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INTERVENTO

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

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

LOTTO **3053/PN_2**

PROGETTO ESECUTIVO

TAV.	OGGETTO	DATA
TAB_18	TABULATI DI CALCOLO CIVICO 47 STATO DI PROGETTO	Settembre 2022
SCALA		N. DISEGNO

VERSIONE	DESCRIZIONE	DATA	REDATTO	VERIFICATO		APPROVATO
00	PRIMA EMISSIONE	Settembre 2022	F. DALMONTE	N. LEONE		N. LEONE
01						
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TABULATI DI CALCOLO
CIVICO 47
STATO DI PROGETTO

Sommario

1 Risultati numerici

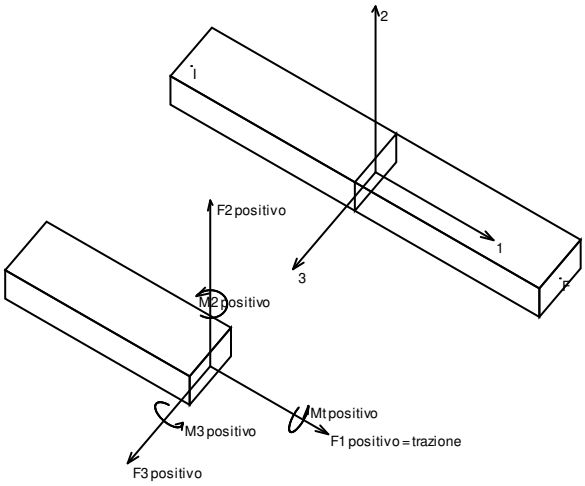
1.1 Sollecitazioni

1.1.1 Sollecitazioni aste

1.1.1.1 Convenzioni di segno aste

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

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



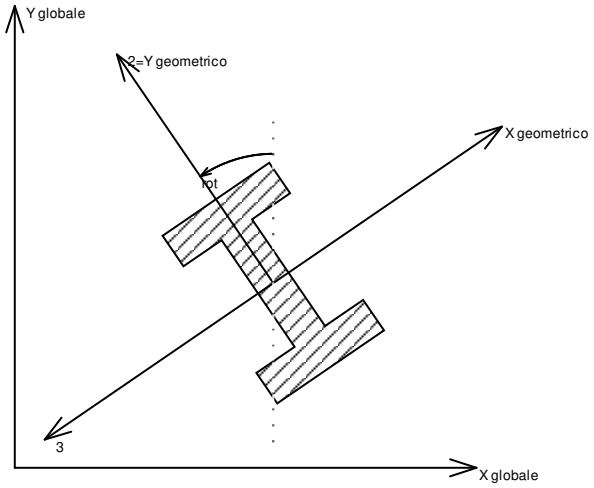
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

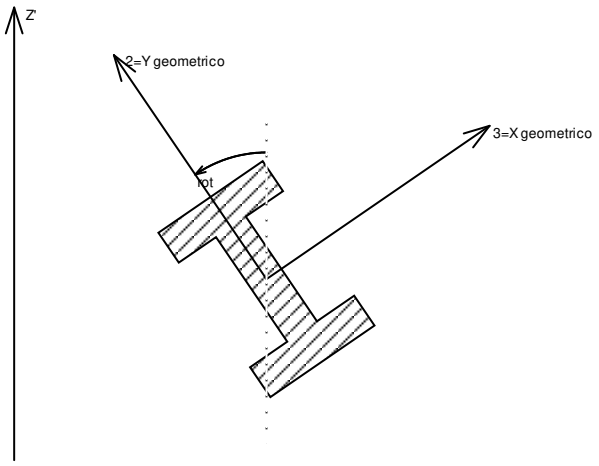
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

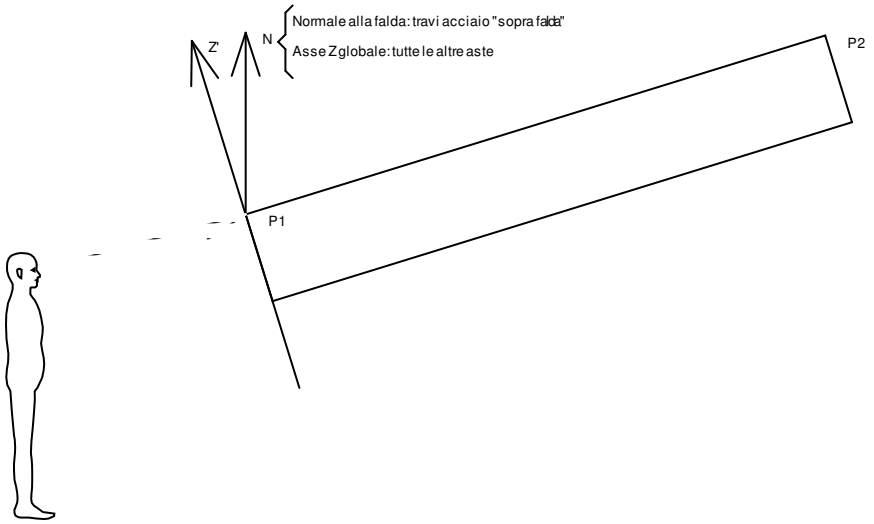
Sistema locale aste non verticali



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

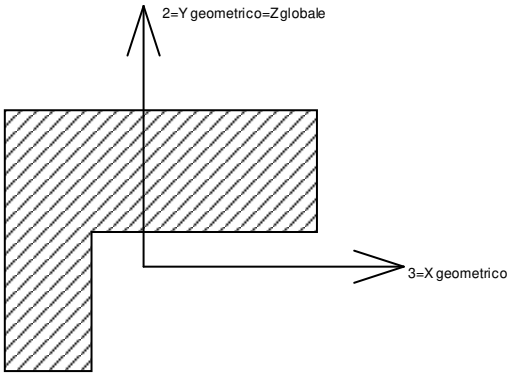
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



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

1.1.1.2 Sollecitazioni estreme aste

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

Sollecitazioni con sforzo normale (N) minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
969	SLV 16	1	-5.09	6.34	15.02	-740.92	-60.61	29.04	0.9471	-1.6938	39.3655
436	SLV 15	31	-6.52	-3.28	-1.58	-381.99	-0.82	-75.34	0.0371	-41.7192	-45.617

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
435	SLV 15	31	-6.52	-2.89	-1.58	-326.96	-4.13	-67.7	0.0307	-30.5272	-32.2862
643	SLV 15	31	-6.02	0.65	-1.58	-308.9	-28.46	-9.36	0.01	10.9662	-17.8898
564	SLV 3	31	-14.65	6.23	-1.58	-302.84	122.59	25.48	-4.0877	5.3621	59.0248

Sollecitazioni con sforzo normale (N) massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
969	SLV 1	1	-5.09	6.34	15.02	554.06	50.6	-19.03	-1.0252	1.1099	-29.7229
436	SLV 2	31	-6.52	-3.28	-1.58	203.16	-73.36	61.29	0.1743	28.8116	-8.5485
1005	SLV X	1	-0.13	-3.31	15.02	186.29	9.19	-11.54	0.0377	1.6287	1.1232
653	SLV 15	1	-6.02	-2.89	-1.58	182.21	67.71	-67.64	-0.0148	-13.6099	-33.6642
730	SLV X	31	-18.25	-3.28	-1.58	176.07	-15.75	-47.94	-0.0859	-22.0499	15.6905

Sollecitazioni con momento M2 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
855	SLV 2	1	-13.11	-0.33	-1.58	-111.07	-15.72	45.59	0.0422	-112.9713	-4.9404
315	SLV 15	1	-5.41	6.58	-1.58	-36.52	124.45	178.47	4.1717	-104.4406	-52.3962
450	SLV 15	1	-5.16	0.8	-1.58	-268.49	-71.54	240.56	0.4427	-100.417	-76.3804
709	SLV 13	31	-14.11	-3.28	-1.58	24.81	-127.4	-85.92	-1.6066	-93.4717	23.0319
561	SLU 84	1	-11.24	1.3	-1.58	-115.95	99.19	158.34	0.3035	-90.1848	63.9817

Sollecitazioni con momento M2 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
703	SLV 2	1	-17.05	-2.93	-1.58	-65.62	31.81	-184.66	-0.4639	133.0824	37.5595
663	SLV 13	31	-7.72	-2.93	-1.58	-103.38	-16.45	212.53	0.3573	128.3829	36.4139
450	SLV 15	31	-6.02	0.8	-1.58	-279.03	-148.19	244.23	0.3787	108.0619	18.7532
683	SLV 2	31	-11.36	-3.28	-1.58	-71.35	-77.24	94.83	5.1937	105.0206	-4.0763
673	SLU 84	1	-11.36	1.05	-1.58	-92.5	56.97	-93.42	-4.0787	92.8151	47.2076

Sollecitazioni con momento M3 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
367	SLV 3	1	-19.87	5.88	-1.58	-89.57	-70.59	-23.82	0.8205	3.1664	-156.23
378	SLV 1	31	-19.37	4.85	-1.58	69.28	35.76	-8.26	-0.0973	-10.283	-125.7617
386	SLU 84	1	-15.31	6.58	-1.58	-40.41	-218.47	15.82	-0.1405	-6.7783	-123.4006
437	SLV 15	1	-0.12	0.8	-1.58	18.16	-151.86	-2.44	0.0266	-3.773	-121.304
290	SLV 4	31	-24.4	5.48	-1.58	-28.4	13.22	-30.23	9.4581	16.7099	-118.7734

Sollecitazioni con momento M3 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
619	SLV 15	1	-0.47	1.05	-1.58	-118.53	314.77	42.75	-3.8663	2.0089	233.9911
606	SLV 14	31	-0.47	1.05	-1.58	-151.11	-282.95	-51.07	4.3142	-35.0388	213.9082
555	SLU 83	31	-15.06	6.23	-1.58	-257.26	-253.9	-8.5	3.1581	14.3013	194.333
577	SLU 83	1	-9.73	6.23	-1.58	-258.06	222.64	-11.19	-3.1899	47.4161	152.4346
299	SLV 4	31	-24.4	1.05	-1.58	-90.6	-219.89	28.19	-1.4471	16.2185	149.6161

1.1.2 Sollecitazioni gusci

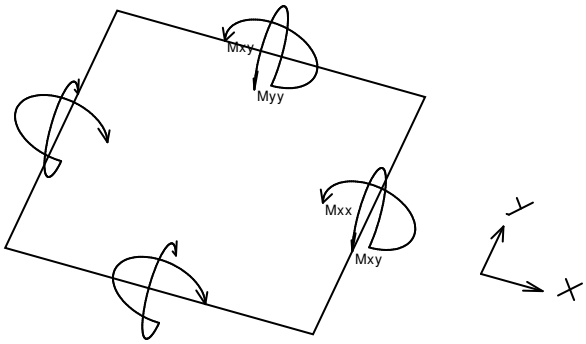
1.1.2.1 Convenzioni di segno gusci

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

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

Convenzione di segno per gusci non verticali

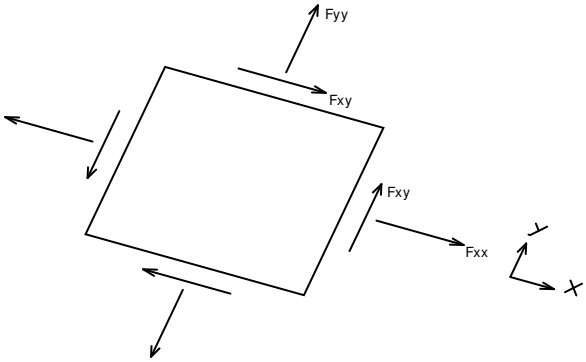
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione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



Si definiscono:

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

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



Si definiscono:

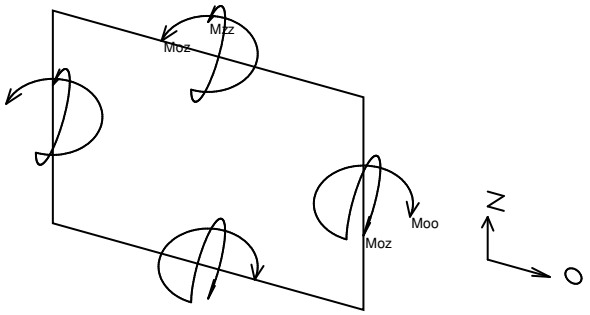
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette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

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

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

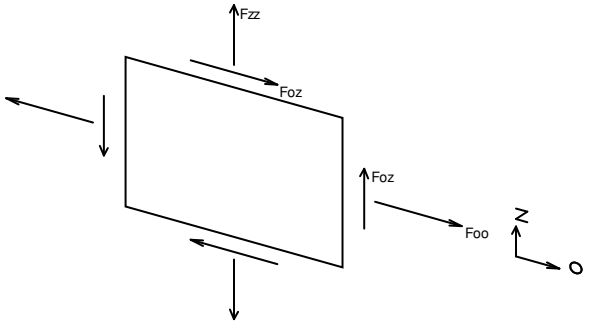
Convenzione di segno per gusci verticali

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



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

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



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

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

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

1.1.2.2 Sollecitazioni estreme gusci

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

Sollecitazioni con momento M11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16268	SLU 83	128	-489.97	55.12	488.15	95	-26	52	-1037	1093
16249	SLU 83	205	-192.39	-42.82	35.35	-14	44	-42	885	25
16240	SLU 83	182	-176.91	-34.16	38.23	95	12	-105	750	19
16419	SLV 3	616	-164.26	-30.77	22.55	-127	14	150	-425	-7

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16463	SLV 14	2709	-139.63	19.87	3.57	-790	124	245	402	-62

Sollecitazioni con momento M11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16292	SLU 83	270	255.07	38.19	-10.46	-49	-56	-95	-476	433
16299	SLU 84	261	207.11	45.72	167.37	-507	-139	-410	-351	-592
16419	SLV 14	616	196.24	38.45	3.22	-685	-57	67	507	85
16422	SLV 13	473	163.13	45.19	0.9	-511	-173	-325	444	67
16421	SLV 13	473	154.92	-18.71	-39.51	-507	254	-107	310	33

Sollecitazioni con momento M22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16264	SLV 14	277	-12.7	-23.27	-127.55	18	37	5	27	392
16294	SLV 1	267	1.64	30.84	-123.81	-9	8	-1	46	-280
16265	SLV 14	276	-15.3	-31.47	-121.11	14	35	5	55	464
16276	SLU 83	177	-8.51	103.08	-120.79	39	-48	-13	-43	-456
16295	SLV 1	266	-8.9	24.22	-120.64	-12	-22	-22	44	-226

Sollecitazioni con momento M22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16268	SLU 83	128	-489.97	55.12	488.15	95	-26	52	-1037	1093
16267	SLU 83	275	66.11	-37.47	199.45	-52	-7	18	-346	702
16259	SLU 84	283	139.96	-30.18	176.92	-630	128	-334	-242	1100
16299	SLU 84	261	207.11	45.72	167.37	-507	-139	-410	-351	-592
16260	SLU 84	282	116.72	-6.95	106.4	-82	102	-264	-269	678

Sollecitazioni con sforzo F11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17178	SLV 7	18435	-14.71	-0.43	-6.57	-4062	-8	-415	72	-15
17177	SLV 10	18435	14.12	-0.4	5.89	-3894	115	-415	69	15
17115	SLV 5	18436	-8.64	2.41	-4	-3162	935	-490	-45	16
17121	SLV 8	18738	1.53	-1.28	-1.84	-2566	-135	368	73	24
16259	SLV 15	236	57.35	-8.57	-35.59	-1385	307	-60	-126	-174

Sollecitazioni con sforzo F11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17177	SLV 7	18435	-14.79	0.41	-6.55	4033	32	83	-72	-16
17178	SLV 10	18435	14.06	0.55	5.92	3906	178	278	-68	13
17121	SLV 5	18436	-8.56	-2.3	-3.83	3119	815	327	44	14
17115	SLV 8	18697	1.8	1.12	-1.88	2534	-292	-430	-74	27
17094	SLV 3	18849	-0.01	0	0.26	1219	0	458	0	0

Sollecitazioni con sforzo F22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17090	SLV 1	19117	0.55	0	0.09	-63	1	-2073	-6	-2
17089	SLV 13	19048	-0.03	0	0.01	-604	-1	-1344	0	0
3121	SLU 83	947	-0.05	0	-0.86	-69	0	-1283	0	-2
3087	SLV 14	948	0.07	0.14	0.28	42	-563	-1234	1	1
4472	SLV 14	2708	2.44	0.15	4.76	-295	-230	-1227	-1	41

Sollecitazioni con sforzo F22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17090	SLV 16	19117	-0.34	0	-0.29	31	-1	2009	4	2
17089	SLV 4	19048	0.01	0	-0.02	612	1	1332	0	1
17144	SLV 3	19045	0.01	0	0.26	-366	1	1074	0	0
16419	SLU 84	508	-4.34	0.72	-0.69	688	640	952	-7	57
17115	SLV 5	18697	1.09	0.66	-1.14	-979	-14	868	-45	16

1.1.2.3 Sollecitazioni estreme gusci non verticali

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

***Vy**: componente Vz della sollecitazione del guscio nel nodo indicato. [kN/m]*

Sollecitazioni con momento Mxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16294	SLV 1	267	-127.81	-20.81	5.64	-2	-9	-7	283	24
16264	SLV 14	277	-126.09	26.59	-14.16	3	-37	21	-391	38
16276	SLU 83	177	-124.18	-101.16	-5.12	-12	49	37	455	-50
16295	SLV 1	266	-123.68	-15.42	-5.87	-19	23	-15	229	26
16268	SLU 83	177	-122.54	-184.9	11.3	-42	73	17	802	-1025

Sollecitazioni con momento Mxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16268	SLU 83	128	486.39	-68.93	-488.21	53	27	94	-1108	-1021
16267	SLU 83	275	196.3	42.6	69.26	17	9	-51	-688	-373
16259	SLU 84	283	179.46	28.47	137.42	-345	-140	-618	-1109	-194
16299	SLU 84	261	158.81	-40.95	215.66	-383	127	-534	555	-407
16260	SLU 84	282	108.61	8.14	114.5	-290	-71	-57	-710	-167

Sollecitazioni con momento Myy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16268	SLU 83	128	486.39	-68.93	-488.21	53	27	94	-1108	-1021
16249	SLU 83	205	35.17	43.29	-192.21	-42	-44	-14	-27	885
16240	SLU 83	182	38.25	34.08	-176.94	-105	-12	95	-19	750
16258	SLU 83	227	69.94	32.54	-127.07	4	-22	-52	193	738
16267	SLV 14	274	-58.07	21.35	-101.29	35	-14	-64	-765	516

Sollecitazioni con momento Myy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16292	SLU 83	270	-13.81	-23.64	258.42	-89	58	-55	-458	-451
16299	SLU 84	261	158.81	-40.95	215.66	-383	127	-534	555	-407
16258	SLU 83	205	69.28	41.56	148.83	-35	-39	-67	129	735
16267	SLU 83	227	96.87	28.26	142.3	-2	-5	-99	282	578
16249	SLU 83	182	70.03	39.29	140.8	-103	-33	-31	122	884

Sollecitazioni con sforzo Fxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16259	SLV 13	283	132.31	20.94	85	-669	-277	-1268	-859	-121
16299	SLV 2	261	122.32	-32.27	148.18	-597	212	-1034	458	-286
16260	SLV 13	282	76.84	6.75	68.76	-533	-142	-186	-576	-100
2232	SLV 2	4172	-0.48	0.26	-1.18	-388	53	-49	3	5
15824	SLV 14	3933	-0.2	-0.12	-0.2	-372	-20	9	0	2

Sollecitazioni con sforzo Fxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
4369	SLV 5	3358	0.28	3.27	-3.45	475	-188	67	-15	20
4258	SLV 9	3358	0.57	-0.98	-3.62	471	-57	-25	12	21
4670	SLV 13	3453	-1.58	-1.28	-2.69	406	-273	-118	9	10
16299	SLV X	261	-19.67	6.16	-5.15	299	-111	603	-96	16
17150	SLV 15	18713	0.06	0	0.01	298	0	-393	0	0

Sollecitazioni con sforzo Fyy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16259	SLV 15	236	-34.68	12.55	56.44	-89	-363	-1356	168	-133
16299	SLV 2	223	-27.17	-11.8	55.81	-144	318	-1119	11	-273
20	SLU 83	268	-0.32	0.54	-1.23	-240	38	-779	-1	16
7239	SLU 83	1135	-0.22	0.14	0.14	27	-3	-771	-1	-1
11201	SLU 83	4254	-0.59	0.17	-2.06	-78	-171	-765	1	-14

Sollecitazioni con sforzo Fyy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16299	SLV X	223	4.87	4.59	1.87	72	-165	647	-5	12
17150	SLV 4	18713	-0.05	0	-0.15	-225	0	495	0	-1
16259	SLV 2	236	-22.53	5.01	44.89	20	97	485	116	-163
5812	SLV 9	4351	-0.14	0	5.45	0	0	372	-1	28
5642	SLV 6	3612	0.01	0.03	-7.6	-19	-1	349	0	39

1.1.2.4 Sollecitazioni estreme gusci verticali

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

***Sollecitazione**: valori della sollecitazione.*
***Moo**: componente Moo della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
***Moz**: componente Moz della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
***Mzz**: componente Mzz della sollecitazione del guscio nel nodo indicato. [kN*m/m]*
***Foo**: componente Foo della sollecitazione del guscio nel nodo indicato. [kN/m]*
***Foz**: componente Foz della sollecitazione del guscio nel nodo indicato. [kN/m]*
***Fzz**: componente Fzz della sollecitazione del guscio nel nodo indicato. [kN/m]*
***Vo**: componente Vo della sollecitazione del guscio nel nodo indicato. [kN/m]*
***Vz**: componente Vz della sollecitazione del guscio nel nodo indicato. [kN/m]*

Sollecitazioni con momento Moo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17115	SLV 3	18436	-38.99	11.02	-18.07	-766	414	-223	-201	74
17121	SLV 3	18436	-38.68	-10.16	-17.32	735	384	76	199	65
17177	SLV 3	18435	-38.67	0.98	-16.81	2531	40	-2	-189	-42
17178	SLV 3	18435	-38.57	-1.18	-16.9	-2553	20	-284	188	-38
16421	SLV 15	473	-37.9	33.56	143.43	-81	-272	-388	-14	297

Sollecitazioni con momento Moo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17115	SLV 14	18436	38.43	-10.9	17.86	-185	161	-102	199	-73
17121	SLV 14	18436	38.15	9.84	17.14	154	162	0	-196	-64
17177	SLV 14	18435	37.99	-0.97	16.15	-2392	107	-330	186	40
17178	SLV 14	18435	37.92	1.3	16.25	2398	150	147	-185	36
16422	SLV 3	473	23.55	17.99	-133.86	116	23	-253	-33	-340

Sollecitazioni con momento Mzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16419	SLV 3	616	23.3	28.38	-165.01	150	-17	-127	2	-425
16463	SLV 14	2709	3.25	-20.99	-139.3	243	-132	-788	65	401
16422	SLV 4	473	19.17	19.59	-135.06	125	21	-251	-21	-346
16421	SLV 4	473	3.95	-28.73	-123.6	-173	-216	-222	-43	-269
16473	SLV 15	2692	23.07	-7.14	-74.9	-71	-21	-155	-51	209

Sollecitazioni con momento Mzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16419	SLV 14	616	2.27	-35.97	197.19	69	47	-687	-79	508
16422	SLV 13	473	-5.81	-30.13	169.84	-296	154	-540	-28	448
16421	SLV 13	473	-34.83	35.17	150.25	-154	-285	-461	-6	311
16900	SLV 2	447	-4.34	-10.7	69.78	-36	26	-118	29	-186
16908	SLV 7	575	-6.43	4.05	64.6	275	7	20	-169	-149

Sollecitazioni con sforzo Foo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17178	SLV 7	18435	-14.71	-0.43	-6.57	-4062	-8	-415	72	-15
17177	SLV 10	18435	14.12	-0.4	5.89	-3894	115	-415	69	15
17115	SLV 5	18436	-8.64	2.41	-4	-3162	935	-490	-45	16
17121	SLV 8	18738	1.53	-1.28	-1.84	-2566	-135	368	73	24
17099	SLV 2	18969	0.03	0	-0.09	-1192	0	464	0	0

Sollecitazioni con sforzo Foo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17177	SLV 7	18435	-14.79	0.41	-6.55	4033	32	83	-72	-16
17178	SLV 10	18435	14.06	0.55	5.92	3906	178	278	-68	13
17121	SLV 5	18436	-8.56	-2.3	-3.83	3119	815	327	44	14
17115	SLV 8	18697	1.8	1.12	-1.88	2534	-292	-430	-74	27
17094	SLV 3	18849	-0.01	0	0.26	1219	0	458	0	0

Sollecitazioni con sforzo Fzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17090	SLV 1	19117	0.55	0	0.09	-63	1	-2073	-6	-2
17089	SLV 13	19048	-0.03	0	0.01	-604	-1	-1344	0	0
3121	SLU 83	947	-0.05	0	-0.86	-69	0	-1283	0	-2
16419	SLV 15	1147	-3.73	1.55	-1.57	-731	678	-1241	-92	481
3087	SLV 14	948	-0.07	0.14	-0.28	42	563	-1234	1	-1

Sollecitazioni con sforzo Fzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17090	SLV 16	19117	-0.34	0	-0.29	31	-1	2009	4	2
17089	SLV 4	19048	0.01	0	-0.02	612	1	1332	0	1
17144	SLV 3	19045	0.01	0	0.26	-366	1	1074	0	0
17115	SLV 5	18697	1.09	0.66	-1.14	-979	-14	868	-45	16

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17183	SLU 80	18966	0.55	-0.36	0.74	-105	-336	837	-9	33

1.1.3 Sollecitazioni gusci armati

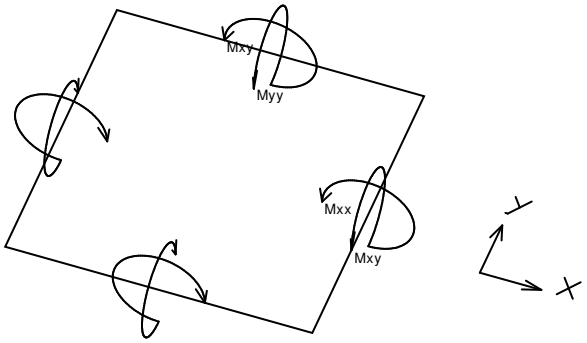
1.1.3.1 Convenzioni di segno gusci

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

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

Convenzione di segno per gusci non verticali

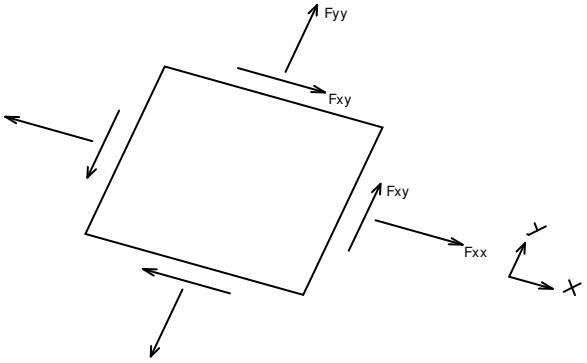
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione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



Si definiscono:

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

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



Si definiscono:

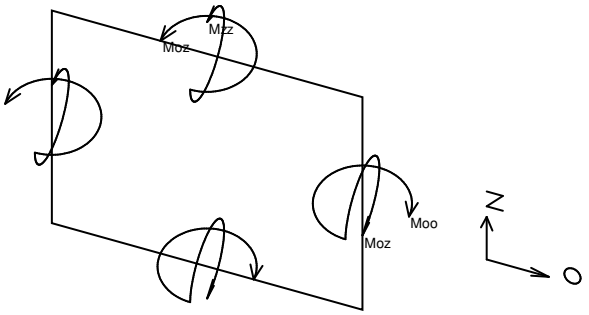
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette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

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

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

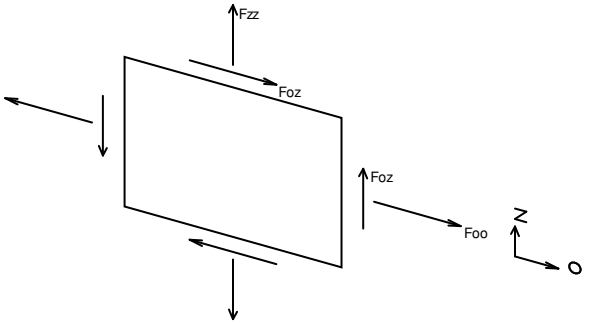
Convenzione di segno per gusci verticali

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



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

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



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

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

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

1.1.4 Sollecitazioni gusci muratura

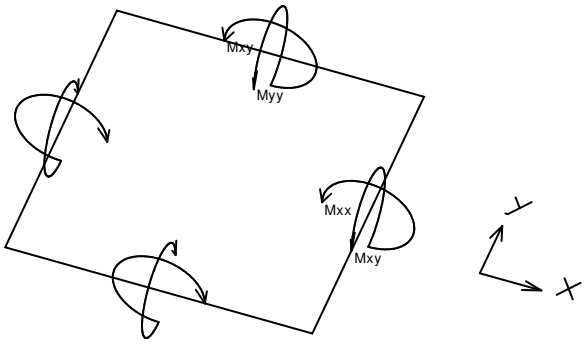
1.1.4.1 Convenzioni di segno gusci muratura

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

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

Convenzione di segno per gusci non verticali

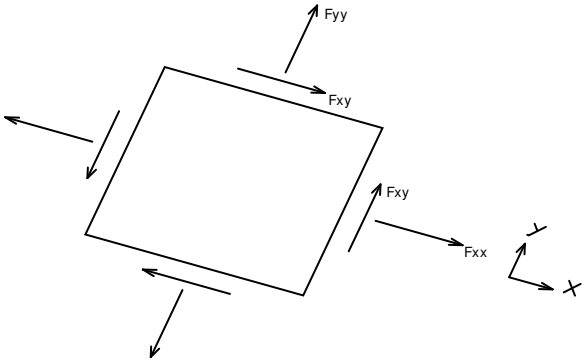
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione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



Si definiscono:

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

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

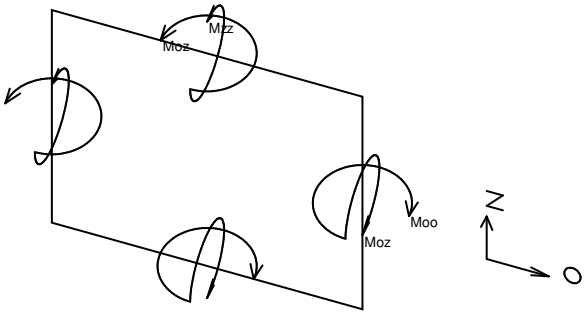


Si definiscono:

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

Convenzione di segno per gusci verticali

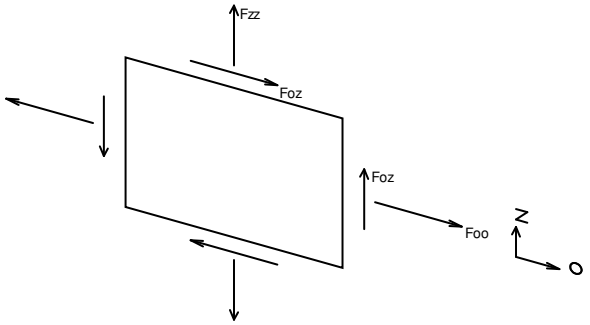
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse O (ascisse) e z (ordinate) contenuti nel piano dell'elemento e terzo asse ortogonale al piano dell'elemento a formare una terna destrogira. In particolare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



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

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

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



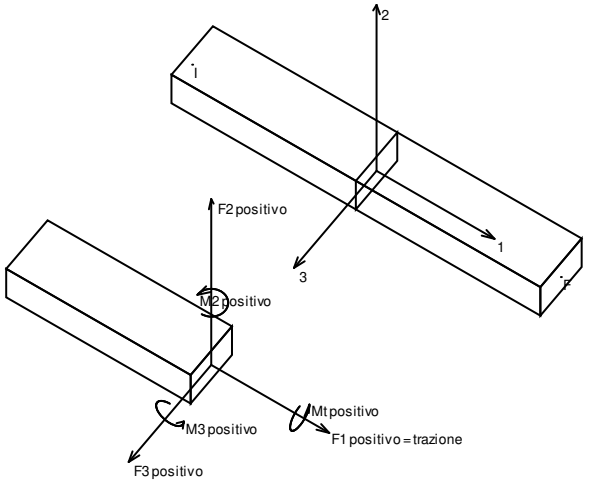
- Fzz: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foo: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso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

1.1.5 Sollecitazioni aste in muratura

1.1.5.1 Convenzioni di segno aste

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

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



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

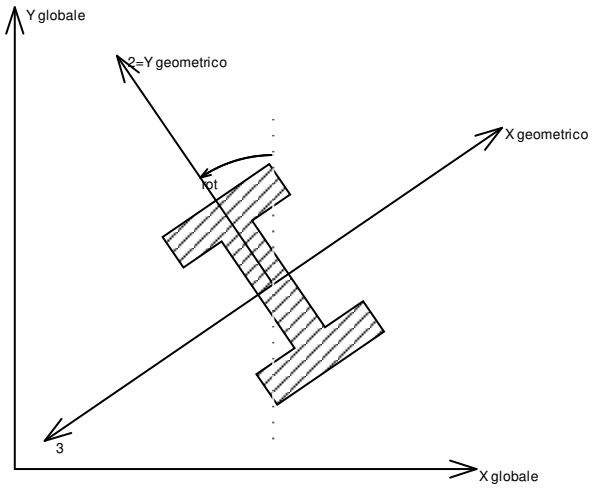
Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- aste verticali ad esempio pilastri e colonne;

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

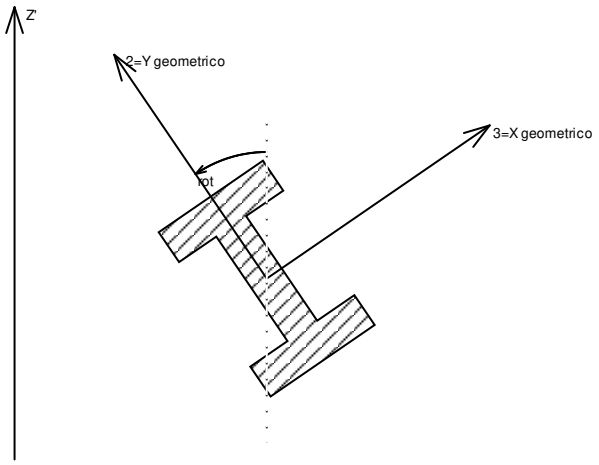
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

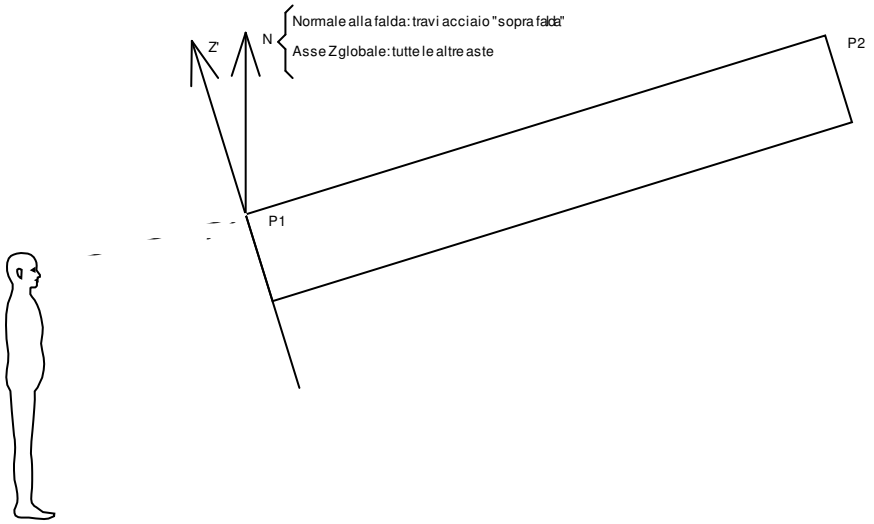
Sistema locale aste non verticali



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

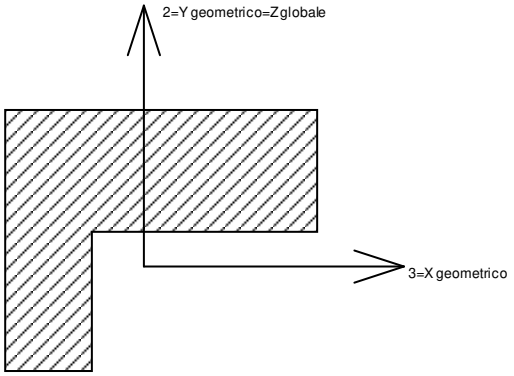
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



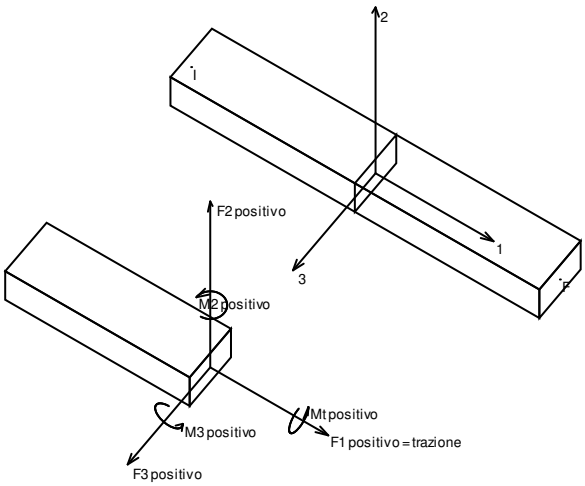
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli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

1.1.6 Sollecitazioni aste in muratura FRCM

1.1.6.1 Convenzioni di segno aste

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

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



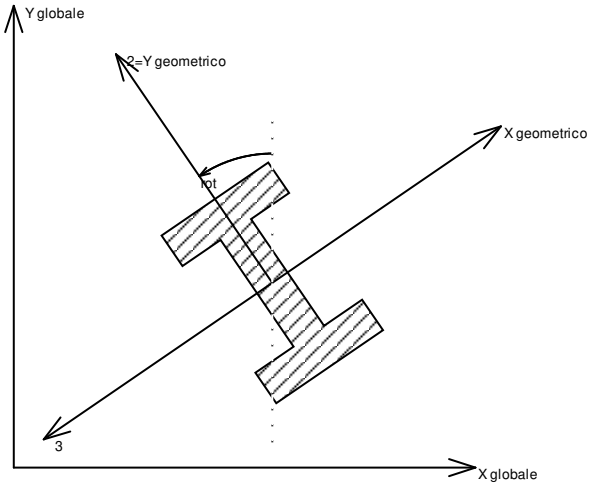
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

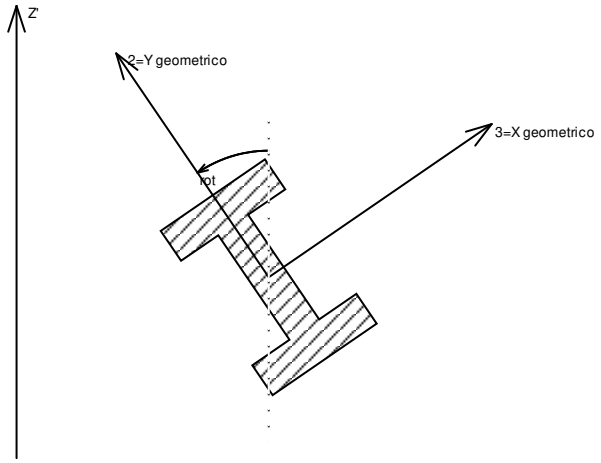
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

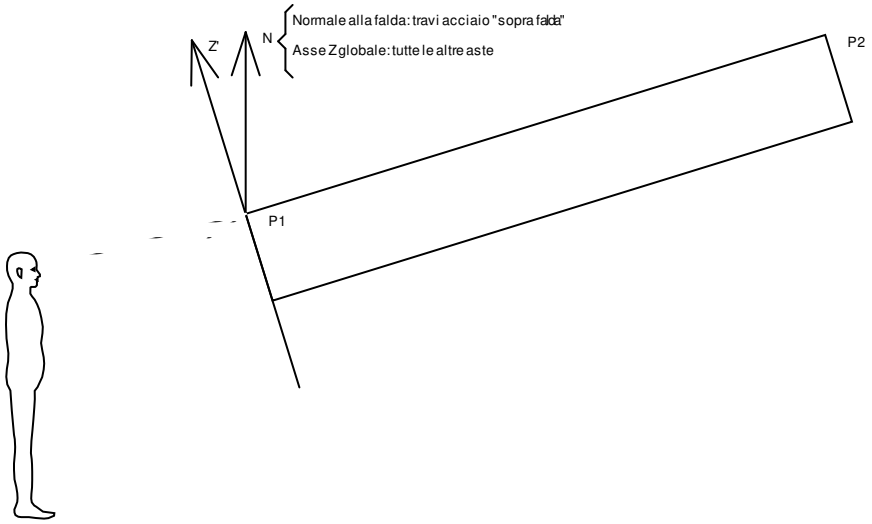
Sistema locale aste non verticali



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

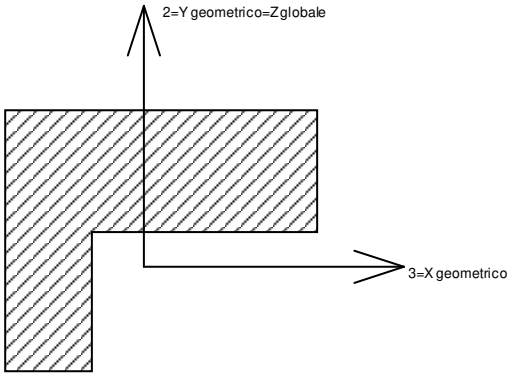
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



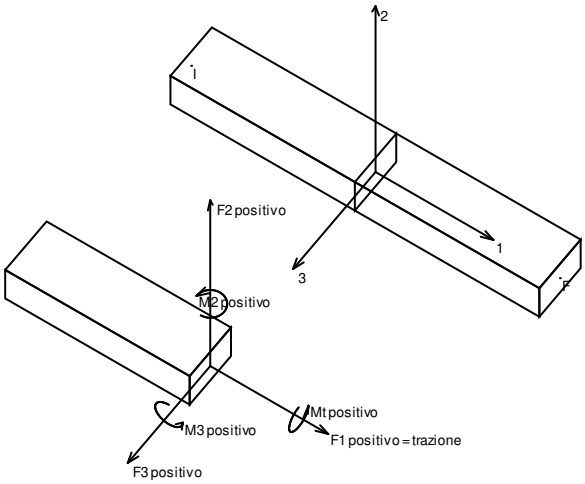
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli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

1.1.7 Sollecitazioni aste in muratura armata

1.1.7.1 Convenzioni di segno aste

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

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



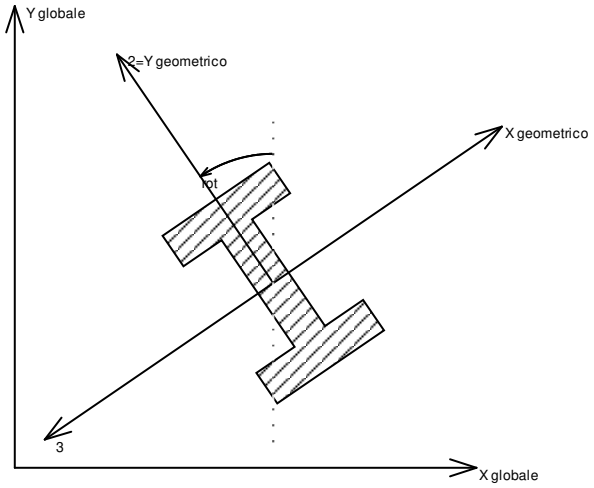
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

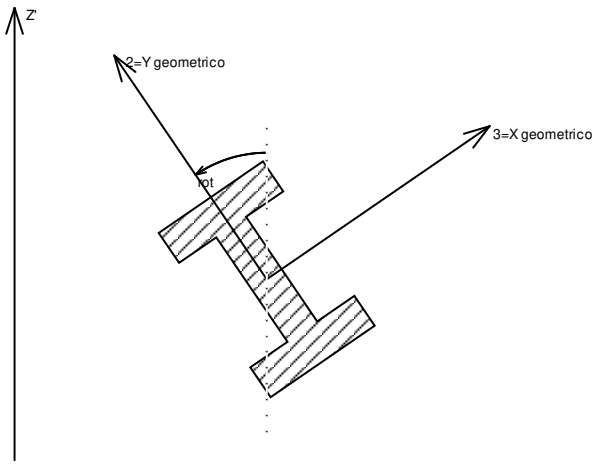
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

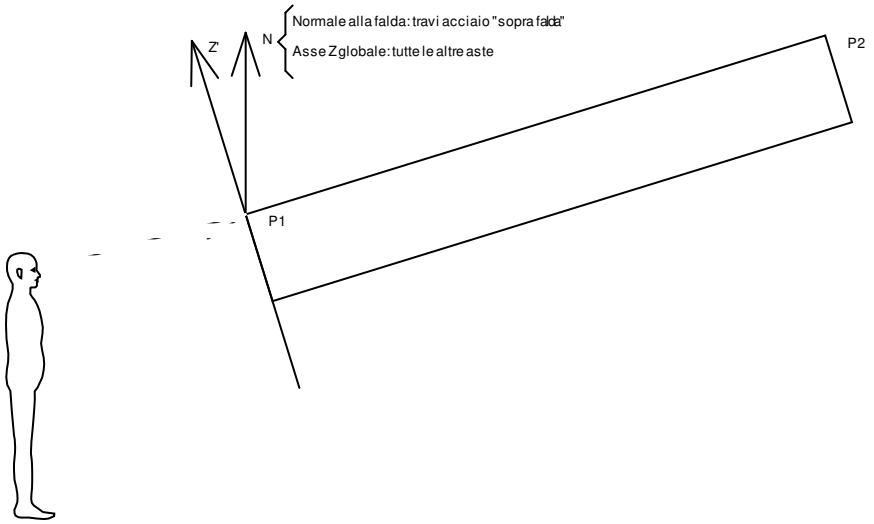
Sistema locale aste non verticali



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

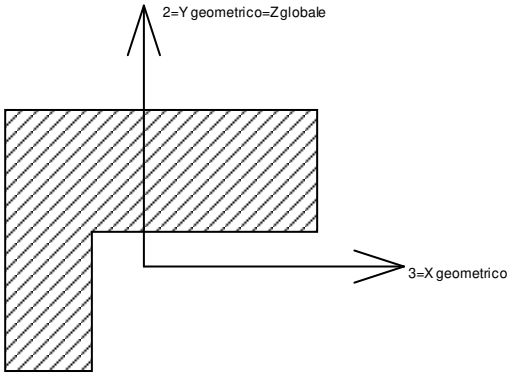
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



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

1.2 Reazioni nodali

1.2.1 Reazioni nodali estreme

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

Reazioni Fx minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18436	SLV 14	-70.01	-45.9	36.2	25.4893	-3.4874	-0.1138
18435	SLV 14	-66.49	532.82	31.8	0.9242	-3.3287	-0.0456
671	SLV 16	-42.62	-5.52	167.95	-11.8471	-10.8489	-3.5209

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
609	SLV 16	-39.18	-8.8	208.17	25.0009	-1.6309	4.7507
612	SLV 15	-33.8	-7.94	183.62	-27.4635	0.1445	-4.8655

Reazioni Fx massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18436	SLV 3	70.75	108.48	40.84	53.1518	3.4474	0.1077
18435	SLV 3	67.8	-621.72	32.13	10.5232	3.4739	0.0428
609	SLV 1	38.93	10.74	195.84	26.6663	-0.3971	-5.076
671	SLV 1	38.45	0.03	263.34	-19.6652	-15.172	2.8147
612	SLV 2	33.62	7.14	170.26	-24.6053	0.1028	4.6565

Reazioni Fy minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18436	SLV 12	-14.86	-1073.14	35.77	32.2488	-0.7782	-0.0596
18435	SLV 7	25.92	-977.1	35.28	14.0549	1.3566	-0.0025
671	SLV 8	6.54	-26.48	224.88	-17.8642	-14.1807	-0.9575
609	SLV 12	-14.6	-21.7	205.93	25.1267	-1.778	0.8695
612	SLV 12	-12.5	-20.55	184.53	-27.4077	-0.1996	-1.8261

Reazioni Fy massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18436	SLV 5	15.6	1135.72	41.28	46.3924	0.7382	0.0535
18435	SLV 10	-24.61	888.2	28.65	-2.6075	-1.2113	-0.0003
609	SLV 5	14.35	23.65	198.08	26.5404	-0.2501	-1.1948
671	SLV 9	-10.72	20.99	206.41	-13.6481	-11.8402	0.2513
612	SLV 5	12.31	19.75	169.35	-24.6611	0.4469	1.6171

Reazioni Fz minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
656	SLV X	-17.96	2.84	-76.84	4.1199	13.853	-0.5837
671	SLV X	-39.53	5.13	-46.49	4.1526	2.3183	-2.6971
731	SLV X	-10.52	1.69	-43.35	7.8872	6.5652	-1.5953
580	SLV X	-10.51	1.56	-40.79	0.161	-0.08	-0.0132
581	SLV X	-10.53	1.52	-38.1	0.1671	-0.0773	-0.0126

Reazioni Fz massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
671	SLU 84	-2.8	-3.8	316.58	-23.0938	-19.1003	-0.4791
609	SLU 84	-0.03	1.56	297.85	38.1344	-1.4827	-0.2539
612	SLU 84	-0.01	-0.43	260.9	-38.3593	0.1744	-0.1317
471	SLU 84	-0.36	-0.82	243.13	-8.6606	53.9887	0.0308
596	SLU 84	-1.59	-3.11	229	-13.4598	-15.5546	-0.2732

1.2.2 Reazioni nodali in combinazioni di carico

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

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLU 1	0	-0.11	3.26	0	0	0
11	SLU 2	0	-0.11	3.26	0	0	0
11	SLU 3	0	-0.11	3.33	0	0	0
11	SLU 4	0	-0.11	3.33	0	0	0
11	SLU 5	0	-0.11	3.3	0	0	0
11	SLU 6	0	-0.11	3.38	0	0	0
11	SLU 7	0	-0.11	3.37	0	0	0
11	SLU 8	0	-0.11	3.34	0	0	0
11	SLU 9	0	-0.11	3.34	0	0	0
11	SLU 10	0	-0.11	3.67	0	0	0
11	SLU 11	0	-0.11	3.74	0	0	0
11	SLU 12	0	-0.11	3.74	0	0	0
11	SLU 13	0	-0.11	3.71	0	0	0
11	SLU 14	-0.01	-0.11	3.79	0	0	0
11	SLU 15	-0.01	-0.11	3.79	0	0	0
11	SLU 16	-0.01	-0.11	3.75	0	0	0
11	SLU 17	-0.01	-0.11	3.75	0	0	0
11	SLU 18	0	-0.11	3.84	0	0	0
11	SLU 19	0	-0.11	3.84	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLU 20	-0.01	-0.11	3.89	0	0	0
11	SLU 21	-0.01	-0.11	3.89	0	0	0
11	SLU 22	0	-0.1	3.61	0	0	0
11	SLU 23	0	-0.11	3.61	0	0	0
11	SLU 24	0	-0.1	3.69	0	0	0
11	SLU 25	0	-0.11	3.69	0	0	0
11	SLU 26	0	-0.11	3.65	0	0	0
11	SLU 27	0	-0.1	3.73	0	0	0
11	SLU 28	0	-0.11	3.73	0	0	0
11	SLU 29	0	-0.1	3.7	0	0	0
11	SLU 30	0	-0.1	3.7	0	0	0
11	SLU 31	0	-0.11	4.02	0	0	0
11	SLU 32	0	-0.11	4.1	0	0	0
11	SLU 33	0	-0.11	4.1	0	0	0
11	SLU 34	0	-0.11	4.06	0	0	0
11	SLU 35	-0.01	-0.11	4.14	0	0	0
11	SLU 36	-0.01	-0.11	4.14	0	0	0
11	SLU 37	-0.01	-0.11	4.11	0	0	0
11	SLU 38	-0.01	-0.11	4.11	0	0	0
11	SLU 39	-0.01	-0.11	4.2	0	0	0
11	SLU 40	-0.01	-0.11	4.2	0	0	0
11	SLU 41	-0.01	-0.11	4.24	0	0	0
11	SLU 42	-0.01	-0.11	4.24	0	0	0
11	SLU 43	0.01	-0.14	4.11	0	0	0
11	SLU 44	0.01	-0.14	4.11	0	0	0
11	SLU 45	0	-0.14	4.19	0	0	0
11	SLU 46	0	-0.14	4.19	0	0	0
11	SLU 47	0	-0.14	4.16	0	0	0
11	SLU 48	0	-0.14	4.23	0	0	0
11	SLU 49	0	-0.14	4.23	0	0	0
11	SLU 50	0	-0.14	4.2	0	0	0
11	SLU 51	0	-0.14	4.2	0	0	0
11	SLU 52	0	-0.15	4.52	0	0	0
11	SLU 53	0	-0.14	4.6	0	0	0
11	SLU 54	0	-0.14	4.6	0	0	0
11	SLU 55	0	-0.14	4.57	0	0	0
11	SLU 56	0	-0.14	4.64	0	0	0
11	SLU 57	0	-0.14	4.64	0	0	0
11	SLU 58	0	-0.14	4.61	0	0	0
11	SLU 59	0	-0.14	4.61	0	0	0
11	SLU 60	0	-0.15	4.7	0	0	0
11	SLU 61	0	-0.15	4.7	0	0	0
11	SLU 62	-0.01	-0.14	4.74	0	0	0
11	SLU 63	-0.01	-0.15	4.74	0	0	0
11	SLU 64	0	-0.14	4.47	0	0	0
11	SLU 65	0.01	-0.14	4.47	0	0	0
11	SLU 66	0	-0.14	4.54	0	0	0
11	SLU 67	0	-0.14	4.54	0	0	0
11	SLU 68	0	-0.14	4.51	0	0	0
11	SLU 69	0	-0.14	4.58	0	0	0
11	SLU 70	0	-0.14	4.58	0	0	0
11	SLU 71	0	-0.14	4.55	0	0	0
11	SLU 72	0	-0.14	4.55	0	0	0
11	SLU 73	0	-0.14	4.88	0	0	0
11	SLU 74	0	-0.14	4.95	0	0	0
11	SLU 75	0	-0.14	4.95	0	0	0
11	SLU 76	0	-0.14	4.92	0	0	0
11	SLU 77	0	-0.14	5	0	0	0
11	SLU 78	0	-0.14	5	0	0	0
11	SLU 79	0	-0.14	4.96	0	0	0
11	SLU 80	0	-0.14	4.96	0	0	0
11	SLU 81	0	-0.14	5.05	0	0	0
11	SLU 82	0	-0.14	5.05	0	0	0
11	SLU 83	-0.01	-0.14	5.1	0	0	0
11	SLU 84	-0.01	-0.14	5.1	0	0	0
11	SLE RA 1	0	-0.11	3.36	0	0	0
11	SLE RA 2	0	-0.11	3.36	0	0	0
11	SLE RA 3	0	-0.11	3.41	0	0	0
11	SLE RA 4	0	-0.11	3.41	0	0	0
11	SLE RA 5	0	-0.11	3.39	0	0	0
11	SLE RA 6	0	-0.11	3.44	0	0	0
11	SLE RA 7	0	-0.11	3.44	0	0	0
11	SLE RA 8	0	-0.11	3.42	0	0	0
11	SLE RA 9	0	-0.11	3.42	0	0	0
11	SLE RA 10	0	-0.11	3.63	0	0	0
11	SLE RA 11	0	-0.11	3.68	0	0	0
11	SLE RA 12	0	-0.11	3.68	0	0	0
11	SLE RA 13	0	-0.11	3.66	0	0	0
11	SLE RA 14	0	-0.11	3.71	0	0	0
11	SLE RA 15	0	-0.11	3.71	0	0	0
11	SLE RA 16	0	-0.11	3.69	0	0	0
11	SLE RA 17	0	-0.11	3.69	0	0	0
11	SLE RA 18	0	-0.11	3.75	0	0	0
11	SLE RA 19	0	-0.11	3.75	0	0	0
11	SLE RA 20	0	-0.11	3.78	0	0	0
11	SLE RA 21	0	-0.11	3.78	0	0	0
11	SLE FR 1	0	-0.11	3.36	0	0	0
11	SLE FR 2	0	-0.11	3.36	0	0	0
11	SLE FR 3	0	-0.11	3.37	0	0	0
11	SLE FR 4	0	-0.11	3.48	0	0	0
11	SLE FR 5	0	-0.11	3.49	0	0	0
11	SLE FR 6	0	-0.11	3.55	0	0	0
11	SLE QP 1	0	-0.11	3.36	0	0	0
11	SLE QP 2	0	-0.11	3.48	0	0	0
11	SLD 1	0.19	-0.08	3.56	0	0	0
11	SLD 2	0.2	-0.08	3.57	0	0	0
11	SLD 3	0.18	-0.15	3.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLD 4	0.19	-0.15	3.55	0	0	0
11	SLD 5	0.08	0	3.54	0	0	0
11	SLD 6	0.08	0	3.54	0	0	0
11	SLD 7	0.04	-0.22	3.46	0	0	0
11	SLD 8	0.04	-0.21	3.46	0	0	0
11	SLD 9	-0.04	0	3.49	0	0	0
11	SLD 10	-0.03	0	3.49	0	0	0
11	SLD 11	-0.08	-0.21	3.41	0	0	0
11	SLD 12	-0.07	-0.21	3.41	0	0	0
11	SLD 13	-0.18	-0.07	3.4	0	0	0
11	SLD 14	-0.17	-0.07	3.41	0	0	0
11	SLD 15	-0.2	-0.13	3.38	0	0	0
11	SLD 16	-0.19	-0.13	3.39	0	0	0
11	SLV 1	0.44	-0.06	3.68	0	0	0
11	SLV 2	0.46	-0.05	3.7	0	0	0
11	SLV 3	0.42	-0.2	3.63	0	0	0
11	SLV 4	0.44	-0.2	3.65	0	0	0
11	SLV 5	0.17	0.12	3.62	0	0	0
11	SLV 6	0.19	0.13	3.63	0	0	0
11	SLV 7	0.08	-0.35	3.43	0	0	0
11	SLV 8	0.09	-0.35	3.45	0	0	0
11	SLV 9	-0.09	0.14	3.51	0	0	0
11	SLV 10	-0.08	0.14	3.52	0	0	0
11	SLV 11	-0.18	-0.34	3.32	0	0	0
11	SLV 12	-0.17	-0.34	3.33	0	0	0
11	SLV 13	-0.43	-0.02	3.31	0	0	0
11	SLV 14	-0.41	-0.01	3.32	0	0	0
11	SLV 15	-0.46	-0.16	3.25	0	0	0
11	SLV 16	-0.44	-0.16	3.27	0	0	0
12	SLU 1	0.01	-0.21	6.5	0	0	0
12	SLU 2	0.01	-0.21	6.49	0	0	0
12	SLU 3	0	-0.21	6.64	0	0	0
12	SLU 4	0.01	-0.21	6.64	0	0	0
12	SLU 5	0.01	-0.21	6.58	0	0	0
12	SLU 6	0	-0.21	6.73	0	0	0
12	SLU 7	0	-0.21	6.73	0	0	0
12	SLU 8	0	-0.2	6.66	0	0	0
12	SLU 9	0	-0.21	6.66	0	0	0
12	SLU 10	0	-0.22	7.31	0	0	0
12	SLU 11	-0.01	-0.22	7.46	0	0	0
12	SLU 12	-0.01	-0.22	7.46	0	0	0
12	SLU 13	-0.01	-0.22	7.39	0	0	0
12	SLU 14	-0.01	-0.21	7.54	0	0	0
12	SLU 15	-0.01	-0.22	7.54	0	0	0
12	SLU 16	-0.01	-0.21	7.48	0	0	0
12	SLU 17	-0.01	-0.22	7.47	0	0	0
12	SLU 18	-0.01	-0.22	7.66	0	0	0
12	SLU 19	-0.01	-0.22	7.65	0	0	0
12	SLU 20	-0.01	-0.22	7.74	0	0	0
12	SLU 21	-0.01	-0.22	7.74	0	0	0
12	SLU 22	0.01	-0.2	7.2	0	0	0
12	SLU 23	0.01	-0.21	7.2	0	0	0
12	SLU 24	0	-0.2	7.35	0	0	0
12	SLU 25	0	-0.21	7.35	0	0	0
12	SLU 26	0	-0.21	7.28	0	0	0
12	SLU 27	0	-0.2	7.43	0	0	0
12	SLU 28	0	-0.2	7.43	0	0	0
12	SLU 29	0	-0.2	7.37	0	0	0
12	SLU 30	0	-0.2	7.37	0	0	0
12	SLU 31	0	-0.21	8.01	0	0	0
12	SLU 32	-0.01	-0.21	8.16	0	0	0
12	SLU 33	-0.01	-0.21	8.16	0	0	0
12	SLU 34	-0.01	-0.21	8.1	0	0	0
12	SLU 35	-0.01	-0.21	8.24	0	0	0
12	SLU 36	-0.01	-0.21	8.24	0	0	0
12	SLU 37	-0.01	-0.21	8.18	0	0	0
12	SLU 38	-0.01	-0.21	8.18	0	0	0
12	SLU 39	-0.01	-0.22	8.36	0	0	0
12	SLU 40	-0.01	-0.22	8.36	0	0	0
12	SLU 41	-0.01	-0.21	8.44	0	0	0
12	SLU 42	-0.01	-0.22	8.44	0	0	0
12	SLU 43	0.01	-0.27	8.2	0	0	0
12	SLU 44	0.01	-0.27	8.2	0	0	0
12	SLU 45	0.01	-0.27	8.35	0	0	0
12	SLU 46	0.01	-0.27	8.35	0	0	0
12	SLU 47	0.01	-0.27	8.29	0	0	0
12	SLU 48	0	-0.27	8.44	0	0	0
12	SLU 49	0	-0.27	8.43	0	0	0
12	SLU 50	0	-0.27	8.37	0	0	0
12	SLU 51	0	-0.27	8.37	0	0	0
12	SLU 52	0	-0.28	9.01	0	0	0
12	SLU 53	0	-0.28	9.16	0	0	0
12	SLU 54	0	-0.28	9.16	0	0	0
12	SLU 55	0	-0.28	9.1	0	0	0
12	SLU 56	-0.01	-0.28	9.25	0	0	0
12	SLU 57	-0.01	-0.28	9.25	0	0	0
12	SLU 58	-0.01	-0.28	9.18	0	0	0
12	SLU 59	-0.01	-0.28	9.18	0	0	0
12	SLU 60	-0.01	-0.28	9.36	0	0	0
12	SLU 61	-0.01	-0.28	9.36	0	0	0
12	SLU 62	-0.01	-0.28	9.45	0	0	0
12	SLU 63	-0.01	-0.28	9.45	0	0	0
12	SLU 64	0.01	-0.27	8.91	0	0	0
12	SLU 65	0.01	-0.27	8.91	0	0	0
12	SLU 66	0.01	-0.27	9.06	0	0	0
12	SLU 67	0.01	-0.27	9.06	0	0	0
12	SLU 68	0.01	-0.27	8.99	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
12	SLU 69	0	-0.27	9.14	0	0	0
12	SLU 70	0	-0.27	9.14	0	0	0
12	SLU 71	0	-0.26	9.08	0	0	0
12	SLU 72	0	-0.27	9.08	0	0	0
12	SLU 73	0	-0.28	9.72	0	0	0
12	SLU 74	-0.01	-0.28	9.87	0	0	0
12	SLU 75	-0.01	-0.28	9.87	0	0	0
12	SLU 76	-0.01	-0.28	9.8	0	0	0
12	SLU 77	-0.01	-0.27	9.95	0	0	0
12	SLU 78	-0.01	-0.28	9.95	0	0	0
12	SLU 79	-0.01	-0.27	9.89	0	0	0
12	SLU 80	-0.01	-0.27	9.89	0	0	0
12	SLU 81	-0.01	-0.28	10.07	0	0	0
12	SLU 82	-0.01	-0.28	10.07	0	0	0
12	SLU 83	-0.01	-0.28	10.15	0	0	0
12	SLU 84	-0.01	-0.28	10.15	0	0	0
12	SLE RA 1	0.01	-0.21	6.7	0	0	0
12	SLE RA 2	0.01	-0.21	6.7	0	0	0
12	SLE RA 3	0.01	-0.21	6.8	0	0	0
12	SLE RA 4	0.01	-0.21	6.8	0	0	0
12	SLE RA 5	0.01	-0.21	6.75	0	0	0
12	SLE RA 6	0	-0.21	6.85	0	0	0
12	SLE RA 7	0	-0.21	6.85	0	0	0
12	SLE RA 8	0	-0.2	6.81	0	0	0
12	SLE RA 9	0	-0.21	6.81	0	0	0
12	SLE RA 10	0	-0.21	7.24	0	0	0
12	SLE RA 11	0	-0.21	7.34	0	0	0
12	SLE RA 12	0	-0.21	7.34	0	0	0
12	SLE RA 13	0	-0.21	7.29	0	0	0
12	SLE RA 14	0	-0.21	7.39	0	0	0
12	SLE RA 15	0	-0.21	7.39	0	0	0
12	SLE RA 16	-0.01	-0.21	7.35	0	0	0
12	SLE RA 17	0	-0.21	7.35	0	0	0
12	SLE RA 18	0	-0.21	7.47	0	0	0
12	SLE RA 19	0	-0.22	7.47	0	0	0
12	SLE RA 20	-0.01	-0.21	7.53	0	0	0
12	SLE RA 21	-0.01	-0.21	7.53	0	0	0
12	SLE FR 1	0.01	-0.21	6.7	0	0	0
12	SLE FR 2	0.01	-0.21	6.7	0	0	0
12	SLE FR 3	0.01	-0.21	6.72	0	0	0
12	SLE FR 4	0	-0.21	6.93	0	0	0
12	SLE FR 5	0	-0.21	6.95	0	0	0
12	SLE FR 6	0	-0.21	7.08	0	0	0
12	SLE QP 1	0.01	-0.21	6.7	0	0	0
12	SLE QP 2	0	-0.21	6.93	0	0	0
12	SLD 1	0.38	-0.17	7.06	0	0	0
12	SLD 2	0.4	-0.16	7.07	0	0	0
12	SLD 3	0.36	-0.29	7.01	0	0	0
12	SLD 4	0.37	-0.28	7.02	0	0	0
12	SLD 5	0.15	-0.01	7.04	0	0	0
12	SLD 6	0.16	0	7.05	0	0	0
12	SLD 7	0.07	-0.42	6.88	0	0	0
12	SLD 8	0.08	-0.42	6.88	0	0	0
12	SLD 9	-0.07	0	6.98	0	0	0
12	SLD 10	-0.06	0.01	6.98	0	0	0
12	SLD 11	-0.15	-0.41	6.81	0	0	0
12	SLD 12	-0.14	-0.41	6.82	0	0	0
12	SLD 13	-0.37	-0.13	6.84	0	0	0
12	SLD 14	-0.35	-0.13	6.85	0	0	0
12	SLD 15	-0.39	-0.26	6.79	0	0	0
12	SLD 16	-0.37	-0.25	6.8	0	0	0
12	SLV 1	0.88	-0.11	7.23	0	0	0
12	SLV 2	0.92	-0.1	7.26	0	0	0
12	SLV 3	0.83	-0.39	7.12	0	0	0
12	SLV 4	0.87	-0.38	7.15	0	0	0
12	SLV 5	0.35	0.25	7.19	0	0	0
12	SLV 6	0.37	0.25	7.21	0	0	0
12	SLV 7	0.16	-0.69	6.81	0	0	0
12	SLV 8	0.19	-0.68	6.83	0	0	0
12	SLV 9	-0.18	0.27	7.03	0	0	0
12	SLV 10	-0.15	0.28	7.05	0	0	0
12	SLV 11	-0.36	-0.67	6.65	0	0	0
12	SLV 12	-0.34	-0.66	6.67	0	0	0
12	SLV 13	-0.86	-0.03	6.71	0	0	0
12	SLV 14	-0.82	-0.02	6.74	0	0	0
12	SLV 15	-0.91	-0.32	6.6	0	0	0
12	SLV 16	-0.88	-0.3	6.63	0	0	0
13	SLU 1	0.01	-0.2	6.47	0	0	0
13	SLU 2	0.01	-0.2	6.47	0	0	0
13	SLU 3	0	-0.2	6.62	0	0	0
13	SLU 4	0.01	-0.2	6.62	0	0	0
13	SLU 5	0.01	-0.2	6.55	0	0	0
13	SLU 6	0	-0.2	6.7	0	0	0
13	SLU 7	0	-0.2	6.7	0	0	0
13	SLU 8	0	-0.2	6.64	0	0	0
13	SLU 9	0	-0.2	6.64	0	0	0
13	SLU 10	0	-0.21	7.27	0	0	0
13	SLU 11	-0.01	-0.21	7.42	0	0	0
13	SLU 12	-0.01	-0.21	7.42	0	0	0
13	SLU 13	-0.01	-0.21	7.36	0	0	0
13	SLU 14	-0.01	-0.21	7.5	0	0	0
13	SLU 15	-0.01	-0.21	7.5	0	0	0
13	SLU 16	-0.01	-0.21	7.44	0	0	0
13	SLU 17	-0.01	-0.21	7.44	0	0	0
13	SLU 18	-0.01	-0.21	7.62	0	0	0
13	SLU 19	-0.01	-0.21	7.62	0	0	0
13	SLU 20	-0.01	-0.21	7.7	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
13	SLU 21	-0.01	-0.21	7.7	0	0	0
13	SLU 22	0.01	-0.2	7.18	0	0	0
13	SLU 23	0.01	-0.2	7.17	0	0	0
13	SLU 24	0	-0.2	7.32	0	0	0
13	SLU 25	0	-0.2	7.32	0	0	0
13	SLU 26	0	-0.2	7.26	0	0	0
13	SLU 27	0	-0.2	7.4	0	0	0
13	SLU 28	0	-0.2	7.4	0	0	0
13	SLU 29	0	-0.19	7.34	0	0	0
13	SLU 30	0	-0.2	7.34	0	0	0
13	SLU 31	0	-0.21	7.97	0	0	0
13	SLU 32	-0.01	-0.21	8.12	0	0	0
13	SLU 33	-0.01	-0.21	8.12	0	0	0
13	SLU 34	-0.01	-0.21	8.06	0	0	0
13	SLU 35	-0.01	-0.2	8.2	0	0	0
13	SLU 36	-0.01	-0.21	8.2	0	0	0
13	SLU 37	-0.01	-0.2	8.14	0	0	0
13	SLU 38	-0.01	-0.2	8.14	0	0	0
13	SLU 39	-0.01	-0.21	8.32	0	0	0
13	SLU 40	-0.01	-0.21	8.32	0	0	0
13	SLU 41	-0.01	-0.21	8.4	0	0	0
13	SLU 42	-0.01	-0.21	8.4	0	0	0
13	SLU 43	0.01	-0.26	8.18	0	0	0
13	SLU 44	0.01	-0.27	8.17	0	0	0
13	SLU 45	0.01	-0.26	8.32	0	0	0
13	SLU 46	0.01	-0.26	8.32	0	0	0
13	SLU 47	0.01	-0.26	8.26	0	0	0
13	SLU 48	0	-0.26	8.4	0	0	0
13	SLU 49	0	-0.26	8.4	0	0	0
13	SLU 50	0	-0.26	8.34	0	0	0
13	SLU 51	0	-0.26	8.34	0	0	0
13	SLU 52	0	-0.27	8.97	0	0	0
13	SLU 53	-0.01	-0.27	9.12	0	0	0
13	SLU 54	0	-0.27	9.12	0	0	0
13	SLU 55	0	-0.27	9.06	0	0	0
13	SLU 56	-0.01	-0.27	9.2	0	0	0
13	SLU 57	-0.01	-0.27	9.2	0	0	0
13	SLU 58	-0.01	-0.27	9.14	0	0	0
13	SLU 59	-0.01	-0.27	9.14	0	0	0
13	SLU 60	-0.01	-0.27	9.32	0	0	0
13	SLU 61	-0.01	-0.28	9.32	0	0	0
13	SLU 62	-0.01	-0.27	9.4	0	0	0
13	SLU 63	-0.01	-0.27	9.4	0	0	0
13	SLU 64	0.01	-0.26	8.88	0	0	0
13	SLU 65	0.01	-0.26	8.88	0	0	0
13	SLU 66	0.01	-0.26	9.02	0	0	0
13	SLU 67	0.01	-0.26	9.02	0	0	0
13	SLU 68	0.01	-0.26	8.96	0	0	0
13	SLU 69	0	-0.26	9.11	0	0	0
13	SLU 70	0	-0.26	9.1	0	0	0
13	SLU 71	0	-0.26	9.04	0	0	0
13	SLU 72	0	-0.26	9.04	0	0	0
13	SLU 73	0	-0.27	9.68	0	0	0
13	SLU 74	-0.01	-0.27	9.82	0	0	0
13	SLU 75	-0.01	-0.27	9.82	0	0	0
13	SLU 76	-0.01	-0.27	9.76	0	0	0
13	SLU 77	-0.01	-0.27	9.91	0	0	0
13	SLU 78	-0.01	-0.27	9.91	0	0	0
13	SLU 79	-0.01	-0.26	9.84	0	0	0
13	SLU 80	-0.01	-0.27	9.84	0	0	0
13	SLU 81	-0.01	-0.27	10.02	0	0	0
13	SLU 82	-0.01	-0.27	10.02	0	0	0
13	SLU 83	-0.01	-0.27	10.1	0	0	0
13	SLU 84	-0.01	-0.27	10.1	0	0	0
13	SLE RA 1	0.01	-0.2	6.67	0	0	0
13	SLE RA 2	0.01	-0.2	6.67	0	0	0
13	SLE RA 3	0.01	-0.2	6.77	0	0	0
13	SLE RA 4	0.01	-0.2	6.77	0	0	0
13	SLE RA 5	0.01	-0.2	6.73	0	0	0
13	SLE RA 6	0	-0.2	6.83	0	0	0
13	SLE RA 7	0	-0.2	6.83	0	0	0
13	SLE RA 8	0	-0.2	6.78	0	0	0
13	SLE RA 9	0	-0.2	6.78	0	0	0
13	SLE RA 10	0	-0.21	7.21	0	0	0
13	SLE RA 11	0	-0.21	7.31	0	0	0
13	SLE RA 12	0	-0.21	7.31	0	0	0
13	SLE RA 13	0	-0.21	7.26	0	0	0
13	SLE RA 14	-0.01	-0.2	7.36	0	0	0
13	SLE RA 15	0	-0.21	7.36	0	0	0
13	SLE RA 16	-0.01	-0.2	7.32	0	0	0
13	SLE RA 17	-0.01	-0.2	7.32	0	0	0
13	SLE RA 18	0	-0.21	7.44	0	0	0
13	SLE RA 19	0	-0.21	7.44	0	0	0
13	SLE RA 20	-0.01	-0.21	7.49	0	0	0
13	SLE RA 21	-0.01	-0.21	7.49	0	0	0
13	SLE FR 1	0.01	-0.2	6.67	0	0	0
13	SLE FR 2	0.01	-0.2	6.67	0	0	0
13	SLE FR 3	0.01	-0.2	6.7	0	0	0
13	SLE FR 4	0	-0.2	6.9	0	0	0
13	SLE FR 5	0	-0.2	6.93	0	0	0
13	SLE FR 6	0	-0.2	7.06	0	0	0
13	SLE QP 1	0.01	-0.2	6.67	0	0	0
13	SLE QP 2	0	-0.2	6.9	0	0	0
13	SLD 1	0.38	-0.16	6.99	0	0	0
13	SLD 2	0.4	-0.15	7	0	0	0
13	SLD 3	0.35	-0.28	6.93	0	0	0
13	SLD 4	0.37	-0.28	6.94	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
13	SLD 5	0.15	-0.01	7.01	0	0	0
13	SLD 6	0.16	0	7.01	0	0	0
13	SLD 7	0.07	-0.41	6.83	0	0	0
13	SLD 8	0.08	-0.41	6.84	0	0	0
13	SLD 9	-0.07	0	6.97	0	0	0
13	SLD 10	-0.06	0.01	6.97	0	0	0
13	SLD 11	-0.15	-0.4	6.8	0	0	0
13	SLD 12	-0.14	-0.4	6.8	0	0	0
13	SLD 13	-0.36	-0.13	6.86	0	0	0
13	SLD 14	-0.35	-0.12	6.87	0	0	0
13	SLD 15	-0.39	-0.25	6.81	0	0	0
13	SLD 16	-0.37	-0.24	6.82	0	0	0
13	SLV 1	0.88	-0.11	7.1	0	0	0
13	SLV 2	0.92	-0.09	7.12	0	0	0
13	SLV 3	0.83	-0.39	6.98	0	0	0
13	SLV 4	0.86	-0.37	7	0	0	0
13	SLV 5	0.34	0.24	7.14	0	0	0
13	SLV 6	0.37	0.25	7.15	0	0	0
13	SLV 7	0.16	-0.68	6.74	0	0	0
13	SLV 8	0.18	-0.67	6.76	0	0	0
13	SLV 9	-0.18	0.27	7.05	0	0	0
13	SLV 10	-0.15	0.28	7.06	0	0	0
13	SLV 11	-0.36	-0.66	6.66	0	0	0
13	SLV 12	-0.34	-0.64	6.67	0	0	0
13	SLV 13	-0.86	-0.03	6.81	0	0	0
13	SLV 14	-0.82	-0.01	6.83	0	0	0
13	SLV 15	-0.91	-0.31	6.69	0	0	0
13	SLV 16	-0.87	-0.29	6.71	0	0	0
14	SLU 1	0.01	-0.2	6.47	0	0	0
14	SLU 2	0.01	-0.2	6.47	0	0	0
14	SLU 3	0	-0.2	6.61	0	0	0
14	SLU 4	0.01	-0.2	6.61	0	0	0
14	SLU 5	0	-0.2	6.55	0	0	0
14	SLU 6	0	-0.19	6.69	0	0	0
14	SLU 7	0	-0.2	6.69	0	0	0
14	SLU 8	0	-0.19	6.63	0	0	0
14	SLU 9	0	-0.2	6.63	0	0	0
14	SLU 10	0	-0.21	7.26	0	0	0
14	SLU 11	-0.01	-0.2	7.4	0	0	0
14	SLU 12	-0.01	-0.2	7.4	0	0	0
14	SLU 13	-0.01	-0.2	7.34	0	0	0
14	SLU 14	-0.01	-0.2	7.48	0	0	0
14	SLU 15	-0.01	-0.2	7.48	0	0	0
14	SLU 16	-0.01	-0.2	7.42	0	0	0
14	SLU 17	-0.01	-0.2	7.42	0	0	0
14	SLU 18	-0.01	-0.21	7.6	0	0	0
14	SLU 19	-0.01	-0.21	7.6	0	0	0
14	SLU 20	-0.01	-0.2	7.68	0	0	0
14	SLU 21	-0.01	-0.21	7.68	0	0	0
14	SLU 22	0.01	-0.19	7.17	0	0	0
14	SLU 23	0.01	-0.19	7.17	0	0	0
14	SLU 24	0	-0.19	7.31	0	0	0
14	SLU 25	0	-0.19	7.31	0	0	0
14	SLU 26	0	-0.19	7.25	0	0	0
14	SLU 27	0	-0.19	7.39	0	0	0
14	SLU 28	0	-0.19	7.39	0	0	0
14	SLU 29	0	-0.19	7.33	0	0	0
14	SLU 30	0	-0.19	7.33	0	0	0
14	SLU 31	-0.01	-0.2	7.96	0	0	0
14	SLU 32	-0.01	-0.2	8.1	0	0	0
14	SLU 33	-0.01	-0.2	8.1	0	0	0
14	SLU 34	-0.01	-0.2	8.04	0	0	0
14	SLU 35	-0.01	-0.2	8.18	0	0	0
14	SLU 36	-0.01	-0.2	8.18	0	0	0
14	SLU 37	-0.01	-0.2	8.12	0	0	0
14	SLU 38	-0.01	-0.2	8.12	0	0	0
14	SLU 39	-0.01	-0.2	8.3	0	0	0
14	SLU 40	-0.01	-0.2	8.3	0	0	0
14	SLU 41	-0.01	-0.2	8.38	0	0	0
14	SLU 42	-0.01	-0.2	8.38	0	0	0
14	SLU 43	0.01	-0.26	8.17	0	0	0
14	SLU 44	0.01	-0.26	8.17	0	0	0
14	SLU 45	0.01	-0.26	8.31	0	0	0
14	SLU 46	0.01	-0.26	8.31	0	0	0
14	SLU 47	0.01	-0.26	8.25	0	0	0
14	SLU 48	0	-0.25	8.39	0	0	0
14	SLU 49	0	-0.26	8.39	0	0	0
14	SLU 50	0	-0.25	8.33	0	0	0
14	SLU 51	0	-0.26	8.33	0	0	0
14	SLU 52	0	-0.27	8.96	0	0	0
14	SLU 53	-0.01	-0.26	9.1	0	0	0
14	SLU 54	0	-0.26	9.1	0	0	0
14	SLU 55	0	-0.26	9.04	0	0	0
14	SLU 56	-0.01	-0.26	9.18	0	0	0
14	SLU 57	-0.01	-0.26	9.18	0	0	0
14	SLU 58	-0.01	-0.26	9.12	0	0	0
14	SLU 59	-0.01	-0.26	9.12	0	0	0
14	SLU 60	-0.01	-0.27	9.3	0	0	0
14	SLU 61	-0.01	-0.27	9.3	0	0	0
14	SLU 62	-0.01	-0.26	9.38	0	0	0
14	SLU 63	-0.01	-0.27	9.38	0	0	0
14	SLU 64	0.01	-0.25	8.87	0	0	0
14	SLU 65	0.01	-0.25	8.87	0	0	0
14	SLU 66	0.01	-0.25	9.01	0	0	0
14	SLU 67	0.01	-0.25	9.01	0	0	0
14	SLU 68	0.01	-0.25	8.95	0	0	0
14	SLU 69	0	-0.25	9.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
14	SLU 70	0	-0.25	9.09	0	0	0
14	SLU 71	0	-0.25	9.03	0	0	0
14	SLU 72	0	-0.25	9.03	0	0	0
14	SLU 73	0	-0.26	9.66	0	0	0
14	SLU 74	-0.01	-0.26	9.8	0	0	0
14	SLU 75	-0.01	-0.26	9.8	0	0	0
14	SLU 76	-0.01	-0.26	9.74	0	0	0
14	SLU 77	-0.01	-0.26	9.88	0	0	0
14	SLU 78	-0.01	-0.26	9.88	0	0	0
14	SLU 79	-0.01	-0.26	9.82	0	0	0
14	SLU 80	-0.01	-0.26	9.82	0	0	0
14	SLU 81	-0.01	-0.26	10	0	0	0
14	SLU 82	-0.01	-0.26	10	0	0	0
14	SLU 83	-0.01	-0.26	10.08	0	0	0
14	SLU 84	-0.01	-0.26	10.08	0	0	0
14	SLE RA 1	0.01	-0.19	6.67	0	0	0
14	SLE RA 2	0.01	-0.2	6.67	0	0	0
14	SLE RA 3	0.01	-0.19	6.76	0	0	0
14	SLE RA 4	0.01	-0.2	6.76	0	0	0
14	SLE RA 5	0.01	-0.2	6.72	0	0	0
14	SLE RA 6	0	-0.19	6.82	0	0	0
14	SLE RA 7	0	-0.19	6.82	0	0	0
14	SLE RA 8	0	-0.19	6.77	0	0	0
14	SLE RA 9	0	-0.19	6.77	0	0	0
14	SLE RA 10	0	-0.2	7.19	0	0	0
14	SLE RA 11	0	-0.2	7.29	0	0	0
14	SLE RA 12	0	-0.2	7.29	0	0	0
14	SLE RA 13	0	-0.2	7.25	0	0	0
14	SLE RA 14	-0.01	-0.2	7.34	0	0	0
14	SLE RA 15	0	-0.2	7.34	0	0	0
14	SLE RA 16	-0.01	-0.2	7.3	0	0	0
14	SLE RA 17	-0.01	-0.2	7.3	0	0	0
14	SLE RA 18	0	-0.2	7.42	0	0	0
14	SLE RA 19	0	-0.2	7.42	0	0	0
14	SLE RA 20	-0.01	-0.2	7.47	0	0	0
14	SLE RA 21	-0.01	-0.2	7.47	0	0	0
14	SLE FR 1	0.01	-0.19	6.67	0	0	0
14	SLE FR 2	0.01	-0.19	6.67	0	0	0
14	SLE FR 3	0.01	-0.19	6.69	0	0	0
14	SLE FR 4	0	-0.2	6.89	0	0	0
14	SLE FR 5	0	-0.2	6.92	0	0	0
14	SLE FR 6	0	-0.2	7.04	0	0	0
14	SLE QP 1	0.01	-0.19	6.67	0	0	0
14	SLE QP 2	0	-0.2	6.89	0	0	0
14	SLD 1	0.38	-0.16	6.89	0	0	0
14	SLD 2	0.4	-0.15	6.9	0	0	0
14	SLD 3	0.35	-0.28	6.84	0	0	0
14	SLD 4	0.37	-0.27	6.84	0	0	0
14	SLD 5	0.15	-0.01	6.97	0	0	0
14	SLD 6	0.16	0	6.98	0	0	0
14	SLD 7	0.07	-0.41	6.79	0	0	0
14	SLD 8	0.08	-0.4	6.8	0	0	0
14	SLD 9	-0.07	0.01	6.99	0	0	0
14	SLD 10	-0.06	0.01	7	0	0	0
14	SLD 11	-0.15	-0.39	6.81	0	0	0
14	SLD 12	-0.14	-0.39	6.81	0	0	0
14	SLD 13	-0.36	-0.12	6.95	0	0	0
14	SLD 14	-0.35	-0.11	6.95	0	0	0
14	SLD 15	-0.39	-0.24	6.89	0	0	0
14	SLD 16	-0.37	-0.23	6.9	0	0	0
14	SLV 1	0.88	-0.12	6.88	0	0	0
14	SLV 2	0.92	-0.09	6.9	0	0	0
14	SLV 3	0.83	-0.39	6.76	0	0	0
14	SLV 4	0.86	-0.36	6.77	0	0	0
14	SLV 5	0.34	0.24	7.08	0	0	0
14	SLV 6	0.37	0.25	7.09	0	0	0
14	SLV 7	0.16	-0.67	6.66	0	0	0
14	SLV 8	0.18	-0.65	6.67	0	0	0
14	SLV 9	-0.18	0.26	7.12	0	0	0
14	SLV 10	-0.15	0.28	7.13	0	0	0
14	SLV 11	-0.36	-0.65	6.7	0	0	0
14	SLV 12	-0.34	-0.63	6.71	0	0	0
14	SLV 13	-0.86	-0.03	7.01	0	0	0
14	SLV 14	-0.82	0	7.03	0	0	0
14	SLV 15	-0.91	-0.3	6.89	0	0	0
14	SLV 16	-0.87	-0.28	6.91	0	0	0
15	SLU 1	0.01	-0.19	6.46	0	0	0
15	SLU 2	0.01	-0.19	6.46	0	0	0
15	SLU 3	0	-0.19	6.6	0	0	0
15	SLU 4	0	-0.19	6.6	0	0	0
15	SLU 5	0	-0.19	6.53	0	0	0
15	SLU 6	0	-0.19	6.68	0	0	0
15	SLU 7	0	-0.19	6.68	0	0	0
15	SLU 8	0	-0.19	6.61	0	0	0
15	SLU 9	0	-0.19	6.61	0	0	0
15	SLU 10	0	-0.2	7.24	0	0	0
15	SLU 11	-0.01	-0.2	7.38	0	0	0
15	SLU 12	-0.01	-0.2	7.38	0	0	0
15	SLU 13	-0.01	-0.2	7.31	0	0	0
15	SLU 14	-0.01	-0.2	7.46	0	0	0
15	SLU 15	-0.01	-0.2	7.46	0	0	0
15	SLU 16	-0.01	-0.19	7.39	0	0	0
15	SLU 17	-0.01	-0.2	7.39	0	0	0
15	SLU 18	-0.01	-0.2	7.57	0	0	0
15	SLU 19	-0.01	-0.2	7.57	0	0	0
15	SLU 20	-0.01	-0.2	7.65	0	0	0
15	SLU 21	-0.01	-0.2	7.65	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
15	SLU 22	0.01	-0.19	7.15	0	0	0
15	SLU 23	0.01	-0.19	7.15	0	0	0
15	SLU 24	0	-0.19	7.3	0	0	0
15	SLU 25	0	-0.19	7.29	0	0	0
15	SLU 26	0	-0.19	7.23	0	0	0
15	SLU 27	0	-0.18	7.37	0	0	0
15	SLU 28	0	-0.19	7.37	0	0	0
15	SLU 29	0	-0.18	7.31	0	0	0
15	SLU 30	0	-0.19	7.31	0	0	0
15	SLU 31	-0.01	-0.19	7.93	0	0	0
15	SLU 32	-0.01	-0.19	8.08	0	0	0
15	SLU 33	-0.01	-0.19	8.07	0	0	0
15	SLU 34	-0.01	-0.19	8.01	0	0	0
15	SLU 35	-0.01	-0.19	8.15	0	0	0
15	SLU 36	-0.01	-0.19	8.15	0	0	0
15	SLU 37	-0.01	-0.19	8.09	0	0	0
15	SLU 38	-0.01	-0.19	8.09	0	0	0
15	SLU 39	-0.01	-0.19	8.27	0	0	0
15	SLU 40	-0.01	-0.2	8.27	0	0	0
15	SLU 41	-0.01	-0.19	8.35	0	0	0
15	SLU 42	-0.01	-0.2	8.34	0	0	0
15	SLU 43	0.01	-0.25	8.16	0	0	0
15	SLU 44	0.01	-0.25	8.15	0	0	0
15	SLU 45	0.01	-0.25	8.3	0	0	0
15	SLU 46	0.01	-0.25	8.3	0	0	0
15	SLU 47	0.01	-0.25	8.23	0	0	0
15	SLU 48	0	-0.25	8.38	0	0	0
15	SLU 49	0	-0.25	8.37	0	0	0
15	SLU 50	0	-0.25	8.31	0	0	0
15	SLU 51	0	-0.25	8.31	0	0	0
15	SLU 52	0	-0.26	8.93	0	0	0
15	SLU 53	-0.01	-0.26	9.08	0	0	0
15	SLU 54	-0.01	-0.26	9.08	0	0	0
15	SLU 55	-0.01	-0.26	9.01	0	0	0
15	SLU 56	-0.01	-0.25	9.16	0	0	0
15	SLU 57	-0.01	-0.26	9.15	0	0	0
15	SLU 58	-0.01	-0.25	9.09	0	0	0
15	SLU 59	-0.01	-0.25	9.09	0	0	0
15	SLU 60	-0.01	-0.26	9.27	0	0	0
15	SLU 61	-0.01	-0.26	9.27	0	0	0
15	SLU 62	-0.01	-0.26	9.35	0	0	0
15	SLU 63	-0.01	-0.26	9.35	0	0	0
15	SLU 64	0.01	-0.24	8.85	0	0	0
15	SLU 65	0.01	-0.25	8.85	0	0	0
15	SLU 66	0.01	-0.24	8.99	0	0	0
15	SLU 67	0.01	-0.25	8.99	0	0	0
15	SLU 68	0.01	-0.25	8.93	0	0	0
15	SLU 69	0	-0.24	9.07	0	0	0
15	SLU 70	0	-0.25	9.07	0	0	0
15	SLU 71	0	-0.24	9.01	0	0	0
15	SLU 72	0	-0.24	9.01	0	0	0
15	SLU 73	0	-0.25	9.63	0	0	0
15	SLU 74	-0.01	-0.25	9.77	0	0	0
15	SLU 75	-0.01	-0.25	9.77	0	0	0
15	SLU 76	-0.01	-0.25	9.71	0	0	0
15	SLU 77	-0.01	-0.25	9.85	0	0	0
15	SLU 78	-0.01	-0.25	9.85	0	0	0
15	SLU 79	-0.01	-0.25	9.79	0	0	0
15	SLU 80	-0.01	-0.25	9.79	0	0	0
15	SLU 81	-0.01	-0.25	9.97	0	0	0
15	SLU 82	-0.01	-0.25	9.97	0	0	0
15	SLU 83	-0.01	-0.25	10.04	0	0	0
15	SLU 84	-0.01	-0.25	10.04	0	0	0
15	SLE RA 1	0.01	-0.19	6.66	0	0	0
15	SLE RA 2	0.01	-0.19	6.66	0	0	0
15	SLE RA 3	0.01	-0.19	6.75	0	0	0
15	SLE RA 4	0.01	-0.19	6.75	0	0	0
15	SLE RA 5	0.01	-0.19	6.71	0	0	0
15	SLE RA 6	0	-0.19	6.8	0	0	0
15	SLE RA 7	0	-0.19	6.8	0	0	0
15	SLE RA 8	0	-0.19	6.76	0	0	0
15	SLE RA 9	0	-0.19	6.76	0	0	0
15	SLE RA 10	0	-0.19	7.18	0	0	0
15	SLE RA 11	0	-0.19	7.27	0	0	0
15	SLE RA 12	0	-0.19	7.27	0	0	0
15	SLE RA 13	0	-0.19	7.23	0	0	0
15	SLE RA 14	-0.01	-0.19	7.32	0	0	0
15	SLE RA 15	-0.01	-0.19	7.32	0	0	0
15	SLE RA 16	-0.01	-0.19	7.28	0	0	0
15	SLE RA 17	-0.01	-0.19	7.28	0	0	0
15	SLE RA 18	-0.01	-0.19	7.4	0	0	0
15	SLE RA 19	0	-0.2	7.4	0	0	0
15	SLE RA 20	-0.01	-0.19	7.45	0	0	0
15	SLE RA 21	-0.01	-0.2	7.45	0	0	0
15	SLE FR 1	0.01	-0.19	6.66	0	0	0
15	SLE FR 2	0.01	-0.19	6.66	0	0	0
15	SLE FR 3	0.01	-0.19	6.68	0	0	0
15	SLE FR 4	0	-0.19	6.88	0	0	0
15	SLE FR 5	0	-0.19	6.9	0	0	0
15	SLE FR 6	0	-0.19	7.03	0	0	0
15	SLE QP 1	0.01	-0.19	6.66	0	0	0
15	SLE QP 2	0	-0.19	6.88	0	0	0
15	SLD 1	0.38	-0.16	6.85	0	0	0
15	SLD 2	0.39	-0.14	6.85	0	0	0
15	SLD 3	0.35	-0.28	6.79	0	0	0
15	SLD 4	0.37	-0.26	6.79	0	0	0
15	SLD 5	0.15	0	6.96	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
15	SLD 6	0.16	0.01	6.96	0	0	0
15	SLD 7	0.07	-0.4	6.76	0	0	0
15	SLD 8	0.08	-0.39	6.77	0	0	0
15	SLD 9	-0.07	0.01	6.99	0	0	0
15	SLD 10	-0.06	0.02	6.99	0	0	0
15	SLD 11	-0.15	-0.39	6.8	0	0	0
15	SLD 12	-0.14	-0.38	6.8	0	0	0
15	SLD 13	-0.36	-0.12	6.96	0	0	0
15	SLD 14	-0.35	-0.1	6.97	0	0	0
15	SLD 15	-0.39	-0.24	6.91	0	0	0
15	SLD 16	-0.37	-0.22	6.91	0	0	0
15	SLV 1	0.88	-0.12	6.8	0	0	0
15	SLV 2	0.92	-0.09	6.81	0	0	0
15	SLV 3	0.82	-0.39	6.67	0	0	0
15	SLV 4	0.86	-0.35	6.68	0	0	0
15	SLV 5	0.34	0.23	7.05	0	0	0
15	SLV 6	0.37	0.25	7.06	0	0	0
15	SLV 7	0.16	-0.66	6.62	0	0	0
15	SLV 8	0.18	-0.64	6.62	0	0	0
15	SLV 9	-0.18	0.26	7.14	0	0	0
15	SLV 10	-0.15	0.28	7.14	0	0	0
15	SLV 11	-0.36	-0.64	6.7	0	0	0
15	SLV 12	-0.34	-0.61	6.7	0	0	0
15	SLV 13	-0.86	-0.03	7.08	0	0	0
15	SLV 14	-0.82	0.01	7.09	0	0	0
15	SLV 15	-0.91	-0.3	6.95	0	0	0
15	SLV 16	-0.87	-0.26	6.95	0	0	0
16	SLU 1	0.01	-0.19	6.46	0	0	0
16	SLU 2	0.01	-0.19	6.45	0	0	0
16	SLU 3	0	-0.19	6.6	0	0	0
16	SLU 4	0	-0.19	6.6	0	0	0
16	SLU 5	0	-0.19	6.53	0	0	0
16	SLU 6	0	-0.18	6.67	0	0	0
16	SLU 7	0	-0.19	6.67	0	0	0
16	SLU 8	0	-0.18	6.61	0	0	0
16	SLU 9	0	-0.18	6.61	0	0	0
16	SLU 10	0	-0.19	7.22	0	0	0
16	SLU 11	-0.01	-0.19	7.37	0	0	0
16	SLU 12	-0.01	-0.19	7.37	0	0	0
16	SLU 13	-0.01	-0.19	7.3	0	0	0
16	SLU 14	-0.01	-0.19	7.44	0	0	0
16	SLU 15	-0.01	-0.19	7.44	0	0	0
16	SLU 16	-0.01	-0.19	7.38	0	0	0
16	SLU 17	-0.01	-0.19	7.38	0	0	0
16	SLU 18	-0.01	-0.19	7.56	0	0	0
16	SLU 19	-0.01	-0.2	7.56	0	0	0
16	SLU 20	-0.01	-0.19	7.63	0	0	0
16	SLU 21	-0.01	-0.19	7.63	0	0	0
16	SLU 22	0.01	-0.18	7.15	0	0	0
16	SLU 23	0.01	-0.18	7.15	0	0	0
16	SLU 24	0	-0.18	7.29	0	0	0
16	SLU 25	0	-0.18	7.29	0	0	0
16	SLU 26	0	-0.18	7.22	0	0	0
16	SLU 27	0	-0.18	7.37	0	0	0
16	SLU 28	0	-0.18	7.37	0	0	0
16	SLU 29	0	-0.18	7.3	0	0	0
16	SLU 30	0	-0.18	7.3	0	0	0
16	SLU 31	-0.01	-0.19	7.92	0	0	0
16	SLU 32	-0.01	-0.19	8.06	0	0	0
16	SLU 33	-0.01	-0.19	8.06	0	0	0
16	SLU 34	-0.01	-0.19	8	0	0	0
16	SLU 35	-0.01	-0.19	8.14	0	0	0
16	SLU 36	-0.01	-0.19	8.14	0	0	0
16	SLU 37	-0.01	-0.18	8.07	0	0	0
16	SLU 38	-0.01	-0.19	8.07	0	0	0
16	SLU 39	-0.01	-0.19	8.25	0	0	0
16	SLU 40	-0.01	-0.19	8.25	0	0	0
16	SLU 41	-0.02	-0.19	8.33	0	0	0
16	SLU 42	-0.01	-0.19	8.33	0	0	0
16	SLU 43	0.01	-0.24	8.15	0	0	0
16	SLU 44	0.01	-0.25	8.15	0	0	0
16	SLU 45	0.01	-0.24	8.29	0	0	0
16	SLU 46	0.01	-0.24	8.29	0	0	0
16	SLU 47	0.01	-0.24	8.23	0	0	0
16	SLU 48	0	-0.24	8.37	0	0	0
16	SLU 49	0	-0.24	8.37	0	0	0
16	SLU 50	0	-0.24	8.31	0	0	0
16	SLU 51	0	-0.24	8.3	0	0	0
16	SLU 52	0	-0.25	8.92	0	0	0
16	SLU 53	-0.01	-0.25	9.07	0	0	0
16	SLU 54	-0.01	-0.25	9.06	0	0	0
16	SLU 55	-0.01	-0.25	9	0	0	0
16	SLU 56	-0.01	-0.25	9.14	0	0	0
16	SLU 57	-0.01	-0.25	9.14	0	0	0
16	SLU 58	-0.01	-0.25	9.08	0	0	0
16	SLU 59	-0.01	-0.25	9.08	0	0	0
16	SLU 60	-0.01	-0.25	9.26	0	0	0
16	SLU 61	-0.01	-0.25	9.25	0	0	0
16	SLU 62	-0.01	-0.25	9.33	0	0	0
16	SLU 63	-0.01	-0.25	9.33	0	0	0
16	SLU 64	0.01	-0.24	8.85	0	0	0
16	SLU 65	0.01	-0.24	8.85	0	0	0
16	SLU 66	0.01	-0.24	8.99	0	0	0
16	SLU 67	0.01	-0.24	8.99	0	0	0
16	SLU 68	0.01	-0.24	8.92	0	0	0
16	SLU 69	0	-0.24	9.07	0	0	0
16	SLU 70	0	-0.24	9.06	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
16	SLU 71	0	-0.24	9	0	0	0
16	SLU 72	0	-0.24	9	0	0	0
16	SLU 73	0	-0.25	9.62	0	0	0
16	SLU 74	-0.01	-0.24	9.76	0	0	0
16	SLU 75	-0.01	-0.25	9.76	0	0	0
16	SLU 76	-0.01	-0.25	9.69	0	0	0
16	SLU 77	-0.01	-0.24	9.84	0	0	0
16	SLU 78	-0.01	-0.24	9.84	0	0	0
16	SLU 79	-0.01	-0.24	9.77	0	0	0
16	SLU 80	-0.01	-0.24	9.77	0	0	0
16	SLU 81	-0.01	-0.25	9.95	0	0	0
16	SLU 82	-0.01	-0.25	9.95	0	0	0
16	SLU 83	-0.01	-0.25	10.03	0	0	0
16	SLU 84	-0.01	-0.25	10.03	0	0	0
16	SLE RA 1	0.01	-0.18	6.65	0	0	0
16	SLE RA 2	0.01	-0.19	6.65	0	0	0
16	SLE RA 3	0	-0.18	6.75	0	0	0
16	SLE RA 4	0.01	-0.19	6.75	0	0	0
16	SLE RA 5	0	-0.19	6.7	0	0	0
16	SLE RA 6	0	-0.18	6.8	0	0	0
16	SLE RA 7	0	-0.18	6.8	0	0	0
16	SLE RA 8	0	-0.18	6.76	0	0	0
16	SLE RA 9	0	-0.18	6.75	0	0	0
16	SLE RA 10	0	-0.19	7.17	0	0	0
16	SLE RA 11	0	-0.19	7.26	0	0	0
16	SLE RA 12	0	-0.19	7.26	0	0	0
16	SLE RA 13	0	-0.19	7.22	0	0	0
16	SLE RA 14	-0.01	-0.19	7.31	0	0	0
16	SLE RA 15	-0.01	-0.19	7.31	0	0	0
16	SLE RA 16	-0.01	-0.19	7.27	0	0	0
16	SLE RA 17	-0.01	-0.19	7.27	0	0	0
16	SLE RA 18	-0.01	-0.19	7.39	0	0	0
16	SLE RA 19	-0.01	-0.19	7.39	0	0	0
16	SLE RA 20	-0.01	-0.19	7.44	0	0	0
16	SLE RA 21	-0.01	-0.19	7.44	0	0	0
16	SLE FR 1	0.01	-0.18	6.65	0	0	0
16	SLE FR 2	0.01	-0.18	6.65	0	0	0
16	SLE FR 3	0.01	-0.18	6.67	0	0	0
16	SLE FR 4	0	-0.19	6.87	0	0	0
16	SLE FR 5	0	-0.19	6.89	0	0	0
16	SLE FR 6	0	-0.19	7.02	0	0	0
16	SLE QP 1	0.01	-0.18	6.65	0	0	0
16	SLE QP 2	0	-0.19	6.87	0	0	0
16	SLD 1	0.38	-0.16	6.8	0	0	0
16	SLD 2	0.4	-0.14	6.8	0	0	0
16	SLD 3	0.36	-0.27	6.74	0	0	0
16	SLD 4	0.37	-0.26	6.74	0	0	0
16	SLD 5	0.15	0	6.95	0	0	0
16	SLD 6	0.16	0.01	6.95	0	0	0
16	SLD 7	0.07	-0.39	6.74	0	0	0
16	SLD 8	0.08	-0.38	6.74	0	0	0
16	SLD 9	-0.07	0.01	7.01	0	0	0
16	SLD 10	-0.06	0.02	7.01	0	0	0
16	SLD 11	-0.15	-0.38	6.8	0	0	0
16	SLD 12	-0.14	-0.37	6.8	0	0	0
16	SLD 13	-0.37	-0.11	7.01	0	0	0
16	SLD 14	-0.35	-0.1	7.01	0	0	0
16	SLD 15	-0.39	-0.23	6.95	0	0	0
16	SLD 16	-0.37	-0.21	6.95	0	0	0
16	SLV 1	0.88	-0.12	6.69	0	0	0
16	SLV 2	0.92	-0.08	6.69	0	0	0
16	SLV 3	0.83	-0.39	6.55	0	0	0
16	SLV 4	0.87	-0.35	6.55	0	0	0
16	SLV 5	0.34	0.23	7.04	0	0	0
16	SLV 6	0.37	0.26	7.04	0	0	0
16	SLV 7	0.16	-0.66	6.56	0	0	0
16	SLV 8	0.18	-0.63	6.56	0	0	0
16	SLV 9	-0.18	0.26	7.19	0	0	0
16	SLV 10	-0.15	0.29	7.19	0	0	0
16	SLV 11	-0.36	-0.63	6.71	0	0	0
16	SLV 12	-0.34	-0.6	6.71	0	0	0
16	SLV 13	-0.86	-0.02	7.2	0	0	0
16	SLV 14	-0.82	0.02	7.2	0	0	0
16	SLV 15	-0.92	-0.29	7.05	0	0	0
16	SLV 16	-0.88	-0.25	7.06	0	0	0
17	SLU 1	0	-0.09	3.22	0	0	0
17	SLU 2	0	-0.09	3.22	0	0	0
17	SLU 3	0	-0.09	3.29	0	0	0
17	SLU 4	0	-0.09	3.29	0	0	0
17	SLU 5	0	-0.09	3.26	0	0	0
17	SLU 6	0	-0.09	3.33	0	0	0
17	SLU 7	0	-0.09	3.33	0	0	0
17	SLU 8	0	-0.09	3.3	0	0	0
17	SLU 9	0	-0.09	3.29	0	0	0
17	SLU 10	0	-0.09	3.6	0	0	0
17	SLU 11	0	-0.09	3.67	0	0	0
17	SLU 12	0	-0.09	3.67	0	0	0
17	SLU 13	0	-0.09	3.64	0	0	0
17	SLU 14	-0.01	-0.09	3.71	0	0	0
17	SLU 15	-0.01	-0.09	3.71	0	0	0
17	SLU 16	-0.01	-0.09	3.68	0	0	0
17	SLU 17	-0.01	-0.09	3.68	0	0	0
17	SLU 18	-0.01	-0.09	3.76	0	0	0
17	SLU 19	-0.01	-0.09	3.76	0	0	0
17	SLU 20	-0.01	-0.09	3.8	0	0	0
17	SLU 21	-0.01	-0.09	3.8	0	0	0
17	SLU 22	0	-0.09	3.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLU 23	0	-0.09	3.57	0	0	0
17	SLU 24	0	-0.09	3.64	0	0	0
17	SLU 25	0	-0.09	3.64	0	0	0
17	SLU 26	0	-0.09	3.6	0	0	0
17	SLU 27	0	-0.09	3.67	0	0	0
17	SLU 28	0	-0.09	3.67	0	0	0
17	SLU 29	0	-0.09	3.64	0	0	0
17	SLU 30	0	-0.09	3.64	0	0	0
17	SLU 31	0	-0.09	3.95	0	0	0
17	SLU 32	0	-0.09	4.02	0	0	0
17	SLU 33	0	-0.09	4.02	0	0	0
17	SLU 34	0	-0.09	3.98	0	0	0
17	SLU 35	-0.01	-0.09	4.05	0	0	0
17	SLU 36	-0.01	-0.09	4.05	0	0	0
17	SLU 37	-0.01	-0.09	4.02	0	0	0
17	SLU 38	-0.01	-0.09	4.02	0	0	0
17	SLU 39	-0.01	-0.09	4.11	0	0	0
17	SLU 40	-0.01	-0.09	4.11	0	0	0
17	SLU 41	-0.01	-0.09	4.15	0	0	0
17	SLU 42	-0.01	-0.09	4.15	0	0	0
17	SLU 43	0	-0.12	4.07	0	0	0
17	SLU 44	0	-0.12	4.07	0	0	0
17	SLU 45	0	-0.12	4.14	0	0	0
17	SLU 46	0	-0.12	4.14	0	0	0
17	SLU 47	0	-0.12	4.11	0	0	0
17	SLU 48	0	-0.12	4.18	0	0	0
17	SLU 49	0	-0.12	4.18	0	0	0
17	SLU 50	0	-0.12	4.14	0	0	0
17	SLU 51	0	-0.12	4.14	0	0	0
17	SLU 52	0	-0.12	4.45	0	0	0
17	SLU 53	0	-0.12	4.52	0	0	0
17	SLU 54	0	-0.12	4.52	0	0	0
17	SLU 55	0	-0.12	4.49	0	0	0
17	SLU 56	0	-0.12	4.56	0	0	0
17	SLU 57	0	-0.12	4.56	0	0	0
17	SLU 58	-0.01	-0.12	4.52	0	0	0
17	SLU 59	0	-0.12	4.52	0	0	0
17	SLU 60	0	-0.12	4.61	0	0	0
17	SLU 61	0	-0.12	4.61	0	0	0
17	SLU 62	-0.01	-0.12	4.65	0	0	0
17	SLU 63	-0.01	-0.12	4.65	0	0	0
17	SLU 64	0	-0.12	4.42	0	0	0
17	SLU 65	0	-0.12	4.41	0	0	0
17	SLU 66	0	-0.12	4.48	0	0	0
17	SLU 67	0	-0.12	4.48	0	0	0
17	SLU 68	0	-0.12	4.45	0	0	0
17	SLU 69	0	-0.12	4.52	0	0	0
17	SLU 70	0	-0.12	4.52	0	0	0
17	SLU 71	0	-0.11	4.49	0	0	0
17	SLU 72	0	-0.12	4.49	0	0	0
17	SLU 73	0	-0.12	4.79	0	0	0
17	SLU 74	0	-0.12	4.86	0	0	0
17	SLU 75	0	-0.12	4.86	0	0	0
17	SLU 76	0	-0.12	4.83	0	0	0
17	SLU 77	-0.01	-0.12	4.9	0	0	0
17	SLU 78	-0.01	-0.12	4.9	0	0	0
17	SLU 79	-0.01	-0.12	4.87	0	0	0
17	SLU 80	-0.01	-0.12	4.87	0	0	0
17	SLU 81	-0.01	-0.12	4.96	0	0	0
17	SLU 82	0	-0.12	4.96	0	0	0
17	SLU 83	-0.01	-0.12	5	0	0	0
17	SLU 84	-0.01	-0.12	4.99	0	0	0
17	SLE RA 1	0	-0.09	3.32	0	0	0
17	SLE RA 2	0	-0.09	3.32	0	0	0
17	SLE RA 3	0	-0.09	3.37	0	0	0
17	SLE RA 4	0	-0.09	3.37	0	0	0
17	SLE RA 5	0	-0.09	3.34	0	0	0
17	SLE RA 6	0	-0.09	3.39	0	0	0
17	SLE RA 7	0	-0.09	3.39	0	0	0
17	SLE RA 8	0	-0.09	3.37	0	0	0
17	SLE RA 9	0	-0.09	3.37	0	0	0
17	SLE RA 10	0	-0.09	3.57	0	0	0
17	SLE RA 11	0	-0.09	3.62	0	0	0
17	SLE RA 12	0	-0.09	3.62	0	0	0
17	SLE RA 13	0	-0.09	3.6	0	0	0
17	SLE RA 14	0	-0.09	3.64	0	0	0
17	SLE RA 15	0	-0.09	3.64	0	0	0
17	SLE RA 16	0	-0.09	3.62	0	0	0
17	SLE RA 17	0	-0.09	3.62	0	0	0
17	SLE RA 18	0	-0.09	3.68	0	0	0
17	SLE RA 19	0	-0.09	3.68	0	0	0
17	SLE RA 20	0	-0.09	3.71	0	0	0
17	SLE RA 21	0	-0.09	3.71	0	0	0
17	SLE FR 1	0	-0.09	3.32	0	0	0
17	SLE FR 2	0	-0.09	3.32	0	0	0
17	SLE FR 3	0	-0.09	3.33	0	0	0
17	SLE FR 4	0	-0.09	3.43	0	0	0
17	SLE FR 5	0	-0.09	3.44	0	0	0
17	SLE FR 6	0	-0.09	3.5	0	0	0
17	SLE QP 1	0	-0.09	3.32	0	0	0
17	SLE QP 2	0	-0.09	3.43	0	0	0
17	SLD 1	0.19	-0.08	3.37	0	0	0
17	SLD 2	0.2	-0.07	3.37	0	0	0
17	SLD 3	0.18	-0.14	3.33	0	0	0
17	SLD 4	0.19	-0.13	3.33	0	0	0
17	SLD 5	0.07	0	3.46	0	0	0
17	SLD 6	0.08	0.01	3.46	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLD 7	0.03	-0.19	3.35	0	0	0
17	SLD 8	0.04	-0.19	3.35	0	0	0
17	SLD 9	-0.04	0.01	3.51	0	0	0
17	SLD 10	-0.03	0.01	3.51	0	0	0
17	SLD 11	-0.08	-0.19	3.4	0	0	0
17	SLD 12	-0.07	-0.18	3.4	0	0	0
17	SLD 13	-0.18	-0.06	3.53	0	0	0
17	SLD 14	-0.18	-0.05	3.52	0	0	0
17	SLD 15	-0.2	-0.11	3.49	0	0	0
17	SLD 16	-0.19	-0.1	3.49	0	0	0
17	SLV 1	0.44	-0.06	3.28	0	0	0
17	SLV 2	0.46	-0.04	3.28	0	0	0
17	SLV 3	0.41	-0.19	3.21	0	0	0
17	SLV 4	0.43	-0.17	3.2	0	0	0
17	SLV 5	0.17	0.11	3.5	0	0	0
17	SLV 6	0.19	0.13	3.5	0	0	0
17	SLV 7	0.08	-0.33	3.24	0	0	0
17	SLV 8	0.09	-0.31	3.24	0	0	0
17	SLV 9	-0.09	0.13	3.61	0	0	0
17	SLV 10	-0.08	0.14	3.61	0	0	0
17	SLV 11	-0.18	-0.31	3.36	0	0	0
17	SLV 12	-0.17	-0.29	3.35	0	0	0
17	SLV 13	-0.43	-0.01	3.65	0	0	0
17	SLV 14	-0.41	0.01	3.65	0	0	0
17	SLV 15	-0.46	-0.14	3.58	0	0	0
17	SLV 16	-0.44	-0.12	3.57	0	0	0
18	SLU 1	0	-0.21	6.39	0	0	0
18	SLU 2	0	-0.22	6.39	0	0	0
18	SLU 3	0	-0.21	6.54	0	0	0
18	SLU 4	0	-0.21	6.54	0	0	0
18	SLU 5	0	-0.21	6.48	0	0	0
18	SLU 6	0	-0.21	6.63	0	0	0
18	SLU 7	0	-0.21	6.63	0	0	0
18	SLU 8	0	-0.21	6.56	0	0	0
18	SLU 9	0	-0.21	6.56	0	0	0
18	SLU 10	-0.01	-0.22	7.2	0	0	0
18	SLU 11	-0.01	-0.22	7.35	0	0	0
18	SLU 12	-0.01	-0.22	7.35	0	0	0
18	SLU 13	-0.01	-0.22	7.29	0	0	0
18	SLU 14	-0.02	-0.22	7.44	0	0	0
18	SLU 15	-0.02	-0.22	7.44	0	0	0
18	SLU 16	-0.02	-0.22	7.38	0	0	0
18	SLU 17	-0.02	-0.22	7.38	0	0	0
18	SLU 18	-0.02	-0.23	7.55	0	0	0
18	SLU 19	-0.02	-0.23	7.55	0	0	0
18	SLU 20	-0.02	-0.22	7.64	0	0	0
18	SLU 21	-0.02	-0.23	7.64	0	0	0
18	SLU 22	0	-0.21	7.09	0	0	0
18	SLU 23	0	-0.21	7.09	0	0	0
18	SLU 24	0	-0.21	7.24	0	0	0
18	SLU 25	0	-0.21	7.24	0	0	0
18	SLU 26	0	-0.21	7.18	0	0	0
18	SLU 27	-0.01	-0.21	7.33	0	0	0
18	SLU 28	-0.01	-0.21	7.33	0	0	0
18	SLU 29	-0.01	-0.21	7.27	0	0	0
18	SLU 30	-0.01	-0.21	7.27	0	0	0
18	SLU 31	-0.01	-0.22	7.9	0	0	0
18	SLU 32	-0.02	-0.22	8.05	0	0	0
18	SLU 33	-0.01	-0.22	8.05	0	0	0
18	SLU 34	-0.02	-0.22	7.99	0	0	0
18	SLU 35	-0.02	-0.22	8.14	0	0	0
18	SLU 36	-0.02	-0.22	8.14	0	0	0
18	SLU 37	-0.02	-0.22	8.08	0	0	0
18	SLU 38	-0.02	-0.22	8.08	0	0	0
18	SLU 39	-0.02	-0.22	8.25	0	0	0
18	SLU 40	-0.02	-0.22	8.25	0	0	0
18	SLU 41	-0.02	-0.22	8.34	0	0	0
18	SLU 42	-0.02	-0.22	8.34	0	0	0
18	SLU 43	0	-0.28	8.07	0	0	0
18	SLU 44	0	-0.28	8.07	0	0	0
18	SLU 45	0	-0.28	8.22	0	0	0
18	SLU 46	0	-0.28	8.22	0	0	0
18	SLU 47	0	-0.28	8.16	0	0	0
18	SLU 48	0	-0.28	8.3	0	0	0
18	SLU 49	0	-0.28	8.3	0	0	0
18	SLU 50	0	-0.27	8.24	0	0	0
18	SLU 51	0	-0.28	8.24	0	0	0
18	SLU 52	-0.01	-0.29	8.88	0	0	0
18	SLU 53	-0.01	-0.29	9.03	0	0	0
18	SLU 54	-0.01	-0.29	9.03	0	0	0
18	SLU 55	-0.01	-0.29	8.97	0	0	0
18	SLU 56	-0.02	-0.29	9.12	0	0	0
18	SLU 57	-0.02	-0.29	9.12	0	0	0
18	SLU 58	-0.02	-0.28	9.05	0	0	0
18	SLU 59	-0.02	-0.29	9.05	0	0	0
18	SLU 60	-0.02	-0.29	9.23	0	0	0
18	SLU 61	-0.02	-0.29	9.23	0	0	0
18	SLU 62	-0.02	-0.29	9.32	0	0	0
18	SLU 63	-0.02	-0.29	9.32	0	0	0
18	SLU 64	0	-0.27	8.77	0	0	0
18	SLU 65	0	-0.28	8.77	0	0	0
18	SLU 66	0	-0.27	8.92	0	0	0
18	SLU 67	0	-0.28	8.92	0	0	0
18	SLU 68	0	-0.28	8.86	0	0	0
18	SLU 69	0	-0.27	9.01	0	0	0
18	SLU 70	0	-0.28	9.01	0	0	0
18	SLU 71	0	-0.27	8.94	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18	SLU 72	0	-0.27	8.94	0	0	0
18	SLU 73	-0.01	-0.29	9.58	0	0	0
18	SLU 74	-0.01	-0.28	9.73	0	0	0
18	SLU 75	-0.01	-0.29	9.73	0	0	0
18	SLU 76	-0.01	-0.29	9.67	0	0	0
18	SLU 77	-0.02	-0.28	9.82	0	0	0
18	SLU 78	-0.02	-0.28	9.82	0	0	0
18	SLU 79	-0.02	-0.28	9.75	0	0	0
18	SLU 80	-0.02	-0.28	9.76	0	0	0
18	SLU 81	-0.02	-0.29	9.93	0	0	0
18	SLU 82	-0.02	-0.29	9.93	0	0	0
18	SLU 83	-0.02	-0.29	10.02	0	0	0
18	SLU 84	-0.02	-0.29	10.02	0	0	0
18	SLE RA 1	0	-0.21	6.59	0	0	0
18	SLE RA 2	0	-0.21	6.59	0	0	0
18	SLE RA 3	0	-0.21	6.69	0	0	0
18	SLE RA 4	0	-0.21	6.69	0	0	0
18	SLE RA 5	0	-0.21	6.65	0	0	0
18	SLE RA 6	0	-0.21	6.75	0	0	0
18	SLE RA 7	0	-0.21	6.75	0	0	0
18	SLE RA 8	0	-0.21	6.71	0	0	0
18	SLE RA 9	0	-0.21	6.71	0	0	0
18	SLE RA 10	-0.01	-0.22	7.13	0	0	0
18	SLE RA 11	-0.01	-0.22	7.23	0	0	0
18	SLE RA 12	-0.01	-0.22	7.23	0	0	0
18	SLE RA 13	-0.01	-0.22	7.19	0	0	0
18	SLE RA 14	-0.01	-0.22	7.29	0	0	0
18	SLE RA 15	-0.01	-0.22	7.29	0	0	0
18	SLE RA 16	-0.01	-0.22	7.25	0	0	0
18	SLE RA 17	-0.01	-0.22	7.25	0	0	0
18	SLE RA 18	-0.01	-0.22	7.37	0	0	0
18	SLE RA 19	-0.01	-0.22	7.37	0	0	0
18	SLE RA 20	-0.01	-0.22	7.42	0	0	0
18	SLE RA 21	-0.01	-0.22	7.42	0	0	0
18	SLE FR 1	0	-0.21	6.59	0	0	0
18	SLE FR 2	0	-0.21	6.59	0	0	0
18	SLE FR 3	0	-0.21	6.62	0	0	0
18	SLE FR 4	0	-0.21	6.82	0	0	0
18	SLE FR 5	0	-0.21	6.85	0	0	0
18	SLE FR 6	0	-0.22	6.98	0	0	0
18	SLE QP 1	0	-0.21	6.59	0	0	0
18	SLE QP 2	0	-0.21	6.82	0	0	0
18	SLD 1	0.38	-0.17	6.98	0	0	0
18	SLD 2	0.39	-0.17	6.99	0	0	0
18	SLD 3	0.35	-0.29	6.95	0	0	0
18	SLD 4	0.37	-0.29	6.96	0	0	0
18	SLD 5	0.15	-0.01	6.91	0	0	0
18	SLD 6	0.15	-0.01	6.91	0	0	0
18	SLD 7	0.07	-0.43	6.82	0	0	0
18	SLD 8	0.07	-0.43	6.83	0	0	0
18	SLD 9	-0.08	0	6.82	0	0	0
18	SLD 10	-0.07	0	6.83	0	0	0
18	SLD 11	-0.16	-0.42	6.73	0	0	0
18	SLD 12	-0.15	-0.42	6.74	0	0	0
18	SLD 13	-0.37	-0.14	6.68	0	0	0
18	SLD 14	-0.36	-0.13	6.7	0	0	0
18	SLD 15	-0.39	-0.26	6.66	0	0	0
18	SLD 16	-0.38	-0.26	6.67	0	0	0
18	SLV 1	0.88	-0.11	7.18	0	0	0
18	SLV 2	0.92	-0.11	7.21	0	0	0
18	SLV 3	0.83	-0.4	7.12	0	0	0
18	SLV 4	0.86	-0.39	7.15	0	0	0
18	SLV 5	0.34	0.25	7.02	0	0	0
18	SLV 6	0.36	0.25	7.03	0	0	0
18	SLV 7	0.16	-0.7	6.82	0	0	0
18	SLV 8	0.18	-0.7	6.84	0	0	0
18	SLV 9	-0.18	0.27	6.81	0	0	0
18	SLV 10	-0.16	0.28	6.83	0	0	0
18	SLV 11	-0.37	-0.68	6.62	0	0	0
18	SLV 12	-0.35	-0.68	6.63	0	0	0
18	SLV 13	-0.86	-0.04	6.5	0	0	0
18	SLV 14	-0.83	-0.03	6.52	0	0	0
18	SLV 15	-0.92	-0.32	6.44	0	0	0
18	SLV 16	-0.89	-0.32	6.47	0	0	0
19	SLU 1	0	-0.41	12.79	0	0	0
19	SLU 2	0.01	-0.42	12.79	0	0	0
19	SLU 3	0	-0.41	13.08	0	0	0
19	SLU 4	0	-0.42	13.08	0	0	0
19	SLU 5	0	-0.42	12.96	0	0	0
19	SLU 6	-0.01	-0.41	13.25	0	0	0
19	SLU 7	-0.01	-0.42	13.25	0	0	0
19	SLU 8	-0.01	-0.41	13.13	0	0	0
19	SLU 9	-0.01	-0.41	13.13	0	0	0
19	SLU 10	-0.02	-0.44	14.4	0	0	0
19	SLU 11	-0.03	-0.43	14.69	0	0	0
19	SLU 12	-0.03	-0.44	14.69	0	0	0
19	SLU 13	-0.03	-0.44	14.57	0	0	0
19	SLU 14	-0.03	-0.43	14.86	0	0	0
19	SLU 15	-0.03	-0.43	14.86	0	0	0
19	SLU 16	-0.04	-0.43	14.74	0	0	0
19	SLU 17	-0.04	-0.43	14.74	0	0	0
19	SLU 18	-0.03	-0.44	15.09	0	0	0
19	SLU 19	-0.03	-0.44	15.09	0	0	0
19	SLU 20	-0.04	-0.44	15.26	0	0	0
19	SLU 21	-0.04	-0.44	15.26	0	0	0
19	SLU 22	0	-0.41	14.19	0	0	0
19	SLU 23	0	-0.41	14.19	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
19	SLU 24	0	-0.41	14.49	0	0	0
19	SLU 25	0	-0.41	14.48	0	0	0
19	SLU 26	0	-0.41	14.36	0	0	0
19	SLU 27	-0.01	-0.41	14.65	0	0	0
19	SLU 28	-0.01	-0.41	14.65	0	0	0
19	SLU 29	-0.01	-0.4	14.53	0	0	0
19	SLU 30	-0.01	-0.41	14.53	0	0	0
19	SLU 31	-0.02	-0.43	15.8	0	0	0
19	SLU 32	-0.03	-0.42	16.09	0	0	0
19	SLU 33	-0.03	-0.43	16.09	0	0	0
19	SLU 34	-0.03	-0.43	15.97	0	0	0
19	SLU 35	-0.04	-0.42	16.26	0	0	0
19	SLU 36	-0.04	-0.43	16.26	0	0	0
19	SLU 37	-0.04	-0.42	16.14	0	0	0
19	SLU 38	-0.04	-0.42	16.14	0	0	0
19	SLU 39	-0.04	-0.43	16.49	0	0	0
19	SLU 40	-0.04	-0.43	16.49	0	0	0
19	SLU 41	-0.04	-0.43	16.66	0	0	0
19	SLU 42	-0.04	-0.43	16.66	0	0	0
19	SLU 43	0.01	-0.54	16.15	0	0	0
19	SLU 44	0.01	-0.55	16.15	0	0	0
19	SLU 45	0	-0.54	16.44	0	0	0
19	SLU 46	0	-0.55	16.44	0	0	0
19	SLU 47	0	-0.54	16.31	0	0	0
19	SLU 48	-0.01	-0.54	16.61	0	0	0
19	SLU 49	-0.01	-0.54	16.61	0	0	0
19	SLU 50	-0.01	-0.54	16.48	0	0	0
19	SLU 51	-0.01	-0.54	16.48	0	0	0
19	SLU 52	-0.02	-0.56	17.75	0	0	0
19	SLU 53	-0.03	-0.56	18.05	0	0	0
19	SLU 54	-0.03	-0.56	18.05	0	0	0
19	SLU 55	-0.03	-0.56	17.92	0	0	0
19	SLU 56	-0.03	-0.56	18.22	0	0	0
19	SLU 57	-0.03	-0.56	18.22	0	0	0
19	SLU 58	-0.03	-0.55	18.09	0	0	0
19	SLU 59	-0.03	-0.56	18.09	0	0	0
19	SLU 60	-0.03	-0.56	18.44	0	0	0
19	SLU 61	-0.03	-0.57	18.44	0	0	0
19	SLU 62	-0.04	-0.56	18.61	0	0	0
19	SLU 63	-0.04	-0.57	18.61	0	0	0
19	SLU 64	0	-0.53	17.55	0	0	0
19	SLU 65	0	-0.54	17.55	0	0	0
19	SLU 66	0	-0.53	17.84	0	0	0
19	SLU 67	0	-0.54	17.84	0	0	0
19	SLU 68	0	-0.54	17.72	0	0	0
19	SLU 69	-0.01	-0.53	18.01	0	0	0
19	SLU 70	-0.01	-0.54	18.01	0	0	0
19	SLU 71	-0.01	-0.53	17.89	0	0	0
19	SLU 72	-0.01	-0.53	17.89	0	0	0
19	SLU 73	-0.02	-0.56	19.16	0	0	0
19	SLU 74	-0.03	-0.55	19.45	0	0	0
19	SLU 75	-0.03	-0.56	19.45	0	0	0
19	SLU 76	-0.03	-0.55	19.33	0	0	0
19	SLU 77	-0.04	-0.55	19.62	0	0	0
19	SLU 78	-0.03	-0.55	19.62	0	0	0
19	SLU 79	-0.04	-0.55	19.5	0	0	0
19	SLU 80	-0.04	-0.55	19.49	0	0	0
19	SLU 81	-0.03	-0.56	19.85	0	0	0
19	SLU 82	-0.03	-0.56	19.85	0	0	0
19	SLU 83	-0.04	-0.56	20.02	0	0	0
19	SLU 84	-0.04	-0.56	20.02	0	0	0
19	SLE RA 1	0	-0.41	13.19	0	0	0
19	SLE RA 2	0	-0.42	13.19	0	0	0
19	SLE RA 3	0	-0.41	13.39	0	0	0
19	SLE RA 4	0	-0.41	13.39	0	0	0
19	SLE RA 5	0	-0.41	13.3	0	0	0
19	SLE RA 6	0	-0.41	13.5	0	0	0
19	SLE RA 7	0	-0.41	13.5	0	0	0
19	SLE RA 8	-0.01	-0.41	13.42	0	0	0
19	SLE RA 9	-0.01	-0.41	13.42	0	0	0
19	SLE RA 10	-0.01	-0.43	14.26	0	0	0
19	SLE RA 11	-0.02	-0.42	14.46	0	0	0
19	SLE RA 12	-0.02	-0.43	14.46	0	0	0
19	SLE RA 13	-0.02	-0.43	14.38	0	0	0
19	SLE RA 14	-0.02	-0.42	14.57	0	0	0
19	SLE RA 15	-0.02	-0.42	14.57	0	0	0
19	SLE RA 16	-0.02	-0.42	14.49	0	0	0
19	SLE RA 17	-0.02	-0.42	14.49	0	0	0
19	SLE RA 18	-0.02	-0.43	14.72	0	0	0
19	SLE RA 19	-0.02	-0.43	14.72	0	0	0
19	SLE RA 20	-0.03	-0.43	14.84	0	0	0
19	SLE RA 21	-0.03	-0.43	14.84	0	0	0
19	SLE FR 1	0	-0.41	13.19	0	0	0
19	SLE FR 2	0	-0.41	13.19	0	0	0
19	SLE FR 3	0	-0.41	13.23	0	0	0
19	SLE FR 4	0	-0.42	13.65	0	0	0
19	SLE FR 5	-0.01	-0.42	13.69	0	0	0
19	SLE FR 6	-0.01	-0.42	13.96	0	0	0
19	SLE QP 1	0	-0.41	13.19	0	0	0
19	SLE QP 2	0	-0.42	13.65	0	0	0
19	SLD 1	0.75	-0.33	13.86	0	0	0
19	SLD 2	0.78	-0.32	13.88	0	0	0
19	SLD 3	0.71	-0.58	13.81	0	0	0
19	SLD 4	0.73	-0.57	13.83	0	0	0
19	SLD 5	0.29	-0.02	13.78	0	0	0
19	SLD 6	0.31	-0.01	13.8	0	0	0
19	SLD 7	0.13	-0.84	13.62	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
19	SLD 8	0.15	-0.84	13.63	0	0	0
19	SLD 9	-0.16	0	13.67	0	0	0
19	SLD 10	-0.14	0.01	13.68	0	0	0
19	SLD 11	-0.32	-0.82	13.5	0	0	0
19	SLD 12	-0.3	-0.82	13.51	0	0	0
19	SLD 13	-0.74	-0.26	13.47	0	0	0
19	SLD 14	-0.72	-0.25	13.49	0	0	0
19	SLD 15	-0.79	-0.51	13.42	0	0	0
19	SLD 16	-0.76	-0.5	13.44	0	0	0
19	SLV 1	1.77	-0.23	14.14	0	0	0
19	SLV 2	1.83	-0.2	14.18	0	0	0
19	SLV 3	1.66	-0.79	14.03	0	0	0
19	SLV 4	1.72	-0.76	14.07	0	0	0
19	SLV 5	0.69	0.49	13.96	0	0	0
19	SLV 6	0.73	0.51	13.99	0	0	0
19	SLV 7	0.31	-1.39	13.58	0	0	0
19	SLV 8	0.36	-1.37	13.61	0	0	0
19	SLV 9	-0.36	0.54	13.69	0	0	0
19	SLV 10	-0.32	0.56	13.71	0	0	0
19	SLV 11	-0.74	-1.34	13.31	0	0	0
19	SLV 12	-0.7	-1.32	13.34	0	0	0
19	SLV 13	-1.73	-0.07	13.23	0	0	0
19	SLV 14	-1.67	-0.04	13.27	0	0	0
19	SLV 15	-1.84	-0.63	13.11	0	0	0
19	SLV 16	-1.78	-0.61	13.16	0	0	0
20	SLU 1	0	-0.41	13.14	0	0	0
20	SLU 2	0	-0.42	13.14	0	0	0
20	SLU 3	0	-0.42	13.44	0	0	0
20	SLU 4	0	-0.42	13.44	0	0	0
20	SLU 5	0	-0.42	13.31	0	0	0
20	SLU 6	-0.01	-0.41	13.61	0	0	0
20	SLU 7	-0.01	-0.42	13.61	0	0	0
20	SLU 8	-0.01	-0.41	13.48	0	0	0
20	SLU 9	-0.01	-0.41	13.48	0	0	0
20	SLU 10	-0.02	-0.44	14.78	0	0	0
20	SLU 11	-0.03	-0.43	15.08	0	0	0
20	SLU 12	-0.03	-0.44	15.08	0	0	0
20	SLU 13	-0.03	-0.44	14.95	0	0	0
20	SLU 14	-0.04	-0.43	15.25	0	0	0
20	SLU 15	-0.04	-0.43	15.25	0	0	0
20	SLU 16	-0.04	-0.43	15.12	0	0	0
20	SLU 17	-0.04	-0.43	15.12	0	0	0
20	SLU 18	-0.04	-0.44	15.48	0	0	0
20	SLU 19	-0.03	-0.44	15.48	0	0	0
20	SLU 20	-0.04	-0.44	15.65	0	0	0
20	SLU 21	-0.04	-0.44	15.65	0	0	0
20	SLU 22	0	-0.41	14.58	0	0	0
20	SLU 23	0	-0.41	14.58	0	0	0
20	SLU 24	0	-0.41	14.88	0	0	0
20	SLU 25	0	-0.41	14.88	0	0	0
20	SLU 26	0	-0.41	14.75	0	0	0
20	SLU 27	-0.01	-0.41	15.05	0	0	0
20	SLU 28	-0.01	-0.41	15.05	0	0	0
20	SLU 29	-0.01	-0.4	14.92	0	0	0
20	SLU 30	-0.01	-0.41	14.92	0	0	0
20	SLU 31	-0.02	-0.43	16.21	0	0	0
20	SLU 32	-0.03	-0.42	16.51	0	0	0
20	SLU 33	-0.03	-0.43	16.51	0	0	0
20	SLU 34	-0.03	-0.43	16.38	0	0	0
20	SLU 35	-0.04	-0.42	16.68	0	0	0
20	SLU 36	-0.04	-0.43	16.68	0	0	0
20	SLU 37	-0.04	-0.42	16.55	0	0	0
20	SLU 38	-0.04	-0.42	16.55	0	0	0
20	SLU 39	-0.04	-0.43	16.91	0	0	0
20	SLU 40	-0.04	-0.43	16.91	0	0	0
20	SLU 41	-0.04	-0.43	17.09	0	0	0
20	SLU 42	-0.04	-0.43	17.08	0	0	0
20	SLU 43	0.01	-0.54	16.59	0	0	0
20	SLU 44	0.01	-0.55	16.59	0	0	0
20	SLU 45	0	-0.54	16.89	0	0	0
20	SLU 46	0	-0.55	16.89	0	0	0
20	SLU 47	0	-0.55	16.76	0	0	0
20	SLU 48	-0.01	-0.54	17.06	0	0	0
20	SLU 49	-0.01	-0.54	17.06	0	0	0
20	SLU 50	-0.01	-0.54	16.93	0	0	0
20	SLU 51	-0.01	-0.54	16.93	0	0	0
20	SLU 52	-0.02	-0.56	18.22	0	0	0
20	SLU 53	-0.03	-0.56	18.52	0	0	0
20	SLU 54	-0.03	-0.56	18.52	0	0	0
20	SLU 55	-0.03	-0.56	18.4	0	0	0
20	SLU 56	-0.03	-0.56	18.7	0	0	0
20	SLU 57	-0.03	-0.56	18.69	0	0	0
20	SLU 58	-0.04	-0.55	18.57	0	0	0
20	SLU 59	-0.03	-0.56	18.57	0	0	0
20	SLU 60	-0.03	-0.56	18.93	0	0	0
20	SLU 61	-0.03	-0.57	18.93	0	0	0
20	SLU 62	-0.04	-0.56	19.1	0	0	0
20	SLU 63	-0.04	-0.57	19.1	0	0	0
20	SLU 64	0	-0.53	18.03	0	0	0
20	SLU 65	0	-0.54	18.03	0	0	0
20	SLU 66	0	-0.53	18.33	0	0	0
20	SLU 67	0	-0.54	18.33	0	0	0
20	SLU 68	0	-0.54	18.2	0	0	0
20	SLU 69	-0.01	-0.53	18.5	0	0	0
20	SLU 70	-0.01	-0.54	18.5	0	0	0
20	SLU 71	-0.01	-0.53	18.37	0	0	0
20	SLU 72	-0.01	-0.53	18.37	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
20	SLU 73	-0.02	-0.56	19.66	0	0	0
20	SLU 74	-0.03	-0.55	19.96	0	0	0
20	SLU 75	-0.03	-0.56	19.96	0	0	0
20	SLU 76	-0.03	-0.55	19.83	0	0	0
20	SLU 77	-0.04	-0.55	20.13	0	0	0
20	SLU 78	-0.04	-0.55	20.13	0	0	0
20	SLU 79	-0.04	-0.55	20	0	0	0
20	SLU 80	-0.04	-0.55	20	0	0	0
20	SLU 81	-0.04	-0.56	20.36	0	0	0
20	SLU 82	-0.03	-0.56	20.36	0	0	0
20	SLU 83	-0.04	-0.55	20.53	0	0	0
20	SLU 84	-0.04	-0.56	20.53	0	0	0
20	SLE RA 1	0	-0.41	13.55	0	0	0
20	SLE RA 2	0	-0.42	13.55	0	0	0
20	SLE RA 3	0	-0.41	13.75	0	0	0
20	SLE RA 4	0	-0.42	13.75	0	0	0
20	SLE RA 5	0	-0.42	13.66	0	0	0
20	SLE RA 6	-0.01	-0.41	13.86	0	0	0
20	SLE RA 7	0	-0.41	13.86	0	0	0
20	SLE RA 8	-0.01	-0.41	13.78	0	0	0
20	SLE RA 9	-0.01	-0.41	13.78	0	0	0
20	SLE RA 10	-0.01	-0.43	14.64	0	0	0
20	SLE RA 11	-0.02	-0.42	14.84	0	0	0
20	SLE RA 12	-0.02	-0.43	14.84	0	0	0
20	SLE RA 13	-0.02	-0.43	14.75	0	0	0
20	SLE RA 14	-0.02	-0.42	14.95	0	0	0
20	SLE RA 15	-0.02	-0.43	14.95	0	0	0
20	SLE RA 16	-0.02	-0.42	14.87	0	0	0
20	SLE RA 17	-0.02	-0.42	14.87	0	0	0
20	SLE RA 18	-0.02	-0.43	15.11	0	0	0
20	SLE RA 19	-0.02	-0.43	15.11	0	0	0
20	SLE RA 20	-0.03	-0.43	15.22	0	0	0
20	SLE RA 21	-0.03	-0.43	15.22	0	0	0
20	SLE FR 1	0	-0.41	13.55	0	0	0
20	SLE FR 2	0	-0.41	13.55	0	0	0
20	SLE FR 3	0	-0.41	13.6	0	0	0
20	SLE FR 4	0	-0.42	14.02	0	0	0
20	SLE FR 5	-0.01	-0.42	14.06	0	0	0
20	SLE FR 6	-0.01	-0.42	14.33	0	0	0
20	SLE QP 1	0	-0.41	13.55	0	0	0
20	SLE QP 2	0	-0.42	14.02	0	0	0
20	SLD 1	0.78	-0.34	14.14	0	0	0
20	SLD 2	0.8	-0.32	14.15	0	0	0
20	SLD 3	0.73	-0.59	14.09	0	0	0
20	SLD 4	0.76	-0.57	14.1	0	0	0
20	SLD 5	0.3	-0.01	14.13	0	0	0
20	SLD 6	0.32	0	14.14	0	0	0
20	SLD 7	0.14	-0.85	13.96	0	0	0
20	SLD 8	0.15	-0.84	13.96	0	0	0
20	SLD 9	-0.16	0.01	14.07	0	0	0
20	SLD 10	-0.14	0.02	14.08	0	0	0
20	SLD 11	-0.33	-0.83	13.89	0	0	0
20	SLD 12	-0.31	-0.82	13.9	0	0	0
20	SLD 13	-0.76	-0.26	13.94	0	0	0
20	SLD 14	-0.74	-0.25	13.95	0	0	0
20	SLD 15	-0.81	-0.52	13.88	0	0	0
20	SLD 16	-0.79	-0.5	13.9	0	0	0
20	SLV 1	1.82	-0.24	14.3	0	0	0
20	SLV 2	1.89	-0.2	14.33	0	0	0
20	SLV 3	1.71	-0.81	14.18	0	0	0
20	SLV 4	1.77	-0.77	14.21	0	0	0
20	SLV 5	0.71	0.5	14.28	0	0	0
20	SLV 6	0.75	0.52	14.3	0	0	0
20	SLV 7	0.32	-1.41	13.88	0	0	0
20	SLV 8	0.37	-1.38	13.9	0	0	0
20	SLV 9	-0.37	0.55	14.14	0	0	0
20	SLV 10	-0.33	0.57	14.16	0	0	0
20	SLV 11	-0.76	-1.36	13.73	0	0	0
20	SLV 12	-0.72	-1.33	13.75	0	0	0
20	SLV 13	-1.78	-0.07	13.82	0	0	0
20	SLV 14	-1.72	-0.03	13.85	0	0	0
20	SLV 15	-1.9	-0.64	13.7	0	0	0
20	SLV 16	-1.83	-0.6	13.73	0	0	0
21	SLU 1	0	-0.41	13.48	0	0	0
21	SLU 2	0	-0.42	13.48	0	0	0
21	SLU 3	0	-0.42	13.78	0	0	0
21	SLU 4	0	-0.42	13.78	0	0	0
21	SLU 5	0	-0.42	13.65	0	0	0
21	SLU 6	-0.01	-0.41	13.95	0	0	0
21	SLU 7	-0.01	-0.42	13.95	0	0	0
21	SLU 8	-0.01	-0.41	13.82	0	0	0
21	SLU 9	-0.01	-0.41	13.82	0	0	0
21	SLU 10	-0.02	-0.44	15.14	0	0	0
21	SLU 11	-0.03	-0.43	15.44	0	0	0
21	SLU 12	-0.03	-0.44	15.44	0	0	0
21	SLU 13	-0.03	-0.43	15.31	0	0	0
21	SLU 14	-0.04	-0.43	15.61	0	0	0
21	SLU 15	-0.04	-0.43	15.61	0	0	0
21	SLU 16	-0.04	-0.43	15.48	0	0	0
21	SLU 17	-0.04	-0.43	15.48	0	0	0
21	SLU 18	-0.04	-0.44	15.85	0	0	0
21	SLU 19	-0.04	-0.44	15.85	0	0	0
21	SLU 20	-0.04	-0.43	16.02	0	0	0
21	SLU 21	-0.04	-0.44	16.02	0	0	0
21	SLU 22	0	-0.41	14.95	0	0	0
21	SLU 23	0	-0.41	14.95	0	0	0
21	SLU 24	-0.01	-0.41	15.25	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	SLU 25	0	-0.41	15.25	0	0	0
21	SLU 26	-0.01	-0.41	15.12	0	0	0
21	SLU 27	-0.01	-0.4	15.42	0	0	0
21	SLU 28	-0.01	-0.41	15.42	0	0	0
21	SLU 29	-0.01	-0.4	15.29	0	0	0
21	SLU 30	-0.01	-0.41	15.29	0	0	0
21	SLU 31	-0.03	-0.43	16.61	0	0	0
21	SLU 32	-0.03	-0.42	16.91	0	0	0
21	SLU 33	-0.03	-0.43	16.91	0	0	0
21	SLU 34	-0.03	-0.43	16.78	0	0	0
21	SLU 35	-0.04	-0.42	17.08	0	0	0
21	SLU 36	-0.04	-0.42	17.08	0	0	0
21	SLU 37	-0.04	-0.42	16.95	0	0	0
21	SLU 38	-0.04	-0.42	16.95	0	0	0
21	SLU 39	-0.04	-0.43	17.32	0	0	0
21	SLU 40	-0.04	-0.43	17.32	0	0	0
21	SLU 41	-0.05	-0.43	17.49	0	0	0
21	SLU 42	-0.05	-0.43	17.49	0	0	0
21	SLU 43	0	-0.54	17.02	0	0	0
21	SLU 44	0.01	-0.55	17.01	0	0	0
21	SLU 45	0	-0.54	17.32	0	0	0
21	SLU 46	0	-0.55	17.32	0	0	0
21	SLU 47	0	-0.55	17.19	0	0	0
21	SLU 48	-0.01	-0.54	17.49	0	0	0
21	SLU 49	-0.01	-0.55	17.49	0	0	0
21	SLU 50	-0.01	-0.54	17.36	0	0	0
21	SLU 51	-0.01	-0.54	17.36	0	0	0
21	SLU 52	-0.02	-0.56	18.67	0	0	0
21	SLU 53	-0.03	-0.56	18.98	0	0	0
21	SLU 54	-0.03	-0.56	18.98	0	0	0
21	SLU 55	-0.03	-0.56	18.85	0	0	0
21	SLU 56	-0.04	-0.56	19.15	0	0	0
21	SLU 57	-0.04	-0.56	19.15	0	0	0
21	SLU 58	-0.04	-0.55	19.02	0	0	0
21	SLU 59	-0.04	-0.56	19.02	0	0	0
21	SLU 60	-0.04	-0.56	19.39	0	0	0
21	SLU 61	-0.03	-0.57	19.39	0	0	0
21	SLU 62	-0.04	-0.56	19.56	0	0	0
21	SLU 63	-0.04	-0.57	19.56	0	0	0
21	SLU 64	0	-0.53	18.49	0	0	0
21	SLU 65	0	-0.54	18.49	0	0	0
21	SLU 66	0	-0.53	18.79	0	0	0
21	SLU 67	0	-0.54	18.79	0	0	0
21	SLU 68	0	-0.54	18.66	0	0	0
21	SLU 69	-0.01	-0.53	18.96	0	0	0
21	SLU 70	-0.01	-0.54	18.96	0	0	0
21	SLU 71	-0.01	-0.53	18.83	0	0	0
21	SLU 72	-0.01	-0.53	18.83	0	0	0
21	SLU 73	-0.02	-0.56	20.15	0	0	0
21	SLU 74	-0.03	-0.55	20.45	0	0	0
21	SLU 75	-0.03	-0.55	20.45	0	0	0
21	SLU 76	-0.03	-0.55	20.32	0	0	0
21	SLU 77	-0.04	-0.55	20.62	0	0	0
21	SLU 78	-0.04	-0.55	20.62	0	0	0
21	SLU 79	-0.04	-0.54	20.49	0	0	0
21	SLU 80	-0.04	-0.55	20.49	0	0	0
21	SLU 81	-0.04	-0.56	20.86	0	0	0
21	SLU 82	-0.04	-0.56	20.86	0	0	0
21	SLU 83	-0.05	-0.55	21.03	0	0	0
21	SLU 84	-0.04	-0.56	21.03	0	0	0
21	SLE RA 1	0	-0.41	13.9	0	0	0
21	SLE RA 2	0	-0.42	13.9	0	0	0
21	SLE RA 3	0	-0.41	14.1	0	0	0
21	SLE RA 4	0	-0.42	14.1	0	0	0
21	SLE RA 5	0	-0.42	14.01	0	0	0
21	SLE RA 6	-0.01	-0.41	14.21	0	0	0
21	SLE RA 7	-0.01	-0.41	14.21	0	0	0
21	SLE RA 8	-0.01	-0.41	14.12	0	0	0
21	SLE RA 9	-0.01	-0.41	14.12	0	0	0
21	SLE RA 10	-0.02	-0.43	15	0	0	0
21	SLE RA 11	-0.02	-0.42	15.21	0	0	0
21	SLE RA 12	-0.02	-0.43	15.21	0	0	0
21	SLE RA 13	-0.02	-0.43	15.12	0	0	0
21	SLE RA 14	-0.03	-0.42	15.32	0	0	0
21	SLE RA 15	-0.02	-0.42	15.32	0	0	0
21	SLE RA 16	-0.03	-0.42	15.23	0	0	0
21	SLE RA 17	-0.03	-0.42	15.23	0	0	0
21	SLE RA 18	-0.02	-0.43	15.48	0	0	0
21	SLE RA 19	-0.02	-0.43	15.48	0	0	0
21	SLE RA 20	-0.03	-0.43	15.59	0	0	0
21	SLE RA 21	-0.03	-0.43	15.59	0	0	0
21	SLE FR 1	0	-0.41	13.9	0	0	0
21	SLE FR 2	0	-0.41	13.9	0	0	0
21	SLE FR 3	0	-0.41	13.94	0	0	0
21	SLE FR 4	-0.01	-0.42	14.37	0	0	0
21	SLE FR 5	-0.01	-0.42	14.42	0	0	0
21	SLE FR 6	-0.01	-0.42	14.69	0	0	0
21	SLE QP 1	0	-0.41	13.9	0	0	0
21	SLE QP 2	-0.01	-0.42	14.37	0	0	0
21	SLD 1	0.8	-0.34	14.34	0	0	0
21	SLD 2	0.83	-0.32	14.35	0	0	0
21	SLD 3	0.75	-0.6	14.28	0	0	0
21	SLD 4	0.77	-0.57	14.29	0	0	0
21	SLD 5	0.31	-0.01	14.46	0	0	0
21	SLD 6	0.33	0.01	14.46	0	0	0
21	SLD 7	0.14	-0.86	14.25	0	0	0
21	SLD 8	0.16	-0.85	14.26	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	SLD 9	-0.17	0.01	14.49	0	0	0
21	SLD 10	-0.15	0.03	14.49	0	0	0
21	SLD 11	-0.34	-0.84	14.28	0	0	0
21	SLD 12	-0.32	-0.82	14.29	0	0	0
21	SLD 13	-0.79	-0.26	14.45	0	0	0
21	SLD 14	-0.76	-0.24	14.46	0	0	0
21	SLD 15	-0.84	-0.52	14.39	0	0	0
21	SLD 16	-0.81	-0.49	14.4	0	0	0
21	SLV 1	1.87	-0.25	14.31	0	0	0
21	SLV 2	1.94	-0.19	14.33	0	0	0
21	SLV 3	1.75	-0.83	14.17	0	0	0
21	SLV 4	1.82	-0.77	14.18	0	0	0
21	SLV 5	0.73	0.5	14.56	0	0	0
21	SLV 6	0.77	0.54	14.57	0	0	0
21	SLV 7	0.33	-1.43	14.09	0	0	0
21	SLV 8	0.37	-1.39	14.11	0	0	0
21	SLV 9	-0.39	0.56	14.64	0	0	0
21	SLV 10	-0.34	0.59	14.65	0	0	0
21	SLV 11	-0.78	-1.37	14.17	0	0	0
21	SLV 12	-0.74	-1.34	14.18	0	0	0
21	SLV 13	-1.83	-0.06	14.56	0	0	0
21	SLV 14	-1.77	-0.01	14.58	0	0	0
21	SLV 15	-1.95	-0.64	14.42	0	0	0
21	SLV 16	-1.88	-0.58	14.44	0	0	0
22	SLU 1	0	-0.36	11.94	0	0	0
22	SLU 2	0	-0.36	11.94	0	0	0
22	SLU 3	0	-0.36	12.2	0	0	0
22	SLU 4	0	-0.36	12.2	0	0	0
22	SLU 5	0	-0.36	12.09	0	0	0
22	SLU 6	-0.01	-0.36	12.35	0	0	0
22	SLU 7	-0.01	-0.36	12.35	0	0	0
22	SLU 8	-0.01	-0.35	12.23	0	0	0
22	SLU 9	-0.01	-0.36	12.23	0	0	0
22	SLU 10	-0.02	-0.38	13.39	0	0	0
22	SLU 11	-0.03	-0.37	13.66	0	0	0
22	SLU 12	-0.03	-0.37	13.66	0	0	0
22	SLU 13	-0.03	-0.37	13.54	0	0	0
22	SLU 14	-0.03	-0.37	13.81	0	0	0
22	SLU 15	-0.03	-0.37	13.81	0	0	0
22	SLU 16	-0.04	-0.37	13.69	0	0	0
22	SLU 17	-0.03	-0.37	13.69	0	0	0
22	SLU 18	-0.03	-0.38	14.02	0	0	0
22	SLU 19	-0.03	-0.38	14.02	0	0	0
22	SLU 20	-0.04	-0.37	14.16	0	0	0
22	SLU 21	-0.04	-0.38	14.16	0	0	0
22	SLU 22	0	-0.35	13.24	0	0	0
22	SLU 23	0	-0.36	13.24	0	0	0
22	SLU 24	-0.01	-0.35	13.51	0	0	0
22	SLU 25	0	-0.35	13.5	0	0	0
22	SLU 26	-0.01	-0.35	13.39	0	0	0
22	SLU 27	-0.01	-0.35	13.65	0	0	0
22	SLU 28	-0.01	-0.35	13.65	0	0	0
22	SLU 29	-0.01	-0.35	13.54	0	0	0
22	SLU 30	-0.01	-0.35	13.53	0	0	0
22	SLU 31	-0.02	-0.37	14.69	0	0	0
22	SLU 32	-0.03	-0.36	14.96	0	0	0
22	SLU 33	-0.03	-0.37	14.96	0	0	0
22	SLU 34	-0.03	-0.37	14.84	0	0	0
22	SLU 35	-0.04	-0.36	15.11	0	0	0
22	SLU 36	-0.04	-0.36	15.11	0	0	0
22	SLU 37	-0.04	-0.36	14.99	0	0	0
22	SLU 38	-0.04	-0.36	14.99	0	0	0
22	SLU 39	-0.04	-0.37	15.32	0	0	0
22	SLU 40	-0.04	-0.37	15.32	0	0	0
22	SLU 41	-0.04	-0.37	15.46	0	0	0
22	SLU 42	-0.04	-0.37	15.46	0	0	0
22	SLU 43	0	-0.47	15.07	0	0	0
22	SLU 44	0	-0.47	15.07	0	0	0
22	SLU 45	0	-0.47	15.34	0	0	0
22	SLU 46	0	-0.47	15.34	0	0	0
22	SLU 47	0	-0.47	15.22	0	0	0
22	SLU 48	-0.01	-0.47	15.49	0	0	0
22	SLU 49	-0.01	-0.47	15.49	0	0	0
22	SLU 50	-0.01	-0.46	15.37	0	0	0
22	SLU 51	-0.01	-0.47	15.37	0	0	0
22	SLU 52	-0.02	-0.49	16.53	0	0	0
22	SLU 53	-0.03	-0.48	16.79	0	0	0
22	SLU 54	-0.03	-0.48	16.79	0	0	0
22	SLU 55	-0.03	-0.48	16.68	0	0	0
22	SLU 56	-0.03	-0.48	16.94	0	0	0
22	SLU 57	-0.03	-0.48	16.94	0	0	0
22	SLU 58	-0.03	-0.48	16.82	0	0	0
22	SLU 59	-0.03	-0.48	16.82	0	0	0
22	SLU 60	-0.03	-0.49	17.15	0	0	0
22	SLU 61	-0.03	-0.49	17.15	0	0	0
22	SLU 62	-0.04	-0.48	17.3	0	0	0
22	SLU 63	-0.04	-0.49	17.3	0	0	0
22	SLU 64	0	-0.46	16.38	0	0	0
22	SLU 65	0	-0.47	16.37	0	0	0
22	SLU 66	0	-0.46	16.64	0	0	0
22	SLU 67	0	-0.46	16.64	0	0	0
22	SLU 68	0	-0.46	16.52	0	0	0
22	SLU 69	-0.01	-0.46	16.79	0	0	0
22	SLU 70	-0.01	-0.46	16.79	0	0	0
22	SLU 71	-0.01	-0.46	16.67	0	0	0
22	SLU 72	-0.01	-0.46	16.67	0	0	0
22	SLU 73	-0.02	-0.48	17.83	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
22	SLU 74	-0.03	-0.47	18.1	0	0	0
22	SLU 75	-0.03	-0.48	18.09	0	0	0
22	SLU 76	-0.03	-0.48	17.98	0	0	0
22	SLU 77	-0.04	-0.47	18.24	0	0	0
22	SLU 78	-0.03	-0.47	18.24	0	0	0
22	SLU 79	-0.04	-0.47	18.13	0	0	0
22	SLU 80	-0.04	-0.47	18.12	0	0	0
22	SLU 81	-0.03	-0.48	18.45	0	0	0
22	SLU 82	-0.03	-0.48	18.45	0	0	0
22	SLU 83	-0.04	-0.48	18.6	0	0	0
22	SLU 84	-0.04	-0.48	18.6	0	0	0
22	SLE RA 1	0	-0.36	12.31	0	0	0
22	SLE RA 2	0	-0.36	12.31	0	0	0
22	SLE RA 3	0	-0.36	12.49	0	0	0
22	SLE RA 4	0	-0.36	12.49	0	0	0
22	SLE RA 5	0	-0.36	12.41	0	0	0
22	SLE RA 6	-0.01	-0.35	12.59	0	0	0
22	SLE RA 7	-0.01	-0.36	12.59	0	0	0
22	SLE RA 8	-0.01	-0.35	12.51	0	0	0
22	SLE RA 9	-0.01	-0.36	12.51	0	0	0
22	SLE RA 10	-0.01	-0.37	13.28	0	0	0
22	SLE RA 11	-0.02	-0.36	13.46	0	0	0
22	SLE RA 12	-0.02	-0.37	13.46	0	0	0
22	SLE RA 13	-0.02	-0.37	13.38	0	0	0
22	SLE RA 14	-0.02	-0.36	13.56	0	0	0
22	SLE RA 15	-0.02	-0.37	13.56	0	0	0
22	SLE RA 16	-0.02	-0.36	13.48	0	0	0
22	SLE RA 17	-0.02	-0.36	13.48	0	0	0
22	SLE RA 18	-0.02	-0.37	13.7	0	0	0
22	SLE RA 19	-0.02	-0.37	13.7	0	0	0
22	SLE RA 20	-0.03	-0.37	13.79	0	0	0
22	SLE RA 21	-0.03	-0.37	13.79	0	0	0
22	SLE FR 1	0	-0.36	12.31	0	0	0
22	SLE FR 2	0	-0.36	12.31	0	0	0
22	SLE FR 3	0	-0.36	12.35	0	0	0
22	SLE FR 4	-0.01	-0.36	12.73	0	0	0
22	SLE FR 5	-0.01	-0.36	12.77	0	0	0
22	SLE FR 6	-0.01	-0.36	13	0	0	0
22	SLE QP 1	0	-0.36	12.31	0	0	0
22	SLE QP 2	-0.01	-0.36	12.73	0	0	0
22	SLD 1	0.71	-0.3	12.64	0	0	0
22	SLD 2	0.73	-0.27	12.64	0	0	0
22	SLD 3	0.66	-0.52	12.57	0	0	0
22	SLD 4	0.69	-0.49	12.57	0	0	0
22	SLD 5	0.27	-0.01	12.79	0	0	0
22	SLD 6	0.29	0.01	12.8	0	0	0
22	SLD 7	0.12	-0.75	12.58	0	0	0
22	SLD 8	0.14	-0.73	12.58	0	0	0
22	SLD 9	-0.15	0.02	12.87	0	0	0
22	SLD 10	-0.13	0.03	12.87	0	0	0
22	SLD 11	-0.3	-0.73	12.66	0	0	0
22	SLD 12	-0.28	-0.71	12.66	0	0	0
22	SLD 13	-0.7	-0.22	12.88	0	0	0
22	SLD 14	-0.67	-0.2	12.88	0	0	0
22	SLD 15	-0.74	-0.45	12.81	0	0	0
22	SLD 16	-0.72	-0.42	12.82	0	0	0
22	SLV 1	1.66	-0.22	12.51	0	0	0
22	SLV 2	1.72	-0.16	12.52	0	0	0
22	SLV 3	1.56	-0.73	12.37	0	0	0
22	SLV 4	1.62	-0.67	12.37	0	0	0
22	SLV 5	0.64	0.44	12.88	0	0	0
22	SLV 6	0.68	0.48	12.88	0	0	0
22	SLV 7	0.29	-1.25	12.4	0	0	0
22	SLV 8	0.33	-1.21	12.4	0	0	0
22	SLV 9	-0.34	0.49	13.05	0	0	0
22	SLV 10	-0.31	0.53	13.05	0	0	0
22	SLV 11	-0.69	-1.2	12.57	0	0	0
22	SLV 12	-0.66	-1.16	12.57	0	0	0
22	SLV 13	-1.63	-0.05	13.08	0	0	0
22	SLV 14	-1.57	0.01	13.08	0	0	0
22	SLV 15	-1.73	-0.56	12.94	0	0	0
22	SLV 16	-1.67	-0.49	12.94	0	0	0
23	SLU 1	0	-0.33	11.38	0	0	0
23	SLU 2	0	-0.34	11.38	0	0	0
23	SLU 3	0	-0.33	11.63	0	0	0
23	SLU 4	0	-0.34	11.63	0	0	0
23	SLU 5	0	-0.34	11.52	0	0	0
23	SLU 6	-0.01	-0.33	11.77	0	0	0
23	SLU 7	-0.01	-0.33	11.77	0	0	0
23	SLU 8	-0.01	-0.33	11.65	0	0	0
23	SLU 9	-0.01	-0.33	11.65	0	0	0
23	SLU 10	-0.02	-0.35	12.75	0	0	0
23	SLU 11	-0.03	-0.34	13	0	0	0
23	SLU 12	-0.03	-0.35	13	0	0	0
23	SLU 13	-0.03	-0.35	12.89	0	0	0
23	SLU 14	-0.03	-0.34	13.14	0	0	0
23	SLU 15	-0.03	-0.35	13.14	0	0	0
23	SLU 16	-0.03	-0.34	13.02	0	0	0
23	SLU 17	-0.03	-0.34	13.02	0	0	0
23	SLU 18	-0.03	-0.35	13.34	0	0	0
23	SLU 19	-0.03	-0.35	13.34	0	0	0
23	SLU 20	-0.04	-0.35	13.47	0	0	0
23	SLU 21	-0.04	-0.35	13.47	0	0	0
23	SLU 22	0	-0.32	12.62	0	0	0
23	SLU 23	0	-0.33	12.62	0	0	0
23	SLU 24	-0.01	-0.32	12.87	0	0	0
23	SLU 25	-0.01	-0.33	12.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
23	SLU 26	-0.01	-0.33	12.75	0	0	0
23	SLU 27	-0.01	-0.32	13	0	0	0
23	SLU 28	-0.01	-0.33	13	0	0	0
23	SLU 29	-0.01	-0.32	12.89	0	0	0
23	SLU 30	-0.01	-0.32	12.89	0	0	0
23	SLU 31	-0.02	-0.34	13.99	0	0	0
23	SLU 32	-0.03	-0.34	14.24	0	0	0
23	SLU 33	-0.03	-0.34	14.24	0	0	0
23	SLU 34	-0.03	-0.34	14.12	0	0	0
23	SLU 35	-0.04	-0.33	14.38	0	0	0
23	SLU 36	-0.04	-0.34	14.37	0	0	0
23	SLU 37	-0.04	-0.33	14.26	0	0	0
23	SLU 38	-0.04	-0.33	14.26	0	0	0
23	SLU 39	-0.04	-0.34	14.58	0	0	0
23	SLU 40	-0.03	-0.34	14.57	0	0	0
23	SLU 41	-0.04	-0.34	14.71	0	0	0
23	SLU 42	-0.04	-0.34	14.71	0	0	0
23	SLU 43	0	-0.44	14.37	0	0	0
23	SLU 44	0	-0.44	14.37	0	0	0
23	SLU 45	0	-0.44	14.62	0	0	0
23	SLU 46	0	-0.44	14.62	0	0	0
23	SLU 47	0	-0.44	14.5	0	0	0
23	SLU 48	-0.01	-0.43	14.76	0	0	0
23	SLU 49	-0.01	-0.44	14.76	0	0	0
23	SLU 50	-0.01	-0.43	14.64	0	0	0
23	SLU 51	-0.01	-0.43	14.64	0	0	0
23	SLU 52	-0.02	-0.45	15.74	0	0	0
23	SLU 53	-0.03	-0.45	15.99	0	0	0
23	SLU 54	-0.03	-0.45	15.99	0	0	0
23	SLU 55	-0.03	-0.45	15.88	0	0	0
23	SLU 56	-0.03	-0.44	16.13	0	0	0
23	SLU 57	-0.03	-0.45	16.13	0	0	0
23	SLU 58	-0.03	-0.44	16.01	0	0	0
23	SLU 59	-0.03	-0.45	16.01	0	0	0
23	SLU 60	-0.03	-0.45	16.33	0	0	0
23	SLU 61	-0.03	-0.45	16.33	0	0	0
23	SLU 62	-0.04	-0.45	16.46	0	0	0
23	SLU 63	-0.04	-0.45	16.46	0	0	0
23	SLU 64	0	-0.43	15.61	0	0	0
23	SLU 65	0	-0.43	15.61	0	0	0
23	SLU 66	0	-0.43	15.86	0	0	0
23	SLU 67	0	-0.43	15.86	0	0	0
23	SLU 68	0	-0.43	15.74	0	0	0
23	SLU 69	-0.01	-0.43	15.99	0	0	0
23	SLU 70	-0.01	-0.43	15.99	0	0	0
23	SLU 71	-0.01	-0.42	15.88	0	0	0
23	SLU 72	-0.01	-0.43	15.88	0	0	0
23	SLU 73	-0.02	-0.44	16.98	0	0	0
23	SLU 74	-0.03	-0.44	17.23	0	0	0
23	SLU 75	-0.03	-0.44	17.23	0	0	0
23	SLU 76	-0.03	-0.44	17.11	0	0	0
23	SLU 77	-0.03	-0.44	17.36	0	0	0
23	SLU 78	-0.03	-0.44	17.36	0	0	0
23	SLU 79	-0.04	-0.43	17.25	0	0	0
23	SLU 80	-0.04	-0.44	17.25	0	0	0
23	SLU 81	-0.03	-0.44	17.56	0	0	0
23	SLU 82	-0.03	-0.44	17.56	0	0	0
23	SLU 83	-0.04	-0.44	17.7	0	0	0
23	SLU 84	-0.04	-0.44	17.7	0	0	0
23	SLE RA 1	0	-0.33	11.73	0	0	0
23	SLE RA 2	0	-0.33	11.73	0	0	0
23	SLE RA 3	0	-0.33	11.9	0	0	0
23	SLE RA 4	0	-0.33	11.9	0	0	0
23	SLE RA 5	0	-0.33	11.82	0	0	0
23	SLE RA 6	-0.01	-0.33	11.99	0	0	0
23	SLE RA 7	-0.01	-0.33	11.99	0	0	0
23	SLE RA 8	-0.01	-0.33	11.92	0	0	0
23	SLE RA 9	-0.01	-0.33	11.92	0	0	0
23	SLE RA 10	-0.01	-0.34	12.65	0	0	0
23	SLE RA 11	-0.02	-0.34	12.81	0	0	0
23	SLE RA 12	-0.02	-0.34	12.81	0	0	0
23	SLE RA 13	-0.02	-0.34	12.74	0	0	0
23	SLE RA 14	-0.02	-0.34	12.91	0	0	0
23	SLE RA 15	-0.02	-0.34	12.9	0	0	0
23	SLE RA 16	-0.02	-0.33	12.83	0	0	0
23	SLE RA 17	-0.02	-0.34	12.83	0	0	0
23	SLE RA 18	-0.02	-0.34	13.04	0	0	0
23	SLE RA 19	-0.02	-0.34	13.04	0	0	0
23	SLE RA 20	-0.03	-0.34	13.13	0	0	0
23	SLE RA 21	-0.03	-0.34	13.13	0	0	0
23	SLE FR 1	0	-0.33	11.73	0	0	0
23	SLE FR 2	0	-0.33	11.73	0	0	0
23	SLE FR 3	0	-0.33	11.77	0	0	0
23	SLE FR 4	-0.01	-0.33	12.12	0	0	0
23	SLE FR 5	-0.01	-0.33	12.16	0	0	0
23	SLE FR 6	-0.01	-0.34	12.39	0	0	0
23	SLE QP 1	0	-0.33	11.73	0	0	0
23	SLE QP 2	-0.01	-0.33	12.12	0	0	0
23	SLD 1	0.68	-0.28	11.96	0	0	0
23	SLD 2	0.7	-0.25	11.95	0	0	0
23	SLD 3	0.63	-0.49	11.89	0	0	0
23	SLD 4	0.66	-0.46	11.88	0	0	0
23	SLD 5	0.26	0	12.18	0	0	0
23	SLD 6	0.28	0.02	12.18	0	0	0
23	SLD 7	0.12	-0.71	11.95	0	0	0
23	SLD 8	0.13	-0.69	11.94	0	0	0
23	SLD 9	-0.14	0.02	12.31	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
23	SLD 10	-0.13	0.04	12.3	0	0	0
23	SLD 11	-0.29	-0.68	12.07	0	0	0
23	SLD 12	-0.27	-0.66	12.07	0	0	0
23	SLD 13	-0.67	-0.21	12.37	0	0	0
23	SLD 14	-0.64	-0.17	12.36	0	0	0
23	SLD 15	-0.71	-0.42	12.29	0	0	0
23	SLD 16	-0.69	-0.39	12.29	0	0	0
23	SLV 1	1.59	-0.22	11.73	0	0	0
23	SLV 2	1.65	-0.15	11.72	0	0	0
23	SLV 3	1.49	-0.7	11.57	0	0	0
23	SLV 4	1.54	-0.62	11.56	0	0	0
23	SLV 5	0.61	0.41	12.25	0	0	0
23	SLV 6	0.65	0.46	12.25	0	0	0
23	SLV 7	0.28	-1.18	11.71	0	0	0
23	SLV 8	0.32	-1.13	11.71	0	0	0
23	SLV 9	-0.33	0.47	12.54	0	0	0
23	SLV 10	-0.29	0.51	12.54	0	0	0
23	SLV 11	-0.66	-1.13	12	0	0	0
23	SLV 12	-0.63	-1.08	12	0	0	0
23	SLV 13	-1.56	-0.04	12.69	0	0	0
23	SLV 14	-1.5	0.03	12.68	0	0	0
23	SLV 15	-1.66	-0.52	12.52	0	0	0
23	SLV 16	-1.6	-0.45	12.52	0	0	0
24	SLU 1	0	-0.16	5.67	0	0	0
24	SLU 2	0	-0.16	5.67	0	0	0
24	SLU 3	0	-0.16	5.79	0	0	0
24	SLU 4	0	-0.16	5.79	0	0	0
24	SLU 5	0	-0.16	5.73	0	0	0
24	SLU 6	0	-0.16	5.86	0	0	0
24	SLU 7	0	-0.16	5.86	0	0	0
24	SLU 8	-0.01	-0.16	5.8	0	0	0
24	SLU 9	0	-0.16	5.8	0	0	0
24	SLU 10	-0.01	-0.17	6.34	0	0	0
24	SLU 11	-0.01	-0.17	6.47	0	0	0
24	SLU 12	-0.01	-0.17	6.46	0	0	0
24	SLU 13	-0.01	-0.17	6.41	0	0	0
24	SLU 14	-0.02	-0.17	6.53	0	0	0
24	SLU 15	-0.02	-0.17	6.53	0	0	0
24	SLU 16	-0.02	-0.17	6.48	0	0	0
24	SLU 17	-0.02	-0.17	6.47	0	0	0
24	SLU 18	-0.02	-0.17	6.63	0	0	0
24	SLU 19	-0.02	-0.17	6.63	0	0	0
24	SLU 20	-0.02	-0.17	6.7	0	0	0
24	SLU 21	-0.02	-0.17	6.7	0	0	0
24	SLU 22	0	-0.16	6.28	0	0	0
24	SLU 23	0	-0.16	6.28	0	0	0
24	SLU 24	0	-0.16	6.41	0	0	0
24	SLU 25	0	-0.16	6.4	0	0	0
24	SLU 26	0	-0.16	6.35	0	0	0
24	SLU 27	-0.01	-0.16	6.47	0	0	0
24	SLU 28	-0.01	-0.16	6.47	0	0	0
24	SLU 29	-0.01	-0.16	6.42	0	0	0
24	SLU 30	-0.01	-0.16	6.42	0	0	0
24	SLU 31	-0.01	-0.17	6.96	0	0	0
24	SLU 32	-0.01	-0.16	7.08	0	0	0
24	SLU 33	-0.01	-0.16	7.08	0	0	0
24	SLU 34	-0.01	-0.16	7.02	0	0	0
24	SLU 35	-0.02	-0.16	7.15	0	0	0
24	SLU 36	-0.02	-0.16	7.15	0	0	0
24	SLU 37	-0.02	-0.16	7.09	0	0	0
24	SLU 38	-0.02	-0.16	7.09	0	0	0
24	SLU 39	-0.02	-0.16	7.25	0	0	0
24	SLU 40	-0.02	-0.17	7.25	0	0	0
24	SLU 41	-0.02	-0.16	7.31	0	0	0
24	SLU 42	-0.02	-0.17	7.31	0	0	0
24	SLU 43	0	-0.21	7.16	0	0	0
24	SLU 44	0	-0.21	7.16	0	0	0
24	SLU 45	0	-0.21	7.28	0	0	0
24	SLU 46	0	-0.21	7.28	0	0	0
24	SLU 47	0	-0.21	7.22	0	0	0
24	SLU 48	0	-0.21	7.35	0	0	0
24	SLU 49	0	-0.21	7.35	0	0	0
24	SLU 50	0	-0.21	7.29	0	0	0
24	SLU 51	0	-0.21	7.29	0	0	0
24	SLU 52	-0.01	-0.22	7.83	0	0	0
24	SLU 53	-0.01	-0.22	7.95	0	0	0
24	SLU 54	-0.01	-0.22	7.95	0	0	0
24	SLU 55	-0.01	-0.22	7.9	0	0	0
24	SLU 56	-0.02	-0.22	8.02	0	0	0
24	SLU 57	-0.02	-0.22	8.02	0	0	0
24	SLU 58	-0.02	-0.22	7.96	0	0	0
24	SLU 59	-0.02	-0.22	7.96	0	0	0
24	SLU 60	-0.02	-0.22	8.12	0	0	0
24	SLU 61	-0.02	-0.22	8.12	0	0	0
24	SLU 62	-0.02	-0.22	8.19	0	0	0
24	SLU 63	-0.02	-0.22	8.19	0	0	0
24	SLU 64	0	-0.21	7.77	0	0	0
24	SLU 65	0	-0.21	7.77	0	0	0
24	SLU 66	0	-0.21	7.89	0	0	0
24	SLU 67	0	-0.21	7.89	0	0	0
24	SLU 68	0	-0.21	7.84	0	0	0
24	SLU 69	-0.01	-0.21	7.96	0	0	0
24	SLU 70	0	-0.21	7.96	0	0	0
24	SLU 71	-0.01	-0.21	7.91	0	0	0
24	SLU 72	-0.01	-0.21	7.9	0	0	0
24	SLU 73	-0.01	-0.22	8.45	0	0	0
24	SLU 74	-0.01	-0.21	8.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
24	SLU 75	-0.01	-0.21	8.57	0	0	0
24	SLU 76	-0.01	-0.21	8.51	0	0	0
24	SLU 77	-0.02	-0.21	8.64	0	0	0
24	SLU 78	-0.02	-0.21	8.64	0	0	0
24	SLU 79	-0.02	-0.21	8.58	0	0	0
24	SLU 80	-0.02	-0.21	8.58	0	0	0
24	SLU 81	-0.02	-0.22	8.74	0	0	0
24	SLU 82	-0.02	-0.22	8.74	0	0	0
24	SLU 83	-0.02	-0.21	8.8	0	0	0
24	SLU 84	-0.02	-0.22	8.8	0	0	0
24	SLE RA 1	0	-0.16	5.84	0	0	0
24	SLE RA 2	0	-0.16	5.84	0	0	0
24	SLE RA 3	0	-0.16	5.92	0	0	0
24	SLE RA 4	0	-0.16	5.92	0	0	0
24	SLE RA 5	0	-0.16	5.89	0	0	0
24	SLE RA 6	0	-0.16	5.97	0	0	0
24	SLE RA 7	0	-0.16	5.97	0	0	0
24	SLE RA 8	0	-0.16	5.93	0	0	0
24	SLE RA 9	0	-0.16	5.93	0	0	0
24	SLE RA 10	-0.01	-0.17	6.29	0	0	0
24	SLE RA 11	-0.01	-0.16	6.37	0	0	0
24	SLE RA 12	-0.01	-0.17	6.37	0	0	0
24	SLE RA 13	-0.01	-0.17	6.34	0	0	0
24	SLE RA 14	-0.01	-0.16	6.42	0	0	0
24	SLE RA 15	-0.01	-0.16	6.42	0	0	0
24	SLE RA 16	-0.01	-0.16	6.38	0	0	0
24	SLE RA 17	-0.01	-0.16	6.38	0	0	0
24	SLE RA 18	-0.01	-0.17	6.49	0	0	0
24	SLE RA 19	-0.01	-0.17	6.49	0	0	0
24	SLE RA 20	-0.01	-0.17	6.53	0	0	0
24	SLE RA 21	-0.01	-0.17	6.53	0	0	0
24	SLE FR 1	0	-0.16	5.84	0	0	0
24	SLE FR 2	0	-0.16	5.84	0	0	0
24	SLE FR 3	0	-0.16	5.86	0	0	0
24	SLE FR 4	0	-0.16	6.04	0	0	0
24	SLE FR 5	0	-0.16	6.05	0	0	0
24	SLE FR 6	-0.01	-0.16	6.16	0	0	0
24	SLE QP 1	0	-0.16	5.84	0	0	0
24	SLE QP 2	0	-0.16	6.04	0	0	0
24	SLD 1	0.34	-0.14	5.91	0	0	0
24	SLD 2	0.35	-0.12	5.91	0	0	0
24	SLD 3	0.32	-0.24	5.87	0	0	0
24	SLD 4	0.33	-0.23	5.87	0	0	0
24	SLD 5	0.13	0	6.06	0	0	0
24	SLD 6	0.14	0.01	6.06	0	0	0
24	SLD 7	0.06	-0.35	5.92	0	0	0
24	SLD 8	0.07	-0.34	5.92	0	0	0
24	SLD 9	-0.07	0.01	6.15	0	0	0
24	SLD 10	-0.06	0.02	6.15	0	0	0
24	SLD 11	-0.14	-0.34	6.01	0	0	0
24	SLD 12	-0.14	-0.32	6.01	0	0	0
24	SLD 13	-0.33	-0.1	6.21	0	0	0
24	SLD 14	-0.32	-0.08	6.2	0	0	0
24	SLD 15	-0.36	-0.2	6.16	0	0	0
24	SLD 16	-0.34	-0.19	6.16	0	0	0
24	SLV 1	0.8	-0.11	5.74	0	0	0
24	SLV 2	0.82	-0.07	5.74	0	0	0
24	SLV 3	0.75	-0.35	5.65	0	0	0
24	SLV 4	0.77	-0.31	5.64	0	0	0
24	SLV 5	0.31	0.2	6.09	0	0	0
24	SLV 6	0.33	0.23	6.09	0	0	0
24	SLV 7	0.14	-0.58	5.78	0	0	0
24	SLV 8	0.16	-0.56	5.77	0	0	0
24	SLV 9	-0.16	0.23	6.3	0	0	0
24	SLV 10	-0.15	0.26	6.29	0	0	0
24	SLV 11	-0.33	-0.56	5.98	0	0	0
24	SLV 12	-0.31	-0.53	5.98	0	0	0
24	SLV 13	-0.78	-0.02	6.43	0	0	0
24	SLV 14	-0.75	0.02	6.42	0	0	0
24	SLV 15	-0.83	-0.26	6.34	0	0	0
24	SLV 16	-0.8	-0.21	6.33	0	0	0
25	SLU 1	-0.01	-0.28	9.38	0	0	0
25	SLU 2	0	-0.28	9.38	0	0	0
25	SLU 3	-0.01	-0.28	9.59	0	0	0
25	SLU 4	-0.01	-0.28	9.59	0	0	0
25	SLU 5	-0.01	-0.28	9.5	0	0	0
25	SLU 6	-0.01	-0.28	9.7	0	0	0
25	SLU 7	-0.01	-0.28	9.7	0	0	0
25	SLU 8	-0.02	-0.28	9.61	0	0	0
25	SLU 9	-0.01	-0.28	9.61	0	0	0
25	SLU 10	-0.03	-0.29	10.52	0	0	0
25	SLU 11	-0.03	-0.29	10.73	0	0	0
25	SLU 12	-0.03	-0.29	10.73	0	0	0
25	SLU 13	-0.03	-0.29	10.63	0	0	0
25	SLU 14	-0.04	-0.29	10.84	0	0	0
25	SLU 15	-0.04	-0.29	10.84	0	0	0
25	SLU 16	-0.04	-0.29	10.75	0	0	0
25	SLU 17	-0.04	-0.29	10.75	0	0	0
25	SLU 18	-0.04	-0.29	11.01	0	0	0
25	SLU 19	-0.03	-0.3	11.01	0	0	0
25	SLU 20	-0.04	-0.29	11.12	0	0	0
25	SLU 21	-0.04	-0.29	11.12	0	0	0
25	SLU 22	-0.01	-0.27	10.41	0	0	0
25	SLU 23	-0.01	-0.28	10.41	0	0	0
25	SLU 24	-0.01	-0.27	10.62	0	0	0
25	SLU 25	-0.01	-0.28	10.62	0	0	0
25	SLU 26	-0.01	-0.28	10.53	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
25	SLU 27	-0.02	-0.27	10.73	0	0	0
25	SLU 28	-0.02	-0.27	10.73	0	0	0
25	SLU 29	-0.02	-0.27	10.64	0	0	0
25	SLU 30	-0.02	-0.27	10.64	0	0	0
25	SLU 31	-0.03	-0.29	11.55	0	0	0
25	SLU 32	-0.03	-0.28	11.76	0	0	0
25	SLU 33	-0.03	-0.29	11.76	0	0	0
25	SLU 34	-0.03	-0.28	11.66	0	0	0
25	SLU 35	-0.04	-0.28	11.87	0	0	0
25	SLU 36	-0.04	-0.28	11.87	0	0	0
25	SLU 37	-0.04	-0.28	11.78	0	0	0
25	SLU 38	-0.04	-0.28	11.78	0	0	0
25	SLU 39	-0.04	-0.29	12.04	0	0	0
25	SLU 40	-0.04	-0.29	12.04	0	0	0
25	SLU 41	-0.04	-0.28	12.15	0	0	0
25	SLU 42	-0.04	-0.29	12.15	0	0	0
25	SLU 43	-0.01	-0.37	11.84	0	0	0
25	SLU 44	-0.01	-0.37	11.84	0	0	0
25	SLU 45	-0.01	-0.37	12.05	0	0	0
25	SLU 46	-0.01	-0.37	12.05	0	0	0
25	SLU 47	-0.01	-0.37	11.96	0	0	0
25	SLU 48	-0.02	-0.37	12.17	0	0	0
25	SLU 49	-0.02	-0.37	12.17	0	0	0
25	SLU 50	-0.02	-0.36	12.07	0	0	0
25	SLU 51	-0.02	-0.37	12.07	0	0	0
25	SLU 52	-0.03	-0.38	12.98	0	0	0
25	SLU 53	-0.03	-0.38	13.19	0	0	0
25	SLU 54	-0.03	-0.38	13.19	0	0	0
25	SLU 55	-0.03	-0.38	13.1	0	0	0
25	SLU 56	-0.04	-0.37	13.3	0	0	0
25	SLU 57	-0.04	-0.38	13.3	0	0	0
25	SLU 58	-0.04	-0.37	13.21	0	0	0
25	SLU 59	-0.04	-0.38	13.21	0	0	0
25	SLU 60	-0.04	-0.38	13.47	0	0	0
25	SLU 61	-0.04	-0.38	13.47	0	0	0
25	SLU 62	-0.04	-0.38	13.58	0	0	0
25	SLU 63	-0.04	-0.38	13.58	0	0	0
25	SLU 64	-0.01	-0.36	12.87	0	0	0
25	SLU 65	-0.01	-0.36	12.87	0	0	0
25	SLU 66	-0.01	-0.36	13.08	0	0	0
25	SLU 67	-0.01	-0.36	13.08	0	0	0
25	SLU 68	-0.01	-0.36	12.99	0	0	0
25	SLU 69	-0.02	-0.36	13.19	0	0	0
25	SLU 70	-0.02	-0.36	13.19	0	0	0
25	SLU 71	-0.02	-0.36	13.1	0	0	0
25	SLU 72	-0.02	-0.36	13.1	0	0	0
25	SLU 73	-0.03	-0.37	14.01	0	0	0
25	SLU 74	-0.03	-0.37	14.22	0	0	0
25	SLU 75	-0.03	-0.37	14.22	0	0	0
25	SLU 76	-0.03	-0.37	14.12	0	0	0
25	SLU 77	-0.04	-0.37	14.33	0	0	0
25	SLU 78	-0.04	-0.37	14.33	0	0	0
25	SLU 79	-0.04	-0.37	14.24	0	0	0
25	SLU 80	-0.04	-0.37	14.24	0	0	0
25	SLU 81	-0.04	-0.37	14.5	0	0	0
25	SLU 82	-0.04	-0.37	14.5	0	0	0
25	SLU 83	-0.04	-0.37	14.61	0	0	0
25	SLU 84	-0.04	-0.37	14.61	0	0	0
25	SLE RA 1	-0.01	-0.28	9.67	0	0	0
25	SLE RA 2	-0.01	-0.28	9.67	0	0	0
25	SLE RA 3	-0.01	-0.28	9.81	0	0	0
25	SLE RA 4	-0.01	-0.28	9.81	0	0	0
25	SLE RA 5	-0.01	-0.28	9.75	0	0	0
25	SLE RA 6	-0.01	-0.28	9.89	0	0	0
25	SLE RA 7	-0.01	-0.28	9.89	0	0	0
25	SLE RA 8	-0.01	-0.28	9.83	0	0	0
25	SLE RA 9	-0.01	-0.28	9.83	0	0	0
25	SLE RA 10	-0.02	-0.29	10.43	0	0	0
25	SLE RA 11	-0.02	-0.28	10.57	0	0	0
25	SLE RA 12	-0.02	-0.29	10.57	0	0	0
25	SLE RA 13	-0.02	-0.29	10.51	0	0	0
25	SLE RA 14	-0.03	-0.28	10.65	0	0	0
25	SLE RA 15	-0.03	-0.29	10.65	0	0	0
25	SLE RA 16	-0.03	-0.28	10.59	0	0	0
25	SLE RA 17	-0.03	-0.28	10.59	0	0	0
25	SLE RA 18	-0.03	-0.29	10.76	0	0	0
25	SLE RA 19	-0.03	-0.29	10.76	0	0	0
25	SLE RA 20	-0.03	-0.29	10.84	0	0	0
25	SLE RA 21	-0.03	-0.29	10.84	0	0	0
25	SLE FR 1	-0.01	-0.28	9.67	0	0	0
25	SLE FR 2	-0.01	-0.28	9.67	0	0	0
25	SLE FR 3	-0.01	-0.28	9.71	0	0	0
25	SLE FR 4	-0.01	-0.28	10	0	0	0
25	SLE FR 5	-0.01	-0.28	10.03	0	0	0
25	SLE FR 6	-0.02	-0.28	10.22	0	0	0
25	SLE QP 1	-0.01	-0.28	9.67	0	0	0
25	SLE QP 2	-0.01	-0.28	10	0	0	0
25	SLD 1	0.57	-0.24	9.84	0	0	0
25	SLD 2	0.58	-0.21	9.84	0	0	0
25	SLD 3	0.53	-0.41	9.81	0	0	0
25	SLD 4	0.54	-0.39	9.8	0	0	0
25	SLD 5	0.21	0	10.01	0	0	0
25	SLD 6	0.23	0.01	10	0	0	0
25	SLD 7	0.09	-0.59	9.89	0	0	0
25	SLD 8	0.1	-0.58	9.89	0	0	0
25	SLD 9	-0.13	0.02	10.11	0	0	0
25	SLD 10	-0.11	0.03	10.11	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
25	SLD 11	-0.25	-0.58	9.99	0	0	0
25	SLD 12	-0.24	-0.56	9.99	0	0	0
25	SLD 13	-0.57	-0.17	10.2	0	0	0
25	SLD 14	-0.55	-0.15	10.19	0	0	0
25	SLD 15	-0.61	-0.35	10.16	0	0	0
25	SLD 16	-0.59	-0.32	10.16	0	0	0
25	SLV 1	1.34	-0.18	9.63	0	0	0
25	SLV 2	1.38	-0.12	9.62	0	0	0
25	SLV 3	1.25	-0.59	9.55	0	0	0
25	SLV 4	1.29	-0.53	9.54	0	0	0
25	SLV 5	0.52	0.35	10.01	0	0	0
25	SLV 6	0.54	0.39	10.01	0	0	0
25	SLV 7	0.23	-0.99	9.74	0	0	0
25	SLV 8	0.26	-0.95	9.74	0	0	0
25	SLV 9	-0.28	0.39	10.26	0	0	0
25	SLV 10	-0.25	0.43	10.26	0	0	0
25	SLV 11	-0.56	-0.95	9.99	0	0	0
25	SLV 12	-0.54	-0.91	9.98	0	0	0
25	SLV 13	-1.31	-0.04	10.46	0	0	0
25	SLV 14	-1.28	0.03	10.45	0	0	0
25	SLV 15	-1.4	-0.44	10.38	0	0	0
25	SLV 16	-1.36	-0.38	10.37	0	0	0
26	SLU 1	0	-0.14	4.93	0	0	0
26	SLU 2	0	-0.15	4.93	0	0	0
26	SLU 3	0	-0.14	5.03	0	0	0
26	SLU 4	0	-0.15	5.03	0	0	0
26	SLU 5	-0.01	-0.15	4.99	0	0	0
26	SLU 6	-0.01	-0.14	5.09	0	0	0
26	SLU 7	-0.01	-0.14	5.09	0	0	0
26	SLU 8	-0.01	-0.14	5.04	0	0	0
26	SLU 9	-0.01	-0.14	5.04	0	0	0
26	SLU 10	-0.01	-0.15	5.52	0	0	0
26	SLU 11	-0.02	-0.15	5.63	0	0	0
26	SLU 12	-0.02	-0.15	5.63	0	0	0
26	SLU 13	-0.02	-0.15	5.58	0	0	0
26	SLU 14	-0.02	-0.15	5.68	0	0	0
26	SLU 15	-0.02	-0.15	5.68	0	0	0
26	SLU 16	-0.02	-0.15	5.64	0	0	0
26	SLU 17	-0.02	-0.15	5.64	0	0	0
26	SLU 18	-0.02	-0.15	5.77	0	0	0
26	SLU 19	-0.02	-0.15	5.77	0	0	0
26	SLU 20	-0.02	-0.15	5.83	0	0	0
26	SLU 21	-0.02	-0.15	5.83	0	0	0
26	SLU 22	0	-0.14	5.47	0	0	0
26	SLU 23	0	-0.14	5.47	0	0	0
26	SLU 24	-0.01	-0.14	5.57	0	0	0
26	SLU 25	-0.01	-0.14	5.57	0	0	0
26	SLU 26	-0.01	-0.14	5.52	0	0	0
26	SLU 27	-0.01	-0.14	5.63	0	0	0
26	SLU 28	-0.01	-0.14	5.63	0	0	0
26	SLU 29	-0.01	-0.14	5.58	0	0	0
26	SLU 30	-0.01	-0.14	5.58	0	0	0
26	SLU 31	-0.01	-0.15	6.06	0	0	0
26	SLU 32	-0.02	-0.14	6.17	0	0	0
26	SLU 33	-0.02	-0.15	6.16	0	0	0
26	SLU 34	-0.02	-0.15	6.12	0	0	0
26	SLU 35	-0.02	-0.14	6.22	0	0	0
26	SLU 36	-0.02	-0.15	6.22	0	0	0
26	SLU 37	-0.02	-0.14	6.18	0	0	0
26	SLU 38	-0.02	-0.14	6.18	0	0	0
26	SLU 39	-0.02	-0.15	6.31	0	0	0
26	SLU 40	-0.02	-0.15	6.31	0	0	0
26	SLU 41	-0.02	-0.15	6.37	0	0	0
26	SLU 42	-0.02	-0.15	6.37	0	0	0
26	SLU 43	0	-0.19	6.22	0	0	0
26	SLU 44	0	-0.19	6.22	0	0	0
26	SLU 45	-0.01	-0.19	6.33	0	0	0
26	SLU 46	-0.01	-0.19	6.33	0	0	0
26	SLU 47	-0.01	-0.19	6.28	0	0	0
26	SLU 48	-0.01	-0.19	6.39	0	0	0
26	SLU 49	-0.01	-0.19	6.39	0	0	0
26	SLU 50	-0.01	-0.19	6.34	0	0	0
26	SLU 51	-0.01	-0.19	6.34	0	0	0
26	SLU 52	-0.01	-0.2	6.81	0	0	0
26	SLU 53	-0.02	-0.19	6.92	0	0	0
26	SLU 54	-0.02	-0.19	6.92	0	0	0
26	SLU 55	-0.02	-0.19	6.87	0	0	0
26	SLU 56	-0.02	-0.19	6.98	0	0	0
26	SLU 57	-0.02	-0.19	6.98	0	0	0
26	SLU 58	-0.02	-0.19	6.93	0	0	0
26	SLU 59	-0.02	-0.19	6.93	0	0	0
26	SLU 60	-0.02	-0.19	7.06	0	0	0
26	SLU 61	-0.02	-0.2	7.06	0	0	0
26	SLU 62	-0.02	-0.19	7.12	0	0	0
26	SLU 63	-0.02	-0.2	7.12	0	0	0
26	SLU 64	0	-0.18	6.76	0	0	0
26	SLU 65	0	-0.19	6.76	0	0	0
26	SLU 66	-0.01	-0.19	6.87	0	0	0
26	SLU 67	-0.01	-0.19	6.87	0	0	0
26	SLU 68	-0.01	-0.19	6.82	0	0	0
26	SLU 69	-0.01	-0.18	6.93	0	0	0
26	SLU 70	-0.01	-0.19	6.93	0	0	0
26	SLU 71	-0.01	-0.18	6.88	0	0	0
26	SLU 72	-0.01	-0.18	6.88	0	0	0
26	SLU 73	-0.01	-0.19	7.35	0	0	0
26	SLU 74	-0.02	-0.19	7.46	0	0	0
26	SLU 75	-0.02	-0.19	7.46	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
26	SLU 76	-0.02	-0.19	7.41	0	0	0
26	SLU 77	-0.02	-0.19	7.52	0	0	0
26	SLU 78	-0.02	-0.19	7.52	0	0	0
26	SLU 79	-0.02	-0.19	7.47	0	0	0
26	SLU 80	-0.02	-0.19	7.47	0	0	0
26	SLU 81	-0.02	-0.19	7.6	0	0	0
26	SLU 82	-0.02	-0.19	7.6	0	0	0
26	SLU 83	-0.02	-0.19	7.66	0	0	0
26	SLU 84	-0.02	-0.19	7.66	0	0	0
26	SLE RA 1	0	-0.14	5.08	0	0	0
26	SLE RA 2	0	-0.14	5.08	0	0	0
26	SLE RA 3	0	-0.14	5.15	0	0	0
26	SLE RA 4	0	-0.14	5.15	0	0	0
26	SLE RA 5	0	-0.14	5.12	0	0	0
26	SLE RA 6	-0.01	-0.14	5.19	0	0	0
26	SLE RA 7	-0.01	-0.14	5.19	0	0	0
26	SLE RA 8	-0.01	-0.14	5.16	0	0	0
26	SLE RA 9	-0.01	-0.14	5.16	0	0	0
26	SLE RA 10	-0.01	-0.15	5.47	0	0	0
26	SLE RA 11	-0.01	-0.15	5.55	0	0	0
26	SLE RA 12	-0.01	-0.15	5.55	0	0	0
26	SLE RA 13	-0.01	-0.15	5.51	0	0	0
26	SLE RA 14	-0.01	-0.15	5.59	0	0	0
26	SLE RA 15	-0.01	-0.15	5.59	0	0	0
26	SLE RA 16	-0.01	-0.14	5.55	0	0	0
26	SLE RA 17	-0.01	-0.15	5.55	0	0	0
26	SLE RA 18	-0.01	-0.15	5.64	0	0	0
26	SLE RA 19	-0.01	-0.15	5.64	0	0	0
26	SLE RA 20	-0.02	-0.15	5.68	0	0	0
26	SLE RA 21	-0.02	-0.15	5.68	0	0	0
26	SLE FR 1	0	-0.14	5.08	0	0	0
26	SLE FR 2	0	-0.14	5.08	0	0	0
26	SLE FR 3	0	-0.14	5.1	0	0	0
26	SLE FR 4	-0.01	-0.14	5.25	0	0	0
26	SLE FR 5	-0.01	-0.14	5.27	0	0	0
26	SLE FR 6	-0.01	-0.15	5.36	0	0	0
26	SLE QP 1	0	-0.14	5.08	0	0	0
26	SLE QP 2	-0.01	-0.14	5.25	0	0	0
26	SLD 1	0.3	-0.12	5.13	0	0	0
26	SLD 2	0.31	-0.11	5.13	0	0	0
26	SLD 3	0.28	-0.22	5.11	0	0	0
26	SLD 4	0.29	-0.2	5.1	0	0	0
26	SLD 5	0.11	0	5.25	0	0	0
26	SLD 6	0.12	0.01	5.25	0	0	0
26	SLD 7	0.05	-0.31	5.17	0	0	0
26	SLD 8	0.05	-0.3	5.17	0	0	0
26	SLD 9	-0.07	0.01	5.33	0	0	0
26	SLD 10	-0.06	0.02	5.33	0	0	0
26	SLD 11	-0.13	-0.3	5.25	0	0	0
26	SLD 12	-0.13	-0.29	5.25	0	0	0
26	SLD 13	-0.3	-0.09	5.4	0	0	0
26	SLD 14	-0.29	-0.07	5.39	0	0	0
26	SLD 15	-0.32	-0.18	5.37	0	0	0
26	SLD 16	-0.31	-0.16	5.37	0	0	0
26	SLV 1	0.71	-0.1	4.97	0	0	0
26	SLV 2	0.73	-0.06	4.96	0	0	0
26	SLV 3	0.66	-0.31	4.92	0	0	0
26	SLV 4	0.68	-0.27	4.91	0	0	0
26	SLV 5	0.27	0.18	5.26	0	0	0
26	SLV 6	0.29	0.2	5.25	0	0	0
26	SLV 7	0.12	-0.52	5.06	0	0	0
26	SLV 8	0.14	-0.49	5.06	0	0	0
26	SLV 9	-0.15	0.21	5.44	0	0	0
26	SLV 10	-0.13	0.23	5.43	0	0	0
26	SLV 11	-0.3	-0.49	5.25	0	0	0
26	SLV 12	-0.28	-0.47	5.24	0	0	0
26	SLV 13	-0.69	-0.02	5.59	0	0	0
26	SLV 14	-0.67	0.02	5.58	0	0	0
26	SLV 15	-0.74	-0.23	5.54	0	0	0
26	SLV 16	-0.72	-0.19	5.53	0	0	0
27	SLU 1	-0.01	-0.31	10.13	0	0	0
27	SLU 2	-0.01	-0.31	10.13	0	0	0
27	SLU 3	-0.01	-0.31	10.36	0	0	0
27	SLU 4	-0.01	-0.31	10.36	0	0	0
27	SLU 5	-0.01	-0.31	10.26	0	0	0
27	SLU 6	-0.02	-0.31	10.49	0	0	0
27	SLU 7	-0.02	-0.31	10.49	0	0	0
27	SLU 8	-0.02	-0.31	10.39	0	0	0
27	SLU 9	-0.02	-0.31	10.39	0	0	0
27	SLU 10	-0.03	-0.33	11.37	0	0	0
27	SLU 11	-0.03	-0.32	11.6	0	0	0
27	SLU 12	-0.03	-0.32	11.6	0	0	0
27	SLU 13	-0.03	-0.32	11.5	0	0	0
27	SLU 14	-0.04	-0.32	11.73	0	0	0
27	SLU 15	-0.04	-0.32	11.73	0	0	0
27	SLU 16	-0.04	-0.32	11.63	0	0	0
27	SLU 17	-0.04	-0.32	11.63	0	0	0
27	SLU 18	-0.04	-0.33	11.9	0	0	0
27	SLU 19	-0.04	-0.33	11.9	0	0	0
27	SLU 20	-0.04	-0.32	12.03	0	0	0
27	SLU 21	-0.04	-0.33	12.03	0	0	0
27	SLU 22	-0.01	-0.3	11.24	0	0	0
27	SLU 23	-0.01	-0.31	11.24	0	0	0
27	SLU 24	-0.01	-0.3	11.47	0	0	0
27	SLU 25	-0.01	-0.31	11.47	0	0	0
27	SLU 26	-0.01	-0.31	11.37	0	0	0
27	SLU 27	-0.02	-0.3	11.6	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
27	SLU 28	-0.02	-0.3	11.6	0	0	0
27	SLU 29	-0.02	-0.3	11.5	0	0	0
27	SLU 30	-0.02	-0.3	11.5	0	0	0
27	SLU 31	-0.03	-0.32	12.49	0	0	0
27	SLU 32	-0.04	-0.31	12.71	0	0	0
27	SLU 33	-0.04	-0.32	12.71	0	0	0
27	SLU 34	-0.04	-0.32	12.61	0	0	0
27	SLU 35	-0.04	-0.31	12.84	0	0	0
27	SLU 36	-0.04	-0.32	12.84	0	0	0
27	SLU 37	-0.04	-0.31	12.74	0	0	0
27	SLU 38	-0.04	-0.31	12.74	0	0	0
27	SLU 39	-0.04	-0.32	13.02	0	0	0
27	SLU 40	-0.04	-0.32	13.02	0	0	0
27	SLU 41	-0.05	-0.32	13.15	0	0	0
27	SLU 42	-0.05	-0.32	13.15	0	0	0
27	SLU 43	-0.01	-0.41	12.79	0	0	0
27	SLU 44	-0.01	-0.41	12.79	0	0	0
27	SLU 45	-0.01	-0.41	13.01	0	0	0
27	SLU 46	-0.01	-0.41	13.01	0	0	0
27	SLU 47	-0.01	-0.41	12.92	0	0	0
27	SLU 48	-0.02	-0.4	13.14	0	0	0
27	SLU 49	-0.02	-0.41	13.14	0	0	0
27	SLU 50	-0.02	-0.4	13.04	0	0	0
27	SLU 51	-0.02	-0.41	13.04	0	0	0
27	SLU 52	-0.03	-0.42	14.03	0	0	0
27	SLU 53	-0.03	-0.42	14.26	0	0	0
27	SLU 54	-0.03	-0.42	14.26	0	0	0
27	SLU 55	-0.04	-0.42	14.16	0	0	0
27	SLU 56	-0.04	-0.42	14.38	0	0	0
27	SLU 57	-0.04	-0.42	14.38	0	0	0
27	SLU 58	-0.04	-0.41	14.29	0	0	0
27	SLU 59	-0.04	-0.42	14.29	0	0	0
27	SLU 60	-0.04	-0.42	14.56	0	0	0
27	SLU 61	-0.04	-0.42	14.56	0	0	0
27	SLU 62	-0.05	-0.42	14.69	0	0	0
27	SLU 63	-0.04	-0.42	14.69	0	0	0
27	SLU 64	-0.01	-0.4	13.9	0	0	0
27	SLU 65	-0.01	-0.4	13.9	0	0	0
27	SLU 66	-0.01	-0.4	14.13	0	0	0
27	SLU 67	-0.01	-0.4	14.13	0	0	0
27	SLU 68	-0.01	-0.4	14.03	0	0	0
27	SLU 69	-0.02	-0.4	14.26	0	0	0
27	SLU 70	-0.02	-0.4	14.26	0	0	0
27	SLU 71	-0.02	-0.4	14.16	0	0	0
27	SLU 72	-0.02	-0.4	14.16	0	0	0
27	SLU 73	-0.03	-0.41	15.14	0	0	0
27	SLU 74	-0.04	-0.41	15.37	0	0	0
27	SLU 75	-0.04	-0.41	15.37	0	0	0
27	SLU 76	-0.04	-0.41	15.27	0	0	0
27	SLU 77	-0.04	-0.41	15.5	0	0	0
27	SLU 78	-0.04	-0.41	15.5	0	0	0
27	SLU 79	-0.04	-0.41	15.4	0	0	0
27	SLU 80	-0.04	-0.41	15.4	0	0	0
27	SLU 81	-0.04	-0.41	15.68	0	0	0
27	SLU 82	-0.04	-0.42	15.68	0	0	0
27	SLU 83	-0.05	-0.41	15.8	0	0	0
27	SLU 84	-0.05	-0.41	15.8	0	0	0
27	SLE RA 1	-0.01	-0.31	10.45	0	0	0
27	SLE RA 2	-0.01	-0.31	10.45	0	0	0
27	SLE RA 3	-0.01	-0.31	10.6	0	0	0
27	SLE RA 4	-0.01	-0.31	10.6	0	0	0
27	SLE RA 5	-0.01	-0.31	10.53	0	0	0
27	SLE RA 6	-0.01	-0.31	10.69	0	0	0
27	SLE RA 7	-0.01	-0.31	10.69	0	0	0
27	SLE RA 8	-0.01	-0.31	10.62	0	0	0
27	SLE RA 9	-0.01	-0.31	10.62	0	0	0
27	SLE RA 10	-0.02	-0.32	11.28	0	0	0
27	SLE RA 11	-0.03	-0.32	11.43	0	0	0
27	SLE RA 12	-0.03	-0.32	11.43	0	0	0
27	SLE RA 13	-0.03	-0.32	11.36	0	0	0
27	SLE RA 14	-0.03	-0.31	11.51	0	0	0
27	SLE RA 15	-0.03	-0.32	11.51	0	0	0
27	SLE RA 16	-0.03	-0.31	11.45	0	0	0
27	SLE RA 17	-0.03	-0.32	11.45	0	0	0
27	SLE RA 18	-0.03	-0.32	11.63	0	0	0
27	SLE RA 19	-0.03	-0.32	11.63	0	0	0
27	SLE RA 20	-0.03	-0.32	11.72	0	0	0
27	SLE RA 21	-0.03	-0.32	11.72	0	0	0
27	SLE FR 1	-0.01	-0.31	10.45	0	0	0
27	SLE FR 2	-0.01	-0.31	10.45	0	0	0
27	SLE FR 3	-0.01	-0.31	10.48	0	0	0
27	SLE FR 4	-0.01	-0.31	10.8	0	0	0
27	SLE FR 5	-0.01	-0.31	10.84	0	0	0
27	SLE FR 6	-0.02	-0.31	11.04	0	0	0
27	SLE QP 1	-0.01	-0.31	10.45	0	0	0
27	SLE QP 2	-0.01	-0.31	10.8	0	0	0
27	SLD 1	0.61	-0.26	10.7	0	0	0
27	SLD 2	0.63	-0.23	10.69	0	0	0
27	SLD 3	0.57	-0.45	10.67	0	0	0
27	SLD 4	0.59	-0.43	10.67	0	0	0
27	SLD 5	0.23	-0.01	10.81	0	0	0
27	SLD 6	0.24	0.01	10.81	0	0	0
27	SLD 7	0.1	-0.65	10.73	0	0	0
27	SLD 8	0.11	-0.64	10.73	0	0	0
27	SLD 9	-0.14	0.01	10.88	0	0	0
27	SLD 10	-0.13	0.03	10.88	0	0	0
27	SLD 11	-0.27	-0.63	10.8	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
27	SLD 12	-0.26	-0.62	10.8	0	0	0
27	SLD 13	-0.61	-0.19	10.94	0	0	0
27	SLD 14	-0.6	-0.17	10.94	0	0	0
27	SLD 15	-0.65	-0.39	10.91	0	0	0
27	SLD 16	-0.64	-0.36	10.91	0	0	0
27	SLV 1	1.45	-0.2	10.55	0	0	0
27	SLV 2	1.49	-0.14	10.55	0	0	0
27	SLV 3	1.35	-0.64	10.49	0	0	0
27	SLV 4	1.39	-0.58	10.49	0	0	0
27	SLV 5	0.56	0.38	10.81	0	0	0
27	SLV 6	0.58	0.42	10.81	0	0	0
27	SLV 7	0.25	-1.09	10.62	0	0	0
27	SLV 8	0.27	-1.05	10.62	0	0	0
27	SLV 9	-0.3	0.43	10.99	0	0	0
27	SLV 10	-0.28	0.46	10.98	0	0	0
27	SLV 11	-0.61	-1.04	10.79	0	0	0
27	SLV 12	-0.58	-1	10.79	0	0	0
27	SLV 13	-1.42	-0.04	11.12	0	0	0
27	SLV 14	-1.38	0.01	11.11	0	0	0
27	SLV 15	-1.51	-0.48	11.06	0	0	0
27	SLV 16	-1.47	-0.43	11.06	0	0	0
28	SLU 1	0	-0.21	6.26	0	0	0
28	SLU 2	0	-0.22	6.26	0	0	0
28	SLU 3	-0.01	-0.21	6.41	0	0	0
28	SLU 4	-0.01	-0.21	6.41	0	0	0
28	SLU 5	-0.01	-0.21	6.35	0	0	0
28	SLU 6	-0.01	-0.21	6.49	0	0	0
28	SLU 7	-0.01	-0.21	6.49	0	0	0
28	SLU 8	-0.01	-0.21	6.43	0	0	0
28	SLU 9	-0.01	-0.21	6.43	0	0	0
28	SLU 10	-0.02	-0.22	7.06	0	0	0
28	SLU 11	-0.02	-0.22	7.21	0	0	0
28	SLU 12	-0.02	-0.22	7.21	0	0	0
28	SLU 13	-0.02	-0.22	7.15	0	0	0
28	SLU 14	-0.02	-0.22	7.29	0	0	0
28	SLU 15	-0.02	-0.22	7.29	0	0	0
28	SLU 16	-0.02	-0.22	7.23	0	0	0
28	SLU 17	-0.02	-0.22	7.23	0	0	0
28	SLU 18	-0.02	-0.22	7.4	0	0	0
28	SLU 19	-0.02	-0.23	7.4	0	0	0
28	SLU 20	-0.03	-0.22	7.49	0	0	0
28	SLU 21	-0.03	-0.23	7.49	0	0	0
28	SLU 22	-0.01	-0.21	6.95	0	0	0
28	SLU 23	-0.01	-0.21	6.95	0	0	0
28	SLU 24	-0.01	-0.21	7.1	0	0	0
28	SLU 25	-0.01	-0.21	7.1	0	0	0
28	SLU 26	-0.01	-0.21	7.04	0	0	0
28	SLU 27	-0.01	-0.21	7.19	0	0	0
28	SLU 28	-0.01	-0.21	7.19	0	0	0
28	SLU 29	-0.01	-0.21	7.13	0	0	0
28	SLU 30	-0.01	-0.21	7.13	0	0	0
28	SLU 31	-0.02	-0.22	7.75	0	0	0
28	SLU 32	-0.02	-0.22	7.9	0	0	0
28	SLU 33	-0.02	-0.22	7.9	0	0	0
28	SLU 34	-0.02	-0.22	7.84	0	0	0
28	SLU 35	-0.03	-0.22	7.99	0	0	0
28	SLU 36	-0.03	-0.22	7.99	0	0	0
28	SLU 37	-0.03	-0.22	7.93	0	0	0
28	SLU 38	-0.03	-0.22	7.93	0	0	0
28	SLU 39	-0.03	-0.22	8.1	0	0	0
28	SLU 40	-0.03	-0.22	8.1	0	0	0
28	SLU 41	-0.03	-0.22	8.18	0	0	0
28	SLU 42	-0.03	-0.22	8.18	0	0	0
28	SLU 43	0	-0.28	7.9	0	0	0
28	SLU 44	0	-0.28	7.9	0	0	0
28	SLU 45	-0.01	-0.28	8.05	0	0	0
28	SLU 46	-0.01	-0.28	8.05	0	0	0
28	SLU 47	-0.01	-0.28	7.99	0	0	0
28	SLU 48	-0.01	-0.28	8.13	0	0	0
28	SLU 49	-0.01	-0.28	8.14	0	0	0
28	SLU 50	-0.01	-0.27	8.07	0	0	0
28	SLU 51	-0.01	-0.28	8.07	0	0	0
28	SLU 52	-0.02	-0.29	8.7	0	0	0
28	SLU 53	-0.02	-0.29	8.85	0	0	0
28	SLU 54	-0.02	-0.29	8.85	0	0	0
28	SLU 55	-0.02	-0.29	8.79	0	0	0
28	SLU 56	-0.02	-0.28	8.93	0	0	0
28	SLU 57	-0.02	-0.29	8.94	0	0	0
28	SLU 58	-0.03	-0.28	8.87	0	0	0
28	SLU 59	-0.03	-0.29	8.88	0	0	0
28	SLU 60	-0.02	-0.29	9.04	0	0	0
28	SLU 61	-0.02	-0.29	9.04	0	0	0
28	SLU 62	-0.03	-0.29	9.13	0	0	0
28	SLU 63	-0.03	-0.29	9.13	0	0	0
28	SLU 64	-0.01	-0.27	8.59	0	0	0
28	SLU 65	-0.01	-0.28	8.59	0	0	0
28	SLU 66	-0.01	-0.27	8.74	0	0	0
28	SLU 67	-0.01	-0.28	8.74	0	0	0
28	SLU 68	-0.01	-0.28	8.68	0	0	0
28	SLU 69	-0.01	-0.27	8.83	0	0	0
28	SLU 70	-0.01	-0.27	8.83	0	0	0
28	SLU 71	-0.01	-0.27	8.77	0	0	0
28	SLU 72	-0.01	-0.27	8.77	0	0	0
28	SLU 73	-0.02	-0.29	9.39	0	0	0
28	SLU 74	-0.02	-0.28	9.54	0	0	0
28	SLU 75	-0.02	-0.28	9.54	0	0	0
28	SLU 76	-0.02	-0.28	9.48	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
28	SLU 77	-0.03	-0.28	9.63	0	0	0
28	SLU 78	-0.03	-0.28	9.63	0	0	0
28	SLU 79	-0.03	-0.28	9.57	0	0	0
28	SLU 80	-0.03	-0.28	9.57	0	0	0
28	SLU 81	-0.03	-0.29	9.74	0	0	0
28	SLU 82	-0.03	-0.29	9.74	0	0	0
28	SLU 83	-0.03	-0.28	9.82	0	0	0
28	SLU 84	-0.03	-0.29	9.82	0	0	0
28	SLE RA 1	0	-0.21	6.46	0	0	0
28	SLE RA 2	0	-0.21	6.46	0	0	0
28	SLE RA 3	-0.01	-0.21	6.56	0	0	0
28	SLE RA 4	-0.01	-0.21	6.56	0	0	0
28	SLE RA 5	-0.01	-0.21	6.52	0	0	0
28	SLE RA 6	-0.01	-0.21	6.61	0	0	0
28	SLE RA 7	-0.01	-0.21	6.61	0	0	0
28	SLE RA 8	-0.01	-0.21	6.57	0	0	0
28	SLE RA 9	-0.01	-0.21	6.57	0	0	0
28	SLE RA 10	-0.01	-0.22	6.99	0	0	0
28	SLE RA 11	-0.02	-0.22	7.09	0	0	0
28	SLE RA 12	-0.02	-0.22	7.09	0	0	0
28	SLE RA 13	-0.02	-0.22	7.05	0	0	0
28	SLE RA 14	-0.02	-0.22	7.15	0	0	0
28	SLE RA 15	-0.02	-0.22	7.15	0	0	0
28	SLE RA 16	-0.02	-0.22	7.11	0	0	0
28	SLE RA 17	-0.02	-0.22	7.11	0	0	0
28	SLE RA 18	-0.02	-0.22	7.22	0	0	0
28	SLE RA 19	-0.02	-0.22	7.22	0	0	0
28	SLE RA 20	-0.02	-0.22	7.28	0	0	0
28	SLE RA 21	-0.02	-0.22	7.28	0	0	0
28	SLE FR 1	0	-0.21	6.46	0	0	0
28	SLE FR 2	0	-0.21	6.46	0	0	0
28	SLE FR 3	-0.01	-0.21	6.48	0	0	0
28	SLE FR 4	-0.01	-0.21	6.69	0	0	0
28	SLE FR 5	-0.01	-0.21	6.71	0	0	0
28	SLE FR 6	-0.01	-0.21	6.84	0	0	0
28	SLE QP 1	0	-0.21	6.46	0	0	0
28	SLE QP 2	-0.01	-0.21	6.69	0	0	0
28	SLD 1	0.37	-0.17	6.82	0	0	0
28	SLD 2	0.38	-0.16	6.83	0	0	0
28	SLD 3	0.35	-0.29	6.8	0	0	0
28	SLD 4	0.36	-0.29	6.81	0	0	0
28	SLD 5	0.14	-0.01	6.76	0	0	0
28	SLD 6	0.15	-0.01	6.77	0	0	0
28	SLD 7	0.06	-0.43	6.68	0	0	0
28	SLD 8	0.07	-0.43	6.69	0	0	0
28	SLD 9	-0.08	0	6.69	0	0	0
28	SLD 10	-0.08	0	6.69	0	0	0
28	SLD 11	-0.16	-0.42	6.6	0	0	0
28	SLD 12	-0.16	-0.42	6.61	0	0	0
28	SLD 13	-0.38	-0.14	6.57	0	0	0
28	SLD 14	-0.37	-0.13	6.57	0	0	0
28	SLD 15	-0.4	-0.26	6.54	0	0	0
28	SLD 16	-0.39	-0.26	6.55	0	0	0
28	SLV 1	0.88	-0.11	7.01	0	0	0
28	SLV 2	0.91	-0.1	7.03	0	0	0
28	SLV 3	0.83	-0.4	6.95	0	0	0
28	SLV 4	0.85	-0.39	6.97	0	0	0
28	SLV 5	0.34	0.25	6.87	0	0	0
28	SLV 6	0.36	0.25	6.88	0	0	0
28	SLV 7	0.15	-0.7	6.68	0	0	0
28	SLV 8	0.17	-0.7	6.69	0	0	0
28	SLV 9	-0.18	0.27	6.68	0	0	0
28	SLV 10	-0.17	0.28	6.7	0	0	0
28	SLV 11	-0.37	-0.68	6.5	0	0	0
28	SLV 12	-0.36	-0.67	6.51	0	0	0
28	SLV 13	-0.87	-0.04	6.4	0	0	0
28	SLV 14	-0.84	-0.03	6.42	0	0	0
28	SLV 15	-0.92	-0.32	6.35	0	0	0
28	SLV 16	-0.9	-0.31	6.36	0	0	0
29	SLU 1	-0.01	-0.41	12.53	0	0	0
29	SLU 2	-0.01	-0.42	12.53	0	0	0
29	SLU 3	-0.01	-0.42	12.82	0	0	0
29	SLU 4	-0.01	-0.42	12.83	0	0	0
29	SLU 5	-0.01	-0.42	12.7	0	0	0
29	SLU 6	-0.02	-0.41	12.99	0	0	0
29	SLU 7	-0.02	-0.42	13	0	0	0
29	SLU 8	-0.02	-0.41	12.87	0	0	0
29	SLU 9	-0.02	-0.41	12.87	0	0	0
29	SLU 10	-0.04	-0.44	14.12	0	0	0
29	SLU 11	-0.04	-0.43	14.41	0	0	0
29	SLU 12	-0.04	-0.44	14.41	0	0	0
29	SLU 13	-0.04	-0.44	14.29	0	0	0
29	SLU 14	-0.05	-0.43	14.58	0	0	0
29	SLU 15	-0.05	-0.43	14.58	0	0	0
29	SLU 16	-0.05	-0.43	14.46	0	0	0
29	SLU 17	-0.05	-0.43	14.46	0	0	0
29	SLU 18	-0.05	-0.44	14.8	0	0	0
29	SLU 19	-0.05	-0.44	14.8	0	0	0
29	SLU 20	-0.05	-0.44	14.97	0	0	0
29	SLU 21	-0.05	-0.44	14.97	0	0	0
29	SLU 22	-0.01	-0.41	13.92	0	0	0
29	SLU 23	-0.01	-0.41	13.92	0	0	0
29	SLU 24	-0.02	-0.41	14.21	0	0	0
29	SLU 25	-0.02	-0.41	14.21	0	0	0
29	SLU 26	-0.02	-0.41	14.09	0	0	0
29	SLU 27	-0.02	-0.41	14.38	0	0	0
29	SLU 28	-0.02	-0.41	14.38	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLU 29	-0.02	-0.4	14.26	0	0	0
29	SLU 30	-0.02	-0.41	14.26	0	0	0
29	SLU 31	-0.04	-0.43	15.51	0	0	0
29	SLU 32	-0.04	-0.43	15.8	0	0	0
29	SLU 33	-0.04	-0.43	15.8	0	0	0
29	SLU 34	-0.04	-0.43	15.68	0	0	0
29	SLU 35	-0.05	-0.42	15.97	0	0	0
29	SLU 36	-0.05	-0.43	15.97	0	0	0
29	SLU 37	-0.05	-0.42	15.85	0	0	0
29	SLU 38	-0.05	-0.42	15.85	0	0	0
29	SLU 39	-0.05	-0.43	16.19	0	0	0
29	SLU 40	-0.05	-0.44	16.19	0	0	0
29	SLU 41	-0.06	-0.43	16.36	0	0	0
29	SLU 42	-0.06	-0.43	16.36	0	0	0
29	SLU 43	-0.01	-0.54	15.82	0	0	0
29	SLU 44	-0.01	-0.55	15.82	0	0	0
29	SLU 45	-0.02	-0.54	16.11	0	0	0
29	SLU 46	-0.01	-0.55	16.11	0	0	0
29	SLU 47	-0.02	-0.55	15.99	0	0	0
29	SLU 48	-0.02	-0.54	16.28	0	0	0
29	SLU 49	-0.02	-0.54	16.28	0	0	0
29	SLU 50	-0.02	-0.54	16.16	0	0	0
29	SLU 51	-0.02	-0.54	16.16	0	0	0
29	SLU 52	-0.04	-0.56	17.41	0	0	0
29	SLU 53	-0.04	-0.56	17.7	0	0	0
29	SLU 54	-0.04	-0.56	17.7	0	0	0
29	SLU 55	-0.04	-0.56	17.58	0	0	0
29	SLU 56	-0.05	-0.56	17.87	0	0	0
29	SLU 57	-0.05	-0.56	17.87	0	0	0
29	SLU 58	-0.05	-0.55	17.75	0	0	0
29	SLU 59	-0.05	-0.56	17.75	0	0	0
29	SLU 60	-0.05	-0.57	18.09	0	0	0
29	SLU 61	-0.05	-0.57	18.09	0	0	0
29	SLU 62	-0.06	-0.56	18.26	0	0	0
29	SLU 63	-0.06	-0.57	18.26	0	0	0
29	SLU 64	-0.01	-0.53	17.2	0	0	0
29	SLU 65	-0.01	-0.54	17.2	0	0	0
29	SLU 66	-0.02	-0.53	17.49	0	0	0
29	SLU 67	-0.02	-0.54	17.5	0	0	0
29	SLU 68	-0.02	-0.54	17.37	0	0	0
29	SLU 69	-0.02	-0.53	17.66	0	0	0
29	SLU 70	-0.02	-0.54	17.67	0	0	0
29	SLU 71	-0.03	-0.53	17.54	0	0	0
29	SLU 72	-0.03	-0.53	17.54	0	0	0
29	SLU 73	-0.04	-0.56	18.79	0	0	0
29	SLU 74	-0.05	-0.55	19.08	0	0	0
29	SLU 75	-0.05	-0.56	19.08	0	0	0
29	SLU 76	-0.05	-0.56	18.96	0	0	0
29	SLU 77	-0.05	-0.55	19.25	0	0	0
29	SLU 78	-0.05	-0.55	19.25	0	0	0
29	SLU 79	-0.05	-0.55	19.13	0	0	0
29	SLU 80	-0.05	-0.55	19.13	0	0	0
29	SLU 81	-0.05	-0.56	19.47	0	0	0
29	SLU 82	-0.05	-0.56	19.47	0	0	0
29	SLU 83	-0.06	-0.56	19.64	0	0	0
29	SLU 84	-0.06	-0.56	19.64	0	0	0
29	SLE RA 1	-0.01	-0.41	12.93	0	0	0
29	SLE RA 2	-0.01	-0.42	12.93	0	0	0
29	SLE RA 3	-0.01	-0.41	13.12	0	0	0
29	SLE RA 4	-0.01	-0.42	13.12	0	0	0
29	SLE RA 5	-0.01	-0.42	13.04	0	0	0
29	SLE RA 6	-0.02	-0.41	13.24	0	0	0
29	SLE RA 7	-0.02	-0.41	13.24	0	0	0
29	SLE RA 8	-0.02	-0.41	13.16	0	0	0
29	SLE RA 9	-0.02	-0.41	13.16	0	0	0
29	SLE RA 10	-0.03	-0.43	13.99	0	0	0
29	SLE RA 11	-0.03	-0.42	14.18	0	0	0
29	SLE RA 12	-0.03	-0.43	14.18	0	0	0
29	SLE RA 13	-0.03	-0.43	14.1	0	0	0
29	SLE RA 14	-0.04	-0.42	14.29	0	0	0
29	SLE RA 15	-0.04	-0.43	14.3	0	0	0
29	SLE RA 16	-0.04	-0.42	14.21	0	0	0
29	SLE RA 17	-0.04	-0.42	14.21	0	0	0
29	SLE RA 18	-0.04	-0.43	14.44	0	0	0
29	SLE RA 19	-0.04	-0.43	14.44	0	0	0
29	SLE RA 20	-0.04	-0.43	14.55	0	0	0
29	SLE RA 21	-0.04	-0.43	14.55	0	0	0
29	SLE FR 1	-0.01	-0.41	12.93	0	0	0
29	SLE FR 2	-0.01	-0.41	12.93	0	0	0
29	SLE FR 3	-0.01	-0.41	12.97	0	0	0
29	SLE FR 4	-0.02	-0.42	13.38	0	0	0
29	SLE FR 5	-0.02	-0.42	13.43	0	0	0
29	SLE FR 6	-0.02	-0.42	13.68	0	0	0
29	SLE QP 1	-0.01	-0.41	12.93	0	0	0
29	SLE QP 2	-0.02	-0.42	13.38	0	0	0
29	SLD 1	0.75	-0.33	13.56	0	0	0
29	SLD 2	0.77	-0.32	13.57	0	0	0
29	SLD 3	0.7	-0.58	13.52	0	0	0
29	SLD 4	0.72	-0.57	13.54	0	0	0
29	SLD 5	0.28	-0.02	13.48	0	0	0
29	SLD 6	0.3	-0.01	13.49	0	0	0
29	SLD 7	0.12	-0.84	13.37	0	0	0
29	SLD 8	0.13	-0.84	13.38	0	0	0
29	SLD 9	-0.17	0	13.38	0	0	0
29	SLD 10	-0.15	0.01	13.39	0	0	0
29	SLD 11	-0.33	-0.82	13.27	0	0	0
29	SLD 12	-0.32	-0.82	13.28	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLD 13	-0.75	-0.26	13.23	0	0	0
29	SLD 14	-0.73	-0.25	13.24	0	0	0
29	SLD 15	-0.8	-0.51	13.2	0	0	0
29	SLD 16	-0.78	-0.5	13.21	0	0	0
29	SLV 1	1.77	-0.23	13.79	0	0	0
29	SLV 2	1.82	-0.2	13.82	0	0	0
29	SLV 3	1.66	-0.79	13.72	0	0	0
29	SLV 4	1.71	-0.76	13.74	0	0	0
29	SLV 5	0.68	0.49	13.62	0	0	0
29	SLV 6	0.71	0.51	13.63	0	0	0
29	SLV 7	0.31	-1.39	13.36	0	0	0
29	SLV 8	0.34	-1.37	13.38	0	0	0
29	SLV 9	-0.37	0.54	13.39	0	0	0
29	SLV 10	-0.34	0.56	13.4	0	0	0
29	SLV 11	-0.75	-1.34	13.13	0	0	0
29	SLV 12	-0.72	-1.32	13.15	0	0	0
29	SLV 13	-1.74	-0.07	13.02	0	0	0
29	SLV 14	-1.69	-0.04	13.05	0	0	0
29	SLV 15	-1.85	-0.63	12.95	0	0	0
29	SLV 16	-1.81	-0.61	12.97	0	0	0
30	SLU 1	-0.01	-0.42	12.85	0	0	0
30	SLU 2	-0.01	-0.42	12.85	0	0	0
30	SLU 3	-0.01	-0.42	13.15	0	0	0
30	SLU 4	-0.01	-0.42	13.15	0	0	0
30	SLU 5	-0.02	-0.42	13.02	0	0	0
30	SLU 6	-0.02	-0.41	13.32	0	0	0
30	SLU 7	-0.02	-0.42	13.32	0	0	0
30	SLU 8	-0.02	-0.41	13.19	0	0	0
30	SLU 9	-0.02	-0.42	13.19	0	0	0
30	SLU 10	-0.04	-0.44	14.46	0	0	0
30	SLU 11	-0.04	-0.43	14.76	0	0	0
30	SLU 12	-0.04	-0.44	14.76	0	0	0
30	SLU 13	-0.04	-0.44	14.64	0	0	0
30	SLU 14	-0.05	-0.43	14.93	0	0	0
30	SLU 15	-0.05	-0.43	14.93	0	0	0
30	SLU 16	-0.05	-0.43	14.81	0	0	0
30	SLU 17	-0.05	-0.43	14.81	0	0	0
30	SLU 18	-0.05	-0.44	15.15	0	0	0
30	SLU 19	-0.05	-0.44	15.15	0	0	0
30	SLU 20	-0.06	-0.44	15.33	0	0	0
30	SLU 21	-0.06	-0.44	15.33	0	0	0
30	SLU 22	-0.01	-0.41	14.27	0	0	0
30	SLU 23	-0.01	-0.41	14.27	0	0	0
30	SLU 24	-0.02	-0.41	14.57	0	0	0
30	SLU 25	-0.02	-0.41	14.57	0	0	0
30	SLU 26	-0.02	-0.41	14.44	0	0	0
30	SLU 27	-0.02	-0.41	14.74	0	0	0
30	SLU 28	-0.02	-0.41	14.74	0	0	0
30	SLU 29	-0.03	-0.4	14.61	0	0	0
30	SLU 30	-0.03	-0.41	14.61	0	0	0
30	SLU 31	-0.04	-0.43	15.88	0	0	0
30	SLU 32	-0.05	-0.42	16.18	0	0	0
30	SLU 33	-0.05	-0.43	16.18	0	0	0
30	SLU 34	-0.05	-0.43	16.05	0	0	0
30	SLU 35	-0.05	-0.42	16.35	0	0	0
30	SLU 36	-0.05	-0.43	16.35	0	0	0
30	SLU 37	-0.05	-0.42	16.22	0	0	0
30	SLU 38	-0.05	-0.42	16.22	0	0	0
30	SLU 39	-0.05	-0.43	16.57	0	0	0
30	SLU 40	-0.05	-0.43	16.57	0	0	0
30	SLU 41	-0.06	-0.43	16.74	0	0	0
30	SLU 42	-0.06	-0.43	16.74	0	0	0
30	SLU 43	-0.01	-0.54	16.22	0	0	0
30	SLU 44	-0.01	-0.55	16.22	0	0	0
30	SLU 45	-0.02	-0.54	16.52	0	0	0
30	SLU 46	-0.02	-0.55	16.52	0	0	0
30	SLU 47	-0.02	-0.55	16.39	0	0	0
30	SLU 48	-0.02	-0.54	16.69	0	0	0
30	SLU 49	-0.02	-0.55	16.69	0	0	0
30	SLU 50	-0.02	-0.54	16.56	0	0	0
30	SLU 51	-0.02	-0.54	16.56	0	0	0
30	SLU 52	-0.04	-0.57	17.83	0	0	0
30	SLU 53	-0.05	-0.56	18.13	0	0	0
30	SLU 54	-0.05	-0.56	18.13	0	0	0
30	SLU 55	-0.05	-0.56	18	0	0	0
30	SLU 56	-0.05	-0.56	18.3	0	0	0
30	SLU 57	-0.05	-0.56	18.3	0	0	0
30	SLU 58	-0.05	-0.55	18.17	0	0	0
30	SLU 59	-0.05	-0.56	18.17	0	0	0
30	SLU 60	-0.05	-0.57	18.52	0	0	0
30	SLU 61	-0.05	-0.57	18.52	0	0	0
30	SLU 62	-0.06	-0.56	18.69	0	0	0
30	SLU 63	-0.06	-0.57	18.69	0	0	0
30	SLU 64	-0.01	-0.53	17.64	0	0	0
30	SLU 65	-0.01	-0.54	17.64	0	0	0
30	SLU 66	-0.02	-0.54	17.93	0	0	0
30	SLU 67	-0.02	-0.54	17.94	0	0	0
30	SLU 68	-0.02	-0.54	17.81	0	0	0
30	SLU 69	-0.03	-0.53	18.11	0	0	0
30	SLU 70	-0.03	-0.54	18.11	0	0	0
30	SLU 71	-0.03	-0.53	17.98	0	0	0
30	SLU 72	-0.03	-0.53	17.98	0	0	0
30	SLU 73	-0.04	-0.56	19.25	0	0	0
30	SLU 74	-0.05	-0.55	19.55	0	0	0
30	SLU 75	-0.05	-0.56	19.55	0	0	0
30	SLU 76	-0.05	-0.56	19.42	0	0	0
30	SLU 77	-0.06	-0.55	19.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
30	SLU 78	-0.05	-0.55	19.72	0	0	0
30	SLU 79	-0.06	-0.55	19.59	0	0	0
30	SLU 80	-0.06	-0.55	19.59	0	0	0
30	SLU 81	-0.05	-0.56	19.94	0	0	0
30	SLU 82	-0.05	-0.56	19.94	0	0	0
30	SLU 83	-0.06	-0.56	20.11	0	0	0
30	SLU 84	-0.06	-0.56	20.11	0	0	0
30	SLE RA 1	-0.01	-0.41	13.26	0	0	0
30	SLE RA 2	-0.01	-0.42	13.26	0	0	0
30	SLE RA 3	-0.01	-0.41	13.45	0	0	0
30	SLE RA 4	-0.01	-0.42	13.45	0	0	0
30	SLE RA 5	-0.01	-0.42	13.37	0	0	0
30	SLE RA 6	-0.02	-0.41	13.57	0	0	0
30	SLE RA 7	-0.02	-0.42	13.57	0	0	0
30	SLE RA 8	-0.02	-0.41	13.48	0	0	0
30	SLE RA 9	-0.02	-0.41	13.49	0	0	0
30	SLE RA 10	-0.03	-0.43	14.33	0	0	0
30	SLE RA 11	-0.03	-0.42	14.53	0	0	0
30	SLE RA 12	-0.03	-0.43	14.53	0	0	0
30	SLE RA 13	-0.03	-0.43	14.45	0	0	0
30	SLE RA 14	-0.04	-0.42	14.64	0	0	0
30	SLE RA 15	-0.04	-0.43	14.64	0	0	0
30	SLE RA 16	-0.04	-0.42	14.56	0	0	0
30	SLE RA 17	-0.04	-0.42	14.56	0	0	0
30	SLE RA 18	-0.04	-0.43	14.79	0	0	0
30	SLE RA 19	-0.04	-0.43	14.79	0	0	0
30	SLE RA 20	-0.04	-0.43	14.91	0	0	0
30	SLE RA 21	-0.04	-0.43	14.91	0	0	0
30	SLE FR 1	-0.01	-0.41	13.26	0	0	0
30	SLE FR 2	-0.01	-0.41	13.26	0	0	0
30	SLE FR 3	-0.01	-0.41	13.3	0	0	0
30	SLE FR 4	-0.02	-0.42	13.72	0	0	0
30	SLE FR 5	-0.02	-0.42	13.76	0	0	0
30	SLE FR 6	-0.02	-0.42	14.02	0	0	0
30	SLE QP 1	-0.01	-0.41	13.26	0	0	0
30	SLE QP 2	-0.02	-0.42	13.72	0	0	0
30	SLD 1	0.77	-0.34	13.8	0	0	0
30	SLD 2	0.79	-0.32	13.81	0	0	0
30	SLD 3	0.72	-0.59	13.78	0	0	0
30	SLD 4	0.74	-0.57	13.78	0	0	0
30	SLD 5	0.29	-0.01	13.77	0	0	0
30	SLD 6	0.31	0	13.78	0	0	0
30	SLD 7	0.12	-0.86	13.7	0	0	0
30	SLD 8	0.14	-0.84	13.71	0	0	0
30	SLD 9	-0.17	0.01	13.73	0	0	0
30	SLD 10	-0.16	0.02	13.73	0	0	0
30	SLD 11	-0.34	-0.83	13.66	0	0	0
30	SLD 12	-0.33	-0.82	13.66	0	0	0
30	SLD 13	-0.78	-0.26	13.65	0	0	0
30	SLD 14	-0.76	-0.25	13.66	0	0	0
30	SLD 15	-0.83	-0.52	13.63	0	0	0
30	SLD 16	-0.81	-0.5	13.63	0	0	0
30	SLV 1	1.83	-0.24	13.91	0	0	0
30	SLV 2	1.88	-0.2	13.93	0	0	0
30	SLV 3	1.71	-0.81	13.86	0	0	0
30	SLV 4	1.76	-0.77	13.88	0	0	0
30	SLV 5	0.71	0.5	13.85	0	0	0
30	SLV 6	0.74	0.52	13.86	0	0	0
30	SLV 7	0.31	-1.41	13.68	0	0	0
30	SLV 8	0.35	-1.38	13.69	0	0	0
30	SLV 9	-0.38	0.55	13.74	0	0	0
30	SLV 10	-0.35	0.58	13.75	0	0	0
30	SLV 11	-0.77	-1.36	13.58	0	0	0
30	SLV 12	-0.74	-1.33	13.59	0	0	0
30	SLV 13	-1.8	-0.07	13.56	0	0	0
30	SLV 14	-1.75	-0.02	13.57	0	0	0
30	SLV 15	-1.91	-0.64	13.51	0	0	0
30	SLV 16	-1.86	-0.6	13.52	0	0	0
31	SLU 1	-0.01	-0.41	12.93	0	0	0
31	SLU 2	-0.01	-0.41	12.93	0	0	0
31	SLU 3	-0.02	-0.41	13.22	0	0	0
31	SLU 4	-0.02	-0.41	13.22	0	0	0
31	SLU 5	-0.02	-0.41	13.09	0	0	0
31	SLU 6	-0.02	-0.41	13.39	0	0	0
31	SLU 7	-0.02	-0.41	13.39	0	0	0
31	SLU 8	-0.02	-0.4	13.26	0	0	0
31	SLU 9	-0.02	-0.41	13.26	0	0	0
31	SLU 10	-0.04	-0.43	14.53	0	0	0
31	SLU 11	-0.05	-0.42	14.82	0	0	0
31	SLU 12	-0.05	-0.43	14.82	0	0	0
31	SLU 13	-0.05	-0.43	14.7	0	0	0
31	SLU 14	-0.05	-0.42	14.99	0	0	0
31	SLU 15	-0.05	-0.43	14.99	0	0	0
31	SLU 16	-0.05	-0.42	14.87	0	0	0
31	SLU 17	-0.05	-0.42	14.87	0	0	0
31	SLU 18	-0.05	-0.43	15.22	0	0	0
31	SLU 19	-0.05	-0.43	15.22	0	0	0
31	SLU 20	-0.06	-0.43	15.39	0	0	0
31	SLU 21	-0.06	-0.43	15.39	0	0	0
31	SLU 22	-0.01	-0.4	14.35	0	0	0
31	SLU 23	-0.01	-0.41	14.35	0	0	0
31	SLU 24	-0.02	-0.4	14.65	0	0	0
31	SLU 25	-0.02	-0.4	14.65	0	0	0
31	SLU 26	-0.02	-0.4	14.52	0	0	0
31	SLU 27	-0.03	-0.4	14.81	0	0	0
31	SLU 28	-0.03	-0.4	14.81	0	0	0
31	SLU 29	-0.03	-0.4	14.69	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
31	SLU 30	-0.03	-0.4	14.69	0	0	0
31	SLU 31	-0.04	-0.42	15.96	0	0	0
31	SLU 32	-0.05	-0.42	16.25	0	0	0
31	SLU 33	-0.05	-0.42	16.25	0	0	0
31	SLU 34	-0.05	-0.42	16.13	0	0	0
31	SLU 35	-0.06	-0.41	16.42	0	0	0
31	SLU 36	-0.06	-0.42	16.42	0	0	0
31	SLU 37	-0.06	-0.41	16.29	0	0	0
31	SLU 38	-0.06	-0.41	16.29	0	0	0
31	SLU 39	-0.06	-0.42	16.64	0	0	0
31	SLU 40	-0.06	-0.43	16.64	0	0	0
31	SLU 41	-0.06	-0.42	16.81	0	0	0
31	SLU 42	-0.06	-0.42	16.81	0	0	0
31	SLU 43	-0.01	-0.53	16.31	0	0	0
31	SLU 44	-0.01	-0.54	16.31	0	0	0
31	SLU 45	-0.02	-0.54	16.61	0	0	0
31	SLU 46	-0.02	-0.54	16.61	0	0	0
31	SLU 47	-0.02	-0.54	16.48	0	0	0
31	SLU 48	-0.03	-0.53	16.78	0	0	0
31	SLU 49	-0.03	-0.54	16.78	0	0	0
31	SLU 50	-0.03	-0.53	16.65	0	0	0
31	SLU 51	-0.03	-0.53	16.65	0	0	0
31	SLU 52	-0.04	-0.56	17.92	0	0	0
31	SLU 53	-0.05	-0.55	18.21	0	0	0
31	SLU 54	-0.05	-0.55	18.21	0	0	0
31	SLU 55	-0.05	-0.55	18.09	0	0	0
31	SLU 56	-0.06	-0.55	18.38	0	0	0
31	SLU 57	-0.05	-0.55	18.38	0	0	0
31	SLU 58	-0.06	-0.54	18.25	0	0	0
31	SLU 59	-0.06	-0.55	18.26	0	0	0
31	SLU 60	-0.05	-0.56	18.61	0	0	0
31	SLU 61	-0.05	-0.56	18.61	0	0	0
31	SLU 62	-0.06	-0.55	18.77	0	0	0
31	SLU 63	-0.06	-0.56	18.77	0	0	0
31	SLU 64	-0.02	-0.53	17.74	0	0	0
31	SLU 65	-0.02	-0.53	17.74	0	0	0
31	SLU 66	-0.02	-0.53	18.03	0	0	0
31	SLU 67	-0.02	-0.53	18.03	0	0	0
31	SLU 68	-0.02	-0.53	17.91	0	0	0
31	SLU 69	-0.03	-0.52	18.2	0	0	0
31	SLU 70	-0.03	-0.53	18.2	0	0	0
31	SLU 71	-0.03	-0.52	18.08	0	0	0
31	SLU 72	-0.03	-0.53	18.08	0	0	0
31	SLU 73	-0.04	-0.55	19.35	0	0	0
31	SLU 74	-0.05	-0.54	19.64	0	0	0
31	SLU 75	-0.05	-0.55	19.64	0	0	0
31	SLU 76	-0.05	-0.54	19.51	0	0	0
31	SLU 77	-0.06	-0.54	19.81	0	0	0
31	SLU 78	-0.06	-0.54	19.81	0	0	0
31	SLU 79	-0.06	-0.54	19.68	0	0	0
31	SLU 80	-0.06	-0.54	19.68	0	0	0
31	SLU 81	-0.06	-0.55	20.03	0	0	0
31	SLU 82	-0.06	-0.55	20.03	0	0	0
31	SLU 83	-0.06	-0.54	20.2	0	0	0
31	SLU 84	-0.06	-0.55	20.2	0	0	0
31	SLE RA 1	-0.01	-0.41	13.33	0	0	0
31	SLE RA 2	-0.01	-0.41	13.33	0	0	0
31	SLE RA 3	-0.02	-0.41	13.53	0	0	0
31	SLE RA 4	-0.02	-0.41	13.53	0	0	0
31	SLE RA 5	-0.02	-0.41	13.45	0	0	0
31	SLE RA 6	-0.02	-0.41	13.64	0	0	0
31	SLE RA 7	-0.02	-0.41	13.64	0	0	0
31	SLE RA 8	-0.02	-0.4	13.56	0	0	0
31	SLE RA 9	-0.02	-0.41	13.56	0	0	0
31	SLE RA 10	-0.03	-0.42	14.4	0	0	0
31	SLE RA 11	-0.04	-0.42	14.6	0	0	0
31	SLE RA 12	-0.03	-0.42	14.6	0	0	0
31	SLE RA 13	-0.04	-0.42	14.52	0	0	0
31	SLE RA 14	-0.04	-0.42	14.71	0	0	0
31	SLE RA 15	-0.04	-0.42	14.71	0	0	0
31	SLE RA 16	-0.04	-0.41	14.63	0	0	0
31	SLE RA 17	-0.04	-0.42	14.63	0	0	0
31	SLE RA 18	-0.04	-0.42	14.86	0	0	0
31	SLE RA 19	-0.04	-0.42	14.86	0	0	0
31	SLE RA 20	-0.04	-0.42	14.97	0	0	0
31	SLE RA 21	-0.04	-0.42	14.97	0	0	0
31	SLE FR 1	-0.01	-0.41	13.33	0	0	0
31	SLE FR 2	-0.01	-0.41	13.33	0	0	0
31	SLE FR 3	-0.01	-0.41	13.38	0	0	0
31	SLE FR 4	-0.02	-0.41	13.79	0	0	0
31	SLE FR 5	-0.02	-0.41	13.84	0	0	0
31	SLE FR 6	-0.03	-0.41	14.1	0	0	0
31	SLE QP 1	-0.01	-0.41	13.33	0	0	0
31	SLE QP 2	-0.02	-0.41	13.79	0	0	0
31	SLD 1	0.78	-0.34	13.73	0	0	0
31	SLD 2	0.8	-0.31	13.73	0	0	0
31	SLD 3	0.73	-0.59	13.71	0	0	0
31	SLD 4	0.75	-0.56	13.72	0	0	0
31	SLD 5	0.3	-0.01	13.8	0	0	0
31	SLD 6	0.31	0.01	13.8	0	0	0
31	SLD 7	0.12	-0.85	13.74	0	0	0
31	SLD 8	0.14	-0.83	13.74	0	0	0
31	SLD 9	-0.18	0.01	13.84	0	0	0
31	SLD 10	-0.16	0.03	13.84	0	0	0
31	SLD 11	-0.35	-0.83	13.78	0	0	0
31	SLD 12	-0.34	-0.81	13.78	0	0	0
31	SLD 13	-0.79	-0.26	13.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
31	SLD 14	-0.77	-0.23	13.87	0	0	0
31	SLD 15	-0.84	-0.51	13.85	0	0	0
31	SLD 16	-0.82	-0.48	13.85	0	0	0
31	SLV 1	1.85	-0.25	13.65	0	0	0
31	SLV 2	1.9	-0.19	13.65	0	0	0
31	SLV 3	1.73	-0.82	13.61	0	0	0
31	SLV 4	1.78	-0.76	13.61	0	0	0
31	SLV 5	0.72	0.5	13.81	0	0	0
31	SLV 6	0.75	0.53	13.81	0	0	0
31	SLV 7	0.32	-1.41	13.68	0	0	0
31	SLV 8	0.35	-1.37	13.68	0	0	0
31	SLV 9	-0.39	0.55	13.9	0	0	0
31	SLV 10	-0.36	0.59	13.9	0	0	0
31	SLV 11	-0.79	-1.35	13.77	0	0	0
31	SLV 12	-0.76	-1.32	13.78	0	0	0
31	SLV 13	-1.82	-0.06	13.97	0	0	0
31	SLV 14	-1.77	0	13.97	0	0	0
31	SLV 15	-1.94	-0.63	13.93	0	0	0
31	SLV 16	-1.89	-0.57	13.93	0	0	0
32	SLU 1	-0.01	-0.26	8.38	0	0	0
32	SLU 2	-0.01	-0.26	8.38	0	0	0
32	SLU 3	-0.01	-0.26	8.56	0	0	0
32	SLU 4	-0.01	-0.26	8.56	0	0	0
32	SLU 5	-0.01	-0.26	8.48	0	0	0
32	SLU 6	-0.02	-0.26	8.67	0	0	0
32	SLU 7	-0.02	-0.26	8.67	0	0	0
32	SLU 8	-0.02	-0.25	8.59	0	0	0
32	SLU 9	-0.02	-0.26	8.59	0	0	0
32	SLU 10	-0.03	-0.27	9.4	0	0	0
32	SLU 11	-0.03	-0.27	9.59	0	0	0
32	SLU 12	-0.03	-0.27	9.59	0	0	0
32	SLU 13	-0.03	-0.27	9.51	0	0	0
32	SLU 14	-0.04	-0.26	9.69	0	0	0
32	SLU 15	-0.04	-0.27	9.69	0	0	0
32	SLU 16	-0.04	-0.26	9.61	0	0	0
32	SLU 17	-0.04	-0.26	9.61	0	0	0
32	SLU 18	-0.04	-0.27	9.84	0	0	0
32	SLU 19	-0.04	-0.27	9.84	0	0	0
32	SLU 20	-0.04	-0.27	9.95	0	0	0
32	SLU 21	-0.04	-0.27	9.95	0	0	0
32	SLU 22	-0.01	-0.25	9.3	0	0	0
32	SLU 23	-0.01	-0.25	9.3	0	0	0
32	SLU 24	-0.02	-0.25	9.49	0	0	0
32	SLU 25	-0.02	-0.25	9.49	0	0	0
32	SLU 26	-0.02	-0.25	9.41	0	0	0
32	SLU 27	-0.02	-0.25	9.6	0	0	0
32	SLU 28	-0.02	-0.25	9.6	0	0	0
32	SLU 29	-0.02	-0.25	9.52	0	0	0
32	SLU 30	-0.02	-0.25	9.52	0	0	0
32	SLU 31	-0.03	-0.26	10.33	0	0	0
32	SLU 32	-0.04	-0.26	10.52	0	0	0
32	SLU 33	-0.04	-0.26	10.52	0	0	0
32	SLU 34	-0.04	-0.26	10.43	0	0	0
32	SLU 35	-0.04	-0.26	10.62	0	0	0
32	SLU 36	-0.04	-0.26	10.62	0	0	0
32	SLU 37	-0.04	-0.26	10.54	0	0	0
32	SLU 38	-0.04	-0.26	10.54	0	0	0
32	SLU 39	-0.04	-0.26	10.77	0	0	0
32	SLU 40	-0.04	-0.26	10.77	0	0	0
32	SLU 41	-0.05	-0.26	10.87	0	0	0
32	SLU 42	-0.05	-0.26	10.87	0	0	0
32	SLU 43	-0.01	-0.34	10.57	0	0	0
32	SLU 44	-0.01	-0.34	10.57	0	0	0
32	SLU 45	-0.02	-0.34	10.76	0	0	0
32	SLU 46	-0.02	-0.34	10.76	0	0	0
32	SLU 47	-0.02	-0.34	10.68	0	0	0
32	SLU 48	-0.02	-0.33	10.86	0	0	0
32	SLU 49	-0.02	-0.34	10.86	0	0	0
32	SLU 50	-0.02	-0.33	10.78	0	0	0
32	SLU 51	-0.02	-0.33	10.78	0	0	0
32	SLU 52	-0.03	-0.35	11.6	0	0	0
32	SLU 53	-0.04	-0.34	11.78	0	0	0
32	SLU 54	-0.04	-0.35	11.78	0	0	0
32	SLU 55	-0.04	-0.35	11.7	0	0	0
32	SLU 56	-0.04	-0.34	11.89	0	0	0
32	SLU 57	-0.04	-0.35	11.89	0	0	0
32	SLU 58	-0.04	-0.34	11.81	0	0	0
32	SLU 59	-0.04	-0.34	11.81	0	0	0
32	SLU 60	-0.04	-0.35	12.03	0	0	0
32	SLU 61	-0.04	-0.35	12.03	0	0	0
32	SLU 62	-0.05	-0.35	12.14	0	0	0
32	SLU 63	-0.05	-0.35	12.14	0	0	0
32	SLU 64	-0.01	-0.33	11.5	0	0	0
32	SLU 65	-0.01	-0.33	11.5	0	0	0
32	SLU 66	-0.02	-0.33	11.69	0	0	0
32	SLU 67	-0.02	-0.33	11.69	0	0	0
32	SLU 68	-0.02	-0.33	11.6	0	0	0
32	SLU 69	-0.02	-0.33	11.79	0	0	0
32	SLU 70	-0.02	-0.33	11.79	0	0	0
32	SLU 71	-0.02	-0.33	11.71	0	0	0
32	SLU 72	-0.02	-0.33	11.71	0	0	0
32	SLU 73	-0.03	-0.34	12.52	0	0	0
32	SLU 74	-0.04	-0.34	12.71	0	0	0
32	SLU 75	-0.04	-0.34	12.71	0	0	0
32	SLU 76	-0.04	-0.34	12.63	0	0	0
32	SLU 77	-0.04	-0.34	12.82	0	0	0
32	SLU 78	-0.04	-0.34	12.82	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
32	SLU 79	-0.04	-0.33	12.73	0	0	0
32	SLU 80	-0.04	-0.34	12.73	0	0	0
32	SLU 81	-0.04	-0.34	12.96	0	0	0
32	SLU 82	-0.04	-0.34	12.96	0	0	0
32	SLU 83	-0.05	-0.34	13.07	0	0	0
32	SLU 84	-0.05	-0.34	13.07	0	0	0
32	SLE RA 1	-0.01	-0.25	8.64	0	0	0
32	SLE RA 2	-0.01	-0.26	8.64	0	0	0
32	SLE RA 3	-0.01	-0.25	8.77	0	0	0
32	SLE RA 4	-0.01	-0.26	8.77	0	0	0
32	SLE RA 5	-0.01	-0.26	8.71	0	0	0
32	SLE RA 6	-0.02	-0.25	8.84	0	0	0
32	SLE RA 7	-0.02	-0.26	8.84	0	0	0
32	SLE RA 8	-0.02	-0.25	8.78	0	0	0
32	SLE RA 9	-0.02	-0.25	8.78	0	0	0
32	SLE RA 10	-0.02	-0.26	9.32	0	0	0
32	SLE RA 11	-0.03	-0.26	9.45	0	0	0
32	SLE RA 12	-0.03	-0.26	9.45	0	0	0
32	SLE RA 13	-0.03	-0.26	9.39	0	0	0
32	SLE RA 14	-0.03	-0.26	9.52	0	0	0
32	SLE RA 15	-0.03	-0.26	9.52	0	0	0
32	SLE RA 16	-0.03	-0.26	9.46	0	0	0
32	SLE RA 17	-0.03	-0.26	9.47	0	0	0
32	SLE RA 18	-0.03	-0.26	9.62	0	0	0
32	SLE RA 19	-0.03	-0.26	9.62	0	0	0
32	SLE RA 20	-0.03	-0.26	9.69	0	0	0
32	SLE RA 21	-0.03	-0.26	9.69	0	0	0
32	SLE FR 1	-0.01	-0.25	8.64	0	0	0
32	SLE FR 2	-0.01	-0.26	8.64	0	0	0
32	SLE FR 3	-0.01	-0.25	8.67	0	0	0
32	SLE FR 4	-0.02	-0.26	8.93	0	0	0
32	SLE FR 5	-0.02	-0.26	8.96	0	0	0
32	SLE FR 6	-0.02	-0.26	9.13	0	0	0
32	SLE QP 1	-0.01	-0.25	8.64	0	0	0
32	SLE QP 2	-0.02	-0.26	8.93	0	0	0
32	SLD 1	0.51	-0.22	8.76	0	0	0
32	SLD 2	0.52	-0.19	8.75	0	0	0
32	SLD 3	0.48	-0.38	8.78	0	0	0
32	SLD 4	0.49	-0.35	8.78	0	0	0
32	SLD 5	0.19	0	8.85	0	0	0
32	SLD 6	0.2	0.01	8.84	0	0	0
32	SLD 7	0.08	-0.54	8.92	0	0	0
32	SLD 8	0.08	-0.53	8.92	0	0	0
32	SLD 9	-0.12	0.01	8.95	0	0	0
32	SLD 10	-0.11	0.03	8.94	0	0	0
32	SLD 11	-0.23	-0.53	9.02	0	0	0
32	SLD 12	-0.23	-0.51	9.02	0	0	0
32	SLD 13	-0.52	-0.16	9.09	0	0	0
32	SLD 14	-0.51	-0.13	9.08	0	0	0
32	SLD 15	-0.56	-0.32	9.11	0	0	0
32	SLD 16	-0.55	-0.3	9.11	0	0	0
32	SLV 1	1.22	-0.17	8.53	0	0	0
32	SLV 2	1.25	-0.11	8.51	0	0	0
32	SLV 3	1.14	-0.54	8.58	0	0	0
32	SLV 4	1.17	-0.48	8.57	0	0	0
32	SLV 5	0.47	0.32	8.73	0	0	0
32	SLV 6	0.49	0.35	8.72	0	0	0
32	SLV 7	0.21	-0.91	8.91	0	0	0
32	SLV 8	0.22	-0.87	8.9	0	0	0
32	SLV 9	-0.26	0.36	8.97	0	0	0
32	SLV 10	-0.24	0.39	8.96	0	0	0
32	SLV 11	-0.52	-0.87	9.14	0	0	0
32	SLV 12	-0.51	-0.83	9.13	0	0	0
32	SLV 13	-1.2	-0.03	9.3	0	0	0
32	SLV 14	-1.18	0.02	9.29	0	0	0
32	SLV 15	-1.28	-0.4	9.36	0	0	0
32	SLV 16	-1.26	-0.34	9.34	0	0	0
33	SLU 1	-0.01	-0.14	4.82	0	0	0
33	SLU 2	-0.01	-0.15	4.82	0	0	0
33	SLU 3	-0.01	-0.14	4.93	0	0	0
33	SLU 4	-0.01	-0.15	4.93	0	0	0
33	SLU 5	-0.01	-0.15	4.88	0	0	0
33	SLU 6	-0.01	-0.14	4.99	0	0	0
33	SLU 7	-0.01	-0.15	4.99	0	0	0
33	SLU 8	-0.01	-0.14	4.94	0	0	0
33	SLU 9	-0.01	-0.14	4.94	0	0	0
33	SLU 10	-0.02	-0.15	5.4	0	0	0
33	SLU 11	-0.02	-0.15	5.51	0	0	0
33	SLU 12	-0.02	-0.15	5.51	0	0	0
33	SLU 13	-0.02	-0.15	5.46	0	0	0
33	SLU 14	-0.02	-0.15	5.57	0	0	0
33	SLU 15	-0.02	-0.15	5.57	0	0	0
33	SLU 16	-0.02	-0.15	5.52	0	0	0
33	SLU 17	-0.02	-0.15	5.52	0	0	0
33	SLU 18	-0.02	-0.15	5.65	0	0	0
33	SLU 19	-0.02	-0.15	5.65	0	0	0
33	SLU 20	-0.03	-0.15	5.71	0	0	0
33	SLU 21	-0.02	-0.15	5.71	0	0	0
33	SLU 22	-0.01	-0.14	5.35	0	0	0
33	SLU 23	-0.01	-0.14	5.35	0	0	0
33	SLU 24	-0.01	-0.14	5.46	0	0	0
33	SLU 25	-0.01	-0.14	5.46	0	0	0
33	SLU 26	-0.01	-0.14	5.41	0	0	0
33	SLU 27	-0.01	-0.14	5.52	0	0	0
33	SLU 28	-0.01	-0.14	5.52	0	0	0
33	SLU 29	-0.01	-0.14	5.47	0	0	0
33	SLU 30	-0.01	-0.14	5.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
33	SLU 31	-0.02	-0.15	5.94	0	0	0
33	SLU 32	-0.02	-0.15	6.04	0	0	0
33	SLU 33	-0.02	-0.15	6.04	0	0	0
33	SLU 34	-0.02	-0.15	6	0	0	0
33	SLU 35	-0.02	-0.14	6.1	0	0	0
33	SLU 36	-0.02	-0.15	6.1	0	0	0
33	SLU 37	-0.02	-0.14	6.06	0	0	0
33	SLU 38	-0.02	-0.14	6.06	0	0	0
33	SLU 39	-0.02	-0.15	6.19	0	0	0
33	SLU 40	-0.02	-0.15	6.19	0	0	0
33	SLU 41	-0.03	-0.15	6.25	0	0	0
33	SLU 42	-0.03	-0.15	6.25	0	0	0
33	SLU 43	-0.01	-0.19	6.08	0	0	0
33	SLU 44	-0.01	-0.19	6.08	0	0	0
33	SLU 45	-0.01	-0.19	6.19	0	0	0
33	SLU 46	-0.01	-0.19	6.19	0	0	0
33	SLU 47	-0.01	-0.19	6.14	0	0	0
33	SLU 48	-0.01	-0.19	6.25	0	0	0
33	SLU 49	-0.01	-0.19	6.25	0	0	0
33	SLU 50	-0.01	-0.19	6.2	0	0	0
33	SLU 51	-0.01	-0.19	6.2	0	0	0
33	SLU 52	-0.02	-0.2	6.67	0	0	0
33	SLU 53	-0.02	-0.19	6.77	0	0	0
33	SLU 54	-0.02	-0.19	6.77	0	0	0
33	SLU 55	-0.02	-0.19	6.73	0	0	0
33	SLU 56	-0.02	-0.19	6.83	0	0	0
33	SLU 57	-0.02	-0.19	6.83	0	0	0
33	SLU 58	-0.02	-0.19	6.79	0	0	0
33	SLU 59	-0.02	-0.19	6.79	0	0	0
33	SLU 60	-0.02	-0.2	6.92	0	0	0
33	SLU 61	-0.02	-0.2	6.92	0	0	0
33	SLU 62	-0.03	-0.19	6.98	0	0	0
33	SLU 63	-0.03	-0.2	6.98	0	0	0
33	SLU 64	-0.01	-0.19	6.62	0	0	0
33	SLU 65	-0.01	-0.19	6.62	0	0	0
33	SLU 66	-0.01	-0.19	6.72	0	0	0
33	SLU 67	-0.01	-0.19	6.72	0	0	0
33	SLU 68	-0.01	-0.19	6.68	0	0	0
33	SLU 69	-0.01	-0.18	6.78	0	0	0
33	SLU 70	-0.01	-0.19	6.78	0	0	0
33	SLU 71	-0.01	-0.18	6.74	0	0	0
33	SLU 72	-0.01	-0.18	6.74	0	0	0
33	SLU 73	-0.02	-0.19	7.2	0	0	0
33	SLU 74	-0.02	-0.19	7.31	0	0	0
33	SLU 75	-0.02	-0.19	7.31	0	0	0
33	SLU 76	-0.02	-0.19	7.26	0	0	0
33	SLU 77	-0.03	-0.19	7.37	0	0	0
33	SLU 78	-0.02	-0.19	7.37	0	0	0
33	SLU 79	-0.03	-0.19	7.32	0	0	0
33	SLU 80	-0.03	-0.19	7.32	0	0	0
33	SLU 81	-0.02	-0.19	7.45	0	0	0
33	SLU 82	-0.02	-0.19	7.45	0	0	0
33	SLU 83	-0.03	-0.19	7.51	0	0	0
33	SLU 84	-0.03	-0.19	7.51	0	0	0
33	SLE RA 1	-0.01	-0.14	4.97	0	0	0
33	SLE RA 2	-0.01	-0.14	4.97	0	0	0
33	SLE RA 3	-0.01	-0.14	5.04	0	0	0
33	SLE RA 4	-0.01	-0.14	5.04	0	0	0
33	SLE RA 5	-0.01	-0.14	5.01	0	0	0
33	SLE RA 6	-0.01	-0.14	5.08	0	0	0
33	SLE RA 7	-0.01	-0.14	5.08	0	0	0
33	SLE RA 8	-0.01	-0.14	5.05	0	0	0
33	SLE RA 9	-0.01	-0.14	5.05	0	0	0
33	SLE RA 10	-0.01	-0.15	5.36	0	0	0
33	SLE RA 11	-0.02	-0.15	5.43	0	0	0
33	SLE RA 12	-0.02	-0.15	5.43	0	0	0
33	SLE RA 13	-0.02	-0.15	5.4	0	0	0
33	SLE RA 14	-0.02	-0.15	5.47	0	0	0
33	SLE RA 15	-0.02	-0.15	5.47	0	0	0
33	SLE RA 16	-0.02	-0.15	5.44	0	0	0
33	SLE RA 17	-0.02	-0.15	5.44	0	0	0
33	SLE RA 18	-0.02	-0.15	5.53	0	0	0
33	SLE RA 19	-0.02	-0.15	5.53	0	0	0
33	SLE RA 20	-0.02	-0.15	5.57	0	0	0
33	SLE RA 21	-0.02	-0.15	5.57	0	0	0
33	SLE FR 1	-0.01	-0.14	4.97	0	0	0
33	SLE FR 2	-0.01	-0.14	4.97	0	0	0
33	SLE FR 3	-0.01	-0.14	4.99	0	0	0
33	SLE FR 4	-0.01	-0.14	5.14	0	0	0
33	SLE FR 5	-0.01	-0.14	5.16	0	0	0
33	SLE FR 6	-0.01	-0.15	5.25	0	0	0
33	SLE QP 1	-0.01	-0.14	4.97	0	0	0
33	SLE QP 2	-0.01	-0.14	5.14	0	0	0
33	SLD 1	0.3	-0.12	5	0	0	0
33	SLD 2	0.3	-0.11	4.99	0	0	0
33	SLD 3	0.28	-0.22	5.02	0	0	0
33	SLD 4	0.28	-0.2	5.01	0	0	0
33	SLD 5	0.11	0	5.07	0	0	0
33	SLD 6	0.12	0.01	5.07	0	0	0
33	SLD 7	0.04	-0.31	5.13	0	0	0
33	SLD 8	0.05	-0.3	5.13	0	0	0
33	SLD 9	-0.07	0.01	5.15	0	0	0
33	SLD 10	-0.06	0.02	5.15	0	0	0
33	SLD 11	-0.14	-0.3	5.21	0	0	0
33	SLD 12	-0.13	-0.29	5.21	0	0	0
33	SLD 13	-0.3	-0.09	5.27	0	0	0
33	SLD 14	-0.3	-0.07	5.26	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
33	SLD 15	-0.32	-0.18	5.29	0	0	0
33	SLD 16	-0.32	-0.16	5.28	0	0	0
33	SLV 1	0.71	-0.1	4.81	0	0	0
33	SLV 2	0.72	-0.06	4.8	0	0	0
33	SLV 3	0.66	-0.31	4.85	0	0	0
33	SLV 4	0.68	-0.27	4.84	0	0	0
33	SLV 5	0.27	0.18	4.98	0	0	0
33	SLV 6	0.28	0.2	4.97	0	0	0
33	SLV 7	0.12	-0.52	5.12	0	0	0
33	SLV 8	0.13	-0.49	5.11	0	0	0
33	SLV 9	-0.15	0.21	5.17	0	0	0
33	SLV 10	-0.14	0.23	5.16	0	0	0
33	SLV 11	-0.3	-0.49	5.31	0	0	0
33	SLV 12	-0.29	-0.47	5.3	0	0	0
33	SLV 13	-0.7	-0.02	5.44	0	0	0
33	SLV 14	-0.68	0.02	5.43	0	0	0
33	SLV 15	-0.74	-0.23	5.48	0	0	0
33	SLV 16	-0.73	-0.19	5.47	0	0	0
34	SLU 1	-0.01	-0.21	6.81	0	0	0
34	SLU 2	-0.01	-0.22	6.81	0	0	0
34	SLU 3	-0.01	-0.21	6.96	0	0	0
34	SLU 4	-0.01	-0.21	6.96	0	0	0
34	SLU 5	-0.01	-0.21	6.9	0	0	0
34	SLU 6	-0.02	-0.21	7.05	0	0	0
34	SLU 7	-0.02	-0.21	7.05	0	0	0
34	SLU 8	-0.02	-0.21	6.98	0	0	0
34	SLU 9	-0.02	-0.21	6.98	0	0	0
34	SLU 10	-0.02	-0.22	7.65	0	0	0
34	SLU 11	-0.03	-0.22	7.8	0	0	0
34	SLU 12	-0.03	-0.22	7.8	0	0	0
34	SLU 13	-0.03	-0.22	7.74	0	0	0
34	SLU 14	-0.03	-0.22	7.89	0	0	0
34	SLU 15	-0.03	-0.22	7.89	0	0	0
34	SLU 16	-0.03	-0.22	7.82	0	0	0
34	SLU 17	-0.03	-0.22	7.82	0	0	0
34	SLU 18	-0.03	-0.22	8.01	0	0	0
34	SLU 19	-0.03	-0.22	8.01	0	0	0
34	SLU 20	-0.04	-0.22	8.1	0	0	0
34	SLU 21	-0.04	-0.22	8.1	0	0	0
34	SLU 22	-0.01	-0.21	7.56	0	0	0
34	SLU 23	-0.01	-0.21	7.56	0	0	0
34	SLU 24	-0.01	-0.21	7.72	0	0	0
34	SLU 25	-0.01	-0.21	7.72	0	0	0
34	SLU 26	-0.01	-0.21	7.65	0	0	0
34	SLU 27	-0.02	-0.21	7.8	0	0	0
34	SLU 28	-0.02	-0.21	7.81	0	0	0
34	SLU 29	-0.02	-0.2	7.74	0	0	0
34	SLU 30	-0.02	-0.21	7.74	0	0	0
34	SLU 31	-0.03	-0.22	8.4	0	0	0
34	SLU 32	-0.03	-0.21	8.56	0	0	0
34	SLU 33	-0.03	-0.22	8.56	0	0	0
34	SLU 34	-0.03	-0.22	8.49	0	0	0
34	SLU 35	-0.03	-0.21	8.64	0	0	0
34	SLU 36	-0.03	-0.22	8.64	0	0	0
34	SLU 37	-0.03	-0.21	8.58	0	0	0
34	SLU 38	-0.03	-0.21	8.58	0	0	0
34	SLU 39	-0.03	-0.22	8.76	0	0	0
34	SLU 40	-0.03	-0.22	8.76	0	0	0
34	SLU 41	-0.04	-0.22	8.85	0	0	0
34	SLU 42	-0.04	-0.22	8.85	0	0	0
34	SLU 43	-0.01	-0.28	8.59	0	0	0
34	SLU 44	-0.01	-0.28	8.59	0	0	0
34	SLU 45	-0.01	-0.28	8.75	0	0	0
34	SLU 46	-0.01	-0.28	8.75	0	0	0
34	SLU 47	-0.01	-0.28	8.68	0	0	0
34	SLU 48	-0.02	-0.28	8.83	0	0	0
34	SLU 49	-0.02	-0.28	8.83	0	0	0
34	SLU 50	-0.02	-0.28	8.77	0	0	0
34	SLU 51	-0.02	-0.28	8.77	0	0	0
34	SLU 52	-0.03	-0.29	9.43	0	0	0
34	SLU 53	-0.03	-0.29	9.59	0	0	0
34	SLU 54	-0.03	-0.29	9.59	0	0	0
34	SLU 55	-0.03	-0.29	9.52	0	0	0
34	SLU 56	-0.03	-0.28	9.67	0	0	0
34	SLU 57	-0.03	-0.29	9.67	0	0	0
34	SLU 58	-0.03	-0.28	9.61	0	0	0
34	SLU 59	-0.03	-0.28	9.61	0	0	0
34	SLU 60	-0.03	-0.29	9.79	0	0	0
34	SLU 61	-0.03	-0.29	9.79	0	0	0
34	SLU 62	-0.04	-0.29	9.88	0	0	0
34	SLU 63	-0.04	-0.29	9.88	0	0	0
34	SLU 64	-0.01	-0.27	9.35	0	0	0
34	SLU 65	-0.01	-0.28	9.35	0	0	0
34	SLU 66	-0.02	-0.27	9.5	0	0	0
34	SLU 67	-0.02	-0.27	9.5	0	0	0
34	SLU 68	-0.02	-0.27	9.44	0	0	0
34	SLU 69	-0.02	-0.27	9.59	0	0	0
34	SLU 70	-0.02	-0.27	9.59	0	0	0
34	SLU 71	-0.02	-0.27	9.52	0	0	0
34	SLU 72	-0.02	-0.27	9.52	0	0	0
34	SLU 73	-0.03	-0.28	10.19	0	0	0
34	SLU 74	-0.03	-0.28	10.34	0	0	0
34	SLU 75	-0.03	-0.28	10.34	0	0	0
34	SLU 76	-0.03	-0.28	10.27	0	0	0
34	SLU 77	-0.04	-0.28	10.43	0	0	0
34	SLU 78	-0.04	-0.28	10.43	0	0	0
34	SLU 79	-0.04	-0.28	10.36	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
34	SLU 80	-0.04	-0.28	10.36	0	0	0
34	SLU 81	-0.04	-0.28	10.55	0	0	0
34	SLU 82	-0.04	-0.28	10.55	0	0	0
34	SLU 83	-0.04	-0.28	10.63	0	0	0
34	SLU 84	-0.04	-0.28	10.63	0	0	0
34	SLE RA 1	-0.01	-0.21	7.02	0	0	0
34	SLE RA 2	-0.01	-0.21	7.02	0	0	0
34	SLE RA 3	-0.01	-0.21	7.13	0	0	0
34	SLE RA 4	-0.01	-0.21	7.13	0	0	0
34	SLE RA 5	-0.01	-0.21	7.08	0	0	0
34	SLE RA 6	-0.01	-0.21	7.19	0	0	0
34	SLE RA 7	-0.01	-0.21	7.19	0	0	0
34	SLE RA 8	-0.01	-0.21	7.14	0	0	0
34	SLE RA 9	-0.01	-0.21	7.14	0	0	0
34	SLE RA 10	-0.02	-0.22	7.58	0	0	0
34	SLE RA 11	-0.02	-0.22	7.69	0	0	0
34	SLE RA 12	-0.02	-0.22	7.69	0	0	0
34	SLE RA 13	-0.02	-0.22	7.64	0	0	0
34	SLE RA 14	-0.02	-0.22	7.74	0	0	0
34	SLE RA 15	-0.02	-0.22	7.74	0	0	0
34	SLE RA 16	-0.02	-0.21	7.7	0	0	0
34	SLE RA 17	-0.02	-0.22	7.7	0	0	0
34	SLE RA 18	-0.02	-0.22	7.82	0	0	0
34	SLE RA 19	-0.02	-0.22	7.82	0	0	0
34	SLE RA 20	-0.03	-0.22	7.88	0	0	0
34	SLE RA 21	-0.03	-0.22	7.88	0	0	0
34	SLE FR 1	-0.01	-0.21	7.02	0	0	0
34	SLE FR 2	-0.01	-0.21	7.02	0	0	0
34	SLE FR 3	-0.01	-0.21	7.05	0	0	0
34	SLE FR 4	-0.01	-0.21	7.26	0	0	0
34	SLE FR 5	-0.01	-0.21	7.29	0	0	0
34	SLE FR 6	-0.02	-0.21	7.42	0	0	0
34	SLE QP 1	-0.01	-0.21	7.02	0	0	0
34	SLE QP 2	-0.01	-0.21	7.26	0	0	0
34	SLD 1	0.42	-0.18	7.16	0	0	0
34	SLD 2	0.43	-0.16	7.16	0	0	0
34	SLD 3	0.39	-0.31	7.18	0	0	0
34	SLD 4	0.4	-0.29	7.17	0	0	0
34	SLD 5	0.16	0	7.21	0	0	0
34	SLD 6	0.16	0.01	7.21	0	0	0
34	SLD 7	0.06	-0.45	7.26	0	0	0
34	SLD 8	0.07	-0.44	7.26	0	0	0
34	SLD 9	-0.1	0.01	7.27	0	0	0
34	SLD 10	-0.09	0.02	7.27	0	0	0
34	SLD 11	-0.19	-0.43	7.32	0	0	0
34	SLD 12	-0.18	-0.42	7.32	0	0	0
34	SLD 13	-0.43	-0.13	7.36	0	0	0
34	SLD 14	-0.42	-0.12	7.35	0	0	0
34	SLD 15	-0.45	-0.27	7.37	0	0	0
34	SLD 16	-0.44	-0.25	7.37	0	0	0
34	SLV 1	0.99	-0.14	7.02	0	0	0
34	SLV 2	1.01	-0.09	7.01	0	0	0
34	SLV 3	0.93	-0.44	7.06	0	0	0
34	SLV 4	0.95	-0.4	7.05	0	0	0
34	SLV 5	0.38	0.26	7.14	0	0	0
34	SLV 6	0.4	0.29	7.13	0	0	0
34	SLV 7	0.17	-0.74	7.26	0	0	0
34	SLV 8	0.18	-0.72	7.26	0	0	0
34	SLV 9	-0.21	0.29	7.27	0	0	0
34	SLV 10	-0.19	0.32	7.27	0	0	0
34	SLV 11	-0.42	-0.71	7.4	0	0	0
34	SLV 12	-0.41	-0.69	7.39	0	0	0
34	SLV 13	-0.98	-0.03	7.48	0	0	0
34	SLV 14	-0.96	0.01	7.47	0	0	0
34	SLV 15	-1.04	-0.33	7.51	0	0	0
34	SLV 16	-1.02	-0.29	7.51	0	0	0
35	SLU 1	-0.01	-0.16	4.94	0	0	0
35	SLU 2	-0.01	-0.16	4.94	0	0	0
35	SLU 3	-0.01	-0.16	5.05	0	0	0
35	SLU 4	-0.01	-0.16	5.05	0	0	0
35	SLU 5	-0.01	-0.16	5	0	0	0
35	SLU 6	-0.01	-0.16	5.11	0	0	0
35	SLU 7	-0.01	-0.16	5.11	0	0	0
35	SLU 8	-0.01	-0.15	5.07	0	0	0
35	SLU 9	-0.01	-0.16	5.07	0	0	0
35	SLU 10	-0.02	-0.16	5.55	0	0	0
35	SLU 11	-0.02	-0.16	5.66	0	0	0
35	SLU 12	-0.02	-0.16	5.66	0	0	0
35	SLU 13	-0.02	-0.16	5.62	0	0	0
35	SLU 14	-0.02	-0.16	5.73	0	0	0
35	SLU 15	-0.02	-0.16	5.73	0	0	0
35	SLU 16	-0.02	-0.16	5.68	0	0	0
35	SLU 17	-0.02	-0.16	5.68	0	0	0
35	SLU 18	-0.02	-0.16	5.81	0	0	0
35	SLU 19	-0.02	-0.17	5.81	0	0	0
35	SLU 20	-0.03	-0.16	5.88	0	0	0
35	SLU 21	-0.03	-0.16	5.88	0	0	0
35	SLU 22	-0.01	-0.15	5.49	0	0	0
35	SLU 23	-0.01	-0.16	5.49	0	0	0
35	SLU 24	-0.01	-0.15	5.6	0	0	0
35	SLU 25	-0.01	-0.15	5.6	0	0	0
35	SLU 26	-0.01	-0.15	5.55	0	0	0
35	SLU 27	-0.01	-0.15	5.66	0	0	0
35	SLU 28	-0.01	-0.15	5.66	0	0	0
35	SLU 29	-0.01	-0.15	5.61	0	0	0
35	SLU 30	-0.01	-0.15	5.62	0	0	0
35	SLU 31	-0.02	-0.16	6.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
35	SLU 32	-0.02	-0.16	6.21	0	0	0
35	SLU 33	-0.02	-0.16	6.21	0	0	0
35	SLU 34	-0.02	-0.16	6.16	0	0	0
35	SLU 35	-0.02	-0.16	6.27	0	0	0
35	SLU 36	-0.02	-0.16	6.28	0	0	0
35	SLU 37	-0.02	-0.16	6.23	0	0	0
35	SLU 38	-0.02	-0.16	6.23	0	0	0
35	SLU 39	-0.02	-0.16	6.36	0	0	0
35	SLU 40	-0.02	-0.16	6.36	0	0	0
35	SLU 41	-0.03	-0.16	6.43	0	0	0
35	SLU 42	-0.03	-0.16	6.43	0	0	0
35	SLU 43	-0.01	-0.2	6.23	0	0	0
35	SLU 44	-0.01	-0.21	6.23	0	0	0
35	SLU 45	-0.01	-0.2	6.34	0	0	0
35	SLU 46	-0.01	-0.21	6.34	0	0	0
35	SLU 47	-0.01	-0.21	6.3	0	0	0
35	SLU 48	-0.01	-0.2	6.41	0	0	0
35	SLU 49	-0.01	-0.21	6.41	0	0	0
35	SLU 50	-0.01	-0.2	6.36	0	0	0
35	SLU 51	-0.01	-0.2	6.36	0	0	0
35	SLU 52	-0.02	-0.21	6.84	0	0	0
35	SLU 53	-0.02	-0.21	6.96	0	0	0
35	SLU 54	-0.02	-0.21	6.96	0	0	0
35	SLU 55	-0.02	-0.21	6.91	0	0	0
35	SLU 56	-0.02	-0.21	7.02	0	0	0
35	SLU 57	-0.02	-0.21	7.02	0	0	0
35	SLU 58	-0.03	-0.21	6.97	0	0	0
35	SLU 59	-0.03	-0.21	6.97	0	0	0
35	SLU 60	-0.02	-0.21	7.11	0	0	0
35	SLU 61	-0.02	-0.21	7.11	0	0	0
35	SLU 62	-0.03	-0.21	7.17	0	0	0
35	SLU 63	-0.03	-0.21	7.17	0	0	0
35	SLU 64	-0.01	-0.2	6.78	0	0	0
35	SLU 65	-0.01	-0.2	6.78	0	0	0
35	SLU 66	-0.01	-0.2	6.89	0	0	0
35	SLU 67	-0.01	-0.2	6.89	0	0	0
35	SLU 68	-0.01	-0.2	6.84	0	0	0
35	SLU 69	-0.01	-0.2	6.96	0	0	0
35	SLU 70	-0.01	-0.2	6.96	0	0	0
35	SLU 71	-0.01	-0.2	6.91	0	0	0
35	SLU 72	-0.01	-0.2	6.91	0	0	0
35	SLU 73	-0.02	-0.21	7.39	0	0	0
35	SLU 74	-0.02	-0.21	7.5	0	0	0
35	SLU 75	-0.02	-0.21	7.5	0	0	0
35	SLU 76	-0.02	-0.21	7.46	0	0	0
35	SLU 77	-0.03	-0.21	7.57	0	0	0
35	SLU 78	-0.03	-0.21	7.57	0	0	0
35	SLU 79	-0.03	-0.21	7.52	0	0	0
35	SLU 80	-0.03	-0.21	7.52	0	0	0
35	SLU 81	-0.03	-0.21	7.65	0	0	0
35	SLU 82	-0.03	-0.21	7.65	0	0	0
35	SLU 83	-0.03	-0.21	7.72	0	0	0
35	SLU 84	-0.03	-0.21	7.72	0	0	0
35	SLE RA 1	-0.01	-0.16	5.09	0	0	0
35	SLE RA 2	-0.01	-0.16	5.09	0	0	0
35	SLE RA 3	-0.01	-0.16	5.17	0	0	0
35	SLE RA 4	-0.01	-0.16	5.17	0	0	0
35	SLE RA 5	-0.01	-0.16	5.14	0	0	0
35	SLE RA 6	-0.01	-0.16	5.21	0	0	0
35	SLE RA 7	-0.01	-0.16	5.21	0	0	0
35	SLE RA 8	-0.01	-0.15	5.18	0	0	0
35	SLE RA 9	-0.01	-0.16	5.18	0	0	0
35	SLE RA 10	-0.01	-0.16	5.5	0	0	0
35	SLE RA 11	-0.02	-0.16	5.58	0	0	0
35	SLE RA 12	-0.02	-0.16	5.58	0	0	0
35	SLE RA 13	-0.02	-0.16	5.55	0	0	0
35	SLE RA 14	-0.02	-0.16	5.62	0	0	0
35	SLE RA 15	-0.02	-0.16	5.62	0	0	0
35	SLE RA 16	-0.02	-0.16	5.59	0	0	0
35	SLE RA 17	-0.02	-0.16	5.59	0	0	0
35	SLE RA 18	-0.02	-0.16	5.68	0	0	0
35	SLE RA 19	-0.02	-0.16	5.68	0	0	0
35	SLE RA 20	-0.02	-0.16	5.72	0	0	0
35	SLE RA 21	-0.02	-0.16	5.72	0	0	0
35	SLE FR 1	-0.01	-0.16	5.09	0	0	0
35	SLE FR 2	-0.01	-0.16	5.09	0	0	0
35	SLE FR 3	-0.01	-0.16	5.11	0	0	0
35	SLE FR 4	-0.01	-0.16	5.27	0	0	0
35	SLE FR 5	-0.01	-0.16	5.29	0	0	0
35	SLE FR 6	-0.01	-0.16	5.39	0	0	0
35	SLE QP 1	-0.01	-0.16	5.09	0	0	0
35	SLE QP 2	-0.01	-0.16	5.27	0	0	0
35	SLD 1	0.3	-0.13	5.22	0	0	0
35	SLD 2	0.31	-0.12	5.21	0	0	0
35	SLD 3	0.28	-0.23	5.23	0	0	0
35	SLD 4	0.29	-0.22	5.23	0	0	0
35	SLD 5	0.11	0	5.23	0	0	0
35	SLD 6	0.12	0	5.23	0	0	0
35	SLD 7	0.05	-0.33	5.28	0	0	0
35	SLD 8	0.05	-0.32	5.28	0	0	0
35	SLD 9	-0.07	0.01	5.26	0	0	0
35	SLD 10	-0.07	0.01	5.26	0	0	0
35	SLD 11	-0.14	-0.32	5.31	0	0	0
35	SLD 12	-0.13	-0.31	5.3	0	0	0
35	SLD 13	-0.31	-0.1	5.31	0	0	0
35	SLD 14	-0.3	-0.09	5.31	0	0	0
35	SLD 15	-0.33	-0.2	5.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
35	SLD 16	-0.32	-0.18	5.32	0	0	0
35	SLV 1	0.72	-0.1	5.14	0	0	0
35	SLV 2	0.74	-0.07	5.14	0	0	0
35	SLV 3	0.67	-0.32	5.17	0	0	0
35	SLV 4	0.69	-0.29	5.17	0	0	0
35	SLV 5	0.28	0.19	5.19	0	0	0
35	SLV 6	0.29	0.21	5.19	0	0	0
35	SLV 7	0.12	-0.54	5.29	0	0	0
35	SLV 8	0.13	-0.53	5.28	0	0	0
35	SLV 9	-0.15	0.21	5.26	0	0	0
35	SLV 10	-0.14	0.23	5.25	0	0	0
35	SLV 11	-0.31	-0.52	5.35	0	0	0
35	SLV 12	-0.3	-0.5	5.35	0	0	0
35	SLV 13	-0.71	-0.02	5.37	0	0	0
35	SLV 14	-0.69	0	5.36	0	0	0
35	SLV 15	-0.76	-0.24	5.4	0	0	0
35	SLV 16	-0.74	-0.22	5.39	0	0	0
37	SLU 1	-0.01	-0.21	6.14	0	0	0
37	SLU 2	-0.01	-0.22	6.14	0	0	0
37	SLU 3	-0.01	-0.21	6.28	0	0	0
37	SLU 4	-0.01	-0.21	6.28	0	0	0
37	SLU 5	-0.01	-0.21	6.23	0	0	0
37	SLU 6	-0.02	-0.21	6.37	0	0	0
37	SLU 7	-0.02	-0.21	6.37	0	0	0
37	SLU 8	-0.02	-0.21	6.31	0	0	0
37	SLU 9	-0.02	-0.21	6.31	0	0	0
37	SLU 10	-0.02	-0.22	6.93	0	0	0
37	SLU 11	-0.03	-0.22	7.07	0	0	0
37	SLU 12	-0.03	-0.22	7.07	0	0	0
37	SLU 13	-0.03	-0.22	7.02	0	0	0
37	SLU 14	-0.03	-0.22	7.16	0	0	0
37	SLU 15	-0.03	-0.22	7.16	0	0	0
37	SLU 16	-0.03	-0.22	7.1	0	0	0
37	SLU 17	-0.03	-0.22	7.1	0	0	0
37	SLU 18	-0.03	-0.22	7.27	0	0	0
37	SLU 19	-0.03	-0.23	7.27	0	0	0
37	SLU 20	-0.03	-0.22	7.35	0	0	0
37	SLU 21	-0.03	-0.23	7.35	0	0	0
37	SLU 22	-0.01	-0.21	6.82	0	0	0
37	SLU 23	-0.01	-0.21	6.82	0	0	0
37	SLU 24	-0.01	-0.21	6.97	0	0	0
37	SLU 25	-0.01	-0.21	6.97	0	0	0
37	SLU 26	-0.01	-0.21	6.91	0	0	0
37	SLU 27	-0.02	-0.21	7.06	0	0	0
37	SLU 28	-0.02	-0.21	7.06	0	0	0
37	SLU 29	-0.02	-0.21	7	0	0	0
37	SLU 30	-0.02	-0.21	7	0	0	0
37	SLU 31	-0.03	-0.22	7.61	0	0	0
37	SLU 32	-0.03	-0.22	7.76	0	0	0
37	SLU 33	-0.03	-0.22	7.76	0	0	0
37	SLU 34	-0.03	-0.22	7.7	0	0	0
37	SLU 35	-0.03	-0.22	7.84	0	0	0
37	SLU 36	-0.03	-0.22	7.85	0	0	0
37	SLU 37	-0.03	-0.22	7.79	0	0	0
37	SLU 38	-0.03	-0.22	7.79	0	0	0
37	SLU 39	-0.03	-0.22	7.95	0	0	0
37	SLU 40	-0.03	-0.22	7.95	0	0	0
37	SLU 41	-0.04	-0.22	8.04	0	0	0
37	SLU 42	-0.04	-0.22	8.04	0	0	0
37	SLU 43	-0.01	-0.28	7.75	0	0	0
37	SLU 44	-0.01	-0.28	7.75	0	0	0
37	SLU 45	-0.01	-0.28	7.89	0	0	0
37	SLU 46	-0.01	-0.28	7.89	0	0	0
37	SLU 47	-0.02	-0.28	7.83	0	0	0
37	SLU 48	-0.02	-0.28	7.98	0	0	0
37	SLU 49	-0.02	-0.28	7.98	0	0	0
37	SLU 50	-0.02	-0.27	7.92	0	0	0
37	SLU 51	-0.02	-0.28	7.92	0	0	0
37	SLU 52	-0.03	-0.29	8.54	0	0	0
37	SLU 53	-0.03	-0.29	8.68	0	0	0
37	SLU 54	-0.03	-0.29	8.68	0	0	0
37	SLU 55	-0.03	-0.29	8.62	0	0	0
37	SLU 56	-0.03	-0.28	8.77	0	0	0
37	SLU 57	-0.03	-0.29	8.77	0	0	0
37	SLU 58	-0.03	-0.28	8.71	0	0	0
37	SLU 59	-0.03	-0.29	8.71	0	0	0
37	SLU 60	-0.03	-0.29	8.87	0	0	0
37	SLU 61	-0.03	-0.29	8.87	0	0	0
37	SLU 62	-0.04	-0.29	8.96	0	0	0
37	SLU 63	-0.04	-0.29	8.96	0	0	0
37	SLU 64	-0.01	-0.27	8.43	0	0	0
37	SLU 65	-0.01	-0.28	8.43	0	0	0
37	SLU 66	-0.02	-0.27	8.58	0	0	0
37	SLU 67	-0.02	-0.28	8.58	0	0	0
37	SLU 68	-0.02	-0.28	8.52	0	0	0
37	SLU 69	-0.02	-0.27	8.66	0	0	0
37	SLU 70	-0.02	-0.27	8.66	0	0	0
37	SLU 71	-0.02	-0.27	8.6	0	0	0
37	SLU 72	-0.02	-0.27	8.6	0	0	0
37	SLU 73	-0.03	-0.29	9.22	0	0	0
37	SLU 74	-0.03	-0.28	9.36	0	0	0
37	SLU 75	-0.03	-0.28	9.37	0	0	0
37	SLU 76	-0.03	-0.28	9.31	0	0	0
37	SLU 77	-0.03	-0.28	9.45	0	0	0
37	SLU 78	-0.03	-0.28	9.45	0	0	0
37	SLU 79	-0.03	-0.28	9.39	0	0	0
37	SLU 80	-0.03	-0.28	9.39	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
37	SLU 81	-0.03	-0.29	9.56	0	0	0
37	SLU 82	-0.03	-0.29	9.56	0	0	0
37	SLU 83	-0.04	-0.28	9.64	0	0	0
37	SLU 84	-0.04	-0.29	9.65	0	0	0
37	SLE RA 1	-0.01	-0.21	6.33	0	0	0
37	SLE RA 2	-0.01	-0.21	6.34	0	0	0
37	SLE RA 3	-0.01	-0.21	6.43	0	0	0
37	SLE RA 4	-0.01	-0.21	6.43	0	0	0
37	SLE RA 5	-0.01	-0.21	6.39	0	0	0
37	SLE RA 6	-0.01	-0.21	6.49	0	0	0
37	SLE RA 7	-0.01	-0.21	6.49	0	0	0
37	SLE RA 8	-0.01	-0.21	6.45	0	0	0
37	SLE RA 9	-0.01	-0.21	6.45	0	0	0
37	SLE RA 10	-0.02	-0.22	6.86	0	0	0
37	SLE RA 11	-0.02	-0.22	6.96	0	0	0
37	SLE RA 12	-0.02	-0.22	6.96	0	0	0
37	SLE RA 13	-0.02	-0.22	6.92	0	0	0
37	SLE RA 14	-0.02	-0.22	7.02	0	0	0
37	SLE RA 15	-0.02	-0.22	7.02	0	0	0
37	SLE RA 16	-0.02	-0.22	6.98	0	0	0
37	SLE RA 17	-0.02	-0.22	6.98	0	0	0
37	SLE RA 18	-0.02	-0.22	7.09	0	0	0
37	SLE RA 19	-0.02	-0.22	7.09	0	0	0
37	SLE RA 20	-0.03	-0.22	7.14	0	0	0
37	SLE RA 21	-0.03	-0.22	7.14	0	0	0
37	SLE FR 1	-0.01	-0.21	6.33	0	0	0
37	SLE FR 2	-0.01	-0.21	6.33	0	0	0
37	SLE FR 3	-0.01	-0.21	6.36	0	0	0
37	SLE FR 4	-0.01	-0.21	6.56	0	0	0
37	SLE FR 5	-0.02	-0.21	6.58	0	0	0
37	SLE FR 6	-0.02	-0.21	6.71	0	0	0
37	SLE QP 1	-0.01	-0.21	6.33	0	0	0
37	SLE QP 2	-0.01	-0.21	6.56	0	0	0
37	SLD 1	0.37	-0.17	6.65	0	0	0
37	SLD 2	0.38	-0.16	6.65	0	0	0
37	SLD 3	0.35	-0.29	6.69	0	0	0
37	SLD 4	0.35	-0.29	6.7	0	0	0
37	SLD 5	0.14	-0.01	6.51	0	0	0
37	SLD 6	0.14	-0.01	6.51	0	0	0
37	SLD 7	0.05	-0.43	6.67	0	0	0
37	SLD 8	0.06	-0.43	6.68	0	0	0
37	SLD 9	-0.09	0	6.44	0	0	0
37	SLD 10	-0.08	0	6.45	0	0	0
37	SLD 11	-0.17	-0.42	6.6	0	0	0
37	SLD 12	-0.17	-0.42	6.61	0	0	0
37	SLD 13	-0.38	-0.14	6.42	0	0	0
37	SLD 14	-0.37	-0.13	6.42	0	0	0
37	SLD 15	-0.41	-0.26	6.47	0	0	0
37	SLD 16	-0.4	-0.26	6.47	0	0	0
37	SLV 1	0.89	-0.11	6.76	0	0	0
37	SLV 2	0.9	-0.1	6.77	0	0	0
37	SLV 3	0.83	-0.4	6.87	0	0	0
37	SLV 4	0.84	-0.39	6.88	0	0	0
37	SLV 5	0.34	0.25	6.45	0	0	0
37	SLV 6	0.35	0.25	6.46	0	0	0
37	SLV 7	0.15	-0.7	6.82	0	0	0
37	SLV 8	0.16	-0.7	6.82	0	0	0
37	SLV 9	-0.19	0.27	6.3	0	0	0
37	SLV 10	-0.18	0.28	6.3	0	0	0
37	SLV 11	-0.38	-0.68	6.66	0	0	0
37	SLV 12	-0.37	-0.67	6.67	0	0	0
37	SLV 13	-0.87	-0.04	6.24	0	0	0
37	SLV 14	-0.86	-0.03	6.25	0	0	0
37	SLV 15	-0.93	-0.32	6.35	0	0	0
37	SLV 16	-0.91	-0.32	6.35	0	0	0
38	SLU 1	-0.02	-0.39	11.68	0	0	0
38	SLU 2	-0.02	-0.4	11.68	0	0	0
38	SLU 3	-0.02	-0.4	11.95	0	0	0
38	SLU 4	-0.02	-0.4	11.95	0	0	0
38	SLU 5	-0.02	-0.4	11.84	0	0	0
38	SLU 6	-0.03	-0.39	12.11	0	0	0
38	SLU 7	-0.03	-0.4	12.12	0	0	0
38	SLU 8	-0.03	-0.39	12	0	0	0
38	SLU 9	-0.03	-0.39	12	0	0	0
38	SLU 10	-0.05	-0.42	13.17	0	0	0
38	SLU 11	-0.05	-0.41	13.44	0	0	0
38	SLU 12	-0.05	-0.42	13.44	0	0	0
38	SLU 13	-0.05	-0.42	13.33	0	0	0
38	SLU 14	-0.06	-0.41	13.6	0	0	0
38	SLU 15	-0.06	-0.41	13.6	0	0	0
38	SLU 16	-0.06	-0.41	13.49	0	0	0
38	SLU 17	-0.06	-0.41	13.49	0	0	0
38	SLU 18	-0.06	-0.42	13.8	0	0	0
38	SLU 19	-0.06	-0.42	13.81	0	0	0
38	SLU 20	-0.06	-0.42	13.97	0	0	0
38	SLU 21	-0.06	-0.42	13.97	0	0	0
38	SLU 22	-0.02	-0.39	12.98	0	0	0
38	SLU 23	-0.02	-0.39	12.98	0	0	0
38	SLU 24	-0.03	-0.39	13.25	0	0	0
38	SLU 25	-0.03	-0.39	13.25	0	0	0
38	SLU 26	-0.03	-0.39	13.14	0	0	0
38	SLU 27	-0.03	-0.39	13.42	0	0	0
38	SLU 28	-0.03	-0.39	13.42	0	0	0
38	SLU 29	-0.03	-0.38	13.3	0	0	0
38	SLU 30	-0.03	-0.39	13.31	0	0	0
38	SLU 31	-0.05	-0.41	14.47	0	0	0
38	SLU 32	-0.05	-0.41	14.74	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
38	SLU 33	-0.05	-0.41	14.74	0	0	0
38	SLU 34	-0.06	-0.41	14.63	0	0	0
38	SLU 35	-0.06	-0.4	14.9	0	0	0
38	SLU 36	-0.06	-0.41	14.91	0	0	0
38	SLU 37	-0.06	-0.4	14.79	0	0	0
38	SLU 38	-0.06	-0.4	14.79	0	0	0
38	SLU 39	-0.06	-0.41	15.11	0	0	0
38	SLU 40	-0.06	-0.42	15.11	0	0	0
38	SLU 41	-0.07	-0.41	15.27	0	0	0
38	SLU 42	-0.07	-0.41	15.27	0	0	0
38	SLU 43	-0.02	-0.51	14.73	0	0	0
38	SLU 44	-0.02	-0.52	14.74	0	0	0
38	SLU 45	-0.03	-0.52	15.01	0	0	0
38	SLU 46	-0.03	-0.52	15.01	0	0	0
38	SLU 47	-0.03	-0.52	14.9	0	0	0
38	SLU 48	-0.03	-0.51	15.17	0	0	0
38	SLU 49	-0.03	-0.52	15.17	0	0	0
38	SLU 50	-0.04	-0.51	15.06	0	0	0
38	SLU 51	-0.04	-0.52	15.06	0	0	0
38	SLU 52	-0.05	-0.54	16.23	0	0	0
38	SLU 53	-0.06	-0.53	16.5	0	0	0
38	SLU 54	-0.06	-0.54	16.5	0	0	0
38	SLU 55	-0.06	-0.54	16.39	0	0	0
38	SLU 56	-0.06	-0.53	16.66	0	0	0
38	SLU 57	-0.06	-0.53	16.66	0	0	0
38	SLU 58	-0.06	-0.53	16.55	0	0	0
38	SLU 59	-0.06	-0.53	16.55	0	0	0
38	SLU 60	-0.06	-0.54	16.86	0	0	0
38	SLU 61	-0.06	-0.54	16.86	0	0	0
38	SLU 62	-0.07	-0.54	17.02	0	0	0
38	SLU 63	-0.07	-0.54	17.02	0	0	0
38	SLU 64	-0.03	-0.51	16.04	0	0	0
38	SLU 65	-0.03	-0.51	16.04	0	0	0
38	SLU 66	-0.03	-0.51	16.31	0	0	0
38	SLU 67	-0.03	-0.51	16.31	0	0	0
38	SLU 68	-0.03	-0.51	16.2	0	0	0
38	SLU 69	-0.04	-0.51	16.47	0	0	0
38	SLU 70	-0.04	-0.51	16.47	0	0	0
38	SLU 71	-0.04	-0.5	16.36	0	0	0
38	SLU 72	-0.04	-0.51	16.36	0	0	0
38	SLU 73	-0.05	-0.53	17.53	0	0	0
38	SLU 74	-0.06	-0.53	17.8	0	0	0
38	SLU 75	-0.06	-0.53	17.8	0	0	0
38	SLU 76	-0.06	-0.53	17.69	0	0	0
38	SLU 77	-0.07	-0.52	17.96	0	0	0
38	SLU 78	-0.07	-0.53	17.96	0	0	0
38	SLU 79	-0.07	-0.52	17.85	0	0	0
38	SLU 80	-0.07	-0.53	17.85	0	0	0
38	SLU 81	-0.07	-0.53	18.16	0	0	0
38	SLU 82	-0.07	-0.54	18.16	0	0	0
38	SLU 83	-0.07	-0.53	18.32	0	0	0
38	SLU 84	-0.07	-0.53	18.33	0	0	0
38	SLE RA 1	-0.02	-0.39	12.05	0	0	0
38	SLE RA 2	-0.02	-0.4	12.05	0	0	0
38	SLE RA 3	-0.02	-0.39	12.23	0	0	0
38	SLE RA 4	-0.02	-0.4	12.23	0	0	0
38	SLE RA 5	-0.02	-0.4	12.16	0	0	0
38	SLE RA 6	-0.03	-0.39	12.34	0	0	0
38	SLE RA 7	-0.03	-0.39	12.34	0	0	0
38	SLE RA 8	-0.03	-0.39	12.27	0	0	0
38	SLE RA 9	-0.03	-0.39	12.27	0	0	0
38	SLE RA 10	-0.04	-0.41	13.04	0	0	0
38	SLE RA 11	-0.04	-0.4	13.22	0	0	0
38	SLE RA 12	-0.04	-0.41	13.23	0	0	0
38	SLE RA 13	-0.04	-0.41	13.15	0	0	0
38	SLE RA 14	-0.05	-0.4	13.33	0	0	0
38	SLE RA 15	-0.05	-0.41	13.33	0	0	0
38	SLE RA 16	-0.05	-0.4	13.26	0	0	0
38	SLE RA 17	-0.05	-0.4	13.26	0	0	0
38	SLE RA 18	-0.05	-0.41	13.47	0	0	0
38	SLE RA 19	-0.05	-0.41	13.47	0	0	0
38	SLE RA 20	-0.05	-0.41	13.57	0	0	0
38	SLE RA 21	-0.05	-0.41	13.58	0	0	0
38	SLE FR 1	-0.02	-0.39	12.05	0	0	0
38	SLE FR 2	-0.02	-0.39	12.05	0	0	0
38	SLE FR 3	-0.02	-0.39	12.09	0	0	0
38	SLE FR 4	-0.03	-0.4	12.47	0	0	0
38	SLE FR 5	-0.03	-0.4	12.52	0	0	0
38	SLE FR 6	-0.03	-0.4	12.76	0	0	0
38	SLE QP 1	-0.02	-0.39	12.05	0	0	0
38	SLE QP 2	-0.03	-0.4	12.47	0	0	0
38	SLD 1	0.71	-0.32	12.56	0	0	0
38	SLD 2	0.72	-0.31	12.57	0	0	0
38	SLD 3	0.66	-0.55	12.64	0	0	0
38	SLD 4	0.67	-0.54	12.64	0	0	0
38	SLD 5	0.26	-0.02	12.38	0	0	0
38	SLD 6	0.27	-0.01	12.39	0	0	0
38	SLD 7	0.1	-0.8	12.64	0	0	0
38	SLD 8	0.11	-0.8	12.64	0	0	0
38	SLD 9	-0.17	0	12.31	0	0	0
38	SLD 10	-0.16	0.01	12.31	0	0	0
38	SLD 11	-0.33	-0.79	12.56	0	0	0
38	SLD 12	-0.32	-0.78	12.56	0	0	0
38	SLD 13	-0.73	-0.25	12.31	0	0	0
38	SLD 14	-0.71	-0.24	12.31	0	0	0
38	SLD 15	-0.78	-0.49	12.38	0	0	0
38	SLD 16	-0.76	-0.48	12.39	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
38	SLV 1	1.69	-0.22	12.68	0	0	0
38	SLV 2	1.72	-0.19	12.69	0	0	0
38	SLV 3	1.58	-0.75	12.86	0	0	0
38	SLV 4	1.61	-0.73	12.86	0	0	0
38	SLV 5	0.65	0.47	12.27	0	0	0
38	SLV 6	0.67	0.48	12.28	0	0	0
38	SLV 7	0.28	-1.32	12.85	0	0	0
38	SLV 8	0.3	-1.31	12.85	0	0	0
38	SLV 9	-0.35	0.51	12.09	0	0	0
38	SLV 10	-0.33	0.53	12.1	0	0	0
38	SLV 11	-0.73	-1.28	12.67	0	0	0
38	SLV 12	-0.71	-1.26	12.67	0	0	0
38	SLV 13	-1.66	-0.07	12.08	0	0	0
38	SLV 14	-1.63	-0.04	12.09	0	0	0
38	SLV 15	-1.78	-0.6	12.26	0	0	0
38	SLV 16	-1.75	-0.58	12.27	0	0	0
39	SLU 1	-0.02	-0.36	10.91	0	0	0
39	SLU 2	-0.02	-0.37	10.91	0	0	0
39	SLU 3	-0.02	-0.36	11.16	0	0	0
39	SLU 4	-0.02	-0.37	11.16	0	0	0
39	SLU 5	-0.02	-0.37	11.06	0	0	0
39	SLU 6	-0.03	-0.36	11.31	0	0	0
39	SLU 7	-0.03	-0.36	11.31	0	0	0
39	SLU 8	-0.03	-0.36	11.21	0	0	0
39	SLU 9	-0.03	-0.36	11.21	0	0	0
39	SLU 10	-0.04	-0.38	12.29	0	0	0
39	SLU 11	-0.05	-0.38	12.54	0	0	0
39	SLU 12	-0.05	-0.38	12.54	0	0	0
39	SLU 13	-0.05	-0.38	12.44	0	0	0
39	SLU 14	-0.05	-0.38	12.69	0	0	0
39	SLU 15	-0.05	-0.38	12.69	0	0	0
39	SLU 16	-0.06	-0.37	12.59	0	0	0
39	SLU 17	-0.06	-0.38	12.59	0	0	0
39	SLU 18	-0.06	-0.38	12.88	0	0	0
39	SLU 19	-0.06	-0.39	12.88	0	0	0
39	SLU 20	-0.06	-0.38	13.03	0	0	0
39	SLU 21	-0.06	-0.38	13.03	0	0	0
39	SLU 22	-0.02	-0.36	12.12	0	0	0
39	SLU 23	-0.02	-0.36	12.13	0	0	0
39	SLU 24	-0.03	-0.36	12.38	0	0	0
39	SLU 25	-0.03	-0.36	12.38	0	0	0
39	SLU 26	-0.03	-0.36	12.28	0	0	0
39	SLU 27	-0.03	-0.35	12.53	0	0	0
39	SLU 28	-0.03	-0.36	12.53	0	0	0
39	SLU 29	-0.03	-0.35	12.42	0	0	0
39	SLU 30	-0.03	-0.36	12.42	0	0	0
39	SLU 31	-0.05	-0.38	13.51	0	0	0
39	SLU 32	-0.05	-0.37	13.76	0	0	0
39	SLU 33	-0.05	-0.37	13.76	0	0	0
39	SLU 34	-0.05	-0.37	13.66	0	0	0
39	SLU 35	-0.06	-0.37	13.91	0	0	0
39	SLU 36	-0.06	-0.37	13.91	0	0	0
39	SLU 37	-0.06	-0.37	13.8	0	0	0
39	SLU 38	-0.06	-0.37	13.8	0	0	0
39	SLU 39	-0.06	-0.38	14.1	0	0	0
39	SLU 40	-0.06	-0.38	14.1	0	0	0
39	SLU 41	-0.06	-0.37	14.24	0	0	0
39	SLU 42	-0.06	-0.38	14.25	0	0	0
39	SLU 43	-0.02	-0.47	13.76	0	0	0
39	SLU 44	-0.02	-0.48	13.77	0	0	0
39	SLU 45	-0.03	-0.47	14.02	0	0	0
39	SLU 46	-0.03	-0.48	14.02	0	0	0
39	SLU 47	-0.03	-0.48	13.92	0	0	0
39	SLU 48	-0.03	-0.47	14.17	0	0	0
39	SLU 49	-0.03	-0.48	14.17	0	0	0
39	SLU 50	-0.03	-0.47	14.06	0	0	0
39	SLU 51	-0.03	-0.47	14.06	0	0	0
39	SLU 52	-0.05	-0.49	15.15	0	0	0
39	SLU 53	-0.05	-0.49	15.4	0	0	0
39	SLU 54	-0.05	-0.49	15.4	0	0	0
39	SLU 55	-0.05	-0.49	15.3	0	0	0
39	SLU 56	-0.06	-0.49	15.55	0	0	0
39	SLU 57	-0.06	-0.49	15.55	0	0	0
39	SLU 58	-0.06	-0.48	15.44	0	0	0
39	SLU 59	-0.06	-0.49	15.44	0	0	0
39	SLU 60	-0.06	-0.49	15.74	0	0	0
39	SLU 61	-0.06	-0.5	15.74	0	0	0
39	SLU 62	-0.07	-0.49	15.88	0	0	0
39	SLU 63	-0.07	-0.5	15.89	0	0	0
39	SLU 64	-0.02	-0.47	14.98	0	0	0
39	SLU 65	-0.02	-0.47	14.98	0	0	0
39	SLU 66	-0.03	-0.47	15.23	0	0	0
39	SLU 67	-0.03	-0.47	15.24	0	0	0
39	SLU 68	-0.03	-0.47	15.13	0	0	0
39	SLU 69	-0.04	-0.47	15.38	0	0	0
39	SLU 70	-0.04	-0.47	15.38	0	0	0
39	SLU 71	-0.04	-0.46	15.28	0	0	0
39	SLU 72	-0.04	-0.47	15.28	0	0	0
39	SLU 73	-0.05	-0.49	16.36	0	0	0
39	SLU 74	-0.06	-0.48	16.61	0	0	0
39	SLU 75	-0.06	-0.49	16.61	0	0	0
39	SLU 76	-0.06	-0.48	16.51	0	0	0
39	SLU 77	-0.06	-0.48	16.76	0	0	0
39	SLU 78	-0.06	-0.48	16.76	0	0	0
39	SLU 79	-0.06	-0.48	16.66	0	0	0
39	SLU 80	-0.06	-0.48	16.66	0	0	0
39	SLU 81	-0.06	-0.49	16.95	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
39	SLU 82	-0.06	-0.49	16.95	0	0	0
39	SLU 83	-0.07	-0.48	17.1	0	0	0
39	SLU 84	-0.07	-0.49	17.1	0	0	0
39	SLE RA 1	-0.02	-0.36	11.26	0	0	0
39	SLE RA 2	-0.02	-0.36	11.26	0	0	0
39	SLE RA 3	-0.02	-0.36	11.43	0	0	0
39	SLE RA 4	-0.02	-0.36	11.43	0	0	0
39	SLE RA 5	-0.02	-0.36	11.36	0	0	0
39	SLE RA 6	-0.03	-0.36	11.52	0	0	0
39	SLE RA 7	-0.03	-0.36	11.53	0	0	0
39	SLE RA 8	-0.03	-0.36	11.46	0	0	0
39	SLE RA 9	-0.03	-0.36	11.46	0	0	0
39	SLE RA 10	-0.04	-0.37	12.18	0	0	0
39	SLE RA 11	-0.04	-0.37	12.34	0	0	0
39	SLE RA 12	-0.04	-0.37	12.35	0	0	0
39	SLE RA 13	-0.04	-0.37	12.28	0	0	0
39	SLE RA 14	-0.04	-0.37	12.44	0	0	0
39	SLE RA 15	-0.04	-0.37	12.45	0	0	0
39	SLE RA 16	-0.04	-0.37	12.37	0	0	0
39	SLE RA 17	-0.04	-0.37	12.38	0	0	0
39	SLE RA 18	-0.04	-0.37	12.57	0	0	0
39	SLE RA 19	-0.04	-0.38	12.57	0	0	0
39	SLE RA 20	-0.05	-0.37	12.67	0	0	0
39	SLE RA 21	-0.05	-0.37	12.67	0	0	0
39	SLE FR 1	-0.02	-0.36	11.26	0	0	0
39	SLE FR 2	-0.02	-0.36	11.26	0	0	0
39	SLE FR 3	-0.02	-0.36	11.3	0	0	0
39	SLE FR 4	-0.03	-0.36	11.65	0	0	0
39	SLE FR 5	-0.03	-0.36	11.69	0	0	0
39	SLE FR 6	-0.03	-0.37	11.91	0	0	0
39	SLE QP 1	-0.02	-0.36	11.26	0	0	0
39	SLE QP 2	-0.03	-0.36	11.65	0	0	0
39	SLD 1	0.67	-0.29	11.67	0	0	0
39	SLD 2	0.68	-0.28	11.67	0	0	0
39	SLD 3	0.62	-0.51	11.73	0	0	0
39	SLD 4	0.63	-0.5	11.73	0	0	0
39	SLD 5	0.25	-0.01	11.57	0	0	0
39	SLD 6	0.26	0	11.57	0	0	0
39	SLD 7	0.1	-0.74	11.77	0	0	0
39	SLD 8	0.1	-0.73	11.77	0	0	0
39	SLD 9	-0.16	0.01	11.53	0	0	0
39	SLD 10	-0.15	0.02	11.53	0	0	0
39	SLD 11	-0.31	-0.73	11.73	0	0	0
39	SLD 12	-0.3	-0.72	11.73	0	0	0
39	SLD 13	-0.68	-0.23	11.57	0	0	0
39	SLD 14	-0.67	-0.22	11.57	0	0	0
39	SLD 15	-0.73	-0.45	11.63	0	0	0
39	SLD 16	-0.72	-0.43	11.63	0	0	0
39	SLV 1	1.59	-0.21	11.7	0	0	0
39	SLV 2	1.62	-0.17	11.71	0	0	0
39	SLV 3	1.49	-0.7	11.84	0	0	0
39	SLV 4	1.51	-0.67	11.84	0	0	0
39	SLV 5	0.62	0.43	11.46	0	0	0
39	SLV 6	0.63	0.46	11.46	0	0	0
39	SLV 7	0.26	-1.23	11.91	0	0	0
39	SLV 8	0.28	-1.21	11.91	0	0	0
39	SLV 9	-0.33	0.48	11.39	0	0	0
39	SLV 10	-0.31	0.5	11.39	0	0	0
39	SLV 11	-0.68	-1.18	11.84	0	0	0
39	SLV 12	-0.67	-1.16	11.84	0	0	0
39	SLV 13	-1.57	-0.06	11.46	0	0	0
39	SLV 14	-1.54	-0.02	11.46	0	0	0
39	SLV 15	-1.67	-0.56	11.6	0	0	0
39	SLV 16	-1.64	-0.52	11.6	0	0	0
40	SLU 1	-0.02	-0.32	9.65	0	0	0
40	SLU 2	-0.02	-0.32	9.65	0	0	0
40	SLU 3	-0.02	-0.32	9.87	0	0	0
40	SLU 4	-0.02	-0.32	9.87	0	0	0
40	SLU 5	-0.02	-0.32	9.78	0	0	0
40	SLU 6	-0.03	-0.31	10	0	0	0
40	SLU 7	-0.03	-0.32	10	0	0	0
40	SLU 8	-0.03	-0.31	9.91	0	0	0
40	SLU 9	-0.03	-0.32	9.91	0	0	0
40	SLU 10	-0.04	-0.33	10.86	0	0	0
40	SLU 11	-0.04	-0.33	11.08	0	0	0
40	SLU 12	-0.05	-0.33	11.08	0	0	0
40	SLU 13	-0.05	-0.33	10.99	0	0	0
40	SLU 14	-0.05	-0.33	11.21	0	0	0
40	SLU 15	-0.05	-0.33	11.21	0	0	0
40	SLU 16	-0.05	-0.32	11.12	0	0	0
40	SLU 17	-0.05	-0.33	11.12	0	0	0
40	SLU 18	-0.05	-0.33	11.38	0	0	0
40	SLU 19	-0.05	-0.33	11.38	0	0	0
40	SLU 20	-0.06	-0.33	11.51	0	0	0
40	SLU 21	-0.06	-0.33	11.51	0	0	0
40	SLU 22	-0.02	-0.31	10.72	0	0	0
40	SLU 23	-0.02	-0.31	10.72	0	0	0
40	SLU 24	-0.02	-0.31	10.94	0	0	0
40	SLU 25	-0.02	-0.31	10.95	0	0	0
40	SLU 26	-0.02	-0.31	10.85	0	0	0
40	SLU 27	-0.03	-0.31	11.07	0	0	0
40	SLU 28	-0.03	-0.31	11.08	0	0	0
40	SLU 29	-0.03	-0.31	10.98	0	0	0
40	SLU 30	-0.03	-0.31	10.98	0	0	0
40	SLU 31	-0.04	-0.33	11.93	0	0	0
40	SLU 32	-0.05	-0.32	12.16	0	0	0
40	SLU 33	-0.05	-0.32	12.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
40	SLU 34	-0.05	-0.32	12.06	0	0	0
40	SLU 35	-0.05	-0.32	12.29	0	0	0
40	SLU 36	-0.05	-0.32	12.29	0	0	0
40	SLU 37	-0.05	-0.32	12.19	0	0	0
40	SLU 38	-0.05	-0.32	12.19	0	0	0
40	SLU 39	-0.05	-0.33	12.45	0	0	0
40	SLU 40	-0.05	-0.33	12.45	0	0	0
40	SLU 41	-0.06	-0.32	12.58	0	0	0
40	SLU 42	-0.06	-0.33	12.58	0	0	0
40	SLU 43	-0.02	-0.41	12.17	0	0	0
40	SLU 44	-0.02	-0.42	12.17	0	0	0
40	SLU 45	-0.03	-0.41	12.39	0	0	0
40	SLU 46	-0.03	-0.42	12.39	0	0	0
40	SLU 47	-0.03	-0.42	12.3	0	0	0
40	SLU 48	-0.03	-0.41	12.52	0	0	0
40	SLU 49	-0.03	-0.41	12.52	0	0	0
40	SLU 50	-0.03	-0.41	12.43	0	0	0
40	SLU 51	-0.03	-0.41	12.43	0	0	0
40	SLU 52	-0.04	-0.43	13.38	0	0	0
40	SLU 53	-0.05	-0.42	13.6	0	0	0
40	SLU 54	-0.05	-0.43	13.61	0	0	0
40	SLU 55	-0.05	-0.43	13.51	0	0	0
40	SLU 56	-0.05	-0.42	13.73	0	0	0
40	SLU 57	-0.05	-0.43	13.74	0	0	0
40	SLU 58	-0.05	-0.42	13.64	0	0	0
40	SLU 59	-0.05	-0.42	13.64	0	0	0
40	SLU 60	-0.05	-0.43	13.9	0	0	0
40	SLU 61	-0.05	-0.43	13.9	0	0	0
40	SLU 62	-0.06	-0.43	14.03	0	0	0
40	SLU 63	-0.06	-0.43	14.03	0	0	0
40	SLU 64	-0.02	-0.41	13.25	0	0	0
40	SLU 65	-0.02	-0.41	13.25	0	0	0
40	SLU 66	-0.03	-0.41	13.47	0	0	0
40	SLU 67	-0.03	-0.41	13.47	0	0	0
40	SLU 68	-0.03	-0.41	13.38	0	0	0
40	SLU 69	-0.03	-0.4	13.6	0	0	0
40	SLU 70	-0.03	-0.41	13.6	0	0	0
40	SLU 71	-0.03	-0.4	13.51	0	0	0
40	SLU 72	-0.03	-0.41	13.51	0	0	0
40	SLU 73	-0.05	-0.42	14.46	0	0	0
40	SLU 74	-0.05	-0.42	14.68	0	0	0
40	SLU 75	-0.05	-0.42	14.68	0	0	0
40	SLU 76	-0.05	-0.42	14.59	0	0	0
40	SLU 77	-0.06	-0.42	14.81	0	0	0
40	SLU 78	-0.06	-0.42	14.81	0	0	0
40	SLU 79	-0.06	-0.41	14.72	0	0	0
40	SLU 80	-0.06	-0.42	14.72	0	0	0
40	SLU 81	-0.06	-0.42	14.98	0	0	0
40	SLU 82	-0.06	-0.43	14.98	0	0	0
40	SLU 83	-0.06	-0.42	15.11	0	0	0
40	SLU 84	-0.06	-0.42	15.11	0	0	0
40	SLE RA 1	-0.02	-0.31	9.95	0	0	0
40	SLE RA 2	-0.02	-0.32	9.95	0	0	0
40	SLE RA 3	-0.02	-0.31	10.1	0	0	0
40	SLE RA 4	-0.02	-0.32	10.1	0	0	0
40	SLE RA 5	-0.02	-0.32	10.04	0	0	0
40	SLE RA 6	-0.02	-0.31	10.19	0	0	0
40	SLE RA 7	-0.02	-0.31	10.19	0	0	0
40	SLE RA 8	-0.02	-0.31	10.13	0	0	0
40	SLE RA 9	-0.02	-0.31	10.13	0	0	0
40	SLE RA 10	-0.03	-0.32	10.76	0	0	0
40	SLE RA 11	-0.04	-0.32	10.91	0	0	0
40	SLE RA 12	-0.04	-0.32	10.91	0	0	0
40	SLE RA 13	-0.04	-0.32	10.85	0	0	0
40	SLE RA 14	-0.04	-0.32	11	0	0	0
40	SLE RA 15	-0.04	-0.32	11	0	0	0
40	SLE RA 16	-0.04	-0.32	10.93	0	0	0
40	SLE RA 17	-0.04	-0.32	10.93	0	0	0
40	SLE RA 18	-0.04	-0.32	11.11	0	0	0
40	SLE RA 19	-0.04	-0.33	11.11	0	0	0
40	SLE RA 20	-0.04	-0.32	11.19	0	0	0
40	SLE RA 21	-0.04	-0.33	11.19	0	0	0
40	SLE FR 1	-0.02	-0.31	9.95	0	0	0
40	SLE FR 2	-0.02	-0.31	9.95	0	0	0
40	SLE FR 3	-0.02	-0.31	9.99	0	0	0
40	SLE FR 4	-0.02	-0.32	10.3	0	0	0
40	SLE FR 5	-0.03	-0.32	10.33	0	0	0
40	SLE FR 6	-0.03	-0.32	10.53	0	0	0
40	SLE QP 1	-0.02	-0.31	9.95	0	0	0
40	SLE QP 2	-0.02	-0.32	10.3	0	0	0
40	SLD 1	0.59	-0.26	10.23	0	0	0
40	SLD 2	0.6	-0.24	10.23	0	0	0
40	SLD 3	0.55	-0.45	10.28	0	0	0
40	SLD 4	0.56	-0.43	10.28	0	0	0
40	SLD 5	0.22	-0.01	10.21	0	0	0
40	SLD 6	0.23	0	10.21	0	0	0
40	SLD 7	0.09	-0.65	10.37	0	0	0
40	SLD 8	0.09	-0.64	10.36	0	0	0
40	SLD 9	-0.14	0.01	10.23	0	0	0
40	SLD 10	-0.13	0.02	10.23	0	0	0
40	SLD 11	-0.28	-0.64	10.39	0	0	0
40	SLD 12	-0.27	-0.62	10.39	0	0	0
40	SLD 13	-0.61	-0.2	10.32	0	0	0
40	SLD 14	-0.6	-0.18	10.32	0	0	0
40	SLD 15	-0.65	-0.39	10.37	0	0	0
40	SLD 16	-0.64	-0.37	10.37	0	0	0
40	SLV 1	1.42	-0.19	10.14	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
40	SLV 2	1.45	-0.15	10.14	0	0	0
40	SLV 3	1.33	-0.63	10.25	0	0	0
40	SLV 4	1.35	-0.58	10.25	0	0	0
40	SLV 5	0.55	0.38	10.09	0	0	0
40	SLV 6	0.56	0.41	10.09	0	0	0
40	SLV 7	0.23	-1.08	10.45	0	0	0
40	SLV 8	0.25	-1.06	10.45	0	0	0
40	SLV 9	-0.3	0.42	10.15	0	0	0
40	SLV 10	-0.28	0.45	10.15	0	0	0
40	SLV 11	-0.61	-1.04	10.51	0	0	0
40	SLV 12	-0.6	-1.01	10.51	0	0	0
40	SLV 13	-1.4	-0.05	10.35	0	0	0
40	SLV 14	-1.38	-0.01	10.35	0	0	0
40	SLV 15	-1.49	-0.49	10.46	0	0	0
40	SLV 16	-1.47	-0.45	10.46	0	0	0
41	SLU 1	-0.01	-0.21	6.63	0	0	0
41	SLU 2	-0.01	-0.22	6.63	0	0	0
41	SLU 3	-0.02	-0.21	6.78	0	0	0
41	SLU 4	-0.02	-0.22	6.78	0	0	0
41	SLU 5	-0.02	-0.22	6.72	0	0	0
41	SLU 6	-0.02	-0.21	6.87	0	0	0
41	SLU 7	-0.02	-0.22	6.87	0	0	0
41	SLU 8	-0.02	-0.21	6.81	0	0	0
41	SLU 9	-0.02	-0.21	6.81	0	0	0
41	SLU 10	-0.03	-0.23	7.46	0	0	0
41	SLU 11	-0.03	-0.22	7.61	0	0	0
41	SLU 12	-0.03	-0.22	7.61	0	0	0
41	SLU 13	-0.03	-0.22	7.55	0	0	0
41	SLU 14	-0.04	-0.22	7.7	0	0	0
41	SLU 15	-0.04	-0.22	7.7	0	0	0
41	SLU 16	-0.04	-0.22	7.64	0	0	0
41	SLU 17	-0.04	-0.22	7.64	0	0	0
41	SLU 18	-0.04	-0.22	7.81	0	0	0
41	SLU 19	-0.04	-0.23	7.81	0	0	0
41	SLU 20	-0.04	-0.22	7.9	0	0	0
41	SLU 21	-0.04	-0.23	7.9	0	0	0
41	SLU 22	-0.01	-0.21	7.37	0	0	0
41	SLU 23	-0.01	-0.21	7.37	0	0	0
41	SLU 24	-0.02	-0.21	7.52	0	0	0
41	SLU 25	-0.02	-0.21	7.52	0	0	0
41	SLU 26	-0.02	-0.21	7.46	0	0	0
41	SLU 27	-0.02	-0.21	7.61	0	0	0
41	SLU 28	-0.02	-0.21	7.61	0	0	0
41	SLU 29	-0.02	-0.21	7.55	0	0	0
41	SLU 30	-0.02	-0.21	7.55	0	0	0
41	SLU 31	-0.03	-0.22	8.2	0	0	0
41	SLU 32	-0.03	-0.22	8.35	0	0	0
41	SLU 33	-0.03	-0.22	8.35	0	0	0
41	SLU 34	-0.03	-0.22	8.29	0	0	0
41	SLU 35	-0.04	-0.22	8.44	0	0	0
41	SLU 36	-0.04	-0.22	8.44	0	0	0
41	SLU 37	-0.04	-0.21	8.38	0	0	0
41	SLU 38	-0.04	-0.22	8.38	0	0	0
41	SLU 39	-0.04	-0.22	8.55	0	0	0
41	SLU 40	-0.04	-0.22	8.55	0	0	0
41	SLU 41	-0.04	-0.22	8.64	0	0	0
41	SLU 42	-0.04	-0.22	8.64	0	0	0
41	SLU 43	-0.02	-0.28	8.37	0	0	0
41	SLU 44	-0.02	-0.28	8.37	0	0	0
41	SLU 45	-0.02	-0.28	8.52	0	0	0
41	SLU 46	-0.02	-0.28	8.52	0	0	0
41	SLU 47	-0.02	-0.28	8.45	0	0	0
41	SLU 48	-0.02	-0.28	8.61	0	0	0
41	SLU 49	-0.02	-0.28	8.61	0	0	0
41	SLU 50	-0.02	-0.28	8.54	0	0	0
41	SLU 51	-0.02	-0.28	8.54	0	0	0
41	SLU 52	-0.03	-0.29	9.19	0	0	0
41	SLU 53	-0.04	-0.29	9.35	0	0	0
41	SLU 54	-0.04	-0.29	9.35	0	0	0
41	SLU 55	-0.04	-0.29	9.28	0	0	0
41	SLU 56	-0.04	-0.29	9.43	0	0	0
41	SLU 57	-0.04	-0.29	9.43	0	0	0
41	SLU 58	-0.04	-0.29	9.37	0	0	0
41	SLU 59	-0.04	-0.29	9.37	0	0	0
41	SLU 60	-0.04	-0.29	9.55	0	0	0
41	SLU 61	-0.04	-0.29	9.55	0	0	0
41	SLU 62	-0.04	-0.29	9.64	0	0	0
41	SLU 63	-0.04	-0.29	9.64	0	0	0
41	SLU 64	-0.02	-0.28	9.11	0	0	0
41	SLU 65	-0.02	-0.28	9.11	0	0	0
41	SLU 66	-0.02	-0.28	9.26	0	0	0
41	SLU 67	-0.02	-0.28	9.26	0	0	0
41	SLU 68	-0.02	-0.28	9.2	0	0	0
41	SLU 69	-0.02	-0.27	9.35	0	0	0
41	SLU 70	-0.02	-0.28	9.35	0	0	0
41	SLU 71	-0.03	-0.27	9.28	0	0	0
41	SLU 72	-0.03	-0.28	9.28	0	0	0
41	SLU 73	-0.03	-0.29	9.94	0	0	0
41	SLU 74	-0.04	-0.28	10.09	0	0	0
41	SLU 75	-0.04	-0.29	10.09	0	0	0
41	SLU 76	-0.04	-0.29	10.02	0	0	0
41	SLU 77	-0.04	-0.28	10.17	0	0	0
41	SLU 78	-0.04	-0.28	10.18	0	0	0
41	SLU 79	-0.04	-0.28	10.11	0	0	0
41	SLU 80	-0.04	-0.28	10.11	0	0	0
41	SLU 81	-0.04	-0.29	10.29	0	0	0
41	SLU 82	-0.04	-0.29	10.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
41	SLU 83	-0.05	-0.29	10.38	0	0	0
41	SLU 84	-0.05	-0.29	10.38	0	0	0
41	SLE RA 1	-0.01	-0.21	6.84	0	0	0
41	SLE RA 2	-0.01	-0.21	6.84	0	0	0
41	SLE RA 3	-0.02	-0.21	6.94	0	0	0
41	SLE RA 4	-0.02	-0.21	6.94	0	0	0
41	SLE RA 5	-0.02	-0.21	6.9	0	0	0
41	SLE RA 6	-0.02	-0.21	7	0	0	0
41	SLE RA 7	-0.02	-0.21	7	0	0	0
41	SLE RA 8	-0.02	-0.21	6.96	0	0	0
41	SLE RA 9	-0.02	-0.21	6.96	0	0	0
41	SLE RA 10	-0.02	-0.22	7.39	0	0	0
41	SLE RA 11	-0.03	-0.22	7.5	0	0	0
41	SLE RA 12	-0.03	-0.22	7.5	0	0	0
41	SLE RA 13	-0.03	-0.22	7.45	0	0	0
41	SLE RA 14	-0.03	-0.22	7.55	0	0	0
41	SLE RA 15	-0.03	-0.22	7.55	0	0	0
41	SLE RA 16	-0.03	-0.22	7.51	0	0	0
41	SLE RA 17	-0.03	-0.22	7.51	0	0	0
41	SLE RA 18	-0.03	-0.22	7.63	0	0	0
41	SLE RA 19	-0.03	-0.22	7.63	0	0	0
41	SLE RA 20	-0.03	-0.22	7.69	0	0	0
41	SLE RA 21	-0.03	-0.22	7.69	0	0	0
41	SLE FR 1	-0.01	-0.21	6.84	0	0	0
41	SLE FR 2	-0.01	-0.21	6.84	0	0	0
41	SLE FR 3	-0.01	-0.21	6.87	0	0	0
41	SLE FR 4	-0.02	-0.22	7.08	0	0	0
41	SLE FR 5	-0.02	-0.21	7.1	0	0	0
41	SLE FR 6	-0.02	-0.22	7.24	0	0	0
41	SLE QP 1	-0.01	-0.21	6.84	0	0	0
41	SLE QP 2	-0.02	-0.21	7.08	0	0	0
41	SLD 1	0.41	-0.18	7	0	0	0
41	SLD 2	0.42	-0.16	6.99	0	0	0
41	SLD 3	0.38	-0.31	7.03	0	0	0
41	SLD 4	0.39	-0.3	7.03	0	0	0
41	SLD 5	0.15	-0.01	7	0	0	0
41	SLD 6	0.16	0	7	0	0	0
41	SLD 7	0.06	-0.45	7.12	0	0	0
41	SLD 8	0.06	-0.44	7.11	0	0	0
41	SLD 9	-0.1	0.01	7.04	0	0	0
41	SLD 10	-0.09	0.02	7.04	0	0	0
41	SLD 11	-0.19	-0.43	7.16	0	0	0
41	SLD 12	-0.19	-0.42	7.15	0	0	0
41	SLD 13	-0.43	-0.13	7.13	0	0	0
41	SLD 14	-0.42	-0.12	7.13	0	0	0
41	SLD 15	-0.45	-0.27	7.16	0	0	0
41	SLD 16	-0.45	-0.25	7.16	0	0	0
41	SLV 1	0.99	-0.13	6.89	0	0	0
41	SLV 2	1	-0.1	6.88	0	0	0
41	SLV 3	0.92	-0.43	6.97	0	0	0
41	SLV 4	0.93	-0.4	6.96	0	0	0
41	SLV 5	0.38	0.26	6.91	0	0	0
41	SLV 6	0.39	0.28	6.9	0	0	0
41	SLV 7	0.16	-0.74	7.16	0	0	0
41	SLV 8	0.17	-0.72	7.16	0	0	0
41	SLV 9	-0.21	0.29	7	0	0	0
41	SLV 10	-0.2	0.31	6.99	0	0	0
41	SLV 11	-0.43	-0.71	7.25	0	0	0
41	SLV 12	-0.42	-0.69	7.25	0	0	0
41	SLV 13	-0.97	-0.03	7.2	0	0	0
41	SLV 14	-0.96	0	7.19	0	0	0
41	SLV 15	-1.04	-0.33	7.27	0	0	0
41	SLV 16	-1.02	-0.3	7.27	0	0	0
42	SLU 1	-0.02	-0.26	8.17	0	0	0
42	SLU 2	-0.02	-0.26	8.17	0	0	0
42	SLU 3	-0.02	-0.26	8.35	0	0	0
42	SLU 4	-0.02	-0.26	8.35	0	0	0
42	SLU 5	-0.02	-0.26	8.28	0	0	0
42	SLU 6	-0.02	-0.25	8.46	0	0	0
42	SLU 7	-0.02	-0.26	8.46	0	0	0
42	SLU 8	-0.03	-0.25	8.38	0	0	0
42	SLU 9	-0.03	-0.26	8.38	0	0	0
42	SLU 10	-0.04	-0.27	9.18	0	0	0
42	SLU 11	-0.04	-0.26	9.36	0	0	0
42	SLU 12	-0.04	-0.27	9.36	0	0	0
42	SLU 13	-0.04	-0.27	9.28	0	0	0
42	SLU 14	-0.05	-0.26	9.47	0	0	0
42	SLU 15	-0.05	-0.27	9.47	0	0	0
42	SLU 16	-0.05	-0.26	9.39	0	0	0
42	SLU 17	-0.05	-0.26	9.39	0	0	0
42	SLU 18	-0.05	-0.27	9.61	0	0	0
42	SLU 19	-0.05	-0.27	9.61	0	0	0
42	SLU 20	-0.05	-0.27	9.72	0	0	0
42	SLU 21	-0.05	-0.27	9.72	0	0	0
42	SLU 22	-0.02	-0.25	9.08	0	0	0
42	SLU 23	-0.02	-0.25	9.08	0	0	0
42	SLU 24	-0.02	-0.25	9.27	0	0	0
42	SLU 25	-0.02	-0.25	9.27	0	0	0
42	SLU 26	-0.02	-0.25	9.19	0	0	0
42	SLU 27	-0.03	-0.25	9.37	0	0	0
42	SLU 28	-0.03	-0.25	9.37	0	0	0
42	SLU 29	-0.03	-0.25	9.29	0	0	0
42	SLU 30	-0.03	-0.25	9.3	0	0	0
42	SLU 31	-0.04	-0.26	10.09	0	0	0
42	SLU 32	-0.04	-0.26	10.28	0	0	0
42	SLU 33	-0.04	-0.26	10.28	0	0	0
42	SLU 34	-0.04	-0.26	10.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
42	SLU 35	-0.05	-0.26	10.38	0	0	0
42	SLU 36	-0.05	-0.26	10.38	0	0	0
42	SLU 37	-0.05	-0.25	10.3	0	0	0
42	SLU 38	-0.05	-0.26	10.3	0	0	0
42	SLU 39	-0.05	-0.26	10.52	0	0	0
42	SLU 40	-0.05	-0.26	10.52	0	0	0
42	SLU 41	-0.05	-0.26	10.63	0	0	0
42	SLU 42	-0.05	-0.26	10.63	0	0	0
42	SLU 43	-0.02	-0.33	10.31	0	0	0
42	SLU 44	-0.02	-0.34	10.31	0	0	0
42	SLU 45	-0.02	-0.34	10.49	0	0	0
42	SLU 46	-0.02	-0.34	10.49	0	0	0
42	SLU 47	-0.02	-0.34	10.41	0	0	0
42	SLU 48	-0.03	-0.33	10.6	0	0	0
42	SLU 49	-0.03	-0.34	10.6	0	0	0
42	SLU 50	-0.03	-0.33	10.52	0	0	0
42	SLU 51	-0.03	-0.33	10.52	0	0	0
42	SLU 52	-0.04	-0.35	11.32	0	0	0
42	SLU 53	-0.04	-0.34	11.5	0	0	0
42	SLU 54	-0.04	-0.35	11.5	0	0	0
42	SLU 55	-0.05	-0.35	11.42	0	0	0
42	SLU 56	-0.05	-0.34	11.61	0	0	0
42	SLU 57	-0.05	-0.34	11.61	0	0	0
42	SLU 58	-0.05	-0.34	11.53	0	0	0
42	SLU 59	-0.05	-0.34	11.53	0	0	0
42	SLU 60	-0.05	-0.35	11.75	0	0	0
42	SLU 61	-0.05	-0.35	11.75	0	0	0
42	SLU 62	-0.05	-0.34	11.85	0	0	0
42	SLU 63	-0.05	-0.35	11.85	0	0	0
42	SLU 64	-0.02	-0.33	11.22	0	0	0
42	SLU 65	-0.02	-0.33	11.22	0	0	0
42	SLU 66	-0.03	-0.33	11.41	0	0	0
42	SLU 67	-0.03	-0.33	11.41	0	0	0
42	SLU 68	-0.03	-0.33	11.33	0	0	0
42	SLU 69	-0.03	-0.33	11.51	0	0	0
42	SLU 70	-0.03	-0.33	11.51	0	0	0
42	SLU 71	-0.03	-0.33	11.43	0	0	0
42	SLU 72	-0.03	-0.33	11.43	0	0	0
42	SLU 73	-0.04	-0.34	12.23	0	0	0
42	SLU 74	-0.05	-0.34	12.41	0	0	0
42	SLU 75	-0.05	-0.34	12.41	0	0	0
42	SLU 76	-0.05	-0.34	12.34	0	0	0
42	SLU 77	-0.05	-0.34	12.52	0	0	0
42	SLU 78	-0.05	-0.34	12.52	0	0	0
42	SLU 79	-0.05	-0.33	12.44	0	0	0
42	SLU 80	-0.05	-0.34	12.44	0	0	0
42	SLU 81	-0.05	-0.34	12.66	0	0	0
42	SLU 82	-0.05	-0.34	12.66	0	0	0
42	SLU 83	-0.06	-0.34	12.77	0	0	0
42	SLU 84	-0.06	-0.34	12.77	0	0	0
42	SLE RA 1	-0.02	-0.25	8.43	0	0	0
42	SLE RA 2	-0.02	-0.26	8.43	0	0	0
42	SLE RA 3	-0.02	-0.25	8.55	0	0	0
42	SLE RA 4	-0.02	-0.26	8.55	0	0	0
42	SLE RA 5	-0.02	-0.26	8.5	0	0	0
42	SLE RA 6	-0.02	-0.25	8.62	0	0	0
42	SLE RA 7	-0.02	-0.25	8.62	0	0	0
42	SLE RA 8	-0.02	-0.25	8.57	0	0	0
42	SLE RA 9	-0.02	-0.25	8.57	0	0	0
42	SLE RA 10	-0.03	-0.26	9.1	0	0	0
42	SLE RA 11	-0.03	-0.26	9.23	0	0	0
42	SLE RA 12	-0.03	-0.26	9.23	0	0	0
42	SLE RA 13	-0.03	-0.26	9.17	0	0	0
42	SLE RA 14	-0.04	-0.26	9.3	0	0	0
42	SLE RA 15	-0.04	-0.26	9.3	0	0	0
42	SLE RA 16	-0.04	-0.26	9.24	0	0	0
42	SLE RA 17	-0.04	-0.26	9.24	0	0	0
42	SLE RA 18	-0.04	-0.26	9.39	0	0	0
42	SLE RA 19	-0.04	-0.26	9.39	0	0	0
42	SLE RA 20	-0.04	-0.26	9.46	0	0	0
42	SLE RA 21	-0.04	-0.26	9.46	0	0	0
42	SLE FR 1	-0.02	-0.25	8.43	0	0	0
42	SLE FR 2	-0.02	-0.25	8.43	0	0	0
42	SLE FR 3	-0.02	-0.25	8.46	0	0	0
42	SLE FR 4	-0.02	-0.26	8.72	0	0	0
42	SLE FR 5	-0.02	-0.26	8.75	0	0	0
42	SLE FR 6	-0.03	-0.26	8.91	0	0	0
42	SLE QP 1	-0.02	-0.25	8.43	0	0	0
42	SLE QP 2	-0.02	-0.26	8.72	0	0	0
42	SLD 1	0.51	-0.22	8.53	0	0	0
42	SLD 2	0.52	-0.19	8.53	0	0	0
42	SLD 3	0.47	-0.38	8.57	0	0	0
42	SLD 4	0.48	-0.35	8.56	0	0	0
42	SLD 5	0.19	0	8.61	0	0	0
42	SLD 6	0.19	0.01	8.6	0	0	0
42	SLD 7	0.07	-0.54	8.73	0	0	0
42	SLD 8	0.08	-0.53	8.73	0	0	0
42	SLD 9	-0.12	0.01	8.71	0	0	0
42	SLD 10	-0.12	0.03	8.71	0	0	0
42	SLD 11	-0.24	-0.52	8.83	0	0	0
42	SLD 12	-0.24	-0.51	8.83	0	0	0
42	SLD 13	-0.53	-0.16	8.87	0	0	0
42	SLD 14	-0.52	-0.13	8.87	0	0	0
42	SLD 15	-0.56	-0.32	8.91	0	0	0
42	SLD 16	-0.56	-0.3	8.9	0	0	0
42	SLV 1	1.22	-0.17	8.29	0	0	0
42	SLV 2	1.24	-0.11	8.27	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
42	SLV 3	1.14	-0.54	8.37	0	0	0
42	SLV 4	1.16	-0.48	8.35	0	0	0
42	SLV 5	0.47	0.32	8.47	0	0	0
42	SLV 6	0.48	0.35	8.45	0	0	0
42	SLV 7	0.2	-0.91	8.74	0	0	0
42	SLV 8	0.21	-0.87	8.73	0	0	0
42	SLV 9	-0.26	0.36	8.7	0	0	0
42	SLV 10	-0.24	0.39	8.69	0	0	0
42	SLV 11	-0.53	-0.86	8.98	0	0	0
42	SLV 12	-0.52	-0.83	8.97	0	0	0
42	SLV 13	-1.2	-0.03	9.08	0	0	0
42	SLV 14	-1.19	0.02	9.07	0	0	0
42	SLV 15	-1.29	-0.4	9.17	0	0	0
42	SLV 16	-1.27	-0.34	9.15	0	0	0
43	SLU 1	-0.01	-0.14	4.71	0	0	0
43	SLU 2	-0.01	-0.15	4.71	0	0	0
43	SLU 3	-0.01	-0.14	4.82	0	0	0
43	SLU 4	-0.01	-0.15	4.82	0	0	0
43	SLU 5	-0.01	-0.15	4.77	0	0	0
43	SLU 6	-0.01	-0.14	4.88	0	0	0
43	SLU 7	-0.01	-0.15	4.88	0	0	0
43	SLU 8	-0.01	-0.14	4.83	0	0	0
43	SLU 9	-0.01	-0.14	4.83	0	0	0
43	SLU 10	-0.02	-0.15	5.29	0	0	0
43	SLU 11	-0.02	-0.15	5.39	0	0	0
43	SLU 12	-0.02	-0.15	5.39	0	0	0
43	SLU 13	-0.02	-0.15	5.35	0	0	0
43	SLU 14	-0.03	-0.15	5.45	0	0	0
43	SLU 15	-0.03	-0.15	5.45	0	0	0
43	SLU 16	-0.03	-0.15	5.41	0	0	0
43	SLU 17	-0.03	-0.15	5.41	0	0	0
43	SLU 18	-0.03	-0.15	5.53	0	0	0
43	SLU 19	-0.03	-0.15	5.54	0	0	0
43	SLU 20	-0.03	-0.15	5.59	0	0	0
43	SLU 21	-0.03	-0.15	5.59	0	0	0
43	SLU 22	-0.01	-0.14	5.24	0	0	0
43	SLU 23	-0.01	-0.14	5.24	0	0	0
43	SLU 24	-0.01	-0.14	5.34	0	0	0
43	SLU 25	-0.01	-0.14	5.34	0	0	0
43	SLU 26	-0.01	-0.14	5.3	0	0	0
43	SLU 27	-0.02	-0.14	5.4	0	0	0
43	SLU 28	-0.02	-0.14	5.4	0	0	0
43	SLU 29	-0.02	-0.14	5.36	0	0	0
43	SLU 30	-0.02	-0.14	5.36	0	0	0
43	SLU 31	-0.02	-0.15	5.82	0	0	0
43	SLU 32	-0.02	-0.15	5.92	0	0	0
43	SLU 33	-0.02	-0.15	5.92	0	0	0
43	SLU 34	-0.03	-0.15	5.88	0	0	0
43	SLU 35	-0.03	-0.14	5.98	0	0	0
43	SLU 36	-0.03	-0.15	5.98	0	0	0
43	SLU 37	-0.03	-0.14	5.93	0	0	0
43	SLU 38	-0.03	-0.14	5.93	0	0	0
43	SLU 39	-0.03	-0.15	6.06	0	0	0
43	SLU 40	-0.03	-0.15	6.06	0	0	0
43	SLU 41	-0.03	-0.15	6.12	0	0	0
43	SLU 42	-0.03	-0.15	6.12	0	0	0
43	SLU 43	-0.01	-0.19	5.95	0	0	0
43	SLU 44	-0.01	-0.19	5.95	0	0	0
43	SLU 45	-0.01	-0.19	6.05	0	0	0
43	SLU 46	-0.01	-0.19	6.05	0	0	0
43	SLU 47	-0.01	-0.19	6.01	0	0	0
43	SLU 48	-0.02	-0.19	6.11	0	0	0
43	SLU 49	-0.02	-0.19	6.11	0	0	0
43	SLU 50	-0.02	-0.19	6.07	0	0	0
43	SLU 51	-0.02	-0.19	6.07	0	0	0
43	SLU 52	-0.02	-0.2	6.52	0	0	0
43	SLU 53	-0.03	-0.19	6.63	0	0	0
43	SLU 54	-0.03	-0.2	6.63	0	0	0
43	SLU 55	-0.03	-0.19	6.58	0	0	0
43	SLU 56	-0.03	-0.19	6.69	0	0	0
43	SLU 57	-0.03	-0.19	6.69	0	0	0
43	SLU 58	-0.03	-0.19	6.64	0	0	0
43	SLU 59	-0.03	-0.19	6.64	0	0	0
43	SLU 60	-0.03	-0.2	6.77	0	0	0
43	SLU 61	-0.03	-0.2	6.77	0	0	0
43	SLU 62	-0.03	-0.19	6.83	0	0	0
43	SLU 63	-0.03	-0.2	6.83	0	0	0
43	SLU 64	-0.01	-0.19	6.47	0	0	0
43	SLU 65	-0.01	-0.19	6.47	0	0	0
43	SLU 66	-0.02	-0.19	6.58	0	0	0
43	SLU 67	-0.02	-0.19	6.58	0	0	0
43	SLU 68	-0.02	-0.19	6.53	0	0	0
43	SLU 69	-0.02	-0.19	6.64	0	0	0
43	SLU 70	-0.02	-0.19	6.64	0	0	0
43	SLU 71	-0.02	-0.18	6.59	0	0	0
43	SLU 72	-0.02	-0.19	6.59	0	0	0
43	SLU 73	-0.02	-0.19	7.05	0	0	0
43	SLU 74	-0.03	-0.19	7.15	0	0	0
43	SLU 75	-0.03	-0.19	7.15	0	0	0
43	SLU 76	-0.03	-0.19	7.11	0	0	0
43	SLU 77	-0.03	-0.19	7.21	0	0	0
43	SLU 78	-0.03	-0.19	7.21	0	0	0
43	SLU 79	-0.03	-0.19	7.17	0	0	0
43	SLU 80	-0.03	-0.19	7.17	0	0	0
43	SLU 81	-0.03	-0.19	7.29	0	0	0
43	SLU 82	-0.03	-0.19	7.3	0	0	0
43	SLU 83	-0.03	-0.19	7.35	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
43	SLU 84	-0.03	-0.19	7.35	0	0	0
43	SLE RA 1	-0.01	-0.14	4.86	0	0	0
43	SLE RA 2	-0.01	-0.14	4.86	0	0	0
43	SLE RA 3	-0.01	-0.14	4.93	0	0	0
43	SLE RA 4	-0.01	-0.14	4.93	0	0	0
43	SLE RA 5	-0.01	-0.14	4.9	0	0	0
43	SLE RA 6	-0.01	-0.14	4.97	0	0	0
43	SLE RA 7	-0.01	-0.14	4.97	0	0	0
43	SLE RA 8	-0.01	-0.14	4.94	0	0	0
43	SLE RA 9	-0.01	-0.14	4.94	0	0	0
43	SLE RA 10	-0.02	-0.15	5.25	0	0	0
43	SLE RA 11	-0.02	-0.15	5.32	0	0	0
43	SLE RA 12	-0.02	-0.15	5.32	0	0	0
43	SLE RA 13	-0.02	-0.15	5.29	0	0	0
43	SLE RA 14	-0.02	-0.15	5.36	0	0	0
43	SLE RA 15	-0.02	-0.15	5.36	0	0	0
43	SLE RA 16	-0.02	-0.15	5.33	0	0	0
43	SLE RA 17	-0.02	-0.15	5.33	0	0	0
43	SLE RA 18	-0.02	-0.15	5.41	0	0	0
43	SLE RA 19	-0.02	-0.15	5.41	0	0	0
43	SLE RA 20	-0.02	-0.15	5.45	0	0	0
43	SLE RA 21	-0.02	-0.15	5.45	0	0	0
43	SLE FR 1	-0.01	-0.14	4.86	0	0	0
43	SLE FR 2	-0.01	-0.14	4.86	0	0	0
43	SLE FR 3	-0.01	-0.14	4.88	0	0	0
43	SLE FR 4	-0.01	-0.15	5.03	0	0	0
43	SLE FR 5	-0.01	-0.14	5.04	0	0	0
43	SLE FR 6	-0.02	-0.15	5.14	0	0	0
43	SLE QP 1	-0.01	-0.14	4.86	0	0	0
43	SLE QP 2	-0.01	-0.14	5.03	0	0	0
43	SLD 1	0.3	-0.12	4.88	0	0	0
43	SLD 2	0.3	-0.11	4.88	0	0	0
43	SLD 3	0.28	-0.22	4.91	0	0	0
43	SLD 4	0.28	-0.2	4.9	0	0	0
43	SLD 5	0.11	0	4.95	0	0	0
43	SLD 6	0.11	0.01	4.95	0	0	0
43	SLD 7	0.04	-0.31	5.02	0	0	0
43	SLD 8	0.04	-0.3	5.02	0	0	0
43	SLD 9	-0.07	0.01	5.03	0	0	0
43	SLD 10	-0.07	0.02	5.03	0	0	0
43	SLD 11	-0.14	-0.3	5.11	0	0	0
43	SLD 12	-0.14	-0.29	5.1	0	0	0
43	SLD 13	-0.31	-0.09	5.16	0	0	0
43	SLD 14	-0.3	-0.07	5.15	0	0	0
43	SLD 15	-0.33	-0.18	5.18	0	0	0
43	SLD 16	-0.32	-0.16	5.17	0	0	0
43	SLV 1	0.71	-0.1	4.69	0	0	0
43	SLV 2	0.72	-0.06	4.68	0	0	0
43	SLV 3	0.66	-0.31	4.74	0	0	0
43	SLV 4	0.67	-0.27	4.73	0	0	0
43	SLV 5	0.27	0.18	4.85	0	0	0
43	SLV 6	0.28	0.2	4.84	0	0	0
43	SLV 7	0.12	-0.52	5.02	0	0	0
43	SLV 8	0.12	-0.5	5.01	0	0	0
43	SLV 9	-0.15	0.21	5.04	0	0	0
43	SLV 10	-0.14	0.23	5.04	0	0	0
43	SLV 11	-0.31	-0.49	5.21	0	0	0
43	SLV 12	-0.3	-0.47	5.2	0	0	0
43	SLV 13	-0.7	-0.02	5.33	0	0	0
43	SLV 14	-0.69	0.02	5.31	0	0	0
43	SLV 15	-0.75	-0.23	5.38	0	0	0
43	SLV 16	-0.74	-0.19	5.36	0	0	0
44	SLU 1	-0.01	-0.21	6.59	0	0	0
44	SLU 2	-0.01	-0.21	6.6	0	0	0
44	SLU 3	-0.02	-0.21	6.74	0	0	0
44	SLU 4	-0.02	-0.21	6.74	0	0	0
44	SLU 5	-0.02	-0.21	6.68	0	0	0
44	SLU 6	-0.02	-0.21	6.83	0	0	0
44	SLU 7	-0.02	-0.21	6.83	0	0	0
44	SLU 8	-0.02	-0.21	6.77	0	0	0
44	SLU 9	-0.02	-0.21	6.77	0	0	0
44	SLU 10	-0.03	-0.22	7.41	0	0	0
44	SLU 11	-0.03	-0.22	7.56	0	0	0
44	SLU 12	-0.03	-0.22	7.56	0	0	0
44	SLU 13	-0.03	-0.22	7.5	0	0	0
44	SLU 14	-0.04	-0.22	7.65	0	0	0
44	SLU 15	-0.04	-0.22	7.65	0	0	0
44	SLU 16	-0.04	-0.21	7.59	0	0	0
44	SLU 17	-0.04	-0.22	7.59	0	0	0
44	SLU 18	-0.04	-0.22	7.76	0	0	0
44	SLU 19	-0.04	-0.22	7.76	0	0	0
44	SLU 20	-0.04	-0.22	7.85	0	0	0
44	SLU 21	-0.04	-0.22	7.85	0	0	0
44	SLU 22	-0.01	-0.2	7.33	0	0	0
44	SLU 23	-0.01	-0.21	7.33	0	0	0
44	SLU 24	-0.02	-0.21	7.48	0	0	0
44	SLU 25	-0.02	-0.21	7.48	0	0	0
44	SLU 26	-0.02	-0.21	7.42	0	0	0
44	SLU 27	-0.02	-0.2	7.57	0	0	0
44	SLU 28	-0.02	-0.21	7.57	0	0	0
44	SLU 29	-0.02	-0.2	7.51	0	0	0
44	SLU 30	-0.02	-0.2	7.51	0	0	0
44	SLU 31	-0.03	-0.22	8.15	0	0	0
44	SLU 32	-0.03	-0.21	8.3	0	0	0
44	SLU 33	-0.03	-0.21	8.3	0	0	0
44	SLU 34	-0.04	-0.21	8.24	0	0	0
44	SLU 35	-0.04	-0.21	8.39	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
44	SLU 36	-0.04	-0.21	8.39	0	0	0
44	SLU 37	-0.04	-0.21	8.32	0	0	0
44	SLU 38	-0.04	-0.21	8.32	0	0	0
44	SLU 39	-0.04	-0.22	8.5	0	0	0
44	SLU 40	-0.04	-0.22	8.5	0	0	0
44	SLU 41	-0.04	-0.21	8.59	0	0	0
44	SLU 42	-0.04	-0.22	8.59	0	0	0
44	SLU 43	-0.02	-0.27	8.32	0	0	0
44	SLU 44	-0.02	-0.28	8.32	0	0	0
44	SLU 45	-0.02	-0.27	8.47	0	0	0
44	SLU 46	-0.02	-0.28	8.47	0	0	0
44	SLU 47	-0.02	-0.28	8.41	0	0	0
44	SLU 48	-0.02	-0.27	8.56	0	0	0
44	SLU 49	-0.02	-0.28	8.56	0	0	0
44	SLU 50	-0.02	-0.27	8.49	0	0	0
44	SLU 51	-0.02	-0.27	8.49	0	0	0
44	SLU 52	-0.03	-0.28	9.14	0	0	0
44	SLU 53	-0.04	-0.28	9.29	0	0	0
44	SLU 54	-0.04	-0.28	9.29	0	0	0
44	SLU 55	-0.04	-0.28	9.23	0	0	0
44	SLU 56	-0.04	-0.28	9.38	0	0	0
44	SLU 57	-0.04	-0.28	9.38	0	0	0
44	SLU 58	-0.04	-0.28	9.31	0	0	0
44	SLU 59	-0.04	-0.28	9.31	0	0	0
44	SLU 60	-0.04	-0.28	9.49	0	0	0
44	SLU 61	-0.04	-0.29	9.49	0	0	0
44	SLU 62	-0.04	-0.28	9.58	0	0	0
44	SLU 63	-0.04	-0.29	9.58	0	0	0
44	SLU 64	-0.02	-0.27	9.06	0	0	0
44	SLU 65	-0.02	-0.27	9.06	0	0	0
44	SLU 66	-0.02	-0.27	9.21	0	0	0
44	SLU 67	-0.02	-0.27	9.21	0	0	0
44	SLU 68	-0.02	-0.27	9.14	0	0	0
44	SLU 69	-0.03	-0.27	9.29	0	0	0
44	SLU 70	-0.03	-0.27	9.29	0	0	0
44	SLU 71	-0.03	-0.27	9.23	0	0	0
44	SLU 72	-0.03	-0.27	9.23	0	0	0
44	SLU 73	-0.03	-0.28	9.88	0	0	0
44	SLU 74	-0.04	-0.28	10.03	0	0	0
44	SLU 75	-0.04	-0.28	10.03	0	0	0
44	SLU 76	-0.04	-0.28	9.96	0	0	0
44	SLU 77	-0.04	-0.28	10.11	0	0	0
44	SLU 78	-0.04	-0.28	10.11	0	0	0
44	SLU 79	-0.04	-0.27	10.05	0	0	0
44	SLU 80	-0.04	-0.28	10.05	0	0	0
44	SLU 81	-0.04	-0.28	10.23	0	0	0
44	SLU 82	-0.04	-0.28	10.23	0	0	0
44	SLU 83	-0.05	-0.28	10.31	0	0	0
44	SLU 84	-0.05	-0.28	10.31	0	0	0
44	SLE RA 1	-0.01	-0.21	6.8	0	0	0
44	SLE RA 2	-0.01	-0.21	6.81	0	0	0
44	SLE RA 3	-0.02	-0.21	6.9	0	0	0
44	SLE RA 4	-0.02	-0.21	6.91	0	0	0
44	SLE RA 5	-0.02	-0.21	6.86	0	0	0
44	SLE RA 6	-0.02	-0.21	6.96	0	0	0
44	SLE RA 7	-0.02	-0.21	6.96	0	0	0
44	SLE RA 8	-0.02	-0.21	6.92	0	0	0
44	SLE RA 9	-0.02	-0.21	6.92	0	0	0
44	SLE RA 10	-0.02	-0.22	7.35	0	0	0
44	SLE RA 11	-0.03	-0.21	7.45	0	0	0
44	SLE RA 12	-0.03	-0.21	7.45	0	0	0
44	SLE RA 13	-0.03	-0.21	7.41	0	0	0
44	SLE RA 14	-0.03	-0.21	7.51	0	0	0
44	SLE RA 15	-0.03	-0.21	7.51	0	0	0
44	SLE RA 16	-0.03	-0.21	7.47	0	0	0
44	SLE RA 17	-0.03	-0.21	7.47	0	0	0
44	SLE RA 18	-0.03	-0.22	7.58	0	0	0
44	SLE RA 19	-0.03	-0.22	7.59	0	0	0
44	SLE RA 20	-0.03	-0.21	7.64	0	0	0
44	SLE RA 21	-0.03	-0.22	7.64	0	0	0
44	SLE FR 1	-0.01	-0.21	6.8	0	0	0
44	SLE FR 2	-0.01	-0.21	6.8	0	0	0
44	SLE FR 3	-0.01	-0.21	6.83	0	0	0
44	SLE FR 4	-0.02	-0.21	7.04	0	0	0
44	SLE FR 5	-0.02	-0.21	7.06	0	0	0
44	SLE FR 6	-0.02	-0.21	7.19	0	0	0
44	SLE QP 1	-0.01	-0.21	6.8	0	0	0
44	SLE QP 2	-0.02	-0.21	7.04	0	0	0
44	SLD 1	0.41	-0.18	6.93	0	0	0
44	SLD 2	0.42	-0.16	6.92	0	0	0
44	SLD 3	0.38	-0.31	6.96	0	0	0
44	SLD 4	0.39	-0.29	6.95	0	0	0
44	SLD 5	0.15	0	6.96	0	0	0
44	SLD 6	0.16	0.01	6.95	0	0	0
44	SLD 7	0.06	-0.44	7.06	0	0	0
44	SLD 8	0.06	-0.43	7.06	0	0	0
44	SLD 9	-0.1	0.01	7.02	0	0	0
44	SLD 10	-0.09	0.02	7.02	0	0	0
44	SLD 11	-0.19	-0.43	7.12	0	0	0
44	SLD 12	-0.19	-0.42	7.12	0	0	0
44	SLD 13	-0.42	-0.13	7.13	0	0	0
44	SLD 14	-0.42	-0.11	7.12	0	0	0
44	SLD 15	-0.45	-0.26	7.16	0	0	0
44	SLD 16	-0.45	-0.25	7.15	0	0	0
44	SLV 1	0.98	-0.13	6.77	0	0	0
44	SLV 2	1	-0.09	6.76	0	0	0
44	SLV 3	0.92	-0.43	6.85	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
44	SLV 4	0.93	-0.39	6.83	0	0	0
44	SLV 5	0.38	0.26	6.85	0	0	0
44	SLV 6	0.39	0.28	6.85	0	0	0
44	SLV 7	0.16	-0.73	7.09	0	0	0
44	SLV 8	0.17	-0.71	7.08	0	0	0
44	SLV 9	-0.21	0.29	6.99	0	0	0
44	SLV 10	-0.2	0.31	6.99	0	0	0
44	SLV 11	-0.43	-0.7	7.23	0	0	0
44	SLV 12	-0.42	-0.68	7.22	0	0	0
44	SLV 13	-0.97	-0.03	7.24	0	0	0
44	SLV 14	-0.96	0.01	7.23	0	0	0
44	SLV 15	-1.04	-0.33	7.32	0	0	0
44	SLV 16	-1.02	-0.29	7.3	0	0	0
45	SLU 1	-0.02	-0.21	6.01	0	0	0
45	SLU 2	-0.02	-0.22	6.02	0	0	0
45	SLU 3	-0.02	-0.21	6.16	0	0	0
45	SLU 4	-0.02	-0.21	6.16	0	0	0
45	SLU 5	-0.02	-0.21	6.1	0	0	0
45	SLU 6	-0.02	-0.21	6.24	0	0	0
45	SLU 7	-0.02	-0.21	6.25	0	0	0
45	SLU 8	-0.02	-0.21	6.19	0	0	0
45	SLU 9	-0.02	-0.21	6.19	0	0	0
45	SLU 10	-0.03	-0.22	6.79	0	0	0
45	SLU 11	-0.03	-0.22	6.93	0	0	0
45	SLU 12	-0.03	-0.22	6.94	0	0	0
45	SLU 13	-0.03	-0.22	6.88	0	0	0
45	SLU 14	-0.04	-0.22	7.02	0	0	0
45	SLU 15	-0.04	-0.22	7.02	0	0	0
45	SLU 16	-0.04	-0.22	6.97	0	0	0
45	SLU 17	-0.04	-0.22	6.97	0	0	0
45	SLU 18	-0.04	-0.22	7.12	0	0	0
45	SLU 19	-0.04	-0.23	7.13	0	0	0
45	SLU 20	-0.04	-0.22	7.21	0	0	0
45	SLU 21	-0.04	-0.23	7.21	0	0	0
45	SLU 22	-0.02	-0.21	6.69	0	0	0
45	SLU 23	-0.02	-0.21	6.69	0	0	0
45	SLU 24	-0.02	-0.21	6.83	0	0	0
45	SLU 25	-0.02	-0.21	6.83	0	0	0
45	SLU 26	-0.02	-0.21	6.78	0	0	0
45	SLU 27	-0.02	-0.21	6.92	0	0	0
45	SLU 28	-0.02	-0.21	6.92	0	0	0
45	SLU 29	-0.02	-0.21	6.86	0	0	0
45	SLU 30	-0.02	-0.21	6.87	0	0	0
45	SLU 31	-0.03	-0.22	7.47	0	0	0
45	SLU 32	-0.04	-0.22	7.61	0	0	0
45	SLU 33	-0.04	-0.22	7.61	0	0	0
45	SLU 34	-0.04	-0.22	7.56	0	0	0
45	SLU 35	-0.04	-0.22	7.7	0	0	0
45	SLU 36	-0.04	-0.22	7.7	0	0	0
45	SLU 37	-0.04	-0.22	7.64	0	0	0
45	SLU 38	-0.04	-0.22	7.64	0	0	0
45	SLU 39	-0.04	-0.22	7.8	0	0	0
45	SLU 40	-0.04	-0.22	7.8	0	0	0
45	SLU 41	-0.04	-0.22	7.89	0	0	0
45	SLU 42	-0.04	-0.22	7.89	0	0	0
45	SLU 43	-0.02	-0.28	7.59	0	0	0
45	SLU 44	-0.02	-0.28	7.59	0	0	0
45	SLU 45	-0.02	-0.28	7.73	0	0	0
45	SLU 46	-0.02	-0.28	7.73	0	0	0
45	SLU 47	-0.02	-0.28	7.68	0	0	0
45	SLU 48	-0.03	-0.28	7.82	0	0	0
45	SLU 49	-0.03	-0.28	7.82	0	0	0
45	SLU 50	-0.03	-0.27	7.76	0	0	0
45	SLU 51	-0.03	-0.28	7.76	0	0	0
45	SLU 52	-0.03	-0.29	8.37	0	0	0
45	SLU 53	-0.04	-0.29	8.51	0	0	0
45	SLU 54	-0.04	-0.29	8.51	0	0	0
45	SLU 55	-0.04	-0.29	8.45	0	0	0
45	SLU 56	-0.04	-0.29	8.59	0	0	0
45	SLU 57	-0.04	-0.29	8.6	0	0	0
45	SLU 58	-0.04	-0.28	8.54	0	0	0
45	SLU 59	-0.04	-0.29	8.54	0	0	0
45	SLU 60	-0.04	-0.29	8.7	0	0	0
45	SLU 61	-0.04	-0.29	8.7	0	0	0
45	SLU 62	-0.04	-0.29	8.78	0	0	0
45	SLU 63	-0.04	-0.29	8.79	0	0	0
45	SLU 64	-0.02	-0.27	8.26	0	0	0
45	SLU 65	-0.02	-0.28	8.26	0	0	0
45	SLU 66	-0.02	-0.27	8.41	0	0	0
45	SLU 67	-0.02	-0.28	8.41	0	0	0
45	SLU 68	-0.02	-0.28	8.35	0	0	0
45	SLU 69	-0.03	-0.27	8.49	0	0	0
45	SLU 70	-0.03	-0.27	8.49	0	0	0
45	SLU 71	-0.03	-0.27	8.44	0	0	0
45	SLU 72	-0.03	-0.27	8.44	0	0	0
45	SLU 73	-0.04	-0.29	9.04	0	0	0
45	SLU 74	-0.04	-0.28	9.18	0	0	0
45	SLU 75	-0.04	-0.28	9.19	0	0	0
45	SLU 76	-0.04	-0.28	9.13	0	0	0
45	SLU 77	-0.04	-0.28	9.27	0	0	0
45	SLU 78	-0.04	-0.28	9.27	0	0	0
45	SLU 79	-0.04	-0.28	9.21	0	0	0
45	SLU 80	-0.04	-0.28	9.22	0	0	0
45	SLU 81	-0.04	-0.29	9.37	0	0	0
45	SLU 82	-0.04	-0.29	9.37	0	0	0
45	SLU 83	-0.05	-0.29	9.46	0	0	0
45	SLU 84	-0.05	-0.29	9.46	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
45	SLE RA 1	-0.02	-0.21	6.21	0	0	0
45	SLE RA 2	-0.02	-0.21	6.21	0	0	0
45	SLE RA 3	-0.02	-0.21	6.3	0	0	0
45	SLE RA 4	-0.02	-0.21	6.3	0	0	0
45	SLE RA 5	-0.02	-0.21	6.27	0	0	0
45	SLE RA 6	-0.02	-0.21	6.36	0	0	0
45	SLE RA 7	-0.02	-0.21	6.36	0	0	0
45	SLE RA 8	-0.02	-0.21	6.32	0	0	0
45	SLE RA 9	-0.02	-0.21	6.32	0	0	0
45	SLE RA 10	-0.03	-0.22	6.73	0	0	0
45	SLE RA 11	-0.03	-0.22	6.82	0	0	0
45	SLE RA 12	-0.03	-0.22	6.82	0	0	0
45	SLE RA 13	-0.03	-0.22	6.79	0	0	0
45	SLE RA 14	-0.03	-0.22	6.88	0	0	0
45	SLE RA 15	-0.03	-0.22	6.88	0	0	0
45	SLE RA 16	-0.03	-0.22	6.84	0	0	0
45	SLE RA 17	-0.03	-0.22	6.84	0	0	0
45	SLE RA 18	-0.03	-0.22	6.95	0	0	0
45	SLE RA 19	-0.03	-0.22	6.95	0	0	0
45	SLE RA 20	-0.03	-0.22	7.01	0	0	0
45	SLE RA 21	-0.03	-0.22	7.01	0	0	0
45	SLE FR 1	-0.02	-0.21	6.21	0	0	0
45	SLE FR 2	-0.02	-0.21	6.21	0	0	0
45	SLE FR 3	-0.02	-0.21	6.23	0	0	0
45	SLE FR 4	-0.02	-0.21	6.43	0	0	0
45	SLE FR 5	-0.02	-0.21	6.45	0	0	0
45	SLE FR 6	-0.02	-0.21	6.58	0	0	0
45	SLE QP 1	-0.02	-0.21	6.21	0	0	0
45	SLE QP 2	-0.02	-0.21	6.43	0	0	0
45	SLD 1	0.37	-0.17	6.49	0	0	0
45	SLD 2	0.37	-0.16	6.49	0	0	0
45	SLD 3	0.34	-0.29	6.56	0	0	0
45	SLD 4	0.35	-0.29	6.56	0	0	0
45	SLD 5	0.14	-0.01	6.33	0	0	0
45	SLD 6	0.14	-0.01	6.33	0	0	0
45	SLD 7	0.05	-0.43	6.58	0	0	0
45	SLD 8	0.05	-0.43	6.58	0	0	0
45	SLD 9	-0.09	0	6.27	0	0	0
45	SLD 10	-0.09	0	6.27	0	0	0
45	SLD 11	-0.18	-0.42	6.53	0	0	0
45	SLD 12	-0.18	-0.42	6.53	0	0	0
45	SLD 13	-0.39	-0.14	6.29	0	0	0
45	SLD 14	-0.38	-0.13	6.29	0	0	0
45	SLD 15	-0.41	-0.26	6.37	0	0	0
45	SLD 16	-0.41	-0.26	6.37	0	0	0
45	SLV 1	0.89	-0.11	6.57	0	0	0
45	SLV 2	0.9	-0.1	6.57	0	0	0
45	SLV 3	0.83	-0.4	6.74	0	0	0
45	SLV 4	0.84	-0.39	6.74	0	0	0
45	SLV 5	0.34	0.25	6.21	0	0	0
45	SLV 6	0.35	0.25	6.21	0	0	0
45	SLV 7	0.14	-0.7	6.78	0	0	0
45	SLV 8	0.14	-0.7	6.78	0	0	0
45	SLV 9	-0.19	0.27	6.07	0	0	0
45	SLV 10	-0.18	0.28	6.07	0	0	0
45	SLV 11	-0.39	-0.68	6.65	0	0	0
45	SLV 12	-0.39	-0.68	6.65	0	0	0
45	SLV 13	-0.88	-0.04	6.11	0	0	0
45	SLV 14	-0.87	-0.03	6.11	0	0	0
45	SLV 15	-0.94	-0.32	6.29	0	0	0
45	SLV 16	-0.93	-0.32	6.29	0	0	0
46	SLU 1	-0.03	-0.38	11.02	0	0	0
46	SLU 2	-0.03	-0.39	11.02	0	0	0
46	SLU 3	-0.03	-0.38	11.28	0	0	0
46	SLU 4	-0.03	-0.39	11.28	0	0	0
46	SLU 5	-0.03	-0.39	11.18	0	0	0
46	SLU 6	-0.04	-0.38	11.43	0	0	0
46	SLU 7	-0.04	-0.38	11.44	0	0	0
46	SLU 8	-0.04	-0.38	11.33	0	0	0
46	SLU 9	-0.04	-0.38	11.33	0	0	0
46	SLU 10	-0.06	-0.4	12.44	0	0	0
46	SLU 11	-0.06	-0.4	12.69	0	0	0
46	SLU 12	-0.06	-0.4	12.69	0	0	0
46	SLU 13	-0.06	-0.4	12.59	0	0	0
46	SLU 14	-0.07	-0.4	12.85	0	0	0
46	SLU 15	-0.07	-0.4	12.85	0	0	0
46	SLU 16	-0.07	-0.39	12.75	0	0	0
46	SLU 17	-0.07	-0.4	12.75	0	0	0
46	SLU 18	-0.07	-0.4	13.04	0	0	0
46	SLU 19	-0.07	-0.41	13.04	0	0	0
46	SLU 20	-0.07	-0.4	13.19	0	0	0
46	SLU 21	-0.07	-0.41	13.2	0	0	0
46	SLU 22	-0.03	-0.37	12.26	0	0	0
46	SLU 23	-0.03	-0.38	12.26	0	0	0
46	SLU 24	-0.04	-0.37	12.52	0	0	0
46	SLU 25	-0.04	-0.38	12.52	0	0	0
46	SLU 26	-0.04	-0.38	12.42	0	0	0
46	SLU 27	-0.04	-0.37	12.67	0	0	0
46	SLU 28	-0.04	-0.38	12.68	0	0	0
46	SLU 29	-0.04	-0.37	12.57	0	0	0
46	SLU 30	-0.04	-0.37	12.57	0	0	0
46	SLU 31	-0.06	-0.4	13.68	0	0	0
46	SLU 32	-0.06	-0.39	13.93	0	0	0
46	SLU 33	-0.06	-0.39	13.93	0	0	0
46	SLU 34	-0.07	-0.39	13.83	0	0	0
46	SLU 35	-0.07	-0.39	14.09	0	0	0
46	SLU 36	-0.07	-0.39	14.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
46	SLU 37	-0.07	-0.39	13.99	0	0	0
46	SLU 38	-0.07	-0.39	13.99	0	0	0
46	SLU 39	-0.07	-0.4	14.28	0	0	0
46	SLU 40	-0.07	-0.4	14.28	0	0	0
46	SLU 41	-0.08	-0.39	14.43	0	0	0
46	SLU 42	-0.08	-0.4	14.44	0	0	0
46	SLU 43	-0.04	-0.5	13.9	0	0	0
46	SLU 44	-0.04	-0.5	13.9	0	0	0
46	SLU 45	-0.04	-0.5	14.16	0	0	0
46	SLU 46	-0.04	-0.5	14.16	0	0	0
46	SLU 47	-0.04	-0.5	14.06	0	0	0
46	SLU 48	-0.05	-0.5	14.31	0	0	0
46	SLU 49	-0.05	-0.5	14.32	0	0	0
46	SLU 50	-0.05	-0.49	14.21	0	0	0
46	SLU 51	-0.05	-0.5	14.21	0	0	0
46	SLU 52	-0.06	-0.52	15.32	0	0	0
46	SLU 53	-0.07	-0.51	15.57	0	0	0
46	SLU 54	-0.07	-0.52	15.57	0	0	0
46	SLU 55	-0.07	-0.52	15.47	0	0	0
46	SLU 56	-0.07	-0.51	15.73	0	0	0
46	SLU 57	-0.08	-0.52	15.73	0	0	0
46	SLU 58	-0.08	-0.51	15.63	0	0	0
46	SLU 59	-0.08	-0.51	15.63	0	0	0
46	SLU 60	-0.08	-0.52	15.92	0	0	0
46	SLU 61	-0.08	-0.52	15.92	0	0	0
46	SLU 62	-0.08	-0.52	16.07	0	0	0
46	SLU 63	-0.08	-0.52	16.08	0	0	0
46	SLU 64	-0.04	-0.49	15.14	0	0	0
46	SLU 65	-0.04	-0.5	15.14	0	0	0
46	SLU 66	-0.04	-0.49	15.4	0	0	0
46	SLU 67	-0.04	-0.5	15.4	0	0	0
46	SLU 68	-0.05	-0.5	15.3	0	0	0
46	SLU 69	-0.05	-0.49	15.55	0	0	0
46	SLU 70	-0.05	-0.49	15.56	0	0	0
46	SLU 71	-0.05	-0.49	15.45	0	0	0
46	SLU 72	-0.05	-0.49	15.45	0	0	0
46	SLU 73	-0.07	-0.51	16.56	0	0	0
46	SLU 74	-0.07	-0.51	16.81	0	0	0
46	SLU 75	-0.07	-0.51	16.81	0	0	0
46	SLU 76	-0.07	-0.51	16.71	0	0	0
46	SLU 77	-0.08	-0.51	16.97	0	0	0
46	SLU 78	-0.08	-0.51	16.97	0	0	0
46	SLU 79	-0.08	-0.5	16.87	0	0	0
46	SLU 80	-0.08	-0.51	16.87	0	0	0
46	SLU 81	-0.08	-0.51	17.16	0	0	0
46	SLU 82	-0.08	-0.52	17.16	0	0	0
46	SLU 83	-0.08	-0.51	17.31	0	0	0
46	SLU 84	-0.08	-0.52	17.32	0	0	0
46	SLE RA 1	-0.03	-0.38	11.37	0	0	0
46	SLE RA 2	-0.03	-0.38	11.37	0	0	0
46	SLE RA 3	-0.03	-0.38	11.54	0	0	0
46	SLE RA 4	-0.03	-0.38	11.55	0	0	0
46	SLE RA 5	-0.03	-0.38	11.48	0	0	0
46	SLE RA 6	-0.04	-0.38	11.65	0	0	0
46	SLE RA 7	-0.04	-0.38	11.65	0	0	0
46	SLE RA 8	-0.04	-0.38	11.58	0	0	0
46	SLE RA 9	-0.04	-0.38	11.58	0	0	0
46	SLE RA 10	-0.05	-0.39	12.32	0	0	0
46	SLE RA 11	-0.05	-0.39	12.49	0	0	0
46	SLE RA 12	-0.05	-0.39	12.49	0	0	0
46	SLE RA 13	-0.05	-0.39	12.42	0	0	0
46	SLE RA 14	-0.06	-0.39	12.59	0	0	0
46	SLE RA 15	-0.06	-0.39	12.59	0	0	0
46	SLE RA 16	-0.06	-0.39	12.52	0	0	0
46	SLE RA 17	-0.06	-0.39	12.53	0	0	0
46	SLE RA 18	-0.06	-0.39	12.72	0	0	0
46	SLE RA 19	-0.06	-0.4	12.72	0	0	0
46	SLE RA 20	-0.06	-0.39	12.82	0	0	0
46	SLE RA 21	-0.06	-0.4	12.82	0	0	0
46	SLE FR 1	-0.03	-0.38	11.37	0	0	0
46	SLE FR 2	-0.03	-0.38	11.37	0	0	0
46	SLE FR 3	-0.03	-0.38	11.41	0	0	0
46	SLE FR 4	-0.04	-0.38	11.78	0	0	0
46	SLE FR 5	-0.04	-0.38	11.82	0	0	0
46	SLE FR 6	-0.04	-0.39	12.04	0	0	0
46	SLE QP 1	-0.03	-0.38	11.37	0	0	0
46	SLE QP 2	-0.04	-0.38	11.78	0	0	0
46	SLD 1	0.68	-0.3	11.81	0	0	0
46	SLD 2	0.69	-0.29	11.81	0	0	0
46	SLD 3	0.63	-0.53	11.94	0	0	0
46	SLD 4	0.64	-0.52	11.94	0	0	0
46	SLD 5	0.25	-0.02	11.6	0	0	0
46	SLD 6	0.26	-0.01	11.6	0	0	0
46	SLD 7	0.09	-0.78	12.01	0	0	0
46	SLD 8	0.09	-0.77	12.01	0	0	0
46	SLD 9	-0.17	0	11.54	0	0	0
46	SLD 10	-0.16	0.01	11.54	0	0	0
46	SLD 11	-0.33	-0.76	11.95	0	0	0
46	SLD 12	-0.33	-0.75	11.95	0	0	0
46	SLD 13	-0.71	-0.24	11.61	0	0	0
46	SLD 14	-0.7	-0.23	11.61	0	0	0
46	SLD 15	-0.76	-0.47	11.74	0	0	0
46	SLD 16	-0.75	-0.46	11.74	0	0	0
46	SLV 1	1.64	-0.21	11.87	0	0	0
46	SLV 2	1.65	-0.18	11.87	0	0	0
46	SLV 3	1.52	-0.73	12.15	0	0	0
46	SLV 4	1.54	-0.7	12.15	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
46	SLV 5	0.63	0.45	11.38	0	0	0
46	SLV 6	0.64	0.47	11.38	0	0	0
46	SLV 7	0.26	-1.28	12.31	0	0	0
46	SLV 8	0.27	-1.26	12.31	0	0	0
46	SLV 9	-0.34	0.49	11.24	0	0	0
46	SLV 10	-0.33	0.51	11.24	0	0	0
46	SLV 11	-0.72	-1.23	12.17	0	0	0
46	SLV 12	-0.71	-1.22	12.17	0	0	0
46	SLV 13	-1.61	-0.06	11.4	0	0	0
46	SLV 14	-1.6	-0.04	11.4	0	0	0
46	SLV 15	-1.73	-0.58	11.68	0	0	0
46	SLV 16	-1.71	-0.56	11.68	0	0	0
47	SLU 1	-0.03	-0.33	9.77	0	0	0
47	SLU 2	-0.03	-0.34	9.77	0	0	0
47	SLU 3	-0.03	-0.33	10	0	0	0
47	SLU 4	-0.03	-0.34	10	0	0	0
47	SLU 5	-0.03	-0.34	9.91	0	0	0
47	SLU 6	-0.04	-0.33	10.13	0	0	0
47	SLU 7	-0.04	-0.33	10.14	0	0	0
47	SLU 8	-0.04	-0.33	10.04	0	0	0
47	SLU 9	-0.04	-0.33	10.04	0	0	0
47	SLU 10	-0.05	-0.35	11.02	0	0	0
47	SLU 11	-0.06	-0.35	11.24	0	0	0
47	SLU 12	-0.06	-0.35	11.25	0	0	0
47	SLU 13	-0.06	-0.35	11.15	0	0	0
47	SLU 14	-0.06	-0.34	11.38	0	0	0
47	SLU 15	-0.06	-0.35	11.38	0	0	0
47	SLU 16	-0.06	-0.34	11.29	0	0	0
47	SLU 17	-0.06	-0.35	11.29	0	0	0
47	SLU 18	-0.06	-0.35	11.55	0	0	0
47	SLU 19	-0.06	-0.35	11.55	0	0	0
47	SLU 20	-0.07	-0.35	11.68	0	0	0
47	SLU 21	-0.07	-0.35	11.69	0	0	0
47	SLU 22	-0.03	-0.33	10.87	0	0	0
47	SLU 23	-0.03	-0.33	10.87	0	0	0
47	SLU 24	-0.03	-0.33	11.1	0	0	0
47	SLU 25	-0.03	-0.33	11.1	0	0	0
47	SLU 26	-0.03	-0.33	11.01	0	0	0
47	SLU 27	-0.04	-0.33	11.23	0	0	0
47	SLU 28	-0.04	-0.33	11.24	0	0	0
47	SLU 29	-0.04	-0.32	11.14	0	0	0
47	SLU 30	-0.04	-0.33	11.14	0	0	0
47	SLU 31	-0.05	-0.34	12.12	0	0	0
47	SLU 32	-0.06	-0.34	12.34	0	0	0
47	SLU 33	-0.06	-0.34	12.34	0	0	0
47	SLU 34	-0.06	-0.34	12.25	0	0	0
47	SLU 35	-0.06	-0.34	12.48	0	0	0
47	SLU 36	-0.06	-0.34	12.48	0	0	0
47	SLU 37	-0.06	-0.34	12.39	0	0	0
47	SLU 38	-0.06	-0.34	12.39	0	0	0
47	SLU 39	-0.06	-0.34	12.65	0	0	0
47	SLU 40	-0.06	-0.35	12.65	0	0	0
47	SLU 41	-0.07	-0.34	12.78	0	0	0
47	SLU 42	-0.07	-0.35	12.79	0	0	0
47	SLU 43	-0.03	-0.43	12.32	0	0	0
47	SLU 44	-0.03	-0.44	12.32	0	0	0
47	SLU 45	-0.04	-0.43	12.55	0	0	0
47	SLU 46	-0.04	-0.44	12.55	0	0	0
47	SLU 47	-0.04	-0.44	12.46	0	0	0
47	SLU 48	-0.04	-0.43	12.69	0	0	0
47	SLU 49	-0.04	-0.44	12.69	0	0	0
47	SLU 50	-0.04	-0.43	12.6	0	0	0
47	SLU 51	-0.04	-0.43	12.6	0	0	0
47	SLU 52	-0.06	-0.45	13.57	0	0	0
47	SLU 53	-0.06	-0.45	13.8	0	0	0
47	SLU 54	-0.06	-0.45	13.8	0	0	0
47	SLU 55	-0.06	-0.45	13.71	0	0	0
47	SLU 56	-0.07	-0.45	13.93	0	0	0
47	SLU 57	-0.07	-0.45	13.94	0	0	0
47	SLU 58	-0.07	-0.44	13.84	0	0	0
47	SLU 59	-0.07	-0.45	13.84	0	0	0
47	SLU 60	-0.07	-0.45	14.1	0	0	0
47	SLU 61	-0.07	-0.46	14.1	0	0	0
47	SLU 62	-0.07	-0.45	14.24	0	0	0
47	SLU 63	-0.07	-0.45	14.24	0	0	0
47	SLU 64	-0.03	-0.43	13.42	0	0	0
47	SLU 65	-0.04	-0.43	13.42	0	0	0
47	SLU 66	-0.04	-0.43	13.65	0	0	0
47	SLU 67	-0.04	-0.43	13.65	0	0	0
47	SLU 68	-0.04	-0.43	13.56	0	0	0
47	SLU 69	-0.04	-0.43	13.79	0	0	0
47	SLU 70	-0.05	-0.43	13.79	0	0	0
47	SLU 71	-0.05	-0.42	13.7	0	0	0
47	SLU 72	-0.05	-0.43	13.7	0	0	0
47	SLU 73	-0.06	-0.45	14.67	0	0	0
47	SLU 74	-0.06	-0.44	14.9	0	0	0
47	SLU 75	-0.06	-0.45	14.9	0	0	0
47	SLU 76	-0.07	-0.44	14.81	0	0	0
47	SLU 77	-0.07	-0.44	15.03	0	0	0
47	SLU 78	-0.07	-0.44	15.04	0	0	0
47	SLU 79	-0.07	-0.44	14.94	0	0	0
47	SLU 80	-0.07	-0.44	14.94	0	0	0
47	SLU 81	-0.07	-0.45	15.2	0	0	0
47	SLU 82	-0.07	-0.45	15.2	0	0	0
47	SLU 83	-0.08	-0.44	15.34	0	0	0
47	SLU 84	-0.08	-0.45	15.34	0	0	0
47	SLE RA 1	-0.03	-0.33	10.08	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
47	SLE RA 2	-0.03	-0.33	10.08	0	0	0
47	SLE RA 3	-0.03	-0.33	10.24	0	0	0
47	SLE RA 4	-0.03	-0.33	10.24	0	0	0
47	SLE RA 5	-0.03	-0.33	10.18	0	0	0
47	SLE RA 6	-0.03	-0.33	10.33	0	0	0
47	SLE RA 7	-0.03	-0.33	10.33	0	0	0
47	SLE RA 8	-0.03	-0.33	10.27	0	0	0
47	SLE RA 9	-0.03	-0.33	10.27	0	0	0
47	SLE RA 10	-0.04	-0.34	10.92	0	0	0
47	SLE RA 11	-0.05	-0.34	11.07	0	0	0
47	SLE RA 12	-0.05	-0.34	11.07	0	0	0
47	SLE RA 13	-0.05	-0.34	11.01	0	0	0
47	SLE RA 14	-0.05	-0.34	11.16	0	0	0
47	SLE RA 15	-0.05	-0.34	11.16	0	0	0
47	SLE RA 16	-0.05	-0.34	11.1	0	0	0
47	SLE RA 17	-0.05	-0.34	11.1	0	0	0
47	SLE RA 18	-0.05	-0.34	11.27	0	0	0
47	SLE RA 19	-0.05	-0.35	11.27	0	0	0
47	SLE RA 20	-0.05	-0.34	11.36	0	0	0
47	SLE RA 21	-0.05	-0.34	11.36	0	0	0
47	SLE FR 1	-0.03	-0.33	10.08	0	0	0
47	SLE FR 2	-0.03	-0.33	10.08	0	0	0
47	SLE FR 3	-0.03	-0.33	10.12	0	0	0
47	SLE FR 4	-0.03	-0.33	10.44	0	0	0
47	SLE FR 5	-0.03	-0.33	10.47	0	0	0
47	SLE FR 6	-0.04	-0.34	10.68	0	0	0
47	SLE QP 1	-0.03	-0.33	10.08	0	0	0
47	SLE QP 2	-0.03	-0.33	10.44	0	0	0
47	SLD 1	0.61	-0.27	10.43	0	0	0
47	SLD 2	0.61	-0.26	10.43	0	0	0
47	SLD 3	0.56	-0.47	10.53	0	0	0
47	SLD 4	0.57	-0.46	10.52	0	0	0
47	SLD 5	0.22	-0.01	10.29	0	0	0
47	SLD 6	0.23	0	10.28	0	0	0
47	SLD 7	0.08	-0.68	10.62	0	0	0
47	SLD 8	0.08	-0.67	10.61	0	0	0
47	SLD 9	-0.15	0.01	10.26	0	0	0
47	SLD 10	-0.14	0.01	10.26	0	0	0
47	SLD 11	-0.29	-0.67	10.59	0	0	0
47	SLD 12	-0.29	-0.66	10.59	0	0	0
47	SLD 13	-0.64	-0.21	10.35	0	0	0
47	SLD 14	-0.63	-0.2	10.35	0	0	0
47	SLD 15	-0.68	-0.41	10.45	0	0	0
47	SLD 16	-0.67	-0.4	10.45	0	0	0
47	SLV 1	1.46	-0.19	10.42	0	0	0
47	SLV 2	1.48	-0.16	10.41	0	0	0
47	SLV 3	1.36	-0.65	10.64	0	0	0
47	SLV 4	1.38	-0.61	10.64	0	0	0
47	SLV 5	0.57	0.4	10.09	0	0	0
47	SLV 6	0.58	0.42	10.09	0	0	0
47	SLV 7	0.23	-1.13	10.84	0	0	0
47	SLV 8	0.24	-1.1	10.84	0	0	0
47	SLV 9	-0.3	0.44	10.04	0	0	0
47	SLV 10	-0.3	0.46	10.03	0	0	0
47	SLV 11	-0.64	-1.08	10.79	0	0	0
47	SLV 12	-0.63	-1.06	10.78	0	0	0
47	SLV 13	-1.44	-0.05	10.24	0	0	0
47	SLV 14	-1.43	-0.02	10.23	0	0	0
47	SLV 15	-1.54	-0.51	10.46	0	0	0
47	SLV 16	-1.53	-0.48	10.46	0	0	0
48	SLU 1	-0.02	-0.29	8.59	0	0	0
48	SLU 2	-0.02	-0.29	8.59	0	0	0
48	SLU 3	-0.03	-0.29	8.79	0	0	0
48	SLU 4	-0.03	-0.29	8.79	0	0	0
48	SLU 5	-0.03	-0.29	8.71	0	0	0
48	SLU 6	-0.03	-0.29	8.91	0	0	0
48	SLU 7	-0.03	-0.29	8.91	0	0	0
48	SLU 8	-0.03	-0.28	8.82	0	0	0
48	SLU 9	-0.03	-0.29	8.83	0	0	0
48	SLU 10	-0.05	-0.3	9.68	0	0	0
48	SLU 11	-0.05	-0.3	9.87	0	0	0
48	SLU 12	-0.05	-0.3	9.88	0	0	0
48	SLU 13	-0.05	-0.3	9.8	0	0	0
48	SLU 14	-0.05	-0.3	9.99	0	0	0
48	SLU 15	-0.05	-0.3	10	0	0	0
48	SLU 16	-0.05	-0.3	9.91	0	0	0
48	SLU 17	-0.05	-0.3	9.91	0	0	0
48	SLU 18	-0.05	-0.3	10.14	0	0	0
48	SLU 19	-0.05	-0.31	10.14	0	0	0
48	SLU 20	-0.06	-0.3	10.26	0	0	0
48	SLU 21	-0.06	-0.3	10.26	0	0	0
48	SLU 22	-0.03	-0.28	9.55	0	0	0
48	SLU 23	-0.03	-0.29	9.56	0	0	0
48	SLU 24	-0.03	-0.28	9.75	0	0	0
48	SLU 25	-0.03	-0.29	9.76	0	0	0
48	SLU 26	-0.03	-0.28	9.68	0	0	0
48	SLU 27	-0.03	-0.28	9.87	0	0	0
48	SLU 28	-0.03	-0.28	9.87	0	0	0
48	SLU 29	-0.03	-0.28	9.79	0	0	0
48	SLU 30	-0.03	-0.28	9.79	0	0	0
48	SLU 31	-0.05	-0.3	10.64	0	0	0
48	SLU 32	-0.05	-0.29	10.84	0	0	0
48	SLU 33	-0.05	-0.3	10.84	0	0	0
48	SLU 34	-0.05	-0.3	10.76	0	0	0
48	SLU 35	-0.06	-0.29	10.96	0	0	0
48	SLU 36	-0.06	-0.29	10.96	0	0	0
48	SLU 37	-0.06	-0.29	10.88	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
48	SLU 38	-0.06	-0.29	10.88	0	0	0
48	SLU 39	-0.06	-0.3	11.11	0	0	0
48	SLU 40	-0.06	-0.3	11.11	0	0	0
48	SLU 41	-0.06	-0.3	11.23	0	0	0
48	SLU 42	-0.06	-0.3	11.23	0	0	0
48	SLU 43	-0.03	-0.38	10.83	0	0	0
48	SLU 44	-0.03	-0.38	10.83	0	0	0
48	SLU 45	-0.03	-0.38	11.03	0	0	0
48	SLU 46	-0.03	-0.38	11.03	0	0	0
48	SLU 47	-0.03	-0.38	10.95	0	0	0
48	SLU 48	-0.04	-0.38	11.15	0	0	0
48	SLU 49	-0.04	-0.38	11.15	0	0	0
48	SLU 50	-0.04	-0.37	11.07	0	0	0
48	SLU 51	-0.04	-0.38	11.07	0	0	0
48	SLU 52	-0.05	-0.39	11.92	0	0	0
48	SLU 53	-0.06	-0.39	12.12	0	0	0
48	SLU 54	-0.06	-0.39	12.12	0	0	0
48	SLU 55	-0.06	-0.39	12.04	0	0	0
48	SLU 56	-0.06	-0.39	12.24	0	0	0
48	SLU 57	-0.06	-0.39	12.24	0	0	0
48	SLU 58	-0.06	-0.38	12.16	0	0	0
48	SLU 59	-0.06	-0.39	12.16	0	0	0
48	SLU 60	-0.06	-0.39	12.38	0	0	0
48	SLU 61	-0.06	-0.39	12.39	0	0	0
48	SLU 62	-0.07	-0.39	12.5	0	0	0
48	SLU 63	-0.07	-0.39	12.51	0	0	0
48	SLU 64	-0.03	-0.37	11.8	0	0	0
48	SLU 65	-0.03	-0.37	11.8	0	0	0
48	SLU 66	-0.04	-0.37	12	0	0	0
48	SLU 67	-0.04	-0.37	12	0	0	0
48	SLU 68	-0.04	-0.37	11.92	0	0	0
48	SLU 69	-0.04	-0.37	12.12	0	0	0
48	SLU 70	-0.04	-0.37	12.12	0	0	0
48	SLU 71	-0.04	-0.37	12.04	0	0	0
48	SLU 72	-0.04	-0.37	12.04	0	0	0
48	SLU 73	-0.05	-0.39	12.89	0	0	0
48	SLU 74	-0.06	-0.38	13.09	0	0	0
48	SLU 75	-0.06	-0.38	13.09	0	0	0
48	SLU 76	-0.06	-0.38	13.01	0	0	0
48	SLU 77	-0.06	-0.38	13.21	0	0	0
48	SLU 78	-0.06	-0.38	13.21	0	0	0
48	SLU 79	-0.06	-0.38	13.12	0	0	0
48	SLU 80	-0.06	-0.38	13.13	0	0	0
48	SLU 81	-0.06	-0.39	13.35	0	0	0
48	SLU 82	-0.06	-0.39	13.35	0	0	0
48	SLU 83	-0.07	-0.38	13.47	0	0	0
48	SLU 84	-0.07	-0.39	13.47	0	0	0
48	SLE RA 1	-0.02	-0.29	8.86	0	0	0
48	SLE RA 2	-0.02	-0.29	8.86	0	0	0
48	SLE RA 3	-0.03	-0.29	9	0	0	0
48	SLE RA 4	-0.03	-0.29	9	0	0	0
48	SLE RA 5	-0.03	-0.29	8.94	0	0	0
48	SLE RA 6	-0.03	-0.29	9.08	0	0	0
48	SLE RA 7	-0.03	-0.29	9.08	0	0	0
48	SLE RA 8	-0.03	-0.28	9.02	0	0	0
48	SLE RA 9	-0.03	-0.29	9.02	0	0	0
48	SLE RA 10	-0.04	-0.3	9.59	0	0	0
48	SLE RA 11	-0.04	-0.29	9.72	0	0	0
48	SLE RA 12	-0.04	-0.3	9.72	0	0	0
48	SLE RA 13	-0.04	-0.3	9.67	0	0	0
48	SLE RA 14	-0.04	-0.29	9.8	0	0	0
48	SLE RA 15	-0.04	-0.29	9.8	0	0	0
48	SLE RA 16	-0.04	-0.29	9.75	0	0	0
48	SLE RA 17	-0.04	-0.29	9.75	0	0	0
48	SLE RA 18	-0.04	-0.3	9.9	0	0	0
48	SLE RA 19	-0.04	-0.3	9.9	0	0	0
48	SLE RA 20	-0.05	-0.3	9.98	0	0	0
48	SLE RA 21	-0.05	-0.3	9.98	0	0	0
48	SLE FR 1	-0.02	-0.29	8.86	0	0	0
48	SLE FR 2	-0.02	-0.29	8.86	0	0	0
48	SLE FR 3	-0.02	-0.29	8.89	0	0	0
48	SLE FR 4	-0.03	-0.29	9.17	0	0	0
48	SLE FR 5	-0.03	-0.29	9.21	0	0	0
48	SLE FR 6	-0.03	-0.29	9.38	0	0	0
48	SLE QP 1	-0.02	-0.29	8.86	0	0	0
48	SLE QP 2	-0.03	-0.29	9.17	0	0	0
48	SLD 1	0.54	-0.24	9.09	0	0	0
48	SLD 2	0.54	-0.22	9.09	0	0	0
48	SLD 3	0.5	-0.41	9.17	0	0	0
48	SLD 4	0.5	-0.4	9.17	0	0	0
48	SLD 5	0.2	-0.01	9.03	0	0	0
48	SLD 6	0.2	0	9.03	0	0	0
48	SLD 7	0.07	-0.6	9.29	0	0	0
48	SLD 8	0.07	-0.59	9.29	0	0	0
48	SLD 9	-0.13	0.01	9.06	0	0	0
48	SLD 10	-0.13	0.02	9.05	0	0	0
48	SLD 11	-0.26	-0.58	9.32	0	0	0
48	SLD 12	-0.26	-0.57	9.32	0	0	0
48	SLD 13	-0.56	-0.18	9.18	0	0	0
48	SLD 14	-0.56	-0.17	9.18	0	0	0
48	SLD 15	-0.6	-0.36	9.26	0	0	0
48	SLD 16	-0.6	-0.34	9.26	0	0	0
48	SLV 1	1.3	-0.17	8.99	0	0	0
48	SLV 2	1.31	-0.13	8.97	0	0	0
48	SLV 3	1.21	-0.57	9.17	0	0	0
48	SLV 4	1.22	-0.53	9.15	0	0	0
48	SLV 5	0.5	0.35	8.85	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
48	SLV 6	0.51	0.37	8.84	0	0	0
48	SLV 7	0.2	-0.99	9.45	0	0	0
48	SLV 8	0.21	-0.96	9.44	0	0	0
48	SLV 9	-0.27	0.38	8.91	0	0	0
48	SLV 10	-0.26	0.41	8.9	0	0	0
48	SLV 11	-0.57	-0.95	9.51	0	0	0
48	SLV 12	-0.56	-0.92	9.5	0	0	0
48	SLV 13	-1.28	-0.04	9.19	0	0	0
48	SLV 14	-1.27	-0.01	9.18	0	0	0
48	SLV 15	-1.37	-0.44	9.37	0	0	0
48	SLV 16	-1.36	-0.41	9.36	0	0	0
49	SLU 1	-0.02	-0.25	7.5	0	0	0
49	SLU 2	-0.02	-0.25	7.5	0	0	0
49	SLU 3	-0.02	-0.25	7.67	0	0	0
49	SLU 4	-0.02	-0.25	7.67	0	0	0
49	SLU 5	-0.02	-0.25	7.6	0	0	0
49	SLU 6	-0.03	-0.25	7.78	0	0	0
49	SLU 7	-0.03	-0.25	7.78	0	0	0
49	SLU 8	-0.03	-0.25	7.7	0	0	0
49	SLU 9	-0.03	-0.25	7.71	0	0	0
49	SLU 10	-0.04	-0.26	8.45	0	0	0
49	SLU 11	-0.04	-0.26	8.62	0	0	0
49	SLU 12	-0.04	-0.26	8.62	0	0	0
49	SLU 13	-0.04	-0.26	8.55	0	0	0
49	SLU 14	-0.05	-0.26	8.72	0	0	0
49	SLU 15	-0.05	-0.26	8.72	0	0	0
49	SLU 16	-0.05	-0.25	8.65	0	0	0
49	SLU 17	-0.05	-0.26	8.65	0	0	0
49	SLU 18	-0.05	-0.26	8.85	0	0	0
49	SLU 19	-0.05	-0.26	8.85	0	0	0
49	SLU 20	-0.05	-0.26	8.95	0	0	0
49	SLU 21	-0.05	-0.26	8.95	0	0	0
49	SLU 22	-0.02	-0.24	8.35	0	0	0
49	SLU 23	-0.02	-0.25	8.35	0	0	0
49	SLU 24	-0.03	-0.24	8.52	0	0	0
49	SLU 25	-0.03	-0.25	8.52	0	0	0
49	SLU 26	-0.03	-0.24	8.45	0	0	0
49	SLU 27	-0.03	-0.24	8.62	0	0	0
49	SLU 28	-0.03	-0.24	8.62	0	0	0
49	SLU 29	-0.03	-0.24	8.55	0	0	0
49	SLU 30	-0.03	-0.24	8.55	0	0	0
49	SLU 31	-0.04	-0.25	9.29	0	0	0
49	SLU 32	-0.05	-0.25	9.46	0	0	0
49	SLU 33	-0.05	-0.25	9.47	0	0	0
49	SLU 34	-0.05	-0.25	9.4	0	0	0
49	SLU 35	-0.05	-0.25	9.57	0	0	0
49	SLU 36	-0.05	-0.25	9.57	0	0	0
49	SLU 37	-0.05	-0.25	9.5	0	0	0
49	SLU 38	-0.05	-0.25	9.5	0	0	0
49	SLU 39	-0.05	-0.25	9.7	0	0	0
49	SLU 40	-0.05	-0.26	9.7	0	0	0
49	SLU 41	-0.05	-0.25	9.8	0	0	0
49	SLU 42	-0.06	-0.26	9.8	0	0	0
49	SLU 43	-0.03	-0.32	9.46	0	0	0
49	SLU 44	-0.03	-0.33	9.46	0	0	0
49	SLU 45	-0.03	-0.32	9.63	0	0	0
49	SLU 46	-0.03	-0.33	9.63	0	0	0
49	SLU 47	-0.03	-0.33	9.56	0	0	0
49	SLU 48	-0.03	-0.32	9.73	0	0	0
49	SLU 49	-0.03	-0.33	9.74	0	0	0
49	SLU 50	-0.03	-0.32	9.66	0	0	0
49	SLU 51	-0.03	-0.32	9.67	0	0	0
49	SLU 52	-0.05	-0.34	10.41	0	0	0
49	SLU 53	-0.05	-0.33	10.58	0	0	0
49	SLU 54	-0.05	-0.34	10.58	0	0	0
49	SLU 55	-0.05	-0.34	10.51	0	0	0
49	SLU 56	-0.05	-0.33	10.68	0	0	0
49	SLU 57	-0.05	-0.33	10.68	0	0	0
49	SLU 58	-0.05	-0.33	10.61	0	0	0
49	SLU 59	-0.05	-0.33	10.61	0	0	0
49	SLU 60	-0.05	-0.34	10.81	0	0	0
49	SLU 61	-0.05	-0.34	10.81	0	0	0
49	SLU 62	-0.06	-0.34	10.91	0	0	0
49	SLU 63	-0.06	-0.34	10.91	0	0	0
49	SLU 64	-0.03	-0.32	10.31	0	0	0
49	SLU 65	-0.03	-0.32	10.31	0	0	0
49	SLU 66	-0.03	-0.32	10.48	0	0	0
49	SLU 67	-0.03	-0.32	10.48	0	0	0
49	SLU 68	-0.03	-0.32	10.41	0	0	0
49	SLU 69	-0.04	-0.32	10.58	0	0	0
49	SLU 70	-0.04	-0.32	10.58	0	0	0
49	SLU 71	-0.04	-0.32	10.51	0	0	0
49	SLU 72	-0.04	-0.32	10.51	0	0	0
49	SLU 73	-0.05	-0.33	11.25	0	0	0
49	SLU 74	-0.05	-0.33	11.42	0	0	0
49	SLU 75	-0.05	-0.33	11.42	0	0	0
49	SLU 76	-0.05	-0.33	11.35	0	0	0
49	SLU 77	-0.06	-0.33	11.53	0	0	0
49	SLU 78	-0.06	-0.33	11.53	0	0	0
49	SLU 79	-0.06	-0.32	11.46	0	0	0
49	SLU 80	-0.06	-0.33	11.46	0	0	0
49	SLU 81	-0.06	-0.33	11.65	0	0	0
49	SLU 82	-0.06	-0.33	11.66	0	0	0
49	SLU 83	-0.06	-0.33	11.76	0	0	0
49	SLU 84	-0.06	-0.33	11.76	0	0	0
49	SLE RA 1	-0.02	-0.25	7.74	0	0	0
49	SLE RA 2	-0.02	-0.25	7.74	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
49	SLE RA 3	-0.02	-0.25	7.86	0	0	0
49	SLE RA 4	-0.02	-0.25	7.86	0	0	0
49	SLE RA 5	-0.02	-0.25	7.81	0	0	0
49	SLE RA 6	-0.03	-0.25	7.93	0	0	0
49	SLE RA 7	-0.03	-0.25	7.93	0	0	0
49	SLE RA 8	-0.03	-0.24	7.88	0	0	0
49	SLE RA 9	-0.03	-0.25	7.88	0	0	0
49	SLE RA 10	-0.03	-0.25	8.37	0	0	0
49	SLE RA 11	-0.04	-0.25	8.49	0	0	0
49	SLE RA 12	-0.04	-0.25	8.49	0	0	0
49	SLE RA 13	-0.04	-0.25	8.44	0	0	0
49	SLE RA 14	-0.04	-0.25	8.55	0	0	0
49	SLE RA 15	-0.04	-0.25	8.56	0	0	0
49	SLE RA 16	-0.04	-0.25	8.51	0	0	0
49	SLE RA 17	-0.04	-0.25	8.51	0	0	0
49	SLE RA 18	-0.04	-0.25	8.64	0	0	0
49	SLE RA 19	-0.04	-0.26	8.64	0	0	0
49	SLE RA 20	-0.04	-0.25	8.71	0	0	0
49	SLE RA 21	-0.04	-0.26	8.71	0	0	0
49	SLE FR 1	-0.02	-0.25	7.74	0	0	0
49	SLE FR 2	-0.02	-0.25	7.74	0	0	0
49	SLE FR 3	-0.02	-0.25	7.77	0	0	0
49	SLE FR 4	-0.03	-0.25	8.01	0	0	0
49	SLE FR 5	-0.03	-0.25	8.04	0	0	0
49	SLE FR 6	-0.03	-0.25	8.19	0	0	0
49	SLE QP 1	-0.02	-0.25	7.74	0	0	0
49	SLE QP 2	-0.03	-0.25	8.01	0	0	0
49	SLD 1	0.47	-0.2	7.9	0	0	0
49	SLD 2	0.48	-0.19	7.9	0	0	0
49	SLD 3	0.44	-0.36	7.97	0	0	0
49	SLD 4	0.44	-0.34	7.96	0	0	0
49	SLD 5	0.17	-0.01	7.88	0	0	0
49	SLD 6	0.18	0	7.88	0	0	0
49	SLD 7	0.06	-0.52	8.1	0	0	0
49	SLD 8	0.06	-0.51	8.09	0	0	0
49	SLD 9	-0.12	0.01	7.93	0	0	0
49	SLD 10	-0.11	0.02	7.92	0	0	0
49	SLD 11	-0.23	-0.5	8.14	0	0	0
49	SLD 12	-0.23	-0.49	8.14	0	0	0
49	SLD 13	-0.5	-0.16	8.06	0	0	0
49	SLD 14	-0.49	-0.14	8.05	0	0	0
49	SLD 15	-0.53	-0.31	8.13	0	0	0
49	SLD 16	-0.53	-0.29	8.12	0	0	0
49	SLV 1	1.14	-0.15	7.76	0	0	0
49	SLV 2	1.15	-0.11	7.75	0	0	0
49	SLV 3	1.06	-0.5	7.91	0	0	0
49	SLV 4	1.07	-0.46	7.89	0	0	0
49	SLV 5	0.44	0.3	7.72	0	0	0
49	SLV 6	0.45	0.33	7.71	0	0	0
49	SLV 7	0.18	-0.86	8.21	0	0	0
49	SLV 8	0.18	-0.83	8.2	0	0	0
49	SLV 9	-0.24	0.34	7.83	0	0	0
49	SLV 10	-0.23	0.36	7.82	0	0	0
49	SLV 11	-0.5	-0.82	8.32	0	0	0
49	SLV 12	-0.5	-0.8	8.31	0	0	0
49	SLV 13	-1.12	-0.04	8.13	0	0	0
49	SLV 14	-1.12	0	8.11	0	0	0
49	SLV 15	-1.2	-0.38	8.28	0	0	0
49	SLV 16	-1.2	-0.35	8.26	0	0	0
50	SLU 1	-0.02	-0.23	7.11	0	0	0
50	SLU 2	-0.02	-0.23	7.12	0	0	0
50	SLU 3	-0.02	-0.23	7.28	0	0	0
50	SLU 4	-0.02	-0.23	7.28	0	0	0
50	SLU 5	-0.02	-0.23	7.21	0	0	0
50	SLU 6	-0.03	-0.23	7.37	0	0	0
50	SLU 7	-0.03	-0.23	7.37	0	0	0
50	SLU 8	-0.03	-0.23	7.3	0	0	0
50	SLU 9	-0.03	-0.23	7.31	0	0	0
50	SLU 10	-0.04	-0.24	8.01	0	0	0
50	SLU 11	-0.04	-0.24	8.17	0	0	0
50	SLU 12	-0.04	-0.24	8.17	0	0	0
50	SLU 13	-0.04	-0.24	8.1	0	0	0
50	SLU 14	-0.05	-0.24	8.26	0	0	0
50	SLU 15	-0.05	-0.24	8.26	0	0	0
50	SLU 16	-0.05	-0.24	8.2	0	0	0
50	SLU 17	-0.05	-0.24	8.2	0	0	0
50	SLU 18	-0.05	-0.24	8.39	0	0	0
50	SLU 19	-0.05	-0.24	8.39	0	0	0
50	SLU 20	-0.05	-0.24	8.48	0	0	0
50	SLU 21	-0.05	-0.24	8.48	0	0	0
50	SLU 22	-0.02	-0.23	7.92	0	0	0
50	SLU 23	-0.02	-0.23	7.92	0	0	0
50	SLU 24	-0.03	-0.23	8.08	0	0	0
50	SLU 25	-0.03	-0.23	8.08	0	0	0
50	SLU 26	-0.03	-0.23	8.01	0	0	0
50	SLU 27	-0.03	-0.23	8.18	0	0	0
50	SLU 28	-0.03	-0.23	8.18	0	0	0
50	SLU 29	-0.03	-0.22	8.11	0	0	0
50	SLU 30	-0.03	-0.23	8.11	0	0	0
50	SLU 31	-0.04	-0.24	8.81	0	0	0
50	SLU 32	-0.04	-0.23	8.97	0	0	0
50	SLU 33	-0.04	-0.24	8.97	0	0	0
50	SLU 34	-0.04	-0.24	8.91	0	0	0
50	SLU 35	-0.05	-0.23	9.07	0	0	0
50	SLU 36	-0.05	-0.24	9.07	0	0	0
50	SLU 37	-0.05	-0.23	9	0	0	0
50	SLU 38	-0.05	-0.23	9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
50	SLU 39	-0.05	-0.24	9.19	0	0	0
50	SLU 40	-0.05	-0.24	9.19	0	0	0
50	SLU 41	-0.05	-0.24	9.28	0	0	0
50	SLU 42	-0.05	-0.24	9.29	0	0	0
50	SLU 43	-0.02	-0.3	8.97	0	0	0
50	SLU 44	-0.03	-0.31	8.97	0	0	0
50	SLU 45	-0.03	-0.3	9.14	0	0	0
50	SLU 46	-0.03	-0.31	9.14	0	0	0
50	SLU 47	-0.03	-0.3	9.07	0	0	0
50	SLU 48	-0.03	-0.3	9.23	0	0	0
50	SLU 49	-0.03	-0.3	9.23	0	0	0
50	SLU 50	-0.03	-0.3	9.16	0	0	0
50	SLU 51	-0.03	-0.3	9.16	0	0	0
50	SLU 52	-0.04	-0.31	9.86	0	0	0
50	SLU 53	-0.05	-0.31	10.03	0	0	0
50	SLU 54	-0.05	-0.31	10.03	0	0	0
50	SLU 55	-0.05	-0.31	9.96	0	0	0
50	SLU 56	-0.05	-0.31	10.12	0	0	0
50	SLU 57	-0.05	-0.31	10.12	0	0	0
50	SLU 58	-0.05	-0.31	10.05	0	0	0
50	SLU 59	-0.05	-0.31	10.06	0	0	0
50	SLU 60	-0.05	-0.31	10.24	0	0	0
50	SLU 61	-0.05	-0.32	10.25	0	0	0
50	SLU 62	-0.06	-0.31	10.34	0	0	0
50	SLU 63	-0.06	-0.31	10.34	0	0	0
50	SLU 64	-0.03	-0.3	9.77	0	0	0
50	SLU 65	-0.03	-0.3	9.78	0	0	0
50	SLU 66	-0.03	-0.3	9.94	0	0	0
50	SLU 67	-0.03	-0.3	9.94	0	0	0
50	SLU 68	-0.03	-0.3	9.87	0	0	0
50	SLU 69	-0.03	-0.3	10.03	0	0	0
50	SLU 70	-0.03	-0.3	10.04	0	0	0
50	SLU 71	-0.03	-0.29	9.97	0	0	0
50	SLU 72	-0.03	-0.3	9.97	0	0	0
50	SLU 73	-0.05	-0.31	10.67	0	0	0
50	SLU 74	-0.05	-0.31	10.83	0	0	0
50	SLU 75	-0.05	-0.31	10.83	0	0	0
50	SLU 76	-0.05	-0.31	10.76	0	0	0
50	SLU 77	-0.05	-0.3	10.93	0	0	0
50	SLU 78	-0.05	-0.31	10.93	0	0	0
50	SLU 79	-0.05	-0.3	10.86	0	0	0
50	SLU 80	-0.05	-0.3	10.86	0	0	0
50	SLU 81	-0.05	-0.31	11.05	0	0	0
50	SLU 82	-0.05	-0.31	11.05	0	0	0
50	SLU 83	-0.06	-0.31	11.14	0	0	0
50	SLU 84	-0.06	-0.31	11.14	0	0	0
50	SLE RA 1	-0.02	-0.23	7.34	0	0	0
50	SLE RA 2	-0.02	-0.23	7.34	0	0	0
50	SLE RA 3	-0.02	-0.23	7.45	0	0	0
50	SLE RA 4	-0.02	-0.23	7.45	0	0	0
50	SLE RA 5	-0.02	-0.23	7.41	0	0	0
50	SLE RA 6	-0.03	-0.23	7.52	0	0	0
50	SLE RA 7	-0.03	-0.23	7.52	0	0	0
50	SLE RA 8	-0.03	-0.23	7.47	0	0	0
50	SLE RA 9	-0.03	-0.23	7.47	0	0	0
50	SLE RA 10	-0.03	-0.24	7.94	0	0	0
50	SLE RA 11	-0.04	-0.24	8.05	0	0	0
50	SLE RA 12	-0.04	-0.24	8.05	0	0	0
50	SLE RA 13	-0.04	-0.24	8	0	0	0
50	SLE RA 14	-0.04	-0.23	8.11	0	0	0
50	SLE RA 15	-0.04	-0.24	8.11	0	0	0
50	SLE RA 16	-0.04	-0.23	8.06	0	0	0
50	SLE RA 17	-0.04	-0.23	8.07	0	0	0
50	SLE RA 18	-0.04	-0.24	8.19	0	0	0
50	SLE RA 19	-0.04	-0.24	8.19	0	0	0
50	SLE RA 20	-0.04	-0.24	8.25	0	0	0
50	SLE RA 21	-0.04	-0.24	8.26	0	0	0
50	SLE FR 1	-0.02	-0.23	7.34	0	0	0
50	SLE FR 2	-0.02	-0.23	7.34	0	0	0
50	SLE FR 3	-0.02	-0.23	7.37	0	0	0
50	SLE FR 4	-0.03	-0.23	7.6	0	0	0
50	SLE FR 5	-0.03	-0.23	7.62	0	0	0
50	SLE FR 6	-0.03	-0.23	7.77	0	0	0
50	SLE QP 1	-0.02	-0.23	7.34	0	0	0
50	SLE QP 2	-0.03	-0.23	7.6	0	0	0
50	SLD 1	0.45	-0.19	7.46	0	0	0
50	SLD 2	0.45	-0.17	7.45	0	0	0
50	SLD 3	0.42	-0.34	7.51	0	0	0
50	SLD 4	0.42	-0.32	7.51	0	0	0
50	SLD 5	0.17	0	7.47	0	0	0
50	SLD 6	0.17	0.01	7.47	0	0	0
50	SLD 7	0.06	-0.49	7.66	0	0	0
50	SLD 8	0.06	-0.47	7.65	0	0	0
50	SLD 9	-0.11	0.01	7.54	0	0	0
50	SLD 10	-0.11	0.02	7.54	0	0	0
50	SLD 11	-0.22	-0.47	7.73	0	0	0
50	SLD 12	-0.22	-0.46	7.72	0	0	0
50	SLD 13	-0.47	-0.14	7.69	0	0	0
50	SLD 14	-0.47	-0.13	7.68	0	0	0
50	SLD 15	-0.51	-0.29	7.74	0	0	0
50	SLD 16	-0.5	-0.27	7.74	0	0	0
50	SLV 1	1.09	-0.15	7.27	0	0	0
50	SLV 2	1.1	-0.1	7.25	0	0	0
50	SLV 3	1.01	-0.47	7.4	0	0	0
50	SLV 4	1.02	-0.43	7.38	0	0	0
50	SLV 5	0.42	0.28	7.31	0	0	0
50	SLV 6	0.43	0.31	7.3	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
50	SLV 7	0.17	-0.81	7.74	0	0	0
50	SLV 8	0.17	-0.78	7.73	0	0	0
50	SLV 9	-0.23	0.32	7.47	0	0	0
50	SLV 10	-0.22	0.35	7.46	0	0	0
50	SLV 11	-0.48	-0.77	7.9	0	0	0
50	SLV 12	-0.47	-0.75	7.89	0	0	0
50	SLV 13	-1.07	-0.03	7.81	0	0	0
50	SLV 14	-1.06	0.01	7.79	0	0	0
50	SLV 15	-1.15	-0.36	7.94	0	0	0
50	SLV 16	-1.14	-0.32	7.92	0	0	0
51	SLU 1	-0.02	-0.26	8.18	0	0	0
51	SLU 2	-0.02	-0.27	8.19	0	0	0
51	SLU 3	-0.03	-0.26	8.37	0	0	0
51	SLU 4	-0.03	-0.27	8.37	0	0	0
51	SLU 5	-0.03	-0.26	8.3	0	0	0
51	SLU 6	-0.03	-0.26	8.48	0	0	0
51	SLU 7	-0.03	-0.26	8.48	0	0	0
51	SLU 8	-0.03	-0.26	8.4	0	0	0
51	SLU 9	-0.03	-0.26	8.4	0	0	0
51	SLU 10	-0.04	-0.27	9.21	0	0	0
51	SLU 11	-0.05	-0.27	9.39	0	0	0
51	SLU 12	-0.05	-0.27	9.39	0	0	0
51	SLU 13	-0.05	-0.27	9.31	0	0	0
51	SLU 14	-0.05	-0.27	9.5	0	0	0
51	SLU 15	-0.05	-0.27	9.5	0	0	0
51	SLU 16	-0.05	-0.27	9.42	0	0	0
51	SLU 17	-0.05	-0.27	9.42	0	0	0
51	SLU 18	-0.05	-0.27	9.64	0	0	0
51	SLU 19	-0.05	-0.28	9.64	0	0	0
51	SLU 20	-0.06	-0.27	9.75	0	0	0
51	SLU 21	-0.06	-0.28	9.75	0	0	0
51	SLU 22	-0.02	-0.26	9.11	0	0	0
51	SLU 23	-0.03	-0.26	9.11	0	0	0
51	SLU 24	-0.03	-0.26	9.3	0	0	0
51	SLU 25	-0.03	-0.26	9.3	0	0	0
51	SLU 26	-0.03	-0.26	9.22	0	0	0
51	SLU 27	-0.03	-0.25	9.4	0	0	0
51	SLU 28	-0.03	-0.26	9.41	0	0	0
51	SLU 29	-0.03	-0.25	9.33	0	0	0
51	SLU 30	-0.03	-0.26	9.33	0	0	0
51	SLU 31	-0.05	-0.27	10.13	0	0	0
51	SLU 32	-0.05	-0.26	10.31	0	0	0
51	SLU 33	-0.05	-0.27	10.32	0	0	0
51	SLU 34	-0.05	-0.27	10.24	0	0	0
51	SLU 35	-0.06	-0.26	10.42	0	0	0
51	SLU 36	-0.06	-0.27	10.42	0	0	0
51	SLU 37	-0.06	-0.26	10.35	0	0	0
51	SLU 38	-0.06	-0.26	10.35	0	0	0
51	SLU 39	-0.06	-0.27	10.56	0	0	0
51	SLU 40	-0.06	-0.27	10.57	0	0	0
51	SLU 41	-0.06	-0.27	10.67	0	0	0
51	SLU 42	-0.06	-0.27	10.67	0	0	0
51	SLU 43	-0.03	-0.34	10.32	0	0	0
51	SLU 44	-0.03	-0.35	10.33	0	0	0
51	SLU 45	-0.03	-0.34	10.51	0	0	0
51	SLU 46	-0.03	-0.35	10.51	0	0	0
51	SLU 47	-0.03	-0.35	10.43	0	0	0
51	SLU 48	-0.04	-0.34	10.62	0	0	0
51	SLU 49	-0.04	-0.34	10.62	0	0	0
51	SLU 50	-0.04	-0.34	10.54	0	0	0
51	SLU 51	-0.04	-0.34	10.54	0	0	0
51	SLU 52	-0.05	-0.36	11.34	0	0	0
51	SLU 53	-0.05	-0.35	11.53	0	0	0
51	SLU 54	-0.05	-0.35	11.53	0	0	0
51	SLU 55	-0.05	-0.35	11.45	0	0	0
51	SLU 56	-0.06	-0.35	11.64	0	0	0
51	SLU 57	-0.06	-0.35	11.64	0	0	0
51	SLU 58	-0.06	-0.35	11.56	0	0	0
51	SLU 59	-0.06	-0.35	11.56	0	0	0
51	SLU 60	-0.06	-0.36	11.78	0	0	0
51	SLU 61	-0.06	-0.36	11.78	0	0	0
51	SLU 62	-0.06	-0.35	11.89	0	0	0
51	SLU 63	-0.06	-0.36	11.89	0	0	0
51	SLU 64	-0.03	-0.34	11.25	0	0	0
51	SLU 65	-0.03	-0.34	11.25	0	0	0
51	SLU 66	-0.03	-0.34	11.43	0	0	0
51	SLU 67	-0.04	-0.34	11.44	0	0	0
51	SLU 68	-0.04	-0.34	11.36	0	0	0
51	SLU 69	-0.04	-0.34	11.54	0	0	0
51	SLU 70	-0.04	-0.34	11.54	0	0	0
51	SLU 71	-0.04	-0.33	11.47	0	0	0
51	SLU 72	-0.04	-0.34	11.47	0	0	0
51	SLU 73	-0.05	-0.35	12.27	0	0	0
51	SLU 74	-0.06	-0.35	12.45	0	0	0
51	SLU 75	-0.06	-0.35	12.45	0	0	0
51	SLU 76	-0.06	-0.35	12.38	0	0	0
51	SLU 77	-0.06	-0.34	12.56	0	0	0
51	SLU 78	-0.06	-0.35	12.56	0	0	0
51	SLU 79	-0.06	-0.34	12.48	0	0	0
51	SLU 80	-0.06	-0.34	12.48	0	0	0
51	SLU 81	-0.06	-0.35	12.7	0	0	0
51	SLU 82	-0.06	-0.35	12.7	0	0	0
51	SLU 83	-0.07	-0.35	12.81	0	0	0
51	SLU 84	-0.07	-0.35	12.81	0	0	0
51	SLE RA 1	-0.02	-0.26	8.45	0	0	0
51	SLE RA 2	-0.02	-0.26	8.45	0	0	0
51	SLE RA 3	-0.03	-0.26	8.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
51	SLE RA 4	-0.03	-0.26	8.57	0	0	0
51	SLE RA 5	-0.03	-0.26	8.52	0	0	0
51	SLE RA 6	-0.03	-0.26	8.65	0	0	0
51	SLE RA 7	-0.03	-0.26	8.65	0	0	0
51	SLE RA 8	-0.03	-0.26	8.59	0	0	0
51	SLE RA 9	-0.03	-0.26	8.59	0	0	0
51	SLE RA 10	-0.04	-0.27	9.13	0	0	0
51	SLE RA 11	-0.04	-0.27	9.25	0	0	0
51	SLE RA 12	-0.04	-0.27	9.25	0	0	0
51	SLE RA 13	-0.04	-0.27	9.2	0	0	0
51	SLE RA 14	-0.04	-0.27	9.32	0	0	0
51	SLE RA 15	-0.04	-0.27	9.33	0	0	0
51	SLE RA 16	-0.04	-0.26	9.27	0	0	0
51	SLE RA 17	-0.04	-0.27	9.27	0	0	0
51	SLE RA 18	-0.04	-0.27	9.42	0	0	0
51	SLE RA 19	-0.04	-0.27	9.42	0	0	0
51	SLE RA 20	-0.05	-0.27	9.49	0	0	0
51	SLE RA 21	-0.05	-0.27	9.49	0	0	0
51	SLE FR 1	-0.02	-0.26	8.45	0	0	0
51	SLE FR 2	-0.02	-0.26	8.45	0	0	0
51	SLE FR 3	-0.02	-0.26	8.48	0	0	0
51	SLE FR 4	-0.03	-0.26	8.74	0	0	0
51	SLE FR 5	-0.03	-0.26	8.77	0	0	0
51	SLE FR 6	-0.03	-0.26	8.93	0	0	0
51	SLE QP 1	-0.02	-0.26	8.45	0	0	0
51	SLE QP 2	-0.03	-0.26	8.74	0	0	0
51	SLD 1	0.52	-0.22	8.53	0	0	0
51	SLD 2	0.52	-0.2	8.52	0	0	0
51	SLD 3	0.48	-0.39	8.59	0	0	0
51	SLD 4	0.49	-0.36	8.58	0	0	0
51	SLD 5	0.19	0	8.59	0	0	0
51	SLD 6	0.2	0.01	8.58	0	0	0
51	SLD 7	0.07	-0.56	8.79	0	0	0
51	SLD 8	0.07	-0.54	8.78	0	0	0
51	SLD 9	-0.13	0.01	8.7	0	0	0
51	SLD 10	-0.12	0.03	8.69	0	0	0
51	SLD 11	-0.25	-0.54	8.9	0	0	0
51	SLD 12	-0.25	-0.52	8.89	0	0	0
51	SLD 13	-0.55	-0.16	8.9	0	0	0
51	SLD 14	-0.54	-0.14	8.89	0	0	0
51	SLD 15	-0.58	-0.33	8.96	0	0	0
51	SLD 16	-0.58	-0.3	8.95	0	0	0
51	SLV 1	1.26	-0.17	8.26	0	0	0
51	SLV 2	1.27	-0.12	8.24	0	0	0
51	SLV 3	1.17	-0.55	8.4	0	0	0
51	SLV 4	1.18	-0.49	8.37	0	0	0
51	SLV 5	0.49	0.32	8.39	0	0	0
51	SLV 6	0.49	0.36	8.38	0	0	0
51	SLV 7	0.2	-0.93	8.85	0	0	0
51	SLV 8	0.2	-0.89	8.83	0	0	0
51	SLV 9	-0.26	0.37	8.65	0	0	0
51	SLV 10	-0.25	0.4	8.63	0	0	0
51	SLV 11	-0.55	-0.89	9.1	0	0	0
51	SLV 12	-0.55	-0.85	9.09	0	0	0
51	SLV 13	-1.24	-0.03	9.11	0	0	0
51	SLV 14	-1.23	0.02	9.08	0	0	0
51	SLV 15	-1.33	-0.41	9.24	0	0	0
51	SLV 16	-1.32	-0.35	9.22	0	0	0
52	SLU 1	-0.01	-0.14	4.6	0	0	0
52	SLU 2	-0.01	-0.15	4.6	0	0	0
52	SLU 3	-0.02	-0.14	4.71	0	0	0
52	SLU 4	-0.02	-0.15	4.71	0	0	0
52	SLU 5	-0.02	-0.15	4.66	0	0	0
52	SLU 6	-0.02	-0.14	4.77	0	0	0
52	SLU 7	-0.02	-0.15	4.77	0	0	0
52	SLU 8	-0.02	-0.14	4.72	0	0	0
52	SLU 9	-0.02	-0.14	4.72	0	0	0
52	SLU 10	-0.03	-0.15	5.17	0	0	0
52	SLU 11	-0.03	-0.15	5.28	0	0	0
52	SLU 12	-0.03	-0.15	5.28	0	0	0
52	SLU 13	-0.03	-0.15	5.23	0	0	0
52	SLU 14	-0.03	-0.15	5.33	0	0	0
52	SLU 15	-0.03	-0.15	5.34	0	0	0
52	SLU 16	-0.03	-0.15	5.29	0	0	0
52	SLU 17	-0.03	-0.15	5.29	0	0	0
52	SLU 18	-0.03	-0.15	5.41	0	0	0
52	SLU 19	-0.03	-0.15	5.42	0	0	0
52	SLU 20	-0.03	-0.15	5.47	0	0	0
52	SLU 21	-0.03	-0.15	5.47	0	0	0
52	SLU 22	-0.01	-0.14	5.12	0	0	0
52	SLU 23	-0.01	-0.14	5.12	0	0	0
52	SLU 24	-0.02	-0.14	5.23	0	0	0
52	SLU 25	-0.02	-0.14	5.23	0	0	0
52	SLU 26	-0.02	-0.14	5.18	0	0	0
52	SLU 27	-0.02	-0.14	5.29	0	0	0
52	SLU 28	-0.02	-0.14	5.29	0	0	0
52	SLU 29	-0.02	-0.14	5.24	0	0	0
52	SLU 30	-0.02	-0.14	5.24	0	0	0
52	SLU 31	-0.03	-0.15	5.69	0	0	0
52	SLU 32	-0.03	-0.15	5.8	0	0	0
52	SLU 33	-0.03	-0.15	5.8	0	0	0
52	SLU 34	-0.03	-0.15	5.75	0	0	0
52	SLU 35	-0.03	-0.14	5.85	0	0	0
52	SLU 36	-0.03	-0.15	5.86	0	0	0
52	SLU 37	-0.03	-0.14	5.81	0	0	0
52	SLU 38	-0.03	-0.14	5.81	0	0	0
52	SLU 39	-0.03	-0.15	5.93	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
52	SLU 40	-0.03	-0.15	5.93	0	0	0
52	SLU 41	-0.03	-0.15	5.99	0	0	0
52	SLU 42	-0.03	-0.15	5.99	0	0	0
52	SLU 43	-0.02	-0.19	5.81	0	0	0
52	SLU 44	-0.02	-0.19	5.81	0	0	0
52	SLU 45	-0.02	-0.19	5.91	0	0	0
52	SLU 46	-0.02	-0.19	5.91	0	0	0
52	SLU 47	-0.02	-0.19	5.87	0	0	0
52	SLU 48	-0.02	-0.19	5.97	0	0	0
52	SLU 49	-0.02	-0.19	5.97	0	0	0
52	SLU 50	-0.02	-0.19	5.93	0	0	0
52	SLU 51	-0.02	-0.19	5.93	0	0	0
52	SLU 52	-0.03	-0.2	6.37	0	0	0
52	SLU 53	-0.03	-0.19	6.48	0	0	0
52	SLU 54	-0.03	-0.2	6.48	0	0	0
52	SLU 55	-0.03	-0.19	6.43	0	0	0
52	SLU 56	-0.03	-0.19	6.54	0	0	0
52	SLU 57	-0.03	-0.19	6.54	0	0	0
52	SLU 58	-0.03	-0.19	6.49	0	0	0
52	SLU 59	-0.03	-0.19	6.49	0	0	0
52	SLU 60	-0.03	-0.2	6.62	0	0	0
52	SLU 61	-0.03	-0.2	6.62	0	0	0
52	SLU 62	-0.04	-0.19	6.68	0	0	0
52	SLU 63	-0.04	-0.2	6.68	0	0	0
52	SLU 64	-0.02	-0.19	6.33	0	0	0
52	SLU 65	-0.02	-0.19	6.33	0	0	0
52	SLU 66	-0.02	-0.19	6.43	0	0	0
52	SLU 67	-0.02	-0.19	6.43	0	0	0
52	SLU 68	-0.02	-0.19	6.39	0	0	0
52	SLU 69	-0.02	-0.19	6.49	0	0	0
52	SLU 70	-0.02	-0.19	6.49	0	0	0
52	SLU 71	-0.02	-0.18	6.45	0	0	0
52	SLU 72	-0.02	-0.19	6.45	0	0	0
52	SLU 73	-0.03	-0.19	6.89	0	0	0
52	SLU 74	-0.03	-0.19	7	0	0	0
52	SLU 75	-0.03	-0.19	7	0	0	0
52	SLU 76	-0.03	-0.19	6.95	0	0	0
52	SLU 77	-0.03	-0.19	7.06	0	0	0
52	SLU 78	-0.03	-0.19	7.06	0	0	0
52	SLU 79	-0.03	-0.19	7.01	0	0	0
52	SLU 80	-0.04	-0.19	7.01	0	0	0
52	SLU 81	-0.04	-0.19	7.14	0	0	0
52	SLU 82	-0.04	-0.19	7.14	0	0	0
52	SLU 83	-0.04	-0.19	7.2	0	0	0
52	SLU 84	-0.04	-0.19	7.2	0	0	0
52	SLE RA 1	-0.01	-0.14	4.75	0	0	0
52	SLE RA 2	-0.01	-0.14	4.75	0	0	0
52	SLE RA 3	-0.01	-0.14	4.82	0	0	0
52	SLE RA 4	-0.01	-0.14	4.82	0	0	0
52	SLE RA 5	-0.02	-0.14	4.79	0	0	0
52	SLE RA 6	-0.02	-0.14	4.86	0	0	0
52	SLE RA 7	-0.02	-0.14	4.86	0	0	0
52	SLE RA 8	-0.02	-0.14	4.83	0	0	0
52	SLE RA 9	-0.02	-0.14	4.83	0	0	0
52	SLE RA 10	-0.02	-0.15	5.13	0	0	0
52	SLE RA 11	-0.02	-0.15	5.2	0	0	0
52	SLE RA 12	-0.02	-0.15	5.2	0	0	0
52	SLE RA 13	-0.02	-0.15	5.17	0	0	0
52	SLE RA 14	-0.02	-0.15	5.24	0	0	0
52	SLE RA 15	-0.02	-0.15	5.24	0	0	0
52	SLE RA 16	-0.02	-0.15	5.21	0	0	0
52	SLE RA 17	-0.02	-0.15	5.21	0	0	0
52	SLE RA 18	-0.02	-0.15	5.29	0	0	0
52	SLE RA 19	-0.02	-0.15	5.29	0	0	0
52	SLE RA 20	-0.03	-0.15	5.33	0	0	0
52	SLE RA 21	-0.03	-0.15	5.33	0	0	0
52	SLE FR 1	-0.01	-0.14	4.75	0	0	0
52	SLE FR 2	-0.01	-0.14	4.75	0	0	0
52	SLE FR 3	-0.01	-0.14	4.77	0	0	0
52	SLE FR 4	-0.02	-0.15	4.91	0	0	0
52	SLE FR 5	-0.02	-0.14	4.93	0	0	0
52	SLE FR 6	-0.02	-0.15	5.02	0	0	0
52	SLE QP 1	-0.01	-0.14	4.75	0	0	0
52	SLE QP 2	-0.02	-0.14	4.91	0	0	0
52	SLD 1	0.3	-0.12	4.76	0	0	0
52	SLD 2	0.3	-0.11	4.76	0	0	0
52	SLD 3	0.27	-0.22	4.79	0	0	0
52	SLD 4	0.28	-0.2	4.79	0	0	0
52	SLD 5	0.11	0	4.82	0	0	0
52	SLD 6	0.11	0.01	4.82	0	0	0
52	SLD 7	0.04	-0.31	4.93	0	0	0
52	SLD 8	0.04	-0.3	4.92	0	0	0
52	SLD 9	-0.07	0.01	4.91	0	0	0
52	SLD 10	-0.07	0.02	4.9	0	0	0
52	SLD 11	-0.14	-0.3	5.01	0	0	0
52	SLD 12	-0.14	-0.29	5.01	0	0	0
52	SLD 13	-0.31	-0.09	5.04	0	0	0
52	SLD 14	-0.31	-0.07	5.03	0	0	0
52	SLD 15	-0.33	-0.18	5.07	0	0	0
52	SLD 16	-0.33	-0.16	5.07	0	0	0
52	SLV 1	0.71	-0.1	4.56	0	0	0
52	SLV 2	0.72	-0.06	4.55	0	0	0
52	SLV 3	0.66	-0.31	4.63	0	0	0
52	SLV 4	0.67	-0.27	4.62	0	0	0
52	SLV 5	0.28	0.18	4.7	0	0	0
52	SLV 6	0.28	0.2	4.69	0	0	0
52	SLV 7	0.11	-0.52	4.94	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
52	SLV 8	0.11	-0.49	4.93	0	0	0
52	SLV 9	-0.15	0.21	4.9	0	0	0
52	SLV 10	-0.14	0.23	4.89	0	0	0
52	SLV 11	-0.31	-0.49	5.14	0	0	0
52	SLV 12	-0.31	-0.47	5.13	0	0	0
52	SLV 13	-0.7	-0.02	5.21	0	0	0
52	SLV 14	-0.7	0.02	5.19	0	0	0
52	SLV 15	-0.75	-0.23	5.28	0	0	0
52	SLV 16	-0.75	-0.19	5.27	0	0	0
53	SLU 1	-0.02	-0.16	4.54	0	0	0
53	SLU 2	-0.02	-0.17	4.54	0	0	0
53	SLU 3	-0.02	-0.16	4.65	0	0	0
53	SLU 4	-0.02	-0.17	4.65	0	0	0
53	SLU 5	-0.02	-0.17	4.61	0	0	0
53	SLU 6	-0.02	-0.16	4.72	0	0	0
53	SLU 7	-0.02	-0.16	4.72	0	0	0
53	SLU 8	-0.02	-0.16	4.68	0	0	0
53	SLU 9	-0.02	-0.16	4.68	0	0	0
53	SLU 10	-0.03	-0.17	5.13	0	0	0
53	SLU 11	-0.03	-0.17	5.24	0	0	0
53	SLU 12	-0.03	-0.17	5.24	0	0	0
53	SLU 13	-0.03	-0.17	5.2	0	0	0
53	SLU 14	-0.03	-0.17	5.31	0	0	0
53	SLU 15	-0.03	-0.17	5.31	0	0	0
53	SLU 16	-0.03	-0.17	5.27	0	0	0
53	SLU 17	-0.03	-0.17	5.27	0	0	0
53	SLU 18	-0.03	-0.17	5.39	0	0	0
53	SLU 19	-0.03	-0.18	5.39	0	0	0
53	SLU 20	-0.04	-0.17	5.45	0	0	0
53	SLU 21	-0.04	-0.17	5.45	0	0	0
53	SLU 22	-0.02	-0.16	5.06	0	0	0
53	SLU 23	-0.02	-0.16	5.06	0	0	0
53	SLU 24	-0.02	-0.16	5.17	0	0	0
53	SLU 25	-0.02	-0.16	5.17	0	0	0
53	SLU 26	-0.02	-0.16	5.13	0	0	0
53	SLU 27	-0.02	-0.16	5.23	0	0	0
53	SLU 28	-0.02	-0.16	5.23	0	0	0
53	SLU 29	-0.02	-0.16	5.19	0	0	0
53	SLU 30	-0.02	-0.16	5.19	0	0	0
53	SLU 31	-0.03	-0.17	5.65	0	0	0
53	SLU 32	-0.03	-0.17	5.76	0	0	0
53	SLU 33	-0.03	-0.17	5.76	0	0	0
53	SLU 34	-0.03	-0.17	5.72	0	0	0
53	SLU 35	-0.03	-0.17	5.82	0	0	0
53	SLU 36	-0.03	-0.17	5.83	0	0	0
53	SLU 37	-0.03	-0.17	5.78	0	0	0
53	SLU 38	-0.04	-0.17	5.78	0	0	0
53	SLU 39	-0.04	-0.17	5.9	0	0	0
53	SLU 40	-0.04	-0.17	5.9	0	0	0
53	SLU 41	-0.04	-0.17	5.97	0	0	0
53	SLU 42	-0.04	-0.17	5.97	0	0	0
53	SLU 43	-0.02	-0.21	5.73	0	0	0
53	SLU 44	-0.02	-0.22	5.73	0	0	0
53	SLU 45	-0.02	-0.21	5.83	0	0	0
53	SLU 46	-0.02	-0.22	5.84	0	0	0
53	SLU 47	-0.02	-0.22	5.8	0	0	0
53	SLU 48	-0.03	-0.21	5.9	0	0	0
53	SLU 49	-0.03	-0.21	5.9	0	0	0
53	SLU 50	-0.03	-0.21	5.86	0	0	0
53	SLU 51	-0.03	-0.21	5.86	0	0	0
53	SLU 52	-0.03	-0.22	6.32	0	0	0
53	SLU 53	-0.04	-0.22	6.43	0	0	0
53	SLU 54	-0.04	-0.22	6.43	0	0	0
53	SLU 55	-0.04	-0.22	6.39	0	0	0
53	SLU 56	-0.04	-0.22	6.49	0	0	0
53	SLU 57	-0.04	-0.22	6.5	0	0	0
53	SLU 58	-0.04	-0.22	6.45	0	0	0
53	SLU 59	-0.04	-0.22	6.45	0	0	0
53	SLU 60	-0.04	-0.22	6.57	0	0	0
53	SLU 61	-0.04	-0.23	6.57	0	0	0
53	SLU 62	-0.04	-0.22	6.64	0	0	0
53	SLU 63	-0.04	-0.22	6.64	0	0	0
53	SLU 64	-0.02	-0.21	6.24	0	0	0
53	SLU 65	-0.02	-0.21	6.24	0	0	0
53	SLU 66	-0.02	-0.21	6.35	0	0	0
53	SLU 67	-0.02	-0.21	6.35	0	0	0
53	SLU 68	-0.02	-0.21	6.31	0	0	0
53	SLU 69	-0.03	-0.21	6.42	0	0	0
53	SLU 70	-0.03	-0.21	6.42	0	0	0
53	SLU 71	-0.03	-0.21	6.38	0	0	0
53	SLU 72	-0.03	-0.21	6.38	0	0	0
53	SLU 73	-0.03	-0.22	6.84	0	0	0
53	SLU 74	-0.04	-0.22	6.94	0	0	0
53	SLU 75	-0.04	-0.22	6.94	0	0	0
53	SLU 76	-0.04	-0.22	6.9	0	0	0
53	SLU 77	-0.04	-0.22	7.01	0	0	0
53	SLU 78	-0.04	-0.22	7.01	0	0	0
53	SLU 79	-0.04	-0.22	6.97	0	0	0
53	SLU 80	-0.04	-0.22	6.97	0	0	0
53	SLU 81	-0.04	-0.22	7.09	0	0	0
53	SLU 82	-0.04	-0.22	7.09	0	0	0
53	SLU 83	-0.04	-0.22	7.15	0	0	0
53	SLU 84	-0.04	-0.22	7.16	0	0	0
53	SLE RA 1	-0.02	-0.16	4.69	0	0	0
53	SLE RA 2	-0.02	-0.16	4.69	0	0	0
53	SLE RA 3	-0.02	-0.16	4.76	0	0	0
53	SLE RA 4	-0.02	-0.16	4.76	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
53	SLE RA 5	-0.02	-0.16	4.73	0	0	0
53	SLE RA 6	-0.02	-0.16	4.81	0	0	0
53	SLE RA 7	-0.02	-0.16	4.81	0	0	0
53	SLE RA 8	-0.02	-0.16	4.78	0	0	0
53	SLE RA 9	-0.02	-0.16	4.78	0	0	0
53	SLE RA 10	-0.03	-0.17	5.08	0	0	0
53	SLE RA 11	-0.03	-0.17	5.15	0	0	0
53	SLE RA 12	-0.03	-0.17	5.16	0	0	0
53	SLE RA 13	-0.03	-0.17	5.13	0	0	0
53	SLE RA 14	-0.03	-0.17	5.2	0	0	0
53	SLE RA 15	-0.03	-0.17	5.2	0	0	0
53	SLE RA 16	-0.03	-0.17	5.17	0	0	0
53	SLE RA 17	-0.03	-0.17	5.17	0	0	0
53	SLE RA 18	-0.03	-0.17	5.25	0	0	0
53	SLE RA 19	-0.03	-0.17	5.25	0	0	0
53	SLE RA 20	-0.03	-0.17	5.3	0	0	0
53	SLE RA 21	-0.03	-0.17	5.3	0	0	0
53	SLE FR 1	-0.02	-0.16	4.69	0	0	0
53	SLE FR 2	-0.02	-0.16	4.69	0	0	0
53	SLE FR 3	-0.02	-0.16	4.71	0	0	0
53	SLE FR 4	-0.02	-0.17	4.86	0	0	0
53	SLE FR 5	-0.02	-0.16	4.87	0	0	0
53	SLE FR 6	-0.02	-0.17	4.97	0	0	0
53	SLE QP 1	-0.02	-0.16	4.69	0	0	0
53	SLE QP 2	-0.02	-0.16	4.86	0	0	0
53	SLD 1	0.28	-0.13	4.88	0	0	0
53	SLD 2	0.28	-0.13	4.88	0	0	0
53	SLD 3	0.26	-0.23	4.96	0	0	0
53	SLD 4	0.26	-0.22	4.96	0	0	0
53	SLD 5	0.1	-0.01	4.74	0	0	0
53	SLD 6	0.1	-0.01	4.74	0	0	0
53	SLD 7	0.03	-0.33	5.01	0	0	0
53	SLD 8	0.03	-0.33	5.01	0	0	0
53	SLD 9	-0.07	0	4.7	0	0	0
53	SLD 10	-0.07	0	4.7	0	0	0
53	SLD 11	-0.14	-0.32	4.97	0	0	0
53	SLD 12	-0.14	-0.32	4.97	0	0	0
53	SLD 13	-0.3	-0.1	4.75	0	0	0
53	SLD 14	-0.3	-0.1	4.75	0	0	0
53	SLD 15	-0.32	-0.2	4.83	0	0	0
53	SLD 16	-0.32	-0.2	4.83	0	0	0
53	SLV 1	0.69	-0.09	4.92	0	0	0
53	SLV 2	0.69	-0.08	4.92	0	0	0
53	SLV 3	0.64	-0.31	5.11	0	0	0
53	SLV 4	0.64	-0.3	5.1	0	0	0
53	SLV 5	0.27	0.19	4.6	0	0	0
53	SLV 6	0.27	0.2	4.6	0	0	0
53	SLV 7	0.1	-0.54	5.21	0	0	0
53	SLV 8	0.1	-0.54	5.2	0	0	0
53	SLV 9	-0.14	0.21	4.51	0	0	0
53	SLV 10	-0.14	0.21	4.51	0	0	0
53	SLV 11	-0.31	-0.52	5.11	0	0	0
53	SLV 12	-0.31	-0.52	5.11	0	0	0
53	SLV 13	-0.68	-0.03	4.61	0	0	0
53	SLV 14	-0.68	-0.02	4.61	0	0	0
53	SLV 15	-0.73	-0.25	4.8	0	0	0
53	SLV 16	-0.73	-0.24	4.79	0	0	0
54	SLU 1	-0.03	-0.29	8.12	0	0	0
54	SLU 2	-0.03	-0.29	8.13	0	0	0
54	SLU 3	-0.03	-0.29	8.32	0	0	0
54	SLU 4	-0.03	-0.29	8.32	0	0	0
54	SLU 5	-0.03	-0.29	8.25	0	0	0
54	SLU 6	-0.04	-0.29	8.44	0	0	0
54	SLU 7	-0.04	-0.29	8.44	0	0	0
54	SLU 8	-0.04	-0.28	8.36	0	0	0
54	SLU 9	-0.04	-0.29	8.37	0	0	0
54	SLU 10	-0.05	-0.3	9.18	0	0	0
54	SLU 11	-0.06	-0.3	9.37	0	0	0
54	SLU 12	-0.06	-0.3	9.37	0	0	0
54	SLU 13	-0.06	-0.3	9.3	0	0	0
54	SLU 14	-0.06	-0.3	9.49	0	0	0
54	SLU 15	-0.06	-0.3	9.49	0	0	0
54	SLU 16	-0.06	-0.3	9.41	0	0	0
54	SLU 17	-0.06	-0.3	9.42	0	0	0
54	SLU 18	-0.06	-0.3	9.63	0	0	0
54	SLU 19	-0.06	-0.31	9.63	0	0	0
54	SLU 20	-0.07	-0.3	9.74	0	0	0
54	SLU 21	-0.07	-0.31	9.75	0	0	0
54	SLU 22	-0.03	-0.28	9.05	0	0	0
54	SLU 23	-0.03	-0.29	9.05	0	0	0
54	SLU 24	-0.04	-0.28	9.24	0	0	0
54	SLU 25	-0.04	-0.29	9.25	0	0	0
54	SLU 26	-0.04	-0.29	9.17	0	0	0
54	SLU 27	-0.04	-0.28	9.36	0	0	0
54	SLU 28	-0.04	-0.28	9.36	0	0	0
54	SLU 29	-0.04	-0.28	9.29	0	0	0
54	SLU 30	-0.04	-0.28	9.29	0	0	0
54	SLU 31	-0.05	-0.3	10.1	0	0	0
54	SLU 32	-0.06	-0.29	10.29	0	0	0
54	SLU 33	-0.06	-0.3	10.3	0	0	0
54	SLU 34	-0.06	-0.3	10.22	0	0	0
54	SLU 35	-0.06	-0.29	10.41	0	0	0
54	SLU 36	-0.06	-0.3	10.42	0	0	0
54	SLU 37	-0.06	-0.29	10.34	0	0	0
54	SLU 38	-0.06	-0.29	10.34	0	0	0
54	SLU 39	-0.06	-0.3	10.55	0	0	0
54	SLU 40	-0.06	-0.3	10.55	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
54	SLU 41	-0.07	-0.3	10.67	0	0	0
54	SLU 42	-0.07	-0.3	10.67	0	0	0
54	SLU 43	-0.04	-0.37	10.25	0	0	0
54	SLU 44	-0.04	-0.38	10.25	0	0	0
54	SLU 45	-0.04	-0.38	10.44	0	0	0
54	SLU 46	-0.04	-0.38	10.44	0	0	0
54	SLU 47	-0.04	-0.38	10.37	0	0	0
54	SLU 48	-0.05	-0.37	10.56	0	0	0
54	SLU 49	-0.05	-0.38	10.56	0	0	0
54	SLU 50	-0.05	-0.37	10.48	0	0	0
54	SLU 51	-0.05	-0.37	10.49	0	0	0
54	SLU 52	-0.06	-0.39	11.3	0	0	0
54	SLU 53	-0.06	-0.39	11.49	0	0	0
54	SLU 54	-0.06	-0.39	11.49	0	0	0
54	SLU 55	-0.06	-0.39	11.42	0	0	0
54	SLU 56	-0.07	-0.39	11.61	0	0	0
54	SLU 57	-0.07	-0.39	11.61	0	0	0
54	SLU 58	-0.07	-0.38	11.53	0	0	0
54	SLU 59	-0.07	-0.39	11.54	0	0	0
54	SLU 60	-0.07	-0.39	11.75	0	0	0
54	SLU 61	-0.07	-0.39	11.75	0	0	0
54	SLU 62	-0.07	-0.39	11.87	0	0	0
54	SLU 63	-0.07	-0.39	11.87	0	0	0
54	SLU 64	-0.04	-0.37	11.17	0	0	0
54	SLU 65	-0.04	-0.37	11.17	0	0	0
54	SLU 66	-0.04	-0.37	11.36	0	0	0
54	SLU 67	-0.04	-0.37	11.37	0	0	0
54	SLU 68	-0.04	-0.37	11.29	0	0	0
54	SLU 69	-0.05	-0.37	11.48	0	0	0
54	SLU 70	-0.05	-0.37	11.48	0	0	0
54	SLU 71	-0.05	-0.37	11.41	0	0	0
54	SLU 72	-0.05	-0.37	11.41	0	0	0
54	SLU 73	-0.06	-0.39	12.22	0	0	0
54	SLU 74	-0.07	-0.38	12.41	0	0	0
54	SLU 75	-0.07	-0.39	12.42	0	0	0
54	SLU 76	-0.07	-0.39	12.34	0	0	0
54	SLU 77	-0.07	-0.38	12.53	0	0	0
54	SLU 78	-0.07	-0.38	12.54	0	0	0
54	SLU 79	-0.07	-0.38	12.46	0	0	0
54	SLU 80	-0.07	-0.38	12.46	0	0	0
54	SLU 81	-0.07	-0.39	12.67	0	0	0
54	SLU 82	-0.07	-0.39	12.67	0	0	0
54	SLU 83	-0.08	-0.39	12.79	0	0	0
54	SLU 84	-0.08	-0.39	12.79	0	0	0
54	SLE RA 1	-0.03	-0.29	8.39	0	0	0
54	SLE RA 2	-0.03	-0.29	8.39	0	0	0
54	SLE RA 3	-0.03	-0.29	8.52	0	0	0
54	SLE RA 4	-0.03	-0.29	8.52	0	0	0
54	SLE RA 5	-0.03	-0.29	8.47	0	0	0
54	SLE RA 6	-0.04	-0.29	8.6	0	0	0
54	SLE RA 7	-0.04	-0.29	8.6	0	0	0
54	SLE RA 8	-0.04	-0.28	8.55	0	0	0
54	SLE RA 9	-0.04	-0.29	8.55	0	0	0
54	SLE RA 10	-0.05	-0.3	9.09	0	0	0
54	SLE RA 11	-0.05	-0.29	9.22	0	0	0
54	SLE RA 12	-0.05	-0.3	9.22	0	0	0
54	SLE RA 13	-0.05	-0.3	9.17	0	0	0
54	SLE RA 14	-0.05	-0.29	9.3	0	0	0
54	SLE RA 15	-0.05	-0.3	9.3	0	0	0
54	SLE RA 16	-0.05	-0.29	9.25	0	0	0
54	SLE RA 17	-0.05	-0.29	9.25	0	0	0
54	SLE RA 18	-0.05	-0.3	9.39	0	0	0
54	SLE RA 19	-0.05	-0.3	9.39	0	0	0
54	SLE RA 20	-0.05	-0.3	9.47	0	0	0
54	SLE RA 21	-0.05	-0.3	9.47	0	0	0
54	SLE FR 1	-0.03	-0.29	8.39	0	0	0
54	SLE FR 2	-0.03	-0.29	8.39	0	0	0
54	SLE FR 3	-0.03	-0.29	8.42	0	0	0
54	SLE FR 4	-0.04	-0.29	8.69	0	0	0
54	SLE FR 5	-0.04	-0.29	8.72	0	0	0
54	SLE FR 6	-0.04	-0.29	8.89	0	0	0
54	SLE QP 1	-0.03	-0.29	8.39	0	0	0
54	SLE QP 2	-0.04	-0.29	8.69	0	0	0
54	SLD 1	0.51	-0.23	8.69	0	0	0
54	SLD 2	0.51	-0.22	8.68	0	0	0
54	SLD 3	0.47	-0.4	8.82	0	0	0
54	SLD 4	0.47	-0.39	8.81	0	0	0
54	SLD 5	0.19	-0.01	8.49	0	0	0
54	SLD 6	0.19	-0.01	8.49	0	0	0
54	SLD 7	0.06	-0.59	8.93	0	0	0
54	SLD 8	0.06	-0.58	8.92	0	0	0
54	SLD 9	-0.13	0	8.45	0	0	0
54	SLD 10	-0.13	0.01	8.45	0	0	0
54	SLD 11	-0.26	-0.57	8.89	0	0	0
54	SLD 12	-0.26	-0.57	8.89	0	0	0
54	SLD 13	-0.54	-0.18	8.56	0	0	0
54	SLD 14	-0.54	-0.18	8.56	0	0	0
54	SLD 15	-0.58	-0.36	8.7	0	0	0
54	SLD 16	-0.58	-0.35	8.69	0	0	0
54	SLV 1	1.24	-0.16	8.69	0	0	0
54	SLV 2	1.24	-0.14	8.68	0	0	0
54	SLV 3	1.15	-0.55	8.99	0	0	0
54	SLV 4	1.15	-0.53	8.98	0	0	0
54	SLV 5	0.48	0.34	8.24	0	0	0
54	SLV 6	0.48	0.35	8.23	0	0	0
54	SLV 7	0.18	-0.96	9.23	0	0	0
54	SLV 8	0.18	-0.95	9.22	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
54	SLV 9	-0.26	0.37	8.15	0	0	0
54	SLV 10	-0.25	0.38	8.15	0	0	0
54	SLV 11	-0.56	-0.93	9.15	0	0	0
54	SLV 12	-0.56	-0.92	9.14	0	0	0
54	SLV 13	-1.22	-0.05	8.4	0	0	0
54	SLV 14	-1.22	-0.03	8.39	0	0	0
54	SLV 15	-1.31	-0.44	8.7	0	0	0
54	SLV 16	-1.31	-0.42	8.69	0	0	0
55	SLU 1	-0.03	-0.25	7.11	0	0	0
55	SLU 2	-0.03	-0.25	7.11	0	0	0
55	SLU 3	-0.03	-0.25	7.28	0	0	0
55	SLU 4	-0.03	-0.25	7.28	0	0	0
55	SLU 5	-0.03	-0.25	7.22	0	0	0
55	SLU 6	-0.03	-0.25	7.38	0	0	0
55	SLU 7	-0.03	-0.25	7.38	0	0	0
55	SLU 8	-0.03	-0.24	7.32	0	0	0
55	SLU 9	-0.03	-0.25	7.32	0	0	0
55	SLU 10	-0.05	-0.26	8.03	0	0	0
55	SLU 11	-0.05	-0.26	8.19	0	0	0
55	SLU 12	-0.05	-0.26	8.2	0	0	0
55	SLU 13	-0.05	-0.26	8.13	0	0	0
55	SLU 14	-0.05	-0.26	8.3	0	0	0
55	SLU 15	-0.05	-0.26	8.3	0	0	0
55	SLU 16	-0.05	-0.25	8.23	0	0	0
55	SLU 17	-0.05	-0.26	8.23	0	0	0
55	SLU 18	-0.05	-0.26	8.42	0	0	0
55	SLU 19	-0.05	-0.26	8.42	0	0	0
55	SLU 20	-0.06	-0.26	8.52	0	0	0
55	SLU 21	-0.06	-0.26	8.52	0	0	0
55	SLU 22	-0.03	-0.24	7.92	0	0	0
55	SLU 23	-0.03	-0.25	7.92	0	0	0
55	SLU 24	-0.03	-0.24	8.09	0	0	0
55	SLU 25	-0.03	-0.25	8.09	0	0	0
55	SLU 26	-0.03	-0.25	8.03	0	0	0
55	SLU 27	-0.04	-0.24	8.19	0	0	0
55	SLU 28	-0.04	-0.24	8.19	0	0	0
55	SLU 29	-0.04	-0.24	8.12	0	0	0
55	SLU 30	-0.04	-0.24	8.13	0	0	0
55	SLU 31	-0.05	-0.26	8.84	0	0	0
55	SLU 32	-0.05	-0.25	9	0	0	0
55	SLU 33	-0.05	-0.26	9	0	0	0
55	SLU 34	-0.05	-0.26	8.94	0	0	0
55	SLU 35	-0.06	-0.25	9.11	0	0	0
55	SLU 36	-0.06	-0.25	9.11	0	0	0
55	SLU 37	-0.06	-0.25	9.04	0	0	0
55	SLU 38	-0.06	-0.25	9.04	0	0	0
55	SLU 39	-0.06	-0.26	9.23	0	0	0
55	SLU 40	-0.06	-0.26	9.23	0	0	0
55	SLU 41	-0.06	-0.26	9.33	0	0	0
55	SLU 42	-0.06	-0.26	9.33	0	0	0
55	SLU 43	-0.03	-0.32	8.97	0	0	0
55	SLU 44	-0.03	-0.33	8.97	0	0	0
55	SLU 45	-0.04	-0.32	9.14	0	0	0
55	SLU 46	-0.04	-0.33	9.14	0	0	0
55	SLU 47	-0.04	-0.33	9.07	0	0	0
55	SLU 48	-0.04	-0.32	9.24	0	0	0
55	SLU 49	-0.04	-0.32	9.24	0	0	0
55	SLU 50	-0.04	-0.32	9.17	0	0	0
55	SLU 51	-0.04	-0.32	9.17	0	0	0
55	SLU 52	-0.05	-0.34	9.88	0	0	0
55	SLU 53	-0.06	-0.33	10.05	0	0	0
55	SLU 54	-0.06	-0.34	10.05	0	0	0
55	SLU 55	-0.06	-0.34	9.99	0	0	0
55	SLU 56	-0.06	-0.33	10.15	0	0	0
55	SLU 57	-0.06	-0.33	10.15	0	0	0
55	SLU 58	-0.06	-0.33	10.09	0	0	0
55	SLU 59	-0.06	-0.33	10.09	0	0	0
55	SLU 60	-0.06	-0.34	10.27	0	0	0
55	SLU 61	-0.06	-0.34	10.27	0	0	0
55	SLU 62	-0.06	-0.34	10.38	0	0	0
55	SLU 63	-0.06	-0.34	10.38	0	0	0
55	SLU 64	-0.04	-0.32	9.78	0	0	0
55	SLU 65	-0.04	-0.32	9.78	0	0	0
55	SLU 66	-0.04	-0.32	9.94	0	0	0
55	SLU 67	-0.04	-0.32	9.95	0	0	0
55	SLU 68	-0.04	-0.32	9.88	0	0	0
55	SLU 69	-0.04	-0.32	10.05	0	0	0
55	SLU 70	-0.04	-0.32	10.05	0	0	0
55	SLU 71	-0.04	-0.32	9.98	0	0	0
55	SLU 72	-0.04	-0.32	9.98	0	0	0
55	SLU 73	-0.06	-0.33	10.69	0	0	0
55	SLU 74	-0.06	-0.33	10.86	0	0	0
55	SLU 75	-0.06	-0.33	10.86	0	0	0
55	SLU 76	-0.06	-0.33	10.8	0	0	0
55	SLU 77	-0.06	-0.33	10.96	0	0	0
55	SLU 78	-0.06	-0.33	10.96	0	0	0
55	SLU 79	-0.06	-0.33	10.89	0	0	0
55	SLU 80	-0.06	-0.33	10.9	0	0	0
55	SLU 81	-0.06	-0.33	11.08	0	0	0
55	SLU 82	-0.06	-0.33	11.08	0	0	0
55	SLU 83	-0.07	-0.33	11.18	0	0	0
55	SLU 84	-0.07	-0.33	11.19	0	0	0
55	SLE RA 1	-0.03	-0.25	7.34	0	0	0
55	SLE RA 2	-0.03	-0.25	7.34	0	0	0
55	SLE RA 3	-0.03	-0.25	7.45	0	0	0
55	SLE RA 4	-0.03	-0.25	7.46	0	0	0
55	SLE RA 5	-0.03	-0.25	7.41	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
55	SLE RA 6	-0.03	-0.25	7.52	0	0	0
55	SLE RA 7	-0.03	-0.25	7.52	0	0	0
55	SLE RA 8	-0.03	-0.24	7.48	0	0	0
55	SLE RA 9	-0.03	-0.25	7.48	0	0	0
55	SLE RA 10	-0.04	-0.26	7.95	0	0	0
55	SLE RA 11	-0.04	-0.25	8.06	0	0	0
55	SLE RA 12	-0.04	-0.25	8.07	0	0	0
55	SLE RA 13	-0.04	-0.25	8.02	0	0	0
55	SLE RA 14	-0.04	-0.25	8.13	0	0	0
55	SLE RA 15	-0.04	-0.25	8.13	0	0	0
55	SLE RA 16	-0.04	-0.25	8.09	0	0	0
55	SLE RA 17	-0.04	-0.25	8.09	0	0	0
55	SLE RA 18	-0.05	-0.26	8.21	0	0	0
55	SLE RA 19	-0.05	-0.26	8.21	0	0	0
55	SLE RA 20	-0.05	-0.25	8.28	0	0	0
55	SLE RA 21	-0.05	-0.26	8.28	0	0	0
55	SLE FR 1	-0.03	-0.25	7.34	0	0	0
55	SLE FR 2	-0.03	-0.25	7.34	0	0	0
55	SLE FR 3	-0.03	-0.25	7.37	0	0	0
55	SLE FR 4	-0.03	-0.25	7.6	0	0	0
55	SLE FR 5	-0.03	-0.25	7.63	0	0	0
55	SLE FR 6	-0.04	-0.25	7.78	0	0	0
55	SLE QP 1	-0.03	-0.25	7.34	0	0	0
55	SLE QP 2	-0.03	-0.25	7.6	0	0	0
55	SLD 1	0.45	-0.2	7.53	0	0	0
55	SLD 2	0.45	-0.19	7.52	0	0	0
55	SLD 3	0.41	-0.35	7.63	0	0	0
55	SLD 4	0.41	-0.34	7.63	0	0	0
55	SLD 5	0.16	-0.01	7.42	0	0	0
55	SLD 6	0.16	0	7.42	0	0	0
55	SLD 7	0.05	-0.51	7.77	0	0	0
55	SLD 8	0.05	-0.5	7.77	0	0	0
55	SLD 9	-0.11	0	7.44	0	0	0
55	SLD 10	-0.11	0.01	7.43	0	0	0
55	SLD 11	-0.23	-0.5	7.79	0	0	0
55	SLD 12	-0.23	-0.49	7.79	0	0	0
55	SLD 13	-0.48	-0.16	7.58	0	0	0
55	SLD 14	-0.48	-0.15	7.57	0	0	0
55	SLD 15	-0.51	-0.31	7.69	0	0	0
55	SLD 16	-0.51	-0.3	7.68	0	0	0
55	SLV 1	1.09	-0.14	7.43	0	0	0
55	SLV 2	1.09	-0.12	7.41	0	0	0
55	SLV 3	1.01	-0.48	7.67	0	0	0
55	SLV 4	1.01	-0.46	7.65	0	0	0
55	SLV 5	0.43	0.3	7.19	0	0	0
55	SLV 6	0.43	0.31	7.18	0	0	0
55	SLV 7	0.16	-0.84	7.99	0	0	0
55	SLV 8	0.16	-0.82	7.98	0	0	0
55	SLV 9	-0.23	0.32	7.23	0	0	0
55	SLV 10	-0.22	0.34	7.22	0	0	0
55	SLV 11	-0.49	-0.81	8.03	0	0	0
55	SLV 12	-0.49	-0.79	8.02	0	0	0
55	SLV 13	-1.08	-0.04	7.55	0	0	0
55	SLV 14	-1.08	-0.02	7.54	0	0	0
55	SLV 15	-1.16	-0.38	7.79	0	0	0
55	SLV 16	-1.16	-0.36	7.78	0	0	0
56	SLU 1	-0.02	-0.23	6.7	0	0	0
56	SLU 2	-0.02	-0.23	6.71	0	0	0
56	SLU 3	-0.03	-0.23	6.86	0	0	0
56	SLU 4	-0.03	-0.23	6.86	0	0	0
56	SLU 5	-0.03	-0.23	6.8	0	0	0
56	SLU 6	-0.03	-0.23	6.96	0	0	0
56	SLU 7	-0.03	-0.23	6.96	0	0	0
56	SLU 8	-0.03	-0.23	6.9	0	0	0
56	SLU 9	-0.03	-0.23	6.9	0	0	0
56	SLU 10	-0.04	-0.24	7.56	0	0	0
56	SLU 11	-0.05	-0.24	7.72	0	0	0
56	SLU 12	-0.05	-0.24	7.72	0	0	0
56	SLU 13	-0.05	-0.24	7.66	0	0	0
56	SLU 14	-0.05	-0.24	7.82	0	0	0
56	SLU 15	-0.05	-0.24	7.82	0	0	0
56	SLU 16	-0.05	-0.24	7.75	0	0	0
56	SLU 17	-0.05	-0.24	7.75	0	0	0
56	SLU 18	-0.05	-0.24	7.93	0	0	0
56	SLU 19	-0.05	-0.24	7.93	0	0	0
56	SLU 20	-0.05	-0.24	8.02	0	0	0
56	SLU 21	-0.05	-0.24	8.03	0	0	0
56	SLU 22	-0.03	-0.22	7.47	0	0	0
56	SLU 23	-0.03	-0.23	7.47	0	0	0
56	SLU 24	-0.03	-0.23	7.63	0	0	0
56	SLU 25	-0.03	-0.23	7.63	0	0	0
56	SLU 26	-0.03	-0.23	7.57	0	0	0
56	SLU 27	-0.03	-0.22	7.72	0	0	0
56	SLU 28	-0.03	-0.23	7.72	0	0	0
56	SLU 29	-0.03	-0.22	7.66	0	0	0
56	SLU 30	-0.03	-0.22	7.66	0	0	0
56	SLU 31	-0.05	-0.24	8.33	0	0	0
56	SLU 32	-0.05	-0.23	8.48	0	0	0
56	SLU 33	-0.05	-0.24	8.49	0	0	0
56	SLU 34	-0.05	-0.24	8.42	0	0	0
56	SLU 35	-0.05	-0.23	8.58	0	0	0
56	SLU 36	-0.05	-0.24	8.58	0	0	0
56	SLU 37	-0.05	-0.23	8.52	0	0	0
56	SLU 38	-0.05	-0.23	8.52	0	0	0
56	SLU 39	-0.05	-0.24	8.69	0	0	0
56	SLU 40	-0.05	-0.24	8.69	0	0	0
56	SLU 41	-0.06	-0.24	8.79	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
56	SLU 42	-0.06	-0.24	8.79	0	0	0
56	SLU 43	-0.03	-0.3	8.45	0	0	0
56	SLU 44	-0.03	-0.3	8.46	0	0	0
56	SLU 45	-0.03	-0.3	8.61	0	0	0
56	SLU 46	-0.03	-0.3	8.61	0	0	0
56	SLU 47	-0.04	-0.3	8.55	0	0	0
56	SLU 48	-0.04	-0.3	8.71	0	0	0
56	SLU 49	-0.04	-0.3	8.71	0	0	0
56	SLU 50	-0.04	-0.3	8.64	0	0	0
56	SLU 51	-0.04	-0.3	8.65	0	0	0
56	SLU 52	-0.05	-0.31	9.31	0	0	0
56	SLU 53	-0.05	-0.31	9.47	0	0	0
56	SLU 54	-0.05	-0.31	9.47	0	0	0
56	SLU 55	-0.05	-0.31	9.41	0	0	0
56	SLU 56	-0.06	-0.31	9.56	0	0	0
56	SLU 57	-0.06	-0.31	9.57	0	0	0
56	SLU 58	-0.06	-0.31	9.5	0	0	0
56	SLU 59	-0.06	-0.31	9.5	0	0	0
56	SLU 60	-0.06	-0.31	9.68	0	0	0
56	SLU 61	-0.06	-0.31	9.68	0	0	0
56	SLU 62	-0.06	-0.31	9.77	0	0	0
56	SLU 63	-0.06	-0.31	9.78	0	0	0
56	SLU 64	-0.03	-0.3	9.22	0	0	0
56	SLU 65	-0.03	-0.3	9.22	0	0	0
56	SLU 66	-0.04	-0.3	9.38	0	0	0
56	SLU 67	-0.04	-0.3	9.38	0	0	0
56	SLU 68	-0.04	-0.3	9.32	0	0	0
56	SLU 69	-0.04	-0.29	9.47	0	0	0
56	SLU 70	-0.04	-0.3	9.47	0	0	0
56	SLU 71	-0.04	-0.29	9.41	0	0	0
56	SLU 72	-0.04	-0.3	9.41	0	0	0
56	SLU 73	-0.05	-0.31	10.08	0	0	0
56	SLU 74	-0.06	-0.3	10.23	0	0	0
56	SLU 75	-0.06	-0.31	10.23	0	0	0
56	SLU 76	-0.06	-0.31	10.17	0	0	0
56	SLU 77	-0.06	-0.3	10.33	0	0	0
56	SLU 78	-0.06	-0.31	10.33	0	0	0
56	SLU 79	-0.06	-0.3	10.27	0	0	0
56	SLU 80	-0.06	-0.3	10.27	0	0	0
56	SLU 81	-0.06	-0.31	10.44	0	0	0
56	SLU 82	-0.06	-0.31	10.44	0	0	0
56	SLU 83	-0.06	-0.31	10.54	0	0	0
56	SLU 84	-0.06	-0.31	10.54	0	0	0
56	SLE RA 1	-0.03	-0.23	6.92	0	0	0
56	SLE RA 2	-0.03	-0.23	6.92	0	0	0
56	SLE RA 3	-0.03	-0.23	7.03	0	0	0
56	SLE RA 4	-0.03	-0.23	7.03	0	0	0
56	SLE RA 5	-0.03	-0.23	6.99	0	0	0
56	SLE RA 6	-0.03	-0.23	7.09	0	0	0
56	SLE RA 7	-0.03	-0.23	7.09	0	0	0
56	SLE RA 8	-0.03	-0.23	7.05	0	0	0
56	SLE RA 9	-0.03	-0.23	7.05	0	0	0
56	SLE RA 10	-0.04	-0.24	7.5	0	0	0
56	SLE RA 11	-0.04	-0.23	7.6	0	0	0
56	SLE RA 12	-0.04	-0.24	7.6	0	0	0
56	SLE RA 13	-0.04	-0.24	7.56	0	0	0
56	SLE RA 14	-0.04	-0.23	7.66	0	0	0
56	SLE RA 15	-0.04	-0.24	7.66	0	0	0
56	SLE RA 16	-0.04	-0.23	7.62	0	0	0
56	SLE RA 17	-0.04	-0.23	7.62	0	0	0
56	SLE RA 18	-0.04	-0.24	7.74	0	0	0
56	SLE RA 19	-0.04	-0.24	7.74	0	0	0
56	SLE RA 20	-0.05	-0.24	7.8	0	0	0
56	SLE RA 21	-0.05	-0.24	7.8	0	0	0
56	SLE FR 1	-0.03	-0.23	6.92	0	0	0
56	SLE FR 2	-0.03	-0.23	6.92	0	0	0
56	SLE FR 3	-0.03	-0.23	6.95	0	0	0
56	SLE FR 4	-0.03	-0.23	7.17	0	0	0
56	SLE FR 5	-0.03	-0.23	7.19	0	0	0
56	SLE FR 6	-0.03	-0.23	7.33	0	0	0
56	SLE QP 1	-0.03	-0.23	6.92	0	0	0
56	SLE QP 2	-0.03	-0.23	7.17	0	0	0
56	SLD 1	0.43	-0.19	7.08	0	0	0
56	SLD 2	0.43	-0.18	7.08	0	0	0
56	SLD 3	0.39	-0.33	7.17	0	0	0
56	SLD 4	0.39	-0.32	7.17	0	0	0
56	SLD 5	0.16	-0.01	7	0	0	0
56	SLD 6	0.16	0	7	0	0	0
56	SLD 7	0.05	-0.48	7.31	0	0	0
56	SLD 8	0.05	-0.47	7.31	0	0	0
56	SLD 9	-0.11	0.01	7.03	0	0	0
56	SLD 10	-0.11	0.01	7.03	0	0	0
56	SLD 11	-0.22	-0.46	7.34	0	0	0
56	SLD 12	-0.22	-0.45	7.33	0	0	0
56	SLD 13	-0.45	-0.15	7.17	0	0	0
56	SLD 14	-0.45	-0.13	7.16	0	0	0
56	SLD 15	-0.49	-0.29	7.26	0	0	0
56	SLD 16	-0.49	-0.27	7.25	0	0	0
56	SLV 1	1.04	-0.13	6.97	0	0	0
56	SLV 2	1.04	-0.11	6.96	0	0	0
56	SLV 3	0.96	-0.45	7.18	0	0	0
56	SLV 4	0.96	-0.43	7.16	0	0	0
56	SLV 5	0.4	0.28	6.8	0	0	0
56	SLV 6	0.41	0.29	6.79	0	0	0
56	SLV 7	0.15	-0.79	7.49	0	0	0
56	SLV 8	0.15	-0.77	7.48	0	0	0
56	SLV 9	-0.21	0.31	6.86	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
56	SLV 10	-0.21	0.32	6.85	0	0	0
56	SLV 11	-0.47	-0.76	7.55	0	0	0
56	SLV 12	-0.47	-0.74	7.54	0	0	0
56	SLV 13	-1.02	-0.04	7.17	0	0	0
56	SLV 14	-1.02	-0.01	7.15	0	0	0
56	SLV 15	-1.1	-0.35	7.38	0	0	0
56	SLV 16	-1.1	-0.33	7.36	0	0	0
57	SLU 1	-0.02	-0.21	6.3	0	0	0
57	SLU 2	-0.02	-0.22	6.3	0	0	0
57	SLU 3	-0.03	-0.21	6.45	0	0	0
57	SLU 4	-0.03	-0.21	6.45	0	0	0
57	SLU 5	-0.03	-0.21	6.39	0	0	0
57	SLU 6	-0.03	-0.21	6.54	0	0	0
57	SLU 7	-0.03	-0.21	6.54	0	0	0
57	SLU 8	-0.03	-0.21	6.48	0	0	0
57	SLU 9	-0.03	-0.21	6.48	0	0	0
57	SLU 10	-0.04	-0.22	7.11	0	0	0
57	SLU 11	-0.04	-0.22	7.25	0	0	0
57	SLU 12	-0.04	-0.22	7.25	0	0	0
57	SLU 13	-0.04	-0.22	7.19	0	0	0
57	SLU 14	-0.05	-0.22	7.34	0	0	0
57	SLU 15	-0.05	-0.22	7.34	0	0	0
57	SLU 16	-0.05	-0.22	7.28	0	0	0
57	SLU 17	-0.05	-0.22	7.28	0	0	0
57	SLU 18	-0.05	-0.22	7.45	0	0	0
57	SLU 19	-0.05	-0.23	7.45	0	0	0
57	SLU 20	-0.05	-0.22	7.53	0	0	0
57	SLU 21	-0.05	-0.22	7.54	0	0	0
57	SLU 22	-0.02	-0.21	7.02	0	0	0
57	SLU 23	-0.03	-0.21	7.02	0	0	0
57	SLU 24	-0.03	-0.21	7.17	0	0	0
57	SLU 25	-0.03	-0.21	7.17	0	0	0
57	SLU 26	-0.03	-0.21	7.11	0	0	0
57	SLU 27	-0.03	-0.21	7.26	0	0	0
57	SLU 28	-0.03	-0.21	7.26	0	0	0
57	SLU 29	-0.03	-0.21	7.2	0	0	0
57	SLU 30	-0.03	-0.21	7.2	0	0	0
57	SLU 31	-0.04	-0.22	7.82	0	0	0
57	SLU 32	-0.05	-0.22	7.97	0	0	0
57	SLU 33	-0.05	-0.22	7.97	0	0	0
57	SLU 34	-0.05	-0.22	7.91	0	0	0
57	SLU 35	-0.05	-0.21	8.06	0	0	0
57	SLU 36	-0.05	-0.22	8.06	0	0	0
57	SLU 37	-0.05	-0.21	8	0	0	0
57	SLU 38	-0.05	-0.22	8	0	0	0
57	SLU 39	-0.05	-0.22	8.16	0	0	0
57	SLU 40	-0.05	-0.22	8.17	0	0	0
57	SLU 41	-0.05	-0.22	8.25	0	0	0
57	SLU 42	-0.05	-0.22	8.25	0	0	0
57	SLU 43	-0.03	-0.28	7.95	0	0	0
57	SLU 44	-0.03	-0.28	7.95	0	0	0
57	SLU 45	-0.03	-0.28	8.09	0	0	0
57	SLU 46	-0.03	-0.28	8.09	0	0	0
57	SLU 47	-0.03	-0.28	8.04	0	0	0
57	SLU 48	-0.04	-0.28	8.18	0	0	0
57	SLU 49	-0.04	-0.28	8.18	0	0	0
57	SLU 50	-0.04	-0.28	8.12	0	0	0
57	SLU 51	-0.04	-0.28	8.12	0	0	0
57	SLU 52	-0.05	-0.29	8.75	0	0	0
57	SLU 53	-0.05	-0.29	8.89	0	0	0
57	SLU 54	-0.05	-0.29	8.9	0	0	0
57	SLU 55	-0.05	-0.29	8.84	0	0	0
57	SLU 56	-0.05	-0.28	8.98	0	0	0
57	SLU 57	-0.05	-0.29	8.98	0	0	0
57	SLU 58	-0.05	-0.28	8.92	0	0	0
57	SLU 59	-0.05	-0.29	8.93	0	0	0
57	SLU 60	-0.05	-0.29	9.09	0	0	0
57	SLU 61	-0.05	-0.29	9.09	0	0	0
57	SLU 62	-0.06	-0.29	9.18	0	0	0
57	SLU 63	-0.06	-0.29	9.18	0	0	0
57	SLU 64	-0.03	-0.27	8.66	0	0	0
57	SLU 65	-0.03	-0.28	8.67	0	0	0
57	SLU 66	-0.03	-0.27	8.81	0	0	0
57	SLU 67	-0.03	-0.28	8.81	0	0	0
57	SLU 68	-0.03	-0.28	8.76	0	0	0
57	SLU 69	-0.04	-0.27	8.9	0	0	0
57	SLU 70	-0.04	-0.27	8.9	0	0	0
57	SLU 71	-0.04	-0.27	8.84	0	0	0
57	SLU 72	-0.04	-0.27	8.84	0	0	0
57	SLU 73	-0.05	-0.28	9.47	0	0	0
57	SLU 74	-0.05	-0.28	9.61	0	0	0
57	SLU 75	-0.05	-0.28	9.61	0	0	0
57	SLU 76	-0.05	-0.28	9.56	0	0	0
57	SLU 77	-0.05	-0.28	9.7	0	0	0
57	SLU 78	-0.06	-0.28	9.7	0	0	0
57	SLU 79	-0.06	-0.28	9.64	0	0	0
57	SLU 80	-0.06	-0.28	9.64	0	0	0
57	SLU 81	-0.06	-0.28	9.81	0	0	0
57	SLU 82	-0.06	-0.29	9.81	0	0	0
57	SLU 83	-0.06	-0.28	9.9	0	0	0
57	SLU 84	-0.06	-0.28	9.9	0	0	0
57	SLE RA 1	-0.02	-0.21	6.51	0	0	0
57	SLE RA 2	-0.02	-0.21	6.51	0	0	0
57	SLE RA 3	-0.03	-0.21	6.61	0	0	0
57	SLE RA 4	-0.03	-0.21	6.61	0	0	0
57	SLE RA 5	-0.03	-0.21	6.57	0	0	0
57	SLE RA 6	-0.03	-0.21	6.66	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
57	SLE RA 7	-0.03	-0.21	6.67	0	0	0
57	SLE RA 8	-0.03	-0.21	6.62	0	0	0
57	SLE RA 9	-0.03	-0.21	6.63	0	0	0
57	SLE RA 10	-0.04	-0.22	7.04	0	0	0
57	SLE RA 11	-0.04	-0.22	7.14	0	0	0
57	SLE RA 12	-0.04	-0.22	7.14	0	0	0
57	SLE RA 13	-0.04	-0.22	7.1	0	0	0
57	SLE RA 14	-0.04	-0.22	7.2	0	0	0
57	SLE RA 15	-0.04	-0.22	7.2	0	0	0
57	SLE RA 16	-0.04	-0.21	7.16	0	0	0
57	SLE RA 17	-0.04	-0.22	7.16	0	0	0
57	SLE RA 18	-0.04	-0.22	7.27	0	0	0
57	SLE RA 19	-0.04	-0.22	7.27	0	0	0
57	SLE RA 20	-0.04	-0.22	7.33	0	0	0
57	SLE RA 21	-0.04	-0.22	7.33	0	0	0
57	SLE FR 1	-0.02	-0.21	6.51	0	0	0
57	SLE FR 2	-0.02	-0.21	6.51	0	0	0
57	SLE FR 3	-0.02	-0.21	6.53	0	0	0
57	SLE FR 4	-0.03	-0.21	6.74	0	0	0
57	SLE FR 5	-0.03	-0.21	6.76	0	0	0
57	SLE FR 6	-0.03	-0.21	6.89	0	0	0
57	SLE QP 1	-0.02	-0.21	6.51	0	0	0
57	SLE QP 2	-0.03	-0.21	6.74	0	0	0
57	SLD 1	0.4	-0.18	6.63	0	0	0
57	SLD 2	0.4	-0.16	6.62	0	0	0
57	SLD 3	0.37	-0.31	6.71	0	0	0
57	SLD 4	0.37	-0.29	6.7	0	0	0
57	SLD 5	0.15	-0.01	6.58	0	0	0
57	SLD 6	0.15	0	6.58	0	0	0
57	SLD 7	0.05	-0.44	6.85	0	0	0
57	SLD 8	0.05	-0.43	6.84	0	0	0
57	SLD 9	-0.1	0.01	6.63	0	0	0
57	SLD 10	-0.1	0.02	6.62	0	0	0
57	SLD 11	-0.21	-0.43	6.89	0	0	0
57	SLD 12	-0.2	-0.42	6.89	0	0	0
57	SLD 13	-0.43	-0.13	6.77	0	0	0
57	SLD 14	-0.43	-0.12	6.77	0	0	0
57	SLD 15	-0.46	-0.26	6.85	0	0	0
57	SLD 16	-0.46	-0.25	6.84	0	0	0
57	SLV 1	0.98	-0.13	6.48	0	0	0
57	SLV 2	0.98	-0.1	6.47	0	0	0
57	SLV 3	0.91	-0.43	6.66	0	0	0
57	SLV 4	0.91	-0.4	6.65	0	0	0
57	SLV 5	0.38	0.26	6.39	0	0	0
57	SLV 6	0.38	0.28	6.38	0	0	0
57	SLV 7	0.15	-0.74	6.99	0	0	0
57	SLV 8	0.15	-0.71	6.98	0	0	0
57	SLV 9	-0.2	0.29	6.49	0	0	0
57	SLV 10	-0.2	0.31	6.48	0	0	0
57	SLV 11	-0.44	-0.71	7.09	0	0	0
57	SLV 12	-0.44	-0.68	7.08	0	0	0
57	SLV 13	-0.97	-0.03	6.83	0	0	0
57	SLV 14	-0.97	0	6.81	0	0	0
57	SLV 15	-1.04	-0.33	7	0	0	0
57	SLV 16	-1.04	-0.3	6.99	0	0	0
58	SLU 1	-0.02	-0.2	6.11	0	0	0
58	SLU 2	-0.02	-0.21	6.11	0	0	0
58	SLU 3	-0.02	-0.2	6.25	0	0	0
58	SLU 4	-0.03	-0.21	6.25	0	0	0
58	SLU 5	-0.03	-0.2	6.2	0	0	0
58	SLU 6	-0.03	-0.2	6.33	0	0	0
58	SLU 7	-0.03	-0.2	6.34	0	0	0
58	SLU 8	-0.03	-0.2	6.28	0	0	0
58	SLU 9	-0.03	-0.2	6.28	0	0	0
58	SLU 10	-0.04	-0.21	6.88	0	0	0
58	SLU 11	-0.04	-0.21	7.02	0	0	0
58	SLU 12	-0.04	-0.21	7.02	0	0	0
58	SLU 13	-0.04	-0.21	6.97	0	0	0
58	SLU 14	-0.05	-0.21	7.11	0	0	0
58	SLU 15	-0.05	-0.21	7.11	0	0	0
58	SLU 16	-0.05	-0.21	7.05	0	0	0
58	SLU 17	-0.05	-0.21	7.05	0	0	0
58	SLU 18	-0.05	-0.21	7.21	0	0	0
58	SLU 19	-0.05	-0.21	7.21	0	0	0
58	SLU 20	-0.05	-0.21	7.3	0	0	0
58	SLU 21	-0.05	-0.21	7.3	0	0	0
58	SLU 22	-0.02	-0.2	6.81	0	0	0
58	SLU 23	-0.02	-0.2	6.81	0	0	0
58	SLU 24	-0.03	-0.2	6.95	0	0	0
58	SLU 25	-0.03	-0.2	6.95	0	0	0
58	SLU 26	-0.03	-0.2	6.89	0	0	0
58	SLU 27	-0.03	-0.2	7.03	0	0	0
58	SLU 28	-0.03	-0.2	7.03	0	0	0
58	SLU 29	-0.03	-0.2	6.97	0	0	0
58	SLU 30	-0.03	-0.2	6.98	0	0	0
58	SLU 31	-0.04	-0.21	7.58	0	0	0
58	SLU 32	-0.04	-0.21	7.72	0	0	0
58	SLU 33	-0.04	-0.21	7.72	0	0	0
58	SLU 34	-0.04	-0.21	7.66	0	0	0
58	SLU 35	-0.05	-0.2	7.8	0	0	0
58	SLU 36	-0.05	-0.21	7.8	0	0	0
58	SLU 37	-0.05	-0.2	7.75	0	0	0
58	SLU 38	-0.05	-0.2	7.75	0	0	0
58	SLU 39	-0.05	-0.21	7.91	0	0	0
58	SLU 40	-0.05	-0.21	7.91	0	0	0
58	SLU 41	-0.05	-0.21	7.99	0	0	0
58	SLU 42	-0.05	-0.21	7.99	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
58	SLU 43	-0.03	-0.27	7.7	0	0	0
58	SLU 44	-0.03	-0.27	7.7	0	0	0
58	SLU 45	-0.03	-0.27	7.84	0	0	0
58	SLU 46	-0.03	-0.27	7.85	0	0	0
58	SLU 47	-0.03	-0.27	7.79	0	0	0
58	SLU 48	-0.03	-0.26	7.93	0	0	0
58	SLU 49	-0.03	-0.27	7.93	0	0	0
58	SLU 50	-0.03	-0.26	7.87	0	0	0
58	SLU 51	-0.03	-0.27	7.87	0	0	0
58	SLU 52	-0.05	-0.28	8.48	0	0	0
58	SLU 53	-0.05	-0.27	8.62	0	0	0
58	SLU 54	-0.05	-0.27	8.62	0	0	0
58	SLU 55	-0.05	-0.27	8.56	0	0	0
58	SLU 56	-0.05	-0.27	8.7	0	0	0
58	SLU 57	-0.05	-0.27	8.7	0	0	0
58	SLU 58	-0.05	-0.27	8.64	0	0	0
58	SLU 59	-0.05	-0.27	8.64	0	0	0
58	SLU 60	-0.05	-0.28	8.8	0	0	0
58	SLU 61	-0.05	-0.28	8.81	0	0	0
58	SLU 62	-0.06	-0.27	8.89	0	0	0
58	SLU 63	-0.06	-0.28	8.89	0	0	0
58	SLU 64	-0.03	-0.26	8.4	0	0	0
58	SLU 65	-0.03	-0.26	8.4	0	0	0
58	SLU 66	-0.03	-0.26	8.54	0	0	0
58	SLU 67	-0.03	-0.26	8.54	0	0	0
58	SLU 68	-0.03	-0.26	8.49	0	0	0
58	SLU 69	-0.04	-0.26	8.62	0	0	0
58	SLU 70	-0.04	-0.26	8.63	0	0	0
58	SLU 71	-0.04	-0.26	8.57	0	0	0
58	SLU 72	-0.04	-0.26	8.57	0	0	0
58	SLU 73	-0.05	-0.27	9.17	0	0	0
58	SLU 74	-0.05	-0.27	9.31	0	0	0
58	SLU 75	-0.05	-0.27	9.31	0	0	0
58	SLU 76	-0.05	-0.27	9.26	0	0	0
58	SLU 77	-0.05	-0.27	9.4	0	0	0
58	SLU 78	-0.05	-0.27	9.4	0	0	0
58	SLU 79	-0.05	-0.27	9.34	0	0	0
58	SLU 80	-0.05	-0.27	9.34	0	0	0
58	SLU 81	-0.05	-0.27	9.5	0	0	0
58	SLU 82	-0.05	-0.27	9.5	0	0	0
58	SLU 83	-0.06	-0.27	9.59	0	0	0
58	SLU 84	-0.06	-0.27	9.59	0	0	0
58	SLE RA 1	-0.02	-0.2	6.31	0	0	0
58	SLE RA 2	-0.02	-0.2	6.31	0	0	0
58	SLE RA 3	-0.02	-0.2	6.4	0	0	0
58	SLE RA 4	-0.02	-0.2	6.4	0	0	0
58	SLE RA 5	-0.02	-0.2	6.37	0	0	0
58	SLE RA 6	-0.03	-0.2	6.46	0	0	0
58	SLE RA 7	-0.03	-0.2	6.46	0	0	0
58	SLE RA 8	-0.03	-0.2	6.42	0	0	0
58	SLE RA 9	-0.03	-0.2	6.42	0	0	0
58	SLE RA 10	-0.03	-0.21	6.82	0	0	0
58	SLE RA 11	-0.04	-0.21	6.92	0	0	0
58	SLE RA 12	-0.04	-0.21	6.92	0	0	0
58	SLE RA 13	-0.04	-0.21	6.88	0	0	0
58	SLE RA 14	-0.04	-0.21	6.97	0	0	0
58	SLE RA 15	-0.04	-0.21	6.97	0	0	0
58	SLE RA 16	-0.04	-0.2	6.93	0	0	0
58	SLE RA 17	-0.04	-0.21	6.94	0	0	0
58	SLE RA 18	-0.04	-0.21	7.04	0	0	0
58	SLE RA 19	-0.04	-0.21	7.04	0	0	0
58	SLE RA 20	-0.04	-0.21	7.1	0	0	0
58	SLE RA 21	-0.04	-0.21	7.1	0	0	0
58	SLE FR 1	-0.02	-0.2	6.31	0	0	0
58	SLE FR 2	-0.02	-0.2	6.31	0	0	0
58	SLE FR 3	-0.02	-0.2	6.33	0	0	0
58	SLE FR 4	-0.03	-0.2	6.53	0	0	0
58	SLE FR 5	-0.03	-0.2	6.55	0	0	0
58	SLE FR 6	-0.03	-0.2	6.68	0	0	0
58	SLE QP 1	-0.02	-0.2	6.31	0	0	0
58	SLE QP 2	-0.03	-0.2	6.53	0	0	0
58	SLD 1	0.39	-0.17	6.39	0	0	0
58	SLD 2	0.39	-0.15	6.38	0	0	0
58	SLD 3	0.36	-0.3	6.46	0	0	0
58	SLD 4	0.36	-0.28	6.45	0	0	0
58	SLD 5	0.15	0	6.38	0	0	0
58	SLD 6	0.15	0.01	6.38	0	0	0
58	SLD 7	0.04	-0.43	6.62	0	0	0
58	SLD 8	0.04	-0.42	6.61	0	0	0
58	SLD 9	-0.1	0.01	6.45	0	0	0
58	SLD 10	-0.1	0.02	6.44	0	0	0
58	SLD 11	-0.2	-0.41	6.68	0	0	0
58	SLD 12	-0.2	-0.4	6.67	0	0	0
58	SLD 13	-0.42	-0.13	6.6	0	0	0
58	SLD 14	-0.42	-0.11	6.6	0	0	0
58	SLD 15	-0.45	-0.25	6.67	0	0	0
58	SLD 16	-0.45	-0.24	6.67	0	0	0
58	SLV 1	0.96	-0.13	6.21	0	0	0
58	SLV 2	0.96	-0.09	6.19	0	0	0
58	SLV 3	0.89	-0.42	6.37	0	0	0
58	SLV 4	0.89	-0.38	6.35	0	0	0
58	SLV 5	0.37	0.25	6.19	0	0	0
58	SLV 6	0.37	0.27	6.18	0	0	0
58	SLV 7	0.14	-0.71	6.73	0	0	0
58	SLV 8	0.14	-0.69	6.71	0	0	0
58	SLV 9	-0.2	0.28	6.34	0	0	0
58	SLV 10	-0.2	0.3	6.33	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
58	SLV 11	-0.43	-0.68	6.88	0	0	0
58	SLV 12	-0.43	-0.66	6.86	0	0	0
58	SLV 13	-0.94	-0.03	6.71	0	0	0
58	SLV 14	-0.94	0.01	6.69	0	0	0
58	SLV 15	-1.01	-0.32	6.87	0	0	0
58	SLV 16	-1.01	-0.28	6.85	0	0	0
59	SLU 1	-0.02	-0.22	6.82	0	0	0
59	SLU 2	-0.02	-0.23	6.83	0	0	0
59	SLU 3	-0.03	-0.22	6.98	0	0	0
59	SLU 4	-0.03	-0.23	6.98	0	0	0
59	SLU 5	-0.03	-0.23	6.92	0	0	0
59	SLU 6	-0.03	-0.22	7.07	0	0	0
59	SLU 7	-0.03	-0.22	7.08	0	0	0
59	SLU 8	-0.03	-0.22	7.01	0	0	0
59	SLU 9	-0.03	-0.22	7.01	0	0	0
59	SLU 10	-0.04	-0.23	7.68	0	0	0
59	SLU 11	-0.05	-0.23	7.84	0	0	0
59	SLU 12	-0.05	-0.23	7.84	0	0	0
59	SLU 13	-0.05	-0.23	7.78	0	0	0
59	SLU 14	-0.05	-0.23	7.93	0	0	0
59	SLU 15	-0.05	-0.23	7.93	0	0	0
59	SLU 16	-0.05	-0.23	7.87	0	0	0
59	SLU 17	-0.05	-0.23	7.87	0	0	0
59	SLU 18	-0.05	-0.23	8.05	0	0	0
59	SLU 19	-0.05	-0.24	8.05	0	0	0
59	SLU 20	-0.06	-0.23	8.14	0	0	0
59	SLU 21	-0.06	-0.23	8.14	0	0	0
59	SLU 22	-0.03	-0.22	7.6	0	0	0
59	SLU 23	-0.03	-0.22	7.6	0	0	0
59	SLU 24	-0.03	-0.22	7.76	0	0	0
59	SLU 25	-0.03	-0.22	7.76	0	0	0
59	SLU 26	-0.03	-0.22	7.7	0	0	0
59	SLU 27	-0.03	-0.22	7.85	0	0	0
59	SLU 28	-0.03	-0.22	7.85	0	0	0
59	SLU 29	-0.03	-0.22	7.79	0	0	0
59	SLU 30	-0.03	-0.22	7.79	0	0	0
59	SLU 31	-0.05	-0.23	8.46	0	0	0
59	SLU 32	-0.05	-0.23	8.62	0	0	0
59	SLU 33	-0.05	-0.23	8.62	0	0	0
59	SLU 34	-0.05	-0.23	8.55	0	0	0
59	SLU 35	-0.05	-0.22	8.71	0	0	0
59	SLU 36	-0.05	-0.23	8.71	0	0	0
59	SLU 37	-0.05	-0.22	8.64	0	0	0
59	SLU 38	-0.05	-0.22	8.65	0	0	0
59	SLU 39	-0.05	-0.23	8.83	0	0	0
59	SLU 40	-0.05	-0.23	8.83	0	0	0
59	SLU 41	-0.06	-0.23	8.92	0	0	0
59	SLU 42	-0.06	-0.23	8.92	0	0	0
59	SLU 43	-0.03	-0.29	8.6	0	0	0
59	SLU 44	-0.03	-0.3	8.61	0	0	0
59	SLU 45	-0.03	-0.29	8.76	0	0	0
59	SLU 46	-0.03	-0.29	8.76	0	0	0
59	SLU 47	-0.04	-0.29	8.7	0	0	0
59	SLU 48	-0.04	-0.29	8.85	0	0	0
59	SLU 49	-0.04	-0.29	8.86	0	0	0
59	SLU 50	-0.04	-0.29	8.79	0	0	0
59	SLU 51	-0.04	-0.29	8.79	0	0	0
59	SLU 52	-0.05	-0.3	9.46	0	0	0
59	SLU 53	-0.05	-0.3	9.62	0	0	0
59	SLU 54	-0.05	-0.3	9.62	0	0	0
59	SLU 55	-0.05	-0.3	9.56	0	0	0
59	SLU 56	-0.06	-0.3	9.71	0	0	0
59	SLU 57	-0.06	-0.3	9.71	0	0	0
59	SLU 58	-0.06	-0.3	9.65	0	0	0
59	SLU 59	-0.06	-0.3	9.65	0	0	0
59	SLU 60	-0.06	-0.3	9.83	0	0	0
59	SLU 61	-0.06	-0.3	9.83	0	0	0
59	SLU 62	-0.06	-0.3	9.92	0	0	0
59	SLU 63	-0.06	-0.3	9.92	0	0	0
59	SLU 64	-0.03	-0.29	9.38	0	0	0
59	SLU 65	-0.03	-0.29	9.39	0	0	0
59	SLU 66	-0.04	-0.29	9.54	0	0	0
59	SLU 67	-0.04	-0.29	9.54	0	0	0
59	SLU 68	-0.04	-0.29	9.48	0	0	0
59	SLU 69	-0.04	-0.29	9.63	0	0	0
59	SLU 70	-0.04	-0.29	9.63	0	0	0
59	SLU 71	-0.04	-0.28	9.57	0	0	0
59	SLU 72	-0.04	-0.29	9.57	0	0	0
59	SLU 73	-0.05	-0.3	10.24	0	0	0
59	SLU 74	-0.06	-0.29	10.4	0	0	0
59	SLU 75	-0.06	-0.3	10.4	0	0	0
59	SLU 76	-0.06	-0.3	10.33	0	0	0
59	SLU 77	-0.06	-0.29	10.49	0	0	0
59	SLU 78	-0.06	-0.3	10.49	0	0	0
59	SLU 79	-0.06	-0.29	10.42	0	0	0
59	SLU 80	-0.06	-0.29	10.43	0	0	0
59	SLU 81	-0.06	-0.3	10.61	0	0	0
59	SLU 82	-0.06	-0.3	10.61	0	0	0
59	SLU 83	-0.06	-0.3	10.7	0	0	0
59	SLU 84	-0.06	-0.3	10.7	0	0	0
59	SLE RA 1	-0.03	-0.22	7.05	0	0	0
59	SLE RA 2	-0.03	-0.22	7.05	0	0	0
59	SLE RA 3	-0.03	-0.22	7.15	0	0	0
59	SLE RA 4	-0.03	-0.22	7.15	0	0	0
59	SLE RA 5	-0.03	-0.22	7.11	0	0	0
59	SLE RA 6	-0.03	-0.22	7.21	0	0	0
59	SLE RA 7	-0.03	-0.22	7.21	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
59	SLE RA 8	-0.03	-0.22	7.17	0	0	0
59	SLE RA 9	-0.03	-0.22	7.17	0	0	0
59	SLE RA 10	-0.04	-0.23	7.62	0	0	0
59	SLE RA 11	-0.04	-0.23	7.72	0	0	0
59	SLE RA 12	-0.04	-0.23	7.72	0	0	0
59	SLE RA 13	-0.04	-0.23	7.68	0	0	0
59	SLE RA 14	-0.04	-0.23	7.78	0	0	0
59	SLE RA 15	-0.04	-0.23	7.78	0	0	0
59	SLE RA 16	-0.04	-0.22	7.74	0	0	0
59	SLE RA 17	-0.04	-0.23	7.74	0	0	0
59	SLE RA 18	-0.04	-0.23	7.86	0	0	0
59	SLE RA 19	-0.04	-0.23	7.86	0	0	0
59	SLE RA 20	-0.05	-0.23	7.92	0	0	0
59	SLE RA 21	-0.05	-0.23	7.92	0	0	0
59	SLE FR 1	-0.03	-0.22	7.05	0	0	0
59	SLE FR 2	-0.03	-0.22	7.05	0	0	0
59	SLE FR 3	-0.03	-0.22	7.07	0	0	0
59	SLE FR 4	-0.03	-0.22	7.29	0	0	0
59	SLE FR 5	-0.03	-0.22	7.32	0	0	0
59	SLE FR 6	-0.03	-0.23	7.45	0	0	0
59	SLE QP 1	-0.03	-0.22	7.05	0	0	0
59	SLE QP 2	-0.03	-0.22	7.29	0	0	0
59	SLD 1	0.44	-0.19	7.1	0	0	0
59	SLD 2	0.44	-0.17	7.09	0	0	0
59	SLD 3	0.41	-0.33	7.17	0	0	0
59	SLD 4	0.41	-0.31	7.16	0	0	0
59	SLD 5	0.16	0	7.12	0	0	0
59	SLD 6	0.16	0.01	7.12	0	0	0
59	SLD 7	0.05	-0.47	7.37	0	0	0
59	SLD 8	0.05	-0.46	7.36	0	0	0
59	SLD 9	-0.11	0.01	7.22	0	0	0
59	SLD 10	-0.11	0.03	7.21	0	0	0
59	SLD 11	-0.22	-0.46	7.46	0	0	0
59	SLD 12	-0.22	-0.44	7.46	0	0	0
59	SLD 13	-0.47	-0.14	7.42	0	0	0
59	SLD 14	-0.47	-0.12	7.41	0	0	0
59	SLD 15	-0.5	-0.28	7.49	0	0	0
59	SLD 16	-0.5	-0.26	7.48	0	0	0
59	SLV 1	1.08	-0.15	6.84	0	0	0
59	SLV 2	1.08	-0.1	6.82	0	0	0
59	SLV 3	1	-0.47	7.01	0	0	0
59	SLV 4	1	-0.42	6.99	0	0	0
59	SLV 5	0.42	0.28	6.91	0	0	0
59	SLV 6	0.42	0.31	6.89	0	0	0
59	SLV 7	0.16	-0.79	7.46	0	0	0
59	SLV 8	0.16	-0.76	7.45	0	0	0
59	SLV 9	-0.22	0.31	7.13	0	0	0
59	SLV 10	-0.22	0.34	7.12	0	0	0
59	SLV 11	-0.48	-0.75	7.69	0	0	0
59	SLV 12	-0.48	-0.72	7.67	0	0	0
59	SLV 13	-1.06	-0.03	7.6	0	0	0
59	SLV 14	-1.06	0.02	7.57	0	0	0
59	SLV 15	-1.14	-0.35	7.76	0	0	0
59	SLV 16	-1.14	-0.3	7.74	0	0	0
60	SLU 1	-0.01	-0.12	3.78	0	0	0
60	SLU 2	-0.01	-0.12	3.78	0	0	0
60	SLU 3	-0.02	-0.12	3.86	0	0	0
60	SLU 4	-0.02	-0.12	3.86	0	0	0
60	SLU 5	-0.02	-0.12	3.83	0	0	0
60	SLU 6	-0.02	-0.12	3.91	0	0	0
60	SLU 7	-0.02	-0.12	3.91	0	0	0
60	SLU 8	-0.02	-0.12	3.88	0	0	0
60	SLU 9	-0.02	-0.12	3.88	0	0	0
60	SLU 10	-0.02	-0.13	4.25	0	0	0
60	SLU 11	-0.03	-0.13	4.33	0	0	0
60	SLU 12	-0.03	-0.13	4.33	0	0	0
60	SLU 13	-0.03	-0.13	4.3	0	0	0
60	SLU 14	-0.03	-0.12	4.38	0	0	0
60	SLU 15	-0.03	-0.13	4.38	0	0	0
60	SLU 16	-0.03	-0.12	4.35	0	0	0
60	SLU 17	-0.03	-0.12	4.35	0	0	0
60	SLU 18	-0.03	-0.13	4.45	0	0	0
60	SLU 19	-0.03	-0.13	4.45	0	0	0
60	SLU 20	-0.03	-0.13	4.5	0	0	0
60	SLU 21	-0.03	-0.13	4.5	0	0	0
60	SLU 22	-0.01	-0.12	4.21	0	0	0
60	SLU 23	-0.02	-0.12	4.21	0	0	0
60	SLU 24	-0.02	-0.12	4.29	0	0	0
60	SLU 25	-0.02	-0.12	4.29	0	0	0
60	SLU 26	-0.02	-0.12	4.26	0	0	0
60	SLU 27	-0.02	-0.12	4.34	0	0	0
60	SLU 28	-0.02	-0.12	4.34	0	0	0
60	SLU 29	-0.02	-0.12	4.31	0	0	0
60	SLU 30	-0.02	-0.12	4.31	0	0	0
60	SLU 31	-0.03	-0.12	4.68	0	0	0
60	SLU 32	-0.03	-0.12	4.76	0	0	0
60	SLU 33	-0.03	-0.12	4.76	0	0	0
60	SLU 34	-0.03	-0.12	4.73	0	0	0
60	SLU 35	-0.03	-0.12	4.81	0	0	0
60	SLU 36	-0.03	-0.12	4.81	0	0	0
60	SLU 37	-0.03	-0.12	4.78	0	0	0
60	SLU 38	-0.03	-0.12	4.78	0	0	0
60	SLU 39	-0.03	-0.12	4.88	0	0	0
60	SLU 40	-0.03	-0.12	4.88	0	0	0
60	SLU 41	-0.03	-0.12	4.93	0	0	0
60	SLU 42	-0.03	-0.12	4.93	0	0	0
60	SLU 43	-0.02	-0.16	4.76	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
60	SLU 44	-0.02	-0.16	4.76	0	0	0
60	SLU 45	-0.02	-0.16	4.85	0	0	0
60	SLU 46	-0.02	-0.16	4.85	0	0	0
60	SLU 47	-0.02	-0.16	4.81	0	0	0
60	SLU 48	-0.02	-0.16	4.9	0	0	0
60	SLU 49	-0.02	-0.16	4.9	0	0	0
60	SLU 50	-0.02	-0.16	4.86	0	0	0
60	SLU 51	-0.02	-0.16	4.86	0	0	0
60	SLU 52	-0.03	-0.16	5.23	0	0	0
60	SLU 53	-0.03	-0.16	5.32	0	0	0
60	SLU 54	-0.03	-0.16	5.32	0	0	0
60	SLU 55	-0.03	-0.16	5.28	0	0	0
60	SLU 56	-0.03	-0.16	5.37	0	0	0
60	SLU 57	-0.03	-0.16	5.37	0	0	0
60	SLU 58	-0.03	-0.16	5.33	0	0	0
60	SLU 59	-0.03	-0.16	5.33	0	0	0
60	SLU 60	-0.03	-0.16	5.43	0	0	0
60	SLU 61	-0.03	-0.17	5.43	0	0	0
60	SLU 62	-0.03	-0.16	5.48	0	0	0
60	SLU 63	-0.03	-0.16	5.48	0	0	0
60	SLU 64	-0.02	-0.16	5.19	0	0	0
60	SLU 65	-0.02	-0.16	5.19	0	0	0
60	SLU 66	-0.02	-0.16	5.28	0	0	0
60	SLU 67	-0.02	-0.16	5.28	0	0	0
60	SLU 68	-0.02	-0.16	5.24	0	0	0
60	SLU 69	-0.02	-0.16	5.33	0	0	0
60	SLU 70	-0.02	-0.16	5.33	0	0	0
60	SLU 71	-0.02	-0.15	5.29	0	0	0
60	SLU 72	-0.02	-0.16	5.29	0	0	0
60	SLU 73	-0.03	-0.16	5.66	0	0	0
60	SLU 74	-0.03	-0.16	5.75	0	0	0
60	SLU 75	-0.03	-0.16	5.75	0	0	0
60	SLU 76	-0.03	-0.16	5.71	0	0	0
60	SLU 77	-0.03	-0.16	5.8	0	0	0
60	SLU 78	-0.03	-0.16	5.8	0	0	0
60	SLU 79	-0.03	-0.16	5.76	0	0	0
60	SLU 80	-0.03	-0.16	5.76	0	0	0
60	SLU 81	-0.03	-0.16	5.86	0	0	0
60	SLU 82	-0.03	-0.16	5.86	0	0	0
60	SLU 83	-0.04	-0.16	5.91	0	0	0
60	SLU 84	-0.04	-0.16	5.91	0	0	0
60	SLE RA 1	-0.01	-0.12	3.9	0	0	0
60	SLE RA 2	-0.01	-0.12	3.9	0	0	0
60	SLE RA 3	-0.02	-0.12	3.96	0	0	0
60	SLE RA 4	-0.02	-0.12	3.96	0	0	0
60	SLE RA 5	-0.02	-0.12	3.93	0	0	0
60	SLE RA 6	-0.02	-0.12	3.99	0	0	0
60	SLE RA 7	-0.02	-0.12	3.99	0	0	0
60	SLE RA 8	-0.02	-0.12	3.97	0	0	0
60	SLE RA 9	-0.02	-0.12	3.97	0	0	0
60	SLE RA 10	-0.02	-0.12	4.21	0	0	0
60	SLE RA 11	-0.02	-0.12	4.27	0	0	0
60	SLE RA 12	-0.02	-0.12	4.27	0	0	0
60	SLE RA 13	-0.02	-0.12	4.25	0	0	0
60	SLE RA 14	-0.02	-0.12	4.3	0	0	0
60	SLE RA 15	-0.02	-0.12	4.3	0	0	0
60	SLE RA 16	-0.02	-0.12	4.28	0	0	0
60	SLE RA 17	-0.02	-0.12	4.28	0	0	0
60	SLE RA 18	-0.02	-0.12	4.35	0	0	0
60	SLE RA 19	-0.02	-0.12	4.35	0	0	0
60	SLE RA 20	-0.03	-0.12	4.38	0	0	0
60	SLE RA 21	-0.03	-0.12	4.38	0	0	0
60	SLE FR 1	-0.01	-0.12	3.9	0	0	0
60	SLE FR 2	-0.01	-0.12	3.9	0	0	0
60	SLE FR 3	-0.01	-0.12	3.91	0	0	0
60	SLE FR 4	-0.02	-0.12	4.03	0	0	0
60	SLE FR 5	-0.02	-0.12	4.05	0	0	0
60	SLE FR 6	-0.02	-0.12	4.12	0	0	0
60	SLE QP 1	-0.01	-0.12	3.9	0	0	0
60	SLE QP 2	-0.02	-0.12	4.03	0	0	0
60	SLD 1	0.25	-0.1	3.9	0	0	0
60	SLD 2	0.25	-0.09	3.89	0	0	0
60	SLD 3	0.23	-0.18	3.93	0	0	0
60	SLD 4	0.23	-0.17	3.93	0	0	0
60	SLD 5	0.09	0	3.94	0	0	0
60	SLD 6	0.09	0.01	3.93	0	0	0
60	SLD 7	0.03	-0.26	4.06	0	0	0
60	SLD 8	0.03	-0.25	4.06	0	0	0
60	SLD 9	-0.06	0.01	4.01	0	0	0
60	SLD 10	-0.06	0.02	4	0	0	0
60	SLD 11	-0.13	-0.25	4.13	0	0	0
60	SLD 12	-0.13	-0.24	4.13	0	0	0
60	SLD 13	-0.26	-0.07	4.14	0	0	0
60	SLD 14	-0.26	-0.06	4.13	0	0	0
60	SLD 15	-0.28	-0.15	4.17	0	0	0
60	SLD 16	-0.28	-0.14	4.17	0	0	0
60	SLV 1	0.6	-0.09	3.72	0	0	0
60	SLV 2	0.6	-0.05	3.7	0	0	0
60	SLV 3	0.56	-0.26	3.8	0	0	0
60	SLV 4	0.56	-0.23	3.79	0	0	0
60	SLV 5	0.23	0.15	3.81	0	0	0
60	SLV 6	0.23	0.17	3.8	0	0	0
60	SLV 7	0.09	-0.44	4.1	0	0	0
60	SLV 8	0.09	-0.42	4.09	0	0	0
60	SLV 9	-0.12	0.17	3.98	0	0	0
60	SLV 10	-0.12	0.19	3.97	0	0	0
60	SLV 11	-0.27	-0.41	4.26	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
60	SLV 12	-0.27	-0.39	4.25	0	0	0
60	SLV 13	-0.59	-0.01	4.28	0	0	0
60	SLV 14	-0.59	0.02	4.26	0	0	0
60	SLV 15	-0.64	-0.19	4.36	0	0	0
60	SLV 16	-0.63	-0.16	4.35	0	0	0
61	SLU 1	-0.01	-0.06	1.58	0	0	0
61	SLU 2	-0.01	-0.06	1.58	0	0	0
61	SLU 3	-0.01	-0.06	1.62	0	0	0
61	SLU 4	-0.01	-0.06	1.62	0	0	0
61	SLU 5	-0.01	-0.06	1.6	0	0	0
61	SLU 6	-0.01	-0.06	1.64	0	0	0
61	SLU 7	-0.01	-0.06	1.64	0	0	0
61	SLU 8	-0.01	-0.06	1.63	0	0	0
61	SLU 9	-0.01	-0.06	1.63	0	0	0
61	SLU 10	-0.01	-0.06	1.79	0	0	0
61	SLU 11	-0.01	-0.06	1.82	0	0	0
61	SLU 12	-0.01	-0.06	1.82	0	0	0
61	SLU 13	-0.01	-0.06	1.81	0	0	0
61	SLU 14	-0.01	-0.06	1.85	0	0	0
61	SLU 15	-0.01	-0.06	1.85	0	0	0
61	SLU 16	-0.01	-0.06	1.83	0	0	0
61	SLU 17	-0.01	-0.06	1.83	0	0	0
61	SLU 18	-0.01	-0.06	1.87	0	0	0
61	SLU 19	-0.01	-0.06	1.87	0	0	0
61	SLU 20	-0.01	-0.06	1.9	0	0	0
61	SLU 21	-0.01	-0.06	1.9	0	0	0
61	SLU 22	-0.01	-0.06	1.76	0	0	0
61	SLU 23	-0.01	-0.06	1.76	0	0	0
61	SLU 24	-0.01	-0.06	1.8	0	0	0
61	SLU 25	-0.01	-0.06	1.8	0	0	0
61	SLU 26	-0.01	-0.06	1.78	0	0	0
61	SLU 27	-0.01	-0.06	1.82	0	0	0
61	SLU 28	-0.01	-0.06	1.82	0	0	0
61	SLU 29	-0.01	-0.06	1.81	0	0	0
61	SLU 30	-0.01	-0.06	1.81	0	0	0
61	SLU 31	-0.01	-0.06	1.97	0	0	0
61	SLU 32	-0.01	-0.06	2	0	0	0
61	SLU 33	-0.01	-0.06	2	0	0	0
61	SLU 34	-0.01	-0.06	1.99	0	0	0
61	SLU 35	-0.01	-0.06	2.03	0	0	0
61	SLU 36	-0.01	-0.06	2.03	0	0	0
61	SLU 37	-0.01	-0.06	2.01	0	0	0
61	SLU 38	-0.01	-0.06	2.01	0	0	0
61	SLU 39	-0.01	-0.06	2.05	0	0	0
61	SLU 40	-0.01	-0.06	2.05	0	0	0
61	SLU 41	-0.01	-0.06	2.08	0	0	0
61	SLU 42	-0.01	-0.06	2.08	0	0	0
61	SLU 43	-0.01	-0.08	1.99	0	0	0
61	SLU 44	-0.01	-0.08	1.99	0	0	0
61	SLU 45	-0.01	-0.08	2.03	0	0	0
61	SLU 46	-0.01	-0.08	2.03	0	0	0
61	SLU 47	-0.01	-0.08	2.02	0	0	0
61	SLU 48	-0.01	-0.08	2.05	0	0	0
61	SLU 49	-0.01	-0.08	2.05	0	0	0
61	SLU 50	-0.01	-0.07	2.04	0	0	0
61	SLU 51	-0.01	-0.08	2.04	0	0	0
61	SLU 52	-0.01	-0.08	2.2	0	0	0
61	SLU 53	-0.01	-0.08	2.24	0	0	0
61	SLU 54	-0.01	-0.08	2.24	0	0	0
61	SLU 55	-0.01	-0.08	2.22	0	0	0
61	SLU 56	-0.01	-0.08	2.26	0	0	0
61	SLU 57	-0.01	-0.08	2.26	0	0	0
61	SLU 58	-0.01	-0.08	2.24	0	0	0
61	SLU 59	-0.01	-0.08	2.25	0	0	0
61	SLU 60	-0.01	-0.08	2.29	0	0	0
61	SLU 61	-0.01	-0.08	2.29	0	0	0
61	SLU 62	-0.02	-0.08	2.31	0	0	0
61	SLU 63	-0.02	-0.08	2.31	0	0	0
61	SLU 64	-0.01	-0.07	2.17	0	0	0
61	SLU 65	-0.01	-0.08	2.17	0	0	0
61	SLU 66	-0.01	-0.07	2.21	0	0	0
61	SLU 67	-0.01	-0.07	2.21	0	0	0
61	SLU 68	-0.01	-0.07	2.2	0	0	0
61	SLU 69	-0.01	-0.07	2.23	0	0	0
61	SLU 70	-0.01	-0.07	2.23	0	0	0
61	SLU 71	-0.01	-0.07	2.22	0	0	0
61	SLU 72	-0.01	-0.07	2.22	0	0	0
61	SLU 73	-0.01	-0.08	2.38	0	0	0
61	SLU 74	-0.01	-0.08	2.42	0	0	0
61	SLU 75	-0.01	-0.08	2.42	0	0	0
61	SLU 76	-0.01	-0.08	2.4	0	0	0
61	SLU 77	-0.02	-0.08	2.44	0	0	0
61	SLU 78	-0.02	-0.08	2.44	0	0	0
61	SLU 79	-0.02	-0.08	2.43	0	0	0
61	SLU 80	-0.02	-0.08	2.43	0	0	0
61	SLU 81	-0.02	-0.08	2.47	0	0	0
61	SLU 82	-0.02	-0.08	2.47	0	0	0
61	SLU 83	-0.02	-0.08	2.49	0	0	0
61	SLU 84	-0.02	-0.08	2.49	0	0	0
61	SLE RA 1	-0.01	-0.06	1.63	0	0	0
61	SLE RA 2	-0.01	-0.06	1.63	0	0	0
61	SLE RA 3	-0.01	-0.06	1.66	0	0	0
61	SLE RA 4	-0.01	-0.06	1.66	0	0	0
61	SLE RA 5	-0.01	-0.06	1.65	0	0	0
61	SLE RA 6	-0.01	-0.06	1.67	0	0	0
61	SLE RA 7	-0.01	-0.06	1.67	0	0	0
61	SLE RA 8	-0.01	-0.06	1.66	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
61	SLE RA 9	-0.01	-0.06	1.66	0	0	0
61	SLE RA 10	-0.01	-0.06	1.77	0	0	0
61	SLE RA 11	-0.01	-0.06	1.79	0	0	0
61	SLE RA 12	-0.01	-0.06	1.79	0	0	0
61	SLE RA 13	-0.01	-0.06	1.78	0	0	0
61	SLE RA 14	-0.01	-0.06	1.81	0	0	0
61	SLE RA 15	-0.01	-0.06	1.81	0	0	0
61	SLE RA 16	-0.01	-0.06	1.8	0	0	0
61	SLE RA 17	-0.01	-0.06	1.8	0	0	0
61	SLE RA 18	-0.01	-0.06	1.83	0	0	0
61	SLE RA 19	-0.01	-0.06	1.83	0	0	0
61	SLE RA 20	-0.01	-0.06	1.84	0	0	0
61	SLE RA 21	-0.01	-0.06	1.84	0	0	0
61	SLE FR 1	-0.01	-0.06	1.63	0	0	0
61	SLE FR 2	-0.01	-0.06	1.63	0	0	0
61	SLE FR 3	-0.01	-0.06	1.64	0	0	0
61	SLE FR 4	-0.01	-0.06	1.69	0	0	0
61	SLE FR 5	-0.01	-0.06	1.7	0	0	0
61	SLE FR 6	-0.01	-0.06	1.73	0	0	0
61	SLE QP 1	-0.01	-0.06	1.63	0	0	0
61	SLE QP 2	-0.01	-0.06	1.69	0	0	0
61	SLD 1	0.1	-0.05	1.7	0	0	0
61	SLD 2	0.1	-0.04	1.69	0	0	0
61	SLD 3	0.09	-0.08	1.73	0	0	0
61	SLD 4	0.09	-0.08	1.73	0	0	0
61	SLD 5	0.04	0	1.64	0	0	0
61	SLD 6	0.04	0	1.64	0	0	0
61	SLD 7	0.01	-0.12	1.75	0	0	0
61	SLD 8	0.01	-0.12	1.75	0	0	0
61	SLD 9	-0.03	0	1.63	0	0	0
61	SLD 10	-0.03	0	1.63	0	0	0
61	SLD 11	-0.05	-0.11	1.74	0	0	0
61	SLD 12	-0.05	-0.11	1.74	0	0	0
61	SLD 13	-0.11	-0.04	1.65	0	0	0
61	SLD 14	-0.11	-0.04	1.65	0	0	0
61	SLD 15	-0.12	-0.07	1.68	0	0	0
61	SLD 16	-0.12	-0.07	1.68	0	0	0
61	SLV 1	0.24	-0.03	1.71	0	0	0
61	SLV 2	0.24	-0.03	1.7	0	0	0
61	SLV 3	0.23	-0.11	1.78	0	0	0
61	SLV 4	0.22	-0.11	1.78	0	0	0
61	SLV 5	0.1	0.07	1.58	0	0	0
61	SLV 6	0.09	0.07	1.58	0	0	0
61	SLV 7	0.03	-0.19	1.83	0	0	0
61	SLV 8	0.03	-0.19	1.83	0	0	0
61	SLV 9	-0.05	0.07	1.55	0	0	0
61	SLV 10	-0.05	0.07	1.55	0	0	0
61	SLV 11	-0.11	-0.18	1.8	0	0	0
61	SLV 12	-0.11	-0.18	1.79	0	0	0
61	SLV 13	-0.24	-0.01	1.6	0	0	0
61	SLV 14	-0.24	-0.01	1.6	0	0	0
61	SLV 15	-0.26	-0.09	1.68	0	0	0
61	SLV 16	-0.26	-0.09	1.67	0	0	0
62	SLU 1	-0.01	-0.1	2.82	0	0	0
62	SLU 2	-0.01	-0.1	2.82	0	0	0
62	SLU 3	-0.01	-0.1	2.89	0	0	0
62	SLU 4	-0.01	-0.1	2.89	0	0	0
62	SLU 5	-0.01	-0.1	2.86	0	0	0
62	SLU 6	-0.01	-0.1	2.93	0	0	0
62	SLU 7	-0.02	-0.1	2.93	0	0	0
62	SLU 8	-0.01	-0.1	2.9	0	0	0
62	SLU 9	-0.02	-0.1	2.9	0	0	0
62	SLU 10	-0.02	-0.11	3.19	0	0	0
62	SLU 11	-0.02	-0.11	3.25	0	0	0
62	SLU 12	-0.02	-0.11	3.25	0	0	0
62	SLU 13	-0.02	-0.11	3.23	0	0	0
62	SLU 14	-0.02	-0.1	3.29	0	0	0
62	SLU 15	-0.02	-0.11	3.3	0	0	0
62	SLU 16	-0.02	-0.1	3.27	0	0	0
62	SLU 17	-0.02	-0.11	3.27	0	0	0
62	SLU 18	-0.02	-0.11	3.34	0	0	0
62	SLU 19	-0.02	-0.11	3.34	0	0	0
62	SLU 20	-0.02	-0.11	3.38	0	0	0
62	SLU 21	-0.02	-0.11	3.38	0	0	0
62	SLU 22	-0.01	-0.1	3.14	0	0	0
62	SLU 23	-0.01	-0.1	3.14	0	0	0
62	SLU 24	-0.01	-0.1	3.21	0	0	0
62	SLU 25	-0.01	-0.1	3.21	0	0	0
62	SLU 26	-0.01	-0.1	3.18	0	0	0
62	SLU 27	-0.02	-0.1	3.25	0	0	0
62	SLU 28	-0.02	-0.1	3.25	0	0	0
62	SLU 29	-0.02	-0.1	3.22	0	0	0
62	SLU 30	-0.02	-0.1	3.23	0	0	0
62	SLU 31	-0.02	-0.1	3.51	0	0	0
62	SLU 32	-0.02	-0.1	3.57	0	0	0
62	SLU 33	-0.02	-0.1	3.58	0	0	0
62	SLU 34	-0.02	-0.1	3.55	0	0	0
62	SLU 35	-0.02	-0.1	3.62	0	0	0
62	SLU 36	-0.02	-0.1	3.62	0	0	0
62	SLU 37	-0.02	-0.1	3.59	0	0	0
62	SLU 38	-0.02	-0.1	3.59	0	0	0
62	SLU 39	-0.02	-0.1	3.66	0	0	0
62	SLU 40	-0.02	-0.11	3.66	0	0	0
62	SLU 41	-0.03	-0.1	3.71	0	0	0
62	SLU 42	-0.03	-0.11	3.71	0	0	0
62	SLU 43	-0.02	-0.13	3.55	0	0	0
62	SLU 44	-0.02	-0.13	3.56	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
62	SLU 45	-0.02	-0.13	3.62	0	0	0
62	SLU 46	-0.02	-0.13	3.62	0	0	0
62	SLU 47	-0.02	-0.13	3.6	0	0	0
62	SLU 48	-0.02	-0.13	3.66	0	0	0
62	SLU 49	-0.02	-0.13	3.66	0	0	0
62	SLU 50	-0.02	-0.13	3.64	0	0	0
62	SLU 51	-0.02	-0.13	3.64	0	0	0
62	SLU 52	-0.02	-0.14	3.92	0	0	0
62	SLU 53	-0.02	-0.14	3.99	0	0	0
62	SLU 54	-0.02	-0.14	3.99	0	0	0
62	SLU 55	-0.02	-0.14	3.96	0	0	0
62	SLU 56	-0.03	-0.14	4.03	0	0	0
62	SLU 57	-0.03	-0.14	4.03	0	0	0
62	SLU 58	-0.03	-0.13	4	0	0	0
62	SLU 59	-0.03	-0.14	4	0	0	0
62	SLU 60	-0.03	-0.14	4.08	0	0	0
62	SLU 61	-0.03	-0.14	4.08	0	0	0
62	SLU 62	-0.03	-0.14	4.12	0	0	0
62	SLU 63	-0.03	-0.14	4.12	0	0	0
62	SLU 64	-0.02	-0.13	3.88	0	0	0
62	SLU 65	-0.02	-0.13	3.88	0	0	0
62	SLU 66	-0.02	-0.13	3.94	0	0	0
62	SLU 67	-0.02	-0.13	3.94	0	0	0
62	SLU 68	-0.02	-0.13	3.92	0	0	0
62	SLU 69	-0.02	-0.13	3.99	0	0	0
62	SLU 70	-0.02	-0.13	3.99	0	0	0
62	SLU 71	-0.02	-0.13	3.96	0	0	0
62	SLU 72	-0.02	-0.13	3.96	0	0	0
62	SLU 73	-0.02	-0.14	4.24	0	0	0
62	SLU 74	-0.03	-0.13	4.31	0	0	0
62	SLU 75	-0.03	-0.14	4.31	0	0	0
62	SLU 76	-0.03	-0.14	4.29	0	0	0
62	SLU 77	-0.03	-0.13	4.35	0	0	0
62	SLU 78	-0.03	-0.13	4.35	0	0	0
62	SLU 79	-0.03	-0.13	4.33	0	0	0
62	SLU 80	-0.03	-0.13	4.33	0	0	0
62	SLU 81	-0.03	-0.14	4.4	0	0	0
62	SLU 82	-0.03	-0.14	4.4	0	0	0
62	SLU 83	-0.03	-0.14	4.44	0	0	0
62	SLU 84	-0.03	-0.14	4.44	0	0	0
62	SLE RA 1	-0.01	-0.1	2.91	0	0	0
62	SLE RA 2	-0.01	-0.1	2.91	0	0	0
62	SLE RA 3	-0.01	-0.1	2.96	0	0	0
62	SLE RA 4	-0.01	-0.1	2.96	0	0	0
62	SLE RA 5	-0.01	-0.1	2.94	0	0	0
62	SLE RA 6	-0.01	-0.1	2.98	0	0	0
62	SLE RA 7	-0.01	-0.1	2.98	0	0	0
62	SLE RA 8	-0.01	-0.1	2.97	0	0	0
62	SLE RA 9	-0.01	-0.1	2.97	0	0	0
62	SLE RA 10	-0.02	-0.1	3.16	0	0	0
62	SLE RA 11	-0.02	-0.1	3.2	0	0	0
62	SLE RA 12	-0.02	-0.1	3.2	0	0	0
62	SLE RA 13	-0.02	-0.1	3.18	0	0	0
62	SLE RA 14	-0.02	-0.1	3.23	0	0	0
62	SLE RA 15	-0.02	-0.1	3.23	0	0	0
62	SLE RA 16	-0.02	-0.1	3.21	0	0	0
62	SLE RA 17	-0.02	-0.1	3.21	0	0	0
62	SLE RA 18	-0.02	-0.1	3.26	0	0	0
62	SLE RA 19	-0.02	-0.1	3.26	0	0	0
62	SLE RA 20	-0.02	-0.1	3.29	0	0	0
62	SLE RA 21	-0.02	-0.1	3.29	0	0	0
62	SLE FR 1	-0.01	-0.1	2.91	0	0	0
62	SLE FR 2	-0.01	-0.1	2.91	0	0	0
62	SLE FR 3	-0.01	-0.1	2.92	0	0	0
62	SLE FR 4	-0.01	-0.1	3.02	0	0	0
62	SLE FR 5	-0.01	-0.1	3.03	0	0	0
62	SLE FR 6	-0.02	-0.1	3.08	0	0	0
62	SLE QP 1	-0.01	-0.1	2.91	0	0	0
62	SLE QP 2	-0.01	-0.1	3.02	0	0	0
62	SLD 1	0.18	-0.08	3.01	0	0	0
62	SLD 2	0.18	-0.08	3.01	0	0	0
62	SLD 3	0.16	-0.14	3.06	0	0	0
62	SLD 4	0.16	-0.14	3.06	0	0	0
62	SLD 5	0.07	0	2.93	0	0	0
62	SLD 6	0.06	0	2.93	0	0	0
62	SLD 7	0.02	-0.21	3.11	0	0	0
62	SLD 8	0.02	-0.2	3.11	0	0	0
62	SLD 9	-0.05	0	2.92	0	0	0
62	SLD 10	-0.05	0	2.92	0	0	0
62	SLD 11	-0.09	-0.2	3.1	0	0	0
62	SLD 12	-0.09	-0.2	3.1	0	0	0
62	SLD 13	-0.19	-0.06	2.97	0	0	0
62	SLD 14	-0.19	-0.06	2.97	0	0	0
62	SLD 15	-0.21	-0.12	3.02	0	0	0
62	SLD 16	-0.21	-0.12	3.02	0	0	0
62	SLV 1	0.44	-0.06	3	0	0	0
62	SLV 2	0.44	-0.05	3	0	0	0
62	SLV 3	0.4	-0.19	3.13	0	0	0
62	SLV 4	0.4	-0.19	3.12	0	0	0
62	SLV 5	0.17	0.12	2.83	0	0	0
62	SLV 6	0.17	0.12	2.83	0	0	0
62	SLV 7	0.06	-0.34	3.23	0	0	0
62	SLV 8	0.06	-0.33	3.23	0	0	0
62	SLV 9	-0.09	0.13	2.8	0	0	0
62	SLV 10	-0.09	0.13	2.8	0	0	0
62	SLV 11	-0.2	-0.33	3.21	0	0	0
62	SLV 12	-0.2	-0.32	3.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
62	SLV 13	-0.43	-0.02	2.91	0	0	0
62	SLV 14	-0.43	-0.01	2.91	0	0	0
62	SLV 15	-0.46	-0.15	3.03	0	0	0
62	SLV 16	-0.47	-0.15	3.03	0	0	0
63	SLU 1	-0.01	-0.09	2.48	0	0	0
63	SLU 2	-0.01	-0.09	2.48	0	0	0
63	SLU 3	-0.01	-0.09	2.54	0	0	0
63	SLU 4	-0.01	-0.09	2.54	0	0	0
63	SLU 5	-0.01	-0.09	2.52	0	0	0
63	SLU 6	-0.01	-0.09	2.58	0	0	0
63	SLU 7	-0.01	-0.09	2.58	0	0	0
63	SLU 8	-0.01	-0.09	2.55	0	0	0
63	SLU 9	-0.01	-0.09	2.55	0	0	0
63	SLU 10	-0.02	-0.09	2.8	0	0	0
63	SLU 11	-0.02	-0.09	2.86	0	0	0
63	SLU 12	-0.02	-0.09	2.86	0	0	0
63	SLU 13	-0.02	-0.09	2.84	0	0	0
63	SLU 14	-0.02	-0.09	2.9	0	0	0
63	SLU 15	-0.02	-0.09	2.9	0	0	0
63	SLU 16	-0.02	-0.09	2.87	0	0	0
63	SLU 17	-0.02	-0.09	2.88	0	0	0
63	SLU 18	-0.02	-0.09	2.94	0	0	0
63	SLU 19	-0.02	-0.09	2.94	0	0	0
63	SLU 20	-0.02	-0.09	2.98	0	0	0
63	SLU 21	-0.02	-0.09	2.98	0	0	0
63	SLU 22	-0.01	-0.09	2.77	0	0	0
63	SLU 23	-0.01	-0.09	2.77	0	0	0
63	SLU 24	-0.01	-0.09	2.82	0	0	0
63	SLU 25	-0.01	-0.09	2.83	0	0	0
63	SLU 26	-0.01	-0.09	2.8	0	0	0
63	SLU 27	-0.01	-0.09	2.86	0	0	0
63	SLU 28	-0.01	-0.09	2.86	0	0	0
63	SLU 29	-0.01	-0.08	2.84	0	0	0
63	SLU 30	-0.01	-0.09	2.84	0	0	0
63	SLU 31	-0.02	-0.09	3.09	0	0	0
63	SLU 32	-0.02	-0.09	3.15	0	0	0
63	SLU 33	-0.02	-0.09	3.15	0	0	0
63	SLU 34	-0.02	-0.09	3.12	0	0	0
63	SLU 35	-0.02	-0.09	3.18	0	0	0
63	SLU 36	-0.02	-0.09	3.18	0	0	0
63	SLU 37	-0.02	-0.09	3.16	0	0	0
63	SLU 38	-0.02	-0.09	3.16	0	0	0
63	SLU 39	-0.02	-0.09	3.22	0	0	0
63	SLU 40	-0.02	-0.09	3.22	0	0	0
63	SLU 41	-0.02	-0.09	3.26	0	0	0
63	SLU 42	-0.02	-0.09	3.26	0	0	0
63	SLU 43	-0.01	-0.11	3.13	0	0	0
63	SLU 44	-0.01	-0.12	3.13	0	0	0
63	SLU 45	-0.01	-0.11	3.19	0	0	0
63	SLU 46	-0.01	-0.12	3.19	0	0	0
63	SLU 47	-0.02	-0.12	3.17	0	0	0
63	SLU 48	-0.02	-0.11	3.22	0	0	0
63	SLU 49	-0.02	-0.11	3.22	0	0	0
63	SLU 50	-0.02	-0.11	3.2	0	0	0
63	SLU 51	-0.02	-0.11	3.2	0	0	0
63	SLU 52	-0.02	-0.12	3.45	0	0	0
63	SLU 53	-0.02	-0.12	3.51	0	0	0
63	SLU 54	-0.02	-0.12	3.51	0	0	0
63	SLU 55	-0.02	-0.12	3.49	0	0	0
63	SLU 56	-0.02	-0.12	3.54	0	0	0
63	SLU 57	-0.02	-0.12	3.55	0	0	0
63	SLU 58	-0.02	-0.12	3.52	0	0	0
63	SLU 59	-0.02	-0.12	3.52	0	0	0
63	SLU 60	-0.02	-0.12	3.59	0	0	0
63	SLU 61	-0.02	-0.12	3.59	0	0	0
63	SLU 62	-0.02	-0.12	3.62	0	0	0
63	SLU 63	-0.02	-0.12	3.62	0	0	0
63	SLU 64	-0.01	-0.11	3.41	0	0	0
63	SLU 65	-0.01	-0.11	3.41	0	0	0
63	SLU 66	-0.02	-0.11	3.47	0	0	0
63	SLU 67	-0.02	-0.11	3.47	0	0	0
63	SLU 68	-0.02	-0.11	3.45	0	0	0
63	SLU 69	-0.02	-0.11	3.51	0	0	0
63	SLU 70	-0.02	-0.11	3.51	0	0	0
63	SLU 71	-0.02	-0.11	3.49	0	0	0
63	SLU 72	-0.02	-0.11	3.49	0	0	0
63	SLU 73	-0.02	-0.12	3.73	0	0	0
63	SLU 74	-0.02	-0.12	3.79	0	0	0
63	SLU 75	-0.02	-0.12	3.79	0	0	0
63	SLU 76	-0.02	-0.12	3.77	0	0	0
63	SLU 77	-0.02	-0.12	3.83	0	0	0
63	SLU 78	-0.02	-0.12	3.83	0	0	0
63	SLU 79	-0.02	-0.12	3.81	0	0	0
63	SLU 80	-0.02	-0.12	3.81	0	0	0
63	SLU 81	-0.02	-0.12	3.87	0	0	0
63	SLU 82	-0.02	-0.12	3.87	0	0	0
63	SLU 83	-0.03	-0.12	3.91	0	0	0
63	SLU 84	-0.03	-0.12	3.91	0	0	0
63	SLE RA 1	-0.01	-0.09	2.56	0	0	0
63	SLE RA 2	-0.01	-0.09	2.56	0	0	0
63	SLE RA 3	-0.01	-0.09	2.6	0	0	0
63	SLE RA 4	-0.01	-0.09	2.6	0	0	0
63	SLE RA 5	-0.01	-0.09	2.59	0	0	0
63	SLE RA 6	-0.01	-0.09	2.63	0	0	0
63	SLE RA 7	-0.01	-0.09	2.63	0	0	0
63	SLE RA 8	-0.01	-0.09	2.61	0	0	0
63	SLE RA 9	-0.01	-0.09	2.61	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
63	SLE RA 10	-0.02	-0.09	2.78	0	0	0
63	SLE RA 11	-0.02	-0.09	2.82	0	0	0
63	SLE RA 12	-0.02	-0.09	2.82	0	0	0
63	SLE RA 13	-0.02	-0.09	2.8	0	0	0
63	SLE RA 14	-0.02	-0.09	2.84	0	0	0
63	SLE RA 15	-0.02	-0.09	2.84	0	0	0
63	SLE RA 16	-0.02	-0.09	2.82	0	0	0
63	SLE RA 17	-0.02	-0.09	2.83	0	0	0
63	SLE RA 18	-0.02	-0.09	2.87	0	0	0
63	SLE RA 19	-0.02	-0.09	2.87	0	0	0
63	SLE RA 20	-0.02	-0.09	2.89	0	0	0
63	SLE RA 21	-0.02	-0.09	2.89	0	0	0
63	SLE FR 1	-0.01	-0.09	2.56	0	0	0
63	SLE FR 2	-0.01	-0.09	2.56	0	0	0
63	SLE FR 3	-0.01	-0.09	2.57	0	0	0
63	SLE FR 4	-0.01	-0.09	2.65	0	0	0
63	SLE FR 5	-0.01	-0.09	2.66	0	0	0
63	SLE FR 6	-0.01	-0.09	2.72	0	0	0
63	SLE QP 1	-0.01	-0.09	2.56	0	0	0
63	SLE QP 2	-0.01	-0.09	2.65	0	0	0
63	SLD 1	0.16	-0.07	2.62	0	0	0
63	SLD 2	0.16	-0.07	2.62	0	0	0
63	SLD 3	0.15	-0.12	2.67	0	0	0
63	SLD 4	0.14	-0.12	2.66	0	0	0
63	SLD 5	0.06	0	2.58	0	0	0
63	SLD 6	0.06	0	2.58	0	0	0
63	SLD 7	0.02	-0.18	2.73	0	0	0
63	SLD 8	0.02	-0.18	2.72	0	0	0
63	SLD 9	-0.04	0	2.59	0	0	0
63	SLD 10	-0.04	0	2.58	0	0	0
63	SLD 11	-0.08	-0.17	2.73	0	0	0
63	SLD 12	-0.08	-0.17	2.73	0	0	0
63	SLD 13	-0.17	-0.06	2.64	0	0	0
63	SLD 14	-0.17	-0.05	2.64	0	0	0
63	SLD 15	-0.18	-0.11	2.69	0	0	0
63	SLD 16	-0.18	-0.11	2.68	0	0	0
63	SLV 1	0.39	-0.05	2.58	0	0	0
63	SLV 2	0.39	-0.04	2.58	0	0	0
63	SLV 3	0.36	-0.17	2.68	0	0	0
63	SLV 4	0.36	-0.16	2.68	0	0	0
63	SLV 5	0.15	0.1	2.48	0	0	0
63	SLV 6	0.15	0.11	2.48	0	0	0
63	SLV 7	0.05	-0.3	2.81	0	0	0
63	SLV 8	0.05	-0.29	2.81	0	0	0
63	SLV 9	-0.08	0.11	2.5	0	0	0
63	SLV 10	-0.08	0.12	2.49	0	0	0
63	SLV 11	-0.18	-0.29	2.83	0	0	0
63	SLV 12	-0.18	-0.28	2.82	0	0	0
63	SLV 13	-0.38	-0.01	2.63	0	0	0
63	SLV 14	-0.38	-0.01	2.62	0	0	0
63	SLV 15	-0.41	-0.13	2.73	0	0	0
63	SLV 16	-0.41	-0.13	2.72	0	0	0
64	SLU 1	-0.01	-0.09	2.46	0	0	0
64	SLU 2	-0.01	-0.09	2.47	0	0	0
64	SLU 3	-0.01	-0.09	2.52	0	0	0
64	SLU 4	-0.01	-0.09	2.52	0	0	0
64	SLU 5	-0.01	-0.09	2.5	0	0	0
64	SLU 6	-0.01	-0.09	2.56	0	0	0
64	SLU 7	-0.01	-0.09	2.56	0	0	0
64	SLU 8	-0.01	-0.08	2.53	0	0	0
64	SLU 9	-0.01	-0.09	2.54	0	0	0
64	SLU 10	-0.02	-0.09	2.78	0	0	0
64	SLU 11	-0.02	-0.09	2.84	0	0	0
64	SLU 12	-0.02	-0.09	2.84	0	0	0
64	SLU 13	-0.02	-0.09	2.82	0	0	0
64	SLU 14	-0.02	-0.09	2.87	0	0	0
64	SLU 15	-0.02	-0.09	2.88	0	0	0
64	SLU 16	-0.02	-0.09	2.85	0	0	0
64	SLU 17	-0.02	-0.09	2.85	0	0	0
64	SLU 18	-0.02	-0.09	2.92	0	0	0
64	SLU 19	-0.02	-0.09	2.92	0	0	0
64	SLU 20	-0.02	-0.09	2.95	0	0	0
64	SLU 21	-0.02	-0.09	2.95	0	0	0
64	SLU 22	-0.01	-0.08	2.75	0	0	0
64	SLU 23	-0.01	-0.09	2.75	0	0	0
64	SLU 24	-0.01	-0.08	2.8	0	0	0
64	SLU 25	-0.01	-0.08	2.81	0	0	0
64	SLU 26	-0.01	-0.08	2.78	0	0	0
64	SLU 27	-0.01	-0.08	2.84	0	0	0
64	SLU 28	-0.01	-0.08	2.84	0	0	0
64	SLU 29	-0.01	-0.08	2.82	0	0	0
64	SLU 30	-0.01	-0.08	2.82	0	0	0
64	SLU 31	-0.02	-0.09	3.06	0	0	0
64	SLU 32	-0.02	-0.09	3.12	0	0	0
64	SLU 33	-0.02	-0.09	3.12	0	0	0
64	SLU 34	-0.02	-0.09	3.1	0	0	0
64	SLU 35	-0.02	-0.09	3.16	0	0	0
64	SLU 36	-0.02	-0.09	3.16	0	0	0
64	SLU 37	-0.02	-0.09	3.13	0	0	0
64	SLU 38	-0.02	-0.09	3.13	0	0	0
64	SLU 39	-0.02	-0.09	3.2	0	0	0
64	SLU 40	-0.02	-0.09	3.2	0	0	0
64	SLU 41	-0.02	-0.09	3.23	0	0	0
64	SLU 42	-0.02	-0.09	3.23	0	0	0
64	SLU 43	-0.01	-0.11	3.11	0	0	0
64	SLU 44	-0.01	-0.11	3.11	0	0	0
64	SLU 45	-0.01	-0.11	3.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
64	SLU 46	-0.01	-0.11	3.17	0	0	0
64	SLU 47	-0.01	-0.11	3.14	0	0	0
64	SLU 48	-0.02	-0.11	3.2	0	0	0
64	SLU 49	-0.02	-0.11	3.2	0	0	0
64	SLU 50	-0.02	-0.11	3.18	0	0	0
64	SLU 51	-0.02	-0.11	3.18	0	0	0
64	SLU 52	-0.02	-0.12	3.42	0	0	0
64	SLU 53	-0.02	-0.12	3.48	0	0	0
64	SLU 54	-0.02	-0.12	3.48	0	0	0
64	SLU 55	-0.02	-0.12	3.46	0	0	0
64	SLU 56	-0.02	-0.11	3.52	0	0	0
64	SLU 57	-0.02	-0.12	3.52	0	0	0
64	SLU 58	-0.02	-0.11	3.49	0	0	0
64	SLU 59	-0.02	-0.11	3.49	0	0	0
64	SLU 60	-0.02	-0.12	3.56	0	0	0
64	SLU 61	-0.02	-0.12	3.56	0	0	0
64	SLU 62	-0.02	-0.12	3.59	0	0	0
64	SLU 63	-0.02	-0.12	3.59	0	0	0
64	SLU 64	-0.01	-0.11	3.39	0	0	0
64	SLU 65	-0.01	-0.11	3.39	0	0	0
64	SLU 66	-0.02	-0.11	3.45	0	0	0
64	SLU 67	-0.02	-0.11	3.45	0	0	0
64	SLU 68	-0.02	-0.11	3.43	0	0	0
64	SLU 69	-0.02	-0.11	3.48	0	0	0
64	SLU 70	-0.02	-0.11	3.48	0	0	0
64	SLU 71	-0.02	-0.11	3.46	0	0	0
64	SLU 72	-0.02	-0.11	3.46	0	0	0
64	SLU 73	-0.02	-0.11	3.71	0	0	0
64	SLU 74	-0.02	-0.11	3.76	0	0	0
64	SLU 75	-0.02	-0.11	3.76	0	0	0
64	SLU 76	-0.02	-0.11	3.74	0	0	0
64	SLU 77	-0.02	-0.11	3.8	0	0	0
64	SLU 78	-0.02	-0.11	3.8	0	0	0
64	SLU 79	-0.02	-0.11	3.78	0	0	0
64	SLU 80	-0.02	-0.11	3.78	0	0	0
64	SLU 81	-0.02	-0.11	3.84	0	0	0
64	SLU 82	-0.02	-0.12	3.84	0	0	0
64	SLU 83	-0.03	-0.11	3.88	0	0	0
64	SLU 84	-0.03	-0.12	3.88	0	0	0
64	SLE RA 1	-0.01	-0.08	2.54	0	0	0
64	SLE RA 2	-0.01	-0.09	2.55	0	0	0
64	SLE RA 3	-0.01	-0.09	2.58	0	0	0
64	SLE RA 4	-0.01	-0.09	2.58	0	0	0
64	SLE RA 5	-0.01	-0.09	2.57	0	0	0
64	SLE RA 6	-0.01	-0.08	2.61	0	0	0
64	SLE RA 7	-0.01	-0.09	2.61	0	0	0
64	SLE RA 8	-0.01	-0.08	2.59	0	0	0
64	SLE RA 9	-0.01	-0.08	2.59	0	0	0
64	SLE RA 10	-0.02	-0.09	2.76	0	0	0
64	SLE RA 11	-0.02	-0.09	2.79	0	0	0
64	SLE RA 12	-0.02	-0.09	2.8	0	0	0
64	SLE RA 13	-0.02	-0.09	2.78	0	0	0
64	SLE RA 14	-0.02	-0.09	2.82	0	0	0
64	SLE RA 15	-0.02	-0.09	2.82	0	0	0
64	SLE RA 16	-0.02	-0.09	2.8	0	0	0
64	SLE RA 17	-0.02	-0.09	2.8	0	0	0
64	SLE RA 18	-0.02	-0.09	2.85	0	0	0
64	SLE RA 19	-0.02	-0.09	2.85	0	0	0
64	SLE RA 20	-0.02	-0.09	2.87	0	0	0
64	SLE RA 21	-0.02	-0.09	2.87	0	0	0
64	SLE FR 1	-0.01	-0.08	2.54	0	0	0
64	SLE FR 2	-0.01	-0.09	2.54	0	0	0
64	SLE FR 3	-0.01	-0.08	2.55	0	0	0
64	SLE FR 4	-0.01	-0.09	2.64	0	0	0
64	SLE FR 5	-0.01	-0.09	2.64	0	0	0
64	SLE FR 6	-0.01	-0.09	2.7	0	0	0
64	SLE QP 1	-0.01	-0.08	2.54	0	0	0
64	SLE QP 2	-0.01	-0.09	2.63	0	0	0
64	SLD 1	0.16	-0.07	2.6	0	0	0
64	SLD 2	0.16	-0.07	2.6	0	0	0
64	SLD 3	0.15	-0.12	2.64	0	0	0
64	SLD 4	0.14	-0.12	2.64	0	0	0
64	SLD 5	0.06	0	2.56	0	0	0
64	SLD 6	0.06	0	2.56	0	0	0
64	SLD 7	0.02	-0.18	2.7	0	0	0
64	SLD 8	0.02	-0.17	2.7	0	0	0
64	SLD 9	-0.04	0	2.57	0	0	0
64	SLD 10	-0.04	0.01	2.57	0	0	0
64	SLD 11	-0.08	-0.17	2.71	0	0	0
64	SLD 12	-0.08	-0.17	2.71	0	0	0
64	SLD 13	-0.17	-0.05	2.63	0	0	0
64	SLD 14	-0.17	-0.05	2.63	0	0	0
64	SLD 15	-0.18	-0.11	2.67	0	0	0
64	SLD 16	-0.18	-0.1	2.67	0	0	0
64	SLV 1	0.39	-0.05	2.55	0	0	0
64	SLV 2	0.39	-0.04	2.54	0	0	0
64	SLV 3	0.36	-0.17	2.64	0	0	0
64	SLV 4	0.36	-0.16	2.64	0	0	0
64	SLV 5	0.15	0.1	2.47	0	0	0
64	SLV 6	0.15	0.11	2.47	0	0	0
64	SLV 7	0.05	-0.29	2.78	0	0	0
64	SLV 8	0.05	-0.29	2.77	0	0	0
64	SLV 9	-0.08	0.11	2.5	0	0	0
64	SLV 10	-0.08	0.12	2.49	0	0	0
64	SLV 11	-0.18	-0.28	2.8	0	0	0
64	SLV 12	-0.18	-0.27	2.8	0	0	0
64	SLV 13	-0.38	-0.01	2.63	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
64	SLV 14	-0.38	0	2.63	0	0	0
64	SLV 15	-0.41	-0.13	2.73	0	0	0
64	SLV 16	-0.41	-0.12	2.72	0	0	0
65	SLU 1	-0.01	-0.08	2.45	0	0	0
65	SLU 2	-0.01	-0.08	2.45	0	0	0
65	SLU 3	-0.01	-0.08	2.5	0	0	0
65	SLU 4	-0.01	-0.08	2.5	0	0	0
65	SLU 5	-0.01	-0.08	2.48	0	0	0
65	SLU 6	-0.01	-0.08	2.54	0	0	0
65	SLU 7	-0.01	-0.08	2.54	0	0	0
65	SLU 8	-0.01	-0.08	2.52	0	0	0
65	SLU 9	-0.01	-0.08	2.52	0	0	0
65	SLU 10	-0.02	-0.09	2.76	0	0	0
65	SLU 11	-0.02	-0.09	2.82	0	0	0
65	SLU 12	-0.02	-0.09	2.82	0	0	0
65	SLU 13	-0.02	-0.09	2.79	0	0	0
65	SLU 14	-0.02	-0.09	2.85	0	0	0
65	SLU 15	-0.02	-0.09	2.85	0	0	0
65	SLU 16	-0.02	-0.09	2.83	0	0	0
65	SLU 17	-0.02	-0.09	2.83	0	0	0
65	SLU 18	-0.02	-0.09	2.89	0	0	0
65	SLU 19	-0.02	-0.09	2.89	0	0	0
65	SLU 20	-0.02	-0.09	2.93	0	0	0
65	SLU 21	-0.02	-0.09	2.93	0	0	0
65	SLU 22	-0.01	-0.08	2.73	0	0	0
65	SLU 23	-0.01	-0.08	2.73	0	0	0
65	SLU 24	-0.01	-0.08	2.78	0	0	0
65	SLU 25	-0.01	-0.08	2.79	0	0	0
65	SLU 26	-0.01	-0.08	2.76	0	0	0
65	SLU 27	-0.01	-0.08	2.82	0	0	0
65	SLU 28	-0.01	-0.08	2.82	0	0	0
65	SLU 29	-0.01	-0.08	2.8	0	0	0
65	SLU 30	-0.01	-0.08	2.8	0	0	0
65	SLU 31	-0.02	-0.09	3.04	0	0	0
65	SLU 32	-0.02	-0.09	3.1	0	0	0
65	SLU 33	-0.02	-0.09	3.1	0	0	0
65	SLU 34	-0.02	-0.09	3.08	0	0	0
65	SLU 35	-0.02	-0.08	3.13	0	0	0
65	SLU 36	-0.02	-0.09	3.13	0	0	0
65	SLU 37	-0.02	-0.08	3.11	0	0	0
65	SLU 38	-0.02	-0.08	3.11	0	0	0
65	SLU 39	-0.02	-0.09	3.17	0	0	0
65	SLU 40	-0.02	-0.09	3.17	0	0	0
65	SLU 41	-0.02	-0.09	3.21	0	0	0
65	SLU 42	-0.02	-0.09	3.21	0	0	0
65	SLU 43	-0.01	-0.11	3.08	0	0	0
65	SLU 44	-0.01	-0.11	3.08	0	0	0
65	SLU 45	-0.01	-0.11	3.14	0	0	0
65	SLU 46	-0.01	-0.11	3.14	0	0	0
65	SLU 47	-0.01	-0.11	3.12	0	0	0
65	SLU 48	-0.02	-0.11	3.18	0	0	0
65	SLU 49	-0.02	-0.11	3.18	0	0	0
65	SLU 50	-0.02	-0.11	3.15	0	0	0
65	SLU 51	-0.02	-0.11	3.15	0	0	0
65	SLU 52	-0.02	-0.11	3.4	0	0	0
65	SLU 53	-0.02	-0.11	3.45	0	0	0
65	SLU 54	-0.02	-0.11	3.45	0	0	0
65	SLU 55	-0.02	-0.11	3.43	0	0	0
65	SLU 56	-0.02	-0.11	3.49	0	0	0
65	SLU 57	-0.02	-0.11	3.49	0	0	0
65	SLU 58	-0.02	-0.11	3.47	0	0	0
65	SLU 59	-0.02	-0.11	3.47	0	0	0
65	SLU 60	-0.02	-0.11	3.53	0	0	0
65	SLU 61	-0.02	-0.11	3.53	0	0	0
65	SLU 62	-0.02	-0.11	3.57	0	0	0
65	SLU 63	-0.02	-0.11	3.57	0	0	0
65	SLU 64	-0.01	-0.11	3.36	0	0	0
65	SLU 65	-0.01	-0.11	3.37	0	0	0
65	SLU 66	-0.02	-0.11	3.42	0	0	0
65	SLU 67	-0.02	-0.11	3.42	0	0	0
65	SLU 68	-0.02	-0.11	3.4	0	0	0
65	SLU 69	-0.02	-0.11	3.46	0	0	0
65	SLU 70	-0.02	-0.11	3.46	0	0	0
65	SLU 71	-0.02	-0.11	3.43	0	0	0
65	SLU 72	-0.02	-0.11	3.43	0	0	0
65	SLU 73	-0.02	-0.11	3.68	0	0	0
65	SLU 74	-0.02	-0.11	3.73	0	0	0
65	SLU 75	-0.02	-0.11	3.74	0	0	0
65	SLU 76	-0.02	-0.11	3.71	0	0	0
65	SLU 77	-0.02	-0.11	3.77	0	0	0
65	SLU 78	-0.02	-0.11	3.77	0	0	0
65	SLU 79	-0.02	-0.11	3.75	0	0	0
65	SLU 80	-0.02	-0.11	3.75	0	0	0
65	SLU 81	-0.02	-0.11	3.81	0	0	0
65	SLU 82	-0.02	-0.11	3.81	0	0	0
65	SLU 83	-0.03	-0.11	3.85	0	0	0
65	SLU 84	-0.03	-0.11	3.85	0	0	0
65	SLE RA 1	-0.01	-0.08	2.53	0	0	0
65	SLE RA 2	-0.01	-0.08	2.53	0	0	0
65	SLE RA 3	-0.01	-0.08	2.56	0	0	0
65	SLE RA 4	-0.01	-0.08	2.57	0	0	0
65	SLE RA 5	-0.01	-0.08	2.55	0	0	0
65	SLE RA 6	-0.01	-0.08	2.59	0	0	0
65	SLE RA 7	-0.01	-0.08	2.59	0	0	0
65	SLE RA 8	-0.01	-0.08	2.57	0	0	0
65	SLE RA 9	-0.01	-0.08	2.57	0	0	0
65	SLE RA 10	-0.02	-0.09	2.74	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
65	SLE RA 11	-0.02	-0.09	2.77	0	0	0
65	SLE RA 12	-0.02	-0.09	2.77	0	0	0
65	SLE RA 13	-0.02	-0.09	2.76	0	0	0
65	SLE RA 14	-0.02	-0.08	2.8	0	0	0
65	SLE RA 15	-0.02	-0.09	2.8	0	0	0
65	SLE RA 16	-0.02	-0.08	2.78	0	0	0
65	SLE RA 17	-0.02	-0.09	2.78	0	0	0
65	SLE RA 18	-0.02	-0.09	2.82	0	0	0
65	SLE RA 19	-0.02	-0.09	2.82	0	0	0
65	SLE RA 20	-0.02	-0.09	2.85	0	0	0
65	SLE RA 21	-0.02	-0.09	2.85	0	0	0
65	SLE FR 1	-0.01	-0.08	2.53	0	0	0
65	SLE FR 2	-0.01	-0.08	2.53	0	0	0
65	SLE FR 3	-0.01	-0.08	2.54	0	0	0
65	SLE FR 4	-0.01	-0.08	2.62	0	0	0
65	SLE FR 5	-0.01	-0.08	2.62	0	0	0
65	SLE FR 6	-0.01	-0.08	2.68	0	0	0
65	SLE QP 1	-0.01	-0.08	2.53	0	0	0
65	SLE QP 2	-0.01	-0.08	2.62	0	0	0
65	SLD 1	0.16	-0.07	2.57	0	0	0
65	SLD 2	0.16	-0.06	2.56	0	0	0
65	SLD 3	0.15	-0.12	2.61	0	0	0
65	SLD 4	0.15	-0.12	2.6	0	0	0
65	SLD 5	0.06	0	2.55	0	0	0
65	SLD 6	0.06	0	2.54	0	0	0
65	SLD 7	0.02	-0.17	2.67	0	0	0
65	SLD 8	0.02	-0.17	2.67	0	0	0
65	SLD 9	-0.04	0	2.56	0	0	0
65	SLD 10	-0.04	0.01	2.56	0	0	0
65	SLD 11	-0.08	-0.17	2.69	0	0	0
65	SLD 12	-0.08	-0.17	2.69	0	0	0
65	SLD 13	-0.17	-0.05	2.63	0	0	0
65	SLD 14	-0.17	-0.05	2.63	0	0	0
65	SLD 15	-0.18	-0.1	2.67	0	0	0
65	SLD 16	-0.18	-0.1	2.66	0	0	0
65	SLV 1	0.39	-0.05	2.51	0	0	0
65	SLV 2	0.39	-0.04	2.5	0	0	0
65	SLV 3	0.36	-0.17	2.59	0	0	0
65	SLV 4	0.36	-0.16	2.58	0	0	0
65	SLV 5	0.15	0.1	2.46	0	0	0
65	SLV 6	0.15	0.11	2.45	0	0	0
65	SLV 7	0.05	-0.29	2.74	0	0	0
65	SLV 8	0.05	-0.28	2.73	0	0	0
65	SLV 9	-0.08	0.11	2.5	0	0	0
65	SLV 10	-0.08	0.12	2.49	0	0	0
65	SLV 11	-0.18	-0.28	2.78	0	0	0
65	SLV 12	-0.18	-0.27	2.77	0	0	0
65	SLV 13	-0.38	-0.01	2.65	0	0	0
65	SLV 14	-0.38	0	2.64	0	0	0
65	SLV 15	-0.41	-0.13	2.73	0	0	0
65	SLV 16	-0.41	-0.12	2.73	0	0	0
66	SLU 1	-0.01	-0.08	2.43	0	0	0
66	SLU 2	-0.01	-0.08	2.43	0	0	0
66	SLU 3	-0.01	-0.08	2.49	0	0	0
66	SLU 4	-0.01	-0.08	2.49	0	0	0
66	SLU 5	-0.01	-0.08	2.46	0	0	0
66	SLU 6	-0.01	-0.08	2.52	0	0	0
66	SLU 7	-0.01	-0.08	2.52	0	0	0
66	SLU 8	-0.01	-0.08	2.5	0	0	0
66	SLU 9	-0.01	-0.08	2.5	0	0	0
66	SLU 10	-0.02	-0.09	2.74	0	0	0
66	SLU 11	-0.02	-0.08	2.79	0	0	0
66	SLU 12	-0.02	-0.09	2.8	0	0	0
66	SLU 13	-0.02	-0.09	2.77	0	0	0
66	SLU 14	-0.02	-0.08	2.83	0	0	0
66	SLU 15	-0.02	-0.09	2.83	0	0	0
66	SLU 16	-0.02	-0.08	2.81	0	0	0
66	SLU 17	-0.02	-0.08	2.81	0	0	0
66	SLU 18	-0.02	-0.09	2.87	0	0	0
66	SLU 19	-0.02	-0.09	2.87	0	0	0
66	SLU 20	-0.02	-0.09	2.9	0	0	0
66	SLU 21	-0.02	-0.09	2.9	0	0	0
66	SLU 22	-0.01	-0.08	2.71	0	0	0
66	SLU 23	-0.01	-0.08	2.71	0	0	0
66	SLU 24	-0.01	-0.08	2.76	0	0	0
66	SLU 25	-0.01	-0.08	2.77	0	0	0
66	SLU 26	-0.01	-0.08	2.74	0	0	0
66	SLU 27	-0.01	-0.08	2.8	0	0	0
66	SLU 28	-0.01	-0.08	2.8	0	0	0
66	SLU 29	-0.01	-0.08	2.78	0	0	0
66	SLU 30	-0.01	-0.08	2.78	0	0	0
66	SLU 31	-0.02	-0.08	3.02	0	0	0
66	SLU 32	-0.02	-0.08	3.07	0	0	0
66	SLU 33	-0.02	-0.08	3.07	0	0	0
66	SLU 34	-0.02	-0.08	3.05	0	0	0
66	SLU 35	-0.02	-0.08	3.11	0	0	0
66	SLU 36	-0.02	-0.08	3.11	0	0	0
66	SLU 37	-0.02	-0.08	3.08	0	0	0
66	SLU 38	-0.02	-0.08	3.09	0	0	0
66	SLU 39	-0.02	-0.08	3.15	0	0	0
66	SLU 40	-0.02	-0.08	3.15	0	0	0
66	SLU 41	-0.02	-0.08	3.18	0	0	0
66	SLU 42	-0.02	-0.08	3.18	0	0	0
66	SLU 43	-0.01	-0.11	3.06	0	0	0
66	SLU 44	-0.01	-0.11	3.06	0	0	0
66	SLU 45	-0.01	-0.11	3.12	0	0	0
66	SLU 46	-0.01	-0.11	3.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
66	SLU 47	-0.01	-0.11	3.1	0	0	0
66	SLU 48	-0.02	-0.11	3.15	0	0	0
66	SLU 49	-0.02	-0.11	3.15	0	0	0
66	SLU 50	-0.02	-0.11	3.13	0	0	0
66	SLU 51	-0.02	-0.11	3.13	0	0	0
66	SLU 52	-0.02	-0.11	3.37	0	0	0
66	SLU 53	-0.02	-0.11	3.43	0	0	0
66	SLU 54	-0.02	-0.11	3.43	0	0	0
66	SLU 55	-0.02	-0.11	3.41	0	0	0
66	SLU 56	-0.02	-0.11	3.46	0	0	0
66	SLU 57	-0.02	-0.11	3.46	0	0	0
66	SLU 58	-0.02	-0.11	3.44	0	0	0
66	SLU 59	-0.02	-0.11	3.44	0	0	0
66	SLU 60	-0.02	-0.11	3.5	0	0	0
66	SLU 61	-0.02	-0.11	3.5	0	0	0
66	SLU 62	-0.02	-0.11	3.54	0	0	0
66	SLU 63	-0.02	-0.11	3.54	0	0	0
66	SLU 64	-0.01	-0.11	3.34	0	0	0
66	SLU 65	-0.01	-0.11	3.34	0	0	0
66	SLU 66	-0.02	-0.11	3.4	0	0	0
66	SLU 67	-0.02	-0.11	3.4	0	0	0
66	SLU 68	-0.02	-0.11	3.38	0	0	0
66	SLU 69	-0.02	-0.1	3.43	0	0	0
66	SLU 70	-0.02	-0.11	3.43	0	0	0
66	SLU 71	-0.02	-0.1	3.41	0	0	0
66	SLU 72	-0.02	-0.11	3.41	0	0	0
66	SLU 73	-0.02	-0.11	3.65	0	0	0
66	SLU 74	-0.02	-0.11	3.71	0	0	0
66	SLU 75	-0.02	-0.11	3.71	0	0	0
66	SLU 76	-0.02	-0.11	3.68	0	0	0
66	SLU 77	-0.02	-0.11	3.74	0	0	0
66	SLU 78	-0.02	-0.11	3.74	0	0	0
66	SLU 79	-0.02	-0.11	3.72	0	0	0
66	SLU 80	-0.02	-0.11	3.72	0	0	0
66	SLU 81	-0.02	-0.11	3.78	0	0	0
66	SLU 82	-0.02	-0.11	3.78	0	0	0
66	SLU 83	-0.03	-0.11	3.82	0	0	0
66	SLU 84	-0.03	-0.11	3.82	0	0	0
66	SLE RA 1	-0.01	-0.08	2.51	0	0	0
66	SLE RA 2	-0.01	-0.08	2.51	0	0	0
66	SLE RA 3	-0.01	-0.08	2.55	0	0	0
66	SLE RA 4	-0.01	-0.08	2.55	0	0	0
66	SLE RA 5	-0.01	-0.08	2.53	0	0	0
66	SLE RA 6	-0.01	-0.08	2.57	0	0	0
66	SLE RA 7	-0.01	-0.08	2.57	0	0	0
66	SLE RA 8	-0.01	-0.08	2.55	0	0	0
66	SLE RA 9	-0.01	-0.08	2.55	0	0	0
66	SLE RA 10	-0.02	-0.08	2.72	0	0	0
66	SLE RA 11	-0.02	-0.08	2.75	0	0	0
66	SLE RA 12	-0.02	-0.08	2.75	0	0	0
66	SLE RA 13	-0.02	-0.08	2.74	0	0	0
66	SLE RA 14	-0.02	-0.08	2.78	0	0	0
66	SLE RA 15	-0.02	-0.08	2.78	0	0	0
66	SLE RA 16	-0.02	-0.08	2.76	0	0	0
66	SLE RA 17	-0.02	-0.08	2.76	0	0	0
66	SLE RA 18	-0.02	-0.08	2.8	0	0	0
66	SLE RA 19	-0.02	-0.08	2.8	0	0	0
66	SLE RA 20	-0.02	-0.08	2.83	0	0	0
66	SLE RA 21	-0.02	-0.08	2.83	0	0	0
66	SLE FR 1	-0.01	-0.08	2.51	0	0	0
66	SLE FR 2	-0.01	-0.08	2.51	0	0	0
66	SLE FR 3	-0.01	-0.08	2.52	0	0	0
66	SLE FR 4	-0.01	-0.08	2.6	0	0	0
66	SLE FR 5	-0.01	-0.08	2.61	0	0	0
66	SLE FR 6	-0.01	-0.08	2.66	0	0	0
66	SLE QP 1	-0.01	-0.08	2.51	0	0	0
66	SLE QP 2	-0.01	-0.08	2.6	0	0	0
66	SLD 1	0.16	-0.07	2.54	0	0	0
66	SLD 2	0.16	-0.06	2.53	0	0	0
66	SLD 3	0.15	-0.12	2.57	0	0	0
66	SLD 4	0.15	-0.11	2.57	0	0	0
66	SLD 5	0.06	0	2.53	0	0	0
66	SLD 6	0.06	0	2.53	0	0	0
66	SLD 7	0.02	-0.17	2.64	0	0	0
66	SLD 8	0.02	-0.17	2.64	0	0	0
66	SLD 9	-0.04	0	2.55	0	0	0
66	SLD 10	-0.04	0.01	2.55	0	0	0
66	SLD 11	-0.08	-0.17	2.67	0	0	0
66	SLD 12	-0.08	-0.16	2.67	0	0	0
66	SLD 13	-0.17	-0.05	2.63	0	0	0
66	SLD 14	-0.17	-0.04	2.62	0	0	0
66	SLD 15	-0.18	-0.1	2.66	0	0	0
66	SLD 16	-0.18	-0.1	2.66	0	0	0
66	SLV 1	0.39	-0.05	2.46	0	0	0
66	SLV 2	0.39	-0.04	2.45	0	0	0
66	SLV 3	0.36	-0.17	2.54	0	0	0
66	SLV 4	0.36	-0.15	2.53	0	0	0
66	SLV 5	0.15	0.1	2.44	0	0	0
66	SLV 6	0.15	0.11	2.43	0	0	0
66	SLV 7	0.06	-0.29	2.7	0	0	0
66	SLV 8	0.05	-0.28	2.69	0	0	0
66	SLV 9	-0.08	0.11	2.5	0	0	0
66	SLV 10	-0.08	0.12	2.5	0	0	0
66	SLV 11	-0.18	-0.27	2.76	0	0	0
66	SLV 12	-0.18	-0.26	2.75	0	0	0
66	SLV 13	-0.38	-0.01	2.67	0	0	0
66	SLV 14	-0.38	0	2.66	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
66	SLV 15	-0.41	-0.13	2.74	0	0	0
66	SLV 16	-0.41	-0.11	2.74	0	0	0
67	SLU 1	-0.01	-0.09	2.72	0	0	0
67	SLU 2	-0.01	-0.09	2.72	0	0	0
67	SLU 3	-0.01	-0.09	2.79	0	0	0
67	SLU 4	-0.01	-0.09	2.79	0	0	0
67	SLU 5	-0.01	-0.09	2.76	0	0	0
67	SLU 6	-0.01	-0.09	2.82	0	0	0
67	SLU 7	-0.01	-0.09	2.82	0	0	0
67	SLU 8	-0.01	-0.09	2.8	0	0	0
67	SLU 9	-0.01	-0.09	2.8	0	0	0
67	SLU 10	-0.02	-0.09	3.07	0	0	0
67	SLU 11	-0.02	-0.09	3.13	0	0	0
67	SLU 12	-0.02	-0.09	3.13	0	0	0
67	SLU 13	-0.02	-0.09	3.11	0	0	0
67	SLU 14	-0.02	-0.09	3.17	0	0	0
67	SLU 15	-0.02	-0.09	3.17	0	0	0
67	SLU 16	-0.02	-0.09	3.14	0	0	0
67	SLU 17	-0.02	-0.09	3.14	0	0	0
67	SLU 18	-0.02	-0.09	3.21	0	0	0
67	SLU 19	-0.02	-0.1	3.21	0	0	0
67	SLU 20	-0.02	-0.09	3.25	0	0	0
67	SLU 21	-0.02	-0.09	3.25	0	0	0
67	SLU 22	-0.01	-0.09	3.04	0	0	0
67	SLU 23	-0.01	-0.09	3.04	0	0	0
67	SLU 24	-0.01	-0.09	3.1	0	0	0
67	SLU 25	-0.01	-0.09	3.1	0	0	0
67	SLU 26	-0.01	-0.09	3.07	0	0	0
67	SLU 27	-0.02	-0.09	3.14	0	0	0
67	SLU 28	-0.02	-0.09	3.14	0	0	0
67	SLU 29	-0.02	-0.09	3.11	0	0	0
67	SLU 30	-0.02	-0.09	3.11	0	0	0
67	SLU 31	-0.02	-0.09	3.38	0	0	0
67	SLU 32	-0.02	-0.09	3.44	0	0	0
67	SLU 33	-0.02	-0.09	3.44	0	0	0
67	SLU 34	-0.02	-0.09	3.42	0	0	0
67	SLU 35	-0.02	-0.09	3.48	0	0	0
67	SLU 36	-0.02	-0.09	3.48	0	0	0
67	SLU 37	-0.02	-0.09	3.46	0	0	0
67	SLU 38	-0.02	-0.09	3.46	0	0	0
67	SLU 39	-0.02	-0.09	3.53	0	0	0
67	SLU 40	-0.02	-0.09	3.53	0	0	0
67	SLU 41	-0.03	-0.09	3.56	0	0	0
67	SLU 42	-0.03	-0.09	3.57	0	0	0
67	SLU 43	-0.01	-0.12	3.43	0	0	0
67	SLU 44	-0.01	-0.12	3.43	0	0	0
67	SLU 45	-0.02	-0.12	3.5	0	0	0
67	SLU 46	-0.02	-0.12	3.5	0	0	0
67	SLU 47	-0.02	-0.12	3.47	0	0	0
67	SLU 48	-0.02	-0.12	3.53	0	0	0
67	SLU 49	-0.02	-0.12	3.53	0	0	0
67	SLU 50	-0.02	-0.12	3.51	0	0	0
67	SLU 51	-0.02	-0.12	3.51	0	0	0
67	SLU 52	-0.02	-0.12	3.78	0	0	0
67	SLU 53	-0.02	-0.12	3.84	0	0	0
67	SLU 54	-0.02	-0.12	3.84	0	0	0
67	SLU 55	-0.02	-0.12	3.82	0	0	0
67	SLU 56	-0.03	-0.12	3.88	0	0	0
67	SLU 57	-0.03	-0.12	3.88	0	0	0
67	SLU 58	-0.03	-0.12	3.85	0	0	0
67	SLU 59	-0.03	-0.12	3.85	0	0	0
67	SLU 60	-0.03	-0.12	3.92	0	0	0
67	SLU 61	-0.03	-0.12	3.92	0	0	0
67	SLU 62	-0.03	-0.12	3.96	0	0	0
67	SLU 63	-0.03	-0.12	3.96	0	0	0
67	SLU 64	-0.02	-0.12	3.75	0	0	0
67	SLU 65	-0.02	-0.12	3.75	0	0	0
67	SLU 66	-0.02	-0.12	3.81	0	0	0
67	SLU 67	-0.02	-0.12	3.81	0	0	0
67	SLU 68	-0.02	-0.12	3.78	0	0	0
67	SLU 69	-0.02	-0.12	3.85	0	0	0
67	SLU 70	-0.02	-0.12	3.85	0	0	0
67	SLU 71	-0.02	-0.12	3.82	0	0	0
67	SLU 72	-0.02	-0.12	3.82	0	0	0
67	SLU 73	-0.02	-0.12	4.09	0	0	0
67	SLU 74	-0.02	-0.12	4.15	0	0	0
67	SLU 75	-0.02	-0.12	4.15	0	0	0
67	SLU 76	-0.03	-0.12	4.13	0	0	0
67	SLU 77	-0.03	-0.12	4.19	0	0	0
67	SLU 78	-0.03	-0.12	4.19	0	0	0
67	SLU 79	-0.03	-0.12	4.16	0	0	0
67	SLU 80	-0.03	-0.12	4.17	0	0	0
67	SLU 81	-0.03	-0.12	4.24	0	0	0
67	SLU 82	-0.03	-0.12	4.24	0	0	0
67	SLU 83	-0.03	-0.12	4.27	0	0	0
67	SLU 84	-0.03	-0.12	4.28	0	0	0
67	SLE RA 1	-0.01	-0.09	2.81	0	0	0
67	SLE RA 2	-0.01	-0.09	2.81	0	0	0
67	SLE RA 3	-0.01	-0.09	2.85	0	0	0
67	SLE RA 4	-0.01	-0.09	2.85	0	0	0
67	SLE RA 5	-0.01	-0.09	2.84	0	0	0
67	SLE RA 6	-0.01	-0.09	2.88	0	0	0
67	SLE RA 7	-0.01	-0.09	2.88	0	0	0
67	SLE RA 8	-0.01	-0.09	2.86	0	0	0
67	SLE RA 9	-0.01	-0.09	2.86	0	0	0
67	SLE RA 10	-0.02	-0.09	3.04	0	0	0
67	SLE RA 11	-0.02	-0.09	3.08	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
67	SLE RA 12	-0.02	-0.09	3.08	0	0	0
67	SLE RA 13	-0.02	-0.09	3.07	0	0	0
67	SLE RA 14	-0.02	-0.09	3.11	0	0	0
67	SLE RA 15	-0.02	-0.09	3.11	0	0	0
67	SLE RA 16	-0.02	-0.09	3.09	0	0	0
67	SLE RA 17	-0.02	-0.09	3.09	0	0	0
67	SLE RA 18	-0.02	-0.09	3.14	0	0	0
67	SLE RA 19	-0.02	-0.09	3.14	0	0	0
67	SLE RA 20	-0.02	-0.09	3.16	0	0	0
67	SLE RA 21	-0.02	-0.09	3.17	0	0	0
67	SLE FR 1	-0.01	-0.09	2.81	0	0	0
67	SLE FR 2	-0.01	-0.09	2.81	0	0	0
67	SLE FR 3	-0.01	-0.09	2.82	0	0	0
67	SLE FR 4	-0.01	-0.09	2.91	0	0	0
67	SLE FR 5	-0.01	-0.09	2.92	0	0	0
67	SLE FR 6	-0.02	-0.09	2.98	0	0	0
67	SLE QP 1	-0.01	-0.09	2.81	0	0	0
67	SLE QP 2	-0.01	-0.09	2.91	0	0	0
67	SLD 1	0.18	-0.08	2.83	0	0	0
67	SLD 2	0.18	-0.07	2.82	0	0	0
67	SLD 3	0.16	-0.13	2.86	0	0	0
67	SLD 4	0.16	-0.13	2.86	0	0	0
67	SLD 5	0.07	0	2.83	0	0	0
67	SLD 6	0.07	0	2.83	0	0	0
67	SLD 7	0.02	-0.19	2.95	0	0	0
67	SLD 8	0.02	-0.19	2.95	0	0	0
67	SLD 9	-0.05	0	2.87	0	0	0
67	SLD 10	-0.05	0.01	2.87	0	0	0
67	SLD 11	-0.09	-0.19	2.99	0	0	0
67	SLD 12	-0.09	-0.18	2.99	0	0	0
67	SLD 13	-0.19	-0.06	2.96	0	0	0
67	SLD 14	-0.19	-0.05	2.96	0	0	0
67	SLD 15	-0.21	-0.11	3	0	0	0
67	SLD 16	-0.21	-0.1	2.99	0	0	0
67	SLV 1	0.44	-0.06	2.72	0	0	0
67	SLV 2	0.44	-0.04	2.71	0	0	0
67	SLV 3	0.4	-0.19	2.8	0	0	0
67	SLV 4	0.4	-0.17	2.79	0	0	0
67	SLV 5	0.17	0.11	2.73	0	0	0
67	SLV 6	0.17	0.12	2.72	0	0	0
67	SLV 7	0.06	-0.32	3	0	0	0
67	SLV 8	0.06	-0.31	3	0	0	0
67	SLV 9	-0.09	0.13	2.83	0	0	0
67	SLV 10	-0.09	0.14	2.82	0	0	0
67	SLV 11	-0.2	-0.31	3.1	0	0	0
67	SLV 12	-0.2	-0.29	3.09	0	0	0
67	SLV 13	-0.43	-0.01	3.03	0	0	0
67	SLV 14	-0.43	0.01	3.02	0	0	0
67	SLV 15	-0.46	-0.14	3.11	0	0	0
67	SLV 16	-0.47	-0.12	3.1	0	0	0
68	SLU 1	-0.01	-0.05	1.5	0	0	0
68	SLU 2	-0.01	-0.05	1.5	0	0	0
68	SLU 3	-0.01	-0.05	1.54	0	0	0
68	SLU 4	-0.01	-0.05	1.54	0	0	0
68	SLU 5	-0.01	-0.05	1.52	0	0	0
68	SLU 6	-0.01	-0.05	1.56	0	0	0
68	SLU 7	-0.01	-0.05	1.56	0	0	0
68	SLU 8	-0.01	-0.05	1.54	0	0	0
68	SLU 9	-0.01	-0.05	1.54	0	0	0
68	SLU 10	-0.01	-0.05	1.69	0	0	0
68	SLU 11	-0.01	-0.05	1.73	0	0	0
68	SLU 12	-0.01	-0.05	1.73	0	0	0
68	SLU 13	-0.01	-0.05	1.71	0	0	0
68	SLU 14	-0.01	-0.05	1.75	0	0	0
68	SLU 15	-0.01	-0.05	1.75	0	0	0
68	SLU 16	-0.01	-0.05	1.73	0	0	0
68	SLU 17	-0.01	-0.05	1.73	0	0	0
68	SLU 18	-0.01	-0.05	1.77	0	0	0
68	SLU 19	-0.01	-0.05	1.77	0	0	0
68	SLU 20	-0.01	-0.05	1.79	0	0	0
68	SLU 21	-0.01	-0.05	1.79	0	0	0
68	SLU 22	-0.01	-0.05	1.68	0	0	0
68	SLU 23	-0.01	-0.05	1.68	0	0	0
68	SLU 24	-0.01	-0.05	1.71	0	0	0
68	SLU 25	-0.01	-0.05	1.71	0	0	0
68	SLU 26	-0.01	-0.05	1.7	0	0	0
68	SLU 27	-0.01	-0.05	1.73	0	0	0
68	SLU 28	-0.01	-0.05	1.73	0	0	0
68	SLU 29	-0.01	-0.05	1.72	0	0	0
68	SLU 30	-0.01	-0.05	1.72	0	0	0
68	SLU 31	-0.01	-0.05	1.86	0	0	0
68	SLU 32	-0.01	-0.05	1.9	0	0	0
68	SLU 33	-0.01	-0.05	1.9	0	0	0
68	SLU 34	-0.01	-0.05	1.88	0	0	0
68	SLU 35	-0.01	-0.05	1.92	0	0	0
68	SLU 36	-0.01	-0.05	1.92	0	0	0
68	SLU 37	-0.01	-0.05	1.9	0	0	0
68	SLU 38	-0.01	-0.05	1.9	0	0	0
68	SLU 39	-0.01	-0.05	1.94	0	0	0
68	SLU 40	-0.01	-0.05	1.94	0	0	0
68	SLU 41	-0.01	-0.05	1.96	0	0	0
68	SLU 42	-0.01	-0.05	1.96	0	0	0
68	SLU 43	-0.01	-0.06	1.89	0	0	0
68	SLU 44	-0.01	-0.06	1.89	0	0	0
68	SLU 45	-0.01	-0.06	1.93	0	0	0
68	SLU 46	-0.01	-0.06	1.93	0	0	0
68	SLU 47	-0.01	-0.06	1.92	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
68	SLU 48	-0.01	-0.06	1.95	0	0	0
68	SLU 49	-0.01	-0.06	1.95	0	0	0
68	SLU 50	-0.01	-0.06	1.93	0	0	0
68	SLU 51	-0.01	-0.06	1.94	0	0	0
68	SLU 52	-0.01	-0.07	2.08	0	0	0
68	SLU 53	-0.01	-0.07	2.12	0	0	0
68	SLU 54	-0.01	-0.07	2.12	0	0	0
68	SLU 55	-0.01	-0.07	2.1	0	0	0
68	SLU 56	-0.01	-0.07	2.14	0	0	0
68	SLU 57	-0.01	-0.07	2.14	0	0	0
68	SLU 58	-0.01	-0.07	2.12	0	0	0
68	SLU 59	-0.01	-0.07	2.12	0	0	0
68	SLU 60	-0.01	-0.07	2.16	0	0	0
68	SLU 61	-0.01	-0.07	2.16	0	0	0
68	SLU 62	-0.02	-0.07	2.18	0	0	0
68	SLU 63	-0.02	-0.07	2.18	0	0	0
68	SLU 64	-0.01	-0.06	2.07	0	0	0
68	SLU 65	-0.01	-0.06	2.07	0	0	0
68	SLU 66	-0.01	-0.06	2.1	0	0	0
68	SLU 67	-0.01	-0.06	2.1	0	0	0
68	SLU 68	-0.01	-0.06	2.09	0	0	0
68	SLU 69	-0.01	-0.06	2.12	0	0	0
68	SLU 70	-0.01	-0.06	2.12	0	0	0
68	SLU 71	-0.01	-0.06	2.11	0	0	0
68	SLU 72	-0.01	-0.06	2.11	0	0	0
68	SLU 73	-0.01	-0.07	2.26	0	0	0
68	SLU 74	-0.01	-0.06	2.29	0	0	0
68	SLU 75	-0.01	-0.06	2.29	0	0	0
68	SLU 76	-0.01	-0.06	2.28	0	0	0
68	SLU 77	-0.01	-0.06	2.31	0	0	0
68	SLU 78	-0.01	-0.06	2.31	0	0	0
68	SLU 79	-0.01	-0.06	2.3	0	0	0
68	SLU 80	-0.01	-0.06	2.3	0	0	0
68	SLU 81	-0.01	-0.07	2.34	0	0	0
68	SLU 82	-0.01	-0.07	2.34	0	0	0
68	SLU 83	-0.02	-0.06	2.36	0	0	0
68	SLU 84	-0.02	-0.07	2.36	0	0	0
68	SLE RA 1	-0.01	-0.05	1.55	0	0	0
68	SLE RA 2	-0.01	-0.05	1.55	0	0	0
68	SLE RA 3	-0.01	-0.05	1.57	0	0	0
68	SLE RA 4	-0.01	-0.05	1.58	0	0	0
68	SLE RA 5	-0.01	-0.05	1.57	0	0	0
68	SLE RA 6	-0.01	-0.05	1.59	0	0	0
68	SLE RA 7	-0.01	-0.05	1.59	0	0	0
68	SLE RA 8	-0.01	-0.05	1.58	0	0	0
68	SLE RA 9	-0.01	-0.05	1.58	0	0	0
68	SLE RA 10	-0.01	-0.05	1.68	0	0	0
68	SLE RA 11	-0.01	-0.05	1.7	0	0	0
68	SLE RA 12	-0.01	-0.05	1.7	0	0	0
68	SLE RA 13	-0.01	-0.05	1.69	0	0	0
68	SLE RA 14	-0.01	-0.05	1.71	0	0	0
68	SLE RA 15	-0.01	-0.05	1.71	0	0	0
68	SLE RA 16	-0.01	-0.05	1.7	0	0	0
68	SLE RA 17	-0.01	-0.05	1.7	0	0	0
68	SLE RA 18	-0.01	-0.05	1.73	0	0	0
68	SLE RA 19	-0.01	-0.05	1.73	0	0	0
68	SLE RA 20	-0.01	-0.05	1.74	0	0	0
68	SLE RA 21	-0.01	-0.05	1.74	0	0	0
68	SLE FR 1	-0.01	-0.05	1.55	0	0	0
68	SLE FR 2	-0.01	-0.05	1.55	0	0	0
68	SLE FR 3	-0.01	-0.05	1.56	0	0	0
68	SLE FR 4	-0.01	-0.05	1.61	0	0	0
68	SLE FR 5	-0.01	-0.05	1.61	0	0	0
68	SLE FR 6	-0.01	-0.05	1.64	0	0	0
68	SLE QP 1	-0.01	-0.05	1.55	0	0	0
68	SLE QP 2	-0.01	-0.05	1.61	0	0	0
68	SLD 1	0.1	-0.04	1.55	0	0	0
68	SLD 2	0.1	-0.04	1.55	0	0	0
68	SLD 3	0.09	-0.07	1.57	0	0	0
68	SLD 4	0.09	-0.07	1.56	0	0	0
68	SLD 5	0.04	0	1.56	0	0	0
68	SLD 6	0.04	0	1.56	0	0	0
68	SLD 7	0.01	-0.11	1.62	0	0	0
68	SLD 8	0.01	-0.1	1.62	0	0	0
68	SLD 9	-0.03	0	1.59	0	0	0
68	SLD 10	-0.03	0.01	1.59	0	0	0
68	SLD 11	-0.05	-0.1	1.65	0	0	0
68	SLD 12	-0.05	-0.1	1.65	0	0	0
68	SLD 13	-0.11	-0.03	1.65	0	0	0
68	SLD 14	-0.11	-0.02	1.64	0	0	0
68	SLD 15	-0.11	-0.06	1.67	0	0	0
68	SLD 16	-0.12	-0.06	1.66	0	0	0
68	SLV 1	0.24	-0.03	1.47	0	0	0
68	SLV 2	0.24	-0.02	1.47	0	0	0
68	SLV 3	0.23	-0.11	1.51	0	0	0
68	SLV 4	0.22	-0.09	1.51	0	0	0
68	SLV 5	0.1	0.06	1.5	0	0	0
68	SLV 6	0.09	0.07	1.5	0	0	0
68	SLV 7	0.03	-0.18	1.64	0	0	0
68	SLV 8	0.03	-0.17	1.64	0	0	0
68	SLV 9	-0.05	0.07	1.57	0	0	0
68	SLV 10	-0.05	0.08	1.57	0	0	0
68	SLV 11	-0.11	-0.17	1.71	0	0	0
68	SLV 12	-0.11	-0.16	1.71	0	0	0
68	SLV 13	-0.24	-0.01	1.7	0	0	0
68	SLV 14	-0.24	0.01	1.7	0	0	0
68	SLV 15	-0.26	-0.08	1.75	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
68	SLV 16	-0.26	-0.06	1.74	0	0	0
129	SLU 1	-0.01	-0.08	3.55	0	0	0
129	SLU 2	-0.01	-0.09	3.55	0	0	0
129	SLU 3	-0.01	-0.08	3.64	0	0	0
129	SLU 4	-0.01	-0.09	3.64	0	0	0
129	SLU 5	-0.01	-0.09	3.6	0	0	0
129	SLU 6	-0.02	-0.09	3.69	0	0	0
129	SLU 7	-0.01	-0.09	3.69	0	0	0
129	SLU 8	-0.02	-0.09	3.66	0	0	0
129	SLU 9	-0.01	-0.09	3.66	0	0	0
129	SLU 10	-0.01	-0.09	3.97	0	0	0
129	SLU 11	-0.01	-0.09	4.05	0	0	0
129	SLU 12	-0.01	-0.09	4.05	0	0	0
129	SLU 13	-0.01	-0.09	4.02	0	0	0
129	SLU 14	-0.01	-0.09	4.11	0	0	0
129	SLU 15	-0.01	-0.09	4.11	0	0	0
129	SLU 16	-0.01	-0.09	4.08	0	0	0
129	SLU 17	-0.01	-0.09	4.08	0	0	0
129	SLU 18	-0.01	-0.09	4.15	0	0	0
129	SLU 19	-0.01	-0.09	4.15	0	0	0
129	SLU 20	-0.01	-0.09	4.2	0	0	0
129	SLU 21	-0.01	-0.09	4.2	0	0	0
129	SLU 22	-0.02	-0.09	3.93	0	0	0
129	SLU 23	-0.01	-0.09	3.93	0	0	0
129	SLU 24	-0.02	-0.09	4.02	0	0	0
129	SLU 25	-0.02	-0.09	4.01	0	0	0
129	SLU 26	-0.02	-0.09	3.98	0	0	0
129	SLU 27	-0.02	-0.09	4.07	0	0	0
129	SLU 28	-0.02	-0.09	4.07	0	0	0
129	SLU 29	-0.02	-0.09	4.04	0	0	0
129	SLU 30	-0.02	-0.09	4.04	0	0	0
129	SLU 31	-0.01	-0.09	4.34	0	0	0
129	SLU 32	-0.02	-0.09	4.43	0	0	0
129	SLU 33	-0.02	-0.09	4.43	0	0	0
129	SLU 34	-0.01	-0.1	4.4	0	0	0
129	SLU 35	-0.02	-0.09	4.49	0	0	0
129	SLU 36	-0.02	-0.1	4.48	0	0	0
129	SLU 37	-0.02	-0.09	4.46	0	0	0
129	SLU 38	-0.02	-0.1	4.45	0	0	0
129	SLU 39	-0.02	-0.09	4.53	0	0	0
129	SLU 40	-0.01	-0.1	4.52	0	0	0
129	SLU 41	-0.02	-0.09	4.58	0	0	0
129	SLU 42	-0.01	-0.1	4.58	0	0	0
129	SLU 43	-0.02	-0.11	4.49	0	0	0
129	SLU 44	-0.02	-0.11	4.49	0	0	0
129	SLU 45	-0.02	-0.11	4.58	0	0	0
129	SLU 46	-0.02	-0.11	4.57	0	0	0
129	SLU 47	-0.02	-0.11	4.54	0	0	0
129	SLU 48	-0.02	-0.11	4.63	0	0	0
129	SLU 49	-0.02	-0.11	4.63	0	0	0
129	SLU 50	-0.02	-0.11	4.6	0	0	0
129	SLU 51	-0.02	-0.11	4.6	0	0	0
129	SLU 52	-0.02	-0.12	4.9	0	0	0
129	SLU 53	-0.02	-0.11	4.99	0	0	0
129	SLU 54	-0.02	-0.12	4.99	0	0	0
129	SLU 55	-0.02	-0.12	4.96	0	0	0
129	SLU 56	-0.02	-0.12	5.05	0	0	0
129	SLU 57	-0.02	-0.12	5.04	0	0	0
129	SLU 58	-0.02	-0.12	5.02	0	0	0
129	SLU 59	-0.02	-0.12	5.01	0	0	0
129	SLU 60	-0.02	-0.12	5.09	0	0	0
129	SLU 61	-0.02	-0.12	5.08	0	0	0
129	SLU 62	-0.02	-0.12	5.14	0	0	0
129	SLU 63	-0.02	-0.12	5.14	0	0	0
129	SLU 64	-0.02	-0.11	4.87	0	0	0
129	SLU 65	-0.02	-0.11	4.86	0	0	0
129	SLU 66	-0.02	-0.11	4.95	0	0	0
129	SLU 67	-0.02	-0.11	4.95	0	0	0
129	SLU 68	-0.02	-0.11	4.92	0	0	0
129	SLU 69	-0.02	-0.11	5.01	0	0	0
129	SLU 70	-0.02	-0.11	5	0	0	0
129	SLU 71	-0.02	-0.11	4.98	0	0	0
129	SLU 72	-0.02	-0.11	4.97	0	0	0
129	SLU 73	-0.02	-0.12	5.28	0	0	0
129	SLU 74	-0.02	-0.12	5.37	0	0	0
129	SLU 75	-0.02	-0.12	5.37	0	0	0
129	SLU 76	-0.02	-0.12	5.33	0	0	0
129	SLU 77	-0.02	-0.12	5.42	0	0	0
129	SLU 78	-0.02	-0.12	5.42	0	0	0
129	SLU 79	-0.02	-0.12	5.39	0	0	0
129	SLU 80	-0.02	-0.12	5.39	0	0	0
129	SLU 81	-0.02	-0.12	5.46	0	0	0
129	SLU 82	-0.02	-0.12	5.46	0	0	0
129	SLU 83	-0.02	-0.12	5.52	0	0	0
129	SLU 84	-0.02	-0.12	5.51	0	0	0
129	SLE RA 1	-0.02	-0.08	3.66	0	0	0
129	SLE RA 2	-0.01	-0.09	3.66	0	0	0
129	SLE RA 3	-0.02	-0.08	3.72	0	0	0
129	SLE RA 4	-0.01	-0.09	3.72	0	0	0
129	SLE RA 5	-0.01	-0.09	3.69	0	0	0
129	SLE RA 6	-0.02	-0.09	3.75	0	0	0
129	SLE RA 7	-0.02	-0.09	3.75	0	0	0
129	SLE RA 8	-0.02	-0.09	3.73	0	0	0
129	SLE RA 9	-0.02	-0.09	3.73	0	0	0
129	SLE RA 10	-0.01	-0.09	3.94	0	0	0
129	SLE RA 11	-0.01	-0.09	4	0	0	0
129	SLE RA 12	-0.01	-0.09	3.99	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
129	SLE RA 13	-0.01	-0.09	3.97	0	0	0
129	SLE RA 14	-0.02	-0.09	4.03	0	0	0
129	SLE RA 15	-0.01	-0.09	4.03	0	0	0
129	SLE RA 16	-0.02	-0.09	4.01	0	0	0
129	SLE RA 17	-0.01	-0.09	4.01	0	0	0
129	SLE RA 18	-0.01	-0.09	4.06	0	0	0
129	SLE RA 19	-0.01	-0.09	4.06	0	0	0
129	SLE RA 20	-0.01	-0.09	4.09	0	0	0
129	SLE RA 21	-0.01	-0.09	4.09	0	0	0
129	SLE FR 1	-0.02	-0.08	3.66	0	0	0
129	SLE FR 2	-0.01	-0.08	3.66	0	0	0
129	SLE FR 3	-0.02	-0.08	3.68	0	0	0
129	SLE FR 4	-0.01	-0.09	3.78	0	0	0
129	SLE FR 5	-0.02	-0.09	3.8	0	0	0
129	SLE FR 6	-0.01	-0.09	3.86	0	0	0
129	SLE QP 1	-0.02	-0.08	3.66	0	0	0
129	SLE QP 2	-0.01	-0.09	3.78	0	0	0
129	SLD 1	0.28	-0.08	4.13	0	0	0
129	SLD 2	0.31	-0.1	4.12	0	0	0
129	SLD 3	0.26	-0.16	4.03	0	0	0
129	SLD 4	0.29	-0.17	4.02	0	0	0
129	SLD 5	0.1	0.03	4.04	0	0	0
129	SLD 6	0.12	0.03	4.04	0	0	0
129	SLD 7	0.03	-0.22	3.7	0	0	0
129	SLD 8	0.05	-0.23	3.69	0	0	0
129	SLD 9	-0.08	0.06	3.87	0	0	0
129	SLD 10	-0.06	0.05	3.86	0	0	0
129	SLD 11	-0.15	-0.2	3.53	0	0	0
129	SLD 12	-0.13	-0.21	3.52	0	0	0
129	SLD 13	-0.32	0	3.54	0	0	0
129	SLD 14	-0.29	-0.01	3.53	0	0	0
129	SLD 15	-0.34	-0.07	3.44	0	0	0
129	SLD 16	-0.31	-0.09	3.43	0	0	0
129	SLV 1	0.67	-0.08	4.6	0	0	0
129	SLV 2	0.74	-0.11	4.57	0	0	0
129	SLV 3	0.62	-0.26	4.37	0	0	0
129	SLV 4	0.69	-0.29	4.34	0	0	0
129	SLV 5	0.26	0.18	4.39	0	0	0
129	SLV 6	0.3	0.16	4.37	0	0	0
129	SLV 7	0.08	-0.39	3.61	0	0	0
129	SLV 8	0.13	-0.42	3.59	0	0	0
129	SLV 9	-0.16	0.24	3.97	0	0	0
129	SLV 10	-0.11	0.22	3.95	0	0	0
129	SLV 11	-0.33	-0.33	3.19	0	0	0
129	SLV 12	-0.29	-0.36	3.18	0	0	0
129	SLV 13	-0.72	0.12	3.22	0	0	0
129	SLV 14	-0.65	0.08	3.19	0	0	0
129	SLV 15	-0.77	-0.06	2.99	0	0	0
129	SLV 16	-0.7	-0.09	2.96	0	0	0
130	SLU 1	-0.03	-0.14	7.01	0	0	0
130	SLU 2	-0.03	-0.15	7	0	0	0
130	SLU 3	-0.03	-0.14	7.17	0	0	0
130	SLU 4	-0.03	-0.15	7.17	0	0	0
130	SLU 5	-0.03	-0.15	7.1	0	0	0
130	SLU 6	-0.03	-0.15	7.28	0	0	0
130	SLU 7	-0.03	-0.15	7.27	0	0	0
130	SLU 8	-0.03	-0.15	7.22	0	0	0
130	SLU 9	-0.03	-0.15	7.22	0	0	0
130	SLU 10	-0.02	-0.16	7.82	0	0	0
130	SLU 11	-0.03	-0.15	8	0	0	0
130	SLU 12	-0.03	-0.16	7.99	0	0	0
130	SLU 13	-0.03	-0.16	7.93	0	0	0
130	SLU 14	-0.03	-0.16	8.1	0	0	0
130	SLU 15	-0.03	-0.16	8.1	0	0	0
130	SLU 16	-0.03	-0.16	8.04	0	0	0
130	SLU 17	-0.03	-0.16	8.04	0	0	0
130	SLU 18	-0.03	-0.16	8.18	0	0	0
130	SLU 19	-0.03	-0.16	8.18	0	0	0
130	SLU 20	-0.03	-0.16	8.29	0	0	0
130	SLU 21	-0.03	-0.16	8.28	0	0	0
130	SLU 22	-0.03	-0.15	7.75	0	0	0
130	SLU 23	-0.03	-0.15	7.74	0	0	0
130	SLU 24	-0.03	-0.15	7.92	0	0	0
130	SLU 25	-0.03	-0.15	7.91	0	0	0
130	SLU 26	-0.03	-0.15	7.85	0	0	0
130	SLU 27	-0.03	-0.15	8.02	0	0	0
130	SLU 28	-0.03	-0.15	8.02	0	0	0
130	SLU 29	-0.03	-0.15	7.96	0	0	0
130	SLU 30	-0.03	-0.15	7.96	0	0	0
130	SLU 31	-0.03	-0.16	8.56	0	0	0
130	SLU 32	-0.03	-0.16	8.74	0	0	0
130	SLU 33	-0.03	-0.16	8.73	0	0	0
130	SLU 34	-0.03	-0.16	8.67	0	0	0
130	SLU 35	-0.03	-0.16	8.85	0	0	0
130	SLU 36	-0.03	-0.16	8.84	0	0	0
130	SLU 37	-0.03	-0.16	8.79	0	0	0
130	SLU 38	-0.03	-0.16	8.78	0	0	0
130	SLU 39	-0.03	-0.16	8.93	0	0	0
130	SLU 40	-0.03	-0.16	8.92	0	0	0
130	SLU 41	-0.03	-0.16	9.03	0	0	0
130	SLU 42	-0.03	-0.16	9.03	0	0	0
130	SLU 43	-0.04	-0.18	8.86	0	0	0
130	SLU 44	-0.03	-0.19	8.85	0	0	0
130	SLU 45	-0.04	-0.19	9.02	0	0	0
130	SLU 46	-0.04	-0.19	9.02	0	0	0
130	SLU 47	-0.03	-0.19	8.95	0	0	0
130	SLU 48	-0.04	-0.19	9.13	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
130	SLU 49	-0.04	-0.19	9.12	0	0	0
130	SLU 50	-0.04	-0.19	9.07	0	0	0
130	SLU 51	-0.04	-0.19	9.06	0	0	0
130	SLU 52	-0.03	-0.2	9.67	0	0	0
130	SLU 53	-0.04	-0.2	9.85	0	0	0
130	SLU 54	-0.03	-0.2	9.84	0	0	0
130	SLU 55	-0.03	-0.2	9.78	0	0	0
130	SLU 56	-0.04	-0.2	9.95	0	0	0
130	SLU 57	-0.03	-0.2	9.95	0	0	0
130	SLU 58	-0.04	-0.2	9.89	0	0	0
130	SLU 59	-0.04	-0.2	9.89	0	0	0
130	SLU 60	-0.03	-0.2	10.03	0	0	0
130	SLU 61	-0.03	-0.2	10.03	0	0	0
130	SLU 62	-0.04	-0.2	10.14	0	0	0
130	SLU 63	-0.03	-0.2	10.13	0	0	0
130	SLU 64	-0.04	-0.19	9.6	0	0	0
130	SLU 65	-0.04	-0.19	9.59	0	0	0
130	SLU 66	-0.04	-0.19	9.76	0	0	0
130	SLU 67	-0.04	-0.19	9.76	0	0	0
130	SLU 68	-0.04	-0.2	9.7	0	0	0
130	SLU 69	-0.04	-0.19	9.87	0	0	0
130	SLU 70	-0.04	-0.2	9.86	0	0	0
130	SLU 71	-0.04	-0.19	9.81	0	0	0
130	SLU 72	-0.04	-0.19	9.81	0	0	0
130	SLU 73	-0.04	-0.2	10.41	0	0	0
130	SLU 74	-0.04	-0.2	10.59	0	0	0
130	SLU 75	-0.04	-0.2	10.58	0	0	0
130	SLU 76	-0.04	-0.2	10.52	0	0	0
130	SLU 77	-0.04	-0.2	10.69	0	0	0
130	SLU 78	-0.04	-0.2	10.69	0	0	0
130	SLU 79	-0.04	-0.2	10.63	0	0	0
130	SLU 80	-0.04	-0.2	10.63	0	0	0
130	SLU 81	-0.04	-0.2	10.77	0	0	0
130	SLU 82	-0.04	-0.2	10.77	0	0	0
130	SLU 83	-0.04	-0.2	10.88	0	0	0
130	SLU 84	-0.04	-0.21	10.87	0	0	0
130	SLE RA 1	-0.03	-0.14	7.22	0	0	0
130	SLE RA 2	-0.03	-0.15	7.21	0	0	0
130	SLE RA 3	-0.03	-0.14	7.33	0	0	0
130	SLE RA 4	-0.03	-0.15	7.33	0	0	0
130	SLE RA 5	-0.03	-0.15	7.28	0	0	0
130	SLE RA 6	-0.03	-0.15	7.4	0	0	0
130	SLE RA 7	-0.03	-0.15	7.4	0	0	0
130	SLE RA 8	-0.03	-0.15	7.36	0	0	0
130	SLE RA 9	-0.03	-0.15	7.36	0	0	0
130	SLE RA 10	-0.03	-0.15	7.76	0	0	0
130	SLE RA 11	-0.03	-0.15	7.88	0	0	0
130	SLE RA 12	-0.03	-0.15	7.88	0	0	0
130	SLE RA 13	-0.03	-0.15	7.83	0	0	0
130	SLE RA 14	-0.03	-0.15	7.95	0	0	0
130	SLE RA 15	-0.03	-0.15	7.95	0	0	0
130	SLE RA 16	-0.03	-0.15	7.91	0	0	0
130	SLE RA 17	-0.03	-0.15	7.91	0	0	0
130	SLE RA 18	-0.03	-0.15	8	0	0	0
130	SLE RA 19	-0.03	-0.15	8	0	0	0
130	SLE RA 20	-0.03	-0.15	8.07	0	0	0
130	SLE RA 21	-0.03	-0.16	8.07	0	0	0
130	SLE FR 1	-0.03	-0.14	7.22	0	0	0
130	SLE FR 2	-0.03	-0.14	7.22	0	0	0
130	SLE FR 3	-0.03	-0.14	7.25	0	0	0
130	SLE FR 4	-0.03	-0.15	7.45	0	0	0
130	SLE FR 5	-0.03	-0.15	7.48	0	0	0
130	SLE FR 6	-0.03	-0.15	7.61	0	0	0
130	SLE QP 1	-0.03	-0.14	7.22	0	0	0
130	SLE QP 2	-0.03	-0.15	7.46	0	0	0
130	SLD 1	0.56	-0.13	8.07	0	0	0
130	SLD 2	0.61	-0.15	8.05	0	0	0
130	SLD 3	0.51	-0.28	7.87	0	0	0
130	SLD 4	0.57	-0.31	7.85	0	0	0
130	SLD 5	0.2	0.1	7.95	0	0	0
130	SLD 6	0.24	0.08	7.93	0	0	0
130	SLD 7	0.05	-0.42	7.28	0	0	0
130	SLD 8	0.09	-0.43	7.27	0	0	0
130	SLD 9	-0.15	0.14	7.64	0	0	0
130	SLD 10	-0.11	0.12	7.63	0	0	0
130	SLD 11	-0.3	-0.37	6.98	0	0	0
130	SLD 12	-0.26	-0.39	6.96	0	0	0
130	SLD 13	-0.63	0.01	7.06	0	0	0
130	SLD 14	-0.57	-0.01	7.04	0	0	0
130	SLD 15	-0.67	-0.14	6.86	0	0	0
130	SLD 16	-0.61	-0.17	6.84	0	0	0
130	SLV 1	1.34	-0.11	8.89	0	0	0
130	SLV 2	1.48	-0.17	8.84	0	0	0
130	SLV 3	1.24	-0.46	8.44	0	0	0
130	SLV 4	1.37	-0.51	8.39	0	0	0
130	SLV 5	0.51	0.4	8.58	0	0	0
130	SLV 6	0.6	0.37	8.55	0	0	0
130	SLV 7	0.17	-0.76	7.07	0	0	0
130	SLV 8	0.26	-0.79	7.04	0	0	0
130	SLV 9	-0.32	0.5	7.87	0	0	0
130	SLV 10	-0.23	0.46	7.84	0	0	0
130	SLV 11	-0.66	-0.66	6.36	0	0	0
130	SLV 12	-0.57	-0.7	6.33	0	0	0
130	SLV 13	-1.43	0.22	6.52	0	0	0
130	SLV 14	-1.29	0.16	6.47	0	0	0
130	SLV 15	-1.54	-0.13	6.07	0	0	0
130	SLV 16	-1.4	-0.19	6.02	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
131	SLU 1	-0.03	-0.12	6.78	0	0	0
131	SLU 2	-0.03	-0.13	6.77	0	0	0
131	SLU 3	-0.03	-0.12	6.94	0	0	0
131	SLU 4	-0.03	-0.12	6.94	0	0	0
131	SLU 5	-0.03	-0.13	6.88	0	0	0
131	SLU 6	-0.03	-0.12	7.05	0	0	0
131	SLU 7	-0.03	-0.13	7.04	0	0	0
131	SLU 8	-0.03	-0.12	6.99	0	0	0
131	SLU 9	-0.03	-0.13	6.98	0	0	0
131	SLU 10	-0.02	-0.13	7.57	0	0	0
131	SLU 11	-0.03	-0.13	7.74	0	0	0
131	SLU 12	-0.03	-0.13	7.74	0	0	0
131	SLU 13	-0.03	-0.13	7.67	0	0	0
131	SLU 14	-0.03	-0.13	7.84	0	0	0
131	SLU 15	-0.03	-0.13	7.84	0	0	0
131	SLU 16	-0.03	-0.13	7.79	0	0	0
131	SLU 17	-0.03	-0.13	7.78	0	0	0
131	SLU 18	-0.03	-0.13	7.92	0	0	0
131	SLU 19	-0.03	-0.13	7.92	0	0	0
131	SLU 20	-0.03	-0.13	8.03	0	0	0
131	SLU 21	-0.03	-0.13	8.02	0	0	0
131	SLU 22	-0.03	-0.12	7.5	0	0	0
131	SLU 23	-0.03	-0.12	7.49	0	0	0
131	SLU 24	-0.03	-0.12	7.66	0	0	0
131	SLU 25	-0.03	-0.12	7.65	0	0	0
131	SLU 26	-0.03	-0.13	7.59	0	0	0
131	SLU 27	-0.03	-0.12	7.76	0	0	0
131	SLU 28	-0.03	-0.13	7.76	0	0	0
131	SLU 29	-0.03	-0.12	7.7	0	0	0
131	SLU 30	-0.03	-0.13	7.7	0	0	0
131	SLU 31	-0.03	-0.13	8.29	0	0	0
131	SLU 32	-0.03	-0.13	8.46	0	0	0
131	SLU 33	-0.03	-0.13	8.45	0	0	0
131	SLU 34	-0.03	-0.13	8.39	0	0	0
131	SLU 35	-0.03	-0.13	8.56	0	0	0
131	SLU 36	-0.03	-0.13	8.56	0	0	0
131	SLU 37	-0.03	-0.13	8.5	0	0	0
131	SLU 38	-0.03	-0.13	8.5	0	0	0
131	SLU 39	-0.03	-0.13	8.64	0	0	0
131	SLU 40	-0.03	-0.13	8.63	0	0	0
131	SLU 41	-0.03	-0.13	8.74	0	0	0
131	SLU 42	-0.03	-0.13	8.74	0	0	0
131	SLU 43	-0.04	-0.15	8.57	0	0	0
131	SLU 44	-0.03	-0.16	8.56	0	0	0
131	SLU 45	-0.04	-0.16	8.73	0	0	0
131	SLU 46	-0.04	-0.16	8.73	0	0	0
131	SLU 47	-0.03	-0.16	8.66	0	0	0
131	SLU 48	-0.04	-0.16	8.83	0	0	0
131	SLU 49	-0.04	-0.16	8.83	0	0	0
131	SLU 50	-0.04	-0.16	8.78	0	0	0
131	SLU 51	-0.04	-0.16	8.77	0	0	0
131	SLU 52	-0.03	-0.17	9.36	0	0	0
131	SLU 53	-0.04	-0.16	9.53	0	0	0
131	SLU 54	-0.03	-0.17	9.53	0	0	0
131	SLU 55	-0.03	-0.17	9.46	0	0	0
131	SLU 56	-0.04	-0.16	9.63	0	0	0
131	SLU 57	-0.03	-0.17	9.63	0	0	0
131	SLU 58	-0.04	-0.16	9.58	0	0	0
131	SLU 59	-0.03	-0.17	9.57	0	0	0
131	SLU 60	-0.03	-0.16	9.71	0	0	0
131	SLU 61	-0.03	-0.17	9.71	0	0	0
131	SLU 62	-0.04	-0.17	9.82	0	0	0
131	SLU 63	-0.03	-0.17	9.81	0	0	0
131	SLU 64	-0.04	-0.15	9.29	0	0	0
131	SLU 65	-0.04	-0.16	9.28	0	0	0
131	SLU 66	-0.04	-0.16	9.45	0	0	0
131	SLU 67	-0.04	-0.16	9.44	0	0	0
131	SLU 68	-0.04	-0.16	9.38	0	0	0
131	SLU 69	-0.04	-0.16	9.55	0	0	0
131	SLU 70	-0.04	-0.16	9.55	0	0	0
131	SLU 71	-0.04	-0.16	9.49	0	0	0
131	SLU 72	-0.04	-0.16	9.49	0	0	0
131	SLU 73	-0.04	-0.17	10.08	0	0	0
131	SLU 74	-0.04	-0.16	10.25	0	0	0
131	SLU 75	-0.04	-0.17	10.24	0	0	0
131	SLU 76	-0.04	-0.17	10.18	0	0	0
131	SLU 77	-0.04	-0.16	10.35	0	0	0
131	SLU 78	-0.04	-0.17	10.34	0	0	0
131	SLU 79	-0.04	-0.16	10.29	0	0	0
131	SLU 80	-0.04	-0.17	10.29	0	0	0
131	SLU 81	-0.04	-0.16	10.43	0	0	0
131	SLU 82	-0.04	-0.17	10.42	0	0	0
131	SLU 83	-0.04	-0.17	10.53	0	0	0
131	SLU 84	-0.04	-0.17	10.53	0	0	0
131	SLE RA 1	-0.03	-0.12	6.99	0	0	0
131	SLE RA 2	-0.03	-0.12	6.98	0	0	0
131	SLE RA 3	-0.03	-0.12	7.09	0	0	0
131	SLE RA 4	-0.03	-0.12	7.09	0	0	0
131	SLE RA 5	-0.03	-0.12	7.05	0	0	0
131	SLE RA 6	-0.03	-0.12	7.16	0	0	0
131	SLE RA 7	-0.03	-0.12	7.16	0	0	0
131	SLE RA 8	-0.03	-0.12	7.12	0	0	0
131	SLE RA 9	-0.03	-0.12	7.12	0	0	0
131	SLE RA 10	-0.03	-0.13	7.51	0	0	0
131	SLE RA 11	-0.03	-0.12	7.63	0	0	0
131	SLE RA 12	-0.03	-0.13	7.62	0	0	0
131	SLE RA 13	-0.03	-0.13	7.58	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
131	SLE RA 14	-0.03	-0.13	7.7	0	0	0
131	SLE RA 15	-0.03	-0.13	7.69	0	0	0
131	SLE RA 16	-0.03	-0.13	7.66	0	0	0
131	SLE RA 17	-0.03	-0.13	7.65	0	0	0
131	SLE RA 18	-0.03	-0.13	7.75	0	0	0
131	SLE RA 19	-0.03	-0.13	7.74	0	0	0
131	SLE RA 20	-0.03	-0.13	7.82	0	0	0
131	SLE RA 21	-0.03	-0.13	7.81	0	0	0
131	SLE FR 1	-0.03	-0.12	6.99	0	0	0
131	SLE FR 2	-0.03	-0.12	6.99	0	0	0
131	SLE FR 3	-0.03	-0.12	7.01	0	0	0
131	SLE FR 4	-0.03	-0.12	7.21	0	0	0
131	SLE FR 5	-0.03	-0.12	7.24	0	0	0
131	SLE FR 6	-0.03	-0.12	7.37	0	0	0
131	SLE QP 1	-0.03	-0.12	6.99	0	0	0
131	SLE QP 2	-0.03	-0.12	7.22	0	0	0
131	SLD 1	0.54	-0.09	7.74	0	0	0
131	SLD 2	0.6	-0.11	7.72	0	0	0
131	SLD 3	0.5	-0.24	7.55	0	0	0
131	SLD 4	0.56	-0.26	7.53	0	0	0
131	SLD 5	0.2	0.12	7.66	0	0	0
131	SLD 6	0.23	0.11	7.65	0	0	0
131	SLD 7	0.05	-0.38	7.03	0	0	0
131	SLD 8	0.09	-0.4	7.02	0	0	0
131	SLD 9	-0.15	0.16	7.41	0	0	0
131	SLD 10	-0.11	0.14	7.4	0	0	0
131	SLD 11	-0.29	-0.35	6.78	0	0	0
131	SLD 12	-0.26	-0.36	6.77	0	0	0
131	SLD 13	-0.61	0.02	6.9	0	0	0
131	SLD 14	-0.56	0	6.88	0	0	0
131	SLD 15	-0.66	-0.13	6.71	0	0	0
131	SLD 16	-0.6	-0.15	6.69	0	0	0
131	SLV 1	1.31	-0.06	8.43	0	0	0
131	SLV 2	1.44	-0.11	8.39	0	0	0
131	SLV 3	1.2	-0.4	8	0	0	0
131	SLV 4	1.34	-0.45	7.95	0	0	0
131	SLV 5	0.5	0.43	8.24	0	0	0
131	SLV 6	0.59	0.39	8.22	0	0	0
131	SLV 7	0.16	-0.71	6.8	0	0	0
131	SLV 8	0.25	-0.75	6.77	0	0	0
131	SLV 9	-0.31	0.51	7.66	0	0	0
131	SLV 10	-0.22	0.47	7.63	0	0	0
131	SLV 11	-0.65	-0.63	6.22	0	0	0
131	SLV 12	-0.56	-0.67	6.19	0	0	0
131	SLV 13	-1.4	0.21	6.48	0	0	0
131	SLV 14	-1.26	0.16	6.44	0	0	0
131	SLV 15	-1.5	-0.13	6.05	0	0	0
131	SLV 16	-1.36	-0.19	6	0	0	0
132	SLU 1	-0.03	-0.1	6.44	0	0.3628	0.0055
132	SLU 2	-0.02	-0.1	6.43	0	0.3623	0.0058
132	SLU 3	-0.03	-0.1	6.59	0	0.3714	0.0056
132	SLU 4	-0.03	-0.1	6.59	0	0.3711	0.0057
132	SLU 5	-0.03	-0.1	6.53	0	0.3678	0.0059
132	SLU 6	-0.03	-0.1	6.69	0	0.3769	0.0056
132	SLU 7	-0.03	-0.1	6.69	0	0.3766	0.0058
132	SLU 8	-0.03	-0.1	6.64	0	0.3738	0.0056
132	SLU 9	-0.03	-0.1	6.63	0	0.3735	0.0058
132	SLU 10	-0.02	-0.11	7.19	0	0.4052	0.0061
132	SLU 11	-0.03	-0.1	7.35	0	0.4143	0.0058
132	SLU 12	-0.03	-0.11	7.35	0	0.414	0.006
132	SLU 13	-0.02	-0.11	7.29	0	0.4107	0.0061
132	SLU 14	-0.03	-0.1	7.45	0	0.4198	0.0059
132	SLU 15	-0.03	-0.11	7.45	0	0.4195	0.0061
132	SLU 16	-0.03	-0.1	7.4	0	0.4167	0.0059
132	SLU 17	-0.03	-0.11	7.39	0	0.4164	0.0061
132	SLU 18	-0.03	-0.1	7.53	0	0.4241	0.0059
132	SLU 19	-0.02	-0.11	7.52	0	0.4238	0.0061
132	SLU 20	-0.03	-0.11	7.63	0	0.4296	0.0059
132	SLU 21	-0.02	-0.11	7.62	0	0.4293	0.0061
132	SLU 22	-0.03	-0.1	7.12	0	0.4011	0.0054
132	SLU 23	-0.03	-0.1	7.11	0	0.4006	0.0057
132	SLU 24	-0.03	-0.1	7.27	0	0.4097	0.0054
132	SLU 25	-0.03	-0.1	7.27	0	0.4094	0.0056
132	SLU 26	-0.03	-0.1	7.21	0	0.4061	0.0058
132	SLU 27	-0.03	-0.1	7.37	0	0.4152	0.0055
132	SLU 28	-0.03	-0.1	7.37	0	0.4149	0.0057
132	SLU 29	-0.03	-0.1	7.32	0	0.4121	0.0055
132	SLU 30	-0.03	-0.1	7.31	0	0.4118	0.0057
132	SLU 31	-0.03	-0.11	7.87	0	0.4435	0.006
132	SLU 32	-0.03	-0.1	8.03	0	0.4526	0.0057
132	SLU 33	-0.03	-0.1	8.03	0	0.4523	0.0059
132	SLU 34	-0.03	-0.11	7.97	0	0.449	0.006
132	SLU 35	-0.03	-0.1	8.13	0	0.4581	0.0058
132	SLU 36	-0.03	-0.11	8.13	0	0.4578	0.0059
132	SLU 37	-0.03	-0.1	8.08	0	0.455	0.0058
132	SLU 38	-0.03	-0.11	8.07	0	0.4547	0.006
132	SLU 39	-0.03	-0.1	8.21	0	0.4624	0.0057
132	SLU 40	-0.03	-0.11	8.2	0	0.4621	0.0059
132	SLU 41	-0.03	-0.1	8.31	0	0.4679	0.0058
132	SLU 42	-0.03	-0.11	8.3	0	0.4676	0.006
132	SLU 43	-0.03	-0.13	8.14	0	0.4585	0.0072
132	SLU 44	-0.03	-0.13	8.13	0	0.458	0.0075
132	SLU 45	-0.04	-0.13	8.29	0	0.4671	0.0072
132	SLU 46	-0.03	-0.13	8.29	0	0.4668	0.0074
132	SLU 47	-0.03	-0.13	8.23	0	0.4635	0.0076
132	SLU 48	-0.04	-0.13	8.39	0	0.4726	0.0073
132	SLU 49	-0.03	-0.13	8.38	0	0.4723	0.0075

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
132	SLU 50	-0.04	-0.13	8.33	0	0.4695	0.0073
132	SLU 51	-0.03	-0.13	8.33	0	0.4692	0.0075
132	SLU 52	-0.03	-0.14	8.89	0	0.5009	0.0078
132	SLU 53	-0.03	-0.13	9.05	-0.0001	0.51	0.0075
132	SLU 54	-0.03	-0.14	9.05	-0.0001	0.5097	0.0077
132	SLU 55	-0.03	-0.14	8.99	0	0.5064	0.0078
132	SLU 56	-0.03	-0.13	9.15	-0.0001	0.5155	0.0076
132	SLU 57	-0.03	-0.14	9.15	-0.0001	0.5152	0.0078
132	SLU 58	-0.04	-0.13	9.1	-0.0001	0.5124	0.0076
132	SLU 59	-0.03	-0.14	9.09	-0.0001	0.5121	0.0078
132	SLU 60	-0.03	-0.13	9.23	-0.0001	0.5198	0.0076
132	SLU 61	-0.03	-0.14	9.22	-0.0001	0.5195	0.0078
132	SLU 62	-0.03	-0.14	9.32	-0.0001	0.5253	0.0076
132	SLU 63	-0.03	-0.14	9.32	-0.0001	0.525	0.0078
132	SLU 64	-0.04	-0.13	8.82	0	0.4968	0.0071
132	SLU 65	-0.04	-0.13	8.81	0	0.4963	0.0074
132	SLU 66	-0.04	-0.13	8.97	0	0.5054	0.0071
132	SLU 67	-0.04	-0.13	8.97	0	0.5051	0.0073
132	SLU 68	-0.04	-0.13	8.91	0	0.5018	0.0075
132	SLU 69	-0.04	-0.13	9.07	-0.0001	0.5109	0.0072
132	SLU 70	-0.04	-0.13	9.06	-0.0001	0.5106	0.0074
132	SLU 71	-0.04	-0.13	9.01	0	0.5078	0.0072
132	SLU 72	-0.04	-0.13	9.01	0	0.5075	0.0074
132	SLU 73	-0.03	-0.14	9.57	-0.0001	0.5392	0.0077
132	SLU 74	-0.04	-0.13	9.73	-0.0001	0.5483	0.0074
132	SLU 75	-0.04	-0.13	9.73	-0.0001	0.548	0.0076
132	SLU 76	-0.03	-0.14	9.67	-0.0001	0.5447	0.0077
132	SLU 77	-0.04	-0.13	9.83	-0.0001	0.5538	0.0074
132	SLU 78	-0.04	-0.14	9.83	-0.0001	0.5535	0.0076
132	SLU 79	-0.04	-0.13	9.78	-0.0001	0.5507	0.0075
132	SLU 80	-0.04	-0.14	9.77	-0.0001	0.5504	0.0077
132	SLU 81	-0.04	-0.13	9.91	-0.0001	0.5581	0.0074
132	SLU 82	-0.03	-0.14	9.9	-0.0001	0.5578	0.0076
132	SLU 83	-0.04	-0.13	10	-0.0001	0.5636	0.0075
132	SLU 84	-0.04	-0.14	10	-0.0001	0.5633	0.0077
132	SLE RA 1	-0.03	-0.1	6.63	0	0.3737	0.0055
132	SLE RA 2	-0.03	-0.1	6.63	0	0.3734	0.0057
132	SLE RA 3	-0.03	-0.1	6.74	0	0.3795	0.0055
132	SLE RA 4	-0.03	-0.1	6.73	0	0.3793	0.0056
132	SLE RA 5	-0.03	-0.1	6.69	0	0.3771	0.0057
132	SLE RA 6	-0.03	-0.1	6.8	0	0.3831	0.0055
132	SLE RA 7	-0.03	-0.1	6.8	0	0.3829	0.0057
132	SLE RA 8	-0.03	-0.1	6.76	0	0.3811	0.0056
132	SLE RA 9	-0.03	-0.1	6.76	0	0.3809	0.0057
132	SLE RA 10	-0.03	-0.1	7.14	0	0.402	0.0059
132	SLE RA 11	-0.03	-0.1	7.24	0	0.4081	0.0057
132	SLE RA 12	-0.03	-0.1	7.24	0	0.4079	0.0058
132	SLE RA 13	-0.03	-0.1	7.2	0	0.4057	0.0059
132	SLE RA 14	-0.03	-0.1	7.31	0	0.4117	0.0057
132	SLE RA 15	-0.03	-0.1	7.31	0	0.4115	0.0058
132	SLE RA 16	-0.03	-0.1	7.27	0	0.4097	0.0057
132	SLE RA 17	-0.03	-0.1	7.27	0	0.4095	0.0059
132	SLE RA 18	-0.03	-0.1	7.36	0	0.4146	0.0057
132	SLE RA 19	-0.03	-0.1	7.36	0	0.4144	0.0058
132	SLE RA 20	-0.03	-0.1	7.42	0	0.4182	0.0058
132	SLE RA 21	-0.03	-0.1	7.42	0	0.418	0.0059
132	SLE FR 1	-0.03	-0.1	6.63	0	0.3737	0.0055
132	SLE FR 2	-0.03	-0.1	6.63	0	0.3737	0.0055
132	SLE FR 3	-0.03	-0.1	6.66	0	0.3752	0.0055
132	SLE FR 4	-0.03	-0.1	6.85	0	0.3859	0.0056
132	SLE FR 5	-0.03	-0.1	6.88	0	0.3875	0.0056
132	SLE FR 6	-0.03	-0.1	7	0	0.3942	0.0056
132	SLE QP 1	-0.03	-0.1	6.63	0	0.3737	0.0055
132	SLE QP 2	-0.03	-0.1	6.85	0	0.386	0.0055
132	SLD 1	0.52	-0.06	7.28	0	0.4103	0.0034
132	SLD 2	0.57	-0.08	7.27	0	0.4094	0.0045
132	SLD 3	0.47	-0.21	7.1	0	0.4002	0.0116
132	SLD 4	0.53	-0.23	7.09	0	0.3993	0.0127
132	SLD 5	0.19	0.14	7.26	0	0.4088	-0.0077
132	SLD 6	0.22	0.12	7.25	0	0.4082	-0.007
132	SLD 7	0.05	-0.35	6.66	0	0.3751	0.0196
132	SLD 8	0.09	-0.36	6.65	0	0.3745	0.0203
132	SLD 9	-0.14	0.16	7.06	0	0.3975	-0.0092
132	SLD 10	-0.11	0.15	7.05	0	0.3969	-0.0085
132	SLD 11	-0.28	-0.32	6.46	0	0.3638	0.0181
132	SLD 12	-0.24	-0.33	6.45	0	0.3632	0.0188
132	SLD 13	-0.59	0.03	6.62	0	0.3726	-0.0016
132	SLD 14	-0.53	0.01	6.6	0	0.3717	-0.0005
132	SLD 15	-0.63	-0.12	6.44	0	0.3625	0.0066
132	SLD 16	-0.57	-0.14	6.42	0	0.3616	0.0076
132	SLV 1	1.24	-0.02	7.86	0	0.4426	0.0009
132	SLV 2	1.37	-0.06	7.82	0	0.4405	0.0034
132	SLV 3	1.15	-0.34	7.45	0	0.4197	0.0194
132	SLV 4	1.28	-0.39	7.41	0	0.4176	0.0219
132	SLV 5	0.48	0.43	7.78	0	0.4381	-0.0243
132	SLV 6	0.56	0.4	7.75	0	0.4367	-0.0227
132	SLV 7	0.16	-0.66	6.42	0	0.3617	0.0373
132	SLV 8	0.24	-0.69	6.4	0	0.3604	0.0389
132	SLV 9	-0.3	0.49	7.31	0	0.4116	-0.0279
132	SLV 10	-0.21	0.47	7.28	0	0.4103	-0.0262
132	SLV 11	-0.62	-0.6	5.95	0	0.3352	0.0338
132	SLV 12	-0.53	-0.63	5.93	0	0.3339	0.0354
132	SLV 13	-1.33	0.19	6.29	0	0.3544	-0.0109
132	SLV 14	-1.2	0.15	6.25	0	0.3523	-0.0083
132	SLV 15	-1.43	-0.14	5.88	0	0.3315	0.0076
132	SLV 16	-1.3	-0.18	5.85	0	0.3294	0.0101
132	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
132	CRTFP Ux-	0	0	0	0	0	0
133	SLU 1	-0.03	-0.08	6.65	0	0.4995	0.0063
133	SLU 2	-0.03	-0.09	6.64	0	0.4988	0.0067
133	SLU 3	-0.03	-0.08	6.81	0	0.5113	0.0063
133	SLU 4	-0.03	-0.09	6.8	0	0.5109	0.0066
133	SLU 5	-0.03	-0.09	6.74	0	0.5064	0.0068
133	SLU 6	-0.03	-0.08	6.91	0	0.5189	0.0064
133	SLU 7	-0.03	-0.09	6.9	0	0.5185	0.0066
133	SLU 8	-0.03	-0.09	6.85	0	0.5146	0.0064
133	SLU 9	-0.03	-0.09	6.85	0	0.5142	0.0067
133	SLU 10	-0.02	-0.09	7.43	0	0.5581	0.0069
133	SLU 11	-0.03	-0.09	7.6	0	0.5707	0.0065
133	SLU 12	-0.03	-0.09	7.59	0	0.5703	0.0068
133	SLU 13	-0.03	-0.09	7.53	0	0.5657	0.007
133	SLU 14	-0.03	-0.09	7.7	0	0.5783	0.0066
133	SLU 15	-0.03	-0.09	7.69	0	0.5779	0.0068
133	SLU 16	-0.03	-0.09	7.64	0	0.574	0.0066
133	SLU 17	-0.03	-0.09	7.64	0	0.5736	0.0069
133	SLU 18	-0.03	-0.09	7.78	0	0.5843	0.0066
133	SLU 19	-0.02	-0.09	7.77	0	0.5839	0.0068
133	SLU 20	-0.03	-0.09	7.88	0	0.5919	0.0066
133	SLU 21	-0.03	-0.09	7.87	0	0.5915	0.0069
133	SLU 22	-0.03	-0.08	7.35	0	0.5522	0.0059
133	SLU 23	-0.03	-0.08	7.34	0	0.5515	0.0064
133	SLU 24	-0.03	-0.08	7.51	0	0.5641	0.006
133	SLU 25	-0.03	-0.08	7.51	0	0.5637	0.0062
133	SLU 26	-0.03	-0.09	7.44	0	0.5591	0.0064
133	SLU 27	-0.03	-0.08	7.61	0	0.5717	0.006
133	SLU 28	-0.03	-0.08	7.61	0	0.5713	0.0063
133	SLU 29	-0.03	-0.08	7.55	0	0.5674	0.0061
133	SLU 30	-0.03	-0.08	7.55	0	0.567	0.0063
133	SLU 31	-0.03	-0.09	8.13	0	0.6109	0.0066
133	SLU 32	-0.03	-0.08	8.3	0	0.6235	0.0062
133	SLU 33	-0.03	-0.09	8.3	0	0.6231	0.0064
133	SLU 34	-0.03	-0.09	8.23	0	0.6185	0.0066
133	SLU 35	-0.03	-0.08	8.4	0	0.6311	0.0062
133	SLU 36	-0.03	-0.09	8.4	0	0.6307	0.0065
133	SLU 37	-0.03	-0.08	8.34	0	0.6268	0.0063
133	SLU 38	-0.03	-0.09	8.34	0	0.6264	0.0065
133	SLU 39	-0.03	-0.08	8.48	0	0.637	0.0062
133	SLU 40	-0.03	-0.09	8.48	0	0.6366	0.0065
133	SLU 41	-0.03	-0.08	8.58	0	0.6446	0.0063
133	SLU 42	-0.03	-0.09	8.58	0	0.6442	0.0066
133	SLU 43	-0.04	-0.11	8.4	0	0.6312	0.0083
133	SLU 44	-0.03	-0.12	8.39	0	0.6305	0.0087
133	SLU 45	-0.04	-0.11	8.56	0	0.6431	0.0083
133	SLU 46	-0.03	-0.11	8.56	0	0.6427	0.0086
133	SLU 47	-0.03	-0.12	8.5	0	0.6381	0.0088
133	SLU 48	-0.04	-0.11	8.66	0	0.6507	0.0084
133	SLU 49	-0.04	-0.11	8.66	0	0.6503	0.0086
133	SLU 50	-0.04	-0.11	8.61	0	0.6464	0.0084
133	SLU 51	-0.04	-0.12	8.6	0	0.646	0.0087
133	SLU 52	-0.03	-0.12	9.19	-0.0001	0.6899	0.0089
133	SLU 53	-0.04	-0.11	9.35	-0.0001	0.7025	0.0085
133	SLU 54	-0.03	-0.12	9.35	-0.0001	0.7021	0.0088
133	SLU 55	-0.03	-0.12	9.29	-0.0001	0.6975	0.009
133	SLU 56	-0.04	-0.11	9.45	-0.0001	0.7101	0.0086
133	SLU 57	-0.03	-0.12	9.45	-0.0001	0.7096	0.0088
133	SLU 58	-0.04	-0.11	9.4	-0.0001	0.7057	0.0086
133	SLU 59	-0.03	-0.12	9.39	-0.0001	0.7053	0.0089
133	SLU 60	-0.03	-0.11	9.53	-0.0001	0.716	0.0086
133	SLU 61	-0.03	-0.12	9.53	-0.0001	0.7156	0.0088
133	SLU 62	-0.03	-0.11	9.63	-0.0001	0.7236	0.0086
133	SLU 63	-0.03	-0.12	9.63	-0.0001	0.7232	0.0089
133	SLU 64	-0.04	-0.11	9.11	-0.0001	0.684	0.0079
133	SLU 65	-0.04	-0.11	9.1	-0.0001	0.6833	0.0084
133	SLU 66	-0.04	-0.11	9.26	-0.0001	0.6959	0.008
133	SLU 67	-0.04	-0.11	9.26	-0.0001	0.6954	0.0082
133	SLU 68	-0.04	-0.11	9.2	-0.0001	0.6909	0.0084
133	SLU 69	-0.04	-0.11	9.37	-0.0001	0.7034	0.008
133	SLU 70	-0.04	-0.11	9.36	-0.0001	0.703	0.0083
133	SLU 71	-0.04	-0.11	9.31	-0.0001	0.6991	0.0081
133	SLU 72	-0.04	-0.11	9.3	-0.0001	0.6987	0.0083
133	SLU 73	-0.03	-0.11	9.89	-0.0001	0.7427	0.0086
133	SLU 74	-0.04	-0.11	10.06	-0.0001	0.7552	0.0082
133	SLU 75	-0.04	-0.11	10.05	-0.0001	0.7548	0.0084
133	SLU 76	-0.04	-0.12	9.99	-0.0001	0.7502	0.0086
133	SLU 77	-0.04	-0.11	10.16	-0.0001	0.7628	0.0082
133	SLU 78	-0.04	-0.11	10.15	-0.0001	0.7624	0.0085
133	SLU 79	-0.04	-0.11	10.1	-0.0001	0.7585	0.0083
133	SLU 80	-0.04	-0.11	10.09	-0.0001	0.7581	0.0085
133	SLU 81	-0.04	-0.11	10.24	-0.0001	0.7688	0.0082
133	SLU 82	-0.04	-0.11	10.23	-0.0001	0.7684	0.0085
133	SLU 83	-0.04	-0.11	10.34	-0.0001	0.7764	0.0083
133	SLU 84	-0.04	-0.11	10.33	-0.0001	0.776	0.0086
133	SLE RA 1	-0.03	-0.08	6.85	0	0.5145	0.0062
133	SLE RA 2	-0.03	-0.09	6.84	0	0.5141	0.0065
133	SLE RA 3	-0.03	-0.08	6.96	0	0.5225	0.0062
133	SLE RA 4	-0.03	-0.08	6.95	0	0.5222	0.0064
133	SLE RA 5	-0.03	-0.09	6.91	0	0.5191	0.0065
133	SLE RA 6	-0.03	-0.08	7.02	0	0.5275	0.0062
133	SLE RA 7	-0.03	-0.09	7.02	0	0.5272	0.0064
133	SLE RA 8	-0.03	-0.08	6.98	0	0.5246	0.0063
133	SLE RA 9	-0.03	-0.09	6.98	0	0.5244	0.0064
133	SLE RA 10	-0.03	-0.09	7.37	0	0.5537	0.0066
133	SLE RA 11	-0.03	-0.08	7.48	0	0.562	0.0063
133	SLE RA 12	-0.03	-0.09	7.48	0	0.5618	0.0065

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
133	SLE RA 13	-0.03	-0.09	7.44	0	0.5587	0.0066
133	SLE RA 14	-0.03	-0.08	7.55	0	0.5671	0.0064
133	SLE RA 15	-0.03	-0.09	7.55	0	0.5668	0.0066
133	SLE RA 16	-0.03	-0.09	7.51	0	0.5642	0.0064
133	SLE RA 17	-0.03	-0.09	7.51	0	0.564	0.0066
133	SLE RA 18	-0.03	-0.08	7.6	0	0.5711	0.0064
133	SLE RA 19	-0.03	-0.09	7.6	0	0.5708	0.0065
133	SLE RA 20	-0.03	-0.09	7.67	0	0.5761	0.0064
133	SLE RA 21	-0.03	-0.09	7.67	0	0.5759	0.0066
133	SLE FR 1	-0.03	-0.08	6.85	0	0.5145	0.0062
133	SLE FR 2	-0.03	-0.08	6.85	0	0.5144	0.0062
133	SLE FR 3	-0.03	-0.08	6.88	0	0.5165	0.0062
133	SLE FR 4	-0.03	-0.08	7.08	0	0.5314	0.0063
133	SLE FR 5	-0.03	-0.08	7.1	0	0.5335	0.0063
133	SLE FR 6	-0.03	-0.08	7.23	0	0.5428	0.0063
133	SLE QP 1	-0.03	-0.08	6.85	0	0.5145	0.0062
133	SLE QP 2	-0.03	-0.08	7.08	0	0.5315	0.0062
133	SLD 1	0.53	-0.04	7.45	0	0.5597	0.0026
133	SLD 2	0.59	-0.05	7.44	0	0.5586	0.0039
133	SLD 3	0.49	-0.19	7.27	0	0.5459	0.014
133	SLD 4	0.55	-0.2	7.25	0	0.5448	0.0153
133	SLD 5	0.19	0.16	7.47	0	0.5611	-0.0123
133	SLD 6	0.23	0.15	7.46	0	0.5603	-0.0114
133	SLD 7	0.05	-0.34	6.86	0	0.5151	0.0256
133	SLD 8	0.09	-0.35	6.85	0	0.5144	0.0264
133	SLD 9	-0.15	0.19	7.3	0	0.5486	-0.0139
133	SLD 10	-0.11	0.17	7.29	0	0.5479	-0.0131
133	SLD 11	-0.29	-0.32	6.69	0	0.5026	0.0239
133	SLD 12	-0.25	-0.33	6.68	0	0.5019	0.0248
133	SLD 13	-0.61	0.04	6.9	0	0.5182	-0.0028
133	SLD 14	-0.55	0.02	6.88	0	0.5171	-0.0015
133	SLD 15	-0.65	-0.11	6.72	0	0.5044	0.0085
133	SLD 16	-0.59	-0.13	6.7	0	0.5033	0.0098
133	SLV 1	1.29	0.02	7.95	0	0.597	-0.0017
133	SLV 2	1.42	-0.02	7.91	0	0.5945	0.0013
133	SLV 3	1.19	-0.32	7.53	0	0.5658	0.024
133	SLV 4	1.32	-0.36	7.5	0	0.5632	0.027
133	SLV 5	0.49	0.47	7.97	0	0.599	-0.0357
133	SLV 6	0.58	0.45	7.95	0	0.5973	-0.0337
133	SLV 7	0.16	-0.67	6.59	0	0.4948	0.05
133	SLV 8	0.25	-0.69	6.57	0	0.4932	0.052
133	SLV 9	-0.31	0.53	7.59	0	0.5698	-0.0395
133	SLV 10	-0.22	0.5	7.56	0	0.5682	-0.0376
133	SLV 11	-0.64	-0.61	6.2	0	0.4656	0.0462
133	SLV 12	-0.55	-0.64	6.18	0	0.464	0.0481
133	SLV 13	-1.38	0.19	6.65	0	0.4998	-0.0145
133	SLV 14	-1.25	0.15	6.62	0	0.4972	-0.0115
133	SLV 15	-1.48	-0.15	6.24	0	0.4685	0.0112
133	SLV 16	-1.35	-0.19	6.2	0	0.466	0.0142
133	CRTFP Ux+	0	0	0	0	0	0
133	CRTFP Ux-	0	0	0	0	0	0
134	SLU 1	-0.03	-0.07	6.65	0	0.6241	0.0062
134	SLU 2	-0.03	-0.07	6.64	0	0.6233	0.0067
134	SLU 3	-0.03	-0.07	6.81	0	0.6391	0.0062
134	SLU 4	-0.03	-0.07	6.8	0	0.6386	0.0065
134	SLU 5	-0.03	-0.07	6.74	0	0.6328	0.0068
134	SLU 6	-0.03	-0.07	6.91	0	0.6486	0.0063
134	SLU 7	-0.03	-0.07	6.9	0	0.6481	0.0066
134	SLU 8	-0.03	-0.07	6.85	0	0.6431	0.0063
134	SLU 9	-0.03	-0.07	6.84	0	0.6426	0.0067
134	SLU 10	-0.02	-0.07	7.43	0	0.698	0.0068
134	SLU 11	-0.03	-0.07	7.6	0	0.7138	0.0063
134	SLU 12	-0.03	-0.07	7.6	0	0.7133	0.0066
134	SLU 13	-0.03	-0.07	7.54	0	0.7075	0.0069
134	SLU 14	-0.03	-0.07	7.7	0	0.7233	0.0063
134	SLU 15	-0.03	-0.07	7.7	0	0.7228	0.0067
134	SLU 16	-0.03	-0.07	7.65	0	0.7178	0.0064
134	SLU 17	-0.03	-0.07	7.64	0	0.7173	0.0067
134	SLU 18	-0.03	-0.07	7.78	0	0.7308	0.0063
134	SLU 19	-0.02	-0.07	7.78	0	0.7303	0.0066
134	SLU 20	-0.03	-0.07	7.89	0	0.7404	0.0064
134	SLU 21	-0.03	-0.07	7.88	0	0.7398	0.0067
134	SLU 22	-0.03	-0.06	7.35	0	0.6902	0.0056
134	SLU 23	-0.03	-0.07	7.34	0	0.6893	0.0061
134	SLU 24	-0.03	-0.06	7.51	0	0.7051	0.0056
134	SLU 25	-0.03	-0.06	7.5	0	0.7046	0.0059
134	SLU 26	-0.03	-0.07	7.44	0	0.6988	0.0062
134	SLU 27	-0.03	-0.06	7.61	0	0.7146	0.0056
134	SLU 28	-0.03	-0.06	7.61	0	0.7141	0.006
134	SLU 29	-0.03	-0.06	7.55	0	0.7092	0.0057
134	SLU 30	-0.03	-0.06	7.55	0	0.7087	0.006
134	SLU 31	-0.03	-0.07	8.14	0	0.764	0.0062
134	SLU 32	-0.03	-0.06	8.31	0	0.7798	0.0057
134	SLU 33	-0.03	-0.06	8.3	0	0.7793	0.006
134	SLU 34	-0.03	-0.07	8.24	0	0.7735	0.0063
134	SLU 35	-0.03	-0.06	8.41	0	0.7893	0.0057
134	SLU 36	-0.03	-0.06	8.4	0	0.7888	0.006
134	SLU 37	-0.03	-0.06	8.35	0	0.7839	0.0058
134	SLU 38	-0.03	-0.07	8.34	0	0.7834	0.0061
134	SLU 39	-0.03	-0.06	8.49	0	0.7969	0.0057
134	SLU 40	-0.03	-0.06	8.48	0	0.7964	0.006
134	SLU 41	-0.03	-0.06	8.59	0	0.8064	0.0058
134	SLU 42	-0.03	-0.06	8.58	0	0.8059	0.0061
134	SLU 43	-0.04	-0.09	8.4	0	0.7887	0.0083
134	SLU 44	-0.03	-0.09	8.39	0	0.7879	0.0088
134	SLU 45	-0.04	-0.09	8.56	0	0.8037	0.0083
134	SLU 46	-0.03	-0.09	8.55	0	0.8032	0.0086

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
134	SLU 47	-0.03	-0.09	8.49	0	0.7974	0.0089
134	SLU 48	-0.04	-0.09	8.66	0	0.8132	0.0083
134	SLU 49	-0.04	-0.09	8.66	0	0.8127	0.0087
134	SLU 50	-0.04	-0.09	8.6	0	0.8077	0.0084
134	SLU 51	-0.04	-0.09	8.6	0	0.8072	0.0087
134	SLU 52	-0.03	-0.09	9.19	-0.0001	0.8626	0.0089
134	SLU 53	-0.04	-0.09	9.36	-0.0001	0.8784	0.0084
134	SLU 54	-0.03	-0.09	9.35	-0.0001	0.8779	0.0087
134	SLU 55	-0.03	-0.1	9.29	-0.0001	0.8721	0.009
134	SLU 56	-0.04	-0.09	9.46	-0.0001	0.8879	0.0084
134	SLU 57	-0.03	-0.09	9.45	-0.0001	0.8874	0.0087
134	SLU 58	-0.04	-0.09	9.4	-0.0001	0.8824	0.0085
134	SLU 59	-0.03	-0.09	9.39	-0.0001	0.8819	0.0088
134	SLU 60	-0.03	-0.09	9.54	-0.0001	0.8954	0.0084
134	SLU 61	-0.03	-0.09	9.53	-0.0001	0.8949	0.0087
134	SLU 62	-0.03	-0.09	9.64	-0.0001	0.9049	0.0085
134	SLU 63	-0.03	-0.09	9.63	-0.0001	0.9044	0.0088
134	SLU 64	-0.04	-0.08	9.1	-0.0001	0.8548	0.0077
134	SLU 65	-0.04	-0.09	9.1	-0.0001	0.8539	0.0082
134	SLU 66	-0.04	-0.08	9.26	-0.0001	0.8697	0.0076
134	SLU 67	-0.04	-0.08	9.26	-0.0001	0.8692	0.008
134	SLU 68	-0.04	-0.09	9.2	-0.0001	0.8634	0.0083
134	SLU 69	-0.04	-0.08	9.36	-0.0001	0.8792	0.0077
134	SLU 70	-0.04	-0.09	9.36	-0.0001	0.8787	0.008
134	SLU 71	-0.04	-0.08	9.31	-0.0001	0.8738	0.0078
134	SLU 72	-0.04	-0.09	9.3	-0.0001	0.8733	0.0081
134	SLU 73	-0.03	-0.09	9.89	-0.0001	0.9286	0.0083
134	SLU 74	-0.04	-0.08	10.06	-0.0001	0.9444	0.0077
134	SLU 75	-0.04	-0.09	10.05	-0.0001	0.9439	0.008
134	SLU 76	-0.04	-0.09	9.99	-0.0001	0.9381	0.0083
134	SLU 77	-0.04	-0.08	10.16	-0.0001	0.9539	0.0078
134	SLU 78	-0.04	-0.09	10.15	-0.0001	0.9534	0.0081
134	SLU 79	-0.04	-0.08	10.1	-0.0001	0.9485	0.0079
134	SLU 80	-0.04	-0.09	10.1	-0.0001	0.948	0.0082
134	SLU 81	-0.04	-0.08	10.24	-0.0001	0.9615	0.0078
134	SLU 82	-0.04	-0.09	10.24	-0.0001	0.961	0.0081
134	SLU 83	-0.04	-0.08	10.34	-0.0001	0.971	0.0078
134	SLU 84	-0.04	-0.09	10.34	-0.0001	0.9705	0.0082
134	SLE RA 1	-0.03	-0.06	6.85	0	0.643	0.006
134	SLE RA 2	-0.03	-0.07	6.84	0	0.6424	0.0064
134	SLE RA 3	-0.03	-0.06	6.95	0	0.653	0.006
134	SLE RA 4	-0.03	-0.07	6.95	0	0.6526	0.0062
134	SLE RA 5	-0.03	-0.07	6.91	0	0.6488	0.0064
134	SLE RA 6	-0.03	-0.06	7.02	0	0.6593	0.0061
134	SLE RA 7	-0.03	-0.07	7.02	0	0.659	0.0063
134	SLE RA 8	-0.03	-0.07	6.98	0	0.6557	0.0061
134	SLE RA 9	-0.03	-0.07	6.98	0	0.6553	0.0063
134	SLE RA 10	-0.03	-0.07	7.37	0	0.6922	0.0064
134	SLE RA 11	-0.03	-0.06	7.49	0	0.7028	0.0061
134	SLE RA 12	-0.03	-0.07	7.48	0	0.7024	0.0063
134	SLE RA 13	-0.03	-0.07	7.44	0	0.6986	0.0065
134	SLE RA 14	-0.03	-0.07	7.55	0	0.7091	0.0061
134	SLE RA 15	-0.03	-0.07	7.55	0	0.7088	0.0063
134	SLE RA 16	-0.03	-0.07	7.51	0	0.7055	0.0062
134	SLE RA 17	-0.03	-0.07	7.51	0	0.7051	0.0064
134	SLE RA 18	-0.03	-0.07	7.61	0	0.7141	0.0061
134	SLE RA 19	-0.03	-0.07	7.6	0	0.7138	0.0063
134	SLE RA 20	-0.03	-0.07	7.67	0	0.7205	0.0061
134	SLE RA 21	-0.03	-0.07	7.67	0	0.7201	0.0064
134	SLE FR 1	-0.03	-0.06	6.85	0	0.643	0.006
134	SLE FR 2	-0.03	-0.06	6.85	0	0.6429	0.0061
134	SLE FR 3	-0.03	-0.06	6.88	0	0.6455	0.006
134	SLE FR 4	-0.03	-0.07	7.07	0	0.6642	0.0061
134	SLE FR 5	-0.03	-0.06	7.1	0	0.6669	0.0061
134	SLE FR 6	-0.03	-0.06	7.23	0	0.6786	0.0061
134	SLE QP 1	-0.03	-0.06	6.85	0	0.643	0.006
134	SLE QP 2	-0.03	-0.06	7.08	0	0.6643	0.0061
134	SLD 1	0.53	-0.01	7.38	0	0.6932	0.0008
134	SLD 2	0.59	-0.02	7.37	0	0.692	0.0022
134	SLD 3	0.49	-0.16	7.2	0	0.6761	0.015
134	SLD 4	0.55	-0.18	7.19	0	0.6749	0.0165
134	SLD 5	0.19	0.19	7.45	0	0.6992	-0.0175
134	SLD 6	0.23	0.18	7.44	0	0.6984	-0.0165
134	SLD 7	0.05	-0.32	6.84	0	0.6421	0.0302
134	SLD 8	0.09	-0.33	6.83	0	0.6413	0.0311
134	SLD 9	-0.15	0.2	7.32	0	0.6874	-0.019
134	SLD 10	-0.11	0.19	7.31	0	0.6866	-0.0181
134	SLD 11	-0.29	-0.31	6.71	0	0.6303	0.0287
134	SLD 12	-0.25	-0.31	6.7	0	0.6295	0.0296
134	SLD 13	-0.61	0.05	6.96	0	0.6538	-0.0044
134	SLD 14	-0.55	0.03	6.95	0	0.6526	-0.0029
134	SLD 15	-0.65	-0.11	6.78	0	0.6367	0.0099
134	SLD 16	-0.59	-0.12	6.77	0	0.6355	0.0114
134	SLV 1	1.29	0.06	7.79	0	0.7313	-0.0058
134	SLV 2	1.42	0.03	7.76	0	0.7285	-0.0025
134	SLV 3	1.19	-0.28	7.38	0	0.6924	0.0265
134	SLV 4	1.32	-0.32	7.35	0	0.6897	0.0298
134	SLV 5	0.49	0.5	7.92	0	0.7438	-0.0472
134	SLV 6	0.58	0.48	7.9	0	0.742	-0.045
134	SLV 7	0.16	-0.65	6.54	0	0.6143	0.0607
134	SLV 8	0.25	-0.67	6.52	0	0.6126	0.0628
134	SLV 9	-0.31	0.54	7.63	0	0.7161	-0.0507
134	SLV 10	-0.22	0.52	7.61	0	0.7143	-0.0486
134	SLV 11	-0.64	-0.61	6.25	0	0.5867	0.0571
134	SLV 12	-0.55	-0.63	6.23	0	0.5849	0.0593
134	SLV 13	-1.38	0.19	6.81	0	0.639	-0.0177
134	SLV 14	-1.25	0.15	6.78	0	0.6363	-0.0144

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
134	SLV 15	-1.48	-0.16	6.39	0	0.6002	0.0146
134	SLV 16	-1.35	-0.19	6.36	0	0.5974	0.0179
134	CRTFP Ux+	0	0	0	0	0	0
134	CRTFP Ux-	0	0	0	0	0	0
134	CRTFP Uy+	0	0	0	0	0	0
134	CRTFP Uy-	0	0	0	0	0	0
135	SLU 1	-0.03	-0.05	6.66	0	0.7506	0.0055
135	SLU 2	-0.03	-0.05	6.65	0	0.7496	0.0062
135	SLU 3	-0.03	-0.05	6.82	0	0.7687	0.0055
135	SLU 4	-0.03	-0.05	6.82	0	0.7681	0.0059
135	SLU 5	-0.03	-0.06	6.76	0	0.7611	0.0062
135	SLU 6	-0.03	-0.05	6.92	0	0.7802	0.0055
135	SLU 7	-0.03	-0.05	6.92	0	0.7796	0.0059
135	SLU 8	-0.03	-0.05	6.87	0	0.7736	0.0056
135	SLU 9	-0.03	-0.05	6.86	0	0.773	0.006
135	SLU 10	-0.02	-0.05	7.46	0	0.8402	0.0061
135	SLU 11	-0.03	-0.05	7.63	0	0.8592	0.0054
135	SLU 12	-0.03	-0.05	7.62	0	0.8586	0.0057
135	SLU 13	-0.03	-0.05	7.56	0	0.8516	0.0061
135	SLU 14	-0.03	-0.05	7.73	0	0.8707	0.0054
135	SLU 15	-0.03	-0.05	7.72	0	0.8701	0.0058
135	SLU 16	-0.03	-0.05	7.67	0	0.8641	0.0055
135	SLU 17	-0.03	-0.05	7.66	0	0.8635	0.0059
135	SLU 18	-0.03	-0.05	7.81	0	0.88	0.0054
135	SLU 19	-0.03	-0.05	7.81	0	0.8794	0.0057
135	SLU 20	-0.03	-0.05	7.91	0	0.8914	0.0054
135	SLU 21	-0.03	-0.05	7.91	0	0.8908	0.0058
135	SLU 22	-0.03	-0.04	7.37	0	0.8303	0.0045
135	SLU 23	-0.03	-0.05	7.36	0	0.8292	0.0052
135	SLU 24	-0.03	-0.04	7.53	0	0.8483	0.0045
135	SLU 25	-0.03	-0.04	7.52	0	0.8477	0.0049
135	SLU 26	-0.03	-0.05	7.46	0	0.8407	0.0052
135	SLU 27	-0.03	-0.04	7.63	0	0.8598	0.0045
135	SLU 28	-0.03	-0.04	7.63	0	0.8592	0.0049
135	SLU 29	-0.03	-0.04	7.57	0	0.8532	0.0046
135	SLU 30	-0.03	-0.04	7.57	0	0.8526	0.005
135	SLU 31	-0.03	-0.04	8.16	0	0.9198	0.0051
135	SLU 32	-0.03	-0.04	8.33	0	0.9388	0.0044
135	SLU 33	-0.03	-0.04	8.33	0	0.9382	0.0047
135	SLU 34	-0.03	-0.05	8.27	0	0.9312	0.0051
135	SLU 35	-0.03	-0.04	8.43	0	0.9503	0.0044
135	SLU 36	-0.03	-0.04	8.43	0	0.9497	0.0048
135	SLU 37	-0.03	-0.04	8.38	0	0.9437	0.0045
135	SLU 38	-0.03	-0.04	8.37	0	0.9431	0.0049
135	SLU 39	-0.03	-0.04	8.52	0	0.9596	0.0044
135	SLU 40	-0.03	-0.04	8.51	0	0.959	0.0048
135	SLU 41	-0.03	-0.04	8.62	0	0.971	0.0044
135	SLU 42	-0.03	-0.04	8.61	0	0.9704	0.0048
135	SLU 43	-0.04	-0.07	8.42	0	0.9485	0.0075
135	SLU 44	-0.03	-0.07	8.41	0	0.9475	0.0082
135	SLU 45	-0.04	-0.07	8.58	0	0.9666	0.0075
135	SLU 46	-0.03	-0.07	8.57	0	0.966	0.0079
135	SLU 47	-0.03	-0.07	8.51	0	0.959	0.0082
135	SLU 48	-0.04	-0.07	8.68	0	0.9781	0.0075
135	SLU 49	-0.04	-0.07	8.68	0	0.9774	0.0079
135	SLU 50	-0.04	-0.07	8.62	0	0.9715	0.0076
135	SLU 51	-0.04	-0.07	8.62	0	0.9709	0.008
135	SLU 52	-0.03	-0.07	9.21	-0.0001	1.038	0.0081
135	SLU 53	-0.04	-0.07	9.38	-0.0001	1.0571	0.0074
135	SLU 54	-0.03	-0.07	9.38	-0.0001	1.0565	0.0077
135	SLU 55	-0.03	-0.07	9.32	-0.0001	1.0495	0.0081
135	SLU 56	-0.04	-0.07	9.48	-0.0001	1.0686	0.0074
135	SLU 57	-0.03	-0.07	9.48	-0.0001	1.068	0.0078
135	SLU 58	-0.04	-0.07	9.43	-0.0001	1.062	0.0075
135	SLU 59	-0.04	-0.07	9.42	-0.0001	1.0614	0.0079
135	SLU 60	-0.03	-0.07	9.57	-0.0001	1.0778	0.0074
135	SLU 61	-0.03	-0.07	9.56	-0.0001	1.0772	0.0078
135	SLU 62	-0.04	-0.07	9.67	-0.0001	1.0893	0.0074
135	SLU 63	-0.03	-0.07	9.66	-0.0001	1.0887	0.0078
135	SLU 64	-0.04	-0.06	9.13	-0.0001	1.0281	0.0065
135	SLU 65	-0.04	-0.06	9.12	-0.0001	1.0271	0.0072
135	SLU 66	-0.04	-0.06	9.29	-0.0001	1.0462	0.0065
135	SLU 67	-0.04	-0.06	9.28	-0.0001	1.0456	0.0069
135	SLU 68	-0.04	-0.06	9.22	-0.0001	1.0386	0.0072
135	SLU 69	-0.04	-0.06	9.39	-0.0001	1.0577	0.0065
135	SLU 70	-0.04	-0.06	9.38	-0.0001	1.0571	0.0069
135	SLU 71	-0.04	-0.06	9.33	-0.0001	1.0511	0.0066
135	SLU 72	-0.04	-0.06	9.32	-0.0001	1.0505	0.007
135	SLU 73	-0.04	-0.06	9.92	-0.0001	1.1177	0.0071
135	SLU 74	-0.04	-0.06	10.09	-0.0001	1.1367	0.0064
135	SLU 75	-0.04	-0.06	10.08	-0.0001	1.1361	0.0067
135	SLU 76	-0.04	-0.06	10.02	-0.0001	1.1291	0.0071
135	SLU 77	-0.04	-0.06	10.19	-0.0001	1.1482	0.0064
135	SLU 78	-0.04	-0.06	10.19	-0.0001	1.1476	0.0068
135	SLU 79	-0.04	-0.06	10.13	-0.0001	1.1416	0.0065
135	SLU 80	-0.04	-0.06	10.13	-0.0001	1.141	0.0069
135	SLU 81	-0.04	-0.06	10.27	-0.0001	1.1575	0.0064
135	SLU 82	-0.04	-0.06	10.27	-0.0001	1.1569	0.0068
135	SLU 83	-0.04	-0.06	10.38	-0.0001	1.1689	0.0064
135	SLU 84	-0.04	-0.06	10.37	-0.0001	1.1683	0.0068
135	SLE RA 1	-0.03	-0.05	6.86	0	0.7734	0.0053
135	SLE RA 2	-0.03	-0.05	6.86	0	0.7727	0.0057
135	SLE RA 3	-0.03	-0.05	6.97	0	0.7854	0.0052
135	SLE RA 4	-0.03	-0.05	6.97	0	0.785	0.0055
135	SLE RA 5	-0.03	-0.05	6.93	0	0.7804	0.0057
135	SLE RA 6	-0.03	-0.05	7.04	0	0.7931	0.0052
135	SLE RA 7	-0.03	-0.05	7.04	0	0.7927	0.0055

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
135	SLE RA 8	-0.03	-0.05	7	0	0.7887	0.0053
135	SLE RA 9	-0.03	-0.05	7	0	0.7883	0.0056
135	SLE RA 10	-0.03	-0.05	7.39	0	0.8331	0.0056
135	SLE RA 11	-0.03	-0.05	7.51	0	0.8458	0.0051
135	SLE RA 12	-0.03	-0.05	7.5	0	0.8454	0.0054
135	SLE RA 13	-0.03	-0.05	7.46	0	0.8407	0.0056
135	SLE RA 14	-0.03	-0.05	7.57	0	0.8534	0.0052
135	SLE RA 15	-0.03	-0.05	7.57	0	0.853	0.0054
135	SLE RA 16	-0.03	-0.05	7.54	0	0.849	0.0052
135	SLE RA 17	-0.03	-0.05	7.53	0	0.8486	0.0055
135	SLE RA 18	-0.03	-0.05	7.63	0	0.8596	0.0051
135	SLE RA 19	-0.03	-0.05	7.63	0	0.8592	0.0054
135	SLE RA 20	-0.03	-0.05	7.7	0	0.8672	0.0052
135	SLE RA 21	-0.03	-0.05	7.69	0	0.8668	0.0054
135	SLE FR 1	-0.03	-0.05	6.86	0	0.7734	0.0053
135	SLE FR 2	-0.03	-0.05	6.86	0	0.7732	0.0053
135	SLE FR 3	-0.03	-0.05	6.89	0	0.7764	0.0053
135	SLE FR 4	-0.03	-0.05	7.09	0	0.7991	0.0053
135	SLE FR 5	-0.03	-0.05	7.12	0	0.8023	0.0052
135	SLE FR 6	-0.03	-0.05	7.25	0	0.8165	0.0052
135	SLE QP 1	-0.03	-0.05	6.86	0	0.7734	0.0053
135	SLE QP 2	-0.03	-0.05	7.09	0	0.7992	0.0052
135	SLD 1	0.53	0.02	7.34	0	0.8268	-0.0018
135	SLD 2	0.59	0	7.33	0	0.8256	-0.0004
135	SLD 3	0.49	-0.14	7.16	0	0.8062	0.0155
135	SLD 4	0.55	-0.15	7.15	0	0.805	0.0169
135	SLD 5	0.19	0.21	7.45	0	0.8389	-0.0233
135	SLD 6	0.23	0.2	7.44	0	0.8381	-0.0224
135	SLD 7	0.05	-0.3	6.84	0	0.7704	0.0342
135	SLD 8	0.09	-0.31	6.83	0	0.7696	0.0352
135	SLD 9	-0.15	0.22	7.36	0	0.8289	-0.0247
135	SLD 10	-0.11	0.21	7.35	0	0.8281	-0.0238
135	SLD 11	-0.29	-0.29	6.75	0	0.7604	0.0329
135	SLD 12	-0.25	-0.3	6.74	0	0.7596	0.0338
135	SLD 13	-0.61	0.06	7.04	0	0.7935	-0.0064
135	SLD 14	-0.55	0.04	7.03	0	0.7923	-0.005
135	SLD 15	-0.65	-0.1	6.86	0	0.7729	0.0109
135	SLD 16	-0.59	-0.11	6.85	0	0.7717	0.0123
135	SLV 1	1.29	0.09	7.66	0	0.8629	-0.0106
135	SLV 2	1.42	0.07	7.63	0	0.8601	-0.0073
135	SLV 3	1.19	-0.25	7.25	0	0.8163	0.0285
135	SLV 4	1.32	-0.28	7.22	0	0.8135	0.0318
135	SLV 5	0.49	0.53	7.9	0	0.8895	-0.0594
135	SLV 6	0.58	0.51	7.88	0	0.8877	-0.0573
135	SLV 7	0.16	-0.63	6.52	0	0.7342	0.071
135	SLV 8	0.25	-0.65	6.5	0	0.7324	0.0731
135	SLV 9	-0.31	0.56	7.69	0	0.8661	-0.0626
135	SLV 10	-0.22	0.54	7.67	0	0.8643	-0.0605
135	SLV 11	-0.64	-0.6	6.31	0	0.7108	0.0677
135	SLV 12	-0.55	-0.62	6.29	0	0.709	0.0699
135	SLV 13	-1.38	0.19	6.97	0	0.785	-0.0213
135	SLV 14	-1.24	0.16	6.94	0	0.7822	-0.0181
135	SLV 15	-1.48	-0.16	6.55	0	0.7384	0.0178
135	SLV 16	-1.34	-0.19	6.53	0	0.7356	0.0211
135	CRTFP Ux+	0	0	0	0	0	0
135	CRTFP Ux-	0	0	0	0	0	0
135	CRTFP Uy+	0	0	0	0	0	0
135	CRTFP Uy-	0	0	0	0	0	0
136	SLU 1	-0.03	-0.03	6.69	0	0.8792	0.0042
136	SLU 2	-0.03	-0.04	6.68	0	0.878	0.005
136	SLU 3	-0.03	-0.03	6.85	0	0.9004	0.0041
136	SLU 4	-0.03	-0.03	6.84	0	0.8997	0.0045
136	SLU 5	-0.03	-0.04	6.78	0	0.8915	0.005
136	SLU 6	-0.03	-0.03	6.95	0	0.9139	0.0041
136	SLU 7	-0.03	-0.03	6.95	0	0.9132	0.0045
136	SLU 8	-0.03	-0.03	6.89	0	0.9062	0.0043
136	SLU 9	-0.03	-0.04	6.89	0	0.9054	0.0047
136	SLU 10	-0.03	-0.03	7.49	0	0.9849	0.0046
136	SLU 11	-0.03	-0.03	7.66	0	1.0073	0.0037
136	SLU 12	-0.03	-0.03	7.66	0	1.0066	0.0042
136	SLU 13	-0.03	-0.04	7.6	0	0.9984	0.0046
136	SLU 14	-0.03	-0.03	7.77	0	1.0208	0.0038
136	SLU 15	-0.03	-0.03	7.76	0	1.0201	0.0042
136	SLU 16	-0.03	-0.03	7.71	0	1.013	0.0039
136	SLU 17	-0.03	-0.03	7.7	0	1.0123	0.0043
136	SLU 18	-0.03	-0.03	7.85	0	1.0319	0.0037
136	SLU 19	-0.03	-0.03	7.85	0	1.0312	0.0042
136	SLU 20	-0.03	-0.03	7.95	0	1.0454	0.0037
136	SLU 21	-0.03	-0.03	7.95	0	1.0447	0.0042
136	SLU 22	-0.03	-0.02	7.4	0	0.9727	0.0028
136	SLU 23	-0.03	-0.03	7.39	0	0.9715	0.0035
136	SLU 24	-0.03	-0.02	7.56	0	0.9939	0.0026
136	SLU 25	-0.03	-0.02	7.56	0	0.9932	0.0031
136	SLU 26	-0.03	-0.03	7.49	0	0.985	0.0035
136	SLU 27	-0.03	-0.02	7.66	0	1.0074	0.0027
136	SLU 28	-0.03	-0.02	7.66	0	1.0067	0.0031
136	SLU 29	-0.03	-0.02	7.61	0	0.9997	0.0028
136	SLU 30	-0.03	-0.02	7.6	0	0.999	0.0032
136	SLU 31	-0.03	-0.02	8.2	0	1.0784	0.0031
136	SLU 32	-0.03	-0.02	8.38	0	1.1008	0.0023
136	SLU 33	-0.03	-0.02	8.37	0	1.1001	0.0027
136	SLU 34	-0.03	-0.02	8.31	0	1.0919	0.0032
136	SLU 35	-0.03	-0.02	8.48	0	1.1143	0.0023
136	SLU 36	-0.03	-0.02	8.47	0	1.1136	0.0027
136	SLU 37	-0.03	-0.02	8.42	0	1.1066	0.0025
136	SLU 38	-0.03	-0.02	8.41	0	1.1059	0.0029
136	SLU 39	-0.03	-0.02	8.56	0	1.1254	0.0023

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
136	SLU 40	-0.03	-0.02	8.56	0	1.1247	0.0027
136	SLU 41	-0.03	-0.02	8.66	0	1.1389	0.0023
136	SLU 42	-0.03	-0.02	8.66	0	1.1382	0.0027
136	SLU 43	-0.04	-0.05	8.45	0	1.1108	0.006
136	SLU 44	-0.03	-0.05	8.44	0	1.1097	0.0067
136	SLU 45	-0.04	-0.04	8.61	0	1.1321	0.0059
136	SLU 46	-0.04	-0.05	8.61	0	1.1314	0.0063
136	SLU 47	-0.03	-0.05	8.54	0	1.1232	0.0067
136	SLU 48	-0.04	-0.04	8.72	0	1.1456	0.0059
136	SLU 49	-0.04	-0.05	8.71	0	1.1449	0.0063
136	SLU 50	-0.04	-0.05	8.66	0	1.1378	0.006
136	SLU 51	-0.04	-0.05	8.65	0	1.1371	0.0065
136	SLU 52	-0.03	-0.05	9.26	-0.0001	1.2166	0.0064
136	SLU 53	-0.04	-0.04	9.43	-0.0001	1.239	0.0055
136	SLU 54	-0.04	-0.05	9.42	-0.0001	1.2383	0.0059
136	SLU 55	-0.03	-0.05	9.36	-0.0001	1.2301	0.0064
136	SLU 56	-0.04	-0.04	9.53	-0.0001	1.2525	0.0055
136	SLU 57	-0.04	-0.05	9.52	-0.0001	1.2518	0.006
136	SLU 58	-0.04	-0.04	9.47	-0.0001	1.2447	0.0057
136	SLU 59	-0.04	-0.05	9.46	-0.0001	1.244	0.0061
136	SLU 60	-0.04	-0.04	9.61	-0.0001	1.2635	0.0055
136	SLU 61	-0.03	-0.05	9.61	-0.0001	1.2628	0.0059
136	SLU 62	-0.04	-0.04	9.72	-0.0001	1.277	0.0055
136	SLU 63	-0.04	-0.05	9.71	-0.0001	1.2763	0.0059
136	SLU 64	-0.04	-0.03	9.16	-0.0001	1.2044	0.0045
136	SLU 65	-0.04	-0.04	9.15	-0.0001	1.2032	0.0053
136	SLU 66	-0.04	-0.03	9.32	-0.0001	1.2256	0.0044
136	SLU 67	-0.04	-0.04	9.32	-0.0001	1.2249	0.0048
136	SLU 68	-0.04	-0.04	9.26	-0.0001	1.2167	0.0053
136	SLU 69	-0.04	-0.03	9.43	-0.0001	1.2391	0.0044
136	SLU 70	-0.04	-0.04	9.42	-0.0001	1.2384	0.0049
136	SLU 71	-0.04	-0.03	9.37	-0.0001	1.2314	0.0046
136	SLU 72	-0.04	-0.04	9.36	-0.0001	1.2307	0.005
136	SLU 73	-0.04	-0.04	9.97	-0.0001	1.3101	0.0049
136	SLU 74	-0.04	-0.03	10.14	-0.0001	1.3325	0.004
136	SLU 75	-0.04	-0.03	10.13	-0.0001	1.3318	0.0045
136	SLU 76	-0.04	-0.04	10.07	-0.0001	1.3236	0.0049
136	SLU 77	-0.04	-0.03	10.24	-0.0001	1.346	0.0041
136	SLU 78	-0.04	-0.03	10.24	-0.0001	1.3453	0.0045
136	SLU 79	-0.04	-0.03	10.18	-0.0001	1.3383	0.0042
136	SLU 80	-0.04	-0.04	10.18	-0.0001	1.3375	0.0047
136	SLU 81	-0.04	-0.03	10.32	-0.0001	1.3571	0.004
136	SLU 82	-0.04	-0.03	10.32	-0.0001	1.3564	0.0045
136	SLU 83	-0.04	-0.03	10.43	-0.0001	1.3706	0.0041
136	SLU 84	-0.04	-0.03	10.42	-0.0001	1.3699	0.0045
136	SLE RA 1	-0.03	-0.03	6.89	0	0.9059	0.0038
136	SLE RA 2	-0.03	-0.03	6.89	0	0.9051	0.0043
136	SLE RA 3	-0.03	-0.03	7	0	0.9201	0.0037
136	SLE RA 4	-0.03	-0.03	7	0	0.9196	0.004
136	SLE RA 5	-0.03	-0.03	6.95	0	0.9141	0.0043
136	SLE RA 6	-0.03	-0.03	7.07	0	0.9291	0.0037
136	SLE RA 7	-0.03	-0.03	7.06	0	0.9286	0.004
136	SLE RA 8	-0.03	-0.03	7.03	0	0.9239	0.0038
136	SLE RA 9	-0.03	-0.03	7.03	0	0.9234	0.0041
136	SLE RA 10	-0.03	-0.03	7.43	0	0.9764	0.0041
136	SLE RA 11	-0.03	-0.03	7.54	0	0.9913	0.0035
136	SLE RA 12	-0.03	-0.03	7.54	0	0.9908	0.0038
136	SLE RA 13	-0.03	-0.03	7.5	0	0.9854	0.0041
136	SLE RA 14	-0.03	-0.03	7.61	0	1.0003	0.0035
136	SLE RA 15	-0.03	-0.03	7.61	0	0.9998	0.0038
136	SLE RA 16	-0.03	-0.03	7.57	0	0.9951	0.0036
136	SLE RA 17	-0.03	-0.03	7.57	0	0.9947	0.0039
136	SLE RA 18	-0.03	-0.03	7.67	0	1.0077	0.0035
136	SLE RA 19	-0.03	-0.03	7.66	0	1.0072	0.0038
136	SLE RA 20	-0.03	-0.03	7.73	0	1.0167	0.0035
136	SLE RA 21	-0.03	-0.03	7.73	0	1.0162	0.0038
136	SLE FR 1	-0.03	-0.03	6.89	0	0.9059	0.0038
136	SLE FR 2	-0.03	-0.03	6.89	0	0.9057	0.0039
136	SLE FR 3	-0.03	-0.03	6.92	0	0.9095	0.0038
136	SLE FR 4	-0.03	-0.03	7.12	0	0.9363	0.0038
136	SLE FR 5	-0.03	-0.03	7.15	0	0.94	0.0037
136	SLE FR 6	-0.03	-0.03	7.28	0	0.9568	0.0036
136	SLE QP 1	-0.03	-0.03	6.89	0	0.9059	0.0038
136	SLE QP 2	-0.03	-0.03	7.12	0	0.9364	0.0037
136	SLD 1	0.53	0.07	7.31	0	0.9612	-0.0097
136	SLD 2	0.59	0.06	7.3	0	0.96	-0.0084
136	SLD 3	0.49	-0.08	7.13	0	0.937	0.0107
136	SLD 4	0.55	-0.09	7.12	0	0.9359	0.012
136	SLD 5	0.19	0.24	7.46	0	0.9806	-0.0314
136	SLD 6	0.23	0.23	7.45	0	0.9799	-0.0305
136	SLD 7	0.05	-0.28	6.85	0	0.9002	0.0364
136	SLD 8	0.09	-0.28	6.84	0	0.8995	0.0373
136	SLD 9	-0.15	0.23	7.41	0	0.9734	-0.0298
136	SLD 10	-0.11	0.22	7.4	0	0.9726	-0.029
136	SLD 11	-0.29	-0.29	6.79	0	0.893	0.038
136	SLD 12	-0.25	-0.3	6.79	0	0.8922	0.0388
136	SLD 13	-0.61	0.03	7.13	0	0.9369	-0.0045
136	SLD 14	-0.55	0.02	7.12	0	0.9358	-0.0032
136	SLD 15	-0.65	-0.12	6.94	0	0.9128	0.0158
136	SLD 16	-0.59	-0.13	6.94	0	0.9117	0.0171
136	SLV 1	1.28	0.2	7.56	0	0.9934	-0.0268
136	SLV 2	1.42	0.18	7.54	0	0.9908	-0.0238
136	SLV 3	1.18	-0.15	7.14	0	0.9387	0.0192
136	SLV 4	1.32	-0.17	7.12	0	0.9361	0.0223
136	SLV 5	0.49	0.58	7.89	0	1.0369	-0.0758
136	SLV 6	0.58	0.56	7.88	0	1.0353	-0.0739
136	SLV 7	0.16	-0.59	6.5	0	0.8546	0.0777

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
136	SLV 8	0.25	-0.61	6.49	0	0.8529	0.0797
136	SLV 9	-0.31	0.55	7.76	0	1.0199	-0.0722
136	SLV 10	-0.22	0.53	7.75	0	1.0183	-0.0703
136	SLV 11	-0.64	-0.62	6.37	0	0.8376	0.0813
136	SLV 12	-0.55	-0.63	6.36	0	0.8359	0.0833
136	SLV 13	-1.38	0.11	7.13	0	0.9367	-0.0149
136	SLV 14	-1.24	0.09	7.11	0	0.9342	-0.0118
136	SLV 15	-1.48	-0.24	6.71	0	0.882	0.0312
136	SLV 16	-1.34	-0.26	6.69	0	0.8795	0.0342
136	CRTFP Ux+	0	0	0	0	0	0
136	CRTFP Ux-	0	0	0	0	0	0
136	CRTFP Uy+	0	0	0	0	0	0
136	CRTFP Uy-	0	0	0	0	0	0
137	SLU 1	-0.15	-0.06	29.48	8.5016	-2.5308	0.0428
137	SLU 2	-0.14	-0.09	29.44	8.493	-2.5279	0.0365
137	SLU 3	-0.16	-0.05	30.19	8.7075	-2.5922	0.0449
137	SLU 4	-0.15	-0.07	30.17	8.7023	-2.5904	0.0411
137	SLU 5	-0.14	-0.08	29.89	8.6229	-2.5667	0.038
137	SLU 6	-0.16	-0.05	30.64	8.8373	-2.631	0.0464
137	SLU 7	-0.15	-0.07	30.62	8.8322	-2.6292	0.0426
137	SLU 8	-0.16	-0.06	30.38	8.7613	-2.6084	0.0458
137	SLU 9	-0.15	-0.07	30.36	8.7561	-2.6066	0.042
137	SLU 10	-0.15	-0.06	33.06	9.5375	-2.8389	0.0443
137	SLU 11	-0.17	-0.03	33.81	9.7519	-2.9031	0.0526
137	SLU 12	-0.16	-0.04	33.79	9.7468	-2.9014	0.0489
137	SLU 13	-0.16	-0.06	33.51	9.6673	-2.8777	0.0458
137	SLU 14	-0.18	-0.03	34.26	9.8818	-2.9419	0.0541
137	SLU 15	-0.17	-0.04	34.24	9.8766	-2.9402	0.0504
137	SLU 16	-0.18	-0.03	34	9.8057	-2.9194	0.0535
137	SLU 17	-0.17	-0.05	33.98	9.8006	-2.9176	0.0498
137	SLU 18	-0.17	-0.02	34.64	9.9937	-2.975	0.0539
137	SLU 19	-0.16	-0.04	34.62	9.9885	-2.9733	0.0501
137	SLU 20	-0.18	-0.02	35.1	10.1235	-3.0138	0.0553
137	SLU 21	-0.17	-0.04	35.07	10.1184	-3.0121	0.0516
137	SLU 22	-0.17	0	32.62	9.4102	-2.8009	0.0534
137	SLU 23	-0.15	-0.02	32.59	9.4016	-2.798	0.0471
137	SLU 24	-0.17	0.01	33.34	9.6161	-2.8622	0.0555
137	SLU 25	-0.16	0	33.31	9.6109	-2.8605	0.0518
137	SLU 26	-0.16	-0.02	33.04	9.5315	-2.8367	0.0486
137	SLU 27	-0.18	0.01	33.79	9.7459	-2.901	0.057
137	SLU 28	-0.17	0	33.77	9.7408	-2.8993	0.0532
137	SLU 29	-0.18	0	33.53	9.6699	-2.8784	0.0564
137	SLU 30	-0.17	-0.01	33.5	9.6647	-2.8767	0.0526
137	SLU 31	-0.17	0	36.2	10.4461	-3.1089	0.0549
137	SLU 32	-0.19	0.04	36.95	10.6605	-3.1732	0.0633
137	SLU 33	-0.18	0.02	36.93	10.6554	-3.1715	0.0595
137	SLU 34	-0.17	0	36.65	10.5759	-3.1477	0.0564
137	SLU 35	-0.19	0.04	37.4	10.7904	-3.212	0.0647
137	SLU 36	-0.18	0.02	37.38	10.7852	-3.2102	0.061
137	SLU 37	-0.19	0.03	37.14	10.7143	-3.1894	0.0641
137	SLU 38	-0.18	0.01	37.12	10.7092	-3.1877	0.0604
137	SLU 39	-0.19	0.04	37.79	10.9023	-3.2451	0.0645
137	SLU 40	-0.18	0.02	37.77	10.8971	-3.2434	0.0607
137	SLU 41	-0.19	0.04	38.24	11.0321	-3.2839	0.066
137	SLU 42	-0.19	0.02	38.22	11.027	-3.2821	0.0622
137	SLU 43	-0.19	-0.1	37.24	10.7406	-3.1975	0.052
137	SLU 44	-0.18	-0.13	37.21	10.732	-3.1946	0.0457
137	SLU 45	-0.2	-0.09	37.96	10.9464	-3.2588	0.0541
137	SLU 46	-0.19	-0.11	37.93	10.9413	-3.2571	0.0503
137	SLU 47	-0.18	-0.12	37.66	10.8618	-3.2334	0.0472
137	SLU 48	-0.2	-0.09	38.41	11.0763	-3.2976	0.0556
137	SLU 49	-0.19	-0.11	38.39	11.0711	-3.2959	0.0518
137	SLU 50	-0.2	-0.1	38.14	11.0002	-3.275	0.055
137	SLU 51	-0.19	-0.11	38.12	10.9951	-3.2733	0.0512
137	SLU 52	-0.19	-0.1	40.82	11.7764	-3.5055	0.0535
137	SLU 53	-0.21	-0.07	41.57	11.9909	-3.5698	0.0618
137	SLU 54	-0.2	-0.08	41.55	11.9857	-3.5681	0.0581
137	SLU 55	-0.2	-0.1	41.27	11.9063	-3.5443	0.055
137	SLU 56	-0.21	-0.07	42.02	12.1207	-3.6086	0.0633
137	SLU 57	-0.21	-0.08	42	12.1156	-3.6068	0.0596
137	SLU 58	-0.21	-0.07	41.76	12.0447	-3.586	0.0627
137	SLU 59	-0.21	-0.09	41.74	12.0395	-3.5843	0.059
137	SLU 60	-0.21	-0.06	42.41	12.2326	-3.6417	0.0631
137	SLU 61	-0.2	-0.08	42.39	12.2275	-3.64	0.0593
137	SLU 62	-0.22	-0.06	42.86	12.3625	-3.6805	0.0646
137	SLU 63	-0.21	-0.08	42.84	12.3573	-3.6787	0.0608
137	SLU 64	-0.21	-0.04	40.39	11.6492	-3.4675	0.0626
137	SLU 65	-0.19	-0.06	40.35	11.6406	-3.4646	0.0564
137	SLU 66	-0.21	-0.03	41.1	11.855	-3.5289	0.0647
137	SLU 67	-0.2	-0.04	41.08	11.8499	-3.5271	0.061
137	SLU 68	-0.2	-0.06	40.8	11.7704	-3.5034	0.0578
137	SLU 69	-0.22	-0.03	41.55	11.9849	-3.5677	0.0662
137	SLU 70	-0.21	-0.04	41.53	11.9797	-3.5659	0.0624
137	SLU 71	-0.22	-0.04	41.29	11.9089	-3.5451	0.0656
137	SLU 72	-0.21	-0.05	41.27	11.9037	-3.5434	0.0618
137	SLU 73	-0.21	-0.04	43.97	12.685	-3.7756	0.0641
137	SLU 74	-0.23	0	44.72	12.8995	-3.8398	0.0725
137	SLU 75	-0.22	-0.02	44.7	12.8943	-3.8381	0.0687
137	SLU 76	-0.21	-0.04	44.42	12.8149	-3.8144	0.0656
137	SLU 77	-0.23	0	45.17	13.0293	-3.8786	0.0739
137	SLU 78	-0.22	-0.02	45.15	13.0242	-3.8769	0.0702
137	SLU 79	-0.23	-0.01	44.91	12.9533	-3.8561	0.0733
137	SLU 80	-0.22	-0.03	44.89	12.9481	-3.8543	0.0696
137	SLU 81	-0.23	0	45.55	13.1412	-3.9118	0.0737
137	SLU 82	-0.22	-0.02	45.53	13.1361	-3.91	0.0699
137	SLU 83	-0.23	0	46	13.2711	-3.9505	0.0752
137	SLU 84	-0.23	-0.02	45.98	13.2659	-3.9488	0.0714

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
137	SLE RA 1	-0.16	-0.04	30.37	8.7612	-2.608	0.0458
137	SLE RA 2	-0.15	-0.06	30.35	8.7555	-2.606	0.0417
137	SLE RA 3	-0.16	-0.04	30.85	8.8985	-2.6489	0.0472
137	SLE RA 4	-0.15	-0.05	30.84	8.895	-2.6477	0.0447
137	SLE RA 5	-0.15	-0.06	30.65	8.842	-2.6319	0.0427
137	SLE RA 6	-0.16	-0.04	31.15	8.985	-2.6747	0.0482
137	SLE RA 7	-0.16	-0.05	31.14	8.9816	-2.6736	0.0457
137	SLE RA 8	-0.16	-0.04	30.98	8.9343	-2.6597	0.0478
137	SLE RA 9	-0.16	-0.05	30.96	8.9309	-2.6585	0.0453
137	SLE RA 10	-0.16	-0.04	32.76	9.4518	-2.8133	0.0468
137	SLE RA 11	-0.17	-0.02	33.26	9.5948	-2.8562	0.0524
137	SLE RA 12	-0.16	-0.03	33.25	9.5913	-2.855	0.0499
137	SLE RA 13	-0.16	-0.04	33.06	9.5383	-2.8392	0.0478
137	SLE RA 14	-0.17	-0.02	33.56	9.6813	-2.882	0.0534
137	SLE RA 15	-0.17	-0.03	33.55	9.6779	-2.8809	0.0509
137	SLE RA 16	-0.17	-0.02	33.39	9.6306	-2.867	0.053
137	SLE RA 17	-0.17	-0.03	33.37	9.6272	-2.8658	0.0505
137	SLE RA 18	-0.17	-0.02	33.82	9.7559	-2.9041	0.0532
137	SLE RA 19	-0.16	-0.03	33.81	9.7525	-2.903	0.0507
137	SLE RA 20	-0.17	-0.02	34.12	9.8425	-2.93	0.0542
137	SLE RA 21	-0.17	-0.03	34.11	9.839	-2.9288	0.0517
137	SLE FR 1	-0.16	-0.04	30.37	8.7612	-2.608	0.0458
137	SLE FR 2	-0.15	-0.05	30.37	8.7601	-2.6076	0.045
137	SLE FR 3	-0.16	-0.04	30.49	8.7958	-2.6183	0.0462
137	SLE FR 4	-0.16	-0.04	31.4	9.0585	-2.6964	0.0472
137	SLE FR 5	-0.16	-0.04	31.53	9.0942	-2.7072	0.0484
137	SLE FR 6	-0.16	-0.03	32.1	9.2586	-2.756	0.0495
137	SLE QP 1	-0.16	-0.04	30.37	8.7612	-2.608	0.0458
137	SLE QP 2	-0.16	-0.04	31.41	9.0596	-2.6968	0.048
137	SLD 1	2.51	0.44	31.95	9.188	-2.7403	-0.7088
137	SLD 2	2.78	0.41	31.94	9.186	-2.7399	-0.7933
137	SLD 3	2.32	-0.28	31.21	9.011	-2.6792	-0.7991
137	SLD 4	2.58	-0.32	31.2	9.009	-2.6787	-0.8836
137	SLD 5	0.9	1.22	32.69	9.3671	-2.8027	-0.0272
137	SLD 6	1.07	1.2	32.68	9.3658	-2.8024	-0.0824
137	SLD 7	0.24	-1.21	30.23	8.7768	-2.5989	-0.3281
137	SLD 8	0.41	-1.23	30.22	8.7755	-2.5986	-0.3833
137	SLD 9	-0.73	1.16	32.59	9.3437	-2.7951	0.4794
137	SLD 10	-0.56	1.14	32.58	9.3424	-2.7948	0.4242
137	SLD 11	-1.39	-1.27	30.13	8.7535	-2.5913	0.1785
137	SLD 12	-1.22	-1.29	30.12	8.7522	-2.591	0.1233
137	SLD 13	-2.9	0.25	31.62	9.1103	-2.7149	0.9797
137	SLD 14	-2.64	0.21	31.6	9.1083	-2.7145	0.8952
137	SLD 15	-3.1	-0.48	30.88	8.9332	-2.6538	0.8894
137	SLD 16	-2.83	-0.52	30.87	8.9312	-2.6533	0.8049
137	SLV 1	6.1	1.06	32.65	9.3548	-2.7966	-1.7256
137	SLV 2	6.71	0.99	32.62	9.3501	-2.7955	-1.9224
137	SLV 3	5.64	-0.59	30.98	8.9528	-2.6578	-1.9323
137	SLV 4	6.25	-0.67	30.95	8.9481	-2.6568	-2.1291
137	SLV 5	2.31	2.81	34.33	9.7586	-2.9374	-0.1367
137	SLV 6	2.71	2.76	34.31	9.7556	-2.9367	-0.2632
137	SLV 7	0.77	-2.69	28.74	8.4187	-2.4749	-0.8259
137	SLV 8	1.17	-2.74	28.73	8.4157	-2.4742	-0.9524
137	SLV 9	-1.48	2.67	34.09	9.7035	-2.9194	1.0485
137	SLV 10	-1.09	2.62	34.07	9.7005	-2.9188	0.922
137	SLV 11	-3.03	-2.83	28.51	8.3636	-2.457	0.3593
137	SLV 12	-2.63	-2.88	28.49	8.3606	-2.4563	0.2328
137	SLV 13	-6.57	0.59	31.87	9.1711	-2.7369	2.2252
137	SLV 14	-5.96	0.52	31.84	9.1664	-2.7358	2.0284
137	SLV 15	-7.03	-1.06	30.19	8.7691	-2.5981	2.0185
137	SLV 16	-6.42	-1.13	30.16	8.7645	-2.5971	1.8217
137	CRTFP Ux+	0	0	0	0	0	0
137	CRTFP Ux-	0	0	0	0	0	0
137	CRTFP Uy+	0	0	0	0	0	0
137	CRTFP Uy-	0	0	0	0	0	0
138	SLU 1	-0.2	-0.06	38.95	12.3309	-0.7001	0.0709
138	SLU 2	-0.19	-0.1	38.91	12.3185	-0.6993	0.0641
138	SLU 3	-0.21	-0.05	39.89	12.6292	-0.7171	0.0732
138	SLU 4	-0.2	-0.07	39.87	12.6218	-0.7166	0.0692
138	SLU 5	-0.19	-0.1	39.5	12.5064	-0.71	0.0662
138	SLU 6	-0.22	-0.05	40.49	12.8171	-0.7278	0.0754
138	SLU 7	-0.21	-0.07	40.46	12.8097	-0.7273	0.0713
138	SLU 8	-0.22	-0.06	40.14	12.7068	-0.7215	0.0752
138	SLU 9	-0.21	-0.08	40.12	12.6993	-0.721	0.0712
138	SLU 10	-0.21	-0.05	43.7	13.8348	-0.7857	0.0736
138	SLU 11	-0.23	-0.01	44.69	14.1455	-0.8034	0.0828
138	SLU 12	-0.22	-0.03	44.66	14.138	-0.803	0.0787
138	SLU 13	-0.22	-0.05	44.29	14.0227	-0.7964	0.0758
138	SLU 14	-0.24	0	45.28	14.3334	-0.8142	0.085
138	SLU 15	-0.23	-0.02	45.26	14.326	-0.8137	0.0809
138	SLU 16	-0.24	-0.01	44.94	14.2231	-0.8079	0.0848
138	SLU 17	-0.23	-0.03	44.91	14.2156	-0.8074	0.0807
138	SLU 18	-0.24	0	45.79	14.4971	-0.8235	0.0845
138	SLU 19	-0.23	-0.02	45.77	14.4896	-0.823	0.0804
138	SLU 20	-0.24	0	46.39	14.685	-0.8342	0.0867
138	SLU 21	-0.23	-0.02	46.36	14.6775	-0.8337	0.0826
138	SLU 22	-0.23	0.02	43.1	13.6459	-0.7745	0.0801
138	SLU 23	-0.21	-0.01	43.06	13.6335	-0.7738	0.0733
138	SLU 24	-0.23	0.04	44.05	13.9442	-0.7915	0.0824
138	SLU 25	-0.22	0.02	44.02	13.9367	-0.791	0.0784
138	SLU 26	-0.21	-0.01	43.65	13.8214	-0.7845	0.0754
138	SLU 27	-0.24	0.04	44.64	14.1321	-0.8022	0.0846
138	SLU 28	-0.23	0.02	44.62	14.1246	-0.8018	0.0805
138	SLU 29	-0.24	0.03	44.3	14.0217	-0.796	0.0844
138	SLU 30	-0.23	0.01	44.27	14.0143	-0.7955	0.0804
138	SLU 31	-0.23	0.04	47.85	15.1498	-0.8601	0.0828
138	SLU 32	-0.26	0.08	48.84	15.4605	-0.8779	0.092

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
138	SLU 33	-0.25	0.06	48.81	15.453	-0.8774	0.0879
138	SLU 34	-0.24	0.04	48.44	15.3377	-0.8709	0.085
138	SLU 35	-0.26	0.08	49.43	15.6484	-0.8886	0.0942
138	SLU 36	-0.25	0.06	49.41	15.6409	-0.8881	0.0901
138	SLU 37	-0.26	0.07	49.09	15.538	-0.8824	0.094
138	SLU 38	-0.25	0.05	49.06	15.5306	-0.8819	0.0899
138	SLU 39	-0.26	0.09	49.95	15.812	-0.898	0.0937
138	SLU 40	-0.25	0.07	49.92	15.8046	-0.8975	0.0896
138	SLU 41	-0.27	0.09	50.54	15.9999	-0.9087	0.0959
138	SLU 42	-0.26	0.07	50.52	15.9925	-0.9082	0.0918
138	SLU 43	-0.26	-0.11	49.21	15.5794	-0.8846	0.089
138	SLU 44	-0.24	-0.15	49.17	15.567	-0.8838	0.0822
138	SLU 45	-0.26	-0.1	50.16	15.8776	-0.9016	0.0914
138	SLU 46	-0.25	-0.12	50.13	15.8702	-0.9011	0.0873
138	SLU 47	-0.25	-0.14	49.76	15.7549	-0.8945	0.0844
138	SLU 48	-0.27	-0.1	50.75	16.0656	-0.9123	0.0935
138	SLU 49	-0.26	-0.12	50.73	16.0581	-0.9118	0.0894
138	SLU 50	-0.27	-0.11	50.41	15.9552	-0.906	0.0933
138	SLU 51	-0.26	-0.13	50.38	15.9478	-0.9055	0.0893
138	SLU 52	-0.26	-0.1	53.96	17.0832	-0.9702	0.0917
138	SLU 53	-0.29	-0.05	54.95	17.3939	-0.9879	0.1009
138	SLU 54	-0.28	-0.07	54.92	17.3865	-0.9875	0.0968
138	SLU 55	-0.27	-0.1	54.55	17.2712	-0.9809	0.0939
138	SLU 56	-0.29	-0.05	55.54	17.5819	-0.9986	0.1031
138	SLU 57	-0.28	-0.07	55.52	17.5744	-0.9982	0.099
138	SLU 58	-0.29	-0.06	55.2	17.4715	-0.9924	0.1029
138	SLU 59	-0.28	-0.08	55.17	17.4641	-0.9919	0.0988
138	SLU 60	-0.29	-0.05	56.06	17.7455	-1.008	0.1026
138	SLU 61	-0.28	-0.07	56.03	17.7381	-1.0075	0.0985
138	SLU 62	-0.3	-0.04	56.65	17.9334	-1.0187	0.1048
138	SLU 63	-0.29	-0.06	56.63	17.926	-1.0182	0.1007
138	SLU 64	-0.28	-0.02	53.36	16.8943	-0.959	0.0982
138	SLU 65	-0.26	-0.06	53.32	16.8819	-0.9583	0.0914
138	SLU 66	-0.29	-0.01	54.31	17.1926	-0.976	0.1006
138	SLU 67	-0.28	-0.03	54.28	17.1852	-0.9755	0.0965
138	SLU 68	-0.27	-0.06	53.92	17.0698	-0.969	0.0936
138	SLU 69	-0.29	-0.01	54.91	17.3805	-0.9867	0.1027
138	SLU 70	-0.28	-0.03	54.88	17.3731	-0.9863	0.0987
138	SLU 71	-0.29	-0.02	54.56	17.2702	-0.9805	0.1025
138	SLU 72	-0.28	-0.04	54.53	17.2627	-0.98	0.0985
138	SLU 73	-0.29	-0.01	58.11	18.3982	-1.0446	0.1009
138	SLU 74	-0.31	0.03	59.1	18.7089	-1.0624	0.1101
138	SLU 75	-0.3	0.01	59.07	18.7014	-1.0619	0.106
138	SLU 76	-0.29	-0.01	58.71	18.5861	-1.0554	0.1031
138	SLU 77	-0.32	0.03	59.7	18.8968	-1.0731	0.1123
138	SLU 78	-0.31	0.01	59.67	18.8894	-1.0726	0.1082
138	SLU 79	-0.32	0.02	59.35	18.7865	-1.0669	0.1121
138	SLU 80	-0.31	0	59.32	18.779	-1.0664	0.108
138	SLU 81	-0.31	0.04	60.21	19.0605	-1.0825	0.1118
138	SLU 82	-0.3	0.02	60.18	19.053	-1.082	0.1077
138	SLU 83	-0.32	0.04	60.8	19.2484	-1.0932	0.114
138	SLU 84	-0.31	0.02	60.78	19.2409	-1.0927	0.1099
138	SLE RA 1	-0.21	-0.04	40.14	12.7066	-0.7214	0.0735
138	SLE RA 2	-0.2	-0.06	40.11	12.6984	-0.7208	0.069
138	SLE RA 3	-0.21	-0.03	40.77	12.9055	-0.7327	0.0751
138	SLE RA 4	-0.21	-0.04	40.75	12.9005	-0.7324	0.0724
138	SLE RA 5	-0.2	-0.06	40.5	12.8236	-0.728	0.0704
138	SLE RA 6	-0.22	-0.03	41.16	13.0308	-0.7398	0.0765
138	SLE RA 7	-0.21	-0.04	41.15	13.0258	-0.7395	0.0738
138	SLE RA 8	-0.22	-0.04	40.93	12.9572	-0.7356	0.0764
138	SLE RA 9	-0.21	-0.05	40.91	12.9522	-0.7353	0.0737
138	SLE RA 10	-0.21	-0.03	43.3	13.7092	-0.7784	0.0753
138	SLE RA 11	-0.23	0	43.96	13.9163	-0.7903	0.0815
138	SLE RA 12	-0.22	-0.01	43.94	13.9114	-0.7899	0.0787
138	SLE RA 13	-0.22	-0.03	43.7	13.8345	-0.7856	0.0768
138	SLE RA 14	-0.23	0	44.36	14.0416	-0.7974	0.0829
138	SLE RA 15	-0.23	-0.01	44.34	14.0367	-0.7971	0.0802
138	SLE RA 16	-0.23	-0.01	44.13	13.9681	-0.7932	0.0828
138	SLE RA 17	-0.23	-0.02	44.11	13.9631	-0.7929	0.0801
138	SLE RA 18	-0.23	0.01	44.7	14.1507	-0.8036	0.0826
138	SLE RA 19	-0.23	-0.01	44.68	14.1458	-0.8033	0.0799
138	SLE RA 20	-0.24	0.01	45.1	14.276	-0.8108	0.0841
138	SLE RA 21	-0.23	-0.01	45.08	14.271	-0.8105	0.0813
138	SLE FR 1	-0.21	-0.04	40.14	12.7066	-0.7214	0.0735
138	SLE FR 2	-0.21	-0.04	40.13	12.705	-0.7213	0.0726
138	SLE FR 3	-0.21	-0.04	40.3	12.7568	-0.7242	0.0741
138	SLE FR 4	-0.21	-0.03	41.5	13.1382	-0.7459	0.0753
138	SLE FR 5	-0.22	-0.02	41.66	13.19	-0.7489	0.0768
138	SLE FR 6	-0.22	-0.02	42.42	13.4287	-0.7625	0.078
138	SLE QP 1	-0.21	-0.04	40.14	12.7066	-0.7214	0.0735
138	SLE QP 2	-0.22	-0.02	41.51	13.1399	-0.746	0.0762
138	SLD 1	3.42	0.6	42.18	13.3275	-0.7504	-1.1972
138	SLD 2	3.77	0.57	42.19	13.3305	-0.7512	-1.3222
138	SLD 3	3.15	-0.38	41.21	13.0629	-0.7327	-1.1011
138	SLD 4	3.5	-0.41	41.22	13.0658	-0.7335	-1.2261
138	SLD 5	1.22	1.66	43.18	13.5971	-0.7741	-0.4295
138	SLD 6	1.45	1.63	43.18	13.599	-0.7746	-0.5111
138	SLD 7	0.32	-1.61	39.95	12.7148	-0.715	-0.1091
138	SLD 8	0.55	-1.63	39.95	12.7167	-0.7156	-0.1908
138	SLD 9	-0.99	1.58	43.06	13.563	-0.7765	0.3432
138	SLD 10	-0.76	1.56	43.07	13.5649	-0.7771	0.2616
138	SLD 11	-1.88	-1.68	39.83	12.6807	-0.7175	0.6636
138	SLD 12	-1.65	-1.71	39.83	12.6826	-0.718	0.5819
138	SLD 13	-3.94	0.36	41.79	13.2139	-0.7586	1.3785
138	SLD 14	-3.58	0.33	41.8	13.2169	-0.7594	1.2536
138	SLD 15	-4.21	-0.62	40.82	12.9493	-0.7408	1.4746
138	SLD 16	-3.85	-0.65	40.83	12.9522	-0.7417	1.3497

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
138	SLV 1	8.29	1.41	43.06	13.5708	-0.7556	-2.9037
138	SLV 2	9.12	1.33	43.07	13.5776	-0.7576	-3.1946
138	SLV 3	7.66	-0.81	40.85	12.97	-0.7154	-2.6798
138	SLV 4	8.49	-0.89	40.87	12.9768	-0.7174	-2.9708
138	SLV 5	3.14	3.79	45.31	14.1792	-0.8096	-1.1074
138	SLV 6	3.68	3.73	45.32	14.1836	-0.8108	-1.2944
138	SLV 7	1.05	-3.62	37.97	12.1765	-0.6755	-0.3613
138	SLV 8	1.59	-3.67	37.98	12.1809	-0.6768	-0.5483
138	SLV 9	-2.02	3.62	45.03	14.0989	-0.8153	0.7007
138	SLV 10	-1.49	3.57	45.04	14.1033	-0.8165	0.5137
138	SLV 11	-4.11	-3.78	37.7	12.0961	-0.6813	1.4468
138	SLV 12	-3.58	-3.84	37.7	12.1005	-0.6825	1.2598
138	SLV 13	-8.92	0.84	42.14	13.3029	-0.7747	3.1233
138	SLV 14	-8.09	0.76	42.16	13.3098	-0.7767	2.8323
138	SLV 15	-9.55	-1.38	39.94	12.7021	-0.7345	3.3471
138	SLV 16	-8.72	-1.46	39.96	12.7089	-0.7365	3.0561
138	CRTFP Ux+	0	0	0	0	0	0
138	CRTFP Ux-	0	0	0	0	0	0
138	CRTFP Uy+	0	0	0	0	0	0
138	CRTFP Uy-	0	0	0	0	0	0
139	SLU 1	-0.22	-0.05	42.17	13.0179	0.0256	0.0778
139	SLU 2	-0.2	-0.09	42.12	13.005	0.0256	0.0709
139	SLU 3	-0.23	-0.04	43.19	13.3324	0.0263	0.0802
139	SLU 4	-0.22	-0.06	43.16	13.3247	0.0262	0.0761
139	SLU 5	-0.21	-0.08	42.76	13.2029	0.026	0.0733
139	SLU 6	-0.23	-0.03	43.83	13.5304	0.0267	0.0825
139	SLU 7	-0.22	-0.06	43.81	13.5226	0.0267	0.0784
139	SLU 8	-0.23	-0.05	43.46	13.4138	0.0265	0.0825
139	SLU 9	-0.22	-0.07	43.43	13.406	0.0264	0.0784
139	SLU 10	-0.23	-0.02	47.31	14.6077	0.0285	0.0811
139	SLU 11	-0.26	0.03	48.38	14.9352	0.0292	0.0904
139	SLU 12	-0.24	0	48.36	14.9274	0.0291	0.0863
139	SLU 13	-0.24	-0.02	47.96	14.8057	0.0289	0.0835
139	SLU 14	-0.26	0.03	49.03	15.1331	0.0296	0.0927
139	SLU 15	-0.25	0.01	49	15.1254	0.0296	0.0886
139	SLU 16	-0.26	0.02	48.65	15.0166	0.0294	0.0927
139	SLU 17	-0.25	0	48.62	15.0088	0.0293	0.0886
139	SLU 18	-0.26	0.04	49.59	15.3076	0.0298	0.0923
139	SLU 19	-0.25	0.02	49.56	15.2998	0.0297	0.0882
139	SLU 20	-0.27	0.04	50.23	15.5055	0.0302	0.0947
139	SLU 21	-0.26	0.02	50.21	15.4978	0.0302	0.0906
139	SLU 22	-0.24	0.05	46.65	14.4026	0.0286	0.0859
139	SLU 23	-0.22	0.01	46.61	14.3897	0.0285	0.0791
139	SLU 24	-0.25	0.06	47.68	14.7171	0.0292	0.0883
139	SLU 25	-0.24	0.04	47.65	14.7094	0.0292	0.0842
139	SLU 26	-0.23	0.01	47.25	14.5876	0.0289	0.0815
139	SLU 27	-0.26	0.06	48.32	14.9151	0.0297	0.0907
139	SLU 28	-0.25	0.04	48.29	14.9073	0.0296	0.0866
139	SLU 29	-0.26	0.05	47.95	14.7985	0.0294	0.0907
139	SLU 30	-0.25	0.03	47.92	14.7907	0.0294	0.0866
139	SLU 31	-0.25	0.07	51.8	15.9924	0.0314	0.0893
139	SLU 32	-0.28	0.12	52.87	16.3199	0.0321	0.0985
139	SLU 33	-0.27	0.1	52.84	16.3121	0.0321	0.0944
139	SLU 34	-0.26	0.08	52.45	16.1904	0.0318	0.0917
139	SLU 35	-0.29	0.13	53.52	16.5178	0.0326	0.1009
139	SLU 36	-0.27	0.1	53.49	16.5101	0.0325	0.0968
139	SLU 37	-0.29	0.11	53.14	16.4012	0.0323	0.1009
139	SLU 38	-0.27	0.09	53.11	16.3935	0.0323	0.0968
139	SLU 39	-0.28	0.14	54.08	16.6923	0.0327	0.1005
139	SLU 40	-0.27	0.11	54.05	16.6845	0.0327	0.0964
139	SLU 41	-0.29	0.14	54.72	16.8902	0.0332	0.1029
139	SLU 42	-0.28	0.12	54.69	16.8824	0.0331	0.0988
139	SLU 43	-0.28	-0.1	53.28	16.4485	0.0323	0.0983
139	SLU 44	-0.26	-0.13	53.23	16.4356	0.0322	0.0914
139	SLU 45	-0.29	-0.08	54.3	16.7631	0.033	0.1007
139	SLU 46	-0.27	-0.11	54.27	16.7553	0.0329	0.0966
139	SLU 47	-0.27	-0.13	53.88	16.6335	0.0327	0.0938
139	SLU 48	-0.29	-0.08	54.95	16.961	0.0334	0.103
139	SLU 49	-0.28	-0.1	54.92	16.9532	0.0333	0.0989
139	SLU 50	-0.29	-0.09	54.57	16.8444	0.0331	0.103
139	SLU 51	-0.28	-0.12	54.54	16.8367	0.0331	0.0989
139	SLU 52	-0.29	-0.07	58.43	18.0384	0.0351	0.1016
139	SLU 53	-0.31	-0.02	59.5	18.3658	0.0359	0.1109
139	SLU 54	-0.3	-0.04	59.47	18.3581	0.0358	0.1068
139	SLU 55	-0.29	-0.07	59.07	18.2363	0.0356	0.104
139	SLU 56	-0.32	-0.02	60.14	18.5638	0.0363	0.1132
139	SLU 57	-0.31	-0.04	60.11	18.556	0.0362	0.1091
139	SLU 58	-0.32	-0.03	59.76	18.4472	0.0361	0.1132
139	SLU 59	-0.31	-0.05	59.74	18.4394	0.036	0.1091
139	SLU 60	-0.32	-0.01	60.7	18.7382	0.0365	0.1129
139	SLU 61	-0.31	-0.03	60.67	18.7304	0.0364	0.1087
139	SLU 62	-0.33	-0.01	61.35	18.9361	0.0369	0.1152
139	SLU 63	-0.31	-0.03	61.32	18.9284	0.0368	0.1111
139	SLU 64	-0.3	0	57.77	17.8332	0.0353	0.1065
139	SLU 65	-0.28	-0.04	57.72	17.8203	0.0352	0.0996
139	SLU 66	-0.31	0.01	58.79	18.1477	0.0359	0.1089
139	SLU 67	-0.3	-0.01	58.76	18.14	0.0359	0.1048
139	SLU 68	-0.29	-0.03	58.36	18.0182	0.0356	0.102
139	SLU 69	-0.32	0.02	59.43	18.3457	0.0363	0.1112
139	SLU 70	-0.3	-0.01	59.4	18.3379	0.0363	0.1071
139	SLU 71	-0.32	0	59.06	18.2291	0.0361	0.1112
139	SLU 72	-0.3	-0.02	59.03	18.2213	0.0361	0.1071
139	SLU 73	-0.31	0.03	62.91	19.4231	0.0381	0.1098
139	SLU 74	-0.34	0.08	63.98	19.7505	0.0388	0.1191
139	SLU 75	-0.33	0.05	63.95	19.7427	0.0388	0.115
139	SLU 76	-0.32	0.03	63.56	19.621	0.0385	0.1122
139	SLU 77	-0.34	0.08	64.63	19.9484	0.0392	0.1214

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
139	SLU 78	-0.33	0.06	64.6	19.9407	0.0392	0.1173
139	SLU 79	-0.34	0.07	64.25	19.8319	0.039	0.1214
139	SLU 80	-0.33	0.04	64.22	19.8241	0.039	0.1173
139	SLU 81	-0.34	0.09	65.19	20.1229	0.0394	0.121
139	SLU 82	-0.33	0.07	65.16	20.1151	0.0394	0.1169
139	SLU 83	-0.35	0.09	65.83	20.3208	0.0398	0.1234
139	SLU 84	-0.34	0.07	65.8	20.3131	0.0398	0.1193
139	SLE RA 1	-0.23	-0.02	43.45	13.4135	0.0265	0.0801
139	SLE RA 2	-0.21	-0.05	43.42	13.4049	0.0264	0.0755
139	SLE RA 3	-0.23	-0.01	44.13	13.6232	0.0269	0.0817
139	SLE RA 4	-0.22	-0.03	44.11	13.618	0.0269	0.079
139	SLE RA 5	-0.22	-0.04	43.85	13.5369	0.0267	0.0771
139	SLE RA 6	-0.24	-0.01	44.56	13.7552	0.0272	0.0833
139	SLE RA 7	-0.23	-0.03	44.54	13.75	0.0272	0.0805
139	SLE RA 8	-0.24	-0.02	44.31	13.6775	0.027	0.0833
139	SLE RA 9	-0.23	-0.03	44.29	13.6723	0.027	0.0805
139	SLE RA 10	-0.23	0	46.88	14.4734	0.0284	0.0823
139	SLE RA 11	-0.25	0.03	47.59	14.6917	0.0288	0.0885
139	SLE RA 12	-0.24	0.01	47.57	14.6865	0.0288	0.0858
139	SLE RA 13	-0.24	0	47.31	14.6054	0.0286	0.0839
139	SLE RA 14	-0.26	0.03	48.02	14.8237	0.0291	0.0901
139	SLE RA 15	-0.25	0.02	48.01	14.8185	0.0291	0.0873
139	SLE RA 16	-0.26	0.02	47.77	14.746	0.029	0.0901
139	SLE RA 17	-0.25	0.01	47.75	14.7408	0.0289	0.0873
139	SLE RA 18	-0.25	0.04	48.4	14.94	0.0292	0.0898
139	SLE RA 19	-0.25	0.02	48.38	14.9348	0.0292	0.0871
139	SLE RA 20	-0.26	0.04	48.83	15.0719	0.0295	0.0914
139	SLE RA 21	-0.25	0.02	48.81	15.0668	0.0295	0.0887
139	SLE FR 1	-0.23	-0.02	43.45	13.4135	0.0265	0.0801
139	SLE FR 2	-0.22	-0.03	43.44	13.4118	0.0265	0.0792
139	SLE FR 3	-0.23	-0.02	43.62	13.4663	0.0266	0.0807
139	SLE FR 4	-0.23	-0.01	44.93	13.8697	0.0273	0.0821
139	SLE FR 5	-0.24	0	45.11	13.9243	0.0274	0.0836
139	SLE FR 6	-0.24	0.01	45.92	14.1768	0.0279	0.085
139	SLE QP 1	-0.23	-0.02	43.45	13.4135	0.0265	0.0801
139	SLE QP 2	-0.24	0	44.93	13.8715	0.0273	0.083
139	SLD 1	3.78	0.42	45.23	14.0694	0.0298	-1.3241
139	SLD 2	4.18	0.39	45.26	14.0817	0.0288	-1.4614
139	SLD 3	3.49	-0.66	44.17	13.7809	0.0292	-1.2203
139	SLD 4	3.88	-0.69	44.2	13.7933	0.0282	-1.3576
139	SLD 5	1.35	1.76	46.62	14.3662	0.0292	-0.4723
139	SLD 6	1.61	1.74	46.65	14.3742	0.0285	-0.562
139	SLD 7	0.36	-1.83	43.09	13.4046	0.0271	-0.1263
139	SLD 8	0.62	-1.85	43.11	13.4127	0.0264	-0.216
139	SLD 9	-1.09	1.84	46.76	14.3303	0.0282	0.382
139	SLD 10	-0.83	1.82	46.78	14.3383	0.0275	0.2923
139	SLD 11	-2.08	-1.75	43.22	13.3687	0.0261	0.728
139	SLD 12	-1.82	-1.77	43.24	13.3768	0.0254	0.6383
139	SLD 13	-4.35	0.68	45.66	13.9497	0.0265	1.5236
139	SLD 14	-3.96	0.65	45.7	13.962	0.0254	1.3863
139	SLD 15	-4.65	-0.4	44.6	13.6612	0.0258	1.6274
139	SLD 16	-4.25	-0.42	44.64	13.6735	0.0248	1.4901
139	SLV 1	9.17	0.94	45.58	14.3254	0.0332	-3.2099
139	SLV 2	10.08	0.88	45.67	14.3541	0.0308	-3.5298
139	SLV 3	8.47	-1.49	43.17	13.6706	0.0317	-2.9676
139	SLV 4	9.39	-1.56	43.26	13.6993	0.0293	-3.2874
139	SLV 5	3.48	3.99	48.77	14.9959	0.0317	-1.2177
139	SLV 6	4.07	3.95	48.82	15.0144	0.0302	-1.4232
139	SLV 7	1.17	-4.14	40.74	12.8131	0.0268	-0.4097
139	SLV 8	1.76	-4.18	40.79	12.8315	0.0253	-0.6153
139	SLV 9	-2.23	4.17	49.07	14.9114	0.0294	0.7813
139	SLV 10	-1.64	4.13	49.13	14.9298	0.0278	0.5758
139	SLV 11	-4.54	-3.95	41.05	12.7286	0.0244	1.5893
139	SLV 12	-3.95	-4	41.1	12.747	0.0229	1.3837
139	SLV 13	-9.86	1.55	46.61	14.0437	0.0253	3.4534
139	SLV 14	-8.94	1.49	46.69	14.0724	0.0229	3.1336
139	SLV 15	-10.55	-0.88	44.2	13.3888	0.0238	3.6958
139	SLV 16	-9.64	-0.95	44.28	13.4175	0.0214	3.376
139	CRTFP Ux+	0	0	0	0	0	0
139	CRTFP Ux-	0	0	0	0	0	0
139	CRTFP Uy+	0	0	0	0	0	0
139	CRTFP Uy-	0	0	0	0	0	0
140	SLU 1	-0.21	-0.04	41.58	12.6642	0.0112	0.0747
140	SLU 2	-0.19	-0.07	41.54	12.652	0.0112	0.0679
140	SLU 3	-0.22	-0.02	42.59	12.9699	0.0115	0.0771
140	SLU 4	-0.21	-0.04	42.56	12.9625	0.0115	0.073
140	SLU 5	-0.2	-0.07	42.17	12.8442	0.0114	0.0702
140	SLU 6	-0.23	-0.02	43.23	13.1621	0.0117	0.0794
140	SLU 7	-0.21	-0.04	43.2	13.1547	0.0117	0.0753
140	SLU 8	-0.23	-0.03	42.85	13.0486	0.0116	0.0794
140	SLU 9	-0.21	-0.05	42.83	13.0413	0.0116	0.0753
140	SLU 10	-0.22	0	46.67	14.213	0.0124	0.0786
140	SLU 11	-0.25	0.04	47.72	14.5309	0.0127	0.0878
140	SLU 12	-0.24	0.02	47.69	14.5236	0.0127	0.0837
140	SLU 13	-0.23	0	47.3	14.4052	0.0126	0.0809
140	SLU 14	-0.26	0.05	48.36	14.7231	0.0129	0.0901
140	SLU 15	-0.24	0.03	48.33	14.7158	0.0129	0.086
140	SLU 16	-0.26	0.04	47.98	14.6097	0.0128	0.0901
140	SLU 17	-0.24	0.01	47.96	14.6023	0.0128	0.086
140	SLU 18	-0.26	0.06	48.91	14.8943	0.0129	0.09
140	SLU 19	-0.24	0.04	48.88	14.887	0.0129	0.0859
140	SLU 20	-0.26	0.06	49.55	15.0865	0.0131	0.0924
140	SLU 21	-0.25	0.04	49.52	15.0792	0.0131	0.0883
140	SLU 22	-0.24	0.06	46	14.0086	0.0126	0.0826
140	SLU 23	-0.22	0.03	45.96	13.9964	0.0125	0.0758
140	SLU 24	-0.24	0.07	47.01	14.3143	0.0129	0.085
140	SLU 25	-0.23	0.05	46.98	14.3069	0.0128	0.0809

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
140	SLU 26	-0.22	0.03	46.59	14.1886	0.0127	0.0781
140	SLU 27	-0.25	0.08	47.64	14.5065	0.0131	0.0873
140	SLU 28	-0.24	0.06	47.62	14.4991	0.013	0.0832
140	SLU 29	-0.25	0.07	47.27	14.393	0.013	0.0873
140	SLU 30	-0.24	0.04	47.25	14.3857	0.0129	0.0832
140	SLU 31	-0.25	0.09	51.09	15.5574	0.0137	0.0865
140	SLU 32	-0.27	0.14	52.14	15.8753	0.0141	0.0957
140	SLU 33	-0.26	0.12	52.11	15.868	0.014	0.0916
140	SLU 34	-0.25	0.1	51.72	15.7496	0.0139	0.0888
140	SLU 35	-0.28	0.15	52.77	16.0675	0.0143	0.098
140	SLU 36	-0.27	0.12	52.75	16.0602	0.0142	0.0939
140	SLU 37	-0.28	0.13	52.4	15.9541	0.0142	0.098
140	SLU 38	-0.27	0.11	52.38	15.9467	0.0141	0.0939
140	SLU 39	-0.28	0.16	53.33	16.2387	0.0143	0.0979
140	SLU 40	-0.27	0.14	53.3	16.2313	0.0142	0.0938
140	SLU 41	-0.29	0.16	53.97	16.4309	0.0145	0.1002
140	SLU 42	-0.27	0.14	53.94	16.4236	0.0144	0.0961
140	SLU 43	-0.27	-0.08	52.54	16.0025	0.0141	0.0945
140	SLU 44	-0.25	-0.12	52.5	15.9903	0.0141	0.0876
140	SLU 45	-0.28	-0.07	53.55	16.3082	0.0144	0.0968
140	SLU 46	-0.26	-0.09	53.52	16.3009	0.0144	0.0927
140	SLU 47	-0.26	-0.12	53.13	16.1825	0.0143	0.09
140	SLU 48	-0.28	-0.07	54.18	16.5004	0.0146	0.0992
140	SLU 49	-0.27	-0.09	54.16	16.4931	0.0146	0.0951
140	SLU 50	-0.28	-0.08	53.81	16.387	0.0145	0.0991
140	SLU 51	-0.27	-0.1	53.79	16.3796	0.0145	0.095
140	SLU 52	-0.28	-0.05	57.63	17.5514	0.0153	0.0983
140	SLU 53	-0.31	0	58.68	17.8693	0.0156	0.1075
140	SLU 54	-0.29	-0.02	58.65	17.8619	0.0156	0.1034
140	SLU 55	-0.29	-0.05	58.26	17.7436	0.0155	0.1007
140	SLU 56	-0.31	0	59.31	18.0615	0.0158	0.1099
140	SLU 57	-0.3	-0.02	59.29	18.0541	0.0158	0.1058
140	SLU 58	-0.31	-0.01	58.94	17.948	0.0157	0.1098
140	SLU 59	-0.3	-0.03	58.92	17.9407	0.0157	0.1057
140	SLU 60	-0.31	0.02	59.87	18.2326	0.0158	0.1098
140	SLU 61	-0.3	-0.01	59.84	18.2253	0.0158	0.1057
140	SLU 62	-0.32	0.02	60.51	18.4248	0.016	0.1121
140	SLU 63	-0.31	0	60.48	18.4175	0.016	0.108
140	SLU 64	-0.29	0.02	56.96	17.3469	0.0155	0.1023
140	SLU 65	-0.27	-0.02	56.92	17.3347	0.0154	0.0955
140	SLU 66	-0.3	0.03	57.97	17.6526	0.0158	0.1047
140	SLU 67	-0.29	0.01	57.94	17.6452	0.0157	0.1006
140	SLU 68	-0.28	-0.02	57.55	17.5269	0.0156	0.0978
140	SLU 69	-0.3	0.03	58.6	17.8448	0.016	0.107
140	SLU 70	-0.29	0.01	58.58	17.8375	0.0159	0.1029
140	SLU 71	-0.3	0.02	58.23	17.7313	0.0159	0.107
140	SLU 72	-0.29	0	58.21	17.724	0.0158	0.1029
140	SLU 73	-0.3	0.05	62.05	18.8958	0.0166	0.1062
140	SLU 74	-0.33	0.1	63.1	19.2137	0.017	0.1154
140	SLU 75	-0.32	0.08	63.07	19.2063	0.0169	0.1113
140	SLU 76	-0.31	0.05	62.68	19.088	0.0168	0.1085
140	SLU 77	-0.34	0.1	63.73	19.4059	0.0172	0.1177
140	SLU 78	-0.32	0.08	63.71	19.3985	0.0171	0.1136
140	SLU 79	-0.34	0.09	63.36	19.2924	0.0171	0.1177
140	SLU 80	-0.32	0.07	63.34	19.2851	0.017	0.1136
140	SLU 81	-0.33	0.11	64.29	19.577	0.0172	0.1176
140	SLU 82	-0.32	0.09	64.26	19.5697	0.0172	0.1135
140	SLU 83	-0.34	0.12	64.93	19.7692	0.0174	0.1199
140	SLU 84	-0.33	0.09	64.9	19.7619	0.0173	0.1158
140	SLE RA 1	-0.22	-0.01	42.85	13.0483	0.0116	0.077
140	SLE RA 2	-0.21	-0.03	42.81	13.0402	0.0116	0.0724
140	SLE RA 3	-0.22	0	43.52	13.2521	0.0118	0.0786
140	SLE RA 4	-0.22	-0.01	43.5	13.2472	0.0118	0.0758
140	SLE RA 5	-0.21	-0.03	43.24	13.1683	0.0117	0.074
140	SLE RA 6	-0.23	0	43.94	13.3802	0.0119	0.0801
140	SLE RA 7	-0.22	-0.01	43.92	13.3753	0.0119	0.0774
140	SLE RA 8	-0.23	-0.01	43.69	13.3046	0.0119	0.0801
140	SLE RA 9	-0.22	-0.02	43.67	13.2997	0.0118	0.0773
140	SLE RA 10	-0.23	0.01	46.23	14.0809	0.0124	0.0796
140	SLE RA 11	-0.24	0.05	46.94	14.2928	0.0126	0.0857
140	SLE RA 12	-0.24	0.03	46.92	14.2879	0.0126	0.083
140	SLE RA 13	-0.23	0.01	46.66	14.209	0.0125	0.0811
140	SLE RA 14	-0.25	0.05	47.36	14.4209	0.0127	0.0873
140	SLE RA 15	-0.24	0.03	47.34	14.416	0.0127	0.0845
140	SLE RA 16	-0.25	0.04	47.11	14.3453	0.0127	0.0872
140	SLE RA 17	-0.24	0.03	47.09	14.3404	0.0126	0.0845
140	SLE RA 18	-0.25	0.06	47.73	14.535	0.0128	0.0872
140	SLE RA 19	-0.24	0.04	47.71	14.5302	0.0127	0.0844
140	SLE RA 20	-0.25	0.06	48.15	14.6632	0.0129	0.0887
140	SLE RA 21	-0.24	0.04	48.14	14.6583	0.0129	0.086
140	SLE FR 1	-0.22	-0.01	42.85	13.0483	0.0116	0.077
140	SLE FR 2	-0.22	-0.01	42.84	13.0467	0.0116	0.0761
140	SLE FR 3	-0.22	-0.01	43.01	13.0996	0.0117	0.0776
140	SLE FR 4	-0.23	0.01	44.3	13.4927	0.0119	0.0791
140	SLE FR 5	-0.23	0.01	44.48	13.5456	0.012	0.0807
140	SLE FR 6	-0.23	0.02	45.29	13.7917	0.0122	0.0821
140	SLE QP 1	-0.22	-0.01	42.85	13.0483	0.0116	0.077
140	SLE QP 2	-0.23	0.01	44.31	13.4943	0.0119	0.08
140	SLD 1	3.79	0.42	44.57	13.6863	0.0134	-1.3251
140	SLD 2	4.18	0.41	44.64	13.7089	0.0123	-1.4624
140	SLD 3	3.49	-0.65	43.52	13.3989	0.014	-1.2214
140	SLD 4	3.88	-0.67	43.59	13.4214	0.0129	-1.3586
140	SLD 5	1.36	1.76	45.98	13.9839	0.0116	-0.4746
140	SLD 6	1.61	1.75	46.03	13.9986	0.0109	-0.5643
140	SLD 7	0.37	-1.81	42.45	13.0258	0.0137	-0.1288
140	SLD 8	0.62	-1.82	42.5	13.0405	0.013	-0.2185
140	SLD 9	-1.08	1.84	46.12	13.9482	0.0109	0.3786

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
140	SLD 10	-0.82	1.83	46.17	13.9629	0.0102	0.2889
140	SLD 11	-2.07	-1.73	42.59	12.99	0.013	0.7243
140	SLD 12	-1.81	-1.74	42.64	13.0048	0.0123	0.6347
140	SLD 13	-4.34	0.69	45.04	13.5673	0.011	1.5187
140	SLD 14	-3.95	0.67	45.11	13.5898	0.0099	1.3815
140	SLD 15	-4.64	-0.38	43.98	13.2798	0.0116	1.6224
140	SLD 16	-4.24	-0.4	44.05	13.3023	0.0105	1.4852
140	SLV 1	9.17	0.93	44.89	13.9341	0.0152	-3.2084
140	SLV 2	10.08	0.9	45.05	13.9866	0.0127	-3.528
140	SLV 3	8.47	-1.49	42.49	13.2815	0.0167	-2.9662
140	SLV 4	9.39	-1.53	42.65	13.334	0.0141	-3.2857
140	SLV 5	3.49	3.98	48.1	14.607	0.0112	-1.2191
140	SLV 6	4.07	3.95	48.21	14.6407	0.0096	-1.4245
140	SLV 7	1.17	-4.11	40.09	12.4318	0.016	-0.4117
140	SLV 8	1.76	-4.14	40.2	12.4655	0.0143	-0.6171
140	SLV 9	-2.22	4.16	48.43	14.5232	0.0096	0.7772
140	SLV 10	-1.63	4.14	48.53	14.5569	0.0079	0.5718
140	SLV 11	-4.53	-3.93	40.42	12.3479	0.0143	1.5846
140	SLV 12	-3.94	-3.95	40.52	12.3816	0.0127	1.3792
140	SLV 13	-9.84	1.55	45.97	13.6547	0.0098	3.4458
140	SLV 14	-8.93	1.51	46.14	13.7071	0.0072	3.1262
140	SLV 15	-10.54	-0.88	43.57	13.0021	0.0112	3.688
140	SLV 16	-9.62	-0.91	43.73	13.0546	0.0087	3.3684
140	CRTFP Ux+	0	0	0	0	0	0
140	CRTFP Ux-	0	0	0	0	0	0
140	CRTFP Uy+	0	0	0	0	0	0
140	CRTFP Uy-	0	0	0	0	0	0
141	SLU 1	-0.2	-0.04	41.48	12.6797	-0.0047	0.0707
141	SLU 2	-0.18	-0.07	41.44	12.6679	-0.0047	0.0639
141	SLU 3	-0.21	-0.02	42.49	12.9857	-0.0048	0.0731
141	SLU 4	-0.2	-0.05	42.46	12.9786	-0.0048	0.069
141	SLU 5	-0.19	-0.07	42.07	12.8602	-0.0048	0.0662
141	SLU 6	-0.22	-0.02	43.12	13.178	-0.0049	0.0753
141	SLU 7	-0.2	-0.04	43.09	13.1709	-0.0049	0.0712
141	SLU 8	-0.22	-0.03	42.75	13.0643	-0.0048	0.0753
141	SLU 9	-0.2	-0.05	42.72	13.0572	-0.0048	0.0712
141	SLU 10	-0.22	0	46.56	14.2332	-0.0054	0.0751
141	SLU 11	-0.24	0.05	47.61	14.551	-0.0055	0.0842
141	SLU 12	-0.23	0.02	47.58	14.5439	-0.0055	0.0801
141	SLU 13	-0.22	0	47.19	14.4255	-0.0055	0.0774
141	SLU 14	-0.25	0.05	48.24	14.7433	-0.0055	0.0865
141	SLU 15	-0.24	0.03	48.22	14.7362	-0.0056	0.0824
141	SLU 16	-0.25	0.04	47.87	14.6296	-0.0055	0.0865
141	SLU 17	-0.24	0.02	47.85	14.6225	-0.0055	0.0824
141	SLU 18	-0.25	0.06	48.8	14.9159	-0.0057	0.0867
141	SLU 19	-0.24	0.04	48.77	14.9088	-0.0057	0.0826
141	SLU 20	-0.26	0.06	49.43	15.1082	-0.0057	0.089
141	SLU 21	-0.24	0.04	49.41	15.1011	-0.0058	0.0849
141	SLU 22	-0.22	0.06	45.89	14.025	-0.0052	0.0781
141	SLU 23	-0.2	0.02	45.84	14.0132	-0.0052	0.0713
141	SLU 24	-0.23	0.07	46.89	14.3309	-0.0053	0.0805
141	SLU 25	-0.22	0.05	46.87	14.3239	-0.0053	0.0764
141	SLU 26	-0.21	0.03	46.48	14.2055	-0.0053	0.0736
141	SLU 27	-0.24	0.08	47.53	14.5232	-0.0053	0.0828
141	SLU 28	-0.23	0.05	47.5	14.5162	-0.0053	0.0787
141	SLU 29	-0.24	0.06	47.16	14.4096	-0.0053	0.0827
141	SLU 30	-0.23	0.04	47.13	14.4025	-0.0053	0.0786
141	SLU 31	-0.24	0.09	50.97	15.5785	-0.0059	0.0825
141	SLU 32	-0.26	0.14	52.01	15.8962	-0.0059	0.0916
141	SLU 33	-0.25	0.12	51.99	15.8892	-0.006	0.0876
141	SLU 34	-0.24	0.1	51.6	15.7708	-0.0059	0.0848
141	SLU 35	-0.27	0.14	52.65	16.0885	-0.006	0.0939
141	SLU 36	-0.26	0.12	52.62	16.0814	-0.006	0.0898
141	SLU 37	-0.27	0.13	52.28	15.9749	-0.006	0.0939
141	SLU 38	-0.26	0.11	52.25	15.9678	-0.006	0.0898
141	SLU 39	-0.27	0.16	53.21	16.2611	-0.0061	0.0941
141	SLU 40	-0.26	0.14	53.18	16.2541	-0.0062	0.09
141	SLU 41	-0.28	0.16	53.84	16.4534	-0.0062	0.0964
141	SLU 42	-0.26	0.14	53.81	16.4464	-0.0062	0.0923
141	SLU 43	-0.26	-0.08	52.42	16.0224	-0.006	0.0894
141	SLU 44	-0.24	-0.12	52.37	16.0106	-0.006	0.0826
141	SLU 45	-0.26	-0.07	53.42	16.3283	-0.0061	0.0917
141	SLU 46	-0.25	-0.09	53.39	16.3213	-0.0061	0.0876
141	SLU 47	-0.24	-0.11	53.01	16.2029	-0.0061	0.0849
141	SLU 48	-0.27	-0.07	54.05	16.5206	-0.0061	0.094
141	SLU 49	-0.26	-0.09	54.03	16.5136	-0.0061	0.0899
141	SLU 50	-0.27	-0.08	53.68	16.407	-0.0061	0.094
141	SLU 51	-0.26	-0.1	53.66	16.3999	-0.0061	0.0899
141	SLU 52	-0.27	-0.05	57.49	17.5759	-0.0067	0.0938
141	SLU 53	-0.3	0	58.54	17.8936	-0.0067	0.1029
141	SLU 54	-0.28	-0.02	58.52	17.8866	-0.0068	0.0988
141	SLU 55	-0.28	-0.05	58.13	17.7682	-0.0067	0.096
141	SLU 56	-0.3	0	59.18	18.0859	-0.0068	0.1052
141	SLU 57	-0.29	-0.02	59.15	18.0788	-0.0068	0.1011
141	SLU 58	-0.3	-0.01	58.81	17.9723	-0.0068	0.1051
141	SLU 59	-0.29	-0.03	58.78	17.9652	-0.0068	0.1011
141	SLU 60	-0.3	0.02	59.73	18.2585	-0.0069	0.1054
141	SLU 61	-0.29	0	59.71	18.2515	-0.007	0.1013
141	SLU 62	-0.31	0.02	60.37	18.4508	-0.007	0.1077
141	SLU 63	-0.3	0	60.34	18.4438	-0.007	0.1036
141	SLU 64	-0.28	0.02	56.82	17.3677	-0.0064	0.0968
141	SLU 65	-0.26	-0.02	56.78	17.3559	-0.0065	0.09
141	SLU 66	-0.28	0.03	57.83	17.6736	-0.0065	0.0991
141	SLU 67	-0.27	0.01	57.8	17.6665	-0.0065	0.0951
141	SLU 68	-0.26	-0.02	57.41	17.5482	-0.0065	0.0923
141	SLU 69	-0.29	0.03	58.46	17.8659	-0.0066	0.1014
141	SLU 70	-0.28	0.01	58.43	17.8588	-0.0066	0.0973

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
141	SLU 71	-0.29	0.02	58.09	17.7523	-0.0065	0.1014
141	SLU 72	-0.28	0	58.06	17.7452	-0.0066	0.0973
141	SLU 73	-0.29	0.05	61.9	18.9212	-0.0071	0.1012
141	SLU 74	-0.32	0.1	62.95	19.2389	-0.0072	0.1103
141	SLU 75	-0.3	0.08	62.92	19.2318	-0.0072	0.1062
141	SLU 76	-0.3	0.05	62.53	19.1135	-0.0072	0.1035
141	SLU 77	-0.32	0.1	63.58	19.4312	-0.0072	0.1126
141	SLU 78	-0.31	0.08	63.56	19.4241	-0.0073	0.1085
141	SLU 79	-0.32	0.09	63.21	19.3176	-0.0072	0.1126
141	SLU 80	-0.31	0.07	63.19	19.3105	-0.0072	0.1085
141	SLU 81	-0.32	0.12	64.14	19.6038	-0.0074	0.1128
141	SLU 82	-0.31	0.09	64.11	19.5967	-0.0074	0.1087
141	SLU 83	-0.33	0.12	64.77	19.7961	-0.0074	0.1151
141	SLU 84	-0.32	0.1	64.75	19.789	-0.0075	0.111
141	SLE RA 1	-0.21	-0.01	42.74	13.0641	-0.0048	0.0728
141	SLE RA 2	-0.2	-0.03	42.71	13.0562	-0.0049	0.0683
141	SLE RA 3	-0.21	0	43.41	13.2681	-0.0049	0.0744
141	SLE RA 4	-0.21	-0.01	43.39	13.2633	-0.0049	0.0717
141	SLE RA 5	-0.2	-0.03	43.13	13.1844	-0.0049	0.0698
141	SLE RA 6	-0.22	0	43.83	13.3962	-0.0049	0.0759
141	SLE RA 7	-0.21	-0.01	43.82	13.3915	-0.005	0.0732
141	SLE RA 8	-0.22	-0.01	43.59	13.3205	-0.0049	0.0759
141	SLE RA 9	-0.21	-0.02	43.57	13.3158	-0.0049	0.0732
141	SLE RA 10	-0.22	0.01	46.13	14.0997	-0.0053	0.0757
141	SLE RA 11	-0.23	0.05	46.83	14.3116	-0.0054	0.0819
141	SLE RA 12	-0.23	0.03	46.81	14.3069	-0.0054	0.0791
141	SLE RA 13	-0.22	0.01	46.55	14.2279	-0.0054	0.0773
141	SLE RA 14	-0.24	0.05	47.25	14.4398	-0.0054	0.0834
141	SLE RA 15	-0.23	0.03	47.23	14.4351	-0.0054	0.0806
141	SLE RA 16	-0.24	0.04	47	14.364	-0.0054	0.0833
141	SLE RA 17	-0.23	0.03	46.98	14.3593	-0.0054	0.0806
141	SLE RA 18	-0.24	0.06	47.62	14.5549	-0.0055	0.0835
141	SLE RA 19	-0.23	0.04	47.6	14.5501	-0.0055	0.0808
141	SLE RA 20	-0.24	0.06	48.04	14.683	-0.0055	0.085
141	SLE RA 21	-0.24	0.04	48.02	14.6783	-0.0055	0.0823
141	SLE FR 1	-0.21	-0.01	42.74	13.0641	-0.0048	0.0728
141	SLE FR 2	-0.21	-0.01	42.74	13.0625	-0.0048	0.0719
141	SLE FR 3	-0.21	-0.01	42.91	13.1154	-0.0049	0.0735
141	SLE FR 4	-0.22	0.01	44.2	13.5097	-0.005	0.0751
141	SLE FR 5	-0.22	0.01	44.37	13.5626	-0.005	0.0766
141	SLE FR 6	-0.22	0.02	45.18	13.8095	-0.0052	0.0782
141	SLE QP 1	-0.21	-0.01	42.74	13.0641	-0.0048	0.0728
141	SLE QP 2	-0.22	0.01	44.2	13.5113	-0.005	0.076
141	SLD 1	3.79	0.41	44.44	13.7027	-0.0035	-1.3257
141	SLD 2	4.18	0.41	44.54	13.7358	-0.0046	-1.4628
141	SLD 3	3.49	-0.66	43.37	13.4105	-0.0027	-1.2222
141	SLD 4	3.88	-0.66	43.47	13.4436	-0.0038	-1.3592
141	SLD 5	1.36	1.75	45.88	14.006	-0.0055	-0.4774
141	SLD 6	1.62	1.75	45.94	14.0276	-0.0063	-0.5669
141	SLD 7	0.38	-1.81	42.32	13.0321	-0.003	-0.1321
141	SLD 8	0.63	-1.81	42.38	13.0537	-0.0037	-0.2217
141	SLD 9	-1.07	1.83	46.03	13.9689	-0.0064	0.3737
141	SLD 10	-0.81	1.83	46.09	13.9905	-0.0071	0.2842
141	SLD 11	-2.06	-1.73	42.47	12.995	-0.0038	0.719
141	SLD 12	-1.8	-1.73	42.53	13.0167	-0.0045	0.6294
141	SLD 13	-4.32	0.68	44.94	13.579	-0.0063	1.5113
141	SLD 14	-3.93	0.68	45.04	13.6121	-0.0074	1.3742
141	SLD 15	-4.62	-0.39	43.87	13.2869	-0.0055	1.6148
141	SLD 16	-4.22	-0.39	43.97	13.32	-0.0066	1.4778
141	SLV 1	9.16	0.92	44.71	13.9491	-0.0014	-3.2044
141	SLV 2	10.07	0.91	44.96	14.0262	-0.0039	-3.5236
141	SLV 3	8.46	-1.51	42.29	13.2858	0.0004	-2.9626
141	SLV 4	9.38	-1.51	42.53	13.3628	-0.0021	-3.2817
141	SLV 5	3.49	3.96	47.99	14.6355	-0.0062	-1.2203
141	SLV 6	4.08	3.96	48.15	14.685	-0.0078	-1.4254
141	SLV 7	1.18	-4.12	39.91	12.4244	-0.0003	-0.414
141	SLV 8	1.77	-4.12	40.07	12.4739	-0.0019	-0.6191
141	SLV 9	-2.2	4.14	48.34	14.5487	-0.0082	0.7712
141	SLV 10	-1.62	4.14	48.5	14.5982	-0.0098	0.5661
141	SLV 11	-4.51	-3.94	40.26	12.3376	-0.0022	1.5775
141	SLV 12	-3.92	-3.94	40.42	12.3871	-0.0039	1.3724
141	SLV 13	-9.82	1.53	45.88	13.6598	-0.0079	3.4338
141	SLV 14	-8.9	1.53	46.12	13.7368	-0.0105	3.1146
141	SLV 15	-10.51	-0.89	43.45	12.9965	-0.0061	3.6757
141	SLV 16	-9.59	-0.9	43.7	13.0735	-0.0087	3.3565
141	CRTFP Ux+	0	0	0	0	0	0
141	CRTFP Ux-	0	0	0	0	0	0
141	CRTFP Uy+	0	0	0	0	0	0
141	CRTFP Uy-	0	0	0	0	0	0
142	SLU 1	-0.19	-0.05	41.84	13.0493	-0.0173	0.0658
142	SLU 2	-0.17	-0.09	41.8	13.0376	-0.0174	0.059
142	SLU 3	-0.2	-0.04	42.85	13.3642	-0.0177	0.068
142	SLU 4	-0.19	-0.06	42.83	13.3572	-0.0178	0.064
142	SLU 5	-0.18	-0.09	42.43	13.2356	-0.0176	0.0612
142	SLU 6	-0.2	-0.04	43.49	13.5621	-0.018	0.0703
142	SLU 7	-0.19	-0.06	43.46	13.5551	-0.018	0.0662
142	SLU 8	-0.2	-0.05	43.12	13.4452	-0.0178	0.0702
142	SLU 9	-0.19	-0.07	43.09	13.4382	-0.0179	0.0661
142	SLU 10	-0.2	-0.02	46.96	14.6507	-0.0195	0.0706
142	SLU 11	-0.23	0.02	48.02	14.9773	-0.0198	0.0796
142	SLU 12	-0.22	0	47.99	14.9703	-0.0198	0.0755
142	SLU 13	-0.21	-0.02	47.6	14.8487	-0.0197	0.0728
142	SLU 14	-0.24	0.03	48.66	15.1752	-0.0201	0.0818
142	SLU 15	-0.23	0.01	48.63	15.1682	-0.0201	0.0778
142	SLU 16	-0.24	0.02	48.28	15.0583	-0.0199	0.0818
142	SLU 17	-0.23	0	48.26	15.0513	-0.02	0.0777
142	SLU 18	-0.24	0.04	49.22	15.3537	-0.0203	0.0823

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
142	SLU 19	-0.23	0.02	49.2	15.3467	-0.0203	0.0783
142	SLU 20	-0.24	0.04	49.86	15.5517	-0.0206	0.0846
142	SLU 21	-0.23	0.02	49.83	15.5447	-0.0206	0.0805
142	SLU 22	-0.21	0.04	46.28	14.4349	-0.0192	0.0726
142	SLU 23	-0.19	0.01	46.24	14.4233	-0.0192	0.0658
142	SLU 24	-0.22	0.05	47.29	14.7498	-0.0196	0.0749
142	SLU 25	-0.21	0.03	47.27	14.7428	-0.0196	0.0708
142	SLU 26	-0.2	0.01	46.88	14.6212	-0.0195	0.068
142	SLU 27	-0.22	0.05	47.93	14.9478	-0.0199	0.0771
142	SLU 28	-0.21	0.03	47.91	14.9408	-0.0199	0.073
142	SLU 29	-0.22	0.04	47.56	14.8308	-0.0197	0.077
142	SLU 30	-0.21	0.02	47.53	14.8238	-0.0197	0.073
142	SLU 31	-0.22	0.07	51.41	16.0364	-0.0213	0.0774
142	SLU 32	-0.25	0.12	52.46	16.363	-0.0217	0.0865
142	SLU 33	-0.24	0.1	52.44	16.356	-0.0217	0.0824
142	SLU 34	-0.23	0.07	52.05	16.2343	-0.0216	0.0796
142	SLU 35	-0.26	0.12	53.1	16.5609	-0.022	0.0887
142	SLU 36	-0.25	0.1	53.08	16.5539	-0.022	0.0846
142	SLU 37	-0.26	0.11	52.73	16.4439	-0.0218	0.0886
142	SLU 38	-0.24	0.09	52.7	16.4369	-0.0218	0.0846
142	SLU 39	-0.26	0.14	53.67	16.7394	-0.0222	0.0892
142	SLU 40	-0.25	0.12	53.64	16.7324	-0.0222	0.0851
142	SLU 41	-0.26	0.14	54.3	16.9373	-0.0225	0.0914
142	SLU 42	-0.25	0.12	54.28	16.9303	-0.0225	0.0873
142	SLU 43	-0.24	-0.1	52.87	16.489	-0.0219	0.0832
142	SLU 44	-0.22	-0.14	52.82	16.4773	-0.0219	0.0764
142	SLU 45	-0.25	-0.09	53.88	16.8039	-0.0223	0.0854
142	SLU 46	-0.24	-0.11	53.85	16.7969	-0.0223	0.0813
142	SLU 47	-0.23	-0.14	53.46	16.6753	-0.0222	0.0786
142	SLU 48	-0.25	-0.09	54.52	17.0018	-0.0225	0.0876
142	SLU 49	-0.24	-0.11	54.49	16.9948	-0.0226	0.0836
142	SLU 50	-0.25	-0.1	54.14	16.8848	-0.0224	0.0876
142	SLU 51	-0.24	-0.12	54.12	16.8779	-0.0224	0.0835
142	SLU 52	-0.25	-0.07	57.99	18.0904	-0.024	0.0879
142	SLU 53	-0.28	-0.02	59.05	18.417	-0.0244	0.097
142	SLU 54	-0.27	-0.04	59.02	18.41	-0.0244	0.0929
142	SLU 55	-0.26	-0.07	58.63	18.2884	-0.0243	0.0902
142	SLU 56	-0.29	-0.02	59.69	18.6149	-0.0246	0.0992
142	SLU 57	-0.28	-0.04	59.66	18.6079	-0.0247	0.0951
142	SLU 58	-0.29	-0.03	59.31	18.498	-0.0245	0.0992
142	SLU 59	-0.28	-0.05	59.29	18.491	-0.0245	0.0951
142	SLU 60	-0.29	-0.01	60.25	18.7934	-0.0249	0.0997
142	SLU 61	-0.28	-0.03	60.22	18.7864	-0.0249	0.0956
142	SLU 62	-0.3	-0.01	60.89	18.9914	-0.0251	0.1019
142	SLU 63	-0.28	-0.03	60.86	18.9844	-0.0252	0.0979
142	SLU 64	-0.26	-0.01	57.31	17.8746	-0.0238	0.09
142	SLU 65	-0.24	-0.04	57.27	17.863	-0.0238	0.0832
142	SLU 66	-0.27	0	58.32	18.1895	-0.0242	0.0923
142	SLU 67	-0.26	-0.02	58.3	18.1825	-0.0242	0.0882
142	SLU 68	-0.25	-0.04	57.91	18.0609	-0.0241	0.0854
142	SLU 69	-0.27	0.01	58.96	18.3875	-0.0244	0.0945
142	SLU 70	-0.26	-0.02	58.94	18.3805	-0.0244	0.0904
142	SLU 71	-0.27	-0.01	58.59	18.2705	-0.0243	0.0944
142	SLU 72	-0.26	-0.03	58.56	18.2635	-0.0243	0.0904
142	SLU 73	-0.27	0.02	62.44	19.4761	-0.0259	0.0948
142	SLU 74	-0.3	0.07	63.49	19.8027	-0.0263	0.1039
142	SLU 75	-0.29	0.05	63.46	19.7957	-0.0263	0.0998
142	SLU 76	-0.28	0.03	63.07	19.674	-0.0261	0.097
142	SLU 77	-0.31	0.07	64.13	20.0006	-0.0265	0.1061
142	SLU 78	-0.3	0.05	64.1	19.9936	-0.0265	0.102
142	SLU 79	-0.31	0.06	63.76	19.8836	-0.0264	0.106
142	SLU 80	-0.3	0.04	63.73	19.8766	-0.0264	0.1019
142	SLU 81	-0.31	0.09	64.69	20.1791	-0.0268	0.1066
142	SLU 82	-0.3	0.07	64.67	20.1721	-0.0268	0.1025
142	SLU 83	-0.31	0.09	65.33	20.377	-0.027	0.1088
142	SLU 84	-0.3	0.07	65.31	20.37	-0.027	0.1047
142	SLE RA 1	-0.2	-0.03	43.11	13.4452	-0.0179	0.0677
142	SLE RA 2	-0.18	-0.05	43.08	13.4374	-0.0179	0.0632
142	SLE RA 3	-0.2	-0.02	43.78	13.6551	-0.0181	0.0692
142	SLE RA 4	-0.19	-0.03	43.77	13.6505	-0.0182	0.0665
142	SLE RA 5	-0.19	-0.05	43.51	13.5694	-0.0181	0.0647
142	SLE RA 6	-0.2	-0.02	44.21	13.7871	-0.0183	0.0707
142	SLE RA 7	-0.2	-0.03	44.19	13.7824	-0.0183	0.068
142	SLE RA 8	-0.2	-0.03	43.96	13.7091	-0.0182	0.0707
142	SLE RA 9	-0.2	-0.04	43.94	13.7044	-0.0182	0.068
142	SLE RA 10	-0.21	-0.01	46.53	14.5128	-0.0193	0.0709
142	SLE RA 11	-0.22	0.03	47.23	14.7305	-0.0195	0.077
142	SLE RA 12	-0.22	0.01	47.21	14.7259	-0.0195	0.0742
142	SLE RA 13	-0.21	0	46.95	14.6448	-0.0195	0.0724
142	SLE RA 14	-0.23	0.03	47.65	14.8625	-0.0197	0.0784
142	SLE RA 15	-0.22	0.01	47.64	14.8578	-0.0197	0.0757
142	SLE RA 16	-0.23	0.02	47.41	14.7845	-0.0196	0.0784
142	SLE RA 17	-0.22	0.01	47.39	14.7798	-0.0196	0.0757
142	SLE RA 18	-0.23	0.04	48.03	14.9815	-0.0199	0.0788
142	SLE RA 19	-0.22	0.02	48.01	14.9768	-0.0199	0.076
142	SLE RA 20	-0.23	0.04	48.46	15.1134	-0.02	0.0802
142	SLE RA 21	-0.22	0.02	48.44	15.1088	-0.02	0.0775
142	SLE FR 1	-0.2	-0.03	43.11	13.4452	-0.0179	0.0677
142	SLE FR 2	-0.19	-0.03	43.1	13.4436	-0.0179	0.0668
142	SLE FR 3	-0.2	-0.03	43.28	13.498	-0.0179	0.0683
142	SLE FR 4	-0.2	-0.01	44.58	13.9045	-0.0185	0.0701
142	SLE FR 5	-0.21	-0.01	44.76	13.9589	-0.0185	0.0716
142	SLE FR 6	-0.21	0	45.57	14.2133	-0.0189	0.0732
142	SLE QP 1	-0.2	-0.03	43.11	13.4452	-0.0179	0.0677
142	SLE QP 2	-0.21	-0.01	44.59	13.9061	-0.0185	0.071
142	SLD 1	3.79	0.65	44.77	13.9697	-0.0159	-1.3259
142	SLD 2	4.18	0.67	44.91	14.0132	-0.017	-1.4627

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
142	SLD 3	3.49	-0.42	43.69	13.6677	-0.015	-1.2226
142	SLD 4	3.88	-0.4	43.82	13.7112	-0.016	-1.3593
142	SLD 5	1.37	1.81	46.27	14.3755	-0.0189	-0.4806
142	SLD 6	1.63	1.82	46.36	14.4039	-0.0196	-0.57
142	SLD 7	0.39	-1.76	42.64	13.3689	-0.0158	-0.1361
142	SLD 8	0.64	-1.75	42.73	13.3973	-0.0165	-0.2255
142	SLD 9	-1.05	1.73	46.44	14.4148	-0.0204	0.3676
142	SLD 10	-0.8	1.74	46.53	14.4433	-0.0211	0.2782
142	SLD 11	-2.04	-1.84	42.81	13.4082	-0.0173	0.7121
142	SLD 12	-1.78	-1.83	42.9	13.4367	-0.018	0.6227
142	SLD 13	-4.3	0.39	45.35	14.1009	-0.0209	1.5014
142	SLD 14	-3.9	0.4	45.49	14.1444	-0.022	1.3647
142	SLD 15	-4.59	-0.68	44.26	13.7989	-0.02	1.6047
142	SLD 16	-4.2	-0.67	44.4	13.8425	-0.021	1.468
142	SLV 1	9.14	1.5	44.99	14.0449	-0.0125	-3.1982
142	SLV 2	10.05	1.53	45.31	14.1463	-0.0149	-3.5166
142	SLV 3	8.45	-0.93	42.52	13.3592	-0.0103	-2.9568
142	SLV 4	9.36	-0.9	42.84	13.4606	-0.0128	-3.2753
142	SLV 5	3.49	4.12	48.4	14.9703	-0.0195	-1.2212
142	SLV 6	4.08	4.14	48.6	15.0355	-0.0211	-1.4259
142	SLV 7	1.19	-3.97	40.17	12.6847	-0.0123	-0.4167
142	SLV 8	1.77	-3.95	40.37	12.7498	-0.0139	-0.6214
142	SLV 9	-2.18	3.93	48.8	15.0623	-0.023	0.7634
142	SLV 10	-1.6	3.95	49.01	15.1275	-0.0246	0.5588
142	SLV 11	-4.49	-4.15	40.57	12.7766	-0.0159	1.568
142	SLV 12	-3.9	-4.13	40.77	12.8418	-0.0174	1.3633
142	SLV 13	-9.77	0.88	46.33	14.3516	-0.0242	3.4174
142	SLV 14	-8.86	0.91	46.65	14.4529	-0.0266	3.0989
142	SLV 15	-10.47	-1.54	43.86	13.6658	-0.022	3.6587
142	SLV 16	-9.55	-1.51	44.18	13.7672	-0.0245	3.3403
142	CRTFP Ux+	0	0	0	0	0	0
142	CRTFP Ux-	0	0	0	0	0	0
142	CRTFP Uy+	0	0	0	0	0	0
142	CRTFP Uy-	0	0	0	0	0	0
143	SLU 1	-0.16	-0.08	38.39	12.346	0.6983	0.0561
143	SLU 2	-0.14	-0.11	38.35	12.3354	0.6976	0.0506
143	SLU 3	-0.17	-0.07	39.32	12.6439	0.7152	0.0579
143	SLU 4	-0.15	-0.09	39.29	12.6376	0.7147	0.0546
143	SLU 5	-0.15	-0.11	38.94	12.5228	0.7082	0.0525
143	SLU 6	-0.17	-0.07	39.9	12.8313	0.7259	0.0598
143	SLU 7	-0.16	-0.09	39.88	12.825	0.7254	0.0565
143	SLU 8	-0.17	-0.08	39.56	12.7207	0.7196	0.06
143	SLU 9	-0.16	-0.1	39.54	12.7144	0.7192	0.0566
143	SLU 10	-0.17	-0.06	43.09	13.8619	0.7839	0.0603
143	SLU 11	-0.2	-0.02	44.05	14.1704	0.8016	0.0677
143	SLU 12	-0.19	-0.03	44.03	14.1641	0.8011	0.0644
143	SLU 13	-0.18	-0.06	43.67	14.0493	0.7946	0.0623
143	SLU 14	-0.2	-0.02	44.64	14.3578	0.8122	0.0696
143	SLU 15	-0.19	-0.03	44.62	14.3515	0.8118	0.0663
143	SLU 16	-0.2	-0.02	44.3	14.2472	0.806	0.0698
143	SLU 17	-0.19	-0.04	44.27	14.2409	0.8056	0.0664
143	SLU 18	-0.2	0	45.16	14.5267	0.8217	0.0701
143	SLU 19	-0.19	-0.02	45.13	14.5204	0.8213	0.0668
143	SLU 20	-0.21	0	45.74	14.7141	0.8324	0.072
143	SLU 21	-0.2	-0.02	45.72	14.7077	0.8319	0.0687
143	SLU 22	-0.18	0	42.47	13.659	0.7725	0.0602
143	SLU 23	-0.16	-0.03	42.43	13.6484	0.7717	0.0547
143	SLU 24	-0.18	0.01	43.39	13.957	0.7894	0.062
143	SLU 25	-0.17	-0.01	43.37	13.9506	0.7889	0.0587
143	SLU 26	-0.16	-0.03	43.01	13.8358	0.7824	0.0566
143	SLU 27	-0.19	0.01	43.98	14.1443	0.8	0.0639
143	SLU 28	-0.18	-0.01	43.96	14.138	0.7996	0.0606
143	SLU 29	-0.19	0	43.64	14.0338	0.7938	0.0641
143	SLU 30	-0.18	-0.02	43.62	14.0274	0.7933	0.0607
143	SLU 31	-0.19	0.03	47.17	15.1749	0.8581	0.0644
143	SLU 32	-0.21	0.07	48.13	15.4835	0.8757	0.0718
143	SLU 33	-0.2	0.05	48.11	15.4771	0.8753	0.0685
143	SLU 34	-0.2	0.03	47.75	15.3623	0.8688	0.0664
143	SLU 35	-0.22	0.07	48.72	15.6708	0.8864	0.0737
143	SLU 36	-0.21	0.05	48.69	15.6645	0.886	0.0704
143	SLU 37	-0.22	0.06	48.38	15.5603	0.8802	0.0739
143	SLU 38	-0.21	0.04	48.35	15.5539	0.8797	0.0705
143	SLU 39	-0.22	0.08	49.23	15.8397	0.8959	0.0742
143	SLU 40	-0.21	0.06	49.21	15.8334	0.8954	0.0709
143	SLU 41	-0.23	0.08	49.82	16.0271	0.9065	0.0761
143	SLU 42	-0.22	0.06	49.8	16.0208	0.9061	0.0728
143	SLU 43	-0.2	-0.13	48.51	15.5996	0.8823	0.0716
143	SLU 44	-0.18	-0.16	48.47	15.5891	0.8816	0.066
143	SLU 45	-0.21	-0.12	49.43	15.8976	0.8992	0.0733
143	SLU 46	-0.2	-0.14	49.41	15.8912	0.8988	0.07
143	SLU 47	-0.19	-0.16	49.05	15.7764	0.8923	0.0679
143	SLU 48	-0.21	-0.12	50.02	16.0849	0.9099	0.0753
143	SLU 49	-0.2	-0.14	50	16.0786	0.9095	0.0719
143	SLU 50	-0.21	-0.13	49.68	15.9744	0.9037	0.0754
143	SLU 51	-0.2	-0.15	49.66	15.968	0.9032	0.0721
143	SLU 52	-0.22	-0.11	53.21	17.1155	0.968	0.0758
143	SLU 53	-0.24	-0.07	54.17	17.4241	0.9856	0.0831
143	SLU 54	-0.23	-0.09	54.15	17.4177	0.9852	0.0798
143	SLU 55	-0.22	-0.11	53.79	17.3029	0.9787	0.0777
143	SLU 56	-0.24	-0.07	54.76	17.6114	0.9963	0.0851
143	SLU 57	-0.23	-0.09	54.73	17.6051	0.9959	0.0817
143	SLU 58	-0.24	-0.08	54.42	17.5009	0.9901	0.0852
143	SLU 59	-0.23	-0.1	54.39	17.4945	0.9896	0.0819
143	SLU 60	-0.25	-0.05	55.27	17.7803	1.0058	0.0855
143	SLU 61	-0.24	-0.07	55.25	17.774	1.0053	0.0822
143	SLU 62	-0.25	-0.05	55.86	17.9677	1.0164	0.0875
143	SLU 63	-0.24	-0.07	55.84	17.9614	1.016	0.0841

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
143	SLU 64	-0.22	-0.05	52.59	16.9127	0.9565	0.0757
143	SLU 65	-0.2	-0.08	52.55	16.9021	0.9558	0.0701
143	SLU 66	-0.22	-0.04	53.51	17.2106	0.9734	0.0774
143	SLU 67	-0.21	-0.06	53.49	17.2042	0.973	0.0741
143	SLU 68	-0.21	-0.08	53.13	17.0894	0.9664	0.072
143	SLU 69	-0.23	-0.04	54.1	17.398	0.9841	0.0794
143	SLU 70	-0.22	-0.06	54.08	17.3916	0.9836	0.076
143	SLU 71	-0.23	-0.05	53.76	17.2874	0.9778	0.0795
143	SLU 72	-0.22	-0.07	53.73	17.281	0.9774	0.0762
143	SLU 73	-0.23	-0.03	57.28	18.4286	1.0422	0.0799
143	SLU 74	-0.26	0.01	58.25	18.7371	1.0598	0.0872
143	SLU 75	-0.24	0	58.23	18.7307	1.0594	0.0839
143	SLU 76	-0.24	-0.03	57.87	18.6159	1.0528	0.0818
143	SLU 77	-0.26	0.01	58.84	18.9244	1.0705	0.0892
143	SLU 78	-0.25	0	58.81	18.9181	1.07	0.0858
143	SLU 79	-0.26	0	58.49	18.8139	1.0642	0.0893
143	SLU 80	-0.25	-0.01	58.47	18.8075	1.0638	0.086
143	SLU 81	-0.26	0.03	59.35	19.0934	1.0799	0.0896
143	SLU 82	-0.25	0.01	59.33	19.087	1.0795	0.0863
143	SLU 83	-0.27	0.03	59.94	19.2807	1.0906	0.0916
143	SLU 84	-0.26	0.01	59.92	19.2744	1.0902	0.0882
143	SLE RA 1	-0.16	-0.06	39.55	12.7212	0.7195	0.0573
143	SLE RA 2	-0.15	-0.08	39.53	12.7141	0.719	0.0536
143	SLE RA 3	-0.17	-0.05	40.17	12.9198	0.7307	0.0585
143	SLE RA 4	-0.16	-0.06	40.16	12.9155	0.7305	0.0563
143	SLE RA 5	-0.16	-0.08	39.92	12.839	0.7261	0.0549
143	SLE RA 6	-0.17	-0.05	40.56	13.0447	0.7379	0.0598
143	SLE RA 7	-0.16	-0.06	40.55	13.0405	0.7376	0.0575
143	SLE RA 8	-0.17	-0.06	40.34	12.971	0.7337	0.0599
143	SLE RA 9	-0.16	-0.07	40.32	12.9668	0.7334	0.0576
143	SLE RA 10	-0.17	-0.04	42.69	13.7318	0.7766	0.0601
143	SLE RA 11	-0.19	-0.01	43.33	13.9374	0.7883	0.065
143	SLE RA 12	-0.18	-0.03	43.32	13.9332	0.788	0.0628
143	SLE RA 13	-0.18	-0.04	43.08	13.8567	0.7837	0.0614
143	SLE RA 14	-0.19	-0.01	43.72	14.0624	0.7954	0.0663
143	SLE RA 15	-0.19	-0.03	43.71	14.0581	0.7952	0.0641
143	SLE RA 16	-0.19	-0.02	43.49	13.9886	0.7913	0.0664
143	SLE RA 17	-0.19	-0.03	43.48	13.9844	0.791	0.0642
143	SLE RA 18	-0.19	-0.01	44.07	14.175	0.8018	0.0666
143	SLE RA 19	-0.19	-0.02	44.05	14.1707	0.8015	0.0644
143	SLE RA 20	-0.2	0	44.46	14.2999	0.8089	0.0679
143	SLE RA 21	-0.19	-0.02	44.44	14.2956	0.8086	0.0657
143	SLE FR 1	-0.16	-0.06	39.55	12.7212	0.7195	0.0573
143	SLE FR 2	-0.16	-0.06	39.55	12.7197	0.7194	0.0566
143	SLE FR 3	-0.17	-0.06	39.71	12.7711	0.7223	0.0578
143	SLE FR 4	-0.17	-0.05	40.9	13.1559	0.7441	0.0593
143	SLE FR 5	-0.17	-0.04	41.06	13.2073	0.747	0.0606
143	SLE FR 6	-0.18	-0.03	41.81	13.4481	0.7606	0.062
143	SLE QP 1	-0.16	-0.06	39.55	12.7212	0.7195	0.0573
143	SLE QP 2	-0.17	-0.04	40.91	13.1573	0.7442	0.0601
143	SLD 1	3.43	0.56	41.01	13.205	0.7482	-1.2002
143	SLD 2	3.78	0.58	41.16	13.2524	0.7503	-1.3241
143	SLD 3	3.16	-0.41	40	12.9217	0.73	-1.1047
143	SLD 4	3.51	-0.39	40.15	12.9691	0.7322	-1.2286
143	SLD 5	1.25	1.6	42.43	13.5929	0.7725	-0.4409
143	SLD 6	1.48	1.62	42.53	13.6239	0.7739	-0.5219
143	SLD 7	0.36	-1.63	39.08	12.6486	0.712	-0.1226
143	SLD 8	0.59	-1.61	39.18	12.6796	0.7134	-0.2036
143	SLD 9	-0.94	1.52	42.63	13.635	0.7749	0.3238
143	SLD 10	-0.7	1.54	42.73	13.666	0.7763	0.2428
143	SLD 11	-1.83	-1.7	39.28	12.6907	0.7144	0.6421
143	SLD 12	-1.6	-1.68	39.38	12.7217	0.7158	0.5611
143	SLD 13	-3.86	0.3	41.66	13.3455	0.7561	1.3488
143	SLD 14	-3.51	0.33	41.82	13.3929	0.7583	1.2249
143	SLD 15	-4.13	-0.67	40.66	13.0622	0.738	1.4443
143	SLD 16	-3.77	-0.64	40.81	13.1096	0.7401	1.3203
143	SLV 1	8.25	1.32	41.1	13.2595	0.7529	-2.8892
143	SLV 2	9.07	1.38	41.46	13.3701	0.7579	-3.1778
143	SLV 3	7.63	-0.87	38.82	12.6162	0.7118	-2.6661
143	SLV 4	8.45	-0.81	39.17	12.7267	0.7168	-2.9548
143	SLV 5	3.16	3.68	44.37	14.1448	0.8084	-1.1136
143	SLV 6	3.69	3.72	44.59	14.2158	0.8116	-1.2991
143	SLV 7	1.08	-3.63	36.76	12.0003	0.6712	-0.37
143	SLV 8	1.61	-3.59	36.99	12.0713	0.6744	-0.5555
143	SLV 9	-1.95	3.51	44.83	14.2433	0.8139	0.6757
143	SLV 10	-1.42	3.55	45.06	14.3143	0.8172	0.4902
143	SLV 11	-4.04	-3.81	37.22	12.0988	0.6768	1.4192
143	SLV 12	-3.51	-3.77	37.45	12.1698	0.68	1.2337
143	SLV 13	-8.8	0.73	42.64	13.5879	0.7716	3.075
143	SLV 14	-7.97	0.79	43	13.6984	0.7766	2.7863
143	SLV 15	-9.42	-1.47	40.36	12.9445	0.7304	3.298
143	SLV 16	-8.6	-1.41	40.71	13.0551	0.7354	3.0094
143	CRTFP Ux+	0	0	0	0	0	0
143	CRTFP Ux-	0	0	0	0	0	0
143	CRTFP Uy+	0	0	0	0	0	0
143	CRTFP Uy-	0	0	0	0	0	0
145	SLU 1	-0.23	-0.15	55.51	11.796	11.9178	0.075
145	SLU 2	-0.21	-0.19	55.45	11.7854	11.9051	0.0788
145	SLU 3	-0.24	-0.13	56.85	12.0807	12.2063	0.074
145	SLU 4	-0.23	-0.16	56.82	12.0744	12.1987	0.0762
145	SLU 5	-0.22	-0.19	56.3	11.9649	12.0874	0.0805
145	SLU 6	-0.25	-0.13	57.7	12.2601	12.3886	0.0756
145	SLU 7	-0.24	-0.16	57.66	12.2538	12.381	0.0779
145	SLU 8	-0.25	-0.15	57.21	12.1548	12.2824	0.0783
145	SLU 9	-0.24	-0.17	57.17	12.1485	12.2748	0.0806
145	SLU 10	-0.26	-0.11	62.29	13.2419	13.3786	0.0727
145	SLU 11	-0.29	-0.06	63.69	13.5371	13.6797	0.0678

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
145	SLU 12	-0.28	-0.09	63.65	13.5308	13.6721	0.0701
145	SLU 13	-0.27	-0.11	63.14	13.4213	13.5609	0.0743
145	SLU 14	-0.3	-0.06	64.53	13.7165	13.8621	0.0695
145	SLU 15	-0.29	-0.09	64.5	13.7102	13.8544	0.0717
145	SLU 16	-0.3	-0.07	64.04	13.6112	13.7559	0.0722
145	SLU 17	-0.28	-0.1	64.01	13.6049	13.7483	0.0745
145	SLU 18	-0.3	-0.04	65.28	13.8766	14.0227	0.0663
145	SLU 19	-0.29	-0.07	65.24	13.8702	14.0151	0.0686
145	SLU 20	-0.31	-0.04	66.12	14.056	14.205	0.0679
145	SLU 21	-0.3	-0.07	66.09	14.0497	14.1974	0.0702
145	SLU 22	-0.26	-0.03	61.4	13.0513	13.1832	0.0552
145	SLU 23	-0.23	-0.08	61.35	13.0407	13.1705	0.059
145	SLU 24	-0.27	-0.02	62.74	13.336	13.4717	0.0541
145	SLU 25	-0.25	-0.05	62.71	13.3297	13.4641	0.0564
145	SLU 26	-0.24	-0.08	62.19	13.2202	13.3528	0.0607
145	SLU 27	-0.28	-0.02	63.59	13.5154	13.654	0.0558
145	SLU 28	-0.26	-0.05	63.56	13.5091	13.6464	0.0581
145	SLU 29	-0.28	-0.03	63.1	13.4101	13.5478	0.0585
145	SLU 30	-0.26	-0.06	63.06	13.4038	13.5402	0.0608
145	SLU 31	-0.28	0	68.18	14.4971	14.644	0.0529
145	SLU 32	-0.32	0.05	69.58	14.7924	14.9452	0.048
145	SLU 33	-0.3	0.03	69.55	14.7861	14.9376	0.0503
145	SLU 34	-0.29	0	69.03	14.6766	14.8263	0.0545
145	SLU 35	-0.33	0.05	70.43	14.9718	15.1275	0.0497
145	SLU 36	-0.31	0.03	70.39	14.9655	15.1199	0.0519
145	SLU 37	-0.32	0.04	69.93	14.8665	15.0213	0.0524
145	SLU 38	-0.31	0.01	69.9	14.8602	15.0137	0.0546
145	SLU 39	-0.33	0.07	71.17	15.1319	15.2882	0.0465
145	SLU 40	-0.31	0.05	71.13	15.1255	15.2806	0.0488
145	SLU 41	-0.34	0.07	72.02	15.3113	15.4705	0.0481
145	SLU 42	-0.32	0.05	71.98	15.305	15.4629	0.0504
145	SLU 43	-0.3	-0.23	70.14	14.9044	15.0592	0.1043
145	SLU 44	-0.27	-0.27	70.09	14.8939	15.0466	0.1081
145	SLU 45	-0.3	-0.21	71.48	15.1891	15.3477	0.1033
145	SLU 46	-0.29	-0.24	71.45	15.1828	15.3401	0.1055
145	SLU 47	-0.28	-0.27	70.93	15.0733	15.2289	0.1098
145	SLU 48	-0.31	-0.21	72.33	15.3685	15.5301	0.1049
145	SLU 49	-0.3	-0.24	72.3	15.3622	15.5224	0.1072
145	SLU 50	-0.31	-0.23	71.84	15.2632	15.4239	0.1076
145	SLU 51	-0.3	-0.25	71.8	15.2569	15.4163	0.1099
145	SLU 52	-0.32	-0.2	76.92	16.3503	16.52	0.102
145	SLU 53	-0.35	-0.14	78.32	16.6455	16.8212	0.0971
145	SLU 54	-0.34	-0.17	78.29	16.6392	16.8136	0.0994
145	SLU 55	-0.33	-0.2	77.77	16.5297	16.7023	0.1036
145	SLU 56	-0.36	-0.14	79.17	16.8249	17.0035	0.0988
145	SLU 57	-0.35	-0.17	79.13	16.8186	16.9959	0.101
145	SLU 58	-0.36	-0.15	78.67	16.7196	16.8973	0.1015
145	SLU 59	-0.35	-0.18	78.64	16.7133	16.8897	0.1038
145	SLU 60	-0.37	-0.12	79.91	16.985	17.1642	0.0956
145	SLU 61	-0.35	-0.15	79.87	16.9787	17.1566	0.0979
145	SLU 62	-0.37	-0.12	80.76	17.1644	17.3465	0.0972
145	SLU 63	-0.36	-0.15	80.72	17.1581	17.3389	0.0995
145	SLU 64	-0.32	-0.12	76.04	16.1597	16.3247	0.0845
145	SLU 65	-0.3	-0.16	75.98	16.1491	16.312	0.0883
145	SLU 66	-0.33	-0.1	77.38	16.4444	16.6132	0.0835
145	SLU 67	-0.31	-0.13	77.34	16.4381	16.6056	0.0857
145	SLU 68	-0.3	-0.16	76.83	16.3286	16.4943	0.09
145	SLU 69	-0.34	-0.1	78.22	16.6238	16.7955	0.0851
145	SLU 70	-0.32	-0.13	78.19	16.6175	16.7879	0.0874
145	SLU 71	-0.34	-0.12	77.73	16.5185	16.6893	0.0878
145	SLU 72	-0.32	-0.14	77.7	16.5122	16.6817	0.0901
145	SLU 73	-0.34	-0.09	82.82	17.6056	17.7855	0.0822
145	SLU 74	-0.38	-0.03	84.21	17.9008	18.0866	0.0773
145	SLU 75	-0.36	-0.06	84.18	17.8945	18.079	0.0796
145	SLU 76	-0.35	-0.09	83.66	17.785	17.9678	0.0838
145	SLU 77	-0.39	-0.03	85.06	18.0802	18.269	0.079
145	SLU 78	-0.37	-0.06	85.03	18.0739	18.2613	0.0812
145	SLU 79	-0.39	-0.04	84.57	17.9749	18.1628	0.0817
145	SLU 80	-0.37	-0.07	84.53	17.9686	18.1552	0.0839
145	SLU 81	-0.39	-0.01	85.8	18.2403	18.4296	0.0758
145	SLU 82	-0.38	-0.04	85.77	18.234	18.422	0.0781
145	SLU 83	-0.4	-0.01	86.65	18.4197	18.612	0.0774
145	SLU 84	-0.38	-0.04	86.61	18.4134	18.6043	0.0797
145	SLE RA 1	-0.24	-0.11	57.19	12.1546	12.2793	0.0694
145	SLE RA 2	-0.22	-0.14	57.16	12.1476	12.2709	0.0719
145	SLE RA 3	-0.25	-0.1	58.09	12.3445	12.4717	0.0687
145	SLE RA 4	-0.24	-0.12	58.07	12.3402	12.4666	0.0702
145	SLE RA 5	-0.23	-0.14	57.72	12.2672	12.3924	0.073
145	SLE RA 6	-0.25	-0.1	58.65	12.4641	12.5932	0.0697
145	SLE RA 7	-0.24	-0.12	58.63	12.4598	12.5881	0.0713
145	SLE RA 8	-0.25	-0.11	58.32	12.3939	12.5224	0.0716
145	SLE RA 9	-0.24	-0.13	58.3	12.3896	12.5173	0.0731
145	SLE RA 10	-0.26	-0.09	61.71	13.1186	13.2532	0.0678
145	SLE RA 11	-0.28	-0.06	62.65	13.3154	13.454	0.0646
145	SLE RA 12	-0.27	-0.07	62.62	13.3112	13.4489	0.0661
145	SLE RA 13	-0.26	-0.09	62.28	13.2382	13.3747	0.0689
145	SLE RA 14	-0.29	-0.06	63.21	13.435	13.5755	0.0657
145	SLE RA 15	-0.28	-0.07	63.19	13.4308	13.5704	0.0672
145	SLE RA 16	-0.29	-0.06	62.88	13.3648	13.5047	0.0675
145	SLE RA 17	-0.28	-0.08	62.86	13.3606	13.4997	0.069
145	SLE RA 18	-0.29	-0.04	63.7	13.5417	13.6826	0.0635
145	SLE RA 19	-0.28	-0.06	63.68	13.5375	13.6776	0.0651
145	SLE RA 20	-0.29	-0.04	64.27	13.6613	13.8042	0.0646
145	SLE RA 21	-0.28	-0.06	64.25	13.6571	13.7991	0.0661
145	SLE FR 1	-0.24	-0.11	57.19	12.1546	12.2793	0.0694
145	SLE FR 2	-0.24	-0.12	57.19	12.1532	12.2776	0.0699
145	SLE FR 3	-0.24	-0.11	57.42	12.2025	12.3279	0.0698

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
145	SLE FR 4	-0.25	-0.1	59.14	12.5694	12.6986	0.0681
145	SLE FR 5	-0.26	-0.09	59.37	12.6186	12.7489	0.0681
145	SLE FR 6	-0.26	-0.08	60.45	12.8482	12.981	0.0665
145	SLE QP 1	-0.24	-0.11	57.19	12.1546	12.2793	0.0694
145	SLE QP 2	-0.26	-0.09	59.15	12.5708	12.7003	0.0676
145	SLD 1	4.85	0.76	59.17	12.5937	12.7545	-1.1842
145	SLD 2	5.35	0.81	59.41	12.6423	12.8009	-1.3047
145	SLD 3	4.46	-0.61	57.65	12.3093	12.4246	-0.8736
145	SLD 4	4.97	-0.56	57.89	12.3579	12.471	-0.9941
145	SLD 5	1.77	2.23	61.42	13.0004	13.2087	-0.7578
145	SLD 6	2.1	2.26	61.58	13.0322	13.239	-0.8365
145	SLD 7	0.49	-2.33	56.35	12.0524	12.1091	0.2777
145	SLD 8	0.82	-2.3	56.51	12.0841	12.1394	0.199
145	SLD 9	-1.33	2.11	61.79	13.0574	13.2612	-0.0637
145	SLD 10	-1	2.15	61.95	13.0892	13.2915	-0.1425
145	SLD 11	-2.61	-2.45	56.72	12.1093	12.1616	0.9718
145	SLD 12	-2.28	-2.42	56.88	12.1411	12.1919	0.893
145	SLD 13	-5.48	0.37	60.41	12.7837	12.9296	1.1293
145	SLD 14	-4.97	0.42	60.65	12.8322	12.976	1.0088
145	SLD 15	-5.86	-1	58.89	12.4992	12.5997	1.44
145	SLD 16	-5.36	-0.95	59.13	12.5478	12.6461	1.3195
145	SLV 1	11.68	1.86	59.14	12.6148	12.8159	-2.8525
145	SLV 2	12.86	1.97	59.71	12.728	12.9239	-3.1332
145	SLV 3	10.79	-1.25	55.69	11.9689	12.067	-2.145
145	SLV 4	11.97	-1.13	56.25	12.0821	12.175	-2.4256
145	SLV 5	4.48	5.18	64.28	13.5442	13.8522	-1.8334
145	SLV 6	5.24	5.25	64.65	13.6169	13.9216	-2.0138
145	SLV 7	1.5	-5.16	52.78	11.3912	11.3561	0.5251
145	SLV 8	2.26	-5.09	53.14	11.4639	11.4255	0.3447
145	SLV 9	-2.77	4.91	65.15	13.6776	13.9751	-0.2094
145	SLV 10	-2.01	4.98	65.52	13.7503	14.0445	-0.3898
145	SLV 11	-5.75	-5.44	53.65	11.5246	11.479	2.1491
145	SLV 12	-4.99	-5.36	54.01	11.5973	11.5484	1.9687
145	SLV 13	-12.48	0.95	62.04	13.0595	13.2256	2.5609
145	SLV 14	-11.3	1.06	62.61	13.1726	13.3336	2.2802
145	SLV 15	-13.37	-2.15	58.59	12.4136	12.4768	3.2684
145	SLV 16	-12.19	-2.04	59.15	12.5267	12.5848	2.9878
145	CRTFP Ux+	0	0	0	0	0	0
145	CRTFP Ux-	0	0	0	0	0	0
145	CRTFP Uy+	0	0	0	0	0	0
145	CRTFP Uy-	0	0	0	0	0	0
147	SLU 1	-0.03	-0.03	5.8	0	-0.7737	-0.0043
147	SLU 2	-0.02	-0.04	5.8	0	-0.7729	-0.0048
147	SLU 3	-0.03	-0.03	5.94	0	-0.7923	-0.0042
147	SLU 4	-0.03	-0.03	5.94	0	-0.7918	-0.0045
147	SLU 5	-0.02	-0.04	5.89	0	-0.7847	-0.0049
147	SLU 6	-0.03	-0.03	6.03	0	-0.8041	-0.0042
147	SLU 7	-0.03	-0.03	6.03	0	-0.8036	-0.0046
147	SLU 8	-0.03	-0.03	5.98	0	-0.7973	-0.0044
147	SLU 9	-0.03	-0.04	5.98	0	-0.7968	-0.0047
147	SLU 10	-0.03	-0.03	6.5	0	-0.8672	-0.0041
147	SLU 11	-0.03	-0.03	6.65	0	-0.8866	-0.0035
147	SLU 12	-0.03	-0.03	6.65	0	-0.8862	-0.0038
147	SLU 13	-0.03	-0.03	6.59	0	-0.879	-0.0042
147	SLU 14	-0.03	-0.03	6.74	0	-0.8984	-0.0035
147	SLU 15	-0.03	-0.03	6.73	0	-0.8979	-0.0038
147	SLU 16	-0.03	-0.03	6.69	0	-0.8916	-0.0037
147	SLU 17	-0.03	-0.03	6.68	0	-0.8911	-0.004
147	SLU 18	-0.03	-0.02	6.81	0	-0.9085	-0.0033
147	SLU 19	-0.03	-0.03	6.81	0	-0.908	-0.0036
147	SLU 20	-0.04	-0.02	6.9	0	-0.9203	-0.0033
147	SLU 21	-0.03	-0.03	6.9	0	-0.9198	-0.0036
147	SLU 22	-0.03	-0.02	6.42	0	-0.8556	-0.0031
147	SLU 23	-0.03	-0.03	6.41	0	-0.8548	-0.0036
147	SLU 24	-0.03	-0.02	6.56	0	-0.8742	-0.003
147	SLU 25	-0.03	-0.02	6.55	0	-0.8737	-0.0033
147	SLU 26	-0.03	-0.03	6.5	0	-0.8666	-0.0036
147	SLU 27	-0.03	-0.02	6.64	0	-0.886	-0.003
147	SLU 28	-0.03	-0.03	6.64	0	-0.8855	-0.0033
147	SLU 29	-0.03	-0.02	6.59	0	-0.8792	-0.0032
147	SLU 30	-0.03	-0.03	6.59	0	-0.8787	-0.0035
147	SLU 31	-0.03	-0.02	7.12	0	-0.9492	-0.0029
147	SLU 32	-0.04	-0.02	7.26	0	-0.9686	-0.0023
147	SLU 33	-0.03	-0.02	7.26	0	-0.9681	-0.0026
147	SLU 34	-0.03	-0.02	7.21	0	-0.9609	-0.0029
147	SLU 35	-0.04	-0.02	7.35	0	-0.9803	-0.0023
147	SLU 36	-0.04	-0.02	7.35	0	-0.9799	-0.0026
147	SLU 37	-0.04	-0.02	7.3	0	-0.9735	-0.0025
147	SLU 38	-0.04	-0.02	7.3	0	-0.973	-0.0028
147	SLU 39	-0.04	-0.02	7.43	0	-0.9904	-0.0021
147	SLU 40	-0.04	-0.02	7.42	0	-0.9899	-0.0024
147	SLU 41	-0.04	-0.02	7.52	0	-1.0022	-0.0021
147	SLU 42	-0.04	-0.02	7.51	0	-1.0017	-0.0024
147	SLU 43	-0.03	-0.04	7.33	0	-0.9777	-0.006
147	SLU 44	-0.03	-0.05	7.33	0	-0.9769	-0.0065
147	SLU 45	-0.03	-0.04	7.47	0	-0.9963	-0.0059
147	SLU 46	-0.03	-0.05	7.47	0	-0.9958	-0.0062
147	SLU 47	-0.03	-0.05	7.42	0	-0.9887	-0.0066
147	SLU 48	-0.04	-0.04	7.56	0	-1.0081	-0.0059
147	SLU 49	-0.03	-0.05	7.56	0	-1.0076	-0.0062
147	SLU 50	-0.04	-0.05	7.51	0	-1.0013	-0.0061
147	SLU 51	-0.03	-0.05	7.51	0	-1.0008	-0.0064
147	SLU 52	-0.04	-0.04	8.03	0	-1.0713	-0.0058
147	SLU 53	-0.04	-0.04	8.18	0	-1.0907	-0.0052
147	SLU 54	-0.04	-0.04	8.18	0	-1.0902	-0.0055
147	SLU 55	-0.04	-0.04	8.12	0	-1.083	-0.0059
147	SLU 56	-0.04	-0.04	8.27	0	-1.1024	-0.0052

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
147	SLU 57	-0.04	-0.04	8.26	0	-1.102	-0.0055
147	SLU 58	-0.04	-0.04	8.22	0	-1.0956	-0.0054
147	SLU 59	-0.04	-0.04	8.21	0	-1.0952	-0.0057
147	SLU 60	-0.04	-0.04	8.34	0	-1.1125	-0.005
147	SLU 61	-0.04	-0.04	8.34	0	-1.112	-0.0053
147	SLU 62	-0.04	-0.04	8.43	0	-1.1243	-0.005
147	SLU 63	-0.04	-0.04	8.43	0	-1.1238	-0.0053
147	SLU 64	-0.04	-0.04	7.95	0	-1.0596	-0.0048
147	SLU 65	-0.03	-0.04	7.94	0	-1.0588	-0.0053
147	SLU 66	-0.04	-0.04	8.09	0	-1.0782	-0.0047
147	SLU 67	-0.04	-0.04	8.08	0	-1.0778	-0.005
147	SLU 68	-0.03	-0.04	8.03	0	-1.0706	-0.0053
147	SLU 69	-0.04	-0.04	8.18	0	-1.09	-0.0047
147	SLU 70	-0.04	-0.04	8.17	0	-1.0895	-0.005
147	SLU 71	-0.04	-0.04	8.12	0	-1.0832	-0.0049
147	SLU 72	-0.04	-0.04	8.12	0	-1.0827	-0.0052
147	SLU 73	-0.04	-0.03	8.65	0	-1.1532	-0.0046
147	SLU 74	-0.04	-0.03	8.79	0	-1.1726	-0.004
147	SLU 75	-0.04	-0.03	8.79	0	-1.1721	-0.0043
147	SLU 76	-0.04	-0.03	8.74	0	-1.165	-0.0046
147	SLU 77	-0.04	-0.03	8.88	0	-1.1844	-0.004
147	SLU 78	-0.04	-0.03	8.88	0	-1.1839	-0.0043
147	SLU 79	-0.04	-0.03	8.83	0	-1.1775	-0.0042
147	SLU 80	-0.04	-0.03	8.83	0	-1.1771	-0.0045
147	SLU 81	-0.04	-0.03	8.96	0	-1.1944	-0.0038
147	SLU 82	-0.04	-0.03	8.95	0	-1.1939	-0.0041
147	SLU 83	-0.05	-0.03	9.05	0	-1.2062	-0.0038
147	SLU 84	-0.04	-0.03	9.04	0	-1.2057	-0.0041
147	SLE RA 1	-0.03	-0.03	5.98	0	-0.7971	-0.0039
147	SLE RA 2	-0.03	-0.03	5.97	0	-0.7966	-0.0043
147	SLE RA 3	-0.03	-0.03	6.07	0	-0.8095	-0.0039
147	SLE RA 4	-0.03	-0.03	6.07	0	-0.8092	-0.0041
147	SLE RA 5	-0.03	-0.03	6.03	0	-0.8044	-0.0043
147	SLE RA 6	-0.03	-0.03	6.13	0	-0.8174	-0.0039
147	SLE RA 7	-0.03	-0.03	6.13	0	-0.817	-0.0041
147	SLE RA 8	-0.03	-0.03	6.1	0	-0.8128	-0.004
147	SLE RA 9	-0.03	-0.03	6.09	0	-0.8125	-0.0042
147	SLE RA 10	-0.03	-0.03	6.45	0	-0.8595	-0.0038
147	SLE RA 11	-0.03	-0.03	6.54	0	-0.8724	-0.0034
147	SLE RA 12	-0.03	-0.03	6.54	0	-0.8721	-0.0036
147	SLE RA 13	-0.03	-0.03	6.5	0	-0.8673	-0.0038
147	SLE RA 14	-0.03	-0.03	6.6	0	-0.8802	-0.0034
147	SLE RA 15	-0.03	-0.03	6.6	0	-0.8799	-0.0036
147	SLE RA 16	-0.03	-0.03	6.57	0	-0.8757	-0.0035
147	SLE RA 17	-0.03	-0.03	6.57	0	-0.8754	-0.0037
147	SLE RA 18	-0.03	-0.02	6.65	0	-0.887	-0.0033
147	SLE RA 19	-0.03	-0.03	6.65	0	-0.8866	-0.0035
147	SLE RA 20	-0.03	-0.02	6.71	0	-0.8948	-0.0033
147	SLE RA 21	-0.03	-0.03	6.71	0	-0.8945	-0.0035
147	SLE FR 1	-0.03	-0.03	5.98	0	-0.7971	-0.0039
147	SLE FR 2	-0.03	-0.03	5.98	0	-0.797	-0.004
147	SLE FR 3	-0.03	-0.03	6	0	-0.8002	-0.0039
147	SLE FR 4	-0.03	-0.03	6.18	0	-0.824	-0.0038
147	SLE FR 5	-0.03	-0.03	6.2	0	-0.8272	-0.0037
147	SLE FR 6	-0.03	-0.03	6.32	0	-0.842	-0.0036
147	SLE QP 1	-0.03	-0.03	5.98	0	-0.7971	-0.0039
147	SLE QP 2	-0.03	-0.03	6.18	0	-0.8241	-0.0037
147	SLD 1	0.49	0.07	6.12	0	-0.8158	0.0089
147	SLD 2	0.54	0.08	6.15	0	-0.82	0.0101
147	SLD 3	0.45	-0.07	5.95	0	-0.7931	-0.0091
147	SLD 4	0.5	-0.06	5.98	0	-0.7972	-0.0078
147	SLD 5	0.18	0.2	6.41	0	-0.8553	0.0271
147	SLD 6	0.21	0.21	6.44	0	-0.858	0.0279
147	SLD 7	0.05	-0.25	5.85	0	-0.7796	-0.0328
147	SLD 8	0.08	-0.24	5.87	0	-0.7823	-0.032
147	SLD 9	-0.14	0.18	6.49	0	-0.8658	0.0245
147	SLD 10	-0.1	0.19	6.51	0	-0.8686	0.0253
147	SLD 11	-0.27	-0.27	5.93	0	-0.7901	-0.0354
147	SLD 12	-0.23	-0.26	5.95	0	-0.7928	-0.0346
147	SLD 13	-0.56	0	6.38	0	-0.8509	0.0004
147	SLD 14	-0.51	0.01	6.41	0	-0.855	0.0016
147	SLD 15	-0.6	-0.13	6.21	0	-0.8282	-0.0176
147	SLD 16	-0.54	-0.12	6.24	0	-0.8323	-0.0164
147	SLV 1	1.18	0.19	6.03	0	-0.804	0.0252
147	SLV 2	1.3	0.21	6.1	0	-0.8136	0.0281
147	SLV 3	1.09	-0.12	5.64	0	-0.7524	-0.0156
147	SLV 4	1.21	-0.1	5.72	0	-0.762	-0.0127
147	SLV 5	0.45	0.5	6.71	0	-0.8946	0.0663
147	SLV 6	0.53	0.51	6.76	0	-0.9009	0.0681
147	SLV 7	0.15	-0.52	5.42	0	-0.7226	-0.0696
147	SLV 8	0.22	-0.51	5.47	0	-0.7288	-0.0677
147	SLV 9	-0.28	0.45	6.89	0	-0.9193	0.0603
147	SLV 10	-0.2	0.47	6.94	0	-0.9255	0.0621
147	SLV 11	-0.59	-0.57	5.6	0	-0.7473	-0.0756
147	SLV 12	-0.51	-0.55	5.65	0	-0.7535	-0.0737
147	SLV 13	-1.27	0.04	6.65	0	-0.8861	0.0052
147	SLV 14	-1.14	0.06	6.72	0	-0.8957	0.0081
147	SLV 15	-1.36	-0.27	6.26	0	-0.8345	-0.0355
147	SLV 16	-1.24	-0.24	6.33	0	-0.8441	-0.0326
147	CRTFP Ux+	0	0	0	0	0	0
147	CRTFP Ux-	0	0	0	0	0	0
147	CRTFP Uy+	0	0	0	0	0	0
147	CRTFP Uy-	0	0	0	0	0	0
149	SLU 1	-0.03	-0.04	5.84	0	-0.6818	-0.0047
149	SLU 2	-0.02	-0.04	5.84	0	-0.6811	-0.0051
149	SLU 3	-0.03	-0.04	5.98	0	-0.6981	-0.0046
149	SLU 4	-0.02	-0.04	5.98	0	-0.6977	-0.0049

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
149	SLU 5	-0.02	-0.04	5.93	0	-0.6914	-0.0052
149	SLU 6	-0.03	-0.04	6.07	0	-0.7085	-0.0047
149	SLU 7	-0.03	-0.04	6.07	0	-0.7081	-0.005
149	SLU 8	-0.03	-0.04	6.02	0	-0.7025	-0.0048
149	SLU 9	-0.03	-0.04	6.02	0	-0.7021	-0.0051
149	SLU 10	-0.03	-0.04	6.55	0	-0.7638	-0.0046
149	SLU 11	-0.03	-0.04	6.69	0	-0.7808	-0.0041
149	SLU 12	-0.03	-0.04	6.69	0	-0.7804	-0.0044
149	SLU 13	-0.03	-0.04	6.64	0	-0.7742	-0.0047
149	SLU 14	-0.03	-0.04	6.78	0	-0.7912	-0.0042
149	SLU 15	-0.03	-0.04	6.78	0	-0.7908	-0.0045
149	SLU 16	-0.03	-0.04	6.73	0	-0.7852	-0.0043
149	SLU 17	-0.03	-0.04	6.73	0	-0.7848	-0.0046
149	SLU 18	-0.03	-0.03	6.86	0	-0.8	-0.004
149	SLU 19	-0.03	-0.04	6.85	0	-0.7995	-0.0042
149	SLU 20	-0.03	-0.03	6.95	0	-0.8103	-0.004
149	SLU 21	-0.03	-0.04	6.94	0	-0.8099	-0.0043
149	SLU 22	-0.03	-0.03	6.46	0	-0.7539	-0.0037
149	SLU 23	-0.03	-0.04	6.46	0	-0.7532	-0.0042
149	SLU 24	-0.03	-0.03	6.6	0	-0.7702	-0.0037
149	SLU 25	-0.03	-0.03	6.6	0	-0.7698	-0.004
149	SLU 26	-0.03	-0.04	6.54	0	-0.7636	-0.0043
149	SLU 27	-0.03	-0.03	6.69	0	-0.7806	-0.0038
149	SLU 28	-0.03	-0.03	6.69	0	-0.7802	-0.004
149	SLU 29	-0.03	-0.03	6.64	0	-0.7746	-0.0039
149	SLU 30	-0.03	-0.04	6.64	0	-0.7742	-0.0041
149	SLU 31	-0.03	-0.03	7.17	0	-0.8359	-0.0037
149	SLU 32	-0.03	-0.03	7.31	0	-0.853	-0.0032
149	SLU 33	-0.03	-0.03	7.31	0	-0.8525	-0.0035
149	SLU 34	-0.03	-0.03	7.25	0	-0.8463	-0.0038
149	SLU 35	-0.04	-0.03	7.4	0	-0.8633	-0.0032
149	SLU 36	-0.03	-0.03	7.4	0	-0.8629	-0.0035
149	SLU 37	-0.04	-0.03	7.35	0	-0.8573	-0.0034
149	SLU 38	-0.03	-0.03	7.35	0	-0.8569	-0.0036
149	SLU 39	-0.04	-0.03	7.47	0	-0.8721	-0.003
149	SLU 40	-0.03	-0.03	7.47	0	-0.8717	-0.0033
149	SLU 41	-0.04	-0.03	7.56	0	-0.8824	-0.0031
149	SLU 42	-0.04	-0.03	7.56	0	-0.882	-0.0034
149	SLU 43	-0.03	-0.05	7.38	0	-0.8616	-0.0064
149	SLU 44	-0.03	-0.06	7.38	0	-0.8609	-0.0069
149	SLU 45	-0.03	-0.05	7.52	0	-0.8779	-0.0064
149	SLU 46	-0.03	-0.06	7.52	0	-0.8775	-0.0066
149	SLU 47	-0.03	-0.06	7.47	0	-0.8712	-0.0069
149	SLU 48	-0.03	-0.06	7.61	0	-0.8883	-0.0064
149	SLU 49	-0.03	-0.06	7.61	0	-0.8879	-0.0067
149	SLU 50	-0.03	-0.06	7.56	0	-0.8823	-0.0065
149	SLU 51	-0.03	-0.06	7.56	0	-0.8819	-0.0068
149	SLU 52	-0.04	-0.05	8.09	0	-0.9436	-0.0064
149	SLU 53	-0.04	-0.05	8.23	0	-0.9606	-0.0059
149	SLU 54	-0.04	-0.05	8.23	0	-0.9602	-0.0061
149	SLU 55	-0.04	-0.06	8.18	0	-0.954	-0.0064
149	SLU 56	-0.04	-0.05	8.32	0	-0.971	-0.0059
149	SLU 57	-0.04	-0.05	8.32	0	-0.9706	-0.0062
149	SLU 58	-0.04	-0.05	8.27	0	-0.965	-0.006
149	SLU 59	-0.04	-0.05	8.27	0	-0.9646	-0.0063
149	SLU 60	-0.04	-0.05	8.4	0	-0.9798	-0.0057
149	SLU 61	-0.04	-0.05	8.39	0	-0.9793	-0.006
149	SLU 62	-0.04	-0.05	8.49	0	-0.9901	-0.0058
149	SLU 63	-0.04	-0.05	8.48	0	-0.9897	-0.006
149	SLU 64	-0.03	-0.05	8	0	-0.9337	-0.0055
149	SLU 65	-0.03	-0.05	8	0	-0.933	-0.0059
149	SLU 66	-0.04	-0.05	8.14	0	-0.95	-0.0054
149	SLU 67	-0.03	-0.05	8.14	0	-0.9496	-0.0057
149	SLU 68	-0.03	-0.05	8.09	0	-0.9434	-0.006
149	SLU 69	-0.04	-0.05	8.23	0	-0.9604	-0.0055
149	SLU 70	-0.04	-0.05	8.23	0	-0.96	-0.0058
149	SLU 71	-0.04	-0.05	8.18	0	-0.9544	-0.0056
149	SLU 72	-0.04	-0.05	8.18	0	-0.954	-0.0059
149	SLU 73	-0.04	-0.05	8.71	0	-1.0157	-0.0054
149	SLU 74	-0.04	-0.04	8.85	0	-1.0328	-0.0049
149	SLU 75	-0.04	-0.04	8.85	0	-1.0324	-0.0052
149	SLU 76	-0.04	-0.05	8.8	0	-1.0261	-0.0055
149	SLU 77	-0.04	-0.04	8.94	0	-1.0431	-0.005
149	SLU 78	-0.04	-0.04	8.94	0	-1.0427	-0.0052
149	SLU 79	-0.04	-0.04	8.89	0	-1.0371	-0.0051
149	SLU 80	-0.04	-0.05	8.89	0	-1.0367	-0.0054
149	SLU 81	-0.04	-0.04	9.02	0	-1.0519	-0.0048
149	SLU 82	-0.04	-0.04	9.01	0	-1.0515	-0.005
149	SLU 83	-0.04	-0.04	9.1	0	-1.0622	-0.0048
149	SLU 84	-0.04	-0.04	9.1	0	-1.0618	-0.0051
149	SLE RA 1	-0.03	-0.04	6.02	0	-0.7024	-0.0044
149	SLE RA 2	-0.02	-0.04	6.02	0	-0.7019	-0.0047
149	SLE RA 3	-0.03	-0.04	6.11	0	-0.7133	-0.0044
149	SLE RA 4	-0.03	-0.04	6.11	0	-0.713	-0.0046
149	SLE RA 5	-0.02	-0.04	6.08	0	-0.7088	-0.0048
149	SLE RA 6	-0.03	-0.04	6.17	0	-0.7202	-0.0044
149	SLE RA 7	-0.03	-0.04	6.17	0	-0.7199	-0.0046
149	SLE RA 8	-0.03	-0.04	6.14	0	-0.7162	-0.0045
149	SLE RA 9	-0.03	-0.04	6.14	0	-0.7159	-0.0047
149	SLE RA 10	-0.03	-0.04	6.49	0	-0.7571	-0.0044
149	SLE RA 11	-0.03	-0.03	6.59	0	-0.7684	-0.004
149	SLE RA 12	-0.03	-0.04	6.58	0	-0.7681	-0.0042
149	SLE RA 13	-0.03	-0.04	6.55	0	-0.764	-0.0044
149	SLE RA 14	-0.03	-0.04	6.65	0	-0.7753	-0.0041
149	SLE RA 15	-0.03	-0.04	6.64	0	-0.7751	-0.0043
149	SLE RA 16	-0.03	-0.04	6.61	0	-0.7713	-0.0042
149	SLE RA 17	-0.03	-0.04	6.61	0	-0.7711	-0.0043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
149	SLE RA 18	-0.03	-0.03	6.7	0	-0.7812	-0.0039
149	SLE RA 19	-0.03	-0.04	6.69	0	-0.7809	-0.0041
149	SLE RA 20	-0.03	-0.03	6.75	0	-0.7881	-0.004
149	SLE RA 21	-0.03	-0.04	6.75	0	-0.7878	-0.0042
149	SLE FR 1	-0.03	-0.04	6.02	0	-0.7024	-0.0044
149	SLE FR 2	-0.03	-0.04	6.02	0	-0.7023	-0.0045
149	SLE FR 3	-0.03	-0.04	6.04	0	-0.7051	-0.0044
149	SLE FR 4	-0.03	-0.04	6.22	0	-0.7259	-0.0043
149	SLE FR 5	-0.03	-0.04	6.25	0	-0.7288	-0.0043
149	SLE FR 6	-0.03	-0.04	6.36	0	-0.7418	-0.0042
149	SLE QP 1	-0.03	-0.04	6.02	0	-0.7024	-0.0044
149	SLE QP 2	-0.03	-0.04	6.22	0	-0.726	-0.0043
149	SLD 1	0.49	0.06	6.12	0	-0.7142	0.0074
149	SLD 2	0.54	0.08	6.16	0	-0.7181	0.0088
149	SLD 3	0.45	-0.07	5.95	0	-0.6941	-0.0082
149	SLD 4	0.5	-0.06	5.98	0	-0.698	-0.0068
149	SLD 5	0.18	0.19	6.45	0	-0.7523	0.0227
149	SLD 6	0.21	0.2	6.47	0	-0.7548	0.0235
149	SLD 7	0.05	-0.25	5.87	0	-0.6852	-0.0293
149	SLD 8	0.08	-0.24	5.9	0	-0.6878	-0.0285
149	SLD 9	-0.14	0.17	6.55	0	-0.7643	0.0199
149	SLD 10	-0.1	0.18	6.57	0	-0.7668	0.0208
149	SLD 11	-0.27	-0.27	5.98	0	-0.6972	-0.0321
149	SLD 12	-0.23	-0.27	6	0	-0.6997	-0.0312
149	SLD 13	-0.56	-0.01	6.46	0	-0.7541	-0.0017
149	SLD 14	-0.5	0	6.5	0	-0.758	-0.0004
149	SLD 15	-0.6	-0.15	6.29	0	-0.734	-0.0173
149	SLD 16	-0.54	-0.14	6.32	0	-0.7378	-0.016
149	SLV 1	1.18	0.19	5.98	0	-0.6977	0.0225
149	SLV 2	1.3	0.22	6.06	0	-0.7067	0.0256
149	SLV 3	1.09	-0.11	5.59	0	-0.652	-0.0128
149	SLV 4	1.21	-0.08	5.67	0	-0.661	-0.0098
149	SLV 5	0.45	0.49	6.73	0	-0.7853	0.0569
149	SLV 6	0.53	0.5	6.78	0	-0.7911	0.0589
149	SLV 7	0.15	-0.52	5.43	0	-0.633	-0.0611
149	SLV 8	0.23	-0.51	5.48	0	-0.6388	-0.0591
149	SLV 9	-0.28	0.43	6.97	0	-0.8133	0.0505
149	SLV 10	-0.2	0.45	7.02	0	-0.8191	0.0525
149	SLV 11	-0.59	-0.58	5.67	0	-0.661	-0.0675
149	SLV 12	-0.51	-0.56	5.72	0	-0.6668	-0.0655
149	SLV 13	-1.26	0.01	6.78	0	-0.791	0.0012
149	SLV 14	-1.14	0.04	6.86	0	-0.8001	0.0043
149	SLV 15	-1.36	-0.29	6.39	0	-0.7453	-0.0342
149	SLV 16	-1.23	-0.27	6.47	0	-0.7544	-0.0311
149	CRTFP Ux+	0	0	0	0	0	0
149	CRTFP Ux-	0	0	0	0	0	0
149	CRTFP Uy+	0	0	0	0	0	0
149	CRTFP Uy-	0	0	0	0	0	0
151	SLU 1	-0.02	-0.05	5.87	0	-0.5866	-0.0048
151	SLU 2	-0.02	-0.05	5.86	0	-0.586	-0.0052
151	SLU 3	-0.03	-0.05	6.01	0	-0.6006	-0.0048
151	SLU 4	-0.02	-0.05	6	0	-0.6003	-0.005
151	SLU 5	-0.02	-0.05	5.95	0	-0.5949	-0.0053
151	SLU 6	-0.03	-0.05	6.09	0	-0.6095	-0.0049
151	SLU 7	-0.03	-0.05	6.09	0	-0.6091	-0.0051
151	SLU 8	-0.03	-0.05	6.04	0	-0.6044	-0.005
151	SLU 9	-0.03	-0.05	6.04	0	-0.604	-0.0052
151	SLU 10	-0.03	-0.05	6.57	0	-0.6568	-0.0049
151	SLU 11	-0.03	-0.04	6.71	0	-0.6714	-0.0045
151	SLU 12	-0.03	-0.05	6.71	0	-0.6711	-0.0047
151	SLU 13	-0.03	-0.05	6.66	0	-0.6657	-0.005
151	SLU 14	-0.03	-0.05	6.8	0	-0.6803	-0.0046
151	SLU 15	-0.03	-0.05	6.8	0	-0.68	-0.0048
151	SLU 16	-0.03	-0.05	6.75	0	-0.6752	-0.0047
151	SLU 17	-0.03	-0.05	6.75	0	-0.6748	-0.0049
151	SLU 18	-0.03	-0.04	6.88	0	-0.6878	-0.0044
151	SLU 19	-0.03	-0.05	6.87	0	-0.6874	-0.0046
151	SLU 20	-0.03	-0.04	6.97	0	-0.6967	-0.0044
151	SLU 21	-0.03	-0.05	6.96	0	-0.6963	-0.0047
151	SLU 22	-0.03	-0.04	6.49	0	-0.6486	-0.0041
151	SLU 23	-0.02	-0.05	6.48	0	-0.648	-0.0045
151	SLU 24	-0.03	-0.04	6.63	0	-0.6626	-0.0041
151	SLU 25	-0.03	-0.04	6.62	0	-0.6623	-0.0043
151	SLU 26	-0.03	-0.05	6.57	0	-0.6569	-0.0046
151	SLU 27	-0.03	-0.04	6.72	0	-0.6715	-0.0042
151	SLU 28	-0.03	-0.04	6.71	0	-0.6712	-0.0044
151	SLU 29	-0.03	-0.04	6.66	0	-0.6664	-0.0043
151	SLU 30	-0.03	-0.05	6.66	0	-0.666	-0.0045
151	SLU 31	-0.03	-0.04	7.19	0	-0.7188	-0.0042
151	SLU 32	-0.03	-0.04	7.33	0	-0.7334	-0.0038
151	SLU 33	-0.03	-0.04	7.33	0	-0.7331	-0.004
151	SLU 34	-0.03	-0.04	7.28	0	-0.7277	-0.0043
151	SLU 35	-0.04	-0.04	7.42	0	-0.7423	-0.0039
151	SLU 36	-0.03	-0.04	7.42	0	-0.742	-0.0041
151	SLU 37	-0.04	-0.04	7.37	0	-0.7372	-0.004
151	SLU 38	-0.03	-0.04	7.37	0	-0.7369	-0.0042
151	SLU 39	-0.04	-0.04	7.5	0	-0.7498	-0.0037
151	SLU 40	-0.03	-0.04	7.49	0	-0.7494	-0.0039
151	SLU 41	-0.04	-0.04	7.59	0	-0.7587	-0.0037
151	SLU 42	-0.04	-0.04	7.58	0	-0.7583	-0.004
151	SLU 43	-0.03	-0.07	7.41	0	-0.7413	-0.0065
151	SLU 44	-0.03	-0.07	7.41	0	-0.7407	-0.0069
151	SLU 45	-0.03	-0.07	7.55	0	-0.7553	-0.0065
151	SLU 46	-0.03	-0.07	7.55	0	-0.755	-0.0067
151	SLU 47	-0.03	-0.07	7.5	0	-0.7496	-0.007
151	SLU 48	-0.03	-0.07	7.64	0	-0.7642	-0.0066
151	SLU 49	-0.03	-0.07	7.64	0	-0.7639	-0.0068

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
151	SLU 50	-0.03	-0.07	7.59	0	-0.7591	-0.0067
151	SLU 51	-0.03	-0.07	7.59	0	-0.7587	-0.0069
151	SLU 52	-0.03	-0.07	8.12	0	-0.8115	-0.0066
151	SLU 53	-0.04	-0.06	8.26	0	-0.8261	-0.0062
151	SLU 54	-0.04	-0.06	8.26	0	-0.8258	-0.0064
151	SLU 55	-0.04	-0.07	8.2	0	-0.8204	-0.0067
151	SLU 56	-0.04	-0.06	8.35	0	-0.835	-0.0063
151	SLU 57	-0.04	-0.06	8.35	0	-0.8347	-0.0065
151	SLU 58	-0.04	-0.06	8.3	0	-0.8299	-0.0064
151	SLU 59	-0.04	-0.07	8.3	0	-0.8296	-0.0066
151	SLU 60	-0.04	-0.06	8.42	0	-0.8425	-0.0061
151	SLU 61	-0.04	-0.06	8.42	0	-0.8421	-0.0063
151	SLU 62	-0.04	-0.06	8.51	0	-0.8514	-0.0061
151	SLU 63	-0.04	-0.06	8.51	0	-0.851	-0.0064
151	SLU 64	-0.03	-0.06	8.03	0	-0.8033	-0.0058
151	SLU 65	-0.03	-0.06	8.03	0	-0.8027	-0.0062
151	SLU 66	-0.04	-0.06	8.17	0	-0.8173	-0.0058
151	SLU 67	-0.03	-0.06	8.17	0	-0.817	-0.006
151	SLU 68	-0.03	-0.06	8.12	0	-0.8116	-0.0063
151	SLU 69	-0.04	-0.06	8.26	0	-0.8262	-0.0059
151	SLU 70	-0.03	-0.06	8.26	0	-0.8259	-0.0061
151	SLU 71	-0.04	-0.06	8.21	0	-0.8211	-0.006
151	SLU 72	-0.03	-0.06	8.21	0	-0.8208	-0.0062
151	SLU 73	-0.04	-0.06	8.74	0	-0.8736	-0.0059
151	SLU 74	-0.04	-0.05	8.88	0	-0.8882	-0.0055
151	SLU 75	-0.04	-0.06	8.88	0	-0.8878	-0.0057
151	SLU 76	-0.04	-0.06	8.82	0	-0.8825	-0.0059
151	SLU 77	-0.04	-0.06	8.97	0	-0.897	-0.0056
151	SLU 78	-0.04	-0.06	8.97	0	-0.8967	-0.0058
151	SLU 79	-0.04	-0.06	8.92	0	-0.8919	-0.0056
151	SLU 80	-0.04	-0.06	8.92	0	-0.8916	-0.0059
151	SLU 81	-0.04	-0.05	9.05	0	-0.9045	-0.0054
151	SLU 82	-0.04	-0.06	9.04	0	-0.9041	-0.0056
151	SLU 83	-0.04	-0.05	9.13	0	-0.9134	-0.0054
151	SLU 84	-0.04	-0.06	9.13	0	-0.913	-0.0057
151	SLE RA 1	-0.03	-0.05	6.04	0	-0.6043	-0.0046
151	SLE RA 2	-0.02	-0.05	6.04	0	-0.6039	-0.0049
151	SLE RA 3	-0.03	-0.05	6.14	0	-0.6137	-0.0046
151	SLE RA 4	-0.03	-0.05	6.13	0	-0.6134	-0.0048
151	SLE RA 5	-0.02	-0.05	6.1	0	-0.6099	-0.0049
151	SLE RA 6	-0.03	-0.05	6.2	0	-0.6196	-0.0047
151	SLE RA 7	-0.03	-0.05	6.19	0	-0.6193	-0.0048
151	SLE RA 8	-0.03	-0.05	6.16	0	-0.6162	-0.0047
151	SLE RA 9	-0.03	-0.05	6.16	0	-0.6159	-0.0049
151	SLE RA 10	-0.03	-0.05	6.51	0	-0.6511	-0.0047
151	SLE RA 11	-0.03	-0.04	6.61	0	-0.6609	-0.0044
151	SLE RA 12	-0.03	-0.05	6.61	0	-0.6606	-0.0046
151	SLE RA 13	-0.03	-0.05	6.57	0	-0.6571	-0.0047
151	SLE RA 14	-0.03	-0.04	6.67	0	-0.6668	-0.0045
151	SLE RA 15	-0.03	-0.05	6.67	0	-0.6666	-0.0046
151	SLE RA 16	-0.03	-0.05	6.63	0	-0.6634	-0.0045
151	SLE RA 17	-0.03	-0.05	6.63	0	-0.6631	-0.0047
151	SLE RA 18	-0.03	-0.04	6.72	0	-0.6718	-0.0043
151	SLE RA 19	-0.03	-0.04	6.72	0	-0.6715	-0.0045
151	SLE RA 20	-0.03	-0.04	6.78	0	-0.6777	-0.0044
151	SLE RA 21	-0.03	-0.05	6.77	0	-0.6775	-0.0045
151	SLE FR 1	-0.03	-0.05	6.04	0	-0.6043	-0.0046
151	SLE FR 2	-0.03	-0.05	6.04	0	-0.6042	-0.0047
151	SLE FR 3	-0.03	-0.05	6.07	0	-0.6067	-0.0047
151	SLE FR 4	-0.03	-0.05	6.24	0	-0.6245	-0.0046
151	SLE FR 5	-0.03	-0.05	6.27	0	-0.6269	-0.0046
151	SLE FR 6	-0.03	-0.04	6.38	0	-0.638	-0.0045
151	SLE QP 1	-0.03	-0.05	6.04	0	-0.6043	-0.0046
151	SLE QP 2	-0.03	-0.05	6.25	0	-0.6246	-0.0045
151	SLD 1	0.49	0.06	6.1	0	-0.6099	0.006
151	SLD 2	0.54	0.07	6.13	0	-0.6135	0.0073
151	SLD 3	0.45	-0.07	5.93	0	-0.5925	-0.0073
151	SLD 4	0.5	-0.06	5.96	0	-0.596	-0.0059
151	SLD 5	0.18	0.18	6.46	0	-0.646	0.0185
151	SLD 6	0.21	0.19	6.48	0	-0.6483	0.0194
151	SLD 7	0.05	-0.26	5.88	0	-0.5878	-0.0257
151	SLD 8	0.08	-0.25	5.9	0	-0.5902	-0.0248
151	SLD 9	-0.14	0.16	6.59	0	-0.6589	0.0157
151	SLD 10	-0.1	0.17	6.61	0	-0.6613	0.0166
151	SLD 11	-0.27	-0.28	6.01	0	-0.6008	-0.0285
151	SLD 12	-0.23	-0.28	6.03	0	-0.6031	-0.0276
151	SLD 13	-0.56	-0.03	6.53	0	-0.6531	-0.0032
151	SLD 14	-0.5	-0.02	6.57	0	-0.6566	-0.0018
151	SLD 15	-0.59	-0.16	6.36	0	-0.6356	-0.0164
151	SLD 16	-0.54	-0.15	6.39	0	-0.6392	-0.0151
151	SLV 1	1.18	0.2	5.9	0	-0.5898	0.0197
151	SLV 2	1.3	0.23	5.98	0	-0.598	0.0228
151	SLV 3	1.09	-0.1	5.5	0	-0.5501	-0.0104
151	SLV 4	1.21	-0.07	5.58	0	-0.5584	-0.0073
151	SLV 5	0.45	0.48	6.73	0	-0.6728	0.0478
151	SLV 6	0.53	0.5	6.78	0	-0.6781	0.0498
151	SLV 7	0.15	-0.52	5.41	0	-0.5407	-0.0525
151	SLV 8	0.23	-0.5	5.46	0	-0.546	-0.0504
151	SLV 9	-0.28	0.41	7.03	0	-0.7031	0.0414
151	SLV 10	-0.2	0.43	7.08	0	-0.7084	0.0434
151	SLV 11	-0.58	-0.59	5.71	0	-0.571	-0.0589
151	SLV 12	-0.51	-0.57	5.76	0	-0.5763	-0.0569
151	SLV 13	-1.26	-0.02	6.91	0	-0.6907	-0.0018
151	SLV 14	-1.14	0.01	6.99	0	-0.699	0.0013
151	SLV 15	-1.35	-0.32	6.51	0	-0.6511	-0.0319
151	SLV 16	-1.23	-0.29	6.59	0	-0.6593	-0.0287
151	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
151	CRTFP Ux-	0	0	0	0	0	0
151	CRTFP Uy+	0	0	0	0	0	0
151	CRTFP Uy-	0	0	0	0	0	0
153	SLU 1	-0.02	-0.06	5.87	0	-0.4894	-0.0047
153	SLU 2	-0.02	-0.06	5.87	0	-0.489	-0.005
153	SLU 3	-0.03	-0.06	6.01	0	-0.5011	-0.0047
153	SLU 4	-0.02	-0.06	6.01	0	-0.5008	-0.0049
153	SLU 5	-0.02	-0.06	5.96	0	-0.4964	-0.0051
153	SLU 6	-0.03	-0.06	6.1	0	-0.5085	-0.0048
153	SLU 7	-0.02	-0.06	6.1	0	-0.5082	-0.005
153	SLU 8	-0.03	-0.06	6.05	0	-0.5042	-0.0049
153	SLU 9	-0.02	-0.06	6.05	0	-0.504	-0.0051
153	SLU 10	-0.03	-0.06	6.57	0	-0.5478	-0.0048
153	SLU 11	-0.03	-0.05	6.72	0	-0.5599	-0.0046
153	SLU 12	-0.03	-0.06	6.72	0	-0.5596	-0.0047
153	SLU 13	-0.03	-0.06	6.66	0	-0.5552	-0.0049
153	SLU 14	-0.03	-0.06	6.81	0	-0.5673	-0.0046
153	SLU 15	-0.03	-0.06	6.8	0	-0.567	-0.0048
153	SLU 16	-0.03	-0.06	6.76	0	-0.5631	-0.0047
153	SLU 17	-0.03	-0.06	6.75	0	-0.5628	-0.0049
153	SLU 18	-0.03	-0.05	6.88	0	-0.5735	-0.0045
153	SLU 19	-0.03	-0.06	6.88	0	-0.5732	-0.0046
153	SLU 20	-0.03	-0.05	6.97	0	-0.5809	-0.0045
153	SLU 21	-0.03	-0.06	6.97	0	-0.5806	-0.0047
153	SLU 22	-0.03	-0.05	6.49	0	-0.5412	-0.0042
153	SLU 23	-0.02	-0.05	6.49	0	-0.5407	-0.0045
153	SLU 24	-0.03	-0.05	6.63	0	-0.5528	-0.0042
153	SLU 25	-0.03	-0.05	6.63	0	-0.5526	-0.0044
153	SLU 26	-0.03	-0.06	6.58	0	-0.5481	-0.0046
153	SLU 27	-0.03	-0.05	6.72	0	-0.5602	-0.0043
153	SLU 28	-0.03	-0.05	6.72	0	-0.56	-0.0045
153	SLU 29	-0.03	-0.05	6.67	0	-0.556	-0.0044
153	SLU 30	-0.03	-0.05	6.67	0	-0.5557	-0.0046
153	SLU 31	-0.03	-0.05	7.19	0	-0.5995	-0.0043
153	SLU 32	-0.03	-0.05	7.34	0	-0.6116	-0.0041
153	SLU 33	-0.03	-0.05	7.34	0	-0.6114	-0.0042
153	SLU 34	-0.03	-0.05	7.28	0	-0.6069	-0.0044
153	SLU 35	-0.03	-0.05	7.43	0	-0.619	-0.0041
153	SLU 36	-0.03	-0.05	7.43	0	-0.6188	-0.0043
153	SLU 37	-0.03	-0.05	7.38	0	-0.6148	-0.0042
153	SLU 38	-0.03	-0.05	7.37	0	-0.6145	-0.0044
153	SLU 39	-0.04	-0.05	7.5	0	-0.6252	-0.004
153	SLU 40	-0.03	-0.05	7.5	0	-0.6249	-0.0041
153	SLU 41	-0.04	-0.05	7.59	0	-0.6326	-0.004
153	SLU 42	-0.03	-0.05	7.59	0	-0.6323	-0.0042
153	SLU 43	-0.03	-0.08	7.42	0	-0.6185	-0.0063
153	SLU 44	-0.03	-0.08	7.42	0	-0.6181	-0.0066
153	SLU 45	-0.03	-0.08	7.56	0	-0.6302	-0.0063
153	SLU 46	-0.03	-0.08	7.56	0	-0.6299	-0.0065
153	SLU 47	-0.03	-0.08	7.51	0	-0.6255	-0.0067
153	SLU 48	-0.03	-0.08	7.65	0	-0.6376	-0.0064
153	SLU 49	-0.03	-0.08	7.65	0	-0.6373	-0.0066
153	SLU 50	-0.03	-0.08	7.6	0	-0.6333	-0.0065
153	SLU 51	-0.03	-0.08	7.6	0	-0.633	-0.0067
153	SLU 52	-0.03	-0.08	8.12	0	-0.6769	-0.0064
153	SLU 53	-0.04	-0.07	8.27	0	-0.689	-0.0061
153	SLU 54	-0.04	-0.08	8.26	0	-0.6887	-0.0063
153	SLU 55	-0.03	-0.08	8.21	0	-0.6843	-0.0065
153	SLU 56	-0.04	-0.07	8.36	0	-0.6964	-0.0062
153	SLU 57	-0.04	-0.08	8.35	0	-0.6961	-0.0064
153	SLU 58	-0.04	-0.08	8.31	0	-0.6921	-0.0063
153	SLU 59	-0.04	-0.08	8.3	0	-0.6919	-0.0065
153	SLU 60	-0.04	-0.07	8.43	0	-0.7026	-0.0061
153	SLU 61	-0.04	-0.07	8.43	0	-0.7023	-0.0062
153	SLU 62	-0.04	-0.07	8.52	0	-0.71	-0.0061
153	SLU 63	-0.04	-0.08	8.52	0	-0.7097	-0.0063
153	SLU 64	-0.03	-0.07	8.04	0	-0.6703	-0.0058
153	SLU 65	-0.03	-0.07	8.04	0	-0.6698	-0.0061
153	SLU 66	-0.03	-0.07	8.18	0	-0.6819	-0.0058
153	SLU 67	-0.03	-0.07	8.18	0	-0.6816	-0.006
153	SLU 68	-0.03	-0.07	8.13	0	-0.6772	-0.0062
153	SLU 69	-0.04	-0.07	8.27	0	-0.6893	-0.0059
153	SLU 70	-0.03	-0.07	8.27	0	-0.689	-0.0061
153	SLU 71	-0.04	-0.07	8.22	0	-0.6851	-0.006
153	SLU 72	-0.03	-0.07	8.22	0	-0.6848	-0.0062
153	SLU 73	-0.04	-0.07	8.74	0	-0.7286	-0.0059
153	SLU 74	-0.04	-0.07	8.89	0	-0.7407	-0.0056
153	SLU 75	-0.04	-0.07	8.89	0	-0.7405	-0.0058
153	SLU 76	-0.04	-0.07	8.83	0	-0.736	-0.006
153	SLU 77	-0.04	-0.07	8.98	0	-0.7481	-0.0057
153	SLU 78	-0.04	-0.07	8.97	0	-0.7479	-0.0059
153	SLU 79	-0.04	-0.07	8.93	0	-0.7439	-0.0058
153	SLU 80	-0.04	-0.07	8.92	0	-0.7436	-0.006
153	SLU 81	-0.04	-0.07	9.05	0	-0.7543	-0.0056
153	SLU 82	-0.04	-0.07	9.05	0	-0.754	-0.0057
153	SLU 83	-0.04	-0.07	9.14	0	-0.7617	-0.0056
153	SLU 84	-0.04	-0.07	9.14	0	-0.7614	-0.0058
153	SLE RA 1	-0.03	-0.06	6.05	0	-0.5042	-0.0046
153	SLE RA 2	-0.02	-0.06	6.05	0	-0.5039	-0.0048
153	SLE RA 3	-0.03	-0.06	6.14	0	-0.512	-0.0046
153	SLE RA 4	-0.02	-0.06	6.14	0	-0.5118	-0.0047
153	SLE RA 5	-0.02	-0.06	6.11	0	-0.5088	-0.0048
153	SLE RA 6	-0.03	-0.06	6.2	0	-0.5169	-0.0046
153	SLE RA 7	-0.03	-0.06	6.2	0	-0.5167	-0.0048
153	SLE RA 8	-0.03	-0.06	6.17	0	-0.5141	-0.0047
153	SLE RA 9	-0.03	-0.06	6.17	0	-0.5139	-0.0048
153	SLE RA 10	-0.03	-0.06	6.52	0	-0.5431	-0.0047

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
153	SLE RA 11	-0.03	-0.05	6.61	0	-0.5512	-0.0045
153	SLE RA 12	-0.03	-0.06	6.61	0	-0.551	-0.0046
153	SLE RA 13	-0.03	-0.06	6.58	0	-0.548	-0.0047
153	SLE RA 14	-0.03	-0.05	6.67	0	-0.5561	-0.0045
153	SLE RA 15	-0.03	-0.06	6.67	0	-0.5559	-0.0046
153	SLE RA 16	-0.03	-0.05	6.64	0	-0.5533	-0.0046
153	SLE RA 17	-0.03	-0.06	6.64	0	-0.5531	-0.0047
153	SLE RA 18	-0.03	-0.05	6.72	0	-0.5602	-0.0044
153	SLE RA 19	-0.03	-0.05	6.72	0	-0.56	-0.0045
153	SLE RA 20	-0.03	-0.05	6.78	0	-0.5652	-0.0045
153	SLE RA 21	-0.03	-0.05	6.78	0	-0.565	-0.0046
153	SLE FR 1	-0.03	-0.06	6.05	0	-0.5042	-0.0046
153	SLE FR 2	-0.02	-0.06	6.05	0	-0.5042	-0.0046
153	SLE FR 3	-0.03	-0.06	6.07	0	-0.5062	-0.0046
153	SLE FR 4	-0.03	-0.05	6.25	0	-0.521	-0.0046
153	SLE FR 5	-0.03	-0.05	6.28	0	-0.523	-0.0046
153	SLE FR 6	-0.03	-0.05	6.39	0	-0.5322	-0.0045
153	SLE QP 1	-0.03	-0.06	6.05	0	-0.5042	-0.0046
153	SLE QP 2	-0.03	-0.05	6.25	0	-0.521	-0.0045
153	SLD 1	0.49	0.06	6.06	0	-0.5049	0.0046
153	SLD 2	0.54	0.07	6.1	0	-0.5079	0.0059
153	SLD 3	0.45	-0.08	5.88	0	-0.4901	-0.0063
153	SLD 4	0.5	-0.06	5.92	0	-0.4932	-0.005
153	SLD 5	0.18	0.17	6.46	0	-0.538	0.0146
153	SLD 6	0.21	0.18	6.48	0	-0.54	0.0154
153	SLD 7	0.05	-0.26	5.87	0	-0.4889	-0.0219
153	SLD 8	0.08	-0.25	5.89	0	-0.4909	-0.021
153	SLD 9	-0.13	0.14	6.61	0	-0.5512	0.012
153	SLD 10	-0.1	0.15	6.64	0	-0.5532	0.0128
153	SLD 11	-0.26	-0.29	6.03	0	-0.5021	-0.0245
153	SLD 12	-0.23	-0.28	6.05	0	-0.5041	-0.0236
153	SLD 13	-0.55	-0.05	6.59	0	-0.5488	-0.0041
153	SLD 14	-0.5	-0.03	6.62	0	-0.5519	-0.0028
153	SLD 15	-0.59	-0.18	6.41	0	-0.5341	-0.015
153	SLD 16	-0.54	-0.16	6.45	0	-0.5372	-0.0137
153	SLV 1	1.17	0.2	5.79	0	-0.4827	0.0165
153	SLV 2	1.3	0.23	5.88	0	-0.4898	0.0195
153	SLV 3	1.08	-0.1	5.39	0	-0.4492	-0.0083
153	SLV 4	1.2	-0.06	5.48	0	-0.4564	-0.0053
153	SLV 5	0.45	0.47	6.71	0	-0.559	0.0389
153	SLV 6	0.53	0.49	6.76	0	-0.5636	0.0408
153	SLV 7	0.15	-0.53	5.37	0	-0.4475	-0.0438
153	SLV 8	0.22	-0.5	5.43	0	-0.4522	-0.0418
153	SLV 9	-0.28	0.39	7.08	0	-0.5899	0.0328
153	SLV 10	-0.2	0.42	7.13	0	-0.5945	0.0347
153	SLV 11	-0.58	-0.6	5.74	0	-0.4784	-0.0499
153	SLV 12	-0.5	-0.58	5.8	0	-0.4831	-0.0479
153	SLV 13	-1.26	-0.05	7.03	0	-0.5856	-0.0038
153	SLV 14	-1.14	-0.01	7.11	0	-0.5928	-0.0008
153	SLV 15	-1.35	-0.34	6.63	0	-0.5522	-0.0286
153	SLV 16	-1.23	-0.31	6.71	0	-0.5594	-0.0256
153	CRTFP Ux+	0	0	0	0	0	0
153	CRTFP Ux-	0	0	0	0	0	0
153	CRTFP Uy+	0	0	0	0	0	0
153	CRTFP Uy-	0	0	0	0	0	0
155	SLU 1	-0.02	-0.06	5.87	0	-0.3913	-0.0043
155	SLU 2	-0.02	-0.07	5.86	0	-0.3909	-0.0046
155	SLU 3	-0.02	-0.07	6.01	0	-0.4006	-0.0044
155	SLU 4	-0.02	-0.07	6	0	-0.4003	-0.0045
155	SLU 5	-0.02	-0.07	5.95	0	-0.3968	-0.0046
155	SLU 6	-0.03	-0.07	6.1	0	-0.4065	-0.0044
155	SLU 7	-0.02	-0.07	6.09	0	-0.4062	-0.0046
155	SLU 8	-0.03	-0.07	6.05	0	-0.4031	-0.0045
155	SLU 9	-0.02	-0.07	6.04	0	-0.4028	-0.0046
155	SLU 10	-0.03	-0.07	6.57	0	-0.4377	-0.0045
155	SLU 11	-0.03	-0.06	6.71	0	-0.4474	-0.0043
155	SLU 12	-0.03	-0.07	6.71	0	-0.4471	-0.0044
155	SLU 13	-0.03	-0.07	6.65	0	-0.4436	-0.0045
155	SLU 14	-0.03	-0.07	6.8	0	-0.4533	-0.0043
155	SLU 15	-0.03	-0.07	6.8	0	-0.453	-0.0045
155	SLU 16	-0.03	-0.07	6.75	0	-0.4499	-0.0044
155	SLU 17	-0.03	-0.07	6.74	0	-0.4496	-0.0045
155	SLU 18	-0.03	-0.06	6.87	0	-0.4581	-0.0042
155	SLU 19	-0.03	-0.07	6.87	0	-0.4579	-0.0043
155	SLU 20	-0.03	-0.06	6.96	0	-0.464	-0.0043
155	SLU 21	-0.03	-0.07	6.96	0	-0.4638	-0.0044
155	SLU 22	-0.03	-0.06	6.49	0	-0.4326	-0.004
155	SLU 23	-0.02	-0.06	6.48	0	-0.4323	-0.0042
155	SLU 24	-0.03	-0.06	6.63	0	-0.4419	-0.004
155	SLU 25	-0.03	-0.06	6.63	0	-0.4417	-0.0042
155	SLU 26	-0.02	-0.06	6.57	0	-0.4382	-0.0043
155	SLU 27	-0.03	-0.06	6.72	0	-0.4478	-0.0041
155	SLU 28	-0.03	-0.06	6.71	0	-0.4476	-0.0042
155	SLU 29	-0.03	-0.06	6.67	0	-0.4444	-0.0041
155	SLU 30	-0.03	-0.06	6.66	0	-0.4442	-0.0043
155	SLU 31	-0.03	-0.06	7.19	0	-0.4791	-0.0041
155	SLU 32	-0.03	-0.06	7.33	0	-0.4888	-0.0039
155	SLU 33	-0.03	-0.06	7.33	0	-0.4885	-0.0041
155	SLU 34	-0.03	-0.06	7.27	0	-0.485	-0.0042
155	SLU 35	-0.03	-0.06	7.42	0	-0.4947	-0.004
155	SLU 36	-0.03	-0.06	7.42	0	-0.4944	-0.0041
155	SLU 37	-0.03	-0.06	7.37	0	-0.4913	-0.0041
155	SLU 38	-0.03	-0.06	7.37	0	-0.491	-0.0042
155	SLU 39	-0.03	-0.06	7.49	0	-0.4995	-0.0039
155	SLU 40	-0.03	-0.06	7.49	0	-0.4993	-0.004
155	SLU 41	-0.04	-0.06	7.58	0	-0.5054	-0.004
155	SLU 42	-0.03	-0.06	7.58	0	-0.5052	-0.0041

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
155	SLU 43	-0.03	-0.09	7.42	0	-0.4944	-0.0057
155	SLU 44	-0.03	-0.09	7.41	0	-0.4941	-0.006
155	SLU 45	-0.03	-0.09	7.56	0	-0.5037	-0.0058
155	SLU 46	-0.03	-0.09	7.55	0	-0.5035	-0.0059
155	SLU 47	-0.03	-0.09	7.5	0	-0.5	-0.006
155	SLU 48	-0.03	-0.09	7.64	0	-0.5096	-0.0058
155	SLU 49	-0.03	-0.09	7.64	0	-0.5094	-0.006
155	SLU 50	-0.03	-0.09	7.59	0	-0.5063	-0.0059
155	SLU 51	-0.03	-0.09	7.59	0	-0.506	-0.006
155	SLU 52	-0.03	-0.09	8.11	0	-0.5409	-0.0059
155	SLU 53	-0.04	-0.09	8.26	0	-0.5506	-0.0057
155	SLU 54	-0.04	-0.09	8.25	0	-0.5503	-0.0058
155	SLU 55	-0.03	-0.09	8.2	0	-0.5468	-0.006
155	SLU 56	-0.04	-0.09	8.35	0	-0.5565	-0.0058
155	SLU 57	-0.04	-0.09	8.34	0	-0.5562	-0.0059
155	SLU 58	-0.04	-0.09	8.3	0	-0.5531	-0.0058
155	SLU 59	-0.04	-0.09	8.29	0	-0.5528	-0.0059
155	SLU 60	-0.04	-0.08	8.42	0	-0.5613	-0.0056
155	SLU 61	-0.04	-0.09	8.42	0	-0.5611	-0.0058
155	SLU 62	-0.04	-0.09	8.51	0	-0.5672	-0.0057
155	SLU 63	-0.04	-0.09	8.5	0	-0.567	-0.0058
155	SLU 64	-0.03	-0.08	8.04	0	-0.5358	-0.0054
155	SLU 65	-0.03	-0.08	8.03	0	-0.5354	-0.0056
155	SLU 66	-0.03	-0.08	8.18	0	-0.5451	-0.0054
155	SLU 67	-0.03	-0.08	8.17	0	-0.5449	-0.0056
155	SLU 68	-0.03	-0.09	8.12	0	-0.5414	-0.0057
155	SLU 69	-0.03	-0.08	8.27	0	-0.551	-0.0055
155	SLU 70	-0.03	-0.08	8.26	0	-0.5508	-0.0056
155	SLU 71	-0.03	-0.08	8.21	0	-0.5476	-0.0056
155	SLU 72	-0.03	-0.09	8.21	0	-0.5474	-0.0057
155	SLU 73	-0.04	-0.08	8.73	0	-0.5823	-0.0056
155	SLU 74	-0.04	-0.08	8.88	0	-0.5919	-0.0053
155	SLU 75	-0.04	-0.08	8.88	0	-0.5917	-0.0055
155	SLU 76	-0.04	-0.08	8.82	0	-0.5882	-0.0056
155	SLU 77	-0.04	-0.08	8.97	0	-0.5978	-0.0054
155	SLU 78	-0.04	-0.08	8.96	0	-0.5976	-0.0056
155	SLU 79	-0.04	-0.08	8.92	0	-0.5944	-0.0055
155	SLU 80	-0.04	-0.08	8.91	0	-0.5942	-0.0056
155	SLU 81	-0.04	-0.08	9.04	0	-0.6027	-0.0053
155	SLU 82	-0.04	-0.08	9.04	0	-0.6025	-0.0054
155	SLU 83	-0.04	-0.08	9.13	0	-0.6086	-0.0054
155	SLU 84	-0.04	-0.08	9.13	0	-0.6084	-0.0055
155	SLE RA 1	-0.02	-0.06	6.05	0	-0.4031	-0.0042
155	SLE RA 2	-0.02	-0.07	6.04	0	-0.4028	-0.0044
155	SLE RA 3	-0.03	-0.06	6.14	0	-0.4093	-0.0042
155	SLE RA 4	-0.02	-0.07	6.14	0	-0.4091	-0.0043
155	SLE RA 5	-0.02	-0.07	6.1	0	-0.4068	-0.0044
155	SLE RA 6	-0.03	-0.06	6.2	0	-0.4132	-0.0043
155	SLE RA 7	-0.02	-0.07	6.2	0	-0.4131	-0.0044
155	SLE RA 8	-0.03	-0.06	6.16	0	-0.411	-0.0043
155	SLE RA 9	-0.02	-0.07	6.16	0	-0.4108	-0.0044
155	SLE RA 10	-0.03	-0.06	6.51	0	-0.434	-0.0043
155	SLE RA 11	-0.03	-0.06	6.61	0	-0.4405	-0.0042
155	SLE RA 12	-0.03	-0.06	6.61	0	-0.4403	-0.0043
155	SLE RA 13	-0.03	-0.07	6.57	0	-0.438	-0.0044
155	SLE RA 14	-0.03	-0.06	6.67	0	-0.4444	-0.0042
155	SLE RA 15	-0.03	-0.07	6.66	0	-0.4443	-0.0043
155	SLE RA 16	-0.03	-0.06	6.63	0	-0.4422	-0.0043
155	SLE RA 17	-0.03	-0.07	6.63	0	-0.442	-0.0044
155	SLE RA 18	-0.03	-0.06	6.71	0	-0.4477	-0.0042
155	SLE RA 19	-0.03	-0.06	6.71	0	-0.4475	-0.0042
155	SLE RA 20	-0.03	-0.06	6.77	0	-0.4516	-0.0042
155	SLE RA 21	-0.03	-0.06	6.77	0	-0.4514	-0.0043
155	SLE FR 1	-0.02	-0.06	6.05	0	-0.4031	-0.0042
155	SLE FR 2	-0.02	-0.06	6.05	0	-0.403	-0.0043
155	SLE FR 3	-0.02	-0.06	6.07	0	-0.4047	-0.0042
155	SLE FR 4	-0.03	-0.06	6.25	0	-0.4164	-0.0042
155	SLE FR 5	-0.03	-0.06	6.27	0	-0.418	-0.0042
155	SLE FR 6	-0.03	-0.06	6.38	0	-0.4254	-0.0042
155	SLE QP 1	-0.02	-0.06	6.05	0	-0.4031	-0.0042
155	SLE QP 2	-0.03	-0.06	6.25	0	-0.4165	-0.0042
155	SLD 1	0.48	0.05	6	0	-0.4002	0.0034
155	SLD 2	0.54	0.07	6.04	0	-0.4028	0.0045
155	SLD 3	0.45	-0.08	5.82	0	-0.3883	-0.0052
155	SLD 4	0.5	-0.06	5.86	0	-0.3908	-0.0041
155	SLD 5	0.18	0.16	6.44	0	-0.4292	0.011
155	SLD 6	0.21	0.18	6.46	0	-0.4309	0.0117
155	SLD 7	0.05	-0.27	5.84	0	-0.3895	-0.0178
155	SLD 8	0.08	-0.26	5.87	0	-0.3911	-0.0171
155	SLD 9	-0.13	0.13	6.63	0	-0.4418	0.0086
155	SLD 10	-0.1	0.14	6.65	0	-0.4435	0.0094
155	SLD 11	-0.26	-0.3	6.03	0	-0.402	-0.0201
155	SLD 12	-0.23	-0.29	6.06	0	-0.4037	-0.0194
155	SLD 13	-0.55	-0.06	6.63	0	-0.4421	-0.0043
155	SLD 14	-0.5	-0.05	6.67	0	-0.4447	-0.0032
155	SLD 15	-0.59	-0.19	6.45	0	-0.4302	-0.013
155	SLD 16	-0.54	-0.18	6.49	0	-0.4327	-0.0118
155	SLV 1	1.17	0.2	5.67	0	-0.378	0.0133
155	SLV 2	1.29	0.24	5.76	0	-0.384	0.0159
155	SLV 3	1.08	-0.09	5.26	0	-0.3509	-0.0063
155	SLV 4	1.2	-0.05	5.35	0	-0.3569	-0.0036
155	SLV 5	0.45	0.45	6.67	0	-0.445	0.0303
155	SLV 6	0.53	0.48	6.73	0	-0.4488	0.032
155	SLV 7	0.15	-0.53	5.32	0	-0.3547	-0.035
155	SLV 8	0.22	-0.5	5.38	0	-0.3585	-0.0333
155	SLV 9	-0.28	0.37	7.12	0	-0.4744	0.0249
155	SLV 10	-0.2	0.4	7.17	0	-0.4783	0.0266

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
155	SLV 11	-0.58	-0.61	5.76	0	-0.3841	-0.0404
155	SLV 12	-0.5	-0.58	5.82	0	-0.3879	-0.0387
155	SLV 13	-1.25	-0.07	7.14	0	-0.4761	-0.0048
155	SLV 14	-1.13	-0.03	7.23	0	-0.4821	-0.0021
155	SLV 15	-1.34	-0.37	6.73	0	-0.449	-0.0244
155	SLV 16	-1.22	-0.33	6.82	0	-0.455	-0.0217
155	CRTFP Ux+	0	0	0	0	0	0
155	CRTFP Ux-	0	0	0	0	0	0
157	SLU 1	-0.02	-0.07	5.78	0	-0.2892	-0.0036
157	SLU 2	-0.02	-0.08	5.78	0	-0.2889	-0.0038
157	SLU 3	-0.02	-0.07	5.92	0	-0.296	-0.0036
157	SLU 4	-0.02	-0.07	5.92	0	-0.2958	-0.0037
157	SLU 5	-0.02	-0.08	5.86	0	-0.2932	-0.0038
157	SLU 6	-0.02	-0.07	6.01	0	-0.3004	-0.0037
157	SLU 7	-0.02	-0.08	6	0	-0.3002	-0.0038
157	SLU 8	-0.02	-0.07	5.96	0	-0.2979	-0.0037
157	SLU 9	-0.02	-0.08	5.95	0	-0.2977	-0.0038
157	SLU 10	-0.03	-0.08	6.47	0	-0.3233	-0.0038
157	SLU 11	-0.03	-0.07	6.61	0	-0.3305	-0.0036
157	SLU 12	-0.03	-0.07	6.61	0	-0.3303	-0.0037
157	SLU 13	-0.03	-0.08	6.55	0	-0.3277	-0.0038
157	SLU 14	-0.03	-0.07	6.7	0	-0.3348	-0.0037
157	SLU 15	-0.03	-0.08	6.69	0	-0.3347	-0.0038
157	SLU 16	-0.03	-0.07	6.65	0	-0.3323	-0.0037
157	SLU 17	-0.03	-0.08	6.64	0	-0.3322	-0.0038
157	SLU 18	-0.03	-0.07	6.77	0	-0.3384	-0.0036
157	SLU 19	-0.03	-0.07	6.76	0	-0.3382	-0.0037
157	SLU 20	-0.03	-0.07	6.86	0	-0.3428	-0.0037
157	SLU 21	-0.03	-0.07	6.85	0	-0.3426	-0.0037
157	SLU 22	-0.03	-0.07	6.4	0	-0.3198	-0.0034
157	SLU 23	-0.02	-0.07	6.39	0	-0.3195	-0.0036
157	SLU 24	-0.03	-0.07	6.53	0	-0.3266	-0.0034
157	SLU 25	-0.02	-0.07	6.53	0	-0.3265	-0.0035
157	SLU 26	-0.02	-0.07	6.48	0	-0.3239	-0.0036
157	SLU 27	-0.03	-0.07	6.62	0	-0.331	-0.0035
157	SLU 28	-0.03	-0.07	6.62	0	-0.3308	-0.0036
157	SLU 29	-0.03	-0.07	6.57	0	-0.3285	-0.0035
157	SLU 30	-0.03	-0.07	6.57	0	-0.3283	-0.0036
157	SLU 31	-0.03	-0.07	7.08	0	-0.354	-0.0036
157	SLU 32	-0.03	-0.07	7.22	0	-0.3611	-0.0034
157	SLU 33	-0.03	-0.07	7.22	0	-0.3609	-0.0035
157	SLU 34	-0.03	-0.07	7.17	0	-0.3583	-0.0036
157	SLU 35	-0.03	-0.07	7.31	0	-0.3655	-0.0035
157	SLU 36	-0.03	-0.07	7.31	0	-0.3653	-0.0036
157	SLU 37	-0.03	-0.07	7.26	0	-0.363	-0.0035
157	SLU 38	-0.03	-0.07	7.26	0	-0.3628	-0.0036
157	SLU 39	-0.03	-0.07	7.38	0	-0.369	-0.0034
157	SLU 40	-0.03	-0.07	7.38	0	-0.3689	-0.0035
157	SLU 41	-0.03	-0.07	7.47	0	-0.3734	-0.0035
157	SLU 42	-0.03	-0.07	7.46	0	-0.3732	-0.0036
157	SLU 43	-0.03	-0.09	7.31	0	-0.3654	-0.0047
157	SLU 44	-0.03	-0.1	7.3	0	-0.3651	-0.0049
157	SLU 45	-0.03	-0.1	7.45	0	-0.3723	-0.0048
157	SLU 46	-0.03	-0.1	7.44	0	-0.3721	-0.0049
157	SLU 47	-0.03	-0.1	7.39	0	-0.3695	-0.005
157	SLU 48	-0.03	-0.1	7.53	0	-0.3766	-0.0048
157	SLU 49	-0.03	-0.1	7.53	0	-0.3764	-0.0049
157	SLU 50	-0.03	-0.1	7.48	0	-0.3741	-0.0049
157	SLU 51	-0.03	-0.1	7.48	0	-0.3739	-0.005
157	SLU 52	-0.03	-0.1	7.99	0	-0.3996	-0.0049
157	SLU 53	-0.04	-0.1	8.13	0	-0.4067	-0.0048
157	SLU 54	-0.03	-0.1	8.13	0	-0.4066	-0.0049
157	SLU 55	-0.03	-0.1	8.08	0	-0.404	-0.005
157	SLU 56	-0.04	-0.1	8.22	0	-0.4111	-0.0048
157	SLU 57	-0.04	-0.1	8.22	0	-0.4109	-0.0049
157	SLU 58	-0.04	-0.1	8.17	0	-0.4086	-0.0049
157	SLU 59	-0.03	-0.1	8.17	0	-0.4084	-0.005
157	SLU 60	-0.04	-0.09	8.29	0	-0.4147	-0.0047
157	SLU 61	-0.04	-0.1	8.29	0	-0.4145	-0.0048
157	SLU 62	-0.04	-0.1	8.38	0	-0.419	-0.0048
157	SLU 63	-0.04	-0.1	8.38	0	-0.4188	-0.0049
157	SLU 64	-0.03	-0.09	7.92	0	-0.396	-0.0045
157	SLU 65	-0.03	-0.09	7.91	0	-0.3957	-0.0047
157	SLU 66	-0.03	-0.09	8.06	0	-0.4029	-0.0046
157	SLU 67	-0.03	-0.09	8.05	0	-0.4027	-0.0047
157	SLU 68	-0.03	-0.1	8	0	-0.4001	-0.0048
157	SLU 69	-0.03	-0.09	8.14	0	-0.4072	-0.0046
157	SLU 70	-0.03	-0.09	8.14	0	-0.4071	-0.0047
157	SLU 71	-0.03	-0.09	8.09	0	-0.4047	-0.0047
157	SLU 72	-0.03	-0.1	8.09	0	-0.4046	-0.0048
157	SLU 73	-0.03	-0.09	8.6	0	-0.4302	-0.0047
157	SLU 74	-0.04	-0.09	8.75	0	-0.4374	-0.0046
157	SLU 75	-0.04	-0.09	8.74	0	-0.4372	-0.0047
157	SLU 76	-0.04	-0.1	8.69	0	-0.4346	-0.0048
157	SLU 77	-0.04	-0.09	8.83	0	-0.4417	-0.0046
157	SLU 78	-0.04	-0.09	8.83	0	-0.4415	-0.0047
157	SLU 79	-0.04	-0.09	8.78	0	-0.4392	-0.0047
157	SLU 80	-0.04	-0.1	8.78	0	-0.439	-0.0048
157	SLU 81	-0.04	-0.09	8.91	0	-0.4453	-0.0045
157	SLU 82	-0.04	-0.09	8.9	0	-0.4451	-0.0046
157	SLU 83	-0.04	-0.09	8.99	0	-0.4496	-0.0046
157	SLU 84	-0.04	-0.09	8.99	0	-0.4495	-0.0047
157	SLE RA 1	-0.02	-0.07	5.96	0	-0.2979	-0.0035
157	SLE RA 2	-0.02	-0.07	5.95	0	-0.2977	-0.0037
157	SLE RA 3	-0.02	-0.07	6.05	0	-0.3025	-0.0036
157	SLE RA 4	-0.02	-0.07	6.05	0	-0.3024	-0.0036
157	SLE RA 5	-0.02	-0.07	6.01	0	-0.3006	-0.0037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
157	SLE RA 6	-0.02	-0.07	6.11	0	-0.3054	-0.0036
157	SLE RA 7	-0.02	-0.07	6.11	0	-0.3053	-0.0037
157	SLE RA 8	-0.02	-0.07	6.07	0	-0.3037	-0.0036
157	SLE RA 9	-0.02	-0.07	6.07	0	-0.3036	-0.0037
157	SLE RA 10	-0.03	-0.07	6.41	0	-0.3207	-0.0036
157	SLE RA 11	-0.03	-0.07	6.51	0	-0.3255	-0.0036
157	SLE RA 12	-0.03	-0.07	6.51	0	-0.3253	-0.0036
157	SLE RA 13	-0.03	-0.07	6.47	0	-0.3236	-0.0037
157	SLE RA 14	-0.03	-0.07	6.57	0	-0.3284	-0.0036
157	SLE RA 15	-0.03	-0.07	6.57	0	-0.3283	-0.0037
157	SLE RA 16	-0.03	-0.07	6.53	0	-0.3267	-0.0036
157	SLE RA 17	-0.03	-0.07	6.53	0	-0.3266	-0.0037
157	SLE RA 18	-0.03	-0.07	6.61	0	-0.3307	-0.0035
157	SLE RA 19	-0.03	-0.07	6.61	0	-0.3306	-0.0036
157	SLE RA 20	-0.03	-0.07	6.67	0	-0.3336	-0.0036
157	SLE RA 21	-0.03	-0.07	6.67	0	-0.3335	-0.0036
157	SLE FR 1	-0.02	-0.07	5.96	0	-0.2979	-0.0035
157	SLE FR 2	-0.02	-0.07	5.96	0	-0.2979	-0.0036
157	SLE FR 3	-0.02	-0.07	5.98	0	-0.2991	-0.0036
157	SLE FR 4	-0.02	-0.07	6.15	0	-0.3077	-0.0036
157	SLE FR 5	-0.03	-0.07	6.18	0	-0.3089	-0.0036
157	SLE FR 6	-0.03	-0.07	6.29	0	-0.3143	-0.0035
157	SLE QP 1	-0.02	-0.07	5.96	0	-0.2979	-0.0035
157	SLE QP 2	-0.03	-0.07	6.16	0	-0.3078	-0.0035
157	SLD 1	0.47	0.05	5.86	0	-0.2932	0.0023
157	SLD 2	0.53	0.06	5.9	0	-0.2952	0.0032
157	SLD 3	0.44	-0.08	5.68	0	-0.2842	-0.004
157	SLD 4	0.49	-0.06	5.72	0	-0.2862	-0.0031
157	SLD 5	0.17	0.15	6.33	0	-0.3166	0.0076
157	SLD 6	0.21	0.16	6.36	0	-0.3179	0.0082
157	SLD 7	0.05	-0.27	5.74	0	-0.2868	-0.0134
157	SLD 8	0.08	-0.26	5.76	0	-0.2881	-0.0128
157	SLD 9	-0.13	0.11	6.55	0	-0.3274	0.0057
157	SLD 10	-0.1	0.13	6.57	0	-0.3287	0.0063
157	SLD 11	-0.26	-0.31	5.95	0	-0.2976	-0.0153
157	SLD 12	-0.22	-0.29	5.98	0	-0.2989	-0.0147
157	SLD 13	-0.54	-0.08	6.59	0	-0.3293	-0.004
157	SLD 14	-0.49	-0.06	6.63	0	-0.3313	-0.003
157	SLD 15	-0.58	-0.21	6.41	0	-0.3203	-0.0103
157	SLD 16	-0.53	-0.19	6.45	0	-0.3223	-0.0093
157	SLV 1	1.14	0.2	5.47	0	-0.2734	0.0098
157	SLV 2	1.26	0.24	5.56	0	-0.278	0.012
157	SLV 3	1.06	-0.09	5.06	0	-0.253	-0.0045
157	SLV 4	1.17	-0.05	5.15	0	-0.2577	-0.0023
157	SLV 5	0.44	0.44	6.55	0	-0.3275	0.0218
157	SLV 6	0.52	0.46	6.61	0	-0.3305	0.0232
157	SLV 7	0.14	-0.52	5.19	0	-0.2597	-0.0259
157	SLV 8	0.22	-0.49	5.25	0	-0.2627	-0.0244
157	SLV 9	-0.27	0.35	7.06	0	-0.3528	0.0174
157	SLV 10	-0.19	0.38	7.12	0	-0.3558	0.0188
157	SLV 11	-0.57	-0.6	5.7	0	-0.285	-0.0302
157	SLV 12	-0.49	-0.58	5.76	0	-0.288	-0.0288
157	SLV 13	-1.22	-0.1	7.16	0	-0.3579	-0.0048
157	SLV 14	-1.11	-0.05	7.25	0	-0.3625	-0.0026
157	SLV 15	-1.31	-0.38	6.75	0	-0.3375	-0.0191
157	SLV 16	-1.19	-0.34	6.84	0	-0.3421	-0.0169
157	CRTFP Ux+	0	0	0	0	0	0
157	CRTFP Ux-	0	0	0	0	0	0
159	SLU 1	-0.02	-0.08	5.65	0	0	0
159	SLU 2	-0.02	-0.08	5.65	0	0	0
159	SLU 3	-0.02	-0.08	5.79	0	0	0
159	SLU 4	-0.02	-0.08	5.78	0	0	0
159	SLU 5	-0.02	-0.08	5.73	0	0	0
159	SLU 6	-0.02	-0.08	5.87	0	0	0
159	SLU 7	-0.02	-0.08	5.87	0	0	0
159	SLU 8	-0.02	-0.08	5.82	0	0	0
159	SLU 9	-0.02	-0.08	5.82	0	0	0
159	SLU 10	-0.03	-0.08	6.32	0	0	0
159	SLU 11	-0.03	-0.08	6.46	0	0	0
159	SLU 12	-0.03	-0.08	6.46	0	0	0
159	SLU 13	-0.03	-0.08	6.4	0	0	0
159	SLU 14	-0.03	-0.08	6.54	0	0	0
159	SLU 15	-0.03	-0.08	6.54	0	0	0
159	SLU 16	-0.03	-0.08	6.5	0	0	0
159	SLU 17	-0.03	-0.08	6.49	0	0	0
159	SLU 18	-0.03	-0.08	6.61	0	0	0
159	SLU 19	-0.03	-0.08	6.61	0	0	0
159	SLU 20	-0.03	-0.08	6.7	0	0	0
159	SLU 21	-0.03	-0.08	6.7	0	0	0
159	SLU 22	-0.02	-0.07	6.25	0	0	0
159	SLU 23	-0.02	-0.08	6.25	0	0	0
159	SLU 24	-0.03	-0.08	6.39	0	0	0
159	SLU 25	-0.02	-0.08	6.38	0	0	0
159	SLU 26	-0.02	-0.08	6.33	0	0	0
159	SLU 27	-0.03	-0.08	6.47	0	0	0
159	SLU 28	-0.02	-0.08	6.47	0	0	0
159	SLU 29	-0.03	-0.08	6.42	0	0	0
159	SLU 30	-0.02	-0.08	6.42	0	0	0
159	SLU 31	-0.03	-0.08	6.92	0	0	0
159	SLU 32	-0.03	-0.08	7.06	0	0	0
159	SLU 33	-0.03	-0.08	7.06	0	0	0
159	SLU 34	-0.03	-0.08	7	0	0	0
159	SLU 35	-0.03	-0.08	7.14	0	0	0
159	SLU 36	-0.03	-0.08	7.14	0	0	0
159	SLU 37	-0.03	-0.08	7.1	0	0	0
159	SLU 38	-0.03	-0.08	7.09	0	0	0
159	SLU 39	-0.03	-0.08	7.21	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
159	SLU 40	-0.03	-0.08	7.21	0	0	0
159	SLU 41	-0.03	-0.08	7.3	0	0	0
159	SLU 42	-0.03	-0.08	7.29	0	0	0
159	SLU 43	-0.03	-0.1	7.14	0	0	0
159	SLU 44	-0.03	-0.1	7.14	0	0	0
159	SLU 45	-0.03	-0.1	7.28	0	0	0
159	SLU 46	-0.03	-0.1	7.27	0	0	0
159	SLU 47	-0.03	-0.11	7.22	0	0	0
159	SLU 48	-0.03	-0.1	7.36	0	0	0
159	SLU 49	-0.03	-0.11	7.36	0	0	0
159	SLU 50	-0.03	-0.1	7.31	0	0	0
159	SLU 51	-0.03	-0.11	7.31	0	0	0
159	SLU 52	-0.03	-0.11	7.81	0	0	0
159	SLU 53	-0.03	-0.1	7.95	0	0	0
159	SLU 54	-0.03	-0.11	7.95	0	0	0
159	SLU 55	-0.03	-0.11	7.89	0	0	0
159	SLU 56	-0.04	-0.1	8.03	0	0	0
159	SLU 57	-0.03	-0.11	8.03	0	0	0
159	SLU 58	-0.04	-0.11	7.99	0	0	0
159	SLU 59	-0.03	-0.11	7.98	0	0	0
159	SLU 60	-0.04	-0.1	8.1	0	0	0
159	SLU 61	-0.03	-0.1	8.1	0	0	0
159	SLU 62	-0.04	-0.1	8.19	0	0	0
159	SLU 63	-0.04	-0.11	8.19	0	0	0
159	SLU 64	-0.03	-0.1	7.74	0	0	0
159	SLU 65	-0.03	-0.1	7.74	0	0	0
159	SLU 66	-0.03	-0.1	7.88	0	0	0
159	SLU 67	-0.03	-0.1	7.87	0	0	0
159	SLU 68	-0.03	-0.1	7.82	0	0	0
159	SLU 69	-0.03	-0.1	7.96	0	0	0
159	SLU 70	-0.03	-0.1	7.96	0	0	0
159	SLU 71	-0.03	-0.1	7.91	0	0	0
159	SLU 72	-0.03	-0.1	7.91	0	0	0
159	SLU 73	-0.03	-0.1	8.41	0	0	0
159	SLU 74	-0.04	-0.1	8.55	0	0	0
159	SLU 75	-0.04	-0.1	8.55	0	0	0
159	SLU 76	-0.03	-0.1	8.49	0	0	0
159	SLU 77	-0.04	-0.1	8.63	0	0	0
159	SLU 78	-0.04	-0.1	8.63	0	0	0
159	SLU 79	-0.04	-0.1	8.59	0	0	0
159	SLU 80	-0.04	-0.1	8.58	0	0	0
159	SLU 81	-0.04	-0.1	8.7	0	0	0
159	SLU 82	-0.04	-0.1	8.7	0	0	0
159	SLU 83	-0.04	-0.1	8.79	0	0	0
159	SLU 84	-0.04	-0.1	8.78	0	0	0
159	SLE RA 1	-0.02	-0.08	5.82	0	0	0
159	SLE RA 2	-0.02	-0.08	5.82	0	0	0
159	SLE RA 3	-0.02	-0.08	5.91	0	0	0
159	SLE RA 4	-0.02	-0.08	5.91	0	0	0
159	SLE RA 5	-0.02	-0.08	5.88	0	0	0
159	SLE RA 6	-0.02	-0.08	5.97	0	0	0
159	SLE RA 7	-0.02	-0.08	5.97	0	0	0
159	SLE RA 8	-0.02	-0.08	5.94	0	0	0
159	SLE RA 9	-0.02	-0.08	5.94	0	0	0
159	SLE RA 10	-0.02	-0.08	6.27	0	0	0
159	SLE RA 11	-0.03	-0.08	6.36	0	0	0
159	SLE RA 12	-0.03	-0.08	6.36	0	0	0
159	SLE RA 13	-0.03	-0.08	6.33	0	0	0
159	SLE RA 14	-0.03	-0.08	6.42	0	0	0
159	SLE RA 15	-0.03	-0.08	6.42	0	0	0
159	SLE RA 16	-0.03	-0.08	6.39	0	0	0
159	SLE RA 17	-0.03	-0.08	6.38	0	0	0
159	SLE RA 18	-0.03	-0.08	6.46	0	0	0
159	SLE RA 19	-0.03	-0.08	6.46	0	0	0
159	SLE RA 20	-0.03	-0.08	6.52	0	0	0
159	SLE RA 21	-0.03	-0.08	6.52	0	0	0
159	SLE FR 1	-0.02	-0.08	5.82	0	0	0
159	SLE FR 2	-0.02	-0.08	5.82	0	0	0
159	SLE FR 3	-0.02	-0.08	5.85	0	0	0
159	SLE FR 4	-0.02	-0.08	6.02	0	0	0
159	SLE FR 5	-0.02	-0.08	6.04	0	0	0
159	SLE FR 6	-0.03	-0.08	6.14	0	0	0
159	SLE QP 1	-0.02	-0.08	5.82	0	0	0
159	SLE QP 2	-0.02	-0.08	6.02	0	0	0
159	SLD 1	0.46	0.04	5.69	0	0	0
159	SLD 2	0.51	0.06	5.73	0	0	0
159	SLD 3	0.42	-0.08	5.51	0	0	0
159	SLD 4	0.47	-0.06	5.55	0	0	0
159	SLD 5	0.17	0.14	6.18	0	0	0
159	SLD 6	0.2	0.15	6.21	0	0	0
159	SLD 7	0.05	-0.27	5.59	0	0	0
159	SLD 8	0.08	-0.25	5.61	0	0	0
159	SLD 9	-0.13	0.1	6.42	0	0	0
159	SLD 10	-0.09	0.11	6.44	0	0	0
159	SLD 11	-0.25	-0.31	5.83	0	0	0
159	SLD 12	-0.22	-0.29	5.85	0	0	0
159	SLD 13	-0.52	-0.09	6.48	0	0	0
159	SLD 14	-0.47	-0.07	6.52	0	0	0
159	SLD 15	-0.56	-0.21	6.31	0	0	0
159	SLD 16	-0.51	-0.19	6.35	0	0	0
159	SLV 1	1.11	0.19	5.24	0	0	0
159	SLV 2	1.23	0.24	5.33	0	0	0
159	SLV 3	1.03	-0.08	4.83	0	0	0
159	SLV 4	1.14	-0.04	4.93	0	0	0
159	SLV 5	0.43	0.41	6.38	0	0	0
159	SLV 6	0.5	0.44	6.44	0	0	0
159	SLV 7	0.14	-0.51	5.03	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
159	SLV 8	0.21	-0.48	5.09	0	0	0
159	SLV 9	-0.26	0.32	6.94	0	0	0
159	SLV 10	-0.19	0.35	7	0	0	0
159	SLV 11	-0.55	-0.6	5.59	0	0	0
159	SLV 12	-0.48	-0.57	5.65	0	0	0
159	SLV 13	-1.19	-0.12	7.1	0	0	0
159	SLV 14	-1.07	-0.07	7.2	0	0	0
159	SLV 15	-1.28	-0.39	6.7	0	0	0
159	SLV 16	-1.16	-0.35	6.79	0	0	0
160	SLU 1	-0.02	-0.09	5.98	0	0	0
160	SLU 2	-0.02	-0.09	5.97	0	0	0
160	SLU 3	-0.02	-0.09	6.12	0	0	0
160	SLU 4	-0.02	-0.09	6.12	0	0	0
160	SLU 5	-0.02	-0.1	6.06	0	0	0
160	SLU 6	-0.03	-0.09	6.21	0	0	0
160	SLU 7	-0.02	-0.1	6.21	0	0	0
160	SLU 8	-0.03	-0.09	6.16	0	0	0
160	SLU 9	-0.02	-0.1	6.15	0	0	0
160	SLU 10	-0.03	-0.1	6.68	0	0	0
160	SLU 11	-0.03	-0.09	6.83	0	0	0
160	SLU 12	-0.03	-0.1	6.83	0	0	0
160	SLU 13	-0.03	-0.1	6.77	0	0	0
160	SLU 14	-0.03	-0.1	6.92	0	0	0
160	SLU 15	-0.03	-0.1	6.92	0	0	0
160	SLU 16	-0.03	-0.1	6.87	0	0	0
160	SLU 17	-0.03	-0.1	6.86	0	0	0
160	SLU 18	-0.03	-0.09	6.99	0	0	0
160	SLU 19	-0.03	-0.1	6.99	0	0	0
160	SLU 20	-0.03	-0.1	7.08	0	0	0
160	SLU 21	-0.03	-0.1	7.08	0	0	0
160	SLU 22	-0.03	-0.09	6.61	0	0	0
160	SLU 23	-0.02	-0.09	6.61	0	0	0
160	SLU 24	-0.03	-0.09	6.76	0	0	0
160	SLU 25	-0.03	-0.09	6.75	0	0	0
160	SLU 26	-0.02	-0.09	6.7	0	0	0
160	SLU 27	-0.03	-0.09	6.85	0	0	0
160	SLU 28	-0.03	-0.09	6.84	0	0	0
160	SLU 29	-0.03	-0.09	6.79	0	0	0
160	SLU 30	-0.03	-0.09	6.79	0	0	0
160	SLU 31	-0.03	-0.09	7.32	0	0	0
160	SLU 32	-0.03	-0.09	7.47	0	0	0
160	SLU 33	-0.03	-0.09	7.46	0	0	0
160	SLU 34	-0.03	-0.1	7.41	0	0	0
160	SLU 35	-0.03	-0.09	7.56	0	0	0
160	SLU 36	-0.03	-0.1	7.55	0	0	0
160	SLU 37	-0.03	-0.09	7.5	0	0	0
160	SLU 38	-0.03	-0.1	7.5	0	0	0
160	SLU 39	-0.03	-0.09	7.63	0	0	0
160	SLU 40	-0.03	-0.09	7.62	0	0	0
160	SLU 41	-0.03	-0.09	7.72	0	0	0
160	SLU 42	-0.03	-0.1	7.71	0	0	0
160	SLU 43	-0.03	-0.12	7.55	0	0	0
160	SLU 44	-0.03	-0.12	7.55	0	0	0
160	SLU 45	-0.03	-0.12	7.7	0	0	0
160	SLU 46	-0.03	-0.12	7.69	0	0	0
160	SLU 47	-0.03	-0.12	7.64	0	0	0
160	SLU 48	-0.03	-0.12	7.79	0	0	0
160	SLU 49	-0.03	-0.12	7.78	0	0	0
160	SLU 50	-0.03	-0.12	7.73	0	0	0
160	SLU 51	-0.03	-0.12	7.73	0	0	0
160	SLU 52	-0.03	-0.12	8.26	0	0	0
160	SLU 53	-0.04	-0.12	8.4	0	0	0
160	SLU 54	-0.04	-0.12	8.4	0	0	0
160	SLU 55	-0.03	-0.13	8.35	0	0	0
160	SLU 56	-0.04	-0.12	8.49	0	0	0
160	SLU 57	-0.04	-0.13	8.49	0	0	0
160	SLU 58	-0.04	-0.12	8.44	0	0	0
160	SLU 59	-0.04	-0.13	8.44	0	0	0
160	SLU 60	-0.04	-0.12	8.57	0	0	0
160	SLU 61	-0.04	-0.12	8.56	0	0	0
160	SLU 62	-0.04	-0.12	8.66	0	0	0
160	SLU 63	-0.04	-0.13	8.65	0	0	0
160	SLU 64	-0.03	-0.12	8.19	0	0	0
160	SLU 65	-0.03	-0.12	8.18	0	0	0
160	SLU 66	-0.03	-0.12	8.33	0	0	0
160	SLU 67	-0.03	-0.12	8.33	0	0	0
160	SLU 68	-0.03	-0.12	8.27	0	0	0
160	SLU 69	-0.03	-0.12	8.42	0	0	0
160	SLU 70	-0.03	-0.12	8.42	0	0	0
160	SLU 71	-0.03	-0.12	8.37	0	0	0
160	SLU 72	-0.03	-0.12	8.37	0	0	0
160	SLU 73	-0.04	-0.12	8.89	0	0	0
160	SLU 74	-0.04	-0.12	9.04	0	0	0
160	SLU 75	-0.04	-0.12	9.04	0	0	0
160	SLU 76	-0.04	-0.12	8.98	0	0	0
160	SLU 77	-0.04	-0.12	9.13	0	0	0
160	SLU 78	-0.04	-0.12	9.13	0	0	0
160	SLU 79	-0.04	-0.12	9.08	0	0	0
160	SLU 80	-0.04	-0.12	9.08	0	0	0
160	SLU 81	-0.04	-0.12	9.2	0	0	0
160	SLU 82	-0.04	-0.12	9.2	0	0	0
160	SLU 83	-0.04	-0.12	9.29	0	0	0
160	SLU 84	-0.04	-0.12	9.29	0	0	0
160	SLE RA 1	-0.02	-0.09	6.16	0	0	0
160	SLE RA 2	-0.02	-0.09	6.16	0	0	0
160	SLE RA 3	-0.02	-0.09	6.25	0	0	0
160	SLE RA 4	-0.02	-0.09	6.25	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
160	SLE RA 5	-0.02	-0.09	6.22	0	0	0
160	SLE RA 6	-0.03	-0.09	6.31	0	0	0
160	SLE RA 7	-0.02	-0.09	6.31	0	0	0
160	SLE RA 8	-0.03	-0.09	6.28	0	0	0
160	SLE RA 9	-0.02	-0.09	6.28	0	0	0
160	SLE RA 10	-0.03	-0.09	6.63	0	0	0
160	SLE RA 11	-0.03	-0.09	6.73	0	0	0
160	SLE RA 12	-0.03	-0.09	6.73	0	0	0
160	SLE RA 13	-0.03	-0.1	6.69	0	0	0
160	SLE RA 14	-0.03	-0.09	6.79	0	0	0
160	SLE RA 15	-0.03	-0.1	6.79	0	0	0
160	SLE RA 16	-0.03	-0.09	6.75	0	0	0
160	SLE RA 17	-0.03	-0.1	6.75	0	0	0
160	SLE RA 18	-0.03	-0.09	6.84	0	0	0
160	SLE RA 19	-0.03	-0.09	6.83	0	0	0
160	SLE RA 20	-0.03	-0.09	6.9	0	0	0
160	SLE RA 21	-0.03	-0.09	6.89	0	0	0
160	SLE FR 1	-0.02	-0.09	6.16	0	0	0
160	SLE FR 2	-0.02	-0.09	6.16	0	0	0
160	SLE FR 3	-0.02	-0.09	6.18	0	0	0
160	SLE FR 4	-0.03	-0.09	6.36	0	0	0
160	SLE FR 5	-0.03	-0.09	6.39	0	0	0
160	SLE FR 6	-0.03	-0.09	6.5	0	0	0
160	SLE QP 1	-0.02	-0.09	6.16	0	0	0
160	SLE QP 2	-0.03	-0.09	6.36	0	0	0
160	SLD 1	0.48	0.04	5.96	0	0	0
160	SLD 2	0.54	0.06	6	0	0	0
160	SLD 3	0.45	-0.09	5.77	0	0	0
160	SLD 4	0.5	-0.07	5.81	0	0	0
160	SLD 5	0.18	0.13	6.52	0	0	0
160	SLD 6	0.21	0.15	6.55	0	0	0
160	SLD 7	0.05	-0.29	5.89	0	0	0
160	SLD 8	0.08	-0.27	5.92	0	0	0
160	SLD 9	-0.13	0.09	6.81	0	0	0
160	SLD 10	-0.1	0.1	6.84	0	0	0
160	SLD 11	-0.26	-0.33	6.17	0	0	0
160	SLD 12	-0.23	-0.32	6.2	0	0	0
160	SLD 13	-0.55	-0.12	6.91	0	0	0
160	SLD 14	-0.5	-0.09	6.96	0	0	0
160	SLD 15	-0.59	-0.24	6.72	0	0	0
160	SLD 16	-0.54	-0.22	6.77	0	0	0
160	SLV 1	1.17	0.2	5.41	0	0	0
160	SLV 2	1.29	0.26	5.52	0	0	0
160	SLV 3	1.08	-0.08	4.98	0	0	0
160	SLV 4	1.2	-0.03	5.08	0	0	0
160	SLV 5	0.45	0.42	6.72	0	0	0
160	SLV 6	0.53	0.46	6.79	0	0	0
160	SLV 7	0.15	-0.53	5.27	0	0	0
160	SLV 8	0.22	-0.5	5.34	0	0	0
160	SLV 9	-0.28	0.32	7.39	0	0	0
160	SLV 10	-0.2	0.35	7.46	0	0	0
160	SLV 11	-0.58	-0.64	5.94	0	0	0
160	SLV 12	-0.5	-0.61	6.01	0	0	0
160	SLV 13	-1.25	-0.15	7.64	0	0	0
160	SLV 14	-1.13	-0.1	7.75	0	0	0
160	SLV 15	-1.34	-0.44	7.21	0	0	0
160	SLV 16	-1.22	-0.39	7.31	0	0	0
161	SLU 1	-0.01	-0.05	3.08	0	0	0
161	SLU 2	-0.01	-0.05	3.08	0	0	0
161	SLU 3	-0.01	-0.05	3.15	0	0	0
161	SLU 4	-0.01	-0.05	3.15	0	0	0
161	SLU 5	-0.01	-0.05	3.12	0	0	0
161	SLU 6	-0.01	-0.05	3.2	0	0	0
161	SLU 7	-0.01	-0.06	3.2	0	0	0
161	SLU 8	-0.01	-0.05	3.17	0	0	0
161	SLU 9	-0.01	-0.06	3.17	0	0	0
161	SLU 10	-0.01	-0.06	3.44	0	0	0
161	SLU 11	-0.02	-0.05	3.52	0	0	0
161	SLU 12	-0.01	-0.06	3.52	0	0	0
161	SLU 13	-0.01	-0.06	3.49	0	0	0
161	SLU 14	-0.02	-0.06	3.57	0	0	0
161	SLU 15	-0.02	-0.06	3.56	0	0	0
161	SLU 16	-0.02	-0.06	3.54	0	0	0
161	SLU 17	-0.02	-0.06	3.54	0	0	0
161	SLU 18	-0.02	-0.05	3.6	0	0	0
161	SLU 19	-0.02	-0.06	3.6	0	0	0
161	SLU 20	-0.02	-0.06	3.65	0	0	0
161	SLU 21	-0.02	-0.06	3.65	0	0	0
161	SLU 22	-0.01	-0.05	3.41	0	0	0
161	SLU 23	-0.01	-0.05	3.41	0	0	0
161	SLU 24	-0.01	-0.05	3.48	0	0	0
161	SLU 25	-0.01	-0.05	3.48	0	0	0
161	SLU 26	-0.01	-0.05	3.45	0	0	0
161	SLU 27	-0.01	-0.05	3.53	0	0	0
161	SLU 28	-0.01	-0.05	3.53	0	0	0
161	SLU 29	-0.01	-0.05	3.5	0	0	0
161	SLU 30	-0.01	-0.05	3.5	0	0	0
161	SLU 31	-0.01	-0.06	3.77	0	0	0
161	SLU 32	-0.02	-0.05	3.85	0	0	0
161	SLU 33	-0.02	-0.06	3.85	0	0	0
161	SLU 34	-0.02	-0.06	3.82	0	0	0
161	SLU 35	-0.02	-0.06	3.9	0	0	0
161	SLU 36	-0.02	-0.06	3.89	0	0	0
161	SLU 37	-0.02	-0.06	3.87	0	0	0
161	SLU 38	-0.02	-0.06	3.87	0	0	0
161	SLU 39	-0.02	-0.05	3.93	0	0	0
161	SLU 40	-0.02	-0.06	3.93	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
161	SLU 41	-0.02	-0.06	3.98	0	0	0
161	SLU 42	-0.02	-0.06	3.98	0	0	0
161	SLU 43	-0.02	-0.07	3.89	0	0	0
161	SLU 44	-0.01	-0.07	3.89	0	0	0
161	SLU 45	-0.02	-0.07	3.97	0	0	0
161	SLU 46	-0.01	-0.07	3.96	0	0	0
161	SLU 47	-0.01	-0.07	3.94	0	0	0
161	SLU 48	-0.02	-0.07	4.01	0	0	0
161	SLU 49	-0.02	-0.07	4.01	0	0	0
161	SLU 50	-0.02	-0.07	3.99	0	0	0
161	SLU 51	-0.02	-0.07	3.98	0	0	0
161	SLU 52	-0.02	-0.07	4.26	0	0	0
161	SLU 53	-0.02	-0.07	4.33	0	0	0
161	SLU 54	-0.02	-0.07	4.33	0	0	0
161	SLU 55	-0.02	-0.07	4.3	0	0	0
161	SLU 56	-0.02	-0.07	4.38	0	0	0
161	SLU 57	-0.02	-0.07	4.38	0	0	0
161	SLU 58	-0.02	-0.07	4.35	0	0	0
161	SLU 59	-0.02	-0.07	4.35	0	0	0
161	SLU 60	-0.02	-0.07	4.41	0	0	0
161	SLU 61	-0.02	-0.07	4.41	0	0	0
161	SLU 62	-0.02	-0.07	4.46	0	0	0
161	SLU 63	-0.02	-0.07	4.46	0	0	0
161	SLU 64	-0.02	-0.07	4.22	0	0	0
161	SLU 65	-0.01	-0.07	4.22	0	0	0
161	SLU 66	-0.02	-0.07	4.3	0	0	0
161	SLU 67	-0.02	-0.07	4.29	0	0	0
161	SLU 68	-0.02	-0.07	4.27	0	0	0
161	SLU 69	-0.02	-0.07	4.34	0	0	0
161	SLU 70	-0.02	-0.07	4.34	0	0	0
161	SLU 71	-0.02	-0.07	4.31	0	0	0
161	SLU 72	-0.02	-0.07	4.31	0	0	0
161	SLU 73	-0.02	-0.07	4.58	0	0	0
161	SLU 74	-0.02	-0.07	4.66	0	0	0
161	SLU 75	-0.02	-0.07	4.66	0	0	0
161	SLU 76	-0.02	-0.07	4.63	0	0	0
161	SLU 77	-0.02	-0.07	4.71	0	0	0
161	SLU 78	-0.02	-0.07	4.71	0	0	0
161	SLU 79	-0.02	-0.07	4.68	0	0	0
161	SLU 80	-0.02	-0.07	4.68	0	0	0
161	SLU 81	-0.02	-0.07	4.74	0	0	0
161	SLU 82	-0.02	-0.07	4.74	0	0	0
161	SLU 83	-0.02	-0.07	4.79	0	0	0
161	SLU 84	-0.02	-0.07	4.79	0	0	0
161	SLE RA 1	-0.01	-0.05	3.18	0	0	0
161	SLE RA 2	-0.01	-0.05	3.17	0	0	0
161	SLE RA 3	-0.01	-0.05	3.22	0	0	0
161	SLE RA 4	-0.01	-0.05	3.22	0	0	0
161	SLE RA 5	-0.01	-0.05	3.2	0	0	0
161	SLE RA 6	-0.01	-0.05	3.26	0	0	0
161	SLE RA 7	-0.01	-0.05	3.25	0	0	0
161	SLE RA 8	-0.01	-0.05	3.24	0	0	0
161	SLE RA 9	-0.01	-0.05	3.24	0	0	0
161	SLE RA 10	-0.01	-0.05	3.42	0	0	0
161	SLE RA 11	-0.01	-0.05	3.47	0	0	0
161	SLE RA 12	-0.01	-0.05	3.47	0	0	0
161	SLE RA 13	-0.01	-0.05	3.45	0	0	0
161	SLE RA 14	-0.01	-0.05	3.5	0	0	0
161	SLE RA 15	-0.01	-0.06	3.5	0	0	0
161	SLE RA 16	-0.01	-0.05	3.48	0	0	0
161	SLE RA 17	-0.01	-0.06	3.48	0	0	0
161	SLE RA 18	-0.02	-0.05	3.52	0	0	0
161	SLE RA 19	-0.01	-0.05	3.52	0	0	0
161	SLE RA 20	-0.02	-0.05	3.55	0	0	0
161	SLE RA 21	-0.01	-0.06	3.55	0	0	0
161	SLE FR 1	-0.01	-0.05	3.18	0	0	0
161	SLE FR 2	-0.01	-0.05	3.18	0	0	0
161	SLE FR 3	-0.01	-0.05	3.19	0	0	0
161	SLE FR 4	-0.01	-0.05	3.28	0	0	0
161	SLE FR 5	-0.01	-0.05	3.29	0	0	0
161	SLE FR 6	-0.01	-0.05	3.35	0	0	0
161	SLE QP 1	-0.01	-0.05	3.18	0	0	0
161	SLE QP 2	-0.01	-0.05	3.28	0	0	0
161	SLD 1	0.25	0.02	3.04	0	0	0
161	SLD 2	0.27	0.03	3.07	0	0	0
161	SLD 3	0.23	-0.05	2.94	0	0	0
161	SLD 4	0.25	-0.03	2.97	0	0	0
161	SLD 5	0.09	0.06	3.36	0	0	0
161	SLD 6	0.11	0.07	3.37	0	0	0
161	SLD 7	0.02	-0.15	3.02	0	0	0
161	SLD 8	0.04	-0.14	3.04	0	0	0
161	SLD 9	-0.07	0.04	3.52	0	0	0
161	SLD 10	-0.05	0.05	3.54	0	0	0
161	SLD 11	-0.13	-0.18	3.19	0	0	0
161	SLD 12	-0.12	-0.17	3.2	0	0	0
161	SLD 13	-0.28	-0.07	3.59	0	0	0
161	SLD 14	-0.25	-0.06	3.62	0	0	0
161	SLD 15	-0.3	-0.13	3.49	0	0	0
161	SLD 16	-0.27	-0.12	3.52	0	0	0
161	SLV 1	0.6	0.11	2.73	0	0	0
161	SLV 2	0.66	0.14	2.78	0	0	0
161	SLV 3	0.55	-0.04	2.5	0	0	0
161	SLV 4	0.61	-0.01	2.55	0	0	0
161	SLV 5	0.23	0.21	3.45	0	0	0
161	SLV 6	0.27	0.23	3.49	0	0	0
161	SLV 7	0.07	-0.27	2.69	0	0	0
161	SLV 8	0.11	-0.26	2.73	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
161	SLV 9	-0.14	0.15	3.83	0	0	0
161	SLV 10	-0.1	0.17	3.87	0	0	0
161	SLV 11	-0.3	-0.34	3.07	0	0	0
161	SLV 12	-0.26	-0.32	3.11	0	0	0
161	SLV 13	-0.64	-0.1	4.01	0	0	0
161	SLV 14	-0.58	-0.07	4.06	0	0	0
161	SLV 15	-0.68	-0.24	3.78	0	0	0
161	SLV 16	-0.62	-0.21	3.83	0	0	0
170	SLU 1	-0.1	-0.29	13.56	0	0	0
170	SLU 2	-0.09	-0.3	13.54	0	0	0
170	SLU 3	-0.1	-0.29	13.88	0	0	0
170	SLU 4	-0.1	-0.3	13.87	0	0	0
170	SLU 5	-0.1	-0.3	13.74	0	0	0
170	SLU 6	-0.1	-0.3	14.08	0	0	0
170	SLU 7	-0.1	-0.3	14.07	0	0	0
170	SLU 8	-0.1	-0.3	13.97	0	0	0
170	SLU 9	-0.1	-0.3	13.96	0	0	0
170	SLU 10	-0.09	-0.32	15.13	0	0	0
170	SLU 11	-0.1	-0.31	15.46	0	0	0
170	SLU 12	-0.1	-0.32	15.45	0	0	0
170	SLU 13	-0.1	-0.32	15.33	0	0	0
170	SLU 14	-0.11	-0.31	15.67	0	0	0
170	SLU 15	-0.1	-0.32	15.66	0	0	0
170	SLU 16	-0.11	-0.31	15.55	0	0	0
170	SLU 17	-0.1	-0.32	15.54	0	0	0
170	SLU 18	-0.1	-0.31	15.82	0	0	0
170	SLU 19	-0.1	-0.32	15.81	0	0	0
170	SLU 20	-0.1	-0.32	16.03	0	0	0
170	SLU 21	-0.1	-0.32	16.02	0	0	0
170	SLU 22	-0.11	-0.29	14.99	0	0	0
170	SLU 23	-0.11	-0.31	14.98	0	0	0
170	SLU 24	-0.11	-0.3	15.31	0	0	0
170	SLU 25	-0.11	-0.3	15.3	0	0	0
170	SLU 26	-0.11	-0.31	15.18	0	0	0
170	SLU 27	-0.12	-0.3	15.52	0	0	0
170	SLU 28	-0.11	-0.31	15.51	0	0	0
170	SLU 29	-0.12	-0.3	15.4	0	0	0
170	SLU 30	-0.11	-0.31	15.39	0	0	0
170	SLU 31	-0.11	-0.32	16.56	0	0	0
170	SLU 32	-0.11	-0.31	16.9	0	0	0
170	SLU 33	-0.11	-0.32	16.89	0	0	0
170	SLU 34	-0.11	-0.33	16.77	0	0	0
170	SLU 35	-0.12	-0.32	17.11	0	0	0
170	SLU 36	-0.11	-0.33	17.1	0	0	0
170	SLU 37	-0.12	-0.32	16.99	0	0	0
170	SLU 38	-0.11	-0.33	16.98	0	0	0
170	SLU 39	-0.11	-0.32	17.26	0	0	0
170	SLU 40	-0.11	-0.33	17.25	0	0	0
170	SLU 41	-0.12	-0.32	17.47	0	0	0
170	SLU 42	-0.11	-0.33	17.46	0	0	0
170	SLU 43	-0.12	-0.37	17.13	0	0	0
170	SLU 44	-0.12	-0.38	17.11	0	0	0
170	SLU 45	-0.13	-0.38	17.45	0	0	0
170	SLU 46	-0.12	-0.38	17.44	0	0	0
170	SLU 47	-0.12	-0.39	17.32	0	0	0
170	SLU 48	-0.13	-0.38	17.65	0	0	0
170	SLU 49	-0.13	-0.39	17.64	0	0	0
170	SLU 50	-0.13	-0.38	17.54	0	0	0
170	SLU 51	-0.13	-0.39	17.53	0	0	0
170	SLU 52	-0.12	-0.4	18.7	0	0	0
170	SLU 53	-0.13	-0.39	19.04	0	0	0
170	SLU 54	-0.12	-0.4	19.03	0	0	0
170	SLU 55	-0.12	-0.41	18.91	0	0	0
170	SLU 56	-0.13	-0.4	19.24	0	0	0
170	SLU 57	-0.13	-0.41	19.23	0	0	0
170	SLU 58	-0.13	-0.4	19.13	0	0	0
170	SLU 59	-0.13	-0.41	19.12	0	0	0
170	SLU 60	-0.13	-0.4	19.4	0	0	0
170	SLU 61	-0.12	-0.41	19.39	0	0	0
170	SLU 62	-0.13	-0.4	19.6	0	0	0
170	SLU 63	-0.13	-0.41	19.59	0	0	0
170	SLU 64	-0.14	-0.38	18.57	0	0	0
170	SLU 65	-0.13	-0.39	18.55	0	0	0
170	SLU 66	-0.14	-0.38	18.89	0	0	0
170	SLU 67	-0.14	-0.39	18.88	0	0	0
170	SLU 68	-0.13	-0.39	18.76	0	0	0
170	SLU 69	-0.14	-0.39	19.09	0	0	0
170	SLU 70	-0.14	-0.39	19.08	0	0	0
170	SLU 71	-0.14	-0.38	18.98	0	0	0
170	SLU 72	-0.14	-0.39	18.97	0	0	0
170	SLU 73	-0.13	-0.41	20.14	0	0	0
170	SLU 74	-0.14	-0.4	20.48	0	0	0
170	SLU 75	-0.14	-0.41	20.47	0	0	0
170	SLU 76	-0.13	-0.41	20.34	0	0	0
170	SLU 77	-0.14	-0.4	20.68	0	0	0
170	SLU 78	-0.14	-0.41	20.67	0	0	0
170	SLU 79	-0.14	-0.4	20.56	0	0	0
170	SLU 80	-0.14	-0.41	20.55	0	0	0
170	SLU 81	-0.14	-0.4	20.84	0	0	0
170	SLU 82	-0.14	-0.41	20.83	0	0	0
170	SLU 83	-0.14	-0.41	21.04	0	0	0
170	SLU 84	-0.14	-0.41	21.03	0	0	0
170	SLE RA 1	-0.1	-0.29	13.97	0	0	0
170	SLE RA 2	-0.1	-0.3	13.96	0	0	0
170	SLE RA 3	-0.1	-0.29	14.18	0	0	0
170	SLE RA 4	-0.1	-0.3	14.17	0	0	0
170	SLE RA 5	-0.1	-0.3	14.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
170	SLE RA 6	-0.11	-0.29	14.32	0	0	0
170	SLE RA 7	-0.1	-0.3	14.31	0	0	0
170	SLE RA 8	-0.11	-0.29	14.24	0	0	0
170	SLE RA 9	-0.1	-0.3	14.23	0	0	0
170	SLE RA 10	-0.1	-0.31	15.01	0	0	0
170	SLE RA 11	-0.1	-0.3	15.24	0	0	0
170	SLE RA 12	-0.1	-0.31	15.23	0	0	0
170	SLE RA 13	-0.1	-0.31	15.15	0	0	0
170	SLE RA 14	-0.11	-0.31	15.38	0	0	0
170	SLE RA 15	-0.1	-0.31	15.37	0	0	0
170	SLE RA 16	-0.11	-0.31	15.3	0	0	0
170	SLE RA 17	-0.1	-0.31	15.29	0	0	0
170	SLE RA 18	-0.1	-0.31	15.48	0	0	0
170	SLE RA 19	-0.1	-0.31	15.47	0	0	0
170	SLE RA 20	-0.11	-0.31	15.62	0	0	0
170	SLE RA 21	-0.1	-0.31	15.61	0	0	0
170	SLE FR 1	-0.1	-0.29	13.97	0	0	0
170	SLE FR 2	-0.1	-0.29	13.96	0	0	0
170	SLE FR 3	-0.1	-0.29	14.02	0	0	0
170	SLE FR 4	-0.1	-0.3	14.42	0	0	0
170	SLE FR 5	-0.1	-0.3	14.48	0	0	0
170	SLE FR 6	-0.1	-0.3	14.72	0	0	0
170	SLE QP 1	-0.1	-0.29	13.97	0	0	0
170	SLE QP 2	-0.1	-0.29	14.42	0	0	0
170	SLD 1	1.05	-0.26	15.54	0	0	0
170	SLD 2	1.16	-0.31	15.5	0	0	0
170	SLD 3	0.96	-0.56	15.2	0	0	0
170	SLD 4	1.08	-0.62	15.16	0	0	0
170	SLD 5	0.35	0.2	15.27	0	0	0
170	SLD 6	0.43	0.16	15.24	0	0	0
170	SLD 7	0.07	-0.84	14.16	0	0	0
170	SLD 8	0.14	-0.87	14.13	0	0	0
170	SLD 9	-0.35	0.28	14.71	0	0	0
170	SLD 10	-0.27	0.25	14.69	0	0	0
170	SLD 11	-0.63	-0.75	13.6	0	0	0
170	SLD 12	-0.56	-0.78	13.57	0	0	0
170	SLD 13	-1.28	0.03	13.68	0	0	0
170	SLD 14	-1.17	-0.02	13.64	0	0	0
170	SLD 15	-1.37	-0.28	13.35	0	0	0
170	SLD 16	-1.25	-0.33	13.31	0	0	0
170	SLV 1	2.59	-0.21	17.02	0	0	0
170	SLV 2	2.85	-0.33	16.92	0	0	0
170	SLV 3	2.39	-0.92	16.26	0	0	0
170	SLV 4	2.65	-1.03	16.17	0	0	0
170	SLV 5	0.96	0.81	16.36	0	0	0
170	SLV 6	1.13	0.74	16.3	0	0	0
170	SLV 7	0.29	-1.52	13.84	0	0	0
170	SLV 8	0.46	-1.6	13.78	0	0	0
170	SLV 9	-0.67	1.01	15.06	0	0	0
170	SLV 10	-0.5	0.93	15	0	0	0
170	SLV 11	-1.34	-1.32	12.54	0	0	0
170	SLV 12	-1.17	-1.4	12.48	0	0	0
170	SLV 13	-2.86	0.45	12.67	0	0	0
170	SLV 14	-2.59	0.33	12.58	0	0	0
170	SLV 15	-3.06	-0.25	11.92	0	0	0
170	SLV 16	-2.79	-0.37	11.82	0	0	0
170	CRTFP Ux+	0	0	0	0	0	0
170	CRTFP Ux-	0	0	0	0	0	0
171	SLU 1	-0.09	-0.23	12.72	0	0	0
171	SLU 2	-0.09	-0.25	12.7	0	0	0
171	SLU 3	-0.1	-0.24	13.02	0	0	0
171	SLU 4	-0.09	-0.24	13.01	0	0	0
171	SLU 5	-0.09	-0.25	12.9	0	0	0
171	SLU 6	-0.1	-0.24	13.21	0	0	0
171	SLU 7	-0.09	-0.25	13.2	0	0	0
171	SLU 8	-0.1	-0.24	13.1	0	0	0
171	SLU 9	-0.09	-0.25	13.09	0	0	0
171	SLU 10	-0.09	-0.26	14.2	0	0	0
171	SLU 11	-0.1	-0.25	14.52	0	0	0
171	SLU 12	-0.09	-0.26	14.51	0	0	0
171	SLU 13	-0.09	-0.26	14.39	0	0	0
171	SLU 14	-0.1	-0.25	14.71	0	0	0
171	SLU 15	-0.1	-0.26	14.7	0	0	0
171	SLU 16	-0.1	-0.25	14.6	0	0	0
171	SLU 17	-0.1	-0.26	14.59	0	0	0
171	SLU 18	-0.1	-0.25	14.86	0	0	0
171	SLU 19	-0.09	-0.26	14.85	0	0	0
171	SLU 20	-0.1	-0.26	15.05	0	0	0
171	SLU 21	-0.09	-0.26	15.04	0	0	0
171	SLU 22	-0.1	-0.23	14.07	0	0	0
171	SLU 23	-0.1	-0.25	14.05	0	0	0
171	SLU 24	-0.11	-0.24	14.37	0	0	0
171	SLU 25	-0.1	-0.24	14.36	0	0	0
171	SLU 26	-0.1	-0.25	14.24	0	0	0
171	SLU 27	-0.11	-0.24	14.56	0	0	0
171	SLU 28	-0.11	-0.25	14.55	0	0	0
171	SLU 29	-0.11	-0.24	14.45	0	0	0
171	SLU 30	-0.11	-0.25	14.44	0	0	0
171	SLU 31	-0.1	-0.26	15.55	0	0	0
171	SLU 32	-0.11	-0.25	15.86	0	0	0
171	SLU 33	-0.11	-0.26	15.85	0	0	0
171	SLU 34	-0.1	-0.26	15.74	0	0	0
171	SLU 35	-0.11	-0.25	16.05	0	0	0
171	SLU 36	-0.11	-0.26	16.04	0	0	0
171	SLU 37	-0.11	-0.25	15.94	0	0	0
171	SLU 38	-0.11	-0.26	15.94	0	0	0
171	SLU 39	-0.11	-0.25	16.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
171	SLU 40	-0.1	-0.26	16.19	0	0	0
171	SLU 41	-0.11	-0.26	16.39	0	0	0
171	SLU 42	-0.11	-0.26	16.38	0	0	0
171	SLU 43	-0.12	-0.31	16.08	0	0	0
171	SLU 44	-0.11	-0.32	16.06	0	0	0
171	SLU 45	-0.12	-0.31	16.38	0	0	0
171	SLU 46	-0.12	-0.32	16.37	0	0	0
171	SLU 47	-0.11	-0.32	16.25	0	0	0
171	SLU 48	-0.12	-0.31	16.57	0	0	0
171	SLU 49	-0.12	-0.32	16.56	0	0	0
171	SLU 50	-0.12	-0.31	16.46	0	0	0
171	SLU 51	-0.12	-0.32	16.45	0	0	0
171	SLU 52	-0.11	-0.33	17.55	0	0	0
171	SLU 53	-0.12	-0.32	17.87	0	0	0
171	SLU 54	-0.12	-0.33	17.86	0	0	0
171	SLU 55	-0.12	-0.33	17.75	0	0	0
171	SLU 56	-0.12	-0.32	18.06	0	0	0
171	SLU 57	-0.12	-0.33	18.05	0	0	0
171	SLU 58	-0.12	-0.32	17.95	0	0	0
171	SLU 59	-0.12	-0.33	17.94	0	0	0
171	SLU 60	-0.12	-0.32	18.21	0	0	0
171	SLU 61	-0.12	-0.33	18.2	0	0	0
171	SLU 62	-0.12	-0.33	18.4	0	0	0
171	SLU 63	-0.12	-0.33	18.39	0	0	0
171	SLU 64	-0.13	-0.31	17.42	0	0	0
171	SLU 65	-0.12	-0.32	17.41	0	0	0
171	SLU 66	-0.13	-0.31	17.72	0	0	0
171	SLU 67	-0.13	-0.32	17.71	0	0	0
171	SLU 68	-0.13	-0.32	17.6	0	0	0
171	SLU 69	-0.13	-0.31	17.91	0	0	0
171	SLU 70	-0.13	-0.32	17.9	0	0	0
171	SLU 71	-0.13	-0.31	17.8	0	0	0
171	SLU 72	-0.13	-0.32	17.8	0	0	0
171	SLU 73	-0.12	-0.33	18.9	0	0	0
171	SLU 74	-0.13	-0.32	19.22	0	0	0
171	SLU 75	-0.13	-0.33	19.21	0	0	0
171	SLU 76	-0.13	-0.33	19.09	0	0	0
171	SLU 77	-0.13	-0.32	19.41	0	0	0
171	SLU 78	-0.13	-0.33	19.4	0	0	0
171	SLU 79	-0.13	-0.32	19.3	0	0	0
171	SLU 80	-0.13	-0.33	19.29	0	0	0
171	SLU 81	-0.13	-0.32	19.56	0	0	0
171	SLU 82	-0.13	-0.33	19.55	0	0	0
171	SLU 83	-0.13	-0.33	19.75	0	0	0
171	SLU 84	-0.13	-0.33	19.74	0	0	0
171	SLE RA 1	-0.1	-0.23	13.1	0	0	0
171	SLE RA 2	-0.09	-0.24	13.09	0	0	0
171	SLE RA 3	-0.1	-0.24	13.31	0	0	0
171	SLE RA 4	-0.1	-0.24	13.3	0	0	0
171	SLE RA 5	-0.09	-0.24	13.22	0	0	0
171	SLE RA 6	-0.1	-0.24	13.43	0	0	0
171	SLE RA 7	-0.1	-0.24	13.43	0	0	0
171	SLE RA 8	-0.1	-0.24	13.36	0	0	0
171	SLE RA 9	-0.1	-0.24	13.35	0	0	0
171	SLE RA 10	-0.09	-0.25	14.09	0	0	0
171	SLE RA 11	-0.1	-0.25	14.3	0	0	0
171	SLE RA 12	-0.1	-0.25	14.3	0	0	0
171	SLE RA 13	-0.1	-0.25	14.22	0	0	0
171	SLE RA 14	-0.1	-0.25	14.43	0	0	0
171	SLE RA 15	-0.1	-0.25	14.42	0	0	0
171	SLE RA 16	-0.1	-0.25	14.36	0	0	0
171	SLE RA 17	-0.1	-0.25	14.35	0	0	0
171	SLE RA 18	-0.1	-0.25	14.53	0	0	0
171	SLE RA 19	-0.1	-0.25	14.52	0	0	0
171	SLE RA 20	-0.1	-0.25	14.66	0	0	0
171	SLE RA 21	-0.1	-0.25	14.65	0	0	0
171	SLE FR 1	-0.1	-0.23	13.1	0	0	0
171	SLE FR 2	-0.1	-0.24	13.1	0	0	0
171	SLE FR 3	-0.1	-0.24	13.16	0	0	0
171	SLE FR 4	-0.1	-0.24	13.53	0	0	0
171	SLE FR 5	-0.1	-0.24	13.58	0	0	0
171	SLE FR 6	-0.1	-0.24	13.82	0	0	0
171	SLE QP 1	-0.1	-0.23	13.1	0	0	0
171	SLE QP 2	-0.1	-0.24	13.53	0	0	0
171	SLD 1	1	-0.18	14.44	0	0	0
171	SLD 2	1.11	-0.22	14.41	0	0	0
171	SLD 3	0.92	-0.48	14.13	0	0	0
171	SLD 4	1.02	-0.52	14.1	0	0	0
171	SLD 5	0.34	0.24	14.28	0	0	0
171	SLD 6	0.41	0.21	14.26	0	0	0
171	SLD 7	0.06	-0.75	13.25	0	0	0
171	SLD 8	0.13	-0.78	13.23	0	0	0
171	SLD 9	-0.33	0.3	13.84	0	0	0
171	SLD 10	-0.26	0.27	13.82	0	0	0
171	SLD 11	-0.6	-0.68	12.8	0	0	0
171	SLD 12	-0.53	-0.71	12.78	0	0	0
171	SLD 13	-1.22	0.04	12.96	0	0	0
171	SLD 14	-1.11	0	12.93	0	0	0
171	SLD 15	-1.3	-0.25	12.65	0	0	0
171	SLD 16	-1.19	-0.3	12.62	0	0	0
171	SLV 1	2.47	-0.11	15.65	0	0	0
171	SLV 2	2.72	-0.21	15.57	0	0	0
171	SLV 3	2.28	-0.78	14.95	0	0	0
171	SLV 4	2.53	-0.89	14.87	0	0	0
171	SLV 5	0.92	0.83	15.25	0	0	0
171	SLV 6	1.08	0.77	15.2	0	0	0
171	SLV 7	0.28	-1.4	12.9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
171	SLV 8	0.44	-1.47	12.85	0	0	0
171	SLV 9	-0.64	0.99	14.21	0	0	0
171	SLV 10	-0.48	0.93	14.16	0	0	0
171	SLV 11	-1.28	-1.25	11.87	0	0	0
171	SLV 12	-1.11	-1.31	11.81	0	0	0
171	SLV 13	-2.72	0.41	12.19	0	0	0
171	SLV 14	-2.47	0.31	12.11	0	0	0
171	SLV 15	-2.91	-0.26	11.49	0	0	0
171	SLV 16	-2.66	-0.36	11.41	0	0	0
171	CRTFP Ux+	0	0	0	0	0	0
171	CRTFP Ux-	0	0	0	0	0	0
172	SLU 1	-0.09	-0.2	12.65	0	0	0
172	SLU 2	-0.09	-0.21	12.64	0	0	0
172	SLU 3	-0.1	-0.2	12.95	0	0	0
172	SLU 4	-0.09	-0.21	12.94	0	0	0
172	SLU 5	-0.09	-0.21	12.83	0	0	0
172	SLU 6	-0.1	-0.2	13.15	0	0	0
172	SLU 7	-0.09	-0.21	13.14	0	0	0
172	SLU 8	-0.1	-0.2	13.04	0	0	0
172	SLU 9	-0.09	-0.21	13.03	0	0	0
172	SLU 10	-0.09	-0.22	14.13	0	0	0
172	SLU 11	-0.1	-0.21	14.45	0	0	0
172	SLU 12	-0.09	-0.22	14.44	0	0	0
172	SLU 13	-0.09	-0.22	14.32	0	0	0
172	SLU 14	-0.1	-0.21	14.64	0	0	0
172	SLU 15	-0.1	-0.22	14.63	0	0	0
172	SLU 16	-0.1	-0.21	14.53	0	0	0
172	SLU 17	-0.1	-0.22	14.52	0	0	0
172	SLU 18	-0.1	-0.21	14.79	0	0	0
172	SLU 19	-0.09	-0.22	14.78	0	0	0
172	SLU 20	-0.1	-0.21	14.98	0	0	0
172	SLU 21	-0.09	-0.22	14.97	0	0	0
172	SLU 22	-0.1	-0.19	13.99	0	0	0
172	SLU 23	-0.1	-0.21	13.98	0	0	0
172	SLU 24	-0.11	-0.2	14.29	0	0	0
172	SLU 25	-0.1	-0.2	14.28	0	0	0
172	SLU 26	-0.1	-0.21	14.17	0	0	0
172	SLU 27	-0.11	-0.2	14.48	0	0	0
172	SLU 28	-0.11	-0.21	14.47	0	0	0
172	SLU 29	-0.11	-0.2	14.37	0	0	0
172	SLU 30	-0.11	-0.21	14.36	0	0	0
172	SLU 31	-0.1	-0.22	15.47	0	0	0
172	SLU 32	-0.11	-0.21	15.79	0	0	0
172	SLU 33	-0.1	-0.21	15.78	0	0	0
172	SLU 34	-0.1	-0.22	15.66	0	0	0
172	SLU 35	-0.11	-0.21	15.98	0	0	0
172	SLU 36	-0.11	-0.22	15.97	0	0	0
172	SLU 37	-0.11	-0.21	15.87	0	0	0
172	SLU 38	-0.11	-0.22	15.86	0	0	0
172	SLU 39	-0.11	-0.21	16.13	0	0	0
172	SLU 40	-0.1	-0.21	16.12	0	0	0
172	SLU 41	-0.11	-0.21	16.32	0	0	0
172	SLU 42	-0.11	-0.22	16.31	0	0	0
172	SLU 43	-0.12	-0.26	15.99	0	0	0
172	SLU 44	-0.11	-0.27	15.98	0	0	0
172	SLU 45	-0.12	-0.26	16.29	0	0	0
172	SLU 46	-0.12	-0.27	16.28	0	0	0
172	SLU 47	-0.11	-0.28	16.17	0	0	0
172	SLU 48	-0.12	-0.27	16.48	0	0	0
172	SLU 49	-0.12	-0.27	16.47	0	0	0
172	SLU 50	-0.12	-0.27	16.37	0	0	0
172	SLU 51	-0.12	-0.27	16.37	0	0	0
172	SLU 52	-0.11	-0.28	17.47	0	0	0
172	SLU 53	-0.12	-0.27	17.79	0	0	0
172	SLU 54	-0.12	-0.28	17.78	0	0	0
172	SLU 55	-0.12	-0.28	17.66	0	0	0
172	SLU 56	-0.12	-0.27	17.98	0	0	0
172	SLU 57	-0.12	-0.28	17.97	0	0	0
172	SLU 58	-0.12	-0.27	17.87	0	0	0
172	SLU 59	-0.12	-0.28	17.86	0	0	0
172	SLU 60	-0.12	-0.27	18.13	0	0	0
172	SLU 61	-0.12	-0.28	18.12	0	0	0
172	SLU 62	-0.12	-0.28	18.32	0	0	0
172	SLU 63	-0.12	-0.28	18.31	0	0	0
172	SLU 64	-0.13	-0.26	17.33	0	0	0
172	SLU 65	-0.12	-0.27	17.31	0	0	0
172	SLU 66	-0.13	-0.26	17.63	0	0	0
172	SLU 67	-0.13	-0.27	17.62	0	0	0
172	SLU 68	-0.13	-0.27	17.51	0	0	0
172	SLU 69	-0.13	-0.26	17.82	0	0	0
172	SLU 70	-0.13	-0.27	17.81	0	0	0
172	SLU 71	-0.13	-0.26	17.71	0	0	0
172	SLU 72	-0.13	-0.27	17.7	0	0	0
172	SLU 73	-0.12	-0.28	18.81	0	0	0
172	SLU 74	-0.13	-0.27	19.12	0	0	0
172	SLU 75	-0.13	-0.27	19.11	0	0	0
172	SLU 76	-0.13	-0.28	19	0	0	0
172	SLU 77	-0.13	-0.27	19.31	0	0	0
172	SLU 78	-0.13	-0.28	19.3	0	0	0
172	SLU 79	-0.13	-0.27	19.21	0	0	0
172	SLU 80	-0.13	-0.28	19.2	0	0	0
172	SLU 81	-0.13	-0.27	19.46	0	0	0
172	SLU 82	-0.13	-0.28	19.45	0	0	0
172	SLU 83	-0.13	-0.27	19.65	0	0	0
172	SLU 84	-0.13	-0.28	19.65	0	0	0
172	SLE RA 1	-0.1	-0.2	13.04	0	0	0
172	SLE RA 2	-0.09	-0.21	13.03	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
172	SLE RA 3	-0.1	-0.2	13.24	0	0	0
172	SLE RA 4	-0.1	-0.2	13.23	0	0	0
172	SLE RA 5	-0.09	-0.21	13.15	0	0	0
172	SLE RA 6	-0.1	-0.2	13.36	0	0	0
172	SLE RA 7	-0.1	-0.21	13.36	0	0	0
172	SLE RA 8	-0.1	-0.2	13.29	0	0	0
172	SLE RA 9	-0.1	-0.21	13.29	0	0	0
172	SLE RA 10	-0.09	-0.21	14.02	0	0	0
172	SLE RA 11	-0.1	-0.21	14.23	0	0	0
172	SLE RA 12	-0.1	-0.21	14.23	0	0	0
172	SLE RA 13	-0.1	-0.21	14.15	0	0	0
172	SLE RA 14	-0.1	-0.21	14.36	0	0	0
172	SLE RA 15	-0.1	-0.21	14.35	0	0	0
172	SLE RA 16	-0.1	-0.21	14.29	0	0	0
172	SLE RA 17	-0.1	-0.21	14.28	0	0	0
172	SLE RA 18	-0.1	-0.21	14.46	0	0	0
172	SLE RA 19	-0.1	-0.21	14.45	0	0	0
172	SLE RA 20	-0.1	-0.21	14.59	0	0	0
172	SLE RA 21	-0.1	-0.21	14.58	0	0	0
172	SLE FR 1	-0.1	-0.2	13.04	0	0	0
172	SLE FR 2	-0.1	-0.2	13.03	0	0	0
172	SLE FR 3	-0.1	-0.2	13.09	0	0	0
172	SLE FR 4	-0.1	-0.2	13.46	0	0	0
172	SLE FR 5	-0.1	-0.2	13.51	0	0	0
172	SLE FR 6	-0.1	-0.2	13.75	0	0	0
172	SLE QP 1	-0.1	-0.2	13.04	0	0	0
172	SLE QP 2	-0.1	-0.2	13.46	0	0	0
172	SLD 1	1	-0.12	14.24	0	0	0
172	SLD 2	1.11	-0.16	14.21	0	0	0
172	SLD 3	0.92	-0.42	13.93	0	0	0
172	SLD 4	1.03	-0.46	13.9	0	0	0
172	SLD 5	0.34	0.28	14.17	0	0	0
172	SLD 6	0.41	0.26	14.15	0	0	0
172	SLD 7	0.06	-0.72	13.14	0	0	0
172	SLD 8	0.14	-0.74	13.12	0	0	0
172	SLD 9	-0.33	0.34	13.8	0	0	0
172	SLD 10	-0.26	0.31	13.78	0	0	0
172	SLD 11	-0.6	-0.66	12.78	0	0	0
172	SLD 12	-0.53	-0.69	12.76	0	0	0
172	SLD 13	-1.22	0.06	13.03	0	0	0
172	SLD 14	-1.12	0.02	13	0	0	0
172	SLD 15	-1.31	-0.24	12.72	0	0	0
172	SLD 16	-1.2	-0.28	12.69	0	0	0
172	SLV 1	2.48	-0.03	15.26	0	0	0
172	SLV 2	2.73	-0.12	15.19	0	0	0
172	SLV 3	2.29	-0.71	14.57	0	0	0
172	SLV 4	2.54	-0.8	14.5	0	0	0
172	SLV 5	0.92	0.9	15.07	0	0	0
172	SLV 6	1.09	0.84	15.02	0	0	0
172	SLV 7	0.28	-1.37	12.75	0	0	0
172	SLV 8	0.45	-1.43	12.71	0	0	0
172	SLV 9	-0.64	1.02	14.22	0	0	0
172	SLV 10	-0.48	0.97	14.17	0	0	0
172	SLV 11	-1.28	-1.24	11.9	0	0	0
172	SLV 12	-1.12	-1.3	11.86	0	0	0
172	SLV 13	-2.74	0.4	12.43	0	0	0
172	SLV 14	-2.48	0.31	12.36	0	0	0
172	SLV 15	-2.93	-0.28	11.73	0	0	0
172	SLV 16	-2.67	-0.37	11.66	0	0	0
173	SLU 1	-0.09	-0.16	12.6	0	0	0
173	SLU 2	-0.09	-0.18	12.59	0	0	0
173	SLU 3	-0.09	-0.17	12.9	0	0	0
173	SLU 4	-0.09	-0.17	12.89	0	0	0
173	SLU 5	-0.09	-0.18	12.78	0	0	0
173	SLU 6	-0.1	-0.17	13.09	0	0	0
173	SLU 7	-0.09	-0.17	13.08	0	0	0
173	SLU 8	-0.1	-0.17	12.98	0	0	0
173	SLU 9	-0.09	-0.18	12.98	0	0	0
173	SLU 10	-0.09	-0.18	14.08	0	0	0
173	SLU 11	-0.1	-0.17	14.4	0	0	0
173	SLU 12	-0.09	-0.18	14.39	0	0	0
173	SLU 13	-0.09	-0.18	14.28	0	0	0
173	SLU 14	-0.1	-0.17	14.59	0	0	0
173	SLU 15	-0.09	-0.18	14.58	0	0	0
173	SLU 16	-0.1	-0.17	14.48	0	0	0
173	SLU 17	-0.09	-0.18	14.47	0	0	0
173	SLU 18	-0.09	-0.17	14.74	0	0	0
173	SLU 19	-0.09	-0.18	14.73	0	0	0
173	SLU 20	-0.1	-0.17	14.93	0	0	0
173	SLU 21	-0.09	-0.18	14.92	0	0	0
173	SLU 22	-0.1	-0.16	13.94	0	0	0
173	SLU 23	-0.1	-0.17	13.92	0	0	0
173	SLU 24	-0.11	-0.16	14.24	0	0	0
173	SLU 25	-0.1	-0.16	14.23	0	0	0
173	SLU 26	-0.1	-0.17	14.11	0	0	0
173	SLU 27	-0.11	-0.16	14.43	0	0	0
173	SLU 28	-0.1	-0.17	14.42	0	0	0
173	SLU 29	-0.11	-0.16	14.32	0	0	0
173	SLU 30	-0.1	-0.17	14.31	0	0	0
173	SLU 31	-0.1	-0.17	15.42	0	0	0
173	SLU 32	-0.11	-0.16	15.73	0	0	0
173	SLU 33	-0.1	-0.17	15.72	0	0	0
173	SLU 34	-0.1	-0.17	15.61	0	0	0
173	SLU 35	-0.11	-0.16	15.92	0	0	0
173	SLU 36	-0.11	-0.17	15.91	0	0	0
173	SLU 37	-0.11	-0.16	15.81	0	0	0
173	SLU 38	-0.11	-0.17	15.8	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
173	SLU 39	-0.11	-0.16	16.07	0	0	0
173	SLU 40	-0.1	-0.17	16.06	0	0	0
173	SLU 41	-0.11	-0.16	16.26	0	0	0
173	SLU 42	-0.1	-0.17	16.26	0	0	0
173	SLU 43	-0.12	-0.22	15.93	0	0	0
173	SLU 44	-0.11	-0.23	15.91	0	0	0
173	SLU 45	-0.12	-0.22	16.23	0	0	0
173	SLU 46	-0.11	-0.22	16.22	0	0	0
173	SLU 47	-0.11	-0.23	16.1	0	0	0
173	SLU 48	-0.12	-0.22	16.42	0	0	0
173	SLU 49	-0.12	-0.23	16.41	0	0	0
173	SLU 50	-0.12	-0.22	16.31	0	0	0
173	SLU 51	-0.12	-0.23	16.3	0	0	0
173	SLU 52	-0.11	-0.23	17.41	0	0	0
173	SLU 53	-0.12	-0.22	17.72	0	0	0
173	SLU 54	-0.12	-0.23	17.71	0	0	0
173	SLU 55	-0.11	-0.24	17.6	0	0	0
173	SLU 56	-0.12	-0.23	17.91	0	0	0
173	SLU 57	-0.12	-0.23	17.9	0	0	0
173	SLU 58	-0.12	-0.23	17.81	0	0	0
173	SLU 59	-0.12	-0.23	17.8	0	0	0
173	SLU 60	-0.12	-0.22	18.07	0	0	0
173	SLU 61	-0.11	-0.23	18.06	0	0	0
173	SLU 62	-0.12	-0.23	18.26	0	0	0
173	SLU 63	-0.12	-0.23	18.25	0	0	0
173	SLU 64	-0.13	-0.21	17.26	0	0	0
173	SLU 65	-0.12	-0.22	17.24	0	0	0
173	SLU 66	-0.13	-0.21	17.56	0	0	0
173	SLU 67	-0.13	-0.22	17.55	0	0	0
173	SLU 68	-0.12	-0.22	17.44	0	0	0
173	SLU 69	-0.13	-0.21	17.75	0	0	0
173	SLU 70	-0.13	-0.22	17.74	0	0	0
173	SLU 71	-0.13	-0.21	17.64	0	0	0
173	SLU 72	-0.13	-0.22	17.63	0	0	0
173	SLU 73	-0.12	-0.22	18.74	0	0	0
173	SLU 74	-0.13	-0.21	19.06	0	0	0
173	SLU 75	-0.13	-0.22	19.05	0	0	0
173	SLU 76	-0.12	-0.23	18.93	0	0	0
173	SLU 77	-0.13	-0.22	19.25	0	0	0
173	SLU 78	-0.13	-0.22	19.24	0	0	0
173	SLU 79	-0.13	-0.22	19.14	0	0	0
173	SLU 80	-0.13	-0.22	19.13	0	0	0
173	SLU 81	-0.13	-0.22	19.4	0	0	0
173	SLU 82	-0.13	-0.22	19.39	0	0	0
173	SLU 83	-0.13	-0.22	19.59	0	0	0
173	SLU 84	-0.13	-0.22	19.58	0	0	0
173	SLE RA 1	-0.1	-0.16	12.98	0	0	0
173	SLE RA 2	-0.09	-0.17	12.97	0	0	0
173	SLE RA 3	-0.1	-0.16	13.18	0	0	0
173	SLE RA 4	-0.09	-0.17	13.18	0	0	0
173	SLE RA 5	-0.09	-0.17	13.1	0	0	0
173	SLE RA 6	-0.1	-0.16	13.31	0	0	0
173	SLE RA 7	-0.1	-0.17	13.3	0	0	0
173	SLE RA 8	-0.1	-0.16	13.24	0	0	0
173	SLE RA 9	-0.1	-0.17	13.23	0	0	0
173	SLE RA 10	-0.09	-0.17	13.97	0	0	0
173	SLE RA 11	-0.1	-0.17	14.18	0	0	0
173	SLE RA 12	-0.1	-0.17	14.18	0	0	0
173	SLE RA 13	-0.09	-0.17	14.1	0	0	0
173	SLE RA 14	-0.1	-0.17	14.31	0	0	0
173	SLE RA 15	-0.1	-0.17	14.3	0	0	0
173	SLE RA 16	-0.1	-0.17	14.24	0	0	0
173	SLE RA 17	-0.1	-0.17	14.23	0	0	0
173	SLE RA 18	-0.1	-0.17	14.41	0	0	0
173	SLE RA 19	-0.09	-0.17	14.4	0	0	0
173	SLE RA 20	-0.1	-0.17	14.54	0	0	0
173	SLE RA 21	-0.1	-0.17	14.53	0	0	0
173	SLE FR 1	-0.1	-0.16	12.98	0	0	0
173	SLE FR 2	-0.09	-0.16	12.98	0	0	0
173	SLE FR 3	-0.1	-0.16	13.03	0	0	0
173	SLE FR 4	-0.09	-0.17	13.41	0	0	0
173	SLE FR 5	-0.1	-0.16	13.46	0	0	0
173	SLE FR 6	-0.1	-0.16	13.7	0	0	0
173	SLE QP 1	-0.1	-0.16	12.98	0	0	0
173	SLE QP 2	-0.1	-0.16	13.41	0	0	0
173	SLD 1	1.01	-0.07	14.05	0	0	0
173	SLD 2	1.12	-0.1	14.03	0	0	0
173	SLD 3	0.92	-0.37	13.75	0	0	0
173	SLD 4	1.03	-0.4	13.72	0	0	0
173	SLD 5	0.34	0.33	14.07	0	0	0
173	SLD 6	0.41	0.31	14.05	0	0	0
173	SLD 7	0.07	-0.68	13.06	0	0	0
173	SLD 8	0.14	-0.7	13.04	0	0	0
173	SLD 9	-0.33	0.37	13.78	0	0	0
173	SLD 10	-0.26	0.35	13.77	0	0	0
173	SLD 11	-0.6	-0.63	12.77	0	0	0
173	SLD 12	-0.53	-0.66	12.75	0	0	0
173	SLD 13	-1.22	0.08	13.1	0	0	0
173	SLD 14	-1.12	0.04	13.07	0	0	0
173	SLD 15	-1.31	-0.23	12.8	0	0	0
173	SLD 16	-1.2	-0.26	12.77	0	0	0
173	SLV 1	2.48	0.05	14.9	0	0	0
173	SLV 2	2.74	-0.03	14.84	0	0	0
173	SLV 3	2.29	-0.63	14.21	0	0	0
173	SLV 4	2.54	-0.71	14.15	0	0	0
173	SLV 5	0.93	0.95	14.92	0	0	0
173	SLV 6	1.09	0.9	14.88	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
173	SLV 7	0.29	-1.33	12.62	0	0	0
173	SLV 8	0.45	-1.38	12.58	0	0	0
173	SLV 9	-0.64	1.05	14.25	0	0	0
173	SLV 10	-0.48	1	14.21	0	0	0
173	SLV 11	-1.28	-1.23	11.95	0	0	0
173	SLV 12	-1.12	-1.28	11.91	0	0	0
173	SLV 13	-2.74	0.39	12.67	0	0	0
173	SLV 14	-2.48	0.31	12.61	0	0	0
173	SLV 15	-2.93	-0.3	11.98	0	0	0
173	SLV 16	-2.67	-0.38	11.92	0	0	0
174	SLU 1	-0.09	-0.13	12.58	0	0	0
174	SLU 2	-0.09	-0.14	12.56	0	0	0
174	SLU 3	-0.09	-0.13	12.88	0	0	0
174	SLU 4	-0.09	-0.14	12.87	0	0	0
174	SLU 5	-0.09	-0.14	12.76	0	0	0
174	SLU 6	-0.1	-0.13	13.07	0	0	0
174	SLU 7	-0.09	-0.14	13.06	0	0	0
174	SLU 8	-0.1	-0.13	12.96	0	0	0
174	SLU 9	-0.09	-0.14	12.95	0	0	0
174	SLU 10	-0.09	-0.14	14.07	0	0	0
174	SLU 11	-0.1	-0.13	14.39	0	0	0
174	SLU 12	-0.09	-0.14	14.38	0	0	0
174	SLU 13	-0.09	-0.14	14.26	0	0	0
174	SLU 14	-0.1	-0.13	14.58	0	0	0
174	SLU 15	-0.09	-0.14	14.57	0	0	0
174	SLU 16	-0.1	-0.13	14.47	0	0	0
174	SLU 17	-0.09	-0.14	14.46	0	0	0
174	SLU 18	-0.09	-0.13	14.73	0	0	0
174	SLU 19	-0.09	-0.14	14.72	0	0	0
174	SLU 20	-0.1	-0.13	14.92	0	0	0
174	SLU 21	-0.09	-0.14	14.91	0	0	0
174	SLU 22	-0.1	-0.12	13.91	0	0	0
174	SLU 23	-0.1	-0.13	13.9	0	0	0
174	SLU 24	-0.1	-0.12	14.21	0	0	0
174	SLU 25	-0.1	-0.12	14.2	0	0	0
174	SLU 26	-0.1	-0.13	14.09	0	0	0
174	SLU 27	-0.11	-0.12	14.4	0	0	0
174	SLU 28	-0.1	-0.12	14.39	0	0	0
174	SLU 29	-0.11	-0.12	14.29	0	0	0
174	SLU 30	-0.1	-0.13	14.29	0	0	0
174	SLU 31	-0.1	-0.13	15.4	0	0	0
174	SLU 32	-0.11	-0.12	15.72	0	0	0
174	SLU 33	-0.1	-0.12	15.71	0	0	0
174	SLU 34	-0.1	-0.13	15.59	0	0	0
174	SLU 35	-0.11	-0.12	15.91	0	0	0
174	SLU 36	-0.1	-0.13	15.9	0	0	0
174	SLU 37	-0.11	-0.12	15.8	0	0	0
174	SLU 38	-0.1	-0.13	15.79	0	0	0
174	SLU 39	-0.1	-0.12	16.06	0	0	0
174	SLU 40	-0.1	-0.13	16.05	0	0	0
174	SLU 41	-0.11	-0.12	16.25	0	0	0
174	SLU 42	-0.1	-0.13	16.24	0	0	0
174	SLU 43	-0.11	-0.17	15.9	0	0	0
174	SLU 44	-0.11	-0.18	15.88	0	0	0
174	SLU 45	-0.12	-0.17	16.2	0	0	0
174	SLU 46	-0.11	-0.18	16.19	0	0	0
174	SLU 47	-0.11	-0.19	16.07	0	0	0
174	SLU 48	-0.12	-0.17	16.39	0	0	0
174	SLU 49	-0.12	-0.18	16.38	0	0	0
174	SLU 50	-0.12	-0.18	16.28	0	0	0
174	SLU 51	-0.12	-0.18	16.27	0	0	0
174	SLU 52	-0.11	-0.19	17.39	0	0	0
174	SLU 53	-0.12	-0.17	17.7	0	0	0
174	SLU 54	-0.12	-0.18	17.69	0	0	0
174	SLU 55	-0.11	-0.19	17.58	0	0	0
174	SLU 56	-0.12	-0.18	17.89	0	0	0
174	SLU 57	-0.12	-0.18	17.88	0	0	0
174	SLU 58	-0.12	-0.18	17.78	0	0	0
174	SLU 59	-0.12	-0.18	17.77	0	0	0
174	SLU 60	-0.12	-0.18	18.05	0	0	0
174	SLU 61	-0.11	-0.18	18.04	0	0	0
174	SLU 62	-0.12	-0.18	18.24	0	0	0
174	SLU 63	-0.12	-0.18	18.23	0	0	0
174	SLU 64	-0.13	-0.16	17.23	0	0	0
174	SLU 65	-0.12	-0.17	17.21	0	0	0
174	SLU 66	-0.13	-0.16	17.53	0	0	0
174	SLU 67	-0.12	-0.17	17.52	0	0	0
174	SLU 68	-0.12	-0.17	17.41	0	0	0
174	SLU 69	-0.13	-0.16	17.72	0	0	0
174	SLU 70	-0.13	-0.17	17.71	0	0	0
174	SLU 71	-0.13	-0.16	17.61	0	0	0
174	SLU 72	-0.13	-0.17	17.6	0	0	0
174	SLU 73	-0.12	-0.17	18.72	0	0	0
174	SLU 74	-0.13	-0.16	19.04	0	0	0
174	SLU 75	-0.13	-0.17	19.03	0	0	0
174	SLU 76	-0.12	-0.17	18.91	0	0	0
174	SLU 77	-0.13	-0.16	19.23	0	0	0
174	SLU 78	-0.13	-0.17	19.22	0	0	0
174	SLU 79	-0.13	-0.16	19.12	0	0	0
174	SLU 80	-0.13	-0.17	19.11	0	0	0
174	SLU 81	-0.13	-0.16	19.38	0	0	0
174	SLU 82	-0.12	-0.17	19.37	0	0	0
174	SLU 83	-0.13	-0.16	19.57	0	0	0
174	SLU 84	-0.13	-0.17	19.56	0	0	0
174	SLE RA 1	-0.09	-0.13	12.96	0	0	0
174	SLE RA 2	-0.09	-0.13	12.95	0	0	0
174	SLE RA 3	-0.1	-0.13	13.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
174	SLE RA 4	-0.09	-0.13	13.15	0	0	0
174	SLE RA 5	-0.09	-0.13	13.08	0	0	0
174	SLE RA 6	-0.1	-0.13	13.29	0	0	0
174	SLE RA 7	-0.1	-0.13	13.28	0	0	0
174	SLE RA 8	-0.1	-0.13	13.22	0	0	0
174	SLE RA 9	-0.1	-0.13	13.21	0	0	0
174	SLE RA 10	-0.09	-0.13	13.95	0	0	0
174	SLE RA 11	-0.1	-0.13	14.16	0	0	0
174	SLE RA 12	-0.09	-0.13	14.16	0	0	0
174	SLE RA 13	-0.09	-0.14	14.08	0	0	0
174	SLE RA 14	-0.1	-0.13	14.29	0	0	0
174	SLE RA 15	-0.1	-0.13	14.29	0	0	0
174	SLE RA 16	-0.1	-0.13	14.22	0	0	0
174	SLE RA 17	-0.1	-0.13	14.21	0	0	0
174	SLE RA 18	-0.1	-0.13	14.39	0	0	0
174	SLE RA 19	-0.09	-0.13	14.39	0	0	0
174	SLE RA 20	-0.1	-0.13	14.52	0	0	0
174	SLE RA 21	-0.1	-0.13	14.52	0	0	0
174	SLE FR 1	-0.09	-0.13	12.96	0	0	0
174	SLE FR 2	-0.09	-0.13	12.96	0	0	0
174	SLE FR 3	-0.09	-0.13	13.01	0	0	0
174	SLE FR 4	-0.09	-0.13	13.39	0	0	0
174	SLE FR 5	-0.1	-0.13	13.44	0	0	0
174	SLE FR 6	-0.1	-0.13	13.68	0	0	0
174	SLE QP 1	-0.09	-0.13	12.96	0	0	0
174	SLE QP 2	-0.09	-0.13	13.39	0	0	0
174	SLD 1	1	-0.01	13.91	0	0	0
174	SLD 2	1.11	-0.04	13.88	0	0	0
174	SLD 3	0.92	-0.32	13.6	0	0	0
174	SLD 4	1.03	-0.35	13.58	0	0	0
174	SLD 5	0.34	0.37	14.01	0	0	0
174	SLD 6	0.41	0.35	13.99	0	0	0
174	SLD 7	0.07	-0.64	13	0	0	0
174	SLD 8	0.14	-0.66	12.98	0	0	0
174	SLD 9	-0.33	0.41	13.8	0	0	0
174	SLD 10	-0.26	0.39	13.78	0	0	0
174	SLD 11	-0.6	-0.61	12.79	0	0	0
174	SLD 12	-0.53	-0.63	12.77	0	0	0
174	SLD 13	-1.22	0.09	13.2	0	0	0
174	SLD 14	-1.11	0.06	13.18	0	0	0
174	SLD 15	-1.3	-0.21	12.9	0	0	0
174	SLD 16	-1.19	-0.24	12.88	0	0	0
174	SLV 1	2.47	0.13	14.59	0	0	0
174	SLV 2	2.73	0.06	14.53	0	0	0
174	SLV 3	2.28	-0.56	13.9	0	0	0
174	SLV 4	2.54	-0.63	13.85	0	0	0
174	SLV 5	0.92	1	14.8	0	0	0
174	SLV 6	1.09	0.96	14.77	0	0	0
174	SLV 7	0.29	-1.29	12.51	0	0	0
174	SLV 8	0.45	-1.33	12.47	0	0	0
174	SLV 9	-0.64	1.08	14.31	0	0	0
174	SLV 10	-0.48	1.03	14.27	0	0	0
174	SLV 11	-1.27	-1.21	12.01	0	0	0
174	SLV 12	-1.11	-1.26	11.98	0	0	0
174	SLV 13	-2.73	0.38	12.94	0	0	0
174	SLV 14	-2.47	0.31	12.88	0	0	0
174	SLV 15	-2.92	-0.31	12.25	0	0	0
174	SLV 16	-2.66	-0.38	12.2	0	0	0
175	SLU 1	-0.09	-0.1	12.62	0	0	0
175	SLU 2	-0.09	-0.11	12.6	0	0	0
175	SLU 3	-0.09	-0.09	12.92	0	0	0
175	SLU 4	-0.09	-0.1	12.91	0	0	0
175	SLU 5	-0.09	-0.11	12.79	0	0	0
175	SLU 6	-0.1	-0.1	13.11	0	0	0
175	SLU 7	-0.09	-0.1	13.1	0	0	0
175	SLU 8	-0.1	-0.1	13	0	0	0
175	SLU 9	-0.09	-0.1	12.99	0	0	0
175	SLU 10	-0.09	-0.1	14.12	0	0	0
175	SLU 11	-0.09	-0.09	14.44	0	0	0
175	SLU 12	-0.09	-0.1	14.43	0	0	0
175	SLU 13	-0.09	-0.11	14.32	0	0	0
175	SLU 14	-0.1	-0.09	14.63	0	0	0
175	SLU 15	-0.09	-0.1	14.62	0	0	0
175	SLU 16	-0.1	-0.1	14.52	0	0	0
175	SLU 17	-0.09	-0.1	14.51	0	0	0
175	SLU 18	-0.09	-0.09	14.79	0	0	0
175	SLU 19	-0.09	-0.1	14.78	0	0	0
175	SLU 20	-0.1	-0.09	14.98	0	0	0
175	SLU 21	-0.09	-0.1	14.97	0	0	0
175	SLU 22	-0.1	-0.08	13.96	0	0	0
175	SLU 23	-0.1	-0.09	13.94	0	0	0
175	SLU 24	-0.1	-0.08	14.26	0	0	0
175	SLU 25	-0.1	-0.08	14.25	0	0	0
175	SLU 26	-0.1	-0.09	14.13	0	0	0
175	SLU 27	-0.11	-0.08	14.45	0	0	0
175	SLU 28	-0.1	-0.08	14.44	0	0	0
175	SLU 29	-0.11	-0.08	14.34	0	0	0
175	SLU 30	-0.1	-0.09	14.33	0	0	0
175	SLU 31	-0.1	-0.09	15.46	0	0	0
175	SLU 32	-0.11	-0.07	15.78	0	0	0
175	SLU 33	-0.1	-0.08	15.77	0	0	0
175	SLU 34	-0.1	-0.09	15.66	0	0	0
175	SLU 35	-0.11	-0.08	15.97	0	0	0
175	SLU 36	-0.1	-0.08	15.97	0	0	0
175	SLU 37	-0.11	-0.08	15.86	0	0	0
175	SLU 38	-0.1	-0.08	15.85	0	0	0
175	SLU 39	-0.1	-0.08	16.13	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
175	SLU 40	-0.1	-0.08	16.12	0	0	0
175	SLU 41	-0.11	-0.08	16.32	0	0	0
175	SLU 42	-0.1	-0.08	16.31	0	0	0
175	SLU 43	-0.11	-0.13	15.94	0	0	0
175	SLU 44	-0.11	-0.14	15.93	0	0	0
175	SLU 45	-0.12	-0.13	16.24	0	0	0
175	SLU 46	-0.11	-0.14	16.24	0	0	0
175	SLU 47	-0.11	-0.14	16.12	0	0	0
175	SLU 48	-0.12	-0.13	16.44	0	0	0
175	SLU 49	-0.12	-0.14	16.43	0	0	0
175	SLU 50	-0.12	-0.13	16.33	0	0	0
175	SLU 51	-0.12	-0.14	16.32	0	0	0
175	SLU 52	-0.11	-0.14	17.45	0	0	0
175	SLU 53	-0.12	-0.13	17.77	0	0	0
175	SLU 54	-0.12	-0.13	17.76	0	0	0
175	SLU 55	-0.11	-0.14	17.64	0	0	0
175	SLU 56	-0.12	-0.13	17.96	0	0	0
175	SLU 57	-0.12	-0.13	17.95	0	0	0
175	SLU 58	-0.12	-0.13	17.85	0	0	0
175	SLU 59	-0.12	-0.14	17.84	0	0	0
175	SLU 60	-0.12	-0.13	18.12	0	0	0
175	SLU 61	-0.11	-0.13	18.11	0	0	0
175	SLU 62	-0.12	-0.13	18.31	0	0	0
175	SLU 63	-0.12	-0.14	18.3	0	0	0
175	SLU 64	-0.12	-0.11	17.28	0	0	0
175	SLU 65	-0.12	-0.12	17.27	0	0	0
175	SLU 66	-0.13	-0.11	17.58	0	0	0
175	SLU 67	-0.12	-0.12	17.58	0	0	0
175	SLU 68	-0.12	-0.12	17.46	0	0	0
175	SLU 69	-0.13	-0.11	17.78	0	0	0
175	SLU 70	-0.13	-0.12	17.77	0	0	0
175	SLU 71	-0.13	-0.11	17.67	0	0	0
175	SLU 72	-0.13	-0.12	17.66	0	0	0
175	SLU 73	-0.12	-0.12	18.79	0	0	0
175	SLU 74	-0.13	-0.11	19.11	0	0	0
175	SLU 75	-0.13	-0.12	19.1	0	0	0
175	SLU 76	-0.12	-0.12	18.98	0	0	0
175	SLU 77	-0.13	-0.11	19.3	0	0	0
175	SLU 78	-0.13	-0.12	19.29	0	0	0
175	SLU 79	-0.13	-0.11	19.19	0	0	0
175	SLU 80	-0.13	-0.12	19.18	0	0	0
175	SLU 81	-0.13	-0.11	19.46	0	0	0
175	SLU 82	-0.12	-0.12	19.45	0	0	0
175	SLU 83	-0.13	-0.11	19.65	0	0	0
175	SLU 84	-0.13	-0.12	19.64	0	0	0
175	SLE RA 1	-0.09	-0.09	13	0	0	0
175	SLE RA 2	-0.09	-0.1	12.99	0	0	0
175	SLE RA 3	-0.1	-0.09	13.2	0	0	0
175	SLE RA 4	-0.09	-0.09	13.19	0	0	0
175	SLE RA 5	-0.09	-0.1	13.12	0	0	0
175	SLE RA 6	-0.1	-0.09	13.33	0	0	0
175	SLE RA 7	-0.09	-0.1	13.32	0	0	0
175	SLE RA 8	-0.1	-0.09	13.26	0	0	0
175	SLE RA 9	-0.09	-0.1	13.25	0	0	0
175	SLE RA 10	-0.09	-0.1	14	0	0	0
175	SLE RA 11	-0.1	-0.09	14.22	0	0	0
175	SLE RA 12	-0.09	-0.09	14.21	0	0	0
175	SLE RA 13	-0.09	-0.1	14.13	0	0	0
175	SLE RA 14	-0.1	-0.09	14.34	0	0	0
175	SLE RA 15	-0.1	-0.09	14.34	0	0	0
175	SLE RA 16	-0.1	-0.09	14.27	0	0	0
175	SLE RA 17	-0.1	-0.09	14.26	0	0	0
175	SLE RA 18	-0.1	-0.09	14.45	0	0	0
175	SLE RA 19	-0.09	-0.09	14.44	0	0	0
175	SLE RA 20	-0.1	-0.09	14.58	0	0	0
175	SLE RA 21	-0.09	-0.09	14.57	0	0	0
175	SLE FR 1	-0.09	-0.09	13	0	0	0
175	SLE FR 2	-0.09	-0.09	13	0	0	0
175	SLE FR 3	-0.09	-0.09	13.05	0	0	0
175	SLE FR 4	-0.09	-0.09	13.43	0	0	0
175	SLE FR 5	-0.09	-0.09	13.49	0	0	0
175	SLE FR 6	-0.09	-0.09	13.72	0	0	0
175	SLE QP 1	-0.09	-0.09	13	0	0	0
175	SLE QP 2	-0.09	-0.09	13.43	0	0	0
175	SLD 1	1	0.03	13.84	0	0	0
175	SLD 2	1.11	0.01	13.82	0	0	0
175	SLD 3	0.92	-0.27	13.53	0	0	0
175	SLD 4	1.03	-0.3	13.51	0	0	0
175	SLD 5	0.34	0.41	14.02	0	0	0
175	SLD 6	0.41	0.4	14.01	0	0	0
175	SLD 7	0.07	-0.6	13	0	0	0
175	SLD 8	0.14	-0.62	12.99	0	0	0
175	SLD 9	-0.33	0.44	13.88	0	0	0
175	SLD 10	-0.26	0.42	13.86	0	0	0
175	SLD 11	-0.6	-0.58	12.86	0	0	0
175	SLD 12	-0.53	-0.59	12.85	0	0	0
175	SLD 13	-1.21	0.11	13.36	0	0	0
175	SLD 14	-1.11	0.09	13.34	0	0	0
175	SLD 15	-1.3	-0.19	13.05	0	0	0
175	SLD 16	-1.19	-0.22	13.03	0	0	0
175	SLV 1	2.46	0.19	14.36	0	0	0
175	SLV 2	2.72	0.13	14.32	0	0	0
175	SLV 3	2.27	-0.5	13.67	0	0	0
175	SLV 4	2.53	-0.56	13.63	0	0	0
175	SLV 5	0.92	1.05	14.77	0	0	0
175	SLV 6	1.08	1.01	14.74	0	0	0
175	SLV 7	0.28	-1.25	12.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
175	SLV 8	0.45	-1.29	12.44	0	0	0
175	SLV 9	-0.63	1.11	14.43	0	0	0
175	SLV 10	-0.47	1.07	14.4	0	0	0
175	SLV 11	-1.27	-1.2	12.13	0	0	0
175	SLV 12	-1.11	-1.23	12.1	0	0	0
175	SLV 13	-2.71	0.38	13.24	0	0	0
175	SLV 14	-2.46	0.32	13.2	0	0	0
175	SLV 15	-2.9	-0.31	12.55	0	0	0
175	SLV 16	-2.65	-0.37	12.51	0	0	0
176	SLU 1	-0.09	-0.06	12.66	0	0	0
176	SLU 2	-0.09	-0.07	12.64	0	0	0
176	SLU 3	-0.09	-0.06	12.96	0	0	0
176	SLU 4	-0.09	-0.07	12.95	0	0	0
176	SLU 5	-0.09	-0.07	12.84	0	0	0
176	SLU 6	-0.09	-0.06	13.16	0	0	0
176	SLU 7	-0.09	-0.07	13.15	0	0	0
176	SLU 8	-0.09	-0.06	13.04	0	0	0
176	SLU 9	-0.09	-0.07	13.04	0	0	0
176	SLU 10	-0.09	-0.07	14.18	0	0	0
176	SLU 11	-0.1	-0.06	14.5	0	0	0
176	SLU 12	-0.09	-0.06	14.49	0	0	0
176	SLU 13	-0.09	-0.07	14.38	0	0	0
176	SLU 14	-0.1	-0.06	14.7	0	0	0
176	SLU 15	-0.09	-0.06	14.69	0	0	0
176	SLU 16	-0.1	-0.06	14.58	0	0	0
176	SLU 17	-0.09	-0.06	14.58	0	0	0
176	SLU 18	-0.09	-0.06	14.86	0	0	0
176	SLU 19	-0.09	-0.06	14.85	0	0	0
176	SLU 20	-0.1	-0.06	15.05	0	0	0
176	SLU 21	-0.09	-0.06	15.04	0	0	0
176	SLU 22	-0.1	-0.04	14.01	0	0	0
176	SLU 23	-0.1	-0.05	13.99	0	0	0
176	SLU 24	-0.1	-0.04	14.31	0	0	0
176	SLU 25	-0.1	-0.05	14.3	0	0	0
176	SLU 26	-0.1	-0.05	14.19	0	0	0
176	SLU 27	-0.11	-0.04	14.51	0	0	0
176	SLU 28	-0.1	-0.05	14.5	0	0	0
176	SLU 29	-0.11	-0.04	14.39	0	0	0
176	SLU 30	-0.1	-0.05	14.38	0	0	0
176	SLU 31	-0.1	-0.05	15.53	0	0	0
176	SLU 32	-0.11	-0.03	15.85	0	0	0
176	SLU 33	-0.1	-0.04	15.84	0	0	0
176	SLU 34	-0.1	-0.05	15.73	0	0	0
176	SLU 35	-0.11	-0.03	16.05	0	0	0
176	SLU 36	-0.1	-0.04	16.04	0	0	0
176	SLU 37	-0.11	-0.04	15.93	0	0	0
176	SLU 38	-0.1	-0.04	15.93	0	0	0
176	SLU 39	-0.1	-0.03	16.21	0	0	0
176	SLU 40	-0.1	-0.04	16.2	0	0	0
176	SLU 41	-0.11	-0.03	16.4	0	0	0
176	SLU 42	-0.1	-0.04	16.39	0	0	0
176	SLU 43	-0.11	-0.09	15.99	0	0	0
176	SLU 44	-0.11	-0.1	15.98	0	0	0
176	SLU 45	-0.12	-0.09	16.3	0	0	0
176	SLU 46	-0.11	-0.09	16.29	0	0	0
176	SLU 47	-0.11	-0.1	16.17	0	0	0
176	SLU 48	-0.12	-0.09	16.49	0	0	0
176	SLU 49	-0.12	-0.09	16.48	0	0	0
176	SLU 50	-0.12	-0.09	16.38	0	0	0
176	SLU 51	-0.12	-0.1	16.37	0	0	0
176	SLU 52	-0.11	-0.1	17.52	0	0	0
176	SLU 53	-0.12	-0.08	17.84	0	0	0
176	SLU 54	-0.12	-0.09	17.83	0	0	0
176	SLU 55	-0.11	-0.1	17.71	0	0	0
176	SLU 56	-0.12	-0.08	18.03	0	0	0
176	SLU 57	-0.12	-0.09	18.02	0	0	0
176	SLU 58	-0.12	-0.08	17.92	0	0	0
176	SLU 59	-0.12	-0.09	17.91	0	0	0
176	SLU 60	-0.12	-0.08	18.19	0	0	0
176	SLU 61	-0.11	-0.09	18.18	0	0	0
176	SLU 62	-0.12	-0.08	18.39	0	0	0
176	SLU 63	-0.12	-0.09	18.38	0	0	0
176	SLU 64	-0.12	-0.07	17.34	0	0	0
176	SLU 65	-0.12	-0.08	17.33	0	0	0
176	SLU 66	-0.13	-0.07	17.65	0	0	0
176	SLU 67	-0.12	-0.07	17.64	0	0	0
176	SLU 68	-0.12	-0.08	17.52	0	0	0
176	SLU 69	-0.13	-0.07	17.84	0	0	0
176	SLU 70	-0.13	-0.07	17.83	0	0	0
176	SLU 71	-0.13	-0.07	17.73	0	0	0
176	SLU 72	-0.13	-0.07	17.72	0	0	0
176	SLU 73	-0.12	-0.07	18.87	0	0	0
176	SLU 74	-0.13	-0.06	19.19	0	0	0
176	SLU 75	-0.13	-0.07	19.18	0	0	0
176	SLU 76	-0.12	-0.07	19.06	0	0	0
176	SLU 77	-0.13	-0.06	19.38	0	0	0
176	SLU 78	-0.13	-0.07	19.37	0	0	0
176	SLU 79	-0.13	-0.06	19.27	0	0	0
176	SLU 80	-0.13	-0.07	19.26	0	0	0
176	SLU 81	-0.13	-0.06	19.54	0	0	0
176	SLU 82	-0.12	-0.07	19.53	0	0	0
176	SLU 83	-0.13	-0.06	19.74	0	0	0
176	SLU 84	-0.13	-0.07	19.73	0	0	0
176	SLE RA 1	-0.09	-0.06	13.04	0	0	0
176	SLE RA 2	-0.09	-0.06	13.03	0	0	0
176	SLE RA 3	-0.1	-0.06	13.25	0	0	0
176	SLE RA 4	-0.09	-0.06	13.24	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
176	SLE RA 5	-0.09	-0.06	13.16	0	0	0
176	SLE RA 6	-0.1	-0.06	13.38	0	0	0
176	SLE RA 7	-0.09	-0.06	13.37	0	0	0
176	SLE RA 8	-0.1	-0.06	13.3	0	0	0
176	SLE RA 9	-0.09	-0.06	13.29	0	0	0
176	SLE RA 10	-0.09	-0.06	14.06	0	0	0
176	SLE RA 11	-0.1	-0.05	14.27	0	0	0
176	SLE RA 12	-0.09	-0.06	14.27	0	0	0
176	SLE RA 13	-0.09	-0.06	14.19	0	0	0
176	SLE RA 14	-0.1	-0.05	14.4	0	0	0
176	SLE RA 15	-0.1	-0.06	14.4	0	0	0
176	SLE RA 16	-0.1	-0.05	14.33	0	0	0
176	SLE RA 17	-0.1	-0.06	14.32	0	0	0
176	SLE RA 18	-0.1	-0.05	14.51	0	0	0
176	SLE RA 19	-0.09	-0.06	14.5	0	0	0
176	SLE RA 20	-0.1	-0.05	14.64	0	0	0
176	SLE RA 21	-0.1	-0.06	14.63	0	0	0
176	SLE FR 1	-0.09	-0.06	13.04	0	0	0
176	SLE FR 2	-0.09	-0.06	13.04	0	0	0
176	SLE FR 3	-0.09	-0.06	13.09	0	0	0
176	SLE FR 4	-0.09	-0.06	13.48	0	0	0
176	SLE FR 5	-0.09	-0.06	13.53	0	0	0
176	SLE FR 6	-0.09	-0.05	13.78	0	0	0
176	SLE QP 1	-0.09	-0.06	13.04	0	0	0
176	SLE QP 2	-0.09	-0.06	13.48	0	0	0
176	SLD 1	0.99	0.15	13.78	0	0	0
176	SLD 2	1.1	0.13	13.77	0	0	0
176	SLD 3	0.91	-0.16	13.48	0	0	0
176	SLD 4	1.02	-0.18	13.46	0	0	0
176	SLD 5	0.34	0.47	14.04	0	0	0
176	SLD 6	0.41	0.46	14.03	0	0	0
176	SLD 7	0.07	-0.55	13.02	0	0	0
176	SLD 8	0.14	-0.56	13.01	0	0	0
176	SLD 9	-0.32	0.45	13.96	0	0	0
176	SLD 10	-0.25	0.44	13.95	0	0	0
176	SLD 11	-0.59	-0.57	12.93	0	0	0
176	SLD 12	-0.52	-0.58	12.92	0	0	0
176	SLD 13	-1.21	0.07	13.5	0	0	0
176	SLD 14	-1.1	0.05	13.49	0	0	0
176	SLD 15	-1.29	-0.24	13.19	0	0	0
176	SLD 16	-1.18	-0.26	13.18	0	0	0
176	SLV 1	2.45	0.4	14.18	0	0	0
176	SLV 2	2.7	0.36	14.14	0	0	0
176	SLV 3	2.26	-0.29	13.48	0	0	0
176	SLV 4	2.51	-0.34	13.45	0	0	0
176	SLV 5	0.91	1.14	14.75	0	0	0
176	SLV 6	1.07	1.11	14.73	0	0	0
176	SLV 7	0.28	-1.17	12.43	0	0	0
176	SLV 8	0.44	-1.2	12.41	0	0	0
176	SLV 9	-0.63	1.09	14.55	0	0	0
176	SLV 10	-0.47	1.06	14.53	0	0	0
176	SLV 11	-1.26	-1.22	12.24	0	0	0
176	SLV 12	-1.1	-1.25	12.21	0	0	0
176	SLV 13	-2.7	0.22	13.52	0	0	0
176	SLV 14	-2.45	0.18	13.48	0	0	0
176	SLV 15	-2.89	-0.47	12.82	0	0	0
176	SLV 16	-2.64	-0.51	12.79	0	0	0
178	SLU 1	-0.05	-0.17	7	0	0	0
178	SLU 2	-0.05	-0.18	6.99	0	0	0
178	SLU 3	-0.05	-0.17	7.17	0	0	0
178	SLU 4	-0.05	-0.18	7.16	0	0	0
178	SLU 5	-0.05	-0.18	7.1	0	0	0
178	SLU 6	-0.05	-0.17	7.27	0	0	0
178	SLU 7	-0.05	-0.18	7.27	0	0	0
178	SLU 8	-0.05	-0.17	7.22	0	0	0
178	SLU 9	-0.05	-0.18	7.21	0	0	0
178	SLU 10	-0.05	-0.19	7.81	0	0	0
178	SLU 11	-0.05	-0.18	7.99	0	0	0
178	SLU 12	-0.05	-0.19	7.98	0	0	0
178	SLU 13	-0.05	-0.19	7.92	0	0	0
178	SLU 14	-0.05	-0.19	8.09	0	0	0
178	SLU 15	-0.05	-0.19	8.09	0	0	0
178	SLU 16	-0.05	-0.18	8.03	0	0	0
178	SLU 17	-0.05	-0.19	8.03	0	0	0
178	SLU 18	-0.05	-0.19	8.17	0	0	0
178	SLU 19	-0.05	-0.19	8.17	0	0	0
178	SLU 20	-0.05	-0.19	8.28	0	0	0
178	SLU 21	-0.05	-0.19	8.27	0	0	0
178	SLU 22	-0.06	-0.17	7.75	0	0	0
178	SLU 23	-0.05	-0.18	7.74	0	0	0
178	SLU 24	-0.06	-0.18	7.91	0	0	0
178	SLU 25	-0.06	-0.18	7.91	0	0	0
178	SLU 26	-0.05	-0.18	7.85	0	0	0
178	SLU 27	-0.06	-0.18	8.02	0	0	0
178	SLU 28	-0.06	-0.18	8.01	0	0	0
178	SLU 29	-0.06	-0.18	7.96	0	0	0
178	SLU 30	-0.06	-0.18	7.95	0	0	0
178	SLU 31	-0.05	-0.19	8.56	0	0	0
178	SLU 32	-0.06	-0.19	8.73	0	0	0
178	SLU 33	-0.06	-0.19	8.73	0	0	0
178	SLU 34	-0.06	-0.19	8.66	0	0	0
178	SLU 35	-0.06	-0.19	8.84	0	0	0
178	SLU 36	-0.06	-0.19	8.83	0	0	0
178	SLU 37	-0.06	-0.19	8.78	0	0	0
178	SLU 38	-0.06	-0.19	8.77	0	0	0
178	SLU 39	-0.06	-0.19	8.92	0	0	0
178	SLU 40	-0.06	-0.19	8.91	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
178	SLU 41	-0.06	-0.19	9.02	0	0	0
178	SLU 42	-0.06	-0.2	9.02	0	0	0
178	SLU 43	-0.06	-0.22	8.85	0	0	0
178	SLU 44	-0.06	-0.22	8.84	0	0	0
178	SLU 45	-0.06	-0.22	9.01	0	0	0
178	SLU 46	-0.06	-0.22	9.01	0	0	0
178	SLU 47	-0.06	-0.23	8.95	0	0	0
178	SLU 48	-0.07	-0.22	9.12	0	0	0
178	SLU 49	-0.06	-0.23	9.12	0	0	0
178	SLU 50	-0.07	-0.22	9.06	0	0	0
178	SLU 51	-0.06	-0.23	9.06	0	0	0
178	SLU 52	-0.06	-0.24	9.66	0	0	0
178	SLU 53	-0.07	-0.23	9.83	0	0	0
178	SLU 54	-0.06	-0.24	9.83	0	0	0
178	SLU 55	-0.06	-0.24	9.76	0	0	0
178	SLU 56	-0.07	-0.23	9.94	0	0	0
178	SLU 57	-0.06	-0.24	9.93	0	0	0
178	SLU 58	-0.07	-0.23	9.88	0	0	0
178	SLU 59	-0.06	-0.24	9.87	0	0	0
178	SLU 60	-0.06	-0.23	10.02	0	0	0
178	SLU 61	-0.06	-0.24	10.01	0	0	0
178	SLU 62	-0.07	-0.24	10.12	0	0	0
178	SLU 63	-0.06	-0.24	10.12	0	0	0
178	SLU 64	-0.07	-0.22	9.59	0	0	0
178	SLU 65	-0.07	-0.23	9.59	0	0	0
178	SLU 66	-0.07	-0.23	9.76	0	0	0
178	SLU 67	-0.07	-0.23	9.75	0	0	0
178	SLU 68	-0.07	-0.23	9.69	0	0	0
178	SLU 69	-0.07	-0.23	9.87	0	0	0
178	SLU 70	-0.07	-0.23	9.86	0	0	0
178	SLU 71	-0.07	-0.23	9.81	0	0	0
178	SLU 72	-0.07	-0.23	9.8	0	0	0
178	SLU 73	-0.07	-0.24	10.4	0	0	0
178	SLU 74	-0.07	-0.24	10.58	0	0	0
178	SLU 75	-0.07	-0.24	10.57	0	0	0
178	SLU 76	-0.07	-0.24	10.51	0	0	0
178	SLU 77	-0.07	-0.24	10.68	0	0	0
178	SLU 78	-0.07	-0.24	10.68	0	0	0
178	SLU 79	-0.07	-0.24	10.62	0	0	0
178	SLU 80	-0.07	-0.24	10.62	0	0	0
178	SLU 81	-0.07	-0.24	10.76	0	0	0
178	SLU 82	-0.07	-0.24	10.76	0	0	0
178	SLU 83	-0.07	-0.24	10.87	0	0	0
178	SLU 84	-0.07	-0.25	10.86	0	0	0
178	SLE RA 1	-0.05	-0.17	7.22	0	0	0
178	SLE RA 2	-0.05	-0.17	7.21	0	0	0
178	SLE RA 3	-0.05	-0.17	7.33	0	0	0
178	SLE RA 4	-0.05	-0.17	7.32	0	0	0
178	SLE RA 5	-0.05	-0.18	7.28	0	0	0
178	SLE RA 6	-0.05	-0.17	7.4	0	0	0
178	SLE RA 7	-0.05	-0.18	7.39	0	0	0
178	SLE RA 8	-0.05	-0.17	7.36	0	0	0
178	SLE RA 9	-0.05	-0.18	7.35	0	0	0
178	SLE RA 10	-0.05	-0.18	7.76	0	0	0
178	SLE RA 11	-0.05	-0.18	7.87	0	0	0
178	SLE RA 12	-0.05	-0.18	7.87	0	0	0
178	SLE RA 13	-0.05	-0.18	7.83	0	0	0
178	SLE RA 14	-0.05	-0.18	7.94	0	0	0
178	SLE RA 15	-0.05	-0.18	7.94	0	0	0
178	SLE RA 16	-0.05	-0.18	7.9	0	0	0
178	SLE RA 17	-0.05	-0.18	7.9	0	0	0
178	SLE RA 18	-0.05	-0.18	8	0	0	0
178	SLE RA 19	-0.05	-0.18	7.99	0	0	0
178	SLE RA 20	-0.05	-0.18	8.07	0	0	0
178	SLE RA 21	-0.05	-0.19	8.06	0	0	0
178	SLE FR 1	-0.05	-0.17	7.22	0	0	0
178	SLE FR 2	-0.05	-0.17	7.22	0	0	0
178	SLE FR 3	-0.05	-0.17	7.24	0	0	0
178	SLE FR 4	-0.05	-0.17	7.45	0	0	0
178	SLE FR 5	-0.05	-0.17	7.48	0	0	0
178	SLE FR 6	-0.05	-0.18	7.61	0	0	0
178	SLE QP 1	-0.05	-0.17	7.22	0	0	0
178	SLE QP 2	-0.05	-0.17	7.45	0	0	0
178	SLD 1	0.53	-0.17	8.1	0	0	0
178	SLD 2	0.59	-0.2	8.08	0	0	0
178	SLD 3	0.49	-0.32	7.93	0	0	0
178	SLD 4	0.55	-0.35	7.9	0	0	0
178	SLD 5	0.18	0.07	7.91	0	0	0
178	SLD 6	0.22	0.05	7.9	0	0	0
178	SLD 7	0.03	-0.45	7.33	0	0	0
178	SLD 8	0.07	-0.47	7.32	0	0	0
178	SLD 9	-0.18	0.12	7.58	0	0	0
178	SLD 10	-0.14	0.1	7.57	0	0	0
178	SLD 11	-0.32	-0.4	7	0	0	0
178	SLD 12	-0.28	-0.42	6.99	0	0	0
178	SLD 13	-0.65	0.01	7	0	0	0
178	SLD 14	-0.59	-0.02	6.97	0	0	0
178	SLD 15	-0.69	-0.15	6.82	0	0	0
178	SLD 16	-0.64	-0.18	6.8	0	0	0
178	SLV 1	1.31	-0.16	8.97	0	0	0
178	SLV 2	1.45	-0.23	8.91	0	0	0
178	SLV 3	1.21	-0.52	8.57	0	0	0
178	SLV 4	1.35	-0.59	8.52	0	0	0
178	SLV 5	0.49	0.38	8.51	0	0	0
178	SLV 6	0.58	0.33	8.48	0	0	0
178	SLV 7	0.15	-0.8	7.2	0	0	0
178	SLV 8	0.24	-0.85	7.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
178	SLV 9	-0.34	0.5	7.74	0	0	0
178	SLV 10	-0.25	0.46	7.7	0	0	0
178	SLV 11	-0.68	-0.68	6.42	0	0	0
178	SLV 12	-0.59	-0.72	6.39	0	0	0
178	SLV 13	-1.45	0.24	6.38	0	0	0
178	SLV 14	-1.32	0.17	6.33	0	0	0
178	SLV 15	-1.55	-0.11	5.99	0	0	0
178	SLV 16	-1.42	-0.18	5.94	0	0	0
179	SLU 1	-0.04	-0.02	6.35	0	0.9544	0.0025
179	SLU 2	-0.04	-0.02	6.35	0	0.9533	0.0033
179	SLU 3	-0.05	-0.01	6.51	0	0.9776	0.0022
179	SLU 4	-0.04	-0.02	6.5	0	0.9769	0.0027
179	SLU 5	-0.04	-0.02	6.44	0	0.968	0.0032
179	SLU 6	-0.05	-0.01	6.61	0	0.9923	0.0022
179	SLU 7	-0.05	-0.02	6.6	0	0.9916	0.0027
179	SLU 8	-0.05	-0.02	6.55	0	0.9838	0.0024
179	SLU 9	-0.05	-0.02	6.54	0	0.9831	0.0029
179	SLU 10	-0.04	-0.02	7.13	0	1.0705	0.0027
179	SLU 11	-0.05	-0.01	7.29	0	1.0948	0.0017
179	SLU 12	-0.05	-0.01	7.28	0	1.0941	0.0021
179	SLU 13	-0.04	-0.02	7.22	0	1.0851	0.0027
179	SLU 14	-0.05	-0.01	7.39	0	1.1094	0.0016
179	SLU 15	-0.05	-0.01	7.38	0	1.1088	0.0021
179	SLU 16	-0.05	-0.01	7.33	0	1.1009	0.0018
179	SLU 17	-0.05	-0.02	7.32	0	1.1002	0.0023
179	SLU 18	-0.05	-0.01	7.47	0	1.1218	0.0016
179	SLU 19	-0.04	-0.01	7.46	0	1.1211	0.0021
179	SLU 20	-0.05	-0.01	7.57	0	1.1365	0.0016
179	SLU 21	-0.05	-0.01	7.56	0	1.1358	0.0021
179	SLU 22	-0.05	0	7.03	0	1.0566	0.0005
179	SLU 23	-0.05	-0.01	7.03	0	1.0554	0.0013
179	SLU 24	-0.05	0	7.19	0	1.0797	0.0003
179	SLU 25	-0.05	-0.01	7.18	0	1.0791	0.0008
179	SLU 26	-0.05	-0.01	7.12	0	1.0701	0.0013
179	SLU 27	-0.05	0	7.29	0	1.0944	0.0003
179	SLU 28	-0.05	-0.01	7.28	0	1.0937	0.0008
179	SLU 29	-0.05	0	7.23	0	1.0859	0.0005
179	SLU 30	-0.05	-0.01	7.22	0	1.0852	0.001
179	SLU 31	-0.05	0	7.81	0	1.1726	0.0007
179	SLU 32	-0.05	0	7.97	0	1.1969	-0.0003
179	SLU 33	-0.05	0	7.96	0	1.1962	0.0002
179	SLU 34	-0.05	0	7.9	0	1.1873	0.0007
179	SLU 35	-0.05	0	8.07	0	1.2116	-0.0003
179	SLU 36	-0.05	0	8.06	0	1.2109	0.0002
179	SLU 37	-0.05	0	8.01	0	1.203	-0.0001
179	SLU 38	-0.05	0	8	0	1.2024	0.0004
179	SLU 39	-0.05	0	8.15	0	1.2239	-0.0003
179	SLU 40	-0.05	0	8.14	0	1.2232	0.0002
179	SLU 41	-0.05	0	8.25	0	1.2386	-0.0003
179	SLU 42	-0.05	0	8.24	0	1.2379	0.0001
179	SLU 43	-0.06	-0.03	8.03	0	1.2058	0.0039
179	SLU 44	-0.05	-0.03	8.02	0	1.2046	0.0047
179	SLU 45	-0.06	-0.02	8.18	0	1.2289	0.0036
179	SLU 46	-0.06	-0.03	8.18	0	1.2283	0.0041
179	SLU 47	-0.05	-0.03	8.12	0	1.2193	0.0046
179	SLU 48	-0.06	-0.02	8.28	0	1.2436	0.0036
179	SLU 49	-0.06	-0.03	8.27	0	1.2429	0.0041
179	SLU 50	-0.06	-0.03	8.22	0	1.2351	0.0038
179	SLU 51	-0.06	-0.03	8.22	0	1.2344	0.0043
179	SLU 52	-0.05	-0.03	8.8	0	1.3218	0.0041
179	SLU 53	-0.06	-0.02	8.96	0	1.3461	0.0031
179	SLU 54	-0.06	-0.02	8.96	0	1.3454	0.0035
179	SLU 55	-0.06	-0.03	8.9	0	1.3364	0.0041
179	SLU 56	-0.06	-0.02	9.06	0	1.3608	0.003
179	SLU 57	-0.06	-0.02	9.05	0	1.3601	0.0035
179	SLU 58	-0.06	-0.02	9	0	1.3522	0.0033
179	SLU 59	-0.06	-0.02	9	0	1.3516	0.0037
179	SLU 60	-0.06	-0.02	9.14	0	1.3731	0.003
179	SLU 61	-0.06	-0.02	9.14	0	1.3724	0.0035
179	SLU 62	-0.06	-0.02	9.24	0	1.3878	0.003
179	SLU 63	-0.06	-0.02	9.23	0	1.3871	0.0035
179	SLU 64	-0.06	-0.01	8.71	0	1.3079	0.0019
179	SLU 65	-0.06	-0.02	8.7	0	1.3068	0.0027
179	SLU 66	-0.06	-0.01	8.86	0	1.3311	0.0017
179	SLU 67	-0.06	-0.01	8.86	0	1.3304	0.0022
179	SLU 68	-0.06	-0.02	8.8	0	1.3214	0.0027
179	SLU 69	-0.06	-0.01	8.96	0	1.3457	0.0017
179	SLU 70	-0.06	-0.01	8.95	0	1.3451	0.0022
179	SLU 71	-0.06	-0.01	8.9	0	1.3372	0.0019
179	SLU 72	-0.06	-0.02	8.9	0	1.3365	0.0024
179	SLU 73	-0.06	-0.01	9.48	0	1.4239	0.0021
179	SLU 74	-0.06	-0.01	9.64	0	1.4482	0.0011
179	SLU 75	-0.06	-0.01	9.64	0	1.4475	0.0016
179	SLU 76	-0.06	-0.01	9.58	0	1.4386	0.0021
179	SLU 77	-0.06	-0.01	9.74	0	1.4629	0.0011
179	SLU 78	-0.06	-0.01	9.73	0	1.4622	0.0016
179	SLU 79	-0.06	-0.01	9.68	0	1.4544	0.0013
179	SLU 80	-0.06	-0.01	9.68	0	1.4537	0.0018
179	SLU 81	-0.06	-0.01	9.82	0	1.4752	0.0011
179	SLU 82	-0.06	-0.01	9.82	0	1.4746	0.0016
179	SLU 83	-0.06	-0.01	9.92	0	1.4899	0.0011
179	SLU 84	-0.06	-0.01	9.91	0	1.4892	0.0015
179	SLE RA 1	-0.05	-0.01	6.55	0	0.9836	0.0019
179	SLE RA 2	-0.04	-0.02	6.54	0	0.9829	0.0024
179	SLE RA 3	-0.05	-0.01	6.65	0	0.9991	0.0018
179	SLE RA 4	-0.05	-0.01	6.65	0	0.9986	0.0021
179	SLE RA 5	-0.05	-0.02	6.61	0	0.9926	0.0024

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
179	SLE RA 6	-0.05	-0.01	6.72	0	1.0089	0.0017
179	SLE RA 7	-0.05	-0.01	6.71	0	1.0084	0.0021
179	SLE RA 8	-0.05	-0.01	6.68	0	1.0032	0.0019
179	SLE RA 9	-0.05	-0.01	6.68	0	1.0027	0.0022
179	SLE RA 10	-0.05	-0.01	7.06	0	1.061	0.002
179	SLE RA 11	-0.05	-0.01	7.17	0	1.0772	0.0014
179	SLE RA 12	-0.05	-0.01	7.17	0	1.0767	0.0017
179	SLE RA 13	-0.05	-0.01	7.13	0	1.0707	0.002
179	SLE RA 14	-0.05	-0.01	7.24	0	1.087	0.0014
179	SLE RA 15	-0.05	-0.01	7.23	0	1.0865	0.0017
179	SLE RA 16	-0.05	-0.01	7.2	0	1.0813	0.0015
179	SLE RA 17	-0.05	-0.01	7.19	0	1.0808	0.0018
179	SLE RA 18	-0.05	-0.01	7.29	0	1.0952	0.0013
179	SLE RA 19	-0.05	-0.01	7.29	0	1.0947	0.0017
179	SLE RA 20	-0.05	-0.01	7.36	0	1.105	0.0013
179	SLE RA 21	-0.05	-0.01	7.35	0	1.1045	0.0017
179	SLE FR 1	-0.05	-0.01	6.55	0	0.9836	0.0019
179	SLE FR 2	-0.05	-0.01	6.55	0	0.9835	0.002
179	SLE FR 3	-0.05	-0.01	6.57	0	0.9875	0.0019
179	SLE FR 4	-0.05	-0.01	6.77	0	1.0169	0.0018
179	SLE FR 5	-0.05	-0.01	6.8	0	1.021	0.0017
179	SLE FR 6	-0.05	-0.01	6.92	0	1.0394	0.0016
179	SLE QP 1	-0.05	-0.01	6.55	0	0.9836	0.0019
179	SLE QP 2	-0.05	-0.01	6.77	0	1.0171	0.0017
179	SLD 1	0.49	0.09	6.89	0	1.0345	-0.0142
179	SLD 2	0.55	0.09	6.88	0	1.0338	-0.0131
179	SLD 3	0.45	-0.06	6.73	0	1.0113	0.009
179	SLD 4	0.51	-0.07	6.73	0	1.0106	0.0101
179	SLD 5	0.17	0.26	7.04	0	1.0577	-0.0384
179	SLD 6	0.2	0.25	7.04	0	1.0572	-0.0377
179	SLD 7	0.03	-0.26	6.53	0	0.9803	0.0389
179	SLD 8	0.07	-0.26	6.52	0	0.9798	0.0396
179	SLD 9	-0.16	0.24	7.02	0	1.0544	-0.0361
179	SLD 10	-0.13	0.24	7.02	0	1.0539	-0.0354
179	SLD 11	-0.3	-0.27	6.5	0	0.977	0.0412
179	SLD 12	-0.26	-0.28	6.5	0	0.9765	0.0419
179	SLD 13	-0.6	0.04	6.81	0	1.0236	-0.0066
179	SLD 14	-0.55	0.04	6.81	0	1.0228	-0.0056
179	SLD 15	-0.64	-0.11	6.66	0	1.0004	0.0166
179	SLD 16	-0.59	-0.12	6.65	0	0.9996	0.0176
179	SLV 1	1.22	0.23	7.04	0	1.0571	-0.0346
179	SLV 2	1.34	0.21	7.03	0	1.0553	-0.0321
179	SLV 3	1.13	-0.12	6.69	0	1.0045	0.0179
179	SLV 4	1.25	-0.14	6.67	0	1.0027	0.0205
179	SLV 5	0.45	0.59	7.38	0	1.1093	-0.0893
179	SLV 6	0.53	0.58	7.38	0	1.1081	-0.0876
179	SLV 7	0.14	-0.57	6.22	0	0.9338	0.0858
179	SLV 8	0.22	-0.58	6.21	0	0.9326	0.0875
179	SLV 9	-0.31	0.56	7.33	0	1.1016	-0.084
179	SLV 10	-0.23	0.55	7.33	0	1.1004	-0.0824
179	SLV 11	-0.63	-0.61	6.16	0	0.9261	0.0911
179	SLV 12	-0.55	-0.62	6.16	0	0.9249	0.0927
179	SLV 13	-1.34	0.11	6.87	0	1.0315	-0.017
179	SLV 14	-1.22	0.1	6.85	0	1.0297	-0.0145
179	SLV 15	-1.44	-0.24	6.52	0	0.9788	0.0355
179	SLV 16	-1.31	-0.25	6.5	0	0.977	0.0381
179	CRTFP Uy+	0	0	0	0	0	0
179	CRTFP Uy-	0	0	0	0	0	0
181	SLU 1	-0.14	-0.09	40.02	0.9379	11.1355	0.0225
181	SLU 2	-0.12	-0.13	39.98	0.9371	11.1243	0.0311
181	SLU 3	-0.14	-0.08	40.98	0.9606	11.4056	0.0197
181	SLU 4	-0.13	-0.1	40.96	0.9601	11.3989	0.0248
181	SLU 5	-0.12	-0.13	40.59	0.9514	11.2946	0.031
181	SLU 6	-0.15	-0.08	41.59	0.9749	11.5759	0.0195
181	SLU 7	-0.14	-0.1	41.57	0.9744	11.5692	0.0247
181	SLU 8	-0.15	-0.09	41.24	0.9664	11.4761	0.0222
181	SLU 9	-0.14	-0.11	41.22	0.966	11.4694	0.0274
181	SLU 10	-0.15	-0.07	44.92	1.0533	12.508	0.0155
181	SLU 11	-0.17	-0.03	45.92	1.0768	12.7893	0.0041
181	SLU 12	-0.16	-0.05	45.9	1.0763	12.7826	0.0092
181	SLU 13	-0.15	-0.07	45.53	1.0676	12.6784	0.0154
181	SLU 14	-0.18	-0.03	46.53	1.0911	12.9596	0.0039
181	SLU 15	-0.17	-0.05	46.51	1.0906	12.9529	0.0091
181	SLU 16	-0.18	-0.04	46.18	1.0827	12.8599	0.0066
181	SLU 17	-0.17	-0.06	46.15	1.0822	12.8531	0.0118
181	SLU 18	-0.18	-0.02	47.07	1.104	13.1123	0.0002
181	SLU 19	-0.17	-0.03	47.05	1.1035	13.1056	0.0054
181	SLU 20	-0.19	-0.01	47.68	1.1182	13.2826	0.0001
181	SLU 21	-0.18	-0.03	47.66	1.1178	13.2759	0.0052
181	SLU 22	-0.15	-0.01	44.27	1.0379	12.3207	-0.0017
181	SLU 23	-0.13	-0.04	44.23	1.0371	12.3095	0.0069
181	SLU 24	-0.15	0	45.24	1.0606	12.5908	-0.0045
181	SLU 25	-0.14	-0.02	45.22	1.0601	12.5841	0.0006
181	SLU 26	-0.14	-0.04	44.84	1.0514	12.4798	0.0068
181	SLU 27	-0.16	0	45.85	1.0749	12.7611	-0.0046
181	SLU 28	-0.15	-0.02	45.83	1.0744	12.7544	0.0005
181	SLU 29	-0.16	-0.01	45.49	1.0665	12.6614	-0.0019
181	SLU 30	-0.15	-0.03	45.47	1.066	12.6546	0.0032
181	SLU 31	-0.16	0.01	49.17	1.1533	13.6933	-0.0087
181	SLU 32	-0.19	0.05	50.18	1.1768	13.9746	-0.0201
181	SLU 33	-0.18	0.04	50.16	1.1763	13.9678	-0.015
181	SLU 34	-0.17	0.01	49.78	1.1676	13.8636	-0.0088
181	SLU 35	-0.19	0.06	50.79	1.1911	14.1449	-0.0202
181	SLU 36	-0.18	0.04	50.77	1.1906	14.1382	-0.0151
181	SLU 37	-0.19	0.05	50.43	1.1827	14.0451	-0.0175
181	SLU 38	-0.18	0.03	50.41	1.1822	14.0384	-0.0124
181	SLU 39	-0.19	0.07	51.33	1.204	14.2975	-0.024

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
181	SLU 40	-0.18	0.05	51.31	1.2035	14.2908	-0.0188
181	SLU 41	-0.2	0.07	51.94	1.2183	14.4678	-0.0241
181	SLU 42	-0.19	0.05	51.92	1.2178	14.4611	-0.0189
181	SLU 43	-0.17	-0.15	50.56	1.185	14.0698	0.0375
181	SLU 44	-0.15	-0.18	50.53	1.1842	14.0586	0.0461
181	SLU 45	-0.18	-0.14	51.53	1.2077	14.3399	0.0347
181	SLU 46	-0.17	-0.16	51.51	1.2072	14.3331	0.0398
181	SLU 47	-0.16	-0.18	51.14	1.1984	14.2289	0.046
181	SLU 48	-0.18	-0.14	52.14	1.2219	14.5102	0.0346
181	SLU 49	-0.17	-0.16	52.12	1.2214	14.5035	0.0397
181	SLU 50	-0.18	-0.15	51.78	1.2135	14.4104	0.0373
181	SLU 51	-0.17	-0.17	51.76	1.213	14.4037	0.0424
181	SLU 52	-0.19	-0.13	55.47	1.3004	15.4423	0.0305
181	SLU 53	-0.21	-0.09	56.47	1.3239	15.7236	0.0191
181	SLU 54	-0.2	-0.1	56.45	1.3234	15.7169	0.0242
181	SLU 55	-0.19	-0.13	56.08	1.3147	15.6126	0.0304
181	SLU 56	-0.21	-0.09	57.08	1.3382	15.8939	0.019
181	SLU 57	-0.2	-0.1	57.06	1.3377	15.8872	0.0241
181	SLU 58	-0.21	-0.09	56.72	1.3298	15.7942	0.0217
181	SLU 59	-0.2	-0.11	56.7	1.3293	15.7874	0.0268
181	SLU 60	-0.22	-0.07	57.62	1.3511	16.0466	0.0152
181	SLU 61	-0.21	-0.09	57.6	1.3506	16.0398	0.0204
181	SLU 62	-0.22	-0.07	58.23	1.3653	16.2169	0.0151
181	SLU 63	-0.21	-0.09	58.21	1.3648	16.2102	0.0203
181	SLU 64	-0.18	-0.07	54.82	1.285	15.255	0.0134
181	SLU 65	-0.17	-0.1	54.78	1.2842	15.2438	0.022
181	SLU 66	-0.19	-0.06	55.79	1.3077	15.5251	0.0105
181	SLU 67	-0.18	-0.08	55.76	1.3072	15.5184	0.0157
181	SLU 68	-0.17	-0.1	55.39	1.2984	15.4141	0.0218
181	SLU 69	-0.2	-0.06	56.4	1.3219	15.6954	0.0104
181	SLU 70	-0.18	-0.08	56.37	1.3214	15.6887	0.0156
181	SLU 71	-0.2	-0.07	56.04	1.3135	15.5957	0.0131
181	SLU 72	-0.18	-0.09	56.02	1.313	15.5889	0.0183
181	SLU 73	-0.2	-0.04	59.72	1.4004	16.6276	0.0064
181	SLU 74	-0.22	0	60.73	1.4239	16.9088	-0.0051
181	SLU 75	-0.21	-0.02	60.7	1.4234	16.9021	0.0001
181	SLU 76	-0.2	-0.04	60.33	1.4147	16.7979	0.0062
181	SLU 77	-0.23	0	61.34	1.4382	17.0792	-0.0052
181	SLU 78	-0.22	-0.02	61.31	1.4377	17.0724	0
181	SLU 79	-0.23	-0.01	60.98	1.4298	16.9794	-0.0025
181	SLU 80	-0.22	-0.03	60.96	1.4293	16.9727	0.0027
181	SLU 81	-0.23	0.01	61.88	1.4511	17.2318	-0.0089
181	SLU 82	-0.22	-0.01	61.85	1.4506	17.2251	-0.0038
181	SLU 83	-0.24	0.01	62.49	1.4653	17.4021	-0.009
181	SLU 84	-0.23	-0.01	62.46	1.4648	17.3954	-0.0039
181	SLE RA 1	-0.14	-0.07	41.23	0.9665	11.4741	0.0156
181	SLE RA 2	-0.13	-0.09	41.21	0.9659	11.4667	0.0213
181	SLE RA 3	-0.14	-0.06	41.88	0.9816	11.6542	0.0137
181	SLE RA 4	-0.14	-0.08	41.86	0.9813	11.6497	0.0171
181	SLE RA 5	-0.13	-0.09	41.61	0.9754	11.5802	0.0212
181	SLE RA 6	-0.15	-0.06	42.28	0.9911	11.7677	0.0136
181	SLE RA 7	-0.14	-0.08	42.27	0.9908	11.7633	0.0171
181	SLE RA 8	-0.15	-0.07	42.05	0.9855	11.7012	0.0154
181	SLE RA 9	-0.14	-0.08	42.03	0.9852	11.6967	0.0189
181	SLE RA 10	-0.15	-0.05	44.5	1.0434	12.3892	0.0109
181	SLE RA 11	-0.16	-0.03	45.17	1.0591	12.5767	0.0033
181	SLE RA 12	-0.16	-0.04	45.16	1.0588	12.5722	0.0067
181	SLE RA 13	-0.15	-0.05	44.91	1.0529	12.5027	0.0108
181	SLE RA 14	-0.17	-0.03	45.58	1.0686	12.6902	0.0032
181	SLE RA 15	-0.16	-0.04	45.56	1.0683	12.6857	0.0067
181	SLE RA 16	-0.17	-0.03	45.34	1.063	12.6237	0.005
181	SLE RA 17	-0.16	-0.05	45.32	1.0627	12.6192	0.0085
181	SLE RA 18	-0.17	-0.02	45.94	1.0772	12.792	0.0007
181	SLE RA 19	-0.16	-0.03	45.92	1.0769	12.7875	0.0042
181	SLE RA 20	-0.17	-0.02	46.34	1.0867	12.9055	0.0006
181	SLE RA 21	-0.17	-0.03	46.33	1.0864	12.9011	0.0041
181	SLE FR 1	-0.14	-0.07	41.23	0.9665	11.4741	0.0156
181	SLE FR 2	-0.14	-0.07	41.23	0.9664	11.4727	0.0167
181	SLE FR 3	-0.14	-0.07	41.4	0.9703	11.5196	0.0156
181	SLE FR 4	-0.15	-0.06	42.64	0.9996	11.868	0.0123
181	SLE FR 5	-0.15	-0.05	42.81	1.0035	11.9149	0.0111
181	SLE FR 6	-0.15	-0.04	43.59	1.0218	12.1331	0.0082
181	SLE QP 1	-0.14	-0.07	41.23	0.9665	11.4741	0.0156
181	SLE QP 2	-0.15	-0.05	42.64	0.9997	11.8695	0.0111
181	SLD 1	3.56	0.57	42.73	1.0035	12.0554	-0.2279
181	SLD 2	3.92	0.6	42.9	1.007	12.0946	-0.244
181	SLD 3	3.28	-0.44	41.7	0.9818	11.7686	0.0572
181	SLD 4	3.65	-0.4	41.86	0.9854	11.8077	0.0411
181	SLD 5	1.32	1.65	44.21	1.033	12.3534	-0.4901
181	SLD 6	1.55	1.68	44.32	1.0353	12.379	-0.5007
181	SLD 7	0.4	-1.7	40.77	0.9609	11.3973	0.4602
181	SLD 8	0.64	-1.68	40.87	0.9632	11.4229	0.4497
181	SLD 9	-0.93	1.57	44.42	1.0362	12.3161	-0.4274
181	SLD 10	-0.7	1.59	44.52	1.0385	12.3417	-0.4379
181	SLD 11	-1.85	-1.78	40.97	0.964	11.3601	0.5229
181	SLD 12	-1.61	-1.76	41.08	0.9664	11.3856	0.5124
181	SLD 13	-3.94	0.3	43.43	1.014	11.9313	-0.0188
181	SLD 14	-3.58	0.33	43.59	1.0175	11.9704	-0.0349
181	SLD 15	-4.22	-0.71	42.39	0.9923	11.6444	0.2663
181	SLD 16	-3.86	-0.68	42.56	0.9959	11.6836	0.2502
181	SLV 1	8.53	1.37	42.81	1.0078	12.2943	-0.5378
181	SLV 2	9.38	1.44	43.2	1.0161	12.3855	-0.5754
181	SLV 3	7.89	-0.91	40.47	0.9587	11.6432	0.1086
181	SLV 4	8.73	-0.84	40.85	0.967	11.7344	0.0711
181	SLV 5	3.28	3.82	46.19	1.0752	12.9689	-1.1275
181	SLV 6	3.83	3.87	46.43	1.0805	13.0275	-1.1517
181	SLV 7	1.14	-3.79	38.37	0.9115	10.7984	1.0272

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
181	SLV 8	1.69	-3.74	38.62	0.9168	10.857	1.0031
181	SLV 9	-1.98	3.63	46.67	1.0826	12.882	-0.9808
181	SLV 10	-1.44	3.68	46.92	1.0879	12.9406	-1.005
181	SLV 11	-4.13	-3.98	38.86	0.9188	10.7115	1.1739
181	SLV 12	-3.58	-3.93	39.1	0.9241	10.7701	1.1498
181	SLV 13	-9.03	0.73	44.44	1.0324	12.0046	-0.0488
181	SLV 14	-8.18	0.8	44.82	1.0406	12.0958	-0.0864
181	SLV 15	-9.67	-1.55	42.09	0.9833	11.3535	0.5976
181	SLV 16	-8.83	-1.48	42.48	0.9915	11.4447	0.56
181	CRTFP Ux+	0	0	0	0	0	0
181	CRTFP Ux-	0	0	0	0	0	0
181	CRTFP Uy+	0	0	0	0	0	0
181	CRTFP Uy-	0	0	0	0	0	0
183	SLU 1	-0.03	-0.06	11.16	0	0	0
183	SLU 2	-0.03	-0.07	11.15	0	0	0
183	SLU 3	-0.04	-0.06	11.43	0	0	0
183	SLU 4	-0.03	-0.07	11.42	0	0	0
183	SLU 5	-0.03	-0.07	11.32	0	0	0
183	SLU 6	-0.04	-0.06	11.6	0	0	0
183	SLU 7	-0.03	-0.07	11.59	0	0	0
183	SLU 8	-0.04	-0.07	11.5	0	0	0
183	SLU 9	-0.03	-0.07	11.49	0	0	0
183	SLU 10	-0.04	-0.06	12.51	0	0	0
183	SLU 11	-0.05	-0.05	12.79	0	0	0
183	SLU 12	-0.04	-0.06	12.79	0	0	0
183	SLU 13	-0.04	-0.06	12.68	0	0	0
183	SLU 14	-0.05	-0.05	12.96	0	0	0
183	SLU 15	-0.04	-0.06	12.95	0	0	0
183	SLU 16	-0.05	-0.05	12.86	0	0	0
183	SLU 17	-0.04	-0.06	12.86	0	0	0
183	SLU 18	-0.05	-0.05	13.11	0	0	0
183	SLU 19	-0.04	-0.05	13.1	0	0	0
183	SLU 20	-0.05	-0.05	13.28	0	0	0
183	SLU 21	-0.05	-0.05	13.27	0	0	0
183	SLU 22	-0.04	-0.05	12.34	0	0	0
183	SLU 23	-0.03	-0.05	12.33	0	0	0
183	SLU 24	-0.04	-0.04	12.61	0	0	0
183	SLU 25	-0.04	-0.05	12.61	0	0	0
183	SLU 26	-0.03	-0.05	12.5	0	0	0
183	SLU 27	-0.04	-0.05	12.78	0	0	0
183	SLU 28	-0.04	-0.05	12.78	0	0	0
183	SLU 29	-0.04	-0.05	12.68	0	0	0
183	SLU 30	-0.04	-0.05	12.68	0	0	0
183	SLU 31	-0.04	-0.04	13.7	0	0	0
183	SLU 32	-0.05	-0.03	13.98	0	0	0
183	SLU 33	-0.05	-0.04	13.97	0	0	0
183	SLU 34	-0.04	-0.04	13.87	0	0	0
183	SLU 35	-0.05	-0.03	14.15	0	0	0
183	SLU 36	-0.05	-0.04	14.14	0	0	0
183	SLU 37	-0.05	-0.04	14.05	0	0	0
183	SLU 38	-0.05	-0.04	14.04	0	0	0
183	SLU 39	-0.05	-0.03	14.29	0	0	0
183	SLU 40	-0.05	-0.04	14.29	0	0	0
183	SLU 41	-0.05	-0.03	14.46	0	0	0
183	SLU 42	-0.05	-0.04	14.46	0	0	0
183	SLU 43	-0.04	-0.09	14.1	0	0	0
183	SLU 44	-0.04	-0.1	14.09	0	0	0
183	SLU 45	-0.05	-0.09	14.37	0	0	0
183	SLU 46	-0.04	-0.09	14.36	0	0	0
183	SLU 47	-0.04	-0.1	14.26	0	0	0
183	SLU 48	-0.05	-0.09	14.54	0	0	0
183	SLU 49	-0.04	-0.09	14.53	0	0	0
183	SLU 50	-0.05	-0.09	14.44	0	0	0
183	SLU 51	-0.04	-0.1	14.43	0	0	0
183	SLU 52	-0.05	-0.09	15.46	0	0	0
183	SLU 53	-0.05	-0.08	15.73	0	0	0
183	SLU 54	-0.05	-0.08	15.73	0	0	0
183	SLU 55	-0.05	-0.09	15.62	0	0	0
183	SLU 56	-0.06	-0.08	15.9	0	0	0
183	SLU 57	-0.05	-0.08	15.9	0	0	0
183	SLU 58	-0.06	-0.08	15.8	0	0	0
183	SLU 59	-0.05	-0.09	15.8	0	0	0
183	SLU 60	-0.06	-0.07	16.05	0	0	0
183	SLU 61	-0.05	-0.08	16.04	0	0	0
183	SLU 62	-0.06	-0.08	16.22	0	0	0
183	SLU 63	-0.06	-0.08	16.21	0	0	0
183	SLU 64	-0.05	-0.07	15.29	0	0	0
183	SLU 65	-0.04	-0.08	15.28	0	0	0
183	SLU 66	-0.05	-0.07	15.55	0	0	0
183	SLU 67	-0.05	-0.07	15.55	0	0	0
183	SLU 68	-0.04	-0.08	15.45	0	0	0
183	SLU 69	-0.05	-0.07	15.72	0	0	0
183	SLU 70	-0.05	-0.08	15.72	0	0	0
183	SLU 71	-0.05	-0.07	15.63	0	0	0
183	SLU 72	-0.05	-0.08	15.62	0	0	0
183	SLU 73	-0.05	-0.07	16.64	0	0	0
183	SLU 74	-0.06	-0.06	16.92	0	0	0
183	SLU 75	-0.06	-0.06	16.91	0	0	0
183	SLU 76	-0.05	-0.07	16.81	0	0	0
183	SLU 77	-0.06	-0.06	17.09	0	0	0
183	SLU 78	-0.06	-0.06	17.08	0	0	0
183	SLU 79	-0.06	-0.06	16.99	0	0	0
183	SLU 80	-0.06	-0.07	16.98	0	0	0
183	SLU 81	-0.06	-0.06	17.23	0	0	0
183	SLU 82	-0.06	-0.06	17.23	0	0	0
183	SLU 83	-0.06	-0.06	17.4	0	0	0
183	SLU 84	-0.06	-0.06	17.4	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
183	SLE RA 1	-0.04	-0.06	11.5	0	0	0
183	SLE RA 2	-0.03	-0.06	11.49	0	0	0
183	SLE RA 3	-0.04	-0.06	11.68	0	0	0
183	SLE RA 4	-0.03	-0.06	11.67	0	0	0
183	SLE RA 5	-0.03	-0.06	11.6	0	0	0
183	SLE RA 6	-0.04	-0.06	11.79	0	0	0
183	SLE RA 7	-0.04	-0.06	11.79	0	0	0
183	SLE RA 8	-0.04	-0.06	11.72	0	0	0
183	SLE RA 9	-0.04	-0.06	11.72	0	0	0
183	SLE RA 10	-0.04	-0.06	12.4	0	0	0
183	SLE RA 11	-0.04	-0.05	12.59	0	0	0
183	SLE RA 12	-0.04	-0.05	12.58	0	0	0
183	SLE RA 13	-0.04	-0.06	12.51	0	0	0
183	SLE RA 14	-0.04	-0.05	12.7	0	0	0
183	SLE RA 15	-0.04	-0.05	12.7	0	0	0
183	SLE RA 16	-0.04	-0.05	12.63	0	0	0
183	SLE RA 17	-0.04	-0.06	12.63	0	0	0
183	SLE RA 18	-0.04	-0.05	12.8	0	0	0
183	SLE RA 19	-0.04	-0.05	12.79	0	0	0
183	SLE RA 20	-0.05	-0.05	12.91	0	0	0
183	SLE RA 21	-0.04	-0.05	12.91	0	0	0
183	SLE FR 1	-0.04	-0.06	11.5	0	0	0
183	SLE FR 2	-0.04	-0.06	11.5	0	0	0
183	SLE FR 3	-0.04	-0.06	11.54	0	0	0
183	SLE FR 4	-0.04	-0.06	11.89	0	0	0
183	SLE FR 5	-0.04	-0.06	11.93	0	0	0
183	SLE FR 6	-0.04	-0.05	12.15	0	0	0
183	SLE QP 1	-0.04	-0.06	11.5	0	0	0
183	SLE QP 2	-0.04	-0.06	11.89	0	0	0
183	SLD 1	0.97	0.13	11.79	0	0	0
183	SLD 2	1.07	0.15	11.85	0	0	0
183	SLD 3	0.9	-0.14	11.5	0	0	0
183	SLD 4	1	-0.12	11.56	0	0	0
183	SLD 5	0.36	0.41	12.29	0	0	0
183	SLD 6	0.43	0.42	12.33	0	0	0
183	SLD 7	0.11	-0.49	11.32	0	0	0
183	SLD 8	0.18	-0.48	11.36	0	0	0
183	SLD 9	-0.25	0.37	12.42	0	0	0
183	SLD 10	-0.19	0.38	12.45	0	0	0
183	SLD 11	-0.5	-0.53	11.45	0	0	0
183	SLD 12	-0.44	-0.52	11.49	0	0	0
183	SLD 13	-1.08	0.01	12.22	0	0	0
183	SLD 14	-0.98	0.02	12.27	0	0	0
183	SLD 15	-1.15	-0.26	11.93	0	0	0
183	SLD 16	-1.05	-0.25	11.98	0	0	0
183	SLV 1	2.33	0.38	11.66	0	0	0
183	SLV 2	2.56	0.42	11.79	0	0	0
183	SLV 3	2.16	-0.23	11	0	0	0
183	SLV 4	2.39	-0.19	11.13	0	0	0
183	SLV 5	0.9	1	12.8	0	0	0
183	SLV 6	1.05	1.02	12.88	0	0	0
183	SLV 7	0.31	-1.04	10.6	0	0	0
183	SLV 8	0.46	-1.02	10.68	0	0	0
183	SLV 9	-0.54	0.9	13.1	0	0	0
183	SLV 10	-0.39	0.93	13.18	0	0	0
183	SLV 11	-1.13	-1.13	10.89	0	0	0
183	SLV 12	-0.98	-1.11	10.98	0	0	0
183	SLV 13	-2.47	0.08	12.65	0	0	0
183	SLV 14	-2.23	0.12	12.78	0	0	0
183	SLV 15	-2.64	-0.53	11.99	0	0	0
183	SLV 16	-2.41	-0.49	12.12	0	0	0
184	SLU 1	-0.03	-0.08	11.27	0	0	0
184	SLU 2	-0.03	-0.09	11.26	0	0	0
184	SLU 3	-0.03	-0.08	11.54	0	0	0
184	SLU 4	-0.03	-0.08	11.53	0	0	0
184	SLU 5	-0.03	-0.09	11.43	0	0	0
184	SLU 6	-0.04	-0.08	11.71	0	0	0
184	SLU 7	-0.03	-0.09	11.7	0	0	0
184	SLU 8	-0.04	-0.08	11.61	0	0	0
184	SLU 9	-0.03	-0.09	11.6	0	0	0
184	SLU 10	-0.04	-0.08	12.62	0	0	0
184	SLU 11	-0.04	-0.07	12.9	0	0	0
184	SLU 12	-0.04	-0.08	12.9	0	0	0
184	SLU 13	-0.04	-0.08	12.79	0	0	0
184	SLU 14	-0.05	-0.07	13.07	0	0	0
184	SLU 15	-0.04	-0.08	13.07	0	0	0
184	SLU 16	-0.05	-0.07	12.98	0	0	0
184	SLU 17	-0.04	-0.08	12.97	0	0	0
184	SLU 18	-0.05	-0.07	13.22	0	0	0
184	SLU 19	-0.04	-0.07	13.21	0	0	0
184	SLU 20	-0.05	-0.07	13.39	0	0	0
184	SLU 21	-0.04	-0.07	13.39	0	0	0
184	SLU 22	-0.04	-0.06	12.46	0	0	0
184	SLU 23	-0.03	-0.07	12.45	0	0	0
184	SLU 24	-0.04	-0.06	12.73	0	0	0
184	SLU 25	-0.03	-0.07	12.72	0	0	0
184	SLU 26	-0.03	-0.07	12.62	0	0	0
184	SLU 27	-0.04	-0.06	12.9	0	0	0
184	SLU 28	-0.04	-0.07	12.89	0	0	0
184	SLU 29	-0.04	-0.07	12.8	0	0	0
184	SLU 30	-0.04	-0.07	12.8	0	0	0
184	SLU 31	-0.04	-0.06	13.82	0	0	0
184	SLU 32	-0.05	-0.06	14.1	0	0	0
184	SLU 33	-0.04	-0.06	14.09	0	0	0
184	SLU 34	-0.04	-0.07	13.99	0	0	0
184	SLU 35	-0.05	-0.06	14.27	0	0	0
184	SLU 36	-0.05	-0.06	14.26	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
184	SLU 37	-0.05	-0.06	14.17	0	0	0
184	SLU 38	-0.05	-0.06	14.16	0	0	0
184	SLU 39	-0.05	-0.05	14.42	0	0	0
184	SLU 40	-0.05	-0.06	14.41	0	0	0
184	SLU 41	-0.05	-0.05	14.59	0	0	0
184	SLU 42	-0.05	-0.06	14.58	0	0	0
184	SLU 43	-0.04	-0.11	14.24	0	0	0
184	SLU 44	-0.04	-0.12	14.23	0	0	0
184	SLU 45	-0.04	-0.11	14.51	0	0	0
184	SLU 46	-0.04	-0.11	14.5	0	0	0
184	SLU 47	-0.04	-0.12	14.4	0	0	0
184	SLU 48	-0.04	-0.11	14.68	0	0	0
184	SLU 49	-0.04	-0.12	14.67	0	0	0
184	SLU 50	-0.04	-0.11	14.58	0	0	0
184	SLU 51	-0.04	-0.12	14.57	0	0	0
184	SLU 52	-0.05	-0.11	15.59	0	0	0
184	SLU 53	-0.05	-0.1	15.87	0	0	0
184	SLU 54	-0.05	-0.11	15.87	0	0	0
184	SLU 55	-0.05	-0.11	15.77	0	0	0
184	SLU 56	-0.05	-0.1	16.04	0	0	0
184	SLU 57	-0.05	-0.11	16.04	0	0	0
184	SLU 58	-0.05	-0.1	15.95	0	0	0
184	SLU 59	-0.05	-0.11	15.94	0	0	0
184	SLU 60	-0.06	-0.1	16.19	0	0	0
184	SLU 61	-0.05	-0.1	16.19	0	0	0
184	SLU 62	-0.06	-0.1	16.36	0	0	0
184	SLU 63	-0.05	-0.1	16.36	0	0	0
184	SLU 64	-0.05	-0.09	15.43	0	0	0
184	SLU 65	-0.04	-0.1	15.42	0	0	0
184	SLU 66	-0.05	-0.09	15.7	0	0	0
184	SLU 67	-0.04	-0.1	15.69	0	0	0
184	SLU 68	-0.04	-0.1	15.59	0	0	0
184	SLU 69	-0.05	-0.09	15.87	0	0	0
184	SLU 70	-0.05	-0.1	15.86	0	0	0
184	SLU 71	-0.05	-0.1	15.77	0	0	0
184	SLU 72	-0.05	-0.1	15.77	0	0	0
184	SLU 73	-0.05	-0.09	16.79	0	0	0
184	SLU 74	-0.06	-0.09	17.07	0	0	0
184	SLU 75	-0.05	-0.09	17.06	0	0	0
184	SLU 76	-0.05	-0.09	16.96	0	0	0
184	SLU 77	-0.06	-0.09	17.24	0	0	0
184	SLU 78	-0.05	-0.09	17.23	0	0	0
184	SLU 79	-0.06	-0.09	17.14	0	0	0
184	SLU 80	-0.05	-0.09	17.13	0	0	0
184	SLU 81	-0.06	-0.08	17.39	0	0	0
184	SLU 82	-0.06	-0.09	17.38	0	0	0
184	SLU 83	-0.06	-0.08	17.56	0	0	0
184	SLU 84	-0.06	-0.09	17.55	0	0	0
184	SLE RA 1	-0.03	-0.08	11.61	0	0	0
184	SLE RA 2	-0.03	-0.08	11.6	0	0	0
184	SLE RA 3	-0.04	-0.08	11.79	0	0	0
184	SLE RA 4	-0.03	-0.08	11.78	0	0	0
184	SLE RA 5	-0.03	-0.08	11.71	0	0	0
184	SLE RA 6	-0.04	-0.08	11.9	0	0	0
184	SLE RA 7	-0.03	-0.08	11.9	0	0	0
184	SLE RA 8	-0.04	-0.08	11.83	0	0	0
184	SLE RA 9	-0.03	-0.08	11.83	0	0	0
184	SLE RA 10	-0.04	-0.08	12.51	0	0	0
184	SLE RA 11	-0.04	-0.07	12.7	0	0	0
184	SLE RA 12	-0.04	-0.07	12.7	0	0	0
184	SLE RA 13	-0.04	-0.08	12.63	0	0	0
184	SLE RA 14	-0.04	-0.07	12.81	0	0	0
184	SLE RA 15	-0.04	-0.07	12.81	0	0	0
184	SLE RA 16	-0.04	-0.07	12.75	0	0	0
184	SLE RA 17	-0.04	-0.08	12.74	0	0	0
184	SLE RA 18	-0.04	-0.07	12.91	0	0	0
184	SLE RA 19	-0.04	-0.07	12.91	0	0	0
184	SLE RA 20	-0.04	-0.07	13.02	0	0	0
184	SLE RA 21	-0.04	-0.07	13.02	0	0	0
184	SLE FR 1	-0.03	-0.08	11.61	0	0	0
184	SLE FR 2	-0.03	-0.08	11.61	0	0	0
184	SLE FR 3	-0.03	-0.08	11.65	0	0	0
184	SLE FR 4	-0.04	-0.07	12	0	0	0
184	SLE FR 5	-0.04	-0.07	12.04	0	0	0
184	SLE FR 6	-0.04	-0.07	12.26	0	0	0
184	SLE QP 1	-0.03	-0.08	11.61	0	0	0
184	SLE QP 2	-0.04	-0.07	12	0	0	0
184	SLD 1	0.98	0.13	11.83	0	0	0
184	SLD 2	1.08	0.15	11.89	0	0	0
184	SLD 3	0.91	-0.14	11.53	0	0	0
184	SLD 4	1.01	-0.12	11.59	0	0	0
184	SLD 5	0.37	0.39	12.38	0	0	0
184	SLD 6	0.43	0.41	12.42	0	0	0
184	SLD 7	0.11	-0.51	11.4	0	0	0
184	SLD 8	0.18	-0.49	11.44	0	0	0
184	SLD 9	-0.25	0.34	12.56	0	0	0
184	SLD 10	-0.19	0.36	12.59	0	0	0
184	SLD 11	-0.5	-0.55	11.57	0	0	0
184	SLD 12	-0.44	-0.54	11.61	0	0	0
184	SLD 13	-1.08	-0.03	12.4	0	0	0
184	SLD 14	-0.98	-0.01	12.46	0	0	0
184	SLD 15	-1.16	-0.3	12.11	0	0	0
184	SLD 16	-1.05	-0.28	12.17	0	0	0
184	SLV 1	2.35	0.39	11.59	0	0	0
184	SLV 2	2.58	0.44	11.73	0	0	0
184	SLV 3	2.17	-0.22	10.92	0	0	0
184	SLV 4	2.4	-0.17	11.06	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
184	SLV 5	0.91	0.98	12.87	0	0	0
184	SLV 6	1.06	1.01	12.96	0	0	0
184	SLV 7	0.32	-1.05	10.64	0	0	0
184	SLV 8	0.47	-1.02	10.73	0	0	0
184	SLV 9	-0.54	0.87	13.27	0	0	0
184	SLV 10	-0.39	0.9	13.36	0	0	0
184	SLV 11	-1.13	-1.16	11.04	0	0	0
184	SLV 12	-0.98	-1.13	11.13	0	0	0
184	SLV 13	-2.48	0.02	12.93	0	0	0
184	SLV 14	-2.24	0.07	13.07	0	0	0
184	SLV 15	-2.65	-0.59	12.26	0	0	0
184	SLV 16	-2.42	-0.54	12.4	0	0	0
185	SLU 1	-0.03	-0.1	11.33	0	0	0
185	SLU 2	-0.03	-0.11	11.32	0	0	0
185	SLU 3	-0.03	-0.1	11.6	0	0	0
185	SLU 4	-0.03	-0.1	11.59	0	0	0
185	SLU 5	-0.03	-0.11	11.49	0	0	0
185	SLU 6	-0.03	-0.1	11.77	0	0	0
185	SLU 7	-0.03	-0.1	11.76	0	0	0
185	SLU 8	-0.03	-0.1	11.67	0	0	0
185	SLU 9	-0.03	-0.11	11.66	0	0	0
185	SLU 10	-0.04	-0.1	12.69	0	0	0
185	SLU 11	-0.04	-0.09	12.97	0	0	0
185	SLU 12	-0.04	-0.1	12.96	0	0	0
185	SLU 13	-0.04	-0.1	12.86	0	0	0
185	SLU 14	-0.04	-0.09	13.14	0	0	0
185	SLU 15	-0.04	-0.1	13.13	0	0	0
185	SLU 16	-0.04	-0.09	13.04	0	0	0
185	SLU 17	-0.04	-0.1	13.03	0	0	0
185	SLU 18	-0.04	-0.09	13.28	0	0	0
185	SLU 19	-0.04	-0.09	13.28	0	0	0
185	SLU 20	-0.05	-0.09	13.45	0	0	0
185	SLU 21	-0.04	-0.1	13.45	0	0	0
185	SLU 22	-0.03	-0.08	12.53	0	0	0
185	SLU 23	-0.03	-0.09	12.52	0	0	0
185	SLU 24	-0.04	-0.08	12.8	0	0	0
185	SLU 25	-0.03	-0.09	12.79	0	0	0
185	SLU 26	-0.03	-0.09	12.69	0	0	0
185	SLU 27	-0.04	-0.09	12.97	0	0	0
185	SLU 28	-0.03	-0.09	12.96	0	0	0
185	SLU 29	-0.04	-0.09	12.87	0	0	0
185	SLU 30	-0.03	-0.09	12.86	0	0	0
185	SLU 31	-0.04	-0.09	13.89	0	0	0
185	SLU 32	-0.05	-0.08	14.17	0	0	0
185	SLU 33	-0.04	-0.08	14.16	0	0	0
185	SLU 34	-0.04	-0.09	14.06	0	0	0
185	SLU 35	-0.05	-0.08	14.34	0	0	0
185	SLU 36	-0.04	-0.08	14.33	0	0	0
185	SLU 37	-0.05	-0.08	14.24	0	0	0
185	SLU 38	-0.04	-0.09	14.23	0	0	0
185	SLU 39	-0.05	-0.07	14.48	0	0	0
185	SLU 40	-0.04	-0.08	14.48	0	0	0
185	SLU 41	-0.05	-0.08	14.65	0	0	0
185	SLU 42	-0.05	-0.08	14.65	0	0	0
185	SLU 43	-0.04	-0.13	14.31	0	0	0
185	SLU 44	-0.03	-0.14	14.3	0	0	0
185	SLU 45	-0.04	-0.13	14.58	0	0	0
185	SLU 46	-0.04	-0.14	14.58	0	0	0
185	SLU 47	-0.04	-0.14	14.47	0	0	0
185	SLU 48	-0.04	-0.13	14.75	0	0	0
185	SLU 49	-0.04	-0.14	14.75	0	0	0
185	SLU 50	-0.04	-0.14	14.66	0	0	0
185	SLU 51	-0.04	-0.14	14.65	0	0	0
185	SLU 52	-0.04	-0.13	15.67	0	0	0
185	SLU 53	-0.05	-0.13	15.95	0	0	0
185	SLU 54	-0.05	-0.13	15.95	0	0	0
185	SLU 55	-0.05	-0.14	15.84	0	0	0
185	SLU 56	-0.05	-0.13	16.12	0	0	0
185	SLU 57	-0.05	-0.13	16.12	0	0	0
185	SLU 58	-0.05	-0.13	16.02	0	0	0
185	SLU 59	-0.05	-0.13	16.02	0	0	0
185	SLU 60	-0.05	-0.12	16.27	0	0	0
185	SLU 61	-0.05	-0.13	16.26	0	0	0
185	SLU 62	-0.05	-0.12	16.44	0	0	0
185	SLU 63	-0.05	-0.13	16.43	0	0	0
185	SLU 64	-0.04	-0.12	15.51	0	0	0
185	SLU 65	-0.04	-0.13	15.5	0	0	0
185	SLU 66	-0.04	-0.12	15.78	0	0	0
185	SLU 67	-0.04	-0.12	15.78	0	0	0
185	SLU 68	-0.04	-0.13	15.67	0	0	0
185	SLU 69	-0.05	-0.12	15.95	0	0	0
185	SLU 70	-0.04	-0.12	15.95	0	0	0
185	SLU 71	-0.05	-0.12	15.86	0	0	0
185	SLU 72	-0.04	-0.13	15.85	0	0	0
185	SLU 73	-0.05	-0.12	16.87	0	0	0
185	SLU 74	-0.05	-0.11	17.15	0	0	0
185	SLU 75	-0.05	-0.12	17.15	0	0	0
185	SLU 76	-0.05	-0.12	17.04	0	0	0
185	SLU 77	-0.05	-0.11	17.32	0	0	0
185	SLU 78	-0.05	-0.12	17.32	0	0	0
185	SLU 79	-0.05	-0.11	17.22	0	0	0
185	SLU 80	-0.05	-0.12	17.22	0	0	0
185	SLU 81	-0.06	-0.11	17.47	0	0	0
185	SLU 82	-0.05	-0.11	17.46	0	0	0
185	SLU 83	-0.06	-0.11	17.64	0	0	0
185	SLU 84	-0.05	-0.12	17.63	0	0	0
185	SLE RA 1	-0.03	-0.09	11.67	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
185	SLE RA 2	-0.03	-0.1	11.66	0	0	0
185	SLE RA 3	-0.03	-0.09	11.85	0	0	0
185	SLE RA 4	-0.03	-0.1	11.85	0	0	0
185	SLE RA 5	-0.03	-0.1	11.78	0	0	0
185	SLE RA 6	-0.03	-0.1	11.96	0	0	0
185	SLE RA 7	-0.03	-0.1	11.96	0	0	0
185	SLE RA 8	-0.03	-0.1	11.9	0	0	0
185	SLE RA 9	-0.03	-0.1	11.89	0	0	0
185	SLE RA 10	-0.04	-0.09	12.58	0	0	0
185	SLE RA 11	-0.04	-0.09	12.76	0	0	0
185	SLE RA 12	-0.04	-0.09	12.76	0	0	0
185	SLE RA 13	-0.04	-0.1	12.69	0	0	0
185	SLE RA 14	-0.04	-0.09	12.88	0	0	0
185	SLE RA 15	-0.04	-0.09	12.87	0	0	0
185	SLE RA 16	-0.04	-0.09	12.81	0	0	0
185	SLE RA 17	-0.04	-0.09	12.81	0	0	0
185	SLE RA 18	-0.04	-0.09	12.97	0	0	0
185	SLE RA 19	-0.04	-0.09	12.97	0	0	0
185	SLE RA 20	-0.04	-0.09	13.09	0	0	0
185	SLE RA 21	-0.04	-0.09	13.08	0	0	0
185	SLE FR 1	-0.03	-0.09	11.67	0	0	0
185	SLE FR 2	-0.03	-0.1	11.67	0	0	0
185	SLE FR 3	-0.03	-0.09	11.72	0	0	0
185	SLE FR 4	-0.03	-0.09	12.06	0	0	0
185	SLE FR 5	-0.04	-0.09	12.11	0	0	0
185	SLE FR 6	-0.04	-0.09	12.32	0	0	0
185	SLE QP 1	-0.03	-0.09	11.67	0	0	0
185	SLE QP 2	-0.03	-0.09	12.06	0	0	0
185	SLD 1	0.99	0.12	11.81	0	0	0
185	SLD 2	1.09	0.15	11.87	0	0	0
185	SLD 3	0.91	-0.15	11.51	0	0	0
185	SLD 4	1.01	-0.12	11.57	0	0	0
185	SLD 5	0.37	0.37	12.42	0	0	0
185	SLD 6	0.43	0.39	12.47	0	0	0
185	SLD 7	0.12	-0.52	11.43	0	0	0
185	SLD 8	0.18	-0.5	11.47	0	0	0
185	SLD 9	-0.25	0.32	12.65	0	0	0
185	SLD 10	-0.19	0.33	12.69	0	0	0
185	SLD 11	-0.5	-0.57	11.65	0	0	0
185	SLD 12	-0.44	-0.56	11.7	0	0	0
185	SLD 13	-1.08	-0.07	12.55	0	0	0
185	SLD 14	-0.98	-0.04	12.61	0	0	0
185	SLD 15	-1.16	-0.33	12.25	0	0	0
185	SLD 16	-1.06	-0.31	12.32	0	0	0
185	SLV 1	2.35	0.4	11.46	0	0	0
185	SLV 2	2.59	0.46	11.6	0	0	0
185	SLV 3	2.18	-0.21	10.78	0	0	0
185	SLV 4	2.41	-0.15	10.93	0	0	0
185	SLV 5	0.91	0.96	12.88	0	0	0
185	SLV 6	1.06	1	12.98	0	0	0
185	SLV 7	0.32	-1.06	10.62	0	0	0
185	SLV 8	0.47	-1.02	10.72	0	0	0
185	SLV 9	-0.54	0.83	13.4	0	0	0
185	SLV 10	-0.39	0.87	13.5	0	0	0
185	SLV 11	-1.13	-1.19	11.15	0	0	0
185	SLV 12	-0.98	-1.15	11.24	0	0	0
185	SLV 13	-2.48	-0.04	13.19	0	0	0
185	SLV 14	-2.25	0.02	13.34	0	0	0
185	SLV 15	-2.66	-0.65	12.52	0	0	0
185	SLV 16	-2.42	-0.58	12.67	0	0	0
186	SLU 1	-0.03	-0.12	11.35	0	0	0
186	SLU 2	-0.02	-0.12	11.34	0	0	0
186	SLU 3	-0.03	-0.12	11.62	0	0	0
186	SLU 4	-0.03	-0.12	11.62	0	0	0
186	SLU 5	-0.03	-0.12	11.52	0	0	0
186	SLU 6	-0.03	-0.12	11.8	0	0	0
186	SLU 7	-0.03	-0.12	11.79	0	0	0
186	SLU 8	-0.03	-0.12	11.7	0	0	0
186	SLU 9	-0.03	-0.12	11.69	0	0	0
186	SLU 10	-0.03	-0.12	12.71	0	0	0
186	SLU 11	-0.04	-0.11	12.99	0	0	0
186	SLU 12	-0.04	-0.12	12.98	0	0	0
186	SLU 13	-0.04	-0.12	12.88	0	0	0
186	SLU 14	-0.04	-0.11	13.16	0	0	0
186	SLU 15	-0.04	-0.12	13.15	0	0	0
186	SLU 16	-0.04	-0.11	13.06	0	0	0
186	SLU 17	-0.04	-0.12	13.05	0	0	0
186	SLU 18	-0.04	-0.11	13.3	0	0	0
186	SLU 19	-0.04	-0.11	13.3	0	0	0
186	SLU 20	-0.04	-0.11	13.47	0	0	0
186	SLU 21	-0.04	-0.12	13.47	0	0	0
186	SLU 22	-0.03	-0.1	12.56	0	0	0
186	SLU 23	-0.03	-0.11	12.55	0	0	0
186	SLU 24	-0.03	-0.1	12.83	0	0	0
186	SLU 25	-0.03	-0.11	12.82	0	0	0
186	SLU 26	-0.03	-0.11	12.72	0	0	0
186	SLU 27	-0.04	-0.11	13	0	0	0
186	SLU 28	-0.03	-0.11	12.99	0	0	0
186	SLU 29	-0.04	-0.11	12.9	0	0	0
186	SLU 30	-0.03	-0.11	12.89	0	0	0
186	SLU 31	-0.04	-0.11	13.91	0	0	0
186	SLU 32	-0.04	-0.1	14.19	0	0	0
186	SLU 33	-0.04	-0.1	14.19	0	0	0
186	SLU 34	-0.04	-0.11	14.08	0	0	0
186	SLU 35	-0.04	-0.1	14.36	0	0	0
186	SLU 36	-0.04	-0.11	14.36	0	0	0
186	SLU 37	-0.04	-0.1	14.26	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
186	SLU 38	-0.04	-0.11	14.26	0	0	0
186	SLU 39	-0.05	-0.1	14.51	0	0	0
186	SLU 40	-0.04	-0.1	14.5	0	0	0
186	SLU 41	-0.05	-0.1	14.68	0	0	0
186	SLU 42	-0.04	-0.1	14.67	0	0	0
186	SLU 43	-0.04	-0.15	14.35	0	0	0
186	SLU 44	-0.03	-0.16	14.34	0	0	0
186	SLU 45	-0.04	-0.15	14.62	0	0	0
186	SLU 46	-0.04	-0.16	14.61	0	0	0
186	SLU 47	-0.03	-0.16	14.51	0	0	0
186	SLU 48	-0.04	-0.16	14.79	0	0	0
186	SLU 49	-0.04	-0.16	14.78	0	0	0
186	SLU 50	-0.04	-0.16	14.69	0	0	0
186	SLU 51	-0.04	-0.16	14.68	0	0	0
186	SLU 52	-0.04	-0.16	15.7	0	0	0
186	SLU 53	-0.05	-0.15	15.98	0	0	0
186	SLU 54	-0.05	-0.15	15.98	0	0	0
186	SLU 55	-0.04	-0.16	15.87	0	0	0
186	SLU 56	-0.05	-0.15	16.15	0	0	0
186	SLU 57	-0.05	-0.16	16.15	0	0	0
186	SLU 58	-0.05	-0.15	16.05	0	0	0
186	SLU 59	-0.05	-0.16	16.05	0	0	0
186	SLU 60	-0.05	-0.15	16.3	0	0	0
186	SLU 61	-0.05	-0.15	16.29	0	0	0
186	SLU 62	-0.05	-0.15	16.47	0	0	0
186	SLU 63	-0.05	-0.15	16.46	0	0	0
186	SLU 64	-0.04	-0.14	15.55	0	0	0
186	SLU 65	-0.04	-0.15	15.54	0	0	0
186	SLU 66	-0.04	-0.14	15.82	0	0	0
186	SLU 67	-0.04	-0.15	15.82	0	0	0
186	SLU 68	-0.04	-0.15	15.71	0	0	0
186	SLU 69	-0.04	-0.14	15.99	0	0	0
186	SLU 70	-0.04	-0.15	15.99	0	0	0
186	SLU 71	-0.04	-0.15	15.89	0	0	0
186	SLU 72	-0.04	-0.15	15.89	0	0	0
186	SLU 73	-0.04	-0.15	16.91	0	0	0
186	SLU 74	-0.05	-0.14	17.19	0	0	0
186	SLU 75	-0.05	-0.14	17.18	0	0	0
186	SLU 76	-0.05	-0.15	17.08	0	0	0
186	SLU 77	-0.05	-0.14	17.36	0	0	0
186	SLU 78	-0.05	-0.14	17.35	0	0	0
186	SLU 79	-0.05	-0.14	17.26	0	0	0
186	SLU 80	-0.05	-0.15	17.25	0	0	0
186	SLU 81	-0.05	-0.14	17.5	0	0	0
186	SLU 82	-0.05	-0.14	17.49	0	0	0
186	SLU 83	-0.06	-0.14	17.67	0	0	0
186	SLU 84	-0.05	-0.14	17.67	0	0	0
186	SLE RA 1	-0.03	-0.11	11.7	0	0	0
186	SLE RA 2	-0.03	-0.12	11.69	0	0	0
186	SLE RA 3	-0.03	-0.11	11.88	0	0	0
186	SLE RA 4	-0.03	-0.12	11.87	0	0	0
186	SLE RA 5	-0.03	-0.12	11.81	0	0	0
186	SLE RA 6	-0.03	-0.11	11.99	0	0	0
186	SLE RA 7	-0.03	-0.12	11.99	0	0	0
186	SLE RA 8	-0.03	-0.11	11.93	0	0	0
186	SLE RA 9	-0.03	-0.12	11.92	0	0	0
186	SLE RA 10	-0.03	-0.11	12.6	0	0	0
186	SLE RA 11	-0.04	-0.11	12.79	0	0	0
186	SLE RA 12	-0.04	-0.11	12.78	0	0	0
186	SLE RA 13	-0.03	-0.12	12.72	0	0	0
186	SLE RA 14	-0.04	-0.11	12.9	0	0	0
186	SLE RA 15	-0.04	-0.11	12.9	0	0	0
186	SLE RA 16	-0.04	-0.11	12.84	0	0	0
186	SLE RA 17	-0.04	-0.11	12.83	0	0	0
186	SLE RA 18	-0.04	-0.11	13	0	0	0
186	SLE RA 19	-0.04	-0.11	12.99	0	0	0
186	SLE RA 20	-0.04	-0.11	13.11	0	0	0
186	SLE RA 21	-0.04	-0.11	13.11	0	0	0
186	SLE FR 1	-0.03	-0.11	11.7	0	0	0
186	SLE FR 2	-0.03	-0.11	11.7	0	0	0
186	SLE FR 3	-0.03	-0.11	11.74	0	0	0
186	SLE FR 4	-0.03	-0.11	12.09	0	0	0
186	SLE FR 5	-0.03	-0.11	12.13	0	0	0
186	SLE FR 6	-0.04	-0.11	12.35	0	0	0
186	SLE QP 1	-0.03	-0.11	11.7	0	0	0
186	SLE QP 2	-0.03	-0.11	12.09	0	0	0
186	SLD 1	0.99	0.11	11.74	0	0	0
186	SLD 2	1.09	0.14	11.81	0	0	0
186	SLD 3	0.91	-0.15	11.44	0	0	0
186	SLD 4	1.01	-0.12	11.51	0	0	0
186	SLD 5	0.37	0.35	12.43	0	0	0
186	SLD 6	0.44	0.37	12.47	0	0	0
186	SLD 7	0.12	-0.53	11.43	0	0	0
186	SLD 8	0.18	-0.51	11.47	0	0	0
186	SLD 9	-0.25	0.29	12.71	0	0	0
186	SLD 10	-0.18	0.31	12.75	0	0	0
186	SLD 11	-0.5	-0.59	11.7	0	0	0
186	SLD 12	-0.44	-0.57	11.75	0	0	0
186	SLD 13	-1.08	-0.1	12.67	0	0	0
186	SLD 14	-0.98	-0.07	12.74	0	0	0
186	SLD 15	-1.15	-0.36	12.37	0	0	0
186	SLD 16	-1.05	-0.33	12.44	0	0	0
186	SLV 1	2.35	0.4	11.26	0	0	0
186	SLV 2	2.59	0.47	11.42	0	0	0
186	SLV 3	2.17	-0.2	10.58	0	0	0
186	SLV 4	2.41	-0.13	10.74	0	0	0
186	SLV 5	0.91	0.94	12.85	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
186	SLV 6	1.06	0.99	12.95	0	0	0
186	SLV 7	0.32	-1.06	10.57	0	0	0
186	SLV 8	0.47	-1.01	10.67	0	0	0
186	SLV 9	-0.54	0.79	13.5	0	0	0
186	SLV 10	-0.39	0.84	13.6	0	0	0
186	SLV 11	-1.13	-1.21	11.22	0	0	0
186	SLV 12	-0.98	-1.16	11.33	0	0	0
186	SLV 13	-2.48	-0.1	13.44	0	0	0
186	SLV 14	-2.24	-0.02	13.6	0	0	0
186	SLV 15	-2.65	-0.7	12.75	0	0	0
186	SLV 16	-2.42	-0.62	12.91	0	0	0
187	SLU 1	-0.03	-0.13	11.35	0	0	0
187	SLU 2	-0.02	-0.14	11.35	0	0	0
187	SLU 3	-0.03	-0.13	11.62	0	0	0
187	SLU 4	-0.03	-0.14	11.62	0	0	0
187	SLU 5	-0.02	-0.14	11.52	0	0	0
187	SLU 6	-0.03	-0.14	11.79	0	0	0
187	SLU 7	-0.03	-0.14	11.79	0	0	0
187	SLU 8	-0.03	-0.14	11.7	0	0	0
187	SLU 9	-0.03	-0.14	11.69	0	0	0
187	SLU 10	-0.03	-0.14	12.7	0	0	0
187	SLU 11	-0.04	-0.13	12.98	0	0	0
187	SLU 12	-0.04	-0.13	12.98	0	0	0
187	SLU 13	-0.03	-0.14	12.87	0	0	0
187	SLU 14	-0.04	-0.13	13.15	0	0	0
187	SLU 15	-0.04	-0.14	13.15	0	0	0
187	SLU 16	-0.04	-0.13	13.05	0	0	0
187	SLU 17	-0.04	-0.14	13.05	0	0	0
187	SLU 18	-0.04	-0.13	13.29	0	0	0
187	SLU 19	-0.04	-0.13	13.29	0	0	0
187	SLU 20	-0.04	-0.13	13.47	0	0	0
187	SLU 21	-0.04	-0.14	13.46	0	0	0
187	SLU 22	-0.03	-0.12	12.56	0	0	0
187	SLU 23	-0.03	-0.13	12.55	0	0	0
187	SLU 24	-0.03	-0.12	12.83	0	0	0
187	SLU 25	-0.03	-0.13	12.82	0	0	0
187	SLU 26	-0.03	-0.13	12.72	0	0	0
187	SLU 27	-0.03	-0.13	13	0	0	0
187	SLU 28	-0.03	-0.13	12.99	0	0	0
187	SLU 29	-0.03	-0.13	12.9	0	0	0
187	SLU 30	-0.03	-0.13	12.89	0	0	0
187	SLU 31	-0.03	-0.13	13.91	0	0	0
187	SLU 32	-0.04	-0.12	14.19	0	0	0
187	SLU 33	-0.04	-0.12	14.18	0	0	0
187	SLU 34	-0.04	-0.13	14.08	0	0	0
187	SLU 35	-0.04	-0.12	14.36	0	0	0
187	SLU 36	-0.04	-0.13	14.35	0	0	0
187	SLU 37	-0.04	-0.12	14.26	0	0	0
187	SLU 38	-0.04	-0.13	14.25	0	0	0
187	SLU 39	-0.04	-0.12	14.5	0	0	0
187	SLU 40	-0.04	-0.12	14.49	0	0	0
187	SLU 41	-0.05	-0.12	14.67	0	0	0
187	SLU 42	-0.04	-0.13	14.66	0	0	0
187	SLU 43	-0.04	-0.18	14.35	0	0	0
187	SLU 44	-0.03	-0.18	14.34	0	0	0
187	SLU 45	-0.04	-0.18	14.62	0	0	0
187	SLU 46	-0.03	-0.18	14.61	0	0	0
187	SLU 47	-0.03	-0.18	14.51	0	0	0
187	SLU 48	-0.04	-0.18	14.79	0	0	0
187	SLU 49	-0.04	-0.18	14.78	0	0	0
187	SLU 50	-0.04	-0.18	14.69	0	0	0
187	SLU 51	-0.04	-0.18	14.68	0	0	0
187	SLU 52	-0.04	-0.18	15.7	0	0	0
187	SLU 53	-0.05	-0.17	15.98	0	0	0
187	SLU 54	-0.04	-0.18	15.97	0	0	0
187	SLU 55	-0.04	-0.18	15.87	0	0	0
187	SLU 56	-0.05	-0.18	16.15	0	0	0
187	SLU 57	-0.04	-0.18	16.14	0	0	0
187	SLU 58	-0.05	-0.18	16.05	0	0	0
187	SLU 59	-0.04	-0.18	16.04	0	0	0
187	SLU 60	-0.05	-0.17	16.29	0	0	0
187	SLU 61	-0.05	-0.18	16.28	0	0	0
187	SLU 62	-0.05	-0.17	16.46	0	0	0
187	SLU 63	-0.05	-0.18	16.45	0	0	0
187	SLU 64	-0.04	-0.17	15.55	0	0	0
187	SLU 65	-0.03	-0.17	15.54	0	0	0
187	SLU 66	-0.04	-0.17	15.82	0	0	0
187	SLU 67	-0.04	-0.17	15.82	0	0	0
187	SLU 68	-0.03	-0.17	15.71	0	0	0
187	SLU 69	-0.04	-0.17	15.99	0	0	0
187	SLU 70	-0.04	-0.17	15.99	0	0	0
187	SLU 71	-0.04	-0.17	15.89	0	0	0
187	SLU 72	-0.04	-0.17	15.89	0	0	0
187	SLU 73	-0.04	-0.17	16.9	0	0	0
187	SLU 74	-0.05	-0.16	17.18	0	0	0
187	SLU 75	-0.05	-0.17	17.17	0	0	0
187	SLU 76	-0.04	-0.17	17.07	0	0	0
187	SLU 77	-0.05	-0.17	17.35	0	0	0
187	SLU 78	-0.05	-0.17	17.34	0	0	0
187	SLU 79	-0.05	-0.17	17.25	0	0	0
187	SLU 80	-0.05	-0.17	17.25	0	0	0
187	SLU 81	-0.05	-0.16	17.49	0	0	0
187	SLU 82	-0.05	-0.17	17.49	0	0	0
187	SLU 83	-0.05	-0.16	17.66	0	0	0
187	SLU 84	-0.05	-0.17	17.66	0	0	0
187	SLE RA 1	-0.03	-0.13	11.7	0	0	0
187	SLE RA 2	-0.03	-0.13	11.69	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
187	SLE RA 3	-0.03	-0.13	11.88	0	0	0
187	SLE RA 4	-0.03	-0.13	11.87	0	0	0
187	SLE RA 5	-0.03	-0.14	11.81	0	0	0
187	SLE RA 6	-0.03	-0.13	11.99	0	0	0
187	SLE RA 7	-0.03	-0.13	11.99	0	0	0
187	SLE RA 8	-0.03	-0.13	11.93	0	0	0
187	SLE RA 9	-0.03	-0.14	11.92	0	0	0
187	SLE RA 10	-0.03	-0.13	12.6	0	0	0
187	SLE RA 11	-0.04	-0.13	12.78	0	0	0
187	SLE RA 12	-0.03	-0.13	12.78	0	0	0
187	SLE RA 13	-0.03	-0.13	12.71	0	0	0
187	SLE RA 14	-0.04	-0.13	12.9	0	0	0
187	SLE RA 15	-0.03	-0.13	12.89	0	0	0
187	SLE RA 16	-0.04	-0.13	12.83	0	0	0
187	SLE RA 17	-0.03	-0.13	12.83	0	0	0
187	SLE RA 18	-0.04	-0.13	12.99	0	0	0
187	SLE RA 19	-0.04	-0.13	12.99	0	0	0
187	SLE RA 20	-0.04	-0.13	13.11	0	0	0
187	SLE RA 21	-0.04	-0.13	13.1	0	0	0
187	SLE FR 1	-0.03	-0.13	11.7	0	0	0
187	SLE FR 2	-0.03	-0.13	11.7	0	0	0
187	SLE FR 3	-0.03	-0.13	11.74	0	0	0
187	SLE FR 4	-0.03	-0.13	12.09	0	0	0
187	SLE FR 5	-0.03	-0.13	12.13	0	0	0
187	SLE FR 6	-0.03	-0.13	12.35	0	0	0
187	SLE QP 1	-0.03	-0.13	11.7	0	0	0
187	SLE QP 2	-0.03	-0.13	12.09	0	0	0
187	SLD 1	0.98	0.1	11.64	0	0	0
187	SLD 2	1.08	0.14	11.71	0	0	0
187	SLD 3	0.91	-0.16	11.34	0	0	0
187	SLD 4	1.01	-0.12	11.41	0	0	0
187	SLD 5	0.37	0.33	12.4	0	0	0
187	SLD 6	0.43	0.35	12.45	0	0	0
187	SLD 7	0.12	-0.54	11.39	0	0	0
187	SLD 8	0.18	-0.52	11.44	0	0	0
187	SLD 9	-0.25	0.26	12.74	0	0	0
187	SLD 10	-0.18	0.28	12.78	0	0	0
187	SLD 11	-0.5	-0.61	11.73	0	0	0
187	SLD 12	-0.43	-0.59	11.77	0	0	0
187	SLD 13	-1.07	-0.13	12.76	0	0	0
187	SLD 14	-0.97	-0.1	12.84	0	0	0
187	SLD 15	-1.14	-0.39	12.46	0	0	0
187	SLD 16	-1.04	-0.36	12.53	0	0	0
187	SLV 1	2.34	0.4	11.04	0	0	0
187	SLV 2	2.57	0.48	11.2	0	0	0
187	SLV 3	2.16	-0.19	10.35	0	0	0
187	SLV 4	2.4	-0.11	10.51	0	0	0
187	SLV 5	0.91	0.91	12.79	0	0	0
187	SLV 6	1.06	0.97	12.9	0	0	0
187	SLV 7	0.32	-1.06	10.49	0	0	0
187	SLV 8	0.47	-1.01	10.6	0	0	0
187	SLV 9	-0.53	0.75	13.58	0	0	0
187	SLV 10	-0.38	0.8	13.69	0	0	0
187	SLV 11	-1.12	-1.22	11.28	0	0	0
187	SLV 12	-0.97	-1.17	11.38	0	0	0
187	SLV 13	-2.46	-0.15	13.66	0	0	0
187	SLV 14	-2.23	-0.07	13.83	0	0	0
187	SLV 15	-2.64	-0.74	12.97	0	0	0
187	SLV 16	-2.4	-0.66	13.14	0	0	0
188	SLU 1	-0.03	-0.14	11.05	0	0	0
188	SLU 2	-0.02	-0.15	11.04	0	0	0
188	SLU 3	-0.03	-0.15	11.31	0	0	0
188	SLU 4	-0.02	-0.15	11.3	0	0	0
188	SLU 5	-0.02	-0.15	11.2	0	0	0
188	SLU 6	-0.03	-0.15	11.47	0	0	0
188	SLU 7	-0.03	-0.15	11.47	0	0	0
188	SLU 8	-0.03	-0.15	11.38	0	0	0
188	SLU 9	-0.03	-0.15	11.37	0	0	0
188	SLU 10	-0.03	-0.15	12.35	0	0	0
188	SLU 11	-0.04	-0.15	12.62	0	0	0
188	SLU 12	-0.03	-0.15	12.62	0	0	0
188	SLU 13	-0.03	-0.15	12.52	0	0	0
188	SLU 14	-0.04	-0.15	12.79	0	0	0
188	SLU 15	-0.03	-0.15	12.78	0	0	0
188	SLU 16	-0.04	-0.15	12.69	0	0	0
188	SLU 17	-0.03	-0.15	12.69	0	0	0
188	SLU 18	-0.04	-0.14	12.93	0	0	0
188	SLU 19	-0.04	-0.15	12.92	0	0	0
188	SLU 20	-0.04	-0.15	13.09	0	0	0
188	SLU 21	-0.04	-0.15	13.09	0	0	0
188	SLU 22	-0.03	-0.14	12.22	0	0	0
188	SLU 23	-0.02	-0.14	12.21	0	0	0
188	SLU 24	-0.03	-0.14	12.48	0	0	0
188	SLU 25	-0.03	-0.14	12.47	0	0	0
188	SLU 26	-0.02	-0.15	12.38	0	0	0
188	SLU 27	-0.03	-0.14	12.65	0	0	0
188	SLU 28	-0.03	-0.14	12.64	0	0	0
188	SLU 29	-0.03	-0.14	12.55	0	0	0
188	SLU 30	-0.03	-0.15	12.54	0	0	0
188	SLU 31	-0.03	-0.14	13.53	0	0	0
188	SLU 32	-0.04	-0.14	13.8	0	0	0
188	SLU 33	-0.04	-0.14	13.79	0	0	0
188	SLU 34	-0.03	-0.15	13.69	0	0	0
188	SLU 35	-0.04	-0.14	13.96	0	0	0
188	SLU 36	-0.04	-0.14	13.96	0	0	0
188	SLU 37	-0.04	-0.14	13.87	0	0	0
188	SLU 38	-0.04	-0.15	13.86	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
188	SLU 39	-0.04	-0.14	14.1	0	0	0
188	SLU 40	-0.04	-0.14	14.09	0	0	0
188	SLU 41	-0.04	-0.14	14.26	0	0	0
188	SLU 42	-0.04	-0.14	14.26	0	0	0
188	SLU 43	-0.03	-0.19	13.96	0	0	0
188	SLU 44	-0.03	-0.2	13.95	0	0	0
188	SLU 45	-0.03	-0.19	14.22	0	0	0
188	SLU 46	-0.03	-0.2	14.21	0	0	0
188	SLU 47	-0.03	-0.2	14.11	0	0	0
188	SLU 48	-0.04	-0.19	14.38	0	0	0
188	SLU 49	-0.03	-0.2	14.38	0	0	0
188	SLU 50	-0.04	-0.19	14.29	0	0	0
188	SLU 51	-0.03	-0.2	14.28	0	0	0
188	SLU 52	-0.04	-0.2	15.26	0	0	0
188	SLU 53	-0.04	-0.19	15.53	0	0	0
188	SLU 54	-0.04	-0.19	15.53	0	0	0
188	SLU 55	-0.04	-0.2	15.43	0	0	0
188	SLU 56	-0.04	-0.19	15.7	0	0	0
188	SLU 57	-0.04	-0.2	15.69	0	0	0
188	SLU 58	-0.04	-0.19	15.6	0	0	0
188	SLU 59	-0.04	-0.2	15.6	0	0	0
188	SLU 60	-0.05	-0.19	15.84	0	0	0
188	SLU 61	-0.04	-0.19	15.83	0	0	0
188	SLU 62	-0.05	-0.19	16	0	0	0
188	SLU 63	-0.04	-0.2	16	0	0	0
188	SLU 64	-0.03	-0.18	15.13	0	0	0
188	SLU 65	-0.03	-0.19	15.12	0	0	0
188	SLU 66	-0.04	-0.18	15.39	0	0	0
188	SLU 67	-0.03	-0.19	15.39	0	0	0
188	SLU 68	-0.03	-0.19	15.29	0	0	0
188	SLU 69	-0.04	-0.19	15.56	0	0	0
188	SLU 70	-0.03	-0.19	15.55	0	0	0
188	SLU 71	-0.04	-0.19	15.46	0	0	0
188	SLU 72	-0.03	-0.19	15.46	0	0	0
188	SLU 73	-0.04	-0.19	16.44	0	0	0
188	SLU 74	-0.05	-0.18	16.71	0	0	0
188	SLU 75	-0.04	-0.19	16.7	0	0	0
188	SLU 76	-0.04	-0.19	16.6	0	0	0
188	SLU 77	-0.05	-0.19	16.87	0	0	0
188	SLU 78	-0.04	-0.19	16.87	0	0	0
188	SLU 79	-0.05	-0.19	16.78	0	0	0
188	SLU 80	-0.04	-0.19	16.77	0	0	0
188	SLU 81	-0.05	-0.18	17.01	0	0	0
188	SLU 82	-0.04	-0.19	17	0	0	0
188	SLU 83	-0.05	-0.18	17.18	0	0	0
188	SLU 84	-0.05	-0.19	17.17	0	0	0
188	SLE RA 1	-0.03	-0.14	11.38	0	0	0
188	SLE RA 2	-0.02	-0.15	11.37	0	0	0
188	SLE RA 3	-0.03	-0.14	11.56	0	0	0
188	SLE RA 4	-0.03	-0.15	11.55	0	0	0
188	SLE RA 5	-0.02	-0.15	11.49	0	0	0
188	SLE RA 6	-0.03	-0.14	11.67	0	0	0
188	SLE RA 7	-0.03	-0.15	11.66	0	0	0
188	SLE RA 8	-0.03	-0.15	11.6	0	0	0
188	SLE RA 9	-0.03	-0.15	11.6	0	0	0
188	SLE RA 10	-0.03	-0.15	12.25	0	0	0
188	SLE RA 11	-0.03	-0.14	12.43	0	0	0
188	SLE RA 12	-0.03	-0.15	12.43	0	0	0
188	SLE RA 13	-0.03	-0.15	12.36	0	0	0
188	SLE RA 14	-0.03	-0.14	12.54	0	0	0
188	SLE RA 15	-0.03	-0.15	12.54	0	0	0
188	SLE RA 16	-0.03	-0.15	12.48	0	0	0
188	SLE RA 17	-0.03	-0.15	12.48	0	0	0
188	SLE RA 18	-0.03	-0.14	12.63	0	0	0
188	SLE RA 19	-0.03	-0.14	12.63	0	0	0
188	SLE RA 20	-0.04	-0.14	12.74	0	0	0
188	SLE RA 21	-0.03	-0.15	12.74	0	0	0
188	SLE FR 1	-0.03	-0.14	11.38	0	0	0
188	SLE FR 2	-0.03	-0.14	11.38	0	0	0
188	SLE FR 3	-0.03	-0.14	11.42	0	0	0
188	SLE FR 4	-0.03	-0.14	11.76	0	0	0
188	SLE FR 5	-0.03	-0.14	11.8	0	0	0
188	SLE FR 6	-0.03	-0.14	12.01	0	0	0
188	SLE QP 1	-0.03	-0.14	11.38	0	0	0
188	SLE QP 2	-0.03	-0.14	11.76	0	0	0
188	SLD 1	0.95	0.09	11.23	0	0	0
188	SLD 2	1.04	0.13	11.3	0	0	0
188	SLD 3	0.87	-0.16	10.93	0	0	0
188	SLD 4	0.97	-0.12	11	0	0	0
188	SLD 5	0.36	0.3	12.04	0	0	0
188	SLD 6	0.42	0.32	12.09	0	0	0
188	SLD 7	0.11	-0.53	11.04	0	0	0
188	SLD 8	0.18	-0.51	11.09	0	0	0
188	SLD 9	-0.24	0.22	12.42	0	0	0
188	SLD 10	-0.17	0.25	12.47	0	0	0
188	SLD 11	-0.48	-0.61	11.43	0	0	0
188	SLD 12	-0.42	-0.58	11.47	0	0	0
188	SLD 13	-1.03	-0.16	12.51	0	0	0
188	SLD 14	-0.93	-0.12	12.58	0	0	0
188	SLD 15	-1.1	-0.41	12.21	0	0	0
188	SLD 16	-1.01	-0.37	12.28	0	0	0
188	SLV 1	2.26	0.39	10.51	0	0	0
188	SLV 2	2.48	0.48	10.68	0	0	0
188	SLV 3	2.09	-0.18	9.83	0	0	0
188	SLV 4	2.31	-0.09	10	0	0	0
188	SLV 5	0.88	0.86	12.39	0	0	0
188	SLV 6	1.02	0.92	12.49	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
188	SLV 7	0.31	-1.03	10.12	0	0	0
188	SLV 8	0.45	-0.97	10.23	0	0	0
188	SLV 9	-0.51	0.69	13.29	0	0	0
188	SLV 10	-0.37	0.74	13.39	0	0	0
188	SLV 11	-1.08	-1.2	11.02	0	0	0
188	SLV 12	-0.93	-1.15	11.13	0	0	0
188	SLV 13	-2.37	-0.19	13.51	0	0	0
188	SLV 14	-2.14	-0.11	13.68	0	0	0
188	SLV 15	-2.54	-0.76	12.83	0	0	0
188	SLV 16	-2.31	-0.67	13	0	0	0
189	SLU 1	-0.03	-0.16	11.29	0	0	0
189	SLU 2	-0.02	-0.17	11.28	0	0	0
189	SLU 3	-0.03	-0.16	11.55	0	0	0
189	SLU 4	-0.02	-0.17	11.55	0	0	0
189	SLU 5	-0.02	-0.17	11.45	0	0	0
189	SLU 6	-0.03	-0.17	11.72	0	0	0
189	SLU 7	-0.02	-0.17	11.72	0	0	0
189	SLU 8	-0.03	-0.17	11.63	0	0	0
189	SLU 9	-0.02	-0.17	11.62	0	0	0
189	SLU 10	-0.03	-0.17	12.62	0	0	0
189	SLU 11	-0.04	-0.17	12.9	0	0	0
189	SLU 12	-0.03	-0.17	12.89	0	0	0
189	SLU 13	-0.03	-0.17	12.79	0	0	0
189	SLU 14	-0.04	-0.17	13.07	0	0	0
189	SLU 15	-0.03	-0.17	13.06	0	0	0
189	SLU 16	-0.04	-0.17	12.97	0	0	0
189	SLU 17	-0.03	-0.17	12.96	0	0	0
189	SLU 18	-0.04	-0.17	13.2	0	0	0
189	SLU 19	-0.04	-0.17	13.2	0	0	0
189	SLU 20	-0.04	-0.17	13.37	0	0	0
189	SLU 21	-0.04	-0.17	13.37	0	0	0
189	SLU 22	-0.03	-0.16	12.49	0	0	0
189	SLU 23	-0.02	-0.16	12.48	0	0	0
189	SLU 24	-0.03	-0.16	12.76	0	0	0
189	SLU 25	-0.03	-0.16	12.75	0	0	0
189	SLU 26	-0.02	-0.17	12.65	0	0	0
189	SLU 27	-0.03	-0.16	12.93	0	0	0
189	SLU 28	-0.03	-0.17	12.92	0	0	0
189	SLU 29	-0.03	-0.16	12.83	0	0	0
189	SLU 30	-0.03	-0.17	12.82	0	0	0
189	SLU 31	-0.03	-0.17	13.82	0	0	0
189	SLU 32	-0.04	-0.16	14.1	0	0	0
189	SLU 33	-0.03	-0.16	14.09	0	0	0
189	SLU 34	-0.03	-0.17	13.99	0	0	0
189	SLU 35	-0.04	-0.16	14.27	0	0	0
189	SLU 36	-0.04	-0.17	14.26	0	0	0
189	SLU 37	-0.04	-0.16	14.17	0	0	0
189	SLU 38	-0.04	-0.17	14.16	0	0	0
189	SLU 39	-0.04	-0.16	14.41	0	0	0
189	SLU 40	-0.04	-0.16	14.4	0	0	0
189	SLU 41	-0.04	-0.16	14.57	0	0	0
189	SLU 42	-0.04	-0.17	14.57	0	0	0
189	SLU 43	-0.03	-0.21	14.26	0	0	0
189	SLU 44	-0.03	-0.22	14.25	0	0	0
189	SLU 45	-0.03	-0.22	14.53	0	0	0
189	SLU 46	-0.03	-0.22	14.52	0	0	0
189	SLU 47	-0.03	-0.22	14.42	0	0	0
189	SLU 48	-0.03	-0.22	14.7	0	0	0
189	SLU 49	-0.03	-0.22	14.69	0	0	0
189	SLU 50	-0.03	-0.22	14.6	0	0	0
189	SLU 51	-0.03	-0.22	14.59	0	0	0
189	SLU 52	-0.04	-0.22	15.59	0	0	0
189	SLU 53	-0.04	-0.22	15.87	0	0	0
189	SLU 54	-0.04	-0.22	15.86	0	0	0
189	SLU 55	-0.04	-0.22	15.76	0	0	0
189	SLU 56	-0.04	-0.22	16.04	0	0	0
189	SLU 57	-0.04	-0.22	16.03	0	0	0
189	SLU 58	-0.04	-0.22	15.94	0	0	0
189	SLU 59	-0.04	-0.23	15.94	0	0	0
189	SLU 60	-0.04	-0.22	16.18	0	0	0
189	SLU 61	-0.04	-0.22	16.17	0	0	0
189	SLU 62	-0.05	-0.22	16.35	0	0	0
189	SLU 63	-0.04	-0.22	16.34	0	0	0
189	SLU 64	-0.03	-0.21	15.46	0	0	0
189	SLU 65	-0.03	-0.21	15.45	0	0	0
189	SLU 66	-0.04	-0.21	15.73	0	0	0
189	SLU 67	-0.03	-0.21	15.72	0	0	0
189	SLU 68	-0.03	-0.22	15.62	0	0	0
189	SLU 69	-0.04	-0.21	15.9	0	0	0
189	SLU 70	-0.03	-0.22	15.89	0	0	0
189	SLU 71	-0.04	-0.21	15.8	0	0	0
189	SLU 72	-0.03	-0.22	15.8	0	0	0
189	SLU 73	-0.04	-0.22	16.8	0	0	0
189	SLU 74	-0.04	-0.21	17.07	0	0	0
189	SLU 75	-0.04	-0.22	17.07	0	0	0
189	SLU 76	-0.04	-0.22	16.96	0	0	0
189	SLU 77	-0.05	-0.21	17.24	0	0	0
189	SLU 78	-0.04	-0.22	17.24	0	0	0
189	SLU 79	-0.05	-0.22	17.14	0	0	0
189	SLU 80	-0.04	-0.22	17.14	0	0	0
189	SLU 81	-0.05	-0.21	17.38	0	0	0
189	SLU 82	-0.04	-0.21	17.37	0	0	0
189	SLU 83	-0.05	-0.21	17.55	0	0	0
189	SLU 84	-0.05	-0.22	17.54	0	0	0
189	SLE RA 1	-0.03	-0.16	11.63	0	0	0
189	SLE RA 2	-0.02	-0.17	11.62	0	0	0
189	SLE RA 3	-0.03	-0.16	11.81	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
189	SLE RA 4	-0.02	-0.16	11.81	0	0	0
189	SLE RA 5	-0.02	-0.17	11.74	0	0	0
189	SLE RA 6	-0.03	-0.16	11.92	0	0	0
189	SLE RA 7	-0.03	-0.17	11.92	0	0	0
189	SLE RA 8	-0.03	-0.17	11.86	0	0	0
189	SLE RA 9	-0.03	-0.17	11.85	0	0	0
189	SLE RA 10	-0.03	-0.17	12.52	0	0	0
189	SLE RA 11	-0.03	-0.16	12.7	0	0	0
189	SLE RA 12	-0.03	-0.17	12.7	0	0	0
189	SLE RA 13	-0.03	-0.17	12.63	0	0	0
189	SLE RA 14	-0.03	-0.17	12.82	0	0	0
189	SLE RA 15	-0.03	-0.17	12.81	0	0	0
189	SLE RA 16	-0.03	-0.17	12.75	0	0	0
189	SLE RA 17	-0.03	-0.17	12.75	0	0	0
189	SLE RA 18	-0.03	-0.16	12.91	0	0	0
189	SLE RA 19	-0.03	-0.17	12.9	0	0	0
189	SLE RA 20	-0.04	-0.16	13.02	0	0	0
189	SLE RA 21	-0.03	-0.17	13.02	0	0	0
189	SLE FR 1	-0.03	-0.16	11.63	0	0	0
189	SLE FR 2	-0.03	-0.16	11.63	0	0	0
189	SLE FR 3	-0.03	-0.16	11.68	0	0	0
189	SLE FR 4	-0.03	-0.16	12.01	0	0	0
189	SLE FR 5	-0.03	-0.16	12.06	0	0	0
189	SLE FR 6	-0.03	-0.16	12.27	0	0	0
189	SLE QP 1	-0.03	-0.16	11.63	0	0	0
189	SLE QP 2	-0.03	-0.16	12.01	0	0	0
189	SLD 1	0.96	0.08	11.38	0	0	0
189	SLD 2	1.06	0.12	11.45	0	0	0
189	SLD 3	0.89	-0.17	11.07	0	0	0
189	SLD 4	0.98	-0.13	11.14	0	0	0
189	SLD 5	0.36	0.28	12.28	0	0	0
189	SLD 6	0.43	0.31	12.33	0	0	0
189	SLD 7	0.12	-0.55	11.25	0	0	0
189	SLD 8	0.18	-0.52	11.3	0	0	0
189	SLD 9	-0.24	0.2	12.73	0	0	0
189	SLD 10	-0.17	0.23	12.78	0	0	0
189	SLD 11	-0.48	-0.63	11.7	0	0	0
189	SLD 12	-0.42	-0.61	11.75	0	0	0
189	SLD 13	-1.04	-0.2	12.88	0	0	0
189	SLD 14	-0.94	-0.15	12.96	0	0	0
189	SLD 15	-1.11	-0.45	12.57	0	0	0
189	SLD 16	-1.02	-0.4	12.65	0	0	0
189	SLV 1	2.28	0.4	10.51	0	0	0
189	SLV 2	2.51	0.49	10.69	0	0	0
189	SLV 3	2.11	-0.17	9.81	0	0	0
189	SLV 4	2.34	-0.07	9.99	0	0	0
189	SLV 5	0.89	0.85	12.6	0	0	0
189	SLV 6	1.03	0.91	12.72	0	0	0
189	SLV 7	0.31	-1.04	10.25	0	0	0
189	SLV 8	0.46	-0.98	10.37	0	0	0
189	SLV 9	-0.52	0.66	13.66	0	0	0
189	SLV 10	-0.37	0.72	13.78	0	0	0
189	SLV 11	-1.09	-1.24	11.31	0	0	0
189	SLV 12	-0.94	-1.17	11.43	0	0	0
189	SLV 13	-2.39	-0.25	14.04	0	0	0
189	SLV 14	-2.17	-0.15	14.22	0	0	0
189	SLV 15	-2.57	-0.82	13.33	0	0	0
189	SLV 16	-2.34	-0.72	13.51	0	0	0
190	SLU 1	-0.02	-0.18	11.34	0	0	0
190	SLU 2	-0.02	-0.19	11.33	0	0	0
190	SLU 3	-0.03	-0.18	11.61	0	0	0
190	SLU 4	-0.02	-0.19	11.6	0	0	0
190	SLU 5	-0.02	-0.19	11.5	0	0	0
190	SLU 6	-0.03	-0.19	11.78	0	0	0
190	SLU 7	-0.02	-0.19	11.77	0	0	0
190	SLU 8	-0.03	-0.19	11.68	0	0	0
190	SLU 9	-0.02	-0.19	11.67	0	0	0
190	SLU 10	-0.03	-0.19	12.68	0	0	0
190	SLU 11	-0.03	-0.19	12.95	0	0	0
190	SLU 12	-0.03	-0.19	12.95	0	0	0
190	SLU 13	-0.03	-0.19	12.85	0	0	0
190	SLU 14	-0.04	-0.19	13.12	0	0	0
190	SLU 15	-0.03	-0.19	13.12	0	0	0
190	SLU 16	-0.04	-0.19	13.03	0	0	0
190	SLU 17	-0.03	-0.19	13.02	0	0	0
190	SLU 18	-0.04	-0.19	13.26	0	0	0
190	SLU 19	-0.03	-0.19	13.26	0	0	0
190	SLU 20	-0.04	-0.19	13.43	0	0	0
190	SLU 21	-0.04	-0.19	13.43	0	0	0
190	SLU 22	-0.03	-0.18	12.55	0	0	0
190	SLU 23	-0.02	-0.18	12.54	0	0	0
190	SLU 24	-0.03	-0.18	12.82	0	0	0
190	SLU 25	-0.02	-0.18	12.81	0	0	0
190	SLU 26	-0.02	-0.19	12.71	0	0	0
190	SLU 27	-0.03	-0.18	12.99	0	0	0
190	SLU 28	-0.03	-0.19	12.98	0	0	0
190	SLU 29	-0.03	-0.18	12.89	0	0	0
190	SLU 30	-0.03	-0.19	12.89	0	0	0
190	SLU 31	-0.03	-0.19	13.89	0	0	0
190	SLU 32	-0.04	-0.18	14.17	0	0	0
190	SLU 33	-0.03	-0.19	14.16	0	0	0
190	SLU 34	-0.03	-0.19	14.06	0	0	0
190	SLU 35	-0.04	-0.19	14.34	0	0	0
190	SLU 36	-0.03	-0.19	14.33	0	0	0
190	SLU 37	-0.04	-0.19	14.24	0	0	0
190	SLU 38	-0.04	-0.19	14.23	0	0	0
190	SLU 39	-0.04	-0.18	14.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
190	SLU 40	-0.04	-0.19	14.47	0	0	0
190	SLU 41	-0.04	-0.19	14.64	0	0	0
190	SLU 42	-0.04	-0.19	14.64	0	0	0
190	SLU 43	-0.03	-0.24	14.33	0	0	0
190	SLU 44	-0.03	-0.24	14.32	0	0	0
190	SLU 45	-0.03	-0.24	14.59	0	0	0
190	SLU 46	-0.03	-0.24	14.59	0	0	0
190	SLU 47	-0.03	-0.24	14.49	0	0	0
190	SLU 48	-0.03	-0.24	14.77	0	0	0
190	SLU 49	-0.03	-0.24	14.76	0	0	0
190	SLU 50	-0.03	-0.24	14.67	0	0	0
190	SLU 51	-0.03	-0.25	14.66	0	0	0
190	SLU 52	-0.04	-0.25	15.66	0	0	0
190	SLU 53	-0.04	-0.24	15.94	0	0	0
190	SLU 54	-0.04	-0.25	15.93	0	0	0
190	SLU 55	-0.04	-0.25	15.83	0	0	0
190	SLU 56	-0.04	-0.24	16.11	0	0	0
190	SLU 57	-0.04	-0.25	16.11	0	0	0
190	SLU 58	-0.04	-0.25	16.01	0	0	0
190	SLU 59	-0.04	-0.25	16.01	0	0	0
190	SLU 60	-0.04	-0.24	16.25	0	0	0
190	SLU 61	-0.04	-0.24	16.24	0	0	0
190	SLU 62	-0.05	-0.24	16.42	0	0	0
190	SLU 63	-0.04	-0.25	16.41	0	0	0
190	SLU 64	-0.03	-0.23	15.54	0	0	0
190	SLU 65	-0.03	-0.24	15.53	0	0	0
190	SLU 66	-0.03	-0.23	15.81	0	0	0
190	SLU 67	-0.03	-0.24	15.8	0	0	0
190	SLU 68	-0.03	-0.24	15.7	0	0	0
190	SLU 69	-0.04	-0.24	15.98	0	0	0
190	SLU 70	-0.03	-0.24	15.97	0	0	0
190	SLU 71	-0.04	-0.24	15.88	0	0	0
190	SLU 72	-0.03	-0.24	15.87	0	0	0
190	SLU 73	-0.04	-0.24	16.87	0	0	0
190	SLU 74	-0.04	-0.24	17.15	0	0	0
190	SLU 75	-0.04	-0.24	17.15	0	0	0
190	SLU 76	-0.04	-0.24	17.04	0	0	0
190	SLU 77	-0.04	-0.24	17.32	0	0	0
190	SLU 78	-0.04	-0.24	17.32	0	0	0
190	SLU 79	-0.04	-0.24	17.22	0	0	0
190	SLU 80	-0.04	-0.25	17.22	0	0	0
190	SLU 81	-0.05	-0.24	17.46	0	0	0
190	SLU 82	-0.04	-0.24	17.45	0	0	0
190	SLU 83	-0.05	-0.24	17.63	0	0	0
190	SLU 84	-0.04	-0.24	17.62	0	0	0
190	SLE RA 1	-0.03	-0.18	11.69	0	0	0
190	SLE RA 2	-0.02	-0.18	11.68	0	0	0
190	SLE RA 3	-0.03	-0.18	11.87	0	0	0
190	SLE RA 4	-0.02	-0.18	11.86	0	0	0
190	SLE RA 5	-0.02	-0.19	11.79	0	0	0
190	SLE RA 6	-0.03	-0.18	11.98	0	0	0
190	SLE RA 7	-0.02	-0.19	11.97	0	0	0
190	SLE RA 8	-0.03	-0.18	11.91	0	0	0
190	SLE RA 9	-0.02	-0.19	11.91	0	0	0
190	SLE RA 10	-0.03	-0.19	12.58	0	0	0
190	SLE RA 11	-0.03	-0.18	12.76	0	0	0
190	SLE RA 12	-0.03	-0.19	12.76	0	0	0
190	SLE RA 13	-0.03	-0.19	12.69	0	0	0
190	SLE RA 14	-0.03	-0.19	12.88	0	0	0
190	SLE RA 15	-0.03	-0.19	12.87	0	0	0
190	SLE RA 16	-0.03	-0.19	12.81	0	0	0
190	SLE RA 17	-0.03	-0.19	12.81	0	0	0
190	SLE RA 18	-0.03	-0.18	12.97	0	0	0
190	SLE RA 19	-0.03	-0.18	12.96	0	0	0
190	SLE RA 20	-0.03	-0.18	13.08	0	0	0
190	SLE RA 21	-0.03	-0.19	13.08	0	0	0
190	SLE FR 1	-0.03	-0.18	11.69	0	0	0
190	SLE FR 2	-0.02	-0.18	11.68	0	0	0
190	SLE FR 3	-0.03	-0.18	11.73	0	0	0
190	SLE FR 4	-0.03	-0.18	12.07	0	0	0
190	SLE FR 5	-0.03	-0.18	12.12	0	0	0
190	SLE FR 6	-0.03	-0.18	12.33	0	0	0
190	SLE QP 1	-0.03	-0.18	11.69	0	0	0
190	SLE QP 2	-0.03	-0.18	12.07	0	0	0
190	SLD 1	0.95	0.07	11.34	0	0	0
190	SLD 2	1.05	0.12	11.42	0	0	0
190	SLD 3	0.88	-0.18	11.02	0	0	0
190	SLD 4	0.98	-0.13	11.1	0	0	0
190	SLD 5	0.36	0.26	12.32	0	0	0
190	SLD 6	0.42	0.29	12.37	0	0	0
190	SLD 7	0.12	-0.56	11.26	0	0	0
190	SLD 8	0.18	-0.53	11.31	0	0	0
190	SLD 9	-0.23	0.17	12.83	0	0	0
190	SLD 10	-0.17	0.2	12.88	0	0	0
190	SLD 11	-0.48	-0.65	11.77	0	0	0
190	SLD 12	-0.42	-0.62	11.83	0	0	0
190	SLD 13	-1.03	-0.23	13.04	0	0	0
190	SLD 14	-0.93	-0.18	13.12	0	0	0
190	SLD 15	-1.1	-0.48	12.72	0	0	0
190	SLD 16	-1.01	-0.43	12.8	0	0	0
190	SLV 1	2.26	0.4	10.34	0	0	0
190	SLV 2	2.49	0.5	10.53	0	0	0
190	SLV 3	2.09	-0.16	9.62	0	0	0
190	SLV 4	2.32	-0.06	9.81	0	0	0
190	SLV 5	0.88	0.83	12.61	0	0	0
190	SLV 6	1.03	0.89	12.73	0	0	0
190	SLV 7	0.31	-1.04	10.21	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
190	SLV 8	0.46	-0.98	10.33	0	0	0
190	SLV 9	-0.51	0.62	13.81	0	0	0
190	SLV 10	-0.37	0.68	13.93	0	0	0
190	SLV 11	-1.08	-1.25	11.41	0	0	0
190	SLV 12	-0.94	-1.19	11.53	0	0	0
190	SLV 13	-2.37	-0.3	14.33	0	0	0
190	SLV 14	-2.15	-0.2	14.52	0	0	0
190	SLV 15	-2.54	-0.86	13.61	0	0	0
190	SLV 16	-2.32	-0.76	13.8	0	0	0
190	CRTFP Ux+	0	0	0	0	0	0
190	CRTFP Ux-	0	0	0	0	0	0
191	SLU 1	-0.01	-0.1	5.65	0	0	0
191	SLU 2	-0.01	-0.1	5.64	0	0	0
191	SLU 3	-0.01	-0.1	5.78	0	0	0
191	SLU 4	-0.01	-0.1	5.78	0	0	0
191	SLU 5	-0.01	-0.1	5.73	0	0	0
191	SLU 6	-0.01	-0.1	5.87	0	0	0
191	SLU 7	-0.01	-0.1	5.86	0	0	0
191	SLU 8	-0.01	-0.1	5.82	0	0	0
191	SLU 9	-0.01	-0.1	5.81	0	0	0
191	SLU 10	-0.01	-0.1	6.31	0	0	0
191	SLU 11	-0.02	-0.1	6.45	0	0	0
191	SLU 12	-0.02	-0.1	6.45	0	0	0
191	SLU 13	-0.01	-0.11	6.4	0	0	0
191	SLU 14	-0.02	-0.1	6.53	0	0	0
191	SLU 15	-0.02	-0.11	6.53	0	0	0
191	SLU 16	-0.02	-0.1	6.49	0	0	0
191	SLU 17	-0.02	-0.11	6.48	0	0	0
191	SLU 18	-0.02	-0.1	6.6	0	0	0
191	SLU 19	-0.02	-0.1	6.6	0	0	0
191	SLU 20	-0.02	-0.1	6.69	0	0	0
191	SLU 21	-0.02	-0.11	6.68	0	0	0
191	SLU 22	-0.01	-0.1	6.25	0	0	0
191	SLU 23	-0.01	-0.1	6.25	0	0	0
191	SLU 24	-0.01	-0.1	6.39	0	0	0
191	SLU 25	-0.01	-0.1	6.38	0	0	0
191	SLU 26	-0.01	-0.1	6.33	0	0	0
191	SLU 27	-0.01	-0.1	6.47	0	0	0
191	SLU 28	-0.01	-0.1	6.47	0	0	0
191	SLU 29	-0.01	-0.1	6.42	0	0	0
191	SLU 30	-0.01	-0.1	6.42	0	0	0
191	SLU 31	-0.01	-0.1	6.92	0	0	0
191	SLU 32	-0.02	-0.1	7.06	0	0	0
191	SLU 33	-0.02	-0.1	7.05	0	0	0
191	SLU 34	-0.02	-0.1	7	0	0	0
191	SLU 35	-0.02	-0.1	7.14	0	0	0
191	SLU 36	-0.02	-0.11	7.14	0	0	0
191	SLU 37	-0.02	-0.1	7.09	0	0	0
191	SLU 38	-0.02	-0.11	7.09	0	0	0
191	SLU 39	-0.02	-0.1	7.21	0	0	0
191	SLU 40	-0.02	-0.1	7.21	0	0	0
191	SLU 41	-0.02	-0.1	7.29	0	0	0
191	SLU 42	-0.02	-0.1	7.29	0	0	0
191	SLU 43	-0.02	-0.13	7.13	0	0	0
191	SLU 44	-0.01	-0.13	7.13	0	0	0
191	SLU 45	-0.02	-0.13	7.27	0	0	0
191	SLU 46	-0.01	-0.13	7.26	0	0	0
191	SLU 47	-0.01	-0.13	7.21	0	0	0
191	SLU 48	-0.02	-0.13	7.35	0	0	0
191	SLU 49	-0.02	-0.13	7.35	0	0	0
191	SLU 50	-0.02	-0.13	7.3	0	0	0
191	SLU 51	-0.02	-0.13	7.3	0	0	0
191	SLU 52	-0.02	-0.13	7.8	0	0	0
191	SLU 53	-0.02	-0.13	7.94	0	0	0
191	SLU 54	-0.02	-0.13	7.93	0	0	0
191	SLU 55	-0.02	-0.14	7.88	0	0	0
191	SLU 56	-0.02	-0.13	8.02	0	0	0
191	SLU 57	-0.02	-0.14	8.02	0	0	0
191	SLU 58	-0.02	-0.13	7.97	0	0	0
191	SLU 59	-0.02	-0.14	7.97	0	0	0
191	SLU 60	-0.02	-0.13	8.09	0	0	0
191	SLU 61	-0.02	-0.13	8.09	0	0	0
191	SLU 62	-0.02	-0.13	8.17	0	0	0
191	SLU 63	-0.02	-0.14	8.17	0	0	0
191	SLU 64	-0.02	-0.13	7.74	0	0	0
191	SLU 65	-0.01	-0.13	7.73	0	0	0
191	SLU 66	-0.02	-0.13	7.87	0	0	0
191	SLU 67	-0.02	-0.13	7.87	0	0	0
191	SLU 68	-0.01	-0.13	7.82	0	0	0
191	SLU 69	-0.02	-0.13	7.96	0	0	0
191	SLU 70	-0.02	-0.13	7.95	0	0	0
191	SLU 71	-0.02	-0.13	7.91	0	0	0
191	SLU 72	-0.02	-0.13	7.91	0	0	0
191	SLU 73	-0.02	-0.13	8.4	0	0	0
191	SLU 74	-0.02	-0.13	8.54	0	0	0
191	SLU 75	-0.02	-0.13	8.54	0	0	0
191	SLU 76	-0.02	-0.13	8.49	0	0	0
191	SLU 77	-0.02	-0.13	8.63	0	0	0
191	SLU 78	-0.02	-0.13	8.62	0	0	0
191	SLU 79	-0.02	-0.13	8.58	0	0	0
191	SLU 80	-0.02	-0.14	8.57	0	0	0
191	SLU 81	-0.02	-0.13	8.69	0	0	0
191	SLU 82	-0.02	-0.13	8.69	0	0	0
191	SLU 83	-0.02	-0.13	8.78	0	0	0
191	SLU 84	-0.02	-0.13	8.78	0	0	0
191	SLE RA 1	-0.01	-0.1	5.82	0	0	0
191	SLE RA 2	-0.01	-0.1	5.82	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
191	SLE RA 3	-0.01	-0.1	5.91	0	0	0
191	SLE RA 4	-0.01	-0.1	5.91	0	0	0
191	SLE RA 5	-0.01	-0.1	5.87	0	0	0
191	SLE RA 6	-0.01	-0.1	5.97	0	0	0
191	SLE RA 7	-0.01	-0.1	5.96	0	0	0
191	SLE RA 8	-0.01	-0.1	5.93	0	0	0
191	SLE RA 9	-0.01	-0.1	5.93	0	0	0
191	SLE RA 10	-0.01	-0.1	6.26	0	0	0
191	SLE RA 11	-0.02	-0.1	6.35	0	0	0
191	SLE RA 12	-0.01	-0.1	6.35	0	0	0
191	SLE RA 13	-0.01	-0.1	6.32	0	0	0
191	SLE RA 14	-0.02	-0.1	6.41	0	0	0
191	SLE RA 15	-0.02	-0.1	6.41	0	0	0
191	SLE RA 16	-0.02	-0.1	6.38	0	0	0
191	SLE RA 17	-0.02	-0.1	6.38	0	0	0
191	SLE RA 18	-0.02	-0.1	6.46	0	0	0
191	SLE RA 19	-0.02	-0.1	6.45	0	0	0
191	SLE RA 20	-0.02	-0.1	6.51	0	0	0
191	SLE RA 21	-0.02	-0.1	6.51	0	0	0
191	SLE FR 1	-0.01	-0.1	5.82	0	0	0
191	SLE FR 2	-0.01	-0.1	5.82	0	0	0
191	SLE FR 3	-0.01	-0.1	5.84	0	0	0
191	SLE FR 4	-0.01	-0.1	6.01	0	0	0
191	SLE FR 5	-0.01	-0.1	6.03	0	0	0
191	SLE FR 6	-0.01	-0.1	6.14	0	0	0
191	SLE QP 1	-0.01	-0.1	5.82	0	0	0
191	SLE QP 2	-0.01	-0.1	6.01	0	0	0
191	SLD 1	0.47	0.03	5.6	0	0	0
191	SLD 2	0.52	0.06	5.64	0	0	0
191	SLD 3	0.43	-0.09	5.44	0	0	0
191	SLD 4	0.48	-0.07	5.48	0	0	0
191	SLD 5	0.18	0.12	6.12	0	0	0
191	SLD 6	0.21	0.14	6.15	0	0	0
191	SLD 7	0.06	-0.28	5.59	0	0	0
191	SLD 8	0.09	-0.27	5.62	0	0	0
191	SLD 9	-0.12	0.07	6.4	0	0	0
191	SLD 10	-0.08	0.09	6.43	0	0	0
191	SLD 11	-0.24	-0.33	5.87	0	0	0
191	SLD 12	-0.2	-0.32	5.9	0	0	0
191	SLD 13	-0.51	-0.13	6.54	0	0	0
191	SLD 14	-0.46	-0.11	6.58	0	0	0
191	SLD 15	-0.54	-0.25	6.38	0	0	0
191	SLD 16	-0.49	-0.23	6.42	0	0	0
191	SLV 1	1.11	0.2	5.04	0	0	0
191	SLV 2	1.22	0.26	5.14	0	0	0
191	SLV 3	1.03	-0.07	4.68	0	0	0
191	SLV 4	1.14	-0.02	4.78	0	0	0
191	SLV 5	0.43	0.4	6.26	0	0	0
191	SLV 6	0.5	0.43	6.32	0	0	0
191	SLV 7	0.15	-0.52	5.04	0	0	0
191	SLV 8	0.22	-0.48	5.11	0	0	0
191	SLV 9	-0.25	0.28	6.92	0	0	0
191	SLV 10	-0.18	0.32	6.98	0	0	0
191	SLV 11	-0.53	-0.63	5.7	0	0	0
191	SLV 12	-0.46	-0.59	5.77	0	0	0
191	SLV 13	-1.17	-0.18	7.25	0	0	0
191	SLV 14	-1.06	-0.12	7.34	0	0	0
191	SLV 15	-1.25	-0.46	6.88	0	0	0
191	SLV 16	-1.14	-0.4	6.98	0	0	0
192	SLU 1	-0.14	-0.29	13.21	0	0	0
192	SLU 2	-0.14	-0.3	13.19	0	0	0
192	SLU 3	-0.15	-0.29	13.52	0	0	0
192	SLU 4	-0.14	-0.3	13.51	0	0	0
192	SLU 5	-0.14	-0.31	13.39	0	0	0
192	SLU 6	-0.15	-0.3	13.72	0	0	0
192	SLU 7	-0.14	-0.3	13.71	0	0	0
192	SLU 8	-0.15	-0.3	13.6	0	0	0
192	SLU 9	-0.14	-0.3	13.6	0	0	0
192	SLU 10	-0.14	-0.32	14.74	0	0	0
192	SLU 11	-0.15	-0.31	15.06	0	0	0
192	SLU 12	-0.15	-0.32	15.05	0	0	0
192	SLU 13	-0.14	-0.32	14.93	0	0	0
192	SLU 14	-0.15	-0.31	15.26	0	0	0
192	SLU 15	-0.15	-0.32	15.25	0	0	0
192	SLU 16	-0.15	-0.31	15.15	0	0	0
192	SLU 17	-0.15	-0.32	15.14	0	0	0
192	SLU 18	-0.15	-0.31	15.41	0	0	0
192	SLU 19	-0.15	-0.32	15.4	0	0	0
192	SLU 20	-0.15	-0.32	15.61	0	0	0
192	SLU 21	-0.15	-0.33	15.6	0	0	0
192	SLU 22	-0.16	-0.29	14.61	0	0	0
192	SLU 23	-0.15	-0.31	14.6	0	0	0
192	SLU 24	-0.16	-0.3	14.92	0	0	0
192	SLU 25	-0.16	-0.31	14.91	0	0	0
192	SLU 26	-0.16	-0.31	14.79	0	0	0
192	SLU 27	-0.17	-0.3	15.12	0	0	0
192	SLU 28	-0.16	-0.31	15.11	0	0	0
192	SLU 29	-0.16	-0.3	15.01	0	0	0
192	SLU 30	-0.16	-0.31	15	0	0	0
192	SLU 31	-0.16	-0.32	16.14	0	0	0
192	SLU 32	-0.17	-0.32	16.46	0	0	0
192	SLU 33	-0.17	-0.32	16.46	0	0	0
192	SLU 34	-0.16	-0.33	16.34	0	0	0
192	SLU 35	-0.17	-0.32	16.66	0	0	0
192	SLU 36	-0.17	-0.33	16.65	0	0	0
192	SLU 37	-0.17	-0.32	16.55	0	0	0
192	SLU 38	-0.17	-0.33	16.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
192	SLU 39	-0.17	-0.32	16.82	0	0	0
192	SLU 40	-0.16	-0.33	16.81	0	0	0
192	SLU 41	-0.17	-0.32	17.01	0	0	0
192	SLU 42	-0.17	-0.33	17.01	0	0	0
192	SLU 43	-0.18	-0.37	16.69	0	0	0
192	SLU 44	-0.17	-0.39	16.67	0	0	0
192	SLU 45	-0.18	-0.38	17	0	0	0
192	SLU 46	-0.18	-0.39	16.99	0	0	0
192	SLU 47	-0.18	-0.39	16.87	0	0	0
192	SLU 48	-0.18	-0.38	17.2	0	0	0
192	SLU 49	-0.18	-0.39	17.19	0	0	0
192	SLU 50	-0.18	-0.38	17.08	0	0	0
192	SLU 51	-0.18	-0.39	17.08	0	0	0
192	SLU 52	-0.18	-0.4	18.22	0	0	0
192	SLU 53	-0.19	-0.4	18.54	0	0	0
192	SLU 54	-0.18	-0.4	18.53	0	0	0
192	SLU 55	-0.18	-0.41	18.42	0	0	0
192	SLU 56	-0.19	-0.4	18.74	0	0	0
192	SLU 57	-0.19	-0.41	18.73	0	0	0
192	SLU 58	-0.19	-0.4	18.63	0	0	0
192	SLU 59	-0.19	-0.41	18.62	0	0	0
192	SLU 60	-0.19	-0.4	18.89	0	0	0
192	SLU 61	-0.18	-0.41	18.88	0	0	0
192	SLU 62	-0.19	-0.4	19.09	0	0	0
192	SLU 63	-0.19	-0.41	19.08	0	0	0
192	SLU 64	-0.2	-0.38	18.09	0	0	0
192	SLU 65	-0.19	-0.39	18.08	0	0	0
192	SLU 66	-0.2	-0.38	18.4	0	0	0
192	SLU 67	-0.2	-0.39	18.39	0	0	0
192	SLU 68	-0.19	-0.39	18.28	0	0	0
192	SLU 69	-0.2	-0.39	18.6	0	0	0
192	SLU 70	-0.2	-0.39	18.59	0	0	0
192	SLU 71	-0.2	-0.39	18.49	0	0	0
192	SLU 72	-0.2	-0.39	18.48	0	0	0
192	SLU 73	-0.2	-0.41	19.62	0	0	0
192	SLU 74	-0.21	-0.4	19.95	0	0	0
192	SLU 75	-0.2	-0.41	19.94	0	0	0
192	SLU 76	-0.2	-0.41	19.82	0	0	0
192	SLU 77	-0.21	-0.4	20.14	0	0	0
192	SLU 78	-0.2	-0.41	20.14	0	0	0
192	SLU 79	-0.21	-0.4	20.03	0	0	0
192	SLU 80	-0.2	-0.41	20.02	0	0	0
192	SLU 81	-0.2	-0.4	20.3	0	0	0
192	SLU 82	-0.2	-0.41	20.29	0	0	0
192	SLU 83	-0.21	-0.41	20.49	0	0	0
192	SLU 84	-0.2	-0.42	20.49	0	0	0
192	SLE RA 1	-0.15	-0.29	13.61	0	0	0
192	SLE RA 2	-0.14	-0.3	13.6	0	0	0
192	SLE RA 3	-0.15	-0.29	13.82	0	0	0
192	SLE RA 4	-0.15	-0.3	13.81	0	0	0
192	SLE RA 5	-0.14	-0.3	13.73	0	0	0
192	SLE RA 6	-0.15	-0.3	13.95	0	0	0
192	SLE RA 7	-0.15	-0.3	13.94	0	0	0
192	SLE RA 8	-0.15	-0.29	13.87	0	0	0
192	SLE RA 9	-0.15	-0.3	13.87	0	0	0
192	SLE RA 10	-0.15	-0.31	14.63	0	0	0
192	SLE RA 11	-0.15	-0.3	14.84	0	0	0
192	SLE RA 12	-0.15	-0.31	14.84	0	0	0
192	SLE RA 13	-0.15	-0.31	14.76	0	0	0
192	SLE RA 14	-0.15	-0.31	14.98	0	0	0
192	SLE RA 15	-0.15	-0.31	14.97	0	0	0
192	SLE RA 16	-0.15	-0.31	14.9	0	0	0
192	SLE RA 17	-0.15	-0.31	14.9	0	0	0
192	SLE RA 18	-0.15	-0.31	15.08	0	0	0
192	SLE RA 19	-0.15	-0.31	15.07	0	0	0
192	SLE RA 20	-0.15	-0.31	15.21	0	0	0
192	SLE RA 21	-0.15	-0.31	15.2	0	0	0
192	SLE FR 1	-0.15	-0.29	13.61	0	0	0
192	SLE FR 2	-0.15	-0.29	13.61	0	0	0
192	SLE FR 3	-0.15	-0.29	13.66	0	0	0
192	SLE FR 4	-0.15	-0.3	14.05	0	0	0
192	SLE FR 5	-0.15	-0.3	14.1	0	0	0
192	SLE FR 6	-0.15	-0.3	14.34	0	0	0
192	SLE QP 1	-0.15	-0.29	13.61	0	0	0
192	SLE QP 2	-0.15	-0.29	14.05	0	0	0
192	SLD 1	0.99	-0.25	15.05	0	0	0
192	SLD 2	1.1	-0.3	15.01	0	0	0
192	SLD 3	0.91	-0.57	14.78	0	0	0
192	SLD 4	1.02	-0.62	14.74	0	0	0
192	SLD 5	0.3	0.2	14.76	0	0	0
192	SLD 6	0.37	0.17	14.74	0	0	0
192	SLD 7	0.02	-0.84	13.86	0	0	0
192	SLD 8	0.09	-0.88	13.84	0	0	0
192	SLD 9	-0.39	0.29	14.26	0	0	0
192	SLD 10	-0.32	0.25	14.23	0	0	0
192	SLD 11	-0.67	-0.76	13.36	0	0	0
192	SLD 12	-0.6	-0.79	13.33	0	0	0
192	SLD 13	-1.32	0.03	13.36	0	0	0
192	SLD 14	-1.21	-0.02	13.32	0	0	0
192	SLD 15	-1.4	-0.29	13.09	0	0	0
192	SLD 16	-1.29	-0.34	13.05	0	0	0
192	SLV 1	2.53	-0.21	16.37	0	0	0
192	SLV 2	2.78	-0.33	16.28	0	0	0
192	SLV 3	2.33	-0.92	15.76	0	0	0
192	SLV 4	2.59	-1.04	15.67	0	0	0
192	SLV 5	0.91	0.83	15.69	0	0	0
192	SLV 6	1.07	0.75	15.63	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
192	SLV 7	0.25	-1.54	13.65	0	0	0
192	SLV 8	0.42	-1.62	13.59	0	0	0
192	SLV 9	-0.72	1.03	14.51	0	0	0
192	SLV 10	-0.55	0.95	14.45	0	0	0
192	SLV 11	-1.37	-1.34	12.46	0	0	0
192	SLV 12	-1.2	-1.42	12.41	0	0	0
192	SLV 13	-2.88	0.45	12.43	0	0	0
192	SLV 14	-2.63	0.33	12.34	0	0	0
192	SLV 15	-3.08	-0.26	11.81	0	0	0
192	SLV 16	-2.82	-0.38	11.72	0	0	0
192	CRTFP Ux+	0	0	0	0	0	0
192	CRTFP Ux-	0	0	0	0	0	0
193	SLU 1	-0.14	-0.24	12.49	0	0	0
193	SLU 2	-0.13	-0.25	12.47	0	0	0
193	SLU 3	-0.14	-0.24	12.78	0	0	0
193	SLU 4	-0.14	-0.25	12.77	0	0	0
193	SLU 5	-0.13	-0.25	12.66	0	0	0
193	SLU 6	-0.14	-0.25	12.97	0	0	0
193	SLU 7	-0.14	-0.25	12.96	0	0	0
193	SLU 8	-0.14	-0.25	12.86	0	0	0
193	SLU 9	-0.14	-0.25	12.86	0	0	0
193	SLU 10	-0.14	-0.26	13.94	0	0	0
193	SLU 11	-0.14	-0.26	14.25	0	0	0
193	SLU 12	-0.14	-0.26	14.24	0	0	0
193	SLU 13	-0.14	-0.27	14.13	0	0	0
193	SLU 14	-0.15	-0.26	14.43	0	0	0
193	SLU 15	-0.14	-0.27	14.43	0	0	0
193	SLU 16	-0.15	-0.26	14.33	0	0	0
193	SLU 17	-0.14	-0.27	14.32	0	0	0
193	SLU 18	-0.14	-0.26	14.58	0	0	0
193	SLU 19	-0.14	-0.27	14.57	0	0	0
193	SLU 20	-0.15	-0.26	14.77	0	0	0
193	SLU 21	-0.14	-0.27	14.76	0	0	0
193	SLU 22	-0.15	-0.24	13.81	0	0	0
193	SLU 23	-0.15	-0.25	13.8	0	0	0
193	SLU 24	-0.16	-0.24	14.11	0	0	0
193	SLU 25	-0.15	-0.25	14.1	0	0	0
193	SLU 26	-0.15	-0.25	13.99	0	0	0
193	SLU 27	-0.16	-0.24	14.29	0	0	0
193	SLU 28	-0.16	-0.25	14.29	0	0	0
193	SLU 29	-0.16	-0.24	14.19	0	0	0
193	SLU 30	-0.15	-0.25	14.18	0	0	0
193	SLU 31	-0.15	-0.26	15.26	0	0	0
193	SLU 32	-0.16	-0.25	15.57	0	0	0
193	SLU 33	-0.16	-0.26	15.56	0	0	0
193	SLU 34	-0.16	-0.27	15.45	0	0	0
193	SLU 35	-0.16	-0.26	15.76	0	0	0
193	SLU 36	-0.16	-0.26	15.75	0	0	0
193	SLU 37	-0.16	-0.26	15.65	0	0	0
193	SLU 38	-0.16	-0.27	15.64	0	0	0
193	SLU 39	-0.16	-0.26	15.9	0	0	0
193	SLU 40	-0.16	-0.26	15.89	0	0	0
193	SLU 41	-0.16	-0.26	16.09	0	0	0
193	SLU 42	-0.16	-0.27	16.08	0	0	0
193	SLU 43	-0.17	-0.31	15.78	0	0	0
193	SLU 44	-0.17	-0.32	15.77	0	0	0
193	SLU 45	-0.17	-0.31	16.07	0	0	0
193	SLU 46	-0.17	-0.32	16.07	0	0	0
193	SLU 47	-0.17	-0.33	15.95	0	0	0
193	SLU 48	-0.18	-0.32	16.26	0	0	0
193	SLU 49	-0.17	-0.32	16.25	0	0	0
193	SLU 50	-0.18	-0.32	16.16	0	0	0
193	SLU 51	-0.17	-0.32	16.15	0	0	0
193	SLU 52	-0.17	-0.34	17.23	0	0	0
193	SLU 53	-0.18	-0.33	17.54	0	0	0
193	SLU 54	-0.18	-0.33	17.53	0	0	0
193	SLU 55	-0.17	-0.34	17.42	0	0	0
193	SLU 56	-0.18	-0.33	17.73	0	0	0
193	SLU 57	-0.18	-0.34	17.72	0	0	0
193	SLU 58	-0.18	-0.33	17.62	0	0	0
193	SLU 59	-0.18	-0.34	17.61	0	0	0
193	SLU 60	-0.18	-0.33	17.87	0	0	0
193	SLU 61	-0.18	-0.34	17.86	0	0	0
193	SLU 62	-0.18	-0.33	18.06	0	0	0
193	SLU 63	-0.18	-0.34	18.05	0	0	0
193	SLU 64	-0.19	-0.31	17.1	0	0	0
193	SLU 65	-0.18	-0.32	17.09	0	0	0
193	SLU 66	-0.19	-0.31	17.4	0	0	0
193	SLU 67	-0.19	-0.32	17.39	0	0	0
193	SLU 68	-0.18	-0.33	17.28	0	0	0
193	SLU 69	-0.19	-0.32	17.59	0	0	0
193	SLU 70	-0.19	-0.32	17.58	0	0	0
193	SLU 71	-0.19	-0.32	17.48	0	0	0
193	SLU 72	-0.19	-0.32	17.47	0	0	0
193	SLU 73	-0.19	-0.34	18.55	0	0	0
193	SLU 74	-0.2	-0.33	18.86	0	0	0
193	SLU 75	-0.19	-0.33	18.85	0	0	0
193	SLU 76	-0.19	-0.34	18.74	0	0	0
193	SLU 77	-0.2	-0.33	19.05	0	0	0
193	SLU 78	-0.2	-0.34	19.04	0	0	0
193	SLU 79	-0.2	-0.33	18.94	0	0	0
193	SLU 80	-0.2	-0.34	18.94	0	0	0
193	SLU 81	-0.2	-0.33	19.2	0	0	0
193	SLU 82	-0.19	-0.34	19.19	0	0	0
193	SLU 83	-0.2	-0.33	19.38	0	0	0
193	SLU 84	-0.19	-0.34	19.38	0	0	0
193	SLE RA 1	-0.14	-0.24	12.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
193	SLE RA 2	-0.14	-0.25	12.86	0	0	0
193	SLE RA 3	-0.14	-0.24	13.06	0	0	0
193	SLE RA 4	-0.14	-0.25	13.06	0	0	0
193	SLE RA 5	-0.14	-0.25	12.98	0	0	0
193	SLE RA 6	-0.14	-0.24	13.19	0	0	0
193	SLE RA 7	-0.14	-0.25	13.18	0	0	0
193	SLE RA 8	-0.14	-0.24	13.12	0	0	0
193	SLE RA 9	-0.14	-0.25	13.11	0	0	0
193	SLE RA 10	-0.14	-0.26	13.83	0	0	0
193	SLE RA 11	-0.15	-0.25	14.04	0	0	0
193	SLE RA 12	-0.14	-0.25	14.03	0	0	0
193	SLE RA 13	-0.14	-0.26	13.96	0	0	0
193	SLE RA 14	-0.15	-0.25	14.16	0	0	0
193	SLE RA 15	-0.15	-0.26	14.16	0	0	0
193	SLE RA 16	-0.15	-0.25	14.09	0	0	0
193	SLE RA 17	-0.15	-0.26	14.09	0	0	0
193	SLE RA 18	-0.15	-0.25	14.26	0	0	0
193	SLE RA 19	-0.14	-0.26	14.26	0	0	0
193	SLE RA 20	-0.15	-0.25	14.39	0	0	0
193	SLE RA 21	-0.15	-0.26	14.38	0	0	0
193	SLE FR 1	-0.14	-0.24	12.87	0	0	0
193	SLE FR 2	-0.14	-0.24	12.86	0	0	0
193	SLE FR 3	-0.14	-0.24	12.92	0	0	0
193	SLE FR 4	-0.14	-0.24	13.28	0	0	0
193	SLE FR 5	-0.14	-0.24	13.33	0	0	0
193	SLE FR 6	-0.14	-0.25	13.56	0	0	0
193	SLE QP 1	-0.14	-0.24	12.87	0	0	0
193	SLE QP 2	-0.14	-0.24	13.28	0	0	0
193	SLD 1	0.96	-0.18	14.1	0	0	0
193	SLD 2	1.07	-0.23	14.06	0	0	0
193	SLD 3	0.88	-0.49	13.84	0	0	0
193	SLD 4	0.99	-0.53	13.81	0	0	0
193	SLD 5	0.29	0.25	13.92	0	0	0
193	SLD 6	0.36	0.22	13.9	0	0	0
193	SLD 7	0.02	-0.77	13.07	0	0	0
193	SLD 8	0.09	-0.8	13.05	0	0	0
193	SLD 9	-0.38	0.32	13.52	0	0	0
193	SLD 10	-0.31	0.29	13.5	0	0	0
193	SLD 11	-0.65	-0.7	12.67	0	0	0
193	SLD 12	-0.58	-0.73	12.65	0	0	0
193	SLD 13	-1.27	0.05	12.76	0	0	0
193	SLD 14	-1.17	0	12.73	0	0	0
193	SLD 15	-1.35	-0.26	12.5	0	0	0
193	SLD 16	-1.25	-0.3	12.47	0	0	0
193	SLV 1	2.44	-0.11	15.18	0	0	0
193	SLV 2	2.69	-0.21	15.1	0	0	0
193	SLV 3	2.25	-0.8	14.6	0	0	0
193	SLV 4	2.5	-0.91	14.52	0	0	0
193	SLV 5	0.88	0.86	14.74	0	0	0
193	SLV 6	1.04	0.8	14.69	0	0	0
193	SLV 7	0.25	-1.44	12.82	0	0	0
193	SLV 8	0.41	-1.51	12.77	0	0	0
193	SLV 9	-0.69	1.02	13.8	0	0	0
193	SLV 10	-0.53	0.96	13.75	0	0	0
193	SLV 11	-1.32	-1.28	11.88	0	0	0
193	SLV 12	-1.16	-1.35	11.83	0	0	0
193	SLV 13	-2.79	0.42	12.05	0	0	0
193	SLV 14	-2.54	0.32	11.97	0	0	0
193	SLV 15	-2.98	-0.27	11.47	0	0	0
193	SLV 16	-2.73	-0.38	11.39	0	0	0
194	SLU 1	-0.13	-0.2	12.06	0	0	0
194	SLU 2	-0.12	-0.21	12.05	0	0	0
194	SLU 3	-0.13	-0.2	12.35	0	0	0
194	SLU 4	-0.13	-0.21	12.34	0	0	0
194	SLU 5	-0.13	-0.21	12.23	0	0	0
194	SLU 6	-0.14	-0.2	12.53	0	0	0
194	SLU 7	-0.13	-0.21	12.52	0	0	0
194	SLU 8	-0.13	-0.2	12.42	0	0	0
194	SLU 9	-0.13	-0.21	12.42	0	0	0
194	SLU 10	-0.13	-0.22	13.47	0	0	0
194	SLU 11	-0.14	-0.21	13.77	0	0	0
194	SLU 12	-0.13	-0.22	13.76	0	0	0
194	SLU 13	-0.13	-0.22	13.65	0	0	0
194	SLU 14	-0.14	-0.21	13.95	0	0	0
194	SLU 15	-0.14	-0.22	13.94	0	0	0
194	SLU 16	-0.14	-0.21	13.84	0	0	0
194	SLU 17	-0.14	-0.22	13.84	0	0	0
194	SLU 18	-0.14	-0.21	14.09	0	0	0
194	SLU 19	-0.13	-0.22	14.08	0	0	0
194	SLU 20	-0.14	-0.21	14.27	0	0	0
194	SLU 21	-0.14	-0.22	14.26	0	0	0
194	SLU 22	-0.15	-0.19	13.34	0	0	0
194	SLU 23	-0.14	-0.21	13.32	0	0	0
194	SLU 24	-0.15	-0.2	13.62	0	0	0
194	SLU 25	-0.15	-0.2	13.61	0	0	0
194	SLU 26	-0.14	-0.21	13.51	0	0	0
194	SLU 27	-0.15	-0.2	13.8	0	0	0
194	SLU 28	-0.15	-0.21	13.8	0	0	0
194	SLU 29	-0.15	-0.2	13.7	0	0	0
194	SLU 30	-0.15	-0.21	13.69	0	0	0
194	SLU 31	-0.15	-0.21	14.75	0	0	0
194	SLU 32	-0.15	-0.2	15.04	0	0	0
194	SLU 33	-0.15	-0.21	15.04	0	0	0
194	SLU 34	-0.15	-0.22	14.93	0	0	0
194	SLU 35	-0.16	-0.21	15.22	0	0	0
194	SLU 36	-0.15	-0.21	15.22	0	0	0
194	SLU 37	-0.16	-0.21	15.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
194	SLU 38	-0.15	-0.22	15.11	0	0	0
194	SLU 39	-0.15	-0.21	15.37	0	0	0
194	SLU 40	-0.15	-0.21	15.36	0	0	0
194	SLU 41	-0.16	-0.21	15.55	0	0	0
194	SLU 42	-0.15	-0.22	15.54	0	0	0
194	SLU 43	-0.16	-0.26	15.24	0	0	0
194	SLU 44	-0.16	-0.27	15.23	0	0	0
194	SLU 45	-0.17	-0.26	15.53	0	0	0
194	SLU 46	-0.16	-0.27	15.52	0	0	0
194	SLU 47	-0.16	-0.27	15.41	0	0	0
194	SLU 48	-0.17	-0.26	15.71	0	0	0
194	SLU 49	-0.17	-0.27	15.7	0	0	0
194	SLU 50	-0.17	-0.27	15.6	0	0	0
194	SLU 51	-0.17	-0.27	15.6	0	0	0
194	SLU 52	-0.16	-0.28	16.65	0	0	0
194	SLU 53	-0.17	-0.27	16.95	0	0	0
194	SLU 54	-0.17	-0.28	16.94	0	0	0
194	SLU 55	-0.17	-0.28	16.83	0	0	0
194	SLU 56	-0.17	-0.27	17.13	0	0	0
194	SLU 57	-0.17	-0.28	17.12	0	0	0
194	SLU 58	-0.17	-0.27	17.03	0	0	0
194	SLU 59	-0.17	-0.28	17.02	0	0	0
194	SLU 60	-0.17	-0.27	17.27	0	0	0
194	SLU 61	-0.17	-0.28	17.26	0	0	0
194	SLU 62	-0.17	-0.28	17.45	0	0	0
194	SLU 63	-0.17	-0.28	17.45	0	0	0
194	SLU 64	-0.18	-0.26	16.52	0	0	0
194	SLU 65	-0.17	-0.27	16.51	0	0	0
194	SLU 66	-0.18	-0.26	16.8	0	0	0
194	SLU 67	-0.18	-0.26	16.8	0	0	0
194	SLU 68	-0.18	-0.27	16.69	0	0	0
194	SLU 69	-0.18	-0.26	16.98	0	0	0
194	SLU 70	-0.18	-0.27	16.98	0	0	0
194	SLU 71	-0.18	-0.26	16.88	0	0	0
194	SLU 72	-0.18	-0.27	16.87	0	0	0
194	SLU 73	-0.18	-0.28	17.93	0	0	0
194	SLU 74	-0.19	-0.27	18.22	0	0	0
194	SLU 75	-0.18	-0.27	18.22	0	0	0
194	SLU 76	-0.18	-0.28	18.11	0	0	0
194	SLU 77	-0.19	-0.27	18.41	0	0	0
194	SLU 78	-0.19	-0.28	18.4	0	0	0
194	SLU 79	-0.19	-0.27	18.3	0	0	0
194	SLU 80	-0.19	-0.28	18.29	0	0	0
194	SLU 81	-0.19	-0.27	18.55	0	0	0
194	SLU 82	-0.18	-0.28	18.54	0	0	0
194	SLU 83	-0.19	-0.27	18.73	0	0	0
194	SLU 84	-0.19	-0.28	18.72	0	0	0
194	SLE RA 1	-0.13	-0.2	12.43	0	0	0
194	SLE RA 2	-0.13	-0.21	12.42	0	0	0
194	SLE RA 3	-0.14	-0.2	12.62	0	0	0
194	SLE RA 4	-0.13	-0.2	12.61	0	0	0
194	SLE RA 5	-0.13	-0.21	12.54	0	0	0
194	SLE RA 6	-0.14	-0.2	12.74	0	0	0
194	SLE RA 7	-0.14	-0.21	12.73	0	0	0
194	SLE RA 8	-0.14	-0.2	12.67	0	0	0
194	SLE RA 9	-0.14	-0.21	12.66	0	0	0
194	SLE RA 10	-0.13	-0.21	13.36	0	0	0
194	SLE RA 11	-0.14	-0.2	13.56	0	0	0
194	SLE RA 12	-0.14	-0.21	13.56	0	0	0
194	SLE RA 13	-0.14	-0.21	13.49	0	0	0
194	SLE RA 14	-0.14	-0.21	13.68	0	0	0
194	SLE RA 15	-0.14	-0.21	13.68	0	0	0
194	SLE RA 16	-0.14	-0.21	13.61	0	0	0
194	SLE RA 17	-0.14	-0.21	13.61	0	0	0
194	SLE RA 18	-0.14	-0.21	13.78	0	0	0
194	SLE RA 19	-0.14	-0.21	13.77	0	0	0
194	SLE RA 20	-0.14	-0.21	13.9	0	0	0
194	SLE RA 21	-0.14	-0.21	13.89	0	0	0
194	SLE FR 1	-0.13	-0.2	12.43	0	0	0
194	SLE FR 2	-0.13	-0.2	12.42	0	0	0
194	SLE FR 3	-0.13	-0.2	12.47	0	0	0
194	SLE FR 4	-0.13	-0.2	12.83	0	0	0
194	SLE FR 5	-0.14	-0.2	12.88	0	0	0
194	SLE FR 6	-0.14	-0.2	13.1	0	0	0
194	SLE QP 1	-0.13	-0.2	12.43	0	0	0
194	SLE QP 2	-0.14	-0.2	12.83	0	0	0
194	SLD 1	0.95	-0.12	13.49	0	0	0
194	SLD 2	1.05	-0.16	13.46	0	0	0
194	SLD 3	0.87	-0.42	13.25	0	0	0
194	SLD 4	0.97	-0.46	13.22	0	0	0
194	SLD 5	0.29	0.29	13.41	0	0	0
194	SLD 6	0.36	0.26	13.39	0	0	0
194	SLD 7	0.03	-0.72	12.59	0	0	0
194	SLD 8	0.09	-0.74	12.57	0	0	0
194	SLD 9	-0.37	0.34	13.09	0	0	0
194	SLD 10	-0.3	0.32	13.07	0	0	0
194	SLD 11	-0.63	-0.66	12.27	0	0	0
194	SLD 12	-0.56	-0.69	12.26	0	0	0
194	SLD 13	-1.25	0.06	12.44	0	0	0
194	SLD 14	-1.14	0.02	12.42	0	0	0
194	SLD 15	-1.32	-0.24	12.2	0	0	0
194	SLD 16	-1.22	-0.28	12.17	0	0	0
194	SLV 1	2.4	-0.03	14.37	0	0	0
194	SLV 2	2.65	-0.12	14.3	0	0	0
194	SLV 3	2.22	-0.71	13.81	0	0	0
194	SLV 4	2.46	-0.8	13.75	0	0	0
194	SLV 5	0.87	0.9	14.15	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
194	SLV 6	1.02	0.85	14.11	0	0	0
194	SLV 7	0.25	-1.37	12.29	0	0	0
194	SLV 8	0.4	-1.43	12.25	0	0	0
194	SLV 9	-0.67	1.03	13.41	0	0	0
194	SLV 10	-0.52	0.97	13.37	0	0	0
194	SLV 11	-1.29	-1.25	11.56	0	0	0
194	SLV 12	-1.14	-1.3	11.51	0	0	0
194	SLV 13	-2.73	0.4	11.92	0	0	0
194	SLV 14	-2.49	0.31	11.85	0	0	0
194	SLV 15	-2.92	-0.28	11.36	0	0	0
194	SLV 16	-2.67	-0.37	11.29	0	0	0
195	SLU 1	-0.13	-0.16	11.86	0	0	0
195	SLU 2	-0.12	-0.17	11.85	0	0	0
195	SLU 3	-0.13	-0.16	12.14	0	0	0
195	SLU 4	-0.13	-0.17	12.13	0	0	0
195	SLU 5	-0.12	-0.18	12.03	0	0	0
195	SLU 6	-0.13	-0.16	12.32	0	0	0
195	SLU 7	-0.13	-0.17	12.31	0	0	0
195	SLU 8	-0.13	-0.17	12.22	0	0	0
195	SLU 9	-0.13	-0.17	12.21	0	0	0
195	SLU 10	-0.13	-0.18	13.25	0	0	0
195	SLU 11	-0.13	-0.17	13.55	0	0	0
195	SLU 12	-0.13	-0.17	13.54	0	0	0
195	SLU 13	-0.13	-0.18	13.43	0	0	0
195	SLU 14	-0.14	-0.17	13.73	0	0	0
195	SLU 15	-0.13	-0.18	13.72	0	0	0
195	SLU 16	-0.14	-0.17	13.62	0	0	0
195	SLU 17	-0.13	-0.18	13.62	0	0	0
195	SLU 18	-0.13	-0.17	13.87	0	0	0
195	SLU 19	-0.13	-0.18	13.86	0	0	0
195	SLU 20	-0.14	-0.17	14.05	0	0	0
195	SLU 21	-0.13	-0.18	14.04	0	0	0
195	SLU 22	-0.14	-0.15	13.11	0	0	0
195	SLU 23	-0.14	-0.16	13.1	0	0	0
195	SLU 24	-0.14	-0.15	13.4	0	0	0
195	SLU 25	-0.14	-0.16	13.39	0	0	0
195	SLU 26	-0.14	-0.17	13.28	0	0	0
195	SLU 27	-0.15	-0.15	13.57	0	0	0
195	SLU 28	-0.14	-0.16	13.57	0	0	0
195	SLU 29	-0.15	-0.16	13.47	0	0	0
195	SLU 30	-0.14	-0.16	13.46	0	0	0
195	SLU 31	-0.14	-0.17	14.51	0	0	0
195	SLU 32	-0.15	-0.16	14.8	0	0	0
195	SLU 33	-0.15	-0.16	14.8	0	0	0
195	SLU 34	-0.14	-0.17	14.69	0	0	0
195	SLU 35	-0.15	-0.16	14.98	0	0	0
195	SLU 36	-0.15	-0.17	14.97	0	0	0
195	SLU 37	-0.15	-0.16	14.88	0	0	0
195	SLU 38	-0.15	-0.17	14.87	0	0	0
195	SLU 39	-0.15	-0.16	15.12	0	0	0
195	SLU 40	-0.15	-0.17	15.12	0	0	0
195	SLU 41	-0.15	-0.16	15.3	0	0	0
195	SLU 42	-0.15	-0.17	15.3	0	0	0
195	SLU 43	-0.16	-0.21	14.99	0	0	0
195	SLU 44	-0.15	-0.23	14.97	0	0	0
195	SLU 45	-0.16	-0.21	15.27	0	0	0
195	SLU 46	-0.16	-0.22	15.26	0	0	0
195	SLU 47	-0.16	-0.23	15.15	0	0	0
195	SLU 48	-0.16	-0.22	15.45	0	0	0
195	SLU 49	-0.16	-0.22	15.44	0	0	0
195	SLU 50	-0.16	-0.22	15.34	0	0	0
195	SLU 51	-0.16	-0.22	15.34	0	0	0
195	SLU 52	-0.16	-0.23	16.38	0	0	0
195	SLU 53	-0.17	-0.22	16.67	0	0	0
195	SLU 54	-0.16	-0.23	16.67	0	0	0
195	SLU 55	-0.16	-0.23	16.56	0	0	0
195	SLU 56	-0.17	-0.22	16.85	0	0	0
195	SLU 57	-0.17	-0.23	16.85	0	0	0
195	SLU 58	-0.17	-0.22	16.75	0	0	0
195	SLU 59	-0.17	-0.23	16.74	0	0	0
195	SLU 60	-0.17	-0.22	17	0	0	0
195	SLU 61	-0.16	-0.23	16.99	0	0	0
195	SLU 62	-0.17	-0.22	17.18	0	0	0
195	SLU 63	-0.17	-0.23	17.17	0	0	0
195	SLU 64	-0.17	-0.2	16.24	0	0	0
195	SLU 65	-0.17	-0.22	16.23	0	0	0
195	SLU 66	-0.18	-0.2	16.52	0	0	0
195	SLU 67	-0.17	-0.21	16.52	0	0	0
195	SLU 68	-0.17	-0.22	16.41	0	0	0
195	SLU 69	-0.18	-0.21	16.7	0	0	0
195	SLU 70	-0.18	-0.21	16.69	0	0	0
195	SLU 71	-0.18	-0.21	16.6	0	0	0
195	SLU 72	-0.18	-0.21	16.59	0	0	0
195	SLU 73	-0.17	-0.22	17.64	0	0	0
195	SLU 74	-0.18	-0.21	17.93	0	0	0
195	SLU 75	-0.18	-0.22	17.92	0	0	0
195	SLU 76	-0.18	-0.22	17.82	0	0	0
195	SLU 77	-0.19	-0.21	18.11	0	0	0
195	SLU 78	-0.18	-0.22	18.1	0	0	0
195	SLU 79	-0.18	-0.21	18.01	0	0	0
195	SLU 80	-0.18	-0.22	18	0	0	0
195	SLU 81	-0.18	-0.21	18.25	0	0	0
195	SLU 82	-0.18	-0.22	18.24	0	0	0
195	SLU 83	-0.18	-0.21	18.43	0	0	0
195	SLU 84	-0.18	-0.22	18.42	0	0	0
195	SLE RA 1	-0.13	-0.16	12.22	0	0	0
195	SLE RA 2	-0.13	-0.17	12.21	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
195	SLE RA 3	-0.13	-0.16	12.41	0	0	0
195	SLE RA 4	-0.13	-0.16	12.4	0	0	0
195	SLE RA 5	-0.13	-0.17	12.33	0	0	0
195	SLE RA 6	-0.13	-0.16	12.52	0	0	0
195	SLE RA 7	-0.13	-0.17	12.52	0	0	0
195	SLE RA 8	-0.13	-0.16	12.46	0	0	0
195	SLE RA 9	-0.13	-0.17	12.45	0	0	0
195	SLE RA 10	-0.13	-0.17	13.15	0	0	0
195	SLE RA 11	-0.14	-0.16	13.34	0	0	0
195	SLE RA 12	-0.13	-0.17	13.34	0	0	0
195	SLE RA 13	-0.13	-0.17	13.27	0	0	0
195	SLE RA 14	-0.14	-0.16	13.46	0	0	0
195	SLE RA 15	-0.14	-0.17	13.46	0	0	0
195	SLE RA 16	-0.14	-0.16	13.39	0	0	0
195	SLE RA 17	-0.14	-0.17	13.39	0	0	0
195	SLE RA 18	-0.14	-0.16	13.56	0	0	0
195	SLE RA 19	-0.13	-0.17	13.55	0	0	0
195	SLE RA 20	-0.14	-0.17	13.68	0	0	0
195	SLE RA 21	-0.13	-0.17	13.67	0	0	0
195	SLE FR 1	-0.13	-0.16	12.22	0	0	0
195	SLE FR 2	-0.13	-0.16	12.22	0	0	0
195	SLE FR 3	-0.13	-0.16	12.27	0	0	0
195	SLE FR 4	-0.13	-0.16	12.62	0	0	0
195	SLE FR 5	-0.13	-0.16	12.67	0	0	0
195	SLE FR 6	-0.13	-0.16	12.89	0	0	0
195	SLE QP 1	-0.13	-0.16	12.22	0	0	0
195	SLE QP 2	-0.13	-0.16	12.62	0	0	0
195	SLD 1	0.94	-0.06	13.15	0	0	0
195	SLD 2	1.05	-0.1	13.13	0	0	0
195	SLD 3	0.86	-0.36	12.91	0	0	0
195	SLD 4	0.97	-0.4	12.89	0	0	0
195	SLD 5	0.29	0.33	13.15	0	0	0
195	SLD 6	0.36	0.31	13.14	0	0	0
195	SLD 7	0.03	-0.67	12.34	0	0	0
195	SLD 8	0.1	-0.69	12.33	0	0	0
195	SLD 9	-0.36	0.37	12.91	0	0	0
195	SLD 10	-0.29	0.35	12.9	0	0	0
195	SLD 11	-0.62	-0.63	12.1	0	0	0
195	SLD 12	-0.56	-0.65	12.09	0	0	0
195	SLD 13	-1.23	0.08	12.35	0	0	0
195	SLD 14	-1.13	0.04	12.33	0	0	0
195	SLD 15	-1.31	-0.22	12.11	0	0	0
195	SLD 16	-1.21	-0.26	12.09	0	0	0
195	SLV 1	2.38	0.05	13.86	0	0	0
195	SLV 2	2.62	-0.02	13.8	0	0	0
195	SLV 3	2.2	-0.63	13.31	0	0	0
195	SLV 4	2.44	-0.71	13.25	0	0	0
195	SLV 5	0.86	0.95	13.83	0	0	0
195	SLV 6	1.01	0.9	13.8	0	0	0
195	SLV 7	0.25	-1.32	12	0	0	0
195	SLV 8	0.4	-1.37	11.97	0	0	0
195	SLV 9	-0.66	1.05	13.27	0	0	0
195	SLV 10	-0.51	1	13.24	0	0	0
195	SLV 11	-1.28	-1.22	11.44	0	0	0
195	SLV 12	-1.12	-1.27	11.41	0	0	0
195	SLV 13	-2.7	0.39	11.99	0	0	0
195	SLV 14	-2.46	0.31	11.93	0	0	0
195	SLV 15	-2.89	-0.3	11.44	0	0	0
195	SLV 16	-2.64	-0.38	11.38	0	0	0
196	SLU 1	-0.12	-0.13	11.81	0	0	0
196	SLU 2	-0.12	-0.14	11.8	0	0	0
196	SLU 3	-0.13	-0.13	12.09	0	0	0
196	SLU 4	-0.12	-0.13	12.09	0	0	0
196	SLU 5	-0.12	-0.14	11.98	0	0	0
196	SLU 6	-0.13	-0.13	12.27	0	0	0
196	SLU 7	-0.13	-0.13	12.26	0	0	0
196	SLU 8	-0.13	-0.13	12.17	0	0	0
196	SLU 9	-0.13	-0.14	12.16	0	0	0
196	SLU 10	-0.12	-0.14	13.21	0	0	0
196	SLU 11	-0.13	-0.13	13.51	0	0	0
196	SLU 12	-0.13	-0.13	13.5	0	0	0
196	SLU 13	-0.13	-0.14	13.39	0	0	0
196	SLU 14	-0.13	-0.13	13.68	0	0	0
196	SLU 15	-0.13	-0.14	13.68	0	0	0
196	SLU 16	-0.13	-0.13	13.58	0	0	0
196	SLU 17	-0.13	-0.14	13.57	0	0	0
196	SLU 18	-0.13	-0.13	13.83	0	0	0
196	SLU 19	-0.13	-0.14	13.82	0	0	0
196	SLU 20	-0.13	-0.13	14.01	0	0	0
196	SLU 21	-0.13	-0.14	14	0	0	0
196	SLU 22	-0.14	-0.11	13.06	0	0	0
196	SLU 23	-0.13	-0.12	13.05	0	0	0
196	SLU 24	-0.14	-0.11	13.35	0	0	0
196	SLU 25	-0.14	-0.12	13.34	0	0	0
196	SLU 26	-0.14	-0.13	13.23	0	0	0
196	SLU 27	-0.14	-0.11	13.52	0	0	0
196	SLU 28	-0.14	-0.12	13.52	0	0	0
196	SLU 29	-0.14	-0.12	13.42	0	0	0
196	SLU 30	-0.14	-0.12	13.41	0	0	0
196	SLU 31	-0.14	-0.13	14.46	0	0	0
196	SLU 32	-0.15	-0.11	14.76	0	0	0
196	SLU 33	-0.14	-0.12	14.75	0	0	0
196	SLU 34	-0.14	-0.13	14.64	0	0	0
196	SLU 35	-0.15	-0.12	14.94	0	0	0
196	SLU 36	-0.15	-0.12	14.93	0	0	0
196	SLU 37	-0.15	-0.12	14.83	0	0	0
196	SLU 38	-0.15	-0.12	14.83	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
196	SLU 39	-0.15	-0.11	15.08	0	0	0
196	SLU 40	-0.14	-0.12	15.08	0	0	0
196	SLU 41	-0.15	-0.12	15.26	0	0	0
196	SLU 42	-0.15	-0.12	15.25	0	0	0
196	SLU 43	-0.16	-0.17	14.93	0	0	0
196	SLU 44	-0.15	-0.18	14.91	0	0	0
196	SLU 45	-0.16	-0.17	15.21	0	0	0
196	SLU 46	-0.16	-0.18	15.2	0	0	0
196	SLU 47	-0.15	-0.18	15.09	0	0	0
196	SLU 48	-0.16	-0.17	15.39	0	0	0
196	SLU 49	-0.16	-0.18	15.38	0	0	0
196	SLU 50	-0.16	-0.17	15.28	0	0	0
196	SLU 51	-0.16	-0.18	15.27	0	0	0
196	SLU 52	-0.16	-0.18	16.33	0	0	0
196	SLU 53	-0.16	-0.17	16.62	0	0	0
196	SLU 54	-0.16	-0.18	16.61	0	0	0
196	SLU 55	-0.16	-0.18	16.5	0	0	0
196	SLU 56	-0.17	-0.17	16.8	0	0	0
196	SLU 57	-0.16	-0.18	16.79	0	0	0
196	SLU 58	-0.17	-0.17	16.7	0	0	0
196	SLU 59	-0.16	-0.18	16.69	0	0	0
196	SLU 60	-0.16	-0.17	16.94	0	0	0
196	SLU 61	-0.16	-0.18	16.94	0	0	0
196	SLU 62	-0.17	-0.17	17.12	0	0	0
196	SLU 63	-0.16	-0.18	17.11	0	0	0
196	SLU 64	-0.17	-0.16	16.18	0	0	0
196	SLU 65	-0.17	-0.17	16.17	0	0	0
196	SLU 66	-0.17	-0.16	16.46	0	0	0
196	SLU 67	-0.17	-0.16	16.45	0	0	0
196	SLU 68	-0.17	-0.17	16.34	0	0	0
196	SLU 69	-0.18	-0.16	16.64	0	0	0
196	SLU 70	-0.17	-0.16	16.63	0	0	0
196	SLU 71	-0.18	-0.16	16.54	0	0	0
196	SLU 72	-0.17	-0.16	16.53	0	0	0
196	SLU 73	-0.17	-0.17	17.58	0	0	0
196	SLU 74	-0.18	-0.16	17.87	0	0	0
196	SLU 75	-0.18	-0.16	17.87	0	0	0
196	SLU 76	-0.17	-0.17	17.76	0	0	0
196	SLU 77	-0.18	-0.16	18.05	0	0	0
196	SLU 78	-0.18	-0.16	18.04	0	0	0
196	SLU 79	-0.18	-0.16	17.95	0	0	0
196	SLU 80	-0.18	-0.17	17.94	0	0	0
196	SLU 81	-0.18	-0.16	18.2	0	0	0
196	SLU 82	-0.17	-0.16	18.19	0	0	0
196	SLU 83	-0.18	-0.16	18.38	0	0	0
196	SLU 84	-0.18	-0.17	18.37	0	0	0
196	SLE RA 1	-0.13	-0.12	12.17	0	0	0
196	SLE RA 2	-0.12	-0.13	12.16	0	0	0
196	SLE RA 3	-0.13	-0.12	12.36	0	0	0
196	SLE RA 4	-0.13	-0.13	12.35	0	0	0
196	SLE RA 5	-0.13	-0.13	12.28	0	0	0
196	SLE RA 6	-0.13	-0.12	12.48	0	0	0
196	SLE RA 7	-0.13	-0.13	12.47	0	0	0
196	SLE RA 8	-0.13	-0.12	12.41	0	0	0
196	SLE RA 9	-0.13	-0.13	12.4	0	0	0
196	SLE RA 10	-0.13	-0.13	13.1	0	0	0
196	SLE RA 11	-0.13	-0.12	13.3	0	0	0
196	SLE RA 12	-0.13	-0.13	13.29	0	0	0
196	SLE RA 13	-0.13	-0.13	13.22	0	0	0
196	SLE RA 14	-0.14	-0.12	13.42	0	0	0
196	SLE RA 15	-0.13	-0.13	13.41	0	0	0
196	SLE RA 16	-0.14	-0.13	13.35	0	0	0
196	SLE RA 17	-0.13	-0.13	13.34	0	0	0
196	SLE RA 18	-0.13	-0.12	13.51	0	0	0
196	SLE RA 19	-0.13	-0.13	13.51	0	0	0
196	SLE RA 20	-0.13	-0.12	13.63	0	0	0
196	SLE RA 21	-0.13	-0.13	13.63	0	0	0
196	SLE FR 1	-0.13	-0.12	12.17	0	0	0
196	SLE FR 2	-0.13	-0.12	12.17	0	0	0
196	SLE FR 3	-0.13	-0.12	12.22	0	0	0
196	SLE FR 4	-0.13	-0.12	12.57	0	0	0
196	SLE FR 5	-0.13	-0.12	12.62	0	0	0
196	SLE FR 6	-0.13	-0.12	12.84	0	0	0
196	SLE QP 1	-0.13	-0.12	12.17	0	0	0
196	SLE QP 2	-0.13	-0.12	12.57	0	0	0
196	SLD 1	0.94	-0.01	12.99	0	0	0
196	SLD 2	1.04	-0.04	12.97	0	0	0
196	SLD 3	0.86	-0.31	12.75	0	0	0
196	SLD 4	0.96	-0.34	12.73	0	0	0
196	SLD 5	0.29	0.37	13.07	0	0	0
196	SLD 6	0.36	0.35	13.06	0	0	0
196	SLD 7	0.03	-0.63	12.26	0	0	0
196	SLD 8	0.1	-0.65	12.25	0	0	0
196	SLD 9	-0.36	0.4	12.9	0	0	0
196	SLD 10	-0.29	0.39	12.88	0	0	0
196	SLD 11	-0.62	-0.6	12.09	0	0	0
196	SLD 12	-0.55	-0.62	12.08	0	0	0
196	SLD 13	-1.22	0.09	12.42	0	0	0
196	SLD 14	-1.12	0.07	12.4	0	0	0
196	SLD 15	-1.3	-0.21	12.18	0	0	0
196	SLD 16	-1.2	-0.24	12.16	0	0	0
196	SLV 1	2.36	0.13	13.54	0	0	0
196	SLV 2	2.6	0.06	13.49	0	0	0
196	SLV 3	2.18	-0.55	12.99	0	0	0
196	SLV 4	2.42	-0.62	12.94	0	0	0
196	SLV 5	0.85	1	13.71	0	0	0
196	SLV 6	1.01	0.96	13.68	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
196	SLV 7	0.25	-1.28	11.87	0	0	0
196	SLV 8	0.4	-1.32	11.84	0	0	0
196	SLV 9	-0.66	1.07	13.3	0	0	0
196	SLV 10	-0.51	1.03	13.27	0	0	0
196	SLV 11	-1.27	-1.2	11.47	0	0	0
196	SLV 12	-1.11	-1.25	11.44	0	0	0
196	SLV 13	-2.68	0.37	12.2	0	0	0
196	SLV 14	-2.44	0.31	12.16	0	0	0
196	SLV 15	-2.86	-0.31	11.65	0	0	0
196	SLV 16	-2.62	-0.38	11.61	0	0	0
197	SLU 1	-0.12	-0.09	11.83	0	0	0
197	SLU 2	-0.12	-0.1	11.82	0	0	0
197	SLU 3	-0.13	-0.09	12.12	0	0	0
197	SLU 4	-0.12	-0.1	12.11	0	0	0
197	SLU 5	-0.12	-0.1	12	0	0	0
197	SLU 6	-0.13	-0.09	12.3	0	0	0
197	SLU 7	-0.12	-0.1	12.29	0	0	0
197	SLU 8	-0.13	-0.09	12.19	0	0	0
197	SLU 9	-0.12	-0.1	12.19	0	0	0
197	SLU 10	-0.12	-0.1	13.25	0	0	0
197	SLU 11	-0.13	-0.09	13.55	0	0	0
197	SLU 12	-0.13	-0.1	13.54	0	0	0
197	SLU 13	-0.12	-0.1	13.43	0	0	0
197	SLU 14	-0.13	-0.09	13.73	0	0	0
197	SLU 15	-0.13	-0.1	13.72	0	0	0
197	SLU 16	-0.13	-0.09	13.62	0	0	0
197	SLU 17	-0.13	-0.1	13.61	0	0	0
197	SLU 18	-0.13	-0.09	13.88	0	0	0
197	SLU 19	-0.13	-0.1	13.87	0	0	0
197	SLU 20	-0.13	-0.09	14.05	0	0	0
197	SLU 21	-0.13	-0.1	14.05	0	0	0
197	SLU 22	-0.14	-0.08	13.09	0	0	0
197	SLU 23	-0.13	-0.09	13.08	0	0	0
197	SLU 24	-0.14	-0.07	13.38	0	0	0
197	SLU 25	-0.14	-0.08	13.37	0	0	0
197	SLU 26	-0.13	-0.09	13.26	0	0	0
197	SLU 27	-0.14	-0.07	13.56	0	0	0
197	SLU 28	-0.14	-0.08	13.55	0	0	0
197	SLU 29	-0.14	-0.08	13.45	0	0	0
197	SLU 30	-0.14	-0.08	13.45	0	0	0
197	SLU 31	-0.14	-0.08	14.51	0	0	0
197	SLU 32	-0.15	-0.07	14.81	0	0	0
197	SLU 33	-0.14	-0.08	14.8	0	0	0
197	SLU 34	-0.14	-0.08	14.69	0	0	0
197	SLU 35	-0.15	-0.07	14.99	0	0	0
197	SLU 36	-0.14	-0.08	14.98	0	0	0
197	SLU 37	-0.15	-0.07	14.88	0	0	0
197	SLU 38	-0.14	-0.08	14.87	0	0	0
197	SLU 39	-0.14	-0.07	15.14	0	0	0
197	SLU 40	-0.14	-0.08	15.13	0	0	0
197	SLU 41	-0.15	-0.07	15.31	0	0	0
197	SLU 42	-0.14	-0.08	15.31	0	0	0
197	SLU 43	-0.15	-0.13	14.95	0	0	0
197	SLU 44	-0.15	-0.14	14.94	0	0	0
197	SLU 45	-0.16	-0.13	15.24	0	0	0
197	SLU 46	-0.15	-0.13	15.23	0	0	0
197	SLU 47	-0.15	-0.14	15.12	0	0	0
197	SLU 48	-0.16	-0.13	15.41	0	0	0
197	SLU 49	-0.16	-0.13	15.41	0	0	0
197	SLU 50	-0.16	-0.13	15.31	0	0	0
197	SLU 51	-0.16	-0.13	15.3	0	0	0
197	SLU 52	-0.15	-0.14	16.37	0	0	0
197	SLU 53	-0.16	-0.12	16.66	0	0	0
197	SLU 54	-0.16	-0.13	16.66	0	0	0
197	SLU 55	-0.16	-0.14	16.55	0	0	0
197	SLU 56	-0.16	-0.12	16.84	0	0	0
197	SLU 57	-0.16	-0.13	16.84	0	0	0
197	SLU 58	-0.16	-0.13	16.74	0	0	0
197	SLU 59	-0.16	-0.13	16.73	0	0	0
197	SLU 60	-0.16	-0.12	16.99	0	0	0
197	SLU 61	-0.16	-0.13	16.99	0	0	0
197	SLU 62	-0.16	-0.12	17.17	0	0	0
197	SLU 63	-0.16	-0.13	17.17	0	0	0
197	SLU 64	-0.17	-0.11	16.21	0	0	0
197	SLU 65	-0.16	-0.12	16.2	0	0	0
197	SLU 66	-0.17	-0.11	16.5	0	0	0
197	SLU 67	-0.17	-0.11	16.49	0	0	0
197	SLU 68	-0.17	-0.12	16.38	0	0	0
197	SLU 69	-0.17	-0.11	16.68	0	0	0
197	SLU 70	-0.17	-0.12	16.67	0	0	0
197	SLU 71	-0.17	-0.11	16.57	0	0	0
197	SLU 72	-0.17	-0.12	16.56	0	0	0
197	SLU 73	-0.17	-0.12	17.63	0	0	0
197	SLU 74	-0.18	-0.11	17.92	0	0	0
197	SLU 75	-0.17	-0.11	17.92	0	0	0
197	SLU 76	-0.17	-0.12	17.81	0	0	0
197	SLU 77	-0.18	-0.11	18.1	0	0	0
197	SLU 78	-0.18	-0.11	18.1	0	0	0
197	SLU 79	-0.18	-0.11	18	0	0	0
197	SLU 80	-0.18	-0.11	17.99	0	0	0
197	SLU 81	-0.18	-0.11	18.25	0	0	0
197	SLU 82	-0.17	-0.11	18.25	0	0	0
197	SLU 83	-0.18	-0.11	18.43	0	0	0
197	SLU 84	-0.18	-0.11	18.43	0	0	0
197	SLE RA 1	-0.13	-0.09	12.19	0	0	0
197	SLE RA 2	-0.12	-0.1	12.19	0	0	0
197	SLE RA 3	-0.13	-0.09	12.38	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
197	SLE RA 4	-0.13	-0.09	12.38	0	0	0
197	SLE RA 5	-0.12	-0.1	12.3	0	0	0
197	SLE RA 6	-0.13	-0.09	12.5	0	0	0
197	SLE RA 7	-0.13	-0.09	12.5	0	0	0
197	SLE RA 8	-0.13	-0.09	12.43	0	0	0
197	SLE RA 9	-0.13	-0.09	12.43	0	0	0
197	SLE RA 10	-0.13	-0.09	13.14	0	0	0
197	SLE RA 11	-0.13	-0.09	13.34	0	0	0
197	SLE RA 12	-0.13	-0.09	13.33	0	0	0
197	SLE RA 13	-0.13	-0.09	13.26	0	0	0
197	SLE RA 14	-0.13	-0.09	13.46	0	0	0
197	SLE RA 15	-0.13	-0.09	13.45	0	0	0
197	SLE RA 16	-0.13	-0.09	13.39	0	0	0
197	SLE RA 17	-0.13	-0.09	13.38	0	0	0
197	SLE RA 18	-0.13	-0.09	13.55	0	0	0
197	SLE RA 19	-0.13	-0.09	13.55	0	0	0
197	SLE RA 20	-0.13	-0.09	13.67	0	0	0
197	SLE RA 21	-0.13	-0.09	13.67	0	0	0
197	SLE FR 1	-0.13	-0.09	12.19	0	0	0
197	SLE FR 2	-0.13	-0.09	12.19	0	0	0
197	SLE FR 3	-0.13	-0.09	12.24	0	0	0
197	SLE FR 4	-0.13	-0.09	12.6	0	0	0
197	SLE FR 5	-0.13	-0.09	12.65	0	0	0
197	SLE FR 6	-0.13	-0.09	12.87	0	0	0
197	SLE QP 1	-0.13	-0.09	12.19	0	0	0
197	SLE QP 2	-0.13	-0.09	12.6	0	0	0
197	SLD 1	0.93	0.04	12.92	0	0	0
197	SLD 2	1.03	0.01	12.9	0	0	0
197	SLD 3	0.85	-0.26	12.67	0	0	0
197	SLD 4	0.95	-0.29	12.66	0	0	0
197	SLD 5	0.29	0.41	13.07	0	0	0
197	SLD 6	0.35	0.4	13.06	0	0	0
197	SLD 7	0.03	-0.59	12.25	0	0	0
197	SLD 8	0.1	-0.61	12.24	0	0	0
197	SLD 9	-0.35	0.43	12.96	0	0	0
197	SLD 10	-0.29	0.42	12.95	0	0	0
197	SLD 11	-0.61	-0.57	12.14	0	0	0
197	SLD 12	-0.54	-0.59	12.13	0	0	0
197	SLD 13	-1.21	0.11	12.55	0	0	0
197	SLD 14	-1.1	0.09	12.53	0	0	0
197	SLD 15	-1.28	-0.19	12.3	0	0	0
197	SLD 16	-1.18	-0.21	12.29	0	0	0
197	SLV 1	2.34	0.19	13.33	0	0	0
197	SLV 2	2.58	0.13	13.29	0	0	0
197	SLV 3	2.16	-0.49	12.77	0	0	0
197	SLV 4	2.4	-0.55	12.74	0	0	0
197	SLV 5	0.85	1.04	13.67	0	0	0
197	SLV 6	1	1	13.64	0	0	0
197	SLV 7	0.24	-1.23	11.82	0	0	0
197	SLV 8	0.4	-1.27	11.79	0	0	0
197	SLV 9	-0.65	1.09	13.41	0	0	0
197	SLV 10	-0.5	1.06	13.38	0	0	0
197	SLV 11	-1.25	-1.18	11.56	0	0	0
197	SLV 12	-1.1	-1.21	11.54	0	0	0
197	SLV 13	-2.65	0.37	12.47	0	0	0
197	SLV 14	-2.41	0.32	12.43	0	0	0
197	SLV 15	-2.83	-0.31	11.91	0	0	0
197	SLV 16	-2.59	-0.36	11.87	0	0	0
198	SLU 1	-0.12	-0.06	11.8	0	0	0
198	SLU 2	-0.11	-0.07	11.79	0	0	0
198	SLU 3	-0.12	-0.06	12.09	0	0	0
198	SLU 4	-0.12	-0.07	12.08	0	0	0
198	SLU 5	-0.12	-0.07	11.97	0	0	0
198	SLU 6	-0.12	-0.06	12.27	0	0	0
198	SLU 7	-0.12	-0.07	12.26	0	0	0
198	SLU 8	-0.12	-0.06	12.17	0	0	0
198	SLU 9	-0.12	-0.07	12.16	0	0	0
198	SLU 10	-0.12	-0.07	13.23	0	0	0
198	SLU 11	-0.13	-0.05	13.53	0	0	0
198	SLU 12	-0.12	-0.06	13.52	0	0	0
198	SLU 13	-0.12	-0.07	13.41	0	0	0
198	SLU 14	-0.13	-0.05	13.71	0	0	0
198	SLU 15	-0.13	-0.06	13.7	0	0	0
198	SLU 16	-0.13	-0.06	13.61	0	0	0
198	SLU 17	-0.13	-0.06	13.6	0	0	0
198	SLU 18	-0.13	-0.05	13.86	0	0	0
198	SLU 19	-0.12	-0.06	13.85	0	0	0
198	SLU 20	-0.13	-0.05	14.04	0	0	0
198	SLU 21	-0.13	-0.06	14.03	0	0	0
198	SLU 22	-0.13	-0.04	13.07	0	0	0
198	SLU 23	-0.13	-0.05	13.06	0	0	0
198	SLU 24	-0.14	-0.04	13.35	0	0	0
198	SLU 25	-0.13	-0.04	13.35	0	0	0
198	SLU 26	-0.13	-0.05	13.24	0	0	0
198	SLU 27	-0.14	-0.04	13.53	0	0	0
198	SLU 28	-0.14	-0.04	13.53	0	0	0
198	SLU 29	-0.14	-0.04	13.43	0	0	0
198	SLU 30	-0.14	-0.05	13.42	0	0	0
198	SLU 31	-0.13	-0.05	14.5	0	0	0
198	SLU 32	-0.14	-0.03	14.79	0	0	0
198	SLU 33	-0.14	-0.04	14.79	0	0	0
198	SLU 34	-0.14	-0.05	14.68	0	0	0
198	SLU 35	-0.14	-0.03	14.97	0	0	0
198	SLU 36	-0.14	-0.04	14.97	0	0	0
198	SLU 37	-0.14	-0.04	14.87	0	0	0
198	SLU 38	-0.14	-0.04	14.86	0	0	0
198	SLU 39	-0.14	-0.03	15.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
198	SLU 40	-0.14	-0.04	15.12	0	0	0
198	SLU 41	-0.14	-0.03	15.31	0	0	0
198	SLU 42	-0.14	-0.04	15.3	0	0	0
198	SLU 43	-0.15	-0.09	14.91	0	0	0
198	SLU 44	-0.14	-0.1	14.9	0	0	0
198	SLU 45	-0.15	-0.08	15.2	0	0	0
198	SLU 46	-0.15	-0.09	15.19	0	0	0
198	SLU 47	-0.15	-0.1	15.08	0	0	0
198	SLU 48	-0.16	-0.08	15.38	0	0	0
198	SLU 49	-0.15	-0.09	15.37	0	0	0
198	SLU 50	-0.16	-0.09	15.27	0	0	0
198	SLU 51	-0.15	-0.09	15.27	0	0	0
198	SLU 52	-0.15	-0.09	16.34	0	0	0
198	SLU 53	-0.16	-0.08	16.64	0	0	0
198	SLU 54	-0.15	-0.09	16.63	0	0	0
198	SLU 55	-0.15	-0.09	16.52	0	0	0
198	SLU 56	-0.16	-0.08	16.82	0	0	0
198	SLU 57	-0.16	-0.09	16.81	0	0	0
198	SLU 58	-0.16	-0.08	16.71	0	0	0
198	SLU 59	-0.16	-0.09	16.71	0	0	0
198	SLU 60	-0.16	-0.08	16.97	0	0	0
198	SLU 61	-0.15	-0.09	16.96	0	0	0
198	SLU 62	-0.16	-0.08	17.15	0	0	0
198	SLU 63	-0.16	-0.09	17.14	0	0	0
198	SLU 64	-0.16	-0.07	16.18	0	0	0
198	SLU 65	-0.16	-0.08	16.16	0	0	0
198	SLU 66	-0.17	-0.06	16.46	0	0	0
198	SLU 67	-0.16	-0.07	16.45	0	0	0
198	SLU 68	-0.16	-0.08	16.34	0	0	0
198	SLU 69	-0.17	-0.06	16.64	0	0	0
198	SLU 70	-0.17	-0.07	16.63	0	0	0
198	SLU 71	-0.17	-0.07	16.54	0	0	0
198	SLU 72	-0.17	-0.07	16.53	0	0	0
198	SLU 73	-0.16	-0.07	17.6	0	0	0
198	SLU 74	-0.17	-0.06	17.9	0	0	0
198	SLU 75	-0.17	-0.06	17.89	0	0	0
198	SLU 76	-0.17	-0.07	17.78	0	0	0
198	SLU 77	-0.18	-0.06	18.08	0	0	0
198	SLU 78	-0.17	-0.06	18.07	0	0	0
198	SLU 79	-0.17	-0.06	17.98	0	0	0
198	SLU 80	-0.17	-0.07	17.97	0	0	0
198	SLU 81	-0.17	-0.06	18.23	0	0	0
198	SLU 82	-0.17	-0.06	18.23	0	0	0
198	SLU 83	-0.17	-0.06	18.41	0	0	0
198	SLU 84	-0.17	-0.06	18.41	0	0	0
198	SLE RA 1	-0.12	-0.05	12.17	0	0	0
198	SLE RA 2	-0.12	-0.06	12.16	0	0	0
198	SLE RA 3	-0.13	-0.05	12.36	0	0	0
198	SLE RA 4	-0.12	-0.06	12.35	0	0	0
198	SLE RA 5	-0.12	-0.06	12.28	0	0	0
198	SLE RA 6	-0.13	-0.05	12.48	0	0	0
198	SLE RA 7	-0.13	-0.06	12.47	0	0	0
198	SLE RA 8	-0.13	-0.06	12.41	0	0	0
198	SLE RA 9	-0.12	-0.06	12.4	0	0	0
198	SLE RA 10	-0.12	-0.06	13.12	0	0	0
198	SLE RA 11	-0.13	-0.05	13.32	0	0	0
198	SLE RA 12	-0.13	-0.05	13.31	0	0	0
198	SLE RA 13	-0.12	-0.06	13.24	0	0	0
198	SLE RA 14	-0.13	-0.05	13.44	0	0	0
198	SLE RA 15	-0.13	-0.05	13.43	0	0	0
198	SLE RA 16	-0.13	-0.05	13.37	0	0	0
198	SLE RA 17	-0.13	-0.06	13.36	0	0	0
198	SLE RA 18	-0.13	-0.05	13.54	0	0	0
198	SLE RA 19	-0.13	-0.05	13.53	0	0	0
198	SLE RA 20	-0.13	-0.05	13.66	0	0	0
198	SLE RA 21	-0.13	-0.05	13.65	0	0	0
198	SLE FR 1	-0.12	-0.05	12.17	0	0	0
198	SLE FR 2	-0.12	-0.06	12.16	0	0	0
198	SLE FR 3	-0.12	-0.06	12.21	0	0	0
198	SLE FR 4	-0.12	-0.05	12.58	0	0	0
198	SLE FR 5	-0.13	-0.05	12.62	0	0	0
198	SLE FR 6	-0.13	-0.05	12.85	0	0	0
198	SLE QP 1	-0.12	-0.05	12.17	0	0	0
198	SLE QP 2	-0.12	-0.05	12.58	0	0	0
198	SLD 1	0.91	0.14	12.8	0	0	0
198	SLD 2	1.01	0.12	12.79	0	0	0
198	SLD 3	0.83	-0.16	12.56	0	0	0
198	SLD 4	0.93	-0.17	12.54	0	0	0
198	SLD 5	0.28	0.46	13.02	0	0	0
198	SLD 6	0.35	0.45	13.01	0	0	0
198	SLD 7	0.03	-0.53	12.2	0	0	0
198	SLD 8	0.09	-0.54	12.19	0	0	0
198	SLD 9	-0.34	0.44	12.96	0	0	0
198	SLD 10	-0.28	0.43	12.95	0	0	0
198	SLD 11	-0.6	-0.56	12.14	0	0	0
198	SLD 12	-0.53	-0.57	12.13	0	0	0
198	SLD 13	-1.18	0.07	12.61	0	0	0
198	SLD 14	-1.08	0.05	12.6	0	0	0
198	SLD 15	-1.26	-0.23	12.36	0	0	0
198	SLD 16	-1.16	-0.25	12.35	0	0	0
198	SLV 1	2.29	0.39	13.1	0	0	0
198	SLV 2	2.52	0.35	13.07	0	0	0
198	SLV 3	2.11	-0.28	12.54	0	0	0
198	SLV 4	2.35	-0.32	12.51	0	0	0
198	SLV 5	0.83	1.11	13.58	0	0	0
198	SLV 6	0.98	1.08	13.56	0	0	0
198	SLV 7	0.24	-1.14	11.73	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
198	SLV 8	0.39	-1.17	11.71	0	0	0
198	SLV 9	-0.64	1.06	13.45	0	0	0
198	SLV 10	-0.49	1.03	13.43	0	0	0
198	SLV 11	-1.23	-1.19	11.59	0	0	0
198	SLV 12	-1.08	-1.22	11.57	0	0	0
198	SLV 13	-2.6	0.22	12.64	0	0	0
198	SLV 14	-2.36	0.17	12.61	0	0	0
198	SLV 15	-2.77	-0.46	12.09	0	0	0
198	SLV 16	-2.54	-0.5	12.06	0	0	0
200	SLU 1	-0.07	-0.17	6.96	0	0	0
200	SLU 2	-0.07	-0.18	6.95	0	0	0
200	SLU 3	-0.07	-0.18	7.12	0	0	0
200	SLU 4	-0.07	-0.18	7.12	0	0	0
200	SLU 5	-0.07	-0.18	7.05	0	0	0
200	SLU 6	-0.08	-0.18	7.23	0	0	0
200	SLU 7	-0.07	-0.18	7.22	0	0	0
200	SLU 8	-0.08	-0.18	7.17	0	0	0
200	SLU 9	-0.07	-0.18	7.16	0	0	0
200	SLU 10	-0.07	-0.19	7.76	0	0	0
200	SLU 11	-0.08	-0.19	7.93	0	0	0
200	SLU 12	-0.08	-0.19	7.93	0	0	0
200	SLU 13	-0.07	-0.19	7.87	0	0	0
200	SLU 14	-0.08	-0.19	8.04	0	0	0
200	SLU 15	-0.08	-0.19	8.03	0	0	0
200	SLU 16	-0.08	-0.19	7.98	0	0	0
200	SLU 17	-0.08	-0.19	7.97	0	0	0
200	SLU 18	-0.08	-0.19	8.12	0	0	0
200	SLU 19	-0.08	-0.19	8.11	0	0	0
200	SLU 20	-0.08	-0.19	8.22	0	0	0
200	SLU 21	-0.08	-0.2	8.22	0	0	0
200	SLU 22	-0.08	-0.18	7.7	0	0	0
200	SLU 23	-0.08	-0.18	7.69	0	0	0
200	SLU 24	-0.08	-0.18	7.86	0	0	0
200	SLU 25	-0.08	-0.18	7.86	0	0	0
200	SLU 26	-0.08	-0.19	7.8	0	0	0
200	SLU 27	-0.09	-0.18	7.97	0	0	0
200	SLU 28	-0.08	-0.19	7.96	0	0	0
200	SLU 29	-0.08	-0.18	7.91	0	0	0
200	SLU 30	-0.08	-0.19	7.9	0	0	0
200	SLU 31	-0.08	-0.2	8.5	0	0	0
200	SLU 32	-0.09	-0.19	8.67	0	0	0
200	SLU 33	-0.08	-0.2	8.67	0	0	0
200	SLU 34	-0.08	-0.2	8.61	0	0	0
200	SLU 35	-0.09	-0.2	8.78	0	0	0
200	SLU 36	-0.09	-0.2	8.77	0	0	0
200	SLU 37	-0.09	-0.19	8.72	0	0	0
200	SLU 38	-0.09	-0.2	8.71	0	0	0
200	SLU 39	-0.09	-0.19	8.86	0	0	0
200	SLU 40	-0.08	-0.2	8.85	0	0	0
200	SLU 41	-0.09	-0.2	8.96	0	0	0
200	SLU 42	-0.09	-0.2	8.96	0	0	0
200	SLU 43	-0.09	-0.22	8.79	0	0	0
200	SLU 44	-0.09	-0.23	8.78	0	0	0
200	SLU 45	-0.09	-0.23	8.95	0	0	0
200	SLU 46	-0.09	-0.23	8.95	0	0	0
200	SLU 47	-0.09	-0.23	8.89	0	0	0
200	SLU 48	-0.1	-0.23	9.06	0	0	0
200	SLU 49	-0.09	-0.23	9.05	0	0	0
200	SLU 50	-0.09	-0.23	9	0	0	0
200	SLU 51	-0.09	-0.23	8.99	0	0	0
200	SLU 52	-0.09	-0.24	9.59	0	0	0
200	SLU 53	-0.1	-0.24	9.76	0	0	0
200	SLU 54	-0.09	-0.24	9.76	0	0	0
200	SLU 55	-0.09	-0.24	9.7	0	0	0
200	SLU 56	-0.1	-0.24	9.87	0	0	0
200	SLU 57	-0.1	-0.24	9.86	0	0	0
200	SLU 58	-0.1	-0.24	9.81	0	0	0
200	SLU 59	-0.1	-0.24	9.81	0	0	0
200	SLU 60	-0.1	-0.24	9.95	0	0	0
200	SLU 61	-0.09	-0.24	9.94	0	0	0
200	SLU 62	-0.1	-0.24	10.05	0	0	0
200	SLU 63	-0.1	-0.25	10.05	0	0	0
200	SLU 64	-0.1	-0.23	9.53	0	0	0
200	SLU 65	-0.1	-0.23	9.52	0	0	0
200	SLU 66	-0.1	-0.23	9.7	0	0	0
200	SLU 67	-0.1	-0.23	9.69	0	0	0
200	SLU 68	-0.1	-0.24	9.63	0	0	0
200	SLU 69	-0.1	-0.23	9.8	0	0	0
200	SLU 70	-0.1	-0.24	9.8	0	0	0
200	SLU 71	-0.1	-0.23	9.74	0	0	0
200	SLU 72	-0.1	-0.24	9.74	0	0	0
200	SLU 73	-0.1	-0.25	10.33	0	0	0
200	SLU 74	-0.11	-0.24	10.51	0	0	0
200	SLU 75	-0.1	-0.25	10.5	0	0	0
200	SLU 76	-0.1	-0.25	10.44	0	0	0
200	SLU 77	-0.11	-0.25	10.61	0	0	0
200	SLU 78	-0.11	-0.25	10.61	0	0	0
200	SLU 79	-0.11	-0.24	10.55	0	0	0
200	SLU 80	-0.1	-0.25	10.55	0	0	0
200	SLU 81	-0.1	-0.24	10.69	0	0	0
200	SLU 82	-0.1	-0.25	10.69	0	0	0
200	SLU 83	-0.11	-0.25	10.79	0	0	0
200	SLU 84	-0.1	-0.25	10.79	0	0	0
200	SLE RA 1	-0.08	-0.17	7.17	0	0	0
200	SLE RA 2	-0.07	-0.18	7.16	0	0	0
200	SLE RA 3	-0.08	-0.18	7.28	0	0	0
200	SLE RA 4	-0.08	-0.18	7.27	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
200	SLE RA 5	-0.07	-0.18	7.23	0	0	0
200	SLE RA 6	-0.08	-0.18	7.35	0	0	0
200	SLE RA 7	-0.08	-0.18	7.34	0	0	0
200	SLE RA 8	-0.08	-0.18	7.31	0	0	0
200	SLE RA 9	-0.08	-0.18	7.31	0	0	0
200	SLE RA 10	-0.08	-0.19	7.7	0	0	0
200	SLE RA 11	-0.08	-0.18	7.82	0	0	0
200	SLE RA 12	-0.08	-0.19	7.82	0	0	0
200	SLE RA 13	-0.08	-0.19	7.77	0	0	0
200	SLE RA 14	-0.08	-0.19	7.89	0	0	0
200	SLE RA 15	-0.08	-0.19	7.89	0	0	0
200	SLE RA 16	-0.08	-0.19	7.85	0	0	0
200	SLE RA 17	-0.08	-0.19	7.85	0	0	0
200	SLE RA 18	-0.08	-0.19	7.94	0	0	0
200	SLE RA 19	-0.08	-0.19	7.94	0	0	0
200	SLE RA 20	-0.08	-0.19	8.01	0	0	0
200	SLE RA 21	-0.08	-0.19	8.01	0	0	0
200	SLE FR 1	-0.08	-0.17	7.17	0	0	0
200	SLE FR 2	-0.07	-0.18	7.17	0	0	0
200	SLE FR 3	-0.08	-0.17	7.2	0	0	0
200	SLE FR 4	-0.08	-0.18	7.4	0	0	0
200	SLE FR 5	-0.08	-0.18	7.43	0	0	0
200	SLE FR 6	-0.08	-0.18	7.55	0	0	0
200	SLE QP 1	-0.08	-0.17	7.17	0	0	0
200	SLE QP 2	-0.08	-0.18	7.4	0	0	0
200	SLD 1	0.51	-0.17	8	0	0	0
200	SLD 2	0.57	-0.2	7.98	0	0	0
200	SLD 3	0.47	-0.33	7.86	0	0	0
200	SLD 4	0.52	-0.36	7.83	0	0	0
200	SLD 5	0.16	0.07	7.8	0	0	0
200	SLD 6	0.19	0.05	7.79	0	0	0
200	SLD 7	0.01	-0.46	7.32	0	0	0
200	SLD 8	0.05	-0.48	7.31	0	0	0
200	SLD 9	-0.2	0.13	7.49	0	0	0
200	SLD 10	-0.16	0.11	7.48	0	0	0
200	SLD 11	-0.34	-0.41	7.01	0	0	0
200	SLD 12	-0.31	-0.43	7	0	0	0
200	SLD 13	-0.68	0	6.97	0	0	0
200	SLD 14	-0.62	-0.03	6.94	0	0	0
200	SLD 15	-0.72	-0.16	6.82	0	0	0
200	SLD 16	-0.66	-0.19	6.8	0	0	0
200	SLV 1	1.3	-0.17	8.8	0	0	0
200	SLV 2	1.43	-0.23	8.75	0	0	0
200	SLV 3	1.2	-0.53	8.47	0	0	0
200	SLV 4	1.33	-0.6	8.42	0	0	0
200	SLV 5	0.47	0.39	8.32	0	0	0
200	SLV 6	0.55	0.35	8.29	0	0	0
200	SLV 7	0.13	-0.82	7.24	0	0	0
200	SLV 8	0.21	-0.87	7.2	0	0	0
200	SLV 9	-0.37	0.51	7.6	0	0	0
200	SLV 10	-0.28	0.47	7.56	0	0	0
200	SLV 11	-0.7	-0.7	6.51	0	0	0
200	SLV 12	-0.62	-0.74	6.48	0	0	0
200	SLV 13	-1.48	0.24	6.38	0	0	0
200	SLV 14	-1.35	0.17	6.33	0	0	0
200	SLV 15	-1.58	-0.12	6.05	0	0	0
200	SLV 16	-1.45	-0.19	6	0	0	0
201	SLU 1	-0.06	-0.02	5.97	0	0.8965	0.0025
201	SLU 2	-0.06	-0.02	5.96	0	0.8955	0.0033
201	SLU 3	-0.06	-0.02	6.11	0	0.9183	0.0023
201	SLU 4	-0.06	-0.02	6.11	0	0.9177	0.0027
201	SLU 5	-0.06	-0.02	6.05	0	0.9093	0.0032
201	SLU 6	-0.06	-0.02	6.2	0	0.932	0.0023
201	SLU 7	-0.06	-0.02	6.2	0	0.9315	0.0027
201	SLU 8	-0.06	-0.02	6.15	0	0.924	0.0025
201	SLU 9	-0.06	-0.02	6.15	0	0.9234	0.0029
201	SLU 10	-0.06	-0.02	6.7	0	1.006	0.0027
201	SLU 11	-0.06	-0.01	6.85	0	1.0287	0.0017
201	SLU 12	-0.06	-0.01	6.84	0	1.0282	0.0021
201	SLU 13	-0.06	-0.02	6.79	0	1.0197	0.0027
201	SLU 14	-0.06	-0.01	6.94	0	1.0425	0.0017
201	SLU 15	-0.06	-0.01	6.94	0	1.0419	0.0021
201	SLU 16	-0.06	-0.01	6.89	0	1.0344	0.0019
201	SLU 17	-0.06	-0.02	6.88	0	1.0339	0.0023
201	SLU 18	-0.06	-0.01	7.02	0	1.0542	0.0016
201	SLU 19	-0.06	-0.01	7.01	0	1.0537	0.0021
201	SLU 20	-0.06	-0.01	7.11	0	1.068	0.0016
201	SLU 21	-0.06	-0.01	7.11	0	1.0675	0.0021
201	SLU 22	-0.07	0	6.61	0	0.9928	0.0006
201	SLU 23	-0.06	-0.01	6.6	0	0.9919	0.0014
201	SLU 24	-0.07	0	6.75	0	1.0146	0.0004
201	SLU 25	-0.07	-0.01	6.75	0	1.0141	0.0009
201	SLU 26	-0.07	-0.01	6.69	0	1.0057	0.0014
201	SLU 27	-0.07	0	6.85	0	1.0284	0.0004
201	SLU 28	-0.07	-0.01	6.84	0	1.0278	0.0009
201	SLU 29	-0.07	0	6.79	0	1.0204	0.0006
201	SLU 30	-0.07	-0.01	6.79	0	1.0198	0.0011
201	SLU 31	-0.07	-0.01	7.34	0	1.1024	0.0008
201	SLU 32	-0.07	0	7.49	0	1.1251	-0.0002
201	SLU 33	-0.07	0	7.49	0	1.1245	0.0003
201	SLU 34	-0.07	-0.01	7.43	0	1.1161	0.0008
201	SLU 35	-0.07	0	7.58	0	1.1389	-0.0002
201	SLU 36	-0.07	0	7.58	0	1.1383	0.0003
201	SLU 37	-0.07	0	7.53	0	1.1308	0
201	SLU 38	-0.07	0	7.52	0	1.1303	0.0005
201	SLU 39	-0.07	0	7.66	0	1.1506	-0.0002
201	SLU 40	-0.07	0	7.66	0	1.1501	0.0002

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
201	SLU 41	-0.07	0	7.75	0	1.1644	-0.0002
201	SLU 42	-0.07	0	7.75	0	1.1638	0.0002
201	SLU 43	-0.07	-0.03	7.54	0	1.1323	0.0039
201	SLU 44	-0.07	-0.03	7.53	0	1.1314	0.0046
201	SLU 45	-0.08	-0.02	7.68	0	1.1542	0.0036
201	SLU 46	-0.07	-0.03	7.68	0	1.1536	0.0041
201	SLU 47	-0.07	-0.03	7.62	0	1.1452	0.0046
201	SLU 48	-0.08	-0.02	7.77	0	1.1679	0.0036
201	SLU 49	-0.08	-0.03	7.77	0	1.1674	0.0041
201	SLU 50	-0.08	-0.03	7.72	0	1.1599	0.0038
201	SLU 51	-0.08	-0.03	7.72	0	1.1593	0.0043
201	SLU 52	-0.07	-0.03	8.27	0	1.2419	0.0041
201	SLU 53	-0.08	-0.02	8.42	0	1.2646	0.0031
201	SLU 54	-0.08	-0.02	8.41	0	1.2641	0.0035
201	SLU 55	-0.08	-0.03	8.36	0	1.2556	0.004
201	SLU 56	-0.08	-0.02	8.51	0	1.2784	0.0031
201	SLU 57	-0.08	-0.02	8.51	0	1.2778	0.0035
201	SLU 58	-0.08	-0.02	8.46	0	1.2703	0.0033
201	SLU 59	-0.08	-0.02	8.45	0	1.2698	0.0037
201	SLU 60	-0.08	-0.02	8.59	0	1.2901	0.003
201	SLU 61	-0.08	-0.02	8.58	0	1.2896	0.0035
201	SLU 62	-0.08	-0.02	8.68	0	1.3039	0.003
201	SLU 63	-0.08	-0.02	8.68	0	1.3033	0.0035
201	SLU 64	-0.08	-0.01	8.18	0	1.2287	0.002
201	SLU 65	-0.08	-0.02	8.17	0	1.2278	0.0028
201	SLU 66	-0.08	-0.01	8.32	0	1.2505	0.0018
201	SLU 67	-0.08	-0.01	8.32	0	1.25	0.0022
201	SLU 68	-0.08	-0.02	8.26	0	1.2416	0.0028
201	SLU 69	-0.08	-0.01	8.42	0	1.2643	0.0018
201	SLU 70	-0.08	-0.01	8.41	0	1.2637	0.0022
201	SLU 71	-0.08	-0.01	8.36	0	1.2563	0.002
201	SLU 72	-0.08	-0.02	8.36	0	1.2557	0.0024
201	SLU 73	-0.08	-0.01	8.91	0	1.3382	0.0022
201	SLU 74	-0.09	-0.01	9.06	0	1.361	0.0012
201	SLU 75	-0.08	-0.01	9.06	0	1.3604	0.0017
201	SLU 76	-0.08	-0.01	9	0	1.352	0.0022
201	SLU 77	-0.09	-0.01	9.15	0	1.3748	0.0012
201	SLU 78	-0.09	-0.01	9.15	0	1.3742	0.0017
201	SLU 79	-0.09	-0.01	9.1	0	1.3667	0.0014
201	SLU 80	-0.09	-0.01	9.09	0	1.3661	0.0019
201	SLU 81	-0.09	-0.01	9.23	0	1.3865	0.0012
201	SLU 82	-0.08	-0.01	9.23	0	1.386	0.0016
201	SLU 83	-0.09	-0.01	9.32	0	1.4003	0.0012
201	SLU 84	-0.08	-0.01	9.32	0	1.3997	0.0016
201	SLE RA 1	-0.06	-0.01	6.15	0	0.924	0.0019
201	SLE RA 2	-0.06	-0.02	6.15	0	0.9234	0.0025
201	SLE RA 3	-0.06	-0.01	6.25	0	0.9385	0.0018
201	SLE RA 4	-0.06	-0.01	6.25	0	0.9382	0.0021
201	SLE RA 5	-0.06	-0.02	6.21	0	0.9325	0.0025
201	SLE RA 6	-0.06	-0.01	6.31	0	0.9477	0.0018
201	SLE RA 7	-0.06	-0.01	6.31	0	0.9473	0.0021
201	SLE RA 8	-0.06	-0.01	6.27	0	0.9423	0.0019
201	SLE RA 9	-0.06	-0.01	6.27	0	0.942	0.0022
201	SLE RA 10	-0.06	-0.01	6.64	0	0.997	0.0021
201	SLE RA 11	-0.06	-0.01	6.74	0	1.0122	0.0014
201	SLE RA 12	-0.06	-0.01	6.74	0	1.0118	0.0017
201	SLE RA 13	-0.06	-0.01	6.7	0	1.0062	0.0021
201	SLE RA 14	-0.06	-0.01	6.8	0	1.0213	0.0014
201	SLE RA 15	-0.06	-0.01	6.8	0	1.021	0.0017
201	SLE RA 16	-0.06	-0.01	6.76	0	1.016	0.0015
201	SLE RA 17	-0.06	-0.01	6.76	0	1.0156	0.0019
201	SLE RA 18	-0.06	-0.01	6.85	0	1.0292	0.0014
201	SLE RA 19	-0.06	-0.01	6.85	0	1.0288	0.0017
201	SLE RA 20	-0.06	-0.01	6.91	0	1.0384	0.0014
201	SLE RA 21	-0.06	-0.01	6.91	0	1.038	0.0017
201	SLE FR 1	-0.06	-0.01	6.15	0	0.924	0.0019
201	SLE FR 2	-0.06	-0.01	6.15	0	0.9239	0.0021
201	SLE FR 3	-0.06	-0.01	6.18	0	0.9277	0.0019
201	SLE FR 4	-0.06	-0.01	6.36	0	0.9554	0.0019
201	SLE FR 5	-0.06	-0.01	6.39	0	0.9592	0.0018
201	SLE FR 6	-0.06	-0.01	6.5	0	0.9766	0.0017
201	SLE QP 1	-0.06	-0.01	6.15	0	0.924	0.0019
201	SLE QP 2	-0.06	-0.01	6.36	0	0.9555	0.0018
201	SLD 1	0.45	0.09	6.4	0	0.9611	-0.0137
201	SLD 2	0.5	0.08	6.39	0	0.9604	-0.0126
201	SLD 3	0.41	-0.06	6.27	0	0.9423	0.0087
201	SLD 4	0.46	-0.07	6.27	0	0.9416	0.0098
201	SLD 5	0.14	0.25	6.56	0	0.9858	-0.037
201	SLD 6	0.17	0.24	6.56	0	0.9853	-0.0364
201	SLD 7	0.01	-0.25	6.15	0	0.9233	0.0377
201	SLD 8	0.05	-0.26	6.14	0	0.9228	0.0384
201	SLD 9	-0.17	0.23	6.58	0	0.9883	-0.0348
201	SLD 10	-0.14	0.23	6.58	0	0.9878	-0.0341
201	SLD 11	-0.3	-0.27	6.16	0	0.9258	0.0399
201	SLD 12	-0.26	-0.27	6.16	0	0.9253	0.0406
201	SLD 13	-0.58	0.04	6.45	0	0.9695	-0.0062
201	SLD 14	-0.53	0.03	6.45	0	0.9688	-0.0052
201	SLD 15	-0.62	-0.11	6.33	0	0.9507	0.0162
201	SLD 16	-0.57	-0.11	6.32	0	0.95	0.0172
201	SLV 1	1.13	0.22	6.44	0	0.9677	-0.0335
201	SLV 2	1.24	0.21	6.43	0	0.9661	-0.0311
201	SLV 3	1.04	-0.11	6.16	0	0.9251	0.0172
201	SLV 4	1.16	-0.13	6.15	0	0.9235	0.0197
201	SLV 5	0.41	0.57	6.82	0	1.024	-0.0862
201	SLV 6	0.48	0.56	6.81	0	1.023	-0.0847
201	SLV 7	0.12	-0.55	5.87	0	0.8821	0.083
201	SLV 8	0.19	-0.56	5.87	0	0.8811	0.0846

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
201	SLV 9	-0.32	0.54	6.86	0	1.03	-0.081
201	SLV 10	-0.24	0.53	6.85	0	1.029	-0.0794
201	SLV 11	-0.61	-0.59	5.91	0	0.8881	0.0882
201	SLV 12	-0.53	-0.6	5.91	0	0.8871	0.0898
201	SLV 13	-1.28	0.11	6.57	0	0.9876	-0.0161
201	SLV 14	-1.17	0.09	6.56	0	0.986	-0.0137
201	SLV 15	-1.37	-0.23	6.29	0	0.945	0.0347
201	SLV 16	-1.25	-0.25	6.28	0	0.9434	0.0371
201	CRTFP Uy+	0	0	0	0	0	0
201	CRTFP Uy-	0	0	0	0	0	0
204	SLU 1	-0.07	-0.1	44.71	-0.0363	12.9259	0.0208
204	SLU 2	-0.05	-0.14	44.68	-0.0361	12.9144	0.0316
204	SLU 3	-0.08	-0.09	45.8	-0.0372	13.2398	0.0172
204	SLU 4	-0.06	-0.11	45.77	-0.0371	13.2328	0.0237
204	SLU 5	-0.06	-0.14	45.36	-0.0367	13.1117	0.0312
204	SLU 6	-0.08	-0.09	46.48	-0.0378	13.4371	0.0169
204	SLU 7	-0.07	-0.11	46.45	-0.0377	13.4302	0.0234
204	SLU 8	-0.08	-0.1	46.07	-0.0375	13.3205	0.0201
204	SLU 9	-0.07	-0.12	46.05	-0.0374	13.3136	0.0266
204	SLU 10	-0.08	-0.07	50.22	-0.04	14.5283	0.012
204	SLU 11	-0.1	-0.03	51.34	-0.041	14.8537	-0.0024
204	SLU 12	-0.09	-0.05	51.31	-0.0409	14.8467	0.0041
204	SLU 13	-0.09	-0.07	50.9	-0.0406	14.7256	0.0116
204	SLU 14	-0.11	-0.02	52.02	-0.0416	15.051	-0.0027
204	SLU 15	-0.1	-0.05	51.99	-0.0415	15.044	0.0038
204	SLU 16	-0.11	-0.04	51.62	-0.0413	14.9344	0.0005
204	SLU 17	-0.1	-0.06	51.59	-0.0412	14.9275	0.007
204	SLU 18	-0.11	-0.01	52.63	-0.0418	15.2315	-0.0072
204	SLU 19	-0.1	-0.03	52.61	-0.0417	15.2246	-0.0007
204	SLU 20	-0.12	-0.01	53.31	-0.0424	15.4288	-0.0075
204	SLU 21	-0.11	-0.03	53.29	-0.0423	15.4219	-0.0011
204	SLU 22	-0.08	0	49.48	-0.0397	14.3068	-0.0086
204	SLU 23	-0.06	-0.04	49.45	-0.0395	14.2952	0.0022
204	SLU 24	-0.08	0.01	50.57	-0.0406	14.6206	-0.0122
204	SLU 25	-0.07	-0.01	50.54	-0.0405	14.6137	-0.0057
204	SLU 26	-0.06	-0.04	50.13	-0.0401	14.4925	0.0019
204	SLU 27	-0.09	0.01	51.25	-0.0412	14.8179	-0.0125
204	SLU 28	-0.07	-0.01	51.22	-0.0411	14.811	-0.006
204	SLU 29	-0.09	0	50.84	-0.0409	14.7014	-0.0093
204	SLU 30	-0.07	-0.02	50.82	-0.0408	14.6945	-0.0028
204	SLU 31	-0.09	0.02	54.99	-0.0434	15.9091	-0.0174
204	SLU 32	-0.11	0.07	56.11	-0.0444	16.2345	-0.0318
204	SLU 33	-0.1	0.05	56.08	-0.0443	16.2276	-0.0253
204	SLU 34	-0.09	0.02	55.67	-0.044	16.1064	-0.0177
204	SLU 35	-0.11	0.07	56.79	-0.045	16.4318	-0.0321
204	SLU 36	-0.1	0.05	56.76	-0.0449	16.4249	-0.0256
204	SLU 37	-0.11	0.06	56.39	-0.0447	16.3153	-0.0289
204	SLU 38	-0.1	0.04	56.36	-0.0446	16.3084	-0.0224
204	SLU 39	-0.12	0.09	57.4	-0.0452	16.6123	-0.0366
204	SLU 40	-0.11	0.07	57.38	-0.0451	16.6054	-0.0301
204	SLU 41	-0.12	0.09	58.08	-0.0458	16.8096	-0.0369
204	SLU 42	-0.11	0.07	58.06	-0.0457	16.8027	-0.0305
204	SLU 43	-0.09	-0.16	56.49	-0.0461	16.3303	0.0371
204	SLU 44	-0.07	-0.2	56.46	-0.0459	16.3188	0.0479
204	SLU 45	-0.1	-0.15	57.57	-0.0469	16.6441	0.0335
204	SLU 46	-0.08	-0.17	57.55	-0.0468	16.6372	0.04
204	SLU 47	-0.08	-0.2	57.14	-0.0465	16.5161	0.0476
204	SLU 48	-0.1	-0.15	58.25	-0.0475	16.8414	0.0332
204	SLU 49	-0.09	-0.17	58.23	-0.0474	16.8345	0.0397
204	SLU 50	-0.1	-0.16	57.85	-0.0473	16.7249	0.0364
204	SLU 51	-0.09	-0.18	57.83	-0.0471	16.718	0.0429
204	SLU 52	-0.1	-0.14	62	-0.0497	17.9327	0.0283
204	SLU 53	-0.12	-0.09	63.12	-0.0507	18.258	0.0139
204	SLU 54	-0.11	-0.11	63.09	-0.0506	18.2511	0.0204
204	SLU 55	-0.11	-0.14	62.68	-0.0503	18.13	0.028
204	SLU 56	-0.13	-0.09	63.8	-0.0513	18.4553	0.0136
204	SLU 57	-0.12	-0.11	63.77	-0.0512	18.4484	0.0201
204	SLU 58	-0.13	-0.1	63.4	-0.0511	18.3388	0.0168
204	SLU 59	-0.12	-0.12	63.37	-0.051	18.3319	0.0233
204	SLU 60	-0.13	-0.07	64.41	-0.0515	18.6359	0.0091
204	SLU 61	-0.12	-0.09	64.39	-0.0514	18.6289	0.0156
204	SLU 62	-0.14	-0.07	65.09	-0.0521	18.8332	0.0088
204	SLU 63	-0.13	-0.09	65.07	-0.052	18.8262	0.0152
204	SLU 64	-0.1	-0.07	61.26	-0.0495	17.7111	0.0077
204	SLU 65	-0.08	-0.1	61.22	-0.0493	17.6996	0.0185
204	SLU 66	-0.1	-0.06	62.34	-0.0503	18.025	0.0042
204	SLU 67	-0.09	-0.08	62.32	-0.0502	18.018	0.0106
204	SLU 68	-0.08	-0.1	61.91	-0.0499	17.8969	0.0182
204	SLU 69	-0.11	-0.05	63.02	-0.0509	18.2223	0.0038
204	SLU 70	-0.09	-0.08	63	-0.0508	18.2153	0.0103
204	SLU 71	-0.11	-0.07	62.62	-0.0507	18.1057	0.0071
204	SLU 72	-0.1	-0.09	62.6	-0.0505	18.0988	0.0135
204	SLU 73	-0.11	-0.04	66.77	-0.0531	19.3135	-0.0011
204	SLU 74	-0.13	0.01	67.89	-0.0541	19.6388	-0.0154
204	SLU 75	-0.12	-0.01	67.86	-0.054	19.6319	-0.009
204	SLU 76	-0.11	-0.04	67.45	-0.0537	19.5108	-0.0014
204	SLU 77	-0.13	0.01	68.57	-0.0547	19.8362	-0.0158
204	SLU 78	-0.12	-0.01	68.54	-0.0546	19.8292	-0.0093
204	SLU 79	-0.14	0	68.17	-0.0545	19.7196	-0.0125
204	SLU 80	-0.12	-0.02	68.14	-0.0544	19.7127	-0.0061
204	SLU 81	-0.14	0.02	69.18	-0.0549	20.0167	-0.0203
204	SLU 82	-0.13	0	69.16	-0.0548	20.0098	-0.0138
204	SLU 83	-0.14	0.03	69.86	-0.0555	20.214	-0.0206
204	SLU 84	-0.13	0	69.84	-0.0554	20.2071	-0.0141
204	SLE RA 1	-0.07	-0.07	46.08	-0.0373	13.3205	0.0124
204	SLE RA 2	-0.06	-0.1	46.05	-0.0372	13.3128	0.0196
204	SLE RA 3	-0.08	-0.07	46.8	-0.0379	13.5297	0.01

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
204	SLE RA 4	-0.07	-0.08	46.78	-0.0378	13.5251	0.0143
204	SLE RA 5	-0.06	-0.1	46.51	-0.0376	13.4443	0.0194
204	SLE RA 6	-0.08	-0.06	47.25	-0.0383	13.6612	0.0098
204	SLE RA 7	-0.07	-0.08	47.24	-0.0382	13.6566	0.0141
204	SLE RA 8	-0.08	-0.07	46.98	-0.0381	13.5835	0.012
204	SLE RA 9	-0.07	-0.09	46.97	-0.038	13.5789	0.0163
204	SLE RA 10	-0.08	-0.05	49.75	-0.0397	14.3887	0.0065
204	SLE RA 11	-0.1	-0.02	50.49	-0.0404	14.6056	-0.003
204	SLE RA 12	-0.09	-0.04	50.48	-0.0403	14.601	0.0013
204	SLE RA 13	-0.08	-0.05	50.2	-0.0401	14.5202	0.0063
204	SLE RA 14	-0.1	-0.02	50.95	-0.0408	14.7371	-0.0033
204	SLE RA 15	-0.09	-0.04	50.93	-0.0407	14.7325	0.001
204	SLE RA 16	-0.1	-0.03	50.68	-0.0406	14.6595	-0.0011
204	SLE RA 17	-0.09	-0.04	50.66	-0.0406	14.6549	0.0032
204	SLE RA 18	-0.1	-0.01	51.36	-0.0409	14.8575	-0.0063
204	SLE RA 19	-0.09	-0.03	51.34	-0.0409	14.8529	-0.002
204	SLE RA 20	-0.1	-0.01	51.81	-0.0413	14.989	-0.0065
204	SLE RA 21	-0.1	-0.03	51.79	-0.0413	14.9844	-0.0022
204	SLE FR 1	-0.07	-0.07	46.08	-0.0373	13.3205	0.0124
204	SLE FR 2	-0.07	-0.08	46.07	-0.0373	13.3189	0.0138
204	SLE FR 3	-0.08	-0.07	46.26	-0.0375	13.3731	0.0123
204	SLE FR 4	-0.08	-0.06	47.66	-0.0384	13.78	0.0082
204	SLE FR 5	-0.08	-0.05	47.84	-0.0385	13.8342	0.0067
204	SLE FR 6	-0.09	-0.04	48.72	-0.0391	14.089	0.0031
204	SLE QP 1	-0.07	-0.07	46.08	-0.0373	13.3205	0.0124
204	SLE QP 2	-0.08	-0.05	47.66	-0.0384	13.7816	0.0068
204	SLD 1	4.11	0.66	47.83	-0.035	14.0004	-0.2017
204	SLD 2	4.51	0.7	48	-0.0356	14.0425	-0.2103
204	SLD 3	3.8	-0.5	46.82	-0.0301	13.7065	0.1378
204	SLD 4	4.2	-0.46	46.99	-0.0306	13.7487	0.1292
204	SLD 5	1.57	1.92	49.22	-0.0448	14.2854	-0.5691
204	SLD 6	1.83	1.94	49.33	-0.0451	14.3129	-0.5748
204	SLD 7	0.55	-1.95	45.84	-0.0283	13.306	0.5625
204	SLD 8	0.81	-1.93	45.95	-0.0287	13.3335	0.5569
204	SLD 9	-0.98	1.82	49.37	-0.0481	14.2296	-0.5433
204	SLD 10	-0.71	1.85	49.48	-0.0484	14.2571	-0.5489
204	SLD 11	-1.99	-2.05	45.99	-0.0317	13.2503	0.5884
204	SLD 12	-1.73	-2.02	46.1	-0.032	13.2778	0.5827
204	SLD 13	-4.37	0.35	48.34	-0.0461	13.8145	-0.1156
204	SLD 14	-3.97	0.39	48.51	-0.0467	13.8566	-0.1242
204	SLD 15	-4.67	-0.81	47.32	-0.0412	13.5207	0.2239
204	SLD 16	-4.27	-0.77	47.49	-0.0417	13.5628	0.2153
204	SLV 1	9.72	1.58	48.02	-0.0303	14.2831	-0.4681
204	SLV 2	10.65	1.67	48.42	-0.0316	14.3812	-0.4882
204	SLV 3	9.01	-1.05	45.72	-0.0192	13.6159	0.3014
204	SLV 4	9.94	-0.96	46.12	-0.0204	13.714	0.2814
204	SLV 5	3.78	4.41	51.19	-0.0527	14.9271	-1.2994
204	SLV 6	4.38	4.47	51.44	-0.0535	14.9901	-1.3123
204	SLV 7	1.4	-4.36	43.52	-0.0155	12.7032	1.2658
204	SLV 8	2	-4.3	43.78	-0.0163	12.7662	1.2529
204	SLV 9	-2.17	4.2	51.54	-0.0605	14.7969	-1.2393
204	SLV 10	-1.57	4.25	51.8	-0.0613	14.86	-1.2522
204	SLV 11	-4.54	-4.58	43.88	-0.0233	12.573	1.3259
204	SLV 12	-3.94	-4.52	44.13	-0.0241	12.6361	1.313
204	SLV 13	-10.1	0.86	49.2	-0.0563	13.8492	-0.2678
204	SLV 14	-9.17	0.94	49.6	-0.0576	13.9473	-0.2878
204	SLV 15	-10.82	-1.78	46.9	-0.0452	13.182	0.5018
204	SLV 16	-9.88	-1.69	47.3	-0.0464	13.2801	0.4817
204	CRTFP Ux+	0	0	0	0	0	0
204	CRTFP Ux-	0	0	0	0	0	0
204	CRTFP Uy+	0	0	0	0	0	0
204	CRTFP Uy-	0	0	0	0	0	0
206	SLU 1	-0.02	-0.06	10.77	0	0	0
206	SLU 2	-0.01	-0.07	10.76	0	0	0
206	SLU 3	-0.02	-0.06	11.03	0	0	0
206	SLU 4	-0.01	-0.07	11.03	0	0	0
206	SLU 5	-0.01	-0.07	10.93	0	0	0
206	SLU 6	-0.02	-0.06	11.19	0	0	0
206	SLU 7	-0.02	-0.07	11.19	0	0	0
206	SLU 8	-0.02	-0.07	11.1	0	0	0
206	SLU 9	-0.02	-0.07	11.09	0	0	0
206	SLU 10	-0.02	-0.06	12.08	0	0	0
206	SLU 11	-0.02	-0.05	12.35	0	0	0
206	SLU 12	-0.02	-0.06	12.34	0	0	0
206	SLU 13	-0.02	-0.06	12.25	0	0	0
206	SLU 14	-0.02	-0.05	12.51	0	0	0
206	SLU 15	-0.02	-0.06	12.51	0	0	0
206	SLU 16	-0.02	-0.06	12.42	0	0	0
206	SLU 17	-0.02	-0.06	12.41	0	0	0
206	SLU 18	-0.03	-0.05	12.66	0	0	0
206	SLU 19	-0.02	-0.05	12.65	0	0	0
206	SLU 20	-0.03	-0.05	12.82	0	0	0
206	SLU 21	-0.02	-0.05	12.81	0	0	0
206	SLU 22	-0.02	-0.05	11.92	0	0	0
206	SLU 23	-0.01	-0.05	11.91	0	0	0
206	SLU 24	-0.02	-0.04	12.18	0	0	0
206	SLU 25	-0.02	-0.05	12.17	0	0	0
206	SLU 26	-0.01	-0.05	12.07	0	0	0
206	SLU 27	-0.02	-0.05	12.34	0	0	0
206	SLU 28	-0.02	-0.05	12.33	0	0	0
206	SLU 29	-0.02	-0.05	12.24	0	0	0
206	SLU 30	-0.02	-0.05	12.24	0	0	0
206	SLU 31	-0.02	-0.04	13.23	0	0	0
206	SLU 32	-0.02	-0.03	13.5	0	0	0
206	SLU 33	-0.02	-0.04	13.49	0	0	0
206	SLU 34	-0.02	-0.04	13.39	0	0	0
206	SLU 35	-0.03	-0.03	13.66	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
206	SLU 36	-0.02	-0.04	13.65	0	0	0
206	SLU 37	-0.03	-0.04	13.56	0	0	0
206	SLU 38	-0.02	-0.04	13.56	0	0	0
206	SLU 39	-0.03	-0.03	13.8	0	0	0
206	SLU 40	-0.02	-0.04	13.8	0	0	0
206	SLU 41	-0.03	-0.03	13.97	0	0	0
206	SLU 42	-0.03	-0.04	13.96	0	0	0
206	SLU 43	-0.02	-0.09	13.61	0	0	0
206	SLU 44	-0.02	-0.1	13.6	0	0	0
206	SLU 45	-0.02	-0.09	13.87	0	0	0
206	SLU 46	-0.02	-0.09	13.86	0	0	0
206	SLU 47	-0.02	-0.1	13.76	0	0	0
206	SLU 48	-0.02	-0.09	14.03	0	0	0
206	SLU 49	-0.02	-0.09	14.03	0	0	0
206	SLU 50	-0.02	-0.09	13.94	0	0	0
206	SLU 51	-0.02	-0.1	13.93	0	0	0
206	SLU 52	-0.02	-0.09	14.92	0	0	0
206	SLU 53	-0.03	-0.08	15.19	0	0	0
206	SLU 54	-0.03	-0.08	15.18	0	0	0
206	SLU 55	-0.02	-0.09	15.08	0	0	0
206	SLU 56	-0.03	-0.08	15.35	0	0	0
206	SLU 57	-0.03	-0.08	15.35	0	0	0
206	SLU 58	-0.03	-0.08	15.26	0	0	0
206	SLU 59	-0.03	-0.09	15.25	0	0	0
206	SLU 60	-0.03	-0.07	15.5	0	0	0
206	SLU 61	-0.03	-0.08	15.49	0	0	0
206	SLU 62	-0.03	-0.08	15.66	0	0	0
206	SLU 63	-0.03	-0.08	15.65	0	0	0
206	SLU 64	-0.02	-0.07	14.76	0	0	0
206	SLU 65	-0.02	-0.08	14.75	0	0	0
206	SLU 66	-0.02	-0.07	15.02	0	0	0
206	SLU 67	-0.02	-0.08	15.01	0	0	0
206	SLU 68	-0.02	-0.08	14.91	0	0	0
206	SLU 69	-0.02	-0.07	15.18	0	0	0
206	SLU 70	-0.02	-0.08	15.17	0	0	0
206	SLU 71	-0.02	-0.07	15.08	0	0	0
206	SLU 72	-0.02	-0.08	15.08	0	0	0
206	SLU 73	-0.02	-0.07	16.07	0	0	0
206	SLU 74	-0.03	-0.06	16.33	0	0	0
206	SLU 75	-0.03	-0.06	16.33	0	0	0
206	SLU 76	-0.02	-0.07	16.23	0	0	0
206	SLU 77	-0.03	-0.06	16.5	0	0	0
206	SLU 78	-0.03	-0.07	16.49	0	0	0
206	SLU 79	-0.03	-0.06	16.4	0	0	0
206	SLU 80	-0.03	-0.07	16.4	0	0	0
206	SLU 81	-0.03	-0.06	16.64	0	0	0
206	SLU 82	-0.03	-0.06	16.64	0	0	0
206	SLU 83	-0.03	-0.06	16.8	0	0	0
206	SLU 84	-0.03	-0.06	16.8	0	0	0
206	SLE RA 1	-0.02	-0.06	11.1	0	0	0
206	SLE RA 2	-0.01	-0.06	11.09	0	0	0
206	SLE RA 3	-0.02	-0.06	11.27	0	0	0
206	SLE RA 4	-0.02	-0.06	11.27	0	0	0
206	SLE RA 5	-0.01	-0.06	11.2	0	0	0
206	SLE RA 6	-0.02	-0.06	11.38	0	0	0
206	SLE RA 7	-0.02	-0.06	11.38	0	0	0
206	SLE RA 8	-0.02	-0.06	11.32	0	0	0
206	SLE RA 9	-0.02	-0.06	11.31	0	0	0
206	SLE RA 10	-0.02	-0.06	11.97	0	0	0
206	SLE RA 11	-0.02	-0.05	12.15	0	0	0
206	SLE RA 12	-0.02	-0.05	12.15	0	0	0
206	SLE RA 13	-0.02	-0.06	12.08	0	0	0
206	SLE RA 14	-0.02	-0.05	12.26	0	0	0
206	SLE RA 15	-0.02	-0.05	12.26	0	0	0
206	SLE RA 16	-0.02	-0.05	12.2	0	0	0
206	SLE RA 17	-0.02	-0.06	12.19	0	0	0
206	SLE RA 18	-0.02	-0.05	12.36	0	0	0
206	SLE RA 19	-0.02	-0.05	12.35	0	0	0
206	SLE RA 20	-0.02	-0.05	12.46	0	0	0
206	SLE RA 21	-0.02	-0.05	12.46	0	0	0
206	SLE FR 1	-0.02	-0.06	11.1	0	0	0
206	SLE FR 2	-0.02	-0.06	11.1	0	0	0
206	SLE FR 3	-0.02	-0.06	11.14	0	0	0
206	SLE FR 4	-0.02	-0.06	11.48	0	0	0
206	SLE FR 5	-0.02	-0.06	11.52	0	0	0
206	SLE FR 6	-0.02	-0.05	11.73	0	0	0
206	SLE QP 1	-0.02	-0.06	11.1	0	0	0
206	SLE QP 2	-0.02	-0.06	11.48	0	0	0
206	SLD 1	0.98	0.14	11.41	0	0	0
206	SLD 2	1.07	0.15	11.46	0	0	0
206	SLD 3	0.91	-0.14	11.17	0	0	0
206	SLD 4	1	-0.12	11.22	0	0	0
206	SLD 5	0.37	0.41	11.82	0	0	0
206	SLD 6	0.44	0.42	11.85	0	0	0
206	SLD 7	0.13	-0.49	11.01	0	0	0
206	SLD 8	0.19	-0.48	11.04	0	0	0
206	SLD 9	-0.23	0.37	11.91	0	0	0
206	SLD 10	-0.17	0.38	11.95	0	0	0
206	SLD 11	-0.47	-0.53	11.1	0	0	0
206	SLD 12	-0.41	-0.52	11.14	0	0	0
206	SLD 13	-1.04	0	11.73	0	0	0
206	SLD 14	-0.94	0.02	11.78	0	0	0
206	SLD 15	-1.11	-0.27	11.49	0	0	0
206	SLD 16	-1.02	-0.25	11.54	0	0	0
206	SLV 1	2.32	0.38	11.32	0	0	0
206	SLV 2	2.54	0.42	11.43	0	0	0
206	SLV 3	2.15	-0.23	10.76	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
206	SLV 4	2.37	-0.19	10.88	0	0	0
206	SLV 5	0.9	1	12.25	0	0	0
206	SLV 6	1.04	1.03	12.32	0	0	0
206	SLV 7	0.34	-1.05	10.4	0	0	0
206	SLV 8	0.48	-1.02	10.48	0	0	0
206	SLV 9	-0.51	0.91	12.47	0	0	0
206	SLV 10	-0.37	0.93	12.55	0	0	0
206	SLV 11	-1.08	-1.14	10.63	0	0	0
206	SLV 12	-0.94	-1.11	10.71	0	0	0
206	SLV 13	-2.41	0.08	12.07	0	0	0
206	SLV 14	-2.18	0.12	12.19	0	0	0
206	SLV 15	-2.58	-0.54	11.52	0	0	0
206	SLV 16	-2.35	-0.49	11.64	0	0	0
207	SLU 1	-0.01	-0.08	10.97	0	0	0
207	SLU 2	-0.01	-0.09	10.96	0	0	0
207	SLU 3	-0.02	-0.08	11.23	0	0	0
207	SLU 4	-0.01	-0.09	11.23	0	0	0
207	SLU 5	-0.01	-0.09	11.13	0	0	0
207	SLU 6	-0.02	-0.08	11.4	0	0	0
207	SLU 7	-0.01	-0.09	11.39	0	0	0
207	SLU 8	-0.02	-0.08	11.3	0	0	0
207	SLU 9	-0.01	-0.09	11.3	0	0	0
207	SLU 10	-0.02	-0.08	12.3	0	0	0
207	SLU 11	-0.02	-0.07	12.57	0	0	0
207	SLU 12	-0.02	-0.08	12.56	0	0	0
207	SLU 13	-0.02	-0.08	12.46	0	0	0
207	SLU 14	-0.02	-0.07	12.74	0	0	0
207	SLU 15	-0.02	-0.08	12.73	0	0	0
207	SLU 16	-0.02	-0.08	12.64	0	0	0
207	SLU 17	-0.02	-0.08	12.63	0	0	0
207	SLU 18	-0.02	-0.07	12.88	0	0	0
207	SLU 19	-0.02	-0.07	12.87	0	0	0
207	SLU 20	-0.03	-0.07	13.05	0	0	0
207	SLU 21	-0.02	-0.08	13.04	0	0	0
207	SLU 22	-0.02	-0.07	12.14	0	0	0
207	SLU 23	-0.01	-0.07	12.13	0	0	0
207	SLU 24	-0.02	-0.06	12.4	0	0	0
207	SLU 25	-0.01	-0.07	12.4	0	0	0
207	SLU 26	-0.01	-0.07	12.3	0	0	0
207	SLU 27	-0.02	-0.07	12.57	0	0	0
207	SLU 28	-0.01	-0.07	12.56	0	0	0
207	SLU 29	-0.02	-0.07	12.47	0	0	0
207	SLU 30	-0.01	-0.07	12.46	0	0	0
207	SLU 31	-0.02	-0.06	13.47	0	0	0
207	SLU 32	-0.02	-0.06	13.74	0	0	0
207	SLU 33	-0.02	-0.06	13.73	0	0	0
207	SLU 34	-0.02	-0.07	13.63	0	0	0
207	SLU 35	-0.02	-0.06	13.9	0	0	0
207	SLU 36	-0.02	-0.06	13.9	0	0	0
207	SLU 37	-0.02	-0.06	13.8	0	0	0
207	SLU 38	-0.02	-0.06	13.8	0	0	0
207	SLU 39	-0.03	-0.05	14.05	0	0	0
207	SLU 40	-0.02	-0.06	14.04	0	0	0
207	SLU 41	-0.03	-0.05	14.21	0	0	0
207	SLU 42	-0.02	-0.06	14.21	0	0	0
207	SLU 43	-0.02	-0.11	13.86	0	0	0
207	SLU 44	-0.01	-0.12	13.86	0	0	0
207	SLU 45	-0.02	-0.11	14.13	0	0	0
207	SLU 46	-0.02	-0.12	14.12	0	0	0
207	SLU 47	-0.01	-0.12	14.02	0	0	0
207	SLU 48	-0.02	-0.11	14.29	0	0	0
207	SLU 49	-0.02	-0.12	14.29	0	0	0
207	SLU 50	-0.02	-0.11	14.19	0	0	0
207	SLU 51	-0.02	-0.12	14.19	0	0	0
207	SLU 52	-0.02	-0.11	15.19	0	0	0
207	SLU 53	-0.03	-0.1	15.46	0	0	0
207	SLU 54	-0.02	-0.11	15.46	0	0	0
207	SLU 55	-0.02	-0.11	15.36	0	0	0
207	SLU 56	-0.03	-0.1	15.63	0	0	0
207	SLU 57	-0.02	-0.11	15.62	0	0	0
207	SLU 58	-0.03	-0.11	15.53	0	0	0
207	SLU 59	-0.02	-0.11	15.53	0	0	0
207	SLU 60	-0.03	-0.1	15.77	0	0	0
207	SLU 61	-0.03	-0.1	15.77	0	0	0
207	SLU 62	-0.03	-0.1	15.94	0	0	0
207	SLU 63	-0.03	-0.11	15.93	0	0	0
207	SLU 64	-0.02	-0.1	15.03	0	0	0
207	SLU 65	-0.01	-0.1	15.02	0	0	0
207	SLU 66	-0.02	-0.1	15.29	0	0	0
207	SLU 67	-0.02	-0.1	15.29	0	0	0
207	SLU 68	-0.02	-0.11	15.19	0	0	0
207	SLU 69	-0.02	-0.1	15.46	0	0	0
207	SLU 70	-0.02	-0.1	15.45	0	0	0
207	SLU 71	-0.02	-0.1	15.36	0	0	0
207	SLU 72	-0.02	-0.1	15.36	0	0	0
207	SLU 73	-0.02	-0.1	16.36	0	0	0
207	SLU 74	-0.03	-0.09	16.63	0	0	0
207	SLU 75	-0.02	-0.09	16.62	0	0	0
207	SLU 76	-0.02	-0.1	16.52	0	0	0
207	SLU 77	-0.03	-0.09	16.79	0	0	0
207	SLU 78	-0.03	-0.09	16.79	0	0	0
207	SLU 79	-0.03	-0.09	16.7	0	0	0
207	SLU 80	-0.03	-0.09	16.69	0	0	0
207	SLU 81	-0.03	-0.08	16.94	0	0	0
207	SLU 82	-0.03	-0.09	16.93	0	0	0
207	SLU 83	-0.03	-0.08	17.1	0	0	0
207	SLU 84	-0.03	-0.09	17.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
207	SLE RA 1	-0.01	-0.08	11.31	0	0	0
207	SLE RA 2	-0.01	-0.08	11.3	0	0	0
207	SLE RA 3	-0.02	-0.08	11.48	0	0	0
207	SLE RA 4	-0.01	-0.08	11.48	0	0	0
207	SLE RA 5	-0.01	-0.08	11.41	0	0	0
207	SLE RA 6	-0.02	-0.08	11.59	0	0	0
207	SLE RA 7	-0.01	-0.08	11.59	0	0	0
207	SLE RA 8	-0.02	-0.08	11.53	0	0	0
207	SLE RA 9	-0.01	-0.08	11.52	0	0	0
207	SLE RA 10	-0.02	-0.08	12.19	0	0	0
207	SLE RA 11	-0.02	-0.07	12.37	0	0	0
207	SLE RA 12	-0.02	-0.07	12.37	0	0	0
207	SLE RA 13	-0.02	-0.08	12.3	0	0	0
207	SLE RA 14	-0.02	-0.07	12.48	0	0	0
207	SLE RA 15	-0.02	-0.08	12.48	0	0	0
207	SLE RA 16	-0.02	-0.07	12.42	0	0	0
207	SLE RA 17	-0.02	-0.08	12.41	0	0	0
207	SLE RA 18	-0.02	-0.07	12.58	0	0	0
207	SLE RA 19	-0.02	-0.07	12.57	0	0	0
207	SLE RA 20	-0.02	-0.07	12.69	0	0	0
207	SLE RA 21	-0.02	-0.07	12.68	0	0	0
207	SLE FR 1	-0.01	-0.08	11.31	0	0	0
207	SLE FR 2	-0.01	-0.08	11.3	0	0	0
207	SLE FR 3	-0.01	-0.08	11.35	0	0	0
207	SLE FR 4	-0.02	-0.08	11.69	0	0	0
207	SLE FR 5	-0.02	-0.08	11.73	0	0	0
207	SLE FR 6	-0.02	-0.07	11.94	0	0	0
207	SLE QP 1	-0.01	-0.08	11.31	0	0	0
207	SLE QP 2	-0.02	-0.08	11.69	0	0	0
207	SLD 1	1	0.13	11.55	0	0	0
207	SLD 2	1.1	0.15	11.61	0	0	0
207	SLD 3	0.92	-0.14	11.3	0	0	0
207	SLD 4	1.02	-0.12	11.36	0	0	0
207	SLD 5	0.38	0.4	12.01	0	0	0
207	SLD 6	0.45	0.41	12.05	0	0	0
207	SLD 7	0.14	-0.51	11.19	0	0	0
207	SLD 8	0.2	-0.5	11.22	0	0	0
207	SLD 9	-0.23	0.35	12.15	0	0	0
207	SLD 10	-0.17	0.36	12.19	0	0	0
207	SLD 11	-0.48	-0.56	11.33	0	0	0
207	SLD 12	-0.42	-0.55	11.36	0	0	0
207	SLD 13	-1.06	-0.03	12.02	0	0	0
207	SLD 14	-0.96	-0.01	12.07	0	0	0
207	SLD 15	-1.13	-0.3	11.77	0	0	0
207	SLD 16	-1.03	-0.28	11.82	0	0	0
207	SLV 1	2.36	0.4	11.36	0	0	0
207	SLV 2	2.59	0.45	11.49	0	0	0
207	SLV 3	2.19	-0.22	10.8	0	0	0
207	SLV 4	2.41	-0.17	10.92	0	0	0
207	SLV 5	0.92	1	12.42	0	0	0
207	SLV 6	1.07	1.03	12.5	0	0	0
207	SLV 7	0.34	-1.07	10.54	0	0	0
207	SLV 8	0.49	-1.03	10.63	0	0	0
207	SLV 9	-0.52	0.88	12.75	0	0	0
207	SLV 10	-0.38	0.92	12.83	0	0	0
207	SLV 11	-1.1	-1.18	10.87	0	0	0
207	SLV 12	-0.95	-1.15	10.95	0	0	0
207	SLV 13	-2.45	0.02	12.45	0	0	0
207	SLV 14	-2.22	0.07	12.58	0	0	0
207	SLV 15	-2.62	-0.6	11.89	0	0	0
207	SLV 16	-2.39	-0.55	12.01	0	0	0
208	SLU 1	-0.01	-0.1	11.06	0	0	0
208	SLU 2	-0.01	-0.11	11.05	0	0	0
208	SLU 3	-0.01	-0.1	11.33	0	0	0
208	SLU 4	-0.01	-0.11	11.32	0	0	0
208	SLU 5	-0.01	-0.11	11.22	0	0	0
208	SLU 6	-0.01	-0.1	11.49	0	0	0
208	SLU 7	-0.01	-0.11	11.49	0	0	0
208	SLU 8	-0.01	-0.1	11.4	0	0	0
208	SLU 9	-0.01	-0.11	11.39	0	0	0
208	SLU 10	-0.02	-0.1	12.39	0	0	0
208	SLU 11	-0.02	-0.09	12.66	0	0	0
208	SLU 12	-0.02	-0.1	12.66	0	0	0
208	SLU 13	-0.02	-0.1	12.56	0	0	0
208	SLU 14	-0.02	-0.1	12.83	0	0	0
208	SLU 15	-0.02	-0.1	12.82	0	0	0
208	SLU 16	-0.02	-0.1	12.73	0	0	0
208	SLU 17	-0.02	-0.1	12.73	0	0	0
208	SLU 18	-0.02	-0.09	12.97	0	0	0
208	SLU 19	-0.02	-0.1	12.97	0	0	0
208	SLU 20	-0.02	-0.09	13.14	0	0	0
208	SLU 21	-0.02	-0.1	13.13	0	0	0
208	SLU 22	-0.01	-0.09	12.24	0	0	0
208	SLU 23	-0.01	-0.09	12.23	0	0	0
208	SLU 24	-0.01	-0.09	12.5	0	0	0
208	SLU 25	-0.01	-0.09	12.5	0	0	0
208	SLU 26	-0.01	-0.1	12.4	0	0	0
208	SLU 27	-0.02	-0.09	12.67	0	0	0
208	SLU 28	-0.01	-0.09	12.66	0	0	0
208	SLU 29	-0.02	-0.09	12.57	0	0	0
208	SLU 30	-0.01	-0.09	12.56	0	0	0
208	SLU 31	-0.02	-0.09	13.57	0	0	0
208	SLU 32	-0.02	-0.08	13.84	0	0	0
208	SLU 33	-0.02	-0.08	13.83	0	0	0
208	SLU 34	-0.02	-0.09	13.73	0	0	0
208	SLU 35	-0.02	-0.08	14	0	0	0
208	SLU 36	-0.02	-0.09	14	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
208	SLU 37	-0.02	-0.08	13.91	0	0	0
208	SLU 38	-0.02	-0.09	13.9	0	0	0
208	SLU 39	-0.02	-0.08	14.15	0	0	0
208	SLU 40	-0.02	-0.08	14.14	0	0	0
208	SLU 41	-0.02	-0.08	14.31	0	0	0
208	SLU 42	-0.02	-0.08	14.31	0	0	0
208	SLU 43	-0.02	-0.14	13.98	0	0	0
208	SLU 44	-0.01	-0.14	13.97	0	0	0
208	SLU 45	-0.02	-0.14	14.24	0	0	0
208	SLU 46	-0.01	-0.14	14.24	0	0	0
208	SLU 47	-0.01	-0.15	14.14	0	0	0
208	SLU 48	-0.02	-0.14	14.41	0	0	0
208	SLU 49	-0.02	-0.14	14.4	0	0	0
208	SLU 50	-0.02	-0.14	14.31	0	0	0
208	SLU 51	-0.02	-0.14	14.31	0	0	0
208	SLU 52	-0.02	-0.14	15.31	0	0	0
208	SLU 53	-0.02	-0.13	15.58	0	0	0
208	SLU 54	-0.02	-0.13	15.57	0	0	0
208	SLU 55	-0.02	-0.14	15.47	0	0	0
208	SLU 56	-0.03	-0.13	15.75	0	0	0
208	SLU 57	-0.02	-0.14	15.74	0	0	0
208	SLU 58	-0.03	-0.13	15.65	0	0	0
208	SLU 59	-0.02	-0.14	15.64	0	0	0
208	SLU 60	-0.03	-0.13	15.89	0	0	0
208	SLU 61	-0.02	-0.13	15.88	0	0	0
208	SLU 62	-0.03	-0.13	16.06	0	0	0
208	SLU 63	-0.02	-0.13	16.05	0	0	0
208	SLU 64	-0.02	-0.12	15.15	0	0	0
208	SLU 65	-0.01	-0.13	15.15	0	0	0
208	SLU 66	-0.02	-0.12	15.42	0	0	0
208	SLU 67	-0.01	-0.13	15.41	0	0	0
208	SLU 68	-0.01	-0.13	15.31	0	0	0
208	SLU 69	-0.02	-0.12	15.58	0	0	0
208	SLU 70	-0.02	-0.13	15.58	0	0	0
208	SLU 71	-0.02	-0.13	15.49	0	0	0
208	SLU 72	-0.02	-0.13	15.48	0	0	0
208	SLU 73	-0.02	-0.12	16.48	0	0	0
208	SLU 74	-0.02	-0.12	16.75	0	0	0
208	SLU 75	-0.02	-0.12	16.75	0	0	0
208	SLU 76	-0.02	-0.12	16.65	0	0	0
208	SLU 77	-0.03	-0.12	16.92	0	0	0
208	SLU 78	-0.02	-0.12	16.92	0	0	0
208	SLU 79	-0.03	-0.12	16.82	0	0	0
208	SLU 80	-0.02	-0.12	16.82	0	0	0
208	SLU 81	-0.03	-0.11	17.06	0	0	0
208	SLU 82	-0.02	-0.12	17.06	0	0	0
208	SLU 83	-0.03	-0.11	17.23	0	0	0
208	SLU 84	-0.03	-0.12	17.23	0	0	0
208	SLE RA 1	-0.01	-0.1	11.4	0	0	0
208	SLE RA 2	-0.01	-0.1	11.39	0	0	0
208	SLE RA 3	-0.01	-0.1	11.57	0	0	0
208	SLE RA 4	-0.01	-0.1	11.57	0	0	0
208	SLE RA 5	-0.01	-0.1	11.5	0	0	0
208	SLE RA 6	-0.01	-0.1	11.68	0	0	0
208	SLE RA 7	-0.01	-0.1	11.68	0	0	0
208	SLE RA 8	-0.01	-0.1	11.62	0	0	0
208	SLE RA 9	-0.01	-0.1	11.62	0	0	0
208	SLE RA 10	-0.01	-0.1	12.28	0	0	0
208	SLE RA 11	-0.02	-0.09	12.47	0	0	0
208	SLE RA 12	-0.02	-0.1	12.46	0	0	0
208	SLE RA 13	-0.02	-0.1	12.4	0	0	0
208	SLE RA 14	-0.02	-0.09	12.58	0	0	0
208	SLE RA 15	-0.02	-0.1	12.57	0	0	0
208	SLE RA 16	-0.02	-0.09	12.51	0	0	0
208	SLE RA 17	-0.02	-0.1	12.51	0	0	0
208	SLE RA 18	-0.02	-0.09	12.67	0	0	0
208	SLE RA 19	-0.02	-0.09	12.67	0	0	0
208	SLE RA 20	-0.02	-0.09	12.78	0	0	0
208	SLE RA 21	-0.02	-0.09	12.78	0	0	0
208	SLE FR 1	-0.01	-0.1	11.4	0	0	0
208	SLE FR 2	-0.01	-0.1	11.4	0	0	0
208	SLE FR 3	-0.01	-0.1	11.44	0	0	0
208	SLE FR 4	-0.01	-0.1	11.78	0	0	0
208	SLE FR 5	-0.02	-0.1	11.82	0	0	0
208	SLE FR 6	-0.02	-0.09	12.04	0	0	0
208	SLE QP 1	-0.01	-0.1	11.4	0	0	0
208	SLE QP 2	-0.02	-0.1	11.78	0	0	0
208	SLD 1	1.01	0.12	11.56	0	0	0
208	SLD 2	1.11	0.15	11.62	0	0	0
208	SLD 3	0.93	-0.15	11.31	0	0	0
208	SLD 4	1.03	-0.12	11.37	0	0	0
208	SLD 5	0.39	0.38	12.08	0	0	0
208	SLD 6	0.45	0.4	12.12	0	0	0
208	SLD 7	0.14	-0.53	11.25	0	0	0
208	SLD 8	0.2	-0.51	11.29	0	0	0
208	SLD 9	-0.23	0.32	12.27	0	0	0
208	SLD 10	-0.17	0.34	12.31	0	0	0
208	SLD 11	-0.48	-0.59	11.44	0	0	0
208	SLD 12	-0.42	-0.57	11.48	0	0	0
208	SLD 13	-1.06	-0.07	12.19	0	0	0
208	SLD 14	-0.96	-0.04	12.25	0	0	0
208	SLD 15	-1.14	-0.34	11.94	0	0	0
208	SLD 16	-1.04	-0.31	12	0	0	0
208	SLV 1	2.38	0.41	11.26	0	0	0
208	SLV 2	2.61	0.47	11.4	0	0	0
208	SLV 3	2.21	-0.21	10.69	0	0	0
208	SLV 4	2.43	-0.15	10.83	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
208	SLV 5	0.93	0.98	12.46	0	0	0
208	SLV 6	1.08	1.02	12.55	0	0	0
208	SLV 7	0.35	-1.08	10.57	0	0	0
208	SLV 8	0.49	-1.04	10.66	0	0	0
208	SLV 9	-0.52	0.85	12.91	0	0	0
208	SLV 10	-0.38	0.89	12.99	0	0	0
208	SLV 11	-1.11	-1.21	11.01	0	0	0
208	SLV 12	-0.96	-1.17	11.1	0	0	0
208	SLV 13	-2.46	-0.04	12.73	0	0	0
208	SLV 14	-2.24	0.02	12.87	0	0	0
208	SLV 15	-2.64	-0.66	12.17	0	0	0
208	SLV 16	-2.41	-0.6	12.3	0	0	0
209	SLU 1	-0.01	-0.12	11.09	0	0	0
209	SLU 2	-0.01	-0.13	11.09	0	0	0
209	SLU 3	-0.01	-0.12	11.36	0	0	0
209	SLU 4	-0.01	-0.12	11.35	0	0	0
209	SLU 5	-0.01	-0.13	11.25	0	0	0
209	SLU 6	-0.01	-0.12	11.52	0	0	0
209	SLU 7	-0.01	-0.13	11.52	0	0	0
209	SLU 8	-0.01	-0.12	11.43	0	0	0
209	SLU 9	-0.01	-0.13	11.42	0	0	0
209	SLU 10	-0.01	-0.12	12.42	0	0	0
209	SLU 11	-0.02	-0.12	12.69	0	0	0
209	SLU 12	-0.02	-0.12	12.69	0	0	0
209	SLU 13	-0.01	-0.12	12.59	0	0	0
209	SLU 14	-0.02	-0.12	12.86	0	0	0
209	SLU 15	-0.02	-0.12	12.85	0	0	0
209	SLU 16	-0.02	-0.12	12.76	0	0	0
209	SLU 17	-0.02	-0.12	12.76	0	0	0
209	SLU 18	-0.02	-0.11	13	0	0	0
209	SLU 19	-0.02	-0.12	12.99	0	0	0
209	SLU 20	-0.02	-0.12	13.17	0	0	0
209	SLU 21	-0.02	-0.12	13.16	0	0	0
209	SLU 22	-0.01	-0.11	12.27	0	0	0
209	SLU 23	-0.01	-0.11	12.26	0	0	0
209	SLU 24	-0.01	-0.11	12.54	0	0	0
209	SLU 25	-0.01	-0.11	12.53	0	0	0
209	SLU 26	-0.01	-0.12	12.43	0	0	0
209	SLU 27	-0.01	-0.11	12.7	0	0	0
209	SLU 28	-0.01	-0.11	12.7	0	0	0
209	SLU 29	-0.01	-0.11	12.6	0	0	0
209	SLU 30	-0.01	-0.12	12.6	0	0	0
209	SLU 31	-0.01	-0.11	13.6	0	0	0
209	SLU 32	-0.02	-0.1	13.87	0	0	0
209	SLU 33	-0.02	-0.11	13.86	0	0	0
209	SLU 34	-0.01	-0.11	13.76	0	0	0
209	SLU 35	-0.02	-0.11	14.03	0	0	0
209	SLU 36	-0.02	-0.11	14.03	0	0	0
209	SLU 37	-0.02	-0.11	13.94	0	0	0
209	SLU 38	-0.02	-0.11	13.93	0	0	0
209	SLU 39	-0.02	-0.1	14.18	0	0	0
209	SLU 40	-0.02	-0.11	14.17	0	0	0
209	SLU 41	-0.02	-0.1	14.34	0	0	0
209	SLU 42	-0.02	-0.11	14.34	0	0	0
209	SLU 43	-0.01	-0.16	14.02	0	0	0
209	SLU 44	-0.01	-0.17	14.01	0	0	0
209	SLU 45	-0.01	-0.16	14.28	0	0	0
209	SLU 46	-0.01	-0.16	14.28	0	0	0
209	SLU 47	-0.01	-0.17	14.18	0	0	0
209	SLU 48	-0.02	-0.16	14.45	0	0	0
209	SLU 49	-0.01	-0.17	14.44	0	0	0
209	SLU 50	-0.02	-0.16	14.35	0	0	0
209	SLU 51	-0.01	-0.17	14.35	0	0	0
209	SLU 52	-0.02	-0.16	15.34	0	0	0
209	SLU 53	-0.02	-0.16	15.62	0	0	0
209	SLU 54	-0.02	-0.16	15.61	0	0	0
209	SLU 55	-0.02	-0.16	15.51	0	0	0
209	SLU 56	-0.02	-0.16	15.78	0	0	0
209	SLU 57	-0.02	-0.16	15.78	0	0	0
209	SLU 58	-0.02	-0.16	15.68	0	0	0
209	SLU 59	-0.02	-0.16	15.68	0	0	0
209	SLU 60	-0.02	-0.15	15.92	0	0	0
209	SLU 61	-0.02	-0.16	15.92	0	0	0
209	SLU 62	-0.02	-0.16	16.09	0	0	0
209	SLU 63	-0.02	-0.16	16.08	0	0	0
209	SLU 64	-0.01	-0.15	15.2	0	0	0
209	SLU 65	-0.01	-0.15	15.19	0	0	0
209	SLU 66	-0.01	-0.15	15.46	0	0	0
209	SLU 67	-0.01	-0.15	15.46	0	0	0
209	SLU 68	-0.01	-0.16	15.36	0	0	0
209	SLU 69	-0.02	-0.15	15.63	0	0	0
209	SLU 70	-0.01	-0.15	15.62	0	0	0
209	SLU 71	-0.02	-0.15	15.53	0	0	0
209	SLU 72	-0.01	-0.16	15.52	0	0	0
209	SLU 73	-0.02	-0.15	16.52	0	0	0
209	SLU 74	-0.02	-0.14	16.79	0	0	0
209	SLU 75	-0.02	-0.15	16.79	0	0	0
209	SLU 76	-0.02	-0.15	16.69	0	0	0
209	SLU 77	-0.02	-0.15	16.96	0	0	0
209	SLU 78	-0.02	-0.15	16.95	0	0	0
209	SLU 79	-0.02	-0.15	16.86	0	0	0
209	SLU 80	-0.02	-0.15	16.86	0	0	0
209	SLU 81	-0.02	-0.14	17.1	0	0	0
209	SLU 82	-0.02	-0.15	17.1	0	0	0
209	SLU 83	-0.03	-0.14	17.27	0	0	0
209	SLU 84	-0.02	-0.15	17.26	0	0	0
209	SLE RA 1	-0.01	-0.12	11.43	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
209	SLE RA 2	-0.01	-0.12	11.43	0	0	0
209	SLE RA 3	-0.01	-0.12	11.61	0	0	0
209	SLE RA 4	-0.01	-0.12	11.6	0	0	0
209	SLE RA 5	-0.01	-0.12	11.54	0	0	0
209	SLE RA 6	-0.01	-0.12	11.72	0	0	0
209	SLE RA 7	-0.01	-0.12	11.71	0	0	0
209	SLE RA 8	-0.01	-0.12	11.65	0	0	0
209	SLE RA 9	-0.01	-0.12	11.65	0	0	0
209	SLE RA 10	-0.01	-0.12	12.31	0	0	0
209	SLE RA 11	-0.02	-0.11	12.5	0	0	0
209	SLE RA 12	-0.01	-0.12	12.49	0	0	0
209	SLE RA 13	-0.01	-0.12	12.43	0	0	0
209	SLE RA 14	-0.02	-0.11	12.61	0	0	0
209	SLE RA 15	-0.01	-0.12	12.6	0	0	0
209	SLE RA 16	-0.02	-0.12	12.54	0	0	0
209	SLE RA 17	-0.01	-0.12	12.54	0	0	0
209	SLE RA 18	-0.02	-0.11	12.7	0	0	0
209	SLE RA 19	-0.02	-0.11	12.7	0	0	0
209	SLE RA 20	-0.02	-0.11	12.81	0	0	0
209	SLE RA 21	-0.02	-0.12	12.81	0	0	0
209	SLE FR 1	-0.01	-0.12	11.43	0	0	0
209	SLE FR 2	-0.01	-0.12	11.43	0	0	0
209	SLE FR 3	-0.01	-0.12	11.48	0	0	0
209	SLE FR 4	-0.01	-0.12	11.81	0	0	0
209	SLE FR 5	-0.01	-0.12	11.86	0	0	0
209	SLE FR 6	-0.01	-0.11	12.07	0	0	0
209	SLE QP 1	-0.01	-0.12	11.43	0	0	0
209	SLE QP 2	-0.01	-0.11	11.81	0	0	0
209	SLD 1	1.01	0.11	11.5	0	0	0
209	SLD 2	1.11	0.15	11.56	0	0	0
209	SLD 3	0.94	-0.16	11.25	0	0	0
209	SLD 4	1.03	-0.12	11.31	0	0	0
209	SLD 5	0.39	0.36	12.09	0	0	0
209	SLD 6	0.45	0.38	12.13	0	0	0
209	SLD 7	0.14	-0.54	11.25	0	0	0
209	SLD 8	0.21	-0.52	11.29	0	0	0
209	SLD 9	-0.23	0.29	12.33	0	0	0
209	SLD 10	-0.17	0.31	12.37	0	0	0
209	SLD 11	-0.48	-0.61	11.49	0	0	0
209	SLD 12	-0.42	-0.59	11.53	0	0	0
209	SLD 13	-1.06	-0.11	12.31	0	0	0
209	SLD 14	-0.96	-0.07	12.37	0	0	0
209	SLD 15	-1.13	-0.38	12.06	0	0	0
209	SLD 16	-1.04	-0.34	12.12	0	0	0
209	SLV 1	2.38	0.41	11.08	0	0	0
209	SLV 2	2.61	0.49	11.22	0	0	0
209	SLV 3	2.21	-0.2	10.51	0	0	0
209	SLV 4	2.44	-0.13	10.65	0	0	0
209	SLV 5	0.93	0.96	12.44	0	0	0
209	SLV 6	1.08	1.01	12.53	0	0	0
209	SLV 7	0.35	-1.08	10.53	0	0	0
209	SLV 8	0.5	-1.03	10.62	0	0	0
209	SLV 9	-0.52	0.8	13	0	0	0
209	SLV 10	-0.38	0.85	13.1	0	0	0
209	SLV 11	-1.1	-1.24	11.1	0	0	0
209	SLV 12	-0.96	-1.19	11.19	0	0	0
209	SLV 13	-2.46	-0.1	12.97	0	0	0
209	SLV 14	-2.23	-0.03	13.12	0	0	0
209	SLV 15	-2.64	-0.71	12.4	0	0	0
209	SLV 16	-2.41	-0.64	12.55	0	0	0
210	SLU 1	-0.01	-0.14	11.08	0	0	0
210	SLU 2	0	-0.14	11.07	0	0	0
210	SLU 3	-0.01	-0.14	11.34	0	0	0
210	SLU 4	-0.01	-0.14	11.34	0	0	0
210	SLU 5	0	-0.15	11.24	0	0	0
210	SLU 6	-0.01	-0.14	11.51	0	0	0
210	SLU 7	-0.01	-0.14	11.5	0	0	0
210	SLU 8	-0.01	-0.14	11.41	0	0	0
210	SLU 9	-0.01	-0.15	11.41	0	0	0
210	SLU 10	-0.01	-0.14	12.4	0	0	0
210	SLU 11	-0.02	-0.14	12.67	0	0	0
210	SLU 12	-0.01	-0.14	12.66	0	0	0
210	SLU 13	-0.01	-0.14	12.56	0	0	0
210	SLU 14	-0.02	-0.14	12.83	0	0	0
210	SLU 15	-0.01	-0.14	12.83	0	0	0
210	SLU 16	-0.02	-0.14	12.74	0	0	0
210	SLU 17	-0.01	-0.14	12.73	0	0	0
210	SLU 18	-0.02	-0.13	12.97	0	0	0
210	SLU 19	-0.02	-0.14	12.97	0	0	0
210	SLU 20	-0.02	-0.14	13.14	0	0	0
210	SLU 21	-0.02	-0.14	13.13	0	0	0
210	SLU 22	-0.01	-0.13	12.26	0	0	0
210	SLU 23	0	-0.13	12.25	0	0	0
210	SLU 24	-0.01	-0.13	12.52	0	0	0
210	SLU 25	-0.01	-0.13	12.52	0	0	0
210	SLU 26	0	-0.14	12.42	0	0	0
210	SLU 27	-0.01	-0.13	12.69	0	0	0
210	SLU 28	-0.01	-0.13	12.68	0	0	0
210	SLU 29	-0.01	-0.13	12.59	0	0	0
210	SLU 30	-0.01	-0.14	12.59	0	0	0
210	SLU 31	-0.01	-0.13	13.58	0	0	0
210	SLU 32	-0.02	-0.13	13.85	0	0	0
210	SLU 33	-0.01	-0.13	13.84	0	0	0
210	SLU 34	-0.01	-0.13	13.74	0	0	0
210	SLU 35	-0.02	-0.13	14.01	0	0	0
210	SLU 36	-0.01	-0.13	14.01	0	0	0
210	SLU 37	-0.02	-0.13	13.91	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
210	SLU 38	-0.01	-0.13	13.91	0	0	0
210	SLU 39	-0.02	-0.12	14.15	0	0	0
210	SLU 40	-0.02	-0.13	14.15	0	0	0
210	SLU 41	-0.02	-0.13	14.32	0	0	0
210	SLU 42	-0.02	-0.13	14.31	0	0	0
210	SLU 43	-0.01	-0.18	14	0	0	0
210	SLU 44	-0.01	-0.19	13.99	0	0	0
210	SLU 45	-0.01	-0.18	14.26	0	0	0
210	SLU 46	-0.01	-0.19	14.26	0	0	0
210	SLU 47	-0.01	-0.19	14.16	0	0	0
210	SLU 48	-0.01	-0.18	14.43	0	0	0
210	SLU 49	-0.01	-0.19	14.42	0	0	0
210	SLU 50	-0.01	-0.19	14.33	0	0	0
210	SLU 51	-0.01	-0.19	14.33	0	0	0
210	SLU 52	-0.01	-0.19	15.32	0	0	0
210	SLU 53	-0.02	-0.18	15.59	0	0	0
210	SLU 54	-0.02	-0.18	15.58	0	0	0
210	SLU 55	-0.01	-0.19	15.48	0	0	0
210	SLU 56	-0.02	-0.18	15.75	0	0	0
210	SLU 57	-0.02	-0.19	15.75	0	0	0
210	SLU 58	-0.02	-0.18	15.66	0	0	0
210	SLU 59	-0.02	-0.19	15.65	0	0	0
210	SLU 60	-0.02	-0.18	15.89	0	0	0
210	SLU 61	-0.02	-0.18	15.89	0	0	0
210	SLU 62	-0.02	-0.18	16.06	0	0	0
210	SLU 63	-0.02	-0.18	16.05	0	0	0
210	SLU 64	-0.01	-0.17	15.18	0	0	0
210	SLU 65	-0.01	-0.18	15.17	0	0	0
210	SLU 66	-0.01	-0.17	15.44	0	0	0
210	SLU 67	-0.01	-0.18	15.44	0	0	0
210	SLU 68	-0.01	-0.18	15.34	0	0	0
210	SLU 69	-0.01	-0.17	15.61	0	0	0
210	SLU 70	-0.01	-0.18	15.6	0	0	0
210	SLU 71	-0.01	-0.18	15.51	0	0	0
210	SLU 72	-0.01	-0.18	15.51	0	0	0
210	SLU 73	-0.01	-0.18	16.5	0	0	0
210	SLU 74	-0.02	-0.17	16.77	0	0	0
210	SLU 75	-0.02	-0.17	16.76	0	0	0
210	SLU 76	-0.01	-0.18	16.66	0	0	0
210	SLU 77	-0.02	-0.17	16.93	0	0	0
210	SLU 78	-0.02	-0.18	16.93	0	0	0
210	SLU 79	-0.02	-0.17	16.84	0	0	0
210	SLU 80	-0.02	-0.18	16.83	0	0	0
210	SLU 81	-0.02	-0.17	17.07	0	0	0
210	SLU 82	-0.02	-0.17	17.07	0	0	0
210	SLU 83	-0.02	-0.17	17.24	0	0	0
210	SLU 84	-0.02	-0.17	17.23	0	0	0
210	SLE RA 1	-0.01	-0.13	11.42	0	0	0
210	SLE RA 2	-0.01	-0.14	11.41	0	0	0
210	SLE RA 3	-0.01	-0.13	11.59	0	0	0
210	SLE RA 4	-0.01	-0.14	11.59	0	0	0
210	SLE RA 5	-0.01	-0.14	11.52	0	0	0
210	SLE RA 6	-0.01	-0.14	11.7	0	0	0
210	SLE RA 7	-0.01	-0.14	11.7	0	0	0
210	SLE RA 8	-0.01	-0.14	11.64	0	0	0
210	SLE RA 9	-0.01	-0.14	11.64	0	0	0
210	SLE RA 10	-0.01	-0.14	12.3	0	0	0
210	SLE RA 11	-0.01	-0.13	12.48	0	0	0
210	SLE RA 12	-0.01	-0.14	12.47	0	0	0
210	SLE RA 13	-0.01	-0.14	12.41	0	0	0
210	SLE RA 14	-0.01	-0.13	12.59	0	0	0
210	SLE RA 15	-0.01	-0.14	12.58	0	0	0
210	SLE RA 16	-0.01	-0.14	12.52	0	0	0
210	SLE RA 17	-0.01	-0.14	12.52	0	0	0
210	SLE RA 18	-0.01	-0.13	12.68	0	0	0
210	SLE RA 19	-0.01	-0.13	12.68	0	0	0
210	SLE RA 20	-0.02	-0.13	12.79	0	0	0
210	SLE RA 21	-0.01	-0.14	12.79	0	0	0
210	SLE FR 1	-0.01	-0.13	11.42	0	0	0
210	SLE FR 2	-0.01	-0.13	11.42	0	0	0
210	SLE FR 3	-0.01	-0.13	11.46	0	0	0
210	SLE FR 4	-0.01	-0.13	11.79	0	0	0
210	SLE FR 5	-0.01	-0.13	11.84	0	0	0
210	SLE FR 6	-0.01	-0.13	12.05	0	0	0
210	SLE QP 1	-0.01	-0.13	11.42	0	0	0
210	SLE QP 2	-0.01	-0.13	11.8	0	0	0
210	SLD 1	1	0.1	11.39	0	0	0
210	SLD 2	1.1	0.14	11.46	0	0	0
210	SLD 3	0.93	-0.16	11.14	0	0	0
210	SLD 4	1.03	-0.13	11.2	0	0	0
210	SLD 5	0.39	0.33	12.05	0	0	0
210	SLD 6	0.45	0.36	12.09	0	0	0
210	SLD 7	0.14	-0.55	11.2	0	0	0
210	SLD 8	0.21	-0.53	11.25	0	0	0
210	SLD 9	-0.23	0.26	12.35	0	0	0
210	SLD 10	-0.16	0.28	12.39	0	0	0
210	SLD 11	-0.47	-0.62	11.5	0	0	0
210	SLD 12	-0.41	-0.6	11.55	0	0	0
210	SLD 13	-1.05	-0.14	12.39	0	0	0
210	SLD 14	-0.95	-0.1	12.45	0	0	0
210	SLD 15	-1.12	-0.4	12.13	0	0	0
210	SLD 16	-1.03	-0.37	12.2	0	0	0
210	SLV 1	2.37	0.41	10.84	0	0	0
210	SLV 2	2.59	0.49	10.99	0	0	0
210	SLV 3	2.19	-0.19	10.27	0	0	0
210	SLV 4	2.42	-0.11	10.42	0	0	0
210	SLV 5	0.93	0.93	12.36	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
210	SLV 6	1.07	0.98	12.45	0	0	0
210	SLV 7	0.35	-1.08	10.44	0	0	0
210	SLV 8	0.49	-1.02	10.54	0	0	0
210	SLV 9	-0.51	0.76	13.05	0	0	0
210	SLV 10	-0.37	0.81	13.15	0	0	0
210	SLV 11	-1.09	-1.25	11.14	0	0	0
210	SLV 12	-0.95	-1.19	11.24	0	0	0
210	SLV 13	-2.44	-0.16	13.17	0	0	0
210	SLV 14	-2.21	-0.07	13.32	0	0	0
210	SLV 15	-2.61	-0.76	12.6	0	0	0
210	SLV 16	-2.39	-0.68	12.75	0	0	0
211	SLU 1	-0.01	-0.15	10.98	0	0	0
211	SLU 2	0	-0.16	10.97	0	0	0
211	SLU 3	-0.01	-0.15	11.24	0	0	0
211	SLU 4	0	-0.16	11.23	0	0	0
211	SLU 5	0	-0.16	11.13	0	0	0
211	SLU 6	-0.01	-0.15	11.4	0	0	0
211	SLU 7	0	-0.16	11.39	0	0	0
211	SLU 8	-0.01	-0.16	11.3	0	0	0
211	SLU 9	0	-0.16	11.3	0	0	0
211	SLU 10	-0.01	-0.16	12.28	0	0	0
211	SLU 11	-0.01	-0.15	12.54	0	0	0
211	SLU 12	-0.01	-0.16	12.54	0	0	0
211	SLU 13	-0.01	-0.16	12.44	0	0	0
211	SLU 14	-0.01	-0.15	12.71	0	0	0
211	SLU 15	-0.01	-0.16	12.7	0	0	0
211	SLU 16	-0.01	-0.16	12.61	0	0	0
211	SLU 17	-0.01	-0.16	12.61	0	0	0
211	SLU 18	-0.02	-0.15	12.84	0	0	0
211	SLU 19	-0.01	-0.15	12.84	0	0	0
211	SLU 20	-0.02	-0.15	13.01	0	0	0
211	SLU 21	-0.01	-0.16	13	0	0	0
211	SLU 22	-0.01	-0.14	12.15	0	0	0
211	SLU 23	0	-0.15	12.14	0	0	0
211	SLU 24	-0.01	-0.14	12.4	0	0	0
211	SLU 25	0	-0.15	12.4	0	0	0
211	SLU 26	0	-0.15	12.3	0	0	0
211	SLU 27	-0.01	-0.15	12.57	0	0	0
211	SLU 28	0	-0.15	12.56	0	0	0
211	SLU 29	-0.01	-0.15	12.47	0	0	0
211	SLU 30	0	-0.15	12.47	0	0	0
211	SLU 31	-0.01	-0.15	13.44	0	0	0
211	SLU 32	-0.01	-0.14	13.71	0	0	0
211	SLU 33	-0.01	-0.15	13.71	0	0	0
211	SLU 34	-0.01	-0.15	13.61	0	0	0
211	SLU 35	-0.01	-0.15	13.88	0	0	0
211	SLU 36	-0.01	-0.15	13.87	0	0	0
211	SLU 37	-0.01	-0.15	13.78	0	0	0
211	SLU 38	-0.01	-0.15	13.78	0	0	0
211	SLU 39	-0.01	-0.14	14.01	0	0	0
211	SLU 40	-0.01	-0.15	14.01	0	0	0
211	SLU 41	-0.02	-0.15	14.18	0	0	0
211	SLU 42	-0.01	-0.15	14.17	0	0	0
211	SLU 43	-0.01	-0.2	13.87	0	0	0
211	SLU 44	0	-0.21	13.86	0	0	0
211	SLU 45	-0.01	-0.2	14.13	0	0	0
211	SLU 46	-0.01	-0.2	14.12	0	0	0
211	SLU 47	0	-0.21	14.02	0	0	0
211	SLU 48	-0.01	-0.2	14.29	0	0	0
211	SLU 49	-0.01	-0.21	14.29	0	0	0
211	SLU 50	-0.01	-0.2	14.2	0	0	0
211	SLU 51	-0.01	-0.21	14.19	0	0	0
211	SLU 52	-0.01	-0.21	15.17	0	0	0
211	SLU 53	-0.01	-0.2	15.43	0	0	0
211	SLU 54	-0.01	-0.2	15.43	0	0	0
211	SLU 55	-0.01	-0.21	15.33	0	0	0
211	SLU 56	-0.02	-0.2	15.6	0	0	0
211	SLU 57	-0.01	-0.21	15.59	0	0	0
211	SLU 58	-0.02	-0.2	15.5	0	0	0
211	SLU 59	-0.01	-0.21	15.5	0	0	0
211	SLU 60	-0.02	-0.2	15.73	0	0	0
211	SLU 61	-0.01	-0.2	15.73	0	0	0
211	SLU 62	-0.02	-0.2	15.9	0	0	0
211	SLU 63	-0.01	-0.21	15.89	0	0	0
211	SLU 64	-0.01	-0.19	15.04	0	0	0
211	SLU 65	0	-0.2	15.03	0	0	0
211	SLU 66	-0.01	-0.19	15.3	0	0	0
211	SLU 67	0	-0.2	15.29	0	0	0
211	SLU 68	0	-0.2	15.19	0	0	0
211	SLU 69	-0.01	-0.19	15.46	0	0	0
211	SLU 70	-0.01	-0.2	15.46	0	0	0
211	SLU 71	-0.01	-0.2	15.36	0	0	0
211	SLU 72	-0.01	-0.2	15.36	0	0	0
211	SLU 73	-0.01	-0.2	16.34	0	0	0
211	SLU 74	-0.01	-0.19	16.6	0	0	0
211	SLU 75	-0.01	-0.2	16.6	0	0	0
211	SLU 76	-0.01	-0.2	16.5	0	0	0
211	SLU 77	-0.02	-0.19	16.77	0	0	0
211	SLU 78	-0.01	-0.2	16.76	0	0	0
211	SLU 79	-0.02	-0.2	16.67	0	0	0
211	SLU 80	-0.01	-0.2	16.67	0	0	0
211	SLU 81	-0.02	-0.19	16.9	0	0	0
211	SLU 82	-0.01	-0.19	16.9	0	0	0
211	SLU 83	-0.02	-0.19	17.07	0	0	0
211	SLU 84	-0.01	-0.2	17.06	0	0	0
211	SLE RA 1	-0.01	-0.15	11.31	0	0	0
211	SLE RA 2	0	-0.15	11.3	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
211	SLE RA 3	-0.01	-0.15	11.48	0	0	0
211	SLE RA 4	0	-0.15	11.48	0	0	0
211	SLE RA 5	0	-0.15	11.41	0	0	0
211	SLE RA 6	-0.01	-0.15	11.59	0	0	0
211	SLE RA 7	0	-0.15	11.59	0	0	0
211	SLE RA 8	-0.01	-0.15	11.53	0	0	0
211	SLE RA 9	0	-0.15	11.53	0	0	0
211	SLE RA 10	-0.01	-0.15	12.18	0	0	0
211	SLE RA 11	-0.01	-0.15	12.35	0	0	0
211	SLE RA 12	-0.01	-0.15	12.35	0	0	0
211	SLE RA 13	-0.01	-0.15	12.29	0	0	0
211	SLE RA 14	-0.01	-0.15	12.46	0	0	0
211	SLE RA 15	-0.01	-0.15	12.46	0	0	0
211	SLE RA 16	-0.01	-0.15	12.4	0	0	0
211	SLE RA 17	-0.01	-0.15	12.4	0	0	0
211	SLE RA 18	-0.01	-0.15	12.55	0	0	0
211	SLE RA 19	-0.01	-0.15	12.55	0	0	0
211	SLE RA 20	-0.01	-0.15	12.66	0	0	0
211	SLE RA 21	-0.01	-0.15	12.66	0	0	0
211	SLE FR 1	-0.01	-0.15	11.31	0	0	0
211	SLE FR 2	0	-0.15	11.31	0	0	0
211	SLE FR 3	-0.01	-0.15	11.35	0	0	0
211	SLE FR 4	-0.01	-0.15	11.68	0	0	0
211	SLE FR 5	-0.01	-0.15	11.73	0	0	0
211	SLE FR 6	-0.01	-0.15	11.93	0	0	0
211	SLE QP 1	-0.01	-0.15	11.31	0	0	0
211	SLE QP 2	-0.01	-0.15	11.68	0	0	0
211	SLD 1	0.99	0.09	11.19	0	0	0
211	SLD 2	1.08	0.13	11.26	0	0	0
211	SLD 3	0.91	-0.17	10.94	0	0	0
211	SLD 4	1.01	-0.13	11	0	0	0
211	SLD 5	0.38	0.31	11.91	0	0	0
211	SLD 6	0.45	0.33	11.95	0	0	0
211	SLD 7	0.14	-0.55	11.06	0	0	0
211	SLD 8	0.2	-0.53	11.11	0	0	0
211	SLD 9	-0.22	0.23	12.26	0	0	0
211	SLD 10	-0.16	0.25	12.3	0	0	0
211	SLD 11	-0.46	-0.63	11.42	0	0	0
211	SLD 12	-0.4	-0.6	11.46	0	0	0
211	SLD 13	-1.02	-0.17	12.36	0	0	0
211	SLD 14	-0.93	-0.13	12.43	0	0	0
211	SLD 15	-1.1	-0.43	12.11	0	0	0
211	SLD 16	-1	-0.39	12.18	0	0	0
211	SLV 1	2.32	0.4	10.52	0	0	0
211	SLV 2	2.54	0.49	10.68	0	0	0
211	SLV 3	2.15	-0.18	9.94	0	0	0
211	SLV 4	2.37	-0.09	10.1	0	0	0
211	SLV 5	0.91	0.89	12.18	0	0	0
211	SLV 6	1.05	0.95	12.28	0	0	0
211	SLV 7	0.34	-1.06	10.26	0	0	0
211	SLV 8	0.49	-1	10.36	0	0	0
211	SLV 9	-0.5	0.71	13	0	0	0
211	SLV 10	-0.36	0.76	13.1	0	0	0
211	SLV 11	-1.07	-1.24	11.09	0	0	0
211	SLV 12	-0.92	-1.19	11.19	0	0	0
211	SLV 13	-2.38	-0.21	13.27	0	0	0
211	SLV 14	-2.16	-0.11	13.42	0	0	0
211	SLV 15	-2.55	-0.79	12.69	0	0	0
211	SLV 16	-2.33	-0.7	12.85	0	0	0
212	SLU 1	0	-0.16	10.63	0	0	0
212	SLU 2	0	-0.17	10.62	0	0	0
212	SLU 3	0	-0.16	10.88	0	0	0
212	SLU 4	0	-0.16	10.88	0	0	0
212	SLU 5	0	-0.17	10.78	0	0	0
212	SLU 6	0	-0.16	11.04	0	0	0
212	SLU 7	0	-0.17	11.04	0	0	0
212	SLU 8	0	-0.17	10.95	0	0	0
212	SLU 9	0	-0.17	10.94	0	0	0
212	SLU 10	-0.01	-0.17	11.89	0	0	0
212	SLU 11	-0.01	-0.16	12.15	0	0	0
212	SLU 12	-0.01	-0.17	12.14	0	0	0
212	SLU 13	-0.01	-0.17	12.05	0	0	0
212	SLU 14	-0.01	-0.17	12.3	0	0	0
212	SLU 15	-0.01	-0.17	12.3	0	0	0
212	SLU 16	-0.01	-0.17	12.21	0	0	0
212	SLU 17	-0.01	-0.17	12.21	0	0	0
212	SLU 18	-0.01	-0.16	12.44	0	0	0
212	SLU 19	-0.01	-0.17	12.43	0	0	0
212	SLU 20	-0.01	-0.16	12.59	0	0	0
212	SLU 21	-0.01	-0.17	12.59	0	0	0
212	SLU 22	0	-0.15	11.77	0	0	0
212	SLU 23	0	-0.16	11.76	0	0	0
212	SLU 24	0	-0.16	12.02	0	0	0
212	SLU 25	0	-0.16	12.01	0	0	0
212	SLU 26	0	-0.16	11.92	0	0	0
212	SLU 27	0	-0.16	12.18	0	0	0
212	SLU 28	0	-0.16	12.17	0	0	0
212	SLU 29	0	-0.16	12.09	0	0	0
212	SLU 30	0	-0.16	12.08	0	0	0
212	SLU 31	0	-0.16	13.02	0	0	0
212	SLU 32	-0.01	-0.16	13.28	0	0	0
212	SLU 33	-0.01	-0.16	13.28	0	0	0
212	SLU 34	-0.01	-0.16	13.18	0	0	0
212	SLU 35	-0.01	-0.16	13.44	0	0	0
212	SLU 36	-0.01	-0.16	13.44	0	0	0
212	SLU 37	-0.01	-0.16	13.35	0	0	0
212	SLU 38	-0.01	-0.17	13.34	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
212	SLU 39	-0.01	-0.16	13.57	0	0	0
212	SLU 40	-0.01	-0.16	13.57	0	0	0
212	SLU 41	-0.01	-0.16	13.73	0	0	0
212	SLU 42	-0.01	-0.16	13.73	0	0	0
212	SLU 43	0	-0.21	13.43	0	0	0
212	SLU 44	0	-0.22	13.42	0	0	0
212	SLU 45	0	-0.21	13.68	0	0	0
212	SLU 46	0	-0.21	13.68	0	0	0
212	SLU 47	0	-0.22	13.58	0	0	0
212	SLU 48	-0.01	-0.21	13.84	0	0	0
212	SLU 49	0	-0.22	13.84	0	0	0
212	SLU 50	-0.01	-0.21	13.75	0	0	0
212	SLU 51	0	-0.22	13.74	0	0	0
212	SLU 52	-0.01	-0.22	14.69	0	0	0
212	SLU 53	-0.01	-0.21	14.95	0	0	0
212	SLU 54	-0.01	-0.22	14.94	0	0	0
212	SLU 55	-0.01	-0.22	14.85	0	0	0
212	SLU 56	-0.01	-0.22	15.1	0	0	0
212	SLU 57	-0.01	-0.22	15.1	0	0	0
212	SLU 58	-0.01	-0.22	15.01	0	0	0
212	SLU 59	-0.01	-0.22	15.01	0	0	0
212	SLU 60	-0.01	-0.21	15.24	0	0	0
212	SLU 61	-0.01	-0.22	15.23	0	0	0
212	SLU 62	-0.01	-0.21	15.39	0	0	0
212	SLU 63	-0.01	-0.22	15.39	0	0	0
212	SLU 64	0	-0.2	14.57	0	0	0
212	SLU 65	0	-0.21	14.56	0	0	0
212	SLU 66	0	-0.21	14.82	0	0	0
212	SLU 67	0	-0.21	14.81	0	0	0
212	SLU 68	0	-0.21	14.72	0	0	0
212	SLU 69	-0.01	-0.21	14.98	0	0	0
212	SLU 70	0	-0.21	14.97	0	0	0
212	SLU 71	-0.01	-0.21	14.89	0	0	0
212	SLU 72	0	-0.21	14.88	0	0	0
212	SLU 73	-0.01	-0.21	15.82	0	0	0
212	SLU 74	-0.01	-0.21	16.08	0	0	0
212	SLU 75	-0.01	-0.21	16.08	0	0	0
212	SLU 76	-0.01	-0.21	15.98	0	0	0
212	SLU 77	-0.01	-0.21	16.24	0	0	0
212	SLU 78	-0.01	-0.21	16.24	0	0	0
212	SLU 79	-0.01	-0.21	16.15	0	0	0
212	SLU 80	-0.01	-0.21	16.14	0	0	0
212	SLU 81	-0.01	-0.21	16.37	0	0	0
212	SLU 82	-0.01	-0.21	16.37	0	0	0
212	SLU 83	-0.01	-0.21	16.53	0	0	0
212	SLU 84	-0.01	-0.21	16.53	0	0	0
212	SLE RA 1	0	-0.16	10.96	0	0	0
212	SLE RA 2	0	-0.16	10.95	0	0	0
212	SLE RA 3	0	-0.16	11.12	0	0	0
212	SLE RA 4	0	-0.16	11.12	0	0	0
212	SLE RA 5	0	-0.16	11.06	0	0	0
212	SLE RA 6	0	-0.16	11.23	0	0	0
212	SLE RA 7	0	-0.16	11.23	0	0	0
212	SLE RA 8	0	-0.16	11.17	0	0	0
212	SLE RA 9	0	-0.16	11.17	0	0	0
212	SLE RA 10	0	-0.16	11.79	0	0	0
212	SLE RA 11	-0.01	-0.16	11.97	0	0	0
212	SLE RA 12	-0.01	-0.16	11.96	0	0	0
212	SLE RA 13	0	-0.16	11.9	0	0	0
212	SLE RA 14	-0.01	-0.16	12.07	0	0	0
212	SLE RA 15	-0.01	-0.16	12.07	0	0	0
212	SLE RA 16	-0.01	-0.16	12.01	0	0	0
212	SLE RA 17	-0.01	-0.17	12.01	0	0	0
212	SLE RA 18	-0.01	-0.16	12.16	0	0	0
212	SLE RA 19	-0.01	-0.16	12.16	0	0	0
212	SLE RA 20	-0.01	-0.16	12.26	0	0	0
212	SLE RA 21	-0.01	-0.16	12.26	0	0	0
212	SLE FR 1	0	-0.16	10.96	0	0	0
212	SLE FR 2	0	-0.16	10.96	0	0	0
212	SLE FR 3	0	-0.16	11	0	0	0
212	SLE FR 4	0	-0.16	11.32	0	0	0
212	SLE FR 5	-0.01	-0.16	11.36	0	0	0
212	SLE FR 6	-0.01	-0.16	11.56	0	0	0
212	SLE QP 1	0	-0.16	10.96	0	0	0
212	SLE QP 2	0	-0.16	11.32	0	0	0
212	SLD 1	0.94	0.08	10.75	0	0	0
212	SLD 2	1.03	0.12	10.82	0	0	0
212	SLD 3	0.87	-0.17	10.5	0	0	0
212	SLD 4	0.96	-0.13	10.57	0	0	0
212	SLD 5	0.37	0.28	11.51	0	0	0
212	SLD 6	0.43	0.3	11.55	0	0	0
212	SLD 7	0.14	-0.54	10.68	0	0	0
212	SLD 8	0.2	-0.51	10.73	0	0	0
212	SLD 9	-0.21	0.19	11.9	0	0	0
212	SLD 10	-0.15	0.22	11.95	0	0	0
212	SLD 11	-0.44	-0.62	11.08	0	0	0
212	SLD 12	-0.38	-0.59	11.12	0	0	0
212	SLD 13	-0.97	-0.19	12.06	0	0	0
212	SLD 14	-0.88	-0.15	12.13	0	0	0
212	SLD 15	-1.04	-0.44	11.82	0	0	0
212	SLD 16	-0.95	-0.39	11.89	0	0	0
212	SLV 1	2.21	0.39	9.98	0	0	0
212	SLV 2	2.42	0.48	10.14	0	0	0
212	SLV 3	2.05	-0.17	9.41	0	0	0
212	SLV 4	2.26	-0.07	9.57	0	0	0
212	SLV 5	0.87	0.83	11.74	0	0	0
212	SLV 6	1	0.89	11.84	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
212	SLV 7	0.33	-1.02	9.87	0	0	0
212	SLV 8	0.47	-0.96	9.97	0	0	0
212	SLV 9	-0.47	0.64	12.67	0	0	0
212	SLV 10	-0.34	0.7	12.77	0	0	0
212	SLV 11	-1.01	-1.21	10.79	0	0	0
212	SLV 12	-0.88	-1.15	10.89	0	0	0
212	SLV 13	-2.27	-0.24	13.06	0	0	0
212	SLV 14	-2.06	-0.15	13.22	0	0	0
212	SLV 15	-2.43	-0.8	12.5	0	0	0
212	SLV 16	-2.22	-0.7	12.66	0	0	0
213	SLU 1	0	-0.17	10.37	0	0	0
213	SLU 2	0	-0.17	10.36	0	0	0
213	SLU 3	0	-0.17	10.61	0	0	0
213	SLU 4	0	-0.17	10.61	0	0	0
213	SLU 5	0	-0.18	10.52	0	0	0
213	SLU 6	0	-0.17	10.77	0	0	0
213	SLU 7	0	-0.18	10.76	0	0	0
213	SLU 8	0	-0.18	10.68	0	0	0
213	SLU 9	0	-0.18	10.67	0	0	0
213	SLU 10	0	-0.18	11.59	0	0	0
213	SLU 11	-0.01	-0.17	11.84	0	0	0
213	SLU 12	-0.01	-0.18	11.84	0	0	0
213	SLU 13	-0.01	-0.18	11.74	0	0	0
213	SLU 14	-0.01	-0.18	12	0	0	0
213	SLU 15	-0.01	-0.18	11.99	0	0	0
213	SLU 16	-0.01	-0.18	11.91	0	0	0
213	SLU 17	-0.01	-0.18	11.9	0	0	0
213	SLU 18	-0.01	-0.17	12.12	0	0	0
213	SLU 19	-0.01	-0.18	12.12	0	0	0
213	SLU 20	-0.01	-0.18	12.28	0	0	0
213	SLU 21	-0.01	-0.18	12.27	0	0	0
213	SLU 22	0	-0.17	11.48	0	0	0
213	SLU 23	0	-0.17	11.47	0	0	0
213	SLU 24	0	-0.17	11.72	0	0	0
213	SLU 25	0	-0.17	11.72	0	0	0
213	SLU 26	0	-0.17	11.63	0	0	0
213	SLU 27	0	-0.17	11.88	0	0	0
213	SLU 28	0	-0.17	11.88	0	0	0
213	SLU 29	0	-0.17	11.79	0	0	0
213	SLU 30	0	-0.18	11.79	0	0	0
213	SLU 31	0	-0.17	12.7	0	0	0
213	SLU 32	-0.01	-0.17	12.95	0	0	0
213	SLU 33	-0.01	-0.17	12.95	0	0	0
213	SLU 34	0	-0.18	12.86	0	0	0
213	SLU 35	-0.01	-0.17	13.11	0	0	0
213	SLU 36	-0.01	-0.18	13.1	0	0	0
213	SLU 37	-0.01	-0.18	13.02	0	0	0
213	SLU 38	-0.01	-0.18	13.01	0	0	0
213	SLU 39	-0.01	-0.17	13.24	0	0	0
213	SLU 40	-0.01	-0.17	13.23	0	0	0
213	SLU 41	-0.01	-0.17	13.39	0	0	0
213	SLU 42	-0.01	-0.18	13.39	0	0	0
213	SLU 43	0	-0.22	13.1	0	0	0
213	SLU 44	0	-0.23	13.09	0	0	0
213	SLU 45	0	-0.22	13.34	0	0	0
213	SLU 46	0	-0.23	13.34	0	0	0
213	SLU 47	0	-0.23	13.24	0	0	0
213	SLU 48	0	-0.23	13.5	0	0	0
213	SLU 49	0	-0.23	13.49	0	0	0
213	SLU 50	-0.01	-0.23	13.41	0	0	0
213	SLU 51	0	-0.23	13.4	0	0	0
213	SLU 52	-0.01	-0.23	14.32	0	0	0
213	SLU 53	-0.01	-0.23	14.57	0	0	0
213	SLU 54	-0.01	-0.23	14.57	0	0	0
213	SLU 55	-0.01	-0.23	14.47	0	0	0
213	SLU 56	-0.01	-0.23	14.73	0	0	0
213	SLU 57	-0.01	-0.23	14.72	0	0	0
213	SLU 58	-0.01	-0.23	14.64	0	0	0
213	SLU 59	-0.01	-0.23	14.63	0	0	0
213	SLU 60	-0.01	-0.23	14.85	0	0	0
213	SLU 61	-0.01	-0.23	14.85	0	0	0
213	SLU 62	-0.01	-0.23	15.01	0	0	0
213	SLU 63	-0.01	-0.23	15	0	0	0
213	SLU 64	0	-0.22	14.21	0	0	0
213	SLU 65	0	-0.22	14.2	0	0	0
213	SLU 66	0	-0.22	14.45	0	0	0
213	SLU 67	0	-0.22	14.45	0	0	0
213	SLU 68	0	-0.23	14.36	0	0	0
213	SLU 69	0	-0.22	14.61	0	0	0
213	SLU 70	0	-0.23	14.6	0	0	0
213	SLU 71	0	-0.22	14.52	0	0	0
213	SLU 72	0	-0.23	14.51	0	0	0
213	SLU 73	0	-0.23	15.43	0	0	0
213	SLU 74	-0.01	-0.22	15.68	0	0	0
213	SLU 75	-0.01	-0.23	15.68	0	0	0
213	SLU 76	-0.01	-0.23	15.59	0	0	0
213	SLU 77	-0.01	-0.23	15.84	0	0	0
213	SLU 78	-0.01	-0.23	15.83	0	0	0
213	SLU 79	-0.01	-0.23	15.75	0	0	0
213	SLU 80	-0.01	-0.23	15.74	0	0	0
213	SLU 81	-0.01	-0.22	15.96	0	0	0
213	SLU 82	-0.01	-0.23	15.96	0	0	0
213	SLU 83	-0.01	-0.23	16.12	0	0	0
213	SLU 84	-0.01	-0.23	16.12	0	0	0
213	SLE RA 1	0	-0.17	10.68	0	0	0
213	SLE RA 2	0	-0.17	10.68	0	0	0
213	SLE RA 3	0	-0.17	10.85	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
213	SLE RA 4	0	-0.17	10.85	0	0	0
213	SLE RA 5	0	-0.17	10.78	0	0	0
213	SLE RA 6	0	-0.17	10.95	0	0	0
213	SLE RA 7	0	-0.17	10.95	0	0	0
213	SLE RA 8	0	-0.17	10.89	0	0	0
213	SLE RA 9	0	-0.17	10.89	0	0	0
213	SLE RA 10	0	-0.17	11.5	0	0	0
213	SLE RA 11	-0.01	-0.17	11.67	0	0	0
213	SLE RA 12	-0.01	-0.17	11.67	0	0	0
213	SLE RA 13	0	-0.18	11.6	0	0	0
213	SLE RA 14	-0.01	-0.17	11.77	0	0	0
213	SLE RA 15	-0.01	-0.18	11.77	0	0	0
213	SLE RA 16	-0.01	-0.17	11.71	0	0	0
213	SLE RA 17	-0.01	-0.18	11.71	0	0	0
213	SLE RA 18	-0.01	-0.17	11.86	0	0	0
213	SLE RA 19	-0.01	-0.17	11.85	0	0	0
213	SLE RA 20	-0.01	-0.17	11.96	0	0	0
213	SLE RA 21	-0.01	-0.18	11.96	0	0	0
213	SLE FR 1	0	-0.17	10.68	0	0	0
213	SLE FR 2	0	-0.17	10.68	0	0	0
213	SLE FR 3	0	-0.17	10.73	0	0	0
213	SLE FR 4	0	-0.17	11.04	0	0	0
213	SLE FR 5	0	-0.17	11.08	0	0	0
213	SLE FR 6	-0.01	-0.17	11.27	0	0	0
213	SLE QP 1	0	-0.17	10.68	0	0	0
213	SLE QP 2	0	-0.17	11.04	0	0	0
213	SLD 1	0.9	0.07	10.4	0	0	0
213	SLD 2	0.99	0.11	10.47	0	0	0
213	SLD 3	0.84	-0.17	10.15	0	0	0
213	SLD 4	0.92	-0.12	10.22	0	0	0
213	SLD 5	0.35	0.25	11.2	0	0	0
213	SLD 6	0.41	0.27	11.25	0	0	0
213	SLD 7	0.13	-0.53	10.39	0	0	0
213	SLD 8	0.19	-0.5	10.43	0	0	0
213	SLD 9	-0.2	0.16	11.64	0	0	0
213	SLD 10	-0.14	0.19	11.68	0	0	0
213	SLD 11	-0.42	-0.61	10.82	0	0	0
213	SLD 12	-0.36	-0.58	10.87	0	0	0
213	SLD 13	-0.93	-0.21	11.85	0	0	0
213	SLD 14	-0.84	-0.17	11.92	0	0	0
213	SLD 15	-1	-0.45	11.6	0	0	0
213	SLD 16	-0.91	-0.4	11.67	0	0	0
213	SLV 1	2.12	0.37	9.53	0	0	0
213	SLV 2	2.32	0.47	9.7	0	0	0
213	SLV 3	1.96	-0.15	8.98	0	0	0
213	SLV 4	2.17	-0.05	9.14	0	0	0
213	SLV 5	0.83	0.78	11.4	0	0	0
213	SLV 6	0.96	0.84	11.51	0	0	0
213	SLV 7	0.32	-0.98	9.55	0	0	0
213	SLV 8	0.45	-0.92	9.65	0	0	0
213	SLV 9	-0.45	0.58	12.42	0	0	0
213	SLV 10	-0.32	0.64	12.52	0	0	0
213	SLV 11	-0.97	-1.18	10.57	0	0	0
213	SLV 12	-0.84	-1.12	10.67	0	0	0
213	SLV 13	-2.17	-0.28	12.93	0	0	0
213	SLV 14	-1.97	-0.18	13.09	0	0	0
213	SLV 15	-2.33	-0.81	12.37	0	0	0
213	SLV 16	-2.13	-0.71	12.54	0	0	0
214	SLU 1	0	-0.09	5.19	0	0	0
214	SLU 2	0	-0.1	5.19	0	0	0
214	SLU 3	0	-0.09	5.32	0	0	0
214	SLU 4	0	-0.1	5.31	0	0	0
214	SLU 5	0	-0.1	5.27	0	0	0
214	SLU 6	0	-0.1	5.39	0	0	0
214	SLU 7	0	-0.1	5.39	0	0	0
214	SLU 8	0	-0.1	5.35	0	0	0
214	SLU 9	0	-0.1	5.35	0	0	0
214	SLU 10	0	-0.1	5.81	0	0	0
214	SLU 11	0	-0.1	5.93	0	0	0
214	SLU 12	0	-0.1	5.93	0	0	0
214	SLU 13	0	-0.1	5.88	0	0	0
214	SLU 14	0	-0.1	6.01	0	0	0
214	SLU 15	0	-0.1	6.01	0	0	0
214	SLU 16	-0.01	-0.1	5.96	0	0	0
214	SLU 17	0	-0.1	5.96	0	0	0
214	SLU 18	-0.01	-0.1	6.07	0	0	0
214	SLU 19	0	-0.1	6.07	0	0	0
214	SLU 20	-0.01	-0.1	6.15	0	0	0
214	SLU 21	0	-0.1	6.15	0	0	0
214	SLU 22	0	-0.09	5.75	0	0	0
214	SLU 23	0	-0.09	5.75	0	0	0
214	SLU 24	0	-0.09	5.88	0	0	0
214	SLU 25	0	-0.09	5.87	0	0	0
214	SLU 26	0	-0.1	5.83	0	0	0
214	SLU 27	0	-0.09	5.95	0	0	0
214	SLU 28	0	-0.1	5.95	0	0	0
214	SLU 29	0	-0.1	5.91	0	0	0
214	SLU 30	0	-0.1	5.91	0	0	0
214	SLU 31	0	-0.1	6.36	0	0	0
214	SLU 32	0	-0.1	6.49	0	0	0
214	SLU 33	0	-0.1	6.49	0	0	0
214	SLU 34	0	-0.1	6.44	0	0	0
214	SLU 35	0	-0.1	6.57	0	0	0
214	SLU 36	0	-0.1	6.57	0	0	0
214	SLU 37	0	-0.1	6.52	0	0	0
214	SLU 38	0	-0.1	6.52	0	0	0
214	SLU 39	-0.01	-0.1	6.63	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
214	SLU 40	0	-0.1	6.63	0	0	0
214	SLU 41	-0.01	-0.1	6.71	0	0	0
214	SLU 42	0	-0.1	6.71	0	0	0
214	SLU 43	0	-0.12	6.56	0	0	0
214	SLU 44	0	-0.12	6.56	0	0	0
214	SLU 45	0	-0.12	6.68	0	0	0
214	SLU 46	0	-0.12	6.68	0	0	0
214	SLU 47	0	-0.12	6.63	0	0	0
214	SLU 48	0	-0.12	6.76	0	0	0
214	SLU 49	0	-0.13	6.76	0	0	0
214	SLU 50	0	-0.12	6.72	0	0	0
214	SLU 51	0	-0.13	6.71	0	0	0
214	SLU 52	0	-0.13	7.17	0	0	0
214	SLU 53	-0.01	-0.12	7.3	0	0	0
214	SLU 54	0	-0.13	7.3	0	0	0
214	SLU 55	0	-0.13	7.25	0	0	0
214	SLU 56	-0.01	-0.13	7.38	0	0	0
214	SLU 57	0	-0.13	7.37	0	0	0
214	SLU 58	-0.01	-0.13	7.33	0	0	0
214	SLU 59	0	-0.13	7.33	0	0	0
214	SLU 60	-0.01	-0.12	7.44	0	0	0
214	SLU 61	0	-0.13	7.44	0	0	0
214	SLU 62	-0.01	-0.13	7.52	0	0	0
214	SLU 63	-0.01	-0.13	7.51	0	0	0
214	SLU 64	0	-0.12	7.12	0	0	0
214	SLU 65	0	-0.12	7.12	0	0	0
214	SLU 66	0	-0.12	7.24	0	0	0
214	SLU 67	0	-0.12	7.24	0	0	0
214	SLU 68	0	-0.12	7.19	0	0	0
214	SLU 69	0	-0.12	7.32	0	0	0
214	SLU 70	0	-0.12	7.32	0	0	0
214	SLU 71	0	-0.12	7.28	0	0	0
214	SLU 72	0	-0.12	7.27	0	0	0
214	SLU 73	0	-0.13	7.73	0	0	0
214	SLU 74	0	-0.12	7.86	0	0	0
214	SLU 75	0	-0.13	7.86	0	0	0
214	SLU 76	0	-0.13	7.81	0	0	0
214	SLU 77	-0.01	-0.13	7.94	0	0	0
214	SLU 78	0	-0.13	7.93	0	0	0
214	SLU 79	-0.01	-0.13	7.89	0	0	0
214	SLU 80	0	-0.13	7.89	0	0	0
214	SLU 81	-0.01	-0.12	8	0	0	0
214	SLU 82	0	-0.13	8	0	0	0
214	SLU 83	-0.01	-0.13	8.08	0	0	0
214	SLU 84	0	-0.13	8.07	0	0	0
214	SLE RA 1	0	-0.09	5.35	0	0	0
214	SLE RA 2	0	-0.09	5.35	0	0	0
214	SLE RA 3	0	-0.09	5.44	0	0	0
214	SLE RA 4	0	-0.09	5.43	0	0	0
214	SLE RA 5	0	-0.1	5.4	0	0	0
214	SLE RA 6	0	-0.09	5.49	0	0	0
214	SLE RA 7	0	-0.1	5.49	0	0	0
214	SLE RA 8	0	-0.09	5.46	0	0	0
214	SLE RA 9	0	-0.1	5.46	0	0	0
214	SLE RA 10	0	-0.1	5.76	0	0	0
214	SLE RA 11	0	-0.09	5.85	0	0	0
214	SLE RA 12	0	-0.1	5.84	0	0	0
214	SLE RA 13	0	-0.1	5.81	0	0	0
214	SLE RA 14	0	-0.1	5.9	0	0	0
214	SLE RA 15	0	-0.1	5.9	0	0	0
214	SLE RA 16	0	-0.1	5.87	0	0	0
214	SLE RA 17	0	-0.1	5.87	0	0	0
214	SLE RA 18	0	-0.09	5.94	0	0	0
214	SLE RA 19	0	-0.1	5.94	0	0	0
214	SLE RA 20	0	-0.1	5.99	0	0	0
214	SLE RA 21	0	-0.1	5.99	0	0	0
214	SLE FR 1	0	-0.09	5.35	0	0	0
214	SLE FR 2	0	-0.09	5.35	0	0	0
214	SLE FR 3	0	-0.09	5.37	0	0	0
214	SLE FR 4	0	-0.09	5.53	0	0	0
214	SLE FR 5	0	-0.09	5.55	0	0	0
214	SLE FR 6	0	-0.09	5.65	0	0	0
214	SLE QP 1	0	-0.09	5.35	0	0	0
214	SLE QP 2	0	-0.09	5.53	0	0	0
214	SLD 1	0.44	0.03	5.17	0	0	0
214	SLD 2	0.49	0.05	5.21	0	0	0
214	SLD 3	0.41	-0.09	5.05	0	0	0
214	SLD 4	0.46	-0.06	5.08	0	0	0
214	SLD 5	0.17	0.11	5.6	0	0	0
214	SLD 6	0.2	0.13	5.63	0	0	0
214	SLD 7	0.06	-0.27	5.19	0	0	0
214	SLD 8	0.09	-0.25	5.21	0	0	0
214	SLD 9	-0.1	0.07	5.85	0	0	0
214	SLD 10	-0.07	0.08	5.87	0	0	0
214	SLD 11	-0.21	-0.31	5.43	0	0	0
214	SLD 12	-0.18	-0.3	5.46	0	0	0
214	SLD 13	-0.46	-0.12	5.98	0	0	0
214	SLD 14	-0.42	-0.1	6.01	0	0	0
214	SLD 15	-0.49	-0.24	5.85	0	0	0
214	SLD 16	-0.45	-0.21	5.89	0	0	0
214	SLV 1	1.04	0.19	4.68	0	0	0
214	SLV 2	1.14	0.24	4.77	0	0	0
214	SLV 3	0.97	-0.07	4.4	0	0	0
214	SLV 4	1.07	-0.02	4.49	0	0	0
214	SLV 5	0.41	0.37	5.69	0	0	0
214	SLV 6	0.47	0.41	5.74	0	0	0
214	SLV 7	0.16	-0.49	4.75	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
214	SLV 8	0.22	-0.45	4.8	0	0	0
214	SLV 9	-0.22	0.27	6.26	0	0	0
214	SLV 10	-0.16	0.3	6.31	0	0	0
214	SLV 11	-0.48	-0.59	5.31	0	0	0
214	SLV 12	-0.41	-0.56	5.37	0	0	0
214	SLV 13	-1.07	-0.17	6.57	0	0	0
214	SLV 14	-0.97	-0.11	6.66	0	0	0
214	SLV 15	-1.15	-0.43	6.29	0	0	0
214	SLV 16	-1.05	-0.37	6.37	0	0	0
215	SLU 1	-0.19	-0.29	13.01	0	0	0
215	SLU 2	-0.19	-0.3	13	0	0	0
215	SLU 3	-0.2	-0.3	13.32	0	0	0
215	SLU 4	-0.19	-0.3	13.31	0	0	0
215	SLU 5	-0.19	-0.31	13.2	0	0	0
215	SLU 6	-0.2	-0.3	13.51	0	0	0
215	SLU 7	-0.2	-0.31	13.51	0	0	0
215	SLU 8	-0.2	-0.3	13.4	0	0	0
215	SLU 9	-0.2	-0.31	13.4	0	0	0
215	SLU 10	-0.2	-0.32	14.52	0	0	0
215	SLU 11	-0.21	-0.31	14.84	0	0	0
215	SLU 12	-0.2	-0.32	14.83	0	0	0
215	SLU 13	-0.2	-0.33	14.71	0	0	0
215	SLU 14	-0.21	-0.32	15.03	0	0	0
215	SLU 15	-0.21	-0.32	15.02	0	0	0
215	SLU 16	-0.21	-0.32	14.92	0	0	0
215	SLU 17	-0.21	-0.32	14.91	0	0	0
215	SLU 18	-0.21	-0.32	15.18	0	0	0
215	SLU 19	-0.2	-0.32	15.17	0	0	0
215	SLU 20	-0.21	-0.32	15.38	0	0	0
215	SLU 21	-0.21	-0.33	15.37	0	0	0
215	SLU 22	-0.22	-0.3	14.4	0	0	0
215	SLU 23	-0.21	-0.31	14.39	0	0	0
215	SLU 24	-0.22	-0.3	14.7	0	0	0
215	SLU 25	-0.22	-0.31	14.7	0	0	0
215	SLU 26	-0.21	-0.31	14.58	0	0	0
215	SLU 27	-0.22	-0.3	14.9	0	0	0
215	SLU 28	-0.22	-0.31	14.89	0	0	0
215	SLU 29	-0.22	-0.3	14.79	0	0	0
215	SLU 30	-0.22	-0.31	14.78	0	0	0
215	SLU 31	-0.22	-0.33	15.9	0	0	0
215	SLU 32	-0.23	-0.32	16.22	0	0	0
215	SLU 33	-0.23	-0.32	16.21	0	0	0
215	SLU 34	-0.22	-0.33	16.1	0	0	0
215	SLU 35	-0.24	-0.32	16.42	0	0	0
215	SLU 36	-0.23	-0.33	16.41	0	0	0
215	SLU 37	-0.23	-0.32	16.31	0	0	0
215	SLU 38	-0.23	-0.33	16.3	0	0	0
215	SLU 39	-0.23	-0.32	16.57	0	0	0
215	SLU 40	-0.23	-0.33	16.56	0	0	0
215	SLU 41	-0.23	-0.32	16.76	0	0	0
215	SLU 42	-0.23	-0.33	16.75	0	0	0
215	SLU 43	-0.24	-0.38	16.44	0	0	0
215	SLU 44	-0.24	-0.39	16.43	0	0	0
215	SLU 45	-0.25	-0.38	16.75	0	0	0
215	SLU 46	-0.24	-0.39	16.74	0	0	0
215	SLU 47	-0.24	-0.39	16.63	0	0	0
215	SLU 48	-0.25	-0.38	16.94	0	0	0
215	SLU 49	-0.25	-0.39	16.94	0	0	0
215	SLU 50	-0.25	-0.38	16.83	0	0	0
215	SLU 51	-0.25	-0.39	16.82	0	0	0
215	SLU 52	-0.25	-0.41	17.95	0	0	0
215	SLU 53	-0.26	-0.4	18.26	0	0	0
215	SLU 54	-0.25	-0.41	18.26	0	0	0
215	SLU 55	-0.25	-0.41	18.14	0	0	0
215	SLU 56	-0.26	-0.4	18.46	0	0	0
215	SLU 57	-0.26	-0.41	18.45	0	0	0
215	SLU 58	-0.26	-0.4	18.35	0	0	0
215	SLU 59	-0.26	-0.41	18.34	0	0	0
215	SLU 60	-0.26	-0.4	18.61	0	0	0
215	SLU 61	-0.25	-0.41	18.6	0	0	0
215	SLU 62	-0.26	-0.41	18.8	0	0	0
215	SLU 63	-0.26	-0.41	18.8	0	0	0
215	SLU 64	-0.26	-0.38	17.83	0	0	0
215	SLU 65	-0.26	-0.39	17.82	0	0	0
215	SLU 66	-0.27	-0.39	18.13	0	0	0
215	SLU 67	-0.27	-0.39	18.13	0	0	0
215	SLU 68	-0.26	-0.4	18.01	0	0	0
215	SLU 69	-0.27	-0.39	18.33	0	0	0
215	SLU 70	-0.27	-0.4	18.32	0	0	0
215	SLU 71	-0.27	-0.39	18.22	0	0	0
215	SLU 72	-0.27	-0.4	18.21	0	0	0
215	SLU 73	-0.27	-0.41	19.33	0	0	0
215	SLU 74	-0.28	-0.4	19.65	0	0	0
215	SLU 75	-0.28	-0.41	19.64	0	0	0
215	SLU 76	-0.27	-0.42	19.53	0	0	0
215	SLU 77	-0.28	-0.41	19.85	0	0	0
215	SLU 78	-0.28	-0.41	19.84	0	0	0
215	SLU 79	-0.28	-0.41	19.73	0	0	0
215	SLU 80	-0.28	-0.41	19.73	0	0	0
215	SLU 81	-0.28	-0.41	20	0	0	0
215	SLU 82	-0.28	-0.41	19.99	0	0	0
215	SLU 83	-0.28	-0.41	20.19	0	0	0
215	SLU 84	-0.28	-0.42	20.18	0	0	0
215	SLE RA 1	-0.2	-0.29	13.41	0	0	0
215	SLE RA 2	-0.19	-0.3	13.4	0	0	0
215	SLE RA 3	-0.2	-0.3	13.61	0	0	0
215	SLE RA 4	-0.2	-0.3	13.61	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
215	SLE RA 5	-0.2	-0.3	13.53	0	0	0
215	SLE RA 6	-0.2	-0.3	13.74	0	0	0
215	SLE RA 7	-0.2	-0.3	13.74	0	0	0
215	SLE RA 8	-0.2	-0.3	13.67	0	0	0
215	SLE RA 9	-0.2	-0.3	13.66	0	0	0
215	SLE RA 10	-0.2	-0.31	14.41	0	0	0
215	SLE RA 11	-0.21	-0.31	14.62	0	0	0
215	SLE RA 12	-0.21	-0.31	14.62	0	0	0
215	SLE RA 13	-0.2	-0.32	14.54	0	0	0
215	SLE RA 14	-0.21	-0.31	14.75	0	0	0
215	SLE RA 15	-0.21	-0.31	14.75	0	0	0
215	SLE RA 16	-0.21	-0.31	14.68	0	0	0
215	SLE RA 17	-0.21	-0.31	14.68	0	0	0
215	SLE RA 18	-0.21	-0.31	14.85	0	0	0
215	SLE RA 19	-0.21	-0.31	14.85	0	0	0
215	SLE RA 20	-0.21	-0.31	14.98	0	0	0
215	SLE RA 21	-0.21	-0.32	14.98	0	0	0
215	SLE FR 1	-0.2	-0.29	13.41	0	0	0
215	SLE FR 2	-0.2	-0.29	13.41	0	0	0
215	SLE FR 3	-0.2	-0.29	13.46	0	0	0
215	SLE FR 4	-0.2	-0.3	13.84	0	0	0
215	SLE FR 5	-0.2	-0.3	13.89	0	0	0
215	SLE FR 6	-0.2	-0.3	14.13	0	0	0
215	SLE QP 1	-0.2	-0.29	13.41	0	0	0
215	SLE QP 2	-0.2	-0.3	13.84	0	0	0
215	SLD 1	0.95	-0.25	14.73	0	0	0
215	SLD 2	1.06	-0.3	14.7	0	0	0
215	SLD 3	0.87	-0.57	14.52	0	0	0
215	SLD 4	0.98	-0.63	14.48	0	0	0
215	SLD 5	0.25	0.22	14.44	0	0	0
215	SLD 6	0.32	0.19	14.41	0	0	0
215	SLD 7	-0.03	-0.86	13.73	0	0	0
215	SLD 8	0.04	-0.9	13.71	0	0	0
215	SLD 9	-0.45	0.3	13.98	0	0	0
215	SLD 10	-0.38	0.27	13.95	0	0	0
215	SLD 11	-0.73	-0.78	13.27	0	0	0
215	SLD 12	-0.66	-0.81	13.25	0	0	0
215	SLD 13	-1.38	0.03	13.2	0	0	0
215	SLD 14	-1.27	-0.02	13.16	0	0	0
215	SLD 15	-1.47	-0.29	12.99	0	0	0
215	SLD 16	-1.36	-0.35	12.95	0	0	0
215	SLV 1	2.5	-0.2	15.92	0	0	0
215	SLV 2	2.75	-0.32	15.83	0	0	0
215	SLV 3	2.31	-0.93	15.44	0	0	0
215	SLV 4	2.56	-1.05	15.35	0	0	0
215	SLV 5	0.86	0.87	15.21	0	0	0
215	SLV 6	1.02	0.79	15.15	0	0	0
215	SLV 7	0.21	-1.58	13.61	0	0	0
215	SLV 8	0.37	-1.66	13.55	0	0	0
215	SLV 9	-0.78	1.07	14.13	0	0	0
215	SLV 10	-0.61	0.99	14.07	0	0	0
215	SLV 11	-1.43	-1.39	12.54	0	0	0
215	SLV 12	-1.27	-1.47	12.48	0	0	0
215	SLV 13	-2.96	0.46	12.33	0	0	0
215	SLV 14	-2.71	0.34	12.25	0	0	0
215	SLV 15	-3.16	-0.28	11.85	0	0	0
215	SLV 16	-2.91	-0.4	11.77	0	0	0
215	CRTFP Ux+	0	0	0	0	0	0
215	CRTFP Ux-	0	0	0	0	0	0
216	SLU 1	-0.17	-0.24	11.75	0	0	0
216	SLU 2	-0.16	-0.25	11.74	0	0	0
216	SLU 3	-0.17	-0.24	12.03	0	0	0
216	SLU 4	-0.17	-0.25	12.02	0	0	0
216	SLU 5	-0.17	-0.25	11.92	0	0	0
216	SLU 6	-0.18	-0.24	12.2	0	0	0
216	SLU 7	-0.18	-0.25	12.2	0	0	0
216	SLU 8	-0.18	-0.24	12.1	0	0	0
216	SLU 9	-0.17	-0.25	12.1	0	0	0
216	SLU 10	-0.17	-0.26	13.12	0	0	0
216	SLU 11	-0.18	-0.25	13.4	0	0	0
216	SLU 12	-0.18	-0.26	13.4	0	0	0
216	SLU 13	-0.18	-0.27	13.29	0	0	0
216	SLU 14	-0.19	-0.26	13.58	0	0	0
216	SLU 15	-0.18	-0.26	13.57	0	0	0
216	SLU 16	-0.19	-0.26	13.48	0	0	0
216	SLU 17	-0.18	-0.26	13.47	0	0	0
216	SLU 18	-0.18	-0.26	13.72	0	0	0
216	SLU 19	-0.18	-0.26	13.71	0	0	0
216	SLU 20	-0.19	-0.26	13.89	0	0	0
216	SLU 21	-0.18	-0.27	13.89	0	0	0
216	SLU 22	-0.19	-0.24	13	0	0	0
216	SLU 23	-0.19	-0.25	12.99	0	0	0
216	SLU 24	-0.2	-0.24	13.27	0	0	0
216	SLU 25	-0.19	-0.25	13.27	0	0	0
216	SLU 26	-0.19	-0.25	13.16	0	0	0
216	SLU 27	-0.2	-0.24	13.45	0	0	0
216	SLU 28	-0.2	-0.25	13.44	0	0	0
216	SLU 29	-0.2	-0.24	13.35	0	0	0
216	SLU 30	-0.19	-0.25	13.34	0	0	0
216	SLU 31	-0.2	-0.26	14.36	0	0	0
216	SLU 32	-0.21	-0.25	14.65	0	0	0
216	SLU 33	-0.2	-0.26	14.64	0	0	0
216	SLU 34	-0.2	-0.26	14.54	0	0	0
216	SLU 35	-0.21	-0.26	14.83	0	0	0
216	SLU 36	-0.21	-0.26	14.82	0	0	0
216	SLU 37	-0.21	-0.26	14.73	0	0	0
216	SLU 38	-0.2	-0.26	14.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
216	SLU 39	-0.2	-0.26	14.96	0	0	0
216	SLU 40	-0.2	-0.26	14.96	0	0	0
216	SLU 41	-0.21	-0.26	15.14	0	0	0
216	SLU 42	-0.21	-0.27	15.13	0	0	0
216	SLU 43	-0.21	-0.31	14.85	0	0	0
216	SLU 44	-0.21	-0.32	14.84	0	0	0
216	SLU 45	-0.22	-0.31	15.13	0	0	0
216	SLU 46	-0.22	-0.32	15.12	0	0	0
216	SLU 47	-0.21	-0.32	15.02	0	0	0
216	SLU 48	-0.22	-0.31	15.3	0	0	0
216	SLU 49	-0.22	-0.32	15.3	0	0	0
216	SLU 50	-0.22	-0.31	15.2	0	0	0
216	SLU 51	-0.22	-0.32	15.2	0	0	0
216	SLU 52	-0.22	-0.33	16.21	0	0	0
216	SLU 53	-0.23	-0.32	16.5	0	0	0
216	SLU 54	-0.22	-0.33	16.49	0	0	0
216	SLU 55	-0.22	-0.34	16.39	0	0	0
216	SLU 56	-0.23	-0.33	16.68	0	0	0
216	SLU 57	-0.23	-0.33	16.67	0	0	0
216	SLU 58	-0.23	-0.33	16.58	0	0	0
216	SLU 59	-0.23	-0.33	16.57	0	0	0
216	SLU 60	-0.23	-0.33	16.81	0	0	0
216	SLU 61	-0.22	-0.33	16.81	0	0	0
216	SLU 62	-0.23	-0.33	16.99	0	0	0
216	SLU 63	-0.23	-0.34	16.98	0	0	0
216	SLU 64	-0.24	-0.31	16.1	0	0	0
216	SLU 65	-0.23	-0.32	16.09	0	0	0
216	SLU 66	-0.24	-0.31	16.37	0	0	0
216	SLU 67	-0.24	-0.32	16.37	0	0	0
216	SLU 68	-0.23	-0.32	16.26	0	0	0
216	SLU 69	-0.24	-0.31	16.55	0	0	0
216	SLU 70	-0.24	-0.32	16.54	0	0	0
216	SLU 71	-0.24	-0.31	16.45	0	0	0
216	SLU 72	-0.24	-0.32	16.44	0	0	0
216	SLU 73	-0.24	-0.33	17.46	0	0	0
216	SLU 74	-0.25	-0.32	17.75	0	0	0
216	SLU 75	-0.25	-0.33	17.74	0	0	0
216	SLU 76	-0.24	-0.34	17.64	0	0	0
216	SLU 77	-0.25	-0.33	17.92	0	0	0
216	SLU 78	-0.25	-0.33	17.92	0	0	0
216	SLU 79	-0.25	-0.33	17.82	0	0	0
216	SLU 80	-0.25	-0.33	17.82	0	0	0
216	SLU 81	-0.25	-0.33	18.06	0	0	0
216	SLU 82	-0.25	-0.33	18.05	0	0	0
216	SLU 83	-0.25	-0.33	18.24	0	0	0
216	SLU 84	-0.25	-0.34	18.23	0	0	0
216	SLE RA 1	-0.18	-0.24	12.11	0	0	0
216	SLE RA 2	-0.17	-0.25	12.1	0	0	0
216	SLE RA 3	-0.18	-0.24	12.29	0	0	0
216	SLE RA 4	-0.18	-0.24	12.29	0	0	0
216	SLE RA 5	-0.18	-0.25	12.22	0	0	0
216	SLE RA 6	-0.18	-0.24	12.41	0	0	0
216	SLE RA 7	-0.18	-0.25	12.41	0	0	0
216	SLE RA 8	-0.18	-0.24	12.34	0	0	0
216	SLE RA 9	-0.18	-0.25	12.34	0	0	0
216	SLE RA 10	-0.18	-0.25	13.02	0	0	0
216	SLE RA 11	-0.19	-0.25	13.21	0	0	0
216	SLE RA 12	-0.18	-0.25	13.2	0	0	0
216	SLE RA 13	-0.18	-0.26	13.13	0	0	0
216	SLE RA 14	-0.19	-0.25	13.33	0	0	0
216	SLE RA 15	-0.19	-0.25	13.32	0	0	0
216	SLE RA 16	-0.19	-0.25	13.26	0	0	0
216	SLE RA 17	-0.19	-0.25	13.25	0	0	0
216	SLE RA 18	-0.19	-0.25	13.42	0	0	0
216	SLE RA 19	-0.18	-0.25	13.41	0	0	0
216	SLE RA 20	-0.19	-0.25	13.53	0	0	0
216	SLE RA 21	-0.19	-0.26	13.53	0	0	0
216	SLE FR 1	-0.18	-0.24	12.11	0	0	0
216	SLE FR 2	-0.18	-0.24	12.11	0	0	0
216	SLE FR 3	-0.18	-0.24	12.15	0	0	0
216	SLE FR 4	-0.18	-0.24	12.5	0	0	0
216	SLE FR 5	-0.18	-0.24	12.55	0	0	0
216	SLE FR 6	-0.18	-0.24	12.76	0	0	0
216	SLE QP 1	-0.18	-0.24	12.11	0	0	0
216	SLE QP 2	-0.18	-0.24	12.5	0	0	0
216	SLD 1	0.9	-0.18	13.18	0	0	0
216	SLD 2	1	-0.22	13.15	0	0	0
216	SLD 3	0.82	-0.48	12.99	0	0	0
216	SLD 4	0.92	-0.53	12.96	0	0	0
216	SLD 5	0.24	0.25	13	0	0	0
216	SLD 6	0.31	0.22	12.98	0	0	0
216	SLD 7	-0.02	-0.77	12.37	0	0	0
216	SLD 8	0.05	-0.8	12.35	0	0	0
216	SLD 9	-0.41	0.31	12.66	0	0	0
216	SLD 10	-0.34	0.29	12.64	0	0	0
216	SLD 11	-0.67	-0.7	12.02	0	0	0
216	SLD 12	-0.6	-0.73	12	0	0	0
216	SLD 13	-1.28	0.05	12.04	0	0	0
216	SLD 14	-1.18	0	12.01	0	0	0
216	SLD 15	-1.36	-0.26	11.85	0	0	0
216	SLD 16	-1.26	-0.3	11.82	0	0	0
216	SLV 1	2.34	-0.11	14.09	0	0	0
216	SLV 2	2.58	-0.21	14.02	0	0	0
216	SLV 3	2.16	-0.8	13.66	0	0	0
216	SLV 4	2.39	-0.9	13.59	0	0	0
216	SLV 5	0.81	0.86	13.64	0	0	0
216	SLV 6	0.96	0.79	13.6	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
216	SLV 7	0.21	-1.43	12.21	0	0	0
216	SLV 8	0.36	-1.5	12.16	0	0	0
216	SLV 9	-0.72	1.02	12.84	0	0	0
216	SLV 10	-0.56	0.95	12.79	0	0	0
216	SLV 11	-1.32	-1.28	11.4	0	0	0
216	SLV 12	-1.17	-1.34	11.36	0	0	0
216	SLV 13	-2.75	0.42	11.41	0	0	0
216	SLV 14	-2.52	0.32	11.34	0	0	0
216	SLV 15	-2.93	-0.27	10.98	0	0	0
216	SLV 16	-2.7	-0.37	10.91	0	0	0
217	SLU 1	-0.16	-0.2	11.29	0	0	0
217	SLU 2	-0.16	-0.21	11.28	0	0	0
217	SLU 3	-0.17	-0.2	11.55	0	0	0
217	SLU 4	-0.16	-0.2	11.55	0	0	0
217	SLU 5	-0.16	-0.21	11.44	0	0	0
217	SLU 6	-0.17	-0.2	11.72	0	0	0
217	SLU 7	-0.17	-0.21	11.71	0	0	0
217	SLU 8	-0.17	-0.2	11.62	0	0	0
217	SLU 9	-0.17	-0.21	11.62	0	0	0
217	SLU 10	-0.17	-0.22	12.6	0	0	0
217	SLU 11	-0.18	-0.21	12.88	0	0	0
217	SLU 12	-0.17	-0.21	12.87	0	0	0
217	SLU 13	-0.17	-0.22	12.77	0	0	0
217	SLU 14	-0.18	-0.21	13.05	0	0	0
217	SLU 15	-0.18	-0.22	13.04	0	0	0
217	SLU 16	-0.18	-0.21	12.95	0	0	0
217	SLU 17	-0.17	-0.22	12.94	0	0	0
217	SLU 18	-0.18	-0.21	13.18	0	0	0
217	SLU 19	-0.17	-0.22	13.18	0	0	0
217	SLU 20	-0.18	-0.21	13.35	0	0	0
217	SLU 21	-0.18	-0.22	13.34	0	0	0
217	SLU 22	-0.18	-0.19	12.48	0	0	0
217	SLU 23	-0.18	-0.2	12.47	0	0	0
217	SLU 24	-0.19	-0.19	12.75	0	0	0
217	SLU 25	-0.18	-0.2	12.74	0	0	0
217	SLU 26	-0.18	-0.2	12.64	0	0	0
217	SLU 27	-0.19	-0.19	12.92	0	0	0
217	SLU 28	-0.19	-0.2	12.91	0	0	0
217	SLU 29	-0.19	-0.2	12.82	0	0	0
217	SLU 30	-0.19	-0.2	12.81	0	0	0
217	SLU 31	-0.19	-0.21	13.8	0	0	0
217	SLU 32	-0.2	-0.2	14.07	0	0	0
217	SLU 33	-0.19	-0.21	14.07	0	0	0
217	SLU 34	-0.19	-0.21	13.97	0	0	0
217	SLU 35	-0.2	-0.2	14.24	0	0	0
217	SLU 36	-0.2	-0.21	14.24	0	0	0
217	SLU 37	-0.2	-0.2	14.15	0	0	0
217	SLU 38	-0.19	-0.21	14.14	0	0	0
217	SLU 39	-0.2	-0.2	14.38	0	0	0
217	SLU 40	-0.19	-0.21	14.37	0	0	0
217	SLU 41	-0.2	-0.21	14.55	0	0	0
217	SLU 42	-0.2	-0.21	14.54	0	0	0
217	SLU 43	-0.2	-0.26	14.26	0	0	0
217	SLU 44	-0.2	-0.27	14.25	0	0	0
217	SLU 45	-0.21	-0.26	14.53	0	0	0
217	SLU 46	-0.21	-0.27	14.52	0	0	0
217	SLU 47	-0.2	-0.27	14.42	0	0	0
217	SLU 48	-0.21	-0.26	14.7	0	0	0
217	SLU 49	-0.21	-0.27	14.69	0	0	0
217	SLU 50	-0.21	-0.26	14.6	0	0	0
217	SLU 51	-0.21	-0.27	14.59	0	0	0
217	SLU 52	-0.21	-0.28	15.58	0	0	0
217	SLU 53	-0.22	-0.27	15.85	0	0	0
217	SLU 54	-0.21	-0.27	15.85	0	0	0
217	SLU 55	-0.21	-0.28	15.75	0	0	0
217	SLU 56	-0.22	-0.27	16.02	0	0	0
217	SLU 57	-0.22	-0.28	16.02	0	0	0
217	SLU 58	-0.22	-0.27	15.93	0	0	0
217	SLU 59	-0.22	-0.28	15.92	0	0	0
217	SLU 60	-0.22	-0.27	16.16	0	0	0
217	SLU 61	-0.21	-0.28	16.15	0	0	0
217	SLU 62	-0.22	-0.27	16.33	0	0	0
217	SLU 63	-0.22	-0.28	16.32	0	0	0
217	SLU 64	-0.22	-0.25	15.46	0	0	0
217	SLU 65	-0.22	-0.26	15.45	0	0	0
217	SLU 66	-0.23	-0.25	15.72	0	0	0
217	SLU 67	-0.23	-0.26	15.72	0	0	0
217	SLU 68	-0.22	-0.27	15.62	0	0	0
217	SLU 69	-0.23	-0.26	15.89	0	0	0
217	SLU 70	-0.23	-0.26	15.89	0	0	0
217	SLU 71	-0.23	-0.26	15.79	0	0	0
217	SLU 72	-0.23	-0.26	15.79	0	0	0
217	SLU 73	-0.23	-0.27	16.77	0	0	0
217	SLU 74	-0.24	-0.26	17.05	0	0	0
217	SLU 75	-0.23	-0.27	17.04	0	0	0
217	SLU 76	-0.23	-0.27	16.94	0	0	0
217	SLU 77	-0.24	-0.26	17.22	0	0	0
217	SLU 78	-0.24	-0.27	17.21	0	0	0
217	SLU 79	-0.24	-0.26	17.12	0	0	0
217	SLU 80	-0.24	-0.27	17.12	0	0	0
217	SLU 81	-0.24	-0.26	17.35	0	0	0
217	SLU 82	-0.23	-0.27	17.35	0	0	0
217	SLU 83	-0.24	-0.27	17.52	0	0	0
217	SLU 84	-0.24	-0.27	17.52	0	0	0
217	SLE RA 1	-0.17	-0.19	11.63	0	0	0
217	SLE RA 2	-0.16	-0.2	11.62	0	0	0
217	SLE RA 3	-0.17	-0.2	11.8	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
217	SLE RA 4	-0.17	-0.2	11.8	0	0	0
217	SLE RA 5	-0.17	-0.2	11.73	0	0	0
217	SLE RA 6	-0.17	-0.2	11.92	0	0	0
217	SLE RA 7	-0.17	-0.2	11.91	0	0	0
217	SLE RA 8	-0.17	-0.2	11.85	0	0	0
217	SLE RA 9	-0.17	-0.2	11.85	0	0	0
217	SLE RA 10	-0.17	-0.21	12.51	0	0	0
217	SLE RA 11	-0.18	-0.2	12.69	0	0	0
217	SLE RA 12	-0.17	-0.21	12.68	0	0	0
217	SLE RA 13	-0.17	-0.21	12.62	0	0	0
217	SLE RA 14	-0.18	-0.2	12.8	0	0	0
217	SLE RA 15	-0.18	-0.21	12.8	0	0	0
217	SLE RA 16	-0.18	-0.2	12.74	0	0	0
217	SLE RA 17	-0.18	-0.21	12.73	0	0	0
217	SLE RA 18	-0.18	-0.2	12.89	0	0	0
217	SLE RA 19	-0.17	-0.21	12.89	0	0	0
217	SLE RA 20	-0.18	-0.2	13	0	0	0
217	SLE RA 21	-0.18	-0.21	13	0	0	0
217	SLE FR 1	-0.17	-0.19	11.63	0	0	0
217	SLE FR 2	-0.17	-0.2	11.63	0	0	0
217	SLE FR 3	-0.17	-0.2	11.67	0	0	0
217	SLE FR 4	-0.17	-0.2	12	0	0	0
217	SLE FR 5	-0.17	-0.2	12.05	0	0	0
217	SLE FR 6	-0.17	-0.2	12.26	0	0	0
217	SLE QP 1	-0.17	-0.19	11.63	0	0	0
217	SLE QP 2	-0.17	-0.2	12.01	0	0	0
217	SLD 1	0.88	-0.12	12.55	0	0	0
217	SLD 2	0.98	-0.16	12.52	0	0	0
217	SLD 3	0.81	-0.42	12.37	0	0	0
217	SLD 4	0.91	-0.46	12.34	0	0	0
217	SLD 5	0.24	0.29	12.45	0	0	0
217	SLD 6	0.31	0.26	12.43	0	0	0
217	SLD 7	-0.01	-0.71	11.84	0	0	0
217	SLD 8	0.05	-0.74	11.82	0	0	0
217	SLD 9	-0.4	0.34	12.19	0	0	0
217	SLD 10	-0.33	0.32	12.17	0	0	0
217	SLD 11	-0.65	-0.66	11.58	0	0	0
217	SLD 12	-0.59	-0.68	11.56	0	0	0
217	SLD 13	-1.25	0.06	11.67	0	0	0
217	SLD 14	-1.15	0.02	11.65	0	0	0
217	SLD 15	-1.32	-0.24	11.49	0	0	0
217	SLD 16	-1.23	-0.28	11.46	0	0	0
217	SLV 1	2.3	-0.02	13.27	0	0	0
217	SLV 2	2.53	-0.11	13.21	0	0	0
217	SLV 3	2.12	-0.7	12.85	0	0	0
217	SLV 4	2.35	-0.79	12.8	0	0	0
217	SLV 5	0.8	0.9	13.03	0	0	0
217	SLV 6	0.95	0.84	12.99	0	0	0
217	SLV 7	0.21	-1.36	11.64	0	0	0
217	SLV 8	0.35	-1.42	11.6	0	0	0
217	SLV 9	-0.7	1.03	12.41	0	0	0
217	SLV 10	-0.55	0.97	12.37	0	0	0
217	SLV 11	-1.29	-1.24	11.02	0	0	0
217	SLV 12	-1.14	-1.29	10.99	0	0	0
217	SLV 13	-2.69	0.4	11.22	0	0	0
217	SLV 14	-2.46	0.31	11.16	0	0	0
217	SLV 15	-2.87	-0.28	10.8	0	0	0
217	SLV 16	-2.64	-0.37	10.74	0	0	0
218	SLU 1	-0.16	-0.16	11.1	0	0	0
218	SLU 2	-0.15	-0.17	11.09	0	0	0
218	SLU 3	-0.16	-0.16	11.36	0	0	0
218	SLU 4	-0.16	-0.17	11.35	0	0	0
218	SLU 5	-0.16	-0.17	11.25	0	0	0
218	SLU 6	-0.17	-0.16	11.52	0	0	0
218	SLU 7	-0.16	-0.17	11.52	0	0	0
218	SLU 8	-0.16	-0.16	11.43	0	0	0
218	SLU 9	-0.16	-0.17	11.42	0	0	0
218	SLU 10	-0.16	-0.17	12.4	0	0	0
218	SLU 11	-0.17	-0.16	12.67	0	0	0
218	SLU 12	-0.17	-0.17	12.67	0	0	0
218	SLU 13	-0.16	-0.18	12.57	0	0	0
218	SLU 14	-0.17	-0.17	12.84	0	0	0
218	SLU 15	-0.17	-0.17	12.83	0	0	0
218	SLU 16	-0.17	-0.17	12.74	0	0	0
218	SLU 17	-0.17	-0.17	12.74	0	0	0
218	SLU 18	-0.17	-0.17	12.97	0	0	0
218	SLU 19	-0.17	-0.17	12.97	0	0	0
218	SLU 20	-0.17	-0.17	13.14	0	0	0
218	SLU 21	-0.17	-0.17	13.13	0	0	0
218	SLU 22	-0.18	-0.15	12.27	0	0	0
218	SLU 23	-0.17	-0.16	12.26	0	0	0
218	SLU 24	-0.18	-0.15	12.53	0	0	0
218	SLU 25	-0.18	-0.16	12.53	0	0	0
218	SLU 26	-0.18	-0.16	12.43	0	0	0
218	SLU 27	-0.18	-0.15	12.7	0	0	0
218	SLU 28	-0.18	-0.16	12.69	0	0	0
218	SLU 29	-0.18	-0.15	12.6	0	0	0
218	SLU 30	-0.18	-0.16	12.6	0	0	0
218	SLU 31	-0.18	-0.17	13.58	0	0	0
218	SLU 32	-0.19	-0.15	13.85	0	0	0
218	SLU 33	-0.19	-0.16	13.84	0	0	0
218	SLU 34	-0.18	-0.17	13.74	0	0	0
218	SLU 35	-0.19	-0.16	14.01	0	0	0
218	SLU 36	-0.19	-0.16	14.01	0	0	0
218	SLU 37	-0.19	-0.16	13.92	0	0	0
218	SLU 38	-0.19	-0.16	13.91	0	0	0
218	SLU 39	-0.19	-0.16	14.15	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
218	SLU 40	-0.19	-0.16	14.14	0	0	0
218	SLU 41	-0.19	-0.16	14.32	0	0	0
218	SLU 42	-0.19	-0.16	14.31	0	0	0
218	SLU 43	-0.2	-0.21	14.02	0	0	0
218	SLU 44	-0.19	-0.22	14.01	0	0	0
218	SLU 45	-0.2	-0.21	14.28	0	0	0
218	SLU 46	-0.2	-0.22	14.28	0	0	0
218	SLU 47	-0.2	-0.22	14.18	0	0	0
218	SLU 48	-0.21	-0.21	14.45	0	0	0
218	SLU 49	-0.2	-0.22	14.44	0	0	0
218	SLU 50	-0.2	-0.21	14.35	0	0	0
218	SLU 51	-0.2	-0.22	14.35	0	0	0
218	SLU 52	-0.2	-0.23	15.33	0	0	0
218	SLU 53	-0.21	-0.22	15.6	0	0	0
218	SLU 54	-0.21	-0.22	15.59	0	0	0
218	SLU 55	-0.21	-0.23	15.49	0	0	0
218	SLU 56	-0.21	-0.22	15.76	0	0	0
218	SLU 57	-0.21	-0.22	15.76	0	0	0
218	SLU 58	-0.21	-0.22	15.67	0	0	0
218	SLU 59	-0.21	-0.22	15.66	0	0	0
218	SLU 60	-0.21	-0.22	15.9	0	0	0
218	SLU 61	-0.21	-0.22	15.89	0	0	0
218	SLU 62	-0.21	-0.22	16.07	0	0	0
218	SLU 63	-0.21	-0.23	16.06	0	0	0
218	SLU 64	-0.22	-0.2	15.2	0	0	0
218	SLU 65	-0.21	-0.21	15.19	0	0	0
218	SLU 66	-0.22	-0.2	15.46	0	0	0
218	SLU 67	-0.22	-0.21	15.45	0	0	0
218	SLU 68	-0.22	-0.21	15.35	0	0	0
218	SLU 69	-0.23	-0.2	15.63	0	0	0
218	SLU 70	-0.22	-0.21	15.62	0	0	0
218	SLU 71	-0.22	-0.2	15.53	0	0	0
218	SLU 72	-0.22	-0.21	15.52	0	0	0
218	SLU 73	-0.22	-0.22	16.5	0	0	0
218	SLU 74	-0.23	-0.21	16.77	0	0	0
218	SLU 75	-0.23	-0.21	16.77	0	0	0
218	SLU 76	-0.22	-0.22	16.67	0	0	0
218	SLU 77	-0.23	-0.21	16.94	0	0	0
218	SLU 78	-0.23	-0.21	16.93	0	0	0
218	SLU 79	-0.23	-0.21	16.84	0	0	0
218	SLU 80	-0.23	-0.22	16.84	0	0	0
218	SLU 81	-0.23	-0.21	17.08	0	0	0
218	SLU 82	-0.23	-0.21	17.07	0	0	0
218	SLU 83	-0.23	-0.21	17.24	0	0	0
218	SLU 84	-0.23	-0.22	17.24	0	0	0
218	SLE RA 1	-0.16	-0.16	11.43	0	0	0
218	SLE RA 2	-0.16	-0.16	11.43	0	0	0
218	SLE RA 3	-0.17	-0.16	11.61	0	0	0
218	SLE RA 4	-0.16	-0.16	11.6	0	0	0
218	SLE RA 5	-0.16	-0.16	11.54	0	0	0
218	SLE RA 6	-0.17	-0.16	11.72	0	0	0
218	SLE RA 7	-0.17	-0.16	11.71	0	0	0
218	SLE RA 8	-0.17	-0.16	11.65	0	0	0
218	SLE RA 9	-0.17	-0.16	11.65	0	0	0
218	SLE RA 10	-0.17	-0.17	12.3	0	0	0
218	SLE RA 11	-0.17	-0.16	12.48	0	0	0
218	SLE RA 12	-0.17	-0.16	12.48	0	0	0
218	SLE RA 13	-0.17	-0.17	12.41	0	0	0
218	SLE RA 14	-0.17	-0.16	12.59	0	0	0
218	SLE RA 15	-0.17	-0.17	12.59	0	0	0
218	SLE RA 16	-0.17	-0.16	12.53	0	0	0
218	SLE RA 17	-0.17	-0.17	12.53	0	0	0
218	SLE RA 18	-0.17	-0.16	12.68	0	0	0
218	SLE RA 19	-0.17	-0.17	12.68	0	0	0
218	SLE RA 20	-0.17	-0.16	12.79	0	0	0
218	SLE RA 21	-0.17	-0.17	12.79	0	0	0
218	SLE FR 1	-0.16	-0.16	11.43	0	0	0
218	SLE FR 2	-0.16	-0.16	11.43	0	0	0
218	SLE FR 3	-0.16	-0.16	11.48	0	0	0
218	SLE FR 4	-0.17	-0.16	11.81	0	0	0
218	SLE FR 5	-0.17	-0.16	11.85	0	0	0
218	SLE FR 6	-0.17	-0.16	12.06	0	0	0
218	SLE QP 1	-0.16	-0.16	11.43	0	0	0
218	SLE QP 2	-0.17	-0.16	11.81	0	0	0
218	SLD 1	0.88	-0.06	12.23	0	0	0
218	SLD 2	0.98	-0.09	12.21	0	0	0
218	SLD 3	0.8	-0.36	12.05	0	0	0
218	SLD 4	0.9	-0.39	12.03	0	0	0
218	SLD 5	0.25	0.33	12.22	0	0	0
218	SLD 6	0.31	0.31	12.2	0	0	0
218	SLD 7	-0.01	-0.67	11.61	0	0	0
218	SLD 8	0.06	-0.69	11.59	0	0	0
218	SLD 9	-0.39	0.37	12.02	0	0	0
218	SLD 10	-0.32	0.35	12.01	0	0	0
218	SLD 11	-0.64	-0.62	11.41	0	0	0
218	SLD 12	-0.58	-0.65	11.4	0	0	0
218	SLD 13	-1.23	0.08	11.58	0	0	0
218	SLD 14	-1.13	0.05	11.56	0	0	0
218	SLD 15	-1.31	-0.22	11.4	0	0	0
218	SLD 16	-1.21	-0.25	11.38	0	0	0
218	SLV 1	2.28	0.06	12.8	0	0	0
218	SLV 2	2.51	-0.02	12.75	0	0	0
218	SLV 3	2.1	-0.62	12.39	0	0	0
218	SLV 4	2.33	-0.7	12.34	0	0	0
218	SLV 5	0.8	0.95	12.74	0	0	0
218	SLV 6	0.94	0.9	12.71	0	0	0
218	SLV 7	0.21	-1.31	11.36	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
218	SLV 8	0.35	-1.36	11.33	0	0	0
218	SLV 9	-0.69	1.05	12.28	0	0	0
218	SLV 10	-0.54	1	12.25	0	0	0
218	SLV 11	-1.27	-1.21	10.9	0	0	0
218	SLV 12	-1.13	-1.26	10.87	0	0	0
218	SLV 13	-2.66	0.38	11.28	0	0	0
218	SLV 14	-2.43	0.3	11.23	0	0	0
218	SLV 15	-2.84	-0.29	10.86	0	0	0
218	SLV 16	-2.61	-0.37	10.81	0	0	0
219	SLU 1	-0.16	-0.12	11.09	0	0	0
219	SLU 2	-0.15	-0.13	11.08	0	0	0
219	SLU 3	-0.16	-0.12	11.35	0	0	0
219	SLU 4	-0.16	-0.13	11.35	0	0	0
219	SLU 5	-0.15	-0.14	11.25	0	0	0
219	SLU 6	-0.16	-0.12	11.52	0	0	0
219	SLU 7	-0.16	-0.13	11.51	0	0	0
219	SLU 8	-0.16	-0.13	11.42	0	0	0
219	SLU 9	-0.16	-0.13	11.42	0	0	0
219	SLU 10	-0.16	-0.14	12.4	0	0	0
219	SLU 11	-0.17	-0.12	12.68	0	0	0
219	SLU 12	-0.16	-0.13	12.67	0	0	0
219	SLU 13	-0.16	-0.14	12.57	0	0	0
219	SLU 14	-0.17	-0.13	12.85	0	0	0
219	SLU 15	-0.17	-0.13	12.84	0	0	0
219	SLU 16	-0.17	-0.13	12.75	0	0	0
219	SLU 17	-0.17	-0.13	12.74	0	0	0
219	SLU 18	-0.17	-0.12	12.98	0	0	0
219	SLU 19	-0.16	-0.13	12.98	0	0	0
219	SLU 20	-0.17	-0.13	13.15	0	0	0
219	SLU 21	-0.17	-0.13	13.14	0	0	0
219	SLU 22	-0.17	-0.11	12.27	0	0	0
219	SLU 23	-0.17	-0.12	12.26	0	0	0
219	SLU 24	-0.18	-0.11	12.53	0	0	0
219	SLU 25	-0.18	-0.12	12.52	0	0	0
219	SLU 26	-0.17	-0.12	12.42	0	0	0
219	SLU 27	-0.18	-0.11	12.7	0	0	0
219	SLU 28	-0.18	-0.12	12.69	0	0	0
219	SLU 29	-0.18	-0.11	12.6	0	0	0
219	SLU 30	-0.18	-0.12	12.59	0	0	0
219	SLU 31	-0.18	-0.12	13.58	0	0	0
219	SLU 32	-0.19	-0.11	13.86	0	0	0
219	SLU 33	-0.18	-0.12	13.85	0	0	0
219	SLU 34	-0.18	-0.12	13.75	0	0	0
219	SLU 35	-0.19	-0.11	14.02	0	0	0
219	SLU 36	-0.19	-0.12	14.02	0	0	0
219	SLU 37	-0.19	-0.11	13.93	0	0	0
219	SLU 38	-0.19	-0.12	13.92	0	0	0
219	SLU 39	-0.19	-0.11	14.16	0	0	0
219	SLU 40	-0.18	-0.12	14.16	0	0	0
219	SLU 41	-0.19	-0.11	14.33	0	0	0
219	SLU 42	-0.19	-0.12	14.32	0	0	0
219	SLU 43	-0.2	-0.17	14.01	0	0	0
219	SLU 44	-0.19	-0.18	14	0	0	0
219	SLU 45	-0.2	-0.16	14.27	0	0	0
219	SLU 46	-0.2	-0.17	14.27	0	0	0
219	SLU 47	-0.19	-0.18	14.17	0	0	0
219	SLU 48	-0.2	-0.17	14.44	0	0	0
219	SLU 49	-0.2	-0.17	14.44	0	0	0
219	SLU 50	-0.2	-0.17	14.34	0	0	0
219	SLU 51	-0.2	-0.17	14.34	0	0	0
219	SLU 52	-0.2	-0.18	15.33	0	0	0
219	SLU 53	-0.21	-0.17	15.6	0	0	0
219	SLU 54	-0.2	-0.17	15.59	0	0	0
219	SLU 55	-0.2	-0.18	15.49	0	0	0
219	SLU 56	-0.21	-0.17	15.77	0	0	0
219	SLU 57	-0.21	-0.17	15.76	0	0	0
219	SLU 58	-0.21	-0.17	15.67	0	0	0
219	SLU 59	-0.21	-0.18	15.67	0	0	0
219	SLU 60	-0.21	-0.17	15.91	0	0	0
219	SLU 61	-0.2	-0.17	15.9	0	0	0
219	SLU 62	-0.21	-0.17	16.07	0	0	0
219	SLU 63	-0.21	-0.17	16.07	0	0	0
219	SLU 64	-0.21	-0.15	15.19	0	0	0
219	SLU 65	-0.21	-0.16	15.18	0	0	0
219	SLU 66	-0.22	-0.15	15.45	0	0	0
219	SLU 67	-0.22	-0.16	15.45	0	0	0
219	SLU 68	-0.21	-0.16	15.35	0	0	0
219	SLU 69	-0.22	-0.15	15.62	0	0	0
219	SLU 70	-0.22	-0.16	15.61	0	0	0
219	SLU 71	-0.22	-0.15	15.52	0	0	0
219	SLU 72	-0.22	-0.16	15.52	0	0	0
219	SLU 73	-0.22	-0.16	16.51	0	0	0
219	SLU 74	-0.23	-0.15	16.78	0	0	0
219	SLU 75	-0.22	-0.16	16.77	0	0	0
219	SLU 76	-0.22	-0.16	16.67	0	0	0
219	SLU 77	-0.23	-0.15	16.95	0	0	0
219	SLU 78	-0.23	-0.16	16.94	0	0	0
219	SLU 79	-0.23	-0.15	16.85	0	0	0
219	SLU 80	-0.23	-0.16	16.84	0	0	0
219	SLU 81	-0.23	-0.15	17.08	0	0	0
219	SLU 82	-0.22	-0.16	17.08	0	0	0
219	SLU 83	-0.23	-0.15	17.25	0	0	0
219	SLU 84	-0.23	-0.16	17.24	0	0	0
219	SLE RA 1	-0.16	-0.12	11.42	0	0	0
219	SLE RA 2	-0.16	-0.13	11.42	0	0	0
219	SLE RA 3	-0.16	-0.12	11.6	0	0	0
219	SLE RA 4	-0.16	-0.12	11.6	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
219	SLE RA 5	-0.16	-0.13	11.53	0	0	0
219	SLE RA 6	-0.17	-0.12	11.71	0	0	0
219	SLE RA 7	-0.16	-0.12	11.71	0	0	0
219	SLE RA 8	-0.16	-0.12	11.65	0	0	0
219	SLE RA 9	-0.16	-0.13	11.64	0	0	0
219	SLE RA 10	-0.16	-0.13	12.3	0	0	0
219	SLE RA 11	-0.17	-0.12	12.48	0	0	0
219	SLE RA 12	-0.17	-0.12	12.48	0	0	0
219	SLE RA 13	-0.17	-0.13	12.41	0	0	0
219	SLE RA 14	-0.17	-0.12	12.6	0	0	0
219	SLE RA 15	-0.17	-0.13	12.59	0	0	0
219	SLE RA 16	-0.17	-0.12	12.53	0	0	0
219	SLE RA 17	-0.17	-0.13	12.53	0	0	0
219	SLE RA 18	-0.17	-0.12	12.69	0	0	0
219	SLE RA 19	-0.17	-0.12	12.68	0	0	0
219	SLE RA 20	-0.17	-0.12	12.8	0	0	0
219	SLE RA 21	-0.17	-0.13	12.8	0	0	0
219	SLE FR 1	-0.16	-0.12	11.42	0	0	0
219	SLE FR 2	-0.16	-0.12	11.42	0	0	0
219	SLE FR 3	-0.16	-0.12	11.47	0	0	0
219	SLE FR 4	-0.16	-0.12	11.8	0	0	0
219	SLE FR 5	-0.16	-0.12	11.85	0	0	0
219	SLE FR 6	-0.16	-0.12	12.06	0	0	0
219	SLE QP 1	-0.16	-0.12	11.42	0	0	0
219	SLE QP 2	-0.16	-0.12	11.8	0	0	0
219	SLD 1	0.87	-0.01	12.13	0	0	0
219	SLD 2	0.97	-0.04	12.11	0	0	0
219	SLD 3	0.8	-0.31	11.94	0	0	0
219	SLD 4	0.9	-0.34	11.93	0	0	0
219	SLD 5	0.24	0.37	12.19	0	0	0
219	SLD 6	0.31	0.36	12.17	0	0	0
219	SLD 7	-0.01	-0.63	11.57	0	0	0
219	SLD 8	0.06	-0.64	11.56	0	0	0
219	SLD 9	-0.38	0.41	12.05	0	0	0
219	SLD 10	-0.32	0.39	12.04	0	0	0
219	SLD 11	-0.63	-0.6	11.43	0	0	0
219	SLD 12	-0.57	-0.61	11.42	0	0	0
219	SLD 13	-1.22	0.1	11.68	0	0	0
219	SLD 14	-1.13	0.07	11.66	0	0	0
219	SLD 15	-1.3	-0.2	11.5	0	0	0
219	SLD 16	-1.2	-0.23	11.48	0	0	0
219	SLV 1	2.26	0.13	12.56	0	0	0
219	SLV 2	2.49	0.07	12.52	0	0	0
219	SLV 3	2.09	-0.55	12.14	0	0	0
219	SLV 4	2.32	-0.61	12.1	0	0	0
219	SLV 5	0.79	1	12.68	0	0	0
219	SLV 6	0.94	0.96	12.65	0	0	0
219	SLV 7	0.21	-1.27	11.27	0	0	0
219	SLV 8	0.35	-1.31	11.25	0	0	0
219	SLV 9	-0.68	1.07	12.36	0	0	0
219	SLV 10	-0.53	1.03	12.33	0	0	0
219	SLV 11	-1.26	-1.2	10.96	0	0	0
219	SLV 12	-1.12	-1.24	10.93	0	0	0
219	SLV 13	-2.64	0.37	11.51	0	0	0
219	SLV 14	-2.41	0.31	11.47	0	0	0
219	SLV 15	-2.82	-0.31	11.09	0	0	0
219	SLV 16	-2.59	-0.37	11.05	0	0	0
220	SLU 1	-0.15	-0.09	11.19	0	0	0
220	SLU 2	-0.15	-0.1	11.18	0	0	0
220	SLU 3	-0.16	-0.09	11.46	0	0	0
220	SLU 4	-0.15	-0.1	11.46	0	0	0
220	SLU 5	-0.15	-0.1	11.35	0	0	0
220	SLU 6	-0.16	-0.09	11.63	0	0	0
220	SLU 7	-0.16	-0.1	11.63	0	0	0
220	SLU 8	-0.16	-0.09	11.53	0	0	0
220	SLU 9	-0.16	-0.1	11.53	0	0	0
220	SLU 10	-0.16	-0.1	12.54	0	0	0
220	SLU 11	-0.17	-0.09	12.82	0	0	0
220	SLU 12	-0.16	-0.09	12.81	0	0	0
220	SLU 13	-0.16	-0.1	12.71	0	0	0
220	SLU 14	-0.17	-0.09	12.99	0	0	0
220	SLU 15	-0.17	-0.09	12.98	0	0	0
220	SLU 16	-0.17	-0.09	12.89	0	0	0
220	SLU 17	-0.16	-0.1	12.88	0	0	0
220	SLU 18	-0.16	-0.09	13.13	0	0	0
220	SLU 19	-0.16	-0.09	13.12	0	0	0
220	SLU 20	-0.17	-0.09	13.3	0	0	0
220	SLU 21	-0.16	-0.09	13.29	0	0	0
220	SLU 22	-0.17	-0.07	12.39	0	0	0
220	SLU 23	-0.17	-0.08	12.38	0	0	0
220	SLU 24	-0.18	-0.07	12.66	0	0	0
220	SLU 25	-0.17	-0.08	12.65	0	0	0
220	SLU 26	-0.17	-0.08	12.55	0	0	0
220	SLU 27	-0.18	-0.07	12.83	0	0	0
220	SLU 28	-0.18	-0.08	12.82	0	0	0
220	SLU 29	-0.18	-0.07	12.73	0	0	0
220	SLU 30	-0.18	-0.08	12.72	0	0	0
220	SLU 31	-0.18	-0.08	13.73	0	0	0
220	SLU 32	-0.18	-0.07	14.01	0	0	0
220	SLU 33	-0.18	-0.08	14	0	0	0
220	SLU 34	-0.18	-0.08	13.9	0	0	0
220	SLU 35	-0.19	-0.07	14.18	0	0	0
220	SLU 36	-0.18	-0.08	14.17	0	0	0
220	SLU 37	-0.19	-0.07	14.08	0	0	0
220	SLU 38	-0.18	-0.08	14.08	0	0	0
220	SLU 39	-0.18	-0.07	14.32	0	0	0
220	SLU 40	-0.18	-0.08	14.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
220	SLU 41	-0.19	-0.07	14.49	0	0	0
220	SLU 42	-0.18	-0.08	14.49	0	0	0
220	SLU 43	-0.19	-0.12	14.14	0	0	0
220	SLU 44	-0.19	-0.13	14.13	0	0	0
220	SLU 45	-0.2	-0.12	14.41	0	0	0
220	SLU 46	-0.19	-0.13	14.41	0	0	0
220	SLU 47	-0.19	-0.14	14.3	0	0	0
220	SLU 48	-0.2	-0.12	14.58	0	0	0
220	SLU 49	-0.2	-0.13	14.57	0	0	0
220	SLU 50	-0.2	-0.13	14.48	0	0	0
220	SLU 51	-0.2	-0.13	14.48	0	0	0
220	SLU 52	-0.2	-0.13	15.49	0	0	0
220	SLU 53	-0.2	-0.12	15.76	0	0	0
220	SLU 54	-0.2	-0.13	15.76	0	0	0
220	SLU 55	-0.2	-0.13	15.66	0	0	0
220	SLU 56	-0.21	-0.12	15.93	0	0	0
220	SLU 57	-0.2	-0.13	15.93	0	0	0
220	SLU 58	-0.21	-0.12	15.84	0	0	0
220	SLU 59	-0.2	-0.13	15.83	0	0	0
220	SLU 60	-0.2	-0.12	16.08	0	0	0
220	SLU 61	-0.2	-0.13	16.07	0	0	0
220	SLU 62	-0.21	-0.12	16.25	0	0	0
220	SLU 63	-0.2	-0.13	16.24	0	0	0
220	SLU 64	-0.21	-0.11	15.34	0	0	0
220	SLU 65	-0.21	-0.12	15.33	0	0	0
220	SLU 66	-0.22	-0.1	15.61	0	0	0
220	SLU 67	-0.21	-0.11	15.6	0	0	0
220	SLU 68	-0.21	-0.12	15.5	0	0	0
220	SLU 69	-0.22	-0.11	15.78	0	0	0
220	SLU 70	-0.22	-0.11	15.77	0	0	0
220	SLU 71	-0.22	-0.11	15.68	0	0	0
220	SLU 72	-0.21	-0.11	15.67	0	0	0
220	SLU 73	-0.21	-0.11	16.68	0	0	0
220	SLU 74	-0.22	-0.1	16.96	0	0	0
220	SLU 75	-0.22	-0.11	16.95	0	0	0
220	SLU 76	-0.22	-0.12	16.85	0	0	0
220	SLU 77	-0.23	-0.1	17.13	0	0	0
220	SLU 78	-0.22	-0.11	17.12	0	0	0
220	SLU 79	-0.23	-0.11	17.03	0	0	0
220	SLU 80	-0.22	-0.11	17.02	0	0	0
220	SLU 81	-0.22	-0.1	17.27	0	0	0
220	SLU 82	-0.22	-0.11	17.27	0	0	0
220	SLU 83	-0.23	-0.1	17.44	0	0	0
220	SLU 84	-0.22	-0.11	17.44	0	0	0
220	SLE RA 1	-0.16	-0.09	11.54	0	0	0
220	SLE RA 2	-0.15	-0.09	11.53	0	0	0
220	SLE RA 3	-0.16	-0.08	11.71	0	0	0
220	SLE RA 4	-0.16	-0.09	11.71	0	0	0
220	SLE RA 5	-0.16	-0.09	11.64	0	0	0
220	SLE RA 6	-0.16	-0.09	11.83	0	0	0
220	SLE RA 7	-0.16	-0.09	11.82	0	0	0
220	SLE RA 8	-0.16	-0.09	11.76	0	0	0
220	SLE RA 9	-0.16	-0.09	11.76	0	0	0
220	SLE RA 10	-0.16	-0.09	12.43	0	0	0
220	SLE RA 11	-0.17	-0.08	12.62	0	0	0
220	SLE RA 12	-0.16	-0.09	12.61	0	0	0
220	SLE RA 13	-0.16	-0.09	12.54	0	0	0
220	SLE RA 14	-0.17	-0.08	12.73	0	0	0
220	SLE RA 15	-0.17	-0.09	12.73	0	0	0
220	SLE RA 16	-0.17	-0.08	12.66	0	0	0
220	SLE RA 17	-0.17	-0.09	12.66	0	0	0
220	SLE RA 18	-0.17	-0.08	12.82	0	0	0
220	SLE RA 19	-0.16	-0.09	12.82	0	0	0
220	SLE RA 20	-0.17	-0.08	12.94	0	0	0
220	SLE RA 21	-0.17	-0.09	12.93	0	0	0
220	SLE FR 1	-0.16	-0.09	11.54	0	0	0
220	SLE FR 2	-0.16	-0.09	11.53	0	0	0
220	SLE FR 3	-0.16	-0.09	11.58	0	0	0
220	SLE FR 4	-0.16	-0.09	11.92	0	0	0
220	SLE FR 5	-0.16	-0.09	11.97	0	0	0
220	SLE FR 6	-0.16	-0.08	12.18	0	0	0
220	SLE QP 1	-0.16	-0.09	11.54	0	0	0
220	SLE QP 2	-0.16	-0.08	11.92	0	0	0
220	SLD 1	0.87	0.04	12.16	0	0	0
220	SLD 2	0.96	0.01	12.14	0	0	0
220	SLD 3	0.79	-0.26	11.97	0	0	0
220	SLD 4	0.89	-0.29	11.95	0	0	0
220	SLD 5	0.24	0.41	12.28	0	0	0
220	SLD 6	0.31	0.4	12.27	0	0	0
220	SLD 7	0	-0.59	11.65	0	0	0
220	SLD 8	0.06	-0.61	11.64	0	0	0
220	SLD 9	-0.38	0.44	12.2	0	0	0
220	SLD 10	-0.32	0.42	12.2	0	0	0
220	SLD 11	-0.63	-0.57	11.57	0	0	0
220	SLD 12	-0.56	-0.58	11.56	0	0	0
220	SLD 13	-1.21	0.12	11.89	0	0	0
220	SLD 14	-1.11	0.09	11.88	0	0	0
220	SLD 15	-1.29	-0.18	11.7	0	0	0
220	SLD 16	-1.19	-0.21	11.69	0	0	0
220	SLV 1	2.24	0.19	12.47	0	0	0
220	SLV 2	2.47	0.14	12.43	0	0	0
220	SLV 3	2.07	-0.49	12.03	0	0	0
220	SLV 4	2.3	-0.54	12	0	0	0
220	SLV 5	0.79	1.04	12.75	0	0	0
220	SLV 6	0.93	1	12.73	0	0	0
220	SLV 7	0.21	-1.23	11.31	0	0	0
220	SLV 8	0.35	-1.26	11.28	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
220	SLV 9	-0.67	1.09	12.56	0	0	0
220	SLV 10	-0.53	1.06	12.54	0	0	0
220	SLV 11	-1.25	-1.17	11.12	0	0	0
220	SLV 12	-1.11	-1.21	11.1	0	0	0
220	SLV 13	-2.62	0.37	11.84	0	0	0
220	SLV 14	-2.39	0.32	11.81	0	0	0
220	SLV 15	-2.79	-0.31	11.41	0	0	0
220	SLV 16	-2.57	-0.36	11.38	0	0	0
221	SLU 1	-0.14	-0.06	10.9	0	0	0
221	SLU 2	-0.14	-0.07	10.89	0	0	0
221	SLU 3	-0.15	-0.05	11.17	0	0	0
221	SLU 4	-0.15	-0.06	11.16	0	0	0
221	SLU 5	-0.14	-0.07	11.06	0	0	0
221	SLU 6	-0.15	-0.06	11.33	0	0	0
221	SLU 7	-0.15	-0.06	11.33	0	0	0
221	SLU 8	-0.15	-0.06	11.23	0	0	0
221	SLU 9	-0.15	-0.06	11.23	0	0	0
221	SLU 10	-0.15	-0.06	12.23	0	0	0
221	SLU 11	-0.16	-0.05	12.5	0	0	0
221	SLU 12	-0.15	-0.06	12.49	0	0	0
221	SLU 13	-0.15	-0.06	12.39	0	0	0
221	SLU 14	-0.16	-0.05	12.67	0	0	0
221	SLU 15	-0.16	-0.06	12.66	0	0	0
221	SLU 16	-0.16	-0.05	12.57	0	0	0
221	SLU 17	-0.16	-0.06	12.56	0	0	0
221	SLU 18	-0.16	-0.05	12.81	0	0	0
221	SLU 19	-0.15	-0.06	12.8	0	0	0
221	SLU 20	-0.16	-0.05	12.97	0	0	0
221	SLU 21	-0.16	-0.06	12.97	0	0	0
221	SLU 22	-0.16	-0.04	12.07	0	0	0
221	SLU 23	-0.16	-0.05	12.06	0	0	0
221	SLU 24	-0.17	-0.03	12.34	0	0	0
221	SLU 25	-0.16	-0.04	12.33	0	0	0
221	SLU 26	-0.16	-0.05	12.23	0	0	0
221	SLU 27	-0.17	-0.03	12.5	0	0	0
221	SLU 28	-0.17	-0.04	12.5	0	0	0
221	SLU 29	-0.17	-0.04	12.4	0	0	0
221	SLU 30	-0.17	-0.04	12.4	0	0	0
221	SLU 31	-0.17	-0.04	13.4	0	0	0
221	SLU 32	-0.17	-0.03	13.67	0	0	0
221	SLU 33	-0.17	-0.04	13.66	0	0	0
221	SLU 34	-0.17	-0.04	13.56	0	0	0
221	SLU 35	-0.18	-0.03	13.84	0	0	0
221	SLU 36	-0.17	-0.04	13.83	0	0	0
221	SLU 37	-0.18	-0.03	13.74	0	0	0
221	SLU 38	-0.17	-0.04	13.73	0	0	0
221	SLU 39	-0.17	-0.03	13.98	0	0	0
221	SLU 40	-0.17	-0.04	13.97	0	0	0
221	SLU 41	-0.18	-0.03	14.14	0	0	0
221	SLU 42	-0.17	-0.04	14.14	0	0	0
221	SLU 43	-0.18	-0.08	13.77	0	0	0
221	SLU 44	-0.18	-0.09	13.76	0	0	0
221	SLU 45	-0.19	-0.08	14.04	0	0	0
221	SLU 46	-0.18	-0.09	14.03	0	0	0
221	SLU 47	-0.18	-0.09	13.93	0	0	0
221	SLU 48	-0.19	-0.08	14.2	0	0	0
221	SLU 49	-0.19	-0.09	14.2	0	0	0
221	SLU 50	-0.19	-0.08	14.1	0	0	0
221	SLU 51	-0.18	-0.09	14.1	0	0	0
221	SLU 52	-0.18	-0.09	15.1	0	0	0
221	SLU 53	-0.19	-0.07	15.37	0	0	0
221	SLU 54	-0.19	-0.08	15.36	0	0	0
221	SLU 55	-0.19	-0.09	15.26	0	0	0
221	SLU 56	-0.2	-0.07	15.54	0	0	0
221	SLU 57	-0.19	-0.08	15.53	0	0	0
221	SLU 58	-0.2	-0.08	15.44	0	0	0
221	SLU 59	-0.19	-0.08	15.43	0	0	0
221	SLU 60	-0.19	-0.07	15.68	0	0	0
221	SLU 61	-0.19	-0.08	15.67	0	0	0
221	SLU 62	-0.2	-0.07	15.84	0	0	0
221	SLU 63	-0.19	-0.08	15.84	0	0	0
221	SLU 64	-0.2	-0.06	14.94	0	0	0
221	SLU 65	-0.19	-0.07	14.93	0	0	0
221	SLU 66	-0.2	-0.06	15.21	0	0	0
221	SLU 67	-0.2	-0.06	15.2	0	0	0
221	SLU 68	-0.2	-0.07	15.1	0	0	0
221	SLU 69	-0.21	-0.06	15.37	0	0	0
221	SLU 70	-0.2	-0.06	15.37	0	0	0
221	SLU 71	-0.21	-0.06	15.27	0	0	0
221	SLU 72	-0.2	-0.07	15.27	0	0	0
221	SLU 73	-0.2	-0.07	16.27	0	0	0
221	SLU 74	-0.21	-0.05	16.54	0	0	0
221	SLU 75	-0.21	-0.06	16.53	0	0	0
221	SLU 76	-0.21	-0.07	16.43	0	0	0
221	SLU 77	-0.21	-0.05	16.71	0	0	0
221	SLU 78	-0.21	-0.06	16.7	0	0	0
221	SLU 79	-0.21	-0.06	16.61	0	0	0
221	SLU 80	-0.21	-0.06	16.6	0	0	0
221	SLU 81	-0.21	-0.05	16.85	0	0	0
221	SLU 82	-0.21	-0.06	16.84	0	0	0
221	SLU 83	-0.21	-0.05	17.01	0	0	0
221	SLU 84	-0.21	-0.06	17.01	0	0	0
221	SLE RA 1	-0.15	-0.05	11.24	0	0	0
221	SLE RA 2	-0.15	-0.06	11.23	0	0	0
221	SLE RA 3	-0.15	-0.05	11.41	0	0	0
221	SLE RA 4	-0.15	-0.05	11.41	0	0	0
221	SLE RA 5	-0.15	-0.06	11.34	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
221	SLE RA 6	-0.15	-0.05	11.52	0	0	0
221	SLE RA 7	-0.15	-0.05	11.52	0	0	0
221	SLE RA 8	-0.15	-0.05	11.46	0	0	0
221	SLE RA 9	-0.15	-0.06	11.45	0	0	0
221	SLE RA 10	-0.15	-0.05	12.12	0	0	0
221	SLE RA 11	-0.16	-0.05	12.3	0	0	0
221	SLE RA 12	-0.16	-0.05	12.3	0	0	0
221	SLE RA 13	-0.15	-0.05	12.23	0	0	0
221	SLE RA 14	-0.16	-0.05	12.41	0	0	0
221	SLE RA 15	-0.16	-0.05	12.41	0	0	0
221	SLE RA 16	-0.16	-0.05	12.35	0	0	0
221	SLE RA 17	-0.16	-0.05	12.34	0	0	0
221	SLE RA 18	-0.16	-0.05	12.51	0	0	0
221	SLE RA 19	-0.15	-0.05	12.5	0	0	0
221	SLE RA 20	-0.16	-0.05	12.62	0	0	0
221	SLE RA 21	-0.16	-0.05	12.61	0	0	0
221	SLE FR 1	-0.15	-0.05	11.24	0	0	0
221	SLE FR 2	-0.15	-0.05	11.24	0	0	0
221	SLE FR 3	-0.15	-0.05	11.28	0	0	0
221	SLE FR 4	-0.15	-0.05	11.62	0	0	0
221	SLE FR 5	-0.15	-0.05	11.66	0	0	0
221	SLE FR 6	-0.15	-0.05	11.87	0	0	0
221	SLE QP 1	-0.15	-0.05	11.24	0	0	0
221	SLE QP 2	-0.15	-0.05	11.62	0	0	0
221	SLD 1	0.82	0.14	11.78	0	0	0
221	SLD 2	0.91	0.12	11.77	0	0	0
221	SLD 3	0.75	-0.15	11.59	0	0	0
221	SLD 4	0.84	-0.16	11.58	0	0	0
221	SLD 5	0.23	0.45	11.95	0	0	0
221	SLD 6	0.29	0.43	11.95	0	0	0
221	SLD 7	0	-0.51	11.33	0	0	0
221	SLD 8	0.06	-0.52	11.32	0	0	0
221	SLD 9	-0.36	0.42	11.92	0	0	0
221	SLD 10	-0.3	0.41	11.91	0	0	0
221	SLD 11	-0.59	-0.53	11.29	0	0	0
221	SLD 12	-0.53	-0.55	11.28	0	0	0
221	SLD 13	-1.14	0.07	11.66	0	0	0
221	SLD 14	-1.05	0.05	11.65	0	0	0
221	SLD 15	-1.21	-0.22	11.47	0	0	0
221	SLD 16	-1.12	-0.24	11.46	0	0	0
221	SLV 1	2.12	0.38	11.98	0	0	0
221	SLV 2	2.34	0.34	11.96	0	0	0
221	SLV 3	1.96	-0.27	11.55	0	0	0
221	SLV 4	2.17	-0.31	11.53	0	0	0
221	SLV 5	0.74	1.07	12.38	0	0	0
221	SLV 6	0.88	1.05	12.36	0	0	0
221	SLV 7	0.2	-1.09	10.95	0	0	0
221	SLV 8	0.33	-1.12	10.94	0	0	0
221	SLV 9	-0.64	1.02	12.3	0	0	0
221	SLV 10	-0.5	0.99	12.28	0	0	0
221	SLV 11	-1.18	-1.15	10.87	0	0	0
221	SLV 12	-1.05	-1.17	10.86	0	0	0
221	SLV 13	-2.47	0.21	11.71	0	0	0
221	SLV 14	-2.26	0.17	11.68	0	0	0
221	SLV 15	-2.64	-0.44	11.28	0	0	0
221	SLV 16	-2.43	-0.48	11.25	0	0	0
223	SLU 1	-0.1	-0.19	7.33	0	0	0
223	SLU 2	-0.1	-0.19	7.32	0	0	0
223	SLU 3	-0.11	-0.19	7.5	0	0	0
223	SLU 4	-0.11	-0.19	7.5	0	0	0
223	SLU 5	-0.1	-0.2	7.43	0	0	0
223	SLU 6	-0.11	-0.19	7.61	0	0	0
223	SLU 7	-0.11	-0.2	7.61	0	0	0
223	SLU 8	-0.11	-0.19	7.55	0	0	0
223	SLU 9	-0.11	-0.2	7.54	0	0	0
223	SLU 10	-0.11	-0.21	8.17	0	0	0
223	SLU 11	-0.11	-0.2	8.35	0	0	0
223	SLU 12	-0.11	-0.21	8.35	0	0	0
223	SLU 13	-0.11	-0.21	8.28	0	0	0
223	SLU 14	-0.12	-0.2	8.46	0	0	0
223	SLU 15	-0.11	-0.21	8.46	0	0	0
223	SLU 16	-0.11	-0.2	8.4	0	0	0
223	SLU 17	-0.11	-0.21	8.4	0	0	0
223	SLU 18	-0.11	-0.2	8.55	0	0	0
223	SLU 19	-0.11	-0.21	8.54	0	0	0
223	SLU 20	-0.12	-0.21	8.66	0	0	0
223	SLU 21	-0.11	-0.21	8.65	0	0	0
223	SLU 22	-0.12	-0.19	8.11	0	0	0
223	SLU 23	-0.11	-0.2	8.1	0	0	0
223	SLU 24	-0.12	-0.2	8.28	0	0	0
223	SLU 25	-0.12	-0.2	8.28	0	0	0
223	SLU 26	-0.12	-0.2	8.21	0	0	0
223	SLU 27	-0.12	-0.2	8.39	0	0	0
223	SLU 28	-0.12	-0.2	8.39	0	0	0
223	SLU 29	-0.12	-0.2	8.33	0	0	0
223	SLU 30	-0.12	-0.2	8.33	0	0	0
223	SLU 31	-0.12	-0.21	8.96	0	0	0
223	SLU 32	-0.13	-0.21	9.14	0	0	0
223	SLU 33	-0.12	-0.21	9.13	0	0	0
223	SLU 34	-0.12	-0.21	9.07	0	0	0
223	SLU 35	-0.13	-0.21	9.25	0	0	0
223	SLU 36	-0.13	-0.21	9.24	0	0	0
223	SLU 37	-0.13	-0.21	9.18	0	0	0
223	SLU 38	-0.13	-0.21	9.18	0	0	0
223	SLU 39	-0.13	-0.21	9.33	0	0	0
223	SLU 40	-0.12	-0.21	9.32	0	0	0
223	SLU 41	-0.13	-0.21	9.44	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
223	SLU 42	-0.13	-0.22	9.44	0	0	0
223	SLU 43	-0.13	-0.24	9.26	0	0	0
223	SLU 44	-0.13	-0.25	9.25	0	0	0
223	SLU 45	-0.13	-0.24	9.43	0	0	0
223	SLU 46	-0.13	-0.25	9.42	0	0	0
223	SLU 47	-0.13	-0.25	9.36	0	0	0
223	SLU 48	-0.14	-0.25	9.54	0	0	0
223	SLU 49	-0.13	-0.25	9.53	0	0	0
223	SLU 50	-0.14	-0.25	9.48	0	0	0
223	SLU 51	-0.13	-0.25	9.47	0	0	0
223	SLU 52	-0.13	-0.26	10.1	0	0	0
223	SLU 53	-0.14	-0.26	10.28	0	0	0
223	SLU 54	-0.14	-0.26	10.28	0	0	0
223	SLU 55	-0.14	-0.26	10.21	0	0	0
223	SLU 56	-0.14	-0.26	10.39	0	0	0
223	SLU 57	-0.14	-0.26	10.39	0	0	0
223	SLU 58	-0.14	-0.26	10.33	0	0	0
223	SLU 59	-0.14	-0.26	10.33	0	0	0
223	SLU 60	-0.14	-0.26	10.47	0	0	0
223	SLU 61	-0.14	-0.26	10.47	0	0	0
223	SLU 62	-0.14	-0.26	10.58	0	0	0
223	SLU 63	-0.14	-0.27	10.58	0	0	0
223	SLU 64	-0.14	-0.25	10.04	0	0	0
223	SLU 65	-0.14	-0.25	10.03	0	0	0
223	SLU 66	-0.15	-0.25	10.21	0	0	0
223	SLU 67	-0.15	-0.25	10.21	0	0	0
223	SLU 68	-0.14	-0.26	10.14	0	0	0
223	SLU 69	-0.15	-0.25	10.32	0	0	0
223	SLU 70	-0.15	-0.26	10.32	0	0	0
223	SLU 71	-0.15	-0.25	10.26	0	0	0
223	SLU 72	-0.15	-0.26	10.26	0	0	0
223	SLU 73	-0.15	-0.27	10.89	0	0	0
223	SLU 74	-0.15	-0.26	11.07	0	0	0
223	SLU 75	-0.15	-0.27	11.06	0	0	0
223	SLU 76	-0.15	-0.27	11	0	0	0
223	SLU 77	-0.16	-0.26	11.18	0	0	0
223	SLU 78	-0.15	-0.27	11.17	0	0	0
223	SLU 79	-0.15	-0.26	11.11	0	0	0
223	SLU 80	-0.15	-0.27	11.11	0	0	0
223	SLU 81	-0.15	-0.26	11.26	0	0	0
223	SLU 82	-0.15	-0.27	11.25	0	0	0
223	SLU 83	-0.16	-0.27	11.37	0	0	0
223	SLU 84	-0.15	-0.27	11.36	0	0	0
223	SLE RA 1	-0.11	-0.19	7.55	0	0	0
223	SLE RA 2	-0.11	-0.19	7.55	0	0	0
223	SLE RA 3	-0.11	-0.19	7.67	0	0	0
223	SLE RA 4	-0.11	-0.19	7.66	0	0	0
223	SLE RA 5	-0.11	-0.19	7.62	0	0	0
223	SLE RA 6	-0.11	-0.19	7.74	0	0	0
223	SLE RA 7	-0.11	-0.19	7.74	0	0	0
223	SLE RA 8	-0.11	-0.19	7.7	0	0	0
223	SLE RA 9	-0.11	-0.19	7.7	0	0	0
223	SLE RA 10	-0.11	-0.2	8.11	0	0	0
223	SLE RA 11	-0.11	-0.2	8.23	0	0	0
223	SLE RA 12	-0.11	-0.2	8.23	0	0	0
223	SLE RA 13	-0.11	-0.2	8.19	0	0	0
223	SLE RA 14	-0.12	-0.2	8.31	0	0	0
223	SLE RA 15	-0.11	-0.2	8.31	0	0	0
223	SLE RA 16	-0.12	-0.2	8.27	0	0	0
223	SLE RA 17	-0.11	-0.2	8.26	0	0	0
223	SLE RA 18	-0.11	-0.2	8.36	0	0	0
223	SLE RA 19	-0.11	-0.2	8.36	0	0	0
223	SLE RA 20	-0.12	-0.2	8.44	0	0	0
223	SLE RA 21	-0.11	-0.2	8.43	0	0	0
223	SLE FR 1	-0.11	-0.19	7.55	0	0	0
223	SLE FR 2	-0.11	-0.19	7.55	0	0	0
223	SLE FR 3	-0.11	-0.19	7.58	0	0	0
223	SLE FR 4	-0.11	-0.19	7.79	0	0	0
223	SLE FR 5	-0.11	-0.19	7.82	0	0	0
223	SLE FR 6	-0.11	-0.19	7.96	0	0	0
223	SLE QP 1	-0.11	-0.19	7.55	0	0	0
223	SLE QP 2	-0.11	-0.19	7.79	0	0	0
223	SLD 1	0.52	-0.18	8.38	0	0	0
223	SLD 2	0.58	-0.21	8.36	0	0	0
223	SLD 3	0.47	-0.36	8.26	0	0	0
223	SLD 4	0.53	-0.39	8.24	0	0	0
223	SLD 5	0.14	0.08	8.16	0	0	0
223	SLD 6	0.18	0.06	8.14	0	0	0
223	SLD 7	-0.01	-0.5	7.76	0	0	0
223	SLD 8	0.02	-0.52	7.74	0	0	0
223	SLD 9	-0.24	0.14	7.85	0	0	0
223	SLD 10	-0.21	0.12	7.83	0	0	0
223	SLD 11	-0.4	-0.45	7.45	0	0	0
223	SLD 12	-0.36	-0.47	7.43	0	0	0
223	SLD 13	-0.75	0	7.35	0	0	0
223	SLD 14	-0.69	-0.03	7.33	0	0	0
223	SLD 15	-0.8	-0.17	7.23	0	0	0
223	SLD 16	-0.74	-0.2	7.21	0	0	0
223	SLV 1	1.36	-0.17	9.16	0	0	0
223	SLV 2	1.5	-0.24	9.1	0	0	0
223	SLV 3	1.25	-0.57	8.89	0	0	0
223	SLV 4	1.39	-0.64	8.83	0	0	0
223	SLV 5	0.47	0.43	8.63	0	0	0
223	SLV 6	0.56	0.38	8.59	0	0	0
223	SLV 7	0.11	-0.89	7.72	0	0	0
223	SLV 8	0.2	-0.94	7.68	0	0	0
223	SLV 9	-0.42	0.56	7.91	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
223	SLV 10	-0.33	0.51	7.87	0	0	0
223	SLV 11	-0.78	-0.77	7	0	0	0
223	SLV 12	-0.69	-0.81	6.96	0	0	0
223	SLV 13	-1.61	0.26	6.76	0	0	0
223	SLV 14	-1.47	0.18	6.7	0	0	0
223	SLV 15	-1.72	-0.14	6.48	0	0	0
223	SLV 16	-1.58	-0.21	6.43	0	0	0
224	SLU 1	-0.07	-0.02	5.45	0	0.8191	0.0025
224	SLU 2	-0.07	-0.02	5.45	0	0.8183	0.0032
224	SLU 3	-0.07	-0.02	5.59	0	0.839	0.0023
224	SLU 4	-0.07	-0.02	5.58	0	0.8386	0.0027
224	SLU 5	-0.07	-0.02	5.53	0	0.8309	0.0032
224	SLU 6	-0.07	-0.02	5.67	0	0.8516	0.0023
224	SLU 7	-0.07	-0.02	5.67	0	0.8512	0.0027
224	SLU 8	-0.07	-0.02	5.62	0	0.8442	0.0025
224	SLU 9	-0.07	-0.02	5.62	0	0.8438	0.0029
224	SLU 10	-0.07	-0.02	6.12	0	0.9197	0.0026
224	SLU 11	-0.08	-0.01	6.26	0	0.9404	0.0017
224	SLU 12	-0.07	-0.01	6.26	0	0.9399	0.0022
224	SLU 13	-0.07	-0.02	6.21	0	0.9322	0.0026
224	SLU 14	-0.08	-0.01	6.34	0	0.9529	0.0017
224	SLU 15	-0.08	-0.01	6.34	0	0.9525	0.0022
224	SLU 16	-0.08	-0.01	6.29	0	0.9455	0.0019
224	SLU 17	-0.07	-0.02	6.29	0	0.9451	0.0023
224	SLU 18	-0.08	-0.01	6.42	0	0.9638	0.0017
224	SLU 19	-0.07	-0.01	6.41	0	0.9634	0.0021
224	SLU 20	-0.08	-0.01	6.5	0	0.9764	0.0017
224	SLU 21	-0.08	-0.01	6.5	0	0.9759	0.0021
224	SLU 22	-0.08	0	6.04	0	0.9075	0.0007
224	SLU 23	-0.08	-0.01	6.04	0	0.9068	0.0015
224	SLU 24	-0.08	0	6.17	0	0.9275	0.0006
224	SLU 25	-0.08	-0.01	6.17	0	0.9271	0.001
224	SLU 26	-0.08	-0.01	6.12	0	0.9194	0.0015
224	SLU 27	-0.08	0	6.26	0	0.9401	0.0005
224	SLU 28	-0.08	-0.01	6.25	0	0.9396	0.001
224	SLU 29	-0.08	0	6.21	0	0.9327	0.0007
224	SLU 30	-0.08	-0.01	6.21	0	0.9322	0.0012
224	SLU 31	-0.08	-0.01	6.71	0	1.0081	0.0009
224	SLU 32	-0.08	0	6.85	0	1.0288	0
224	SLU 33	-0.08	0	6.85	0	1.0284	0.0004
224	SLU 34	-0.08	-0.01	6.79	0	1.0207	0.0009
224	SLU 35	-0.09	0	6.93	0	1.0414	0
224	SLU 36	-0.08	0	6.93	0	1.0409	0.0004
224	SLU 37	-0.08	0	6.88	0	1.034	0.0002
224	SLU 38	-0.08	0	6.88	0	1.0335	0.0006
224	SLU 39	-0.08	0	7.01	0	1.0523	0
224	SLU 40	-0.08	0	7	0	1.0518	0.0004
224	SLU 41	-0.09	0	7.09	0	1.0648	-0.0001
224	SLU 42	-0.08	0	7.09	0	1.0644	0.0004
224	SLU 43	-0.09	-0.03	6.89	0	1.0345	0.0038
224	SLU 44	-0.09	-0.03	6.88	0	1.0337	0.0045
224	SLU 45	-0.09	-0.02	7.02	0	1.0544	0.0036
224	SLU 46	-0.09	-0.03	7.02	0	1.054	0.0041
224	SLU 47	-0.09	-0.03	6.97	0	1.0463	0.0045
224	SLU 48	-0.09	-0.02	7.1	0	1.067	0.0036
224	SLU 49	-0.09	-0.03	7.1	0	1.0665	0.004
224	SLU 50	-0.09	-0.03	7.05	0	1.0596	0.0038
224	SLU 51	-0.09	-0.03	7.05	0	1.0591	0.0042
224	SLU 52	-0.09	-0.03	7.56	0	1.1351	0.004
224	SLU 53	-0.09	-0.02	7.69	0	1.1557	0.0031
224	SLU 54	-0.09	-0.02	7.69	0	1.1553	0.0035
224	SLU 55	-0.09	-0.03	7.64	0	1.1476	0.004
224	SLU 56	-0.09	-0.02	7.78	0	1.1683	0.0031
224	SLU 57	-0.09	-0.02	7.77	0	1.1679	0.0035
224	SLU 58	-0.09	-0.02	7.73	0	1.1609	0.0032
224	SLU 59	-0.09	-0.02	7.73	0	1.1605	0.0037
224	SLU 60	-0.09	-0.02	7.85	0	1.1792	0.003
224	SLU 61	-0.09	-0.02	7.85	0	1.1788	0.0035
224	SLU 62	-0.09	-0.02	7.93	0	1.1918	0.003
224	SLU 63	-0.09	-0.02	7.93	0	1.1913	0.0034
224	SLU 64	-0.1	-0.01	7.48	0	1.1229	0.0021
224	SLU 65	-0.09	-0.02	7.47	0	1.1222	0.0028
224	SLU 66	-0.1	-0.01	7.61	0	1.1429	0.0019
224	SLU 67	-0.1	-0.02	7.61	0	1.1424	0.0023
224	SLU 68	-0.1	-0.02	7.55	0	1.1348	0.0028
224	SLU 69	-0.1	-0.01	7.69	0	1.1554	0.0019
224	SLU 70	-0.1	-0.02	7.69	0	1.155	0.0023
224	SLU 71	-0.1	-0.01	7.64	0	1.1481	0.0021
224	SLU 72	-0.1	-0.02	7.64	0	1.1476	0.0025
224	SLU 73	-0.1	-0.02	8.14	0	1.2235	0.0023
224	SLU 74	-0.1	-0.01	8.28	0	1.2442	0.0013
224	SLU 75	-0.1	-0.01	8.28	0	1.2438	0.0018
224	SLU 76	-0.1	-0.01	8.23	0	1.2361	0.0023
224	SLU 77	-0.1	-0.01	8.37	0	1.2568	0.0013
224	SLU 78	-0.1	-0.01	8.36	0	1.2563	0.0018
224	SLU 79	-0.1	-0.01	8.32	0	1.2494	0.0015
224	SLU 80	-0.1	-0.01	8.31	0	1.2489	0.002
224	SLU 81	-0.1	-0.01	8.44	0	1.2677	0.0013
224	SLU 82	-0.1	-0.01	8.44	0	1.2672	0.0017
224	SLU 83	-0.1	-0.01	8.52	0	1.2802	0.0013
224	SLU 84	-0.1	-0.01	8.52	0	1.2798	0.0017
224	SLE RA 1	-0.07	-0.01	5.62	0	0.8443	0.002
224	SLE RA 2	-0.07	-0.02	5.62	0	0.8439	0.0025
224	SLE RA 3	-0.07	-0.01	5.71	0	0.8577	0.0019
224	SLE RA 4	-0.07	-0.01	5.71	0	0.8574	0.0021
224	SLE RA 5	-0.07	-0.02	5.67	0	0.8522	0.0025
224	SLE RA 6	-0.07	-0.01	5.77	0	0.866	0.0018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
224	SLE RA 7	-0.07	-0.01	5.76	0	0.8657	0.0021
224	SLE RA 8	-0.07	-0.01	5.73	0	0.8611	0.002
224	SLE RA 9	-0.07	-0.02	5.73	0	0.8608	0.0023
224	SLE RA 10	-0.07	-0.01	6.07	0	0.9114	0.0021
224	SLE RA 11	-0.08	-0.01	6.16	0	0.9252	0.0015
224	SLE RA 12	-0.08	-0.01	6.16	0	0.9249	0.0018
224	SLE RA 13	-0.07	-0.01	6.12	0	0.9198	0.0021
224	SLE RA 14	-0.08	-0.01	6.21	0	0.9336	0.0015
224	SLE RA 15	-0.08	-0.01	6.21	0	0.9333	0.0018
224	SLE RA 16	-0.08	-0.01	6.18	0	0.9286	0.0016
224	SLE RA 17	-0.08	-0.01	6.18	0	0.9284	0.0019
224	SLE RA 18	-0.08	-0.01	6.26	0	0.9408	0.0015
224	SLE RA 19	-0.07	-0.01	6.26	0	0.9406	0.0017
224	SLE RA 20	-0.08	-0.01	6.32	0	0.9492	0.0014
224	SLE RA 21	-0.08	-0.01	6.32	0	0.9489	0.0017
224	SLE FR 1	-0.07	-0.01	5.62	0	0.8443	0.002
224	SLE FR 2	-0.07	-0.01	5.62	0	0.8443	0.0021
224	SLE FR 3	-0.07	-0.01	5.64	0	0.8477	0.002
224	SLE FR 4	-0.07	-0.01	5.81	0	0.8732	0.0019
224	SLE FR 5	-0.07	-0.01	5.84	0	0.8766	0.0018
224	SLE FR 6	-0.07	-0.01	5.94	0	0.8926	0.0017
224	SLE QP 1	-0.07	-0.01	5.62	0	0.8443	0.002
224	SLE QP 2	-0.07	-0.01	5.81	0	0.8733	0.0018
224	SLD 1	0.4	0.09	5.83	0	0.8759	-0.0128
224	SLD 2	0.44	0.08	5.83	0	0.8754	-0.0118
224	SLD 3	0.36	-0.06	5.74	0	0.8616	0.0083
224	SLD 4	0.41	-0.06	5.73	0	0.861	0.0093
224	SLD 5	0.11	0.23	5.96	0	0.896	-0.0348
224	SLD 6	0.14	0.23	5.96	0	0.8956	-0.0341
224	SLD 7	0	-0.24	5.65	0	0.8481	0.0356
224	SLD 8	0.03	-0.24	5.64	0	0.8477	0.0363
224	SLD 9	-0.17	0.22	5.98	0	0.8988	-0.0326
224	SLD 10	-0.14	0.21	5.98	0	0.8985	-0.032
224	SLD 11	-0.29	-0.25	5.67	0	0.851	0.0378
224	SLD 12	-0.26	-0.26	5.66	0	0.8506	0.0384
224	SLD 13	-0.55	0.04	5.9	0	0.8856	-0.0057
224	SLD 14	-0.51	0.03	5.89	0	0.885	-0.0047
224	SLD 15	-0.59	-0.1	5.8	0	0.8712	0.0154
224	SLD 16	-0.54	-0.11	5.8	0	0.8707	0.0164
224	SLV 1	1.03	0.21	5.85	0	0.8788	-0.0315
224	SLV 2	1.13	0.19	5.84	0	0.8775	-0.0292
224	SLV 3	0.95	-0.11	5.63	0	0.8462	0.0163
224	SLV 4	1.05	-0.12	5.62	0	0.8449	0.0186
224	SLV 5	0.36	0.54	6.16	0	0.9246	-0.0811
224	SLV 6	0.43	0.53	6.15	0	0.9238	-0.0796
224	SLV 7	0.09	-0.52	5.43	0	0.816	0.0783
224	SLV 8	0.16	-0.53	5.43	0	0.8151	0.0798
224	SLV 9	-0.31	0.51	6.2	0	0.9315	-0.0761
224	SLV 10	-0.24	0.5	6.2	0	0.9306	-0.0746
224	SLV 11	-0.57	-0.55	5.48	0	0.8228	0.0833
224	SLV 12	-0.51	-0.56	5.47	0	0.822	0.0847
224	SLV 13	-1.2	0.1	6	0	0.9017	-0.0149
224	SLV 14	-1.09	0.08	5.99	0	0.9004	-0.0126
224	SLV 15	-1.28	-0.22	5.79	0	0.8691	0.0329
224	SLV 16	-1.17	-0.23	5.78	0	0.8678	0.0352
224	CRTFP Uy+	0	0	0	0	0	0
224	CRTFP Uy-	0	0	0	0	0	0
226	SLU 1	0.01	-0.08	37.5	-0.9323	10.633	0.0169
226	SLU 2	0.02	-0.11	37.47	-0.9315	10.6247	0.0264
226	SLU 3	0.01	-0.07	38.41	-0.9549	10.8913	0.0139
226	SLU 4	0.02	-0.09	38.39	-0.9544	10.8864	0.0195
226	SLU 5	0.02	-0.11	38.04	-0.9457	10.7866	0.026
226	SLU 6	0.01	-0.07	38.98	-0.969	11.0533	0.0135
226	SLU 7	0.01	-0.09	38.96	-0.9686	11.0483	0.0192
226	SLU 8	0	-0.08	38.64	-0.9607	10.9568	0.0162
226	SLU 9	0.01	-0.1	38.62	-0.9602	10.9518	0.0219
226	SLU 10	0.01	-0.06	42.14	-1.0473	11.9591	0.0094
226	SLU 11	-0.01	-0.02	43.08	-1.0706	12.2258	-0.0031
226	SLU 12	0	-0.04	43.06	-1.0701	12.2208	0.0025
226	SLU 13	0	-0.06	42.71	-1.0615	12.1211	0.009
226	SLU 14	-0.01	-0.02	43.65	-1.0848	12.3877	-0.0035
226	SLU 15	0	-0.04	43.63	-1.0843	12.3828	0.0022
226	SLU 16	-0.01	-0.03	43.31	-1.0764	12.2913	-0.0008
226	SLU 17	0	-0.05	43.29	-1.0759	12.2863	0.0049
226	SLU 18	-0.02	0	44.17	-1.0976	12.5393	-0.0074
226	SLU 19	-0.01	-0.02	44.15	-1.0972	12.5343	-0.0017
226	SLU 20	-0.02	0	44.74	-1.1118	12.7013	-0.0077
226	SLU 21	-0.01	-0.02	44.72	-1.1114	12.6963	-0.002
226	SLU 22	0.01	0	41.52	-1.0318	11.7731	-0.0079
226	SLU 23	0.03	-0.03	41.49	-1.0311	11.7648	0.0016
226	SLU 24	0.01	0.01	42.42	-1.0544	12.0315	-0.0109
226	SLU 25	0.02	-0.01	42.41	-1.0539	12.0265	-0.0052
226	SLU 26	0.03	-0.03	42.06	-1.0452	11.9267	0.0013
226	SLU 27	0.01	0.01	42.99	-1.0686	12.1934	-0.0112
226	SLU 28	0.02	-0.01	42.98	-1.0681	12.1884	-0.0056
226	SLU 29	0.01	0	42.65	-1.0602	12.097	-0.0085
226	SLU 30	0.02	-0.02	42.64	-1.0597	12.092	-0.0029
226	SLU 31	0.01	0.02	46.16	-1.1468	13.0992	-0.0154
226	SLU 32	-0.01	0.07	47.09	-1.1701	13.3659	-0.0279
226	SLU 33	0	0.05	47.07	-1.1697	13.3609	-0.0222
226	SLU 34	0.01	0.03	46.73	-1.161	13.2612	-0.0157
226	SLU 35	-0.01	0.07	47.66	-1.1843	13.5279	-0.0282
226	SLU 36	0	0.05	47.64	-1.1839	13.5229	-0.0226
226	SLU 37	-0.01	0.06	47.32	-1.176	13.4314	-0.0255
226	SLU 38	0	0.04	47.31	-1.1755	13.4264	-0.0199
226	SLU 39	-0.01	0.08	48.18	-1.1972	13.6795	-0.0321
226	SLU 40	0	0.06	48.17	-1.1967	13.6745	-0.0265

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
226	SLU 41	-0.01	0.08	48.75	-1.2114	13.8414	-0.0325
226	SLU 42	0	0.06	48.74	-1.2109	13.8364	-0.0268
226	SLU 43	0.01	-0.14	47.38	-1.1779	13.4319	0.0305
226	SLU 44	0.02	-0.17	47.35	-1.1771	13.4236	0.0399
226	SLU 45	0.01	-0.13	48.28	-1.2004	13.6903	0.0274
226	SLU 46	0.02	-0.15	48.27	-1.2	13.6854	0.0331
226	SLU 47	0.02	-0.17	47.92	-1.1913	13.5856	0.0396
226	SLU 48	0.01	-0.13	48.85	-1.2146	13.8523	0.0271
226	SLU 49	0.02	-0.15	48.84	-1.2141	13.8473	0.0328
226	SLU 50	0	-0.14	48.51	-1.2062	13.7558	0.0298
226	SLU 51	0.01	-0.16	48.5	-1.2058	13.7508	0.0355
226	SLU 52	0.01	-0.11	52.02	-1.2928	14.7581	0.0229
226	SLU 53	-0.01	-0.07	52.95	-1.3162	15.0248	0.0104
226	SLU 54	0	-0.09	52.93	-1.3157	15.0198	0.0161
226	SLU 55	0.01	-0.11	52.59	-1.307	14.92	0.0226
226	SLU 56	-0.01	-0.07	53.52	-1.3304	15.1867	0.0101
226	SLU 57	0	-0.09	53.5	-1.3299	15.1817	0.0158
226	SLU 58	-0.01	-0.08	53.18	-1.322	15.0903	0.0128
226	SLU 59	0	-0.1	53.16	-1.3215	15.0853	0.0185
226	SLU 60	-0.01	-0.06	54.04	-1.3432	15.3383	0.0062
226	SLU 61	-0.01	-0.08	54.03	-1.3427	15.3333	0.0119
226	SLU 62	-0.02	-0.06	54.61	-1.3574	15.5003	0.0058
226	SLU 63	-0.01	-0.08	54.6	-1.3569	15.4953	0.0115
226	SLU 64	0.01	-0.05	51.39	-1.2774	14.5721	0.0057
226	SLU 65	0.03	-0.08	51.36	-1.2766	14.5638	0.0152
226	SLU 66	0.01	-0.04	52.3	-1.3	14.8305	0.0027
226	SLU 67	0.02	-0.06	52.28	-1.2995	14.8255	0.0083
226	SLU 68	0.03	-0.08	51.93	-1.2908	14.7257	0.0148
226	SLU 69	0.01	-0.04	52.87	-1.3142	14.9924	0.0023
226	SLU 70	0.02	-0.06	52.85	-1.3137	14.9874	0.008
226	SLU 71	0.01	-0.05	52.53	-1.3058	14.8959	0.005
226	SLU 72	0.02	-0.07	52.51	-1.3053	14.891	0.0107
226	SLU 73	0.01	-0.03	56.03	-1.3924	15.8982	-0.0018
226	SLU 74	0	0.01	56.97	-1.4157	16.1649	-0.0143
226	SLU 75	0.01	-0.01	56.95	-1.4152	16.1599	-0.0087
226	SLU 76	0.01	-0.03	56.6	-1.4066	16.0602	-0.0022
226	SLU 77	-0.01	0.01	57.53	-1.4299	16.3269	-0.0147
226	SLU 78	0	-0.01	57.52	-1.4294	16.3219	-0.009
226	SLU 79	-0.01	0	57.2	-1.4215	16.2304	-0.012
226	SLU 80	0	-0.02	57.18	-1.421	16.2254	-0.0063
226	SLU 81	-0.01	0.03	58.06	-1.4427	16.4784	-0.0186
226	SLU 82	0	0.01	58.04	-1.4423	16.4735	-0.0129
226	SLU 83	-0.01	0.03	58.63	-1.4569	16.6404	-0.0189
226	SLU 84	0	0.01	58.61	-1.4565	16.6354	-0.0132
226	SLE RA 1	0.01	-0.06	38.65	-0.9607	10.9587	0.0098
226	SLE RA 2	0.02	-0.08	38.63	-0.9602	10.9532	0.0161
226	SLE RA 3	0.01	-0.05	39.25	-0.9758	11.131	0.0078
226	SLE RA 4	0.02	-0.07	39.24	-0.9755	11.1276	0.0116
226	SLE RA 5	0.02	-0.08	39.01	-0.9697	11.0611	0.0159
226	SLE RA 6	0.01	-0.05	39.63	-0.9852	11.2389	0.0076
226	SLE RA 7	0.01	-0.06	39.62	-0.9849	11.2356	0.0114
226	SLE RA 8	0.01	-0.06	39.41	-0.9797	11.1746	0.0094
226	SLE RA 9	0.01	-0.07	39.4	-0.9793	11.1713	0.0132
226	SLE RA 10	0.01	-0.04	41.74	-1.0374	11.8428	0.0048
226	SLE RA 11	0	-0.02	42.37	-1.0529	12.0206	-0.0035
226	SLE RA 12	0	-0.03	42.35	-1.0526	12.0173	0.0003
226	SLE RA 13	0.01	-0.04	42.12	-1.0468	11.9508	0.0046
226	SLE RA 14	0	-0.02	42.74	-1.0624	12.1286	-0.0038
226	SLE RA 15	0	-0.03	42.73	-1.0621	12.1252	0
226	SLE RA 16	0	-0.02	42.52	-1.0568	12.0643	-0.002
226	SLE RA 17	0	-0.03	42.51	-1.0565	12.0609	0.0018
226	SLE RA 18	-0.01	-0.01	43.09	-1.071	12.2296	-0.0064
226	SLE RA 19	0	-0.02	43.08	-1.0707	12.2263	-0.0026
226	SLE RA 20	-0.01	-0.01	43.47	-1.0804	12.3376	-0.0066
226	SLE RA 21	0	-0.02	43.46	-1.0801	12.3343	-0.0028
226	SLE FR 1	0.01	-0.06	38.65	-0.9607	10.9587	0.0098
226	SLE FR 2	0.01	-0.06	38.65	-0.9606	10.9576	0.0111
226	SLE FR 3	0.01	-0.06	38.8	-0.9645	11.0019	0.0097
226	SLE FR 4	0.01	-0.05	39.98	-0.9937	11.3389	0.0062
226	SLE FR 5	0	-0.04	40.13	-0.9976	11.3832	0.0049
226	SLE FR 6	0	-0.03	40.87	-1.0159	11.5942	0.0017
226	SLE QP 1	0.01	-0.06	38.65	-0.9607	10.9587	0.0098
226	SLE QP 2	0	-0.04	39.98	-0.9938	11.34	0.005
226	SLD 1	3.55	0.58	40.47	-0.9976	11.5406	-0.0502
226	SLD 2	3.88	0.61	40.6	-1.001	11.572	-0.0495
226	SLD 3	3.3	-0.43	39.74	-0.977	11.3306	0.2357
226	SLD 4	3.63	-0.39	39.87	-0.9804	11.362	0.2364
226	SLD 5	1.4	1.66	41.22	-1.0256	11.7131	-0.4454
226	SLD 6	1.61	1.68	41.3	-1.0279	11.7336	-0.445
226	SLD 7	0.55	-1.69	38.78	-0.9569	11.0131	0.5078
226	SLD 8	0.76	-1.66	38.86	-0.9591	11.0337	0.5083
226	SLD 9	-0.76	1.58	41.1	-1.0285	11.6463	-0.4983
226	SLD 10	-0.54	1.6	41.19	-1.0308	11.6668	-0.4979
226	SLD 11	-1.6	-1.77	38.66	-0.9597	10.9463	0.4549
226	SLD 12	-1.39	-1.75	38.75	-0.962	10.9669	0.4554
226	SLD 13	-3.62	0.31	40.09	-1.0072	11.3179	-0.2265
226	SLD 14	-3.29	0.34	40.22	-1.0107	11.3494	-0.2258
226	SLD 15	-3.87	-0.7	39.36	-0.9866	11.1079	0.0595
226	SLD 16	-3.54	-0.66	39.49	-0.99	11.1394	0.0602
226	SLV 1	8.31	1.37	41.11	-1.002	11.802	-0.1139
226	SLV 2	9.07	1.44	41.41	-1.01	11.8752	-0.1123
226	SLV 3	7.71	-0.9	39.45	-0.9551	11.325	0.5342
226	SLV 4	8.48	-0.83	39.75	-0.9632	11.3982	0.5358
226	SLV 5	3.26	3.82	42.79	-1.066	12.1895	-1.014
226	SLV 6	3.75	3.87	42.98	-1.0711	12.2366	-1.0129
226	SLV 7	1.29	-3.76	37.25	-0.9098	10.5995	1.1464
226	SLV 8	1.78	-3.72	37.45	-0.9149	10.6465	1.1475

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
226	SLV 9	-1.77	3.63	42.52	-1.0727	12.0334	-1.1375
226	SLV 10	-1.28	3.68	42.71	-1.0779	12.0805	-1.1365
226	SLV 11	-3.75	-3.95	36.98	-0.9165	10.4434	1.0228
226	SLV 12	-3.25	-3.9	37.18	-0.9217	10.4904	1.0239
226	SLV 13	-8.47	0.74	40.21	-1.0245	11.2818	-0.5259
226	SLV 14	-7.7	0.82	40.52	-1.0325	11.3549	-0.5243
226	SLV 15	-9.06	-1.53	38.55	-0.9776	10.8047	0.1222
226	SLV 16	-8.3	-1.46	38.86	-0.9856	10.8779	0.1239
226	CRTFP Ux+	0	0	0	0	0	0
226	CRTFP Ux-	0	0	0	0	0	0
226	CRTFP Uy+	0	0	0	0	0	0
226	CRTFP Uy-	0	0	0	0	0	0
228	SLU 1	0	-0.06	10.38	0	0	0
228	SLU 2	0.01	-0.07	10.38	0	0	0
228	SLU 3	0	-0.06	10.63	0	0	0
228	SLU 4	0.01	-0.07	10.63	0	0	0
228	SLU 5	0.01	-0.07	10.53	0	0	0
228	SLU 6	0	-0.06	10.79	0	0	0
228	SLU 7	0.01	-0.07	10.79	0	0	0
228	SLU 8	0	-0.06	10.7	0	0	0
228	SLU 9	0.01	-0.07	10.69	0	0	0
228	SLU 10	0	-0.06	11.65	0	0	0
228	SLU 11	0	-0.05	11.91	0	0	0
228	SLU 12	0	-0.06	11.91	0	0	0
228	SLU 13	0	-0.06	11.81	0	0	0
228	SLU 14	0	-0.05	12.07	0	0	0
228	SLU 15	0	-0.06	12.06	0	0	0
228	SLU 16	0	-0.05	11.97	0	0	0
228	SLU 17	0	-0.06	11.97	0	0	0
228	SLU 18	0	-0.05	12.21	0	0	0
228	SLU 19	0	-0.05	12.2	0	0	0
228	SLU 20	0	-0.05	12.36	0	0	0
228	SLU 21	0	-0.05	12.36	0	0	0
228	SLU 22	0.01	-0.04	11.49	0	0	0
228	SLU 23	0.01	-0.05	11.49	0	0	0
228	SLU 24	0	-0.04	11.74	0	0	0
228	SLU 25	0.01	-0.05	11.74	0	0	0
228	SLU 26	0.01	-0.05	11.64	0	0	0
228	SLU 27	0	-0.04	11.9	0	0	0
228	SLU 28	0.01	-0.05	11.89	0	0	0
228	SLU 29	0	-0.05	11.81	0	0	0
228	SLU 30	0.01	-0.05	11.8	0	0	0
228	SLU 31	0	-0.04	12.76	0	0	0
228	SLU 32	0	-0.03	13.02	0	0	0
228	SLU 33	0	-0.04	13.01	0	0	0
228	SLU 34	0	-0.04	12.92	0	0	0
228	SLU 35	0	-0.03	13.17	0	0	0
228	SLU 36	0	-0.04	13.17	0	0	0
228	SLU 37	0	-0.04	13.08	0	0	0
228	SLU 38	0	-0.04	13.08	0	0	0
228	SLU 39	0	-0.03	13.32	0	0	0
228	SLU 40	0	-0.03	13.31	0	0	0
228	SLU 41	0	-0.03	13.47	0	0	0
228	SLU 42	0	-0.03	13.47	0	0	0
228	SLU 43	0	-0.09	13.12	0	0	0
228	SLU 44	0.01	-0.1	13.11	0	0	0
228	SLU 45	0	-0.09	13.37	0	0	0
228	SLU 46	0.01	-0.09	13.36	0	0	0
228	SLU 47	0.01	-0.1	13.27	0	0	0
228	SLU 48	0	-0.09	13.53	0	0	0
228	SLU 49	0.01	-0.09	13.52	0	0	0
228	SLU 50	0	-0.09	13.43	0	0	0
228	SLU 51	0.01	-0.09	13.43	0	0	0
228	SLU 52	0	-0.09	14.39	0	0	0
228	SLU 53	0	-0.08	14.64	0	0	0
228	SLU 54	0	-0.08	14.64	0	0	0
228	SLU 55	0	-0.09	14.55	0	0	0
228	SLU 56	0	-0.08	14.8	0	0	0
228	SLU 57	0	-0.08	14.8	0	0	0
228	SLU 58	0	-0.08	14.71	0	0	0
228	SLU 59	0	-0.08	14.7	0	0	0
228	SLU 60	0	-0.07	14.94	0	0	0
228	SLU 61	0	-0.08	14.94	0	0	0
228	SLU 62	0	-0.07	15.1	0	0	0
228	SLU 63	0	-0.08	15.09	0	0	0
228	SLU 64	0.01	-0.07	14.23	0	0	0
228	SLU 65	0.01	-0.08	14.22	0	0	0
228	SLU 66	0.01	-0.07	14.48	0	0	0
228	SLU 67	0.01	-0.07	14.47	0	0	0
228	SLU 68	0.01	-0.08	14.38	0	0	0
228	SLU 69	0	-0.07	14.63	0	0	0
228	SLU 70	0.01	-0.07	14.63	0	0	0
228	SLU 71	0	-0.07	14.54	0	0	0
228	SLU 72	0.01	-0.08	14.54	0	0	0
228	SLU 73	0.01	-0.07	15.5	0	0	0
228	SLU 74	0	-0.06	15.75	0	0	0
228	SLU 75	0	-0.06	15.75	0	0	0
228	SLU 76	0	-0.07	15.65	0	0	0
228	SLU 77	0	-0.06	15.91	0	0	0
228	SLU 78	0	-0.06	15.91	0	0	0
228	SLU 79	0	-0.06	15.82	0	0	0
228	SLU 80	0	-0.07	15.81	0	0	0
228	SLU 81	0	-0.05	16.05	0	0	0
228	SLU 82	0	-0.06	16.05	0	0	0
228	SLU 83	0	-0.05	16.21	0	0	0
228	SLU 84	0	-0.06	16.2	0	0	0
228	SLE RA 1	0	-0.06	10.7	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
228	SLE RA 2	0.01	-0.06	10.7	0	0	0
228	SLE RA 3	0	-0.06	10.87	0	0	0
228	SLE RA 4	0.01	-0.06	10.86	0	0	0
228	SLE RA 5	0.01	-0.06	10.8	0	0	0
228	SLE RA 6	0	-0.06	10.97	0	0	0
228	SLE RA 7	0.01	-0.06	10.97	0	0	0
228	SLE RA 8	0	-0.06	10.91	0	0	0
228	SLE RA 9	0.01	-0.06	10.91	0	0	0
228	SLE RA 10	0	-0.06	11.55	0	0	0
228	SLE RA 11	0	-0.05	11.72	0	0	0
228	SLE RA 12	0	-0.05	11.72	0	0	0
228	SLE RA 13	0	-0.06	11.65	0	0	0
228	SLE RA 14	0	-0.05	11.82	0	0	0
228	SLE RA 15	0	-0.05	11.82	0	0	0
228	SLE RA 16	0	-0.05	11.76	0	0	0
228	SLE RA 17	0	-0.05	11.76	0	0	0
228	SLE RA 18	0	-0.05	11.92	0	0	0
228	SLE RA 19	0	-0.05	11.91	0	0	0
228	SLE RA 20	0	-0.05	12.02	0	0	0
228	SLE RA 21	0	-0.05	12.02	0	0	0
228	SLE FR 1	0	-0.06	10.7	0	0	0
228	SLE FR 2	0	-0.06	10.7	0	0	0
228	SLE FR 3	0	-0.06	10.74	0	0	0
228	SLE FR 4	0	-0.06	11.06	0	0	0
228	SLE FR 5	0	-0.05	11.11	0	0	0
228	SLE FR 6	0	-0.05	11.31	0	0	0
228	SLE QP 1	0	-0.06	10.7	0	0	0
228	SLE QP 2	0	-0.05	11.07	0	0	0
228	SLD 1	0.98	0.14	11.03	0	0	0
228	SLD 2	1.07	0.16	11.07	0	0	0
228	SLD 3	0.91	-0.13	10.83	0	0	0
228	SLD 4	1	-0.12	10.88	0	0	0
228	SLD 5	0.39	0.41	11.35	0	0	0
228	SLD 6	0.45	0.42	11.37	0	0	0
228	SLD 7	0.15	-0.49	10.69	0	0	0
228	SLD 8	0.21	-0.48	10.72	0	0	0
228	SLD 9	-0.21	0.37	11.41	0	0	0
228	SLD 10	-0.15	0.38	11.44	0	0	0
228	SLD 11	-0.44	-0.53	10.76	0	0	0
228	SLD 12	-0.38	-0.52	10.79	0	0	0
228	SLD 13	-1	0.01	11.26	0	0	0
228	SLD 14	-0.91	0.03	11.3	0	0	0
228	SLD 15	-1.07	-0.26	11.06	0	0	0
228	SLD 16	-0.98	-0.25	11.1	0	0	0
228	SLV 1	2.3	0.38	10.97	0	0	0
228	SLV 2	2.51	0.43	11.08	0	0	0
228	SLV 3	2.13	-0.23	10.53	0	0	0
228	SLV 4	2.34	-0.19	10.63	0	0	0
228	SLV 5	0.9	1	11.7	0	0	0
228	SLV 6	1.04	1.03	11.77	0	0	0
228	SLV 7	0.36	-1.05	10.21	0	0	0
228	SLV 8	0.49	-1.02	10.27	0	0	0
228	SLV 9	-0.49	0.91	11.86	0	0	0
228	SLV 10	-0.35	0.94	11.93	0	0	0
228	SLV 11	-1.03	-1.14	10.37	0	0	0
228	SLV 12	-0.9	-1.11	10.43	0	0	0
228	SLV 13	-2.34	0.08	11.5	0	0	0
228	SLV 14	-2.13	0.12	11.61	0	0	0
228	SLV 15	-2.5	-0.54	11.06	0	0	0
228	SLV 16	-2.29	-0.49	11.16	0	0	0
229	SLU 1	0	-0.08	10.78	0	0	0
229	SLU 2	0.01	-0.09	10.78	0	0	0
229	SLU 3	0	-0.08	11.04	0	0	0
229	SLU 4	0.01	-0.09	11.04	0	0	0
229	SLU 5	0.01	-0.09	10.94	0	0	0
229	SLU 6	0	-0.08	11.2	0	0	0
229	SLU 7	0.01	-0.09	11.2	0	0	0
229	SLU 8	0	-0.09	11.11	0	0	0
229	SLU 9	0.01	-0.09	11.1	0	0	0
229	SLU 10	0	-0.08	12.09	0	0	0
229	SLU 11	0	-0.07	12.35	0	0	0
229	SLU 12	0	-0.08	12.35	0	0	0
229	SLU 13	0	-0.08	12.25	0	0	0
229	SLU 14	0	-0.08	12.52	0	0	0
229	SLU 15	0	-0.08	12.51	0	0	0
229	SLU 16	0	-0.08	12.42	0	0	0
229	SLU 17	0	-0.08	12.42	0	0	0
229	SLU 18	0	-0.07	12.66	0	0	0
229	SLU 19	0	-0.08	12.66	0	0	0
229	SLU 20	0	-0.07	12.82	0	0	0
229	SLU 21	0	-0.08	12.82	0	0	0
229	SLU 22	0.01	-0.07	11.93	0	0	0
229	SLU 23	0.01	-0.08	11.92	0	0	0
229	SLU 24	0.01	-0.07	12.19	0	0	0
229	SLU 25	0.01	-0.07	12.18	0	0	0
229	SLU 26	0.01	-0.08	12.09	0	0	0
229	SLU 27	0.01	-0.07	12.35	0	0	0
229	SLU 28	0.01	-0.07	12.35	0	0	0
229	SLU 29	0.01	-0.07	12.25	0	0	0
229	SLU 30	0.01	-0.07	12.25	0	0	0
229	SLU 31	0.01	-0.07	13.24	0	0	0
229	SLU 32	0	-0.06	13.5	0	0	0
229	SLU 33	0	-0.06	13.5	0	0	0
229	SLU 34	0.01	-0.07	13.4	0	0	0
229	SLU 35	0	-0.06	13.67	0	0	0
229	SLU 36	0	-0.06	13.66	0	0	0
229	SLU 37	0	-0.06	13.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLU 38	0	-0.07	13.57	0	0	0
229	SLU 39	0	-0.05	13.81	0	0	0
229	SLU 40	0	-0.06	13.81	0	0	0
229	SLU 41	0	-0.06	13.97	0	0	0
229	SLU 42	0	-0.06	13.97	0	0	0
229	SLU 43	0.01	-0.11	13.62	0	0	0
229	SLU 44	0.01	-0.12	13.62	0	0	0
229	SLU 45	0.01	-0.11	13.88	0	0	0
229	SLU 46	0.01	-0.12	13.88	0	0	0
229	SLU 47	0.01	-0.12	13.78	0	0	0
229	SLU 48	0.01	-0.12	14.04	0	0	0
229	SLU 49	0.01	-0.12	14.04	0	0	0
229	SLU 50	0	-0.12	13.95	0	0	0
229	SLU 51	0.01	-0.12	13.94	0	0	0
229	SLU 52	0.01	-0.11	14.93	0	0	0
229	SLU 53	0	-0.11	15.19	0	0	0
229	SLU 54	0	-0.11	15.19	0	0	0
229	SLU 55	0.01	-0.12	15.09	0	0	0
229	SLU 56	0	-0.11	15.36	0	0	0
229	SLU 57	0	-0.11	15.35	0	0	0
229	SLU 58	0	-0.11	15.26	0	0	0
229	SLU 59	0	-0.11	15.26	0	0	0
229	SLU 60	0	-0.1	15.5	0	0	0
229	SLU 61	0	-0.11	15.5	0	0	0
229	SLU 62	0	-0.1	15.66	0	0	0
229	SLU 63	0	-0.11	15.66	0	0	0
229	SLU 64	0.01	-0.1	14.77	0	0	0
229	SLU 65	0.01	-0.11	14.76	0	0	0
229	SLU 66	0.01	-0.1	15.03	0	0	0
229	SLU 67	0.01	-0.1	15.02	0	0	0
229	SLU 68	0.01	-0.11	14.93	0	0	0
229	SLU 69	0.01	-0.1	15.19	0	0	0
229	SLU 70	0.01	-0.1	15.19	0	0	0
229	SLU 71	0.01	-0.1	15.1	0	0	0
229	SLU 72	0.01	-0.11	15.09	0	0	0
229	SLU 73	0.01	-0.1	16.08	0	0	0
229	SLU 74	0	-0.09	16.34	0	0	0
229	SLU 75	0.01	-0.09	16.34	0	0	0
229	SLU 76	0.01	-0.1	16.24	0	0	0
229	SLU 77	0	-0.09	16.51	0	0	0
229	SLU 78	0	-0.09	16.5	0	0	0
229	SLU 79	0	-0.09	16.41	0	0	0
229	SLU 80	0	-0.1	16.41	0	0	0
229	SLU 81	0	-0.09	16.65	0	0	0
229	SLU 82	0	-0.09	16.65	0	0	0
229	SLU 83	0	-0.09	16.81	0	0	0
229	SLU 84	0	-0.09	16.81	0	0	0
229	SLE RA 1	0.01	-0.08	11.11	0	0	0
229	SLE RA 2	0.01	-0.08	11.11	0	0	0
229	SLE RA 3	0.01	-0.08	11.28	0	0	0
229	SLE RA 4	0.01	-0.08	11.28	0	0	0
229	SLE RA 5	0.01	-0.09	11.21	0	0	0
229	SLE RA 6	0	-0.08	11.39	0	0	0
229	SLE RA 7	0.01	-0.08	11.39	0	0	0
229	SLE RA 8	0	-0.08	11.33	0	0	0
229	SLE RA 9	0.01	-0.08	11.32	0	0	0
229	SLE RA 10	0.01	-0.08	11.98	0	0	0
229	SLE RA 11	0	-0.07	12.16	0	0	0
229	SLE RA 12	0	-0.08	12.16	0	0	0
229	SLE RA 13	0	-0.08	12.09	0	0	0
229	SLE RA 14	0	-0.07	12.27	0	0	0
229	SLE RA 15	0	-0.08	12.26	0	0	0
229	SLE RA 16	0	-0.07	12.2	0	0	0
229	SLE RA 17	0	-0.08	12.2	0	0	0
229	SLE RA 18	0	-0.07	12.36	0	0	0
229	SLE RA 19	0	-0.07	12.36	0	0	0
229	SLE RA 20	0	-0.07	12.47	0	0	0
229	SLE RA 21	0	-0.07	12.47	0	0	0
229	SLE FR 1	0.01	-0.08	11.11	0	0	0
229	SLE FR 2	0.01	-0.08	11.11	0	0	0
229	SLE FR 3	0.01	-0.08	11.15	0	0	0
229	SLE FR 4	0	-0.08	11.48	0	0	0
229	SLE FR 5	0	-0.08	11.53	0	0	0
229	SLE FR 6	0	-0.07	11.74	0	0	0
229	SLE QP 1	0.01	-0.08	11.11	0	0	0
229	SLE QP 2	0	-0.08	11.49	0	0	0
229	SLD 1	1.03	0.13	11.38	0	0	0
229	SLD 2	1.12	0.16	11.43	0	0	0
229	SLD 3	0.95	-0.15	11.18	0	0	0
229	SLD 4	1.05	-0.12	11.23	0	0	0
229	SLD 5	0.4	0.41	11.75	0	0	0
229	SLD 6	0.47	0.42	11.79	0	0	0
229	SLD 7	0.16	-0.53	11.08	0	0	0
229	SLD 8	0.22	-0.51	11.11	0	0	0
229	SLD 9	-0.21	0.36	11.86	0	0	0
229	SLD 10	-0.15	0.37	11.9	0	0	0
229	SLD 11	-0.46	-0.58	11.18	0	0	0
229	SLD 12	-0.4	-0.56	11.22	0	0	0
229	SLD 13	-1.04	-0.03	11.74	0	0	0
229	SLD 14	-0.94	-0.01	11.79	0	0	0
229	SLD 15	-1.11	-0.31	11.54	0	0	0
229	SLD 16	-1.02	-0.29	11.59	0	0	0
229	SLV 1	2.39	0.41	11.23	0	0	0
229	SLV 2	2.61	0.46	11.35	0	0	0
229	SLV 3	2.22	-0.23	10.77	0	0	0
229	SLV 4	2.44	-0.17	10.89	0	0	0
229	SLV 5	0.94	1.02	12.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLV 6	1.08	1.06	12.17	0	0	0
229	SLV 7	0.37	-1.09	10.55	0	0	0
229	SLV 8	0.52	-1.06	10.62	0	0	0
229	SLV 9	-0.51	0.9	12.35	0	0	0
229	SLV 10	-0.37	0.94	12.42	0	0	0
229	SLV 11	-1.08	-1.21	10.81	0	0	0
229	SLV 12	-0.93	-1.17	10.88	0	0	0
229	SLV 13	-2.44	0.02	12.09	0	0	0
229	SLV 14	-2.22	0.07	12.2	0	0	0
229	SLV 15	-2.61	-0.62	11.62	0	0	0
229	SLV 16	-2.39	-0.56	11.74	0	0	0
230	SLU 1	0.01	-0.1	10.85	0	0	0
230	SLU 2	0.01	-0.11	10.84	0	0	0
230	SLU 3	0.01	-0.1	11.1	0	0	0
230	SLU 4	0.01	-0.11	11.1	0	0	0
230	SLU 5	0.01	-0.11	11	0	0	0
230	SLU 6	0.01	-0.11	11.27	0	0	0
230	SLU 7	0.01	-0.11	11.26	0	0	0
230	SLU 8	0.01	-0.11	11.17	0	0	0
230	SLU 9	0.01	-0.11	11.17	0	0	0
230	SLU 10	0.01	-0.11	12.15	0	0	0
230	SLU 11	0	-0.1	12.42	0	0	0
230	SLU 12	0	-0.1	12.41	0	0	0
230	SLU 13	0.01	-0.11	12.32	0	0	0
230	SLU 14	0	-0.1	12.58	0	0	0
230	SLU 15	0	-0.1	12.58	0	0	0
230	SLU 16	0	-0.1	12.48	0	0	0
230	SLU 17	0	-0.11	12.48	0	0	0
230	SLU 18	0	-0.09	12.72	0	0	0
230	SLU 19	0	-0.1	12.72	0	0	0
230	SLU 20	0	-0.1	12.88	0	0	0
230	SLU 21	0	-0.1	12.88	0	0	0
230	SLU 22	0.01	-0.09	12	0	0	0
230	SLU 23	0.01	-0.1	12	0	0	0
230	SLU 24	0.01	-0.09	12.26	0	0	0
230	SLU 25	0.01	-0.09	12.26	0	0	0
230	SLU 26	0.01	-0.1	12.16	0	0	0
230	SLU 27	0.01	-0.09	12.42	0	0	0
230	SLU 28	0.01	-0.1	12.42	0	0	0
230	SLU 29	0.01	-0.09	12.33	0	0	0
230	SLU 30	0.01	-0.1	12.32	0	0	0
230	SLU 31	0.01	-0.09	13.31	0	0	0
230	SLU 32	0	-0.08	13.57	0	0	0
230	SLU 33	0.01	-0.09	13.57	0	0	0
230	SLU 34	0.01	-0.09	13.47	0	0	0
230	SLU 35	0	-0.08	13.73	0	0	0
230	SLU 36	0.01	-0.09	13.73	0	0	0
230	SLU 37	0	-0.09	13.64	0	0	0
230	SLU 38	0.01	-0.09	13.63	0	0	0
230	SLU 39	0	-0.08	13.88	0	0	0
230	SLU 40	0	-0.08	13.87	0	0	0
230	SLU 41	0	-0.08	14.04	0	0	0
230	SLU 42	0	-0.09	14.04	0	0	0
230	SLU 43	0.01	-0.14	13.7	0	0	0
230	SLU 44	0.01	-0.15	13.7	0	0	0
230	SLU 45	0.01	-0.14	13.96	0	0	0
230	SLU 46	0.01	-0.15	13.96	0	0	0
230	SLU 47	0.01	-0.15	13.86	0	0	0
230	SLU 48	0.01	-0.14	14.13	0	0	0
230	SLU 49	0.01	-0.15	14.12	0	0	0
230	SLU 50	0.01	-0.14	14.03	0	0	0
230	SLU 51	0.01	-0.15	14.03	0	0	0
230	SLU 52	0.01	-0.14	15.01	0	0	0
230	SLU 53	0	-0.13	15.28	0	0	0
230	SLU 54	0.01	-0.14	15.27	0	0	0
230	SLU 55	0.01	-0.14	15.17	0	0	0
230	SLU 56	0	-0.14	15.44	0	0	0
230	SLU 57	0.01	-0.14	15.43	0	0	0
230	SLU 58	0	-0.14	15.34	0	0	0
230	SLU 59	0.01	-0.14	15.34	0	0	0
230	SLU 60	0	-0.13	15.58	0	0	0
230	SLU 61	0	-0.14	15.58	0	0	0
230	SLU 62	0	-0.13	15.74	0	0	0
230	SLU 63	0	-0.14	15.74	0	0	0
230	SLU 64	0.01	-0.13	14.86	0	0	0
230	SLU 65	0.01	-0.13	14.85	0	0	0
230	SLU 66	0.01	-0.13	15.12	0	0	0
230	SLU 67	0.01	-0.13	15.11	0	0	0
230	SLU 68	0.01	-0.14	15.02	0	0	0
230	SLU 69	0.01	-0.13	15.28	0	0	0
230	SLU 70	0.01	-0.13	15.28	0	0	0
230	SLU 71	0.01	-0.13	15.18	0	0	0
230	SLU 72	0.01	-0.13	15.18	0	0	0
230	SLU 73	0.01	-0.13	16.17	0	0	0
230	SLU 74	0.01	-0.12	16.43	0	0	0
230	SLU 75	0.01	-0.12	16.43	0	0	0
230	SLU 76	0.01	-0.13	16.33	0	0	0
230	SLU 77	0	-0.12	16.59	0	0	0
230	SLU 78	0.01	-0.13	16.59	0	0	0
230	SLU 79	0	-0.12	16.5	0	0	0
230	SLU 80	0.01	-0.13	16.49	0	0	0
230	SLU 81	0	-0.12	16.74	0	0	0
230	SLU 82	0.01	-0.12	16.73	0	0	0
230	SLU 83	0	-0.12	16.9	0	0	0
230	SLU 84	0.01	-0.12	16.89	0	0	0
230	SLE RA 1	0.01	-0.1	11.18	0	0	0
230	SLE RA 2	0.01	-0.11	11.17	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
230	SLE RA 3	0.01	-0.1	11.35	0	0	0
230	SLE RA 4	0.01	-0.1	11.35	0	0	0
230	SLE RA 5	0.01	-0.11	11.28	0	0	0
230	SLE RA 6	0.01	-0.1	11.46	0	0	0
230	SLE RA 7	0.01	-0.1	11.45	0	0	0
230	SLE RA 8	0.01	-0.1	11.39	0	0	0
230	SLE RA 9	0.01	-0.11	11.39	0	0	0
230	SLE RA 10	0.01	-0.1	12.05	0	0	0
230	SLE RA 11	0	-0.1	12.22	0	0	0
230	SLE RA 12	0.01	-0.1	12.22	0	0	0
230	SLE RA 13	0.01	-0.1	12.16	0	0	0
230	SLE RA 14	0	-0.1	12.33	0	0	0
230	SLE RA 15	0.01	-0.1	12.33	0	0	0
230	SLE RA 16	0	-0.1	12.27	0	0	0
230	SLE RA 17	0.01	-0.1	12.27	0	0	0
230	SLE RA 18	0	-0.09	12.43	0	0	0
230	SLE RA 19	0	-0.1	12.42	0	0	0
230	SLE RA 20	0	-0.09	12.54	0	0	0
230	SLE RA 21	0	-0.1	12.53	0	0	0
230	SLE FR 1	0.01	-0.1	11.18	0	0	0
230	SLE FR 2	0.01	-0.1	11.18	0	0	0
230	SLE FR 3	0.01	-0.1	11.22	0	0	0
230	SLE FR 4	0.01	-0.1	11.55	0	0	0
230	SLE FR 5	0.01	-0.1	11.6	0	0	0
230	SLE FR 6	0.01	-0.1	11.8	0	0	0
230	SLE QP 1	0.01	-0.1	11.18	0	0	0
230	SLE QP 2	0.01	-0.1	11.55	0	0	0
230	SLD 1	1.04	0.13	11.37	0	0	0
230	SLD 2	1.13	0.15	11.42	0	0	0
230	SLD 3	0.96	-0.15	11.16	0	0	0
230	SLD 4	1.06	-0.12	11.22	0	0	0
230	SLD 5	0.41	0.39	11.8	0	0	0
230	SLD 6	0.47	0.41	11.83	0	0	0
230	SLD 7	0.16	-0.54	11.12	0	0	0
230	SLD 8	0.23	-0.52	11.15	0	0	0
230	SLD 9	-0.21	0.33	11.95	0	0	0
230	SLD 10	-0.15	0.35	11.99	0	0	0
230	SLD 11	-0.46	-0.6	11.27	0	0	0
230	SLD 12	-0.4	-0.58	11.31	0	0	0
230	SLD 13	-1.05	-0.07	11.89	0	0	0
230	SLD 14	-0.95	-0.04	11.94	0	0	0
230	SLD 15	-1.12	-0.35	11.68	0	0	0
230	SLD 16	-1.03	-0.32	11.74	0	0	0
230	SLV 1	2.42	0.42	11.11	0	0	0
230	SLV 2	2.64	0.48	11.24	0	0	0
230	SLV 3	2.25	-0.22	10.65	0	0	0
230	SLV 4	2.47	-0.15	10.77	0	0	0
230	SLV 5	0.95	1.01	12.1	0	0	0
230	SLV 6	1.1	1.05	12.18	0	0	0
230	SLV 7	0.38	-1.11	10.56	0	0	0
230	SLV 8	0.52	-1.06	10.64	0	0	0
230	SLV 9	-0.51	0.87	12.47	0	0	0
230	SLV 10	-0.37	0.91	12.55	0	0	0
230	SLV 11	-1.08	-1.24	10.92	0	0	0
230	SLV 12	-0.94	-1.2	11	0	0	0
230	SLV 13	-2.46	-0.05	12.33	0	0	0
230	SLV 14	-2.24	0.02	12.45	0	0	0
230	SLV 15	-2.63	-0.68	11.87	0	0	0
230	SLV 16	-2.41	-0.61	11.99	0	0	0
231	SLU 1	0.01	-0.12	10.87	0	0	0
231	SLU 2	0.01	-0.13	10.86	0	0	0
231	SLU 3	0.01	-0.12	11.13	0	0	0
231	SLU 4	0.01	-0.13	11.12	0	0	0
231	SLU 5	0.01	-0.13	11.02	0	0	0
231	SLU 6	0.01	-0.13	11.29	0	0	0
231	SLU 7	0.01	-0.13	11.28	0	0	0
231	SLU 8	0.01	-0.13	11.19	0	0	0
231	SLU 9	0.01	-0.13	11.19	0	0	0
231	SLU 10	0.01	-0.13	12.17	0	0	0
231	SLU 11	0	-0.12	12.43	0	0	0
231	SLU 12	0.01	-0.12	12.43	0	0	0
231	SLU 13	0.01	-0.13	12.33	0	0	0
231	SLU 14	0	-0.12	12.59	0	0	0
231	SLU 15	0.01	-0.13	12.59	0	0	0
231	SLU 16	0	-0.12	12.5	0	0	0
231	SLU 17	0.01	-0.13	12.5	0	0	0
231	SLU 18	0	-0.12	12.73	0	0	0
231	SLU 19	0.01	-0.12	12.73	0	0	0
231	SLU 20	0	-0.12	12.9	0	0	0
231	SLU 21	0	-0.12	12.89	0	0	0
231	SLU 22	0.01	-0.11	12.03	0	0	0
231	SLU 23	0.02	-0.12	12.02	0	0	0
231	SLU 24	0.01	-0.11	12.28	0	0	0
231	SLU 25	0.01	-0.12	12.28	0	0	0
231	SLU 26	0.02	-0.12	12.18	0	0	0
231	SLU 27	0.01	-0.11	12.44	0	0	0
231	SLU 28	0.01	-0.12	12.44	0	0	0
231	SLU 29	0.01	-0.12	12.35	0	0	0
231	SLU 30	0.01	-0.12	12.35	0	0	0
231	SLU 31	0.01	-0.12	13.33	0	0	0
231	SLU 32	0.01	-0.11	13.59	0	0	0
231	SLU 33	0.01	-0.11	13.59	0	0	0
231	SLU 34	0.01	-0.12	13.49	0	0	0
231	SLU 35	0.01	-0.11	13.75	0	0	0
231	SLU 36	0.01	-0.11	13.75	0	0	0
231	SLU 37	0.01	-0.11	13.66	0	0	0
231	SLU 38	0.01	-0.12	13.65	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLU 39	0	-0.11	13.89	0	0	0
231	SLU 40	0.01	-0.11	13.89	0	0	0
231	SLU 41	0	-0.11	14.05	0	0	0
231	SLU 42	0.01	-0.11	14.05	0	0	0
231	SLU 43	0.01	-0.17	13.73	0	0	0
231	SLU 44	0.02	-0.17	13.73	0	0	0
231	SLU 45	0.01	-0.17	13.99	0	0	0
231	SLU 46	0.01	-0.17	13.99	0	0	0
231	SLU 47	0.02	-0.18	13.89	0	0	0
231	SLU 48	0.01	-0.17	14.15	0	0	0
231	SLU 49	0.01	-0.17	14.15	0	0	0
231	SLU 50	0.01	-0.17	14.06	0	0	0
231	SLU 51	0.01	-0.17	14.05	0	0	0
231	SLU 52	0.01	-0.17	15.03	0	0	0
231	SLU 53	0.01	-0.16	15.3	0	0	0
231	SLU 54	0.01	-0.17	15.29	0	0	0
231	SLU 55	0.01	-0.17	15.19	0	0	0
231	SLU 56	0.01	-0.16	15.46	0	0	0
231	SLU 57	0.01	-0.17	15.45	0	0	0
231	SLU 58	0.01	-0.17	15.36	0	0	0
231	SLU 59	0.01	-0.17	15.36	0	0	0
231	SLU 60	0	-0.16	15.6	0	0	0
231	SLU 61	0.01	-0.16	15.59	0	0	0
231	SLU 62	0	-0.16	15.76	0	0	0
231	SLU 63	0.01	-0.17	15.76	0	0	0
231	SLU 64	0.01	-0.15	14.89	0	0	0
231	SLU 65	0.02	-0.16	14.88	0	0	0
231	SLU 66	0.01	-0.15	15.15	0	0	0
231	SLU 67	0.02	-0.16	15.14	0	0	0
231	SLU 68	0.02	-0.16	15.05	0	0	0
231	SLU 69	0.01	-0.16	15.31	0	0	0
231	SLU 70	0.02	-0.16	15.31	0	0	0
231	SLU 71	0.01	-0.16	15.21	0	0	0
231	SLU 72	0.02	-0.16	15.21	0	0	0
231	SLU 73	0.01	-0.16	16.19	0	0	0
231	SLU 74	0.01	-0.15	16.45	0	0	0
231	SLU 75	0.01	-0.15	16.45	0	0	0
231	SLU 76	0.01	-0.16	16.35	0	0	0
231	SLU 77	0.01	-0.15	16.62	0	0	0
231	SLU 78	0.01	-0.16	16.61	0	0	0
231	SLU 79	0.01	-0.15	16.52	0	0	0
231	SLU 80	0.01	-0.16	16.52	0	0	0
231	SLU 81	0.01	-0.15	16.76	0	0	0
231	SLU 82	0.01	-0.15	16.75	0	0	0
231	SLU 83	0.01	-0.15	16.92	0	0	0
231	SLU 84	0.01	-0.15	16.91	0	0	0
231	SLE RA 1	0.01	-0.12	11.2	0	0	0
231	SLE RA 2	0.01	-0.13	11.19	0	0	0
231	SLE RA 3	0.01	-0.12	11.37	0	0	0
231	SLE RA 4	0.01	-0.12	11.37	0	0	0
231	SLE RA 5	0.01	-0.13	11.3	0	0	0
231	SLE RA 6	0.01	-0.12	11.48	0	0	0
231	SLE RA 7	0.01	-0.13	11.48	0	0	0
231	SLE RA 8	0.01	-0.12	11.42	0	0	0
231	SLE RA 9	0.01	-0.13	11.41	0	0	0
231	SLE RA 10	0.01	-0.12	12.07	0	0	0
231	SLE RA 11	0.01	-0.12	12.24	0	0	0
231	SLE RA 12	0.01	-0.12	12.24	0	0	0
231	SLE RA 13	0.01	-0.12	12.17	0	0	0
231	SLE RA 14	0.01	-0.12	12.35	0	0	0
231	SLE RA 15	0.01	-0.12	12.35	0	0	0
231	SLE RA 16	0.01	-0.12	12.29	0	0	0
231	SLE RA 17	0.01	-0.12	12.28	0	0	0
231	SLE RA 18	0.01	-0.12	12.44	0	0	0
231	SLE RA 19	0.01	-0.12	12.44	0	0	0
231	SLE RA 20	0	-0.12	12.55	0	0	0
231	SLE RA 21	0.01	-0.12	12.55	0	0	0
231	SLE FR 1	0.01	-0.12	11.2	0	0	0
231	SLE FR 2	0.01	-0.12	11.2	0	0	0
231	SLE FR 3	0.01	-0.12	11.24	0	0	0
231	SLE FR 4	0.01	-0.12	11.57	0	0	0
231	SLE FR 5	0.01	-0.12	11.62	0	0	0
231	SLE FR 6	0.01	-0.12	11.82	0	0	0
231	SLE QP 1	0.01	-0.12	11.2	0	0	0
231	SLE QP 2	0.01	-0.12	11.57	0	0	0
231	SLD 1	1.04	0.12	11.3	0	0	0
231	SLD 2	1.14	0.15	11.36	0	0	0
231	SLD 3	0.97	-0.16	11.1	0	0	0
231	SLD 4	1.06	-0.13	11.15	0	0	0
231	SLD 5	0.41	0.36	11.79	0	0	0
231	SLD 6	0.48	0.39	11.83	0	0	0
231	SLD 7	0.17	-0.56	11.11	0	0	0
231	SLD 8	0.23	-0.54	11.15	0	0	0
231	SLD 9	-0.21	0.3	12	0	0	0
231	SLD 10	-0.15	0.32	12.03	0	0	0
231	SLD 11	-0.46	-0.63	11.32	0	0	0
231	SLD 12	-0.4	-0.6	11.36	0	0	0
231	SLD 13	-1.05	-0.11	11.99	0	0	0
231	SLD 14	-0.95	-0.08	12.05	0	0	0
231	SLD 15	-1.12	-0.39	11.79	0	0	0
231	SLD 16	-1.02	-0.35	11.85	0	0	0
231	SLV 1	2.43	0.42	10.93	0	0	0
231	SLV 2	2.65	0.5	11.06	0	0	0
231	SLV 3	2.25	-0.21	10.46	0	0	0
231	SLV 4	2.48	-0.13	10.6	0	0	0
231	SLV 5	0.96	0.98	12.06	0	0	0
231	SLV 6	1.1	1.03	12.14	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLV 7	0.38	-1.11	10.52	0	0	0
231	SLV 8	0.52	-1.06	10.6	0	0	0
231	SLV 9	-0.51	0.82	12.54	0	0	0
231	SLV 10	-0.36	0.87	12.63	0	0	0
231	SLV 11	-1.08	-1.27	11	0	0	0
231	SLV 12	-0.94	-1.22	11.09	0	0	0
231	SLV 13	-2.46	-0.11	12.55	0	0	0
231	SLV 14	-2.24	-0.03	12.68	0	0	0
231	SLV 15	-2.63	-0.74	12.08	0	0	0
231	SLV 16	-2.41	-0.66	12.22	0	0	0
232	SLU 1	0.01	-0.14	10.89	0	0	0
232	SLU 2	0.02	-0.15	10.88	0	0	0
232	SLU 3	0.01	-0.14	11.14	0	0	0
232	SLU 4	0.01	-0.15	11.14	0	0	0
232	SLU 5	0.02	-0.15	11.04	0	0	0
232	SLU 6	0.01	-0.15	11.31	0	0	0
232	SLU 7	0.01	-0.15	11.3	0	0	0
232	SLU 8	0.01	-0.15	11.21	0	0	0
232	SLU 9	0.01	-0.15	11.21	0	0	0
232	SLU 10	0.01	-0.15	12.18	0	0	0
232	SLU 11	0.01	-0.14	12.44	0	0	0
232	SLU 12	0.01	-0.15	12.44	0	0	0
232	SLU 13	0.01	-0.15	12.34	0	0	0
232	SLU 14	0.01	-0.14	12.61	0	0	0
232	SLU 15	0.01	-0.15	12.6	0	0	0
232	SLU 16	0.01	-0.15	12.51	0	0	0
232	SLU 17	0.01	-0.15	12.51	0	0	0
232	SLU 18	0.01	-0.14	12.74	0	0	0
232	SLU 19	0.01	-0.14	12.74	0	0	0
232	SLU 20	0	-0.14	12.91	0	0	0
232	SLU 21	0.01	-0.15	12.9	0	0	0
232	SLU 22	0.01	-0.13	12.05	0	0	0
232	SLU 23	0.02	-0.14	12.04	0	0	0
232	SLU 24	0.01	-0.13	12.3	0	0	0
232	SLU 25	0.02	-0.14	12.3	0	0	0
232	SLU 26	0.02	-0.14	12.2	0	0	0
232	SLU 27	0.01	-0.14	12.47	0	0	0
232	SLU 28	0.02	-0.14	12.46	0	0	0
232	SLU 29	0.01	-0.14	12.37	0	0	0
232	SLU 30	0.02	-0.14	12.37	0	0	0
232	SLU 31	0.01	-0.14	13.34	0	0	0
232	SLU 32	0.01	-0.13	13.6	0	0	0
232	SLU 33	0.01	-0.14	13.6	0	0	0
232	SLU 34	0.01	-0.14	13.5	0	0	0
232	SLU 35	0.01	-0.13	13.77	0	0	0
232	SLU 36	0.01	-0.14	13.76	0	0	0
232	SLU 37	0.01	-0.14	13.67	0	0	0
232	SLU 38	0.01	-0.14	13.67	0	0	0
232	SLU 39	0.01	-0.13	13.91	0	0	0
232	SLU 40	0.01	-0.13	13.9	0	0	0
232	SLU 41	0.01	-0.13	14.07	0	0	0
232	SLU 42	0.01	-0.14	14.06	0	0	0
232	SLU 43	0.01	-0.19	13.75	0	0	0
232	SLU 44	0.02	-0.2	13.75	0	0	0
232	SLU 45	0.01	-0.19	14.01	0	0	0
232	SLU 46	0.02	-0.19	14.01	0	0	0
232	SLU 47	0.02	-0.2	13.91	0	0	0
232	SLU 48	0.01	-0.19	14.17	0	0	0
232	SLU 49	0.02	-0.2	14.17	0	0	0
232	SLU 50	0.01	-0.19	14.08	0	0	0
232	SLU 51	0.02	-0.2	14.07	0	0	0
232	SLU 52	0.01	-0.19	15.05	0	0	0
232	SLU 53	0.01	-0.19	15.31	0	0	0
232	SLU 54	0.01	-0.19	15.31	0	0	0
232	SLU 55	0.01	-0.2	15.21	0	0	0
232	SLU 56	0.01	-0.19	15.47	0	0	0
232	SLU 57	0.01	-0.19	15.47	0	0	0
232	SLU 58	0.01	-0.19	15.38	0	0	0
232	SLU 59	0.01	-0.2	15.38	0	0	0
232	SLU 60	0.01	-0.19	15.61	0	0	0
232	SLU 61	0.01	-0.19	15.61	0	0	0
232	SLU 62	0.01	-0.19	15.77	0	0	0
232	SLU 63	0.01	-0.19	15.77	0	0	0
232	SLU 64	0.02	-0.18	14.91	0	0	0
232	SLU 65	0.02	-0.19	14.91	0	0	0
232	SLU 66	0.02	-0.18	15.17	0	0	0
232	SLU 67	0.02	-0.18	15.17	0	0	0
232	SLU 68	0.02	-0.19	15.07	0	0	0
232	SLU 69	0.02	-0.18	15.33	0	0	0
232	SLU 70	0.02	-0.19	15.33	0	0	0
232	SLU 71	0.02	-0.18	15.24	0	0	0
232	SLU 72	0.02	-0.19	15.24	0	0	0
232	SLU 73	0.02	-0.18	16.21	0	0	0
232	SLU 74	0.01	-0.18	16.47	0	0	0
232	SLU 75	0.01	-0.18	16.47	0	0	0
232	SLU 76	0.02	-0.19	16.37	0	0	0
232	SLU 77	0.01	-0.18	16.63	0	0	0
232	SLU 78	0.01	-0.19	16.63	0	0	0
232	SLU 79	0.01	-0.18	16.54	0	0	0
232	SLU 80	0.01	-0.19	16.54	0	0	0
232	SLU 81	0.01	-0.18	16.77	0	0	0
232	SLU 82	0.01	-0.18	16.77	0	0	0
232	SLU 83	0.01	-0.18	16.94	0	0	0
232	SLU 84	0.01	-0.18	16.93	0	0	0
232	SLE RA 1	0.01	-0.14	11.22	0	0	0
232	SLE RA 2	0.02	-0.14	11.21	0	0	0
232	SLE RA 3	0.01	-0.14	11.39	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
232	SLE RA 4	0.01	-0.14	11.39	0	0	0
232	SLE RA 5	0.02	-0.15	11.32	0	0	0
232	SLE RA 6	0.01	-0.14	11.5	0	0	0
232	SLE RA 7	0.01	-0.15	11.49	0	0	0
232	SLE RA 8	0.01	-0.14	11.43	0	0	0
232	SLE RA 9	0.01	-0.15	11.43	0	0	0
232	SLE RA 10	0.01	-0.14	12.08	0	0	0
232	SLE RA 11	0.01	-0.14	12.26	0	0	0
232	SLE RA 12	0.01	-0.14	12.25	0	0	0
232	SLE RA 13	0.01	-0.15	12.19	0	0	0
232	SLE RA 14	0.01	-0.14	12.36	0	0	0
232	SLE RA 15	0.01	-0.14	12.36	0	0	0
232	SLE RA 16	0.01	-0.14	12.3	0	0	0
232	SLE RA 17	0.01	-0.14	12.3	0	0	0
232	SLE RA 18	0.01	-0.14	12.46	0	0	0
232	SLE RA 19	0.01	-0.14	12.45	0	0	0
232	SLE RA 20	0.01	-0.14	12.56	0	0	0
232	SLE RA 21	0.01	-0.14	12.56	0	0	0
232	SLE FR 1	0.01	-0.14	11.22	0	0	0
232	SLE FR 2	0.01	-0.14	11.22	0	0	0
232	SLE FR 3	0.01	-0.14	11.26	0	0	0
232	SLE FR 4	0.01	-0.14	11.59	0	0	0
232	SLE FR 5	0.01	-0.14	11.63	0	0	0
232	SLE FR 6	0.01	-0.14	11.84	0	0	0
232	SLE QP 1	0.01	-0.14	11.22	0	0	0
232	SLE QP 2	0.01	-0.14	11.59	0	0	0
232	SLD 1	1.04	0.1	11.22	0	0	0
232	SLD 2	1.13	0.14	11.28	0	0	0
232	SLD 3	0.96	-0.17	11.02	0	0	0
232	SLD 4	1.06	-0.13	11.08	0	0	0
232	SLD 5	0.41	0.34	11.78	0	0	0
232	SLD 6	0.48	0.36	11.82	0	0	0
232	SLD 7	0.17	-0.57	11.1	0	0	0
232	SLD 8	0.23	-0.54	11.14	0	0	0
232	SLD 9	-0.21	0.26	12.04	0	0	0
232	SLD 10	-0.15	0.29	12.08	0	0	0
232	SLD 11	-0.45	-0.64	11.36	0	0	0
232	SLD 12	-0.39	-0.62	11.4	0	0	0
232	SLD 13	-1.04	-0.15	12.1	0	0	0
232	SLD 14	-0.94	-0.11	12.16	0	0	0
232	SLD 15	-1.11	-0.42	11.9	0	0	0
232	SLD 16	-1.02	-0.38	11.96	0	0	0
232	SLV 1	2.41	0.42	10.72	0	0	0
232	SLV 2	2.63	0.51	10.87	0	0	0
232	SLV 3	2.24	-0.2	10.26	0	0	0
232	SLV 4	2.46	-0.11	10.4	0	0	0
232	SLV 5	0.95	0.95	12.01	0	0	0
232	SLV 6	1.1	1.01	12.1	0	0	0
232	SLV 7	0.38	-1.11	10.46	0	0	0
232	SLV 8	0.52	-1.05	10.56	0	0	0
232	SLV 9	-0.5	0.77	12.62	0	0	0
232	SLV 10	-0.36	0.83	12.71	0	0	0
232	SLV 11	-1.07	-1.29	11.08	0	0	0
232	SLV 12	-0.93	-1.23	11.17	0	0	0
232	SLV 13	-2.44	-0.17	12.78	0	0	0
232	SLV 14	-2.22	-0.08	12.92	0	0	0
232	SLV 15	-2.61	-0.79	12.31	0	0	0
232	SLV 16	-2.39	-0.7	12.45	0	0	0
233	SLU 1	0.02	-0.16	10.87	0	0	0
233	SLU 2	0.02	-0.17	10.86	0	0	0
233	SLU 3	0.02	-0.16	11.12	0	0	0
233	SLU 4	0.02	-0.16	11.12	0	0	0
233	SLU 5	0.02	-0.17	11.02	0	0	0
233	SLU 6	0.01	-0.16	11.28	0	0	0
233	SLU 7	0.02	-0.17	11.28	0	0	0
233	SLU 8	0.01	-0.16	11.19	0	0	0
233	SLU 9	0.02	-0.17	11.19	0	0	0
233	SLU 10	0.02	-0.17	12.15	0	0	0
233	SLU 11	0.01	-0.16	12.41	0	0	0
233	SLU 12	0.01	-0.16	12.41	0	0	0
233	SLU 13	0.01	-0.17	12.31	0	0	0
233	SLU 14	0.01	-0.16	12.58	0	0	0
233	SLU 15	0.01	-0.17	12.57	0	0	0
233	SLU 16	0.01	-0.16	12.48	0	0	0
233	SLU 17	0.01	-0.17	12.48	0	0	0
233	SLU 18	0.01	-0.16	12.71	0	0	0
233	SLU 19	0.01	-0.16	12.71	0	0	0
233	SLU 20	0.01	-0.16	12.87	0	0	0
233	SLU 21	0.01	-0.17	12.87	0	0	0
233	SLU 22	0.02	-0.15	12.03	0	0	0
233	SLU 23	0.02	-0.16	12.02	0	0	0
233	SLU 24	0.02	-0.15	12.28	0	0	0
233	SLU 25	0.02	-0.16	12.28	0	0	0
233	SLU 26	0.02	-0.16	12.18	0	0	0
233	SLU 27	0.02	-0.16	12.45	0	0	0
233	SLU 28	0.02	-0.16	12.44	0	0	0
233	SLU 29	0.02	-0.16	12.35	0	0	0
233	SLU 30	0.02	-0.16	12.35	0	0	0
233	SLU 31	0.02	-0.16	13.31	0	0	0
233	SLU 32	0.01	-0.15	13.58	0	0	0
233	SLU 33	0.02	-0.16	13.57	0	0	0
233	SLU 34	0.02	-0.16	13.48	0	0	0
233	SLU 35	0.01	-0.16	13.74	0	0	0
233	SLU 36	0.02	-0.16	13.74	0	0	0
233	SLU 37	0.01	-0.16	13.64	0	0	0
233	SLU 38	0.02	-0.16	13.64	0	0	0
233	SLU 39	0.01	-0.15	13.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
233	SLU 40	0.01	-0.16	13.87	0	0	0
233	SLU 41	0.01	-0.15	14.04	0	0	0
233	SLU 42	0.01	-0.16	14.03	0	0	0
233	SLU 43	0.02	-0.21	13.73	0	0	0
233	SLU 44	0.02	-0.22	13.72	0	0	0
233	SLU 45	0.02	-0.21	13.98	0	0	0
233	SLU 46	0.02	-0.21	13.98	0	0	0
233	SLU 47	0.02	-0.22	13.88	0	0	0
233	SLU 48	0.02	-0.21	14.15	0	0	0
233	SLU 49	0.02	-0.22	14.14	0	0	0
233	SLU 50	0.02	-0.21	14.05	0	0	0
233	SLU 51	0.02	-0.22	14.05	0	0	0
233	SLU 52	0.02	-0.22	15.01	0	0	0
233	SLU 53	0.01	-0.21	15.28	0	0	0
233	SLU 54	0.02	-0.21	15.27	0	0	0
233	SLU 55	0.02	-0.22	15.18	0	0	0
233	SLU 56	0.01	-0.21	15.44	0	0	0
233	SLU 57	0.02	-0.22	15.43	0	0	0
233	SLU 58	0.01	-0.21	15.34	0	0	0
233	SLU 59	0.02	-0.22	15.34	0	0	0
233	SLU 60	0.01	-0.21	15.57	0	0	0
233	SLU 61	0.02	-0.21	15.57	0	0	0
233	SLU 62	0.01	-0.21	15.74	0	0	0
233	SLU 63	0.01	-0.22	15.73	0	0	0
233	SLU 64	0.02	-0.2	14.89	0	0	0
233	SLU 65	0.03	-0.21	14.88	0	0	0
233	SLU 66	0.02	-0.2	15.15	0	0	0
233	SLU 67	0.02	-0.21	15.14	0	0	0
233	SLU 68	0.03	-0.21	15.04	0	0	0
233	SLU 69	0.02	-0.21	15.31	0	0	0
233	SLU 70	0.02	-0.21	15.3	0	0	0
233	SLU 71	0.02	-0.21	15.21	0	0	0
233	SLU 72	0.02	-0.21	15.21	0	0	0
233	SLU 73	0.02	-0.21	16.18	0	0	0
233	SLU 74	0.02	-0.2	16.44	0	0	0
233	SLU 75	0.02	-0.21	16.43	0	0	0
233	SLU 76	0.02	-0.21	16.34	0	0	0
233	SLU 77	0.02	-0.21	16.6	0	0	0
233	SLU 78	0.02	-0.21	16.6	0	0	0
233	SLU 79	0.02	-0.21	16.5	0	0	0
233	SLU 80	0.02	-0.21	16.5	0	0	0
233	SLU 81	0.02	-0.2	16.74	0	0	0
233	SLU 82	0.02	-0.21	16.73	0	0	0
233	SLU 83	0.01	-0.2	16.9	0	0	0
233	SLU 84	0.02	-0.21	16.89	0	0	0
233	SLE RA 1	0.02	-0.16	11.2	0	0	0
233	SLE RA 2	0.02	-0.16	11.19	0	0	0
233	SLE RA 3	0.02	-0.16	11.37	0	0	0
233	SLE RA 4	0.02	-0.16	11.37	0	0	0
233	SLE RA 5	0.02	-0.16	11.3	0	0	0
233	SLE RA 6	0.02	-0.16	11.48	0	0	0
233	SLE RA 7	0.02	-0.16	11.47	0	0	0
233	SLE RA 8	0.02	-0.16	11.41	0	0	0
233	SLE RA 9	0.02	-0.16	11.41	0	0	0
233	SLE RA 10	0.02	-0.16	12.06	0	0	0
233	SLE RA 11	0.01	-0.16	12.23	0	0	0
233	SLE RA 12	0.01	-0.16	12.23	0	0	0
233	SLE RA 13	0.02	-0.16	12.16	0	0	0
233	SLE RA 14	0.01	-0.16	12.34	0	0	0
233	SLE RA 15	0.01	-0.16	12.34	0	0	0
233	SLE RA 16	0.01	-0.16	12.27	0	0	0
233	SLE RA 17	0.01	-0.16	12.27	0	0	0
233	SLE RA 18	0.01	-0.16	12.43	0	0	0
233	SLE RA 19	0.01	-0.16	12.43	0	0	0
233	SLE RA 20	0.01	-0.16	12.54	0	0	0
233	SLE RA 21	0.01	-0.16	12.53	0	0	0
233	SLE FR 1	0.02	-0.16	11.2	0	0	0
233	SLE FR 2	0.02	-0.16	11.2	0	0	0
233	SLE FR 3	0.02	-0.16	11.24	0	0	0
233	SLE FR 4	0.02	-0.16	11.57	0	0	0
233	SLE FR 5	0.01	-0.16	11.61	0	0	0
233	SLE FR 6	0.01	-0.16	11.81	0	0	0
233	SLE QP 1	0.02	-0.16	11.2	0	0	0
233	SLE QP 2	0.01	-0.16	11.57	0	0	0
233	SLD 1	1.02	0.09	11.11	0	0	0
233	SLD 2	1.12	0.13	11.17	0	0	0
233	SLD 3	0.95	-0.17	10.9	0	0	0
233	SLD 4	1.04	-0.13	10.97	0	0	0
233	SLD 5	0.41	0.31	11.73	0	0	0
233	SLD 6	0.47	0.34	11.77	0	0	0
233	SLD 7	0.17	-0.57	11.05	0	0	0
233	SLD 8	0.23	-0.54	11.09	0	0	0
233	SLD 9	-0.2	0.23	12.05	0	0	0
233	SLD 10	-0.14	0.26	12.09	0	0	0
233	SLD 11	-0.44	-0.65	11.37	0	0	0
233	SLD 12	-0.38	-0.63	11.41	0	0	0
233	SLD 13	-1.01	-0.18	12.17	0	0	0
233	SLD 14	-0.92	-0.14	12.23	0	0	0
233	SLD 15	-1.09	-0.45	11.96	0	0	0
233	SLD 16	-0.99	-0.4	12.03	0	0	0
233	SLV 1	2.37	0.42	10.48	0	0	0
233	SLV 2	2.59	0.51	10.63	0	0	0
233	SLV 3	2.2	-0.19	10.02	0	0	0
233	SLV 4	2.42	-0.09	10.17	0	0	0
233	SLV 5	0.94	0.91	11.92	0	0	0
233	SLV 6	1.08	0.97	12.02	0	0	0
233	SLV 7	0.38	-1.1	10.37	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
233	SLV 8	0.52	-1.03	10.47	0	0	0
233	SLV 9	-0.49	0.72	12.67	0	0	0
233	SLV 10	-0.35	0.78	12.76	0	0	0
233	SLV 11	-1.05	-1.29	11.12	0	0	0
233	SLV 12	-0.91	-1.23	11.21	0	0	0
233	SLV 13	-2.39	-0.22	12.97	0	0	0
233	SLV 14	-2.18	-0.13	13.12	0	0	0
233	SLV 15	-2.56	-0.82	12.5	0	0	0
233	SLV 16	-2.34	-0.73	12.65	0	0	0
234	SLU 1	0.02	-0.16	10	0	0	0
234	SLU 2	0.02	-0.16	10	0	0	0
234	SLU 3	0.02	-0.16	10.24	0	0	0
234	SLU 4	0.02	-0.16	10.23	0	0	0
234	SLU 5	0.02	-0.17	10.15	0	0	0
234	SLU 6	0.02	-0.16	10.39	0	0	0
234	SLU 7	0.02	-0.17	10.38	0	0	0
234	SLU 8	0.02	-0.16	10.3	0	0	0
234	SLU 9	0.02	-0.17	10.3	0	0	0
234	SLU 10	0.02	-0.16	11.18	0	0	0
234	SLU 11	0.01	-0.16	11.42	0	0	0
234	SLU 12	0.02	-0.16	11.42	0	0	0
234	SLU 13	0.02	-0.17	11.33	0	0	0
234	SLU 14	0.01	-0.16	11.57	0	0	0
234	SLU 15	0.02	-0.17	11.57	0	0	0
234	SLU 16	0.01	-0.16	11.49	0	0	0
234	SLU 17	0.02	-0.17	11.48	0	0	0
234	SLU 18	0.01	-0.16	11.7	0	0	0
234	SLU 19	0.01	-0.16	11.69	0	0	0
234	SLU 20	0.01	-0.16	11.85	0	0	0
234	SLU 21	0.01	-0.17	11.84	0	0	0
234	SLU 22	0.02	-0.15	11.08	0	0	0
234	SLU 23	0.02	-0.16	11.07	0	0	0
234	SLU 24	0.02	-0.15	11.31	0	0	0
234	SLU 25	0.02	-0.16	11.31	0	0	0
234	SLU 26	0.02	-0.16	11.22	0	0	0
234	SLU 27	0.02	-0.16	11.46	0	0	0
234	SLU 28	0.02	-0.16	11.46	0	0	0
234	SLU 29	0.02	-0.16	11.37	0	0	0
234	SLU 30	0.02	-0.16	11.37	0	0	0
234	SLU 31	0.02	-0.16	12.26	0	0	0
234	SLU 32	0.02	-0.16	12.5	0	0	0
234	SLU 33	0.02	-0.16	12.5	0	0	0
234	SLU 34	0.02	-0.16	12.41	0	0	0
234	SLU 35	0.02	-0.16	12.65	0	0	0
234	SLU 36	0.02	-0.16	12.64	0	0	0
234	SLU 37	0.02	-0.16	12.56	0	0	0
234	SLU 38	0.02	-0.16	12.56	0	0	0
234	SLU 39	0.02	-0.15	12.77	0	0	0
234	SLU 40	0.02	-0.16	12.77	0	0	0
234	SLU 41	0.01	-0.16	12.92	0	0	0
234	SLU 42	0.02	-0.16	12.92	0	0	0
234	SLU 43	0.02	-0.21	12.63	0	0	0
234	SLU 44	0.03	-0.21	12.63	0	0	0
234	SLU 45	0.02	-0.21	12.87	0	0	0
234	SLU 46	0.02	-0.21	12.87	0	0	0
234	SLU 47	0.03	-0.21	12.78	0	0	0
234	SLU 48	0.02	-0.21	13.02	0	0	0
234	SLU 49	0.02	-0.21	13.02	0	0	0
234	SLU 50	0.02	-0.21	12.93	0	0	0
234	SLU 51	0.02	-0.22	12.93	0	0	0
234	SLU 52	0.02	-0.21	13.82	0	0	0
234	SLU 53	0.02	-0.21	14.06	0	0	0
234	SLU 54	0.02	-0.21	14.05	0	0	0
234	SLU 55	0.02	-0.22	13.96	0	0	0
234	SLU 56	0.02	-0.21	14.21	0	0	0
234	SLU 57	0.02	-0.22	14.2	0	0	0
234	SLU 58	0.02	-0.21	14.12	0	0	0
234	SLU 59	0.02	-0.22	14.12	0	0	0
234	SLU 60	0.02	-0.21	14.33	0	0	0
234	SLU 61	0.02	-0.21	14.33	0	0	0
234	SLU 62	0.02	-0.21	14.48	0	0	0
234	SLU 63	0.02	-0.22	14.48	0	0	0
234	SLU 64	0.02	-0.2	13.71	0	0	0
234	SLU 65	0.03	-0.21	13.7	0	0	0
234	SLU 66	0.03	-0.2	13.94	0	0	0
234	SLU 67	0.03	-0.21	13.94	0	0	0
234	SLU 68	0.03	-0.21	13.85	0	0	0
234	SLU 69	0.02	-0.21	14.09	0	0	0
234	SLU 70	0.03	-0.21	14.09	0	0	0
234	SLU 71	0.02	-0.21	14.01	0	0	0
234	SLU 72	0.03	-0.21	14	0	0	0
234	SLU 73	0.03	-0.21	14.89	0	0	0
234	SLU 74	0.02	-0.2	15.13	0	0	0
234	SLU 75	0.02	-0.21	15.13	0	0	0
234	SLU 76	0.02	-0.21	15.04	0	0	0
234	SLU 77	0.02	-0.21	15.28	0	0	0
234	SLU 78	0.02	-0.21	15.28	0	0	0
234	SLU 79	0.02	-0.21	15.19	0	0	0
234	SLU 80	0.02	-0.21	15.19	0	0	0
234	SLU 81	0.02	-0.2	15.4	0	0	0
234	SLU 82	0.02	-0.21	15.4	0	0	0
234	SLU 83	0.02	-0.21	15.55	0	0	0
234	SLU 84	0.02	-0.21	15.55	0	0	0
234	SLE RA 1	0.02	-0.16	10.31	0	0	0
234	SLE RA 2	0.02	-0.16	10.3	0	0	0
234	SLE RA 3	0.02	-0.16	10.47	0	0	0
234	SLE RA 4	0.02	-0.16	10.46	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
234	SLE RA 5	0.02	-0.16	10.4	0	0	0
234	SLE RA 6	0.02	-0.16	10.57	0	0	0
234	SLE RA 7	0.02	-0.16	10.56	0	0	0
234	SLE RA 8	0.02	-0.16	10.51	0	0	0
234	SLE RA 9	0.02	-0.16	10.5	0	0	0
234	SLE RA 10	0.02	-0.16	11.1	0	0	0
234	SLE RA 11	0.02	-0.16	11.26	0	0	0
234	SLE RA 12	0.02	-0.16	11.26	0	0	0
234	SLE RA 13	0.02	-0.16	11.2	0	0	0
234	SLE RA 14	0.02	-0.16	11.36	0	0	0
234	SLE RA 15	0.02	-0.16	11.35	0	0	0
234	SLE RA 16	0.02	-0.16	11.3	0	0	0
234	SLE RA 17	0.02	-0.16	11.3	0	0	0
234	SLE RA 18	0.01	-0.16	11.44	0	0	0
234	SLE RA 19	0.02	-0.16	11.44	0	0	0
234	SLE RA 20	0.01	-0.16	11.54	0	0	0
234	SLE RA 21	0.02	-0.16	11.54	0	0	0
234	SLE FR 1	0.02	-0.16	10.31	0	0	0
234	SLE FR 2	0.02	-0.16	10.31	0	0	0
234	SLE FR 3	0.02	-0.16	10.35	0	0	0
234	SLE FR 4	0.02	-0.16	10.65	0	0	0
234	SLE FR 5	0.02	-0.16	10.69	0	0	0
234	SLE FR 6	0.02	-0.16	10.87	0	0	0
234	SLE QP 1	0.02	-0.16	10.31	0	0	0
234	SLE QP 2	0.02	-0.16	10.65	0	0	0
234	SLD 1	0.92	0.07	10.14	0	0	0
234	SLD 2	1.01	0.11	10.2	0	0	0
234	SLD 3	0.86	-0.16	9.95	0	0	0
234	SLD 4	0.94	-0.12	10.01	0	0	0
234	SLD 5	0.37	0.27	10.77	0	0	0
234	SLD 6	0.43	0.29	10.81	0	0	0
234	SLD 7	0.16	-0.53	10.14	0	0	0
234	SLD 8	0.21	-0.5	10.18	0	0	0
234	SLD 9	-0.18	0.19	11.12	0	0	0
234	SLD 10	-0.12	0.21	11.16	0	0	0
234	SLD 11	-0.39	-0.6	10.48	0	0	0
234	SLD 12	-0.34	-0.58	10.52	0	0	0
234	SLD 13	-0.91	-0.19	11.28	0	0	0
234	SLD 14	-0.82	-0.15	11.35	0	0	0
234	SLD 15	-0.97	-0.43	11.1	0	0	0
234	SLD 16	-0.89	-0.39	11.16	0	0	0
234	SLV 1	2.14	0.38	9.45	0	0	0
234	SLV 2	2.34	0.47	9.59	0	0	0
234	SLV 3	1.99	-0.16	9.02	0	0	0
234	SLV 4	2.19	-0.07	9.16	0	0	0
234	SLV 5	0.85	0.81	10.92	0	0	0
234	SLV 6	0.98	0.87	11.01	0	0	0
234	SLV 7	0.34	-0.99	9.48	0	0	0
234	SLV 8	0.47	-0.93	9.57	0	0	0
234	SLV 9	-0.44	0.62	11.72	0	0	0
234	SLV 10	-0.31	0.68	11.82	0	0	0
234	SLV 11	-0.94	-1.18	10.28	0	0	0
234	SLV 12	-0.82	-1.12	10.38	0	0	0
234	SLV 13	-2.15	-0.24	12.13	0	0	0
234	SLV 14	-1.95	-0.15	12.28	0	0	0
234	SLV 15	-2.3	-0.78	11.7	0	0	0
234	SLV 16	-2.11	-0.69	11.85	0	0	0
235	SLU 1	0.02	-0.15	9.36	0	0	0
235	SLU 2	0.02	-0.16	9.35	0	0	0
235	SLU 3	0.02	-0.16	9.58	0	0	0
235	SLU 4	0.02	-0.16	9.58	0	0	0
235	SLU 5	0.02	-0.16	9.49	0	0	0
235	SLU 6	0.02	-0.16	9.72	0	0	0
235	SLU 7	0.02	-0.16	9.71	0	0	0
235	SLU 8	0.02	-0.16	9.64	0	0	0
235	SLU 9	0.02	-0.16	9.63	0	0	0
235	SLU 10	0.02	-0.16	10.46	0	0	0
235	SLU 11	0.02	-0.16	10.69	0	0	0
235	SLU 12	0.02	-0.16	10.68	0	0	0
235	SLU 13	0.02	-0.17	10.6	0	0	0
235	SLU 14	0.02	-0.16	10.83	0	0	0
235	SLU 15	0.02	-0.17	10.82	0	0	0
235	SLU 16	0.02	-0.16	10.74	0	0	0
235	SLU 17	0.02	-0.17	10.74	0	0	0
235	SLU 18	0.02	-0.16	10.94	0	0	0
235	SLU 19	0.02	-0.16	10.94	0	0	0
235	SLU 20	0.01	-0.16	11.08	0	0	0
235	SLU 21	0.02	-0.17	11.08	0	0	0
235	SLU 22	0.02	-0.15	10.36	0	0	0
235	SLU 23	0.03	-0.16	10.36	0	0	0
235	SLU 24	0.02	-0.15	10.59	0	0	0
235	SLU 25	0.03	-0.16	10.58	0	0	0
235	SLU 26	0.03	-0.16	10.5	0	0	0
235	SLU 27	0.02	-0.16	10.73	0	0	0
235	SLU 28	0.02	-0.16	10.72	0	0	0
235	SLU 29	0.02	-0.16	10.64	0	0	0
235	SLU 30	0.02	-0.16	10.64	0	0	0
235	SLU 31	0.02	-0.16	11.47	0	0	0
235	SLU 32	0.02	-0.16	11.7	0	0	0
235	SLU 33	0.02	-0.16	11.69	0	0	0
235	SLU 34	0.02	-0.16	11.61	0	0	0
235	SLU 35	0.02	-0.16	11.83	0	0	0
235	SLU 36	0.02	-0.16	11.83	0	0	0
235	SLU 37	0.02	-0.16	11.75	0	0	0
235	SLU 38	0.02	-0.16	11.75	0	0	0
235	SLU 39	0.02	-0.16	11.95	0	0	0
235	SLU 40	0.02	-0.16	11.95	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
235	SLU 41	0.02	-0.16	12.09	0	0	0
235	SLU 42	0.02	-0.16	12.09	0	0	0
235	SLU 43	0.02	-0.2	11.82	0	0	0
235	SLU 44	0.03	-0.21	11.81	0	0	0
235	SLU 45	0.02	-0.2	12.04	0	0	0
235	SLU 46	0.03	-0.21	12.04	0	0	0
235	SLU 47	0.03	-0.21	11.95	0	0	0
235	SLU 48	0.02	-0.21	12.18	0	0	0
235	SLU 49	0.03	-0.21	12.18	0	0	0
235	SLU 50	0.02	-0.21	12.1	0	0	0
235	SLU 51	0.03	-0.21	12.09	0	0	0
235	SLU 52	0.03	-0.21	12.92	0	0	0
235	SLU 53	0.02	-0.21	13.15	0	0	0
235	SLU 54	0.02	-0.21	13.15	0	0	0
235	SLU 55	0.02	-0.21	13.06	0	0	0
235	SLU 56	0.02	-0.21	13.29	0	0	0
235	SLU 57	0.02	-0.21	13.29	0	0	0
235	SLU 58	0.02	-0.21	13.21	0	0	0
235	SLU 59	0.02	-0.21	13.2	0	0	0
235	SLU 60	0.02	-0.21	13.4	0	0	0
235	SLU 61	0.02	-0.21	13.4	0	0	0
235	SLU 62	0.02	-0.21	13.54	0	0	0
235	SLU 63	0.02	-0.21	13.54	0	0	0
235	SLU 64	0.03	-0.2	12.83	0	0	0
235	SLU 65	0.03	-0.2	12.82	0	0	0
235	SLU 66	0.03	-0.2	13.05	0	0	0
235	SLU 67	0.03	-0.2	13.04	0	0	0
235	SLU 68	0.03	-0.21	12.96	0	0	0
235	SLU 69	0.03	-0.2	13.19	0	0	0
235	SLU 70	0.03	-0.21	13.18	0	0	0
235	SLU 71	0.03	-0.2	13.11	0	0	0
235	SLU 72	0.03	-0.21	13.1	0	0	0
235	SLU 73	0.03	-0.21	13.93	0	0	0
235	SLU 74	0.02	-0.2	14.16	0	0	0
235	SLU 75	0.03	-0.21	14.15	0	0	0
235	SLU 76	0.03	-0.21	14.07	0	0	0
235	SLU 77	0.02	-0.21	14.3	0	0	0
235	SLU 78	0.03	-0.21	14.29	0	0	0
235	SLU 79	0.02	-0.21	14.21	0	0	0
235	SLU 80	0.03	-0.21	14.21	0	0	0
235	SLU 81	0.02	-0.2	14.41	0	0	0
235	SLU 82	0.03	-0.21	14.41	0	0	0
235	SLU 83	0.02	-0.21	14.55	0	0	0
235	SLU 84	0.03	-0.21	14.55	0	0	0
235	SLE RA 1	0.02	-0.15	9.64	0	0	0
235	SLE RA 2	0.02	-0.16	9.64	0	0	0
235	SLE RA 3	0.02	-0.16	9.79	0	0	0
235	SLE RA 4	0.02	-0.16	9.79	0	0	0
235	SLE RA 5	0.02	-0.16	9.73	0	0	0
235	SLE RA 6	0.02	-0.16	9.89	0	0	0
235	SLE RA 7	0.02	-0.16	9.88	0	0	0
235	SLE RA 8	0.02	-0.16	9.83	0	0	0
235	SLE RA 9	0.02	-0.16	9.83	0	0	0
235	SLE RA 10	0.02	-0.16	10.38	0	0	0
235	SLE RA 11	0.02	-0.16	10.53	0	0	0
235	SLE RA 12	0.02	-0.16	10.53	0	0	0
235	SLE RA 13	0.02	-0.16	10.47	0	0	0
235	SLE RA 14	0.02	-0.16	10.62	0	0	0
235	SLE RA 15	0.02	-0.16	10.62	0	0	0
235	SLE RA 16	0.02	-0.16	10.57	0	0	0
235	SLE RA 17	0.02	-0.16	10.57	0	0	0
235	SLE RA 18	0.02	-0.16	10.7	0	0	0
235	SLE RA 19	0.02	-0.16	10.7	0	0	0
235	SLE RA 20	0.02	-0.16	10.79	0	0	0
235	SLE RA 21	0.02	-0.16	10.79	0	0	0
235	SLE FR 1	0.02	-0.15	9.64	0	0	0
235	SLE FR 2	0.02	-0.15	9.64	0	0	0
235	SLE FR 3	0.02	-0.15	9.68	0	0	0
235	SLE FR 4	0.02	-0.16	9.96	0	0	0
235	SLE FR 5	0.02	-0.16	10	0	0	0
235	SLE FR 6	0.02	-0.16	10.17	0	0	0
235	SLE QP 1	0.02	-0.15	9.64	0	0	0
235	SLE QP 2	0.02	-0.15	9.96	0	0	0
235	SLD 1	0.85	0.06	9.41	0	0	0
235	SLD 2	0.93	0.1	9.47	0	0	0
235	SLD 3	0.79	-0.16	9.23	0	0	0
235	SLD 4	0.87	-0.12	9.3	0	0	0
235	SLD 5	0.35	0.23	10.06	0	0	0
235	SLD 6	0.4	0.26	10.1	0	0	0
235	SLD 7	0.15	-0.49	9.46	0	0	0
235	SLD 8	0.2	-0.46	9.5	0	0	0
235	SLD 9	-0.16	0.16	10.42	0	0	0
235	SLD 10	-0.11	0.18	10.46	0	0	0
235	SLD 11	-0.36	-0.57	9.82	0	0	0
235	SLD 12	-0.31	-0.54	9.86	0	0	0
235	SLD 13	-0.83	-0.19	10.63	0	0	0
235	SLD 14	-0.75	-0.15	10.69	0	0	0
235	SLD 15	-0.89	-0.41	10.45	0	0	0
235	SLD 16	-0.81	-0.37	10.51	0	0	0
235	SLV 1	1.96	0.34	8.68	0	0	0
235	SLV 2	2.14	0.44	8.82	0	0	0
235	SLV 3	1.82	-0.15	8.27	0	0	0
235	SLV 4	2	-0.06	8.41	0	0	0
235	SLV 5	0.78	0.73	10.17	0	0	0
235	SLV 6	0.9	0.78	10.26	0	0	0
235	SLV 7	0.32	-0.91	8.81	0	0	0
235	SLV 8	0.43	-0.86	8.9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
235	SLV 9	-0.4	0.55	11.03	0	0	0
235	SLV 10	-0.28	0.61	11.12	0	0	0
235	SLV 11	-0.86	-1.09	9.66	0	0	0
235	SLV 12	-0.74	-1.03	9.75	0	0	0
235	SLV 13	-1.97	-0.25	11.52	0	0	0
235	SLV 14	-1.79	-0.16	11.66	0	0	0
235	SLV 15	-2.1	-0.75	11.11	0	0	0
235	SLV 16	-1.92	-0.65	11.25	0	0	0
236	SLU 1	0.01	-0.08	4.68	0	0	0
236	SLU 2	0.01	-0.09	4.68	0	0	0
236	SLU 3	0.01	-0.09	4.79	0	0	0
236	SLU 4	0.01	-0.09	4.79	0	0	0
236	SLU 5	0.01	-0.09	4.75	0	0	0
236	SLU 6	0.01	-0.09	4.86	0	0	0
236	SLU 7	0.01	-0.09	4.86	0	0	0
236	SLU 8	0.01	-0.09	4.82	0	0	0
236	SLU 9	0.01	-0.09	4.82	0	0	0
236	SLU 10	0.01	-0.09	5.23	0	0	0
236	SLU 11	0.01	-0.09	5.35	0	0	0
236	SLU 12	0.01	-0.09	5.34	0	0	0
236	SLU 13	0.01	-0.09	5.3	0	0	0
236	SLU 14	0.01	-0.09	5.42	0	0	0
236	SLU 15	0.01	-0.09	5.41	0	0	0
236	SLU 16	0.01	-0.09	5.38	0	0	0
236	SLU 17	0.01	-0.09	5.37	0	0	0
236	SLU 18	0.01	-0.09	5.47	0	0	0
236	SLU 19	0.01	-0.09	5.47	0	0	0
236	SLU 20	0.01	-0.09	5.54	0	0	0
236	SLU 21	0.01	-0.09	5.54	0	0	0
236	SLU 22	0.01	-0.08	5.19	0	0	0
236	SLU 23	0.01	-0.09	5.19	0	0	0
236	SLU 24	0.01	-0.09	5.3	0	0	0
236	SLU 25	0.01	-0.09	5.3	0	0	0
236	SLU 26	0.01	-0.09	5.26	0	0	0
236	SLU 27	0.01	-0.09	5.37	0	0	0
236	SLU 28	0.01	-0.09	5.37	0	0	0
236	SLU 29	0.01	-0.09	5.33	0	0	0
236	SLU 30	0.01	-0.09	5.33	0	0	0
236	SLU 31	0.01	-0.09	5.74	0	0	0
236	SLU 32	0.01	-0.09	5.85	0	0	0
236	SLU 33	0.01	-0.09	5.85	0	0	0
236	SLU 34	0.01	-0.09	5.81	0	0	0
236	SLU 35	0.01	-0.09	5.92	0	0	0
236	SLU 36	0.01	-0.09	5.92	0	0	0
236	SLU 37	0.01	-0.09	5.88	0	0	0
236	SLU 38	0.01	-0.09	5.88	0	0	0
236	SLU 39	0.01	-0.09	5.98	0	0	0
236	SLU 40	0.01	-0.09	5.98	0	0	0
236	SLU 41	0.01	-0.09	6.05	0	0	0
236	SLU 42	0.01	-0.09	6.05	0	0	0
236	SLU 43	0.01	-0.11	5.91	0	0	0
236	SLU 44	0.01	-0.11	5.91	0	0	0
236	SLU 45	0.01	-0.11	6.02	0	0	0
236	SLU 46	0.01	-0.11	6.02	0	0	0
236	SLU 47	0.01	-0.11	5.98	0	0	0
236	SLU 48	0.01	-0.11	6.09	0	0	0
236	SLU 49	0.01	-0.11	6.09	0	0	0
236	SLU 50	0.01	-0.11	6.05	0	0	0
236	SLU 51	0.01	-0.11	6.05	0	0	0
236	SLU 52	0.01	-0.11	6.46	0	0	0
236	SLU 53	0.01	-0.11	6.58	0	0	0
236	SLU 54	0.01	-0.12	6.58	0	0	0
236	SLU 55	0.01	-0.12	6.53	0	0	0
236	SLU 56	0.01	-0.12	6.65	0	0	0
236	SLU 57	0.01	-0.12	6.65	0	0	0
236	SLU 58	0.01	-0.12	6.61	0	0	0
236	SLU 59	0.01	-0.12	6.6	0	0	0
236	SLU 60	0.01	-0.11	6.7	0	0	0
236	SLU 61	0.01	-0.12	6.7	0	0	0
236	SLU 62	0.01	-0.12	6.77	0	0	0
236	SLU 63	0.01	-0.12	6.77	0	0	0
236	SLU 64	0.01	-0.11	6.42	0	0	0
236	SLU 65	0.02	-0.11	6.42	0	0	0
236	SLU 66	0.01	-0.11	6.53	0	0	0
236	SLU 67	0.01	-0.11	6.53	0	0	0
236	SLU 68	0.02	-0.11	6.49	0	0	0
236	SLU 69	0.01	-0.11	6.6	0	0	0
236	SLU 70	0.01	-0.11	6.6	0	0	0
236	SLU 71	0.01	-0.11	6.56	0	0	0
236	SLU 72	0.01	-0.11	6.56	0	0	0
236	SLU 73	0.01	-0.11	6.97	0	0	0
236	SLU 74	0.01	-0.11	7.08	0	0	0
236	SLU 75	0.01	-0.11	7.08	0	0	0
236	SLU 76	0.01	-0.12	7.04	0	0	0
236	SLU 77	0.01	-0.11	7.15	0	0	0
236	SLU 78	0.01	-0.12	7.15	0	0	0
236	SLU 79	0.01	-0.12	7.11	0	0	0
236	SLU 80	0.01	-0.12	7.11	0	0	0
236	SLU 81	0.01	-0.11	7.21	0	0	0
236	SLU 82	0.01	-0.11	7.21	0	0	0
236	SLU 83	0.01	-0.11	7.28	0	0	0
236	SLU 84	0.01	-0.12	7.28	0	0	0
236	SLE RA 1	0.01	-0.08	4.83	0	0	0
236	SLE RA 2	0.01	-0.09	4.82	0	0	0
236	SLE RA 3	0.01	-0.09	4.9	0	0	0
236	SLE RA 4	0.01	-0.09	4.9	0	0	0
236	SLE RA 5	0.01	-0.09	4.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
236	SLE RA 6	0.01	-0.09	4.95	0	0	0
236	SLE RA 7	0.01	-0.09	4.95	0	0	0
236	SLE RA 8	0.01	-0.09	4.92	0	0	0
236	SLE RA 9	0.01	-0.09	4.92	0	0	0
236	SLE RA 10	0.01	-0.09	5.19	0	0	0
236	SLE RA 11	0.01	-0.09	5.27	0	0	0
236	SLE RA 12	0.01	-0.09	5.27	0	0	0
236	SLE RA 13	0.01	-0.09	5.24	0	0	0
236	SLE RA 14	0.01	-0.09	5.32	0	0	0
236	SLE RA 15	0.01	-0.09	5.31	0	0	0
236	SLE RA 16	0.01	-0.09	5.29	0	0	0
236	SLE RA 17	0.01	-0.09	5.29	0	0	0
236	SLE RA 18	0.01	-0.09	5.35	0	0	0
236	SLE RA 19	0.01	-0.09	5.35	0	0	0
236	SLE RA 20	0.01	-0.09	5.4	0	0	0
236	SLE RA 21	0.01	-0.09	5.4	0	0	0
236	SLE FR 1	0.01	-0.08	4.83	0	0	0
236	SLE FR 2	0.01	-0.08	4.83	0	0	0
236	SLE FR 3	0.01	-0.08	4.84	0	0	0
236	SLE FR 4	0.01	-0.09	4.98	0	0	0
236	SLE FR 5	0.01	-0.09	5	0	0	0
236	SLE FR 6	0.01	-0.09	5.09	0	0	0
236	SLE QP 1	0.01	-0.08	4.83	0	0	0
236	SLE QP 2	0.01	-0.08	4.98	0	0	0
236	SLD 1	0.42	0.03	4.68	0	0	0
236	SLD 2	0.46	0.05	4.71	0	0	0
236	SLD 3	0.39	-0.08	4.59	0	0	0
236	SLD 4	0.43	-0.06	4.62	0	0	0
236	SLD 5	0.17	0.1	5.03	0	0	0
236	SLD 6	0.19	0.12	5.05	0	0	0
236	SLD 7	0.07	-0.25	4.72	0	0	0
236	SLD 8	0.1	-0.23	4.74	0	0	0
236	SLD 9	-0.08	0.06	5.23	0	0	0
236	SLD 10	-0.05	0.08	5.25	0	0	0
236	SLD 11	-0.18	-0.29	4.92	0	0	0
236	SLD 12	-0.15	-0.27	4.94	0	0	0
236	SLD 13	-0.41	-0.11	5.35	0	0	0
236	SLD 14	-0.37	-0.09	5.38	0	0	0
236	SLD 15	-0.44	-0.22	5.26	0	0	0
236	SLD 16	-0.4	-0.2	5.29	0	0	0
236	SLV 1	0.96	0.17	4.26	0	0	0
236	SLV 2	1.05	0.22	4.34	0	0	0
236	SLV 3	0.9	-0.07	4.05	0	0	0
236	SLV 4	0.98	-0.02	4.13	0	0	0
236	SLV 5	0.38	0.35	5.07	0	0	0
236	SLV 6	0.44	0.38	5.12	0	0	0
236	SLV 7	0.16	-0.45	4.38	0	0	0
236	SLV 8	0.21	-0.42	4.42	0	0	0
236	SLV 9	-0.19	0.25	5.55	0	0	0
236	SLV 10	-0.14	0.28	5.59	0	0	0
236	SLV 11	-0.42	-0.55	4.85	0	0	0
236	SLV 12	-0.37	-0.52	4.9	0	0	0
236	SLV 13	-0.97	-0.15	5.84	0	0	0
236	SLV 14	-0.88	-0.1	5.91	0	0	0
236	SLV 15	-1.03	-0.39	5.63	0	0	0
236	SLV 16	-0.95	-0.34	5.7	0	0	0
238	SLU 1	-1.1	0.07	53.42	12.1003	-9.1026	0.281
238	SLU 2	-1.08	-0.04	53.36	12.0884	-9.0926	0.2567
238	SLU 3	-1.13	0.08	54.72	12.3921	-9.322	0.291
238	SLU 4	-1.12	0.02	54.68	12.3849	-9.316	0.2764
238	SLU 5	-1.1	-0.03	54.19	12.2734	-9.2319	0.2635
238	SLU 6	-1.15	0.09	55.54	12.577	-9.4613	0.2979
238	SLU 7	-1.14	0.03	55.51	12.5699	-9.4553	0.2833
238	SLU 8	-1.14	0.09	55.07	12.4703	-9.3812	0.2947
238	SLU 9	-1.13	0.02	55.03	12.4631	-9.3752	0.2801
238	SLU 10	-1.15	0.05	59.29	13.4246	-10.0961	0.2914
238	SLU 11	-1.21	0.17	60.64	13.7283	-10.3255	0.3258
238	SLU 12	-1.2	0.11	60.6	13.7211	-10.3195	0.3112
238	SLU 13	-1.18	0.06	60.11	13.6096	-10.2355	0.2982
238	SLU 14	-1.23	0.18	61.46	13.9133	-10.4649	0.3326
238	SLU 15	-1.22	0.11	61.43	13.9061	-10.4589	0.318
238	SLU 16	-1.22	0.17	60.99	13.8065	-10.3848	0.3294
238	SLU 17	-1.21	0.11	60.95	13.7993	-10.3788	0.3148
238	SLU 18	-1.21	0.19	61.88	14.0092	-10.5362	0.3306
238	SLU 19	-1.2	0.13	61.85	14.0021	-10.5302	0.316
238	SLU 20	-1.23	0.2	62.7	14.1942	-10.6756	0.3374
238	SLU 21	-1.22	0.14	62.67	14.187	-10.6696	0.3228
238	SLU 22	-1.24	0.18	59.38	13.4456	-10.1102	0.335
238	SLU 23	-1.22	0.07	59.32	13.4337	-10.1002	0.3107
238	SLU 24	-1.27	0.19	60.67	13.7374	-10.3296	0.3451
238	SLU 25	-1.26	0.13	60.64	13.7302	-10.3236	0.3305
238	SLU 26	-1.24	0.08	60.14	13.6187	-10.2396	0.3175
238	SLU 27	-1.29	0.2	61.5	13.9223	-10.4689	0.3519
238	SLU 28	-1.28	0.13	61.46	13.9152	-10.463	0.3373
238	SLU 29	-1.28	0.19	61.02	13.8156	-10.3889	0.3487
238	SLU 30	-1.27	0.13	60.99	13.8084	-10.3829	0.3341
238	SLU 31	-1.3	0.16	65.24	14.7699	-11.1038	0.3454
238	SLU 32	-1.35	0.27	66.59	15.0736	-11.3332	0.3798
238	SLU 33	-1.34	0.21	66.56	15.0664	-11.3272	0.3652
238	SLU 34	-1.32	0.17	66.06	14.9549	-11.2431	0.3523
238	SLU 35	-1.37	0.28	67.42	15.2586	-11.4725	0.3866
238	SLU 36	-1.36	0.22	67.38	15.2514	-11.4665	0.372
238	SLU 37	-1.36	0.28	66.94	15.1518	-11.3925	0.3834
238	SLU 38	-1.35	0.22	66.91	15.1446	-11.3865	0.3688
238	SLU 39	-1.35	0.3	67.84	15.3545	-11.5439	0.3846
238	SLU 40	-1.34	0.24	67.8	15.3474	-11.5379	0.37
238	SLU 41	-1.37	0.31	68.66	15.5395	-11.6832	0.3915

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
238	SLU 42	-1.36	0.25	68.62	15.5323	-11.6772	0.3769
238	SLU 43	-1.38	0.05	67.41	15.2692	-11.4878	0.3468
238	SLU 44	-1.36	-0.05	67.35	15.2572	-11.4779	0.3224
238	SLU 45	-1.41	0.06	68.7	15.5609	-11.7073	0.3568
238	SLU 46	-1.4	0	68.67	15.5538	-11.7013	0.3422
238	SLU 47	-1.38	-0.04	68.17	15.4422	-11.6172	0.3293
238	SLU 48	-1.43	0.07	69.53	15.7459	-11.8466	0.3637
238	SLU 49	-1.42	0.01	69.49	15.7387	-11.8406	0.3491
238	SLU 50	-1.42	0.07	69.05	15.6391	-11.7665	0.3605
238	SLU 51	-1.41	0.01	69.02	15.6319	-11.7605	0.3459
238	SLU 52	-1.43	0.04	73.27	16.5935	-12.4814	0.3572
238	SLU 53	-1.49	0.15	74.63	16.8971	-12.7108	0.3915
238	SLU 54	-1.48	0.09	74.59	16.89	-12.7048	0.3769
238	SLU 55	-1.46	0.04	74.09	16.7784	-12.6208	0.364
238	SLU 56	-1.51	0.16	75.45	17.0821	-12.8502	0.3984
238	SLU 57	-1.5	0.1	75.41	17.0749	-12.8442	0.3838
238	SLU 58	-1.5	0.16	74.97	16.9753	-12.7701	0.3952
238	SLU 59	-1.49	0.09	74.94	16.9682	-12.7641	0.3806
238	SLU 60	-1.49	0.18	75.87	17.1781	-12.9215	0.3964
238	SLU 61	-1.48	0.11	75.83	17.1709	-12.9155	0.3818
238	SLU 62	-1.51	0.19	76.69	17.363	-13.0609	0.4032
238	SLU 63	-1.5	0.12	76.65	17.3559	-13.0549	0.3886
238	SLU 64	-1.52	0.16	73.36	16.6145	-12.4955	0.4008
238	SLU 65	-1.5	0.06	73.3	16.6026	-12.4855	0.3765
238	SLU 66	-1.55	0.17	74.66	16.9062	-12.7149	0.4108
238	SLU 67	-1.54	0.11	74.62	16.8991	-12.7089	0.3962
238	SLU 68	-1.52	0.06	74.13	16.7875	-12.6248	0.3833
238	SLU 69	-1.58	0.18	75.48	17.0912	-12.8542	0.4177
238	SLU 70	-1.56	0.12	75.45	17.084	-12.8482	0.4031
238	SLU 71	-1.56	0.18	75.01	16.9844	-12.7742	0.4145
238	SLU 72	-1.55	0.11	74.97	16.9772	-12.7682	0.3999
238	SLU 73	-1.58	0.14	79.23	17.9388	-13.4891	0.4112
238	SLU 74	-1.63	0.26	80.58	18.2425	-13.7185	0.4455
238	SLU 75	-1.62	0.2	80.54	18.2353	-13.7125	0.431
238	SLU 76	-1.6	0.15	80.05	18.1237	-13.6284	0.418
238	SLU 77	-1.65	0.27	81.4	18.4274	-13.8578	0.4524
238	SLU 78	-1.64	0.2	81.37	18.4202	-13.8518	0.4378
238	SLU 79	-1.64	0.26	80.93	18.3206	-13.7777	0.4492
238	SLU 80	-1.63	0.2	80.89	18.3135	-13.7718	0.4346
238	SLU 81	-1.63	0.28	81.82	18.5234	-13.9292	0.4504
238	SLU 82	-1.62	0.22	81.79	18.5162	-13.9232	0.4358
238	SLU 83	-1.65	0.29	82.64	18.7083	-14.0685	0.4572
238	SLU 84	-1.64	0.23	82.61	18.7012	-14.0625	0.4426
238	SLE RA 1	-1.14	0.1	55.12	12.4847	-9.3905	0.2964
238	SLE RA 2	-1.12	0.03	55.09	12.4767	-9.3838	0.2802
238	SLE RA 3	-1.16	0.11	55.99	12.6792	-9.5367	0.3031
238	SLE RA 4	-1.15	0.07	55.97	12.6744	-9.5327	0.2934
238	SLE RA 5	-1.14	0.04	55.63	12.6001	-9.4767	0.2848
238	SLE RA 6	-1.18	0.11	56.54	12.8025	-9.6296	0.3077
238	SLE RA 7	-1.17	0.07	56.51	12.7977	-9.6256	0.298
238	SLE RA 8	-1.17	0.11	56.22	12.7313	-9.5762	0.3056
238	SLE RA 9	-1.16	0.07	56.2	12.7265	-9.5722	0.2958
238	SLE RA 10	-1.18	0.09	59.03	13.3676	-10.0529	0.3034
238	SLE RA 11	-1.21	0.17	59.94	13.57	-10.2058	0.3263
238	SLE RA 12	-1.2	0.12	59.91	13.5652	-10.2018	0.3165
238	SLE RA 13	-1.19	0.09	59.58	13.4909	-10.1457	0.3079
238	SLE RA 14	-1.23	0.17	60.48	13.6933	-10.2987	0.3308
238	SLE RA 15	-1.22	0.13	60.46	13.6885	-10.2947	0.3211
238	SLE RA 16	-1.22	0.17	60.17	13.6221	-10.2453	0.3287
238	SLE RA 17	-1.21	0.13	60.14	13.6174	-10.2413	0.319
238	SLE RA 18	-1.21	0.18	60.76	13.7573	-10.3462	0.3295
238	SLE RA 19	-1.2	0.14	60.74	13.7525	-10.3422	0.3198
238	SLE RA 20	-1.23	0.19	61.31	13.8806	-10.4391	0.3341
238	SLE RA 21	-1.22	0.15	61.29	13.8758	-10.4351	0.3243
238	SLE FR 1	-1.14	0.1	55.12	12.4847	-9.3905	0.2964
238	SLE FR 2	-1.14	0.09	55.12	12.4831	-9.3891	0.2932
238	SLE FR 3	-1.14	0.1	55.34	12.534	-9.4276	0.2983
238	SLE FR 4	-1.16	0.11	56.81	12.8649	-9.6759	0.3031
238	SLE FR 5	-1.17	0.13	57.04	12.9158	-9.7144	0.3082
238	SLE FR 6	-1.18	0.14	57.94	13.121	-9.8684	0.313
238	SLE QP 1	-1.14	0.1	55.12	12.4847	-9.3905	0.2964
238	SLE QP 2	-1.16	0.12	56.82	12.8665	-9.6772	0.3063
238	SLD 1	3.05	0.87	73.83	16.7126	-12.4965	-0.5042
238	SLD 2	3.45	0.18	73.24	16.5902	-12.3964	-0.7261
238	SLD 3	2.71	-1.04	72.59	16.4457	-12.2891	-0.9027
238	SLD 4	3.11	-1.72	71.99	16.3232	-12.189	-1.1246
238	SLD 5	0.55	3.36	63.91	14.4469	-10.8551	0.7067
238	SLD 6	0.81	2.92	63.52	14.3669	-10.7897	0.5617
238	SLD 7	-0.59	-3	59.77	13.557	-10.164	-0.6214
238	SLD 8	-0.33	-3.45	59.38	13.4769	-10.0986	-0.7665
238	SLD 9	-2	3.7	54.25	12.256	-9.2558	1.3792
238	SLD 10	-1.73	3.25	53.87	12.176	-9.1904	1.2341
238	SLD 11	-3.13	-2.67	50.11	11.3661	-8.5647	0.051
238	SLD 12	-2.87	-3.12	49.72	11.2861	-8.4992	-0.094
238	SLD 13	-5.43	1.97	41.64	9.4098	-7.1654	1.7373
238	SLD 14	-5.03	1.29	41.05	9.2873	-7.0653	1.5154
238	SLD 15	-5.77	0.07	40.4	9.1428	-6.958	1.3388
238	SLD 16	-5.37	-0.62	39.8	9.0203	-6.8579	1.1169
238	SLV 1	8.68	1.8	96.61	21.8649	-16.2724	-1.6053
238	SLV 2	9.61	0.19	95.24	21.5797	-16.0392	-2.1222
238	SLV 3	7.89	-2.52	93.76	21.2516	-15.7966	-2.5089
238	SLV 4	8.82	-4.12	92.39	20.9663	-15.5634	-3.0258
238	SLV 5	2.83	7.45	73.31	16.5452	-12.4172	1.1919
238	SLV 6	3.43	6.42	72.43	16.3619	-12.2673	0.8597
238	SLV 7	0.2	-6.94	63.81	14.5006	-10.8315	-1.8202
238	SLV 8	0.8	-7.97	62.93	14.3173	-10.6816	-2.1523
238	SLV 9	-3.12	8.22	50.7	11.4157	-8.6728	2.765

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
238	SLV 10	-2.52	7.19	49.82	11.2324	-8.5229	2.4329
238	SLV 11	-5.75	-6.17	41.2	9.3711	-7.087	-0.247
238	SLV 12	-5.15	-7.2	40.32	9.1878	-6.9372	-0.5792
238	SLV 13	-11.14	4.37	21.25	4.7666	-3.7909	3.6385
238	SLV 14	-10.21	2.77	19.87	4.4814	-3.5577	3.1216
238	SLV 15	-11.93	0.06	18.4	4.1533	-3.3152	2.7348
238	SLV 16	-11	-1.55	17.02	3.868	-3.082	2.218
238	CRTFP Ux+	0	0	0	0	0	0
238	CRTFP Ux-	0	0	0	0	0	0
238	CRTFP Uy+	0	0	0	0	0	0
238	CRTFP Uy-	0	0	0	0	0	0
240	SLU 1	-0.76	0.03	34.59	9.5408	-0.8981	0.266
240	SLU 2	-0.74	-0.04	34.55	9.532	-0.8972	0.2591
240	SLU 3	-0.78	0.04	35.42	9.7666	-0.9197	0.2739
240	SLU 4	-0.77	0	35.4	9.7613	-0.9191	0.2698
240	SLU 5	-0.76	-0.03	35.08	9.6751	-0.9109	0.2645
240	SLU 6	-0.8	0.04	35.95	9.9097	-0.9333	0.2793
240	SLU 7	-0.79	0	35.93	9.9044	-0.9328	0.2752
240	SLU 8	-0.79	0.04	35.65	9.827	-0.9255	0.2767
240	SLU 9	-0.78	0	35.63	9.8217	-0.9249	0.2726
240	SLU 10	-0.8	0.02	38.37	10.5648	-0.9959	0.2791
240	SLU 11	-0.83	0.1	39.24	10.7994	-1.0183	0.2939
240	SLU 12	-0.83	0.05	39.22	10.7941	-1.0177	0.2898
240	SLU 13	-0.81	0.02	38.9	10.7079	-1.0095	0.2845
240	SLU 14	-0.85	0.1	39.77	10.9425	-1.032	0.2993
240	SLU 15	-0.84	0.06	39.75	10.9372	-1.0314	0.2952
240	SLU 16	-0.84	0.1	39.47	10.8598	-1.0241	0.2967
240	SLU 17	-0.83	0.06	39.44	10.8545	-1.0236	0.2926
240	SLU 18	-0.83	0.11	40.04	11.0162	-1.0391	0.2946
240	SLU 19	-0.83	0.07	40.02	11.0109	-1.0385	0.2905
240	SLU 20	-0.85	0.12	40.57	11.1593	-1.0527	0.2999
240	SLU 21	-0.84	0.08	40.55	11.154	-1.0522	0.2958
240	SLU 22	-0.86	0.1	38.42	10.5819	-0.9971	0.3018
240	SLU 23	-0.84	0.03	38.39	10.5731	-0.9961	0.295
240	SLU 24	-0.88	0.11	39.26	10.8077	-1.0186	0.3098
240	SLU 25	-0.87	0.07	39.24	10.8024	-1.018	0.3056
240	SLU 26	-0.86	0.04	38.92	10.7162	-1.0098	0.3003
240	SLU 27	-0.89	0.11	39.79	10.9508	-1.0322	0.3151
240	SLU 28	-0.88	0.07	39.77	10.9455	-1.0317	0.311
240	SLU 29	-0.89	0.11	39.48	10.8681	-1.0244	0.3125
240	SLU 30	-0.88	0.07	39.46	10.8628	-1.0238	0.3084
240	SLU 31	-0.89	0.09	42.21	11.6059	-1.0948	0.315
240	SLU 32	-0.93	0.17	43.08	11.8405	-1.1172	0.3298
240	SLU 33	-0.92	0.13	43.05	11.8352	-1.1167	0.3257
240	SLU 34	-0.91	0.1	42.73	11.749	-1.1084	0.3203
240	SLU 35	-0.95	0.17	43.61	11.9836	-1.1309	0.3351
240	SLU 36	-0.94	0.13	43.58	11.9783	-1.1303	0.331
240	SLU 37	-0.94	0.17	43.3	11.9009	-1.123	0.3325
240	SLU 38	-0.93	0.13	43.28	11.8956	-1.1225	0.3284
240	SLU 39	-0.93	0.18	43.88	12.0574	-1.138	0.3304
240	SLU 40	-0.92	0.14	43.86	12.0521	-1.1374	0.3263
240	SLU 41	-0.95	0.19	44.41	12.2005	-1.1516	0.3357
240	SLU 42	-0.94	0.15	44.39	12.1952	-1.1511	0.3316
240	SLU 43	-0.95	0.02	43.65	12.0461	-1.1337	0.3335
240	SLU 44	-0.94	-0.05	43.61	12.0372	-1.1328	0.3266
240	SLU 45	-0.98	0.02	44.48	12.2718	-1.1552	0.3414
240	SLU 46	-0.97	-0.02	44.46	12.2666	-1.1546	0.3373
240	SLU 47	-0.95	-0.05	44.14	12.1803	-1.1464	0.332
240	SLU 48	-0.99	0.03	45.01	12.4149	-1.1688	0.3468
240	SLU 49	-0.98	-0.01	44.99	12.4097	-1.1683	0.3427
240	SLU 50	-0.98	0.03	44.71	12.3323	-1.161	0.3442
240	SLU 51	-0.97	-0.01	44.69	12.327	-1.1604	0.3401
240	SLU 52	-0.99	0	47.43	13.0701	-1.2314	0.3467
240	SLU 53	-1.03	0.08	48.3	13.3047	-1.2538	0.3615
240	SLU 54	-1.02	0.04	48.28	13.2994	-1.2533	0.3573
240	SLU 55	-1.01	0.01	47.96	13.2132	-1.2451	0.352
240	SLU 56	-1.04	0.09	48.83	13.4478	-1.2675	0.3668
240	SLU 57	-1.04	0.04	48.81	13.4425	-1.2669	0.3627
240	SLU 58	-1.04	0.08	48.53	13.3651	-1.2596	0.3642
240	SLU 59	-1.03	0.04	48.5	13.3598	-1.2591	0.3601
240	SLU 60	-1.03	0.1	49.1	13.5215	-1.2746	0.3621
240	SLU 61	-1.02	0.06	49.08	13.5162	-1.274	0.358
240	SLU 62	-1.04	0.1	49.63	13.6646	-1.2882	0.3674
240	SLU 63	-1.04	0.06	49.61	13.6593	-1.2877	0.3633
240	SLU 64	-1.05	0.09	47.49	13.0872	-1.2326	0.3693
240	SLU 65	-1.04	0.02	47.45	13.0784	-1.2317	0.3625
240	SLU 66	-1.07	0.09	48.32	13.313	-1.2541	0.3773
240	SLU 67	-1.06	0.05	48.3	13.3077	-1.2535	0.3732
240	SLU 68	-1.05	0.02	47.98	13.2215	-1.2453	0.3678
240	SLU 69	-1.09	0.1	48.85	13.4561	-1.2678	0.3826
240	SLU 70	-1.08	0.06	48.83	13.4508	-1.2672	0.3785
240	SLU 71	-1.08	0.1	48.54	13.3734	-1.2599	0.38
240	SLU 72	-1.07	0.06	48.52	13.3681	-1.2594	0.3759
240	SLU 73	-1.09	0.08	51.27	14.1112	-1.3303	0.3825
240	SLU 74	-1.13	0.15	52.14	14.3458	-1.3527	0.3973
240	SLU 75	-1.12	0.11	52.12	14.3405	-1.3522	0.3932
240	SLU 76	-1.1	0.08	51.8	14.2543	-1.344	0.3878
240	SLU 77	-1.14	0.16	52.67	14.4889	-1.3664	0.4026
240	SLU 78	-1.13	0.12	52.64	14.4836	-1.3658	0.3985
240	SLU 79	-1.13	0.16	52.36	14.4062	-1.3586	0.4
240	SLU 80	-1.12	0.11	52.34	14.4009	-1.358	0.3959
240	SLU 81	-1.13	0.17	52.94	14.5626	-1.3735	0.3979
240	SLU 82	-1.12	0.13	52.92	14.5574	-1.3729	0.3938
240	SLU 83	-1.14	0.17	53.47	14.7057	-1.3872	0.4032
240	SLU 84	-1.13	0.13	53.45	14.7005	-1.3866	0.3991
240	SLE RA 1	-0.79	0.05	35.68	9.8383	-0.9264	0.2762
240	SLE RA 2	-0.78	0.01	35.66	9.8324	-0.9258	0.2716

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
240	SLE RA 3	-0.8	0.06	36.24	9.9888	-0.9407	0.2815
240	SLE RA 4	-0.8	0.03	36.23	9.9853	-0.9404	0.2788
240	SLE RA 5	-0.79	0.01	36.01	9.9278	-0.9349	0.2752
240	SLE RA 6	-0.81	0.06	36.59	10.0842	-0.9499	0.2851
240	SLE RA 7	-0.81	0.03	36.58	10.0806	-0.9495	0.2823
240	SLE RA 8	-0.81	0.06	36.39	10.0291	-0.9446	0.2833
240	SLE RA 9	-0.8	0.03	36.38	10.0255	-0.9443	0.2806
240	SLE RA 10	-0.81	0.04	38.21	10.5209	-0.9916	0.285
240	SLE RA 11	-0.84	0.09	38.79	10.6773	-1.0065	0.2949
240	SLE RA 12	-0.83	0.07	38.77	10.6738	-1.0061	0.2921
240	SLE RA 13	-0.82	0.05	38.56	10.6163	-1.0007	0.2886
240	SLE RA 14	-0.85	0.1	39.14	10.7727	-1.0156	0.2984
240	SLE RA 15	-0.84	0.07	39.12	10.7692	-1.0152	0.2957
240	SLE RA 16	-0.84	0.1	38.94	10.7176	-1.0104	0.2967
240	SLE RA 17	-0.84	0.07	38.92	10.7141	-1.01	0.2939
240	SLE RA 18	-0.84	0.11	39.32	10.8219	-1.0203	0.2953
240	SLE RA 19	-0.83	0.08	39.31	10.8184	-1.02	0.2925
240	SLE RA 20	-0.85	0.11	39.67	10.9173	-1.0295	0.2988
240	SLE RA 21	-0.84	0.08	39.66	10.9138	-1.0291	0.2961
240	SLE FR 1	-0.79	0.05	35.68	9.8383	-0.9264	0.2762
240	SLE FR 2	-0.79	0.04	35.68	9.8371	-0.9263	0.2753
240	SLE FR 3	-0.79	0.05	35.83	9.8764	-0.93	0.2776
240	SLE FR 4	-0.8	0.06	36.77	10.1322	-0.9545	0.281
240	SLE FR 5	-0.81	0.07	36.92	10.1715	-0.9582	0.2834
240	SLE FR 6	-0.81	0.08	37.5	10.3301	-0.9734	0.2857
240	SLE QP 1	-0.79	0.05	35.68	9.8383	-0.9264	0.2762
240	SLE QP 2	-0.8	0.07	36.78	10.1333	-0.9546	0.2819
240	SLD 1	2.12	0.58	47.53	13.1232	-1.2243	-0.6518
240	SLD 2	2.38	0.13	47.16	13.0316	-1.215	-0.7576
240	SLD 3	1.89	-0.7	46.76	12.9184	-1.205	-0.751
240	SLD 4	2.16	-1.15	46.39	12.8268	-1.1957	-0.8568
240	SLD 5	0.36	2.24	41.24	11.3571	-1.0664	0.1709
240	SLD 6	0.54	1.95	41	11.2972	-1.0603	0.1018
240	SLD 7	-0.38	-2.02	38.66	10.6744	-1.0021	-0.1597
240	SLD 8	-0.2	-2.32	38.42	10.6146	-0.996	-0.2288
240	SLD 9	-1.4	2.46	35.13	9.6521	-0.9131	0.7926
240	SLD 10	-1.23	2.16	34.89	9.5922	-0.9071	0.7235
240	SLD 11	-2.14	-1.81	32.55	8.9694	-0.8488	0.4621
240	SLD 12	-1.97	-2.11	32.31	8.9096	-0.8428	0.393
240	SLD 13	-3.77	1.29	27.16	7.4398	-0.7134	1.4206
240	SLD 14	-3.5	0.84	26.79	7.3483	-0.7042	1.3149
240	SLD 15	-3.99	0.01	26.39	7.2351	-0.6941	1.3215
240	SLD 16	-3.72	-0.44	26.02	7.1435	-0.6849	1.2157
240	SLV 1	6.02	1.22	61.94	17.1288	-1.5855	-1.9047
240	SLV 2	6.65	0.15	61.08	16.9155	-1.564	-2.1511
240	SLV 3	5.51	-1.68	60.17	16.6578	-1.5412	-2.1331
240	SLV 4	6.13	-2.74	59.31	16.4445	-1.5197	-2.3794
240	SLV 5	1.92	4.99	47.16	12.9828	-1.2147	0.0145
240	SLV 6	2.32	4.3	46.61	12.8458	-1.2009	-0.1438
240	SLV 7	0.2	-4.67	41.25	11.4129	-1.0671	-0.7467
240	SLV 8	0.6	-5.35	40.7	11.2758	-1.0532	-0.9051
240	SLV 9	-2.21	5.49	32.85	8.9908	-0.8559	1.4689
240	SLV 10	-1.81	4.8	32.3	8.8538	-0.8421	1.3106
240	SLV 11	-3.93	-4.17	26.94	7.4209	-0.7083	0.7077
240	SLV 12	-3.53	-4.85	26.39	7.2839	-0.6944	0.5493
240	SLV 13	-7.74	2.88	14.24	3.8222	-0.3895	2.9433
240	SLV 14	-7.11	1.82	13.39	3.6089	-0.368	2.697
240	SLV 15	-8.25	-0.02	12.47	3.3512	-0.3452	2.7149
240	SLV 16	-7.63	-1.08	11.61	3.1379	-0.3237	2.4686
240	CRTFP Ux+	0	0	0	0	0	0
240	CRTFP Ux-	0	0	0	0	0	0
240	CRTFP Uy+	0	0	0	0	0	0
240	CRTFP Uy-	0	0	0	0	0	0
241	SLU 1	-0.89	0.01	37.51	8.9385	0.0943	0.3119
241	SLU 2	-0.88	-0.07	37.47	8.9304	0.0941	0.3062
241	SLU 3	-0.92	0.02	38.41	9.145	0.0968	0.321
241	SLU 4	-0.91	-0.03	38.39	9.1402	0.0967	0.3176
241	SLU 5	-0.89	-0.06	38.04	9.0614	0.0957	0.3123
241	SLU 6	-0.94	0.02	38.98	9.276	0.0983	0.3271
241	SLU 7	-0.93	-0.02	38.96	9.2712	0.0982	0.3237
241	SLU 8	-0.93	0.02	38.65	9.2004	0.0974	0.3241
241	SLU 9	-0.92	-0.03	38.63	9.1956	0.0973	0.3207
241	SLU 10	-0.94	0	41.59	9.8726	0.1052	0.3279
241	SLU 11	-0.98	0.08	42.53	10.0872	0.1078	0.3426
241	SLU 12	-0.97	0.03	42.51	10.0824	0.1077	0.3392
241	SLU 13	-0.96	0	42.16	10.0036	0.1068	0.334
241	SLU 14	-1	0.08	43.1	10.2182	0.1094	0.3488
241	SLU 15	-0.99	0.04	43.08	10.2134	0.1093	0.3454
241	SLU 16	-0.99	0.08	42.77	10.1426	0.1085	0.3458
241	SLU 17	-0.98	0.04	42.75	10.1378	0.1084	0.3424
241	SLU 18	-0.98	0.1	43.4	10.2844	0.1101	0.3428
241	SLU 19	-0.97	0.05	43.37	10.2796	0.11	0.3394
241	SLU 20	-1	0.1	43.97	10.4154	0.1116	0.3489
241	SLU 21	-0.99	0.06	43.94	10.4106	0.1116	0.3455
241	SLU 22	-1.01	0.09	41.64	9.8887	0.1057	0.3517
241	SLU 23	-0.99	0.01	41.6	9.8806	0.1056	0.346
241	SLU 24	-1.03	0.09	42.54	10.0953	0.1082	0.3608
241	SLU 25	-1.02	0.05	42.52	10.0904	0.1081	0.3574
241	SLU 26	-1.01	0.02	42.17	10.0116	0.1071	0.3521
241	SLU 27	-1.05	0.1	43.11	10.2263	0.1097	0.3669
241	SLU 28	-1.04	0.05	43.09	10.2214	0.1096	0.3635
241	SLU 29	-1.04	0.1	42.78	10.1507	0.1088	0.3639
241	SLU 30	-1.03	0.05	42.76	10.1458	0.1087	0.3605
241	SLU 31	-1.05	0.07	45.72	10.8228	0.1166	0.3676
241	SLU 32	-1.1	0.16	46.66	11.0374	0.1192	0.3824
241	SLU 33	-1.09	0.11	46.64	11.0326	0.1192	0.379
241	SLU 34	-1.07	0.08	46.29	10.9538	0.1182	0.3738

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
241	SLU 35	-1.11	0.16	47.23	11.1684	0.1208	0.3885
241	SLU 36	-1.1	0.11	47.21	11.1636	0.1207	0.3851
241	SLU 37	-1.11	0.16	46.9	11.0928	0.1199	0.3855
241	SLU 38	-1.1	0.11	46.88	11.088	0.1198	0.3821
241	SLU 39	-1.1	0.17	47.53	11.2346	0.1215	0.3826
241	SLU 40	-1.09	0.13	47.5	11.2298	0.1214	0.3792
241	SLU 41	-1.11	0.18	48.1	11.3656	0.1231	0.3887
241	SLU 42	-1.1	0.13	48.07	11.3608	0.123	0.3853
241	SLU 43	-1.12	-0.01	47.35	11.2942	0.1186	0.3918
241	SLU 44	-1.11	-0.09	47.31	11.2862	0.1185	0.3861
241	SLU 45	-1.15	-0.01	48.25	11.5008	0.1211	0.4009
241	SLU 46	-1.14	-0.05	48.23	11.496	0.121	0.3975
241	SLU 47	-1.12	-0.08	47.88	11.4171	0.1201	0.3923
241	SLU 48	-1.17	0	48.82	11.6318	0.1227	0.407
241	SLU 49	-1.16	-0.05	48.8	11.6269	0.1226	0.4036
241	SLU 50	-1.16	0	48.49	11.5562	0.1218	0.404
241	SLU 51	-1.15	-0.05	48.47	11.5514	0.1217	0.4006
241	SLU 52	-1.17	-0.03	51.43	12.2283	0.1296	0.4078
241	SLU 53	-1.21	0.06	52.37	12.4429	0.1322	0.4226
241	SLU 54	-1.2	0.01	52.34	12.4381	0.1321	0.4192
241	SLU 55	-1.19	-0.02	52	12.3593	0.1311	0.4139
241	SLU 56	-1.23	0.06	52.94	12.5739	0.1337	0.4287
241	SLU 57	-1.22	0.01	52.91	12.5691	0.1337	0.4253
241	SLU 58	-1.22	0.06	52.61	12.4983	0.1328	0.4257
241	SLU 59	-1.21	0.01	52.59	12.4935	0.1327	0.4223
241	SLU 60	-1.21	0.08	53.23	12.6401	0.1344	0.4228
241	SLU 61	-1.2	0.03	53.21	12.6353	0.1344	0.4194
241	SLU 62	-1.23	0.08	53.8	12.7711	0.136	0.4289
241	SLU 63	-1.22	0.03	53.78	12.7663	0.1359	0.4255
241	SLU 64	-1.24	0.06	51.48	12.2444	0.1301	0.4316
241	SLU 65	-1.22	-0.01	51.44	12.2364	0.1299	0.4259
241	SLU 66	-1.26	0.07	52.38	12.451	0.1325	0.4407
241	SLU 67	-1.25	0.02	52.35	12.4462	0.1325	0.4373
241	SLU 68	-1.24	-0.01	52.01	12.3674	0.1315	0.432
241	SLU 69	-1.28	0.08	52.95	12.582	0.1341	0.4468
241	SLU 70	-1.27	0.03	52.93	12.5772	0.134	0.4434
241	SLU 71	-1.27	0.07	52.62	12.5064	0.1332	0.4438
241	SLU 72	-1.26	0.03	52.6	12.5016	0.1331	0.4404
241	SLU 73	-1.28	0.05	55.56	13.1785	0.141	0.4476
241	SLU 74	-1.33	0.13	56.5	13.3932	0.1436	0.4624
241	SLU 75	-1.32	0.09	56.47	13.3883	0.1435	0.4589
241	SLU 76	-1.3	0.05	56.13	13.3095	0.1425	0.4537
241	SLU 77	-1.34	0.14	57.07	13.5242	0.1452	0.4685
241	SLU 78	-1.33	0.09	57.04	13.5193	0.1451	0.4651
241	SLU 79	-1.33	0.13	56.74	13.4486	0.1442	0.4655
241	SLU 80	-1.32	0.09	56.72	13.4437	0.1442	0.4621
241	SLU 81	-1.33	0.15	57.36	13.5904	0.1459	0.4625
241	SLU 82	-1.32	0.11	57.34	13.5855	0.1458	0.4591
241	SLU 83	-1.34	0.16	57.93	13.7214	0.1474	0.4686
241	SLU 84	-1.33	0.11	57.91	13.7165	0.1473	0.4652
241	SLE RA 1	-0.93	0.03	38.69	9.21	0.0975	0.3232
241	SLE RA 2	-0.92	-0.02	38.67	9.2046	0.0974	0.3195
241	SLE RA 3	-0.94	0.04	39.29	9.3477	0.0992	0.3293
241	SLE RA 4	-0.94	0.01	39.28	9.3445	0.0991	0.327
241	SLE RA 5	-0.93	-0.02	39.05	9.2919	0.0985	0.3235
241	SLE RA 6	-0.96	0.04	39.67	9.435	0.1002	0.3334
241	SLE RA 7	-0.95	0.01	39.66	9.4318	0.1002	0.3311
241	SLE RA 8	-0.95	0.04	39.45	9.3846	0.0996	0.3314
241	SLE RA 9	-0.94	0.01	39.44	9.3814	0.0996	0.3291
241	SLE RA 10	-0.96	0.02	41.41	9.8327	0.1048	0.3339
241	SLE RA 11	-0.99	0.08	42.04	9.9758	0.1066	0.3438
241	SLE RA 12	-0.98	0.05	42.02	9.9726	0.1065	0.3415
241	SLE RA 13	-0.97	0.03	41.79	9.92	0.1059	0.338
241	SLE RA 14	-1	0.08	42.42	10.0631	0.1076	0.3478
241	SLE RA 15	-0.99	0.05	42.4	10.0599	0.1075	0.3456
241	SLE RA 16	-0.99	0.08	42.2	10.0127	0.107	0.3458
241	SLE RA 17	-0.98	0.05	42.18	10.0095	0.1069	0.3436
241	SLE RA 18	-0.99	0.09	42.61	10.1072	0.1081	0.3439
241	SLE RA 19	-0.98	0.06	42.6	10.104	0.108	0.3416
241	SLE RA 20	-1	0.09	43	10.1946	0.1091	0.348
241	SLE RA 21	-0.99	0.06	42.98	10.1914	0.1091	0.3457
241	SLE FR 1	-0.93	0.03	38.69	9.21	0.0975	0.3232
241	SLE FR 2	-0.92	0.02	38.69	9.2089	0.0975	0.3225
241	SLE FR 3	-0.93	0.03	38.84	9.2449	0.098	0.3249
241	SLE FR 4	-0.94	0.04	39.86	9.4781	0.1007	0.3287
241	SLE FR 5	-0.95	0.05	40.02	9.5141	0.1011	0.3311
241	SLE FR 6	-0.96	0.06	40.65	9.6586	0.1028	0.3336
241	SLE QP 1	-0.93	0.03	38.69	9.21	0.0975	0.3232
241	SLE QP 2	-0.94	0.05	39.87	9.4791	0.1007	0.3294
241	SLD 1	2.48	0.63	51.08	12.2051	0.1452	-0.8671
241	SLD 2	2.79	0.13	50.7	12.1218	0.1437	-0.9757
241	SLD 3	2.22	-0.78	50.28	12.0124	0.1418	-0.7783
241	SLD 4	2.53	-1.27	49.9	11.929	0.1403	-0.8869
241	SLD 5	0.42	2.44	44.52	10.604	0.1195	-0.145
241	SLD 6	0.63	2.12	44.27	10.5496	0.1186	-0.216
241	SLD 7	-0.44	-2.24	41.84	9.9615	0.1081	0.151
241	SLD 8	-0.24	-2.57	41.59	9.907	0.1071	0.08
241	SLD 9	-1.65	2.66	38.14	9.0513	0.0943	0.5789
241	SLD 10	-1.44	2.34	37.89	8.9968	0.0933	0.5079
241	SLD 11	-2.51	-2.02	35.47	8.4087	0.0828	0.8749
241	SLD 12	-2.31	-2.34	35.22	8.3543	0.0819	0.8039
241	SLD 13	-4.42	1.37	29.84	7.0292	0.0611	1.5458
241	SLD 14	-4.11	0.88	29.46	6.9459	0.0596	1.4372
241	SLD 15	-4.68	-0.03	29.04	6.8365	0.0577	1.6346
241	SLD 16	-4.37	-0.53	28.66	6.7532	0.0562	1.526
241	SLV 1	7.06	1.34	66.1	15.8573	0.2048	-2.4694
241	SLV 2	7.79	0.2	65.21	15.6632	0.2014	-2.7225

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
241	SLV 3	6.46	-1.84	64.26	15.4134	0.1969	-2.263
241	SLV 4	7.19	-2.98	63.37	15.2194	0.1936	-2.5161
241	SLV 5	2.25	5.46	50.69	12.099	0.1444	-0.7799
241	SLV 6	2.72	4.72	50.11	11.9742	0.1423	-0.9425
241	SLV 7	0.24	-5.14	44.55	10.6195	0.1182	-0.0919
241	SLV 8	0.71	-5.88	43.97	10.4948	0.116	-0.2545
241	SLV 9	-2.6	5.98	35.77	8.4635	0.0854	0.9134
241	SLV 10	-2.13	5.24	35.19	8.3387	0.0832	0.7508
241	SLV 11	-4.6	-4.62	29.63	6.984	0.0591	1.6014
241	SLV 12	-4.13	-5.36	29.05	6.8593	0.057	1.4388
241	SLV 13	-9.08	3.08	16.37	3.7389	0.0078	3.1749
241	SLV 14	-8.35	1.94	15.48	3.5449	0.0045	2.9219
241	SLV 15	-9.68	-0.1	14.53	3.2951	0	3.3813
241	SLV 16	-8.95	-1.24	13.64	3.101	-0.0034	3.1283
241	CRTFP Ux+	0	0	0	0	0	0
241	CRTFP Ux-	0	0	0	0	0	0
241	CRTFP Uy+	0	0	0	0	0	0
241	CRTFP Uy-	0	0	0	0	0	0
242	SLU 1	-0.9	-0.02	34.77	6.9966	0.0771	0.3134
242	SLU 2	-0.88	-0.09	34.74	6.9906	0.077	0.3078
242	SLU 3	-0.92	-0.01	35.6	7.1529	0.0791	0.3226
242	SLU 4	-0.91	-0.05	35.58	7.1493	0.0791	0.3192
242	SLU 5	-0.9	-0.08	35.26	7.0898	0.0783	0.3139
242	SLU 6	-0.94	-0.01	36.12	7.2521	0.0804	0.3287
242	SLU 7	-0.93	-0.05	36.1	7.2485	0.0803	0.3253
242	SLU 8	-0.93	-0.01	35.82	7.195	0.0796	0.3257
242	SLU 9	-0.92	-0.05	35.8	7.1914	0.0796	0.3223
242	SLU 10	-0.94	-0.03	38.54	7.7005	0.086	0.3296
242	SLU 11	-0.99	0.04	39.4	7.8629	0.0881	0.3444
242	SLU 12	-0.98	0	39.38	7.8593	0.0881	0.341
242	SLU 13	-0.96	-0.03	39.06	7.7998	0.0873	0.3357
242	SLU 14	-1	0.05	39.92	7.9621	0.0894	0.3505
242	SLU 15	-0.99	0.01	39.9	7.9585	0.0893	0.3471
242	SLU 16	-1	0.05	39.62	7.905	0.0887	0.3475
242	SLU 17	-0.99	0	39.6	7.9014	0.0886	0.3441
242	SLU 18	-0.99	0.06	40.2	8.0108	0.09	0.3446
242	SLU 19	-0.98	0.02	40.18	8.0072	0.0899	0.3412
242	SLU 20	-1.01	0.07	40.72	8.1101	0.0912	0.3507
242	SLU 21	-1	0.03	40.7	8.1065	0.0912	0.3473
242	SLU 22	-1.01	0.05	38.57	7.713	0.0865	0.3534
242	SLU 23	-1	-0.02	38.54	7.707	0.0863	0.3477
242	SLU 24	-1.04	0.06	39.4	7.8693	0.0885	0.3625
242	SLU 25	-1.03	0.02	39.38	7.8657	0.0884	0.3591
242	SLU 26	-1.01	-0.01	39.06	7.8062	0.0876	0.3539
242	SLU 27	-1.06	0.06	39.92	7.9685	0.0898	0.3687
242	SLU 28	-1.05	0.02	39.9	7.9649	0.0897	0.3653
242	SLU 29	-1.05	0.06	39.62	7.9114	0.089	0.3657
242	SLU 30	-1.04	0.02	39.6	7.9078	0.0889	0.3623
242	SLU 31	-1.06	0.04	42.33	8.4169	0.0953	0.3696
242	SLU 32	-1.1	0.12	43.19	8.5793	0.0975	0.3844
242	SLU 33	-1.09	0.07	43.17	8.5757	0.0974	0.381
242	SLU 34	-1.08	0.04	42.86	8.5162	0.0966	0.3757
242	SLU 35	-1.12	0.12	43.72	8.6785	0.0988	0.3905
242	SLU 36	-1.11	0.08	43.7	8.6749	0.0987	0.3871
242	SLU 37	-1.11	0.12	43.42	8.6214	0.098	0.3875
242	SLU 38	-1.1	0.08	43.4	8.6178	0.0979	0.3841
242	SLU 39	-1.1	0.13	44	8.7272	0.0993	0.3846
242	SLU 40	-1.09	0.09	43.98	8.7236	0.0992	0.3812
242	SLU 41	-1.12	0.14	44.52	8.8265	0.1006	0.3907
242	SLU 42	-1.11	0.1	44.5	8.8228	0.1005	0.3873
242	SLU 43	-1.13	-0.04	43.9	8.8499	0.097	0.3938
242	SLU 44	-1.11	-0.12	43.87	8.8439	0.0969	0.3881
242	SLU 45	-1.15	-0.04	44.73	9.0063	0.099	0.4029
242	SLU 46	-1.14	-0.08	44.71	9.0027	0.099	0.3995
242	SLU 47	-1.13	-0.11	44.39	8.9431	0.0982	0.3942
242	SLU 48	-1.17	-0.04	45.25	9.1055	0.1003	0.409
242	SLU 49	-1.16	-0.08	45.23	9.1019	0.1003	0.4056
242	SLU 50	-1.16	-0.04	44.95	9.0484	0.0996	0.406
242	SLU 51	-1.15	-0.08	44.93	9.0448	0.0995	0.4026
242	SLU 52	-1.17	-0.06	47.67	9.5539	0.1059	0.4099
242	SLU 53	-1.22	0.02	48.53	9.7163	0.1081	0.4247
242	SLU 54	-1.21	-0.03	48.51	9.7127	0.108	0.4213
242	SLU 55	-1.19	-0.06	48.19	9.6531	0.1072	0.4161
242	SLU 56	-1.23	0.02	49.05	9.8155	0.1093	0.4309
242	SLU 57	-1.22	-0.02	49.03	9.8119	0.1093	0.4275
242	SLU 58	-1.23	0.02	48.75	9.7584	0.1086	0.4278
242	SLU 59	-1.22	-0.02	48.73	9.7547	0.1085	0.4244
242	SLU 60	-1.22	0.03	49.33	9.8642	0.1099	0.4249
242	SLU 61	-1.21	-0.01	49.31	9.8606	0.1098	0.4215
242	SLU 62	-1.24	0.04	49.85	9.9634	0.1112	0.4311
242	SLU 63	-1.23	0	49.83	9.9598	0.1111	0.4277
242	SLU 64	-1.24	0.03	47.7	9.5663	0.1064	0.4337
242	SLU 65	-1.23	-0.04	47.67	9.5603	0.1063	0.4281
242	SLU 66	-1.27	0.03	48.53	9.7227	0.1084	0.4429
242	SLU 67	-1.26	-0.01	48.51	9.7191	0.1083	0.4395
242	SLU 68	-1.24	-0.04	48.19	9.6595	0.1075	0.4342
242	SLU 69	-1.29	0.03	49.05	9.8219	0.1097	0.449
242	SLU 70	-1.28	-0.01	49.03	9.8183	0.1096	0.4456
242	SLU 71	-1.28	0.03	48.75	9.7648	0.1089	0.446
242	SLU 72	-1.27	-0.01	48.73	9.7611	0.1089	0.4426
242	SLU 73	-1.29	0.01	51.46	10.2703	0.1153	0.4499
242	SLU 74	-1.33	0.09	52.32	10.4327	0.1174	0.4647
242	SLU 75	-1.32	0.04	52.3	10.429	0.1173	0.4613
242	SLU 76	-1.31	0.01	51.99	10.3695	0.1165	0.456
242	SLU 77	-1.35	0.09	52.85	10.5319	0.1187	0.4708
242	SLU 78	-1.34	0.05	52.83	10.5283	0.1186	0.4674
242	SLU 79	-1.34	0.09	52.55	10.4747	0.1179	0.4678

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
242	SLU 80	-1.33	0.05	52.53	10.4711	0.1179	0.4644
242	SLU 81	-1.33	0.1	53.13	10.5806	0.1192	0.4649
242	SLU 82	-1.32	0.06	53.11	10.577	0.1192	0.4615
242	SLU 83	-1.35	0.11	53.65	10.6798	0.1205	0.471
242	SLU 84	-1.34	0.07	53.63	10.6762	0.1204	0.4676
242	SLE RA 1	-0.93	0	35.86	7.2013	0.0798	0.3249
242	SLE RA 2	-0.92	-0.04	35.84	7.1972	0.0797	0.3211
242	SLE RA 3	-0.95	0.01	36.41	7.3055	0.0811	0.3309
242	SLE RA 4	-0.94	-0.02	36.4	7.3031	0.0811	0.3287
242	SLE RA 5	-0.93	-0.04	36.19	7.2634	0.0805	0.3252
242	SLE RA 6	-0.96	0.01	36.76	7.3716	0.082	0.335
242	SLE RA 7	-0.95	-0.02	36.75	7.3692	0.0819	0.3328
242	SLE RA 8	-0.95	0.01	36.56	7.3335	0.0815	0.333
242	SLE RA 9	-0.95	-0.02	36.54	7.3311	0.0814	0.3308
242	SLE RA 10	-0.96	-0.01	38.37	7.6706	0.0857	0.3356
242	SLE RA 11	-0.99	0.04	38.94	7.7788	0.0871	0.3455
242	SLE RA 12	-0.98	0.02	38.93	7.7764	0.0871	0.3432
242	SLE RA 13	-0.97	0	38.72	7.7367	0.0865	0.3397
242	SLE RA 14	-1	0.05	39.29	7.845	0.088	0.3496
242	SLE RA 15	-1	0.02	39.28	7.8426	0.0879	0.3473
242	SLE RA 16	-1	0.05	39.09	7.8069	0.0875	0.3476
242	SLE RA 17	-0.99	0.02	39.08	7.8045	0.0874	0.3453
242	SLE RA 18	-0.99	0.06	39.48	7.8774	0.0883	0.3456
242	SLE RA 19	-0.98	0.03	39.46	7.875	0.0883	0.3434
242	SLE RA 20	-1	0.06	39.83	7.9436	0.0892	0.3497
242	SLE RA 21	-1	0.03	39.81	7.9412	0.0891	0.3475
242	SLE FR 1	-0.93	0	35.86	7.2013	0.0798	0.3249
242	SLE FR 2	-0.93	-0.01	35.85	7.2005	0.0798	0.3241
242	SLE FR 3	-0.94	0.01	36	7.2277	0.0801	0.3265
242	SLE FR 4	-0.95	0.01	36.94	7.4033	0.0823	0.3303
242	SLE FR 5	-0.95	0.02	37.08	7.4306	0.0827	0.3327
242	SLE FR 6	-0.96	0.03	37.67	7.5393	0.0841	0.3353
242	SLE QP 1	-0.93	0	35.86	7.2013	0.0798	0.3249
242	SLE QP 2	-0.95	0.02	36.94	7.4041	0.0823	0.3311
242	SLD 1	2.48	0.56	46.83	9.4461	0.1211	-0.8675
242	SLD 2	2.79	0.11	46.49	9.3845	0.1198	-0.9763
242	SLD 3	2.22	-0.75	46.12	9.2881	0.1181	-0.7789
242	SLD 4	2.53	-1.19	45.78	9.2264	0.1169	-0.8876
242	SLD 5	0.42	2.24	41.04	8.2673	0.0987	-0.1437
242	SLD 6	0.62	1.95	40.82	8.227	0.0979	-0.2148
242	SLD 7	-0.45	-2.11	38.69	7.7405	0.0888	0.1518
242	SLD 8	-0.24	-2.4	38.47	7.7002	0.088	0.0807
242	SLD 9	-1.66	2.44	35.42	7.108	0.0767	0.5815
242	SLD 10	-1.45	2.15	35.2	7.0677	0.0759	0.5104
242	SLD 11	-2.52	-1.91	33.07	6.5812	0.0668	0.877
242	SLD 12	-2.31	-2.2	32.85	6.5409	0.066	0.8059
242	SLD 13	-4.43	1.23	28.1	5.5818	0.0478	1.5498
242	SLD 14	-4.12	0.79	27.76	5.5201	0.0465	1.441
242	SLD 15	-4.69	-0.07	27.4	5.4238	0.0449	1.6384
242	SLD 16	-4.38	-0.52	27.06	5.3621	0.0436	1.5297
242	SLV 1	7.07	1.23	60.07	12.1821	0.173	-2.4726
242	SLV 2	7.8	0.18	59.28	12.0385	0.1701	-2.7259
242	SLV 3	6.47	-1.72	58.45	11.817	0.1662	-2.2666
242	SLV 4	7.2	-2.77	57.66	11.6734	0.1633	-2.5199
242	SLV 5	2.24	5.04	46.48	9.4158	0.1203	-0.7792
242	SLV 6	2.71	4.36	45.97	9.3235	0.1184	-0.942
242	SLV 7	0.24	-4.8	41.07	8.1989	0.0977	-0.0923
242	SLV 8	0.71	-5.47	40.56	8.1066	0.0958	-0.255
242	SLV 9	-2.61	5.51	33.32	6.7016	0.0688	0.9172
242	SLV 10	-2.14	4.84	32.81	6.6093	0.067	0.7545
242	SLV 11	-4.61	-4.32	27.92	5.4847	0.0462	1.6041
242	SLV 12	-4.14	-5	27.41	5.3924	0.0444	1.4414
242	SLV 13	-9.1	2.81	16.23	3.1348	0.0014	3.182
242	SLV 14	-8.36	1.76	15.44	2.9912	-0.0015	2.9288
242	SLV 15	-9.7	-0.14	14.61	2.7697	-0.0054	3.3881
242	SLV 16	-8.96	-1.19	13.82	2.6261	-0.0083	3.1348
242	CRTFP Ux+	0	0	0	0	0	0
242	CRTFP Ux-	0	0	0	0	0	0
242	CRTFP Uy+	0	0	0	0	0	0
242	CRTFP Uy-	0	0	0	0	0	0
243	SLU 1	-0.9	-0.04	32.59	5.5018	0.0594	0.3146
243	SLU 2	-0.88	-0.11	32.56	5.4974	0.0593	0.3089
243	SLU 3	-0.93	-0.04	33.36	5.6195	0.061	0.3237
243	SLU 4	-0.92	-0.08	33.34	5.6169	0.0609	0.3203
243	SLU 5	-0.9	-0.1	33.05	5.5722	0.0603	0.315
243	SLU 6	-0.94	-0.03	33.85	5.6943	0.0619	0.3298
243	SLU 7	-0.93	-0.07	33.83	5.6917	0.0619	0.3264
243	SLU 8	-0.94	-0.04	33.57	5.6514	0.0613	0.3268
243	SLU 9	-0.93	-0.07	33.55	5.6488	0.0613	0.3234
243	SLU 10	-0.95	-0.06	36.11	6.0289	0.0662	0.3308
243	SLU 11	-0.99	0.01	36.91	6.1511	0.0678	0.3457
243	SLU 12	-0.98	-0.03	36.89	6.1484	0.0678	0.3423
243	SLU 13	-0.97	-0.05	36.6	6.1037	0.0671	0.337
243	SLU 14	-1.01	0.02	37.4	6.2259	0.0688	0.3518
243	SLU 15	-1	-0.02	37.38	6.2232	0.0687	0.3484
243	SLU 16	-1	0.01	37.12	6.183	0.0682	0.3488
243	SLU 17	-0.99	-0.02	37.1	6.1803	0.0682	0.3454
243	SLU 18	-0.99	0.03	37.66	6.2612	0.0692	0.3459
243	SLU 19	-0.98	-0.01	37.64	6.2585	0.0691	0.3425
243	SLU 20	-1.01	0.03	38.15	6.336	0.0702	0.3521
243	SLU 21	-1	-0.01	38.13	6.3333	0.0701	0.3487
243	SLU 22	-1.02	0.02	36.13	6.0382	0.0666	0.3547
243	SLU 23	-1	-0.04	36.1	6.0338	0.0665	0.349
243	SLU 24	-1.04	0.03	36.9	6.1559	0.0682	0.3638
243	SLU 25	-1.03	-0.01	36.88	6.1533	0.0681	0.3604
243	SLU 26	-1.02	-0.04	36.58	6.1086	0.0675	0.3552
243	SLU 27	-1.06	0.03	37.38	6.2307	0.0692	0.37

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
243	SLU 28	-1.05	-0.01	37.37	6.2281	0.0691	0.3666
243	SLU 29	-1.05	0.03	37.1	6.1878	0.0686	0.367
243	SLU 30	-1.04	-0.01	37.09	6.1852	0.0685	0.3636
243	SLU 31	-1.06	0.01	39.64	6.5653	0.0734	0.371
243	SLU 32	-1.11	0.08	40.44	6.6875	0.075	0.3858
243	SLU 33	-1.1	0.04	40.42	6.6848	0.075	0.3824
243	SLU 34	-1.08	0.01	40.13	6.6401	0.0744	0.3771
243	SLU 35	-1.12	0.08	40.93	6.7623	0.076	0.3919
243	SLU 36	-1.11	0.04	40.91	6.7596	0.076	0.3885
243	SLU 37	-1.11	0.08	40.65	6.7194	0.0754	0.3889
243	SLU 38	-1.1	0.04	40.63	6.7167	0.0754	0.3855
243	SLU 39	-1.11	0.09	41.19	6.7976	0.0764	0.3861
243	SLU 40	-1.1	0.06	41.17	6.7949	0.0764	0.3827
243	SLU 41	-1.12	0.1	41.68	6.8724	0.0774	0.3922
243	SLU 42	-1.11	0.06	41.66	6.8697	0.0773	0.3888
243	SLU 43	-1.13	-0.07	41.16	6.9685	0.0747	0.3952
243	SLU 44	-1.12	-0.14	41.13	6.964	0.0746	0.3895
243	SLU 45	-1.16	-0.07	41.93	7.0862	0.0763	0.4043
243	SLU 46	-1.15	-0.11	41.91	7.0835	0.0762	0.4009
243	SLU 47	-1.13	-0.14	41.62	7.0388	0.0756	0.3956
243	SLU 48	-1.18	-0.07	42.42	7.161	0.0773	0.4105
243	SLU 49	-1.17	-0.11	42.4	7.1583	0.0772	0.4071
243	SLU 50	-1.17	-0.07	42.14	7.1181	0.0767	0.4075
243	SLU 51	-1.16	-0.11	42.12	7.1154	0.0766	0.4041
243	SLU 52	-1.18	-0.09	44.68	7.4956	0.0815	0.4115
243	SLU 53	-1.22	-0.02	45.47	7.6177	0.0832	0.4263
243	SLU 54	-1.21	-0.06	45.46	7.6151	0.0831	0.4229
243	SLU 55	-1.2	-0.09	45.16	7.5704	0.0825	0.4176
243	SLU 56	-1.24	-0.02	45.96	7.6925	0.0841	0.4324
243	SLU 57	-1.23	-0.06	45.94	7.6899	0.0841	0.429
243	SLU 58	-1.23	-0.02	45.68	7.6496	0.0836	0.4294
243	SLU 59	-1.22	-0.06	45.67	7.647	0.0835	0.426
243	SLU 60	-1.22	0	46.23	7.7278	0.0845	0.4265
243	SLU 61	-1.21	-0.04	46.21	7.7252	0.0845	0.4231
243	SLU 62	-1.24	0	46.71	7.8026	0.0855	0.4327
243	SLU 63	-1.23	-0.04	46.7	7.8	0.0855	0.4293
243	SLU 64	-1.25	-0.01	44.69	7.5048	0.0819	0.4353
243	SLU 65	-1.23	-0.08	44.66	7.5004	0.0819	0.4296
243	SLU 66	-1.27	-0.01	45.46	7.6226	0.0835	0.4444
243	SLU 67	-1.26	-0.05	45.44	7.6199	0.0835	0.441
243	SLU 68	-1.25	-0.07	45.15	7.5752	0.0828	0.4358
243	SLU 69	-1.29	0	45.95	7.6974	0.0845	0.4506
243	SLU 70	-1.28	-0.04	45.93	7.6947	0.0844	0.4472
243	SLU 71	-1.28	-0.01	45.67	7.6544	0.0839	0.4476
243	SLU 72	-1.27	-0.04	45.65	7.6518	0.0839	0.4442
243	SLU 73	-1.29	-0.03	48.21	8.032	0.0887	0.4516
243	SLU 74	-1.34	0.04	49.01	8.1541	0.0904	0.4664
243	SLU 75	-1.33	0	48.99	8.1515	0.0903	0.463
243	SLU 76	-1.31	-0.02	48.7	8.1068	0.0897	0.4577
243	SLU 77	-1.35	0.05	49.5	8.2289	0.0914	0.4725
243	SLU 78	-1.34	0.01	49.48	8.2263	0.0913	0.4691
243	SLU 79	-1.35	0.04	49.22	8.186	0.0908	0.4695
243	SLU 80	-1.34	0.01	49.2	8.1833	0.0907	0.4661
243	SLU 81	-1.34	0.06	49.76	8.2642	0.0918	0.4667
243	SLU 82	-1.33	0.02	49.74	8.2615	0.0917	0.4633
243	SLU 83	-1.35	0.06	50.25	8.339	0.0927	0.4728
243	SLU 84	-1.34	0.02	50.23	8.3364	0.0927	0.4694
243	SLE RA 1	-0.93	-0.02	33.6	5.6551	0.0614	0.326
243	SLE RA 2	-0.92	-0.07	33.58	5.6521	0.0614	0.3222
243	SLE RA 3	-0.95	-0.02	34.12	5.7335	0.0625	0.3321
243	SLE RA 4	-0.94	-0.05	34.1	5.7318	0.0625	0.3299
243	SLE RA 5	-0.93	-0.06	33.91	5.702	0.062	0.3263
243	SLE RA 6	-0.96	-0.02	34.44	5.7834	0.0631	0.3362
243	SLE RA 7	-0.96	-0.04	34.43	5.7816	0.0631	0.3339
243	SLE RA 8	-0.96	-0.02	34.26	5.7548	0.0628	0.3342
243	SLE RA 9	-0.95	-0.04	34.24	5.753	0.0627	0.3319
243	SLE RA 10	-0.96	-0.03	35.95	6.0065	0.066	0.3369
243	SLE RA 11	-0.99	0.01	36.48	6.0879	0.0671	0.3468
243	SLE RA 12	-0.99	-0.01	36.47	6.0861	0.067	0.3445
243	SLE RA 13	-0.98	-0.03	36.27	6.0564	0.0666	0.341
243	SLE RA 14	-1.01	0.02	36.8	6.1378	0.0677	0.3509
243	SLE RA 15	-1	-0.01	36.79	6.136	0.0677	0.3486
243	SLE RA 16	-1	0.01	36.62	6.1092	0.0673	0.3489
243	SLE RA 17	-0.99	-0.01	36.61	6.1074	0.0673	0.3466
243	SLE RA 18	-0.99	0.02	36.98	6.1613	0.068	0.3469
243	SLE RA 19	-0.99	0	36.97	6.1595	0.068	0.3447
243	SLE RA 20	-1.01	0.03	37.31	6.2112	0.0686	0.351
243	SLE RA 21	-1	0	37.29	6.2094	0.0686	0.3488
243	SLE FR 1	-0.93	-0.02	33.6	5.6551	0.0614	0.326
243	SLE FR 2	-0.93	-0.03	33.6	5.6545	0.0614	0.3253
243	SLE FR 3	-0.94	-0.02	33.73	5.675	0.0617	0.3277
243	SLE FR 4	-0.95	-0.02	34.61	5.8064	0.0634	0.3315
243	SLE FR 5	-0.96	-0.01	34.75	5.8269	0.0637	0.3339
243	SLE FR 6	-0.96	0	35.29	5.9082	0.0647	0.3365
243	SLE QP 1	-0.93	-0.02	33.6	5.6551	0.0614	0.326
243	SLE QP 2	-0.95	-0.01	34.62	5.8069	0.0634	0.3323
243	SLD 1	2.48	0.49	43.36	7.3087	0.0963	-0.8684
243	SLD 2	2.79	0.08	43.06	7.2643	0.0953	-0.9773
243	SLD 3	2.22	-0.72	42.74	7.1679	0.0939	-0.7799
243	SLD 4	2.54	-1.13	42.43	7.1235	0.0928	-0.8887
243	SLD 5	0.41	2.05	38.24	6.4789	0.0772	-0.143
243	SLD 6	0.62	1.78	38.04	6.4498	0.0765	-0.2142
243	SLD 7	-0.45	-1.98	36.16	6.0096	0.0691	0.1522
243	SLD 8	-0.24	-2.25	35.96	5.9805	0.0684	0.0811
243	SLD 9	-1.66	2.23	33.27	5.6334	0.0585	0.5835
243	SLD 10	-1.46	1.97	33.07	5.6043	0.0578	0.5124
243	SLD 11	-2.52	-1.8	31.19	5.164	0.0504	0.8788

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
243	SLD 12	-2.32	-2.06	30.99	5.135	0.0497	0.8076
243	SLD 13	-4.44	1.11	26.8	4.4904	0.034	1.5533
243	SLD 14	-4.13	0.71	26.5	4.4459	0.0329	1.4444
243	SLD 15	-4.7	-0.09	26.17	4.3496	0.0316	1.6419
243	SLD 16	-4.38	-0.5	25.87	4.3052	0.0305	1.533
243	SLV 1	7.08	1.1	55.08	9.3212	0.1404	-2.4764
243	SLV 2	7.81	0.15	54.37	9.2178	0.138	-2.7301
243	SLV 3	6.48	-1.63	53.64	8.9943	0.1349	-2.2705
243	SLV 4	7.21	-2.58	52.93	8.8909	0.1324	-2.5241
243	SLV 5	2.24	4.63	43.06	7.3748	0.0954	-0.7792
243	SLV 6	2.71	4.02	42.6	7.3083	0.0938	-0.9422
243	SLV 7	0.24	-4.48	38.26	6.2851	0.0768	-0.0928
243	SLV 8	0.71	-5.09	37.81	6.2186	0.0752	-0.2558
243	SLV 9	-2.62	5.07	31.42	5.3953	0.0516	0.9204
243	SLV 10	-2.15	4.46	30.97	5.3288	0.05	0.7574
243	SLV 11	-4.61	-4.04	26.63	4.3056	0.033	1.6068
243	SLV 12	-4.14	-4.65	26.18	4.2391	0.0314	1.4437
243	SLV 13	-9.11	2.57	16.3	2.723	-0.0056	3.1887
243	SLV 14	-8.38	1.62	15.59	2.6196	-0.008	2.9351
243	SLV 15	-9.71	-0.17	14.86	2.3961	-0.0111	3.3946
243	SLV 16	-8.98	-1.12	14.16	2.2926	-0.0136	3.141
243	CRTFP Ux+	0	0	0	0	0	0
243	CRTFP Ux-	0	0	0	0	0	0
243	CRTFP Uy+	0	0	0	0	0	0
243	CRTFP Uy-	0	0	0	0	0	0
244	SLU 1	-0.9	-0.06	30.98	4.4372	0.0421	0.3152
244	SLU 2	-0.89	-0.12	30.95	4.434	0.042	0.3095
244	SLU 3	-0.93	-0.06	31.7	4.5275	0.0432	0.3243
244	SLU 4	-0.92	-0.1	31.68	4.5255	0.0432	0.3209
244	SLU 5	-0.9	-0.12	31.41	4.4914	0.0427	0.3156
244	SLU 6	-0.95	-0.06	32.16	4.5849	0.0439	0.3304
244	SLU 7	-0.94	-0.1	32.15	4.583	0.0439	0.327
244	SLU 8	-0.94	-0.06	31.9	4.5521	0.0435	0.3274
244	SLU 9	-0.93	-0.1	31.88	4.5502	0.0434	0.324
244	SLU 10	-0.95	-0.08	34.31	4.8389	0.0468	0.3315
244	SLU 11	-0.99	-0.02	35.06	4.9324	0.048	0.3464
244	SLU 12	-0.98	-0.05	35.04	4.9305	0.0479	0.3429
244	SLU 13	-0.97	-0.08	34.77	4.8964	0.0475	0.3377
244	SLU 14	-1.01	-0.02	35.52	4.9899	0.0487	0.3525
244	SLU 15	-1	-0.05	35.51	4.9879	0.0486	0.3491
244	SLU 16	-1	-0.02	35.26	4.9571	0.0483	0.3495
244	SLU 17	-0.99	-0.05	35.24	4.9551	0.0482	0.3461
244	SLU 18	-0.99	0	35.77	5.0157	0.0489	0.3467
244	SLU 19	-0.98	-0.04	35.76	5.0138	0.0489	0.3432
244	SLU 20	-1.01	0	36.24	5.0732	0.0496	0.3528
244	SLU 21	-1	-0.04	36.22	5.0712	0.0496	0.3494
244	SLU 22	-1.02	-0.01	34.31	4.8455	0.0472	0.3554
244	SLU 23	-1	-0.06	34.28	4.8422	0.0472	0.3497
244	SLU 24	-1.04	0	35.04	4.9357	0.0483	0.3645
244	SLU 25	-1.03	-0.04	35.02	4.9337	0.0483	0.3611
244	SLU 26	-1.02	-0.06	34.75	4.8996	0.0479	0.3558
244	SLU 27	-1.06	0	35.5	4.9931	0.049	0.3707
244	SLU 28	-1.05	-0.04	35.48	4.9912	0.049	0.3673
244	SLU 29	-1.05	0	35.24	4.9604	0.0486	0.3677
244	SLU 30	-1.04	-0.04	35.22	4.9584	0.0486	0.3643
244	SLU 31	-1.06	-0.02	37.64	5.2471	0.0519	0.3717
244	SLU 32	-1.11	0.04	38.4	5.3406	0.0531	0.3866
244	SLU 33	-1.1	0	38.38	5.3387	0.0531	0.3832
244	SLU 34	-1.08	-0.02	38.1	5.3046	0.0526	0.3779
244	SLU 35	-1.13	0.04	38.86	5.3981	0.0538	0.3927
244	SLU 36	-1.12	0.01	38.84	5.3961	0.0538	0.3893
244	SLU 37	-1.12	0.04	38.59	5.3653	0.0534	0.3897
244	SLU 38	-1.11	0.01	38.58	5.3633	0.0534	0.3863
244	SLU 39	-1.11	0.06	39.11	5.424	0.0541	0.3869
244	SLU 40	-1.1	0.02	39.09	5.422	0.054	0.3835
244	SLU 41	-1.13	0.06	39.57	5.4814	0.0548	0.393
244	SLU 42	-1.12	0.02	39.55	5.4794	0.0547	0.3896
244	SLU 43	-1.13	-0.1	39.12	5.6285	0.053	0.3959
244	SLU 44	-1.12	-0.16	39.1	5.6252	0.0529	0.3902
244	SLU 45	-1.16	-0.1	39.85	5.7187	0.0541	0.4051
244	SLU 46	-1.15	-0.14	39.83	5.7167	0.054	0.4017
244	SLU 47	-1.13	-0.16	39.56	5.6826	0.0536	0.3964
244	SLU 48	-1.18	-0.1	40.31	5.7761	0.0548	0.4112
244	SLU 49	-1.17	-0.14	40.3	5.7742	0.0547	0.4078
244	SLU 50	-1.17	-0.1	40.05	5.7434	0.0543	0.4082
244	SLU 51	-1.16	-0.14	40.03	5.7414	0.0543	0.4048
244	SLU 52	-1.18	-0.12	42.46	6.0301	0.0577	0.4123
244	SLU 53	-1.22	-0.06	43.21	6.1236	0.0589	0.4271
244	SLU 54	-1.21	-0.09	43.19	6.1217	0.0588	0.4237
244	SLU 55	-1.2	-0.12	42.92	6.0876	0.0584	0.4184
244	SLU 56	-1.24	-0.06	43.67	6.1811	0.0595	0.4333
244	SLU 57	-1.23	-0.09	43.65	6.1791	0.0595	0.4298
244	SLU 58	-1.23	-0.06	43.41	6.1483	0.0591	0.4303
244	SLU 59	-1.22	-0.09	43.39	6.1463	0.0591	0.4268
244	SLU 60	-1.22	-0.04	43.92	6.207	0.0598	0.4274
244	SLU 61	-1.21	-0.08	43.91	6.205	0.0597	0.424
244	SLU 62	-1.24	-0.04	44.39	6.2644	0.0605	0.4336
244	SLU 63	-1.23	-0.08	44.37	6.2624	0.0604	0.4302
244	SLU 64	-1.25	-0.05	42.46	6.0367	0.0581	0.4361
244	SLU 65	-1.23	-0.1	42.43	6.0334	0.058	0.4305
244	SLU 66	-1.28	-0.04	43.19	6.1269	0.0592	0.4453
244	SLU 67	-1.27	-0.08	43.17	6.1249	0.0592	0.4419
244	SLU 68	-1.25	-0.1	42.89	6.0909	0.0587	0.4366
244	SLU 69	-1.29	-0.04	43.65	6.1843	0.0599	0.4514
244	SLU 70	-1.28	-0.08	43.63	6.1824	0.0599	0.448
244	SLU 71	-1.28	-0.04	43.38	6.1516	0.0595	0.4484
244	SLU 72	-1.27	-0.08	43.37	6.1496	0.0594	0.445

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
244	SLU 73	-1.3	-0.06	45.79	6.4383	0.0628	0.4525
244	SLU 74	-1.34	0	46.54	6.5318	0.064	0.4673
244	SLU 75	-1.33	-0.03	46.53	6.5299	0.0639	0.4639
244	SLU 76	-1.31	-0.06	46.25	6.4958	0.0635	0.4586
244	SLU 77	-1.36	0	47.01	6.5893	0.0647	0.4735
244	SLU 78	-1.35	-0.03	46.99	6.5873	0.0646	0.4701
244	SLU 79	-1.35	0	46.74	6.5565	0.0643	0.4705
244	SLU 80	-1.34	-0.03	46.73	6.5546	0.0642	0.4671
244	SLU 81	-1.34	0.02	47.26	6.6152	0.0649	0.4676
244	SLU 82	-1.33	-0.02	47.24	6.6132	0.0649	0.4642
244	SLU 83	-1.36	0.02	47.72	6.6726	0.0656	0.4738
244	SLU 84	-1.35	-0.02	47.7	6.6707	0.0656	0.4704
244	SLE RA 1	-0.94	-0.05	31.93	4.5539	0.0436	0.3267
244	SLE RA 2	-0.92	-0.09	31.91	4.5517	0.0435	0.3229
244	SLE RA 3	-0.95	-0.05	32.41	4.614	0.0443	0.3327
244	SLE RA 4	-0.95	-0.07	32.4	4.6127	0.0443	0.3305
244	SLE RA 5	-0.94	-0.09	32.22	4.59	0.044	0.327
244	SLE RA 6	-0.96	-0.04	32.72	4.6523	0.0448	0.3368
244	SLE RA 7	-0.96	-0.07	32.71	4.651	0.0447	0.3346
244	SLE RA 8	-0.96	-0.05	32.54	4.6305	0.0445	0.3348
244	SLE RA 9	-0.95	-0.07	32.53	4.6292	0.0445	0.3326
244	SLE RA 10	-0.97	-0.06	34.15	4.8217	0.0467	0.3376
244	SLE RA 11	-1	-0.02	34.65	4.884	0.0475	0.3474
244	SLE RA 12	-0.99	-0.04	34.64	4.8827	0.0475	0.3452
244	SLE RA 13	-0.98	-0.06	34.46	4.86	0.0472	0.3417
244	SLE RA 14	-1.01	-0.02	34.96	4.9223	0.048	0.3515
244	SLE RA 15	-1	-0.04	34.95	4.921	0.0479	0.3493
244	SLE RA 16	-1	-0.02	34.78	4.9004	0.0477	0.3495
244	SLE RA 17	-0.99	-0.04	34.77	4.8991	0.0476	0.3473
244	SLE RA 18	-1	-0.01	35.13	4.9395	0.0481	0.3477
244	SLE RA 19	-0.99	-0.03	35.12	4.9382	0.0481	0.3454
244	SLE RA 20	-1.01	-0.01	35.44	4.9778	0.0486	0.3517
244	SLE RA 21	-1	-0.03	35.42	4.9765	0.0485	0.3495
244	SLE FR 1	-0.94	-0.05	31.93	4.5539	0.0436	0.3267
244	SLE FR 2	-0.93	-0.06	31.92	4.5534	0.0435	0.3259
244	SLE FR 3	-0.94	-0.05	32.05	4.5692	0.0437	0.3283
244	SLE FR 4	-0.95	-0.04	32.88	4.6691	0.0449	0.3322
244	SLE FR 5	-0.96	-0.03	33.01	4.6849	0.0451	0.3346
244	SLE FR 6	-0.97	-0.03	33.53	4.7467	0.0458	0.3372
244	SLE QP 1	-0.94	-0.05	31.93	4.5539	0.0436	0.3267
244	SLE QP 2	-0.95	-0.04	32.89	4.6696	0.0449	0.333
244	SLD 1	2.48	0.41	40.68	5.7632	0.0723	-0.8699
244	SLD 2	2.8	0.04	40.4	5.7317	0.0714	-0.9789
244	SLD 3	2.23	-0.71	40.11	5.6258	0.0704	-0.7813
244	SLD 4	2.54	-1.08	39.84	5.5942	0.0695	-0.8904
244	SLD 5	0.41	1.87	36.13	5.2117	0.0561	-0.1429
244	SLD 6	0.62	1.63	35.95	5.191	0.0556	-0.2142
244	SLD 7	-0.45	-1.88	34.25	4.7536	0.0499	0.1522
244	SLD 8	-0.24	-2.12	34.07	4.733	0.0493	0.081
244	SLD 9	-1.67	2.05	31.7	4.6062	0.0405	0.5849
244	SLD 10	-1.46	1.81	31.53	4.5855	0.04	0.5137
244	SLD 11	-2.53	-1.7	29.83	4.1481	0.0343	0.8801
244	SLD 12	-2.32	-1.94	29.65	4.1275	0.0337	0.8088
244	SLD 13	-4.45	1.01	25.94	3.7449	0.0203	1.5563
244	SLD 14	-4.13	0.64	25.66	3.7133	0.0194	1.4472
244	SLD 15	-4.71	-0.11	25.37	3.6075	0.0184	1.6448
244	SLD 16	-4.39	-0.48	25.1	3.5759	0.0175	1.5358
244	SLV 1	7.09	0.97	51.11	7.2292	0.109	-2.4807
244	SLV 2	7.82	0.1	50.47	7.1556	0.107	-2.7347
244	SLV 3	6.49	-1.58	49.81	6.9086	0.1047	-2.2749
244	SLV 4	7.22	-2.44	49.18	6.835	0.1026	-2.5289
244	SLV 5	2.24	4.27	40.43	5.9363	0.0711	-0.7798
244	SLV 6	2.71	3.71	40.02	5.889	0.0698	-0.9431
244	SLV 7	0.25	-4.2	36.11	4.8677	0.0566	-0.0936
244	SLV 8	0.72	-4.76	35.7	4.8204	0.0553	-0.2569
244	SLV 9	-2.63	4.69	30.07	4.5188	0.0345	0.9228
244	SLV 10	-2.15	4.13	29.67	4.4715	0.0332	0.7595
244	SLV 11	-4.62	-3.78	25.76	3.4502	0.0201	1.609
244	SLV 12	-4.15	-4.34	25.35	3.4029	0.0188	1.4457
244	SLV 13	-9.13	2.37	16.6	2.5042	-0.0128	3.1948
244	SLV 14	-8.4	1.5	15.96	2.4306	-0.0148	2.9408
244	SLV 15	-9.73	-0.17	15.3	2.1836	-0.0171	3.4006
244	SLV 16	-8.99	-1.04	14.67	2.11	-0.0192	3.1466
244	CRTFP Ux+	0	0	0	0	0	0
244	CRTFP Ux-	0	0	0	0	0	0
244	CRTFP Uy+	0	0	0	0	0	0
244	CRTFP Uy-	0	0	0	0	0	0
245	SLU 1	-0.9	-0.09	29.9	3.7777	0.0257	0.3152
245	SLU 2	-0.89	-0.14	29.87	3.7752	0.0256	0.3095
245	SLU 3	-0.93	-0.09	30.59	3.8509	0.0264	0.3243
245	SLU 4	-0.92	-0.12	30.58	3.8494	0.0263	0.3209
245	SLU 5	-0.9	-0.14	30.31	3.8219	0.026	0.3156
245	SLU 6	-0.95	-0.09	31.04	3.8977	0.0268	0.3305
245	SLU 7	-0.94	-0.12	31.02	3.8961	0.0267	0.327
245	SLU 8	-0.94	-0.09	30.78	3.8712	0.0265	0.3275
245	SLU 9	-0.93	-0.12	30.77	3.8697	0.0265	0.324
245	SLU 10	-0.95	-0.11	33.11	4.1024	0.0284	0.3316
245	SLU 11	-0.99	-0.05	33.83	4.1782	0.0291	0.3464
245	SLU 12	-0.98	-0.08	33.82	4.1767	0.0291	0.343
245	SLU 13	-0.97	-0.1	33.55	4.1492	0.0288	0.3377
245	SLU 14	-1.01	-0.05	34.28	4.2249	0.0296	0.3525
245	SLU 15	-1	-0.08	34.26	4.2234	0.0295	0.3491
245	SLU 16	-1	-0.05	34.02	4.1985	0.0293	0.3496
245	SLU 17	-0.99	-0.08	34.01	4.1969	0.0293	0.3461
245	SLU 18	-0.99	-0.03	34.52	4.2453	0.0297	0.3467
245	SLU 19	-0.98	-0.07	34.51	4.2437	0.0296	0.3433
245	SLU 20	-1.01	-0.03	34.97	4.292	0.0301	0.3529

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
245	SLU 21	-1	-0.07	34.95	4.2905	0.03	0.3495
245	SLU 22	-1.02	-0.03	33.1	4.1065	0.0288	0.3554
245	SLU 23	-1	-0.09	33.07	4.1039	0.0288	0.3497
245	SLU 24	-1.04	-0.03	33.8	4.1797	0.0295	0.3646
245	SLU 25	-1.03	-0.07	33.78	4.1781	0.0295	0.3611
245	SLU 26	-1.02	-0.09	33.52	4.1507	0.0292	0.3559
245	SLU 27	-1.06	-0.03	34.24	4.2264	0.0299	0.3707
245	SLU 28	-1.05	-0.06	34.22	4.2249	0.0299	0.3673
245	SLU 29	-1.05	-0.03	33.99	4.2	0.0297	0.3677
245	SLU 30	-1.04	-0.06	33.97	4.1984	0.0296	0.3643
245	SLU 31	-1.06	-0.05	36.31	4.4312	0.0316	0.3718
245	SLU 32	-1.11	0.01	37.03	4.507	0.0323	0.3867
245	SLU 33	-1.1	-0.03	37.02	4.5054	0.0323	0.3832
245	SLU 34	-1.08	-0.05	36.76	4.4779	0.032	0.378
245	SLU 35	-1.13	0.01	37.48	4.5537	0.0327	0.3928
245	SLU 36	-1.12	-0.03	37.46	4.5522	0.0327	0.3894
245	SLU 37	-1.12	0.01	37.23	4.5272	0.0325	0.3898
245	SLU 38	-1.11	-0.03	37.21	4.5257	0.0324	0.3864
245	SLU 39	-1.11	0.02	37.72	4.574	0.0328	0.387
245	SLU 40	-1.1	-0.01	37.71	4.5725	0.0328	0.3836
245	SLU 41	-1.13	0.02	38.17	4.6208	0.0332	0.3931
245	SLU 42	-1.12	-0.01	38.15	4.6192	0.0332	0.3897
245	SLU 43	-1.13	-0.13	37.77	4.7983	0.0323	0.396
245	SLU 44	-1.12	-0.19	37.74	4.7958	0.0322	0.3902
245	SLU 45	-1.16	-0.13	38.46	4.8715	0.033	0.4051
245	SLU 46	-1.15	-0.17	38.45	4.87	0.0329	0.4017
245	SLU 47	-1.13	-0.19	38.18	4.8425	0.0327	0.3964
245	SLU 48	-1.18	-0.13	38.91	4.9183	0.0334	0.4112
245	SLU 49	-1.17	-0.16	38.89	4.9167	0.0334	0.4078
245	SLU 50	-1.17	-0.13	38.66	4.8918	0.0331	0.4082
245	SLU 51	-1.16	-0.17	38.64	4.8903	0.0331	0.4048
245	SLU 52	-1.18	-0.15	40.98	5.1231	0.035	0.4123
245	SLU 53	-1.22	-0.09	41.7	5.1988	0.0358	0.4272
245	SLU 54	-1.21	-0.13	41.69	5.1973	0.0357	0.4237
245	SLU 55	-1.2	-0.15	41.42	5.1698	0.0355	0.4185
245	SLU 56	-1.24	-0.09	42.15	5.2455	0.0362	0.4333
245	SLU 57	-1.23	-0.13	42.13	5.244	0.0362	0.4299
245	SLU 58	-1.23	-0.09	41.89	5.2191	0.0359	0.4303
245	SLU 59	-1.22	-0.13	41.88	5.2175	0.0359	0.4269
245	SLU 60	-1.22	-0.08	42.39	5.2659	0.0363	0.4275
245	SLU 61	-1.21	-0.11	42.38	5.2643	0.0362	0.4241
245	SLU 62	-1.24	-0.08	42.84	5.3126	0.0367	0.4336
245	SLU 63	-1.23	-0.11	42.82	5.3111	0.0367	0.4302
245	SLU 64	-1.25	-0.08	40.97	5.1271	0.0355	0.4362
245	SLU 65	-1.23	-0.13	40.94	5.1245	0.0354	0.4305
245	SLU 66	-1.28	-0.08	41.67	5.2003	0.0361	0.4453
245	SLU 67	-1.27	-0.11	41.65	5.1987	0.0361	0.4419
245	SLU 68	-1.25	-0.13	41.39	5.1713	0.0358	0.4366
245	SLU 69	-1.29	-0.08	42.11	5.247	0.0366	0.4515
245	SLU 70	-1.28	-0.11	42.1	5.2455	0.0365	0.448
245	SLU 71	-1.28	-0.08	41.86	5.2206	0.0363	0.4485
245	SLU 72	-1.27	-0.11	41.84	5.219	0.0363	0.4451
245	SLU 73	-1.3	-0.1	44.18	5.4518	0.0382	0.4526
245	SLU 74	-1.34	-0.04	44.9	5.5276	0.0389	0.4674
245	SLU 75	-1.33	-0.07	44.89	5.526	0.0389	0.464
245	SLU 76	-1.31	-0.1	44.63	5.4985	0.0386	0.4587
245	SLU 77	-1.36	-0.04	45.35	5.5743	0.0393	0.4736
245	SLU 78	-1.35	-0.07	45.33	5.5728	0.0393	0.4701
245	SLU 79	-1.35	-0.04	45.1	5.5478	0.0391	0.4706
245	SLU 80	-1.34	-0.07	45.08	5.5463	0.0391	0.4671
245	SLU 81	-1.34	-0.02	45.6	5.5946	0.0394	0.4678
245	SLU 82	-1.33	-0.06	45.58	5.5931	0.0394	0.4643
245	SLU 83	-1.36	-0.02	46.04	5.6414	0.0399	0.4739
245	SLU 84	-1.35	-0.06	46.02	5.6398	0.0398	0.4705
245	SLE RA 1	-0.94	-0.07	30.81	3.8717	0.0266	0.3267
245	SLE RA 2	-0.92	-0.11	30.79	3.87	0.0265	0.3229
245	SLE RA 3	-0.95	-0.07	31.28	3.9205	0.027	0.3328
245	SLE RA 4	-0.95	-0.09	31.27	3.9194	0.027	0.3305
245	SLE RA 5	-0.94	-0.11	31.09	3.9011	0.0268	0.327
245	SLE RA 6	-0.96	-0.07	31.57	3.9516	0.0273	0.3369
245	SLE RA 7	-0.96	-0.09	31.56	3.9506	0.0273	0.3346
245	SLE RA 8	-0.96	-0.07	31.4	3.934	0.0271	0.3349
245	SLE RA 9	-0.95	-0.09	31.39	3.9329	0.0271	0.3326
245	SLE RA 10	-0.97	-0.08	32.95	4.0881	0.0284	0.3376
245	SLE RA 11	-1	-0.05	33.43	4.1386	0.0289	0.3475
245	SLE RA 12	-0.99	-0.07	33.42	4.1376	0.0289	0.3452
245	SLE RA 13	-0.98	-0.08	33.25	4.1193	0.0287	0.3417
245	SLE RA 14	-1.01	-0.05	33.73	4.1698	0.0292	0.3516
245	SLE RA 15	-1	-0.07	33.72	4.1688	0.0292	0.3493
245	SLE RA 16	-1	-0.05	33.56	4.1522	0.029	0.3496
245	SLE RA 17	-0.99	-0.07	33.55	4.1511	0.029	0.3473
245	SLE RA 18	-1	-0.04	33.89	4.1834	0.0292	0.3477
245	SLE RA 19	-0.99	-0.06	33.88	4.1823	0.0292	0.3455
245	SLE RA 20	-1.01	-0.04	34.19	4.2145	0.0295	0.3518
245	SLE RA 21	-1	-0.06	34.18	4.2135	0.0295	0.3495
245	SLE FR 1	-0.94	-0.07	30.81	3.8717	0.0266	0.3267
245	SLE FR 2	-0.93	-0.08	30.81	3.8713	0.0266	0.3259
245	SLE FR 3	-0.94	-0.07	30.93	3.8841	0.0267	0.3283
245	SLE FR 4	-0.95	-0.07	31.73	3.9648	0.0274	0.3322
245	SLE FR 5	-0.96	-0.06	31.85	3.9776	0.0275	0.3346
245	SLE FR 6	-0.97	-0.05	32.35	4.0275	0.0279	0.3372
245	SLE QP 1	-0.94	-0.07	30.81	3.8717	0.0266	0.3267
245	SLE QP 2	-0.95	-0.06	31.74	3.9652	0.0274	0.333
245	SLD 1	2.49	0.34	38.73	4.7669	0.0497	-0.8719
245	SLD 2	2.8	0	38.49	4.7439	0.049	-0.9811
245	SLD 3	2.23	-0.71	38.22	4.6262	0.0484	-0.7833
245	SLD 4	2.55	-1.05	37.97	4.6032	0.0477	-0.8926

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
245	SLD 5	0.41	1.71	34.66	4.4231	0.0363	-0.1434
245	SLD 6	0.62	1.49	34.5	4.4081	0.0358	-0.2148
245	SLD 7	-0.44	-1.79	32.94	3.9541	0.0317	0.1517
245	SLD 8	-0.24	-2.02	32.78	3.9391	0.0313	0.0803
245	SLD 9	-1.67	1.89	30.69	3.9912	0.0235	0.5857
245	SLD 10	-1.46	1.67	30.53	3.9762	0.023	0.5143
245	SLD 11	-2.53	-1.62	28.97	3.5222	0.0189	0.8808
245	SLD 12	-2.32	-1.84	28.81	3.5072	0.0185	0.8095
245	SLD 13	-4.45	0.93	25.5	3.3271	0.0071	1.5586
245	SLD 14	-4.14	0.59	25.25	3.3042	0.0064	1.4493
245	SLD 15	-4.71	-0.12	24.99	3.1864	0.0057	1.6471
245	SLD 16	-4.4	-0.46	24.74	3.1635	0.005	1.5379
245	SLV 1	7.1	0.83	48.11	5.8417	0.0797	-2.4855
245	SLV 2	7.83	0.04	47.53	5.7882	0.0781	-2.7399
245	SLV 3	6.5	-1.55	46.92	5.5125	0.0765	-2.2796
245	SLV 4	7.24	-2.34	46.34	5.4591	0.0749	-2.534
245	SLV 5	2.24	3.95	38.55	5.0365	0.0482	-0.7812
245	SLV 6	2.71	3.44	38.18	5.0021	0.0471	-0.9447
245	SLV 7	0.25	-3.98	34.59	3.9393	0.0376	-0.0949
245	SLV 8	0.72	-4.49	34.22	3.905	0.0366	-0.2585
245	SLV 9	-2.63	4.37	29.26	4.0254	0.0182	0.9245
245	SLV 10	-2.16	3.86	28.88	3.991	0.0172	0.761
245	SLV 11	-4.62	-3.57	25.29	2.9282	0.0076	1.6107
245	SLV 12	-4.15	-4.07	24.92	2.8939	0.0066	1.4472
245	SLV 13	-9.14	2.22	17.13	2.4713	-0.0202	3.2
245	SLV 14	-8.41	1.42	16.55	2.4178	-0.0218	2.9456
245	SLV 15	-9.74	-0.16	15.94	2.1422	-0.0234	3.4059
245	SLV 16	-9.01	-0.96	15.37	2.0887	-0.025	3.1515
245	CRTFP Ux+	0	0	0	0	0	0
245	CRTFP Ux-	0	0	0	0	0	0
245	CRTFP Uy+	0	0	0	0	0	0
245	CRTFP Uy-	0	0	0	0	0	0
246	SLU 1	-0.9	-0.11	29.32	3.4936	0.0103	0.3147
246	SLU 2	-0.88	-0.16	29.3	3.4913	0.0102	0.3089
246	SLU 3	-0.93	-0.11	30.01	3.5595	0.0105	0.3238
246	SLU 4	-0.92	-0.14	29.99	3.5581	0.0105	0.3203
246	SLU 5	-0.9	-0.16	29.73	3.5335	0.0104	0.3151
246	SLU 6	-0.94	-0.11	30.44	3.6016	0.0107	0.3299
246	SLU 7	-0.93	-0.14	30.43	3.6002	0.0107	0.3264
246	SLU 8	-0.94	-0.11	30.19	3.5779	0.0106	0.3269
246	SLU 9	-0.93	-0.14	30.18	3.5765	0.0106	0.3235
246	SLU 10	-0.95	-0.13	32.48	3.7864	0.0112	0.331
246	SLU 11	-0.99	-0.08	33.19	3.8545	0.0115	0.3458
246	SLU 12	-0.98	-0.11	33.17	3.8532	0.0114	0.3424
246	SLU 13	-0.97	-0.13	32.91	3.8286	0.0113	0.3371
246	SLU 14	-1.01	-0.08	33.62	3.8967	0.0116	0.3519
246	SLU 15	-1	-0.11	33.61	3.8953	0.0116	0.3485
246	SLU 16	-1	-0.08	33.37	3.873	0.0115	0.349
246	SLU 17	-0.99	-0.11	33.36	3.8716	0.0115	0.3455
246	SLU 18	-0.99	-0.07	33.87	3.9152	0.0116	0.3462
246	SLU 19	-0.98	-0.1	33.85	3.9138	0.0116	0.3428
246	SLU 20	-1.01	-0.07	34.3	3.9573	0.0117	0.3523
246	SLU 21	-1	-0.1	34.29	3.9559	0.0117	0.3489
246	SLU 22	-1.02	-0.06	32.46	3.7879	0.0116	0.3549
246	SLU 23	-1	-0.11	32.43	3.7856	0.0116	0.3492
246	SLU 24	-1.04	-0.06	33.14	3.8538	0.0119	0.364
246	SLU 25	-1.03	-0.09	33.12	3.8524	0.0118	0.3605
246	SLU 26	-1.02	-0.11	32.87	3.8278	0.0117	0.3553
246	SLU 27	-1.06	-0.06	33.57	3.8959	0.012	0.3701
246	SLU 28	-1.05	-0.09	33.56	3.8945	0.012	0.3666
246	SLU 29	-1.05	-0.06	33.33	3.8722	0.0119	0.3671
246	SLU 30	-1.04	-0.09	33.31	3.8709	0.0119	0.3637
246	SLU 31	-1.06	-0.08	35.61	4.0807	0.0125	0.3712
246	SLU 32	-1.11	-0.03	36.32	4.1488	0.0128	0.386
246	SLU 33	-1.1	-0.06	36.3	4.1475	0.0128	0.3826
246	SLU 34	-1.08	-0.08	36.05	4.1229	0.0126	0.3773
246	SLU 35	-1.12	-0.03	36.75	4.191	0.0129	0.3922
246	SLU 36	-1.11	-0.06	36.74	4.1896	0.0129	0.3887
246	SLU 37	-1.11	-0.03	36.51	4.1673	0.0128	0.3892
246	SLU 38	-1.1	-0.06	36.49	4.1659	0.0128	0.3858
246	SLU 39	-1.11	-0.01	37	4.2095	0.0129	0.3864
246	SLU 40	-1.1	-0.04	36.98	4.2081	0.0129	0.383
246	SLU 41	-1.12	-0.01	37.43	4.2516	0.013	0.3925
246	SLU 42	-1.11	-0.04	37.42	4.2502	0.013	0.3891
246	SLU 43	-1.13	-0.16	37.05	4.4408	0.0129	0.3953
246	SLU 44	-1.12	-0.22	37.02	4.4385	0.0129	0.3896
246	SLU 45	-1.16	-0.16	37.73	4.5066	0.0132	0.4044
246	SLU 46	-1.15	-0.19	37.71	4.5053	0.0132	0.4009
246	SLU 47	-1.13	-0.21	37.46	4.4807	0.013	0.3957
246	SLU 48	-1.18	-0.16	38.16	4.5488	0.0133	0.4105
246	SLU 49	-1.17	-0.19	38.15	4.5474	0.0133	0.407
246	SLU 50	-1.17	-0.16	37.92	4.5251	0.0132	0.4075
246	SLU 51	-1.16	-0.19	37.9	4.5237	0.0132	0.4041
246	SLU 52	-1.18	-0.18	40.2	4.7336	0.0138	0.4116
246	SLU 53	-1.22	-0.13	40.91	4.8017	0.0141	0.4264
246	SLU 54	-1.21	-0.16	40.89	4.8003	0.0141	0.423
246	SLU 55	-1.2	-0.18	40.64	4.7757	0.014	0.4178
246	SLU 56	-1.24	-0.13	41.34	4.8439	0.0143	0.4326
246	SLU 57	-1.23	-0.16	41.33	4.8425	0.0142	0.4291
246	SLU 58	-1.23	-0.13	41.1	4.8202	0.0141	0.4296
246	SLU 59	-1.22	-0.16	41.08	4.8188	0.0141	0.4262
246	SLU 60	-1.22	-0.12	41.59	4.8623	0.0142	0.4268
246	SLU 61	-1.21	-0.15	41.57	4.861	0.0142	0.4234
246	SLU 62	-1.24	-0.12	42.02	4.9045	0.0144	0.4329
246	SLU 63	-1.23	-0.15	42.01	4.9031	0.0144	0.4295
246	SLU 64	-1.25	-0.11	40.18	4.7351	0.0142	0.4355
246	SLU 65	-1.23	-0.16	40.15	4.7328	0.0142	0.4298

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
246	SLU 66	-1.27	-0.11	40.86	4.8009	0.0145	0.4446
246	SLU 67	-1.26	-0.14	40.85	4.7996	0.0145	0.4411
246	SLU 68	-1.25	-0.16	40.59	4.775	0.0143	0.4359
246	SLU 69	-1.29	-0.11	41.3	4.8431	0.0147	0.4507
246	SLU 70	-1.28	-0.14	41.28	4.8417	0.0146	0.4473
246	SLU 71	-1.28	-0.11	41.05	4.8194	0.0145	0.4477
246	SLU 72	-1.27	-0.14	41.03	4.818	0.0145	0.4443
246	SLU 73	-1.29	-0.13	43.33	5.0279	0.0151	0.4518
246	SLU 74	-1.34	-0.08	44.04	5.096	0.0154	0.4667
246	SLU 75	-1.33	-0.11	44.03	5.0946	0.0154	0.4632
246	SLU 76	-1.31	-0.13	43.77	5.07	0.0153	0.458
246	SLU 77	-1.35	-0.08	44.48	5.1382	0.0156	0.4728
246	SLU 78	-1.34	-0.11	44.46	5.1368	0.0156	0.4693
246	SLU 79	-1.35	-0.08	44.23	5.1145	0.0155	0.4698
246	SLU 80	-1.34	-0.11	44.21	5.1131	0.0154	0.4664
246	SLU 81	-1.34	-0.07	44.72	5.1566	0.0155	0.467
246	SLU 82	-1.33	-0.1	44.71	5.1553	0.0155	0.4636
246	SLU 83	-1.36	-0.07	45.16	5.1988	0.0157	0.4731
246	SLU 84	-1.35	-0.1	45.14	5.1974	0.0157	0.4697
246	SLE RA 1	-0.93	-0.1	30.22	3.5777	0.0106	0.3262
246	SLE RA 2	-0.92	-0.13	30.2	3.5762	0.0106	0.3223
246	SLE RA 3	-0.95	-0.1	30.67	3.6216	0.0108	0.3322
246	SLE RA 4	-0.94	-0.12	30.66	3.6207	0.0108	0.3299
246	SLE RA 5	-0.93	-0.13	30.49	3.6043	0.0107	0.3264
246	SLE RA 6	-0.96	-0.1	30.96	3.6497	0.0109	0.3363
246	SLE RA 7	-0.96	-0.12	30.95	3.6488	0.0109	0.334
246	SLE RA 8	-0.96	-0.1	30.8	3.6339	0.0109	0.3343
246	SLE RA 9	-0.95	-0.12	30.79	3.633	0.0109	0.332
246	SLE RA 10	-0.97	-0.11	32.32	3.7729	0.0112	0.3371
246	SLE RA 11	-0.99	-0.08	32.79	3.8183	0.0114	0.3469
246	SLE RA 12	-0.99	-0.1	32.78	3.8174	0.0114	0.3446
246	SLE RA 13	-0.98	-0.11	32.61	3.801	0.0113	0.3411
246	SLE RA 14	-1.01	-0.08	33.08	3.8464	0.0115	0.351
246	SLE RA 15	-1	-0.1	33.07	3.8455	0.0115	0.3487
246	SLE RA 16	-1	-0.08	32.92	3.8306	0.0115	0.349
246	SLE RA 17	-0.99	-0.1	32.91	3.8297	0.0115	0.3467
246	SLE RA 18	-0.99	-0.07	33.25	3.8587	0.0115	0.3472
246	SLE RA 19	-0.99	-0.09	33.24	3.8578	0.0115	0.3449
246	SLE RA 20	-1.01	-0.07	33.54	3.8868	0.0116	0.3513
246	SLE RA 21	-1	-0.09	33.53	3.8859	0.0116	0.349
246	SLE FR 1	-0.93	-0.1	30.22	3.5777	0.0106	0.3262
246	SLE FR 2	-0.93	-0.1	30.22	3.5774	0.0106	0.3254
246	SLE FR 3	-0.94	-0.1	30.34	3.589	0.0107	0.3278
246	SLE FR 4	-0.95	-0.1	31.12	3.6617	0.0109	0.3317
246	SLE FR 5	-0.96	-0.09	31.24	3.6733	0.0109	0.3341
246	SLE FR 6	-0.96	-0.08	31.73	3.7182	0.0111	0.3367
246	SLE QP 1	-0.93	-0.1	30.22	3.5777	0.0106	0.3262
246	SLE QP 2	-0.95	-0.09	31.13	3.662	0.0109	0.3325
246	SLD 1	2.49	0.27	37.49	4.2712	0.0289	-0.8743
246	SLD 2	2.81	-0.05	37.26	4.2531	0.0284	-0.9837
246	SLD 3	2.24	-0.73	37	4.1268	0.0279	-0.7858
246	SLD 4	2.55	-1.04	36.77	4.1087	0.0274	-0.8951
246	SLD 5	0.41	1.58	33.81	4.067	0.0178	-0.1445
246	SLD 6	0.62	1.38	33.66	4.0552	0.0175	-0.216
246	SLD 7	-0.44	-1.73	32.2	3.5856	0.0146	0.1506
246	SLD 8	-0.23	-1.94	32.05	3.5738	0.0143	0.0791
246	SLD 9	-1.67	1.76	30.21	3.7502	0.0075	0.5858
246	SLD 10	-1.47	1.56	30.06	3.7384	0.0072	0.5143
246	SLD 11	-2.52	-1.56	28.59	3.2688	0.0043	0.881
246	SLD 12	-2.32	-1.76	28.45	3.257	0.004	0.8095
246	SLD 13	-4.46	0.86	25.48	3.2153	-0.0056	1.5601
246	SLD 14	-4.14	0.55	25.25	3.1973	-0.0061	1.4507
246	SLD 15	-4.71	-0.13	25	3.0709	-0.0066	1.6486
246	SLD 16	-4.4	-0.44	24.77	3.0528	-0.0071	1.5392
246	SLV 1	7.11	0.7	46	5.0881	0.053	-2.4905
246	SLV 2	7.84	-0.03	45.47	5.0461	0.0518	-2.7452
246	SLV 3	6.52	-1.55	44.89	4.7498	0.0507	-2.2846
246	SLV 4	7.25	-2.28	44.36	4.7078	0.0495	-2.5394
246	SLV 5	2.24	3.69	37.37	4.6101	0.0271	-0.783
246	SLV 6	2.71	3.22	37.03	4.5831	0.0263	-0.9468
246	SLV 7	0.26	-3.82	33.66	3.4825	0.0197	-0.0967
246	SLV 8	0.73	-4.28	33.32	3.4555	0.0189	-0.2605
246	SLV 9	-2.64	4.11	28.94	3.8685	0.0029	0.9254
246	SLV 10	-2.17	3.64	28.6	3.8415	0.0021	0.7617
246	SLV 11	-4.62	-3.4	25.23	2.741	-0.0045	1.6117
246	SLV 12	-4.15	-3.86	24.89	2.714	-0.0053	1.448
246	SLV 13	-9.15	2.1	17.9	2.6162	-0.0277	3.2043
246	SLV 14	-8.42	1.37	17.37	2.5742	-0.0289	2.9495
246	SLV 15	-9.75	-0.15	16.79	2.278	-0.03	3.4102
246	SLV 16	-9.02	-0.88	16.25	2.2359	-0.0312	3.1554
246	CRTFP Ux+	0	0	0	0	0	0
246	CRTFP Ux-	0	0	0	0	0	0
246	CRTFP Uy+	0	0	0	0	0	0
246	CRTFP Uy-	0	0	0	0	0	0
247	SLU 1	-0.9	-0.14	29.23	3.5572	-0.0041	0.3136
247	SLU 2	-0.88	-0.19	29.2	3.5549	-0.0041	0.3079
247	SLU 3	-0.92	-0.14	29.91	3.6246	-0.0042	0.3227
247	SLU 4	-0.91	-0.17	29.89	3.6232	-0.0042	0.3192
247	SLU 5	-0.9	-0.19	29.64	3.5981	-0.0042	0.314
247	SLU 6	-0.94	-0.14	30.34	3.6679	-0.0043	0.3287
247	SLU 7	-0.93	-0.17	30.33	3.6664	-0.0043	0.3253
247	SLU 8	-0.93	-0.14	30.1	3.6437	-0.0043	0.3258
247	SLU 9	-0.92	-0.17	30.08	3.6423	-0.0043	0.3224
247	SLU 10	-0.95	-0.16	32.38	3.86	-0.005	0.3299
247	SLU 11	-0.99	-0.11	33.09	3.9298	-0.0051	0.3447
247	SLU 12	-0.98	-0.14	33.07	3.9284	-0.0051	0.3412
247	SLU 13	-0.96	-0.16	32.82	3.9032	-0.005	0.336

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
247	SLU 14	-1.01	-0.11	33.52	3.973	-0.0051	0.3508
247	SLU 15	-1	-0.14	33.5	3.9716	-0.0051	0.3473
247	SLU 16	-1	-0.11	33.27	3.9488	-0.0051	0.3478
247	SLU 17	-0.99	-0.14	33.26	3.9474	-0.0051	0.3444
247	SLU 18	-0.99	-0.1	33.77	3.9932	-0.0053	0.3451
247	SLU 19	-0.98	-0.13	33.75	3.9917	-0.0053	0.3416
247	SLU 20	-1.01	-0.1	34.2	4.0364	-0.0054	0.3512
247	SLU 21	-1	-0.13	34.19	4.035	-0.0054	0.3477
247	SLU 22	-1.01	-0.09	32.35	3.8587	-0.0045	0.3537
247	SLU 23	-1	-0.14	32.32	3.8563	-0.0045	0.348
247	SLU 24	-1.04	-0.09	33.03	3.926	-0.0046	0.3628
247	SLU 25	-1.03	-0.12	33.01	3.9246	-0.0046	0.3593
247	SLU 26	-1.01	-0.14	32.76	3.8995	-0.0046	0.3541
247	SLU 27	-1.06	-0.09	33.46	3.9693	-0.0047	0.3689
247	SLU 28	-1.05	-0.12	33.44	3.9678	-0.0047	0.3654
247	SLU 29	-1.05	-0.09	33.21	3.9451	-0.0047	0.3659
247	SLU 30	-1.04	-0.12	33.2	3.9437	-0.0047	0.3625
247	SLU 31	-1.06	-0.11	35.5	4.1614	-0.0054	0.37
247	SLU 32	-1.1	-0.06	36.2	4.2312	-0.0055	0.3848
247	SLU 33	-1.09	-0.09	36.19	4.2298	-0.0055	0.3813
247	SLU 34	-1.08	-0.11	35.93	4.2047	-0.0055	0.3761
247	SLU 35	-1.12	-0.06	36.64	4.2744	-0.0055	0.3909
247	SLU 36	-1.11	-0.09	36.62	4.273	-0.0056	0.3874
247	SLU 37	-1.11	-0.06	36.39	4.2503	-0.0055	0.3879
247	SLU 38	-1.1	-0.09	36.38	4.2488	-0.0055	0.3845
247	SLU 39	-1.1	-0.05	36.89	4.2946	-0.0057	0.3852
247	SLU 40	-1.09	-0.08	36.87	4.2932	-0.0058	0.3817
247	SLU 41	-1.12	-0.05	37.32	4.3378	-0.0058	0.3913
247	SLU 42	-1.11	-0.08	37.31	4.3364	-0.0058	0.3878
247	SLU 43	-1.13	-0.2	36.93	4.5211	-0.0052	0.394
247	SLU 44	-1.11	-0.24	36.9	4.5187	-0.0052	0.3882
247	SLU 45	-1.15	-0.2	37.61	4.5885	-0.0053	0.403
247	SLU 46	-1.14	-0.22	37.59	4.587	-0.0053	0.3995
247	SLU 47	-1.13	-0.24	37.34	4.5619	-0.0053	0.3943
247	SLU 48	-1.17	-0.2	38.04	4.6317	-0.0054	0.4091
247	SLU 49	-1.16	-0.23	38.03	4.6303	-0.0054	0.4056
247	SLU 50	-1.16	-0.2	37.8	4.6075	-0.0053	0.4061
247	SLU 51	-1.15	-0.23	37.78	4.6061	-0.0054	0.4027
247	SLU 52	-1.18	-0.22	40.08	4.8238	-0.0061	0.4102
247	SLU 53	-1.22	-0.17	40.79	4.8936	-0.0062	0.425
247	SLU 54	-1.21	-0.2	40.77	4.8922	-0.0062	0.4216
247	SLU 55	-1.19	-0.22	40.52	4.8671	-0.0061	0.4163
247	SLU 56	-1.24	-0.17	41.22	4.9368	-0.0062	0.4311
247	SLU 57	-1.23	-0.2	41.2	4.9354	-0.0062	0.4276
247	SLU 58	-1.23	-0.17	40.97	4.9127	-0.0062	0.4282
247	SLU 59	-1.22	-0.2	40.96	4.9112	-0.0062	0.4247
247	SLU 60	-1.22	-0.16	41.47	4.957	-0.0064	0.4254
247	SLU 61	-1.21	-0.18	41.45	4.9556	-0.0064	0.422
247	SLU 62	-1.24	-0.16	41.9	5.0002	-0.0065	0.4315
247	SLU 63	-1.23	-0.18	41.89	4.9988	-0.0065	0.4281
247	SLU 64	-1.24	-0.15	40.05	4.8225	-0.0056	0.4341
247	SLU 65	-1.23	-0.2	40.02	4.8201	-0.0056	0.4283
247	SLU 66	-1.27	-0.15	40.72	4.8899	-0.0057	0.4431
247	SLU 67	-1.26	-0.18	40.71	4.8884	-0.0057	0.4396
247	SLU 68	-1.24	-0.2	40.45	4.8633	-0.0057	0.4344
247	SLU 69	-1.29	-0.15	41.16	4.9331	-0.0058	0.4492
247	SLU 70	-1.28	-0.18	41.14	4.9317	-0.0058	0.4457
247	SLU 71	-1.28	-0.15	40.91	4.9089	-0.0058	0.4463
247	SLU 72	-1.27	-0.18	40.9	4.9075	-0.0058	0.4428
247	SLU 73	-1.29	-0.17	43.2	5.1253	-0.0065	0.4503
247	SLU 74	-1.33	-0.12	43.9	5.195	-0.0066	0.4651
247	SLU 75	-1.32	-0.15	43.89	5.1936	-0.0066	0.4617
247	SLU 76	-1.31	-0.17	43.63	5.1685	-0.0065	0.4564
247	SLU 77	-1.35	-0.12	44.34	5.2383	-0.0066	0.4712
247	SLU 78	-1.34	-0.15	44.32	5.2368	-0.0066	0.4678
247	SLU 79	-1.34	-0.12	44.09	5.2141	-0.0066	0.4683
247	SLU 80	-1.33	-0.15	44.08	5.2127	-0.0066	0.4648
247	SLU 81	-1.33	-0.11	44.59	5.2584	-0.0068	0.4655
247	SLU 82	-1.32	-0.14	44.57	5.257	-0.0068	0.4621
247	SLU 83	-1.35	-0.11	45.02	5.3016	-0.0069	0.4716
247	SLU 84	-1.34	-0.14	45.01	5.3002	-0.0069	0.4682
247	SLE RA 1	-0.93	-0.12	30.12	3.6434	-0.0042	0.3251
247	SLE RA 2	-0.92	-0.16	30.1	3.6418	-0.0042	0.3212
247	SLE RA 3	-0.95	-0.12	30.57	3.6883	-0.0043	0.3311
247	SLE RA 4	-0.94	-0.14	30.56	3.6873	-0.0043	0.3288
247	SLE RA 5	-0.93	-0.16	30.39	3.6706	-0.0043	0.3253
247	SLE RA 6	-0.96	-0.12	30.86	3.7171	-0.0043	0.3352
247	SLE RA 7	-0.95	-0.14	30.85	3.7162	-0.0043	0.3329
247	SLE RA 8	-0.95	-0.12	30.7	3.701	-0.0043	0.3332
247	SLE RA 9	-0.95	-0.14	30.69	3.7	-0.0043	0.3309
247	SLE RA 10	-0.96	-0.14	32.22	3.8452	-0.0048	0.3359
247	SLE RA 11	-0.99	-0.1	32.69	3.8917	-0.0049	0.3458
247	SLE RA 12	-0.98	-0.12	32.68	3.8908	-0.0049	0.3435
247	SLE RA 13	-0.97	-0.14	32.51	3.874	-0.0049	0.34
247	SLE RA 14	-1	-0.11	32.98	3.9205	-0.0049	0.3498
247	SLE RA 15	-1	-0.12	32.97	3.9196	-0.0049	0.3475
247	SLE RA 16	-1	-0.11	32.82	3.9044	-0.0049	0.3479
247	SLE RA 17	-0.99	-0.12	32.81	3.9035	-0.0049	0.3456
247	SLE RA 18	-0.99	-0.1	33.15	3.934	-0.005	0.346
247	SLE RA 19	-0.98	-0.12	33.14	3.933	-0.005	0.3437
247	SLE RA 20	-1	-0.1	33.44	3.9628	-0.0051	0.3501
247	SLE RA 21	-1	-0.12	33.43	3.9618	-0.0051	0.3478
247	SLE FR 1	-0.93	-0.12	30.12	3.6434	-0.0042	0.3251
247	SLE FR 2	-0.93	-0.13	30.12	3.643	-0.0042	0.3243
247	SLE FR 3	-0.94	-0.12	30.23	3.6549	-0.0043	0.3267
247	SLE FR 4	-0.95	-0.12	31.02	3.7302	-0.0045	0.3306
247	SLE FR 5	-0.95	-0.12	31.14	3.7421	-0.0045	0.333

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
247	SLE FR 6	-0.96	-0.11	31.63	3.7887	-0.0046	0.3356
247	SLE QP 1	-0.93	-0.12	30.12	3.6434	-0.0042	0.3251
247	SLE QP 2	-0.95	-0.12	31.03	3.7305	-0.0045	0.3314
247	SLD 1	2.5	0.2	36.88	4.2318	0.009	-0.8771
247	SLD 2	2.82	-0.09	36.66	4.2155	0.0087	-0.9866
247	SLD 3	2.25	-0.76	36.41	4.0866	0.0098	-0.7886
247	SLD 4	2.56	-1.05	36.2	4.0703	0.0094	-0.8981
247	SLD 5	0.42	1.48	33.53	4.104	-0.0015	-0.1461
247	SLD 6	0.62	1.29	33.38	4.0934	-0.0017	-0.2177
247	SLD 7	-0.43	-1.7	31.98	3.62	0.001	0.149
247	SLD 8	-0.23	-1.89	31.84	3.6094	0.0008	0.0775
247	SLD 9	-1.67	1.66	30.22	3.8517	-0.0097	0.5853
247	SLD 10	-1.47	1.47	30.08	3.8411	-0.01	0.5137
247	SLD 11	-2.52	-1.52	28.67	3.3677	-0.0072	0.8804
247	SLD 12	-2.32	-1.71	28.53	3.3571	-0.0075	0.8089
247	SLD 13	-4.46	0.82	25.86	3.3908	-0.0184	1.5608
247	SLD 14	-4.15	0.52	25.64	3.3745	-0.0187	1.4513
247	SLD 15	-4.72	-0.14	25.39	3.2456	-0.0176	1.6494
247	SLD 16	-4.4	-0.43	25.18	3.2293	-0.018	1.5399
247	SLV 1	7.12	0.58	44.71	4.9041	0.0272	-2.4956
247	SLV 2	7.86	-0.1	44.21	4.8662	0.0263	-2.7507
247	SLV 3	6.53	-1.58	43.64	4.5639	0.0289	-2.2898
247	SLV 4	7.26	-2.26	43.14	4.526	0.0281	-2.5448
247	SLV 5	2.25	3.48	36.84	4.6051	0.0025	-0.7853
247	SLV 6	2.72	3.05	36.52	4.5807	0.002	-0.9492
247	SLV 7	0.27	-3.71	33.28	3.4711	0.0083	-0.099
247	SLV 8	0.74	-4.15	32.96	3.4467	0.0078	-0.263
247	SLV 9	-2.64	3.92	29.1	4.0144	-0.0168	0.9257
247	SLV 10	-2.17	3.48	28.78	3.99	-0.0173	0.7618
247	SLV 11	-4.61	-3.28	25.54	2.8804	-0.0109	1.6119
247	SLV 12	-4.14	-3.72	25.22	2.856	-0.0115	1.448
247	SLV 13	-9.16	2.02	18.91	2.9351	-0.037	3.2075
247	SLV 14	-8.43	1.34	18.41	2.8972	-0.0379	2.9525
247	SLV 15	-9.76	-0.14	17.84	2.5949	-0.0353	3.4134
247	SLV 16	-9.02	-0.81	17.34	2.557	-0.0361	3.1584
247	CRTFP Ux+	0	0	0	0	0	0
247	CRTFP Ux-	0	0	0	0	0	0
247	CRTFP Uy+	0	0	0	0	0	0
247	CRTFP Uy-	0	0	0	0	0	0
248	SLU 1	-0.89	-0.17	29.58	3.9448	-0.0175	0.3121
248	SLU 2	-0.88	-0.21	29.55	3.9419	-0.0174	0.3063
248	SLU 3	-0.92	-0.17	30.26	4.022	-0.0179	0.3211
248	SLU 4	-0.91	-0.19	30.25	4.0203	-0.0179	0.3176
248	SLU 5	-0.9	-0.21	29.99	3.9915	-0.0177	0.3124
248	SLU 6	-0.94	-0.17	30.7	4.0715	-0.0182	0.3271
248	SLU 7	-0.93	-0.2	30.69	4.0699	-0.0182	0.3237
248	SLU 8	-0.93	-0.17	30.45	4.0439	-0.018	0.3242
248	SLU 9	-0.92	-0.2	30.44	4.0422	-0.018	0.3208
248	SLU 10	-0.94	-0.19	32.78	4.2968	-0.0199	0.3283
248	SLU 11	-0.98	-0.14	33.5	4.3768	-0.0204	0.343
248	SLU 12	-0.97	-0.17	33.48	4.3751	-0.0204	0.3395
248	SLU 13	-0.96	-0.19	33.22	4.3464	-0.0202	0.3343
248	SLU 14	-1	-0.14	33.93	4.4264	-0.0207	0.3491
248	SLU 15	-0.99	-0.17	33.92	4.4247	-0.0207	0.3456
248	SLU 16	-0.99	-0.14	33.69	4.3987	-0.0205	0.3461
248	SLU 17	-0.98	-0.17	33.67	4.397	-0.0205	0.3427
248	SLU 18	-0.98	-0.13	34.19	4.4517	-0.021	0.3434
248	SLU 19	-0.97	-0.16	34.18	4.45	-0.021	0.34
248	SLU 20	-1	-0.13	34.63	4.5012	-0.0213	0.3495
248	SLU 21	-0.99	-0.16	34.62	4.4996	-0.0213	0.346
248	SLU 22	-1.01	-0.12	32.73	4.2919	-0.0195	0.3521
248	SLU 23	-0.99	-0.17	32.71	4.2891	-0.0195	0.3463
248	SLU 24	-1.03	-0.12	33.42	4.3691	-0.0199	0.361
248	SLU 25	-1.02	-0.15	33.41	4.3674	-0.0199	0.3576
248	SLU 26	-1.01	-0.17	33.15	4.3387	-0.0197	0.3523
248	SLU 27	-1.05	-0.12	33.86	4.4187	-0.0202	0.3671
248	SLU 28	-1.04	-0.15	33.84	4.417	-0.0202	0.3636
248	SLU 29	-1.04	-0.12	33.61	4.391	-0.0201	0.3642
248	SLU 30	-1.03	-0.15	33.6	4.3893	-0.02	0.3607
248	SLU 31	-1.06	-0.14	35.94	4.6439	-0.022	0.3682
248	SLU 32	-1.1	-0.1	36.65	4.724	-0.0224	0.3829
248	SLU 33	-1.09	-0.12	36.64	4.7223	-0.0224	0.3795
248	SLU 34	-1.07	-0.14	36.38	4.6935	-0.0222	0.3743
248	SLU 35	-1.11	-0.1	37.09	4.7735	-0.0227	0.389
248	SLU 36	-1.1	-0.13	37.08	4.7719	-0.0227	0.3855
248	SLU 37	-1.11	-0.1	36.84	4.7459	-0.0225	0.3861
248	SLU 38	-1.1	-0.13	36.83	4.7442	-0.0225	0.3826
248	SLU 39	-1.1	-0.09	37.35	4.7988	-0.023	0.3834
248	SLU 40	-1.09	-0.11	37.34	4.7971	-0.023	0.3799
248	SLU 41	-1.12	-0.09	37.79	4.8484	-0.0233	0.3894
248	SLU 42	-1.11	-0.11	37.77	4.8467	-0.0233	0.386
248	SLU 43	-1.12	-0.23	37.37	5.0092	-0.022	0.3921
248	SLU 44	-1.11	-0.28	37.34	5.0063	-0.022	0.3863
248	SLU 45	-1.15	-0.23	38.05	5.0864	-0.0224	0.401
248	SLU 46	-1.14	-0.26	38.04	5.0847	-0.0224	0.3976
248	SLU 47	-1.12	-0.28	37.78	5.0559	-0.0223	0.3923
248	SLU 48	-1.17	-0.23	38.49	5.136	-0.0227	0.4071
248	SLU 49	-1.16	-0.26	38.48	5.1343	-0.0227	0.4036
248	SLU 50	-1.16	-0.23	38.24	5.1083	-0.0226	0.4042
248	SLU 51	-1.15	-0.26	38.23	5.1066	-0.0226	0.4007
248	SLU 52	-1.17	-0.25	40.57	5.3612	-0.0245	0.4082
248	SLU 53	-1.21	-0.21	41.29	5.4412	-0.0249	0.4229
248	SLU 54	-1.2	-0.24	41.27	5.4395	-0.0249	0.4195
248	SLU 55	-1.19	-0.26	41.01	5.4108	-0.0248	0.4143
248	SLU 56	-1.23	-0.21	41.72	5.4908	-0.0252	0.429
248	SLU 57	-1.22	-0.24	41.71	5.4891	-0.0252	0.4255
248	SLU 58	-1.22	-0.21	41.48	5.4631	-0.0251	0.4261

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
248	SLU 59	-1.21	-0.24	41.46	5.4615	-0.0251	0.4226
248	SLU 60	-1.21	-0.2	41.98	5.5161	-0.0256	0.4234
248	SLU 61	-1.2	-0.23	41.97	5.5144	-0.0256	0.4199
248	SLU 62	-1.23	-0.2	42.42	5.5656	-0.0259	0.4294
248	SLU 63	-1.22	-0.23	42.41	5.564	-0.0258	0.426
248	SLU 64	-1.24	-0.19	40.52	5.3563	-0.024	0.432
248	SLU 65	-1.22	-0.23	40.5	5.3535	-0.024	0.4262
248	SLU 66	-1.26	-0.19	41.21	5.4335	-0.0245	0.441
248	SLU 67	-1.25	-0.21	41.2	5.4318	-0.0245	0.4375
248	SLU 68	-1.24	-0.23	40.94	5.4031	-0.0243	0.4323
248	SLU 69	-1.28	-0.19	41.65	5.4831	-0.0247	0.447
248	SLU 70	-1.27	-0.22	41.63	5.4814	-0.0247	0.4436
248	SLU 71	-1.27	-0.19	41.4	5.4554	-0.0246	0.4441
248	SLU 72	-1.26	-0.22	41.39	5.4537	-0.0246	0.4407
248	SLU 73	-1.28	-0.21	43.73	5.7083	-0.0265	0.4481
248	SLU 74	-1.33	-0.16	44.44	5.7884	-0.027	0.4629
248	SLU 75	-1.32	-0.19	44.43	5.7867	-0.0269	0.4594
248	SLU 76	-1.3	-0.21	44.17	5.7579	-0.0268	0.4542
248	SLU 77	-1.34	-0.16	44.88	5.8379	-0.0272	0.4689
248	SLU 78	-1.33	-0.19	44.87	5.8363	-0.0272	0.4655
248	SLU 79	-1.34	-0.16	44.63	5.8103	-0.0271	0.466
248	SLU 80	-1.33	-0.19	44.62	5.8086	-0.0271	0.4626
248	SLU 81	-1.33	-0.15	45.14	5.8632	-0.0276	0.4633
248	SLU 82	-1.32	-0.18	45.13	5.8615	-0.0276	0.4598
248	SLU 83	-1.35	-0.15	45.58	5.9128	-0.0279	0.4694
248	SLU 84	-1.34	-0.18	45.56	5.9111	-0.0279	0.4659
248	SLE RA 1	-0.93	-0.15	30.48	4.0439	-0.018	0.3235
248	SLE RA 2	-0.92	-0.18	30.46	4.0421	-0.018	0.3197
248	SLE RA 3	-0.94	-0.15	30.94	4.0954	-0.0183	0.3295
248	SLE RA 4	-0.94	-0.17	30.93	4.0943	-0.0183	0.3272
248	SLE RA 5	-0.93	-0.18	30.75	4.0751	-0.0182	0.3237
248	SLE RA 6	-0.96	-0.15	31.23	4.1285	-0.0185	0.3335
248	SLE RA 7	-0.95	-0.17	31.22	4.1273	-0.0185	0.3312
248	SLE RA 8	-0.95	-0.15	31.06	4.11	-0.0184	0.3316
248	SLE RA 9	-0.94	-0.17	31.05	4.1089	-0.0184	0.3293
248	SLE RA 10	-0.96	-0.17	32.62	4.2786	-0.0197	0.3343
248	SLE RA 11	-0.99	-0.14	33.09	4.332	-0.02	0.3441
248	SLE RA 12	-0.98	-0.16	33.08	4.3309	-0.02	0.3418
248	SLE RA 13	-0.97	-0.17	32.91	4.3117	-0.0199	0.3383
248	SLE RA 14	-1	-0.14	33.38	4.365	-0.0202	0.3482
248	SLE RA 15	-0.99	-0.16	33.37	4.3639	-0.0202	0.3458
248	SLE RA 16	-0.99	-0.14	33.22	4.3466	-0.0201	0.3462
248	SLE RA 17	-0.99	-0.16	33.21	4.3455	-0.0201	0.3439
248	SLE RA 18	-0.99	-0.13	33.56	4.3819	-0.0204	0.3444
248	SLE RA 19	-0.98	-0.15	33.55	4.3808	-0.0204	0.3421
248	SLE RA 20	-1	-0.13	33.85	4.4149	-0.0206	0.3484
248	SLE RA 21	-0.99	-0.15	33.84	4.4138	-0.0206	0.3461
248	SLE FR 1	-0.93	-0.15	30.48	4.0439	-0.018	0.3235
248	SLE FR 2	-0.93	-0.16	30.47	4.0436	-0.018	0.3228
248	SLE FR 3	-0.93	-0.15	30.59	4.0572	-0.0181	0.3251
248	SLE FR 4	-0.94	-0.15	31.4	4.1449	-0.0187	0.329
248	SLE FR 5	-0.95	-0.15	31.52	4.1585	-0.0188	0.3314
248	SLE FR 6	-0.96	-0.14	32.02	4.2129	-0.0192	0.334
248	SLE QP 1	-0.93	-0.15	30.48	4.0439	-0.018	0.3235
248	SLE QP 2	-0.95	-0.15	31.4	4.1453	-0.0187	0.3298
248	SLD 1	2.51	0.13	36.85	4.6101	-0.0083	-0.8802
248	SLD 2	2.82	-0.14	36.65	4.5931	-0.0085	-0.9898
248	SLD 3	2.26	-0.8	36.4	4.4678	-0.0075	-0.7917
248	SLD 4	2.57	-1.07	36.19	4.4507	-0.0077	-0.9013
248	SLD 5	0.42	1.39	33.77	4.5037	-0.0168	-0.1481
248	SLD 6	0.63	1.22	33.63	4.4926	-0.017	-0.2197
248	SLD 7	-0.43	-1.7	32.24	4.0291	-0.0141	0.1469
248	SLD 8	-0.22	-1.88	32.11	4.018	-0.0142	0.0753
248	SLD 9	-1.67	1.59	30.69	4.2726	-0.0233	0.5842
248	SLD 10	-1.47	1.41	30.56	4.2615	-0.0234	0.5126
248	SLD 11	-2.52	-1.51	29.17	3.7981	-0.0205	0.8793
248	SLD 12	-2.31	-1.69	29.04	3.787	-0.0206	0.8077
248	SLD 13	-4.46	0.78	26.61	3.8399	-0.0298	1.5609
248	SLD 14	-4.15	0.5	26.4	3.8229	-0.03	1.4513
248	SLD 15	-4.71	-0.15	26.15	3.6975	-0.0289	1.6494
248	SLD 16	-4.4	-0.43	25.95	3.6805	-0.0292	1.5398
248	SLV 1	7.14	0.47	44.15	5.2334	0.0057	-2.5007
248	SLV 2	7.87	-0.17	43.68	5.1938	0.0052	-2.7559
248	SLV 3	6.55	-1.63	43.11	4.9001	0.0076	-2.295
248	SLV 4	7.28	-2.27	42.63	4.8605	0.0071	-2.5502
248	SLV 5	2.25	3.34	36.9	4.984	-0.0143	-0.7877
248	SLV 6	2.72	2.92	36.59	4.9585	-0.0146	-0.9517
248	SLV 7	0.28	-3.67	33.4	3.8731	-0.0078	-0.1018
248	SLV 8	0.75	-4.08	33.1	3.8476	-0.0081	-0.2658
248	SLV 9	-2.64	3.79	29.71	4.443	-0.0293	0.9254
248	SLV 10	-2.17	3.38	29.4	4.4176	-0.0297	0.7614
248	SLV 11	-4.61	-3.22	26.21	3.3321	-0.0229	1.6113
248	SLV 12	-4.14	-3.63	25.9	3.3066	-0.0232	1.4473
248	SLV 13	-9.17	1.98	20.17	3.4301	-0.0446	3.2097
248	SLV 14	-8.44	1.34	19.7	3.3905	-0.0451	2.9546
248	SLV 15	-9.76	-0.13	19.13	3.0969	-0.0426	3.4155
248	SLV 16	-9.03	-0.76	18.65	3.0572	-0.0432	3.1603
248	CRTFP Ux+	0	0	0	0	0	0
248	CRTFP Ux-	0	0	0	0	0	0
248	CRTFP Uy+	0	0	0	0	0	0
248	CRTFP Uy-	0	0	0	0	0	0
249	SLU 1	-0.89	-0.2	30.33	4.6354	-0.0296	0.3102
249	SLU 2	-0.87	-0.25	30.3	4.6319	-0.0296	0.3044
249	SLU 3	-0.92	-0.2	31.04	4.7302	-0.0303	0.3191
249	SLU 4	-0.91	-0.23	31.02	4.7281	-0.0303	0.3156
249	SLU 5	-0.89	-0.25	30.76	4.6927	-0.03	0.3104
249	SLU 6	-0.93	-0.2	31.49	4.7911	-0.0308	0.3251

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
249	SLU 7	-0.92	-0.23	31.47	4.7889	-0.0308	0.3216
249	SLU 8	-0.92	-0.21	31.23	4.7571	-0.0306	0.3223
249	SLU 9	-0.91	-0.23	31.22	4.755	-0.0306	0.3188
249	SLU 10	-0.94	-0.23	33.64	5.0738	-0.0336	0.3262
249	SLU 11	-0.98	-0.18	34.37	5.1721	-0.0343	0.3409
249	SLU 12	-0.97	-0.21	34.36	5.17	-0.0343	0.3374
249	SLU 13	-0.95	-0.23	34.09	5.1346	-0.034	0.3322
249	SLU 14	-1	-0.19	34.82	5.2329	-0.0348	0.3469
249	SLU 15	-0.99	-0.21	34.81	5.2308	-0.0348	0.3434
249	SLU 16	-0.99	-0.19	34.57	5.199	-0.0346	0.344
249	SLU 17	-0.98	-0.21	34.55	5.1969	-0.0345	0.3405
249	SLU 18	-0.98	-0.18	35.1	5.2667	-0.0353	0.3413
249	SLU 19	-0.97	-0.2	35.08	5.2646	-0.0353	0.3378
249	SLU 20	-1	-0.18	35.55	5.3275	-0.0358	0.3473
249	SLU 21	-0.99	-0.2	35.53	5.3254	-0.0358	0.3438
249	SLU 22	-1	-0.16	33.57	5.0644	-0.0331	0.3499
249	SLU 23	-0.99	-0.2	33.55	5.0609	-0.033	0.3441
249	SLU 24	-1.03	-0.16	34.28	5.1592	-0.0338	0.3588
249	SLU 25	-1.02	-0.19	34.27	5.1571	-0.0338	0.3553
249	SLU 26	-1	-0.2	34	5.1217	-0.0335	0.3501
249	SLU 27	-1.05	-0.16	34.73	5.22	-0.0343	0.3648
249	SLU 28	-1.04	-0.19	34.72	5.2179	-0.0343	0.3614
249	SLU 29	-1.04	-0.16	34.48	5.1861	-0.034	0.362
249	SLU 30	-1.03	-0.19	34.46	5.1839	-0.034	0.3585
249	SLU 31	-1.05	-0.18	36.89	5.5028	-0.037	0.3659
249	SLU 32	-1.09	-0.14	37.62	5.6011	-0.0378	0.3806
249	SLU 33	-1.08	-0.17	37.6	5.599	-0.0378	0.3771
249	SLU 34	-1.07	-0.19	37.34	5.5636	-0.0375	0.3719
249	SLU 35	-1.11	-0.14	38.07	5.6619	-0.0383	0.3866
249	SLU 36	-1.1	-0.17	38.05	5.6598	-0.0383	0.3831
249	SLU 37	-1.1	-0.14	37.81	5.6279	-0.038	0.3837
249	SLU 38	-1.09	-0.17	37.8	5.6258	-0.038	0.3803
249	SLU 39	-1.09	-0.13	38.34	5.6957	-0.0388	0.381
249	SLU 40	-1.08	-0.16	38.33	5.6935	-0.0387	0.3775
249	SLU 41	-1.11	-0.13	38.79	5.7565	-0.0392	0.387
249	SLU 42	-1.1	-0.16	38.78	5.7544	-0.0392	0.3836
249	SLU 43	-1.12	-0.28	38.32	5.879	-0.0373	0.3897
249	SLU 44	-1.1	-0.32	38.29	5.8754	-0.0373	0.3839
249	SLU 45	-1.14	-0.28	39.02	5.9738	-0.038	0.3985
249	SLU 46	-1.13	-0.31	39.01	5.9717	-0.038	0.3951
249	SLU 47	-1.12	-0.32	38.74	5.9363	-0.0377	0.3899
249	SLU 48	-1.16	-0.28	39.47	6.0346	-0.0385	0.4046
249	SLU 49	-1.15	-0.31	39.46	6.0325	-0.0385	0.4011
249	SLU 50	-1.15	-0.28	39.22	6.0006	-0.0383	0.4017
249	SLU 51	-1.14	-0.31	39.2	5.9985	-0.0382	0.3982
249	SLU 52	-1.16	-0.3	41.63	6.3173	-0.0412	0.4056
249	SLU 53	-1.21	-0.26	42.36	6.4156	-0.042	0.4203
249	SLU 54	-1.2	-0.29	42.34	6.4135	-0.042	0.4168
249	SLU 55	-1.18	-0.31	42.08	6.3782	-0.0417	0.4116
249	SLU 56	-1.22	-0.26	42.81	6.4765	-0.0425	0.4263
249	SLU 57	-1.21	-0.29	42.8	6.4744	-0.0425	0.4228
249	SLU 58	-1.22	-0.26	42.56	6.4425	-0.0423	0.4235
249	SLU 59	-1.21	-0.29	42.54	6.4404	-0.0422	0.42
249	SLU 60	-1.21	-0.25	43.08	6.5102	-0.043	0.4207
249	SLU 61	-1.2	-0.28	43.07	6.5081	-0.043	0.4173
249	SLU 62	-1.22	-0.25	43.53	6.5711	-0.0435	0.4268
249	SLU 63	-1.21	-0.28	43.52	6.569	-0.0435	0.4233
249	SLU 64	-1.23	-0.23	41.56	6.3079	-0.0407	0.4294
249	SLU 65	-1.21	-0.28	41.54	6.3044	-0.0407	0.4236
249	SLU 66	-1.26	-0.24	42.27	6.4027	-0.0415	0.4383
249	SLU 67	-1.25	-0.26	42.25	6.4006	-0.0415	0.4348
249	SLU 68	-1.23	-0.28	41.99	6.3653	-0.0412	0.4296
249	SLU 69	-1.27	-0.24	42.72	6.4636	-0.042	0.4443
249	SLU 70	-1.26	-0.26	42.7	6.4615	-0.042	0.4408
249	SLU 71	-1.27	-0.24	42.47	6.4296	-0.0417	0.4414
249	SLU 72	-1.26	-0.26	42.45	6.4275	-0.0417	0.4379
249	SLU 73	-1.28	-0.26	44.87	6.7463	-0.0447	0.4453
249	SLU 74	-1.32	-0.22	45.6	6.8446	-0.0455	0.46
249	SLU 75	-1.31	-0.24	45.59	6.8425	-0.0455	0.4565
249	SLU 76	-1.29	-0.26	45.32	6.8071	-0.0452	0.4514
249	SLU 77	-1.34	-0.22	46.06	6.9055	-0.046	0.466
249	SLU 78	-1.33	-0.24	46.04	6.9034	-0.046	0.4626
249	SLU 79	-1.33	-0.22	45.8	6.8715	-0.0457	0.4632
249	SLU 80	-1.32	-0.24	45.79	6.8694	-0.0457	0.4597
249	SLU 81	-1.32	-0.21	46.33	6.9392	-0.0464	0.4605
249	SLU 82	-1.31	-0.23	46.31	6.9371	-0.0464	0.457
249	SLU 83	-1.34	-0.21	46.78	7	-0.0469	0.4665
249	SLU 84	-1.33	-0.24	46.76	6.9979	-0.0469	0.463
249	SLE RA 1	-0.92	-0.19	31.26	4.758	-0.0306	0.3216
249	SLE RA 2	-0.91	-0.22	31.24	4.7556	-0.0306	0.3177
249	SLE RA 3	-0.94	-0.19	31.73	4.8212	-0.0311	0.3275
249	SLE RA 4	-0.93	-0.21	31.72	4.8198	-0.0311	0.3252
249	SLE RA 5	-0.92	-0.22	31.54	4.7962	-0.0309	0.3217
249	SLE RA 6	-0.95	-0.19	32.03	4.8617	-0.0314	0.3315
249	SLE RA 7	-0.94	-0.21	32.02	4.8603	-0.0314	0.3292
249	SLE RA 8	-0.95	-0.19	31.86	4.8391	-0.0312	0.3296
249	SLE RA 9	-0.94	-0.21	31.85	4.8377	-0.0312	0.3273
249	SLE RA 10	-0.95	-0.21	33.46	5.0502	-0.0332	0.3322
249	SLE RA 11	-0.98	-0.18	33.95	5.1158	-0.0337	0.342
249	SLE RA 12	-0.97	-0.2	33.94	5.1144	-0.0337	0.3397
249	SLE RA 13	-0.96	-0.21	33.77	5.0908	-0.0335	0.3362
249	SLE RA 14	-0.99	-0.18	34.25	5.1563	-0.0341	0.346
249	SLE RA 15	-0.99	-0.2	34.24	5.1549	-0.0341	0.3437
249	SLE RA 16	-0.99	-0.18	34.08	5.1337	-0.0339	0.3441
249	SLE RA 17	-0.98	-0.2	34.07	5.1323	-0.0339	0.3418
249	SLE RA 18	-0.98	-0.17	34.43	5.1788	-0.0344	0.3423
249	SLE RA 19	-0.98	-0.19	34.42	5.1774	-0.0344	0.34

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
249	SLE RA 20	-0.99	-0.17	34.74	5.2194	-0.0347	0.3463
249	SLE RA 21	-0.99	-0.19	34.73	5.218	-0.0347	0.344
249	SLE FR 1	-0.92	-0.19	31.26	4.758	-0.0306	0.3216
249	SLE FR 2	-0.92	-0.2	31.25	4.7575	-0.0306	0.3208
249	SLE FR 3	-0.93	-0.19	31.38	4.7742	-0.0307	0.3232
249	SLE FR 4	-0.94	-0.19	32.21	4.8838	-0.0317	0.327
249	SLE FR 5	-0.94	-0.19	32.33	4.9004	-0.0319	0.3294
249	SLE FR 6	-0.95	-0.18	32.85	4.9684	-0.0325	0.3319
249	SLE QP 1	-0.92	-0.19	31.26	4.758	-0.0306	0.3216
249	SLE QP 2	-0.94	-0.18	32.21	4.8842	-0.0317	0.3278
249	SLD 1	2.52	0.07	37.36	5.374	-0.0239	-0.8835
249	SLD 2	2.83	-0.19	37.16	5.3543	-0.0241	-0.9931
249	SLD 3	2.27	-0.85	36.9	5.2369	-0.0229	-0.7951
249	SLD 4	2.58	-1.11	36.7	5.2172	-0.023	-0.9047
249	SLD 5	0.43	1.33	34.49	5.2426	-0.031	-0.1503
249	SLD 6	0.63	1.16	34.36	5.2297	-0.031	-0.2219
249	SLD 7	-0.42	-1.73	32.95	4.7855	-0.0274	0.1444
249	SLD 8	-0.21	-1.9	32.82	4.7726	-0.0275	0.0728
249	SLD 9	-1.67	1.53	31.6	4.9958	-0.0359	0.5828
249	SLD 10	-1.46	1.36	31.47	4.9829	-0.036	0.5112
249	SLD 11	-2.51	-1.53	30.06	4.5387	-0.0324	0.8775
249	SLD 12	-2.31	-1.7	29.93	4.5258	-0.0325	0.8059
249	SLD 13	-4.46	0.74	27.72	4.5513	-0.0405	1.5602
249	SLD 14	-4.15	0.48	27.52	4.5315	-0.0406	1.4506
249	SLD 15	-4.71	-0.17	27.26	4.4142	-0.0394	1.6486
249	SLD 16	-4.4	-0.44	27.06	4.3944	-0.0395	1.539
249	SLV 1	7.15	0.37	44.26	6.0304	-0.0135	-2.5057
249	SLV 2	7.88	-0.24	43.79	5.9844	-0.0137	-2.7609
249	SLV 3	6.56	-1.71	43.2	5.7102	-0.011	-2.3002
249	SLV 4	7.29	-2.32	42.74	5.6642	-0.0113	-2.5554
249	SLV 5	2.25	3.24	37.5	5.7216	-0.0299	-0.7903
249	SLV 6	2.72	2.84	37.2	5.692	-0.0301	-0.9543
249	SLV 7	0.29	-3.69	33.99	4.6543	-0.0218	-0.1051
249	SLV 8	0.76	-4.08	33.69	4.6247	-0.0219	-0.2691
249	SLV 9	-2.64	3.71	30.73	5.1437	-0.0415	0.9247
249	SLV 10	-2.17	3.32	30.43	5.1142	-0.0417	0.7607
249	SLV 11	-4.6	-3.21	27.22	4.0765	-0.0334	1.6099
249	SLV 12	-4.13	-3.6	26.92	4.0469	-0.0335	1.4459
249	SLV 13	-9.17	1.95	21.69	4.1043	-0.0521	3.2109
249	SLV 14	-8.44	1.34	21.22	4.0583	-0.0524	2.9557
249	SLV 15	-9.76	-0.13	20.63	3.7841	-0.0497	3.4165
249	SLV 16	-9.03	-0.74	20.16	3.7381	-0.05	3.1613
249	CRTFP Ux+	0	0	0	0	0	0
249	CRTFP Ux-	0	0	0	0	0	0
249	CRTFP Uy+	0	0	0	0	0	0
249	CRTFP Uy-	0	0	0	0	0	0
250	SLU 1	-0.88	-0.25	31.45	5.6056	-0.04	0.3079
250	SLU 2	-0.87	-0.29	31.42	5.6012	-0.04	0.3021
250	SLU 3	-0.91	-0.25	32.18	5.7251	-0.0411	0.3167
250	SLU 4	-0.9	-0.28	32.17	5.7225	-0.041	0.3132
250	SLU 5	-0.89	-0.3	31.89	5.6778	-0.0407	0.3081
250	SLU 6	-0.93	-0.25	32.65	5.8018	-0.0417	0.3227
250	SLU 7	-0.92	-0.28	32.64	5.7991	-0.0417	0.3192
250	SLU 8	-0.92	-0.25	32.39	5.7589	-0.0414	0.3199
250	SLU 9	-0.91	-0.28	32.37	5.7562	-0.0413	0.3164
250	SLU 10	-0.93	-0.28	34.9	6.1648	-0.0453	0.3237
250	SLU 11	-0.97	-0.24	35.67	6.2887	-0.0464	0.3383
250	SLU 12	-0.96	-0.26	35.65	6.2861	-0.0463	0.3348
250	SLU 13	-0.95	-0.28	35.37	6.2414	-0.0459	0.3297
250	SLU 14	-0.99	-0.24	36.14	6.3653	-0.047	0.3443
250	SLU 15	-0.98	-0.26	36.12	6.3627	-0.047	0.3408
250	SLU 16	-0.98	-0.24	35.87	6.3225	-0.0466	0.3414
250	SLU 17	-0.97	-0.27	35.86	6.3198	-0.0466	0.338
250	SLU 18	-0.97	-0.23	36.42	6.4107	-0.0476	0.3387
250	SLU 19	-0.96	-0.26	36.41	6.4081	-0.0476	0.3352
250	SLU 20	-0.99	-0.23	36.9	6.4874	-0.0483	0.3447
250	SLU 21	-0.98	-0.26	36.88	6.4847	-0.0482	0.3412
250	SLU 22	-1	-0.21	34.82	6.1497	-0.0447	0.3473
250	SLU 23	-0.98	-0.25	34.8	6.1453	-0.0447	0.3415
250	SLU 24	-1.02	-0.21	35.56	6.2692	-0.0458	0.3561
250	SLU 25	-1.01	-0.24	35.54	6.2666	-0.0457	0.3526
250	SLU 26	-1	-0.25	35.27	6.2219	-0.0454	0.3475
250	SLU 27	-1.04	-0.21	36.03	6.3459	-0.0464	0.3621
250	SLU 28	-1.03	-0.24	36.01	6.3432	-0.0464	0.3586
250	SLU 29	-1.03	-0.21	35.76	6.303	-0.0461	0.3593
250	SLU 30	-1.02	-0.24	35.75	6.3003	-0.046	0.3558
250	SLU 31	-1.04	-0.24	38.28	6.7089	-0.05	0.3631
250	SLU 32	-1.08	-0.2	39.04	6.8328	-0.0511	0.3777
250	SLU 33	-1.07	-0.22	39.03	6.8302	-0.051	0.3742
250	SLU 34	-1.06	-0.24	38.75	6.7855	-0.0506	0.3691
250	SLU 35	-1.1	-0.2	39.51	6.9095	-0.0517	0.3837
250	SLU 36	-1.09	-0.22	39.5	6.9068	-0.0517	0.3802
250	SLU 37	-1.09	-0.2	39.25	6.8666	-0.0513	0.3809
250	SLU 38	-1.08	-0.22	39.23	6.8639	-0.0513	0.3774
250	SLU 39	-1.09	-0.19	39.8	6.9548	-0.0523	0.3782
250	SLU 40	-1.08	-0.21	39.78	6.9522	-0.0523	0.3747
250	SLU 41	-1.1	-0.19	40.27	7.0315	-0.053	0.3841
250	SLU 42	-1.09	-0.22	40.25	7.0288	-0.0529	0.3807
250	SLU 43	-1.11	-0.34	39.72	7.1007	-0.0504	0.3868
250	SLU 44	-1.09	-0.38	39.7	7.0963	-0.0504	0.3809
250	SLU 45	-1.14	-0.34	40.46	7.2203	-0.0515	0.3955
250	SLU 46	-1.13	-0.37	40.44	7.2176	-0.0514	0.3921
250	SLU 47	-1.11	-0.38	40.17	7.173	-0.0511	0.3869
250	SLU 48	-1.15	-0.34	40.93	7.2969	-0.0521	0.4015
250	SLU 49	-1.14	-0.37	40.91	7.2942	-0.0521	0.398
250	SLU 50	-1.15	-0.34	40.66	7.254	-0.0518	0.3987
250	SLU 51	-1.14	-0.37	40.65	7.2514	-0.0517	0.3952

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
250	SLU 52	-1.16	-0.37	43.18	7.6599	-0.0557	0.4025
250	SLU 53	-1.2	-0.33	43.94	7.7838	-0.0568	0.4171
250	SLU 54	-1.19	-0.35	43.93	7.7812	-0.0567	0.4136
250	SLU 55	-1.17	-0.37	43.65	7.7365	-0.0563	0.4085
250	SLU 56	-1.22	-0.33	44.41	7.8605	-0.0574	0.4231
250	SLU 57	-1.21	-0.35	44.4	7.8578	-0.0574	0.4196
250	SLU 58	-1.21	-0.33	44.15	7.8176	-0.057	0.4203
250	SLU 59	-1.2	-0.35	44.13	7.8149	-0.057	0.4168
250	SLU 60	-1.2	-0.32	44.7	7.9059	-0.058	0.4176
250	SLU 61	-1.19	-0.34	44.69	7.9032	-0.058	0.4141
250	SLU 62	-1.22	-0.32	45.17	7.9825	-0.0587	0.4236
250	SLU 63	-1.21	-0.35	45.16	7.9799	-0.0586	0.4201
250	SLU 64	-1.22	-0.3	43.1	7.6448	-0.0551	0.4262
250	SLU 65	-1.21	-0.34	43.07	7.6404	-0.0551	0.4204
250	SLU 66	-1.25	-0.3	43.83	7.7644	-0.0562	0.435
250	SLU 67	-1.24	-0.32	43.82	7.7617	-0.0561	0.4315
250	SLU 68	-1.22	-0.34	43.54	7.7171	-0.0558	0.4263
250	SLU 69	-1.27	-0.3	44.3	7.841	-0.0568	0.441
250	SLU 70	-1.26	-0.33	44.29	7.8383	-0.0568	0.4375
250	SLU 71	-1.26	-0.3	44.04	7.7981	-0.0565	0.4381
250	SLU 72	-1.25	-0.33	44.02	7.7955	-0.0564	0.4346
250	SLU 73	-1.27	-0.33	46.56	8.204	-0.0604	0.442
250	SLU 74	-1.31	-0.28	47.32	8.3279	-0.0615	0.4566
250	SLU 75	-1.3	-0.31	47.3	8.3253	-0.0614	0.4531
250	SLU 76	-1.29	-0.33	47.03	8.2806	-0.061	0.4479
250	SLU 77	-1.33	-0.29	47.79	8.4046	-0.0621	0.4625
250	SLU 78	-1.32	-0.31	47.77	8.4019	-0.0621	0.459
250	SLU 79	-1.32	-0.29	47.52	8.3617	-0.0617	0.4597
250	SLU 80	-1.31	-0.31	47.51	8.3591	-0.0617	0.4562
250	SLU 81	-1.31	-0.28	48.08	8.45	-0.0627	0.457
250	SLU 82	-1.3	-0.3	48.06	8.4473	-0.0627	0.4535
250	SLU 83	-1.33	-0.28	48.55	8.5266	-0.0634	0.463
250	SLU 84	-1.32	-0.31	48.53	8.524	-0.0633	0.4595
250	SLE RA 1	-0.92	-0.24	32.41	5.7611	-0.0414	0.3192
250	SLE RA 2	-0.91	-0.27	32.39	5.7581	-0.0414	0.3153
250	SLE RA 3	-0.93	-0.24	32.9	5.8407	-0.0421	0.325
250	SLE RA 4	-0.93	-0.26	32.89	5.839	-0.042	0.3227
250	SLE RA 5	-0.92	-0.27	32.71	5.8092	-0.0418	0.3193
250	SLE RA 6	-0.95	-0.24	33.21	5.8918	-0.0425	0.329
250	SLE RA 7	-0.94	-0.26	33.2	5.8901	-0.0425	0.3267
250	SLE RA 8	-0.94	-0.24	33.04	5.8632	-0.0423	0.3271
250	SLE RA 9	-0.93	-0.26	33.03	5.8615	-0.0422	0.3248
250	SLE RA 10	-0.95	-0.26	34.72	6.1338	-0.0449	0.3297
250	SLE RA 11	-0.98	-0.23	35.22	6.2165	-0.0456	0.3394
250	SLE RA 12	-0.97	-0.25	35.21	6.2147	-0.0456	0.3371
250	SLE RA 13	-0.96	-0.26	35.03	6.1849	-0.0453	0.3337
250	SLE RA 14	-0.99	-0.23	35.54	6.2676	-0.046	0.3434
250	SLE RA 15	-0.98	-0.25	35.53	6.2658	-0.046	0.3411
250	SLE RA 16	-0.98	-0.23	35.36	6.239	-0.0458	0.3415
250	SLE RA 17	-0.97	-0.25	35.35	6.2372	-0.0458	0.3392
250	SLE RA 18	-0.98	-0.22	35.73	6.2978	-0.0464	0.3397
250	SLE RA 19	-0.97	-0.24	35.72	6.296	-0.0464	0.3374
250	SLE RA 20	-0.99	-0.23	36.04	6.3489	-0.0469	0.3437
250	SLE RA 21	-0.98	-0.24	36.03	6.3471	-0.0468	0.3414
250	SLE FR 1	-0.92	-0.24	32.41	5.7611	-0.0414	0.3192
250	SLE FR 2	-0.91	-0.24	32.41	5.7605	-0.0414	0.3184
250	SLE FR 3	-0.92	-0.24	32.54	5.7815	-0.0416	0.3208
250	SLE FR 4	-0.93	-0.24	33.4	5.9215	-0.0429	0.3246
250	SLE FR 5	-0.94	-0.23	33.53	5.9425	-0.0431	0.3269
250	SLE FR 6	-0.95	-0.23	34.07	6.0294	-0.0439	0.3294
250	SLE QP 1	-0.92	-0.24	32.41	5.7611	-0.0414	0.3192
250	SLE QP 2	-0.93	-0.23	33.41	5.9221	-0.0429	0.3253
250	SLD 1	2.53	-0.01	38.34	6.4901	-0.0372	-0.8869
250	SLD 2	2.84	-0.26	38.14	6.466	-0.0373	-0.9965
250	SLD 3	2.27	-0.93	37.86	6.3578	-0.036	-0.7987
250	SLD 4	2.59	-1.18	37.66	6.3337	-0.036	-0.9082
250	SLD 5	0.43	1.27	35.64	6.2974	-0.0431	-0.1529
250	SLD 6	0.64	1.11	35.51	6.2817	-0.0431	-0.2244
250	SLD 7	-0.41	-1.79	34.06	5.8564	-0.0389	0.1414
250	SLD 8	-0.2	-1.96	33.93	5.8406	-0.0389	0.0698
250	SLD 9	-1.67	1.49	32.88	6.0036	-0.0469	0.5809
250	SLD 10	-1.46	1.32	32.75	5.9878	-0.0469	0.5093
250	SLD 11	-2.5	-1.58	31.3	5.5625	-0.0427	0.8751
250	SLD 12	-2.3	-1.74	31.17	5.5467	-0.0427	0.8035
250	SLD 13	-4.46	0.71	29.15	5.5105	-0.0498	1.5589
250	SLD 14	-4.14	0.46	28.95	5.4864	-0.0498	1.4494
250	SLD 15	-4.71	-0.21	28.68	5.3782	-0.0485	1.6471
250	SLD 16	-4.4	-0.46	28.48	5.3541	-0.0485	1.5376
250	SLV 1	7.16	0.26	44.93	7.2503	-0.0296	-2.5106
250	SLV 2	7.89	-0.32	44.47	7.1941	-0.0297	-2.7656
250	SLV 3	6.58	-1.82	43.84	6.9429	-0.0267	-2.3054
250	SLV 4	7.31	-2.4	43.38	6.8868	-0.0268	-2.5604
250	SLV 5	2.26	3.17	38.59	6.7963	-0.0433	-0.793
250	SLV 6	2.73	2.8	38.29	6.7602	-0.0433	-0.9569
250	SLV 7	0.31	-3.77	34.97	5.7718	-0.0336	-0.1089
250	SLV 8	0.78	-4.14	34.68	5.7358	-0.0337	-0.2729
250	SLV 9	-2.64	3.67	32.14	6.1084	-0.0521	0.9235
250	SLV 10	-2.17	3.3	31.84	6.0723	-0.0522	0.7596
250	SLV 11	-4.6	-3.26	28.52	5.084	-0.0424	1.6076
250	SLV 12	-4.13	-3.64	28.23	5.0479	-0.0425	1.4436
250	SLV 13	-9.18	1.94	23.43	4.9574	-0.059	3.2111
250	SLV 14	-8.45	1.35	22.97	4.9013	-0.0591	2.956
250	SLV 15	-9.76	-0.15	22.35	4.65	-0.0561	3.4163
250	SLV 16	-9.03	-0.73	21.88	4.5939	-0.0561	3.1612
250	CRTFP Ux+	0	0	0	0	0	0
250	CRTFP Ux-	0	0	0	0	0	0
250	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
250	CRTFP Uy-	0	0	0	0	0	0
251	SLU 1	-0.88	-0.31	32.86	6.8192	-0.0479	0.3052
251	SLU 2	-0.86	-0.36	32.83	6.8138	-0.0478	0.2993
251	SLU 3	-0.9	-0.31	33.63	6.9696	-0.0491	0.3139
251	SLU 4	-0.89	-0.34	33.61	6.9664	-0.0491	0.3104
251	SLU 5	-0.88	-0.36	33.32	6.9101	-0.0486	0.3053
251	SLU 6	-0.92	-0.32	34.12	7.066	-0.0499	0.3198
251	SLU 7	-0.91	-0.34	34.11	7.0628	-0.0498	0.3163
251	SLU 8	-0.91	-0.32	33.84	7.012	-0.0494	0.317
251	SLU 9	-0.9	-0.34	33.83	7.0087	-0.0494	0.3135
251	SLU 10	-0.92	-0.35	36.5	7.5294	-0.0541	0.3207
251	SLU 11	-0.96	-0.31	37.3	7.6853	-0.0554	0.3352
251	SLU 12	-0.95	-0.33	37.28	7.682	-0.0553	0.3317
251	SLU 13	-0.94	-0.35	36.99	7.6258	-0.0549	0.3266
251	SLU 14	-0.98	-0.31	37.79	7.7816	-0.0561	0.3411
251	SLU 15	-0.97	-0.33	37.78	7.7784	-0.0561	0.3376
251	SLU 16	-0.97	-0.31	37.51	7.7276	-0.0557	0.3384
251	SLU 17	-0.96	-0.34	37.5	7.7243	-0.0557	0.3349
251	SLU 18	-0.97	-0.3	38.1	7.8415	-0.0568	0.3357
251	SLU 19	-0.96	-0.33	38.08	7.8383	-0.0568	0.3322
251	SLU 20	-0.98	-0.3	38.59	7.9379	-0.0576	0.3416
251	SLU 21	-0.97	-0.33	38.58	7.9346	-0.0576	0.3381
251	SLU 22	-0.99	-0.28	36.4	7.5074	-0.0535	0.3442
251	SLU 23	-0.97	-0.32	36.37	7.502	-0.0534	0.3384
251	SLU 24	-1.02	-0.28	37.17	7.6578	-0.0547	0.3529
251	SLU 25	-1.01	-0.3	37.15	7.6546	-0.0547	0.3494
251	SLU 26	-0.99	-0.32	36.86	7.5983	-0.0542	0.3443
251	SLU 27	-1.03	-0.28	37.66	7.7542	-0.0555	0.3588
251	SLU 28	-1.02	-0.31	37.65	7.7509	-0.0555	0.3554
251	SLU 29	-1.02	-0.28	37.39	7.7001	-0.0551	0.3561
251	SLU 30	-1.01	-0.31	37.37	7.6969	-0.055	0.3526
251	SLU 31	-1.04	-0.31	40.04	8.2176	-0.0597	0.3598
251	SLU 32	-1.08	-0.27	40.84	8.3734	-0.061	0.3743
251	SLU 33	-1.07	-0.3	40.82	8.3702	-0.0609	0.3708
251	SLU 34	-1.05	-0.31	40.53	8.314	-0.0605	0.3657
251	SLU 35	-1.09	-0.27	41.33	8.4698	-0.0618	0.3802
251	SLU 36	-1.08	-0.3	41.32	8.4666	-0.0617	0.3767
251	SLU 37	-1.09	-0.27	41.06	8.4158	-0.0613	0.3774
251	SLU 38	-1.08	-0.3	41.04	8.4125	-0.0613	0.3739
251	SLU 39	-1.08	-0.26	41.64	8.5297	-0.0624	0.3747
251	SLU 40	-1.07	-0.29	41.63	8.5264	-0.0624	0.3712
251	SLU 41	-1.1	-0.27	42.14	8.6261	-0.0632	0.3807
251	SLU 42	-1.09	-0.29	42.12	8.6228	-0.0632	0.3772
251	SLU 43	-1.1	-0.42	41.5	8.629	-0.0603	0.3833
251	SLU 44	-1.09	-0.46	41.47	8.6236	-0.0603	0.3775
251	SLU 45	-1.13	-0.42	42.27	8.7795	-0.0615	0.392
251	SLU 46	-1.12	-0.45	42.25	8.7762	-0.0615	0.3885
251	SLU 47	-1.1	-0.46	41.97	8.72	-0.061	0.3834
251	SLU 48	-1.15	-0.42	42.76	8.8758	-0.0623	0.3979
251	SLU 49	-1.14	-0.45	42.75	8.8726	-0.0623	0.3944
251	SLU 50	-1.14	-0.42	42.49	8.8218	-0.0619	0.3952
251	SLU 51	-1.13	-0.45	42.47	8.8185	-0.0618	0.3917
251	SLU 52	-1.15	-0.45	45.14	9.3392	-0.0665	0.3988
251	SLU 53	-1.19	-0.41	45.94	9.4951	-0.0678	0.4134
251	SLU 54	-1.18	-0.44	45.92	9.4918	-0.0678	0.4099
251	SLU 55	-1.17	-0.46	45.64	9.4356	-0.0673	0.4048
251	SLU 56	-1.21	-0.41	46.44	9.5915	-0.0686	0.4193
251	SLU 57	-1.2	-0.44	46.42	9.5882	-0.0685	0.4158
251	SLU 58	-1.2	-0.42	46.16	9.5374	-0.0681	0.4165
251	SLU 59	-1.19	-0.44	46.14	9.5341	-0.0681	0.413
251	SLU 60	-1.19	-0.41	46.74	9.6513	-0.0693	0.4138
251	SLU 61	-1.18	-0.43	46.73	9.6481	-0.0692	0.4103
251	SLU 62	-1.21	-0.41	47.24	9.7477	-0.07	0.4197
251	SLU 63	-1.2	-0.44	47.22	9.7445	-0.07	0.4163
251	SLU 64	-1.22	-0.38	45.04	9.3172	-0.0659	0.4224
251	SLU 65	-1.2	-0.42	45.01	9.3118	-0.0659	0.4166
251	SLU 66	-1.24	-0.38	45.81	9.4676	-0.0671	0.4311
251	SLU 67	-1.23	-0.41	45.8	9.4644	-0.0671	0.4276
251	SLU 68	-1.22	-0.43	45.51	9.4081	-0.0667	0.4225
251	SLU 69	-1.26	-0.39	46.31	9.564	-0.0679	0.437
251	SLU 70	-1.25	-0.41	46.29	9.5608	-0.0679	0.4335
251	SLU 71	-1.25	-0.39	46.03	9.5099	-0.0675	0.4342
251	SLU 72	-1.24	-0.41	46.01	9.5067	-0.0675	0.4307
251	SLU 73	-1.26	-0.42	48.68	10.0274	-0.0721	0.4379
251	SLU 74	-1.3	-0.38	49.48	10.1833	-0.0734	0.4524
251	SLU 75	-1.29	-0.4	49.47	10.18	-0.0734	0.4489
251	SLU 76	-1.28	-0.42	49.18	10.1238	-0.0729	0.4438
251	SLU 77	-1.32	-0.38	49.98	10.2796	-0.0742	0.4584
251	SLU 78	-1.31	-0.4	49.96	10.2764	-0.0742	0.4549
251	SLU 79	-1.31	-0.38	49.7	10.2256	-0.0738	0.4556
251	SLU 80	-1.3	-0.41	49.68	10.2223	-0.0737	0.4521
251	SLU 81	-1.3	-0.37	50.29	10.3395	-0.0749	0.4529
251	SLU 82	-1.29	-0.4	50.27	10.3363	-0.0748	0.4494
251	SLU 83	-1.32	-0.37	50.78	10.4359	-0.0757	0.4588
251	SLU 84	-1.31	-0.4	50.76	10.4326	-0.0756	0.4553
251	SLE RA 1	-0.91	-0.3	33.87	7.0158	-0.0495	0.3163
251	SLE RA 2	-0.9	-0.33	33.85	7.0122	-0.0494	0.3124
251	SLE RA 3	-0.93	-0.3	34.38	7.1161	-0.0503	0.3221
251	SLE RA 4	-0.92	-0.32	34.37	7.1139	-0.0503	0.3198
251	SLE RA 5	-0.91	-0.33	34.18	7.0765	-0.05	0.3164
251	SLE RA 6	-0.94	-0.3	34.71	7.1804	-0.0508	0.3261
251	SLE RA 7	-0.93	-0.32	34.7	7.1782	-0.0508	0.3237
251	SLE RA 8	-0.93	-0.31	34.53	7.1443	-0.0505	0.3242
251	SLE RA 9	-0.93	-0.32	34.52	7.1422	-0.0505	0.3219
251	SLE RA 10	-0.94	-0.33	36.3	7.4893	-0.0536	0.3267
251	SLE RA 11	-0.97	-0.3	36.83	7.5932	-0.0545	0.3364
251	SLE RA 12	-0.96	-0.31	36.82	7.591	-0.0544	0.334

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
251	SLE RA 13	-0.95	-0.33	36.63	7.5535	-0.0541	0.3306
251	SLE RA 14	-0.98	-0.3	37.16	7.6575	-0.055	0.3403
251	SLE RA 15	-0.97	-0.32	37.15	7.6553	-0.055	0.338
251	SLE RA 16	-0.97	-0.3	36.97	7.6214	-0.0547	0.3385
251	SLE RA 17	-0.97	-0.32	36.96	7.6192	-0.0547	0.3361
251	SLE RA 18	-0.97	-0.29	37.36	7.6974	-0.0554	0.3367
251	SLE RA 19	-0.96	-0.31	37.35	7.6952	-0.0554	0.3343
251	SLE RA 20	-0.98	-0.3	37.69	7.7616	-0.056	0.3406
251	SLE RA 21	-0.97	-0.31	37.68	7.7595	-0.0559	0.3383
251	SLE FR 1	-0.91	-0.3	33.87	7.0158	-0.0495	0.3163
251	SLE FR 2	-0.91	-0.31	33.87	7.0151	-0.0495	0.3155
251	SLE FR 3	-0.91	-0.3	34	7.0415	-0.0497	0.3179
251	SLE FR 4	-0.93	-0.3	34.91	7.2196	-0.0513	0.3217
251	SLE FR 5	-0.93	-0.3	35.05	7.246	-0.0515	0.324
251	SLE FR 6	-0.94	-0.3	35.62	7.3566	-0.0525	0.3265
251	SLE QP 1	-0.91	-0.3	33.87	7.0158	-0.0495	0.3163
251	SLE QP 2	-0.93	-0.3	34.92	7.2203	-0.0513	0.3224
251	SLD 1	2.54	-0.09	39.68	7.9101	-0.0471	-0.8906
251	SLD 2	2.85	-0.33	39.49	7.8805	-0.0471	-1
251	SLD 3	2.28	-1.02	39.19	7.7792	-0.0458	-0.8026
251	SLD 4	2.6	-1.26	38.99	7.7496	-0.0457	-0.9119
251	SLD 5	0.44	1.22	37.13	7.6311	-0.0521	-0.1557
251	SLD 6	0.64	1.06	37	7.6117	-0.0521	-0.2272
251	SLD 7	-0.4	-1.89	35.48	7.1946	-0.0476	0.1378
251	SLD 8	-0.2	-2.05	35.35	7.1752	-0.0475	0.0663
251	SLD 9	-1.66	1.45	34.48	7.2653	-0.055	0.5785
251	SLD 10	-1.46	1.29	34.35	7.246	-0.055	0.5071
251	SLD 11	-2.5	-1.66	32.83	6.8288	-0.0505	0.872
251	SLD 12	-2.29	-1.82	32.7	6.8095	-0.0504	0.8005
251	SLD 13	-4.45	0.66	30.85	6.691	-0.0568	1.5568
251	SLD 14	-4.14	0.42	30.65	6.6614	-0.0568	1.4474
251	SLD 15	-4.7	-0.27	30.35	6.56	-0.0554	1.6448
251	SLD 16	-4.39	-0.51	30.15	6.5304	-0.0554	1.5355
251	SLV 1	7.17	0.16	46.06	8.8324	-0.0415	-2.5153
251	SLV 2	7.9	-0.41	45.59	8.7634	-0.0415	-2.77
251	SLV 3	6.59	-1.95	44.93	8.5305	-0.0384	-2.3106
251	SLV 4	7.32	-2.52	44.46	8.4616	-0.0384	-2.5653
251	SLV 5	2.26	3.13	40.05	8.1736	-0.0531	-0.7957
251	SLV 6	2.73	2.77	39.76	8.1293	-0.053	-0.9594
251	SLV 7	0.32	-3.89	36.29	7.1673	-0.0427	-0.1134
251	SLV 8	0.79	-4.26	35.99	7.123	-0.0427	-0.2771
251	SLV 9	-2.64	3.66	33.85	7.3176	-0.0599	0.922
251	SLV 10	-2.17	3.3	33.55	7.2732	-0.0598	0.7582
251	SLV 11	-4.59	-3.37	30.08	6.3113	-0.0495	1.6043
251	SLV 12	-4.12	-3.73	29.78	6.267	-0.0495	1.4405
251	SLV 13	-9.18	1.92	25.37	5.979	-0.0642	3.2102
251	SLV 14	-8.45	1.35	24.91	5.9101	-0.0641	2.9554
251	SLV 15	-9.76	-0.19	24.24	5.6771	-0.0611	3.4149
251	SLV 16	-9.03	-0.76	23.78	5.6082	-0.061	3.1601
251	CRTFP Ux+	0	0	0	0	0	0
251	CRTFP Ux-	0	0	0	0	0	0
251	CRTFP Uy+	0	0	0	0	0	0
251	CRTFP Uy-	0	0	0	0	0	0
252	SLU 1	-0.87	-0.39	34.46	8.2162	-0.0515	0.3019
252	SLU 2	-0.85	-0.44	34.43	8.2098	-0.0515	0.296
252	SLU 3	-0.9	-0.4	35.27	8.4022	-0.0528	0.3104
252	SLU 4	-0.89	-0.42	35.25	8.3984	-0.0528	0.307
252	SLU 5	-0.87	-0.44	34.95	8.3288	-0.0523	0.3019
252	SLU 6	-0.91	-0.4	35.79	8.5213	-0.0537	0.3163
252	SLU 7	-0.9	-0.43	35.77	8.5174	-0.0536	0.3128
252	SLU 8	-0.9	-0.4	35.49	8.4543	-0.0532	0.3136
252	SLU 9	-0.89	-0.43	35.48	8.4505	-0.0532	0.3101
252	SLU 10	-0.91	-0.44	38.31	9.1004	-0.0582	0.3171
252	SLU 11	-0.96	-0.4	39.15	9.2928	-0.0596	0.3315
252	SLU 12	-0.95	-0.42	39.13	9.289	-0.0595	0.328
252	SLU 13	-0.93	-0.44	38.82	9.2195	-0.059	0.323
252	SLU 14	-0.97	-0.4	39.67	9.4119	-0.0604	0.3374
252	SLU 15	-0.96	-0.43	39.65	9.4081	-0.0604	0.3339
252	SLU 16	-0.97	-0.4	39.37	9.345	-0.0599	0.3347
252	SLU 17	-0.96	-0.43	39.36	9.3411	-0.0599	0.3312
252	SLU 18	-0.96	-0.39	40	9.4885	-0.0611	0.332
252	SLU 19	-0.95	-0.42	39.98	9.4847	-0.0611	0.3285
252	SLU 20	-0.97	-0.4	40.52	9.6076	-0.062	0.3378
252	SLU 21	-0.96	-0.42	40.5	9.6037	-0.0619	0.3343
252	SLU 22	-0.98	-0.36	38.18	9.0702	-0.0575	0.3405
252	SLU 23	-0.97	-0.41	38.15	9.0637	-0.0575	0.3347
252	SLU 24	-1.01	-0.37	39	9.2562	-0.0589	0.3491
252	SLU 25	-1	-0.39	38.98	9.2524	-0.0588	0.3456
252	SLU 26	-0.98	-0.41	38.67	9.1828	-0.0583	0.3405
252	SLU 27	-1.02	-0.37	39.52	9.3753	-0.0597	0.3549
252	SLU 28	-1.01	-0.4	39.5	9.3714	-0.0597	0.3514
252	SLU 29	-1.02	-0.37	39.22	9.3083	-0.0592	0.3522
252	SLU 30	-1.01	-0.4	39.21	9.3045	-0.0592	0.3487
252	SLU 31	-1.03	-0.41	42.03	9.9544	-0.0642	0.3557
252	SLU 32	-1.07	-0.37	42.88	10.1468	-0.0656	0.3701
252	SLU 33	-1.06	-0.39	42.86	10.143	-0.0656	0.3666
252	SLU 34	-1.04	-0.41	42.55	10.0734	-0.0651	0.3616
252	SLU 35	-1.08	-0.37	43.4	10.2659	-0.0664	0.376
252	SLU 36	-1.07	-0.4	43.38	10.2621	-0.0664	0.3725
252	SLU 37	-1.08	-0.37	43.1	10.1989	-0.0659	0.3733
252	SLU 38	-1.07	-0.4	43.09	10.1951	-0.0659	0.3698
252	SLU 39	-1.07	-0.36	43.73	10.3425	-0.0672	0.3706
252	SLU 40	-1.06	-0.39	43.71	10.3386	-0.0671	0.3671
252	SLU 41	-1.09	-0.37	44.25	10.4616	-0.068	0.3765
252	SLU 42	-1.08	-0.39	44.23	10.4577	-0.068	0.373
252	SLU 43	-1.09	-0.52	43.51	10.3882	-0.0649	0.3792
252	SLU 44	-1.08	-0.56	43.48	10.3818	-0.0649	0.3734

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLU 45	-1.12	-0.52	44.33	10.5743	-0.0662	0.3878
252	SLU 46	-1.11	-0.55	44.31	10.5704	-0.0662	0.3843
252	SLU 47	-1.09	-0.57	44	10.5009	-0.0657	0.3792
252	SLU 48	-1.14	-0.53	44.85	10.6933	-0.067	0.3936
252	SLU 49	-1.13	-0.55	44.83	10.6895	-0.067	0.3901
252	SLU 50	-1.13	-0.53	44.55	10.6264	-0.0666	0.3909
252	SLU 51	-1.12	-0.55	44.54	10.6225	-0.0665	0.3874
252	SLU 52	-1.14	-0.56	47.36	11.2725	-0.0716	0.3944
252	SLU 53	-1.18	-0.52	48.21	11.4649	-0.0729	0.4088
252	SLU 54	-1.17	-0.55	48.19	11.4611	-0.0729	0.4053
252	SLU 55	-1.15	-0.57	47.88	11.3915	-0.0724	0.4003
252	SLU 56	-1.2	-0.53	48.72	11.584	-0.0738	0.4147
252	SLU 57	-1.19	-0.55	48.71	11.5801	-0.0738	0.4112
252	SLU 58	-1.19	-0.53	48.43	11.517	-0.0733	0.412
252	SLU 59	-1.18	-0.55	48.41	11.5132	-0.0733	0.4085
252	SLU 60	-1.18	-0.52	49.06	11.6606	-0.0745	0.4093
252	SLU 61	-1.17	-0.55	49.04	11.6567	-0.0745	0.4058
252	SLU 62	-1.2	-0.53	49.58	11.7796	-0.0754	0.4151
252	SLU 63	-1.19	-0.55	49.56	11.7758	-0.0753	0.4117
252	SLU 64	-1.2	-0.49	47.24	11.2422	-0.0709	0.4178
252	SLU 65	-1.19	-0.53	47.21	11.2358	-0.0709	0.412
252	SLU 66	-1.23	-0.49	48.05	11.4283	-0.0722	0.4264
252	SLU 67	-1.22	-0.52	48.04	11.4244	-0.0722	0.4229
252	SLU 68	-1.21	-0.54	47.73	11.3549	-0.0717	0.4179
252	SLU 69	-1.25	-0.5	48.57	11.5473	-0.0731	0.4323
252	SLU 70	-1.24	-0.52	48.56	11.5435	-0.073	0.4288
252	SLU 71	-1.24	-0.5	48.28	11.4804	-0.0726	0.4295
252	SLU 72	-1.23	-0.52	48.26	11.4765	-0.0726	0.4261
252	SLU 73	-1.25	-0.53	51.09	12.1264	-0.0776	0.4331
252	SLU 74	-1.29	-0.49	51.93	12.3189	-0.079	0.4475
252	SLU 75	-1.28	-0.52	51.92	12.315	-0.0789	0.444
252	SLU 76	-1.27	-0.54	51.61	12.2455	-0.0785	0.4389
252	SLU 77	-1.31	-0.5	52.45	12.438	-0.0798	0.4533
252	SLU 78	-1.3	-0.52	52.44	12.4341	-0.0798	0.4498
252	SLU 79	-1.3	-0.5	52.16	12.371	-0.0793	0.4506
252	SLU 80	-1.29	-0.52	52.14	12.3671	-0.0793	0.4471
252	SLU 81	-1.29	-0.49	52.78	12.5146	-0.0805	0.4479
252	SLU 82	-1.28	-0.52	52.77	12.5107	-0.0805	0.4444
252	SLU 83	-1.31	-0.5	53.3	12.6336	-0.0814	0.4538
252	SLU 84	-1.3	-0.52	53.29	12.6298	-0.0814	0.4503
252	SLE RA 1	-0.9	-0.38	35.52	8.4602	-0.0532	0.3129
252	SLE RA 2	-0.89	-0.41	35.5	8.4559	-0.0532	0.309
252	SLE RA 3	-0.92	-0.39	36.06	8.5842	-0.0541	0.3186
252	SLE RA 4	-0.91	-0.4	36.05	8.5816	-0.0541	0.3163
252	SLE RA 5	-0.9	-0.42	35.85	8.5353	-0.0538	0.3129
252	SLE RA 6	-0.93	-0.39	36.41	8.6636	-0.0547	0.3225
252	SLE RA 7	-0.92	-0.41	36.4	8.661	-0.0546	0.3202
252	SLE RA 8	-0.92	-0.39	36.21	8.6189	-0.0543	0.3207
252	SLE RA 9	-0.92	-0.41	36.2	8.6164	-0.0543	0.3184
252	SLE RA 10	-0.93	-0.41	38.09	9.0497	-0.0577	0.3231
252	SLE RA 11	-0.96	-0.39	38.65	9.178	-0.0586	0.3327
252	SLE RA 12	-0.95	-0.4	38.64	9.1754	-0.0586	0.3303
252	SLE RA 13	-0.94	-0.42	38.43	9.129	-0.0583	0.327
252	SLE RA 14	-0.97	-0.39	38.99	9.2573	-0.0592	0.3366
252	SLE RA 15	-0.96	-0.41	38.98	9.2548	-0.0591	0.3342
252	SLE RA 16	-0.97	-0.39	38.8	9.2127	-0.0588	0.3348
252	SLE RA 17	-0.96	-0.41	38.79	9.2101	-0.0588	0.3324
252	SLE RA 18	-0.96	-0.38	39.22	9.3084	-0.0596	0.333
252	SLE RA 19	-0.95	-0.4	39.2	9.3058	-0.0596	0.3306
252	SLE RA 20	-0.97	-0.39	39.56	9.3878	-0.0602	0.3369
252	SLE RA 21	-0.97	-0.4	39.55	9.3852	-0.0602	0.3346
252	SLE FR 1	-0.9	-0.38	35.52	8.4602	-0.0532	0.3129
252	SLE FR 2	-0.9	-0.39	35.52	8.4593	-0.0532	0.3121
252	SLE FR 3	-0.91	-0.38	35.66	8.4919	-0.0535	0.3145
252	SLE FR 4	-0.92	-0.39	36.63	8.7138	-0.0552	0.3182
252	SLE FR 5	-0.92	-0.39	36.77	8.7464	-0.0554	0.3205
252	SLE FR 6	-0.93	-0.38	37.37	8.8843	-0.0564	0.3229
252	SLE QP 1	-0.9	-0.38	35.52	8.4602	-0.0532	0.3129
252	SLE QP 2	-0.92	-0.38	36.63	8.7146	-0.0552	0.3189
252	SLD 1	2.55	-0.18	41.27	9.5564	-0.0518	-0.8946
252	SLD 2	2.86	-0.42	41.07	9.5206	-0.0517	-1.0038
252	SLD 3	2.3	-1.13	40.75	9.4226	-0.0505	-0.8069
252	SLD 4	2.61	-1.37	40.55	9.3868	-0.0505	-0.916
252	SLD 5	0.44	1.16	38.85	9.1765	-0.056	-0.1589
252	SLD 6	0.65	1	38.71	9.1531	-0.056	-0.2302
252	SLD 7	-0.39	-2.01	37.11	8.7304	-0.0519	0.1336
252	SLD 8	-0.19	-2.16	36.98	8.707	-0.0518	0.0622
252	SLD 9	-1.65	1.4	36.28	8.7223	-0.0585	0.5756
252	SLD 10	-1.45	1.24	36.15	8.6989	-0.0584	0.5043
252	SLD 11	-2.49	-1.77	34.54	8.2762	-0.0543	0.8681
252	SLD 12	-2.28	-1.93	34.41	8.2528	-0.0543	0.7968
252	SLD 13	-4.45	0.6	32.71	8.0425	-0.0599	1.5539
252	SLD 14	-4.14	0.36	32.51	8.0067	-0.0598	1.4447
252	SLD 15	-4.7	-0.35	32.19	7.9087	-0.0586	1.6416
252	SLD 16	-4.38	-0.59	31.99	7.8729	-0.0586	1.5325
252	SLV 1	7.19	0.05	47.48	10.681	-0.0472	-2.5199
252	SLV 2	7.91	-0.5	47.01	10.5976	-0.047	-2.7742
252	SLV 3	6.61	-2.1	46.29	10.3747	-0.0443	-2.316
252	SLV 4	7.33	-2.65	45.83	10.2913	-0.0442	-2.5702
252	SLV 5	2.27	3.1	41.76	9.7835	-0.0571	-0.7985
252	SLV 6	2.74	2.75	41.46	9.7298	-0.0571	-0.9619
252	SLV 7	0.33	-4.06	37.81	8.7624	-0.0475	-0.1186
252	SLV 8	0.8	-4.42	37.51	8.7087	-0.0475	-0.282
252	SLV 9	-2.64	3.65	35.75	8.7206	-0.0628	0.9199
252	SLV 10	-2.17	3.3	35.45	8.6669	-0.0628	0.7565
252	SLV 11	-4.58	-3.51	31.8	7.6995	-0.0532	1.5998
252	SLV 12	-4.11	-3.87	31.5	7.6458	-0.0532	1.4364

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLV 13	-9.17	1.89	27.43	7.138	-0.0661	3.2081
252	SLV 14	-8.45	1.33	26.97	7.0546	-0.066	2.9538
252	SLV 15	-9.75	-0.26	26.25	6.8317	-0.0633	3.412
252	SLV 16	-9.03	-0.82	25.78	6.7482	-0.0632	3.1578
252	CRTFP Ux+	0	0	0	0	0	0
252	CRTFP Ux-	0	0	0	0	0	0
252	CRTFP Uy+	0	0	0	0	0	0
252	CRTFP Uy-	0	0	0	0	0	0
253	SLU 1	-0.86	-0.49	36.07	9.7047	-0.0486	0.2978
253	SLU 2	-0.84	-0.54	36.04	9.6974	-0.0486	0.292
253	SLU 3	-0.89	-0.5	36.92	9.9286	-0.0498	0.3062
253	SLU 4	-0.88	-0.52	36.91	9.9243	-0.0498	0.3028
253	SLU 5	-0.86	-0.54	36.59	9.8406	-0.0494	0.2978
253	SLU 6	-0.9	-0.5	37.47	10.0719	-0.0506	0.312
253	SLU 7	-0.89	-0.53	37.45	10.0675	-0.0506	0.3085
253	SLU 8	-0.89	-0.5	37.16	9.9911	-0.0502	0.3094
253	SLU 9	-0.88	-0.53	37.14	9.9867	-0.0501	0.3059
253	SLU 10	-0.9	-0.55	40.13	10.7747	-0.055	0.3127
253	SLU 11	-0.95	-0.51	41.02	11.0059	-0.0562	0.3269
253	SLU 12	-0.94	-0.53	41	11.0016	-0.0562	0.3234
253	SLU 13	-0.92	-0.55	40.68	10.9179	-0.0557	0.3185
253	SLU 14	-0.96	-0.51	41.56	11.1491	-0.057	0.3327
253	SLU 15	-0.95	-0.54	41.54	11.1448	-0.057	0.3292
253	SLU 16	-0.95	-0.51	41.25	11.0684	-0.0566	0.3301
253	SLU 17	-0.94	-0.54	41.24	11.064	-0.0565	0.3266
253	SLU 18	-0.95	-0.51	41.92	11.2436	-0.0577	0.3274
253	SLU 19	-0.94	-0.53	41.9	11.2393	-0.0577	0.3239
253	SLU 20	-0.96	-0.51	42.46	11.3868	-0.0585	0.3332
253	SLU 21	-0.95	-0.54	42.44	11.3825	-0.0585	0.3297
253	SLU 22	-0.97	-0.47	39.99	10.7352	-0.0543	0.3359
253	SLU 23	-0.95	-0.52	39.96	10.728	-0.0542	0.3301
253	SLU 24	-0.99	-0.48	40.84	10.9592	-0.0555	0.3443
253	SLU 25	-0.98	-0.5	40.82	10.9548	-0.0555	0.3408
253	SLU 26	-0.97	-0.52	40.5	10.8712	-0.055	0.3359
253	SLU 27	-1.01	-0.48	41.39	11.1024	-0.0563	0.3501
253	SLU 28	-1	-0.51	41.37	11.098	-0.0562	0.3466
253	SLU 29	-1	-0.48	41.08	11.0216	-0.0558	0.3475
253	SLU 30	-0.99	-0.51	41.06	11.0173	-0.0558	0.344
253	SLU 31	-1.01	-0.53	44.05	11.8052	-0.0606	0.3508
253	SLU 32	-1.05	-0.49	44.93	12.0364	-0.0619	0.365
253	SLU 33	-1.04	-0.51	44.91	12.0321	-0.0619	0.3615
253	SLU 34	-1.03	-0.53	44.59	11.9484	-0.0614	0.3566
253	SLU 35	-1.07	-0.49	45.48	12.1797	-0.0627	0.3708
253	SLU 36	-1.06	-0.52	45.46	12.1753	-0.0626	0.3673
253	SLU 37	-1.06	-0.49	45.17	12.0989	-0.0622	0.3682
253	SLU 38	-1.05	-0.52	45.15	12.0945	-0.0622	0.3647
253	SLU 39	-1.06	-0.49	45.83	12.2742	-0.0634	0.3654
253	SLU 40	-1.05	-0.51	45.81	12.2698	-0.0634	0.362
253	SLU 41	-1.07	-0.49	46.38	12.4174	-0.0642	0.3712
253	SLU 42	-1.06	-0.52	46.36	12.413	-0.0641	0.3677
253	SLU 43	-1.08	-0.65	45.55	12.2628	-0.0613	0.3741
253	SLU 44	-1.06	-0.69	45.52	12.2555	-0.0612	0.3683
253	SLU 45	-1.11	-0.65	46.4	12.4867	-0.0625	0.3825
253	SLU 46	-1.1	-0.68	46.38	12.4824	-0.0625	0.3791
253	SLU 47	-1.08	-0.7	46.06	12.3987	-0.062	0.3741
253	SLU 48	-1.12	-0.66	46.95	12.6299	-0.0633	0.3883
253	SLU 49	-1.11	-0.68	46.93	12.6256	-0.0632	0.3848
253	SLU 50	-1.11	-0.66	46.64	12.5492	-0.0628	0.3857
253	SLU 51	-1.1	-0.68	46.62	12.5448	-0.0628	0.3822
253	SLU 52	-1.12	-0.7	49.61	13.3328	-0.0676	0.389
253	SLU 53	-1.17	-0.66	50.49	13.564	-0.0689	0.4032
253	SLU 54	-1.16	-0.69	50.48	13.5597	-0.0689	0.3997
253	SLU 55	-1.14	-0.71	50.16	13.476	-0.0684	0.3948
253	SLU 56	-1.18	-0.67	51.04	13.7072	-0.0697	0.409
253	SLU 57	-1.17	-0.69	51.02	13.7029	-0.0696	0.4055
253	SLU 58	-1.17	-0.67	50.73	13.6264	-0.0692	0.4064
253	SLU 59	-1.16	-0.7	50.71	13.6221	-0.0692	0.4029
253	SLU 60	-1.17	-0.66	51.39	13.8017	-0.0704	0.4037
253	SLU 61	-1.16	-0.69	51.38	13.7974	-0.0704	0.4002
253	SLU 62	-1.18	-0.67	51.94	13.9449	-0.0712	0.4094
253	SLU 63	-1.17	-0.69	51.92	13.9406	-0.0711	0.406
253	SLU 64	-1.19	-0.63	49.47	13.2933	-0.0669	0.4122
253	SLU 65	-1.17	-0.67	49.44	13.286	-0.0669	0.4064
253	SLU 66	-1.22	-0.63	50.32	13.5173	-0.0681	0.4206
253	SLU 67	-1.21	-0.66	50.3	13.5129	-0.0681	0.4171
253	SLU 68	-1.19	-0.68	49.98	13.4293	-0.0676	0.4122
253	SLU 69	-1.23	-0.64	50.87	13.6605	-0.0689	0.4264
253	SLU 70	-1.22	-0.66	50.85	13.6561	-0.0689	0.4229
253	SLU 71	-1.22	-0.64	50.56	13.5797	-0.0685	0.4238
253	SLU 72	-1.21	-0.66	50.54	13.5754	-0.0684	0.4203
253	SLU 73	-1.23	-0.68	53.53	14.3633	-0.0733	0.4271
253	SLU 74	-1.28	-0.64	54.41	14.5945	-0.0745	0.4413
253	SLU 75	-1.27	-0.67	54.39	14.5902	-0.0745	0.4378
253	SLU 76	-1.25	-0.69	54.07	14.5065	-0.074	0.4328
253	SLU 77	-1.29	-0.65	54.96	14.7377	-0.0753	0.4471
253	SLU 78	-1.28	-0.67	54.94	14.7334	-0.0753	0.4436
253	SLU 79	-1.28	-0.65	54.65	14.657	-0.0748	0.4444
253	SLU 80	-1.27	-0.67	54.63	14.6526	-0.0748	0.441
253	SLU 81	-1.28	-0.64	55.31	14.8322	-0.076	0.4417
253	SLU 82	-1.27	-0.67	55.29	14.8279	-0.076	0.4382
253	SLU 83	-1.29	-0.65	55.86	14.9755	-0.0768	0.4475
253	SLU 84	-1.28	-0.67	55.84	14.9711	-0.0768	0.444
253	SLE RA 1	-0.89	-0.49	37.19	9.9991	-0.0502	0.3087
253	SLE RA 2	-0.88	-0.52	37.17	9.9943	-0.0502	0.3048
253	SLE RA 3	-0.91	-0.49	37.76	10.1484	-0.051	0.3143
253	SLE RA 4	-0.9	-0.51	37.75	10.1455	-0.051	0.312
253	SLE RA 5	-0.89	-0.52	37.53	10.0898	-0.0507	0.3087

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
253	SLE RA 6	-0.92	-0.49	38.12	10.2439	-0.0516	0.3182
253	SLE RA 7	-0.91	-0.51	38.11	10.241	-0.0515	0.3158
253	SLE RA 8	-0.91	-0.49	37.92	10.1901	-0.0513	0.3164
253	SLE RA 9	-0.91	-0.51	37.91	10.1872	-0.0512	0.3141
253	SLE RA 10	-0.92	-0.52	39.9	10.7125	-0.0545	0.3186
253	SLE RA 11	-0.95	-0.5	40.49	10.8666	-0.0553	0.3281
253	SLE RA 12	-0.94	-0.51	40.47	10.8637	-0.0553	0.3258
253	SLE RA 13	-0.93	-0.53	40.26	10.8079	-0.055	0.3225
253	SLE RA 14	-0.96	-0.5	40.85	10.9621	-0.0558	0.332
253	SLE RA 15	-0.95	-0.52	40.84	10.9592	-0.0558	0.3296
253	SLE RA 16	-0.95	-0.5	40.65	10.9082	-0.0555	0.3302
253	SLE RA 17	-0.95	-0.52	40.63	10.9053	-0.0555	0.3279
253	SLE RA 18	-0.95	-0.5	41.09	11.0251	-0.0563	0.3284
253	SLE RA 19	-0.94	-0.51	41.07	11.0222	-0.0563	0.3261
253	SLE RA 20	-0.96	-0.5	41.45	11.1206	-0.0568	0.3323
253	SLE RA 21	-0.95	-0.52	41.44	11.1177	-0.0568	0.3299
253	SLE FR 1	-0.89	-0.49	37.19	9.9991	-0.0502	0.3087
253	SLE FR 2	-0.89	-0.49	37.19	9.9981	-0.0502	0.3079
253	SLE FR 3	-0.9	-0.49	37.34	10.0373	-0.0504	0.3102
253	SLE FR 4	-0.91	-0.5	38.36	10.3059	-0.052	0.3138
253	SLE FR 5	-0.91	-0.49	38.51	10.3451	-0.0523	0.3161
253	SLE FR 6	-0.92	-0.49	39.14	10.5121	-0.0533	0.3185
253	SLE QP 1	-0.89	-0.49	37.19	9.9991	-0.0502	0.3087
253	SLE QP 2	-0.91	-0.49	38.36	10.3069	-0.052	0.3146
253	SLD 1	2.56	-0.29	42.89	11.3117	-0.0483	-0.8991
253	SLD 2	2.87	-0.52	42.69	11.2695	-0.0483	-1.008
253	SLD 3	2.31	-1.26	42.35	11.1738	-0.0474	-0.8118
253	SLD 4	2.62	-1.49	42.15	11.1316	-0.0474	-0.9206
253	SLD 5	0.45	1.08	40.57	10.825	-0.0523	-0.1627
253	SLD 6	0.66	0.93	40.44	10.7974	-0.0523	-0.2339
253	SLD 7	-0.38	-2.15	38.77	10.3652	-0.0493	0.1284
253	SLD 8	-0.17	-2.3	38.64	10.3377	-0.0493	0.0573
253	SLD 9	-1.65	1.32	38.08	10.2762	-0.0548	0.572
253	SLD 10	-1.44	1.17	37.95	10.2486	-0.0548	0.5008
253	SLD 11	-2.48	-1.91	36.28	9.8164	-0.0518	0.8631
253	SLD 12	-2.27	-2.06	36.15	9.7888	-0.0518	0.7919
253	SLD 13	-4.44	0.52	34.57	9.4822	-0.0567	1.5498
253	SLD 14	-4.13	0.28	34.37	9.4401	-0.0567	1.441
253	SLD 15	-4.69	-0.46	34.03	9.3443	-0.0557	1.6372
253	SLD 16	-4.38	-0.69	33.83	9.3021	-0.0558	1.5283
253	SLV 1	7.2	-0.07	48.93	12.6539	-0.0433	-2.5248
253	SLV 2	7.93	-0.61	48.47	12.5557	-0.0434	-2.7783
253	SLV 3	6.62	-2.27	47.71	12.3396	-0.0412	-2.3217
253	SLV 4	7.35	-2.8	47.24	12.2414	-0.0412	-2.5752
253	SLV 5	2.28	3.06	43.47	11.5045	-0.0527	-0.8017
253	SLV 6	2.74	2.71	43.17	11.4414	-0.0527	-0.9647
253	SLV 7	0.35	-4.26	39.38	10.4568	-0.0456	-0.1249
253	SLV 8	0.81	-4.6	39.08	10.3937	-0.0456	-0.2878
253	SLV 9	-2.63	3.62	37.64	10.2201	-0.0585	0.917
253	SLV 10	-2.17	3.28	37.34	10.157	-0.0585	0.7541
253	SLV 11	-4.56	-3.69	33.55	9.1724	-0.0514	1.5939
253	SLV 12	-4.1	-4.04	33.25	9.1093	-0.0514	1.431
253	SLV 13	-9.17	1.82	29.48	8.3724	-0.0629	3.2044
253	SLV 14	-8.44	1.29	29.01	8.2742	-0.0629	2.9509
253	SLV 15	-9.74	-0.37	28.25	8.0581	-0.0607	3.4075
253	SLV 16	-9.02	-0.91	27.79	7.9599	-0.0607	3.154
253	CRTFP Ux+	0	0	0	0	0	0
253	CRTFP Ux-	0	0	0	0	0	0
253	CRTFP Uy+	0	0	0	0	0	0
253	CRTFP Uy-	0	0	0	0	0	0
254	SLU 1	-0.77	-0.54	33.75	10.0349	0.601	0.2751
254	SLU 2	-0.75	-0.58	33.72	10.028	0.6005	0.2706
254	SLU 3	-0.79	-0.55	34.55	10.2696	0.6152	0.2827
254	SLU 4	-0.78	-0.57	34.53	10.2655	0.6149	0.28
254	SLU 5	-0.76	-0.59	34.23	10.1779	0.6096	0.2758
254	SLU 6	-0.8	-0.56	35.06	10.4195	0.6243	0.2879
254	SLU 7	-0.79	-0.58	35.04	10.4153	0.624	0.2852
254	SLU 8	-0.79	-0.56	34.77	10.3347	0.6192	0.2856
254	SLU 9	-0.79	-0.58	34.76	10.3305	0.6189	0.2829
254	SLU 10	-0.8	-0.6	37.57	11.1607	0.6685	0.2892
254	SLU 11	-0.84	-0.57	38.4	11.4023	0.6832	0.3013
254	SLU 12	-0.83	-0.59	38.38	11.3981	0.6829	0.2986
254	SLU 13	-0.82	-0.61	38.08	11.3106	0.6776	0.2945
254	SLU 14	-0.85	-0.58	38.91	11.5522	0.6923	0.3066
254	SLU 15	-0.85	-0.6	38.89	11.548	0.692	0.3039
254	SLU 16	-0.85	-0.58	38.62	11.4674	0.6872	0.3043
254	SLU 17	-0.84	-0.6	38.61	11.4632	0.6869	0.3016
254	SLU 18	-0.84	-0.57	39.25	11.6531	0.6982	0.3017
254	SLU 19	-0.83	-0.6	39.23	11.6489	0.6979	0.299
254	SLU 20	-0.86	-0.58	39.76	11.803	0.7073	0.307
254	SLU 21	-0.85	-0.6	39.74	11.7988	0.707	0.3043
254	SLU 22	-0.86	-0.54	37.42	11.1163	0.6663	0.3087
254	SLU 23	-0.85	-0.57	37.39	11.1094	0.6657	0.3042
254	SLU 24	-0.88	-0.54	38.22	11.351	0.6805	0.3163
254	SLU 25	-0.88	-0.57	38.21	11.3468	0.6802	0.3136
254	SLU 26	-0.86	-0.58	37.91	11.2593	0.6748	0.3095
254	SLU 27	-0.9	-0.55	38.73	11.5009	0.6896	0.3216
254	SLU 28	-0.89	-0.57	38.72	11.4967	0.6893	0.3189
254	SLU 29	-0.89	-0.55	38.45	11.4161	0.6845	0.3193
254	SLU 30	-0.88	-0.57	38.43	11.4119	0.6841	0.3166
254	SLU 31	-0.9	-0.59	41.24	12.2421	0.7338	0.3229
254	SLU 32	-0.94	-0.56	42.07	12.4837	0.7485	0.335
254	SLU 33	-0.93	-0.59	42.06	12.4795	0.7482	0.3323
254	SLU 34	-0.92	-0.6	41.76	12.3919	0.7429	0.3281
254	SLU 35	-0.95	-0.57	42.58	12.6336	0.7576	0.3403
254	SLU 36	-0.94	-0.59	42.57	12.6294	0.7573	0.3375
254	SLU 37	-0.95	-0.57	42.3	12.5488	0.7525	0.3379

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
254	SLU 38	-0.94	-0.59	42.28	12.5446	0.7522	0.3352
254	SLU 39	-0.94	-0.56	42.92	12.7344	0.7634	0.3354
254	SLU 40	-0.93	-0.59	42.91	12.7303	0.7631	0.3327
254	SLU 41	-0.95	-0.57	43.43	12.8843	0.7725	0.3407
254	SLU 42	-0.94	-0.59	43.42	12.8802	0.7722	0.3379
254	SLU 43	-0.96	-0.71	42.61	12.6747	0.7589	0.3461
254	SLU 44	-0.95	-0.75	42.59	12.6677	0.7584	0.3416
254	SLU 45	-0.98	-0.72	43.41	12.9094	0.7731	0.3537
254	SLU 46	-0.97	-0.74	43.4	12.9052	0.7728	0.351
254	SLU 47	-0.96	-0.76	43.1	12.8176	0.7675	0.3468
254	SLU 48	-1	-0.72	43.93	13.0592	0.7822	0.3589
254	SLU 49	-0.99	-0.75	43.91	13.0551	0.7819	0.3562
254	SLU 50	-0.99	-0.72	43.64	12.9744	0.7771	0.3566
254	SLU 51	-0.98	-0.75	43.62	12.9703	0.7768	0.3539
254	SLU 52	-1	-0.77	46.44	13.8004	0.8264	0.3602
254	SLU 53	-1.04	-0.74	47.27	14.042	0.8412	0.3723
254	SLU 54	-1.03	-0.76	47.25	14.0379	0.8408	0.3696
254	SLU 55	-1.01	-0.78	46.95	13.9503	0.8355	0.3655
254	SLU 56	-1.05	-0.74	47.78	14.1919	0.8503	0.3776
254	SLU 57	-1.04	-0.77	47.76	14.1878	0.8499	0.3749
254	SLU 58	-1.04	-0.74	47.49	14.1071	0.8451	0.3753
254	SLU 59	-1.03	-0.77	47.47	14.103	0.8448	0.3726
254	SLU 60	-1.04	-0.74	48.12	14.2928	0.8561	0.3727
254	SLU 61	-1.03	-0.76	48.1	14.2886	0.8558	0.37
254	SLU 62	-1.05	-0.75	48.63	14.4427	0.8652	0.378
254	SLU 63	-1.04	-0.77	48.61	14.4385	0.8649	0.3753
254	SLU 64	-1.06	-0.7	46.29	13.756	0.8242	0.3797
254	SLU 65	-1.04	-0.74	46.26	13.7491	0.8237	0.3752
254	SLU 66	-1.08	-0.71	47.09	13.9907	0.8384	0.3873
254	SLU 67	-1.07	-0.73	47.07	13.9866	0.8381	0.3846
254	SLU 68	-1.06	-0.75	46.77	13.899	0.8328	0.3805
254	SLU 69	-1.09	-0.72	47.6	14.1406	0.8475	0.3926
254	SLU 70	-1.09	-0.74	47.58	14.1364	0.8472	0.3899
254	SLU 71	-1.09	-0.71	47.31	14.0558	0.8424	0.3902
254	SLU 72	-1.08	-0.74	47.29	14.0516	0.8421	0.3875
254	SLU 73	-1.1	-0.76	50.11	14.8818	0.8917	0.3939
254	SLU 74	-1.13	-0.73	50.94	15.1234	0.9064	0.406
254	SLU 75	-1.12	-0.75	50.92	15.1193	0.9061	0.4033
254	SLU 76	-1.11	-0.77	50.62	15.0317	0.9008	0.3991
254	SLU 77	-1.15	-0.74	51.45	15.2733	0.9155	0.4112
254	SLU 78	-1.14	-0.76	51.43	15.2691	0.9152	0.4085
254	SLU 79	-1.14	-0.73	51.16	15.1885	0.9104	0.4089
254	SLU 80	-1.13	-0.76	51.14	15.1843	0.9101	0.4062
254	SLU 81	-1.13	-0.73	51.79	15.3742	0.9214	0.4064
254	SLU 82	-1.13	-0.75	51.77	15.37	0.921	0.4037
254	SLU 83	-1.15	-0.74	52.3	15.5241	0.9305	0.4116
254	SLU 84	-1.14	-0.76	52.28	15.5199	0.9301	0.4089
254	SLE RA 1	-0.79	-0.54	34.8	10.3439	0.6196	0.2847
254	SLE RA 2	-0.78	-0.57	34.78	10.3393	0.6193	0.2817
254	SLE RA 3	-0.81	-0.55	35.33	10.5004	0.6291	0.2898
254	SLE RA 4	-0.8	-0.56	35.32	10.4976	0.6289	0.288
254	SLE RA 5	-0.79	-0.57	35.12	10.4392	0.6254	0.2852
254	SLE RA 6	-0.82	-0.55	35.67	10.6003	0.6352	0.2933
254	SLE RA 7	-0.81	-0.57	35.66	10.5975	0.635	0.2915
254	SLE RA 8	-0.81	-0.55	35.48	10.5438	0.6318	0.2917
254	SLE RA 9	-0.81	-0.57	35.47	10.541	0.6316	0.2899
254	SLE RA 10	-0.82	-0.58	37.35	11.0944	0.6646	0.2941
254	SLE RA 11	-0.84	-0.56	37.9	11.2555	0.6745	0.3022
254	SLE RA 12	-0.84	-0.58	37.89	11.2527	0.6743	0.3004
254	SLE RA 13	-0.83	-0.59	37.69	11.1943	0.6707	0.2976
254	SLE RA 14	-0.85	-0.56	38.24	11.3554	0.6805	0.3057
254	SLE RA 15	-0.85	-0.58	38.23	11.3526	0.6803	0.3039
254	SLE RA 16	-0.85	-0.56	38.05	11.2989	0.6771	0.3042
254	SLE RA 17	-0.84	-0.58	38.04	11.2961	0.6769	0.3024
254	SLE RA 18	-0.84	-0.56	38.47	11.4227	0.6844	0.3025
254	SLE RA 19	-0.84	-0.58	38.45	11.4199	0.6842	0.3007
254	SLE RA 20	-0.85	-0.57	38.81	11.5226	0.6905	0.306
254	SLE RA 21	-0.85	-0.58	38.8	11.5198	0.6903	0.3042
254	SLE FR 1	-0.79	-0.54	34.8	10.3439	0.6196	0.2847
254	SLE FR 2	-0.79	-0.55	34.8	10.343	0.6196	0.2841
254	SLE FR 3	-0.8	-0.54	34.94	10.3839	0.6221	0.2861
254	SLE FR 4	-0.81	-0.55	35.9	10.6666	0.639	0.2894
254	SLE FR 5	-0.81	-0.55	36.04	10.7075	0.6415	0.2914
254	SLE FR 6	-0.82	-0.55	36.63	10.8833	0.652	0.2936
254	SLE QP 1	-0.79	-0.54	34.8	10.3439	0.6196	0.2847
254	SLE QP 2	-0.81	-0.55	35.9	10.6675	0.6391	0.29
254	SLD 1	2.32	-0.37	39.86	11.7094	0.7169	-0.7981
254	SLD 2	2.6	-0.57	39.68	11.6661	0.7134	-0.8923
254	SLD 3	2.1	-1.26	39.37	11.5849	0.7076	-0.7248
254	SLD 4	2.38	-1.46	39.19	11.5416	0.7041	-0.819
254	SLD 5	0.42	0.89	37.86	11.1765	0.6771	-0.1309
254	SLD 6	0.6	0.76	37.75	11.1482	0.6749	-0.1925
254	SLD 7	-0.33	-2.08	36.23	10.7616	0.6462	0.1134
254	SLD 8	-0.14	-2.21	36.11	10.7334	0.6439	0.0518
254	SLD 9	-1.47	1.11	35.69	10.6017	0.6343	0.5282
254	SLD 10	-1.29	0.98	35.57	10.5734	0.632	0.4667
254	SLD 11	-2.22	-1.85	34.05	10.1868	0.6033	0.7725
254	SLD 12	-2.04	-1.98	33.93	10.1586	0.6011	0.7109
254	SLD 13	-3.99	0.37	32.61	9.7934	0.574	1.3991
254	SLD 14	-3.71	0.17	32.43	9.7502	0.5706	1.3048
254	SLD 15	-4.22	-0.52	32.12	9.669	0.5647	1.4724
254	SLD 16	-3.94	-0.72	31.94	9.6257	0.5613	1.3781
254	SLV 1	6.51	-0.18	45.15	13.1014	0.8208	-2.2558
254	SLV 2	7.17	-0.64	44.73	13.0006	0.8128	-2.4753
254	SLV 3	5.99	-2.19	44.03	12.8182	0.7996	-2.0848
254	SLV 4	6.65	-2.65	43.61	12.7174	0.7916	-2.3043
254	SLV 5	2.07	2.7	40.44	11.8446	0.727	-0.6955

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
254	SLV 6	2.49	2.4	40.17	11.7798	0.7219	-0.8366
254	SLV 7	0.33	-4.01	36.72	10.9004	0.6566	-0.1254
254	SLV 8	0.75	-4.31	36.45	10.8356	0.6514	-0.2665
254	SLV 9	-2.37	3.22	35.35	10.4995	0.6267	0.8466
254	SLV 10	-1.95	2.92	35.08	10.4347	0.6216	0.7055
254	SLV 11	-4.1	-3.49	31.63	9.5553	0.5563	1.4166
254	SLV 12	-3.68	-3.79	31.36	9.4905	0.5512	1.2755
254	SLV 13	-8.26	1.56	28.19	8.6177	0.4865	2.8843
254	SLV 14	-7.61	1.09	27.77	8.5169	0.4785	2.6648
254	SLV 15	-8.78	-0.46	27.07	8.3344	0.4654	3.0553
254	SLV 16	-8.13	-0.92	26.65	8.2337	0.4574	2.8358
254	CRTFP Ux+	0	0	0	0	0	0
254	CRTFP Ux-	0	0	0	0	0	0
254	CRTFP Uy+	0	0	0	0	0	0
254	CRTFP Uy-	0	0	0	0	0	0
256	SLU 1	-1.97	-1.66	88.43	20.1073	-0.0121	0.4407
256	SLU 2	-1.93	-1.76	88.35	20.0932	-0.0129	0.432
256	SLU 3	-2.03	-1.69	90.52	20.5832	-0.0123	0.4531
256	SLU 4	-2	-1.74	90.48	20.5747	-0.0128	0.4479
256	SLU 5	-1.97	-1.78	89.69	20.3968	-0.0128	0.4406
256	SLU 6	-2.06	-1.71	91.87	20.8868	-0.0122	0.4617
256	SLU 7	-2.04	-1.76	91.82	20.8784	-0.0127	0.4565
256	SLU 8	-2.05	-1.7	91.11	20.7146	-0.0119	0.4579
256	SLU 9	-2.02	-1.76	91.06	20.7061	-0.0124	0.4527
256	SLU 10	-2.07	-1.84	98.49	22.3955	-0.0234	0.4615
256	SLU 11	-2.16	-1.77	100.66	22.8855	-0.0228	0.4826
256	SLU 12	-2.14	-1.82	100.62	22.8771	-0.0233	0.4774
256	SLU 13	-2.11	-1.86	99.83	22.6992	-0.0233	0.4701
256	SLU 14	-2.2	-1.79	102.01	23.1892	-0.0227	0.4912
256	SLU 15	-2.18	-1.84	101.96	23.1807	-0.0232	0.486
256	SLU 16	-2.18	-1.78	101.25	23.017	-0.0224	0.4874
256	SLU 17	-2.16	-1.84	101.2	23.0085	-0.0229	0.4822
256	SLU 18	-2.17	-1.78	102.91	23.3964	-0.0271	0.4828
256	SLU 19	-2.14	-1.83	102.87	23.3879	-0.0276	0.4776
256	SLU 20	-2.21	-1.8	104.25	23.7	-0.027	0.4914
256	SLU 21	-2.18	-1.86	104.21	23.6916	-0.0275	0.4862
256	SLU 22	-2.22	-1.67	98.05	22.2979	-0.0125	0.4964
256	SLU 23	-2.18	-1.77	97.97	22.2838	-0.0133	0.4878
256	SLU 24	-2.27	-1.69	100.15	22.7738	-0.0127	0.5088
256	SLU 25	-2.25	-1.75	100.1	22.7653	-0.0132	0.5036
256	SLU 26	-2.22	-1.79	99.31	22.5874	-0.0132	0.4964
256	SLU 27	-2.31	-1.71	101.49	23.0774	-0.0126	0.5174
256	SLU 28	-2.29	-1.77	101.44	23.069	-0.0131	0.5122
256	SLU 29	-2.3	-1.71	100.73	22.9052	-0.0122	0.5136
256	SLU 30	-2.27	-1.77	100.69	22.8967	-0.0127	0.5084
256	SLU 31	-2.32	-1.85	108.11	24.5862	-0.0238	0.5173
256	SLU 32	-2.41	-1.77	110.29	25.0762	-0.0232	0.5383
256	SLU 33	-2.39	-1.83	110.24	25.0677	-0.0237	0.5331
256	SLU 34	-2.36	-1.87	109.46	24.8898	-0.0237	0.5259
256	SLU 35	-2.45	-1.79	111.63	25.3798	-0.0231	0.5469
256	SLU 36	-2.43	-1.85	111.58	25.3713	-0.0236	0.5417
256	SLU 37	-2.43	-1.79	110.87	25.2076	-0.0227	0.5431
256	SLU 38	-2.41	-1.85	110.83	25.1991	-0.0232	0.5379
256	SLU 39	-2.42	-1.78	112.53	25.587	-0.0275	0.5386
256	SLU 40	-2.39	-1.84	112.49	25.5785	-0.028	0.5334
256	SLU 41	-2.46	-1.81	113.88	25.8907	-0.0273	0.5472
256	SLU 42	-2.43	-1.86	113.83	25.8822	-0.0278	0.542
256	SLU 43	-2.48	-2.16	111.65	25.3885	-0.0156	0.5538
256	SLU 44	-2.44	-2.25	111.58	25.3743	-0.0165	0.5451
256	SLU 45	-2.53	-2.18	113.75	25.8643	-0.0158	0.5662
256	SLU 46	-2.51	-2.24	113.71	25.8558	-0.0163	0.561
256	SLU 47	-2.48	-2.28	112.92	25.678	-0.0163	0.5537
256	SLU 48	-2.57	-2.2	115.09	26.168	-0.0157	0.5748
256	SLU 49	-2.55	-2.26	115.05	26.1595	-0.0162	0.5696
256	SLU 50	-2.55	-2.2	114.34	25.9957	-0.0154	0.571
256	SLU 51	-2.53	-2.26	114.29	25.9873	-0.0159	0.5658
256	SLU 52	-2.58	-2.34	121.72	27.6767	-0.027	0.5746
256	SLU 53	-2.67	-2.26	123.89	28.1667	-0.0263	0.5957
256	SLU 54	-2.65	-2.32	123.85	28.1582	-0.0268	0.5905
256	SLU 55	-2.61	-2.36	123.06	27.9803	-0.0268	0.5832
256	SLU 56	-2.71	-2.28	125.23	28.4703	-0.0262	0.6043
256	SLU 57	-2.68	-2.34	125.19	28.4618	-0.0267	0.5991
256	SLU 58	-2.69	-2.28	124.48	28.2981	-0.0259	0.6005
256	SLU 59	-2.67	-2.34	124.43	28.2896	-0.0264	0.5953
256	SLU 60	-2.67	-2.27	126.14	28.6775	-0.0306	0.5959
256	SLU 61	-2.65	-2.33	126.09	28.6691	-0.0311	0.5907
256	SLU 62	-2.71	-2.29	127.48	28.9812	-0.0305	0.6045
256	SLU 63	-2.69	-2.35	127.44	28.9727	-0.031	0.5993
256	SLU 64	-2.73	-2.17	121.28	27.5791	-0.016	0.6095
256	SLU 65	-2.69	-2.26	121.2	27.5649	-0.0168	0.6009
256	SLU 66	-2.78	-2.19	123.38	28.0549	-0.0162	0.6219
256	SLU 67	-2.76	-2.25	123.33	28.0465	-0.0167	0.6167
256	SLU 68	-2.73	-2.28	122.54	27.8686	-0.0167	0.6095
256	SLU 69	-2.82	-2.21	124.72	28.3586	-0.0161	0.6305
256	SLU 70	-2.8	-2.27	124.67	28.3501	-0.0166	0.6253
256	SLU 71	-2.8	-2.21	123.96	28.1864	-0.0157	0.6267
256	SLU 72	-2.78	-2.27	123.91	28.1779	-0.0162	0.6215
256	SLU 73	-2.83	-2.34	131.34	29.8673	-0.0273	0.6304
256	SLU 74	-2.92	-2.27	133.52	30.3573	-0.0267	0.6514
256	SLU 75	-2.9	-2.33	133.47	30.3488	-0.0272	0.6462
256	SLU 76	-2.86	-2.36	132.68	30.1709	-0.0272	0.639
256	SLU 77	-2.96	-2.29	134.86	30.6609	-0.0266	0.66
256	SLU 78	-2.93	-2.35	134.81	30.6524	-0.0271	0.6548
256	SLU 79	-2.94	-2.29	134.1	30.4887	-0.0262	0.6562
256	SLU 80	-2.92	-2.35	134.05	30.4802	-0.0267	0.651
256	SLU 81	-2.92	-2.28	135.76	30.8682	-0.031	0.6517
256	SLU 82	-2.9	-2.34	135.72	30.8597	-0.0315	0.6465

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
256	SLU 83	-2.96	-2.3	137.1	31.1718	-0.0309	0.6603
256	SLU 84	-2.94	-2.36	137.06	31.1633	-0.0314	0.6551
256	SLE RA 1	-2.04	-1.66	91.17	20.7332	-0.0122	0.4566
256	SLE RA 2	-2.02	-1.73	91.12	20.7238	-0.0128	0.4509
256	SLE RA 3	-2.08	-1.68	92.57	21.0505	-0.0124	0.4649
256	SLE RA 4	-2.06	-1.72	92.54	21.0448	-0.0127	0.4614
256	SLE RA 5	-2.04	-1.74	92.02	20.9262	-0.0127	0.4566
256	SLE RA 6	-2.1	-1.69	93.47	21.2529	-0.0123	0.4706
256	SLE RA 7	-2.09	-1.73	93.44	21.2472	-0.0126	0.4672
256	SLE RA 8	-2.09	-1.69	92.96	21.1381	-0.012	0.4681
256	SLE RA 9	-2.08	-1.73	92.93	21.1324	-0.0124	0.4646
256	SLE RA 10	-2.11	-1.78	97.89	22.2587	-0.0198	0.4705
256	SLE RA 11	-2.17	-1.73	99.33	22.5854	-0.0194	0.4845
256	SLE RA 12	-2.16	-1.77	99.3	22.5797	-0.0197	0.4811
256	SLE RA 13	-2.13	-1.8	98.78	22.4611	-0.0197	0.4762
256	SLE RA 14	-2.2	-1.75	100.23	22.7878	-0.0193	0.4903
256	SLE RA 15	-2.18	-1.79	100.2	22.7821	-0.0196	0.4868
256	SLE RA 16	-2.18	-1.75	99.72	22.673	-0.019	0.4877
256	SLE RA 17	-2.17	-1.78	99.69	22.6673	-0.0194	0.4843
256	SLE RA 18	-2.17	-1.74	100.83	22.9259	-0.0222	0.4847
256	SLE RA 19	-2.16	-1.78	100.8	22.9203	-0.0225	0.4812
256	SLE RA 20	-2.2	-1.75	101.73	23.1284	-0.0221	0.4904
256	SLE RA 21	-2.18	-1.79	101.7	23.1227	-0.0225	0.487
256	SLE FR 1	-2.04	-1.66	91.17	20.7332	-0.0122	0.4566
256	SLE FR 2	-2.04	-1.68	91.16	20.7313	-0.0123	0.4555
256	SLE FR 3	-2.05	-1.67	91.53	20.8142	-0.0122	0.4589
256	SLE FR 4	-2.08	-1.7	94.06	21.3891	-0.0153	0.4639
256	SLE FR 5	-2.09	-1.69	94.43	21.472	-0.0152	0.4673
256	SLE FR 6	-2.11	-1.7	96	21.8296	-0.0172	0.4707
256	SLE QP 1	-2.04	-1.66	91.17	20.7332	-0.0122	0.4566
256	SLE QP 2	-2.08	-1.69	94.07	21.391	-0.0152	0.4651
256	SLD 1	5.82	-1.24	103.78	23.5034	0.1543	-1.4312
256	SLD 2	6.54	-1.71	103.32	23.4108	0.1482	-1.5969
256	SLD 3	5.25	-3.51	102.5	23.2649	0.1316	-1.2991
256	SLD 4	5.97	-3.97	102.04	23.1724	0.1255	-1.4648
256	SLD 5	1.02	1.96	99	22.4027	0.0711	-0.2748
256	SLD 6	1.49	1.65	98.7	22.3422	0.0671	-0.3832
256	SLD 7	-0.87	-5.58	94.75	21.608	-0.0045	0.1654
256	SLD 8	-0.4	-5.89	94.44	21.5475	-0.0085	0.0571
256	SLD 9	-3.76	2.51	93.7	21.2346	-0.022	0.873
256	SLD 10	-3.3	2.21	93.4	21.1741	-0.0259	0.7647
256	SLD 11	-5.65	-5.03	89.44	20.4399	-0.0976	1.3133
256	SLD 12	-5.18	-5.33	89.14	20.3794	-0.1015	1.2049
256	SLD 13	-10.13	0.6	86.1	19.6097	-0.1559	2.3949
256	SLD 14	-9.42	0.13	85.64	19.5171	-0.162	2.2292
256	SLD 15	-10.7	-1.66	84.82	19.3713	-0.1786	2.527
256	SLD 16	-9.98	-2.13	84.36	19.2787	-0.1847	2.3613
256	SLV 1	16.4	-0.74	116.75	26.3261	0.381	-3.9712
256	SLV 2	18.07	-1.83	115.67	26.1106	0.3668	-4.3573
256	SLV 3	15.09	-5.86	113.84	25.7834	0.3291	-3.6637
256	SLV 4	16.76	-6.95	112.77	25.5678	0.315	-4.0498
256	SLV 5	5.17	6.54	105.46	23.7317	0.1847	-1.2659
256	SLV 6	6.25	5.84	104.77	23.5931	0.1756	-1.5141
256	SLV 7	0.79	-10.51	95.78	21.9225	0.0119	-0.2412
256	SLV 8	1.86	-11.21	95.09	21.784	0.0028	-0.4893
256	SLV 9	-6.02	7.84	93.05	20.9981	-0.0332	1.4194
256	SLV 10	-4.95	7.14	92.36	20.8595	-0.0423	1.1713
256	SLV 11	-10.41	-9.22	83.37	19.189	-0.206	2.4442
256	SLV 12	-9.34	-9.92	82.68	19.0504	-0.2151	2.1961
256	SLV 13	-20.92	3.57	75.37	17.2143	-0.3454	4.9799
256	SLV 14	-19.25	2.48	74.3	16.9987	-0.3596	4.5939
256	SLV 15	-22.24	-1.54	72.47	16.6715	-0.3972	5.2874
256	SLV 16	-20.56	-2.63	71.4	16.4559	-0.4114	4.9013
256	CRTFP Ux+	0	0	0	0	0	0
256	CRTFP Ux-	0	0	0	0	0	0
256	CRTFP Uy+	0	0	0	0	0	0
256	CRTFP Uy-	0	0	0	0	0	0
258	SLU 1	-0.69	-0.71	32.46	10.4109	-0.6045	0.2251
258	SLU 2	-0.67	-0.75	32.43	10.4048	-0.6041	0.2195
258	SLU 3	-0.71	-0.72	33.22	10.6563	-0.6188	0.2316
258	SLU 4	-0.7	-0.75	33.21	10.6527	-0.6186	0.2282
258	SLU 5	-0.69	-0.76	32.92	10.5612	-0.6132	0.224
258	SLU 6	-0.72	-0.73	33.72	10.8127	-0.6279	0.236
258	SLU 7	-0.71	-0.76	33.7	10.8091	-0.6277	0.2327
258	SLU 8	-0.71	-0.73	33.44	10.7237	-0.6228	0.234
258	SLU 9	-0.71	-0.75	33.42	10.72	-0.6225	0.2307
258	SLU 10	-0.72	-0.79	36.16	11.5953	-0.6739	0.235
258	SLU 11	-0.75	-0.76	36.96	11.8468	-0.6886	0.247
258	SLU 12	-0.74	-0.79	36.94	11.8432	-0.6883	0.2437
258	SLU 13	-0.73	-0.8	36.66	11.7517	-0.683	0.2394
258	SLU 14	-0.77	-0.77	37.45	12.0032	-0.6977	0.2515
258	SLU 15	-0.76	-0.8	37.43	11.9996	-0.6974	0.2481
258	SLU 16	-0.76	-0.77	37.17	11.9142	-0.6925	0.2495
258	SLU 17	-0.75	-0.79	37.16	11.9105	-0.6923	0.2461
258	SLU 18	-0.75	-0.77	37.79	12.1116	-0.7042	0.2471
258	SLU 19	-0.75	-0.79	37.77	12.108	-0.7039	0.2438
258	SLU 20	-0.77	-0.78	38.28	12.268	-0.7133	0.2516
258	SLU 21	-0.76	-0.8	38.27	12.2643	-0.7131	0.2483
258	SLU 22	-0.77	-0.73	35.98	11.5427	-0.6701	0.2552
258	SLU 23	-0.76	-0.76	35.96	11.5365	-0.6697	0.2497
258	SLU 24	-0.79	-0.74	36.75	11.7881	-0.6844	0.2617
258	SLU 25	-0.79	-0.76	36.74	11.7844	-0.6841	0.2584
258	SLU 26	-0.77	-0.77	36.45	11.6929	-0.6788	0.2541
258	SLU 27	-0.81	-0.75	37.24	11.9445	-0.6935	0.2662
258	SLU 28	-0.8	-0.77	37.23	11.9408	-0.6932	0.2628
258	SLU 29	-0.8	-0.75	36.97	11.8554	-0.6883	0.2642
258	SLU 30	-0.79	-0.77	36.95	11.8518	-0.6881	0.2608

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
258	SLU 31	-0.81	-0.8	39.69	12.727	-0.7394	0.2651
258	SLU 32	-0.84	-0.78	40.49	12.9786	-0.7541	0.2771
258	SLU 33	-0.83	-0.8	40.47	12.9749	-0.7539	0.2738
258	SLU 34	-0.82	-0.81	40.18	12.8834	-0.7485	0.2696
258	SLU 35	-0.85	-0.79	40.98	13.135	-0.7632	0.2816
258	SLU 36	-0.85	-0.81	40.96	13.1313	-0.763	0.2783
258	SLU 37	-0.85	-0.79	40.7	13.0459	-0.7581	0.2796
258	SLU 38	-0.84	-0.81	40.69	13.0423	-0.7578	0.2763
258	SLU 39	-0.84	-0.78	41.32	13.2434	-0.7697	0.2773
258	SLU 40	-0.83	-0.81	41.3	13.2397	-0.7695	0.2739
258	SLU 41	-0.85	-0.79	41.81	13.3998	-0.7789	0.2817
258	SLU 42	-0.85	-0.82	41.79	13.3961	-0.7786	0.2784
258	SLU 43	-0.86	-0.92	40.98	13.1462	-0.7634	0.2823
258	SLU 44	-0.85	-0.96	40.96	13.14	-0.763	0.2767
258	SLU 45	-0.88	-0.93	41.75	13.3916	-0.7777	0.2888
258	SLU 46	-0.87	-0.96	41.74	13.3879	-0.7775	0.2854
258	SLU 47	-0.86	-0.97	41.45	13.2964	-0.7721	0.2812
258	SLU 48	-0.9	-0.94	42.24	13.548	-0.7868	0.2932
258	SLU 49	-0.89	-0.96	42.23	13.5443	-0.7866	0.2899
258	SLU 50	-0.89	-0.94	41.96	13.4589	-0.7816	0.2912
258	SLU 51	-0.88	-0.96	41.95	13.4553	-0.7814	0.2879
258	SLU 52	-0.9	-1	44.69	14.3305	-0.8328	0.2921
258	SLU 53	-0.93	-0.97	45.48	14.5821	-0.8475	0.3042
258	SLU 54	-0.92	-1	45.47	14.5784	-0.8472	0.3009
258	SLU 55	-0.91	-1.01	45.18	14.4869	-0.8419	0.2966
258	SLU 56	-0.94	-0.98	45.98	14.7385	-0.8566	0.3087
258	SLU 57	-0.93	-1	45.96	14.7348	-0.8563	0.3053
258	SLU 58	-0.94	-0.98	45.7	14.6494	-0.8514	0.3066
258	SLU 59	-0.93	-1	45.68	14.6458	-0.8512	0.3033
258	SLU 60	-0.93	-0.98	46.32	14.8469	-0.8631	0.3043
258	SLU 61	-0.92	-1	46.3	14.8432	-0.8628	0.301
258	SLU 62	-0.94	-0.99	46.81	15.0033	-0.8722	0.3088
258	SLU 63	-0.94	-1.01	46.79	14.9996	-0.8719	0.3055
258	SLU 64	-0.95	-0.94	44.51	14.2779	-0.829	0.3124
258	SLU 65	-0.94	-0.97	44.49	14.2718	-0.8286	0.3068
258	SLU 66	-0.97	-0.95	45.28	14.5233	-0.8432	0.3189
258	SLU 67	-0.96	-0.97	45.27	14.5197	-0.843	0.3156
258	SLU 68	-0.95	-0.98	44.98	14.4282	-0.8377	0.3113
258	SLU 69	-0.98	-0.96	45.77	14.6797	-0.8524	0.3234
258	SLU 70	-0.97	-0.98	45.76	14.676	-0.8521	0.32
258	SLU 71	-0.98	-0.96	45.49	14.5907	-0.8472	0.3213
258	SLU 72	-0.97	-0.98	45.48	14.587	-0.8469	0.318
258	SLU 73	-0.98	-1.01	48.22	15.4623	-0.8983	0.3223
258	SLU 74	-1.02	-0.99	49.01	15.7138	-0.913	0.3343
258	SLU 75	-1.01	-1.01	49	15.7102	-0.9128	0.331
258	SLU 76	-1	-1.02	48.71	15.6187	-0.9074	0.3268
258	SLU 77	-1.03	-1	49.5	15.8702	-0.9221	0.3388
258	SLU 78	-1.02	-1.02	49.49	15.8666	-0.9219	0.3355
258	SLU 79	-1.02	-1	49.23	15.7812	-0.9169	0.3368
258	SLU 80	-1.02	-1.02	49.21	15.7775	-0.9167	0.3334
258	SLU 81	-1.02	-0.99	49.85	15.9786	-0.9286	0.3344
258	SLU 82	-1.01	-1.02	49.83	15.975	-0.9284	0.3311
258	SLU 83	-1.03	-1	50.34	16.135	-0.9377	0.3389
258	SLU 84	-1.02	-1.02	50.32	16.1313	-0.9375	0.3356
258	SLE RA 1	-0.71	-0.72	33.46	10.7343	-0.6233	0.2337
258	SLE RA 2	-0.7	-0.74	33.45	10.7302	-0.623	0.23
258	SLE RA 3	-0.72	-0.72	33.98	10.8979	-0.6328	0.238
258	SLE RA 4	-0.72	-0.74	33.97	10.8954	-0.6326	0.2358
258	SLE RA 5	-0.71	-0.75	33.77	10.8344	-0.6291	0.233
258	SLE RA 6	-0.73	-0.73	34.3	11.0021	-0.6389	0.241
258	SLE RA 7	-0.73	-0.75	34.29	10.9997	-0.6387	0.2388
258	SLE RA 8	-0.73	-0.73	34.12	10.9428	-0.6354	0.2396
258	SLE RA 9	-0.72	-0.74	34.11	10.9403	-0.6352	0.2374
258	SLE RA 10	-0.73	-0.77	35.94	11.5239	-0.6695	0.2403
258	SLE RA 11	-0.76	-0.75	36.47	11.6916	-0.6793	0.2483
258	SLE RA 12	-0.75	-0.77	36.46	11.6891	-0.6791	0.2461
258	SLE RA 13	-0.74	-0.77	36.26	11.6281	-0.6756	0.2433
258	SLE RA 14	-0.77	-0.76	36.79	11.7958	-0.6854	0.2513
258	SLE RA 15	-0.76	-0.77	36.78	11.7934	-0.6852	0.2491
258	SLE RA 16	-0.76	-0.76	36.61	11.7365	-0.6819	0.2499
258	SLE RA 17	-0.76	-0.77	36.6	11.734	-0.6817	0.2477
258	SLE RA 18	-0.76	-0.76	37.02	11.8681	-0.6897	0.2484
258	SLE RA 19	-0.75	-0.77	37.01	11.8656	-0.6895	0.2462
258	SLE RA 20	-0.77	-0.76	37.35	11.9723	-0.6958	0.2514
258	SLE RA 21	-0.76	-0.78	37.34	11.9699	-0.6956	0.2491
258	SLE FR 1	-0.71	-0.72	33.46	10.7343	-0.6233	0.2337
258	SLE FR 2	-0.71	-0.72	33.46	10.7335	-0.6232	0.2329
258	SLE FR 3	-0.72	-0.72	33.59	10.776	-0.6257	0.2349
258	SLE FR 4	-0.72	-0.73	34.53	11.0736	-0.6431	0.2374
258	SLE FR 5	-0.73	-0.73	34.66	11.1161	-0.6456	0.2393
258	SLE FR 6	-0.73	-0.74	35.24	11.3012	-0.6565	0.241
258	SLE QP 1	-0.71	-0.72	33.46	10.7343	-0.6233	0.2337
258	SLE QP 2	-0.73	-0.73	34.53	11.0744	-0.6432	0.2381
258	SLD 1	2.2	-0.58	37.76	12.0648	-0.6962	-0.7945
258	SLD 2	2.46	-0.74	37.61	12.0197	-0.6937	-0.8889
258	SLD 3	1.99	-1.41	37.35	11.9688	-0.6897	-0.7142
258	SLD 4	2.25	-1.57	37.2	11.9237	-0.6872	-0.8086
258	SLD 5	0.42	0.61	36.14	11.5252	-0.6695	-0.1767
258	SLD 6	0.59	0.51	36.04	11.4957	-0.6678	-0.2384
258	SLD 7	-0.27	-2.17	34.79	11.205	-0.6476	0.0908
258	SLD 8	-0.1	-2.28	34.69	11.1756	-0.646	0.0291
258	SLD 9	-1.35	0.82	34.37	10.9733	-0.6404	0.4471
258	SLD 10	-1.18	0.72	34.27	10.9438	-0.6387	0.3854
258	SLD 11	-2.04	-1.97	33.02	10.6531	-0.6185	0.7146
258	SLD 12	-1.87	-2.07	32.92	10.6237	-0.6169	0.6529
258	SLD 13	-3.7	0.12	31.86	10.2251	-0.5992	1.2848
258	SLD 14	-3.44	-0.04	31.71	10.18	-0.5967	1.1904

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
258	SLD 15	-3.91	-0.72	31.45	10.1291	-0.5927	1.3651
258	SLD 16	-3.65	-0.88	31.3	10.084	-0.5901	1.2707
258	SLV 1	6.12	-0.41	42.07	13.3891	-0.7671	-2.1772
258	SLV 2	6.73	-0.78	41.72	13.284	-0.7612	-2.397
258	SLV 3	5.63	-2.3	41.15	13.1697	-0.7522	-1.9914
258	SLV 4	6.24	-2.67	40.8	13.0647	-0.7463	-2.2112
258	SLV 5	1.96	2.3	38.25	12.1194	-0.704	-0.7306
258	SLV 6	2.35	2.06	38.02	12.0519	-0.7002	-0.8719
258	SLV 7	0.34	-4	35.18	11.3884	-0.6542	-0.1113
258	SLV 8	0.73	-4.25	34.95	11.3209	-0.6505	-0.2526
258	SLV 9	-2.19	2.79	34.11	10.828	-0.6359	0.7288
258	SLV 10	-1.79	2.55	33.88	10.7605	-0.6321	0.5875
258	SLV 11	-3.8	-3.52	31.04	10.0969	-0.5861	1.3481
258	SLV 12	-3.41	-3.76	30.81	10.0294	-0.5824	1.2068
258	SLV 13	-7.69	1.22	28.26	9.0841	-0.5401	2.6874
258	SLV 14	-7.08	0.84	27.91	8.9791	-0.5342	2.4676
258	SLV 15	-8.18	-0.68	27.34	8.8648	-0.5251	2.8732
258	SLV 16	-7.57	-1.05	26.99	8.7598	-0.5193	2.6534
258	CRTFP Ux+	0	0	0	0	0	0
258	CRTFP Ux-	0	0	0	0	0	0
258	CRTFP Uy+	0	0	0	0	0	0
258	CRTFP Uy-	0	0	0	0	0	0
259	SLU 1	-0.76	-0.88	36.06	11.4528	0.0096	0.2626
259	SLU 2	-0.74	-0.92	36.04	11.4468	0.0096	0.2571
259	SLU 3	-0.78	-0.9	36.91	11.722	0.01	0.2699
259	SLU 4	-0.77	-0.92	36.9	11.7183	0.0099	0.2667
259	SLU 5	-0.76	-0.93	36.58	11.6182	0.0098	0.2622
259	SLU 6	-0.79	-0.91	37.46	11.8934	0.0102	0.2751
259	SLU 7	-0.78	-0.93	37.44	11.8897	0.0101	0.2718
259	SLU 8	-0.79	-0.91	37.15	11.7957	0.0101	0.2728
259	SLU 9	-0.78	-0.93	37.13	11.792	0.01	0.2695
259	SLU 10	-0.79	-0.98	40.19	12.7559	0.0105	0.2749
259	SLU 11	-0.83	-0.95	41.07	13.0311	0.0109	0.2877
259	SLU 12	-0.82	-0.97	41.06	13.0275	0.0108	0.2845
259	SLU 13	-0.81	-0.99	40.74	12.9273	0.0107	0.28
259	SLU 14	-0.84	-0.96	41.61	13.2025	0.0111	0.2929
259	SLU 15	-0.83	-0.99	41.6	13.1989	0.011	0.2896
259	SLU 16	-0.84	-0.96	41.31	13.1048	0.011	0.2906
259	SLU 17	-0.83	-0.98	41.29	13.1012	0.0109	0.2873
259	SLU 18	-0.83	-0.96	42	13.3231	0.0109	0.288
259	SLU 19	-0.82	-0.98	41.98	13.3194	0.0109	0.2847
259	SLU 20	-0.85	-0.97	42.54	13.4945	0.0111	0.2931
259	SLU 21	-0.84	-0.99	42.53	13.4908	0.0111	0.2898
259	SLU 22	-0.85	-0.91	39.97	12.6939	0.0111	0.2961
259	SLU 23	-0.84	-0.94	39.95	12.6878	0.011	0.2906
259	SLU 24	-0.87	-0.92	40.82	12.963	0.0114	0.3034
259	SLU 25	-0.86	-0.94	40.81	12.9594	0.0114	0.3002
259	SLU 26	-0.85	-0.96	40.49	12.8592	0.0112	0.2957
259	SLU 27	-0.89	-0.93	41.37	13.1344	0.0116	0.3086
259	SLU 28	-0.88	-0.96	41.35	13.1308	0.0116	0.3053
259	SLU 29	-0.88	-0.93	41.06	13.0367	0.0115	0.3063
259	SLU 30	-0.87	-0.95	41.04	13.0331	0.0115	0.303
259	SLU 31	-0.89	-1	44.1	13.997	0.0119	0.3084
259	SLU 32	-0.93	-0.97	44.98	14.2722	0.0123	0.3212
259	SLU 33	-0.92	-1	44.97	14.2685	0.0123	0.318
259	SLU 34	-0.9	-1.01	44.65	14.1684	0.0121	0.3135
259	SLU 35	-0.94	-0.99	45.52	14.4436	0.0125	0.3264
259	SLU 36	-0.93	-1.01	45.51	14.44	0.0125	0.3231
259	SLU 37	-0.93	-0.98	45.22	14.3459	0.0124	0.3241
259	SLU 38	-0.92	-1.01	45.2	14.3422	0.0124	0.3208
259	SLU 39	-0.93	-0.98	45.91	14.5642	0.0124	0.3215
259	SLU 40	-0.92	-1.01	45.9	14.5605	0.0123	0.3182
259	SLU 41	-0.94	-0.99	46.45	14.7356	0.0126	0.3266
259	SLU 42	-0.93	-1.02	46.44	14.7319	0.0126	0.3233
259	SLU 43	-0.95	-1.14	45.54	14.4632	0.012	0.3299
259	SLU 44	-0.94	-1.18	45.51	14.4571	0.012	0.3244
259	SLU 45	-0.97	-1.15	46.39	14.7323	0.0123	0.3372
259	SLU 46	-0.96	-1.18	46.38	14.7287	0.0123	0.334
259	SLU 47	-0.95	-1.19	46.06	14.6285	0.0122	0.3295
259	SLU 48	-0.99	-1.16	46.94	14.9037	0.0126	0.3424
259	SLU 49	-0.98	-1.19	46.92	14.9001	0.0125	0.3391
259	SLU 50	-0.98	-1.16	46.63	14.806	0.0125	0.3401
259	SLU 51	-0.97	-1.19	46.61	14.8024	0.0124	0.3368
259	SLU 52	-0.99	-1.23	49.67	15.7663	0.0129	0.3422
259	SLU 53	-1.02	-1.21	50.55	16.0415	0.0133	0.355
259	SLU 54	-1.01	-1.23	50.53	16.0378	0.0132	0.3518
259	SLU 55	-1	-1.24	50.21	15.9377	0.0131	0.3473
259	SLU 56	-1.04	-1.22	51.09	16.2129	0.0135	0.3602
259	SLU 57	-1.03	-1.24	51.08	16.2092	0.0134	0.3569
259	SLU 58	-1.03	-1.22	50.78	16.1152	0.0134	0.3579
259	SLU 59	-1.02	-1.24	50.77	16.1115	0.0133	0.3546
259	SLU 60	-1.02	-1.22	51.48	16.3334	0.0133	0.3553
259	SLU 61	-1.02	-1.24	51.46	16.3298	0.0133	0.352
259	SLU 62	-1.04	-1.23	52.02	16.5048	0.0135	0.3604
259	SLU 63	-1.03	-1.25	52.01	16.5012	0.0135	0.3571
259	SLU 64	-1.05	-1.16	49.45	15.7043	0.0135	0.3634
259	SLU 65	-1.03	-1.2	49.42	15.6982	0.0134	0.3579
259	SLU 66	-1.07	-1.18	50.3	15.9734	0.0138	0.3707
259	SLU 67	-1.06	-1.2	50.29	15.9697	0.0138	0.3674
259	SLU 68	-1.05	-1.21	49.97	15.8696	0.0136	0.363
259	SLU 69	-1.08	-1.19	50.85	16.1448	0.014	0.3758
259	SLU 70	-1.07	-1.21	50.83	16.1411	0.014	0.3726
259	SLU 71	-1.08	-1.19	50.54	16.0471	0.0139	0.3736
259	SLU 72	-1.07	-1.21	50.52	16.0434	0.0139	0.3703
259	SLU 73	-1.08	-1.26	53.58	17.0073	0.0143	0.3757
259	SLU 74	-1.12	-1.23	54.46	17.2825	0.0147	0.3885
259	SLU 75	-1.11	-1.25	54.44	17.2789	0.0147	0.3852

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
259	SLU 76	-1.1	-1.27	54.13	17.1787	0.0145	0.3808
259	SLU 77	-1.13	-1.24	55	17.454	0.0149	0.3936
259	SLU 78	-1.13	-1.27	54.99	17.4503	0.0149	0.3904
259	SLU 79	-1.13	-1.24	54.69	17.3562	0.0148	0.3914
259	SLU 80	-1.12	-1.26	54.68	17.3526	0.0148	0.3881
259	SLU 81	-1.12	-1.24	55.39	17.5745	0.0148	0.3888
259	SLU 82	-1.11	-1.26	55.37	17.5708	0.0147	0.3855
259	SLU 83	-1.14	-1.25	55.93	17.7459	0.015	0.3939
259	SLU 84	-1.13	-1.27	55.92	17.7422	0.0149	0.3906
259	SLE RA 1	-0.78	-0.89	37.18	11.8074	0.0101	0.2721
259	SLE RA 2	-0.77	-0.92	37.16	11.8034	0.01	0.2685
259	SLE RA 3	-0.8	-0.9	37.75	11.9869	0.0103	0.2771
259	SLE RA 4	-0.79	-0.91	37.74	11.9844	0.0102	0.2749
259	SLE RA 5	-0.78	-0.92	37.52	11.9176	0.0101	0.2719
259	SLE RA 6	-0.81	-0.91	38.11	12.1011	0.0104	0.2805
259	SLE RA 7	-0.8	-0.92	38.1	12.0987	0.0104	0.2783
259	SLE RA 8	-0.8	-0.9	37.9	12.036	0.0103	0.279
259	SLE RA 9	-0.8	-0.92	37.89	12.0335	0.0103	0.2768
259	SLE RA 10	-0.81	-0.95	39.93	12.6762	0.0106	0.2804
259	SLE RA 11	-0.83	-0.93	40.52	12.8596	0.0109	0.2889
259	SLE RA 12	-0.83	-0.95	40.51	12.8572	0.0108	0.2867
259	SLE RA 13	-0.82	-0.96	40.3	12.7904	0.0107	0.2838
259	SLE RA 14	-0.84	-0.94	40.88	12.9739	0.011	0.2923
259	SLE RA 15	-0.84	-0.96	40.87	12.9715	0.011	0.2901
259	SLE RA 16	-0.84	-0.94	40.67	12.9088	0.0109	0.2908
259	SLE RA 17	-0.83	-0.96	40.66	12.9063	0.0109	0.2886
259	SLE RA 18	-0.83	-0.94	41.14	13.0543	0.0109	0.2891
259	SLE RA 19	-0.83	-0.96	41.13	13.0518	0.0109	0.2869
259	SLE RA 20	-0.84	-0.95	41.5	13.1685	0.0111	0.2925
259	SLE RA 21	-0.84	-0.96	41.49	13.1661	0.011	0.2903
259	SLE FR 1	-0.78	-0.89	37.18	11.8074	0.0101	0.2721
259	SLE FR 2	-0.78	-0.89	37.18	11.8066	0.0101	0.2714
259	SLE FR 3	-0.79	-0.89	37.32	11.8531	0.0101	0.2735
259	SLE FR 4	-0.8	-0.91	38.36	12.1807	0.0103	0.2765
259	SLE FR 5	-0.8	-0.91	38.51	12.2272	0.0104	0.2786
259	SLE FR 6	-0.81	-0.91	39.16	12.4309	0.0105	0.2806
259	SLE QP 1	-0.78	-0.89	37.18	11.8074	0.0101	0.2721
259	SLE QP 2	-0.8	-0.9	38.37	12.1815	0.0103	0.2772
259	SLD 1	2.47	-0.76	41.62	13.172	0.022	-0.8683
259	SLD 2	2.76	-0.94	41.47	13.1239	0.0215	-0.9705
259	SLD 3	2.24	-1.7	41.22	13.0824	0.0203	-0.7869
259	SLD 4	2.53	-1.87	41.06	13.0343	0.0198	-0.8891
259	SLD 5	0.48	0.58	39.98	12.6231	0.0165	-0.1718
259	SLD 6	0.67	0.47	39.88	12.5917	0.0161	-0.2386
259	SLD 7	-0.29	-2.53	38.64	12.3243	0.0108	0.0995
259	SLD 8	-0.1	-2.64	38.54	12.2929	0.0105	0.0327
259	SLD 9	-1.5	0.83	38.2	12.0701	0.0101	0.5217
259	SLD 10	-1.31	0.72	38.1	12.0387	0.0098	0.4549
259	SLD 11	-2.27	-2.28	36.85	11.7713	0.0045	0.7931
259	SLD 12	-2.08	-2.39	36.75	11.7399	0.0042	0.7263
259	SLD 13	-4.13	0.06	35.67	11.3287	0.0009	1.4436
259	SLD 14	-3.84	-0.11	35.52	11.2806	0.0003	1.3414
259	SLD 15	-4.36	-0.87	35.27	11.239	-0.0008	1.525
259	SLD 16	-4.07	-1.04	35.11	11.191	-0.0014	1.4228
259	SLV 1	6.85	-0.62	45.97	14.4968	0.0376	-2.4028
259	SLV 2	7.53	-1.02	45.61	14.3848	0.0364	-2.6409
259	SLV 3	6.31	-2.73	45.05	14.2914	0.0338	-2.2135
259	SLV 4	6.99	-3.13	44.69	14.1795	0.0325	-2.4515
259	SLV 5	2.2	2.46	42.1	13.2067	0.0246	-0.7731
259	SLV 6	2.64	2.19	41.87	13.1348	0.0238	-0.9261
259	SLV 7	0.4	-4.58	39.04	12.5222	0.0117	-0.142
259	SLV 8	0.83	-4.85	38.81	12.4502	0.0109	-0.295
259	SLV 9	-2.43	3.04	37.92	11.9127	0.0097	0.8495
259	SLV 10	-1.99	2.78	37.69	11.8408	0.0089	0.6965
259	SLV 11	-4.24	-4	34.86	11.2282	-0.0031	1.4806
259	SLV 12	-3.8	-4.26	34.63	11.1562	-0.0039	1.3276
259	SLV 13	-8.59	1.32	32.04	10.1835	-0.0119	3.006
259	SLV 14	-7.91	0.92	31.68	10.0716	-0.0131	2.7679
259	SLV 15	-9.13	-0.79	31.12	9.9781	-0.0157	3.1953
259	SLV 16	-8.45	-1.19	30.77	9.8662	-0.017	2.9573
259	CRTFP Ux+	0	0	0	0	0	0
259	CRTFP Ux-	0	0	0	0	0	0
259	CRTFP Uy+	0	0	0	0	0	0
259	CRTFP Uy-	0	0	0	0	0	0
260	SLU 1	-0.63	-0.79	30.08	9.5213	0.8505	0.2431
260	SLU 2	-0.62	-0.82	30.06	9.5169	0.85	0.2394
260	SLU 3	-0.65	-0.8	30.79	9.7444	0.8706	0.2496
260	SLU 4	-0.64	-0.82	30.78	9.7417	0.8703	0.2474
260	SLU 5	-0.63	-0.83	30.52	9.6589	0.8628	0.244
260	SLU 6	-0.66	-0.81	31.24	9.8863	0.8834	0.2542
260	SLU 7	-0.66	-0.83	31.23	9.8837	0.8831	0.252
260	SLU 8	-0.66	-0.81	30.99	9.8053	0.8762	0.2523
260	SLU 9	-0.65	-0.83	30.97	9.8026	0.8758	0.25
260	SLU 10	-0.66	-0.87	33.54	10.6062	0.948	0.2559
260	SLU 11	-0.69	-0.85	34.26	10.8336	0.9687	0.2661
260	SLU 12	-0.69	-0.87	34.25	10.831	0.9684	0.2639
260	SLU 13	-0.68	-0.88	33.99	10.7482	0.9609	0.2604
260	SLU 14	-0.71	-0.86	34.72	10.9756	0.9815	0.2707
260	SLU 15	-0.7	-0.88	34.7	10.973	0.9812	0.2685
260	SLU 16	-0.7	-0.86	34.46	10.8946	0.9743	0.2687
260	SLU 17	-0.69	-0.88	34.45	10.8919	0.9739	0.2665
260	SLU 18	-0.69	-0.86	35.04	11.0774	0.9907	0.2666
260	SLU 19	-0.69	-0.88	35.03	11.0748	0.9903	0.2644
260	SLU 20	-0.71	-0.87	35.5	11.2194	1.0035	0.2712
260	SLU 21	-0.7	-0.89	35.48	11.2168	1.0031	0.269
260	SLU 22	-0.71	-0.81	33.33	10.5499	0.9427	0.2718
260	SLU 23	-0.7	-0.85	33.31	10.5455	0.9422	0.2681

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
260	SLU 24	-0.73	-0.83	34.04	10.7729	0.9628	0.2784
260	SLU 25	-0.72	-0.85	34.03	10.7703	0.9625	0.2761
260	SLU 26	-0.71	-0.86	33.77	10.6875	0.955	0.2727
260	SLU 27	-0.74	-0.84	34.49	10.9149	0.9756	0.283
260	SLU 28	-0.74	-0.86	34.48	10.9123	0.9753	0.2807
260	SLU 29	-0.74	-0.83	34.24	10.8339	0.9684	0.281
260	SLU 30	-0.73	-0.85	34.23	10.8312	0.968	0.2788
260	SLU 31	-0.74	-0.9	36.79	11.6347	1.0402	0.2846
260	SLU 32	-0.77	-0.88	37.51	11.8622	1.0609	0.2949
260	SLU 33	-0.77	-0.9	37.5	11.8595	1.0605	0.2926
260	SLU 34	-0.76	-0.91	37.24	11.7767	1.053	0.2892
260	SLU 35	-0.79	-0.89	37.97	12.0042	1.0737	0.2994
260	SLU 36	-0.78	-0.91	37.95	12.0015	1.0734	0.2972
260	SLU 37	-0.78	-0.88	37.71	11.9231	1.0664	0.2975
260	SLU 38	-0.77	-0.9	37.7	11.9205	1.0661	0.2953
260	SLU 39	-0.78	-0.89	38.29	12.106	1.0828	0.2954
260	SLU 40	-0.77	-0.91	38.28	12.1033	1.0825	0.2932
260	SLU 41	-0.79	-0.9	38.75	12.248	1.0957	0.3
260	SLU 42	-0.78	-0.92	38.73	12.2453	1.0953	0.2977
260	SLU 43	-0.8	-1.02	37.99	12.0251	1.0741	0.3062
260	SLU 44	-0.78	-1.05	37.97	12.0206	1.0735	0.3024
260	SLU 45	-0.81	-1.03	38.7	12.2481	1.0942	0.3127
260	SLU 46	-0.81	-1.05	38.69	12.2455	1.0938	0.3105
260	SLU 47	-0.79	-1.06	38.43	12.1626	1.0863	0.307
260	SLU 48	-0.83	-1.04	39.15	12.3901	1.107	0.3173
260	SLU 49	-0.82	-1.06	39.14	12.3874	1.1067	0.315
260	SLU 50	-0.82	-1.04	38.9	12.309	1.0997	0.3153
260	SLU 51	-0.81	-1.06	38.89	12.3064	1.0994	0.3131
260	SLU 52	-0.83	-1.1	41.45	13.1099	1.1716	0.3189
260	SLU 53	-0.86	-1.08	42.17	13.3374	1.1923	0.3292
260	SLU 54	-0.85	-1.1	42.16	13.3347	1.1919	0.327
260	SLU 55	-0.84	-1.11	41.9	13.2519	1.1844	0.3235
260	SLU 56	-0.87	-1.09	42.63	13.4794	1.2051	0.3338
260	SLU 57	-0.86	-1.11	42.61	13.4767	1.2047	0.3315
260	SLU 58	-0.86	-1.09	42.37	13.3983	1.1978	0.3318
260	SLU 59	-0.86	-1.11	42.36	13.3957	1.1975	0.3296
260	SLU 60	-0.86	-1.09	42.95	13.5812	1.2142	0.3297
260	SLU 61	-0.85	-1.11	42.94	13.5785	1.2139	0.3275
260	SLU 62	-0.87	-1.1	43.41	13.7231	1.227	0.3343
260	SLU 63	-0.86	-1.12	43.39	13.7205	1.2267	0.3321
260	SLU 64	-0.88	-1.04	41.24	13.0536	1.1663	0.3349
260	SLU 65	-0.86	-1.08	41.22	13.0492	1.1657	0.3312
260	SLU 66	-0.89	-1.06	41.95	13.2767	1.1864	0.3414
260	SLU 67	-0.89	-1.08	41.94	13.274	1.186	0.3392
260	SLU 68	-0.87	-1.09	41.68	13.1912	1.1785	0.3358
260	SLU 69	-0.91	-1.07	42.4	13.4187	1.1992	0.346
260	SLU 70	-0.9	-1.09	42.39	13.416	1.1988	0.3438
260	SLU 71	-0.9	-1.06	42.15	13.3376	1.1919	0.3441
260	SLU 72	-0.89	-1.08	42.14	13.335	1.1916	0.3418
260	SLU 73	-0.91	-1.13	44.7	14.1385	1.2638	0.3477
260	SLU 74	-0.94	-1.11	45.42	14.3659	1.2845	0.3579
260	SLU 75	-0.93	-1.13	45.41	14.3633	1.2841	0.3557
260	SLU 76	-0.92	-1.14	45.15	14.2805	1.2766	0.3523
260	SLU 77	-0.95	-1.12	45.88	14.5079	1.2973	0.3625
260	SLU 78	-0.94	-1.14	45.86	14.5053	1.2969	0.3603
260	SLU 79	-0.94	-1.11	45.62	14.4269	1.29	0.3606
260	SLU 80	-0.94	-1.13	45.61	14.4242	1.2896	0.3583
260	SLU 81	-0.94	-1.11	46.2	14.6097	1.3064	0.3585
260	SLU 82	-0.93	-1.13	46.19	14.6071	1.306	0.3562
260	SLU 83	-0.95	-1.13	46.66	14.7517	1.3192	0.363
260	SLU 84	-0.94	-1.14	46.64	14.7491	1.3189	0.3608
260	SLE RA 1	-0.66	-0.8	31.01	9.8152	0.8769	0.2513
260	SLE RA 2	-0.65	-0.82	31	9.8123	0.8765	0.2488
260	SLE RA 3	-0.67	-0.81	31.48	9.9639	0.8903	0.2557
260	SLE RA 4	-0.66	-0.82	31.48	9.9621	0.89	0.2542
260	SLE RA 5	-0.66	-0.83	31.3	9.9069	0.885	0.2519
260	SLE RA 6	-0.68	-0.81	31.79	10.0585	0.8988	0.2587
260	SLE RA 7	-0.67	-0.83	31.78	10.0568	0.8986	0.2572
260	SLE RA 8	-0.67	-0.81	31.61	10.0045	0.894	0.2574
260	SLE RA 9	-0.67	-0.82	31.61	10.0027	0.8937	0.2559
260	SLE RA 10	-0.68	-0.85	33.31	10.5384	0.9419	0.2598
260	SLE RA 11	-0.7	-0.84	33.8	10.6901	0.9557	0.2667
260	SLE RA 12	-0.69	-0.85	33.79	10.6883	0.9554	0.2652
260	SLE RA 13	-0.68	-0.86	33.61	10.6331	0.9504	0.2629
260	SLE RA 14	-0.7	-0.85	34.1	10.7847	0.9642	0.2697
260	SLE RA 15	-0.7	-0.86	34.09	10.783	0.964	0.2682
260	SLE RA 16	-0.7	-0.84	33.93	10.7307	0.9594	0.2684
260	SLE RA 17	-0.7	-0.86	33.92	10.7289	0.9591	0.2669
260	SLE RA 18	-0.7	-0.84	34.32	10.8526	0.9703	0.267
260	SLE RA 19	-0.69	-0.86	34.31	10.8508	0.9701	0.2655
260	SLE RA 20	-0.71	-0.85	34.62	10.9473	0.9788	0.2701
260	SLE RA 21	-0.7	-0.87	34.61	10.9455	0.9786	0.2686
260	SLE FR 1	-0.66	-0.8	31.01	9.8152	0.8769	0.2513
260	SLE FR 2	-0.65	-0.8	31.01	9.8146	0.8768	0.2508
260	SLE FR 3	-0.66	-0.8	31.13	9.8531	0.8803	0.2525
260	SLE FR 4	-0.67	-0.82	32	10.1258	0.9048	0.2555
260	SLE FR 5	-0.67	-0.81	32.12	10.1643	0.9083	0.2572
260	SLE FR 6	-0.68	-0.82	32.67	10.3339	0.9236	0.2592
260	SLE QP 1	-0.66	-0.8	31.01	9.8152	0.8769	0.2513
260	SLE QP 2	-0.67	-0.81	32	10.1264	0.9049	0.256
260	SLD 1	2.1	-0.72	34.43	10.856	0.9801	-0.7012
260	SLD 2	2.34	-0.86	34.32	10.8183	0.9766	-0.7836
260	SLD 3	1.9	-1.51	34.13	10.7956	0.9709	-0.6376
260	SLD 4	2.15	-1.65	34.02	10.7579	0.9674	-0.72
260	SLD 5	0.42	0.44	33.21	10.4436	0.9421	-0.1129
260	SLD 6	0.58	0.35	33.13	10.4189	0.9398	-0.1668
260	SLD 7	-0.24	-2.19	32.21	10.2422	0.9113	0.0988

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
260	SLD 8	-0.08	-2.29	32.14	10.2176	0.909	0.045
260	SLD 9	-1.26	0.66	31.87	10.0352	0.9008	0.467
260	SLD 10	-1.1	0.57	31.8	10.0106	0.8985	0.4132
260	SLD 11	-1.91	-1.97	30.88	9.8339	0.87	0.6788
260	SLD 12	-1.75	-2.06	30.8	9.8093	0.8677	0.625
260	SLD 13	-3.48	0.03	29.99	9.495	0.8425	1.2321
260	SLD 14	-3.24	-0.12	29.87	9.4572	0.8389	1.1497
260	SLD 15	-3.68	-0.76	29.69	9.4346	0.8332	1.2956
260	SLD 16	-3.43	-0.91	29.58	9.3968	0.8297	1.2132
260	SLV 1	5.8	-0.62	37.68	11.8322	1.0807	-1.9836
260	SLV 2	6.37	-0.96	37.41	11.7443	1.0724	-2.1755
260	SLV 3	5.34	-2.41	37	11.693	1.0596	-1.8352
260	SLV 4	5.92	-2.74	36.73	11.6051	1.0513	-2.0272
260	SLV 5	1.87	2.01	34.78	10.8643	0.991	-0.6081
260	SLV 6	2.24	1.8	34.61	10.8078	0.9857	-0.7314
260	SLV 7	0.34	-3.94	32.51	10.4003	0.9208	-0.1134
260	SLV 8	0.71	-4.16	32.34	10.3439	0.9155	-0.2368
260	SLV 9	-2.05	2.53	31.67	9.909	0.8943	0.7488
260	SLV 10	-1.68	2.32	31.49	9.8525	0.889	0.6255
260	SLV 11	-3.57	-3.42	29.4	9.445	0.8241	1.2434
260	SLV 12	-3.2	-3.63	29.22	9.3885	0.8188	1.1201
260	SLV 13	-7.25	1.12	27.28	8.6477	0.7585	2.5392
260	SLV 14	-6.68	0.78	27.01	8.5598	0.7502	2.3473
260	SLV 15	-7.71	-0.67	26.6	8.5085	0.7374	2.6876
260	SLV 16	-7.13	-1	26.33	8.4206	0.7292	2.4957
260	CRTFP Ux+	0	0	0	0	0	0
260	CRTFP Ux-	0	0	0	0	0	0
260	CRTFP Uy+	0	0	0	0	0	0
260	CRTFP Uy-	0	0	0	0	0	0
261	SLU 1	-1.21	-1.51	57.01	17.336	-2.1577	0.3461
261	SLU 2	-1.19	-1.58	56.97	17.3297	-2.1566	0.3351
261	SLU 3	-1.25	-1.54	58.35	17.7413	-2.208	0.3565
261	SLU 4	-1.23	-1.58	58.33	17.7375	-2.2074	0.3499
261	SLU 5	-1.21	-1.6	57.83	17.5875	-2.1886	0.3422
261	SLU 6	-1.27	-1.56	59.2	17.9991	-2.24	0.3636
261	SLU 7	-1.26	-1.6	59.18	17.9953	-2.2394	0.357
261	SLU 8	-1.26	-1.55	58.71	17.8515	-2.2217	0.3602
261	SLU 9	-1.25	-1.59	58.69	17.8478	-2.221	0.3536
261	SLU 10	-1.27	-1.67	63.57	19.3232	-2.4067	0.3593
261	SLU 11	-1.33	-1.63	64.94	19.7348	-2.4581	0.3807
261	SLU 12	-1.32	-1.67	64.92	19.7311	-2.4574	0.3741
261	SLU 13	-1.3	-1.69	64.42	19.581	-2.4387	0.3663
261	SLU 14	-1.35	-1.65	65.79	19.9926	-2.4901	0.3877
261	SLU 15	-1.34	-1.69	65.77	19.9889	-2.4894	0.3811
261	SLU 16	-1.34	-1.65	65.3	19.8451	-2.4717	0.3844
261	SLU 17	-1.33	-1.69	65.28	19.8413	-2.4711	0.3778
261	SLU 18	-1.33	-1.65	66.43	20.1838	-2.5149	0.3806
261	SLU 19	-1.32	-1.69	66.41	20.1801	-2.5143	0.374
261	SLU 20	-1.36	-1.67	67.28	20.4416	-2.5469	0.3877
261	SLU 21	-1.34	-1.71	67.26	20.4379	-2.5463	0.3811
261	SLU 22	-1.37	-1.55	63.13	19.204	-2.3877	0.3962
261	SLU 23	-1.34	-1.62	63.1	19.1977	-2.3867	0.3852
261	SLU 24	-1.4	-1.58	64.47	19.6094	-2.438	0.4066
261	SLU 25	-1.39	-1.61	64.45	19.6056	-2.4374	0.4
261	SLU 26	-1.37	-1.64	63.95	19.4555	-2.4187	0.3923
261	SLU 27	-1.43	-1.6	65.32	19.8672	-2.47	0.4137
261	SLU 28	-1.41	-1.63	65.3	19.8634	-2.4694	0.4071
261	SLU 29	-1.41	-1.59	64.84	19.7196	-2.4517	0.4103
261	SLU 30	-1.4	-1.63	64.82	19.7158	-2.4511	0.4037
261	SLU 31	-1.43	-1.71	69.69	21.1912	-2.6367	0.4094
261	SLU 32	-1.49	-1.67	71.06	21.6029	-2.6881	0.4308
261	SLU 33	-1.47	-1.71	71.04	21.5991	-2.6875	0.4242
261	SLU 34	-1.45	-1.73	70.55	21.449	-2.6687	0.4164
261	SLU 35	-1.51	-1.69	71.92	21.8607	-2.7201	0.4378
261	SLU 36	-1.49	-1.73	71.9	21.8569	-2.7194	0.4312
261	SLU 37	-1.5	-1.69	71.43	21.7131	-2.7018	0.4345
261	SLU 38	-1.48	-1.73	71.41	21.7093	-2.7011	0.4279
261	SLU 39	-1.49	-1.69	72.55	22.0519	-2.745	0.4307
261	SLU 40	-1.47	-1.73	72.53	22.0481	-2.7443	0.4241
261	SLU 41	-1.51	-1.71	73.4	22.3097	-2.777	0.4378
261	SLU 42	-1.5	-1.75	73.38	22.3059	-2.7763	0.4312
261	SLU 43	-1.53	-1.95	72.01	21.8963	-2.7261	0.4328
261	SLU 44	-1.5	-2.02	71.98	21.89	-2.7251	0.4218
261	SLU 45	-1.56	-1.98	73.35	22.3016	-2.7764	0.4432
261	SLU 46	-1.54	-2.02	73.33	22.2979	-2.7758	0.4366
261	SLU 47	-1.52	-2.04	72.83	22.1478	-2.7571	0.4289
261	SLU 48	-1.58	-2	74.2	22.5594	-2.8084	0.4502
261	SLU 49	-1.57	-2.04	74.18	22.5557	-2.8078	0.4436
261	SLU 50	-1.57	-1.99	73.71	22.4119	-2.7901	0.4469
261	SLU 51	-1.56	-2.03	73.69	22.4081	-2.7895	0.4403
261	SLU 52	-1.58	-2.12	78.57	23.8835	-2.9752	0.446
261	SLU 53	-1.64	-2.08	79.94	24.2952	-3.0265	0.4673
261	SLU 54	-1.63	-2.11	79.92	24.2914	-3.0259	0.4607
261	SLU 55	-1.61	-2.14	79.42	24.1413	-3.0071	0.453
261	SLU 56	-1.67	-2.1	80.79	24.553	-3.0585	0.4744
261	SLU 57	-1.65	-2.13	80.77	24.5492	-3.0579	0.4678
261	SLU 58	-1.66	-2.09	80.31	24.4054	-3.0402	0.471
261	SLU 59	-1.64	-2.13	80.29	24.4016	-3.0396	0.4644
261	SLU 60	-1.65	-2.09	81.43	24.7442	-3.0834	0.4673
261	SLU 61	-1.63	-2.13	81.41	24.7404	-3.0828	0.4607
261	SLU 62	-1.67	-2.11	82.28	25.002	-3.1154	0.4743
261	SLU 63	-1.65	-2.15	82.26	24.9982	-3.1147	0.4677
261	SLU 64	-1.68	-1.99	78.14	23.7643	-2.9562	0.4829
261	SLU 65	-1.65	-2.06	78.1	23.758	-2.9551	0.4719
261	SLU 66	-1.71	-2.02	79.47	24.1697	-3.0065	0.4933
261	SLU 67	-1.7	-2.05	79.45	24.1659	-3.0058	0.4867
261	SLU 68	-1.68	-2.08	78.95	24.0158	-2.9871	0.479

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
261	SLU 69	-1.74	-2.04	80.33	24.4275	-3.0384	0.5003
261	SLU 70	-1.72	-2.07	80.31	24.4237	-3.0378	0.4937
261	SLU 71	-1.73	-2.03	79.84	24.2799	-3.0201	0.497
261	SLU 72	-1.71	-2.07	79.82	24.2761	-3.0195	0.4904
261	SLU 73	-1.74	-2.15	84.7	25.7515	-3.2052	0.4961
261	SLU 74	-1.8	-2.11	86.07	26.1632	-3.2565	0.5174
261	SLU 75	-1.78	-2.15	86.05	26.1594	-3.2559	0.5108
261	SLU 76	-1.76	-2.17	85.55	26.0093	-3.2372	0.5031
261	SLU 77	-1.82	-2.13	86.92	26.421	-3.2885	0.5245
261	SLU 78	-1.8	-2.17	86.9	26.4172	-3.2879	0.5179
261	SLU 79	-1.81	-2.13	86.43	26.2734	-3.2702	0.5211
261	SLU 80	-1.79	-2.17	86.41	26.2696	-3.2696	0.5145
261	SLU 81	-1.8	-2.13	87.55	26.6122	-3.3134	0.5174
261	SLU 82	-1.78	-2.17	87.53	26.6084	-3.3128	0.5108
261	SLU 83	-1.82	-2.15	88.41	26.87	-3.3454	0.5244
261	SLU 84	-1.81	-2.19	88.39	26.8662	-3.3448	0.5178
261	SLE RA 1	-1.26	-1.52	58.76	17.8697	-2.2234	0.3604
261	SLE RA 2	-1.24	-1.57	58.74	17.8655	-2.2227	0.3531
261	SLE RA 3	-1.28	-1.54	59.65	18.1399	-2.2569	0.3674
261	SLE RA 4	-1.27	-1.57	59.64	18.1374	-2.2565	0.363
261	SLE RA 5	-1.26	-1.58	59.3	18.0373	-2.244	0.3578
261	SLE RA 6	-1.3	-1.55	60.22	18.3118	-2.2783	0.3721
261	SLE RA 7	-1.29	-1.58	60.2	18.3093	-2.2779	0.3677
261	SLE RA 8	-1.29	-1.55	59.89	18.2134	-2.2661	0.3698
261	SLE RA 9	-1.28	-1.58	59.88	18.2109	-2.2656	0.3654
261	SLE RA 10	-1.3	-1.63	63.13	19.1945	-2.3894	0.3692
261	SLE RA 11	-1.34	-1.6	64.04	19.4689	-2.4237	0.3835
261	SLE RA 12	-1.33	-1.63	64.03	19.4664	-2.4232	0.3791
261	SLE RA 13	-1.31	-1.64	63.7	19.3664	-2.4108	0.3739
261	SLE RA 14	-1.35	-1.62	64.61	19.6408	-2.445	0.3882
261	SLE RA 15	-1.34	-1.64	64.6	19.6383	-2.4446	0.3838
261	SLE RA 16	-1.35	-1.62	64.29	19.5424	-2.4328	0.3859
261	SLE RA 17	-1.33	-1.64	64.28	19.5399	-2.4324	0.3815
261	SLE RA 18	-1.34	-1.62	65.04	19.7683	-2.4616	0.3834
261	SLE RA 19	-1.33	-1.64	65.02	19.7658	-2.4612	0.379
261	SLE RA 20	-1.35	-1.63	65.6	19.9401	-2.4829	0.3881
261	SLE RA 21	-1.34	-1.66	65.59	19.9376	-2.4825	0.3837
261	SLE FR 1	-1.26	-1.52	58.76	17.8697	-2.2234	0.3604
261	SLE FR 2	-1.25	-1.53	58.75	17.8688	-2.2233	0.359
261	SLE FR 3	-1.26	-1.53	58.99	17.9384	-2.2319	0.3623
261	SLE FR 4	-1.28	-1.56	60.64	18.4384	-2.2947	0.3659
261	SLE FR 5	-1.29	-1.56	60.87	18.508	-2.3034	0.3692
261	SLE FR 6	-1.3	-1.57	61.9	18.819	-2.3425	0.3719
261	SLE QP 1	-1.26	-1.52	58.76	17.8697	-2.2234	0.3604
261	SLE QP 2	-1.28	-1.55	60.64	18.4393	-2.2949	0.3673
261	SLD 1	4.08	-1.37	64.56	19.5229	-2.4027	-1.2817
261	SLD 2	4.55	-1.64	64.37	19.4628	-2.3971	-1.4497
261	SLD 3	3.69	-2.91	64.05	19.4438	-2.3876	-1.441
261	SLD 4	4.17	-3.17	63.87	19.3837	-2.3821	-1.6089
261	SLD 5	0.82	0.88	62.62	18.8949	-2.351	0.1438
261	SLD 6	1.13	0.71	62.49	18.8556	-2.3473	0.0341
261	SLD 7	-0.45	-4.24	60.93	18.6313	-2.3009	-0.387
261	SLD 8	-0.14	-4.42	60.81	18.592	-2.2973	-0.4967
261	SLD 9	-2.43	1.31	60.47	18.2865	-2.2924	1.2314
261	SLD 10	-2.11	1.14	60.35	18.2472	-2.2888	1.1217
261	SLD 11	-3.7	-3.81	58.79	18.0229	-2.2424	0.7006
261	SLD 12	-3.38	-3.99	58.67	17.9836	-2.2388	0.5909
261	SLD 13	-6.74	0.07	57.42	17.4948	-2.2076	2.3436
261	SLD 14	-6.26	-0.2	57.23	17.4347	-2.2021	2.1757
261	SLD 15	-7.12	-1.47	56.91	17.4157	-2.1926	2.1844
261	SLD 16	-6.64	-1.73	56.72	17.3556	-2.1871	2.0164
261	SLV 1	11.25	-1.19	69.79	20.9743	-2.5467	-3.4947
261	SLV 2	12.37	-1.81	69.35	20.8343	-2.5338	-3.8859
261	SLV 3	10.37	-4.67	68.64	20.7891	-2.5122	-3.8613
261	SLV 4	11.48	-5.29	68.2	20.6491	-2.4993	-4.2524
261	SLV 5	3.63	3.94	65.21	19.5046	-2.425	-0.1684
261	SLV 6	4.35	3.54	64.93	19.4146	-2.4166	-0.4198
261	SLV 7	0.68	-7.66	61.37	18.8874	-2.31	-1.3901
261	SLV 8	1.39	-8.05	61.09	18.7974	-2.3016	-1.6415
261	SLV 9	-3.96	4.95	60.2	18.0811	-2.2881	2.3762
261	SLV 10	-3.24	4.55	59.92	17.9911	-2.2798	2.1248
261	SLV 11	-6.91	-6.64	56.36	17.4639	-2.1731	1.1545
261	SLV 12	-6.19	-7.04	56.07	17.3739	-2.1648	0.9031
261	SLV 13	-14.05	2.18	53.08	16.2294	-2.0904	4.9871
261	SLV 14	-12.93	1.56	52.64	16.0894	-2.0775	4.5959
261	SLV 15	-14.93	-1.3	51.93	16.0443	-2.0559	4.6206
261	SLV 16	-13.82	-1.92	51.49	15.9042	-2.043	4.2294
261	CRTFP Ux+	0	0	0	0	0	0
261	CRTFP Ux-	0	0	0	0	0	0
261	CRTFP Uy+	0	0	0	0	0	0
261	CRTFP Uy-	0	0	0	0	0	0
262	SLU 1	-0.94	-1.09	43.68	12.0809	0.3538	0.2995
262	SLU 2	-0.92	-1.14	43.65	12.0775	0.3536	0.2938
262	SLU 3	-0.97	-1.11	44.7	12.362	0.3622	0.3077
262	SLU 4	-0.96	-1.14	44.68	12.36	0.362	0.3043
262	SLU 5	-0.94	-1.16	44.3	12.256	0.359	0.2995
262	SLU 6	-0.99	-1.12	45.35	12.5405	0.3675	0.3134
262	SLU 7	-0.98	-1.15	45.33	12.5385	0.3674	0.31
262	SLU 8	-0.98	-1.12	44.98	12.4379	0.3645	0.3109
262	SLU 9	-0.97	-1.15	44.96	12.4359	0.3644	0.3075
262	SLU 10	-0.99	-1.21	48.72	13.4712	0.3943	0.3146
262	SLU 11	-1.03	-1.18	49.76	13.7557	0.4028	0.3285
262	SLU 12	-1.02	-1.2	49.75	13.7537	0.4027	0.3251
262	SLU 13	-1.01	-1.22	49.37	13.6497	0.3996	0.3203
262	SLU 14	-1.05	-1.19	50.41	13.9342	0.4081	0.3342
262	SLU 15	-1.04	-1.22	50.4	13.9322	0.408	0.3308
262	SLU 16	-1.05	-1.19	50.04	13.8317	0.4051	0.3317

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
262	SLU 17	-1.03	-1.22	50.03	13.8296	0.405	0.3283
262	SLU 18	-1.04	-1.19	50.91	14.072	0.4119	0.3292
262	SLU 19	-1.02	-1.22	50.9	14.0699	0.4118	0.3258
262	SLU 20	-1.05	-1.2	51.56	14.2505	0.4172	0.3349
262	SLU 21	-1.04	-1.23	51.55	14.2484	0.4171	0.3315
262	SLU 22	-1.06	-1.11	48.34	13.3745	0.3922	0.3364
262	SLU 23	-1.04	-1.16	48.32	13.3711	0.392	0.3307
262	SLU 24	-1.09	-1.12	49.36	13.6556	0.4006	0.3446
262	SLU 25	-1.08	-1.15	49.35	13.6535	0.4004	0.3411
262	SLU 26	-1.06	-1.17	48.97	13.5496	0.3974	0.3364
262	SLU 27	-1.11	-1.14	50.01	13.8341	0.4059	0.3502
262	SLU 28	-1.09	-1.17	50	13.832	0.4058	0.3468
262	SLU 29	-1.1	-1.14	49.64	13.7315	0.4029	0.3478
262	SLU 30	-1.09	-1.17	49.63	13.7294	0.4028	0.3443
262	SLU 31	-1.11	-1.22	53.38	14.7648	0.4327	0.3515
262	SLU 32	-1.15	-1.19	54.43	15.0493	0.4412	0.3653
262	SLU 33	-1.14	-1.22	54.41	15.0472	0.4411	0.3619
262	SLU 34	-1.13	-1.24	54.03	14.9433	0.438	0.3572
262	SLU 35	-1.17	-1.2	55.08	15.2278	0.4465	0.371
262	SLU 36	-1.16	-1.23	55.06	15.2257	0.4464	0.3676
262	SLU 37	-1.16	-1.2	54.71	15.1252	0.4435	0.3686
262	SLU 38	-1.15	-1.23	54.69	15.1232	0.4434	0.3651
262	SLU 39	-1.16	-1.2	55.58	15.3655	0.4503	0.3661
262	SLU 40	-1.14	-1.23	55.56	15.3635	0.4502	0.3627
262	SLU 41	-1.17	-1.22	56.23	15.544	0.4556	0.3718
262	SLU 42	-1.16	-1.25	56.21	15.542	0.4555	0.3683
262	SLU 43	-1.19	-1.42	55.18	15.2617	0.4468	0.3768
262	SLU 44	-1.17	-1.47	55.16	15.2583	0.4466	0.3711
262	SLU 45	-1.21	-1.43	56.2	15.5428	0.4552	0.3849
262	SLU 46	-1.2	-1.46	56.19	15.5407	0.455	0.3815
262	SLU 47	-1.18	-1.48	55.81	15.4368	0.4519	0.3768
262	SLU 48	-1.23	-1.45	56.85	15.7213	0.4605	0.3906
262	SLU 49	-1.22	-1.48	56.84	15.7192	0.4604	0.3872
262	SLU 50	-1.22	-1.45	56.48	15.6187	0.4575	0.3881
262	SLU 51	-1.21	-1.47	56.47	15.6167	0.4574	0.3847
262	SLU 52	-1.23	-1.53	60.22	16.652	0.4872	0.3918
262	SLU 53	-1.28	-1.5	61.27	16.9365	0.4958	0.4057
262	SLU 54	-1.27	-1.53	61.25	16.9345	0.4957	0.4023
262	SLU 55	-1.25	-1.55	60.87	16.8305	0.4926	0.3975
262	SLU 56	-1.3	-1.51	61.92	17.115	0.5011	0.4114
262	SLU 57	-1.28	-1.54	61.9	17.113	0.501	0.408
262	SLU 58	-1.29	-1.51	61.55	17.0124	0.4981	0.4089
262	SLU 59	-1.28	-1.54	61.53	17.0104	0.498	0.4055
262	SLU 60	-1.28	-1.51	62.42	17.2527	0.5049	0.4065
262	SLU 61	-1.27	-1.54	62.4	17.2507	0.5047	0.403
262	SLU 62	-1.3	-1.53	63.07	17.4312	0.5102	0.4122
262	SLU 63	-1.29	-1.56	63.05	17.4292	0.5101	0.4087
262	SLU 64	-1.31	-1.43	59.85	16.5553	0.4852	0.4136
262	SLU 65	-1.28	-1.48	59.82	16.5518	0.485	0.4079
262	SLU 66	-1.33	-1.45	60.87	16.8363	0.4936	0.4218
262	SLU 67	-1.32	-1.48	60.85	16.8343	0.4934	0.4184
262	SLU 68	-1.3	-1.5	60.47	16.7303	0.4903	0.4136
262	SLU 69	-1.35	-1.46	61.52	17.0148	0.4989	0.4275
262	SLU 70	-1.34	-1.49	61.5	17.0128	0.4988	0.4241
262	SLU 71	-1.34	-1.46	61.15	16.9123	0.4959	0.425
262	SLU 72	-1.33	-1.49	61.13	16.9102	0.4958	0.4216
262	SLU 73	-1.35	-1.55	64.89	17.9456	0.5256	0.4287
262	SLU 74	-1.4	-1.51	65.93	18.2301	0.5342	0.4426
262	SLU 75	-1.38	-1.54	65.92	18.228	0.5341	0.4391
262	SLU 76	-1.37	-1.56	65.54	18.1241	0.531	0.4344
262	SLU 77	-1.41	-1.53	66.58	18.4086	0.5395	0.4483
262	SLU 78	-1.4	-1.56	66.57	18.4065	0.5394	0.4448
262	SLU 79	-1.41	-1.53	66.21	18.306	0.5365	0.4458
262	SLU 80	-1.39	-1.56	66.2	18.3039	0.5364	0.4424
262	SLU 81	-1.4	-1.53	67.08	18.5463	0.5433	0.4433
262	SLU 82	-1.39	-1.56	67.07	18.5442	0.5431	0.4399
262	SLU 83	-1.42	-1.54	67.73	18.7248	0.5486	0.449
262	SLU 84	-1.4	-1.57	67.72	18.7227	0.5485	0.4456
262	SLE RA 1	-0.98	-1.1	45.01	12.4505	0.3648	0.3101
262	SLE RA 2	-0.96	-1.13	44.99	12.4482	0.3647	0.3063
262	SLE RA 3	-1	-1.11	45.69	12.6379	0.3704	0.3155
262	SLE RA 4	-0.99	-1.13	45.68	12.6365	0.3703	0.3132
262	SLE RA 5	-0.98	-1.14	45.43	12.5672	0.3682	0.3101
262	SLE RA 6	-1.01	-1.12	46.12	12.7569	0.3739	0.3193
262	SLE RA 7	-1	-1.14	46.11	12.7555	0.3738	0.317
262	SLE RA 8	-1	-1.12	45.88	12.6885	0.3719	0.3177
262	SLE RA 9	-0.99	-1.14	45.87	12.6871	0.3718	0.3154
262	SLE RA 10	-1.01	-1.18	48.37	13.3774	0.3918	0.3201
262	SLE RA 11	-1.04	-1.15	49.07	13.5671	0.3975	0.3294
262	SLE RA 12	-1.03	-1.17	49.06	13.5657	0.3974	0.3271
262	SLE RA 13	-1.02	-1.18	48.8	13.4964	0.3953	0.3239
262	SLE RA 14	-1.05	-1.16	49.5	13.6861	0.401	0.3332
262	SLE RA 15	-1.04	-1.18	49.49	13.6847	0.4009	0.3309
262	SLE RA 16	-1.05	-1.16	49.25	13.6177	0.399	0.3315
262	SLE RA 17	-1.04	-1.18	49.24	13.6163	0.3989	0.3292
262	SLE RA 18	-1.04	-1.16	49.83	13.7779	0.4035	0.3299
262	SLE RA 19	-1.03	-1.18	49.82	13.7765	0.4034	0.3276
262	SLE RA 20	-1.05	-1.17	50.27	13.8969	0.4071	0.3337
262	SLE RA 21	-1.04	-1.19	50.26	13.8955	0.407	0.3314
262	SLE FR 1	-0.98	-1.1	45.01	12.4505	0.3648	0.3101
262	SLE FR 2	-0.98	-1.1	45.01	12.4501	0.3648	0.3093
262	SLE FR 3	-0.98	-1.1	45.18	12.4981	0.3662	0.3116
262	SLE FR 4	-0.99	-1.12	46.45	12.8483	0.3764	0.3152
262	SLE FR 5	-1	-1.12	46.63	12.8963	0.3778	0.3175
262	SLE FR 6	-1.01	-1.13	47.42	13.1142	0.3842	0.32
262	SLE QP 1	-0.98	-1.1	45.01	12.4505	0.3648	0.3101
262	SLE QP 2	-1	-1.12	46.46	12.8487	0.3764	0.316

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
262	SLD 1	3.23	-0.93	48.88	13.4299	0.4092	-0.9453
262	SLD 2	3.61	-1.12	48.76	13.3961	0.4077	-1.0566
262	SLD 3	2.93	-2.15	48.53	13.3868	0.4058	-0.8585
262	SLD 4	3.31	-2.35	48.4	13.353	0.4043	-0.9698
262	SLD 5	0.66	0.83	47.75	13.0943	0.3917	-0.1744
262	SLD 6	0.91	0.7	47.67	13.0722	0.3907	-0.2472
262	SLD 7	-0.34	-3.25	46.56	12.9508	0.3803	0.1151
262	SLD 8	-0.09	-3.38	46.48	12.9288	0.3793	0.0423
262	SLD 9	-1.9	1.14	46.44	12.7687	0.3735	0.5897
262	SLD 10	-1.65	1.02	46.36	12.7466	0.3726	0.517
262	SLD 11	-2.9	-2.94	45.25	12.6252	0.3621	0.8792
262	SLD 12	-2.66	-3.06	45.17	12.6031	0.3611	0.8064
262	SLD 13	-5.31	0.11	44.51	12.3444	0.3486	1.6018
262	SLD 14	-4.93	-0.08	44.39	12.3106	0.3471	1.4905
262	SLD 15	-5.61	-1.11	44.15	12.3014	0.3451	1.6886
262	SLD 16	-5.23	-1.3	44.03	12.2676	0.3437	1.5773
262	SLV 1	8.9	-0.73	52.12	14.2091	0.453	-2.6351
262	SLV 2	9.78	-1.18	51.84	14.1304	0.4496	-2.8943
262	SLV 3	8.2	-3.5	51.3	14.1063	0.4452	-2.4327
262	SLV 4	9.08	-3.95	51.02	14.0276	0.4417	-2.6919
262	SLV 5	2.88	3.28	49.45	13.4261	0.4119	-0.8318
262	SLV 6	3.45	2.99	49.27	13.3755	0.4097	-0.9984
262	SLV 7	0.55	-5.95	46.72	13.0837	0.3857	-0.1573
262	SLV 8	1.12	-6.25	46.54	13.0331	0.3835	-0.3239
262	SLV 9	-3.11	4.01	46.38	12.6643	0.3693	0.9559
262	SLV 10	-2.54	3.72	46.2	12.6138	0.3671	0.7893
262	SLV 11	-5.44	-5.22	43.65	12.3219	0.3432	1.6304
262	SLV 12	-4.88	-5.51	43.47	12.2713	0.341	1.4638
262	SLV 13	-11.08	1.72	41.9	11.6698	0.3111	3.324
262	SLV 14	-10.19	1.26	41.61	11.5911	0.3077	3.0647
262	SLV 15	-11.78	-1.05	41.08	11.5671	0.3033	3.5263
262	SLV 16	-10.89	-1.5	40.79	11.4884	0.2998	3.2671
262	CRTFP Ux+	0	0	0	0	0	0
262	CRTFP Ux-	0	0	0	0	0	0
262	CRTFP Uy+	0	0	0	0	0	0
262	CRTFP Uy-	0	0	0	0	0	0
263	SLU 1	-0.88	-0.9	39.89	11.2026	0.0296	0.2779
263	SLU 2	-0.86	-0.95	39.87	11.1998	0.0296	0.2721
263	SLU 3	-0.91	-0.91	40.82	11.4627	0.0303	0.2855
263	SLU 4	-0.9	-0.94	40.81	11.461	0.0303	0.2821
263	SLU 5	-0.88	-0.96	40.46	11.3646	0.0301	0.2774
263	SLU 6	-0.92	-0.92	41.41	11.6276	0.0308	0.2908
263	SLU 7	-0.91	-0.95	41.4	11.6259	0.0308	0.2874
263	SLU 8	-0.92	-0.92	41.07	11.5323	0.0306	0.2885
263	SLU 9	-0.91	-0.95	41.06	11.5306	0.0306	0.285
263	SLU 10	-0.92	-0.99	44.51	12.4974	0.0324	0.2916
263	SLU 11	-0.97	-0.96	45.46	12.7603	0.0332	0.305
263	SLU 12	-0.96	-0.99	45.45	12.7587	0.0331	0.3015
263	SLU 13	-0.94	-1.01	45.1	12.6623	0.0329	0.2969
263	SLU 14	-0.98	-0.97	46.06	12.9252	0.0336	0.3103
263	SLU 15	-0.97	-1	46.04	12.9235	0.0336	0.3068
263	SLU 16	-0.98	-0.97	45.72	12.8299	0.0334	0.308
263	SLU 17	-0.97	-1	45.7	12.8282	0.0334	0.3045
263	SLU 18	-0.97	-0.97	46.52	13.0563	0.0337	0.3057
263	SLU 19	-0.96	-1	46.51	13.0546	0.0337	0.3022
263	SLU 20	-0.99	-0.98	47.11	13.2212	0.0342	0.311
263	SLU 21	-0.98	-1.01	47.1	13.2195	0.0341	0.3075
263	SLU 22	-0.99	-0.9	44.13	12.3968	0.0331	0.3128
263	SLU 23	-0.97	-0.94	44.11	12.394	0.0331	0.307
263	SLU 24	-1.02	-0.91	45.07	12.657	0.0338	0.3204
263	SLU 25	-1.01	-0.93	45.05	12.6553	0.0338	0.3169
263	SLU 26	-0.99	-0.95	44.7	12.5589	0.0336	0.3123
263	SLU 27	-1.03	-0.92	45.66	12.8218	0.0343	0.3257
263	SLU 28	-1.02	-0.95	45.64	12.8202	0.0343	0.3222
263	SLU 29	-1.03	-0.92	45.32	12.7266	0.0341	0.3234
263	SLU 30	-1.02	-0.95	45.3	12.7249	0.0341	0.3199
263	SLU 31	-1.04	-0.99	48.76	13.6917	0.036	0.3264
263	SLU 32	-1.08	-0.96	49.71	13.9546	0.0367	0.3399
263	SLU 33	-1.07	-0.98	49.7	13.9529	0.0367	0.3364
263	SLU 34	-1.05	-1	49.35	13.8565	0.0364	0.3317
263	SLU 35	-1.1	-0.97	50.3	14.1195	0.0372	0.3452
263	SLU 36	-1.08	-0.99	50.29	14.1178	0.0371	0.3417
263	SLU 37	-1.09	-0.97	49.96	14.0242	0.0369	0.3428
263	SLU 38	-1.08	-0.99	49.95	14.0225	0.0369	0.3393
263	SLU 39	-1.08	-0.97	50.77	14.2506	0.0372	0.3406
263	SLU 40	-1.07	-0.99	50.75	14.2489	0.0372	0.3371
263	SLU 41	-1.1	-0.98	51.36	14.4154	0.0377	0.3459
263	SLU 42	-1.09	-1	51.34	14.4138	0.0377	0.3424
263	SLU 43	-1.11	-1.17	50.4	14.1539	0.0373	0.3493
263	SLU 44	-1.09	-1.22	50.38	14.1511	0.0373	0.3435
263	SLU 45	-1.13	-1.18	51.33	14.414	0.038	0.357
263	SLU 46	-1.12	-1.21	51.32	14.4124	0.038	0.3535
263	SLU 47	-1.11	-1.23	50.97	14.316	0.0377	0.3488
263	SLU 48	-1.15	-1.19	51.93	14.5789	0.0385	0.3623
263	SLU 49	-1.14	-1.22	51.91	14.5772	0.0384	0.3588
263	SLU 50	-1.14	-1.19	51.59	14.4836	0.0382	0.3599
263	SLU 51	-1.13	-1.22	51.57	14.4819	0.0382	0.3564
263	SLU 52	-1.15	-1.27	55.02	15.4487	0.0401	0.363
263	SLU 53	-1.19	-1.23	55.98	15.7117	0.0408	0.3764
263	SLU 54	-1.18	-1.26	55.96	15.71	0.0408	0.3729
263	SLU 55	-1.17	-1.28	55.61	15.6136	0.0406	0.3683
263	SLU 56	-1.21	-1.24	56.57	15.8765	0.0413	0.3817
263	SLU 57	-1.2	-1.27	56.55	15.8748	0.0413	0.3782
263	SLU 58	-1.2	-1.24	56.23	15.7812	0.0411	0.3794
263	SLU 59	-1.19	-1.27	56.21	15.7796	0.0411	0.3759
263	SLU 60	-1.2	-1.24	57.03	16.0076	0.0414	0.3771
263	SLU 61	-1.19	-1.27	57.02	16.006	0.0414	0.3736

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
263	SLU 62	-1.21	-1.25	57.63	16.1725	0.0418	0.3824
263	SLU 63	-1.2	-1.28	57.61	16.1708	0.0418	0.3789
263	SLU 64	-1.22	-1.17	54.65	15.3481	0.0408	0.3842
263	SLU 65	-1.2	-1.21	54.63	15.3454	0.0408	0.3784
263	SLU 66	-1.24	-1.18	55.58	15.6083	0.0415	0.3918
263	SLU 67	-1.23	-1.21	55.57	15.6066	0.0415	0.3883
263	SLU 68	-1.22	-1.22	55.22	15.5102	0.0413	0.3837
263	SLU 69	-1.26	-1.19	56.17	15.7732	0.042	0.3971
263	SLU 70	-1.25	-1.22	56.16	15.7715	0.042	0.3936
263	SLU 71	-1.25	-1.19	55.83	15.6779	0.0418	0.3948
263	SLU 72	-1.24	-1.22	55.82	15.6762	0.0418	0.3913
263	SLU 73	-1.26	-1.26	59.27	16.643	0.0436	0.3979
263	SLU 74	-1.31	-1.23	60.22	16.9059	0.0444	0.4113
263	SLU 75	-1.29	-1.25	60.21	16.9042	0.0443	0.4078
263	SLU 76	-1.28	-1.27	59.86	16.8078	0.0441	0.4031
263	SLU 77	-1.32	-1.24	60.81	17.0708	0.0448	0.4166
263	SLU 78	-1.31	-1.26	60.8	17.0691	0.0448	0.4131
263	SLU 79	-1.32	-1.24	60.47	16.9755	0.0446	0.4142
263	SLU 80	-1.3	-1.27	60.46	16.9738	0.0446	0.4108
263	SLU 81	-1.31	-1.24	61.28	17.2019	0.0449	0.412
263	SLU 82	-1.3	-1.26	61.27	17.2002	0.0449	0.4085
263	SLU 83	-1.32	-1.25	61.87	17.3668	0.0454	0.4173
263	SLU 84	-1.31	-1.28	61.86	17.3651	0.0453	0.4138
263	SLE RA 1	-0.91	-0.9	41.1	11.5438	0.0306	0.2879
263	SLE RA 2	-0.9	-0.93	41.09	11.5419	0.0306	0.284
263	SLE RA 3	-0.93	-0.91	41.72	11.7172	0.0311	0.293
263	SLE RA 4	-0.92	-0.92	41.72	11.7161	0.0311	0.2906
263	SLE RA 5	-0.91	-0.94	41.48	11.6518	0.0309	0.2875
263	SLE RA 6	-0.94	-0.91	42.12	11.8271	0.0314	0.2965
263	SLE RA 7	-0.93	-0.93	42.11	11.826	0.0314	0.2942
263	SLE RA 8	-0.94	-0.91	41.89	11.7636	0.0313	0.2949
263	SLE RA 9	-0.93	-0.93	41.88	11.7625	0.0312	0.2926
263	SLE RA 10	-0.94	-0.96	44.18	12.407	0.0325	0.297
263	SLE RA 11	-0.97	-0.94	44.82	12.5823	0.033	0.3059
263	SLE RA 12	-0.96	-0.96	44.81	12.5812	0.033	0.3036
263	SLE RA 13	-0.95	-0.97	44.58	12.5169	0.0328	0.3005
263	SLE RA 14	-0.98	-0.95	45.21	12.6922	0.0333	0.3095
263	SLE RA 15	-0.97	-0.96	45.2	12.6911	0.0333	0.3071
263	SLE RA 16	-0.98	-0.95	44.99	12.6287	0.0332	0.3079
263	SLE RA 17	-0.97	-0.96	44.98	12.6276	0.0331	0.3056
263	SLE RA 18	-0.97	-0.94	45.52	12.7796	0.0333	0.3064
263	SLE RA 19	-0.96	-0.96	45.52	12.7785	0.0333	0.3041
263	SLE RA 20	-0.98	-0.95	45.92	12.8895	0.0337	0.3099
263	SLE RA 21	-0.98	-0.97	45.91	12.8884	0.0336	0.3076
263	SLE FR 1	-0.91	-0.9	41.1	11.5438	0.0306	0.2879
263	SLE FR 2	-0.91	-0.9	41.1	11.5434	0.0306	0.2871
263	SLE FR 3	-0.92	-0.9	41.26	11.5878	0.0308	0.2893
263	SLE FR 4	-0.93	-0.92	42.43	11.9142	0.0314	0.2927
263	SLE FR 5	-0.94	-0.92	42.59	11.9585	0.0316	0.2948
263	SLE FR 6	-0.94	-0.92	43.31	12.1617	0.032	0.2971
263	SLE QP 1	-0.91	-0.9	41.1	11.5438	0.0306	0.2879
263	SLE QP 2	-0.93	-0.91	42.43	11.9145	0.0314	0.2934
263	SLD 1	3.05	-0.67	44.23	12.3306	0.043	-0.9148
263	SLD 2	3.4	-0.84	44.13	12.3043	0.0425	-1.0223
263	SLD 3	2.76	-1.83	43.92	12.2954	0.0437	-0.8291
263	SLD 4	3.12	-2	43.82	12.2691	0.0432	-0.9365
263	SLD 5	0.63	0.95	43.46	12.0974	0.0339	-0.1801
263	SLD 6	0.86	0.84	43.4	12.0802	0.0336	-0.2503
263	SLD 7	-0.32	-2.92	42.42	11.9801	0.0363	0.1057
263	SLD 8	-0.08	-3.03	42.36	11.9628	0.036	0.0355
263	SLD 9	-1.78	1.21	42.5	11.8662	0.0269	0.5514
263	SLD 10	-1.55	1.1	42.44	11.849	0.0266	0.4811
263	SLD 11	-2.72	-2.67	41.46	11.7489	0.0293	0.8372
263	SLD 12	-2.49	-2.78	41.4	11.7317	0.029	0.767
263	SLD 13	-4.98	0.18	41.04	11.56	0.0197	1.5234
263	SLD 14	-4.63	0.01	40.94	11.5336	0.0192	1.4159
263	SLD 15	-5.26	-0.99	40.73	11.5248	0.0204	1.6091
263	SLD 16	-4.91	-1.15	40.63	11.4984	0.0199	1.5017
263	SLV 1	8.37	-0.4	46.63	12.8888	0.0584	-2.5333
263	SLV 2	9.2	-0.78	46.4	12.8274	0.0573	-2.7836
263	SLV 3	7.72	-3.03	45.91	12.8044	0.0601	-2.3339
263	SLV 4	8.54	-3.41	45.69	12.7429	0.059	-2.5842
263	SLV 5	2.72	3.3	44.81	12.3455	0.0372	-0.8141
263	SLV 6	3.25	3.05	44.67	12.306	0.0365	-0.975
263	SLV 7	0.52	-5.47	42.43	12.0639	0.0427	-0.1495
263	SLV 8	1.06	-5.72	42.29	12.0244	0.042	-0.3103
263	SLV 9	-2.92	3.89	42.57	11.8047	0.0208	0.8972
263	SLV 10	-2.39	3.64	42.43	11.7652	0.0201	0.7363
263	SLV 11	-5.11	-4.87	40.19	11.5231	0.0264	1.5618
263	SLV 12	-4.58	-5.12	40.05	11.4836	0.0257	1.401
263	SLV 13	-10.41	1.59	39.17	11.0862	0.0039	3.1711
263	SLV 14	-9.58	1.2	38.94	11.0247	0.0028	2.9208
263	SLV 15	-11.07	-1.04	38.45	11.0017	0.0056	3.3704
263	SLV 16	-10.24	-1.43	38.23	10.9402	0.0045	3.1202
263	CRTFP Ux+	0	0	0	0	0	0
263	CRTFP Ux-	0	0	0	0	0	0
263	CRTFP Uy+	0	0	0	0	0	0
263	CRTFP Uy-	0	0	0	0	0	0
264	SLU 1	-0.87	-0.76	38.96	10.9271	0.0167	0.2752
264	SLU 2	-0.85	-0.8	38.94	10.9244	0.0167	0.2694
264	SLU 3	-0.9	-0.76	39.87	11.1811	0.017	0.2827
264	SLU 4	-0.88	-0.79	39.85	11.1795	0.017	0.2792
264	SLU 5	-0.87	-0.81	39.51	11.085	0.0169	0.2746
264	SLU 6	-0.91	-0.77	40.44	11.3416	0.0173	0.2879
264	SLU 7	-0.9	-0.8	40.43	11.34	0.0172	0.2845
264	SLU 8	-0.9	-0.78	40.11	11.2482	0.0172	0.2856
264	SLU 9	-0.89	-0.8	40.1	11.2466	0.0172	0.2821

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
264	SLU 10	-0.91	-0.84	43.5	12.1988	0.0177	0.2887
264	SLU 11	-0.96	-0.8	44.43	12.4554	0.018	0.302
264	SLU 12	-0.94	-0.82	44.41	12.4538	0.018	0.2985
264	SLU 13	-0.93	-0.84	44.07	12.3593	0.0179	0.2939
264	SLU 14	-0.97	-0.81	45	12.616	0.0183	0.3072
264	SLU 15	-0.96	-0.83	44.99	12.6144	0.0183	0.3037
264	SLU 16	-0.97	-0.81	44.67	12.5225	0.0182	0.3049
264	SLU 17	-0.95	-0.84	44.66	12.5209	0.0182	0.3014
264	SLU 18	-0.96	-0.8	45.47	12.7476	0.0181	0.3027
264	SLU 19	-0.95	-0.83	45.46	12.746	0.0181	0.2992
264	SLU 20	-0.97	-0.81	46.05	12.9081	0.0184	0.3079
264	SLU 21	-0.96	-0.84	46.04	12.9065	0.0184	0.3045
264	SLU 22	-0.98	-0.74	43.09	12.089	0.0186	0.3096
264	SLU 23	-0.96	-0.78	43.07	12.0863	0.0186	0.3038
264	SLU 24	-1	-0.74	44	12.3429	0.0189	0.3171
264	SLU 25	-0.99	-0.77	43.99	12.3413	0.0189	0.3137
264	SLU 26	-0.98	-0.79	43.65	12.2468	0.0188	0.3091
264	SLU 27	-1.02	-0.75	44.58	12.5035	0.0191	0.3224
264	SLU 28	-1.01	-0.78	44.57	12.5019	0.0191	0.3189
264	SLU 29	-1.01	-0.75	44.24	12.41	0.0191	0.3201
264	SLU 30	-1	-0.78	44.23	12.4084	0.0191	0.3166
264	SLU 31	-1.02	-0.81	47.63	13.3607	0.0196	0.3231
264	SLU 32	-1.06	-0.78	48.56	13.6173	0.0199	0.3364
264	SLU 33	-1.05	-0.8	48.55	13.6157	0.0199	0.333
264	SLU 34	-1.04	-0.82	48.21	13.5212	0.0198	0.3283
264	SLU 35	-1.08	-0.78	49.14	13.7778	0.0201	0.3416
264	SLU 36	-1.07	-0.81	49.13	13.7762	0.0201	0.3382
264	SLU 37	-1.07	-0.79	48.81	13.6844	0.0201	0.3393
264	SLU 38	-1.06	-0.81	48.79	13.6828	0.0201	0.3359
264	SLU 39	-1.07	-0.78	49.61	13.9095	0.02	0.3372
264	SLU 40	-1.06	-0.81	49.59	13.9079	0.02	0.3337
264	SLU 41	-1.08	-0.79	50.18	14.07	0.0203	0.3424
264	SLU 42	-1.07	-0.82	50.17	14.0684	0.0203	0.3389
264	SLU 43	-1.1	-0.99	49.22	13.8069	0.021	0.3459
264	SLU 44	-1.08	-1.04	49.2	13.8042	0.021	0.3401
264	SLU 45	-1.12	-1	50.13	14.0608	0.0214	0.3534
264	SLU 46	-1.11	-1.03	50.12	14.0592	0.0214	0.35
264	SLU 47	-1.09	-1.05	49.78	13.9647	0.0213	0.3453
264	SLU 48	-1.14	-1.01	50.71	14.2214	0.0216	0.3587
264	SLU 49	-1.12	-1.03	50.7	14.2198	0.0216	0.3552
264	SLU 50	-1.13	-1.01	50.38	14.1279	0.0215	0.3564
264	SLU 51	-1.12	-1.04	50.37	14.1263	0.0215	0.3529
264	SLU 52	-1.14	-1.07	53.76	15.0786	0.022	0.3594
264	SLU 53	-1.18	-1.03	54.7	15.3352	0.0224	0.3727
264	SLU 54	-1.17	-1.06	54.68	15.3336	0.0224	0.3692
264	SLU 55	-1.15	-1.08	54.34	15.2391	0.0223	0.3646
264	SLU 56	-1.2	-1.04	55.27	15.4957	0.0226	0.3779
264	SLU 57	-1.18	-1.07	55.26	15.4941	0.0226	0.3745
264	SLU 58	-1.19	-1.04	54.94	15.4023	0.0225	0.3756
264	SLU 59	-1.18	-1.07	54.93	15.4007	0.0225	0.3722
264	SLU 60	-1.18	-1.04	55.74	15.6274	0.0225	0.3734
264	SLU 61	-1.17	-1.07	55.73	15.6258	0.0225	0.37
264	SLU 62	-1.2	-1.05	56.32	15.7879	0.0227	0.3787
264	SLU 63	-1.19	-1.08	56.3	15.7863	0.0227	0.3752
264	SLU 64	-1.2	-0.97	53.36	14.9687	0.0229	0.3804
264	SLU 65	-1.19	-1.02	53.34	14.9661	0.0229	0.3746
264	SLU 66	-1.23	-0.98	54.27	15.2227	0.0233	0.3879
264	SLU 67	-1.22	-1	54.26	15.2211	0.0233	0.3844
264	SLU 68	-1.2	-1.02	53.92	15.1266	0.0232	0.3798
264	SLU 69	-1.25	-0.99	54.85	15.3832	0.0235	0.3931
264	SLU 70	-1.23	-1.01	54.84	15.3816	0.0235	0.3896
264	SLU 71	-1.24	-0.99	54.51	15.2898	0.0234	0.3908
264	SLU 72	-1.23	-1.02	54.5	15.2882	0.0234	0.3873
264	SLU 73	-1.25	-1.05	57.9	16.2404	0.0239	0.3938
264	SLU 74	-1.29	-1.01	58.83	16.4971	0.0243	0.4072
264	SLU 75	-1.28	-1.04	58.82	16.4955	0.0243	0.4037
264	SLU 76	-1.26	-1.06	58.48	16.401	0.0242	0.3991
264	SLU 77	-1.31	-1.02	59.41	16.6576	0.0245	0.4124
264	SLU 78	-1.29	-1.05	59.4	16.656	0.0245	0.4089
264	SLU 79	-1.3	-1.02	59.07	16.5642	0.0244	0.4101
264	SLU 80	-1.29	-1.05	59.06	16.5626	0.0244	0.4066
264	SLU 81	-1.29	-1.02	59.88	16.7892	0.0244	0.4079
264	SLU 82	-1.28	-1.04	59.86	16.7877	0.0244	0.4044
264	SLU 83	-1.31	-1.03	60.45	16.9498	0.0246	0.4131
264	SLU 84	-1.3	-1.05	60.44	16.9482	0.0246	0.4096
264	SLE RA 1	-0.9	-0.75	40.14	11.259	0.0172	0.285
264	SLE RA 2	-0.89	-0.78	40.12	11.2573	0.0172	0.2812
264	SLE RA 3	-0.92	-0.76	40.74	11.4284	0.0174	0.29
264	SLE RA 4	-0.91	-0.77	40.74	11.4273	0.0174	0.2877
264	SLE RA 5	-0.9	-0.79	40.51	11.3643	0.0174	0.2846
264	SLE RA 6	-0.93	-0.76	41.13	11.5354	0.0176	0.2935
264	SLE RA 7	-0.92	-0.78	41.12	11.5343	0.0176	0.2912
264	SLE RA 8	-0.93	-0.76	40.91	11.4731	0.0175	0.292
264	SLE RA 9	-0.92	-0.78	40.9	11.472	0.0175	0.2897
264	SLE RA 10	-0.93	-0.8	43.16	12.1069	0.0179	0.294
264	SLE RA 11	-0.96	-0.78	43.78	12.2779	0.0181	0.3029
264	SLE RA 12	-0.95	-0.8	43.78	12.2769	0.0181	0.3006
264	SLE RA 13	-0.94	-0.81	43.55	12.2139	0.0181	0.2975
264	SLE RA 14	-0.97	-0.78	44.17	12.385	0.0183	0.3064
264	SLE RA 15	-0.96	-0.8	44.16	12.3839	0.0183	0.3041
264	SLE RA 16	-0.97	-0.79	43.95	12.3227	0.0182	0.3048
264	SLE RA 17	-0.96	-0.8	43.94	12.3216	0.0182	0.3025
264	SLE RA 18	-0.96	-0.78	44.48	12.4727	0.0182	0.3034
264	SLE RA 19	-0.95	-0.8	44.47	12.4717	0.0182	0.3011
264	SLE RA 20	-0.97	-0.79	44.87	12.5798	0.0183	0.3069
264	SLE RA 21	-0.96	-0.81	44.86	12.5787	0.0183	0.3045
264	SLE FR 1	-0.9	-0.75	40.14	11.259	0.0172	0.285

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
264	SLE FR 2	-0.9	-0.76	40.13	11.2587	0.0172	0.2842
264	SLE FR 3	-0.91	-0.75	40.29	11.3019	0.0173	0.2864
264	SLE FR 4	-0.92	-0.77	41.44	11.6228	0.0175	0.2897
264	SLE FR 5	-0.92	-0.76	41.59	11.666	0.0176	0.2919
264	SLE FR 6	-0.93	-0.77	42.31	11.8659	0.0177	0.2942
264	SLE QP 1	-0.9	-0.75	40.14	11.259	0.0172	0.285
264	SLE QP 2	-0.92	-0.76	41.44	11.6232	0.0175	0.2905
264	SLD 1	3.04	-0.45	42.82	11.9205	0.0278	-0.915
264	SLD 2	3.4	-0.6	42.74	11.8991	0.0274	-1.022
264	SLD 3	2.76	-1.62	42.51	11.8889	0.0285	-0.8294
264	SLD 4	3.11	-1.77	42.43	11.8675	0.0281	-0.9364
264	SLD 5	0.63	1.13	42.34	11.7641	0.0196	-0.182
264	SLD 6	0.87	1.04	42.28	11.7501	0.0193	-0.252
264	SLD 7	-0.31	-2.76	41.31	11.6587	0.022	0.1033
264	SLD 8	-0.07	-2.86	41.26	11.6448	0.0217	0.0333
264	SLD 9	-1.77	1.34	41.62	11.6015	0.0133	0.5477
264	SLD 10	-1.53	1.24	41.57	11.5876	0.013	0.4777
264	SLD 11	-2.71	-2.56	40.6	11.4962	0.0157	0.833
264	SLD 12	-2.47	-2.65	40.54	11.4823	0.0155	0.7631
264	SLD 13	-4.95	0.25	40.45	11.3788	0.0069	1.5175
264	SLD 14	-4.6	0.1	40.37	11.3574	0.0065	1.4104
264	SLD 15	-5.24	-0.92	40.14	11.3472	0.0076	1.6031
264	SLD 16	-4.88	-1.07	40.06	11.3258	0.0072	1.496
264	SLV 1	8.35	-0.08	44.66	12.3195	0.0416	-2.5297
264	SLV 2	9.18	-0.42	44.47	12.2697	0.0406	-2.7791
264	SLV 3	7.7	-2.72	43.96	12.244	0.0433	-2.3307
264	SLV 4	8.52	-3.07	43.77	12.1941	0.0423	-2.5801
264	SLV 5	2.71	3.52	43.5	11.9552	0.0223	-0.8146
264	SLV 6	3.24	3.29	43.38	11.9232	0.0217	-0.9749
264	SLV 7	0.53	-5.3	41.16	11.7034	0.028	-0.1513
264	SLV 8	1.06	-5.53	41.04	11.6713	0.0274	-0.3116
264	SLV 9	-2.9	4.01	41.84	11.575	0.0076	0.8926
264	SLV 10	-2.37	3.78	41.72	11.543	0.007	0.7324
264	SLV 11	-5.08	-4.82	39.5	11.3232	0.0134	1.5559
264	SLV 12	-4.55	-5.04	39.38	11.2911	0.0128	1.3957
264	SLV 13	-10.36	1.55	39.11	11.0522	-0.0073	3.1611
264	SLV 14	-9.54	1.2	38.92	11.0024	-0.0083	2.9118
264	SLV 15	-11.02	-1.1	38.41	10.9766	-0.0056	3.3601
264	SLV 16	-10.19	-1.45	38.22	10.9268	-0.0065	3.1108
264	CRTFP Ux+	0	0	0	0	0	0
264	CRTFP Ux-	0	0	0	0	0	0
264	CRTFP Uy+	0	0	0	0	0	0
264	CRTFP Uy-	0	0	0	0	0	0
265	SLU 1	-0.86	-0.62	38.62	10.8268	-0.0007	0.2714
265	SLU 2	-0.84	-0.66	38.6	10.824	-0.0007	0.2656
265	SLU 3	-0.88	-0.62	39.53	11.0795	-0.0008	0.2788
265	SLU 4	-0.87	-0.64	39.52	11.0779	-0.0008	0.2753
265	SLU 5	-0.86	-0.67	39.17	10.9833	-0.0007	0.2707
265	SLU 6	-0.9	-0.62	40.1	11.2388	-0.0009	0.2839
265	SLU 7	-0.89	-0.65	40.09	11.2371	-0.0009	0.2805
265	SLU 8	-0.89	-0.63	39.77	11.1454	-0.0008	0.2817
265	SLU 9	-0.88	-0.66	39.76	11.1437	-0.0008	0.2782
265	SLU 10	-0.9	-0.68	43.17	12.0998	-0.0021	0.2845
265	SLU 11	-0.94	-0.64	44.09	12.3553	-0.0022	0.2977
265	SLU 12	-0.93	-0.66	44.08	12.3536	-0.0022	0.2943
265	SLU 13	-0.92	-0.69	43.74	12.2591	-0.0021	0.2897
265	SLU 14	-0.96	-0.64	44.67	12.5146	-0.0023	0.3029
265	SLU 15	-0.95	-0.67	44.65	12.5129	-0.0023	0.2994
265	SLU 16	-0.95	-0.65	44.33	12.4211	-0.0022	0.3006
265	SLU 17	-0.94	-0.67	44.32	12.4195	-0.0022	0.2971
265	SLU 18	-0.94	-0.64	45.14	12.6493	-0.0027	0.2984
265	SLU 19	-0.93	-0.67	45.13	12.6477	-0.0027	0.295
265	SLU 20	-0.96	-0.65	45.71	12.8086	-0.0027	0.3036
265	SLU 21	-0.95	-0.67	45.7	12.8069	-0.0027	0.3001
265	SLU 22	-0.97	-0.58	42.72	11.9781	-0.0009	0.3053
265	SLU 23	-0.95	-0.62	42.7	11.9753	-0.0009	0.2995
265	SLU 24	-0.99	-0.58	43.63	12.2308	-0.0011	0.3127
265	SLU 25	-0.98	-0.61	43.62	12.2291	-0.0011	0.3093
265	SLU 26	-0.96	-0.63	43.28	12.1346	-0.001	0.3047
265	SLU 27	-1.01	-0.58	44.2	12.3901	-0.0011	0.3179
265	SLU 28	-0.99	-0.61	44.19	12.3884	-0.0011	0.3144
265	SLU 29	-1	-0.59	43.87	12.2967	-0.001	0.3156
265	SLU 30	-0.99	-0.62	43.86	12.295	-0.001	0.3121
265	SLU 31	-1.01	-0.64	47.27	13.2511	-0.0023	0.3185
265	SLU 32	-1.05	-0.6	48.19	13.5066	-0.0025	0.3317
265	SLU 33	-1.04	-0.62	48.18	13.5049	-0.0025	0.3282
265	SLU 34	-1.02	-0.65	47.84	13.4103	-0.0024	0.3236
265	SLU 35	-1.07	-0.6	48.77	13.6659	-0.0025	0.3368
265	SLU 36	-1.05	-0.63	48.75	13.6642	-0.0025	0.3333
265	SLU 37	-1.06	-0.61	48.43	13.5724	-0.0024	0.3345
265	SLU 38	-1.05	-0.63	48.42	13.5707	-0.0024	0.3311
265	SLU 39	-1.05	-0.6	49.24	13.8006	-0.0029	0.3324
265	SLU 40	-1.04	-0.63	49.23	13.7989	-0.0029	0.3289
265	SLU 41	-1.07	-0.61	49.82	13.9599	-0.003	0.3375
265	SLU 42	-1.06	-0.64	49.8	13.9582	-0.003	0.3341
265	SLU 43	-1.08	-0.81	48.8	13.6801	-0.0008	0.3412
265	SLU 44	-1.06	-0.86	48.78	13.6773	-0.0008	0.3354
265	SLU 45	-1.1	-0.82	49.71	13.9329	-0.001	0.3486
265	SLU 46	-1.09	-0.84	49.7	13.9312	-0.0009	0.3451
265	SLU 47	-1.08	-0.86	49.36	13.8366	-0.0008	0.3405
265	SLU 48	-1.12	-0.82	50.28	14.0921	-0.001	0.3537
265	SLU 49	-1.11	-0.85	50.27	14.0905	-0.001	0.3502
265	SLU 50	-1.11	-0.83	49.95	13.9987	-0.0009	0.3514
265	SLU 51	-1.1	-0.85	49.94	13.997	-0.0009	0.348
265	SLU 52	-1.12	-0.88	53.35	14.9531	-0.0022	0.3543
265	SLU 53	-1.16	-0.83	54.27	15.2086	-0.0024	0.3675
265	SLU 54	-1.15	-0.86	54.26	15.2069	-0.0023	0.364

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
265	SLU 55	-1.14	-0.88	53.92	15.1124	-0.0022	0.3595
265	SLU 56	-1.18	-0.84	54.85	15.3679	-0.0024	0.3726
265	SLU 57	-1.17	-0.87	54.83	15.3662	-0.0024	0.3692
265	SLU 58	-1.17	-0.85	54.51	15.2745	-0.0023	0.3704
265	SLU 59	-1.16	-0.87	54.5	15.2728	-0.0023	0.3669
265	SLU 60	-1.16	-0.84	55.32	15.5027	-0.0028	0.3682
265	SLU 61	-1.15	-0.87	55.31	15.501	-0.0028	0.3648
265	SLU 62	-1.18	-0.85	55.9	15.6619	-0.0029	0.3734
265	SLU 63	-1.17	-0.87	55.88	15.6603	-0.0028	0.3699
265	SLU 64	-1.19	-0.77	52.9	14.8314	-0.001	0.3751
265	SLU 65	-1.17	-0.82	52.88	14.8286	-0.001	0.3693
265	SLU 66	-1.21	-0.78	53.81	15.0841	-0.0012	0.3825
265	SLU 67	-1.2	-0.8	53.8	15.0825	-0.0012	0.379
265	SLU 68	-1.18	-0.83	53.46	14.9879	-0.0011	0.3745
265	SLU 69	-1.23	-0.78	54.38	15.2434	-0.0013	0.3876
265	SLU 70	-1.22	-0.81	54.37	15.2417	-0.0013	0.3842
265	SLU 71	-1.22	-0.79	54.05	15.15	-0.0012	0.3854
265	SLU 72	-1.21	-0.81	54.04	15.1483	-0.0012	0.3819
265	SLU 73	-1.23	-0.84	57.45	16.1044	-0.0024	0.3883
265	SLU 74	-1.27	-0.79	58.37	16.3599	-0.0026	0.4014
265	SLU 75	-1.26	-0.82	58.36	16.3582	-0.0026	0.398
265	SLU 76	-1.24	-0.84	58.02	16.2637	-0.0025	0.3934
265	SLU 77	-1.29	-0.8	58.95	16.5192	-0.0027	0.4066
265	SLU 78	-1.27	-0.83	58.94	16.5175	-0.0027	0.4031
265	SLU 79	-1.28	-0.81	58.61	16.4257	-0.0026	0.4043
265	SLU 80	-1.27	-0.83	58.6	16.4241	-0.0026	0.4009
265	SLU 81	-1.27	-0.8	59.42	16.6539	-0.0031	0.4022
265	SLU 82	-1.26	-0.83	59.41	16.6523	-0.003	0.3987
265	SLU 83	-1.29	-0.81	60	16.8132	-0.0031	0.4073
265	SLU 84	-1.28	-0.83	59.98	16.8115	-0.0031	0.4038
265	SLE RA 1	-0.89	-0.6	39.79	11.1558	-0.0008	0.2811
265	SLE RA 2	-0.88	-0.63	39.78	11.1539	-0.0007	0.2772
265	SLE RA 3	-0.91	-0.61	40.4	11.3242	-0.0009	0.286
265	SLE RA 4	-0.9	-0.62	40.39	11.3231	-0.0008	0.2837
265	SLE RA 5	-0.89	-0.64	40.16	11.2601	-0.0008	0.2806
265	SLE RA 6	-0.92	-0.61	40.78	11.4304	-0.0009	0.2894
265	SLE RA 7	-0.91	-0.63	40.77	11.4293	-0.0009	0.2871
265	SLE RA 8	-0.91	-0.61	40.56	11.3681	-0.0008	0.2879
265	SLE RA 9	-0.9	-0.63	40.55	11.367	-0.0008	0.2856
265	SLE RA 10	-0.92	-0.65	42.82	12.0044	-0.0017	0.2899
265	SLE RA 11	-0.94	-0.62	43.44	12.1748	-0.0018	0.2986
265	SLE RA 12	-0.94	-0.64	43.43	12.1736	-0.0018	0.2963
265	SLE RA 13	-0.93	-0.65	43.2	12.1106	-0.0017	0.2933
265	SLE RA 14	-0.96	-0.62	43.82	12.2809	-0.0018	0.3021
265	SLE RA 15	-0.95	-0.64	43.81	12.2798	-0.0018	0.2998
265	SLE RA 16	-0.95	-0.63	43.6	12.2186	-0.0018	0.3006
265	SLE RA 17	-0.94	-0.64	43.59	12.2175	-0.0018	0.2982
265	SLE RA 18	-0.95	-0.62	44.14	12.3708	-0.0021	0.2991
265	SLE RA 19	-0.94	-0.64	44.13	12.3696	-0.0021	0.2968
265	SLE RA 20	-0.96	-0.63	44.52	12.477	-0.0021	0.3025
265	SLE RA 21	-0.95	-0.64	44.51	12.4758	-0.0021	0.3002
265	SLE FR 1	-0.89	-0.6	39.79	11.1558	-0.0008	0.2811
265	SLE FR 2	-0.89	-0.61	39.79	11.1554	-0.0007	0.2803
265	SLE FR 3	-0.89	-0.61	39.95	11.1982	-0.0008	0.2824
265	SLE FR 4	-0.9	-0.62	41.1	11.5199	-0.0011	0.2857
265	SLE FR 5	-0.91	-0.61	41.25	11.5627	-0.0012	0.2879
265	SLE FR 6	-0.92	-0.61	41.97	11.7633	-0.0014	0.2901
265	SLE QP 1	-0.89	-0.6	39.79	11.1558	-0.0008	0.2811
265	SLE QP 2	-0.91	-0.61	41.1	11.5203	-0.0012	0.2865
265	SLD 1	3.05	-0.22	42.12	11.7164	0.008	-0.9166
265	SLD 2	3.4	-0.36	42.05	11.6994	0.0076	-1.0233
265	SLD 3	2.76	-1.4	41.79	11.6845	0.0089	-0.8312
265	SLD 4	3.12	-1.53	41.73	11.6674	0.0086	-0.9379
265	SLD 5	0.64	1.32	41.9	11.6306	0.0002	-0.1852
265	SLD 6	0.87	1.23	41.86	11.6194	-0.0001	-0.2549
265	SLD 7	-0.29	-2.61	40.83	11.5241	0.0034	0.0997
265	SLD 8	-0.06	-2.7	40.79	11.5129	0.0032	0.0299
265	SLD 9	-1.75	1.48	41.41	11.5276	-0.0055	0.5431
265	SLD 10	-1.52	1.39	41.37	11.5164	-0.0057	0.4733
265	SLD 11	-2.69	-2.45	40.34	11.4211	-0.0022	0.8279
265	SLD 12	-2.46	-2.54	40.29	11.4099	-0.0025	0.7582
265	SLD 13	-4.93	0.32	40.47	11.3731	-0.0109	1.5109
265	SLD 14	-4.58	0.18	40.4	11.356	-0.0112	1.4042
265	SLD 15	-5.21	-0.86	40.15	11.3411	-0.0099	1.5963
265	SLD 16	-4.86	-0.99	40.08	11.3241	-0.0103	1.4896
265	SLV 1	8.34	0.25	43.47	11.9798	0.0202	-2.5282
265	SLV 2	9.16	-0.06	43.32	11.9401	0.0194	-2.7768
265	SLV 3	7.69	-2.42	42.74	11.9044	0.0225	-2.3296
265	SLV 4	8.51	-2.73	42.58	11.8647	0.0216	-2.5781
265	SLV 5	2.72	3.75	42.95	11.7793	0.002	-0.8167
265	SLV 6	3.25	3.55	42.85	11.7538	0.0014	-0.9764
265	SLV 7	0.54	-5.15	40.5	11.5279	0.0095	-0.1544
265	SLV 8	1.07	-5.34	40.41	11.5024	0.009	-0.3141
265	SLV 9	-2.88	4.13	41.79	11.5381	-0.0113	0.8871
265	SLV 10	-2.35	3.93	41.69	11.5126	-0.0118	0.7274
265	SLV 11	-5.06	-4.77	39.35	11.2867	-0.0037	1.5494
265	SLV 12	-4.53	-4.97	39.25	11.2613	-0.0043	1.3896
265	SLV 13	-10.32	1.51	39.61	11.1758	-0.0239	3.1511
265	SLV 14	-9.5	1.2	39.46	11.1361	-0.0248	2.9026
265	SLV 15	-10.97	-1.16	38.88	11.1004	-0.0217	3.3497
265	SLV 16	-10.15	-1.47	38.73	11.0607	-0.0225	3.1012
265	CRTFP Ux+	0	0	0	0	0	0
265	CRTFP Ux-	0	0	0	0	0	0
265	CRTFP Uy+	0	0	0	0	0	0
265	CRTFP Uy-	0	0	0	0	0	0
266	SLU 1	-0.84	-0.48	38.96	10.9436	-0.0195	0.2668
266	SLU 2	-0.83	-0.52	38.94	10.9404	-0.0194	0.2611

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
266	SLU 3	-0.87	-0.48	39.88	11.201	-0.0201	0.2741
266	SLU 4	-0.86	-0.5	39.87	11.1991	-0.0201	0.2706
266	SLU 5	-0.84	-0.53	39.52	11.1022	-0.0198	0.2661
266	SLU 6	-0.88	-0.48	40.46	11.3628	-0.0205	0.2791
266	SLU 7	-0.87	-0.51	40.45	11.3609	-0.0205	0.2757
266	SLU 8	-0.88	-0.49	40.12	11.2671	-0.0202	0.2769
266	SLU 9	-0.87	-0.51	40.11	11.2652	-0.0202	0.2735
266	SLU 10	-0.88	-0.53	43.59	12.2474	-0.0234	0.2796
266	SLU 11	-0.93	-0.48	44.54	12.5081	-0.0241	0.2926
266	SLU 12	-0.91	-0.51	44.52	12.5062	-0.0241	0.2892
266	SLU 13	-0.9	-0.53	44.18	12.4092	-0.0238	0.2846
266	SLU 14	-0.94	-0.48	45.12	12.6698	-0.0245	0.2977
266	SLU 15	-0.93	-0.51	45.1	12.6679	-0.0245	0.2942
266	SLU 16	-0.93	-0.49	44.78	12.5742	-0.0242	0.2954
266	SLU 17	-0.92	-0.52	44.76	12.5722	-0.0242	0.292
266	SLU 18	-0.93	-0.48	45.61	12.8108	-0.0251	0.2933
266	SLU 19	-0.92	-0.51	45.6	12.8089	-0.0251	0.2898
266	SLU 20	-0.94	-0.49	46.19	12.9726	-0.0255	0.2983
266	SLU 21	-0.93	-0.51	46.18	12.9706	-0.0255	0.2949
266	SLU 22	-0.95	-0.42	43.11	12.1109	-0.022	0.3002
266	SLU 23	-0.93	-0.46	43.09	12.1077	-0.022	0.2944
266	SLU 24	-0.97	-0.42	44.03	12.3683	-0.0227	0.3075
266	SLU 25	-0.96	-0.45	44.02	12.3664	-0.0227	0.304
266	SLU 26	-0.95	-0.47	43.67	12.2694	-0.0224	0.2995
266	SLU 27	-0.99	-0.42	44.61	12.5301	-0.0231	0.3125
266	SLU 28	-0.98	-0.45	44.6	12.5281	-0.023	0.309
266	SLU 29	-0.98	-0.43	44.27	12.4344	-0.0228	0.3103
266	SLU 30	-0.97	-0.46	44.26	12.4325	-0.0227	0.3068
266	SLU 31	-0.99	-0.47	47.74	13.4147	-0.026	0.313
266	SLU 32	-1.03	-0.42	48.69	13.6753	-0.0267	0.326
266	SLU 33	-1.02	-0.45	48.67	13.6734	-0.0266	0.3225
266	SLU 34	-1	-0.47	48.32	13.5765	-0.0263	0.318
266	SLU 35	-1.05	-0.43	49.27	13.8371	-0.027	0.331
266	SLU 36	-1.04	-0.45	49.25	13.8352	-0.027	0.3276
266	SLU 37	-1.04	-0.43	48.93	13.7414	-0.0267	0.3288
266	SLU 38	-1.03	-0.46	48.91	13.7395	-0.0267	0.3254
266	SLU 39	-1.03	-0.43	49.76	13.9781	-0.0277	0.3267
266	SLU 40	-1.02	-0.45	49.75	13.9762	-0.0277	0.3232
266	SLU 41	-1.05	-0.43	50.34	14.1398	-0.0281	0.3317
266	SLU 42	-1.04	-0.46	50.33	14.1379	-0.028	0.3282
266	SLU 43	-1.06	-0.64	49.22	13.8265	-0.0244	0.3355
266	SLU 44	-1.04	-0.68	49.2	13.8233	-0.0244	0.3297
266	SLU 45	-1.08	-0.64	50.14	14.0839	-0.0251	0.3427
266	SLU 46	-1.07	-0.66	50.13	14.082	-0.0251	0.3392
266	SLU 47	-1.06	-0.69	49.78	13.985	-0.0248	0.3347
266	SLU 48	-1.1	-0.64	50.72	14.2457	-0.0255	0.3478
266	SLU 49	-1.09	-0.67	50.71	14.2437	-0.0254	0.3443
266	SLU 50	-1.09	-0.65	50.38	14.15	-0.0252	0.3455
266	SLU 51	-1.08	-0.68	50.37	14.1481	-0.0252	0.3421
266	SLU 52	-1.1	-0.69	53.86	15.1303	-0.0284	0.3482
266	SLU 53	-1.14	-0.64	54.8	15.3909	-0.0291	0.3612
266	SLU 54	-1.13	-0.67	54.79	15.389	-0.029	0.3578
266	SLU 55	-1.12	-0.69	54.44	15.2921	-0.0287	0.3532
266	SLU 56	-1.16	-0.65	55.38	15.5527	-0.0294	0.3663
266	SLU 57	-1.15	-0.67	55.37	15.5508	-0.0294	0.3628
266	SLU 58	-1.15	-0.65	55.04	15.457	-0.0292	0.3641
266	SLU 59	-1.14	-0.68	55.03	15.4551	-0.0291	0.3606
266	SLU 60	-1.14	-0.65	55.88	15.6937	-0.0301	0.3619
266	SLU 61	-1.13	-0.67	55.86	15.6918	-0.0301	0.3584
266	SLU 62	-1.16	-0.65	56.46	15.8554	-0.0305	0.367
266	SLU 63	-1.15	-0.68	56.44	15.8535	-0.0305	0.3635
266	SLU 64	-1.17	-0.58	53.37	14.9937	-0.027	0.3688
266	SLU 65	-1.15	-0.63	53.35	14.9906	-0.0269	0.363
266	SLU 66	-1.19	-0.58	54.29	15.2512	-0.0276	0.3761
266	SLU 67	-1.18	-0.61	54.28	15.2493	-0.0276	0.3726
266	SLU 68	-1.16	-0.63	53.93	15.1523	-0.0273	0.3681
266	SLU 69	-1.21	-0.59	54.87	15.4129	-0.028	0.3811
266	SLU 70	-1.19	-0.61	54.86	15.411	-0.028	0.3777
266	SLU 71	-1.2	-0.59	54.53	15.3173	-0.0277	0.3789
266	SLU 72	-1.19	-0.62	54.52	15.3153	-0.0277	0.3754
266	SLU 73	-1.21	-0.63	58.01	16.2976	-0.0309	0.3816
266	SLU 74	-1.25	-0.59	58.95	16.5582	-0.0316	0.3946
266	SLU 75	-1.24	-0.61	58.94	16.5563	-0.0316	0.3911
266	SLU 76	-1.22	-0.64	58.59	16.4594	-0.0313	0.3866
266	SLU 77	-1.26	-0.59	59.53	16.72	-0.032	0.3996
266	SLU 78	-1.25	-0.62	59.52	16.7181	-0.032	0.3962
266	SLU 79	-1.26	-0.6	59.19	16.6243	-0.0317	0.3974
266	SLU 80	-1.25	-0.62	59.18	16.6224	-0.0317	0.394
266	SLU 81	-1.25	-0.59	60.03	16.861	-0.0327	0.3953
266	SLU 82	-1.24	-0.62	60.01	16.859	-0.0326	0.3918
266	SLU 83	-1.27	-0.59	60.61	17.0227	-0.033	0.4003
266	SLU 84	-1.25	-0.62	60.59	17.0208	-0.033	0.3969
266	SLE RA 1	-0.87	-0.46	40.14	11.2771	-0.0202	0.2764
266	SLE RA 2	-0.86	-0.49	40.13	11.275	-0.0202	0.2725
266	SLE RA 3	-0.89	-0.46	40.76	11.4487	-0.0206	0.2812
266	SLE RA 4	-0.88	-0.48	40.75	11.4474	-0.0206	0.2789
266	SLE RA 5	-0.87	-0.49	40.52	11.3828	-0.0204	0.2759
266	SLE RA 6	-0.9	-0.46	41.14	11.5566	-0.0209	0.2846
266	SLE RA 7	-0.89	-0.48	41.14	11.5553	-0.0209	0.2823
266	SLE RA 8	-0.9	-0.47	40.92	11.4928	-0.0207	0.2831
266	SLE RA 9	-0.89	-0.48	40.91	11.4915	-0.0207	0.2808
266	SLE RA 10	-0.9	-0.49	43.23	12.1463	-0.0228	0.2849
266	SLE RA 11	-0.93	-0.46	43.86	12.3201	-0.0233	0.2936
266	SLE RA 12	-0.92	-0.48	43.85	12.3188	-0.0233	0.2912
266	SLE RA 13	-0.91	-0.5	43.62	12.2542	-0.0231	0.2882
266	SLE RA 14	-0.94	-0.47	44.25	12.4279	-0.0235	0.2969
266	SLE RA 15	-0.93	-0.48	44.24	12.4266	-0.0235	0.2946

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
266	SLE RA 16	-0.93	-0.47	44.02	12.3641	-0.0233	0.2954
266	SLE RA 17	-0.93	-0.49	44.01	12.3629	-0.0233	0.2931
266	SLE RA 18	-0.93	-0.46	44.58	12.5219	-0.024	0.294
266	SLE RA 19	-0.92	-0.48	44.57	12.5206	-0.024	0.2917
266	SLE RA 20	-0.94	-0.47	44.97	12.6297	-0.0242	0.2974
266	SLE RA 21	-0.93	-0.49	44.96	12.6285	-0.0242	0.2951
266	SLE FR 1	-0.87	-0.46	40.14	11.2771	-0.0202	0.2764
266	SLE FR 2	-0.87	-0.47	40.14	11.2767	-0.0202	0.2756
266	SLE FR 3	-0.88	-0.46	40.3	11.3202	-0.0203	0.2777
266	SLE FR 4	-0.89	-0.47	41.47	11.6501	-0.0213	0.2809
266	SLE FR 5	-0.9	-0.46	41.63	11.6937	-0.0214	0.283
266	SLE FR 6	-0.9	-0.46	42.36	11.8995	-0.0221	0.2852
266	SLE QP 1	-0.87	-0.46	40.14	11.2771	-0.0202	0.2764
266	SLE QP 2	-0.89	-0.46	41.47	11.6506	-0.0213	0.2817
266	SLD 1	3.05	-0.01	42.18	11.7646	-0.0131	-0.9192
266	SLD 2	3.4	-0.12	42.12	11.7514	-0.0134	-1.0255
266	SLD 3	2.77	-1.2	41.82	11.7254	-0.0118	-0.8339
266	SLD 4	3.12	-1.31	41.77	11.7122	-0.0122	-0.9402
266	SLD 5	0.65	1.5	42.23	11.7466	-0.0207	-0.1892
266	SLD 6	0.88	1.42	42.19	11.738	-0.0209	-0.2587
266	SLD 7	-0.28	-2.47	41.06	11.6159	-0.0165	0.0952
266	SLD 8	-0.05	-2.54	41.02	11.6072	-0.0167	0.0257
266	SLD 9	-1.73	1.62	41.93	11.6939	-0.0259	0.5376
266	SLD 10	-1.5	1.54	41.89	11.6852	-0.0261	0.4682
266	SLD 11	-2.67	-2.35	40.76	11.5632	-0.0217	0.822
266	SLD 12	-2.44	-2.42	40.72	11.5545	-0.022	0.7525
266	SLD 13	-4.9	0.39	41.18	11.5889	-0.0305	1.5035
266	SLD 14	-4.55	0.28	41.12	11.5757	-0.0308	1.3972
266	SLD 15	-5.19	-0.8	40.83	11.5497	-0.0292	1.5888
266	SLD 16	-4.83	-0.91	40.77	11.5365	-0.0296	1.4825
266	SLV 1	8.33	0.55	43.11	11.9185	-0.002	-2.5277
266	SLV 2	9.15	0.29	42.98	11.8878	-0.0028	-2.7753
266	SLV 3	7.68	-2.14	42.31	11.8275	0.0009	-2.3294
266	SLV 4	8.5	-2.41	42.18	11.7967	0.0001	-2.577
266	SLV 5	2.72	3.97	43.2	11.8743	-0.0198	-0.8195
266	SLV 6	3.25	3.8	43.12	11.8545	-0.0203	-0.9786
266	SLV 7	0.55	-5.01	40.53	11.5708	-0.0101	-0.1585
266	SLV 8	1.08	-5.18	40.45	11.5511	-0.0106	-0.3176
266	SLV 9	-2.86	4.25	42.5	11.75	-0.032	0.8809
266	SLV 10	-2.33	4.08	42.42	11.7303	-0.0325	0.7218
266	SLV 11	-5.03	-4.73	39.83	11.4466	-0.0224	1.5419
266	SLV 12	-4.51	-4.9	39.75	11.4268	-0.0229	1.3828
266	SLV 13	-10.28	1.48	40.77	11.5044	-0.0428	3.1404
266	SLV 14	-9.46	1.22	40.64	11.4736	-0.0435	2.8927
266	SLV 15	-10.93	-1.21	39.97	11.4133	-0.0399	3.3387
266	SLV 16	-10.12	-1.48	39.84	11.3826	-0.0406	3.091
266	CRTFP Ux+	0	0	0	0	0	0
266	CRTFP Ux-	0	0	0	0	0	0
266	CRTFP Uy+	0	0	0	0	0	0
266	CRTFP Uy-	0	0	0	0	0	0
267	SLU 1	-0.83	-0.35	39.93	11.2755	-0.037	0.2615
267	SLU 2	-0.81	-0.39	39.91	11.2717	-0.037	0.2558
267	SLU 3	-0.85	-0.34	40.89	11.5435	-0.0382	0.2686
267	SLU 4	-0.84	-0.37	40.87	11.5412	-0.0382	0.2652
267	SLU 5	-0.83	-0.39	40.51	11.4396	-0.0377	0.2607
267	SLU 6	-0.87	-0.34	41.48	11.7113	-0.0389	0.2736
267	SLU 7	-0.85	-0.37	41.47	11.7091	-0.0388	0.2701
267	SLU 8	-0.86	-0.35	41.13	11.6113	-0.0384	0.2714
267	SLU 9	-0.85	-0.38	41.12	11.609	-0.0384	0.268
267	SLU 10	-0.87	-0.38	44.75	12.6394	-0.0434	0.2738
267	SLU 11	-0.91	-0.33	45.73	12.9111	-0.0446	0.2867
267	SLU 12	-0.9	-0.36	45.71	12.9088	-0.0445	0.2832
267	SLU 13	-0.88	-0.38	45.35	12.8073	-0.044	0.2788
267	SLU 14	-0.92	-0.33	46.32	13.079	-0.0452	0.2916
267	SLU 15	-0.91	-0.36	46.31	13.0767	-0.0452	0.2882
267	SLU 16	-0.92	-0.34	45.97	12.9789	-0.0448	0.2895
267	SLU 17	-0.9	-0.37	45.96	12.9767	-0.0447	0.286
267	SLU 18	-0.91	-0.33	46.85	13.2293	-0.0461	0.2873
267	SLU 19	-0.9	-0.36	46.83	13.227	-0.0461	0.2839
267	SLU 20	-0.92	-0.33	47.45	13.3972	-0.0468	0.2923
267	SLU 21	-0.91	-0.36	47.43	13.3949	-0.0468	0.2888
267	SLU 22	-0.93	-0.27	44.21	12.485	-0.0417	0.2942
267	SLU 23	-0.91	-0.32	44.18	12.4812	-0.0417	0.2885
267	SLU 24	-0.95	-0.27	45.16	12.7529	-0.0429	0.3013
267	SLU 25	-0.94	-0.29	45.15	12.7506	-0.0429	0.2979
267	SLU 26	-0.93	-0.32	44.78	12.6491	-0.0424	0.2934
267	SLU 27	-0.97	-0.27	45.76	12.9208	-0.0436	0.3063
267	SLU 28	-0.96	-0.3	45.75	12.9185	-0.0435	0.3028
267	SLU 29	-0.96	-0.28	45.41	12.8208	-0.0431	0.3041
267	SLU 30	-0.95	-0.3	45.39	12.8185	-0.0431	0.3007
267	SLU 31	-0.97	-0.31	49.02	13.8488	-0.0481	0.3065
267	SLU 32	-1.01	-0.26	50	14.1206	-0.0493	0.3194
267	SLU 33	-1	-0.28	49.99	14.1183	-0.0492	0.3159
267	SLU 34	-0.98	-0.31	49.62	14.0167	-0.0487	0.3115
267	SLU 35	-1.03	-0.26	50.6	14.2884	-0.0499	0.3243
267	SLU 36	-1.01	-0.29	50.59	14.2862	-0.0499	0.3209
267	SLU 37	-1.02	-0.27	50.25	14.1884	-0.0495	0.3222
267	SLU 38	-1.01	-0.29	50.23	14.1861	-0.0494	0.3187
267	SLU 39	-1.01	-0.26	51.12	14.4387	-0.0508	0.32
267	SLU 40	-1	-0.28	51.11	14.4365	-0.0508	0.3166
267	SLU 41	-1.03	-0.26	51.72	14.6066	-0.0515	0.325
267	SLU 42	-1.02	-0.29	51.71	14.6044	-0.0515	0.3215
267	SLU 43	-1.04	-0.47	50.45	14.2435	-0.0465	0.3288
267	SLU 44	-1.02	-0.52	50.42	14.2397	-0.0465	0.3231
267	SLU 45	-1.06	-0.47	51.4	14.5114	-0.0477	0.3359
267	SLU 46	-1.05	-0.5	51.39	14.5092	-0.0477	0.3324
267	SLU 47	-1.04	-0.52	51.02	14.4076	-0.0472	0.328

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
267	SLU 48	-1.08	-0.47	52	14.6793	-0.0484	0.3408
267	SLU 49	-1.07	-0.5	51.98	14.6771	-0.0483	0.3374
267	SLU 50	-1.07	-0.48	51.64	14.5793	-0.0479	0.3387
267	SLU 51	-1.06	-0.51	51.63	14.577	-0.0479	0.3352
267	SLU 52	-1.08	-0.51	55.26	15.6074	-0.0529	0.3411
267	SLU 53	-1.12	-0.46	56.24	15.8791	-0.0541	0.3539
267	SLU 54	-1.11	-0.49	56.22	15.8768	-0.054	0.3505
267	SLU 55	-1.09	-0.51	55.86	15.7753	-0.0535	0.346
267	SLU 56	-1.14	-0.46	56.84	16.047	-0.0547	0.3589
267	SLU 57	-1.12	-0.49	56.82	16.0447	-0.0547	0.3554
267	SLU 58	-1.13	-0.47	56.48	15.9469	-0.0543	0.3567
267	SLU 59	-1.12	-0.5	56.47	15.9447	-0.0542	0.3533
267	SLU 60	-1.12	-0.46	57.36	16.1973	-0.0556	0.3546
267	SLU 61	-1.11	-0.49	57.35	16.195	-0.0556	0.3511
267	SLU 62	-1.14	-0.46	57.96	16.3652	-0.0563	0.3595
267	SLU 63	-1.13	-0.49	57.95	16.3629	-0.0563	0.3561
267	SLU 64	-1.14	-0.4	54.72	15.453	-0.0512	0.3615
267	SLU 65	-1.13	-0.45	54.7	15.4492	-0.0512	0.3557
267	SLU 66	-1.17	-0.4	55.67	15.7209	-0.0524	0.3686
267	SLU 67	-1.16	-0.42	55.66	15.7186	-0.0524	0.3651
267	SLU 68	-1.14	-0.45	55.3	15.6171	-0.0519	0.3607
267	SLU 69	-1.18	-0.4	56.27	15.8888	-0.0531	0.3735
267	SLU 70	-1.17	-0.42	56.26	15.8865	-0.053	0.3701
267	SLU 71	-1.18	-0.41	55.92	15.7887	-0.0526	0.3714
267	SLU 72	-1.16	-0.43	55.91	15.7865	-0.0526	0.3679
267	SLU 73	-1.18	-0.44	59.54	16.8168	-0.0576	0.3738
267	SLU 74	-1.22	-0.39	60.51	17.0885	-0.0588	0.3866
267	SLU 75	-1.21	-0.41	60.5	17.0863	-0.0587	0.3832
267	SLU 76	-1.2	-0.44	60.14	16.9847	-0.0582	0.3787
267	SLU 77	-1.24	-0.39	61.11	17.2564	-0.0594	0.3916
267	SLU 78	-1.23	-0.41	61.1	17.2542	-0.0594	0.3881
267	SLU 79	-1.23	-0.4	60.76	17.1564	-0.059	0.3894
267	SLU 80	-1.22	-0.42	60.75	17.1541	-0.0589	0.386
267	SLU 81	-1.22	-0.39	61.64	17.4067	-0.0603	0.3873
267	SLU 82	-1.21	-0.41	61.62	17.4045	-0.0603	0.3838
267	SLU 83	-1.24	-0.39	62.23	17.5746	-0.061	0.3922
267	SLU 84	-1.23	-0.42	62.22	17.5724	-0.061	0.3888
267	SLE RA 1	-0.86	-0.33	41.15	11.6211	-0.0384	0.2709
267	SLE RA 2	-0.85	-0.35	41.14	11.6186	-0.0384	0.2671
267	SLE RA 3	-0.87	-0.32	41.79	11.7997	-0.0392	0.2756
267	SLE RA 4	-0.87	-0.34	41.78	11.7982	-0.0391	0.2733
267	SLE RA 5	-0.86	-0.36	41.54	11.7305	-0.0388	0.2703
267	SLE RA 6	-0.88	-0.32	42.19	11.9116	-0.0396	0.2789
267	SLE RA 7	-0.88	-0.34	42.18	11.9101	-0.0396	0.2766
267	SLE RA 8	-0.88	-0.33	41.95	11.8449	-0.0393	0.2775
267	SLE RA 9	-0.87	-0.35	41.94	11.8434	-0.0393	0.2752
267	SLE RA 10	-0.88	-0.35	44.37	12.5303	-0.0426	0.2791
267	SLE RA 11	-0.91	-0.31	45.02	12.7115	-0.0434	0.2876
267	SLE RA 12	-0.9	-0.33	45.01	12.7099	-0.0434	0.2853
267	SLE RA 13	-0.89	-0.35	44.76	12.6422	-0.0431	0.2824
267	SLE RA 14	-0.92	-0.32	45.42	12.8234	-0.0439	0.2909
267	SLE RA 15	-0.91	-0.33	45.41	12.8219	-0.0438	0.2886
267	SLE RA 16	-0.92	-0.32	45.18	12.7567	-0.0435	0.2895
267	SLE RA 17	-0.91	-0.34	45.17	12.7552	-0.0435	0.2872
267	SLE RA 18	-0.91	-0.32	45.76	12.9236	-0.0445	0.2881
267	SLE RA 19	-0.9	-0.33	45.75	12.9221	-0.0444	0.2858
267	SLE RA 20	-0.92	-0.32	46.16	13.0355	-0.0449	0.2914
267	SLE RA 21	-0.91	-0.33	46.15	13.034	-0.0449	0.2891
267	SLE FR 1	-0.86	-0.33	41.15	11.6211	-0.0384	0.2709
267	SLE FR 2	-0.86	-0.33	41.15	11.6206	-0.0384	0.2701
267	SLE FR 3	-0.86	-0.33	41.31	11.6659	-0.0386	0.2722
267	SLE FR 4	-0.87	-0.33	42.53	12.0113	-0.0402	0.2753
267	SLE FR 5	-0.88	-0.32	42.7	12.0566	-0.0404	0.2774
267	SLE FR 6	-0.88	-0.32	43.46	12.2723	-0.0414	0.2795
267	SLE QP 1	-0.86	-0.33	41.15	11.6211	-0.0384	0.2709
267	SLE QP 2	-0.87	-0.32	42.54	12.0118	-0.0402	0.276
267	SLD 1	3.06	0.17	42.98	11.9944	-0.0324	-0.9223
267	SLD 2	3.41	0.08	42.94	11.9847	-0.0327	-1.0282
267	SLD 3	2.78	-1.03	42.59	11.9412	-0.0309	-0.8373
267	SLD 4	3.13	-1.12	42.55	11.9314	-0.0313	-0.9431
267	SLD 5	0.67	1.66	43.28	12.0891	-0.0401	-0.1938
267	SLD 6	0.9	1.6	43.25	12.0827	-0.0403	-0.263
267	SLD 7	-0.26	-2.34	41.96	11.9116	-0.0351	0.0898
267	SLD 8	-0.04	-2.4	41.93	11.9052	-0.0353	0.0206
267	SLD 9	-1.71	1.76	43.14	12.1185	-0.0451	0.5315
267	SLD 10	-1.48	1.69	43.11	12.1121	-0.0453	0.4623
267	SLD 11	-2.64	-2.25	41.82	11.9409	-0.0402	0.815
267	SLD 12	-2.41	-2.31	41.8	11.9346	-0.0404	0.7459
267	SLD 13	-4.87	0.48	42.53	12.0923	-0.0492	1.4952
267	SLD 14	-4.52	0.38	42.49	12.0825	-0.0495	1.3894
267	SLD 15	-5.15	-0.72	42.13	12.039	-0.0477	1.5803
267	SLD 16	-4.8	-0.82	42.09	12.0293	-0.048	1.4744
267	SLV 1	8.32	0.79	43.57	11.9655	-0.022	-2.5276
267	SLV 2	9.13	0.57	43.48	11.9428	-0.0227	-2.7741
267	SLV 3	7.67	-1.93	42.68	11.843	-0.0186	-2.3299
267	SLV 4	8.48	-2.15	42.58	11.8203	-0.0193	-2.5764
267	SLV 5	2.73	4.17	44.22	12.1876	-0.0398	-0.8227
267	SLV 6	3.25	4.03	44.16	12.173	-0.0402	-0.9812
267	SLV 7	0.57	-4.89	41.23	11.7793	-0.0284	-0.1636
267	SLV 8	1.09	-5.03	41.17	11.7647	-0.0289	-0.322
267	SLV 9	-2.84	4.39	43.9	12.259	-0.0515	0.8741
267	SLV 10	-2.31	4.24	43.84	12.2444	-0.052	0.7157
267	SLV 11	-5	-4.68	40.91	11.8507	-0.0402	1.5332
267	SLV 12	-4.48	-4.82	40.85	11.8361	-0.0406	1.3748
267	SLV 13	-10.23	1.5	42.49	12.2034	-0.0611	3.1285
267	SLV 14	-9.42	1.28	42.4	12.1806	-0.0619	2.8819
267	SLV 15	-10.88	-1.22	41.6	12.0809	-0.0577	3.3262

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
267	SLV 16	-10.07	-1.44	41.5	12.0581	-0.0585	3.0797
267	CRTFP Ux+	0	0	0	0	0	0
267	CRTFP Ux-	0	0	0	0	0	0
267	CRTFP Uy+	0	0	0	0	0	0
267	CRTFP Uy-	0	0	0	0	0	0
268	SLU 1	-2.24	-0.59	116.85	40.9812	-9.1753	0.7883
268	SLU 2	-2.19	-0.71	116.78	40.9615	-9.1696	0.7613
268	SLU 3	-2.3	-0.56	119.67	41.9691	-9.4018	0.8125
268	SLU 4	-2.27	-0.64	119.63	41.9573	-9.3983	0.7963
268	SLU 5	-2.23	-0.71	118.55	41.5796	-9.3109	0.7767
268	SLU 6	-2.35	-0.57	121.44	42.5872	-9.5431	0.8278
268	SLU 7	-2.32	-0.64	121.4	42.5754	-9.5396	0.8117
268	SLU 8	-2.33	-0.59	120.39	42.2174	-9.4579	0.819
268	SLU 9	-2.3	-0.67	120.35	42.2056	-9.4545	0.8028
268	SLU 10	-2.34	-0.64	131.2	46.025	-10.3363	0.8227
268	SLU 11	-2.45	-0.5	134.09	47.0326	-10.5685	0.8738
268	SLU 12	-2.42	-0.57	134.05	47.0207	-10.565	0.8576
268	SLU 13	-2.38	-0.65	132.97	46.6431	-10.4776	0.838
268	SLU 14	-2.5	-0.5	135.86	47.6507	-10.7098	0.8892
268	SLU 15	-2.47	-0.57	135.81	47.6388	-10.7063	0.873
268	SLU 16	-2.48	-0.53	134.8	47.2809	-10.6246	0.8804
268	SLU 17	-2.45	-0.6	134.76	47.2691	-10.6212	0.8642
268	SLU 18	-2.46	-0.49	137.44	48.2147	-10.842	0.8759
268	SLU 19	-2.43	-0.57	137.4	48.2029	-10.8386	0.8597
268	SLU 20	-2.5	-0.5	139.21	48.8328	-10.9833	0.8913
268	SLU 21	-2.47	-0.57	139.17	48.821	-10.9799	0.8751
268	SLU 22	-2.52	-0.34	129.47	45.4115	-10.1819	0.9096
268	SLU 23	-2.47	-0.46	129.4	45.3918	-10.1762	0.8827
268	SLU 24	-2.58	-0.31	132.29	46.3994	-10.4084	0.9338
268	SLU 25	-2.55	-0.38	132.25	46.3876	-10.405	0.9177
268	SLU 26	-2.51	-0.46	131.17	46.0099	-10.3175	0.898
268	SLU 27	-2.63	-0.31	134.06	47.0175	-10.5497	0.9492
268	SLU 28	-2.59	-0.38	134.02	47.0057	-10.5463	0.933
268	SLU 29	-2.61	-0.34	133.01	46.6477	-10.4645	0.9404
268	SLU 30	-2.58	-0.41	132.97	46.6359	-10.4611	0.9242
268	SLU 31	-2.62	-0.39	143.82	50.4553	-11.3429	0.944
268	SLU 32	-2.73	-0.24	146.71	51.4629	-11.5751	0.9952
268	SLU 33	-2.7	-0.31	146.66	51.451	-11.5717	0.979
268	SLU 34	-2.66	-0.39	145.58	51.0734	-11.4842	0.9594
268	SLU 35	-2.78	-0.25	148.47	52.081	-11.7164	1.0106
268	SLU 36	-2.75	-0.32	148.43	52.0691	-11.713	0.9944
268	SLU 37	-2.76	-0.27	147.42	51.7112	-11.6312	1.0017
268	SLU 38	-2.73	-0.35	147.38	51.6994	-11.6278	0.9856
268	SLU 39	-2.74	-0.24	150.06	52.6451	-11.8486	0.9973
268	SLU 40	-2.71	-0.31	150.02	52.6332	-11.8452	0.9811
268	SLU 41	-2.78	-0.24	151.83	53.2632	-11.9899	1.0127
268	SLU 42	-2.75	-0.31	151.79	53.2513	-11.9865	0.9965
268	SLU 43	-2.82	-0.85	147.58	51.7566	-11.5828	0.9831
268	SLU 44	-2.77	-0.97	147.51	51.7369	-11.577	0.9562
268	SLU 45	-2.88	-0.83	150.4	52.7445	-11.8092	1.0073
268	SLU 46	-2.85	-0.9	150.36	52.7327	-11.8058	0.9912
268	SLU 47	-2.81	-0.98	149.28	52.355	-11.7183	0.9715
268	SLU 48	-2.92	-0.83	152.17	53.3626	-11.9505	1.0227
268	SLU 49	-2.89	-0.9	152.13	53.3508	-11.9471	1.0065
268	SLU 50	-2.91	-0.86	151.12	52.9928	-11.8654	1.0139
268	SLU 51	-2.87	-0.93	151.08	52.981	-11.8619	0.9977
268	SLU 52	-2.92	-0.91	161.93	56.8004	-12.7437	1.0175
268	SLU 53	-3.03	-0.76	164.82	57.808	-12.9759	1.0687
268	SLU 54	-3	-0.83	164.78	57.7961	-12.9725	1.0525
268	SLU 55	-2.96	-0.91	163.7	57.4185	-12.885	1.0329
268	SLU 56	-3.07	-0.76	166.59	58.4261	-13.1172	1.0841
268	SLU 57	-3.04	-0.83	166.54	58.4142	-13.1138	1.0679
268	SLU 58	-3.06	-0.79	165.53	58.0563	-13.0321	1.0752
268	SLU 59	-3.03	-0.86	165.49	58.0445	-13.0286	1.0591
268	SLU 60	-3.04	-0.76	168.17	58.9901	-13.2495	1.0708
268	SLU 61	-3	-0.83	168.13	58.9783	-13.246	1.0546
268	SLU 62	-3.08	-0.76	169.94	59.6082	-13.3908	1.0861
268	SLU 63	-3.05	-0.83	169.9	59.5964	-13.3873	1.07
268	SLU 64	-3.1	-0.6	160.2	56.1869	-12.5894	1.1045
268	SLU 65	-3.05	-0.72	160.13	56.1672	-12.5836	1.0775
268	SLU 66	-3.16	-0.57	163.02	57.1748	-12.8159	1.1287
268	SLU 67	-3.13	-0.65	162.98	57.163	-12.8124	1.1125
268	SLU 68	-3.09	-0.72	161.9	56.7853	-12.725	1.0929
268	SLU 69	-3.2	-0.58	164.79	57.7929	-12.9572	1.1441
268	SLU 70	-3.17	-0.65	164.75	57.7811	-12.9537	1.1279
268	SLU 71	-3.19	-0.61	163.74	57.4231	-12.872	1.1352
268	SLU 72	-3.15	-0.68	163.7	57.4113	-12.8686	1.1191
268	SLU 73	-3.2	-0.65	174.55	61.2307	-13.7503	1.1389
268	SLU 74	-3.31	-0.51	177.44	62.2383	-13.9826	1.1901
268	SLU 75	-3.28	-0.58	177.39	62.2264	-13.9791	1.1739
268	SLU 76	-3.24	-0.66	176.31	61.8488	-13.8917	1.1543
268	SLU 77	-3.35	-0.51	179.2	62.8564	-14.1239	1.2054
268	SLU 78	-3.32	-0.58	179.16	62.8445	-14.1204	1.1893
268	SLU 79	-3.34	-0.54	178.15	62.4866	-14.0387	1.1966
268	SLU 80	-3.3	-0.61	178.11	62.4748	-14.0353	1.1804
268	SLU 81	-3.32	-0.5	180.79	63.4205	-14.2561	1.1921
268	SLU 82	-3.28	-0.58	180.75	63.4086	-14.2527	1.176
268	SLU 83	-3.36	-0.51	182.56	64.0386	-14.3974	1.2075
268	SLU 84	-3.33	-0.58	182.52	64.0267	-14.394	1.1913
268	SLE RA 1	-2.32	-0.52	120.46	42.247	-9.4629	0.8229
268	SLE RA 2	-2.29	-0.6	120.41	42.2339	-9.4591	0.805
268	SLE RA 3	-2.36	-0.5	122.34	42.9056	-9.6139	0.8391
268	SLE RA 4	-2.34	-0.55	122.31	42.8977	-9.6116	0.8283
268	SLE RA 5	-2.32	-0.6	121.59	42.6459	-9.5533	0.8152
268	SLE RA 6	-2.39	-0.5	123.52	43.3177	-9.7081	0.8493
268	SLE RA 7	-2.37	-0.55	123.49	43.3098	-9.7058	0.8385
268	SLE RA 8	-2.38	-0.52	122.82	43.0712	-9.6513	0.8434

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
268	SLE RA 9	-2.36	-0.57	122.79	43.0633	-9.649	0.8327
268	SLE RA 10	-2.39	-0.55	130.02	45.6095	-10.2369	0.8459
268	SLE RA 11	-2.46	-0.46	131.95	46.2813	-10.3917	0.88
268	SLE RA 12	-2.44	-0.5	131.92	46.2734	-10.3894	0.8692
268	SLE RA 13	-2.42	-0.55	131.2	46.0216	-10.3311	0.8561
268	SLE RA 14	-2.49	-0.46	133.13	46.6933	-10.4859	0.8902
268	SLE RA 15	-2.47	-0.5	133.1	46.6854	-10.4836	0.8794
268	SLE RA 16	-2.48	-0.48	132.42	46.4468	-10.4291	0.8843
268	SLE RA 17	-2.46	-0.52	132.4	46.4389	-10.4268	0.8736
268	SLE RA 18	-2.47	-0.45	134.18	47.0694	-10.574	0.8814
268	SLE RA 19	-2.45	-0.5	134.16	47.0615	-10.5718	0.8706
268	SLE RA 20	-2.5	-0.46	135.36	47.4814	-10.6683	0.8916
268	SLE RA 21	-2.47	-0.5	135.34	47.4735	-10.666	0.8808
268	SLE FR 1	-2.32	-0.52	120.46	42.247	-9.4629	0.8229
268	SLE FR 2	-2.32	-0.53	120.45	42.2444	-9.4621	0.8193
268	SLE FR 3	-2.33	-0.52	120.93	42.4118	-9.5006	0.827
268	SLE FR 4	-2.36	-0.51	124.57	43.6911	-9.7955	0.8369
268	SLE FR 5	-2.38	-0.5	125.05	43.8586	-9.8339	0.8446
268	SLE FR 6	-2.4	-0.49	127.32	44.6582	-10.0185	0.8522
268	SLE QP 1	-2.32	-0.52	120.46	42.247	-9.4629	0.8229
268	SLE QP 2	-2.37	-0.5	124.58	43.6937	-9.7962	0.8405
268	SLD 1	8.6	1.79	124.45	43.53	-9.6531	-2.7425
268	SLD 2	9.57	1.6	124.37	43.5072	-9.653	-3.0973
268	SLD 3	7.83	-1.62	123.23	43.1929	-9.5422	-3.1643
268	SLD 4	8.79	-1.82	123.15	43.1701	-9.5421	-3.5191
268	SLD 5	1.93	5.4	126.41	44.1599	-9.9215	0.4681
268	SLD 6	2.56	5.27	126.36	44.145	-9.9214	0.2362
268	SLD 7	-0.65	-5.98	122.33	43.0363	-9.5519	-0.938
268	SLD 8	-0.02	-6.11	122.28	43.0214	-9.5518	-1.1699
268	SLD 9	-4.71	5.11	126.87	44.3661	-10.0407	2.8509
268	SLD 10	-4.08	4.98	126.82	44.3512	-10.0406	2.619
268	SLD 11	-7.29	-6.27	122.8	43.2425	-9.6711	1.4447
268	SLD 12	-6.66	-6.4	122.75	43.2276	-9.671	1.2128
268	SLD 13	-13.53	0.82	126	44.2173	-10.0504	5.2001
268	SLD 14	-12.57	0.62	125.93	44.1946	-10.0503	4.8453
268	SLD 15	-14.3	-2.59	124.78	43.8803	-9.9395	4.7782
268	SLD 16	-13.34	-2.79	124.7	43.8575	-9.9394	4.4234
268	SLV 1	23.3	4.73	124.21	43.2905	-9.4565	-7.5553
268	SLV 2	25.54	4.27	124.04	43.2374	-9.4562	-8.3816
268	SLV 3	21.5	-3	121.43	42.5211	-9.2038	-8.5199
268	SLV 4	23.74	-3.46	121.25	42.4681	-9.2035	-9.3463
268	SLV 5	7.68	12.88	128.72	44.7486	-10.0777	-0.0737
268	SLV 6	9.11	12.58	128.61	44.7145	-10.0775	-0.6048
268	SLV 7	1.69	-12.9	119.44	42.1842	-9.2353	-3.289
268	SLV 8	3.13	-13.2	119.32	42.1501	-9.2351	-3.8201
268	SLV 9	-7.86	12.2	129.83	45.2373	-10.3574	5.5011
268	SLV 10	-6.42	11.9	129.71	45.2032	-10.3572	4.97
268	SLV 11	-13.85	-13.58	120.54	42.6729	-9.515	2.2857
268	SLV 12	-12.41	-13.88	120.43	42.6388	-9.5148	1.7546
268	SLV 13	-28.48	2.47	127.9	44.9194	-10.389	11.0272
268	SLV 14	-26.24	2.01	127.73	44.8663	-10.3887	10.2008
268	SLV 15	-30.27	-5.27	125.12	44.1501	-10.1363	10.0626
268	SLV 16	-28.03	-5.73	124.94	44.097	-10.1359	9.2362
268	CRTFP Ux+	0	0	0	0	0	0
268	CRTFP Ux-	0	0	0	0	0	0
268	CRTFP Uy+	0	0	0	0	0	0
268	CRTFP Uy-	0	0	0	0	0	0
271	SLU 1	-0.54	-0.09	28.67	8.5811	3.8396	0.1898
271	SLU 2	-0.53	-0.12	28.65	8.5776	3.8372	0.1896
271	SLU 3	-0.56	-0.08	29.37	8.7894	3.9329	0.1936
271	SLU 4	-0.55	-0.1	29.36	8.7873	3.9315	0.1934
271	SLU 5	-0.54	-0.12	29.09	8.7076	3.8956	0.1929
271	SLU 6	-0.57	-0.08	29.81	8.9193	3.9913	0.1969
271	SLU 7	-0.56	-0.1	29.79	8.9172	3.9899	0.1968
271	SLU 8	-0.56	-0.09	29.54	8.841	3.9564	0.1965
271	SLU 9	-0.56	-0.11	29.53	8.8389	3.955	0.1963
271	SLU 10	-0.57	-0.1	32.22	9.6484	4.3142	0.1988
271	SLU 11	-0.59	-0.06	32.94	9.8601	4.4099	0.2028
271	SLU 12	-0.59	-0.08	32.93	9.858	4.4085	0.2027
271	SLU 13	-0.58	-0.1	32.66	9.7783	4.3726	0.2021
271	SLU 14	-0.6	-0.06	33.37	9.9901	4.4683	0.2062
271	SLU 15	-0.6	-0.08	33.36	9.988	4.4669	0.206
271	SLU 16	-0.6	-0.07	33.11	9.9118	4.4334	0.2057
271	SLU 17	-0.59	-0.08	33.1	9.9097	4.432	0.2056
271	SLU 18	-0.6	-0.06	33.77	10.1108	4.521	0.203
271	SLU 19	-0.59	-0.08	33.76	10.1087	4.5196	0.2029
271	SLU 20	-0.61	-0.06	34.2	10.2407	4.5794	0.2063
271	SLU 21	-0.6	-0.07	34.19	10.2386	4.578	0.2062
271	SLU 22	-0.61	-0.02	31.78	9.5145	4.2559	0.2031
271	SLU 23	-0.6	-0.05	31.77	9.511	4.2536	0.2028
271	SLU 24	-0.63	-0.02	32.48	9.7228	4.3492	0.2069
271	SLU 25	-0.62	-0.03	32.47	9.7207	4.3478	0.2067
271	SLU 26	-0.61	-0.05	32.2	9.641	4.312	0.2062
271	SLU 27	-0.64	-0.02	32.92	9.8527	4.4077	0.2102
271	SLU 28	-0.63	-0.03	32.91	9.8506	4.4063	0.21
271	SLU 29	-0.63	-0.02	32.66	9.7744	4.3728	0.2097
271	SLU 30	-0.62	-0.04	32.65	9.7723	4.3714	0.2096
271	SLU 31	-0.63	-0.03	35.33	10.5818	4.7306	0.2121
271	SLU 32	-0.66	0.01	36.05	10.7935	4.8262	0.2161
271	SLU 33	-0.65	-0.01	36.04	10.7914	4.8248	0.216
271	SLU 34	-0.65	-0.03	35.77	10.7117	4.789	0.2154
271	SLU 35	-0.67	0.01	36.48	10.9235	4.8847	0.2194
271	SLU 36	-0.66	-0.01	36.47	10.9214	4.8833	0.2193
271	SLU 37	-0.67	0	36.22	10.8452	4.8498	0.219
271	SLU 38	-0.66	-0.02	36.21	10.8431	4.8484	0.2189
271	SLU 39	-0.66	0.01	36.88	11.0441	4.9373	0.2163
271	SLU 40	-0.66	-0.01	36.87	11.042	4.9359	0.2162

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
271	SLU 41	-0.67	0.01	37.32	11.1741	4.9958	0.2196
271	SLU 42	-0.67	-0.01	37.3	11.172	4.9944	0.2195
271	SLU 43	-0.68	-0.14	36.21	10.8355	4.8487	0.2422
271	SLU 44	-0.67	-0.17	36.19	10.832	4.8463	0.2419
271	SLU 45	-0.7	-0.13	36.9	11.0437	4.942	0.246
271	SLU 46	-0.69	-0.15	36.89	11.0416	4.9406	0.2458
271	SLU 47	-0.68	-0.17	36.62	10.9619	4.9048	0.2453
271	SLU 48	-0.71	-0.13	37.34	11.1737	5.0004	0.2493
271	SLU 49	-0.7	-0.15	37.33	11.1716	4.999	0.2491
271	SLU 50	-0.7	-0.14	37.08	11.0954	4.9655	0.2488
271	SLU 51	-0.7	-0.16	37.07	11.0933	4.9641	0.2487
271	SLU 52	-0.71	-0.15	39.76	11.9027	5.3233	0.2512
271	SLU 53	-0.73	-0.11	40.47	12.1145	5.419	0.2552
271	SLU 54	-0.73	-0.13	40.46	12.1123	5.4176	0.2551
271	SLU 55	-0.72	-0.15	40.19	12.0326	5.3818	0.2545
271	SLU 56	-0.74	-0.11	40.91	12.2444	5.4774	0.2585
271	SLU 57	-0.74	-0.13	40.9	12.2423	5.476	0.2584
271	SLU 58	-0.74	-0.12	40.65	12.1661	5.4425	0.2581
271	SLU 59	-0.73	-0.13	40.64	12.164	5.4411	0.2579
271	SLU 60	-0.73	-0.11	41.3	12.3651	5.5301	0.2554
271	SLU 61	-0.73	-0.12	41.29	12.363	5.5287	0.2553
271	SLU 62	-0.75	-0.11	41.74	12.495	5.5885	0.2587
271	SLU 63	-0.74	-0.12	41.73	12.4929	5.5871	0.2586
271	SLU 64	-0.75	-0.07	39.32	11.7688	5.265	0.2555
271	SLU 65	-0.74	-0.1	39.3	11.7653	5.2627	0.2552
271	SLU 66	-0.76	-0.07	40.01	11.9771	5.3583	0.2593
271	SLU 67	-0.76	-0.08	40	11.975	5.3569	0.2591
271	SLU 68	-0.75	-0.1	39.74	11.8953	5.3211	0.2586
271	SLU 69	-0.77	-0.07	40.45	12.107	5.4168	0.2626
271	SLU 70	-0.77	-0.08	40.44	12.1049	5.4154	0.2624
271	SLU 71	-0.77	-0.07	40.19	12.0287	5.3819	0.2621
271	SLU 72	-0.76	-0.09	40.18	12.0266	5.3805	0.262
271	SLU 73	-0.77	-0.08	42.87	12.8361	5.7397	0.2645
271	SLU 74	-0.8	-0.04	43.58	13.0478	5.8353	0.2685
271	SLU 75	-0.79	-0.06	43.57	13.0457	5.8339	0.2684
271	SLU 76	-0.78	-0.08	43.3	12.966	5.7981	0.2678
271	SLU 77	-0.81	-0.04	44.02	13.1778	5.8938	0.2718
271	SLU 78	-0.8	-0.06	44.01	13.1757	5.8924	0.2717
271	SLU 79	-0.81	-0.05	43.76	13.0995	5.8589	0.2714
271	SLU 80	-0.8	-0.07	43.75	13.0974	5.8575	0.2712
271	SLU 81	-0.8	-0.04	44.41	13.2985	5.9465	0.2687
271	SLU 82	-0.8	-0.06	44.4	13.2964	5.9451	0.2685
271	SLU 83	-0.81	-0.04	44.85	13.4284	6.0049	0.272
271	SLU 84	-0.81	-0.06	44.84	13.4263	6.0035	0.2719
271	SLE RA 1	-0.56	-0.07	29.56	8.8478	3.9585	0.1936
271	SLE RA 2	-0.55	-0.09	29.55	8.8455	3.957	0.1934
271	SLE RA 3	-0.57	-0.07	30.03	8.9866	4.0207	0.1961
271	SLE RA 4	-0.57	-0.08	30.02	8.9852	4.0198	0.196
271	SLE RA 5	-0.56	-0.09	29.84	8.9321	3.9959	0.1957
271	SLE RA 6	-0.58	-0.07	30.32	9.0733	4.0597	0.1983
271	SLE RA 7	-0.57	-0.08	30.31	9.0719	4.0587	0.1982
271	SLE RA 8	-0.58	-0.07	30.14	9.0211	4.0364	0.198
271	SLE RA 9	-0.57	-0.08	30.14	9.0197	4.0355	0.1979
271	SLE RA 10	-0.58	-0.07	31.93	9.5593	4.275	0.1996
271	SLE RA 11	-0.6	-0.05	32.4	9.7005	4.3387	0.2023
271	SLE RA 12	-0.59	-0.06	32.4	9.6991	4.3378	0.2022
271	SLE RA 13	-0.59	-0.07	32.22	9.6459	4.3139	0.2018
271	SLE RA 14	-0.6	-0.05	32.69	9.7871	4.3777	0.2045
271	SLE RA 15	-0.6	-0.06	32.69	9.7857	4.3767	0.2044
271	SLE RA 16	-0.6	-0.06	32.52	9.7349	4.3544	0.2042
271	SLE RA 17	-0.6	-0.07	32.51	9.7335	4.3535	0.2041
271	SLE RA 18	-0.6	-0.05	32.96	9.8676	4.4128	0.2024
271	SLE RA 19	-0.59	-0.06	32.95	9.8662	4.4119	0.2023
271	SLE RA 20	-0.6	-0.05	33.25	9.9542	4.4518	0.2046
271	SLE RA 21	-0.6	-0.06	33.24	9.9528	4.4508	0.2045
271	SLE FR 1	-0.56	-0.07	29.56	8.8478	3.9585	0.1936
271	SLE FR 2	-0.56	-0.07	29.56	8.8473	3.9582	0.1936
271	SLE FR 3	-0.56	-0.07	29.68	8.8825	3.9741	0.1945
271	SLE FR 4	-0.57	-0.07	30.58	9.1533	4.0945	0.1962
271	SLE FR 5	-0.58	-0.06	30.7	9.1884	4.1104	0.1971
271	SLE FR 6	-0.58	-0.06	31.26	9.3577	4.1857	0.198
271	SLE QP 1	-0.56	-0.07	29.56	8.8478	3.9585	0.1936
271	SLE QP 2	-0.57	-0.06	30.58	9.1537	4.0948	0.1962
271	SLD 1	2.03	0.5	30.44	9.0569	4.0783	-0.679
271	SLD 2	2.26	0.47	30.42	9.0542	4.0763	-0.7478
271	SLD 3	1.84	-0.31	30.12	8.9978	4.0355	-0.5726
271	SLD 4	2.07	-0.34	30.1	8.9952	4.0335	-0.6413
271	SLD 5	0.45	1.34	31.03	9.2148	4.1551	-0.2156
271	SLD 6	0.6	1.32	31.02	9.213	4.1538	-0.2606
271	SLD 7	-0.17	-1.36	29.96	9.0178	4.0125	0.1392
271	SLD 8	-0.02	-1.39	29.95	9.0161	4.0112	0.0943
271	SLD 9	-1.13	1.26	31.21	9.2914	4.1784	0.2982
271	SLD 10	-0.98	1.23	31.2	9.2896	4.1771	0.2533
271	SLD 11	-1.74	-1.45	30.14	9.0945	4.0358	0.653
271	SLD 12	-1.59	-1.47	30.13	9.0927	4.0345	0.6081
271	SLD 13	-3.22	0.22	31.06	9.3123	4.156	1.0338
271	SLD 14	-2.99	0.18	31.04	9.3097	4.1541	0.9651
271	SLD 15	-3.4	-0.6	30.74	9.2532	4.1133	1.1403
271	SLD 16	-3.17	-0.63	30.72	9.2506	4.1113	1.0715
271	SLV 1	5.51	1.23	30.23	8.9239	4.0541	-1.8493
271	SLV 2	6.05	1.15	30.2	8.9177	4.0495	-2.0094
271	SLV 3	5.08	-0.61	29.5	8.7886	3.9566	-1.6055
271	SLV 4	5.62	-0.69	29.47	8.7824	3.9521	-1.7656
271	SLV 5	1.81	3.13	31.59	9.291	4.2311	-0.7598
271	SLV 6	2.16	3.07	31.57	9.287	4.2282	-0.8627
271	SLV 7	0.38	-3	29.15	8.8401	3.9063	0.053
271	SLV 8	0.73	-3.06	29.13	8.8361	3.9034	-0.0499

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
271	SLV 9	-1.87	2.93	32.03	9.4714	4.2862	0.4424
271	SLV 10	-1.53	2.87	32.01	9.4674	4.2833	0.3395
271	SLV 11	-3.3	-3.2	29.59	9.0204	3.9614	1.2552
271	SLV 12	-2.96	-3.26	29.57	9.0164	3.9584	1.1523
271	SLV 13	-6.76	0.56	31.69	9.5251	4.2375	2.158
271	SLV 14	-6.23	0.48	31.66	9.5188	4.233	1.9979
271	SLV 15	-7.19	-1.28	30.96	9.3898	4.1401	2.4019
271	SLV 16	-6.66	-1.36	30.93	9.3836	4.1355	2.2418
271	CRTFP Ux+	0	0	0	0	0	0
271	CRTFP Ux-	0	0	0	0	0	0
271	CRTFP Uy+	0	0	0	0	0	0
271	CRTFP Uy-	0	0	0	0	0	0
273	SLU 1	0.23	-0.21	77.99	8.9876	13.5835	-0.0284
273	SLU 2	0.26	-0.28	77.94	8.9852	13.574	-0.0197
273	SLU 3	0.23	-0.19	79.87	9.2035	13.9139	-0.0337
273	SLU 4	0.25	-0.23	79.84	9.2021	13.9081	-0.0285
273	SLU 5	0.26	-0.28	79.12	9.1191	13.7803	-0.0206
273	SLU 6	0.23	-0.19	81.04	9.3375	14.1202	-0.0346
273	SLU 7	0.25	-0.23	81.02	9.336	14.1145	-0.0293
273	SLU 8	0.23	-0.21	80.34	9.2554	13.9962	-0.0301
273	SLU 9	0.25	-0.25	80.31	9.254	13.9905	-0.0249
273	SLU 10	0.25	-0.16	87.69	10.1116	15.2907	-0.0429
273	SLU 11	0.22	-0.08	89.61	10.3299	15.6306	-0.0569
273	SLU 12	0.24	-0.12	89.59	10.3285	15.6249	-0.0517
273	SLU 13	0.25	-0.16	88.86	10.2455	15.4971	-0.0437
273	SLU 14	0.22	-0.08	90.79	10.4639	15.8369	-0.0577
273	SLU 15	0.24	-0.12	90.76	10.4624	15.8312	-0.0525
273	SLU 16	0.22	-0.1	90.08	10.3818	15.7129	-0.0533
273	SLU 17	0.23	-0.14	90.05	10.3804	15.7072	-0.0481
273	SLU 18	0.21	-0.05	91.91	10.5967	16.036	-0.0615
273	SLU 19	0.23	-0.09	91.88	10.5953	16.0303	-0.0563
273	SLU 20	0.21	-0.05	93.08	10.7306	16.2423	-0.0624
273	SLU 21	0.23	-0.09	93.06	10.7292	16.2366	-0.0572
273	SLU 22	0.26	-0.03	86.37	9.9592	15.0438	-0.0685
273	SLU 23	0.29	-0.1	86.33	9.9568	15.0343	-0.0598
273	SLU 24	0.27	-0.01	88.25	10.1752	15.3741	-0.0738
273	SLU 25	0.29	-0.05	88.23	10.1737	15.3684	-0.0686
273	SLU 26	0.29	-0.1	87.5	10.0908	15.2406	-0.0607
273	SLU 27	0.27	-0.01	89.43	10.3091	15.5805	-0.0747
273	SLU 28	0.29	-0.05	89.4	10.3077	15.5748	-0.0695
273	SLU 29	0.26	-0.03	88.72	10.2271	15.4565	-0.0702
273	SLU 30	0.28	-0.07	88.69	10.2256	15.4508	-0.065
273	SLU 31	0.28	0.01	96.07	11.0832	16.751	-0.083
273	SLU 32	0.26	0.1	98	11.3016	17.0909	-0.097
273	SLU 33	0.27	0.06	97.97	11.3001	17.0852	-0.0918
273	SLU 34	0.28	0.02	97.25	11.2172	16.9573	-0.0839
273	SLU 35	0.26	0.1	99.17	11.4355	17.2972	-0.0979
273	SLU 36	0.27	0.06	99.15	11.4341	17.2915	-0.0927
273	SLU 37	0.25	0.08	98.46	11.3535	17.1732	-0.0934
273	SLU 38	0.27	0.04	98.44	11.352	17.1675	-0.0882
273	SLU 39	0.25	0.13	100.29	11.5684	17.4963	-0.1017
273	SLU 40	0.26	0.09	100.26	11.5669	17.4906	-0.0964
273	SLU 41	0.25	0.13	101.47	11.7023	17.7026	-0.1025
273	SLU 42	0.26	0.09	101.44	11.7009	17.6969	-0.0973
273	SLU 43	0.28	-0.34	98.51	11.3507	17.1579	-0.0232
273	SLU 44	0.31	-0.41	98.46	11.3483	17.1484	-0.0145
273	SLU 45	0.29	-0.32	100.39	11.5667	17.4882	-0.0285
273	SLU 46	0.31	-0.36	100.36	11.5652	17.4825	-0.0232
273	SLU 47	0.31	-0.41	99.64	11.4822	17.3547	-0.0153
273	SLU 48	0.29	-0.32	101.56	11.7006	17.6946	-0.0293
273	SLU 49	0.31	-0.36	101.54	11.6992	17.6889	-0.0241
273	SLU 50	0.28	-0.34	100.86	11.6186	17.5706	-0.0249
273	SLU 51	0.3	-0.38	100.83	11.6171	17.5649	-0.0196
273	SLU 52	0.3	-0.29	108.21	12.4747	18.8651	-0.0376
273	SLU 53	0.28	-0.2	110.13	12.6931	19.205	-0.0517
273	SLU 54	0.3	-0.24	110.11	12.6916	19.1993	-0.0464
273	SLU 55	0.3	-0.29	109.38	12.6086	19.0714	-0.0385
273	SLU 56	0.28	-0.2	111.31	12.827	19.4113	-0.0525
273	SLU 57	0.29	-0.24	111.28	12.8256	19.4056	-0.0473
273	SLU 58	0.27	-0.22	110.6	12.745	19.2873	-0.0481
273	SLU 59	0.29	-0.26	110.58	12.7435	19.2816	-0.0428
273	SLU 60	0.27	-0.17	112.43	12.9599	19.6104	-0.0563
273	SLU 61	0.29	-0.21	112.4	12.9584	19.6047	-0.0511
273	SLU 62	0.27	-0.17	113.6	13.0938	19.8167	-0.0571
273	SLU 63	0.29	-0.21	113.58	13.0923	19.811	-0.0519
273	SLU 64	0.32	-0.16	106.89	12.3223	18.6182	-0.0633
273	SLU 65	0.35	-0.23	106.85	12.32	18.6087	-0.0546
273	SLU 66	0.32	-0.14	108.77	12.5383	18.9485	-0.0686
273	SLU 67	0.34	-0.18	108.75	12.5369	18.9428	-0.0634
273	SLU 68	0.35	-0.23	108.02	12.4539	18.815	-0.0554
273	SLU 69	0.32	-0.14	109.95	12.6722	19.1549	-0.0695
273	SLU 70	0.34	-0.18	109.92	12.6708	19.1492	-0.0642
273	SLU 71	0.32	-0.16	109.24	12.5902	19.0309	-0.065
273	SLU 72	0.34	-0.2	109.22	12.5888	19.0251	-0.0598
273	SLU 73	0.34	-0.11	116.59	13.4464	20.3254	-0.0778
273	SLU 74	0.31	-0.02	118.52	13.6647	20.6653	-0.0918
273	SLU 75	0.33	-0.06	118.49	13.6633	20.6595	-0.0866
273	SLU 76	0.34	-0.11	117.77	13.5803	20.5317	-0.0786
273	SLU 77	0.31	-0.02	119.69	13.7986	20.8716	-0.0926
273	SLU 78	0.33	-0.06	119.67	13.7972	20.8659	-0.0874
273	SLU 79	0.31	-0.04	118.99	13.7166	20.7476	-0.0882
273	SLU 80	0.33	-0.08	118.96	13.7152	20.7419	-0.083
273	SLU 81	0.3	0.01	120.81	13.9315	21.0707	-0.0964
273	SLU 82	0.32	-0.03	120.79	13.9301	21.0649	-0.0912
273	SLU 83	0.3	0.01	121.99	14.0654	21.277	-0.0973
273	SLU 84	0.32	-0.03	121.96	14.064	21.2713	-0.0921
273	SLE RA 1	0.24	-0.16	80.38	9.2652	14.0007	-0.0399

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
273	SLE RA 2	0.26	-0.21	80.35	9.2636	13.9944	-0.0341
273	SLE RA 3	0.24	-0.15	81.64	9.4092	14.221	-0.0434
273	SLE RA 4	0.25	-0.18	81.62	9.4082	14.2172	-0.0399
273	SLE RA 5	0.26	-0.21	81.14	9.3529	14.1319	-0.0346
273	SLE RA 6	0.24	-0.15	82.42	9.4984	14.3585	-0.044
273	SLE RA 7	0.25	-0.18	82.4	9.4975	14.3547	-0.0405
273	SLE RA 8	0.24	-0.16	81.95	9.4438	14.2759	-0.041
273	SLE RA 9	0.25	-0.19	81.93	9.4428	14.272	-0.0375
273	SLE RA 10	0.25	-0.13	86.85	10.0145	15.1389	-0.0495
273	SLE RA 11	0.23	-0.07	88.13	10.1601	15.3655	-0.0589
273	SLE RA 12	0.25	-0.1	88.12	10.1591	15.3616	-0.0554
273	SLE RA 13	0.25	-0.13	87.63	10.1038	15.2764	-0.0501
273	SLE RA 14	0.23	-0.07	88.92	10.2494	15.503	-0.0594
273	SLE RA 15	0.25	-0.1	88.9	10.2484	15.4992	-0.056
273	SLE RA 16	0.23	-0.08	88.44	10.1947	15.4203	-0.0565
273	SLE RA 17	0.24	-0.11	88.43	10.1937	15.4165	-0.053
273	SLE RA 18	0.23	-0.05	89.66	10.3379	15.6357	-0.062
273	SLE RA 19	0.24	-0.08	89.64	10.337	15.6319	-0.0585
273	SLE RA 20	0.23	-0.05	90.44	10.4272	15.7733	-0.0625
273	SLE RA 21	0.24	-0.08	90.43	10.4263	15.7695	-0.059
273	SLE FR 1	0.24	-0.16	80.38	9.2652	14.0007	-0.0399
273	SLE FR 2	0.24	-0.17	80.38	9.2649	13.9995	-0.0387
273	SLE FR 3	0.24	-0.16	80.69	9.3009	14.0558	-0.0401
273	SLE FR 4	0.24	-0.14	83.16	9.5867	14.49	-0.0453
273	SLE FR 5	0.23	-0.13	83.48	9.6227	14.5463	-0.0467
273	SLE FR 6	0.23	-0.11	85.02	9.8016	14.8182	-0.0509
273	SLE QP 1	0.24	-0.16	80.38	9.2652	14.0007	-0.0399
273	SLE QP 2	0.23	-0.13	83.16	9.587	14.4912	-0.0465
273	SLD 1	7.75	1.24	84.18	9.7002	14.8129	-1.1274
273	SLD 2	8.42	1.32	84.42	9.7237	14.846	-1.2131
273	SLD 3	7.23	-0.95	83.03	9.6303	14.5789	-0.7255
273	SLD 4	7.89	-0.87	83.27	9.6537	14.612	-0.8112
273	SLD 5	3.17	3.58	85.17	9.723	14.9368	-0.9652
273	SLD 6	3.6	3.63	85.32	9.7383	14.9584	-1.0212
273	SLD 7	1.42	-3.7	81.34	9.4897	14.1568	0.3745
273	SLD 8	1.85	-3.65	81.5	9.505	14.1785	0.3185
273	SLD 9	-1.38	3.39	84.83	9.669	14.804	-0.4115
273	SLD 10	-0.95	3.44	84.99	9.6843	14.8257	-0.4675
273	SLD 11	-3.13	-3.89	81.01	9.4357	14.0241	0.9282
273	SLD 12	-2.7	-3.84	81.16	9.4511	14.0457	0.8722
273	SLD 13	-7.42	0.61	83.06	9.5203	14.3704	0.7182
273	SLD 14	-6.76	0.69	83.3	9.5438	14.4036	0.6325
273	SLD 15	-7.95	-1.58	81.91	9.4503	14.1364	1.1201
273	SLD 16	-7.29	-1.5	82.15	9.4738	14.1696	1.0344
273	SLV 1	17.83	2.99	85.49	9.8499	15.2358	-2.5622
273	SLV 2	19.37	3.18	86.05	9.9045	15.313	-2.7618
273	SLV 3	16.61	-1.97	82.88	9.69	14.7041	-1.6494
273	SLV 4	18.15	-1.78	83.44	9.7446	14.7813	-1.849
273	SLV 5	7.11	8.29	87.72	9.899	15.5078	-2.1514
273	SLV 6	8.1	8.41	88.08	9.9341	15.5574	-2.2797
273	SLV 7	3.02	-8.22	79.03	9.3661	13.7354	0.8913
273	SLV 8	4.01	-8.1	79.39	9.4012	13.785	0.763
273	SLV 9	-3.55	7.85	86.94	9.7728	15.1974	-0.856
273	SLV 10	-2.55	7.97	87.3	9.808	15.2471	-0.9843
273	SLV 11	-7.63	-8.66	78.25	9.2399	13.425	2.1867
273	SLV 12	-6.64	-8.54	78.61	9.275	13.4746	2.0584
273	SLV 13	-17.68	1.52	82.89	9.4294	14.2012	1.756
273	SLV 14	-16.14	1.71	83.45	9.484	14.2784	1.5564
273	SLV 15	-18.91	-3.43	80.28	9.2695	13.6695	2.6688
273	SLV 16	-17.36	-3.25	80.84	9.3241	13.7467	2.4692
273	CRTFP Ux+	0	0	0	0	0	0
273	CRTFP Ux-	0	0	0	0	0	0
273	CRTFP Uy+	0	0	0	0	0	0
273	CRTFP Uy-	0	0	0	0	0	0
275	SLU 1	0.17	-0.25	41.24	12.1902	0.0272	-0.0568
275	SLU 2	0.18	-0.29	41.22	12.1872	0.0272	-0.0617
275	SLU 3	0.17	-0.25	42.22	12.4819	0.028	-0.0583
275	SLU 4	0.18	-0.27	42.21	12.4801	0.028	-0.0612
275	SLU 5	0.18	-0.29	41.84	12.3684	0.0277	-0.0621
275	SLU 6	0.17	-0.25	42.84	12.6631	0.0285	-0.0586
275	SLU 7	0.18	-0.27	42.83	12.6613	0.0285	-0.0615
275	SLU 8	0.17	-0.26	42.47	12.5526	0.0282	-0.0576
275	SLU 9	0.18	-0.28	42.46	12.5508	0.0282	-0.0605
275	SLU 10	0.18	-0.24	46.32	13.7012	0.0318	-0.0617
275	SLU 11	0.17	-0.2	47.32	13.9959	0.0326	-0.0583
275	SLU 12	0.18	-0.22	47.31	13.9941	0.0326	-0.0612
275	SLU 13	0.18	-0.24	46.93	13.8824	0.0323	-0.0621
275	SLU 14	0.17	-0.2	47.94	14.1771	0.0331	-0.0587
275	SLU 15	0.18	-0.22	47.93	14.1753	0.0331	-0.0616
275	SLU 16	0.17	-0.21	47.57	14.0666	0.0328	-0.0576
275	SLU 17	0.18	-0.23	47.56	14.0648	0.0328	-0.0605
275	SLU 18	0.16	-0.19	48.52	14.3531	0.0338	-0.0569
275	SLU 19	0.17	-0.21	48.51	14.3513	0.0338	-0.0598
275	SLU 20	0.16	-0.19	49.14	14.5343	0.0343	-0.0573
275	SLU 21	0.17	-0.21	49.13	14.5325	0.0343	-0.0602
275	SLU 22	0.19	-0.17	45.66	13.5048	0.0304	-0.0651
275	SLU 23	0.21	-0.21	45.65	13.5018	0.0304	-0.07
275	SLU 24	0.19	-0.17	46.65	13.7965	0.0312	-0.0665
275	SLU 25	0.2	-0.19	46.64	13.7947	0.0312	-0.0694
275	SLU 26	0.21	-0.21	46.26	13.683	0.0308	-0.0703
275	SLU 27	0.2	-0.17	47.27	13.9777	0.0317	-0.0669
275	SLU 28	0.21	-0.19	47.26	13.9759	0.0317	-0.0698
275	SLU 29	0.19	-0.18	46.9	13.8672	0.0314	-0.0659
275	SLU 30	0.2	-0.2	46.89	13.8654	0.0313	-0.0688
275	SLU 31	0.2	-0.16	50.75	15.0158	0.035	-0.07
275	SLU 32	0.19	-0.12	51.75	15.3105	0.0358	-0.0666
275	SLU 33	0.2	-0.14	51.74	15.3087	0.0358	-0.0695

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
275	SLU 34	0.21	-0.16	51.36	15.197	0.0354	-0.0704
275	SLU 35	0.19	-0.12	52.37	15.4917	0.0363	-0.0669
275	SLU 36	0.2	-0.14	52.36	15.4899	0.0363	-0.0698
275	SLU 37	0.19	-0.13	52	15.3812	0.036	-0.0659
275	SLU 38	0.2	-0.15	51.99	15.3794	0.0359	-0.0688
275	SLU 39	0.19	-0.11	52.95	15.6677	0.037	-0.0652
275	SLU 40	0.2	-0.13	52.94	15.6659	0.037	-0.0681
275	SLU 41	0.19	-0.11	53.57	15.8488	0.0375	-0.0655
275	SLU 42	0.2	-0.13	53.56	15.847	0.0374	-0.0684
275	SLU 43	0.21	-0.36	52.09	15.3966	0.0343	-0.0711
275	SLU 44	0.22	-0.39	52.07	15.3936	0.0343	-0.0759
275	SLU 45	0.21	-0.35	53.08	15.6883	0.0351	-0.0725
275	SLU 46	0.22	-0.37	53.07	15.6865	0.0351	-0.0754
275	SLU 47	0.22	-0.39	52.69	15.5748	0.0347	-0.0763
275	SLU 48	0.21	-0.35	53.69	15.8694	0.0356	-0.0729
275	SLU 49	0.22	-0.37	53.68	15.8677	0.0356	-0.0758
275	SLU 50	0.21	-0.36	53.32	15.7589	0.0353	-0.0718
275	SLU 51	0.22	-0.38	53.31	15.7571	0.0352	-0.0747
275	SLU 52	0.22	-0.34	57.17	16.9076	0.0389	-0.0759
275	SLU 53	0.21	-0.3	58.18	17.2023	0.0397	-0.0725
275	SLU 54	0.22	-0.32	58.17	17.2005	0.0397	-0.0754
275	SLU 55	0.22	-0.35	57.79	17.0888	0.0393	-0.0763
275	SLU 56	0.21	-0.31	58.79	17.3834	0.0402	-0.0729
275	SLU 57	0.22	-0.33	58.78	17.3816	0.0402	-0.0758
275	SLU 58	0.21	-0.32	58.42	17.2729	0.0399	-0.0718
275	SLU 59	0.22	-0.34	58.41	17.2711	0.0399	-0.0748
275	SLU 60	0.21	-0.29	59.37	17.5594	0.0409	-0.0711
275	SLU 61	0.21	-0.31	59.36	17.5576	0.0409	-0.074
275	SLU 62	0.21	-0.29	59.99	17.7406	0.0414	-0.0715
275	SLU 63	0.22	-0.31	59.98	17.7388	0.0413	-0.0744
275	SLU 64	0.23	-0.28	56.52	16.7112	0.0375	-0.0793
275	SLU 65	0.25	-0.31	56.5	16.7082	0.0374	-0.0842
275	SLU 66	0.24	-0.27	57.51	17.0028	0.0383	-0.0807
275	SLU 67	0.25	-0.29	57.49	17.001	0.0383	-0.0837
275	SLU 68	0.25	-0.31	57.12	16.8893	0.0379	-0.0846
275	SLU 69	0.24	-0.27	58.12	17.184	0.0388	-0.0811
275	SLU 70	0.25	-0.29	58.11	17.1822	0.0387	-0.084
275	SLU 71	0.23	-0.28	57.75	17.0735	0.0385	-0.0801
275	SLU 72	0.24	-0.3	57.74	17.0717	0.0384	-0.083
275	SLU 73	0.25	-0.26	61.6	18.2222	0.042	-0.0842
275	SLU 74	0.23	-0.22	62.61	18.5168	0.0429	-0.0808
275	SLU 75	0.24	-0.24	62.59	18.515	0.0429	-0.0837
275	SLU 76	0.25	-0.27	62.22	18.4033	0.0425	-0.0846
275	SLU 77	0.24	-0.23	63.22	18.698	0.0434	-0.0812
275	SLU 78	0.24	-0.25	63.21	18.6962	0.0433	-0.0841
275	SLU 79	0.23	-0.24	62.85	18.5875	0.0431	-0.0801
275	SLU 80	0.24	-0.26	62.84	18.5857	0.043	-0.083
275	SLU 81	0.23	-0.21	63.8	18.874	0.0441	-0.0794
275	SLU 82	0.24	-0.23	63.79	18.8722	0.044	-0.0823
275	SLU 83	0.23	-0.21	64.42	19.0552	0.0446	-0.0798
275	SLU 84	0.24	-0.23	64.41	19.0534	0.0445	-0.0827
275	SLE RA 1	0.17	-0.23	42.5	12.5658	0.0282	-0.0592
275	SLE RA 2	0.18	-0.25	42.49	12.5638	0.0281	-0.0624
275	SLE RA 3	0.18	-0.23	43.16	12.7603	0.0287	-0.0602
275	SLE RA 4	0.18	-0.24	43.15	12.7591	0.0287	-0.0621
275	SLE RA 5	0.18	-0.26	42.9	12.6846	0.0284	-0.0627
275	SLE RA 6	0.18	-0.23	43.57	12.8811	0.029	-0.0604
275	SLE RA 7	0.18	-0.24	43.56	12.8799	0.029	-0.0623
275	SLE RA 8	0.17	-0.23	43.32	12.8074	0.0288	-0.0597
275	SLE RA 9	0.18	-0.25	43.32	12.8062	0.0288	-0.0617
275	SLE RA 10	0.18	-0.22	45.89	13.5732	0.0312	-0.0625
275	SLE RA 11	0.17	-0.2	46.56	13.7696	0.0318	-0.0602
275	SLE RA 12	0.18	-0.21	46.55	13.7684	0.0317	-0.0621
275	SLE RA 13	0.18	-0.22	46.3	13.6939	0.0315	-0.0627
275	SLE RA 14	0.18	-0.2	46.97	13.8904	0.0321	-0.0604
275	SLE RA 15	0.18	-0.21	46.96	13.8892	0.032	-0.0624
275	SLE RA 16	0.17	-0.2	46.72	13.8167	0.0319	-0.0597
275	SLE RA 17	0.18	-0.22	46.72	13.8155	0.0318	-0.0617
275	SLE RA 18	0.17	-0.19	47.36	14.0077	0.0325	-0.0592
275	SLE RA 19	0.18	-0.2	47.35	14.0065	0.0325	-0.0612
275	SLE RA 20	0.17	-0.19	47.77	14.1285	0.0329	-0.0595
275	SLE RA 21	0.18	-0.2	47.76	14.1273	0.0328	-0.0614
275	SLE FR 1	0.17	-0.23	42.5	12.5658	0.0282	-0.0592
275	SLE FR 2	0.18	-0.24	42.5	12.5654	0.0281	-0.0599
275	SLE FR 3	0.17	-0.23	42.67	12.6141	0.0283	-0.0593
275	SLE FR 4	0.17	-0.22	43.96	12.998	0.0295	-0.0599
275	SLE FR 5	0.17	-0.22	44.12	13.0467	0.0296	-0.0593
275	SLE FR 6	0.17	-0.21	44.93	13.2868	0.0303	-0.0592
275	SLE QP 1	0.17	-0.23	42.5	12.5658	0.0282	-0.0592
275	SLE QP 2	0.17	-0.22	43.96	12.9984	0.0295	-0.0592
275	SLD 1	4.21	0.6	43.95	13.0931	0.0366	-1.3082
275	SLD 2	4.56	0.68	44.1	13.1298	0.0363	-1.4155
275	SLD 3	3.93	-0.56	43.45	12.9975	0.0355	-1.2218
275	SLD 4	4.28	-0.48	43.59	13.0342	0.0352	-1.329
275	SLD 5	1.75	1.77	44.7	13.1653	0.0333	-0.5461
275	SLD 6	1.97	1.82	44.8	13.1893	0.0331	-0.6162
275	SLD 7	0.81	-2.09	43.01	12.8466	0.0297	-0.2579
275	SLD 8	1.04	-2.04	43.1	12.8706	0.0295	-0.328
275	SLD 9	-0.7	1.61	44.81	13.1262	0.0294	0.2096
275	SLD 10	-0.47	1.66	44.91	13.1502	0.0292	0.1395
275	SLD 11	-1.63	-2.26	43.12	12.8074	0.0259	0.4977
275	SLD 12	-1.4	-2.2	43.21	12.8314	0.0257	0.4276
275	SLD 13	-3.93	0.05	44.33	12.9626	0.0237	1.2106
275	SLD 14	-3.59	0.13	44.47	12.9993	0.0234	1.1033
275	SLD 15	-4.21	-1.11	43.82	12.8669	0.0227	1.297
275	SLD 16	-3.86	-1.03	43.96	12.9037	0.0224	1.1898
275	SLV 1	9.62	1.65	43.93	13.2172	0.0461	-2.9818

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
275	SLV 2	10.43	1.83	44.27	13.3027	0.0454	-3.2317
275	SLV 3	8.97	-0.98	42.78	12.9987	0.0437	-2.7799
275	SLV 4	9.78	-0.8	43.11	13.0842	0.0429	-3.0298
275	SLV 5	3.86	4.29	45.65	13.3808	0.0383	-1.1994
275	SLV 6	4.38	4.41	45.87	13.4358	0.0378	-1.36
275	SLV 7	1.68	-4.46	41.79	12.6524	0.0302	-0.5264
275	SLV 8	2.2	-4.35	42.01	12.7073	0.0297	-0.687
275	SLV 9	-1.86	3.91	45.91	13.2894	0.0292	0.5686
275	SLV 10	-1.34	4.03	46.13	13.3444	0.0288	0.408
275	SLV 11	-4.04	-4.85	42.05	12.561	0.0211	1.2415
275	SLV 12	-3.51	-4.73	42.27	12.616	0.0207	1.0809
275	SLV 13	-9.44	0.36	44.8	12.9126	0.016	2.9113
275	SLV 14	-8.62	0.55	45.14	12.9981	0.0153	2.6615
275	SLV 15	-10.09	-2.26	43.64	12.694	0.0136	3.1132
275	SLV 16	-9.28	-2.08	43.98	12.7796	0.0128	2.8634
275	CRTFP Ux+	0	0	0	0	0	0
275	CRTFP Ux-	0	0	0	0	0	0
275	CRTFP Uy+	0	0	0	0	0	0
275	CRTFP Uy-	0	0	0	0	0	0
276	SLU 1	0.17	-0.34	41.13	11.9618	0.0148	-0.0586
276	SLU 2	0.19	-0.38	41.12	11.9596	0.0147	-0.0635
276	SLU 3	0.18	-0.34	42.11	12.2465	0.0153	-0.0601
276	SLU 4	0.19	-0.36	42.1	12.2451	0.0153	-0.063
276	SLU 5	0.19	-0.38	41.73	12.1366	0.015	-0.0639
276	SLU 6	0.18	-0.35	42.73	12.4234	0.0156	-0.0605
276	SLU 7	0.19	-0.37	42.72	12.4221	0.0156	-0.0634
276	SLU 8	0.18	-0.35	42.36	12.3157	0.0154	-0.0594
276	SLU 9	0.19	-0.37	42.35	12.3144	0.0154	-0.0624
276	SLU 10	0.19	-0.34	46.16	13.4303	0.0179	-0.0635
276	SLU 11	0.18	-0.3	47.15	13.7172	0.0184	-0.0601
276	SLU 12	0.19	-0.32	47.14	13.7158	0.0184	-0.063
276	SLU 13	0.19	-0.35	46.77	13.6073	0.0182	-0.0639
276	SLU 14	0.18	-0.31	47.77	13.8941	0.0187	-0.0605
276	SLU 15	0.19	-0.33	47.76	13.8928	0.0187	-0.0634
276	SLU 16	0.17	-0.32	47.4	13.7864	0.0185	-0.0595
276	SLU 17	0.18	-0.34	47.39	13.7851	0.0185	-0.0624
276	SLU 18	0.17	-0.29	48.33	14.0628	0.0193	-0.0586
276	SLU 19	0.18	-0.31	48.32	14.0615	0.0192	-0.0616
276	SLU 20	0.17	-0.3	48.95	14.2398	0.0196	-0.059
276	SLU 21	0.18	-0.32	48.94	14.2385	0.0195	-0.062
276	SLU 22	0.2	-0.27	45.54	13.2492	0.0166	-0.067
276	SLU 23	0.22	-0.31	45.53	13.247	0.0165	-0.0719
276	SLU 24	0.2	-0.27	46.52	13.5338	0.0171	-0.0685
276	SLU 25	0.21	-0.29	46.51	13.5325	0.0171	-0.0714
276	SLU 26	0.22	-0.31	46.14	13.4239	0.0168	-0.0723
276	SLU 27	0.2	-0.27	47.13	13.7108	0.0174	-0.0689
276	SLU 28	0.21	-0.29	47.13	13.7095	0.0174	-0.0718
276	SLU 29	0.2	-0.28	46.77	13.6031	0.0172	-0.0679
276	SLU 30	0.21	-0.3	46.76	13.6018	0.0172	-0.0708
276	SLU 31	0.21	-0.27	50.57	14.7177	0.0197	-0.0719
276	SLU 32	0.2	-0.23	51.56	15.0045	0.0202	-0.0685
276	SLU 33	0.21	-0.25	51.55	15.0032	0.0202	-0.0714
276	SLU 34	0.21	-0.28	51.18	14.8946	0.02	-0.0723
276	SLU 35	0.2	-0.24	52.18	15.1815	0.0205	-0.0689
276	SLU 36	0.21	-0.26	52.17	15.1802	0.0205	-0.0719
276	SLU 37	0.2	-0.25	51.81	15.0738	0.0203	-0.0679
276	SLU 38	0.21	-0.27	51.8	15.0725	0.0203	-0.0708
276	SLU 39	0.2	-0.22	52.74	15.3502	0.0211	-0.0671
276	SLU 40	0.21	-0.24	52.73	15.3489	0.0211	-0.07
276	SLU 41	0.2	-0.23	53.36	15.5271	0.0214	-0.0675
276	SLU 42	0.21	-0.25	53.35	15.5258	0.0214	-0.0704
276	SLU 43	0.22	-0.47	51.96	15.109	0.0186	-0.0733
276	SLU 44	0.23	-0.5	51.95	15.1068	0.0186	-0.0782
276	SLU 45	0.22	-0.47	52.94	15.3936	0.0191	-0.0748
276	SLU 46	0.23	-0.49	52.93	15.3923	0.0191	-0.0777
276	SLU 47	0.23	-0.51	52.56	15.2837	0.0189	-0.0786
276	SLU 48	0.22	-0.47	53.55	15.5706	0.0194	-0.0752
276	SLU 49	0.23	-0.49	53.54	15.5693	0.0194	-0.0781
276	SLU 50	0.22	-0.48	53.19	15.4629	0.0192	-0.0741
276	SLU 51	0.23	-0.5	53.18	15.4616	0.0192	-0.0771
276	SLU 52	0.23	-0.47	56.99	16.5775	0.0217	-0.0782
276	SLU 53	0.22	-0.43	57.98	16.8643	0.0223	-0.0748
276	SLU 54	0.23	-0.45	57.97	16.863	0.0222	-0.0777
276	SLU 55	0.23	-0.47	57.6	16.7544	0.022	-0.0786
276	SLU 56	0.22	-0.44	58.59	17.0413	0.0226	-0.0752
276	SLU 57	0.23	-0.46	58.59	17.04	0.0225	-0.0781
276	SLU 58	0.22	-0.44	58.23	16.9336	0.0224	-0.0741
276	SLU 59	0.23	-0.46	58.22	16.9323	0.0223	-0.0771
276	SLU 60	0.21	-0.42	59.16	17.21	0.0231	-0.0733
276	SLU 61	0.22	-0.44	59.15	17.2087	0.0231	-0.0762
276	SLU 62	0.22	-0.42	59.77	17.3869	0.0234	-0.0737
276	SLU 63	0.22	-0.44	59.76	17.3856	0.0234	-0.0767
276	SLU 64	0.24	-0.4	56.37	16.3963	0.0204	-0.0817
276	SLU 65	0.26	-0.43	56.35	16.3941	0.0204	-0.0866
276	SLU 66	0.25	-0.4	57.35	16.681	0.0209	-0.0832
276	SLU 67	0.26	-0.42	57.34	16.6797	0.0209	-0.0861
276	SLU 68	0.26	-0.44	56.97	16.5711	0.0207	-0.087
276	SLU 69	0.25	-0.4	57.96	16.8579	0.0212	-0.0836
276	SLU 70	0.26	-0.42	57.95	16.8566	0.0212	-0.0865
276	SLU 71	0.24	-0.41	57.59	16.7503	0.021	-0.0826
276	SLU 72	0.25	-0.43	57.59	16.7489	0.021	-0.0855
276	SLU 73	0.26	-0.4	61.4	17.8648	0.0235	-0.0866
276	SLU 74	0.24	-0.36	62.39	18.1517	0.0241	-0.0832
276	SLU 75	0.25	-0.38	62.38	18.1504	0.024	-0.0861
276	SLU 76	0.26	-0.4	62.01	18.0418	0.0238	-0.087
276	SLU 77	0.25	-0.37	63	18.3286	0.0244	-0.0836
276	SLU 78	0.26	-0.39	62.99	18.3273	0.0243	-0.0866

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
276	SLU 79	0.24	-0.37	62.64	18.221	0.0242	-0.0826
276	SLU 80	0.25	-0.39	62.63	18.2196	0.0241	-0.0855
276	SLU 81	0.24	-0.35	63.57	18.4973	0.0249	-0.0818
276	SLU 82	0.25	-0.37	63.56	18.496	0.0249	-0.0847
276	SLU 83	0.24	-0.35	64.18	18.6743	0.0252	-0.0822
276	SLU 84	0.25	-0.37	64.17	18.673	0.0252	-0.0851
276	SLE RA 1	0.18	-0.32	42.39	12.3296	0.0153	-0.061
276	SLE RA 2	0.19	-0.35	42.38	12.3282	0.0153	-0.0643
276	SLE RA 3	0.18	-0.32	43.05	12.5194	0.0157	-0.062
276	SLE RA 4	0.19	-0.33	43.04	12.5185	0.0156	-0.0639
276	SLE RA 5	0.19	-0.35	42.79	12.4461	0.0155	-0.0645
276	SLE RA 6	0.18	-0.32	43.45	12.6374	0.0158	-0.0623
276	SLE RA 7	0.19	-0.34	43.45	12.6365	0.0158	-0.0642
276	SLE RA 8	0.18	-0.33	43.21	12.5656	0.0157	-0.0616
276	SLE RA 9	0.19	-0.34	43.2	12.5647	0.0157	-0.0635
276	SLE RA 10	0.19	-0.32	45.74	13.3086	0.0174	-0.0643
276	SLE RA 11	0.18	-0.3	46.41	13.4999	0.0177	-0.062
276	SLE RA 12	0.19	-0.31	46.4	13.499	0.0177	-0.064
276	SLE RA 13	0.19	-0.32	46.15	13.4266	0.0176	-0.0646
276	SLE RA 14	0.18	-0.3	46.81	13.6178	0.0179	-0.0623
276	SLE RA 15	0.19	-0.31	46.81	13.617	0.0179	-0.0642
276	SLE RA 16	0.18	-0.31	46.57	13.546	0.0178	-0.0616
276	SLE RA 17	0.19	-0.32	46.56	13.5452	0.0178	-0.0635
276	SLE RA 18	0.18	-0.29	47.19	13.7303	0.0183	-0.061
276	SLE RA 19	0.19	-0.3	47.19	13.7294	0.0183	-0.063
276	SLE RA 20	0.18	-0.29	47.6	13.8483	0.0185	-0.0613
276	SLE RA 21	0.19	-0.31	47.6	13.8474	0.0185	-0.0633
276	SLE FR 1	0.18	-0.32	42.39	12.3296	0.0153	-0.061
276	SLE FR 2	0.18	-0.33	42.39	12.3293	0.0153	-0.0617
276	SLE FR 3	0.18	-0.33	42.56	12.3768	0.0154	-0.0611
276	SLE FR 4	0.18	-0.32	43.83	12.7495	0.0162	-0.0617
276	SLE FR 5	0.18	-0.31	44	12.797	0.0163	-0.0611
276	SLE FR 6	0.18	-0.31	44.79	13.03	0.0168	-0.061
276	SLE QP 1	0.18	-0.32	42.39	12.3296	0.0153	-0.061
276	SLE QP 2	0.18	-0.31	43.83	12.7498	0.0162	-0.061
276	SLD 1	4.27	0.56	43.64	12.7215	0.0238	-1.3105
276	SLD 2	4.62	0.66	43.8	12.7614	0.0235	-1.418
276	SLD 3	3.98	-0.6	43.15	12.6383	0.0228	-1.2241
276	SLD 4	4.34	-0.5	43.31	12.6782	0.0224	-1.3316
276	SLD 5	1.77	1.68	44.48	12.8604	0.0201	-0.548
276	SLD 6	2	1.75	44.59	12.8865	0.0198	-0.6182
276	SLD 7	0.83	-2.17	42.86	12.5832	0.0167	-0.2598
276	SLD 8	1.06	-2.1	42.97	12.6093	0.0165	-0.3301
276	SLD 9	-0.7	1.47	44.7	12.8904	0.0159	0.208
276	SLD 10	-0.47	1.54	44.8	12.9165	0.0157	0.1378
276	SLD 11	-1.64	-2.37	43.08	12.6132	0.0126	0.4962
276	SLD 12	-1.41	-2.31	43.18	12.6393	0.0124	0.4259
276	SLD 13	-3.98	-0.13	44.35	12.8214	0.01	1.2095
276	SLD 14	-3.62	-0.03	44.51	12.8613	0.0097	1.102
276	SLD 15	-4.26	-1.28	43.87	12.7383	0.009	1.296
276	SLD 16	-3.91	-1.18	44.03	12.7782	0.0087	1.1885
276	SLV 1	9.74	1.68	43.36	12.682	0.0339	-2.9848
276	SLV 2	10.57	1.91	43.73	12.7749	0.0331	-3.2352
276	SLV 3	9.08	-0.94	42.26	12.4915	0.0316	-2.7829
276	SLV 4	9.9	-0.7	42.63	12.5844	0.0308	-3.0333
276	SLV 5	3.91	4.22	45.31	13.0025	0.0251	-1.2015
276	SLV 6	4.44	4.36	45.55	13.0622	0.0246	-1.3624
276	SLV 7	1.7	-4.51	41.62	12.3675	0.0175	-0.5285
276	SLV 8	2.23	-4.36	41.85	12.4272	0.017	-0.6894
276	SLV 9	-1.87	3.73	45.81	13.0725	0.0154	0.5673
276	SLV 10	-1.34	3.88	46.05	13.1322	0.015	0.4064
276	SLV 11	-4.08	-4.99	42.12	12.4375	0.0078	1.2404
276	SLV 12	-3.55	-4.84	42.36	12.4972	0.0073	1.0794
276	SLV 13	-9.54	0.08	45.04	12.9153	0.0016	2.9113
276	SLV 14	-8.72	0.31	45.41	13.0082	0.0008	2.6609
276	SLV 15	-10.21	-2.54	43.93	12.7248	-0.0007	3.1132
276	SLV 16	-9.38	-2.31	44.3	12.8177	-0.0015	2.8628
276	CRTFP Ux+	0	0	0	0	0	0
276	CRTFP Ux-	0	0	0	0	0	0
276	CRTFP Uy+	0	0	0	0	0	0
276	CRTFP Uy-	0	0	0	0	0	0
277	SLU 1	0.18	-0.43	40.72	11.7845	0.0089	-0.0606
277	SLU 2	0.2	-0.46	40.71	11.7831	0.0088	-0.0655
277	SLU 3	0.18	-0.43	41.69	12.0634	0.0092	-0.0621
277	SLU 4	0.19	-0.45	41.68	12.0625	0.0092	-0.0651
277	SLU 5	0.2	-0.47	41.31	11.9566	0.009	-0.0659
277	SLU 6	0.19	-0.44	42.29	12.2369	0.0094	-0.0626
277	SLU 7	0.2	-0.45	42.28	12.2361	0.0094	-0.0655
277	SLU 8	0.18	-0.44	41.93	12.1316	0.0093	-0.0615
277	SLU 9	0.19	-0.46	41.92	12.1307	0.0092	-0.0644
277	SLU 10	0.19	-0.43	45.65	13.2167	0.0112	-0.0655
277	SLU 11	0.18	-0.4	46.63	13.497	0.0116	-0.0621
277	SLU 12	0.19	-0.42	46.62	13.4962	0.0115	-0.0651
277	SLU 13	0.2	-0.44	46.25	13.3902	0.0114	-0.066
277	SLU 14	0.18	-0.41	47.23	13.6705	0.0118	-0.0626
277	SLU 15	0.19	-0.43	47.23	13.6697	0.0117	-0.0655
277	SLU 16	0.18	-0.42	46.87	13.5652	0.0116	-0.0615
277	SLU 17	0.19	-0.44	46.86	13.5643	0.0116	-0.0644
277	SLU 18	0.18	-0.39	47.78	13.8326	0.0122	-0.0606
277	SLU 19	0.19	-0.41	47.77	13.8317	0.0122	-0.0636
277	SLU 20	0.18	-0.4	48.39	14.0061	0.0124	-0.0611
277	SLU 21	0.19	-0.42	48.38	14.0052	0.0124	-0.064
277	SLU 22	0.21	-0.37	45.08	13.0511	0.0099	-0.0692
277	SLU 23	0.22	-0.4	45.07	13.0497	0.0099	-0.0741
277	SLU 24	0.21	-0.37	46.05	13.33	0.0103	-0.0708
277	SLU 25	0.22	-0.39	46.04	13.3291	0.0102	-0.0737
277	SLU 26	0.22	-0.41	45.67	13.2232	0.0101	-0.0746

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
277	SLU 27	0.21	-0.38	46.65	13.5035	0.0104	-0.0712
277	SLU 28	0.22	-0.39	46.64	13.5027	0.0104	-0.0742
277	SLU 29	0.21	-0.38	46.29	13.3982	0.0103	-0.0701
277	SLU 30	0.22	-0.4	46.28	13.3973	0.0103	-0.0731
277	SLU 31	0.22	-0.37	50.01	14.4833	0.0122	-0.0741
277	SLU 32	0.21	-0.34	50.99	14.7636	0.0126	-0.0708
277	SLU 33	0.22	-0.36	50.98	14.7627	0.0126	-0.0737
277	SLU 34	0.22	-0.38	50.61	14.6568	0.0124	-0.0746
277	SLU 35	0.21	-0.35	51.59	14.9371	0.0128	-0.0712
277	SLU 36	0.22	-0.37	51.58	14.9363	0.0128	-0.0742
277	SLU 37	0.21	-0.36	51.23	14.8318	0.0126	-0.0702
277	SLU 38	0.22	-0.38	51.22	14.8309	0.0126	-0.0731
277	SLU 39	0.2	-0.33	52.14	15.0992	0.0133	-0.0693
277	SLU 40	0.21	-0.35	52.13	15.0983	0.0132	-0.0722
277	SLU 41	0.2	-0.34	52.75	15.2727	0.0135	-0.0697
277	SLU 42	0.21	-0.36	52.74	15.2718	0.0134	-0.0727
277	SLU 43	0.23	-0.58	51.44	14.8856	0.0112	-0.0758
277	SLU 44	0.24	-0.61	51.43	14.8842	0.0111	-0.0807
277	SLU 45	0.23	-0.58	52.41	15.1645	0.0115	-0.0773
277	SLU 46	0.24	-0.6	52.4	15.1636	0.0115	-0.0803
277	SLU 47	0.24	-0.62	52.03	15.0577	0.0113	-0.0811
277	SLU 48	0.23	-0.58	53.01	15.338	0.0117	-0.0778
277	SLU 49	0.24	-0.6	53	15.3372	0.0117	-0.0807
277	SLU 50	0.23	-0.59	52.65	15.2327	0.0116	-0.0767
277	SLU 51	0.24	-0.61	52.64	15.2318	0.0116	-0.0796
277	SLU 52	0.24	-0.58	56.37	16.3178	0.0135	-0.0807
277	SLU 53	0.23	-0.55	57.35	16.5981	0.0139	-0.0773
277	SLU 54	0.24	-0.57	57.34	16.5973	0.0138	-0.0803
277	SLU 55	0.24	-0.59	56.98	16.4913	0.0137	-0.0812
277	SLU 56	0.23	-0.56	57.96	16.7716	0.0141	-0.0778
277	SLU 57	0.24	-0.58	57.95	16.7708	0.014	-0.0807
277	SLU 58	0.23	-0.57	57.59	16.6663	0.0139	-0.0767
277	SLU 59	0.24	-0.58	57.59	16.6654	0.0139	-0.0797
277	SLU 60	0.22	-0.54	58.5	16.9337	0.0145	-0.0758
277	SLU 61	0.23	-0.56	58.5	16.9328	0.0145	-0.0788
277	SLU 62	0.22	-0.55	59.11	17.1072	0.0147	-0.0763
277	SLU 63	0.23	-0.57	59.1	17.1063	0.0147	-0.0792
277	SLU 64	0.25	-0.52	55.8	16.1522	0.0122	-0.0844
277	SLU 65	0.27	-0.55	55.79	16.1508	0.0122	-0.0893
277	SLU 66	0.26	-0.52	56.77	16.4311	0.0126	-0.086
277	SLU 67	0.27	-0.54	56.76	16.4302	0.0125	-0.0889
277	SLU 68	0.27	-0.56	56.39	16.3243	0.0124	-0.0898
277	SLU 69	0.26	-0.52	57.37	16.6046	0.0128	-0.0864
277	SLU 70	0.27	-0.54	57.36	16.6038	0.0127	-0.0894
277	SLU 71	0.25	-0.53	57.01	16.4993	0.0126	-0.0853
277	SLU 72	0.26	-0.55	57	16.4984	0.0126	-0.0883
277	SLU 73	0.27	-0.52	60.73	17.5844	0.0145	-0.0894
277	SLU 74	0.25	-0.49	61.71	17.8647	0.0149	-0.086
277	SLU 75	0.26	-0.51	61.7	17.8638	0.0149	-0.0889
277	SLU 76	0.27	-0.53	61.34	17.7579	0.0147	-0.0898
277	SLU 77	0.26	-0.5	62.31	18.0382	0.0151	-0.0864
277	SLU 78	0.27	-0.52	62.31	18.0374	0.0151	-0.0894
277	SLU 79	0.25	-0.51	61.95	17.9329	0.015	-0.0854
277	SLU 80	0.26	-0.52	61.94	17.932	0.0149	-0.0883
277	SLU 81	0.25	-0.48	62.86	18.2003	0.0156	-0.0845
277	SLU 82	0.26	-0.5	62.86	18.1994	0.0155	-0.0874
277	SLU 83	0.25	-0.49	63.47	18.3738	0.0158	-0.0849
277	SLU 84	0.26	-0.51	63.46	18.3729	0.0157	-0.0879
277	SLE RA 1	0.19	-0.41	41.97	12.1464	0.0092	-0.063
277	SLE RA 2	0.2	-0.43	41.96	12.1455	0.0091	-0.0663
277	SLE RA 3	0.19	-0.41	42.61	12.3323	0.0094	-0.0641
277	SLE RA 4	0.2	-0.42	42.61	12.3318	0.0094	-0.066
277	SLE RA 5	0.2	-0.44	42.36	12.2611	0.0093	-0.0666
277	SLE RA 6	0.19	-0.42	43.01	12.448	0.0095	-0.0644
277	SLE RA 7	0.2	-0.43	43.01	12.4474	0.0095	-0.0663
277	SLE RA 8	0.19	-0.42	42.77	12.3778	0.0094	-0.0637
277	SLE RA 9	0.2	-0.43	42.77	12.3772	0.0094	-0.0656
277	SLE RA 10	0.2	-0.42	45.25	13.1012	0.0107	-0.0663
277	SLE RA 11	0.19	-0.39	45.91	13.2881	0.011	-0.0641
277	SLE RA 12	0.2	-0.41	45.9	13.2875	0.0109	-0.066
277	SLE RA 13	0.2	-0.42	45.66	13.2169	0.0108	-0.0666
277	SLE RA 14	0.19	-0.4	46.31	13.4038	0.0111	-0.0644
277	SLE RA 15	0.2	-0.41	46.3	13.4032	0.0111	-0.0664
277	SLE RA 16	0.19	-0.4	46.07	13.3335	0.011	-0.0637
277	SLE RA 17	0.19	-0.42	46.06	13.333	0.011	-0.0656
277	SLE RA 18	0.19	-0.39	46.67	13.5118	0.0114	-0.0631
277	SLE RA 19	0.19	-0.4	46.67	13.5112	0.0114	-0.065
277	SLE RA 20	0.19	-0.39	47.08	13.6275	0.0115	-0.0634
277	SLE RA 21	0.19	-0.4	47.07	13.6269	0.0115	-0.0653
277	SLE FR 1	0.19	-0.41	41.97	12.1464	0.0092	-0.063
277	SLE FR 2	0.19	-0.42	41.96	12.1462	0.0092	-0.0637
277	SLE FR 3	0.19	-0.41	42.13	12.1927	0.0092	-0.0632
277	SLE FR 4	0.19	-0.41	43.38	12.5558	0.0098	-0.0637
277	SLE FR 5	0.19	-0.41	43.54	12.6023	0.0099	-0.0632
277	SLE FR 6	0.19	-0.4	44.32	12.8291	0.0103	-0.0631
277	SLE QP 1	0.19	-0.41	41.97	12.1464	0.0092	-0.063
277	SLE QP 2	0.19	-0.4	43.38	12.556	0.0098	-0.0631
277	SLD 1	4.28	0.51	42.92	12.4694	0.0183	-1.3153
277	SLD 2	4.64	0.63	43.09	12.5125	0.0179	-1.4232
277	SLD 3	4	-0.63	42.46	12.3972	0.0174	-1.2286
277	SLD 4	4.36	-0.51	42.63	12.4403	0.017	-1.3365
277	SLD 5	1.78	1.58	43.91	12.6319	0.0138	-0.5511
277	SLD 6	2.02	1.66	44.02	12.6601	0.0136	-0.6216
277	SLD 7	0.84	-2.22	42.37	12.3912	0.0108	-0.2622
277	SLD 8	1.07	-2.14	42.49	12.4194	0.0105	-0.3327
277	SLD 9	-0.69	1.34	44.27	12.6926	0.0091	0.2066
277	SLD 10	-0.46	1.41	44.38	12.7208	0.0089	0.1361

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
277	SLD 11	-1.64	-2.47	42.74	12.4519	0.0061	0.4955
277	SLD 12	-1.41	-2.39	42.85	12.4801	0.0059	0.425
277	SLD 13	-3.98	-0.3	44.13	12.6717	0.0027	1.2104
277	SLD 14	-3.62	-0.18	44.3	12.7149	0.0023	1.1025
277	SLD 15	-4.27	-1.44	43.67	12.5995	0.0018	1.2971
277	SLD 16	-3.91	-1.32	43.84	12.6427	0.0014	1.1891
277	SLV 1	9.77	1.7	42.28	12.352	0.0296	-2.9932
277	SLV 2	10.6	1.98	42.68	12.4525	0.0288	-3.2445
277	SLV 3	9.11	-0.88	41.23	12.186	0.0274	-2.7907
277	SLV 4	9.94	-0.61	41.63	12.2865	0.0267	-3.0421
277	SLV 5	3.93	4.11	44.57	12.7294	0.0191	-1.206
277	SLV 6	4.46	4.28	44.83	12.794	0.0186	-1.3676
277	SLV 7	1.71	-4.52	41.08	12.176	0.0121	-0.5313
277	SLV 8	2.25	-4.34	41.33	12.2406	0.0115	-0.6928
277	SLV 9	-1.87	3.53	45.43	12.8715	0.0081	0.5667
277	SLV 10	-1.34	3.71	45.68	12.9361	0.0076	0.4052
277	SLV 11	-4.09	-5.09	41.93	12.3181	0.0011	1.2415
277	SLV 12	-3.55	-4.91	42.19	12.3827	0.0006	1.0799
277	SLV 13	-9.56	-0.2	45.13	12.8256	-0.007	2.916
277	SLV 14	-8.73	0.07	45.53	12.9261	-0.0078	2.6646
277	SLV 15	-10.23	-2.79	44.08	12.6595	-0.0091	3.1184
277	SLV 16	-9.4	-2.51	44.48	12.7601	-0.0099	2.8671
277	CRTFP Ux+	0	0	0	0	0	0
277	CRTFP Ux-	0	0	0	0	0	0
277	CRTFP Uy+	0	0	0	0	0	0
277	CRTFP Uy-	0	0	0	0	0	0
278	SLU 1	0.19	-0.51	40.59	11.7165	-0.002	-0.0627
278	SLU 2	0.2	-0.54	40.58	11.7158	-0.0021	-0.0676
278	SLU 3	0.19	-0.52	41.55	11.9926	-0.002	-0.0643
278	SLU 4	0.2	-0.53	41.54	11.9921	-0.002	-0.0673
278	SLU 5	0.21	-0.55	41.18	11.8877	-0.0021	-0.0681
278	SLU 6	0.19	-0.52	42.15	12.1645	-0.002	-0.0648
278	SLU 7	0.2	-0.54	42.14	12.164	-0.002	-0.0678
278	SLU 8	0.19	-0.53	41.79	12.0604	-0.002	-0.0637
278	SLU 9	0.2	-0.55	41.78	12.06	-0.002	-0.0667
278	SLU 10	0.2	-0.53	45.46	13.1271	-0.0012	-0.0677
278	SLU 11	0.19	-0.5	46.43	13.4039	-0.0011	-0.0643
278	SLU 12	0.2	-0.52	46.43	13.4035	-0.0012	-0.0673
278	SLU 13	0.2	-0.54	46.06	13.299	-0.0012	-0.0682
278	SLU 14	0.19	-0.51	47.03	13.5758	-0.0011	-0.0648
278	SLU 15	0.2	-0.53	47.03	13.5754	-0.0012	-0.0678
278	SLU 16	0.19	-0.51	46.67	13.4718	-0.0012	-0.0637
278	SLU 17	0.2	-0.53	46.67	13.4713	-0.0012	-0.0667
278	SLU 18	0.18	-0.49	47.57	13.7327	-0.0008	-0.0627
278	SLU 19	0.19	-0.51	47.56	13.7323	-0.0008	-0.0657
278	SLU 20	0.19	-0.5	48.17	13.9047	-0.0008	-0.0632
278	SLU 21	0.2	-0.52	48.16	13.9042	-0.0008	-0.0662
278	SLU 22	0.21	-0.46	44.94	12.9762	-0.0024	-0.0716
278	SLU 23	0.23	-0.49	44.92	12.9754	-0.0024	-0.0765
278	SLU 24	0.22	-0.47	45.89	13.2522	-0.0023	-0.0732
278	SLU 25	0.23	-0.48	45.89	13.2517	-0.0024	-0.0762
278	SLU 26	0.23	-0.5	45.52	13.1473	-0.0024	-0.077
278	SLU 27	0.22	-0.47	46.49	13.4241	-0.0023	-0.0737
278	SLU 28	0.23	-0.49	46.49	13.4237	-0.0023	-0.0767
278	SLU 29	0.22	-0.48	46.14	13.32	-0.0023	-0.0726
278	SLU 30	0.23	-0.5	46.13	13.3196	-0.0024	-0.0756
278	SLU 31	0.23	-0.48	49.81	14.3867	-0.0016	-0.0766
278	SLU 32	0.22	-0.45	50.78	14.6635	-0.0015	-0.0732
278	SLU 33	0.23	-0.47	50.77	14.6631	-0.0015	-0.0762
278	SLU 34	0.23	-0.49	50.41	14.5587	-0.0016	-0.0771
278	SLU 35	0.22	-0.46	51.38	14.8355	-0.0015	-0.0737
278	SLU 36	0.23	-0.48	51.37	14.835	-0.0015	-0.0767
278	SLU 37	0.21	-0.46	51.02	14.7314	-0.0015	-0.0726
278	SLU 38	0.22	-0.48	51.01	14.7309	-0.0015	-0.0756
278	SLU 39	0.21	-0.44	51.91	14.9924	-0.0012	-0.0716
278	SLU 40	0.22	-0.46	51.91	14.9919	-0.0012	-0.0746
278	SLU 41	0.21	-0.45	52.51	15.1643	-0.0012	-0.0721
278	SLU 42	0.22	-0.47	52.51	15.1638	-0.0012	-0.0751
278	SLU 43	0.23	-0.68	51.28	14.7996	-0.0025	-0.0785
278	SLU 44	0.25	-0.72	51.27	14.7989	-0.0026	-0.0834
278	SLU 45	0.24	-0.69	52.24	15.0757	-0.0025	-0.0801
278	SLU 46	0.25	-0.71	52.23	15.0752	-0.0025	-0.0831
278	SLU 47	0.25	-0.72	51.87	14.9708	-0.0025	-0.0839
278	SLU 48	0.24	-0.7	52.84	15.2476	-0.0025	-0.0806
278	SLU 49	0.25	-0.71	52.83	15.2471	-0.0025	-0.0836
278	SLU 50	0.24	-0.7	52.48	15.1435	-0.0025	-0.0795
278	SLU 51	0.25	-0.72	52.47	15.143	-0.0025	-0.0824
278	SLU 52	0.25	-0.7	56.15	16.2102	-0.0017	-0.0834
278	SLU 53	0.24	-0.67	57.12	16.487	-0.0016	-0.0801
278	SLU 54	0.25	-0.69	57.11	16.4865	-0.0017	-0.0831
278	SLU 55	0.25	-0.71	56.75	16.3821	-0.0017	-0.0839
278	SLU 56	0.24	-0.68	57.72	16.6589	-0.0016	-0.0806
278	SLU 57	0.25	-0.7	57.71	16.6585	-0.0016	-0.0836
278	SLU 58	0.24	-0.69	57.36	16.5548	-0.0016	-0.0795
278	SLU 59	0.24	-0.7	57.35	16.5544	-0.0017	-0.0825
278	SLU 60	0.23	-0.66	58.25	16.8158	-0.0013	-0.0785
278	SLU 61	0.24	-0.68	58.25	16.8154	-0.0013	-0.0815
278	SLU 62	0.23	-0.67	58.85	16.9878	-0.0013	-0.079
278	SLU 63	0.24	-0.69	58.85	16.9873	-0.0013	-0.082
278	SLU 64	0.26	-0.64	55.62	16.0593	-0.0029	-0.0874
278	SLU 65	0.28	-0.67	55.61	16.0585	-0.0029	-0.0923
278	SLU 66	0.27	-0.64	56.58	16.3353	-0.0028	-0.089
278	SLU 67	0.28	-0.66	56.58	16.3348	-0.0028	-0.092
278	SLU 68	0.28	-0.67	56.21	16.2304	-0.0029	-0.0928
278	SLU 69	0.27	-0.65	57.18	16.5072	-0.0028	-0.0895
278	SLU 70	0.28	-0.66	57.17	16.5068	-0.0028	-0.0925
278	SLU 71	0.26	-0.65	56.82	16.4031	-0.0028	-0.0884

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
278	SLU 72	0.27	-0.67	56.82	16.4027	-0.0029	-0.0913
278	SLU 73	0.28	-0.65	60.5	17.4698	-0.0021	-0.0923
278	SLU 74	0.26	-0.62	61.47	17.7466	-0.002	-0.089
278	SLU 75	0.27	-0.64	61.46	17.7462	-0.002	-0.092
278	SLU 76	0.28	-0.66	61.1	17.6418	-0.002	-0.0928
278	SLU 77	0.27	-0.63	62.07	17.9186	-0.002	-0.0895
278	SLU 78	0.28	-0.65	62.06	17.9181	-0.002	-0.0925
278	SLU 79	0.26	-0.64	61.71	17.8145	-0.002	-0.0884
278	SLU 80	0.27	-0.65	61.7	17.814	-0.002	-0.0914
278	SLU 81	0.26	-0.61	62.6	18.0755	-0.0017	-0.0874
278	SLU 82	0.27	-0.63	62.59	18.075	-0.0017	-0.0904
278	SLU 83	0.26	-0.62	63.2	18.2474	-0.0016	-0.0879
278	SLU 84	0.27	-0.64	63.19	18.2469	-0.0017	-0.0909
278	SLE RA 1	0.2	-0.5	41.83	12.0764	-0.0021	-0.0653
278	SLE RA 2	0.21	-0.52	41.82	12.0759	-0.0022	-0.0685
278	SLE RA 3	0.2	-0.5	42.47	12.2605	-0.0021	-0.0663
278	SLE RA 4	0.2	-0.51	42.47	12.2601	-0.0021	-0.0683
278	SLE RA 5	0.21	-0.53	42.22	12.1905	-0.0021	-0.0689
278	SLE RA 6	0.2	-0.51	42.87	12.3751	-0.0021	-0.0667
278	SLE RA 7	0.21	-0.52	42.87	12.3748	-0.0021	-0.0686
278	SLE RA 8	0.2	-0.51	42.63	12.3057	-0.0021	-0.0659
278	SLE RA 9	0.2	-0.52	42.63	12.3054	-0.0021	-0.0679
278	SLE RA 10	0.2	-0.51	45.08	13.0168	-0.0016	-0.0686
278	SLE RA 11	0.2	-0.49	45.73	13.2013	-0.0015	-0.0663
278	SLE RA 12	0.2	-0.5	45.72	13.201	-0.0016	-0.0683
278	SLE RA 13	0.21	-0.51	45.48	13.1314	-0.0016	-0.0689
278	SLE RA 14	0.2	-0.5	46.13	13.316	-0.0015	-0.0667
278	SLE RA 15	0.2	-0.51	46.12	13.3157	-0.0015	-0.0687
278	SLE RA 16	0.2	-0.5	45.89	13.2466	-0.0015	-0.0659
278	SLE RA 17	0.2	-0.51	45.88	13.2463	-0.0016	-0.0679
278	SLE RA 18	0.19	-0.48	46.48	13.4206	-0.0013	-0.0653
278	SLE RA 19	0.2	-0.5	46.48	13.4203	-0.0013	-0.0672
278	SLE RA 20	0.19	-0.49	46.88	13.5352	-0.0013	-0.0656
278	SLE RA 21	0.2	-0.5	46.88	13.5349	-0.0013	-0.0676
278	SLE FR 1	0.2	-0.5	41.83	12.0764	-0.0021	-0.0653
278	SLE FR 2	0.2	-0.5	41.83	12.0763	-0.0021	-0.0659
278	SLE FR 3	0.2	-0.5	41.99	12.1223	-0.0021	-0.0654
278	SLE FR 4	0.2	-0.5	43.23	12.4796	-0.0019	-0.0659
278	SLE FR 5	0.19	-0.5	43.39	12.5255	-0.0019	-0.0654
278	SLE FR 6	0.19	-0.49	44.16	12.7485	-0.0017	-0.0653
278	SLE QP 1	0.2	-0.5	41.83	12.0764	-0.0021	-0.0653
278	SLE QP 2	0.19	-0.49	43.23	12.4797	-0.0019	-0.0653
278	SLD 1	4.3	0.47	42.45	12.3091	0.0076	-1.3197
278	SLD 2	4.65	0.61	42.63	12.3561	0.0072	-1.428
278	SLD 3	4.01	-0.66	42.01	12.244	0.0069	-1.2329
278	SLD 4	4.37	-0.52	42.19	12.291	0.0065	-1.3412
278	SLD 5	1.79	1.48	43.63	12.5189	0.0022	-0.5542
278	SLD 6	2.03	1.57	43.75	12.5496	0.0019	-0.6249
278	SLD 7	0.84	-2.28	42.16	12.302	-0.0003	-0.2647
278	SLD 8	1.08	-2.19	42.28	12.3327	-0.0006	-0.3355
278	SLD 9	-0.69	1.2	44.18	12.6267	-0.0032	0.2049
278	SLD 10	-0.46	1.29	44.3	12.6574	-0.0035	0.1342
278	SLD 11	-1.64	-2.56	42.7	12.4097	-0.0057	0.4944
278	SLD 12	-1.41	-2.47	42.82	12.4404	-0.0059	0.4236
278	SLD 13	-3.98	-0.47	44.26	12.6683	-0.0103	1.2106
278	SLD 14	-3.62	-0.33	44.45	12.7153	-0.0107	1.1024
278	SLD 15	-4.27	-1.6	43.82	12.6033	-0.011	1.2975
278	SLD 16	-3.91	-1.46	44.01	12.6502	-0.0114	1.1892
278	SLV 1	9.8	1.72	41.39	12.0797	0.0204	-3.0007
278	SLV 2	10.63	2.04	41.82	12.1892	0.0195	-3.2529
278	SLV 3	9.13	-0.84	40.38	11.9293	0.0187	-2.7979
278	SLV 4	9.96	-0.52	40.81	12.0387	0.0177	-3.0501
278	SLV 5	3.94	3.99	44.13	12.5691	0.0076	-1.2103
278	SLV 6	4.48	4.2	44.41	12.6394	0.007	-1.3724
278	SLV 7	1.72	-4.53	40.77	12.0677	0.0018	-0.5342
278	SLV 8	2.26	-4.33	41.05	12.138	0.0012	-0.6963
278	SLV 9	-1.87	3.34	45.41	12.8214	-0.005	0.5658
278	SLV 10	-1.33	3.54	45.68	12.8917	-0.0056	0.4037
278	SLV 11	-4.09	-5.19	42.05	12.3199	-0.0108	1.2418
278	SLV 12	-3.55	-4.98	42.32	12.3903	-0.0114	1.0798
278	SLV 13	-9.57	-0.47	45.64	12.9206	-0.0215	2.9195
278	SLV 14	-8.74	-0.15	46.07	13.0301	-0.0224	2.6674
278	SLV 15	-10.24	-3.03	44.64	12.7702	-0.0232	3.1223
278	SLV 16	-9.41	-2.71	45.06	12.8796	-0.0242	2.8702
278	CRTFP Ux+	0	0	0	0	0	0
278	CRTFP Ux-	0	0	0	0	0	0
278	CRTFP Uy+	0	0	0	0	0	0
278	CRTFP Uy-	0	0	0	0	0	0
279	SLU 1	0.19	-0.6	40.85	11.7961	-0.0145	-0.0648
279	SLU 2	0.21	-0.63	40.84	11.7958	-0.0145	-0.0698
279	SLU 3	0.2	-0.6	41.82	12.0733	-0.0148	-0.0665
279	SLU 4	0.21	-0.62	41.81	12.0732	-0.0148	-0.0695
279	SLU 5	0.21	-0.64	41.45	11.9687	-0.0147	-0.0703
279	SLU 6	0.2	-0.61	42.42	12.2462	-0.015	-0.0671
279	SLU 7	0.21	-0.63	42.41	12.246	-0.015	-0.07
279	SLU 8	0.2	-0.62	42.06	12.1418	-0.0149	-0.0659
279	SLU 9	0.21	-0.64	42.05	12.1417	-0.0149	-0.0689
279	SLU 10	0.21	-0.62	45.73	13.2053	-0.0154	-0.0697
279	SLU 11	0.2	-0.6	46.7	13.4828	-0.0157	-0.0665
279	SLU 12	0.21	-0.61	46.69	13.4827	-0.0157	-0.0695
279	SLU 13	0.21	-0.63	46.33	13.3782	-0.0156	-0.0703
279	SLU 14	0.2	-0.61	47.3	13.6557	-0.0159	-0.067
279	SLU 15	0.21	-0.62	47.29	13.6555	-0.0159	-0.07
279	SLU 16	0.2	-0.61	46.94	13.5513	-0.0158	-0.0659
279	SLU 17	0.2	-0.63	46.94	13.5512	-0.0158	-0.0689
279	SLU 18	0.19	-0.59	47.83	13.8096	-0.0158	-0.0648
279	SLU 19	0.2	-0.61	47.82	13.8095	-0.0158	-0.0677

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
279	SLU 20	0.19	-0.6	48.43	13.9825	-0.016	-0.0653
279	SLU 21	0.2	-0.62	48.42	13.9824	-0.016	-0.0683
279	SLU 22	0.22	-0.56	45.24	13.0672	-0.0164	-0.074
279	SLU 23	0.24	-0.59	45.23	13.0669	-0.0164	-0.079
279	SLU 24	0.23	-0.56	46.2	13.3444	-0.0167	-0.0757
279	SLU 25	0.24	-0.58	46.19	13.3443	-0.0167	-0.0787
279	SLU 26	0.24	-0.6	45.83	13.2398	-0.0166	-0.0795
279	SLU 27	0.23	-0.57	46.8	13.5173	-0.0169	-0.0762
279	SLU 28	0.24	-0.59	46.8	13.5171	-0.0169	-0.0792
279	SLU 29	0.23	-0.58	46.44	13.4129	-0.0168	-0.0751
279	SLU 30	0.23	-0.6	46.44	13.4127	-0.0168	-0.0781
279	SLU 31	0.24	-0.58	50.11	14.4764	-0.0173	-0.0789
279	SLU 32	0.23	-0.56	51.08	14.7539	-0.0176	-0.0756
279	SLU 33	0.23	-0.57	51.08	14.7538	-0.0176	-0.0786
279	SLU 34	0.24	-0.59	50.71	14.6493	-0.0175	-0.0795
279	SLU 35	0.23	-0.57	51.68	14.9268	-0.0178	-0.0762
279	SLU 36	0.24	-0.58	51.68	14.9266	-0.0178	-0.0792
279	SLU 37	0.22	-0.57	51.32	14.8224	-0.0177	-0.0751
279	SLU 38	0.23	-0.59	51.32	14.8222	-0.0177	-0.078
279	SLU 39	0.22	-0.55	52.21	15.0807	-0.0177	-0.0739
279	SLU 40	0.23	-0.57	52.2	15.0806	-0.0177	-0.0769
279	SLU 41	0.22	-0.56	52.81	15.2536	-0.0179	-0.0745
279	SLU 42	0.23	-0.58	52.81	15.2534	-0.0179	-0.0775
279	SLU 43	0.24	-0.79	51.61	14.8991	-0.0182	-0.0811
279	SLU 44	0.26	-0.82	51.6	14.8989	-0.0182	-0.0861
279	SLU 45	0.25	-0.79	52.57	15.1763	-0.0185	-0.0828
279	SLU 46	0.26	-0.81	52.56	15.1762	-0.0185	-0.0858
279	SLU 47	0.26	-0.83	52.2	15.0717	-0.0184	-0.0866
279	SLU 48	0.25	-0.8	53.17	15.3492	-0.0187	-0.0834
279	SLU 49	0.26	-0.82	53.17	15.3491	-0.0187	-0.0863
279	SLU 50	0.25	-0.81	52.81	15.2448	-0.0186	-0.0822
279	SLU 51	0.26	-0.83	52.81	15.2447	-0.0186	-0.0852
279	SLU 52	0.26	-0.81	56.48	16.3084	-0.0191	-0.086
279	SLU 53	0.25	-0.79	57.45	16.5858	-0.0194	-0.0828
279	SLU 54	0.26	-0.81	57.45	16.5857	-0.0194	-0.0858
279	SLU 55	0.26	-0.82	57.08	16.4812	-0.0193	-0.0866
279	SLU 56	0.25	-0.8	58.05	16.7587	-0.0196	-0.0833
279	SLU 57	0.26	-0.82	58.05	16.7586	-0.0196	-0.0863
279	SLU 58	0.24	-0.8	57.69	16.6543	-0.0195	-0.0822
279	SLU 59	0.25	-0.82	57.69	16.6542	-0.0195	-0.0852
279	SLU 60	0.24	-0.78	58.58	16.9127	-0.0194	-0.0811
279	SLU 61	0.25	-0.8	58.58	16.9125	-0.0195	-0.084
279	SLU 62	0.24	-0.79	59.18	17.0855	-0.0196	-0.0816
279	SLU 63	0.25	-0.81	59.18	17.0854	-0.0197	-0.0846
279	SLU 64	0.27	-0.75	55.99	16.1702	-0.0201	-0.0903
279	SLU 65	0.29	-0.78	55.98	16.17	-0.0201	-0.0953
279	SLU 66	0.28	-0.75	56.95	16.4474	-0.0204	-0.092
279	SLU 67	0.29	-0.77	56.95	16.4473	-0.0204	-0.095
279	SLU 68	0.29	-0.79	56.58	16.3428	-0.0203	-0.0958
279	SLU 69	0.28	-0.77	57.56	16.6203	-0.0206	-0.0925
279	SLU 70	0.29	-0.78	57.55	16.6201	-0.0206	-0.0955
279	SLU 71	0.27	-0.77	57.2	16.5159	-0.0205	-0.0914
279	SLU 72	0.28	-0.79	57.19	16.5158	-0.0205	-0.0944
279	SLU 73	0.29	-0.77	60.86	17.5795	-0.021	-0.0952
279	SLU 74	0.27	-0.75	61.83	17.8569	-0.0213	-0.0919
279	SLU 75	0.28	-0.77	61.83	17.8568	-0.0213	-0.0949
279	SLU 76	0.29	-0.78	61.47	17.7523	-0.0212	-0.0958
279	SLU 77	0.28	-0.76	62.44	18.0298	-0.0215	-0.0925
279	SLU 78	0.29	-0.78	62.43	18.0296	-0.0215	-0.0955
279	SLU 79	0.27	-0.76	62.08	17.9254	-0.0214	-0.0914
279	SLU 80	0.28	-0.78	62.07	17.9253	-0.0214	-0.0943
279	SLU 81	0.27	-0.74	62.96	18.1838	-0.0214	-0.0902
279	SLU 82	0.28	-0.76	62.96	18.1836	-0.0214	-0.0932
279	SLU 83	0.27	-0.75	63.57	18.3566	-0.0216	-0.0908
279	SLU 84	0.28	-0.77	63.56	18.3565	-0.0216	-0.0938
279	SLE RA 1	0.2	-0.59	42.11	12.1592	-0.015	-0.0674
279	SLE RA 2	0.21	-0.61	42.1	12.1591	-0.015	-0.0707
279	SLE RA 3	0.21	-0.59	42.75	12.3441	-0.0152	-0.0686
279	SLE RA 4	0.21	-0.6	42.74	12.344	-0.0152	-0.0706
279	SLE RA 5	0.21	-0.61	42.5	12.2743	-0.0152	-0.0711
279	SLE RA 6	0.21	-0.6	43.15	12.4593	-0.0154	-0.0689
279	SLE RA 7	0.21	-0.61	43.15	12.4592	-0.0154	-0.0709
279	SLE RA 8	0.2	-0.6	42.91	12.3897	-0.0153	-0.0682
279	SLE RA 9	0.21	-0.61	42.91	12.3896	-0.0153	-0.0702
279	SLE RA 10	0.21	-0.6	45.35	13.0988	-0.0156	-0.0707
279	SLE RA 11	0.2	-0.58	46	13.2837	-0.0158	-0.0685
279	SLE RA 12	0.21	-0.6	46	13.2836	-0.0158	-0.0705
279	SLE RA 13	0.21	-0.61	45.76	13.214	-0.0158	-0.0711
279	SLE RA 14	0.21	-0.59	46.4	13.399	-0.016	-0.0689
279	SLE RA 15	0.21	-0.6	46.4	13.3989	-0.016	-0.0709
279	SLE RA 16	0.2	-0.6	46.16	13.3294	-0.0159	-0.0682
279	SLE RA 17	0.21	-0.61	46.16	13.3293	-0.0159	-0.0701
279	SLE RA 18	0.2	-0.58	46.76	13.5016	-0.0159	-0.0674
279	SLE RA 19	0.21	-0.59	46.75	13.5015	-0.0159	-0.0694
279	SLE RA 20	0.2	-0.59	47.16	13.6169	-0.016	-0.0678
279	SLE RA 21	0.21	-0.6	47.15	13.6168	-0.016	-0.0698
279	SLE FR 1	0.2	-0.59	42.11	12.1592	-0.015	-0.0674
279	SLE FR 2	0.2	-0.59	42.11	12.1592	-0.015	-0.0681
279	SLE FR 3	0.2	-0.59	42.27	12.2053	-0.0151	-0.0676
279	SLE FR 4	0.2	-0.59	43.5	12.5619	-0.0153	-0.0681
279	SLE FR 5	0.2	-0.59	43.66	12.6081	-0.0153	-0.0676
279	SLE FR 6	0.2	-0.58	44.43	12.8304	-0.0154	-0.0674
279	SLE QP 1	0.2	-0.59	42.11	12.1592	-0.015	-0.0674
279	SLE QP 2	0.2	-0.58	43.5	12.562	-0.0153	-0.0674
279	SLD 1	4.31	0.42	42.36	12.2915	-0.0045	-1.3241
279	SLD 2	4.66	0.58	42.56	12.3433	-0.0049	-1.4327
279	SLD 3	4.02	-0.69	41.93	12.2284	-0.0051	-1.2371

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
279	SLD 4	4.38	-0.54	42.13	12.2801	-0.0056	-1.3457
279	SLD 5	1.8	1.38	43.79	12.5675	-0.011	-0.5572
279	SLD 6	2.04	1.48	43.92	12.6013	-0.0113	-0.6281
279	SLD 7	0.85	-2.33	42.33	12.3569	-0.0131	-0.2672
279	SLD 8	1.09	-2.23	42.46	12.3907	-0.0134	-0.3382
279	SLD 9	-0.68	1.06	44.54	12.7332	-0.0171	0.2033
279	SLD 10	-0.45	1.17	44.67	12.767	-0.0174	0.1323
279	SLD 11	-1.63	-2.65	43.09	12.5226	-0.0192	0.4933
279	SLD 12	-1.4	-2.55	43.22	12.5564	-0.0196	0.4223
279	SLD 13	-3.98	-0.63	44.88	12.8438	-0.025	1.2108
279	SLD 14	-3.62	-0.47	45.08	12.8955	-0.0254	1.1022
279	SLD 15	-4.26	-1.74	44.44	12.7806	-0.0256	1.2978
279	SLD 16	-3.9	-1.59	44.64	12.8324	-0.0261	1.1892
279	SLV 1	9.81	1.73	40.83	11.9287	0.01	-3.0079
279	SLV 2	10.64	2.09	41.29	12.0492	0.0089	-3.2609
279	SLV 3	9.14	-0.8	39.83	11.782	0.0085	-2.8047
279	SLV 4	9.97	-0.44	40.3	11.9025	0.0074	-3.0577
279	SLV 5	3.95	3.88	44.13	12.5739	-0.0052	-1.2144
279	SLV 6	4.49	4.12	44.43	12.6513	-0.0059	-1.377
279	SLV 7	1.73	-4.55	40.81	12.0848	-0.0102	-0.5371
279	SLV 8	2.27	-4.31	41.11	12.1622	-0.0109	-0.6997
279	SLV 9	-1.86	3.15	45.89	12.9617	-0.0196	0.5648
279	SLV 10	-1.33	3.38	46.19	13.0391	-0.0203	0.4022
279	SLV 11	-4.08	-5.28	42.57	12.4726	-0.0246	1.2421
279	SLV 12	-3.55	-5.05	42.87	12.55	-0.0253	1.0795
279	SLV 13	-9.57	-0.73	46.71	13.2215	-0.0379	2.9228
279	SLV 14	-8.74	-0.37	47.17	13.3419	-0.039	2.6698
279	SLV 15	-10.24	-3.26	45.71	13.0747	-0.0395	3.126
279	SLV 16	-9.4	-2.9	46.18	13.1952	-0.0406	2.873
279	CRTFP Ux+	0	0	0	0	0	0
279	CRTFP Ux-	0	0	0	0	0	0
279	CRTFP Uy+	0	0	0	0	0	0
279	CRTFP Uy-	0	0	0	0	0	0
280	SLU 1	0.2	-0.68	41.47	12.014	-0.025	-0.0664
280	SLU 2	0.22	-0.7	41.46	12.0142	-0.025	-0.0714
280	SLU 3	0.21	-0.68	42.45	12.2964	-0.0256	-0.0682
280	SLU 4	0.22	-0.7	42.44	12.2965	-0.0256	-0.0712
280	SLU 5	0.22	-0.72	42.07	12.1904	-0.0254	-0.072
280	SLU 6	0.21	-0.7	43.06	12.4726	-0.026	-0.0688
280	SLU 7	0.22	-0.71	43.05	12.4727	-0.026	-0.0718
280	SLU 8	0.2	-0.7	42.69	12.3664	-0.0258	-0.0676
280	SLU 9	0.21	-0.72	42.69	12.3665	-0.0258	-0.0706
280	SLU 10	0.21	-0.71	46.39	13.4415	-0.0275	-0.0713
280	SLU 11	0.2	-0.69	47.38	13.7238	-0.0281	-0.068
280	SLU 12	0.21	-0.7	47.37	13.7239	-0.0281	-0.071
280	SLU 13	0.22	-0.72	47	13.6177	-0.0279	-0.0718
280	SLU 14	0.2	-0.7	47.99	13.9	-0.0285	-0.0686
280	SLU 15	0.21	-0.72	47.98	13.9001	-0.0285	-0.0716
280	SLU 16	0.2	-0.7	47.62	13.7938	-0.0282	-0.0674
280	SLU 17	0.21	-0.72	47.62	13.7939	-0.0283	-0.0704
280	SLU 18	0.2	-0.68	48.51	14.0531	-0.0285	-0.0662
280	SLU 19	0.21	-0.7	48.51	14.0532	-0.0285	-0.0692
280	SLU 20	0.2	-0.69	49.13	14.2293	-0.0289	-0.0668
280	SLU 21	0.21	-0.71	49.12	14.2294	-0.0289	-0.0698
280	SLU 22	0.23	-0.65	45.94	13.314	-0.0283	-0.0759
280	SLU 23	0.25	-0.68	45.93	13.3142	-0.0283	-0.0809
280	SLU 24	0.23	-0.65	46.91	13.5964	-0.0289	-0.0776
280	SLU 25	0.24	-0.67	46.91	13.5965	-0.0289	-0.0806
280	SLU 26	0.25	-0.69	46.54	13.4904	-0.0287	-0.0815
280	SLU 27	0.24	-0.67	47.53	13.7726	-0.0293	-0.0782
280	SLU 28	0.25	-0.68	47.52	13.7727	-0.0293	-0.0812
280	SLU 29	0.23	-0.67	47.16	13.6664	-0.0291	-0.0771
280	SLU 30	0.24	-0.69	47.16	13.6665	-0.0291	-0.08
280	SLU 31	0.24	-0.68	50.86	14.7415	-0.0307	-0.0807
280	SLU 32	0.23	-0.66	51.84	15.0238	-0.0313	-0.0774
280	SLU 33	0.24	-0.67	51.84	15.0239	-0.0313	-0.0804
280	SLU 34	0.24	-0.69	51.47	14.9177	-0.0311	-0.0813
280	SLU 35	0.23	-0.67	52.46	15.2	-0.0317	-0.078
280	SLU 36	0.24	-0.69	52.45	15.2001	-0.0317	-0.081
280	SLU 37	0.23	-0.67	52.09	15.0938	-0.0315	-0.0769
280	SLU 38	0.24	-0.69	52.09	15.0939	-0.0315	-0.0799
280	SLU 39	0.23	-0.65	52.98	15.3531	-0.0318	-0.0756
280	SLU 40	0.24	-0.67	52.97	15.3532	-0.0318	-0.0786
280	SLU 41	0.23	-0.66	53.59	15.5293	-0.0321	-0.0762
280	SLU 42	0.24	-0.68	53.59	15.5294	-0.0322	-0.0792
280	SLU 43	0.25	-0.89	52.38	15.1725	-0.0314	-0.0831
280	SLU 44	0.27	-0.92	52.37	15.1727	-0.0314	-0.0881
280	SLU 45	0.26	-0.9	53.36	15.4549	-0.032	-0.0849
280	SLU 46	0.27	-0.91	53.35	15.455	-0.032	-0.0879
280	SLU 47	0.27	-0.93	52.98	15.3489	-0.0318	-0.0887
280	SLU 48	0.26	-0.91	53.97	15.6311	-0.0324	-0.0855
280	SLU 49	0.27	-0.93	53.96	15.6312	-0.0324	-0.0885
280	SLU 50	0.25	-0.91	53.6	15.5249	-0.0322	-0.0843
280	SLU 51	0.26	-0.93	53.6	15.525	-0.0322	-0.0873
280	SLU 52	0.26	-0.92	57.3	16.6	-0.0339	-0.088
280	SLU 53	0.25	-0.9	58.29	16.8823	-0.0345	-0.0847
280	SLU 54	0.26	-0.92	58.28	16.8824	-0.0345	-0.0877
280	SLU 55	0.27	-0.93	57.91	16.7762	-0.0343	-0.0885
280	SLU 56	0.26	-0.91	58.9	17.0585	-0.0348	-0.0853
280	SLU 57	0.27	-0.93	58.89	17.0586	-0.0349	-0.0883
280	SLU 58	0.25	-0.92	58.53	16.9523	-0.0346	-0.0841
280	SLU 59	0.26	-0.93	58.53	16.9524	-0.0346	-0.0871
280	SLU 60	0.25	-0.89	59.42	17.2116	-0.0349	-0.0829
280	SLU 61	0.26	-0.91	59.42	17.2117	-0.0349	-0.0859
280	SLU 62	0.25	-0.91	60.03	17.3878	-0.0353	-0.0835
280	SLU 63	0.26	-0.92	60.03	17.3879	-0.0353	-0.0865
280	SLU 64	0.28	-0.86	56.85	16.4725	-0.0347	-0.0926

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
280	SLU 65	0.3	-0.89	56.84	16.4726	-0.0347	-0.0976
280	SLU 66	0.28	-0.87	57.82	16.7549	-0.0353	-0.0943
280	SLU 67	0.29	-0.88	57.82	16.755	-0.0353	-0.0973
280	SLU 68	0.3	-0.9	57.45	16.6488	-0.0351	-0.0982
280	SLU 69	0.29	-0.88	58.44	16.9311	-0.0357	-0.0949
280	SLU 70	0.3	-0.9	58.43	16.9312	-0.0357	-0.0979
280	SLU 71	0.28	-0.88	58.07	16.8249	-0.0355	-0.0938
280	SLU 72	0.29	-0.9	58.07	16.825	-0.0355	-0.0967
280	SLU 73	0.29	-0.89	61.77	17.9	-0.0371	-0.0974
280	SLU 74	0.28	-0.87	62.75	18.1823	-0.0377	-0.0941
280	SLU 75	0.29	-0.89	62.75	18.1823	-0.0377	-0.0971
280	SLU 76	0.3	-0.9	62.38	18.0762	-0.0375	-0.098
280	SLU 77	0.28	-0.88	63.37	18.3585	-0.0381	-0.0947
280	SLU 78	0.29	-0.9	63.36	18.3586	-0.0381	-0.0977
280	SLU 79	0.28	-0.89	63	18.2523	-0.0379	-0.0936
280	SLU 80	0.29	-0.9	63	18.2524	-0.0379	-0.0966
280	SLU 81	0.28	-0.86	63.89	18.5116	-0.0381	-0.0923
280	SLU 82	0.29	-0.88	63.88	18.5117	-0.0382	-0.0953
280	SLU 83	0.28	-0.88	64.5	18.6878	-0.0385	-0.0929
280	SLU 84	0.29	-0.89	64.5	18.6879	-0.0386	-0.0959
280	SLE RA 1	0.21	-0.67	42.75	12.3854	-0.026	-0.0691
280	SLE RA 2	0.22	-0.69	42.74	12.3855	-0.026	-0.0725
280	SLE RA 3	0.21	-0.67	43.4	12.5737	-0.0264	-0.0703
280	SLE RA 4	0.22	-0.68	43.39	12.5738	-0.0264	-0.0723
280	SLE RA 5	0.22	-0.7	43.15	12.503	-0.0262	-0.0729
280	SLE RA 6	0.21	-0.68	43.81	12.6912	-0.0266	-0.0707
280	SLE RA 7	0.22	-0.69	43.8	12.6912	-0.0266	-0.0727
280	SLE RA 8	0.21	-0.68	43.56	12.6204	-0.0265	-0.0699
280	SLE RA 9	0.22	-0.7	43.56	12.6204	-0.0265	-0.0719
280	SLE RA 10	0.22	-0.69	46.03	13.3371	-0.0276	-0.0723
280	SLE RA 11	0.21	-0.68	46.68	13.5253	-0.028	-0.0702
280	SLE RA 12	0.22	-0.69	46.68	13.5253	-0.028	-0.0722
280	SLE RA 13	0.22	-0.7	46.44	13.4546	-0.0279	-0.0727
280	SLE RA 14	0.21	-0.68	47.09	13.6428	-0.0282	-0.0706
280	SLE RA 15	0.22	-0.69	47.09	13.6428	-0.0283	-0.0726
280	SLE RA 16	0.21	-0.69	46.85	13.572	-0.0281	-0.0698
280	SLE RA 17	0.22	-0.7	46.85	13.572	-0.0281	-0.0718
280	SLE RA 18	0.21	-0.67	47.44	13.7449	-0.0283	-0.069
280	SLE RA 19	0.21	-0.68	47.44	13.7449	-0.0283	-0.071
280	SLE RA 20	0.21	-0.68	47.85	13.8623	-0.0285	-0.0694
280	SLE RA 21	0.21	-0.69	47.85	13.8624	-0.0285	-0.0714
280	SLE FR 1	0.21	-0.67	42.75	12.3854	-0.026	-0.0691
280	SLE FR 2	0.21	-0.67	42.75	12.3855	-0.026	-0.0698
280	SLE FR 3	0.21	-0.67	42.91	12.4324	-0.0261	-0.0693
280	SLE FR 4	0.21	-0.67	44.15	12.7933	-0.0267	-0.0697
280	SLE FR 5	0.21	-0.67	44.32	12.8403	-0.0268	-0.0692
280	SLE FR 6	0.21	-0.67	45.09	13.0651	-0.0271	-0.069
280	SLE QP 1	0.21	-0.67	42.75	12.3854	-0.026	-0.0691
280	SLE QP 2	0.21	-0.67	44.16	12.7933	-0.0266	-0.0691
280	SLD 1	4.31	0.37	42.62	12.4074	-0.0152	-1.3281
280	SLD 2	4.67	0.54	42.84	12.4649	-0.0157	-1.4371
280	SLD 3	4.02	-0.73	42.17	12.3406	-0.0144	-1.2409
280	SLD 4	4.38	-0.56	42.39	12.3982	-0.0149	-1.3499
280	SLD 5	1.81	1.28	44.33	12.7685	-0.0243	-0.5597
280	SLD 6	2.04	1.39	44.47	12.8062	-0.0246	-0.631
280	SLD 7	0.86	-2.39	42.85	12.5461	-0.0217	-0.2691
280	SLD 8	1.09	-2.27	42.99	12.5837	-0.0221	-0.3404
280	SLD 9	-0.68	0.94	45.32	13.0028	-0.0312	0.2022
280	SLD 10	-0.44	1.05	45.46	13.0404	-0.0316	0.131
280	SLD 11	-1.62	-2.73	43.84	12.7804	-0.0287	0.4928
280	SLD 12	-1.39	-2.62	43.98	12.818	-0.029	0.4216
280	SLD 13	-3.97	-0.78	45.92	13.1883	-0.0384	1.2117
280	SLD 14	-3.61	-0.61	46.14	13.2459	-0.0389	1.1027
280	SLD 15	-4.25	-1.88	45.47	13.1216	-0.0376	1.2989
280	SLD 16	-3.89	-1.71	45.69	13.1792	-0.0381	1.1899
280	SLV 1	9.8	1.73	40.55	11.8899	0.0003	-3.0151
280	SLV 2	10.64	2.13	41.06	12.024	-0.001	-3.269
280	SLV 3	9.14	-0.77	39.53	11.7344	0.0021	-2.8114
280	SLV 4	9.97	-0.37	40.04	11.8685	0.0008	-3.0653
280	SLV 5	3.95	3.77	44.53	12.7351	-0.0211	-1.2182
280	SLV 6	4.49	4.03	44.86	12.8212	-0.0219	-1.3814
280	SLV 7	1.73	-4.56	41.13	12.2169	-0.0151	-0.5394
280	SLV 8	2.27	-4.3	41.46	12.303	-0.0159	-0.7026
280	SLV 9	-1.85	2.96	46.85	13.2835	-0.0374	0.5644
280	SLV 10	-1.32	3.22	47.18	13.3697	-0.0382	0.4013
280	SLV 11	-4.07	-5.37	43.45	12.7653	-0.0314	1.2432
280	SLV 12	-3.54	-5.11	43.78	12.8515	-0.0322	1.0801
280	SLV 13	-9.55	-0.97	48.27	13.718	-0.0541	2.9272
280	SLV 14	-8.72	-0.57	48.78	13.8521	-0.0554	2.6733
280	SLV 15	-10.22	-3.47	47.25	13.5626	-0.0522	3.1308
280	SLV 16	-9.39	-3.07	47.76	13.6966	-0.0535	2.8769
280	CRTFP Ux+	0	0	0	0	0	0
280	CRTFP Ux-	0	0	0	0	0	0
280	CRTFP Uy+	0	0	0	0	0	0
280	CRTFP Uy-	0	0	0	0	0	0
281	SLU 1	0.18	-0.63	36.37	10.3874	0.9023	-0.0401
281	SLU 2	0.19	-0.66	36.36	10.3877	0.9022	-0.0437
281	SLU 3	0.18	-0.64	37.23	10.632	0.9236	-0.0414
281	SLU 4	0.19	-0.66	37.22	10.6321	0.9235	-0.0436
281	SLU 5	0.19	-0.67	36.9	10.5404	0.9155	-0.0439
281	SLU 6	0.18	-0.65	37.77	10.7847	0.9369	-0.0416
281	SLU 7	0.19	-0.67	37.76	10.7849	0.9368	-0.0438
281	SLU 8	0.18	-0.66	37.45	10.6928	0.9289	-0.0405
281	SLU 9	0.19	-0.67	37.44	10.693	0.9288	-0.0427
281	SLU 10	0.19	-0.67	40.67	11.6178	1.0093	-0.0431
281	SLU 11	0.18	-0.65	41.54	11.8621	1.0307	-0.0407
281	SLU 12	0.19	-0.67	41.53	11.8623	1.0306	-0.0429

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
281	SLU 13	0.19	-0.68	41.21	11.7705	1.0226	-0.0433
281	SLU 14	0.18	-0.66	42.08	12.0148	1.044	-0.0409
281	SLU 15	0.19	-0.68	42.07	12.015	1.0439	-0.0431
281	SLU 16	0.18	-0.67	41.76	11.9229	1.0361	-0.0398
281	SLU 17	0.19	-0.68	41.75	11.9231	1.036	-0.042
281	SLU 18	0.17	-0.65	42.53	12.1447	1.0554	-0.0391
281	SLU 19	0.18	-0.66	42.52	12.1449	1.0553	-0.0413
281	SLU 20	0.17	-0.66	43.07	12.2974	1.0687	-0.0393
281	SLU 21	0.18	-0.67	43.06	12.2976	1.0686	-0.0415
281	SLU 22	0.2	-0.62	40.3	11.517	0.9996	-0.0486
281	SLU 23	0.22	-0.64	40.3	11.5173	0.9994	-0.0523
281	SLU 24	0.21	-0.62	41.16	11.7616	1.0208	-0.0499
281	SLU 25	0.22	-0.64	41.16	11.7618	1.0207	-0.0521
281	SLU 26	0.22	-0.65	40.84	11.67	1.0127	-0.0525
281	SLU 27	0.21	-0.64	41.7	11.9143	1.0341	-0.0501
281	SLU 28	0.22	-0.65	41.7	11.9145	1.034	-0.0523
281	SLU 29	0.2	-0.64	41.38	11.8224	1.0262	-0.049
281	SLU 30	0.21	-0.65	41.38	11.8226	1.0261	-0.0512
281	SLU 31	0.21	-0.65	44.61	12.7474	1.1066	-0.0516
281	SLU 32	0.2	-0.63	45.47	12.9917	1.128	-0.0492
281	SLU 33	0.21	-0.65	45.47	12.9919	1.1279	-0.0514
281	SLU 34	0.22	-0.66	45.15	12.9001	1.1199	-0.0518
281	SLU 35	0.21	-0.65	46.01	13.1445	1.1413	-0.0495
281	SLU 36	0.21	-0.66	46.01	13.1446	1.1412	-0.0517
281	SLU 37	0.2	-0.65	45.69	13.0526	1.1333	-0.0484
281	SLU 38	0.21	-0.66	45.69	13.0527	1.1332	-0.0506
281	SLU 39	0.2	-0.63	46.46	13.2743	1.1526	-0.0477
281	SLU 40	0.21	-0.64	46.46	13.2745	1.1525	-0.0499
281	SLU 41	0.2	-0.64	47	13.4271	1.1659	-0.0479
281	SLU 42	0.21	-0.66	47	13.4272	1.1658	-0.0501
281	SLU 43	0.22	-0.83	45.93	13.1163	1.1397	-0.0492
281	SLU 44	0.23	-0.85	45.92	13.1166	1.1395	-0.0528
281	SLU 45	0.23	-0.84	46.79	13.3609	1.1609	-0.0505
281	SLU 46	0.23	-0.85	46.78	13.3611	1.1608	-0.0527
281	SLU 47	0.24	-0.87	46.46	13.2693	1.1528	-0.053
281	SLU 48	0.23	-0.85	47.33	13.5136	1.1742	-0.0507
281	SLU 49	0.24	-0.87	47.32	13.5138	1.1741	-0.0529
281	SLU 50	0.22	-0.86	47.01	13.4217	1.1663	-0.0496
281	SLU 51	0.23	-0.87	47	13.4219	1.1662	-0.0518
281	SLU 52	0.23	-0.86	50.24	14.3467	1.2466	-0.0522
281	SLU 53	0.22	-0.85	51.1	14.591	1.268	-0.0498
281	SLU 54	0.23	-0.86	51.1	14.5912	1.2679	-0.052
281	SLU 55	0.23	-0.88	50.77	14.4994	1.2599	-0.0524
281	SLU 56	0.22	-0.86	51.64	14.7437	1.2814	-0.05
281	SLU 57	0.23	-0.87	51.63	14.7439	1.2813	-0.0522
281	SLU 58	0.22	-0.86	51.32	14.6519	1.2734	-0.0489
281	SLU 59	0.23	-0.88	51.31	14.652	1.2733	-0.0511
281	SLU 60	0.22	-0.84	52.09	14.8736	1.2927	-0.0482
281	SLU 61	0.23	-0.86	52.09	14.8738	1.2926	-0.0504
281	SLU 62	0.22	-0.86	52.63	15.0263	1.306	-0.0484
281	SLU 63	0.23	-0.87	52.62	15.0265	1.3059	-0.0506
281	SLU 64	0.25	-0.81	49.87	14.2459	1.2369	-0.0577
281	SLU 65	0.26	-0.84	49.86	14.2462	1.2368	-0.0614
281	SLU 66	0.25	-0.82	50.72	14.4905	1.2582	-0.059
281	SLU 67	0.26	-0.84	50.72	14.4907	1.2581	-0.0612
281	SLU 68	0.26	-0.85	50.4	14.3989	1.2501	-0.0616
281	SLU 69	0.25	-0.83	51.26	14.6432	1.2715	-0.0592
281	SLU 70	0.26	-0.85	51.26	14.6434	1.2714	-0.0614
281	SLU 71	0.25	-0.84	50.94	14.5513	1.2635	-0.0581
281	SLU 72	0.26	-0.85	50.94	14.5515	1.2634	-0.0603
281	SLU 73	0.26	-0.85	54.17	15.4763	1.3439	-0.0607
281	SLU 74	0.25	-0.83	55.04	15.7207	1.3653	-0.0583
281	SLU 75	0.26	-0.84	55.03	15.7208	1.3652	-0.0605
281	SLU 76	0.26	-0.86	54.71	15.629	1.3572	-0.0609
281	SLU 77	0.25	-0.84	55.57	15.8734	1.3786	-0.0586
281	SLU 78	0.26	-0.86	55.57	15.8735	1.3785	-0.0607
281	SLU 79	0.25	-0.85	55.25	15.7815	1.3707	-0.0575
281	SLU 80	0.26	-0.86	55.25	15.7816	1.3706	-0.0597
281	SLU 81	0.24	-0.83	56.03	16.0033	1.39	-0.0568
281	SLU 82	0.25	-0.84	56.02	16.0034	1.3899	-0.059
281	SLU 83	0.24	-0.84	56.56	16.156	1.4033	-0.057
281	SLU 84	0.25	-0.85	56.56	16.1561	1.4032	-0.0592
281	SLE RA 1	0.18	-0.63	37.49	10.7101	0.9301	-0.0425
281	SLE RA 2	0.19	-0.65	37.49	10.7103	0.93	-0.0449
281	SLE RA 3	0.19	-0.64	38.07	10.8732	0.9443	-0.0434
281	SLE RA 4	0.19	-0.64	38.06	10.8733	0.9442	-0.0448
281	SLE RA 5	0.19	-0.65	37.85	10.8121	0.9389	-0.0451
281	SLE RA 6	0.19	-0.64	38.42	10.975	0.9531	-0.0435
281	SLE RA 7	0.19	-0.65	38.42	10.9751	0.9531	-0.045
281	SLE RA 8	0.19	-0.65	38.21	10.9137	0.9479	-0.0428
281	SLE RA 9	0.19	-0.65	38.21	10.9139	0.9478	-0.0443
281	SLE RA 10	0.19	-0.65	40.36	11.5304	1.0014	-0.0445
281	SLE RA 11	0.19	-0.64	40.94	11.6933	1.0157	-0.0429
281	SLE RA 12	0.19	-0.65	40.94	11.6934	1.0156	-0.0444
281	SLE RA 13	0.19	-0.66	40.72	11.6322	1.0103	-0.0447
281	SLE RA 14	0.19	-0.65	41.3	11.7951	1.0246	-0.0431
281	SLE RA 15	0.19	-0.66	41.3	11.7952	1.0245	-0.0445
281	SLE RA 16	0.18	-0.65	41.09	11.7338	1.0193	-0.0424
281	SLE RA 17	0.19	-0.66	41.08	11.7339	1.0192	-0.0438
281	SLE RA 18	0.18	-0.64	41.6	11.8817	1.0321	-0.0419
281	SLE RA 19	0.19	-0.65	41.6	11.8818	1.0321	-0.0433
281	SLE RA 20	0.18	-0.65	41.96	11.9835	1.041	-0.042
281	SLE RA 21	0.19	-0.66	41.96	11.9836	1.0409	-0.0435
281	SLE FR 1	0.18	-0.63	37.49	10.7101	0.9301	-0.0425
281	SLE FR 2	0.19	-0.63	37.49	10.7102	0.9301	-0.043
281	SLE FR 3	0.18	-0.63	37.64	10.7508	0.9337	-0.0426
281	SLE FR 4	0.18	-0.64	38.72	11.0616	0.9607	-0.0428

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
281	SLE FR 5	0.18	-0.64	38.87	11.1023	0.9643	-0.0424
281	SLE FR 6	0.18	-0.63	39.55	11.2959	0.9811	-0.0422
281	SLE QP 1	0.18	-0.63	37.49	10.7101	0.9301	-0.0425
281	SLE QP 2	0.18	-0.63	38.73	11.0616	0.9607	-0.0423
281	SLD 1	3.7	0.28	37.05	10.6339	0.9266	-1.1255
281	SLD 2	4.01	0.44	37.26	10.6878	0.9313	-1.2223
281	SLD 3	3.46	-0.65	36.65	10.5709	0.9174	-1.0411
281	SLD 4	3.76	-0.49	36.85	10.6249	0.9221	-1.1378
281	SLD 5	1.56	1.03	38.8	11.0192	0.9635	-0.4782
281	SLD 6	1.76	1.14	38.94	11.0544	0.9666	-0.5414
281	SLD 7	0.74	-2.09	37.45	10.8094	0.933	-0.1968
281	SLD 8	0.94	-1.98	37.58	10.8446	0.9361	-0.2601
281	SLD 9	-0.57	0.72	39.87	11.2785	0.9853	0.1754
281	SLD 10	-0.37	0.82	40	11.3138	0.9885	0.1122
281	SLD 11	-1.39	-2.4	38.51	11.0687	0.9548	0.4568
281	SLD 12	-1.19	-2.3	38.65	11.104	0.9579	0.3936
281	SLD 13	-3.4	-0.77	40.6	11.4983	0.9993	1.0532
281	SLD 14	-3.09	-0.61	40.8	11.5523	1.004	0.9565
281	SLD 15	-3.64	-1.71	40.19	11.4354	0.9901	1.1376
281	SLD 16	-3.34	-1.55	40.4	11.4893	0.9949	1.0409
281	SLV 1	8.42	1.47	34.8	10.0603	0.8805	-2.5767
281	SLV 2	9.13	1.85	35.28	10.1859	0.8916	-2.802
281	SLV 3	7.84	-0.65	33.87	9.9137	0.8595	-2.3802
281	SLV 4	8.56	-0.27	34.35	10.0393	0.8706	-2.6055
281	SLV 5	3.4	3.16	38.88	10.962	0.9666	-1.062
281	SLV 6	3.86	3.4	39.18	11.0428	0.9737	-1.2068
281	SLV 7	1.49	-3.92	35.78	10.4734	0.8966	-0.4071
281	SLV 8	1.95	-3.68	36.08	10.5541	0.9037	-0.5519
281	SLV 9	-1.59	2.42	41.37	11.5691	1.0177	0.4672
281	SLV 10	-1.13	2.66	41.67	11.6498	1.0248	0.3224
281	SLV 11	-3.49	-4.66	38.27	11.0804	0.9477	1.1222
281	SLV 12	-3.03	-4.42	38.57	11.1612	0.9548	0.9774
281	SLV 13	-8.19	-0.99	43.1	12.0839	1.0508	2.5209
281	SLV 14	-7.48	-0.62	43.58	12.2095	1.0619	2.2956
281	SLV 15	-8.77	-3.11	42.17	11.9373	1.0298	2.7174
281	SLV 16	-8.05	-2.74	42.65	12.0629	1.0409	2.4921
281	CRTFP Ux+	0	0	0	0	0	0
281	CRTFP Ux-	0	0	0	0	0	0
281	CRTFP Uy+	0	0	0	0	0	0
281	CRTFP Uy-	0	0	0	0	0	0
282	SLU 1	0.12	-0.44	24.82	6.8005	0.5689	-0.0254
282	SLU 2	0.13	-0.46	24.82	6.8007	0.5688	-0.0278
282	SLU 3	0.12	-0.45	25.41	6.961	0.5823	-0.0263
282	SLU 4	0.13	-0.46	25.41	6.9612	0.5822	-0.0277
282	SLU 5	0.13	-0.47	25.19	6.901	0.5772	-0.028
282	SLU 6	0.12	-0.46	25.78	7.0613	0.5907	-0.0264
282	SLU 7	0.13	-0.47	25.78	7.0614	0.5906	-0.0278
282	SLU 8	0.12	-0.46	25.56	7.001	0.5857	-0.0257
282	SLU 9	0.13	-0.47	25.56	7.0011	0.5856	-0.0272
282	SLU 10	0.13	-0.47	27.76	7.605	0.6361	-0.0272
282	SLU 11	0.12	-0.46	28.35	7.7653	0.6497	-0.0256
282	SLU 12	0.13	-0.47	28.35	7.7654	0.6496	-0.027
282	SLU 13	0.13	-0.47	28.13	7.7052	0.6446	-0.0273
282	SLU 14	0.12	-0.47	28.72	7.8655	0.6581	-0.0257
282	SLU 15	0.13	-0.47	28.72	7.8656	0.658	-0.0272
282	SLU 16	0.12	-0.47	28.5	7.8052	0.6531	-0.025
282	SLU 17	0.13	-0.48	28.5	7.8053	0.653	-0.0265
282	SLU 18	0.12	-0.45	29.02	7.9494	0.6651	-0.0245
282	SLU 19	0.12	-0.46	29.02	7.9496	0.665	-0.0259
282	SLU 20	0.12	-0.46	29.39	8.0497	0.6735	-0.0246
282	SLU 21	0.12	-0.47	29.39	8.0498	0.6735	-0.0261
282	SLU 22	0.14	-0.43	27.52	7.5432	0.6306	-0.0309
282	SLU 23	0.15	-0.45	27.52	7.5434	0.6305	-0.0333
282	SLU 24	0.14	-0.44	28.11	7.7037	0.644	-0.0317
282	SLU 25	0.15	-0.45	28.1	7.7038	0.6439	-0.0331
282	SLU 26	0.15	-0.46	27.88	7.6436	0.6389	-0.0334
282	SLU 27	0.14	-0.45	28.48	7.8039	0.6524	-0.0318
282	SLU 28	0.15	-0.46	28.47	7.804	0.6523	-0.0333
282	SLU 29	0.14	-0.45	28.26	7.7436	0.6474	-0.0311
282	SLU 30	0.15	-0.46	28.25	7.7437	0.6473	-0.0326
282	SLU 31	0.14	-0.46	30.45	8.3476	0.6978	-0.0326
282	SLU 32	0.14	-0.45	31.05	8.5079	0.7114	-0.031
282	SLU 33	0.14	-0.46	31.04	8.508	0.7113	-0.0325
282	SLU 34	0.15	-0.46	30.82	8.4478	0.7063	-0.0327
282	SLU 35	0.14	-0.46	31.41	8.6081	0.7198	-0.0312
282	SLU 36	0.15	-0.47	31.41	8.6083	0.7197	-0.0326
282	SLU 37	0.14	-0.46	31.2	8.5479	0.7148	-0.0305
282	SLU 38	0.14	-0.47	31.19	8.548	0.7147	-0.0319
282	SLU 39	0.13	-0.44	31.72	8.6921	0.7268	-0.0299
282	SLU 40	0.14	-0.45	31.72	8.6922	0.7267	-0.0314
282	SLU 41	0.14	-0.45	32.09	8.7923	0.7352	-0.03
282	SLU 42	0.14	-0.46	32.08	8.7924	0.7352	-0.0315
282	SLU 43	0.15	-0.58	31.35	8.5861	0.7184	-0.0312
282	SLU 44	0.16	-0.59	31.34	8.5863	0.7183	-0.0336
282	SLU 45	0.15	-0.58	31.93	8.7466	0.7318	-0.032
282	SLU 46	0.16	-0.59	31.93	8.7467	0.7317	-0.0335
282	SLU 47	0.16	-0.6	31.71	8.6865	0.7267	-0.0338
282	SLU 48	0.15	-0.59	32.3	8.8468	0.7402	-0.0322
282	SLU 49	0.16	-0.6	32.3	8.8469	0.7402	-0.0336
282	SLU 50	0.15	-0.6	32.08	8.7865	0.7352	-0.0315
282	SLU 51	0.16	-0.6	32.08	8.7866	0.7351	-0.0329
282	SLU 52	0.16	-0.6	34.28	9.3905	0.7856	-0.033
282	SLU 53	0.15	-0.59	34.87	9.5508	0.7992	-0.0314
282	SLU 54	0.16	-0.6	34.87	9.5509	0.7991	-0.0328
282	SLU 55	0.16	-0.61	34.65	9.4907	0.7941	-0.0331
282	SLU 56	0.15	-0.6	35.24	9.651	0.8076	-0.0315
282	SLU 57	0.16	-0.61	35.24	9.6512	0.8075	-0.033

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
282	SLU 58	0.15	-0.6	35.02	9.5908	0.8026	-0.0308
282	SLU 59	0.16	-0.61	35.02	9.5909	0.8025	-0.0323
282	SLU 60	0.15	-0.59	35.55	9.735	0.8146	-0.0303
282	SLU 61	0.15	-0.6	35.54	9.7351	0.8146	-0.0317
282	SLU 62	0.15	-0.6	35.91	9.8352	0.823	-0.0304
282	SLU 63	0.15	-0.61	35.91	9.8353	0.823	-0.0319
282	SLU 64	0.17	-0.57	34.04	9.3287	0.7801	-0.0366
282	SLU 65	0.18	-0.58	34.04	9.3289	0.78	-0.039
282	SLU 66	0.17	-0.58	34.63	9.4892	0.7935	-0.0375
282	SLU 67	0.18	-0.58	34.63	9.4893	0.7934	-0.0389
282	SLU 68	0.18	-0.59	34.41	9.4291	0.7884	-0.0392
282	SLU 69	0.17	-0.58	35	9.5894	0.8019	-0.0376
282	SLU 70	0.18	-0.59	35	9.5896	0.8019	-0.039
282	SLU 71	0.17	-0.59	34.78	9.5291	0.7969	-0.0369
282	SLU 72	0.18	-0.59	34.78	9.5293	0.7968	-0.0383
282	SLU 73	0.17	-0.59	36.98	10.1332	0.8473	-0.0384
282	SLU 74	0.17	-0.58	37.57	10.2935	0.8609	-0.0368
282	SLU 75	0.17	-0.59	37.57	10.2936	0.8608	-0.0382
282	SLU 76	0.18	-0.6	37.35	10.2334	0.8558	-0.0385
282	SLU 77	0.17	-0.59	37.94	10.3937	0.8693	-0.0369
282	SLU 78	0.18	-0.6	37.93	10.3938	0.8692	-0.0384
282	SLU 79	0.17	-0.59	37.72	10.3334	0.8643	-0.0362
282	SLU 80	0.17	-0.6	37.72	10.3335	0.8642	-0.0377
282	SLU 81	0.16	-0.58	38.24	10.4776	0.8763	-0.0357
282	SLU 82	0.17	-0.59	38.24	10.4777	0.8763	-0.0371
282	SLU 83	0.17	-0.59	38.61	10.5778	0.8847	-0.0358
282	SLU 84	0.17	-0.6	38.61	10.578	0.8847	-0.0373
282	SLE RA 1	0.12	-0.44	25.6	7.0127	0.5865	-0.027
282	SLE RA 2	0.13	-0.45	25.59	7.0128	0.5864	-0.0286
282	SLE RA 3	0.13	-0.44	25.99	7.1197	0.5954	-0.0275
282	SLE RA 4	0.13	-0.45	25.98	7.1198	0.5954	-0.0285
282	SLE RA 5	0.13	-0.46	25.84	7.0797	0.592	-0.0287
282	SLE RA 6	0.13	-0.45	26.23	7.1865	0.6011	-0.0276
282	SLE RA 7	0.13	-0.46	26.23	7.1866	0.601	-0.0286
282	SLE RA 8	0.13	-0.45	26.09	7.1463	0.5977	-0.0272
282	SLE RA 9	0.13	-0.46	26.08	7.1464	0.5977	-0.0281
282	SLE RA 10	0.13	-0.46	27.55	7.549	0.6313	-0.0282
282	SLE RA 11	0.13	-0.45	27.95	7.6559	0.6404	-0.0271
282	SLE RA 12	0.13	-0.46	27.94	7.656	0.6403	-0.0281
282	SLE RA 13	0.13	-0.46	27.8	7.6158	0.637	-0.0282
282	SLE RA 14	0.13	-0.46	28.19	7.7227	0.646	-0.0272
282	SLE RA 15	0.13	-0.46	28.19	7.7228	0.6459	-0.0281
282	SLE RA 16	0.12	-0.46	28.05	7.6825	0.6426	-0.0267
282	SLE RA 17	0.13	-0.46	28.04	7.6826	0.6426	-0.0277
282	SLE RA 18	0.12	-0.45	28.39	7.7787	0.6507	-0.0264
282	SLE RA 19	0.13	-0.45	28.39	7.7787	0.6506	-0.0273
282	SLE RA 20	0.12	-0.45	28.64	7.8455	0.6563	-0.0264
282	SLE RA 21	0.13	-0.46	28.64	7.8456	0.6562	-0.0274
282	SLE FR 1	0.12	-0.44	25.6	7.0127	0.5865	-0.027
282	SLE FR 2	0.13	-0.44	25.59	7.0127	0.5865	-0.0273
282	SLE FR 3	0.13	-0.44	25.69	7.0394	0.5887	-0.027
282	SLE FR 4	0.13	-0.44	26.43	7.2425	0.6057	-0.0271
282	SLE FR 5	0.12	-0.44	26.53	7.2692	0.608	-0.0268
282	SLE FR 6	0.12	-0.44	26.99	7.3957	0.6186	-0.0267
282	SLE QP 1	0.12	-0.44	25.6	7.0127	0.5865	-0.027
282	SLE QP 2	0.12	-0.44	26.43	7.2425	0.6057	-0.0268
282	SLD 1	2.48	0.17	25.12	6.9142	0.5779	-0.7251
282	SLD 2	2.69	0.29	25.27	6.9518	0.5812	-0.7877
282	SLD 3	2.32	-0.45	24.83	6.8691	0.5718	-0.6711
282	SLD 4	2.52	-0.34	24.98	6.9066	0.575	-0.7336
282	SLD 5	1.04	0.67	26.46	7.2059	0.6062	-0.3072
282	SLD 6	1.18	0.74	26.55	7.2304	0.6083	-0.3481
282	SLD 7	0.5	-1.41	25.48	7.0554	0.5856	-0.127
282	SLD 8	0.63	-1.33	25.58	7.0799	0.5878	-0.1679
282	SLD 9	-0.38	0.45	27.29	7.4051	0.6237	0.1143
282	SLD 10	-0.25	0.52	27.39	7.4296	0.6258	0.0734
282	SLD 11	-0.93	-1.62	26.32	7.2546	0.6032	0.2945
282	SLD 12	-0.8	-1.55	26.41	7.2791	0.6053	0.2536
282	SLD 13	-2.28	-0.55	27.89	7.5783	0.6365	0.68
282	SLD 14	-2.07	-0.43	28.04	7.6159	0.6397	0.6175
282	SLD 15	-2.44	-1.17	27.6	7.5332	0.6303	0.7341
282	SLD 16	-2.23	-1.06	27.75	7.5707	0.6336	0.6715
282	SLV 1	5.64	0.98	23.36	6.474	0.5405	-1.6607
282	SLV 2	6.12	1.24	23.7	6.5614	0.5481	-1.8064
282	SLV 3	5.26	-0.44	22.69	6.369	0.5264	-1.5348
282	SLV 4	5.74	-0.17	23.03	6.4564	0.534	-1.6805
282	SLV 5	2.28	2.08	26.47	7.1562	0.6063	-0.683
282	SLV 6	2.59	2.25	26.69	7.2124	0.6111	-0.7766
282	SLV 7	1	-2.63	24.24	6.8062	0.5592	-0.2633
282	SLV 8	1.31	-2.46	24.46	6.8624	0.5641	-0.3569
282	SLV 9	-1.06	1.57	28.41	7.6226	0.6474	0.3033
282	SLV 10	-0.75	1.74	28.63	7.6788	0.6523	0.2097
282	SLV 11	-2.34	-3.14	26.18	7.2726	0.6003	0.723
282	SLV 12	-2.03	-2.97	26.4	7.3288	0.6052	0.6294
282	SLV 13	-5.49	-0.71	29.84	8.0286	0.6775	1.6269
282	SLV 14	-5.01	-0.45	30.18	8.116	0.6851	1.4812
282	SLV 15	-5.87	-2.12	29.17	7.9236	0.6634	1.7528
282	SLV 16	-5.39	-1.86	29.51	8.011	0.671	1.6071
282	CRTFP Ux+	0	0	0	0	0	0
282	CRTFP Ux-	0	0	0	0	0	0
282	CRTFP Uy+	0	0	0	0	0	0
282	CRTFP Uy-	0	0	0	0	0	0
283	SLU 1	0.22	-0.79	44.88	14.1173	-1.0886	-0.0914
283	SLU 2	0.24	-0.82	44.87	14.1176	-1.0884	-0.0977
283	SLU 3	0.23	-0.8	45.94	14.4516	-1.1146	-0.0937
283	SLU 4	0.24	-0.82	45.93	14.4518	-1.1144	-0.0975
283	SLU 5	0.24	-0.83	45.53	14.3263	-1.1047	-0.0987

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
283	SLU 6	0.23	-0.82	46.61	14.6603	-1.1308	-0.0948
283	SLU 7	0.24	-0.83	46.6	14.6605	-1.1307	-0.0985
283	SLU 8	0.22	-0.82	46.21	14.5348	-1.1211	-0.0936
283	SLU 9	0.23	-0.84	46.2	14.5349	-1.121	-0.0973
283	SLU 10	0.23	-0.83	50.18	15.7852	-1.217	-0.0969
283	SLU 11	0.22	-0.82	51.25	16.1192	-1.2432	-0.0929
283	SLU 12	0.23	-0.83	51.24	16.1194	-1.243	-0.0967
283	SLU 13	0.23	-0.85	50.84	15.9939	-1.2333	-0.0979
283	SLU 14	0.22	-0.83	51.91	16.328	-1.2594	-0.094
283	SLU 15	0.23	-0.85	51.91	16.3281	-1.2593	-0.0977
283	SLU 16	0.22	-0.84	51.52	16.2024	-1.2497	-0.0927
283	SLU 17	0.23	-0.85	51.51	16.2026	-1.2496	-0.0965
283	SLU 18	0.21	-0.81	52.46	16.4996	-1.2723	-0.0902
283	SLU 19	0.22	-0.83	52.45	16.4998	-1.2722	-0.094
283	SLU 20	0.22	-0.83	53.13	16.7084	-1.2886	-0.0913
283	SLU 21	0.23	-0.84	53.12	16.7085	-1.2885	-0.0951
283	SLU 22	0.25	-0.78	49.77	15.6664	-1.2085	-0.1018
283	SLU 23	0.27	-0.8	49.77	15.6667	-1.2083	-0.1081
283	SLU 24	0.26	-0.79	50.84	16.0007	-1.2345	-0.1041
283	SLU 25	0.27	-0.8	50.83	16.0009	-1.2343	-0.1079
283	SLU 26	0.27	-0.82	50.43	15.8754	-1.2246	-0.1091
283	SLU 27	0.26	-0.8	51.5	16.2094	-1.2507	-0.1052
283	SLU 28	0.27	-0.82	51.5	16.2096	-1.2506	-0.1089
283	SLU 29	0.26	-0.81	51.11	16.0839	-1.241	-0.104
283	SLU 30	0.27	-0.82	51.1	16.084	-1.2409	-0.1077
283	SLU 31	0.26	-0.82	55.07	17.3343	-1.3369	-0.1073
283	SLU 32	0.25	-0.8	56.15	17.6683	-1.363	-0.1033
283	SLU 33	0.26	-0.82	56.14	17.6685	-1.3629	-0.1071
283	SLU 34	0.27	-0.83	55.74	17.543	-1.3532	-0.1083
283	SLU 35	0.26	-0.82	56.81	17.8771	-1.3793	-0.1044
283	SLU 36	0.27	-0.83	56.81	17.8772	-1.3792	-0.1081
283	SLU 37	0.25	-0.82	56.42	17.7515	-1.3696	-0.1031
283	SLU 38	0.26	-0.84	56.41	17.7517	-1.3695	-0.1069
283	SLU 39	0.25	-0.8	57.36	18.0487	-1.3922	-0.1006
283	SLU 40	0.26	-0.81	57.35	18.0489	-1.3921	-0.1044
283	SLU 41	0.25	-0.81	58.02	18.2575	-1.4085	-0.1017
283	SLU 42	0.26	-0.83	58.02	18.2576	-1.4084	-0.1055
283	SLU 43	0.27	-1.03	56.66	17.8214	-1.3741	-0.1153
283	SLU 44	0.29	-1.06	56.65	17.8216	-1.3739	-0.1215
283	SLU 45	0.28	-1.05	57.72	18.1557	-1.4	-0.1176
283	SLU 46	0.29	-1.06	57.72	18.1558	-1.3999	-0.1213
283	SLU 47	0.29	-1.08	57.32	18.0304	-1.3902	-0.1226
283	SLU 48	0.28	-1.06	58.39	18.3644	-1.4163	-0.1186
283	SLU 49	0.29	-1.08	58.38	18.3646	-1.4162	-0.1224
283	SLU 50	0.28	-1.06	57.99	18.2388	-1.4066	-0.1174
283	SLU 51	0.29	-1.08	57.99	18.239	-1.4065	-0.1212
283	SLU 52	0.29	-1.08	61.96	19.4893	-1.5025	-0.1207
283	SLU 53	0.28	-1.06	63.03	19.8233	-1.5286	-0.1168
283	SLU 54	0.29	-1.08	63.03	19.8235	-1.5285	-0.1205
283	SLU 55	0.29	-1.09	62.63	19.698	-1.5187	-0.1218
283	SLU 56	0.28	-1.08	63.7	20.032	-1.5449	-0.1178
283	SLU 57	0.29	-1.09	63.69	20.0322	-1.5448	-0.1216
283	SLU 58	0.27	-1.08	63.3	19.9065	-1.5352	-0.1166
283	SLU 59	0.29	-1.1	63.3	19.9066	-1.5351	-0.1203
283	SLU 60	0.27	-1.06	64.24	20.2037	-1.5578	-0.1141
283	SLU 61	0.28	-1.07	64.24	20.2039	-1.5577	-0.1179
283	SLU 62	0.27	-1.07	64.91	20.4124	-1.5741	-0.1152
283	SLU 63	0.28	-1.09	64.9	20.4126	-1.5739	-0.1189
283	SLU 64	0.31	-1.02	61.56	19.3705	-1.494	-0.1257
283	SLU 65	0.32	-1.04	61.55	19.3707	-1.4938	-0.1319
283	SLU 66	0.31	-1.03	62.62	19.7048	-1.5199	-0.128
283	SLU 67	0.32	-1.05	62.62	19.7049	-1.5198	-0.1317
283	SLU 68	0.33	-1.06	62.22	19.5795	-1.51	-0.133
283	SLU 69	0.31	-1.05	63.29	19.9135	-1.5362	-0.129
283	SLU 70	0.32	-1.06	63.28	19.9137	-1.5361	-0.1328
283	SLU 71	0.31	-1.05	62.89	19.7879	-1.5265	-0.1278
283	SLU 72	0.32	-1.07	62.89	19.7881	-1.5264	-0.1316
283	SLU 73	0.32	-1.06	66.86	21.0384	-1.6224	-0.1311
283	SLU 74	0.31	-1.05	67.93	21.3724	-1.6485	-0.1272
283	SLU 75	0.32	-1.06	67.92	21.3726	-1.6484	-0.1309
283	SLU 76	0.32	-1.08	67.52	21.2471	-1.6386	-0.1322
283	SLU 77	0.31	-1.06	68.6	21.5811	-1.6648	-0.1282
283	SLU 78	0.32	-1.08	68.59	21.5813	-1.6647	-0.132
283	SLU 79	0.31	-1.06	68.2	21.4556	-1.6551	-0.127
283	SLU 80	0.32	-1.08	68.19	21.4557	-1.655	-0.1307
283	SLU 81	0.3	-1.04	69.14	21.7528	-1.6777	-0.1245
283	SLU 82	0.31	-1.06	69.14	21.753	-1.6776	-0.1283
283	SLU 83	0.3	-1.06	69.81	21.9615	-1.694	-0.1256
283	SLU 84	0.31	-1.07	69.8	21.9617	-1.6938	-0.1293
283	SLE RA 1	0.23	-0.79	46.28	14.5599	-1.1229	-0.0944
283	SLE RA 2	0.24	-0.8	46.27	14.5601	-1.1227	-0.0986
283	SLE RA 3	0.23	-0.79	46.98	14.7828	-1.1402	-0.0959
283	SLE RA 4	0.24	-0.81	46.98	14.7829	-1.1401	-0.0984
283	SLE RA 5	0.24	-0.81	46.71	14.6992	-1.1336	-0.0993
283	SLE RA 6	0.23	-0.8	47.43	14.9219	-1.151	-0.0966
283	SLE RA 7	0.24	-0.82	47.43	14.922	-1.1509	-0.0991
283	SLE RA 8	0.23	-0.81	47.16	14.8382	-1.1446	-0.0958
283	SLE RA 9	0.24	-0.82	47.16	14.8383	-1.1445	-0.0983
283	SLE RA 10	0.24	-0.81	49.81	15.6718	-1.2085	-0.098
283	SLE RA 11	0.23	-0.8	50.52	15.8945	-1.2259	-0.0954
283	SLE RA 12	0.24	-0.82	50.52	15.8946	-1.2258	-0.0979
283	SLE RA 13	0.24	-0.83	50.25	15.811	-1.2193	-0.0987
283	SLE RA 14	0.23	-0.82	50.97	16.0337	-1.2367	-0.0961
283	SLE RA 15	0.24	-0.83	50.96	16.0338	-1.2367	-0.0986
283	SLE RA 16	0.23	-0.82	50.7	15.95	-1.2303	-0.0953
283	SLE RA 17	0.24	-0.83	50.7	15.9501	-1.2302	-0.0978
283	SLE RA 18	0.23	-0.8	51.33	16.1481	-1.2453	-0.0936

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
283	SLE RA 19	0.23	-0.81	51.33	16.1482	-1.2453	-0.0961
283	SLE RA 20	0.23	-0.81	51.78	16.2873	-1.2562	-0.0943
283	SLE RA 21	0.23	-0.82	51.77	16.2874	-1.2561	-0.0968
283	SLE FR 1	0.23	-0.79	46.28	14.5599	-1.1229	-0.0944
283	SLE FR 2	0.23	-0.79	46.27	14.5599	-1.1228	-0.0952
283	SLE FR 3	0.23	-0.79	46.45	14.6156	-1.1272	-0.0947
283	SLE FR 4	0.23	-0.79	47.79	15.0364	-1.1596	-0.095
283	SLE FR 5	0.23	-0.8	47.97	15.092	-1.1639	-0.0944
283	SLE FR 6	0.23	-0.79	48.8	15.354	-1.1841	-0.094
283	SLE QP 1	0.23	-0.79	46.28	14.5599	-1.1229	-0.0944
283	SLE QP 2	0.23	-0.79	47.79	15.0364	-1.1596	-0.0942
283	SLD 1	4.44	0.29	45.08	14.2318	-1.0773	-1.4893
283	SLD 2	4.8	0.5	45.36	14.316	-1.0849	-1.6067
283	SLD 3	4.14	-0.82	44.53	14.1227	-1.0623	-1.3966
283	SLD 4	4.51	-0.6	44.81	14.2069	-1.0699	-1.514
283	SLD 5	1.87	1.17	47.75	14.9456	-1.1563	-0.6325
283	SLD 6	2.11	1.31	47.94	15.0006	-1.1612	-0.7093
283	SLD 7	0.89	-2.51	45.94	14.5819	-1.1063	-0.3235
283	SLD 8	1.13	-2.37	46.12	14.6369	-1.1113	-0.4002
283	SLD 9	-0.68	0.79	49.46	15.4358	-1.2079	0.2119
283	SLD 10	-0.44	0.93	49.65	15.4909	-1.2129	0.1352
283	SLD 11	-1.65	-2.89	47.65	15.0721	-1.158	0.521
283	SLD 12	-1.41	-2.75	47.83	15.1271	-1.1629	0.4442
283	SLD 13	-4.06	-0.98	50.77	15.8659	-1.2493	1.3257
283	SLD 14	-3.69	-0.77	51.05	15.9501	-1.2569	1.2083
283	SLD 15	-4.35	-2.08	50.23	15.7567	-1.2344	1.4184
283	SLD 16	-3.98	-1.87	50.51	15.8409	-1.2419	1.301
283	SLV 1	10.08	1.7	41.42	13.1521	-0.9666	-3.3585
283	SLV 2	10.93	2.19	42.08	13.3482	-0.9842	-3.632
283	SLV 3	9.39	-0.81	40.17	12.8992	-0.9322	-3.1421
283	SLV 4	10.25	-0.32	40.83	13.0954	-0.9499	-3.4156
283	SLV 5	4.07	3.67	47.66	14.821	-1.1508	-1.3548
283	SLV 6	4.62	3.99	48.08	14.947	-1.1621	-1.5306
283	SLV 7	1.79	-4.68	43.5	13.9781	-1.0363	-0.6335
283	SLV 8	2.34	-4.36	43.92	14.1042	-1.0476	-0.8092
283	SLV 9	-1.89	2.78	51.67	15.9686	-1.2716	0.6209
283	SLV 10	-1.34	3.1	52.09	16.0946	-1.2829	0.4452
283	SLV 11	-4.17	-5.57	47.5	15.1257	-1.1571	1.3423
283	SLV 12	-3.62	-5.25	47.92	15.2517	-1.1685	1.1665
283	SLV 13	-9.79	-1.27	54.76	16.9774	-1.3693	3.2273
283	SLV 14	-8.94	-0.77	55.41	17.1735	-1.387	2.9538
283	SLV 15	-10.48	-3.77	53.51	16.7245	-1.335	3.4437
283	SLV 16	-9.62	-3.28	54.16	16.9207	-1.3527	3.1702
283	CRTFP Ux+	0	0	0	0	0	0
283	CRTFP Ux-	0	0	0	0	0	0
283	CRTFP Uy+	0	0	0	0	0	0
283	CRTFP Uy-	0	0	0	0	0	0
284	SLU 1	0.16	-0.52	31.37	10.1764	-0.8843	-0.0682
284	SLU 2	0.17	-0.54	31.37	10.1761	-0.8842	-0.0728
284	SLU 3	0.16	-0.53	32.12	10.4178	-0.9054	-0.0699
284	SLU 4	0.17	-0.54	32.12	10.4176	-0.9053	-0.0727
284	SLU 5	0.17	-0.55	31.83	10.3268	-0.8974	-0.0736
284	SLU 6	0.16	-0.54	32.59	10.5685	-0.9187	-0.0707
284	SLU 7	0.17	-0.55	32.58	10.5683	-0.9186	-0.0735
284	SLU 8	0.16	-0.54	32.31	10.4778	-0.9108	-0.0699
284	SLU 9	0.17	-0.55	32.3	10.4776	-0.9107	-0.0726
284	SLU 10	0.17	-0.55	35.08	11.3739	-0.9886	-0.072
284	SLU 11	0.16	-0.54	35.83	11.6156	-1.0099	-0.0692
284	SLU 12	0.17	-0.55	35.82	11.6154	-1.0098	-0.0719
284	SLU 13	0.17	-0.56	35.54	11.5246	-1.0019	-0.0729
284	SLU 14	0.16	-0.55	36.29	11.7663	-1.0231	-0.07
284	SLU 15	0.17	-0.56	36.29	11.7661	-1.023	-0.0727
284	SLU 16	0.16	-0.55	36.02	11.6756	-1.0153	-0.0691
284	SLU 17	0.16	-0.56	36.01	11.6754	-1.0152	-0.0719
284	SLU 18	0.15	-0.53	36.67	11.8875	-1.0336	-0.0671
284	SLU 19	0.16	-0.54	36.67	11.8874	-1.0335	-0.0699
284	SLU 20	0.15	-0.54	37.14	12.0382	-1.0468	-0.068
284	SLU 21	0.16	-0.55	37.13	12.0381	-1.0467	-0.0707
284	SLU 22	0.18	-0.51	34.82	11.2964	-0.9818	-0.0758
284	SLU 23	0.19	-0.53	34.81	11.2961	-0.9816	-0.0804
284	SLU 24	0.18	-0.52	35.56	11.5378	-1.0029	-0.0775
284	SLU 25	0.19	-0.53	35.56	11.5377	-1.0028	-0.0802
284	SLU 26	0.19	-0.54	35.28	11.4468	-0.9948	-0.0812
284	SLU 27	0.18	-0.53	36.03	11.6885	-1.0161	-0.0783
284	SLU 28	0.19	-0.54	36.03	11.6884	-1.016	-0.0811
284	SLU 29	0.18	-0.53	35.75	11.5978	-1.0082	-0.0774
284	SLU 30	0.19	-0.54	35.75	11.5977	-1.0081	-0.0802
284	SLU 31	0.19	-0.54	38.52	12.494	-1.0861	-0.0796
284	SLU 32	0.18	-0.53	39.27	12.7357	-1.1073	-0.0767
284	SLU 33	0.19	-0.54	39.27	12.7355	-1.1072	-0.0795
284	SLU 34	0.19	-0.55	38.99	12.6447	-1.0993	-0.0804
284	SLU 35	0.18	-0.54	39.74	12.8864	-1.1206	-0.0776
284	SLU 36	0.19	-0.55	39.73	12.8862	-1.1205	-0.0803
284	SLU 37	0.18	-0.54	39.46	12.7957	-1.1127	-0.0767
284	SLU 38	0.19	-0.55	39.46	12.7955	-1.1126	-0.0794
284	SLU 39	0.18	-0.52	40.11	13.0076	-1.131	-0.0747
284	SLU 40	0.18	-0.53	40.11	13.0074	-1.1309	-0.0775
284	SLU 41	0.18	-0.53	40.58	13.1583	-1.1442	-0.0755
284	SLU 42	0.18	-0.54	40.58	13.1581	-1.1441	-0.0783
284	SLU 43	0.2	-0.68	39.6	12.8452	-1.1162	-0.0861
284	SLU 44	0.21	-0.7	39.6	12.845	-1.1161	-0.0906
284	SLU 45	0.2	-0.69	40.35	13.0867	-1.1373	-0.0878
284	SLU 46	0.21	-0.7	40.35	13.0865	-1.1372	-0.0905
284	SLU 47	0.21	-0.71	40.07	12.9957	-1.1293	-0.0915
284	SLU 48	0.2	-0.7	40.82	13.2374	-1.1506	-0.0886
284	SLU 49	0.21	-0.71	40.81	13.2372	-1.1504	-0.0914
284	SLU 50	0.2	-0.7	40.54	13.1466	-1.1427	-0.0877

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
284	SLU 51	0.21	-0.71	40.54	13.1465	-1.1426	-0.0905
284	SLU 52	0.2	-0.71	43.31	14.0428	-1.2205	-0.0899
284	SLU 53	0.2	-0.7	44.06	14.2845	-1.2418	-0.087
284	SLU 54	0.2	-0.71	44.06	14.2843	-1.2417	-0.0898
284	SLU 55	0.21	-0.72	43.77	14.1935	-1.2338	-0.0907
284	SLU 56	0.2	-0.71	44.53	14.4352	-1.255	-0.0879
284	SLU 57	0.21	-0.72	44.52	14.435	-1.2549	-0.0906
284	SLU 58	0.2	-0.71	44.25	14.3445	-1.2472	-0.087
284	SLU 59	0.2	-0.72	44.24	14.3443	-1.247	-0.0897
284	SLU 60	0.19	-0.69	44.9	14.5564	-1.2655	-0.085
284	SLU 61	0.2	-0.7	44.9	14.5563	-1.2654	-0.0877
284	SLU 62	0.19	-0.7	45.37	14.7071	-1.2787	-0.0858
284	SLU 63	0.2	-0.71	45.37	14.707	-1.2786	-0.0886
284	SLU 64	0.22	-0.67	43.05	13.9653	-1.2137	-0.0936
284	SLU 65	0.23	-0.69	43.04	13.965	-1.2135	-0.0982
284	SLU 66	0.22	-0.68	43.79	14.2067	-1.2348	-0.0954
284	SLU 67	0.23	-0.69	43.79	14.2066	-1.2347	-0.0981
284	SLU 68	0.23	-0.7	43.51	14.1157	-1.2267	-0.099
284	SLU 69	0.22	-0.69	44.26	14.3574	-1.248	-0.0962
284	SLU 70	0.23	-0.7	44.26	14.3573	-1.2479	-0.0989
284	SLU 71	0.22	-0.69	43.98	14.2667	-1.2401	-0.0953
284	SLU 72	0.23	-0.7	43.98	14.2665	-1.24	-0.098
284	SLU 73	0.23	-0.69	46.75	15.1629	-1.318	-0.0975
284	SLU 74	0.22	-0.69	47.5	15.4046	-1.3392	-0.0946
284	SLU 75	0.23	-0.7	47.5	15.4044	-1.3391	-0.0974
284	SLU 76	0.23	-0.71	47.22	15.3136	-1.3312	-0.0983
284	SLU 77	0.22	-0.7	47.97	15.5553	-1.3525	-0.0954
284	SLU 78	0.23	-0.71	47.97	15.5551	-1.3524	-0.0982
284	SLU 79	0.22	-0.7	47.69	15.4645	-1.3446	-0.0946
284	SLU 80	0.23	-0.71	47.69	15.4644	-1.3445	-0.0973
284	SLU 81	0.21	-0.68	48.34	15.6765	-1.3629	-0.0926
284	SLU 82	0.22	-0.69	48.34	15.6763	-1.3628	-0.0953
284	SLU 83	0.22	-0.69	48.81	15.8272	-1.3761	-0.0934
284	SLU 84	0.22	-0.7	48.81	15.827	-1.376	-0.0961
284	SLE RA 1	0.16	-0.52	32.36	10.4964	-0.9122	-0.0704
284	SLE RA 2	0.17	-0.53	32.35	10.4962	-0.9121	-0.0734
284	SLE RA 3	0.17	-0.52	32.85	10.6573	-0.9262	-0.0715
284	SLE RA 4	0.17	-0.53	32.85	10.6572	-0.9262	-0.0733
284	SLE RA 5	0.17	-0.54	32.66	10.5967	-0.9209	-0.074
284	SLE RA 6	0.17	-0.53	33.17	10.7578	-0.9351	-0.0721
284	SLE RA 7	0.17	-0.54	33.16	10.7577	-0.935	-0.0739
284	SLE RA 8	0.16	-0.53	32.98	10.6973	-0.9298	-0.0715
284	SLE RA 9	0.17	-0.54	32.98	10.6972	-0.9297	-0.0733
284	SLE RA 10	0.17	-0.53	34.82	11.2947	-0.9817	-0.0729
284	SLE RA 11	0.16	-0.53	35.33	11.4559	-0.9959	-0.071
284	SLE RA 12	0.17	-0.53	35.32	11.4558	-0.9958	-0.0728
284	SLE RA 13	0.17	-0.54	35.14	11.3952	-0.9905	-0.0735
284	SLE RA 14	0.16	-0.53	35.64	11.5563	-1.0047	-0.0716
284	SLE RA 15	0.17	-0.54	35.64	11.5562	-1.0046	-0.0734
284	SLE RA 16	0.16	-0.54	35.45	11.4959	-0.9995	-0.071
284	SLE RA 17	0.17	-0.54	35.45	11.4958	-0.9994	-0.0728
284	SLE RA 18	0.16	-0.52	35.89	11.6372	-1.0117	-0.0696
284	SLE RA 19	0.16	-0.53	35.89	11.6371	-1.0116	-0.0715
284	SLE RA 20	0.16	-0.53	36.2	11.7376	-1.0205	-0.0702
284	SLE RA 21	0.17	-0.54	36.2	11.7375	-1.0204	-0.072
284	SLE FR 1	0.16	-0.52	32.36	10.4964	-0.9122	-0.0704
284	SLE FR 2	0.16	-0.52	32.36	10.4963	-0.9122	-0.071
284	SLE FR 3	0.16	-0.52	32.48	10.5366	-0.9157	-0.0706
284	SLE FR 4	0.16	-0.52	33.42	10.8386	-0.942	-0.0708
284	SLE FR 5	0.16	-0.52	33.54	10.8788	-0.9456	-0.0704
284	SLE FR 6	0.16	-0.52	34.12	11.0668	-0.9619	-0.07
284	SLE QP 1	0.16	-0.52	32.36	10.4964	-0.9122	-0.0704
284	SLE QP 2	0.16	-0.52	33.42	10.8386	-0.942	-0.0701
284	SLD 1	3.06	0.19	31.23	10.1532	-0.8746	-1.0735
284	SLD 2	3.31	0.35	31.44	10.2187	-0.8809	-1.1576
284	SLD 3	2.86	-0.56	30.82	10.0543	-0.8621	-1.0068
284	SLD 4	3.11	-0.41	31.03	10.1198	-0.8684	-1.0909
284	SLD 5	1.29	0.81	33.35	10.7714	-0.9397	-0.4574
284	SLD 6	1.46	0.91	33.49	10.8142	-0.9438	-0.5124
284	SLD 7	0.62	-1.7	31.97	10.4418	-0.8979	-0.2352
284	SLD 8	0.79	-1.6	32.11	10.4846	-0.902	-0.2901
284	SLD 9	-0.46	0.57	34.72	11.1927	-0.9821	0.1498
284	SLD 10	-0.3	0.67	34.86	11.2355	-0.9862	0.0949
284	SLD 11	-1.13	-1.95	33.34	10.863	-0.9402	0.3721
284	SLD 12	-0.97	-1.85	33.48	10.9058	-0.9443	0.3171
284	SLD 13	-2.78	-0.63	35.8	11.5574	-1.0157	0.9506
284	SLD 14	-2.53	-0.48	36.01	11.6229	-1.022	0.8665
284	SLD 15	-2.99	-1.38	35.39	11.4585	-1.0032	1.0173
284	SLD 16	-2.73	-1.23	35.6	11.524	-1.0094	0.9332
284	SLV 1	6.94	1.12	28.3	9.2327	-0.784	-2.4177
284	SLV 2	7.52	1.48	28.79	9.3852	-0.7986	-2.6136
284	SLV 3	6.47	-0.59	27.35	9.0047	-0.7553	-2.2621
284	SLV 4	7.05	-0.24	27.84	9.1572	-0.7698	-2.4581
284	SLV 5	2.81	2.51	33.23	10.6765	-0.9357	-0.9768
284	SLV 6	3.19	2.74	33.55	10.7745	-0.9451	-1.1027
284	SLV 7	1.24	-3.2	30.07	9.9165	-0.8399	-0.4583
284	SLV 8	1.62	-2.97	30.39	10.0145	-0.8492	-0.5842
284	SLV 9	-1.29	1.94	36.44	11.6627	-1.0348	0.4439
284	SLV 10	-0.91	2.16	36.76	11.7607	-1.0442	0.318
284	SLV 11	-2.86	-3.78	33.28	10.9027	-0.9389	0.9624
284	SLV 12	-2.48	-3.55	33.6	11.0007	-0.9483	0.8365
284	SLV 13	-6.73	-0.8	38.99	12.52	-1.1142	2.3178
284	SLV 14	-6.14	-0.44	39.48	12.6725	-1.1288	2.1218
284	SLV 15	-7.2	-2.52	38.05	12.292	-1.0855	2.4733
284	SLV 16	-6.61	-2.16	38.54	12.4445	-1.1	2.2774
284	CRTFP Ux+	0	0	0	0	0	0
284	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
284	CRTFP Uy+	0	0	0	0	0	0
284	CRTFP Uy-	0	0	0	0	0	0
285	SLU 1	0.19	-0.55	37.4	12.1389	-0.0042	-0.0653
285	SLU 2	0.21	-0.57	37.39	12.1381	-0.0041	-0.0701
285	SLU 3	0.2	-0.56	38.29	12.4276	-0.0043	-0.0671
285	SLU 4	0.21	-0.57	38.28	12.4271	-0.0043	-0.07
285	SLU 5	0.21	-0.58	37.95	12.3183	-0.0043	-0.0708
285	SLU 6	0.2	-0.57	38.85	12.6079	-0.0045	-0.0678
285	SLU 7	0.21	-0.58	38.84	12.6074	-0.0044	-0.0707
285	SLU 8	0.2	-0.57	38.51	12.4994	-0.0044	-0.0667
285	SLU 9	0.21	-0.59	38.51	12.499	-0.0044	-0.0696
285	SLU 10	0.2	-0.57	41.8	13.5657	-0.0045	-0.0688
285	SLU 11	0.2	-0.56	42.7	13.8552	-0.0047	-0.0658
285	SLU 12	0.2	-0.58	42.7	13.8547	-0.0047	-0.0687
285	SLU 13	0.21	-0.59	42.36	13.7459	-0.0046	-0.0695
285	SLU 14	0.2	-0.57	43.26	14.0355	-0.0048	-0.0665
285	SLU 15	0.21	-0.59	43.26	14.035	-0.0048	-0.0694
285	SLU 16	0.19	-0.58	42.93	13.927	-0.0048	-0.0653
285	SLU 17	0.2	-0.59	42.93	13.9266	-0.0047	-0.0682
285	SLU 18	0.19	-0.56	43.71	14.1783	-0.0047	-0.0634
285	SLU 19	0.2	-0.57	43.7	14.1778	-0.0047	-0.0663
285	SLU 20	0.19	-0.57	44.26	14.3586	-0.0048	-0.0641
285	SLU 21	0.2	-0.58	44.26	14.3581	-0.0048	-0.067
285	SLU 22	0.22	-0.53	41.52	13.4798	-0.0051	-0.0748
285	SLU 23	0.23	-0.55	41.51	13.4789	-0.0051	-0.0797
285	SLU 24	0.23	-0.54	42.41	13.7685	-0.0053	-0.0767
285	SLU 25	0.23	-0.55	42.41	13.768	-0.0053	-0.0796
285	SLU 26	0.24	-0.56	42.07	13.6592	-0.0052	-0.0804
285	SLU 27	0.23	-0.55	42.97	13.9488	-0.0054	-0.0774
285	SLU 28	0.24	-0.56	42.97	13.9483	-0.0054	-0.0803
285	SLU 29	0.23	-0.56	42.64	13.8403	-0.0054	-0.0762
285	SLU 30	0.23	-0.57	42.63	13.8398	-0.0054	-0.0791
285	SLU 31	0.23	-0.56	45.93	14.9065	-0.0055	-0.0783
285	SLU 32	0.22	-0.55	46.83	15.1961	-0.0057	-0.0754
285	SLU 33	0.23	-0.56	46.82	15.1956	-0.0057	-0.0782
285	SLU 34	0.23	-0.57	46.49	15.0868	-0.0056	-0.079
285	SLU 35	0.23	-0.56	47.39	15.3764	-0.0058	-0.076
285	SLU 36	0.23	-0.57	47.38	15.3759	-0.0058	-0.0789
285	SLU 37	0.22	-0.56	47.05	15.2679	-0.0057	-0.0749
285	SLU 38	0.23	-0.57	47.05	15.2674	-0.0057	-0.0778
285	SLU 39	0.22	-0.54	47.83	15.5192	-0.0057	-0.0729
285	SLU 40	0.22	-0.55	47.82	15.5187	-0.0056	-0.0758
285	SLU 41	0.22	-0.55	48.39	15.6995	-0.0058	-0.0736
285	SLU 42	0.23	-0.56	48.38	15.699	-0.0058	-0.0765
285	SLU 43	0.24	-0.72	47.2	15.3208	-0.0051	-0.0816
285	SLU 44	0.26	-0.74	47.19	15.32	-0.005	-0.0864
285	SLU 45	0.25	-0.73	48.09	15.6096	-0.0053	-0.0835
285	SLU 46	0.26	-0.74	48.09	15.6091	-0.0052	-0.0863
285	SLU 47	0.26	-0.75	47.75	15.5003	-0.0052	-0.0871
285	SLU 48	0.25	-0.74	48.65	15.7898	-0.0054	-0.0841
285	SLU 49	0.26	-0.75	48.65	15.7893	-0.0054	-0.087
285	SLU 50	0.25	-0.74	48.32	15.6814	-0.0053	-0.083
285	SLU 51	0.25	-0.76	48.32	15.6809	-0.0053	-0.0859
285	SLU 52	0.25	-0.75	51.61	16.7476	-0.0054	-0.0851
285	SLU 53	0.24	-0.73	52.51	17.0372	-0.0056	-0.0821
285	SLU 54	0.25	-0.75	52.51	17.0367	-0.0056	-0.085
285	SLU 55	0.25	-0.76	52.17	16.9279	-0.0055	-0.0858
285	SLU 56	0.25	-0.75	53.07	17.2174	-0.0057	-0.0828
285	SLU 57	0.25	-0.76	53.07	17.217	-0.0057	-0.0857
285	SLU 58	0.24	-0.75	52.74	17.109	-0.0057	-0.0816
285	SLU 59	0.25	-0.76	52.73	17.1085	-0.0056	-0.0845
285	SLU 60	0.24	-0.73	53.51	17.3602	-0.0056	-0.0797
285	SLU 61	0.25	-0.74	53.51	17.3597	-0.0056	-0.0826
285	SLU 62	0.24	-0.74	54.07	17.5405	-0.0057	-0.0804
285	SLU 63	0.25	-0.75	54.07	17.54	-0.0057	-0.0833
285	SLU 64	0.27	-0.7	51.32	16.6617	-0.0061	-0.0912
285	SLU 65	0.28	-0.72	51.32	16.6609	-0.006	-0.096
285	SLU 66	0.27	-0.71	52.22	16.9504	-0.0062	-0.093
285	SLU 67	0.28	-0.72	52.21	16.9499	-0.0062	-0.0959
285	SLU 68	0.29	-0.74	51.88	16.8412	-0.0061	-0.0967
285	SLU 69	0.28	-0.72	52.78	17.1307	-0.0064	-0.0937
285	SLU 70	0.29	-0.74	52.77	17.1302	-0.0063	-0.0966
285	SLU 71	0.27	-0.73	52.44	17.0223	-0.0063	-0.0925
285	SLU 72	0.28	-0.74	52.44	17.0218	-0.0063	-0.0954
285	SLU 73	0.28	-0.73	55.73	18.0885	-0.0064	-0.0946
285	SLU 74	0.27	-0.72	56.63	18.378	-0.0066	-0.0917
285	SLU 75	0.28	-0.73	56.63	18.3776	-0.0066	-0.0946
285	SLU 76	0.28	-0.74	56.29	18.2688	-0.0065	-0.0953
285	SLU 77	0.27	-0.73	57.19	18.5583	-0.0067	-0.0924
285	SLU 78	0.28	-0.74	57.19	18.5578	-0.0067	-0.0952
285	SLU 79	0.27	-0.73	56.86	18.4499	-0.0066	-0.0912
285	SLU 80	0.28	-0.74	56.85	18.4494	-0.0066	-0.0941
285	SLU 81	0.26	-0.71	57.63	18.7011	-0.0066	-0.0892
285	SLU 82	0.27	-0.72	57.63	18.7006	-0.0066	-0.0921
285	SLU 83	0.27	-0.72	58.19	18.8814	-0.0067	-0.0899
285	SLU 84	0.28	-0.73	58.19	18.8809	-0.0067	-0.0928
285	SLE RA 1	0.2	-0.54	38.57	12.522	-0.0044	-0.068
285	SLE RA 2	0.21	-0.56	38.57	12.5214	-0.0044	-0.0712
285	SLE RA 3	0.2	-0.55	39.17	12.7145	-0.0046	-0.0693
285	SLE RA 4	0.21	-0.56	39.17	12.7142	-0.0046	-0.0712
285	SLE RA 5	0.21	-0.57	38.94	12.6416	-0.0045	-0.0717
285	SLE RA 6	0.21	-0.56	39.54	12.8347	-0.0046	-0.0697
285	SLE RA 7	0.21	-0.57	39.54	12.8343	-0.0046	-0.0716
285	SLE RA 8	0.2	-0.56	39.32	12.7624	-0.0046	-0.0689
285	SLE RA 9	0.21	-0.57	39.32	12.762	-0.0046	-0.0709
285	SLE RA 10	0.21	-0.56	41.51	13.4732	-0.0047	-0.0703
285	SLE RA 11	0.2	-0.55	42.11	13.6662	-0.0048	-0.0684

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
285	SLE RA 12	0.21	-0.56	42.11	13.6659	-0.0048	-0.0703
285	SLE RA 13	0.21	-0.57	41.89	13.5934	-0.0047	-0.0708
285	SLE RA 14	0.2	-0.56	42.49	13.7864	-0.0049	-0.0688
285	SLE RA 15	0.21	-0.57	42.48	13.7861	-0.0049	-0.0708
285	SLE RA 16	0.2	-0.56	42.26	13.7141	-0.0048	-0.068
285	SLE RA 17	0.21	-0.57	42.26	13.7138	-0.0048	-0.07
285	SLE RA 18	0.2	-0.55	42.78	13.8816	-0.0048	-0.0667
285	SLE RA 19	0.2	-0.56	42.78	13.8813	-0.0048	-0.0687
285	SLE RA 20	0.2	-0.56	43.15	14.0018	-0.0049	-0.0672
285	SLE RA 21	0.21	-0.57	43.15	14.0015	-0.0049	-0.0691
285	SLE FR 1	0.2	-0.54	38.57	12.522	-0.0044	-0.068
285	SLE FR 2	0.2	-0.55	38.57	12.5219	-0.0044	-0.0687
285	SLE FR 3	0.2	-0.55	38.72	12.5701	-0.0045	-0.0682
285	SLE FR 4	0.2	-0.55	39.83	12.9298	-0.0045	-0.0683
285	SLE FR 5	0.2	-0.55	39.98	12.9779	-0.0046	-0.0678
285	SLE FR 6	0.2	-0.55	40.68	13.2018	-0.0046	-0.0674
285	SLE QP 1	0.2	-0.54	38.57	12.522	-0.0044	-0.068
285	SLE QP 2	0.2	-0.55	39.84	12.9299	-0.0045	-0.0676
285	SLD 1	3.62	0.24	36.94	12.0165	0.0045	-1.2647
285	SLD 2	3.92	0.43	37.21	12.0981	0.004	-1.3691
285	SLD 3	3.38	-0.64	36.4	11.8803	0.0062	-1.1816
285	SLD 4	3.68	-0.46	36.67	11.9619	0.0057	-1.286
285	SLD 5	1.53	1.01	39.74	12.8481	-0.0043	-0.5344
285	SLD 6	1.73	1.13	39.92	12.9014	-0.0047	-0.6027
285	SLD 7	0.74	-1.96	37.94	12.3939	0.0014	-0.2572
285	SLD 8	0.94	-1.83	38.11	12.4473	0.001	-0.3255
285	SLD 9	-0.53	0.74	41.56	13.4125	-0.0101	0.1902
285	SLD 10	-0.34	0.87	41.73	13.4658	-0.0104	0.122
285	SLD 11	-1.33	-2.22	39.75	12.9583	-0.0044	0.4674
285	SLD 12	-1.13	-2.1	39.93	13.0116	-0.0048	0.3991
285	SLD 13	-3.28	-0.63	43	13.8979	-0.0147	1.1507
285	SLD 14	-2.98	-0.45	43.27	13.9794	-0.0153	1.0463
285	SLD 15	-3.51	-1.52	42.46	13.7616	-0.013	1.2339
285	SLD 16	-3.22	-1.34	42.73	13.8432	-0.0136	1.1294
285	SLV 1	8.19	1.28	33.05	10.7894	0.0168	-2.8687
285	SLV 2	8.89	1.71	33.68	10.9794	0.0154	-3.1119
285	SLV 3	7.64	-0.74	31.81	10.4761	0.0206	-2.6745
285	SLV 4	8.33	-0.31	32.44	10.6661	0.0193	-2.9177
285	SLV 5	3.32	2.99	39.57	12.7303	-0.0038	-1.1608
285	SLV 6	3.77	3.27	39.98	12.8524	-0.0047	-1.3172
285	SLV 7	1.47	-3.74	35.44	11.6861	0.0091	-0.5134
285	SLV 8	1.92	-3.46	35.84	11.8082	0.0082	-0.6698
285	SLV 9	-1.52	2.37	43.83	14.0516	-0.0173	0.5345
285	SLV 10	-1.07	2.65	44.23	14.1737	-0.0182	0.3782
285	SLV 11	-3.37	-4.36	39.7	13.0073	-0.0044	1.1819
285	SLV 12	-2.92	-4.08	40.1	13.1294	-0.0053	1.0256
285	SLV 13	-7.93	-0.78	47.23	15.1936	-0.0284	2.7824
285	SLV 14	-7.24	-0.35	47.86	15.3836	-0.0297	2.5392
285	SLV 15	-8.49	-2.8	45.99	14.8804	-0.0245	2.9767
285	SLV 16	-7.79	-2.37	46.62	15.0704	-0.0258	2.7334
285	CRTFP Ux+	0	0	0	0	0	0
285	CRTFP Ux-	0	0	0	0	0	0
285	CRTFP Uy+	0	0	0	0	0	0
285	CRTFP Uy-	0	0	0	0	0	0
286	SLU 1	0.13	-0.32	24.52	7.983	1.5234	-0.0263
286	SLU 2	0.14	-0.33	24.52	7.9822	1.5231	-0.0287
286	SLU 3	0.14	-0.32	25.11	8.1732	1.5598	-0.0273
286	SLU 4	0.14	-0.33	25.11	8.1727	1.5596	-0.0287
286	SLU 5	0.14	-0.34	24.89	8.101	1.5459	-0.0287
286	SLU 6	0.14	-0.33	25.48	8.2921	1.5827	-0.0274
286	SLU 7	0.14	-0.34	25.47	8.2916	1.5825	-0.0288
286	SLU 8	0.14	-0.33	25.26	8.2207	1.5691	-0.0264
286	SLU 9	0.14	-0.34	25.25	8.2202	1.5689	-0.0278
286	SLU 10	0.14	-0.33	27.41	8.9209	1.7029	-0.0279
286	SLU 11	0.13	-0.32	28	9.1119	1.7396	-0.0266
286	SLU 12	0.14	-0.33	28	9.1114	1.7394	-0.028
286	SLU 13	0.14	-0.34	27.78	9.0397	1.7257	-0.028
286	SLU 14	0.14	-0.33	28.37	9.2308	1.7624	-0.0266
286	SLU 15	0.14	-0.34	28.37	9.2303	1.7622	-0.028
286	SLU 16	0.13	-0.33	28.15	9.1594	1.7489	-0.0257
286	SLU 17	0.14	-0.34	28.15	9.1589	1.7487	-0.0271
286	SLU 18	0.13	-0.32	28.66	9.324	1.7802	-0.0252
286	SLU 19	0.14	-0.33	28.65	9.3235	1.78	-0.0267
286	SLU 20	0.13	-0.32	29.02	9.4428	1.8031	-0.0253
286	SLU 21	0.14	-0.33	29.02	9.4423	1.8029	-0.0267
286	SLU 22	0.15	-0.3	27.23	8.8673	1.6918	-0.0338
286	SLU 23	0.16	-0.32	27.23	8.8665	1.6914	-0.0361
286	SLU 24	0.16	-0.31	27.82	9.0576	1.7282	-0.0348
286	SLU 25	0.16	-0.32	27.82	9.0571	1.728	-0.0362
286	SLU 26	0.16	-0.32	27.6	8.9854	1.7143	-0.0362
286	SLU 27	0.16	-0.32	28.19	9.1764	1.751	-0.0349
286	SLU 28	0.16	-0.32	28.19	9.176	1.7508	-0.0363
286	SLU 29	0.16	-0.32	27.97	9.1051	1.7374	-0.0339
286	SLU 30	0.16	-0.33	27.97	9.1046	1.7372	-0.0353
286	SLU 31	0.16	-0.32	30.12	9.8052	1.8712	-0.0354
286	SLU 32	0.15	-0.31	30.71	9.9963	1.908	-0.034
286	SLU 33	0.16	-0.32	30.71	9.9958	1.9078	-0.0354
286	SLU 34	0.16	-0.32	30.49	9.9241	1.8941	-0.0355
286	SLU 35	0.16	-0.31	31.08	10.1151	1.9308	-0.0341
286	SLU 36	0.16	-0.32	31.08	10.1146	1.9306	-0.0355
286	SLU 37	0.15	-0.32	30.86	10.0437	1.9172	-0.0332
286	SLU 38	0.16	-0.32	30.86	10.0433	1.917	-0.0346
286	SLU 39	0.15	-0.3	31.37	10.2083	1.9486	-0.0327
286	SLU 40	0.15	-0.31	31.36	10.2078	1.9484	-0.0341
286	SLU 41	0.15	-0.31	31.74	10.3272	1.9714	-0.0328
286	SLU 42	0.16	-0.32	31.73	10.3267	1.9712	-0.0342
286	SLU 43	0.17	-0.42	30.95	10.0747	1.9227	-0.0316

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
286	SLU 44	0.18	-0.43	30.94	10.0739	1.9224	-0.034
286	SLU 45	0.17	-0.42	31.54	10.2649	1.9591	-0.0326
286	SLU 46	0.18	-0.43	31.53	10.2644	1.9589	-0.034
286	SLU 47	0.18	-0.44	31.31	10.1927	1.9452	-0.034
286	SLU 48	0.17	-0.43	31.9	10.3838	1.9819	-0.0327
286	SLU 49	0.18	-0.44	31.9	10.3833	1.9818	-0.0341
286	SLU 50	0.17	-0.43	31.69	10.3124	1.9684	-0.0318
286	SLU 51	0.18	-0.44	31.68	10.3119	1.9682	-0.0332
286	SLU 52	0.17	-0.43	33.84	11.0126	2.1022	-0.0332
286	SLU 53	0.17	-0.42	34.43	11.2036	2.1389	-0.0319
286	SLU 54	0.17	-0.43	34.43	11.2031	2.1387	-0.0333
286	SLU 55	0.18	-0.44	34.21	11.1314	2.125	-0.0333
286	SLU 56	0.17	-0.43	34.8	11.3225	2.1617	-0.032
286	SLU 57	0.18	-0.44	34.79	11.322	2.1615	-0.0334
286	SLU 58	0.17	-0.43	34.58	11.2511	2.1481	-0.031
286	SLU 59	0.17	-0.44	34.58	11.2506	2.148	-0.0324
286	SLU 60	0.16	-0.42	35.08	11.4156	2.1795	-0.0306
286	SLU 61	0.17	-0.43	35.08	11.4152	2.1793	-0.032
286	SLU 62	0.17	-0.42	35.45	11.5345	2.2024	-0.0306
286	SLU 63	0.17	-0.43	35.45	11.534	2.2022	-0.0321
286	SLU 64	0.19	-0.4	33.66	10.959	2.0911	-0.0391
286	SLU 65	0.19	-0.42	33.66	10.9582	2.0907	-0.0415
286	SLU 66	0.19	-0.41	34.25	11.1493	2.1275	-0.0401
286	SLU 67	0.19	-0.42	34.24	11.1488	2.1273	-0.0415
286	SLU 68	0.2	-0.42	34.02	11.0771	2.1136	-0.0415
286	SLU 69	0.19	-0.42	34.62	11.2681	2.1503	-0.0402
286	SLU 70	0.2	-0.42	34.61	11.2676	2.1501	-0.0416
286	SLU 71	0.19	-0.42	34.4	11.1967	2.1367	-0.0392
286	SLU 72	0.19	-0.43	34.39	11.1963	2.1365	-0.0407
286	SLU 73	0.19	-0.42	36.55	11.8969	2.2705	-0.0407
286	SLU 74	0.19	-0.41	37.14	12.0879	2.3073	-0.0394
286	SLU 75	0.19	-0.42	37.14	12.0875	2.3071	-0.0408
286	SLU 76	0.19	-0.42	36.92	12.0158	2.2933	-0.0408
286	SLU 77	0.19	-0.41	37.51	12.2068	2.3301	-0.0394
286	SLU 78	0.19	-0.42	37.51	12.2063	2.3299	-0.0408
286	SLU 79	0.19	-0.42	37.29	12.1354	2.3165	-0.0385
286	SLU 80	0.19	-0.43	37.29	12.135	2.3163	-0.0399
286	SLU 81	0.18	-0.4	37.79	12.3	2.3479	-0.0381
286	SLU 82	0.19	-0.41	37.79	12.2995	2.3477	-0.0395
286	SLU 83	0.18	-0.41	38.16	12.4189	2.3707	-0.0381
286	SLU 84	0.19	-0.42	38.16	12.4184	2.3705	-0.0395
286	SLE RA 1	0.14	-0.31	25.3	8.2357	1.5715	-0.0284
286	SLE RA 2	0.14	-0.32	25.29	8.2351	1.5713	-0.03
286	SLE RA 3	0.14	-0.32	25.69	8.3625	1.5958	-0.0291
286	SLE RA 4	0.14	-0.32	25.69	8.3622	1.5956	-0.03
286	SLE RA 5	0.15	-0.33	25.54	8.3144	1.5865	-0.0301
286	SLE RA 6	0.14	-0.32	25.93	8.4417	1.611	-0.0292
286	SLE RA 7	0.15	-0.33	25.93	8.4414	1.6109	-0.0301
286	SLE RA 8	0.14	-0.32	25.79	8.3941	1.6019	-0.0285
286	SLE RA 9	0.14	-0.33	25.79	8.3938	1.6018	-0.0295
286	SLE RA 10	0.14	-0.32	27.22	8.8609	1.6911	-0.0295
286	SLE RA 11	0.14	-0.32	27.62	8.9883	1.7156	-0.0286
286	SLE RA 12	0.14	-0.32	27.62	8.988	1.7155	-0.0296
286	SLE RA 13	0.14	-0.33	27.47	8.9402	1.7064	-0.0296
286	SLE RA 14	0.14	-0.32	27.86	9.0675	1.7309	-0.0287
286	SLE RA 15	0.14	-0.33	27.86	9.0672	1.7307	-0.0296
286	SLE RA 16	0.14	-0.32	27.72	9.0199	1.7218	-0.028
286	SLE RA 17	0.14	-0.33	27.71	9.0196	1.7217	-0.029
286	SLE RA 18	0.14	-0.31	28.05	9.1296	1.7427	-0.0277
286	SLE RA 19	0.14	-0.32	28.05	9.1293	1.7426	-0.0287
286	SLE RA 20	0.14	-0.32	28.3	9.2089	1.7579	-0.0278
286	SLE RA 21	0.14	-0.32	28.3	9.2086	1.7578	-0.0287
286	SLE FR 1	0.14	-0.31	25.3	8.2357	1.5715	-0.0284
286	SLE FR 2	0.14	-0.32	25.3	8.2356	1.5715	-0.0288
286	SLE FR 3	0.14	-0.32	25.4	8.2674	1.5776	-0.0285
286	SLE FR 4	0.14	-0.32	26.12	8.5037	1.6228	-0.0285
286	SLE FR 5	0.14	-0.32	26.22	8.5355	1.629	-0.0282
286	SLE FR 6	0.14	-0.31	26.68	8.6826	1.6571	-0.0281
286	SLE QP 1	0.14	-0.31	25.3	8.2357	1.5715	-0.0284
286	SLE QP 2	0.14	-0.31	26.12	8.5039	1.6229	-0.0282
286	SLD 1	2.37	0.18	24.08	7.8609	1.4978	-0.8326
286	SLD 2	2.57	0.31	24.26	7.9157	1.5092	-0.909
286	SLD 3	2.22	-0.4	23.69	7.7631	1.4745	-0.7579
286	SLD 4	2.41	-0.27	23.88	7.8178	1.4858	-0.8344
286	SLD 5	1.01	0.7	26.06	8.4497	1.6188	-0.3692
286	SLD 6	1.14	0.78	26.18	8.4855	1.6262	-0.4192
286	SLD 7	0.49	-1.25	24.78	8.1235	1.5409	-0.1204
286	SLD 8	0.62	-1.16	24.9	8.1593	1.5483	-0.1704
286	SLD 9	-0.34	0.53	27.34	8.8484	1.6974	0.1139
286	SLD 10	-0.21	0.62	27.46	8.8842	1.7048	0.0639
286	SLD 11	-0.86	-1.41	26.07	8.5222	1.6195	0.3627
286	SLD 12	-0.73	-1.32	26.19	8.558	1.627	0.3128
286	SLD 13	-2.14	-0.35	28.37	9.1899	1.7599	0.7779
286	SLD 14	-1.94	-0.23	28.55	9.2446	1.7713	0.7015
286	SLD 15	-2.29	-0.94	27.99	9.092	1.7365	0.8525
286	SLD 16	-2.1	-0.81	28.17	9.1468	1.7479	0.7761
286	SLV 1	5.37	0.83	21.32	6.9968	1.3296	-1.9097
286	SLV 2	5.83	1.12	21.75	7.1243	1.3561	-2.0877
286	SLV 3	5.01	-0.5	20.45	6.7722	1.2761	-1.7367
286	SLV 4	5.46	-0.2	20.88	6.8997	1.3026	-1.9147
286	SLV 5	2.18	1.98	25.94	8.3706	1.6114	-0.8246
286	SLV 6	2.47	2.17	26.21	8.4525	1.6285	-0.939
286	SLV 7	0.97	-2.43	23.02	7.6218	1.4332	-0.2478
286	SLV 8	1.26	-2.24	23.3	7.7038	1.4502	-0.3623
286	SLV 9	-0.99	1.61	28.95	9.3039	1.7955	0.3058
286	SLV 10	-0.69	1.8	29.23	9.3859	1.8125	0.1914
286	SLV 11	-2.2	-2.8	26.03	8.5552	1.6173	0.8825

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
286	SLV 12	-1.91	-2.61	26.31	8.6371	1.6343	0.7681
286	SLV 13	-5.19	-0.43	31.37	10.108	1.9431	1.8583
286	SLV 14	-4.73	-0.13	31.8	10.2355	1.9696	1.6802
286	SLV 15	-5.55	-1.75	30.49	9.8834	1.8897	2.0313
286	SLV 16	-5.09	-1.45	30.93	10.0109	1.9162	1.8533
286	CRTFP Ux+	0	0	0	0	0	0
286	CRTFP Ux-	0	0	0	0	0	0
286	CRTFP Uy+	0	0	0	0	0	0
286	CRTFP Uy-	0	0	0	0	0	0
288	SLU 1	0.37	-0.63	58.33	10.113	-0.3967	-0.0546
288	SLU 2	0.4	-0.66	58.31	10.1107	-0.3962	-0.0587
288	SLU 3	0.38	-0.64	59.73	10.3548	-0.4065	-0.0561
288	SLU 4	0.4	-0.66	59.72	10.3535	-0.4062	-0.0586
288	SLU 5	0.4	-0.67	59.19	10.2625	-0.4027	-0.0594
288	SLU 6	0.39	-0.65	60.61	10.5066	-0.413	-0.0569
288	SLU 7	0.4	-0.67	60.6	10.5052	-0.4127	-0.0593
288	SLU 8	0.38	-0.66	60.09	10.4164	-0.4096	-0.056
288	SLU 9	0.4	-0.68	60.08	10.4151	-0.4094	-0.0585
288	SLU 10	0.4	-0.65	65.17	11.2995	-0.4357	-0.0568
288	SLU 11	0.38	-0.63	66.59	11.5436	-0.446	-0.0543
288	SLU 12	0.4	-0.64	66.58	11.5423	-0.4457	-0.0567
288	SLU 13	0.4	-0.66	66.05	11.4512	-0.4422	-0.0575
288	SLU 14	0.39	-0.64	67.47	11.6953	-0.4524	-0.055
288	SLU 15	0.4	-0.66	67.46	11.694	-0.4522	-0.0574
288	SLU 16	0.38	-0.65	66.95	11.6051	-0.4491	-0.0542
288	SLU 17	0.4	-0.67	66.94	11.6038	-0.4488	-0.0566
288	SLU 18	0.37	-0.61	68.13	11.8112	-0.453	-0.0519
288	SLU 19	0.39	-0.63	68.12	11.8098	-0.4528	-0.0544
288	SLU 20	0.38	-0.63	69.01	11.9629	-0.4595	-0.0526
288	SLU 21	0.39	-0.65	69	11.9616	-0.4593	-0.0551
288	SLU 22	0.42	-0.58	64.79	11.2347	-0.4457	-0.0612
288	SLU 23	0.45	-0.61	64.77	11.2325	-0.4453	-0.0653
288	SLU 24	0.43	-0.59	66.19	11.4766	-0.4556	-0.0628
288	SLU 25	0.45	-0.61	66.18	11.4752	-0.4553	-0.0652
288	SLU 26	0.45	-0.63	65.65	11.3842	-0.4518	-0.066
288	SLU 27	0.44	-0.61	67.06	11.6283	-0.4621	-0.0635
288	SLU 28	0.45	-0.63	67.05	11.627	-0.4618	-0.0659
288	SLU 29	0.43	-0.61	66.54	11.5381	-0.4587	-0.0627
288	SLU 30	0.45	-0.63	66.54	11.5368	-0.4585	-0.0651
288	SLU 31	0.44	-0.6	71.63	12.4212	-0.4848	-0.0634
288	SLU 32	0.43	-0.58	73.05	12.6653	-0.495	-0.0609
288	SLU 33	0.45	-0.6	73.04	12.664	-0.4948	-0.0633
288	SLU 34	0.45	-0.62	72.51	12.573	-0.4913	-0.0641
288	SLU 35	0.44	-0.6	73.92	12.817	-0.5015	-0.0616
288	SLU 36	0.45	-0.61	73.92	12.8157	-0.5013	-0.0641
288	SLU 37	0.43	-0.6	73.41	12.7269	-0.4982	-0.0608
288	SLU 38	0.44	-0.62	73.4	12.7256	-0.4979	-0.0632
288	SLU 39	0.42	-0.57	74.59	12.9329	-0.5021	-0.0585
288	SLU 40	0.44	-0.58	74.58	12.9316	-0.5019	-0.061
288	SLU 41	0.43	-0.58	75.47	13.0846	-0.5086	-0.0592
288	SLU 42	0.44	-0.6	75.46	13.0833	-0.5084	-0.0617
288	SLU 43	0.47	-0.83	73.61	12.7622	-0.4988	-0.0687
288	SLU 44	0.49	-0.86	73.6	12.76	-0.4984	-0.0728
288	SLU 45	0.48	-0.84	75.01	13.0041	-0.5087	-0.0702
288	SLU 46	0.49	-0.86	75	13.0028	-0.5084	-0.0727
288	SLU 47	0.5	-0.88	74.48	12.9117	-0.5049	-0.0735
288	SLU 48	0.48	-0.86	75.89	13.1558	-0.5151	-0.071
288	SLU 49	0.5	-0.87	75.88	13.1545	-0.5149	-0.0734
288	SLU 50	0.48	-0.86	75.37	13.0657	-0.5118	-0.0701
288	SLU 51	0.49	-0.88	75.36	13.0644	-0.5115	-0.0726
288	SLU 52	0.49	-0.85	80.46	13.9488	-0.5379	-0.0709
288	SLU 53	0.48	-0.83	81.87	14.1929	-0.5481	-0.0684
288	SLU 54	0.49	-0.85	81.86	14.1915	-0.5479	-0.0708
288	SLU 55	0.49	-0.87	81.34	14.1005	-0.5444	-0.0716
288	SLU 56	0.48	-0.85	82.75	14.3446	-0.5546	-0.0691
288	SLU 57	0.5	-0.86	82.74	14.3433	-0.5544	-0.0715
288	SLU 58	0.48	-0.85	82.23	14.2544	-0.5513	-0.0683
288	SLU 59	0.49	-0.87	82.22	14.2531	-0.551	-0.0707
288	SLU 60	0.47	-0.82	83.41	14.4605	-0.5552	-0.066
288	SLU 61	0.48	-0.83	83.4	14.4591	-0.555	-0.0685
288	SLU 62	0.47	-0.83	84.29	14.6122	-0.5617	-0.0667
288	SLU 63	0.49	-0.85	84.28	14.6109	-0.5614	-0.0692
288	SLU 64	0.52	-0.79	80.07	13.884	-0.5479	-0.0753
288	SLU 65	0.54	-0.82	80.06	13.8818	-0.5475	-0.0794
288	SLU 66	0.53	-0.8	81.47	14.1259	-0.5577	-0.0769
288	SLU 67	0.54	-0.81	81.46	14.1245	-0.5575	-0.0793
288	SLU 68	0.55	-0.83	80.93	14.0335	-0.554	-0.0801
288	SLU 69	0.53	-0.81	82.35	14.2776	-0.5642	-0.0776
288	SLU 70	0.55	-0.83	82.34	14.2763	-0.564	-0.08
288	SLU 71	0.53	-0.82	81.83	14.1874	-0.5609	-0.0768
288	SLU 72	0.54	-0.84	81.82	14.1861	-0.5606	-0.0792
288	SLU 73	0.54	-0.81	86.92	15.0705	-0.587	-0.0775
288	SLU 74	0.53	-0.78	88.33	15.3146	-0.5972	-0.075
288	SLU 75	0.54	-0.8	88.32	15.3133	-0.597	-0.0774
288	SLU 76	0.54	-0.82	87.79	15.2222	-0.5934	-0.0782
288	SLU 77	0.53	-0.8	89.21	15.4663	-0.6037	-0.0757
288	SLU 78	0.55	-0.82	89.2	15.465	-0.6034	-0.0782
288	SLU 79	0.53	-0.81	88.69	15.3762	-0.6004	-0.0749
288	SLU 80	0.54	-0.82	88.68	15.3748	-0.6001	-0.0773
288	SLU 81	0.52	-0.77	89.87	15.5822	-0.6043	-0.0726
288	SLU 82	0.53	-0.79	89.86	15.5809	-0.604	-0.0751
288	SLU 83	0.52	-0.79	90.75	15.7339	-0.6108	-0.0734
288	SLU 84	0.54	-0.8	90.74	15.7326	-0.6105	-0.0758
288	SLE RA 1	0.39	-0.61	60.17	10.4334	-0.4107	-0.0565
288	SLE RA 2	0.4	-0.63	60.16	10.432	-0.4104	-0.0592
288	SLE RA 3	0.39	-0.62	61.11	10.5947	-0.4172	-0.0575
288	SLE RA 4	0.4	-0.63	61.1	10.5938	-0.4171	-0.0591

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
288	SLE RA 5	0.41	-0.65	60.75	10.5331	-0.4147	-0.0597
288	SLE RA 6	0.4	-0.63	61.69	10.6959	-0.4216	-0.058
288	SLE RA 7	0.41	-0.64	61.69	10.695	-0.4214	-0.0596
288	SLE RA 8	0.39	-0.64	61.35	10.6357	-0.4193	-0.0574
288	SLE RA 9	0.4	-0.65	61.34	10.6349	-0.4192	-0.0591
288	SLE RA 10	0.4	-0.63	64.74	11.2245	-0.4367	-0.0579
288	SLE RA 11	0.39	-0.61	65.68	11.3872	-0.4436	-0.0563
288	SLE RA 12	0.4	-0.63	65.67	11.3863	-0.4434	-0.0579
288	SLE RA 13	0.41	-0.64	65.32	11.3256	-0.441	-0.0584
288	SLE RA 14	0.4	-0.62	66.27	11.4884	-0.4479	-0.0567
288	SLE RA 15	0.41	-0.64	66.26	11.4875	-0.4477	-0.0584
288	SLE RA 16	0.39	-0.63	65.92	11.4282	-0.4456	-0.0562
288	SLE RA 17	0.4	-0.64	65.91	11.4274	-0.4455	-0.0578
288	SLE RA 18	0.39	-0.6	66.71	11.5656	-0.4483	-0.0547
288	SLE RA 19	0.4	-0.62	66.7	11.5647	-0.4481	-0.0563
288	SLE RA 20	0.39	-0.61	67.29	11.6667	-0.4526	-0.0552
288	SLE RA 21	0.4	-0.63	67.29	11.6659	-0.4524	-0.0568
288	SLE FR 1	0.39	-0.61	60.17	10.4334	-0.4107	-0.0565
288	SLE FR 2	0.39	-0.62	60.17	10.4332	-0.4106	-0.057
288	SLE FR 3	0.39	-0.62	60.41	10.4739	-0.4124	-0.0567
288	SLE FR 4	0.39	-0.62	62.13	10.7728	-0.4219	-0.0565
288	SLE FR 5	0.39	-0.62	62.37	10.8136	-0.4237	-0.0561
288	SLE FR 6	0.39	-0.61	63.44	10.9995	-0.4295	-0.0556
288	SLE QP 1	0.39	-0.61	60.17	10.4334	-0.4107	-0.0565
288	SLE QP 2	0.39	-0.61	62.13	10.7731	-0.422	-0.0559
288	SLD 1	5.67	0.54	56.73	9.8658	-0.2491	-1
288	SLD 2	6.14	0.86	57.22	9.945	-0.261	-1.0763
288	SLD 3	5.29	-0.84	55.67	9.7023	-0.2191	-0.9395
288	SLD 4	5.77	-0.51	56.16	9.7814	-0.2309	-1.0158
288	SLD 5	2.46	1.76	62.03	10.735	-0.4135	-0.4175
288	SLD 6	2.77	1.97	62.35	10.7867	-0.4213	-0.4674
288	SLD 7	1.21	-2.82	58.5	10.1898	-0.3135	-0.2157
288	SLD 8	1.52	-2.61	58.83	10.2415	-0.3212	-0.2656
288	SLD 9	-0.74	1.39	65.44	11.3047	-0.5227	0.1537
288	SLD 10	-0.43	1.6	65.76	11.3564	-0.5304	0.1038
288	SLD 11	-1.99	-3.2	61.92	10.7595	-0.4226	0.3555
288	SLD 12	-1.68	-2.98	62.24	10.8112	-0.4304	0.3056
288	SLD 13	-4.99	-0.71	68.11	11.7648	-0.613	0.9039
288	SLD 14	-4.52	-0.39	68.6	11.8439	-0.6249	0.8276
288	SLD 15	-5.37	-2.09	67.05	11.6012	-0.583	0.9645
288	SLD 16	-4.89	-1.76	67.54	11.6804	-0.5949	0.8882
288	SLV 1	12.74	2.03	49.45	8.6453	-0.0166	-2.265
288	SLV 2	13.85	2.79	50.6	8.8297	-0.0442	-2.4427
288	SLV 3	11.87	-1.09	47.03	8.271	0.0522	-2.1237
288	SLV 4	12.97	-0.33	48.18	8.4553	0.0245	-2.3014
288	SLV 5	5.23	4.79	61.8	10.6709	-0.3999	-0.9025
288	SLV 6	5.94	5.28	62.54	10.7894	-0.4177	-1.0167
288	SLV 7	2.32	-5.63	53.74	9.4231	-0.1707	-0.4315
288	SLV 8	3.03	-5.14	54.47	9.5416	-0.1885	-0.5457
288	SLV 9	-2.25	3.91	69.79	12.0046	-0.6555	0.4339
288	SLV 10	-1.54	4.4	70.53	12.1231	-0.6732	0.3196
288	SLV 11	-5.17	-6.5	61.73	10.7568	-0.4262	0.9048
288	SLV 12	-4.46	-6.01	62.47	10.8752	-0.444	0.7906
288	SLV 13	-12.2	-0.89	76.09	13.0909	-0.8684	2.1895
288	SLV 14	-11.09	-0.13	77.24	13.2752	-0.8961	2.0118
288	SLV 15	-13.07	-4.02	73.67	12.7165	-0.7997	2.3308
288	SLV 16	-11.97	-3.26	74.82	12.9009	-0.8274	2.1531
288	CRTFP Ux+	0	0	0	0	0	0
288	CRTFP Ux-	0	0	0	0	0	0
288	CRTFP Uy+	0	0	0	0	0	0
288	CRTFP Uy-	0	0	0	0	0	0
290	SLU 1	0.17	-0.25	28.12	8.449	-1.7289	-0.0744
290	SLU 2	0.18	-0.27	28.11	8.4471	-1.7285	-0.0791
290	SLU 3	0.18	-0.26	28.79	8.6489	-1.7703	-0.0762
290	SLU 4	0.18	-0.26	28.78	8.6478	-1.7701	-0.0791
290	SLU 5	0.18	-0.27	28.53	8.5725	-1.7545	-0.0802
290	SLU 6	0.18	-0.26	29.21	8.7743	-1.7964	-0.0774
290	SLU 7	0.18	-0.27	29.21	8.7732	-1.7961	-0.0802
290	SLU 8	0.17	-0.27	28.96	8.6998	-1.781	-0.0766
290	SLU 9	0.18	-0.27	28.96	8.6987	-1.7807	-0.0794
290	SLU 10	0.18	-0.26	31.4	9.4296	-1.9308	-0.0776
290	SLU 11	0.17	-0.24	32.08	9.6314	-1.9727	-0.0748
290	SLU 12	0.18	-0.25	32.08	9.6303	-1.9724	-0.0776
290	SLU 13	0.18	-0.26	31.83	9.555	-1.9568	-0.0787
290	SLU 14	0.18	-0.25	32.51	9.7568	-1.9987	-0.0759
290	SLU 15	0.18	-0.26	32.5	9.7557	-1.9984	-0.0787
290	SLU 16	0.17	-0.26	32.26	9.6822	-1.9833	-0.0752
290	SLU 17	0.18	-0.26	32.25	9.6811	-1.983	-0.078
290	SLU 18	0.17	-0.24	32.82	9.8524	-2.018	-0.0723
290	SLU 19	0.17	-0.25	32.82	9.8513	-2.0177	-0.0751
290	SLU 20	0.17	-0.24	33.24	9.9779	-2.044	-0.0734
290	SLU 21	0.18	-0.25	33.24	9.9767	-2.0437	-0.0762
290	SLU 22	0.19	-0.22	31.24	9.3835	-1.921	-0.0808
290	SLU 23	0.21	-0.24	31.23	9.3816	-1.9206	-0.0855
290	SLU 24	0.2	-0.23	31.91	9.5834	-1.9624	-0.0827
290	SLU 25	0.21	-0.24	31.91	9.5823	-1.9622	-0.0855
290	SLU 26	0.21	-0.25	31.66	9.507	-1.9466	-0.0866
290	SLU 27	0.2	-0.23	32.34	9.7088	-1.9885	-0.0838
290	SLU 28	0.21	-0.24	32.33	9.7077	-1.9882	-0.0866
290	SLU 29	0.2	-0.24	32.09	9.6343	-1.9731	-0.0831
290	SLU 30	0.2	-0.25	32.08	9.6332	-1.9728	-0.0859
290	SLU 31	0.2	-0.23	34.53	10.3641	-2.1229	-0.084
290	SLU 32	0.2	-0.22	35.21	10.5659	-2.1648	-0.0812
290	SLU 33	0.2	-0.23	35.2	10.5647	-2.1645	-0.084
290	SLU 34	0.21	-0.23	34.95	10.4895	-2.1489	-0.0852
290	SLU 35	0.2	-0.22	35.63	10.6913	-2.1908	-0.0823
290	SLU 36	0.21	-0.23	35.63	10.6902	-2.1905	-0.0852

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
290	SLU 37	0.2	-0.23	35.38	10.6167	-2.1754	-0.0816
290	SLU 38	0.2	-0.24	35.38	10.6156	-2.1751	-0.0844
290	SLU 39	0.19	-0.21	35.94	10.7869	-2.2101	-0.0787
290	SLU 40	0.2	-0.22	35.94	10.7858	-2.2098	-0.0815
290	SLU 41	0.19	-0.22	36.37	10.9123	-2.2361	-0.0798
290	SLU 42	0.2	-0.22	36.36	10.9112	-2.2358	-0.0826
290	SLU 43	0.21	-0.34	35.48	10.6633	-2.1818	-0.0945
290	SLU 44	0.22	-0.35	35.47	10.6614	-2.1813	-0.0992
290	SLU 45	0.22	-0.34	36.15	10.8632	-2.2232	-0.0964
290	SLU 46	0.23	-0.35	36.15	10.8621	-2.2229	-0.0992
290	SLU 47	0.23	-0.36	35.9	10.7868	-2.2073	-0.1003
290	SLU 48	0.22	-0.35	36.58	10.9886	-2.2492	-0.0975
290	SLU 49	0.23	-0.36	36.57	10.9875	-2.2489	-0.1003
290	SLU 50	0.22	-0.35	36.33	10.9141	-2.2338	-0.0967
290	SLU 51	0.22	-0.36	36.32	10.913	-2.2335	-0.0995
290	SLU 52	0.22	-0.34	38.77	11.6439	-2.3836	-0.0977
290	SLU 53	0.22	-0.33	39.45	11.8457	-2.4255	-0.0949
290	SLU 54	0.22	-0.34	39.44	11.8446	-2.4252	-0.0977
290	SLU 55	0.22	-0.35	39.19	11.7693	-2.4097	-0.0988
290	SLU 56	0.22	-0.34	39.87	11.9711	-2.4515	-0.096
290	SLU 57	0.23	-0.35	39.87	11.97	-2.4512	-0.0988
290	SLU 58	0.22	-0.34	39.62	11.8965	-2.4361	-0.0953
290	SLU 59	0.22	-0.35	39.62	11.8954	-2.4358	-0.0981
290	SLU 60	0.21	-0.32	40.18	12.0667	-2.4708	-0.0924
290	SLU 61	0.22	-0.33	40.18	12.0656	-2.4705	-0.0952
290	SLU 62	0.21	-0.33	40.61	12.1922	-2.4968	-0.0935
290	SLU 63	0.22	-0.34	40.6	12.191	-2.4965	-0.0963
290	SLU 64	0.24	-0.31	38.6	11.5978	-2.3739	-0.1009
290	SLU 65	0.25	-0.32	38.6	11.5959	-2.3734	-0.1056
290	SLU 66	0.24	-0.31	39.28	11.7977	-2.4153	-0.1028
290	SLU 67	0.25	-0.32	39.27	11.7966	-2.415	-0.1056
290	SLU 68	0.25	-0.33	39.02	11.7213	-2.3994	-0.1067
290	SLU 69	0.24	-0.32	39.7	11.9231	-2.4413	-0.1039
290	SLU 70	0.25	-0.33	39.7	11.922	-2.441	-0.1067
290	SLU 71	0.24	-0.32	39.45	11.8486	-2.4259	-0.1032
290	SLU 72	0.25	-0.33	39.45	11.8475	-2.4256	-0.106
290	SLU 73	0.25	-0.31	41.89	12.5784	-2.5757	-0.1041
290	SLU 74	0.24	-0.3	42.57	12.7802	-2.6176	-0.1013
290	SLU 75	0.25	-0.31	42.57	12.779	-2.6173	-0.1041
290	SLU 76	0.25	-0.32	42.31	12.7038	-2.6018	-0.1053
290	SLU 77	0.24	-0.31	42.99	12.9056	-2.6436	-0.1024
290	SLU 78	0.25	-0.32	42.99	12.9045	-2.6433	-0.1053
290	SLU 79	0.24	-0.31	42.74	12.831	-2.6282	-0.1017
290	SLU 80	0.25	-0.32	42.74	12.8299	-2.6279	-0.1045
290	SLU 81	0.23	-0.29	43.31	13.0012	-2.6629	-0.0988
290	SLU 82	0.24	-0.3	43.3	13.0001	-2.6626	-0.1016
290	SLU 83	0.24	-0.3	43.73	13.1266	-2.6889	-0.0999
290	SLU 84	0.24	-0.31	43.73	13.1255	-2.6886	-0.1028
290	SLE RA 1	0.18	-0.24	29.01	8.716	-1.7838	-0.0762
290	SLE RA 2	0.18	-0.25	29	8.7147	-1.7835	-0.0793
290	SLE RA 3	0.18	-0.25	29.46	8.8493	-1.8114	-0.0775
290	SLE RA 4	0.19	-0.25	29.45	8.8485	-1.8113	-0.0793
290	SLE RA 5	0.19	-0.26	29.29	8.7984	-1.8009	-0.0801
290	SLE RA 6	0.18	-0.25	29.74	8.9329	-1.8288	-0.0782
290	SLE RA 7	0.19	-0.26	29.74	8.9321	-1.8286	-0.0801
290	SLE RA 8	0.18	-0.25	29.57	8.8832	-1.8185	-0.0777
290	SLE RA 9	0.18	-0.26	29.57	8.8824	-1.8183	-0.0796
290	SLE RA 10	0.18	-0.25	31.2	9.3697	-1.9184	-0.0784
290	SLE RA 11	0.18	-0.24	31.65	9.5042	-1.9463	-0.0765
290	SLE RA 12	0.18	-0.24	31.65	9.5035	-1.9461	-0.0784
290	SLE RA 13	0.18	-0.25	31.48	9.4533	-1.9358	-0.0791
290	SLE RA 14	0.18	-0.24	31.94	9.5878	-1.9637	-0.0772
290	SLE RA 15	0.19	-0.25	31.93	9.5871	-1.9635	-0.0791
290	SLE RA 16	0.18	-0.25	31.77	9.5381	-1.9534	-0.0767
290	SLE RA 17	0.18	-0.25	31.77	9.5374	-1.9532	-0.0786
290	SLE RA 18	0.18	-0.23	32.15	9.6516	-1.9765	-0.0748
290	SLE RA 19	0.18	-0.24	32.14	9.6509	-1.9763	-0.0767
290	SLE RA 20	0.18	-0.24	32.43	9.7352	-1.9938	-0.0756
290	SLE RA 21	0.18	-0.24	32.42	9.7345	-1.9937	-0.0774
290	SLE FR 1	0.18	-0.24	29.01	8.716	-1.7838	-0.0762
290	SLE FR 2	0.18	-0.25	29.01	8.7157	-1.7838	-0.0768
290	SLE FR 3	0.18	-0.25	29.12	8.7494	-1.7908	-0.0765
290	SLE FR 4	0.18	-0.24	29.95	8.9964	-1.8416	-0.0764
290	SLE FR 5	0.18	-0.24	30.06	9.0301	-1.8486	-0.0761
290	SLE FR 6	0.18	-0.24	30.58	9.1838	-1.8802	-0.0755
290	SLE QP 1	0.18	-0.24	29.01	8.716	-1.7838	-0.0762
290	SLE QP 2	0.18	-0.24	29.95	8.9967	-1.8416	-0.0758
290	SLD 1	2.84	0.33	27.16	8.2903	-1.667	-0.9933
290	SLD 2	3.07	0.51	27.4	8.3516	-1.6819	-1.064
290	SLD 3	2.65	-0.36	26.66	8.1619	-1.6354	-0.9296
290	SLD 4	2.88	-0.18	26.9	8.2231	-1.6504	-1.0004
290	SLD 5	1.21	0.95	29.84	8.9688	-1.8344	-0.435
290	SLD 6	1.37	1.06	30	9.0088	-1.8442	-0.4812
290	SLD 7	0.6	-1.35	28.15	8.5406	-1.7293	-0.223
290	SLD 8	0.75	-1.24	28.31	8.5806	-1.7391	-0.2692
290	SLD 9	-0.4	0.76	31.59	9.4127	-1.9442	0.1176
290	SLD 10	-0.24	0.87	31.75	9.4528	-1.9539	0.0714
290	SLD 11	-1.01	-1.54	29.9	8.9845	-1.8391	0.3296
290	SLD 12	-0.86	-1.43	30.06	9.0246	-1.8488	0.2834
290	SLD 13	-2.53	-0.3	33	9.7702	-2.0329	0.8488
290	SLD 14	-2.3	-0.12	33.24	9.8315	-2.0478	0.7781
290	SLD 15	-2.72	-0.99	32.49	9.6417	-2.0014	0.9124
290	SLD 16	-2.48	-0.81	32.73	9.703	-2.0163	0.8417
290	SLV 1	6.4	1.08	23.42	7.3399	-1.432	-2.2218
290	SLV 2	6.95	1.49	23.98	7.4826	-1.4667	-2.3865
290	SLV 3	5.97	-0.49	22.26	7.0463	-1.3599	-2.0745
290	SLV 4	6.51	-0.08	22.82	7.1891	-1.3946	-2.2392

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
290	SLV 5	2.61	2.46	29.65	8.9204	-1.8222	-0.9148
290	SLV 6	2.96	2.73	30.01	9.0121	-1.8445	-1.0206
290	SLV 7	1.16	-2.77	25.79	7.9419	-1.5818	-0.4238
290	SLV 8	1.51	-2.5	26.15	8.0336	-1.6041	-0.5297
290	SLV 9	-1.16	2.02	33.75	9.9597	-2.0792	0.3781
290	SLV 10	-0.81	2.29	34.11	10.0514	-2.1015	0.2722
290	SLV 11	-2.6	-3.21	29.89	8.9812	-1.8388	0.869
290	SLV 12	-2.25	-2.95	30.25	9.073	-1.8611	0.7632
290	SLV 13	-6.16	-0.4	37.08	10.8043	-2.2887	2.0876
290	SLV 14	-5.61	0.01	37.64	10.947	-2.3234	1.9229
290	SLV 15	-6.59	-1.97	35.92	10.5107	-2.2165	2.2349
290	SLV 16	-6.05	-1.56	36.48	10.6535	-2.2513	2.0702
290	CRTFP Ux+	0	0	0	0	0	0
290	CRTFP Ux-	0	0	0	0	0	0
290	CRTFP Uy+	0	0	0	0	0	0
290	CRTFP Uy-	0	0	0	0	0	0
291	SLU 1	0.25	-0.29	39.13	10.7896	0.0593	-0.0856
291	SLU 2	0.27	-0.31	39.12	10.7866	0.0593	-0.091
291	SLU 3	0.26	-0.29	40.06	11.0423	0.0608	-0.088
291	SLU 4	0.27	-0.3	40.06	11.0406	0.0608	-0.0913
291	SLU 5	0.27	-0.31	39.7	10.9453	0.0602	-0.0921
291	SLU 6	0.26	-0.3	40.65	11.2011	0.0617	-0.0891
291	SLU 7	0.27	-0.31	40.64	11.1993	0.0617	-0.0923
291	SLU 8	0.26	-0.3	40.3	11.107	0.0611	-0.0876
291	SLU 9	0.27	-0.32	40.3	11.1052	0.0611	-0.0909
291	SLU 10	0.27	-0.28	43.68	12.0258	0.0672	-0.0896
291	SLU 11	0.26	-0.27	44.62	12.2815	0.0687	-0.0866
291	SLU 12	0.27	-0.28	44.62	12.2798	0.0687	-0.0899
291	SLU 13	0.27	-0.29	44.27	12.1845	0.0681	-0.0907
291	SLU 14	0.26	-0.28	45.21	12.4403	0.0696	-0.0877
291	SLU 15	0.27	-0.29	45.21	12.4385	0.0696	-0.0909
291	SLU 16	0.26	-0.28	44.86	12.3462	0.069	-0.0862
291	SLU 17	0.27	-0.29	44.86	12.3444	0.069	-0.0895
291	SLU 18	0.25	-0.25	45.64	12.5598	0.0706	-0.0836
291	SLU 19	0.26	-0.27	45.64	12.5581	0.0706	-0.0868
291	SLU 20	0.25	-0.26	46.23	12.7186	0.0715	-0.0846
291	SLU 21	0.26	-0.28	46.22	12.7168	0.0715	-0.0879
291	SLU 22	0.29	-0.24	43.47	11.9726	0.0662	-0.0974
291	SLU 23	0.3	-0.26	43.46	11.9697	0.0662	-0.1029
291	SLU 24	0.29	-0.24	44.4	12.2254	0.0677	-0.0999
291	SLU 25	0.3	-0.25	44.4	12.2236	0.0677	-0.1031
291	SLU 26	0.31	-0.27	44.05	12.1284	0.0671	-0.1039
291	SLU 27	0.3	-0.25	44.99	12.3841	0.0686	-0.1009
291	SLU 28	0.31	-0.26	44.99	12.3824	0.0686	-0.1042
291	SLU 29	0.29	-0.26	44.64	12.2901	0.0681	-0.0995
291	SLU 30	0.3	-0.27	44.64	12.2883	0.068	-0.1028
291	SLU 31	0.3	-0.24	48.02	13.2089	0.0741	-0.1015
291	SLU 32	0.29	-0.22	48.97	13.4646	0.0756	-0.0985
291	SLU 33	0.3	-0.23	48.96	13.4628	0.0756	-0.1017
291	SLU 34	0.3	-0.25	48.61	13.3676	0.075	-0.1025
291	SLU 35	0.29	-0.23	49.55	13.6233	0.0766	-0.0995
291	SLU 36	0.3	-0.24	49.55	13.6216	0.0765	-0.1028
291	SLU 37	0.29	-0.23	49.21	13.5293	0.076	-0.0981
291	SLU 38	0.3	-0.25	49.2	13.5275	0.076	-0.1014
291	SLU 39	0.28	-0.21	49.98	13.7429	0.0775	-0.0954
291	SLU 40	0.29	-0.22	49.98	13.7411	0.0775	-0.0987
291	SLU 41	0.29	-0.22	50.57	13.9016	0.0784	-0.0964
291	SLU 42	0.3	-0.23	50.57	13.8999	0.0784	-0.0997
291	SLU 43	0.32	-0.39	49.37	13.6208	0.0747	-0.1072
291	SLU 44	0.33	-0.41	49.36	13.6178	0.0747	-0.1126
291	SLU 45	0.32	-0.39	50.31	13.8736	0.0762	-0.1096
291	SLU 46	0.33	-0.4	50.3	13.8718	0.0762	-0.1129
291	SLU 47	0.34	-0.42	49.95	13.7766	0.0756	-0.1137
291	SLU 48	0.33	-0.4	50.9	14.0323	0.0771	-0.1107
291	SLU 49	0.34	-0.41	50.89	14.0305	0.0771	-0.1139
291	SLU 50	0.32	-0.41	50.55	13.9383	0.0765	-0.1092
291	SLU 51	0.33	-0.42	50.55	13.9365	0.0765	-0.1125
291	SLU 52	0.33	-0.39	53.93	14.857	0.0826	-0.1112
291	SLU 53	0.32	-0.37	54.87	15.1128	0.0841	-0.1082
291	SLU 54	0.33	-0.38	54.87	15.111	0.0841	-0.1115
291	SLU 55	0.33	-0.39	54.51	15.0158	0.0835	-0.1123
291	SLU 56	0.32	-0.38	55.46	15.2715	0.085	-0.1093
291	SLU 57	0.33	-0.39	55.45	15.2697	0.085	-0.1125
291	SLU 58	0.32	-0.38	55.11	15.1775	0.0845	-0.1078
291	SLU 59	0.33	-0.4	55.11	15.1757	0.0844	-0.1111
291	SLU 60	0.31	-0.36	55.89	15.3911	0.086	-0.1052
291	SLU 61	0.32	-0.37	55.89	15.3893	0.086	-0.1084
291	SLU 62	0.32	-0.36	56.48	15.5498	0.0869	-0.1062
291	SLU 63	0.33	-0.38	56.47	15.548	0.0869	-0.1095
291	SLU 64	0.35	-0.34	53.72	14.8039	0.0816	-0.119
291	SLU 65	0.37	-0.36	53.71	14.8009	0.0816	-0.1245
291	SLU 66	0.36	-0.34	54.65	15.0566	0.0831	-0.1215
291	SLU 67	0.37	-0.36	54.65	15.0549	0.0831	-0.1247
291	SLU 68	0.37	-0.37	54.3	14.9596	0.0825	-0.1255
291	SLU 69	0.36	-0.35	55.24	15.2154	0.084	-0.1225
291	SLU 70	0.37	-0.37	55.24	15.2136	0.084	-0.1258
291	SLU 71	0.36	-0.36	54.89	15.1213	0.0835	-0.1211
291	SLU 72	0.37	-0.37	54.89	15.1195	0.0835	-0.1244
291	SLU 73	0.36	-0.34	58.27	16.0401	0.0895	-0.1231
291	SLU 74	0.36	-0.32	59.21	16.2959	0.091	-0.1201
291	SLU 75	0.37	-0.33	59.21	16.2941	0.091	-0.1233
291	SLU 76	0.37	-0.35	58.86	16.1988	0.0904	-0.1241
291	SLU 77	0.36	-0.33	59.8	16.4546	0.092	-0.1211
291	SLU 78	0.37	-0.34	59.8	16.4528	0.0919	-0.1244
291	SLU 79	0.35	-0.34	59.46	16.3605	0.0914	-0.1197
291	SLU 80	0.36	-0.35	59.45	16.3587	0.0914	-0.123
291	SLU 81	0.35	-0.31	60.23	16.5742	0.0929	-0.117

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
291	SLU 82	0.36	-0.32	60.23	16.5724	0.0929	-0.1203
291	SLU 83	0.35	-0.32	60.82	16.7329	0.0939	-0.118
291	SLU 84	0.36	-0.33	60.82	16.7311	0.0938	-0.1213
291	SLE RA 1	0.26	-0.27	40.37	11.1276	0.0613	-0.0889
291	SLE RA 2	0.27	-0.29	40.36	11.1256	0.0612	-0.0926
291	SLE RA 3	0.27	-0.27	40.99	11.2961	0.0623	-0.0906
291	SLE RA 4	0.27	-0.28	40.99	11.2949	0.0622	-0.0928
291	SLE RA 5	0.28	-0.29	40.75	11.2314	0.0619	-0.0933
291	SLE RA 6	0.27	-0.28	41.38	11.4019	0.0629	-0.0913
291	SLE RA 7	0.28	-0.29	41.38	11.4007	0.0629	-0.0935
291	SLE RA 8	0.27	-0.28	41.15	11.3392	0.0625	-0.0903
291	SLE RA 9	0.27	-0.29	41.15	11.338	0.0625	-0.0925
291	SLE RA 10	0.27	-0.27	43.4	11.9517	0.0665	-0.0917
291	SLE RA 11	0.27	-0.26	44.03	12.1222	0.0675	-0.0896
291	SLE RA 12	0.27	-0.27	44.03	12.121	0.0675	-0.0918
291	SLE RA 13	0.27	-0.28	43.79	12.0576	0.0671	-0.0923
291	SLE RA 14	0.27	-0.27	44.42	12.228	0.0682	-0.0903
291	SLE RA 15	0.27	-0.27	44.42	12.2269	0.0681	-0.0925
291	SLE RA 16	0.26	-0.27	44.19	12.1653	0.0678	-0.0894
291	SLE RA 17	0.27	-0.28	44.19	12.1642	0.0678	-0.0916
291	SLE RA 18	0.26	-0.25	44.71	12.3078	0.0688	-0.0876
291	SLE RA 19	0.27	-0.26	44.71	12.3066	0.0688	-0.0898
291	SLE RA 20	0.26	-0.26	45.1	12.4136	0.0694	-0.0883
291	SLE RA 21	0.27	-0.27	45.1	12.4124	0.0694	-0.0905
291	SLE FR 1	0.26	-0.27	40.37	11.1276	0.0613	-0.0889
291	SLE FR 2	0.27	-0.27	40.37	11.1272	0.0613	-0.0897
291	SLE FR 3	0.26	-0.27	40.52	11.1699	0.0615	-0.0892
291	SLE FR 4	0.26	-0.27	41.67	11.4812	0.0635	-0.0893
291	SLE FR 5	0.26	-0.27	41.83	11.524	0.0638	-0.0888
291	SLE FR 6	0.26	-0.26	42.54	11.7177	0.065	-0.0883
291	SLE QP 1	0.26	-0.27	40.37	11.1276	0.0613	-0.0889
291	SLE QP 2	0.26	-0.27	41.67	11.4816	0.0635	-0.0885
291	SLD 1	4.08	0.54	37.52	10.6174	0.0688	-1.427
291	SLD 2	4.42	0.8	37.87	10.6976	0.0689	-1.5447
291	SLD 3	3.82	-0.45	36.8	10.4391	0.0678	-1.334
291	SLD 4	4.16	-0.18	37.15	10.5193	0.0679	-1.4517
291	SLD 5	1.75	1.42	41.46	11.4786	0.0666	-0.6103
291	SLD 6	1.97	1.6	41.69	11.531	0.0666	-0.6872
291	SLD 7	0.86	-1.86	39.05	10.8843	0.0633	-0.3003
291	SLD 8	1.09	-1.69	39.27	10.9367	0.0634	-0.3773
291	SLD 9	-0.56	1.16	44.06	12.0265	0.0636	0.2002
291	SLD 10	-0.34	1.33	44.29	12.079	0.0637	0.1232
291	SLD 11	-1.45	-2.13	41.65	11.4322	0.0604	0.5102
291	SLD 12	-1.23	-1.95	41.88	11.4847	0.0605	0.4332
291	SLD 13	-3.63	-0.35	46.19	12.4439	0.0591	1.2746
291	SLD 14	-3.29	-0.08	46.54	12.5241	0.0592	1.1569
291	SLD 15	-3.9	-1.33	45.47	12.2656	0.0582	1.3676
291	SLD 16	-3.56	-1.07	45.81	12.3459	0.0582	1.2499
291	SLV 1	9.21	1.58	31.95	9.4537	0.0759	-3.2203
291	SLV 2	9.99	2.2	32.75	9.6406	0.0761	-3.4945
291	SLV 3	8.58	-0.66	30.29	9.0469	0.0736	-3.0031
291	SLV 4	9.37	-0.04	31.1	9.2337	0.0738	-3.2773
291	SLV 5	3.76	3.58	41.13	11.4583	0.0706	-1.3105
291	SLV 6	4.26	3.98	41.65	11.5784	0.0707	-1.4867
291	SLV 7	1.68	-3.89	35.6	10.1022	0.0631	-0.5865
291	SLV 8	2.18	-3.49	36.12	10.2222	0.0632	-0.7627
291	SLV 9	-1.66	2.96	47.22	12.741	0.0638	0.5857
291	SLV 10	-1.16	3.36	47.73	12.8611	0.0639	0.4094
291	SLV 11	-3.74	-4.51	41.69	11.3849	0.0563	1.3097
291	SLV 12	-3.23	-4.11	42.21	11.505	0.0564	1.1334
291	SLV 13	-8.85	-0.49	52.24	13.7295	0.0532	3.1002
291	SLV 14	-8.06	0.13	53.05	13.9164	0.0534	2.8261
291	SLV 15	-9.47	-2.73	50.59	13.3227	0.051	3.3174
291	SLV 16	-8.68	-2.11	51.39	13.5096	0.0512	3.0433
291	CRTFP Ux+	0	0	0	0	0	0
291	CRTFP Ux-	0	0	0	0	0	0
291	CRTFP Uy+	0	0	0	0	0	0
291	CRTFP Uy-	0	0	0	0	0	0
292	SLU 1	0.26	-0.2	37.22	9.1138	0.066	-0.0876
292	SLU 2	0.27	-0.22	37.21	9.1109	0.066	-0.0932
292	SLU 3	0.27	-0.2	38.11	9.3236	0.0677	-0.0902
292	SLU 4	0.28	-0.21	38.1	9.3219	0.0677	-0.0935
292	SLU 5	0.28	-0.23	37.77	9.2428	0.0671	-0.0942
292	SLU 6	0.27	-0.21	38.66	9.4555	0.0688	-0.0913
292	SLU 7	0.28	-0.22	38.66	9.4538	0.0688	-0.0946
292	SLU 8	0.26	-0.22	38.34	9.3776	0.0681	-0.0898
292	SLU 9	0.27	-0.23	38.33	9.3758	0.0681	-0.0931
292	SLU 10	0.27	-0.19	41.52	10.1356	0.0748	-0.0915
292	SLU 11	0.26	-0.17	42.41	10.3483	0.0766	-0.0886
292	SLU 12	0.27	-0.18	42.41	10.3466	0.0765	-0.0919
292	SLU 13	0.27	-0.2	42.07	10.2675	0.0759	-0.0926
292	SLU 14	0.26	-0.18	42.97	10.4802	0.0776	-0.0897
292	SLU 15	0.27	-0.19	42.97	10.4785	0.0776	-0.093
292	SLU 16	0.26	-0.19	42.64	10.4023	0.077	-0.0882
292	SLU 17	0.27	-0.2	42.64	10.4005	0.077	-0.0915
292	SLU 18	0.25	-0.16	43.37	10.5777	0.0787	-0.0853
292	SLU 19	0.26	-0.17	43.37	10.5759	0.0786	-0.0886
292	SLU 20	0.26	-0.16	43.93	10.7096	0.0797	-0.0864
292	SLU 21	0.27	-0.18	43.92	10.7078	0.0797	-0.0897
292	SLU 22	0.29	-0.15	41.34	10.0961	0.074	-0.0996
292	SLU 23	0.31	-0.17	41.33	10.0932	0.0739	-0.1051
292	SLU 24	0.3	-0.15	42.22	10.3059	0.0757	-0.1021
292	SLU 25	0.31	-0.16	42.22	10.3042	0.0756	-0.1054
292	SLU 26	0.31	-0.17	41.88	10.2251	0.075	-0.1062
292	SLU 27	0.3	-0.16	42.78	10.4378	0.0767	-0.1032
292	SLU 28	0.31	-0.17	42.78	10.4361	0.0767	-0.1065
292	SLU 29	0.3	-0.16	42.45	10.3599	0.0761	-0.1018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
292	SLU 30	0.31	-0.17	42.45	10.3581	0.076	-0.1051
292	SLU 31	0.3	-0.14	45.63	11.1179	0.0828	-0.1034
292	SLU 32	0.3	-0.12	46.53	11.3306	0.0845	-0.1005
292	SLU 33	0.31	-0.13	46.52	11.3289	0.0845	-0.1038
292	SLU 34	0.31	-0.14	46.19	11.2498	0.0838	-0.1045
292	SLU 35	0.3	-0.13	47.09	11.4625	0.0855	-0.1016
292	SLU 36	0.31	-0.14	47.08	11.4608	0.0855	-0.1049
292	SLU 37	0.3	-0.13	46.76	11.3846	0.0849	-0.1001
292	SLU 38	0.3	-0.14	46.75	11.3829	0.0849	-0.1034
292	SLU 39	0.29	-0.1	47.49	11.56	0.0866	-0.0972
292	SLU 40	0.3	-0.12	47.48	11.5582	0.0866	-0.1005
292	SLU 41	0.29	-0.11	48.05	11.6919	0.0876	-0.0983
292	SLU 42	0.3	-0.12	48.04	11.6901	0.0876	-0.1016
292	SLU 43	0.32	-0.28	46.97	11.5112	0.0831	-0.1099
292	SLU 44	0.34	-0.3	46.96	11.5083	0.0831	-0.1154
292	SLU 45	0.33	-0.28	47.86	11.721	0.0848	-0.1124
292	SLU 46	0.34	-0.29	47.86	11.7192	0.0848	-0.1157
292	SLU 47	0.34	-0.3	47.52	11.6402	0.0842	-0.1165
292	SLU 48	0.33	-0.29	48.42	11.8528	0.0859	-0.1135
292	SLU 49	0.34	-0.3	48.41	11.8511	0.0859	-0.1168
292	SLU 50	0.33	-0.29	48.09	11.7749	0.0852	-0.112
292	SLU 51	0.34	-0.3	48.08	11.7732	0.0852	-0.1153
292	SLU 52	0.34	-0.27	51.27	12.533	0.0919	-0.1137
292	SLU 53	0.33	-0.25	52.17	12.7457	0.0937	-0.1108
292	SLU 54	0.34	-0.26	52.16	12.7439	0.0936	-0.1141
292	SLU 55	0.34	-0.27	51.83	12.6649	0.093	-0.1148
292	SLU 56	0.33	-0.26	52.73	12.8775	0.0947	-0.1119
292	SLU 57	0.34	-0.27	52.72	12.8758	0.0947	-0.1152
292	SLU 58	0.33	-0.26	52.4	12.7996	0.0941	-0.1104
292	SLU 59	0.34	-0.28	52.39	12.7979	0.0941	-0.1137
292	SLU 60	0.32	-0.23	53.13	12.975	0.0958	-0.1075
292	SLU 61	0.33	-0.25	53.12	12.9733	0.0957	-0.1108
292	SLU 62	0.32	-0.24	53.68	13.1069	0.0968	-0.1086
292	SLU 63	0.33	-0.25	53.68	13.1052	0.0968	-0.1119
292	SLU 64	0.36	-0.22	51.09	12.4935	0.0911	-0.1218
292	SLU 65	0.37	-0.24	51.08	12.4906	0.091	-0.1273
292	SLU 66	0.37	-0.23	51.98	12.7033	0.0928	-0.1243
292	SLU 67	0.38	-0.24	51.97	12.7015	0.0927	-0.1276
292	SLU 68	0.38	-0.25	51.64	12.6225	0.0921	-0.1284
292	SLU 69	0.37	-0.23	52.54	12.8351	0.0938	-0.1254
292	SLU 70	0.38	-0.25	52.53	12.8334	0.0938	-0.1287
292	SLU 71	0.36	-0.24	52.21	12.7572	0.0932	-0.124
292	SLU 72	0.37	-0.25	52.2	12.7555	0.0931	-0.1273
292	SLU 73	0.37	-0.21	55.39	13.5153	0.0999	-0.1256
292	SLU 74	0.36	-0.2	56.28	13.728	0.1016	-0.1227
292	SLU 75	0.37	-0.21	56.28	13.7262	0.1016	-0.126
292	SLU 76	0.37	-0.22	55.95	13.6472	0.1009	-0.1267
292	SLU 77	0.37	-0.2	56.84	13.8599	0.1026	-0.1238
292	SLU 78	0.37	-0.22	56.84	13.8581	0.1026	-0.1271
292	SLU 79	0.36	-0.21	56.51	13.7819	0.102	-0.1223
292	SLU 80	0.37	-0.22	56.51	13.7802	0.102	-0.1256
292	SLU 81	0.35	-0.18	57.24	13.9573	0.1037	-0.1194
292	SLU 82	0.36	-0.19	57.24	13.9556	0.1037	-0.1227
292	SLU 83	0.36	-0.19	57.8	14.0892	0.1047	-0.1205
292	SLU 84	0.37	-0.2	57.79	14.0875	0.1047	-0.1238
292	SLE RA 1	0.27	-0.18	38.4	9.3945	0.0683	-0.0911
292	SLE RA 2	0.28	-0.2	38.39	9.3925	0.0683	-0.0947
292	SLE RA 3	0.27	-0.19	38.99	9.5343	0.0694	-0.0928
292	SLE RA 4	0.28	-0.19	38.98	9.5332	0.0694	-0.095
292	SLE RA 5	0.28	-0.2	38.76	9.4805	0.069	-0.0955
292	SLE RA 6	0.28	-0.19	39.36	9.6223	0.0701	-0.0935
292	SLE RA 7	0.28	-0.2	39.36	9.6211	0.0701	-0.0957
292	SLE RA 8	0.27	-0.19	39.14	9.5703	0.0697	-0.0925
292	SLE RA 9	0.28	-0.2	39.14	9.5692	0.0697	-0.0947
292	SLE RA 10	0.28	-0.18	41.26	10.0757	0.0742	-0.0936
292	SLE RA 11	0.27	-0.17	41.86	10.2175	0.0753	-0.0917
292	SLE RA 12	0.28	-0.17	41.85	10.2163	0.0753	-0.0939
292	SLE RA 13	0.28	-0.18	41.63	10.1636	0.0749	-0.0944
292	SLE RA 14	0.27	-0.17	42.23	10.3054	0.076	-0.0924
292	SLE RA 15	0.28	-0.18	42.23	10.3042	0.076	-0.0946
292	SLE RA 16	0.27	-0.17	42.01	10.2534	0.0756	-0.0914
292	SLE RA 17	0.28	-0.18	42.01	10.2523	0.0756	-0.0936
292	SLE RA 18	0.26	-0.16	42.5	10.3704	0.0767	-0.0895
292	SLE RA 19	0.27	-0.16	42.49	10.3692	0.0767	-0.0917
292	SLE RA 20	0.27	-0.16	42.87	10.4583	0.0774	-0.0902
292	SLE RA 21	0.27	-0.17	42.87	10.4571	0.0774	-0.0924
292	SLE FR 1	0.27	-0.18	38.4	9.3945	0.0683	-0.0911
292	SLE FR 2	0.27	-0.19	38.39	9.3941	0.0683	-0.0918
292	SLE FR 3	0.27	-0.19	38.54	9.4296	0.0686	-0.0913
292	SLE FR 4	0.27	-0.18	39.62	9.6869	0.0708	-0.0913
292	SLE FR 5	0.27	-0.18	39.77	9.7224	0.0711	-0.0909
292	SLE FR 6	0.27	-0.17	40.45	9.8824	0.0725	-0.0903
292	SLE QP 1	0.27	-0.18	38.4	9.3945	0.0683	-0.0911
292	SLE QP 2	0.27	-0.18	39.63	9.6872	0.0708	-0.0906
292	SLD 1	4.08	0.59	35.33	8.9972	0.0762	-1.4277
292	SLD 2	4.42	0.87	35.67	9.0661	0.0764	-1.5457
292	SLD 3	3.82	-0.38	34.63	8.8346	0.0747	-1.3349
292	SLD 4	4.16	-0.11	34.97	8.9036	0.0749	-1.4529
292	SLD 5	1.76	1.48	39.34	9.7146	0.0747	-0.6116
292	SLD 6	1.98	1.67	39.56	9.7597	0.0748	-0.6888
292	SLD 7	0.87	-1.77	37.01	9.1727	0.0697	-0.3022
292	SLD 8	1.09	-1.58	37.23	9.2177	0.0698	-0.3794
292	SLD 9	-0.56	1.23	42.02	10.1567	0.0718	0.1982
292	SLD 10	-0.33	1.41	42.24	10.2018	0.072	0.121
292	SLD 11	-1.44	-2.02	39.69	9.6148	0.0668	0.5076
292	SLD 12	-1.22	-1.83	39.91	9.6598	0.067	0.4305
292	SLD 13	-3.62	-0.24	44.28	10.4709	0.0668	1.2717

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
292	SLD 14	-3.28	0.03	44.62	10.5399	0.067	1.1537
292	SLD 15	-3.89	-1.22	43.58	10.3083	0.0653	1.3645
292	SLD 16	-3.55	-0.94	43.92	10.3773	0.0655	1.2465
292	SLV 1	9.2	1.59	29.56	8.0675	0.0833	-3.2192
292	SLV 2	9.99	2.24	30.35	8.2281	0.0838	-3.4941
292	SLV 3	8.58	-0.63	27.96	7.6963	0.0798	-3.0024
292	SLV 4	9.37	0.02	28.75	7.8569	0.0804	-3.2773
292	SLV 5	3.75	3.61	38.89	9.7369	0.0797	-1.3109
292	SLV 6	4.26	4.03	39.4	9.8401	0.0801	-1.4876
292	SLV 7	1.68	-3.79	33.57	8.4993	0.0682	-0.5882
292	SLV 8	2.19	-3.37	34.08	8.6025	0.0686	-0.7649
292	SLV 9	-1.65	3.02	45.18	10.7719	0.0731	0.5837
292	SLV 10	-1.15	3.44	45.68	10.8751	0.0735	0.407
292	SLV 11	-3.73	-4.38	39.85	9.5344	0.0616	1.3064
292	SLV 12	-3.22	-3.96	40.36	9.6376	0.0619	1.1297
292	SLV 13	-8.83	-0.37	50.5	11.5176	0.0613	3.0961
292	SLV 14	-8.04	0.28	51.29	11.6782	0.0618	2.8212
292	SLV 15	-9.45	-2.59	48.9	11.1463	0.0578	3.313
292	SLV 16	-8.67	-1.94	49.69	11.3069	0.0584	3.038
292	CRTFP Ux+	0	0	0	0	0	0
292	CRTFP Ux-	0	0	0	0	0	0
292	CRTFP Uy+	0	0	0	0	0	0
292	CRTFP Uy-	0	0	0	0	0	0
293	SLU 1	0.26	-0.12	35.27	7.493	0.0626	-0.0891
293	SLU 2	0.28	-0.14	35.26	7.4905	0.0625	-0.0946
293	SLU 3	0.27	-0.12	36.11	7.6611	0.0642	-0.0917
293	SLU 4	0.28	-0.14	36.1	7.6596	0.0641	-0.095
293	SLU 5	0.28	-0.15	35.79	7.5963	0.0635	-0.0958
293	SLU 6	0.27	-0.13	36.64	7.7669	0.0652	-0.0928
293	SLU 7	0.28	-0.14	36.63	7.7654	0.0651	-0.0962
293	SLU 8	0.27	-0.14	36.33	7.7046	0.0646	-0.0914
293	SLU 9	0.28	-0.15	36.32	7.703	0.0645	-0.0947
293	SLU 10	0.27	-0.11	39.31	8.3072	0.0709	-0.0927
293	SLU 11	0.26	-0.09	40.16	8.4778	0.0726	-0.0898
293	SLU 12	0.27	-0.1	40.15	8.4763	0.0726	-0.0931
293	SLU 13	0.28	-0.11	39.84	8.4129	0.0719	-0.0939
293	SLU 14	0.27	-0.1	40.68	8.5836	0.0736	-0.0909
293	SLU 15	0.28	-0.11	40.68	8.5821	0.0736	-0.0942
293	SLU 16	0.26	-0.1	40.37	8.5213	0.073	-0.0895
293	SLU 17	0.27	-0.11	40.37	8.5197	0.073	-0.0928
293	SLU 18	0.25	-0.07	41.05	8.6597	0.0746	-0.0864
293	SLU 19	0.26	-0.08	41.05	8.6582	0.0746	-0.0897
293	SLU 20	0.26	-0.08	41.58	8.7655	0.0756	-0.0875
293	SLU 21	0.27	-0.09	41.57	8.764	0.0756	-0.0908
293	SLU 22	0.3	-0.07	39.15	8.2792	0.0702	-0.101
293	SLU 23	0.31	-0.08	39.15	8.2767	0.0701	-0.1065
293	SLU 24	0.3	-0.07	39.99	8.4473	0.0718	-0.1036
293	SLU 25	0.31	-0.08	39.99	8.4458	0.0717	-0.1069
293	SLU 26	0.31	-0.09	39.67	8.3824	0.0711	-0.1077
293	SLU 27	0.31	-0.07	40.52	8.5531	0.0728	-0.1048
293	SLU 28	0.32	-0.09	40.51	8.5516	0.0727	-0.1081
293	SLU 29	0.3	-0.08	40.21	8.4908	0.0722	-0.1033
293	SLU 30	0.31	-0.09	40.2	8.4892	0.0721	-0.1066
293	SLU 31	0.31	-0.05	43.19	9.0933	0.0786	-0.1046
293	SLU 32	0.3	-0.03	44.04	9.264	0.0802	-0.1017
293	SLU 33	0.31	-0.04	44.03	9.2625	0.0802	-0.105
293	SLU 34	0.31	-0.05	43.72	9.1991	0.0796	-0.1058
293	SLU 35	0.3	-0.04	44.56	9.3698	0.0812	-0.1029
293	SLU 36	0.31	-0.05	44.56	9.3683	0.0812	-0.1062
293	SLU 37	0.3	-0.04	44.25	9.3074	0.0806	-0.1014
293	SLU 38	0.31	-0.05	44.25	9.3059	0.0806	-0.1047
293	SLU 39	0.29	-0.01	44.93	9.4459	0.0822	-0.0983
293	SLU 40	0.3	-0.02	44.93	9.4444	0.0822	-0.1016
293	SLU 41	0.29	-0.02	45.46	9.5517	0.0832	-0.0994
293	SLU 42	0.3	-0.03	45.46	9.5501	0.0832	-0.1027
293	SLU 43	0.33	-0.18	44.52	9.4714	0.0787	-0.1117
293	SLU 44	0.34	-0.2	44.52	9.4688	0.0787	-0.1173
293	SLU 45	0.34	-0.18	45.36	9.6395	0.0803	-0.1143
293	SLU 46	0.34	-0.19	45.36	9.638	0.0803	-0.1177
293	SLU 47	0.35	-0.21	45.04	9.5746	0.0797	-0.1184
293	SLU 48	0.34	-0.19	45.89	9.7453	0.0813	-0.1155
293	SLU 49	0.35	-0.2	45.88	9.7437	0.0813	-0.1188
293	SLU 50	0.33	-0.19	45.58	9.6829	0.0807	-0.114
293	SLU 51	0.34	-0.21	45.57	9.6814	0.0807	-0.1173
293	SLU 52	0.34	-0.16	48.56	10.2855	0.0871	-0.1153
293	SLU 53	0.33	-0.14	49.41	10.4562	0.0888	-0.1124
293	SLU 54	0.34	-0.16	49.4	10.4546	0.0887	-0.1157
293	SLU 55	0.34	-0.17	49.09	10.3913	0.0881	-0.1165
293	SLU 56	0.33	-0.15	49.93	10.5619	0.0898	-0.1136
293	SLU 57	0.34	-0.16	49.93	10.5604	0.0897	-0.1169
293	SLU 58	0.33	-0.16	49.62	10.4996	0.0892	-0.1121
293	SLU 59	0.34	-0.17	49.62	10.4981	0.0891	-0.1154
293	SLU 60	0.32	-0.13	50.3	10.6381	0.0908	-0.109
293	SLU 61	0.33	-0.14	50.3	10.6365	0.0907	-0.1123
293	SLU 62	0.32	-0.13	50.83	10.7438	0.0918	-0.1101
293	SLU 63	0.33	-0.15	50.83	10.7423	0.0917	-0.1135
293	SLU 64	0.36	-0.12	48.4	10.2576	0.0863	-0.1237
293	SLU 65	0.38	-0.14	48.4	10.255	0.0863	-0.1292
293	SLU 66	0.37	-0.12	49.24	10.4257	0.0879	-0.1263
293	SLU 67	0.38	-0.13	49.24	10.4242	0.0879	-0.1296
293	SLU 68	0.38	-0.15	48.92	10.3608	0.0873	-0.1303
293	SLU 69	0.37	-0.13	49.77	10.5315	0.0889	-0.1274
293	SLU 70	0.38	-0.14	49.76	10.5299	0.0889	-0.1307
293	SLU 71	0.37	-0.14	49.46	10.4691	0.0883	-0.1259
293	SLU 72	0.38	-0.15	49.45	10.4676	0.0883	-0.1293
293	SLU 73	0.37	-0.1	52.44	11.0717	0.0947	-0.1273
293	SLU 74	0.37	-0.09	53.29	11.2424	0.0964	-0.1244

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
293	SLU 75	0.37	-0.1	53.28	11.2408	0.0963	-0.1277
293	SLU 76	0.38	-0.11	52.97	11.1775	0.0957	-0.1284
293	SLU 77	0.37	-0.09	53.81	11.3481	0.0974	-0.1255
293	SLU 78	0.38	-0.11	53.81	11.3466	0.0973	-0.1288
293	SLU 79	0.36	-0.1	53.5	11.2858	0.0968	-0.124
293	SLU 80	0.37	-0.11	53.5	11.2843	0.0967	-0.1273
293	SLU 81	0.36	-0.07	54.18	11.4243	0.0984	-0.1209
293	SLU 82	0.36	-0.08	54.18	11.4227	0.0983	-0.1242
293	SLU 83	0.36	-0.08	54.71	11.53	0.0994	-0.1221
293	SLU 84	0.37	-0.09	54.71	11.5285	0.0993	-0.1254
293	SLE RA 1	0.27	-0.11	36.38	7.7177	0.0647	-0.0925
293	SLE RA 2	0.28	-0.12	36.38	7.716	0.0647	-0.0962
293	SLE RA 3	0.28	-0.11	36.94	7.8297	0.0658	-0.0942
293	SLE RA 4	0.28	-0.12	36.94	7.8287	0.0658	-0.0965
293	SLE RA 5	0.28	-0.12	36.73	7.7865	0.0654	-0.0969
293	SLE RA 6	0.28	-0.11	37.29	7.9002	0.0665	-0.095
293	SLE RA 7	0.28	-0.12	37.29	7.8992	0.0665	-0.0972
293	SLE RA 8	0.28	-0.12	37.08	7.8587	0.0661	-0.094
293	SLE RA 9	0.28	-0.12	37.08	7.8577	0.066	-0.0962
293	SLE RA 10	0.28	-0.09	39.07	8.2604	0.0703	-0.0949
293	SLE RA 11	0.27	-0.08	39.64	8.3742	0.0714	-0.093
293	SLE RA 12	0.28	-0.09	39.63	8.3732	0.0714	-0.0952
293	SLE RA 13	0.28	-0.1	39.42	8.3309	0.071	-0.0957
293	SLE RA 14	0.28	-0.09	39.99	8.4447	0.0721	-0.0937
293	SLE RA 15	0.28	-0.1	39.98	8.4437	0.0721	-0.0959
293	SLE RA 16	0.27	-0.09	39.78	8.4031	0.0717	-0.0927
293	SLE RA 17	0.28	-0.1	39.78	8.4021	0.0717	-0.095
293	SLE RA 18	0.27	-0.07	40.23	8.4954	0.0728	-0.0907
293	SLE RA 19	0.27	-0.08	40.23	8.4944	0.0727	-0.0929
293	SLE RA 20	0.27	-0.08	40.59	8.566	0.0734	-0.0914
293	SLE RA 21	0.28	-0.08	40.58	8.5649	0.0734	-0.0936
293	SLE FR 1	0.27	-0.11	36.38	7.7177	0.0647	-0.0925
293	SLE FR 2	0.27	-0.11	36.38	7.7173	0.0647	-0.0932
293	SLE FR 3	0.27	-0.11	36.52	7.7459	0.065	-0.0928
293	SLE FR 4	0.27	-0.1	37.54	7.9506	0.0671	-0.0927
293	SLE FR 5	0.27	-0.1	37.68	7.9792	0.0674	-0.0923
293	SLE FR 6	0.27	-0.09	38.31	8.1065	0.0687	-0.0916
293	SLE QP 1	0.27	-0.11	36.38	7.7177	0.0647	-0.0925
293	SLE QP 2	0.27	-0.1	37.54	7.951	0.0671	-0.092
293	SLD 1	4.08	0.63	33.08	7.4229	0.0736	-1.4274
293	SLD 2	4.42	0.92	33.41	7.4799	0.0738	-1.5457
293	SLD 3	3.82	-0.34	32.41	7.2751	0.072	-1.3348
293	SLD 4	4.16	-0.05	32.75	7.332	0.0722	-1.4531
293	SLD 5	1.76	1.54	37.15	8.0067	0.0715	-0.6121
293	SLD 6	1.98	1.73	37.36	8.044	0.0717	-0.6894
293	SLD 7	0.87	-1.69	34.93	7.5139	0.0661	-0.3035
293	SLD 8	1.09	-1.5	35.15	7.5511	0.0662	-0.3808
293	SLD 9	-0.55	1.31	39.92	8.3508	0.0681	0.1969
293	SLD 10	-0.33	1.5	40.14	8.3881	0.0682	0.1196
293	SLD 11	-1.44	-1.92	37.71	7.858	0.0626	0.5055
293	SLD 12	-1.22	-1.73	37.93	7.8952	0.0628	0.4282
293	SLD 13	-3.62	-0.14	42.33	8.5699	0.0621	1.2692
293	SLD 14	-3.28	0.15	42.66	8.6269	0.0623	1.1509
293	SLD 15	-3.88	-1.11	41.66	8.4221	0.0605	1.3618
293	SLD 16	-3.54	-0.82	42	8.479	0.0607	1.2435
293	SLV 1	9.19	1.58	27.08	6.7115	0.0822	-3.2167
293	SLV 2	9.98	2.25	27.86	6.8442	0.0827	-3.4921
293	SLV 3	8.57	-0.63	25.56	6.3724	0.0784	-3.0005
293	SLV 4	9.36	0.04	26.34	6.505	0.079	-3.2759
293	SLV 5	3.75	3.64	36.57	8.0708	0.0772	-1.3102
293	SLV 6	4.26	4.07	37.07	8.1561	0.0776	-1.4872
293	SLV 7	1.68	-3.72	31.51	6.9403	0.0648	-0.5893
293	SLV 8	2.19	-3.29	32	7.0255	0.0651	-0.7663
293	SLV 9	-1.65	3.1	43.07	8.8764	0.0692	0.5824
293	SLV 10	-1.14	3.53	43.57	8.9617	0.0695	0.4054
293	SLV 11	-3.72	-4.26	38	7.7459	0.0567	1.3033
293	SLV 12	-3.21	-3.83	38.5	7.8312	0.057	1.1263
293	SLV 13	-8.82	-0.23	48.74	9.3969	0.0553	3.092
293	SLV 14	-8.03	0.44	49.51	9.5296	0.0558	2.8165
293	SLV 15	-9.44	-2.44	47.22	9.0578	0.0515	3.3082
293	SLV 16	-8.65	-1.77	47.99	9.1904	0.0521	3.0328
293	CRTFP Ux+	0	0	0	0	0	0
293	CRTFP Ux-	0	0	0	0	0	0
293	CRTFP Uy+	0	0	0	0	0	0
293	CRTFP Uy-	0	0	0	0	0	0
294	SLU 1	0.26	-0.06	33.53	6.0708	0.0526	-0.0902
294	SLU 2	0.28	-0.08	33.53	6.0687	0.0526	-0.0957
294	SLU 3	0.27	-0.06	34.33	6.2023	0.054	-0.0928
294	SLU 4	0.28	-0.07	34.32	6.201	0.054	-0.0962
294	SLU 5	0.28	-0.08	34.03	6.1515	0.0534	-0.0969
294	SLU 6	0.27	-0.07	34.83	6.2851	0.0548	-0.094
294	SLU 7	0.28	-0.08	34.82	6.2838	0.0548	-0.0973
294	SLU 8	0.27	-0.07	34.53	6.2364	0.0543	-0.0925
294	SLU 9	0.28	-0.08	34.53	6.2352	0.0543	-0.0959
294	SLU 10	0.27	-0.03	37.34	6.7023	0.0598	-0.0935
294	SLU 11	0.27	-0.02	38.14	6.8359	0.0612	-0.0906
294	SLU 12	0.27	-0.03	38.13	6.8346	0.0611	-0.094
294	SLU 13	0.28	-0.04	37.84	6.7851	0.0606	-0.0947
294	SLU 14	0.27	-0.02	38.64	6.9187	0.062	-0.0918
294	SLU 15	0.28	-0.03	38.63	6.9174	0.062	-0.0951
294	SLU 16	0.26	-0.03	38.34	6.87	0.0615	-0.0903
294	SLU 17	0.27	-0.04	38.34	6.8688	0.0615	-0.0936
294	SLU 18	0.26	0	38.98	6.976	0.0629	-0.087
294	SLU 19	0.26	-0.01	38.97	6.9747	0.0629	-0.0903
294	SLU 20	0.26	0	39.48	7.0588	0.0637	-0.0882
294	SLU 21	0.27	-0.01	39.47	7.0575	0.0637	-0.0915
294	SLU 22	0.3	0	37.2	6.6837	0.0591	-0.102

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
294	SLU 23	0.31	-0.01	37.2	6.6817	0.059	-0.1076
294	SLU 24	0.31	0	38	6.8152	0.0604	-0.1047
294	SLU 25	0.31	-0.01	37.99	6.8139	0.0604	-0.108
294	SLU 26	0.32	-0.02	37.7	6.7645	0.0599	-0.1088
294	SLU 27	0.31	0	38.49	6.898	0.0613	-0.1059
294	SLU 28	0.32	-0.02	38.49	6.8967	0.0613	-0.1092
294	SLU 29	0.3	-0.01	38.2	6.8493	0.0608	-0.1044
294	SLU 30	0.31	-0.02	38.2	6.8481	0.0607	-0.1077
294	SLU 31	0.31	0.03	41.01	7.3153	0.0662	-0.1054
294	SLU 32	0.3	0.05	41.8	7.4488	0.0676	-0.1025
294	SLU 33	0.31	0.04	41.8	7.4475	0.0676	-0.1058
294	SLU 34	0.31	0.02	41.51	7.3981	0.0671	-0.1066
294	SLU 35	0.3	0.04	42.3	7.5316	0.0685	-0.1037
294	SLU 36	0.31	0.03	42.3	7.5303	0.0685	-0.107
294	SLU 37	0.3	0.03	42.01	7.4829	0.068	-0.1022
294	SLU 38	0.31	0.02	42.01	7.4817	0.0679	-0.1055
294	SLU 39	0.29	0.07	42.64	7.5889	0.0694	-0.0989
294	SLU 40	0.3	0.05	42.64	7.5876	0.0693	-0.1022
294	SLU 41	0.29	0.06	43.14	7.6717	0.0702	-0.1001
294	SLU 42	0.3	0.05	43.14	7.6704	0.0702	-0.1034
294	SLU 43	0.33	-0.1	42.34	7.6819	0.0662	-0.1131
294	SLU 44	0.35	-0.12	42.33	7.6798	0.0662	-0.1187
294	SLU 45	0.34	-0.1	43.13	7.8134	0.0675	-0.1158
294	SLU 46	0.35	-0.11	43.12	7.8121	0.0675	-0.1191
294	SLU 47	0.35	-0.12	42.83	7.7626	0.067	-0.1199
294	SLU 48	0.34	-0.1	43.63	7.8962	0.0684	-0.117
294	SLU 49	0.35	-0.12	43.62	7.8949	0.0684	-0.1203
294	SLU 50	0.34	-0.11	43.33	7.8475	0.0679	-0.1155
294	SLU 51	0.35	-0.12	43.33	7.8463	0.0679	-0.1188
294	SLU 52	0.34	-0.07	46.14	8.3134	0.0733	-0.1165
294	SLU 53	0.33	-0.05	46.94	8.447	0.0747	-0.1136
294	SLU 54	0.34	-0.07	46.93	8.4457	0.0747	-0.1169
294	SLU 55	0.34	-0.08	46.64	8.3962	0.0742	-0.1177
294	SLU 56	0.34	-0.06	47.44	8.5298	0.0756	-0.1148
294	SLU 57	0.35	-0.07	47.43	8.5285	0.0756	-0.1181
294	SLU 58	0.33	-0.07	47.14	8.4811	0.0751	-0.1133
294	SLU 59	0.34	-0.08	47.14	8.4799	0.075	-0.1166
294	SLU 60	0.32	-0.03	47.78	8.5871	0.0765	-0.11
294	SLU 61	0.33	-0.05	47.77	8.5858	0.0764	-0.1133
294	SLU 62	0.33	-0.04	48.28	8.6699	0.0773	-0.1112
294	SLU 63	0.34	-0.05	48.27	8.6686	0.0773	-0.1145
294	SLU 64	0.36	-0.03	46	8.2948	0.0727	-0.125
294	SLU 65	0.38	-0.05	46	8.2928	0.0726	-0.1306
294	SLU 66	0.37	-0.04	46.8	8.4263	0.074	-0.1277
294	SLU 67	0.38	-0.05	46.79	8.425	0.074	-0.131
294	SLU 68	0.38	-0.06	46.5	8.3756	0.0735	-0.1317
294	SLU 69	0.38	-0.04	47.3	8.5091	0.0749	-0.1289
294	SLU 70	0.39	-0.05	47.29	8.5078	0.0748	-0.1322
294	SLU 71	0.37	-0.05	47	8.4604	0.0743	-0.1274
294	SLU 72	0.38	-0.06	47	8.4592	0.0743	-0.1307
294	SLU 73	0.38	-0.01	49.81	8.9264	0.0798	-0.1284
294	SLU 74	0.37	0.01	50.61	9.0599	0.0812	-0.1255
294	SLU 75	0.38	0	50.6	9.0586	0.0812	-0.1288
294	SLU 76	0.38	-0.02	50.31	9.0092	0.0807	-0.1295
294	SLU 77	0.37	0	51.11	9.1427	0.082	-0.1266
294	SLU 78	0.38	-0.01	51.1	9.1414	0.082	-0.13
294	SLU 79	0.37	0	50.81	9.094	0.0815	-0.1252
294	SLU 80	0.38	-0.02	50.81	9.0928	0.0815	-0.1285
294	SLU 81	0.36	0.03	51.45	9.2	0.0829	-0.1219
294	SLU 82	0.37	0.02	51.44	9.1987	0.0829	-0.1252
294	SLU 83	0.36	0.02	51.95	9.2828	0.0838	-0.123
294	SLU 84	0.37	0.01	51.94	9.2815	0.0838	-0.1264
294	SLE RA 1	0.27	-0.04	34.58	6.2459	0.0545	-0.0935
294	SLE RA 2	0.28	-0.05	34.58	6.2446	0.0544	-0.0973
294	SLE RA 3	0.28	-0.04	35.11	6.3336	0.0554	-0.0953
294	SLE RA 4	0.28	-0.05	35.11	6.3327	0.0554	-0.0975
294	SLE RA 5	0.29	-0.06	34.91	6.2997	0.055	-0.098
294	SLE RA 6	0.28	-0.05	35.44	6.3888	0.0559	-0.0961
294	SLE RA 7	0.29	-0.05	35.44	6.3879	0.0559	-0.0983
294	SLE RA 8	0.28	-0.05	35.25	6.3563	0.0556	-0.0951
294	SLE RA 9	0.28	-0.06	35.25	6.3555	0.0556	-0.0973
294	SLE RA 10	0.28	-0.02	37.12	6.667	0.0592	-0.0958
294	SLE RA 11	0.27	-0.01	37.65	6.756	0.0602	-0.0939
294	SLE RA 12	0.28	-0.02	37.65	6.7551	0.0602	-0.0961
294	SLE RA 13	0.28	-0.03	37.45	6.7221	0.0598	-0.0966
294	SLE RA 14	0.28	-0.02	37.98	6.8112	0.0607	-0.0946
294	SLE RA 15	0.28	-0.02	37.98	6.8103	0.0607	-0.0969
294	SLE RA 16	0.27	-0.02	37.79	6.7787	0.0604	-0.0937
294	SLE RA 17	0.28	-0.03	37.79	6.7779	0.0604	-0.0959
294	SLE RA 18	0.27	0	38.21	6.8494	0.0613	-0.0914
294	SLE RA 19	0.27	-0.01	38.21	6.8485	0.0613	-0.0937
294	SLE RA 20	0.27	0	38.54	6.9046	0.0619	-0.0922
294	SLE RA 21	0.28	-0.01	38.54	6.9037	0.0619	-0.0945
294	SLE FR 1	0.27	-0.04	34.58	6.2459	0.0545	-0.0935
294	SLE FR 2	0.28	-0.04	34.58	6.2457	0.0545	-0.0943
294	SLE FR 3	0.27	-0.04	34.71	6.268	0.0547	-0.0939
294	SLE FR 4	0.27	-0.03	35.67	6.4267	0.0565	-0.0937
294	SLE FR 5	0.27	-0.03	35.8	6.449	0.0568	-0.0932
294	SLE FR 6	0.27	-0.02	36.4	6.5477	0.0579	-0.0925
294	SLE QP 1	0.27	-0.04	34.58	6.2459	0.0545	-0.0935
294	SLE QP 2	0.27	-0.03	35.67	6.427	0.0565	-0.0929
294	SLD 1	4.08	0.66	31	6.0306	0.0648	-1.4265
294	SLD 2	4.42	0.96	31.33	6.0764	0.065	-1.5448
294	SLD 3	3.81	-0.31	30.37	5.8897	0.0634	-1.3342
294	SLD 4	4.15	-0.01	30.69	5.9356	0.0635	-1.4525
294	SLD 5	1.76	1.6	35.17	6.5136	0.0612	-0.612
294	SLD 6	1.98	1.79	35.38	6.5435	0.0613	-0.6894

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
294	SLD 7	0.87	-1.64	33.06	6.0441	0.0564	-0.3044
294	SLD 8	1.09	-1.44	33.28	6.074	0.0565	-0.3817
294	SLD 9	-0.55	1.39	38.06	6.7799	0.0566	0.1959
294	SLD 10	-0.33	1.58	38.28	6.8099	0.0567	0.1186
294	SLD 11	-1.43	-1.85	35.96	6.3104	0.0518	0.5036
294	SLD 12	-1.21	-1.65	36.17	6.3404	0.0519	0.4262
294	SLD 13	-3.61	-0.04	40.65	6.9184	0.0495	1.2667
294	SLD 14	-3.27	0.26	40.97	6.9642	0.0497	1.1483
294	SLD 15	-3.87	-1.02	40.01	6.7775	0.0481	1.359
294	SLD 16	-3.53	-0.72	40.34	6.8234	0.0482	1.2406
294	SLV 1	9.18	1.56	24.72	5.497	0.0759	-3.2132
294	SLV 2	9.97	2.25	25.48	5.6038	0.0763	-3.4889
294	SLV 3	8.56	-0.66	23.27	5.1714	0.0726	-2.9976
294	SLV 4	9.35	0.04	24.03	5.2782	0.0729	-3.2733
294	SLV 5	3.75	3.69	34.45	6.6235	0.0673	-1.3087
294	SLV 6	4.25	4.13	34.94	6.6921	0.0676	-1.4859
294	SLV 7	1.68	-3.69	29.62	5.5382	0.0562	-0.5902
294	SLV 8	2.19	-3.25	30.11	5.6068	0.0565	-0.7673
294	SLV 9	-1.65	3.19	41.23	7.2471	0.0566	0.5815
294	SLV 10	-1.14	3.64	41.72	7.3158	0.0568	0.4043
294	SLV 11	-3.71	-4.19	36.4	6.1618	0.0455	1.3
294	SLV 12	-3.2	-3.74	36.89	6.2304	0.0457	1.1229
294	SLV 13	-8.81	-0.1	47.31	7.5758	0.0401	3.0875
294	SLV 14	-8.02	0.6	48.07	7.6826	0.0405	2.8118
294	SLV 15	-9.43	-2.31	45.86	7.2502	0.0368	3.303
294	SLV 16	-8.63	-1.61	46.62	7.357	0.0371	3.0274
294	CRTFP Ux+	0	0	0	0	0	0
294	CRTFP Ux-	0	0	0	0	0	0
294	CRTFP Uy+	0	0	0	0	0	0
294	CRTFP Uy-	0	0	0	0	0	0
295	SLU 1	0.27	0	32.16	4.9391	0.0387	-0.091
295	SLU 2	0.28	-0.02	32.15	4.9375	0.0387	-0.0966
295	SLU 3	0.27	0	32.91	5.0413	0.0397	-0.0937
295	SLU 4	0.28	-0.01	32.91	5.0404	0.0397	-0.097
295	SLU 5	0.28	-0.03	32.63	5.002	0.0393	-0.0978
295	SLU 6	0.28	-0.01	33.39	5.1058	0.0403	-0.0949
295	SLU 7	0.29	-0.02	33.39	5.1048	0.0403	-0.0983
295	SLU 8	0.27	-0.01	33.11	5.068	0.04	-0.0934
295	SLU 9	0.28	-0.03	33.11	5.0671	0.0399	-0.0968
295	SLU 10	0.27	0.03	35.77	5.4248	0.0441	-0.0941
295	SLU 11	0.27	0.05	36.53	5.5286	0.0452	-0.0912
295	SLU 12	0.28	0.04	36.53	5.5276	0.0451	-0.0946
295	SLU 13	0.28	0.02	36.25	5.4892	0.0448	-0.0953
295	SLU 14	0.27	0.04	37.01	5.5931	0.0458	-0.0924
295	SLU 15	0.28	0.03	37.01	5.5921	0.0458	-0.0958
295	SLU 16	0.27	0.04	36.73	5.5553	0.0454	-0.0909
295	SLU 17	0.28	0.02	36.73	5.5543	0.0454	-0.0943
295	SLU 18	0.26	0.07	37.33	5.6352	0.0465	-0.0874
295	SLU 19	0.27	0.06	37.32	5.6342	0.0465	-0.0908
295	SLU 20	0.26	0.06	37.8	5.6997	0.0471	-0.0886
295	SLU 21	0.27	0.05	37.8	5.6987	0.0471	-0.092
295	SLU 22	0.3	0.06	35.65	5.4133	0.0435	-0.1028
295	SLU 23	0.31	0.05	35.65	5.4117	0.0435	-0.1083
295	SLU 24	0.31	0.06	36.41	5.5156	0.0445	-0.1055
295	SLU 25	0.32	0.05	36.41	5.5146	0.0445	-0.1088
295	SLU 26	0.32	0.04	36.13	5.4762	0.0441	-0.1096
295	SLU 27	0.31	0.06	36.89	5.58	0.0451	-0.1067
295	SLU 28	0.32	0.05	36.89	5.5791	0.0451	-0.1101
295	SLU 29	0.31	0.05	36.61	5.5422	0.0448	-0.1052
295	SLU 30	0.32	0.04	36.61	5.5413	0.0447	-0.1086
295	SLU 31	0.31	0.09	39.27	5.899	0.049	-0.1059
295	SLU 32	0.3	0.11	40.03	6.0028	0.05	-0.103
295	SLU 33	0.31	0.1	40.03	6.0019	0.05	-0.1064
295	SLU 34	0.31	0.09	39.75	5.9635	0.0496	-0.1071
295	SLU 35	0.3	0.11	40.51	6.0673	0.0506	-0.1042
295	SLU 36	0.31	0.1	40.51	6.0663	0.0506	-0.1076
295	SLU 37	0.3	0.1	40.23	6.0295	0.0502	-0.1027
295	SLU 38	0.31	0.09	40.23	6.0286	0.0502	-0.1061
295	SLU 39	0.29	0.14	40.83	6.1094	0.0513	-0.0992
295	SLU 40	0.3	0.12	40.82	6.1085	0.0513	-0.1026
295	SLU 41	0.29	0.13	41.3	6.1739	0.0519	-0.1004
295	SLU 42	0.3	0.12	41.3	6.1729	0.0519	-0.1038
295	SLU 43	0.33	-0.02	40.6	6.2582	0.0487	-0.1142
295	SLU 44	0.35	-0.04	40.6	6.2566	0.0486	-0.1198
295	SLU 45	0.34	-0.02	41.36	6.3605	0.0497	-0.1169
295	SLU 46	0.35	-0.04	41.36	6.3595	0.0497	-0.1203
295	SLU 47	0.35	-0.05	41.08	6.3211	0.0493	-0.121
295	SLU 48	0.34	-0.03	41.84	6.4249	0.0503	-0.1182
295	SLU 49	0.35	-0.04	41.84	6.424	0.0503	-0.1215
295	SLU 50	0.34	-0.04	41.56	6.3872	0.0499	-0.1167
295	SLU 51	0.35	-0.05	41.56	6.3862	0.0499	-0.12
295	SLU 52	0.34	0.01	44.22	6.7439	0.0541	-0.1173
295	SLU 53	0.33	0.02	44.98	6.8477	0.0551	-0.1145
295	SLU 54	0.34	0.01	44.98	6.8468	0.0551	-0.1178
295	SLU 55	0.35	0	44.7	6.8084	0.0547	-0.1185
295	SLU 56	0.34	0.02	45.46	6.9122	0.0557	-0.1157
295	SLU 57	0.35	0.01	45.45	6.9112	0.0557	-0.119
295	SLU 58	0.33	0.01	45.18	6.8744	0.0554	-0.1142
295	SLU 59	0.34	0	45.17	6.8735	0.0553	-0.1175
295	SLU 60	0.32	0.05	45.77	6.9543	0.0565	-0.1107
295	SLU 61	0.33	0.04	45.77	6.9534	0.0565	-0.114
295	SLU 62	0.33	0.04	46.25	7.0188	0.0571	-0.1119
295	SLU 63	0.34	0.03	46.25	7.0178	0.0571	-0.1152
295	SLU 64	0.37	0.04	44.1	6.7325	0.0535	-0.126
295	SLU 65	0.38	0.02	44.1	6.7309	0.0535	-0.1316
295	SLU 66	0.37	0.04	44.86	6.8347	0.0545	-0.1287
295	SLU 67	0.38	0.03	44.86	6.8337	0.0545	-0.1321

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
295	SLU 68	0.39	0.02	44.57	6.7953	0.0541	-0.1328
295	SLU 69	0.38	0.03	45.34	6.8992	0.0551	-0.13
295	SLU 70	0.39	0.02	45.33	6.8982	0.0551	-0.1333
295	SLU 71	0.37	0.03	45.06	6.8614	0.0547	-0.1285
295	SLU 72	0.38	0.02	45.05	6.8604	0.0547	-0.1318
295	SLU 73	0.38	0.07	47.72	7.2181	0.0589	-0.1291
295	SLU 74	0.37	0.09	48.48	7.322	0.06	-0.1263
295	SLU 75	0.38	0.08	48.48	7.321	0.0599	-0.1296
295	SLU 76	0.38	0.07	48.19	7.2826	0.0595	-0.1303
295	SLU 77	0.37	0.08	48.96	7.3864	0.0606	-0.1275
295	SLU 78	0.38	0.07	48.95	7.3855	0.0605	-0.1308
295	SLU 79	0.37	0.08	48.68	7.3487	0.0602	-0.126
295	SLU 80	0.38	0.07	48.67	7.3477	0.0602	-0.1293
295	SLU 81	0.36	0.11	49.27	7.4286	0.0613	-0.1225
295	SLU 82	0.37	0.1	49.27	7.4276	0.0613	-0.1258
295	SLU 83	0.36	0.11	49.75	7.493	0.0619	-0.1237
295	SLU 84	0.37	0.09	49.75	7.4921	0.0619	-0.127
295	SLE RA 1	0.27	0.02	33.16	5.0746	0.0401	-0.0943
295	SLE RA 2	0.29	0	33.15	5.0735	0.0401	-0.0981
295	SLE RA 3	0.28	0.02	33.66	5.1427	0.0408	-0.0962
295	SLE RA 4	0.29	0.01	33.66	5.1421	0.0407	-0.0984
295	SLE RA 5	0.29	0	33.47	5.1165	0.0405	-0.0989
295	SLE RA 6	0.28	0.01	33.98	5.1857	0.0412	-0.097
295	SLE RA 7	0.29	0.01	33.98	5.1851	0.0412	-0.0992
295	SLE RA 8	0.28	0.01	33.79	5.1605	0.0409	-0.096
295	SLE RA 9	0.29	0	33.79	5.1599	0.0409	-0.0982
295	SLE RA 10	0.28	0.04	35.57	5.3984	0.0437	-0.0964
295	SLE RA 11	0.28	0.05	36.07	5.4676	0.0444	-0.0945
295	SLE RA 12	0.28	0.04	36.07	5.467	0.0444	-0.0967
295	SLE RA 13	0.28	0.03	35.88	5.4413	0.0441	-0.0972
295	SLE RA 14	0.28	0.05	36.39	5.5106	0.0448	-0.0953
295	SLE RA 15	0.28	0.04	36.39	5.5099	0.0448	-0.0975
295	SLE RA 16	0.28	0.04	36.21	5.4854	0.0446	-0.0943
295	SLE RA 17	0.28	0.03	36.2	5.4847	0.0445	-0.0965
295	SLE RA 18	0.27	0.06	36.6	5.5387	0.0453	-0.092
295	SLE RA 19	0.27	0.06	36.6	5.538	0.0453	-0.0942
295	SLE RA 20	0.27	0.06	36.92	5.5816	0.0457	-0.0928
295	SLE RA 21	0.28	0.05	36.92	5.581	0.0457	-0.095
295	SLE FR 1	0.27	0.02	33.16	5.0746	0.0401	-0.0943
295	SLE FR 2	0.28	0.01	33.16	5.0744	0.0401	-0.0951
295	SLE FR 3	0.28	0.02	33.28	5.0918	0.0403	-0.0947
295	SLE FR 4	0.28	0.03	34.19	5.2136	0.0417	-0.0944
295	SLE FR 5	0.27	0.03	34.32	5.231	0.0418	-0.094
295	SLE FR 6	0.27	0.04	34.88	5.3066	0.0427	-0.0932
295	SLE QP 1	0.27	0.02	33.16	5.0746	0.0401	-0.0943
295	SLE QP 2	0.27	0.03	34.19	5.2138	0.0417	-0.0936
295	SLD 1	4.07	0.69	29.24	4.901	0.0525	-1.425
295	SLD 2	4.41	1	29.57	4.9379	0.0525	-1.5434
295	SLD 3	3.81	-0.3	28.63	4.7596	0.0514	-1.3331
295	SLD 4	4.15	0.02	28.96	4.7965	0.0514	-1.4514
295	SLD 5	1.75	1.66	33.58	5.3279	0.0466	-0.6116
295	SLD 6	1.98	1.87	33.79	5.352	0.0466	-0.689
295	SLD 7	0.87	-1.62	31.54	4.8566	0.0429	-0.3051
295	SLD 8	1.1	-1.41	31.75	4.8807	0.0429	-0.3824
295	SLD 9	-0.55	1.47	36.63	5.5469	0.0404	0.1952
295	SLD 10	-0.33	1.68	36.84	5.571	0.0404	0.1178
295	SLD 11	-1.43	-1.81	34.59	5.0756	0.0368	0.5017
295	SLD 12	-1.21	-1.6	34.8	5.0997	0.0367	0.4243
295	SLD 13	-3.6	0.05	39.42	5.6311	0.0319	1.2642
295	SLD 14	-3.26	0.36	39.75	5.668	0.0319	1.1458
295	SLD 15	-3.87	-0.94	38.81	5.4897	0.0308	1.3561
295	SLD 16	-3.53	-0.62	39.14	5.5266	0.0308	1.2378
295	SLV 1	9.16	1.54	22.6	4.4804	0.067	-3.2088
295	SLV 2	9.96	2.27	23.36	4.5663	0.067	-3.4845
295	SLV 3	8.55	-0.71	21.2	4.1513	0.0645	-2.994
295	SLV 4	9.34	0.03	21.95	4.2372	0.0644	-3.2698
295	SLV 5	3.74	3.76	32.71	5.4783	0.0531	-1.3067
295	SLV 6	4.25	4.23	33.2	5.5335	0.0531	-1.4839
295	SLV 7	1.68	-3.72	28.03	4.3811	0.0447	-0.5908
295	SLV 8	2.19	-3.25	28.52	4.4363	0.0447	-0.768
295	SLV 9	-1.65	3.31	39.86	5.9913	0.0387	0.5807
295	SLV 10	-1.14	3.78	40.35	6.0465	0.0386	0.4035
295	SLV 11	-3.7	-4.17	35.18	4.8941	0.0302	1.2966
295	SLV 12	-3.19	-3.7	35.67	4.9493	0.0302	1.1194
295	SLV 13	-8.79	0.04	46.43	6.1904	0.0189	3.0825
295	SLV 14	-8	0.77	47.18	6.2763	0.0188	2.8068
295	SLV 15	-9.41	-2.21	45.02	5.8613	0.0164	3.2973
295	SLV 16	-8.62	-1.47	45.78	5.9472	0.0163	3.0215
295	CRTFP Ux+	0	0	0	0	0	0
295	CRTFP Ux-	0	0	0	0	0	0
295	CRTFP Uy+	0	0	0	0	0	0
295	CRTFP Uy-	0	0	0	0	0	0
296	SLU 1	0.27	0.05	31.24	4.1539	0.0223	-0.0916
296	SLU 2	0.28	0.03	31.23	4.1528	0.0222	-0.0972
296	SLU 3	0.27	0.05	31.97	4.2359	0.0228	-0.0944
296	SLU 4	0.28	0.04	31.97	4.2352	0.0228	-0.0977
296	SLU 5	0.29	0.02	31.7	4.2045	0.0226	-0.0984
296	SLU 6	0.28	0.04	32.43	4.2876	0.0232	-0.0956
296	SLU 7	0.29	0.03	32.43	4.2869	0.0232	-0.099
296	SLU 8	0.27	0.04	32.16	4.2574	0.023	-0.0941
296	SLU 9	0.28	0.03	32.16	4.2567	0.0229	-0.0975
296	SLU 10	0.28	0.09	34.72	4.5375	0.0256	-0.0944
296	SLU 11	0.27	0.11	35.46	4.6206	0.0262	-0.0916
296	SLU 12	0.28	0.09	35.45	4.6199	0.0262	-0.095
296	SLU 13	0.28	0.08	35.18	4.5892	0.026	-0.0957
296	SLU 14	0.27	0.1	35.92	4.6723	0.0266	-0.0929
296	SLU 15	0.28	0.09	35.92	4.6716	0.0266	-0.0962

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
296	SLU 16	0.27	0.09	35.65	4.6421	0.0264	-0.0914
296	SLU 17	0.28	0.08	35.65	4.6414	0.0263	-0.0947
296	SLU 18	0.26	0.13	36.22	4.7036	0.0271	-0.0877
296	SLU 19	0.27	0.12	36.21	4.7029	0.0271	-0.091
296	SLU 20	0.26	0.12	36.68	4.7553	0.0275	-0.0889
296	SLU 21	0.27	0.11	36.68	4.7546	0.0275	-0.0923
296	SLU 22	0.3	0.12	34.62	4.5312	0.0251	-0.1033
296	SLU 23	0.32	0.1	34.62	4.53	0.0251	-0.1089
296	SLU 24	0.31	0.12	35.35	4.6131	0.0257	-0.1061
296	SLU 25	0.32	0.11	35.35	4.6124	0.0257	-0.1094
296	SLU 26	0.32	0.09	35.08	4.5817	0.0254	-0.1101
296	SLU 27	0.31	0.11	35.82	4.6648	0.026	-0.1073
296	SLU 28	0.32	0.1	35.81	4.6641	0.026	-0.1107
296	SLU 29	0.31	0.11	35.55	4.6346	0.0258	-0.1058
296	SLU 30	0.32	0.1	35.54	4.6339	0.0258	-0.1092
296	SLU 31	0.31	0.16	38.1	4.9147	0.0285	-0.1061
296	SLU 32	0.3	0.17	38.84	4.9979	0.0291	-0.1033
296	SLU 33	0.31	0.16	38.84	4.9972	0.0291	-0.1067
296	SLU 34	0.31	0.15	38.56	4.9665	0.0288	-0.1074
296	SLU 35	0.3	0.17	39.3	5.0496	0.0294	-0.1046
296	SLU 36	0.31	0.16	39.3	5.0489	0.0294	-0.1079
296	SLU 37	0.3	0.16	39.03	5.0194	0.0292	-0.1031
296	SLU 38	0.31	0.15	39.03	5.0187	0.0292	-0.1064
296	SLU 39	0.29	0.2	39.6	5.0808	0.03	-0.0994
296	SLU 40	0.3	0.19	39.6	5.0801	0.03	-0.1027
296	SLU 41	0.29	0.19	40.06	5.1325	0.0303	-0.1006
296	SLU 42	0.3	0.18	40.06	5.1318	0.0303	-0.104
296	SLU 43	0.33	0.04	39.45	5.2708	0.028	-0.115
296	SLU 44	0.35	0.02	39.44	5.2696	0.028	-0.1206
296	SLU 45	0.34	0.04	40.18	5.3527	0.0286	-0.1178
296	SLU 46	0.35	0.03	40.18	5.352	0.0285	-0.1212
296	SLU 47	0.35	0.02	39.91	5.3213	0.0283	-0.1219
296	SLU 48	0.35	0.04	40.64	5.4044	0.0289	-0.1191
296	SLU 49	0.36	0.02	40.64	5.4037	0.0289	-0.1224
296	SLU 50	0.34	0.03	40.37	5.3742	0.0287	-0.1176
296	SLU 51	0.35	0.02	40.37	5.3735	0.0287	-0.1209
296	SLU 52	0.34	0.08	42.93	5.6544	0.0314	-0.1179
296	SLU 53	0.34	0.1	43.67	5.7375	0.0319	-0.1151
296	SLU 54	0.35	0.09	43.66	5.7368	0.0319	-0.1184
296	SLU 55	0.35	0.07	43.39	5.7061	0.0317	-0.1192
296	SLU 56	0.34	0.09	44.13	5.7892	0.0323	-0.1163
296	SLU 57	0.35	0.08	44.13	5.7885	0.0323	-0.1197
296	SLU 58	0.33	0.09	43.86	5.759	0.0321	-0.1148
296	SLU 59	0.34	0.07	43.86	5.7583	0.0321	-0.1182
296	SLU 60	0.32	0.12	44.43	5.8204	0.0328	-0.1111
296	SLU 61	0.33	0.11	44.42	5.8197	0.0328	-0.1145
296	SLU 62	0.33	0.12	44.89	5.8721	0.0332	-0.1124
296	SLU 63	0.34	0.1	44.89	5.8714	0.0332	-0.1158
296	SLU 64	0.37	0.11	42.83	5.648	0.0308	-0.1267
296	SLU 65	0.38	0.09	42.83	5.6468	0.0308	-0.1323
296	SLU 66	0.38	0.11	43.56	5.73	0.0314	-0.1295
296	SLU 67	0.39	0.1	43.56	5.7292	0.0314	-0.1329
296	SLU 68	0.39	0.08	43.29	5.6986	0.0311	-0.1336
296	SLU 69	0.38	0.1	44.03	5.7817	0.0317	-0.1308
296	SLU 70	0.39	0.09	44.03	5.781	0.0317	-0.1341
296	SLU 71	0.38	0.1	43.76	5.7514	0.0315	-0.1293
296	SLU 72	0.39	0.09	43.75	5.7507	0.0315	-0.1326
296	SLU 73	0.38	0.15	46.31	6.0316	0.0342	-0.1296
296	SLU 74	0.37	0.17	47.05	6.1147	0.0348	-0.1268
296	SLU 75	0.38	0.15	47.05	6.114	0.0348	-0.1301
296	SLU 76	0.38	0.14	46.78	6.0833	0.0345	-0.1309
296	SLU 77	0.37	0.16	47.51	6.1664	0.0351	-0.128
296	SLU 78	0.38	0.15	47.51	6.1657	0.0351	-0.1314
296	SLU 79	0.37	0.15	47.24	6.1362	0.0349	-0.1265
296	SLU 80	0.38	0.14	47.24	6.1355	0.0349	-0.1299
296	SLU 81	0.36	0.19	47.81	6.1976	0.0357	-0.1228
296	SLU 82	0.37	0.18	47.81	6.1969	0.0357	-0.1262
296	SLU 83	0.36	0.18	48.27	6.2494	0.036	-0.1241
296	SLU 84	0.37	0.17	48.27	6.2487	0.036	-0.1275
296	SLE RA 1	0.28	0.07	32.2	4.2617	0.0231	-0.0949
296	SLE RA 2	0.29	0.06	32.2	4.2609	0.0231	-0.0987
296	SLE RA 3	0.28	0.07	32.69	4.3163	0.0235	-0.0968
296	SLE RA 4	0.29	0.06	32.69	4.3159	0.0235	-0.099
296	SLE RA 5	0.29	0.05	32.51	4.2954	0.0233	-0.0995
296	SLE RA 6	0.28	0.07	33	4.3508	0.0237	-0.0976
296	SLE RA 7	0.29	0.06	33	4.3504	0.0237	-0.0998
296	SLE RA 8	0.28	0.06	32.82	4.3307	0.0236	-0.0966
296	SLE RA 9	0.29	0.05	32.82	4.3302	0.0235	-0.0988
296	SLE RA 10	0.28	0.09	34.52	4.5174	0.0253	-0.0968
296	SLE RA 11	0.28	0.11	35.02	4.5728	0.0257	-0.0949
296	SLE RA 12	0.28	0.1	35.01	4.5724	0.0257	-0.0972
296	SLE RA 13	0.28	0.09	34.83	4.5519	0.0256	-0.0977
296	SLE RA 14	0.28	0.1	35.32	4.6073	0.026	-0.0958
296	SLE RA 15	0.29	0.1	35.32	4.6069	0.0259	-0.098
296	SLE RA 16	0.28	0.1	35.14	4.5872	0.0258	-0.0948
296	SLE RA 17	0.28	0.09	35.14	4.5867	0.0258	-0.097
296	SLE RA 18	0.27	0.12	35.52	4.6281	0.0263	-0.0923
296	SLE RA 19	0.28	0.12	35.52	4.6277	0.0263	-0.0946
296	SLE RA 20	0.27	0.12	35.83	4.6626	0.0266	-0.0932
296	SLE RA 21	0.28	0.11	35.83	4.6622	0.0265	-0.0954
296	SLE FR 1	0.28	0.07	32.2	4.2617	0.0231	-0.0949
296	SLE FR 2	0.28	0.07	32.2	4.2616	0.0231	-0.0957
296	SLE FR 3	0.28	0.07	32.33	4.2755	0.0232	-0.0953
296	SLE FR 4	0.28	0.08	33.2	4.3715	0.0241	-0.0949
296	SLE FR 5	0.27	0.08	33.32	4.3854	0.0242	-0.0945
296	SLE FR 6	0.27	0.1	33.86	4.4449	0.0247	-0.0936
296	SLE QP 1	0.28	0.07	32.2	4.2617	0.0231	-0.0949

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
296	SLE QP 2	0.27	0.09	33.2	4.3716	0.0241	-0.0941
296	SLD 1	4.07	0.72	27.89	4.0775	0.0382	-1.4231
296	SLD 2	4.41	1.05	28.22	4.1084	0.0379	-1.5414
296	SLD 3	3.8	-0.29	27.29	3.9332	0.0374	-1.3315
296	SLD 4	4.14	0.04	27.62	3.9642	0.0371	-1.4498
296	SLD 5	1.75	1.75	32.47	4.4967	0.0295	-0.6108
296	SLD 6	1.97	1.97	32.68	4.5169	0.0294	-0.6882
296	SLD 7	0.87	-1.62	30.45	4.0159	0.0269	-0.3055
296	SLD 8	1.1	-1.4	30.66	4.0361	0.0267	-0.3828
296	SLD 9	-0.55	1.57	35.73	4.7072	0.0214	0.1946
296	SLD 10	-0.33	1.79	35.95	4.7274	0.0212	0.1172
296	SLD 11	-1.43	-1.79	33.72	4.2263	0.0187	0.4999
296	SLD 12	-1.2	-1.58	33.93	4.2466	0.0186	0.4226
296	SLD 13	-3.6	0.13	38.78	4.7791	0.011	1.2615
296	SLD 14	-3.26	0.47	39.11	4.81	0.0108	1.1432
296	SLD 15	-3.86	-0.88	38.18	4.6348	0.0102	1.3531
296	SLD 16	-3.52	-0.54	38.5	4.6658	0.01	1.2348
296	SLV 1	9.15	1.53	20.77	3.6825	0.0571	-3.2036
296	SLV 2	9.94	2.31	21.53	3.7545	0.0565	-3.4792
296	SLV 3	8.53	-0.77	19.37	3.3453	0.0552	-2.9897
296	SLV 4	9.33	0.01	20.14	3.4174	0.0547	-3.2653
296	SLV 5	3.73	3.88	31.45	4.6639	0.0369	-1.3042
296	SLV 6	4.24	4.38	31.94	4.7102	0.0365	-1.4813
296	SLV 7	1.68	-3.8	26.81	3.5401	0.0307	-0.5911
296	SLV 8	2.19	-3.3	27.3	3.5864	0.0304	-0.7683
296	SLV 9	-1.64	3.47	39.1	5.1569	0.0178	0.58
296	SLV 10	-1.14	3.97	39.59	5.2032	0.0174	0.4028
296	SLV 11	-3.69	-4.21	34.46	4.0331	0.0116	1.2931
296	SLV 12	-3.19	-3.71	34.95	4.0794	0.0113	1.1159
296	SLV 13	-8.78	0.16	46.26	5.3259	-0.0066	3.077
296	SLV 14	-7.99	0.94	47.02	5.3979	-0.0071	2.8014
296	SLV 15	-9.39	-2.14	44.87	4.9887	-0.0084	3.2909
296	SLV 16	-8.6	-1.36	45.63	5.0608	-0.0089	3.0153
296	CRTFP Ux+	0	0	0	0	0	0
296	CRTFP Ux-	0	0	0	0	0	0
296	CRTFP Uy+	0	0	0	0	0	0
296	CRTFP Uy-	0	0	0	0	0	0
297	SLU 1	0.27	0.1	30.84	3.7532	0.004	-0.092
297	SLU 2	0.28	0.08	30.83	3.7524	0.004	-0.0976
297	SLU 3	0.28	0.1	31.56	3.8248	0.0041	-0.0948
297	SLU 4	0.29	0.09	31.56	3.8243	0.0041	-0.0982
297	SLU 5	0.29	0.07	31.29	3.7976	0.004	-0.0989
297	SLU 6	0.28	0.09	32.02	3.87	0.0041	-0.0961
297	SLU 7	0.29	0.08	32.02	3.8696	0.0041	-0.0994
297	SLU 8	0.27	0.09	31.75	3.8437	0.0041	-0.0946
297	SLU 9	0.28	0.08	31.75	3.8432	0.0041	-0.0979
297	SLU 10	0.28	0.14	34.25	4.083	0.0051	-0.0946
297	SLU 11	0.27	0.16	34.98	4.1554	0.0052	-0.0918
297	SLU 12	0.28	0.15	34.98	4.1549	0.0052	-0.0952
297	SLU 13	0.28	0.14	34.71	4.1282	0.0051	-0.0959
297	SLU 14	0.27	0.16	35.44	4.2006	0.0052	-0.0931
297	SLU 15	0.28	0.14	35.44	4.2001	0.0052	-0.0965
297	SLU 16	0.27	0.15	35.17	4.1742	0.0052	-0.0916
297	SLU 17	0.28	0.14	35.17	4.1737	0.0052	-0.095
297	SLU 18	0.26	0.19	35.72	4.2254	0.0056	-0.0878
297	SLU 19	0.27	0.18	35.72	4.2249	0.0056	-0.0911
297	SLU 20	0.26	0.18	36.18	4.2707	0.0056	-0.089
297	SLU 21	0.27	0.17	36.18	4.2702	0.0056	-0.0924
297	SLU 22	0.3	0.17	34.17	4.08	0.0046	-0.1036
297	SLU 23	0.32	0.15	34.17	4.0791	0.0046	-0.1092
297	SLU 24	0.31	0.17	34.89	4.1516	0.0047	-0.1064
297	SLU 25	0.32	0.16	34.89	4.1511	0.0047	-0.1098
297	SLU 26	0.32	0.15	34.62	4.1244	0.0046	-0.1105
297	SLU 27	0.31	0.17	35.35	4.1968	0.0047	-0.1077
297	SLU 28	0.32	0.15	35.35	4.1963	0.0047	-0.111
297	SLU 29	0.31	0.16	35.08	4.1704	0.0047	-0.1062
297	SLU 30	0.32	0.15	35.08	4.1699	0.0047	-0.1095
297	SLU 31	0.31	0.21	37.58	4.4097	0.0057	-0.1062
297	SLU 32	0.3	0.23	38.31	4.4821	0.0058	-0.1034
297	SLU 33	0.31	0.22	38.31	4.4816	0.0058	-0.1068
297	SLU 34	0.31	0.21	38.04	4.4549	0.0057	-0.1075
297	SLU 35	0.3	0.23	38.77	4.5273	0.0059	-0.1047
297	SLU 36	0.31	0.22	38.77	4.5268	0.0058	-0.1081
297	SLU 37	0.3	0.22	38.5	4.5009	0.0058	-0.1032
297	SLU 38	0.31	0.21	38.5	4.5004	0.0058	-0.1066
297	SLU 39	0.29	0.26	39.05	4.5522	0.0062	-0.0993
297	SLU 40	0.3	0.25	39.05	4.5517	0.0062	-0.1027
297	SLU 41	0.29	0.26	39.51	4.5974	0.0063	-0.1006
297	SLU 42	0.3	0.24	39.51	4.5969	0.0062	-0.104
297	SLU 43	0.34	0.1	38.95	4.7672	0.005	-0.1156
297	SLU 44	0.35	0.08	38.94	4.7664	0.005	-0.1212
297	SLU 45	0.34	0.1	39.67	4.8388	0.0051	-0.1184
297	SLU 46	0.35	0.09	39.67	4.8383	0.005	-0.1218
297	SLU 47	0.36	0.08	39.4	4.8116	0.005	-0.1225
297	SLU 48	0.35	0.1	40.13	4.884	0.0051	-0.1197
297	SLU 49	0.36	0.09	40.13	4.8835	0.0051	-0.1231
297	SLU 50	0.34	0.09	39.86	4.8576	0.0051	-0.1182
297	SLU 51	0.35	0.08	39.86	4.8571	0.0051	-0.1215
297	SLU 52	0.34	0.15	42.36	5.0969	0.0061	-0.1183
297	SLU 53	0.34	0.17	43.09	5.1693	0.0062	-0.1155
297	SLU 54	0.35	0.15	43.09	5.1688	0.0062	-0.1188
297	SLU 55	0.35	0.14	42.82	5.1421	0.0061	-0.1195
297	SLU 56	0.34	0.16	43.55	5.2145	0.0062	-0.1167
297	SLU 57	0.35	0.15	43.54	5.214	0.0062	-0.1201
297	SLU 58	0.34	0.16	43.28	5.1882	0.0062	-0.1152
297	SLU 59	0.35	0.14	43.28	5.1877	0.0062	-0.1186
297	SLU 60	0.33	0.19	43.83	5.2394	0.0066	-0.1114

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
297	SLU 61	0.33	0.18	43.83	5.2389	0.0066	-0.1147
297	SLU 62	0.33	0.19	44.29	5.2846	0.0066	-0.1127
297	SLU 63	0.34	0.18	44.29	5.2841	0.0066	-0.116
297	SLU 64	0.37	0.18	42.28	5.0939	0.0056	-0.1272
297	SLU 65	0.39	0.16	42.27	5.0931	0.0056	-0.1328
297	SLU 66	0.38	0.18	43	5.1655	0.0057	-0.13
297	SLU 67	0.39	0.16	43	5.165	0.0057	-0.1334
297	SLU 68	0.39	0.15	42.73	5.1383	0.0056	-0.1341
297	SLU 69	0.38	0.17	43.46	5.2107	0.0057	-0.1313
297	SLU 70	0.39	0.16	43.46	5.2102	0.0057	-0.1347
297	SLU 71	0.38	0.16	43.19	5.1843	0.0057	-0.1298
297	SLU 72	0.39	0.15	43.19	5.1839	0.0057	-0.1331
297	SLU 73	0.38	0.22	45.69	5.4236	0.0067	-0.1299
297	SLU 74	0.37	0.24	46.42	5.4961	0.0068	-0.1271
297	SLU 75	0.38	0.23	46.42	5.4956	0.0068	-0.1304
297	SLU 76	0.38	0.21	46.15	5.4689	0.0067	-0.1311
297	SLU 77	0.37	0.23	46.88	5.5413	0.0068	-0.1283
297	SLU 78	0.38	0.22	46.88	5.5408	0.0068	-0.1317
297	SLU 79	0.37	0.23	46.61	5.5149	0.0068	-0.1268
297	SLU 80	0.38	0.22	46.61	5.5144	0.0068	-0.1302
297	SLU 81	0.36	0.27	47.16	5.5661	0.0072	-0.123
297	SLU 82	0.37	0.25	47.16	5.5656	0.0072	-0.1263
297	SLU 83	0.36	0.26	47.62	5.6113	0.0072	-0.1243
297	SLU 84	0.37	0.25	47.62	5.6108	0.0072	-0.1276
297	SLE RA 1	0.28	0.12	31.79	3.8466	0.0042	-0.0953
297	SLE RA 2	0.29	0.11	31.79	3.846	0.0042	-0.099
297	SLE RA 3	0.28	0.12	32.27	3.8943	0.0042	-0.0972
297	SLE RA 4	0.29	0.11	32.27	3.894	0.0042	-0.0994
297	SLE RA 5	0.29	0.1	32.09	3.8762	0.0042	-0.0999
297	SLE RA 6	0.28	0.12	32.58	3.9245	0.0043	-0.098
297	SLE RA 7	0.29	0.11	32.58	3.9241	0.0043	-0.1003
297	SLE RA 8	0.28	0.11	32.4	3.9069	0.0042	-0.097
297	SLE RA 9	0.29	0.1	32.4	3.9065	0.0042	-0.0993
297	SLE RA 10	0.28	0.15	34.07	4.0664	0.0049	-0.0971
297	SLE RA 11	0.28	0.16	34.55	4.1147	0.005	-0.0952
297	SLE RA 12	0.28	0.15	34.55	4.1144	0.005	-0.0974
297	SLE RA 13	0.28	0.14	34.37	4.0965	0.0049	-0.0979
297	SLE RA 14	0.28	0.16	34.86	4.1448	0.005	-0.0961
297	SLE RA 15	0.29	0.15	34.85	4.1445	0.005	-0.0983
297	SLE RA 16	0.28	0.15	34.68	4.1272	0.005	-0.095
297	SLE RA 17	0.28	0.15	34.68	4.1269	0.005	-0.0973
297	SLE RA 18	0.27	0.18	35.04	4.1614	0.0052	-0.0925
297	SLE RA 19	0.28	0.17	35.04	4.1611	0.0052	-0.0947
297	SLE RA 20	0.27	0.18	35.35	4.1915	0.0053	-0.0933
297	SLE RA 21	0.28	0.17	35.35	4.1912	0.0053	-0.0956
297	SLE FR 1	0.28	0.12	31.79	3.8466	0.0042	-0.0953
297	SLE FR 2	0.28	0.12	31.79	3.8465	0.0042	-0.0961
297	SLE FR 3	0.28	0.12	31.91	3.8586	0.0042	-0.0956
297	SLE FR 4	0.28	0.13	32.77	3.9409	0.0045	-0.0952
297	SLE FR 5	0.28	0.14	32.89	3.9531	0.0045	-0.0948
297	SLE FR 6	0.27	0.15	33.42	4.004	0.0047	-0.0939
297	SLE QP 1	0.28	0.12	31.79	3.8466	0.0042	-0.0953
297	SLE QP 2	0.27	0.14	32.77	3.941	0.0045	-0.0945
297	SLD 1	4.06	0.76	27	3.5842	0.0219	-1.4208
297	SLD 2	4.4	1.11	27.33	3.6131	0.0214	-1.539
297	SLD 3	3.8	-0.29	26.38	3.4399	0.0228	-1.3295
297	SLD 4	4.14	0.07	26.72	3.4687	0.0224	-1.4477
297	SLD 5	1.75	1.85	31.91	4.0478	0.0083	-0.6098
297	SLD 6	1.97	2.08	32.13	4.0667	0.008	-0.6871
297	SLD 7	0.87	-1.65	29.85	3.5666	0.0116	-0.3057
297	SLD 8	1.1	-1.41	30.07	3.5855	0.0112	-0.3829
297	SLD 9	-0.55	1.69	35.46	4.2965	-0.0022	0.194
297	SLD 10	-0.32	1.92	35.68	4.3154	-0.0026	0.1168
297	SLD 11	-1.42	-1.81	33.4	3.8154	0.001	0.4982
297	SLD 12	-1.2	-1.58	33.62	3.8343	0.0007	0.4209
297	SLD 13	-3.59	0.21	38.82	4.4133	-0.0134	1.2588
297	SLD 14	-3.25	0.57	39.15	4.4422	-0.0139	1.1406
297	SLD 15	-3.85	-0.84	38.2	4.269	-0.0124	1.3501
297	SLD 16	-3.51	-0.48	38.54	4.2979	-0.0129	1.2318
297	SLV 1	9.13	1.56	19.25	3.1053	0.0452	-3.1977
297	SLV 2	9.93	2.39	20.03	3.1726	0.0441	-3.473
297	SLV 3	8.52	-0.84	17.83	2.7675	0.0475	-2.9846
297	SLV 4	9.31	0	18.61	2.8348	0.0464	-3.2599
297	SLV 5	3.73	4.05	30.73	4.1911	0.0135	-1.3014
297	SLV 6	4.24	4.59	31.24	4.2343	0.0128	-1.4784
297	SLV 7	1.68	-3.93	25.99	3.0652	0.021	-0.5911
297	SLV 8	2.19	-3.39	26.5	3.1084	0.0203	-0.7681
297	SLV 9	-1.64	3.66	39.03	4.7736	-0.0113	0.5792
297	SLV 10	-1.13	4.2	39.54	4.8169	-0.012	0.4022
297	SLV 11	-3.69	-4.31	34.3	3.6478	-0.0038	1.2895
297	SLV 12	-3.18	-3.77	34.8	3.691	-0.0045	1.1125
297	SLV 13	-8.76	0.27	46.92	5.0472	-0.0374	3.071
297	SLV 14	-7.97	1.11	47.71	5.1145	-0.0385	2.7957
297	SLV 15	-9.38	-2.12	45.5	4.7095	-0.0351	3.2841
297	SLV 16	-8.58	-1.28	46.29	4.7767	-0.0362	3.0088
297	CRTFP Ux+	0	0	0	0	0	0
297	CRTFP Ux-	0	0	0	0	0	0
297	CRTFP Uy+	0	0	0	0	0	0
297	CRTFP Uy-	0	0	0	0	0	0
298	SLU 1	0.27	0.14	31.01	3.7702	-0.0159	-0.0921
298	SLU 2	0.28	0.12	31.01	3.7697	-0.0159	-0.0977
298	SLU 3	0.28	0.15	31.74	3.8423	-0.0164	-0.095
298	SLU 4	0.29	0.13	31.74	3.8419	-0.0164	-0.0983
298	SLU 5	0.29	0.12	31.47	3.8152	-0.0162	-0.099
298	SLU 6	0.28	0.14	32.2	3.8878	-0.0167	-0.0963
298	SLU 7	0.29	0.13	32.2	3.8875	-0.0167	-0.0996
298	SLU 8	0.28	0.13	31.93	3.8612	-0.0165	-0.0947

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
298	SLU 9	0.28	0.12	31.93	3.8609	-0.0165	-0.0981
298	SLU 10	0.28	0.19	34.43	4.098	-0.0173	-0.0946
298	SLU 11	0.27	0.22	35.16	4.1706	-0.0177	-0.0918
298	SLU 12	0.28	0.2	35.16	4.1703	-0.0178	-0.0952
298	SLU 13	0.28	0.19	34.89	4.1435	-0.0176	-0.0959
298	SLU 14	0.27	0.21	35.62	4.2162	-0.018	-0.0931
298	SLU 15	0.28	0.2	35.62	4.2158	-0.018	-0.0965
298	SLU 16	0.27	0.21	35.36	4.1896	-0.0179	-0.0916
298	SLU 17	0.28	0.19	35.35	4.1893	-0.0179	-0.0949
298	SLU 18	0.26	0.25	35.9	4.2393	-0.0179	-0.0876
298	SLU 19	0.27	0.23	35.9	4.239	-0.0179	-0.091
298	SLU 20	0.26	0.24	36.36	4.2848	-0.0182	-0.0889
298	SLU 21	0.27	0.23	36.36	4.2845	-0.0182	-0.0923
298	SLU 22	0.3	0.22	34.36	4.097	-0.0177	-0.1036
298	SLU 23	0.32	0.2	34.36	4.0964	-0.0177	-0.1092
298	SLU 24	0.31	0.22	35.09	4.169	-0.0182	-0.1064
298	SLU 25	0.32	0.21	35.09	4.1687	-0.0182	-0.1098
298	SLU 26	0.32	0.2	34.82	4.1419	-0.018	-0.1105
298	SLU 27	0.31	0.22	35.55	4.2145	-0.0185	-0.1078
298	SLU 28	0.32	0.21	35.55	4.2142	-0.0185	-0.1111
298	SLU 29	0.31	0.21	35.28	4.188	-0.0183	-0.1062
298	SLU 30	0.32	0.2	35.28	4.1877	-0.0183	-0.1096
298	SLU 31	0.31	0.27	37.78	4.4248	-0.0191	-0.106
298	SLU 32	0.3	0.29	38.51	4.4974	-0.0195	-0.1033
298	SLU 33	0.31	0.28	38.51	4.4971	-0.0196	-0.1066
298	SLU 34	0.31	0.27	38.24	4.4703	-0.0194	-0.1074
298	SLU 35	0.3	0.29	38.97	4.5429	-0.0198	-0.1046
298	SLU 36	0.31	0.28	38.97	4.5426	-0.0198	-0.1079
298	SLU 37	0.3	0.28	38.7	4.5164	-0.0197	-0.103
298	SLU 38	0.31	0.27	38.7	4.516	-0.0197	-0.1064
298	SLU 39	0.29	0.32	39.25	4.5661	-0.0197	-0.0991
298	SLU 40	0.3	0.31	39.25	4.5657	-0.0197	-0.1024
298	SLU 41	0.29	0.32	39.71	4.6116	-0.02	-0.1004
298	SLU 42	0.3	0.31	39.71	4.6112	-0.02	-0.1037
298	SLU 43	0.34	0.16	39.17	4.7892	-0.0201	-0.1158
298	SLU 44	0.35	0.14	39.17	4.7887	-0.0201	-0.1214
298	SLU 45	0.34	0.16	39.9	4.8613	-0.0205	-0.1187
298	SLU 46	0.35	0.15	39.9	4.861	-0.0205	-0.122
298	SLU 47	0.36	0.14	39.63	4.8342	-0.0204	-0.1228
298	SLU 48	0.35	0.16	40.36	4.9068	-0.0208	-0.12
298	SLU 49	0.36	0.14	40.36	4.9065	-0.0208	-0.1233
298	SLU 50	0.34	0.15	40.09	4.8803	-0.0206	-0.1184
298	SLU 51	0.35	0.14	40.09	4.8799	-0.0207	-0.1218
298	SLU 52	0.34	0.21	42.59	5.117	-0.0215	-0.1183
298	SLU 53	0.34	0.23	43.32	5.1897	-0.0219	-0.1155
298	SLU 54	0.35	0.22	43.32	5.1893	-0.0219	-0.1189
298	SLU 55	0.35	0.21	43.05	5.1626	-0.0218	-0.1196
298	SLU 56	0.34	0.23	43.78	5.2352	-0.0222	-0.1168
298	SLU 57	0.35	0.22	43.78	5.2349	-0.0222	-0.1202
298	SLU 58	0.34	0.22	43.51	5.2086	-0.022	-0.1153
298	SLU 59	0.35	0.21	43.51	5.2083	-0.022	-0.1186
298	SLU 60	0.32	0.26	44.06	5.2583	-0.022	-0.1113
298	SLU 61	0.33	0.25	44.05	5.258	-0.0221	-0.1147
298	SLU 62	0.33	0.26	44.52	5.3038	-0.0223	-0.1126
298	SLU 63	0.34	0.25	44.52	5.3035	-0.0223	-0.116
298	SLU 64	0.37	0.24	42.52	5.116	-0.0219	-0.1273
298	SLU 65	0.39	0.22	42.51	5.1154	-0.0219	-0.1329
298	SLU 66	0.38	0.24	43.25	5.1881	-0.0223	-0.1302
298	SLU 67	0.39	0.23	43.24	5.1877	-0.0223	-0.1335
298	SLU 68	0.39	0.21	42.97	5.161	-0.0222	-0.1342
298	SLU 69	0.38	0.23	43.71	5.2336	-0.0226	-0.1315
298	SLU 70	0.39	0.22	43.71	5.2332	-0.0226	-0.1348
298	SLU 71	0.38	0.23	43.44	5.207	-0.0224	-0.1299
298	SLU 72	0.39	0.22	43.44	5.2067	-0.0225	-0.1333
298	SLU 73	0.38	0.29	45.94	5.4438	-0.0233	-0.1298
298	SLU 74	0.37	0.31	46.67	5.5164	-0.0237	-0.127
298	SLU 75	0.38	0.3	46.67	5.5161	-0.0237	-0.1303
298	SLU 76	0.38	0.28	46.4	5.4893	-0.0236	-0.1311
298	SLU 77	0.37	0.31	47.13	5.5619	-0.024	-0.1283
298	SLU 78	0.38	0.29	47.13	5.5616	-0.024	-0.1317
298	SLU 79	0.37	0.3	46.86	5.5354	-0.0238	-0.1268
298	SLU 80	0.38	0.29	46.86	5.5351	-0.0238	-0.1301
298	SLU 81	0.36	0.34	47.4	5.5851	-0.0238	-0.1228
298	SLU 82	0.37	0.33	47.4	5.5848	-0.0239	-0.1261
298	SLU 83	0.36	0.34	47.86	5.6306	-0.0241	-0.1241
298	SLU 84	0.37	0.32	47.86	5.6303	-0.0241	-0.1275
298	SLE RA 1	0.28	0.17	31.97	3.8636	-0.0164	-0.0954
298	SLE RA 2	0.29	0.15	31.97	3.8632	-0.0164	-0.0992
298	SLE RA 3	0.28	0.17	32.46	3.9116	-0.0167	-0.0973
298	SLE RA 4	0.29	0.16	32.45	3.9114	-0.0167	-0.0995
298	SLE RA 5	0.29	0.15	32.27	3.8935	-0.0166	-0.1
298	SLE RA 6	0.29	0.16	32.76	3.942	-0.0169	-0.0982
298	SLE RA 7	0.29	0.16	32.76	3.9417	-0.0169	-0.1004
298	SLE RA 8	0.28	0.16	32.58	3.9242	-0.0168	-0.0972
298	SLE RA 9	0.29	0.15	32.58	3.924	-0.0168	-0.0994
298	SLE RA 10	0.28	0.2	34.25	4.0821	-0.0174	-0.097
298	SLE RA 11	0.28	0.21	34.74	4.1305	-0.0176	-0.0952
298	SLE RA 12	0.28	0.21	34.74	4.1303	-0.0177	-0.0974
298	SLE RA 13	0.28	0.2	34.56	4.1125	-0.0176	-0.0979
298	SLE RA 14	0.28	0.21	35.04	4.1609	-0.0178	-0.0961
298	SLE RA 15	0.29	0.2	35.04	4.1606	-0.0178	-0.0983
298	SLE RA 16	0.28	0.21	34.86	4.1432	-0.0177	-0.095
298	SLE RA 17	0.28	0.2	34.86	4.1429	-0.0177	-0.0973
298	SLE RA 18	0.27	0.23	35.23	4.1763	-0.0177	-0.0924
298	SLE RA 19	0.28	0.23	35.23	4.1761	-0.0177	-0.0946
298	SLE RA 20	0.27	0.23	35.53	4.2066	-0.0179	-0.0933
298	SLE RA 21	0.28	0.22	35.53	4.2064	-0.0179	-0.0955

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
298	SLE FR 1	0.28	0.17	31.97	3.8636	-0.0164	-0.0954
298	SLE FR 2	0.28	0.16	31.97	3.8635	-0.0164	-0.0962
298	SLE FR 3	0.28	0.17	32.09	3.8757	-0.0165	-0.0958
298	SLE FR 4	0.28	0.18	32.95	3.9573	-0.0168	-0.0953
298	SLE FR 5	0.28	0.19	33.07	3.9695	-0.0169	-0.0949
298	SLE FR 6	0.27	0.2	33.6	4.0199	-0.0171	-0.0939
298	SLE QP 1	0.28	0.17	31.97	3.8636	-0.0164	-0.0954
298	SLE QP 2	0.27	0.19	32.95	3.9574	-0.0168	-0.0945
298	SLD 1	4.05	0.81	26.58	3.4396	0.0052	-1.4179
298	SLD 2	4.39	1.2	26.94	3.4712	0.0045	-1.536
298	SLD 3	3.79	-0.29	25.93	3.2998	0.0068	-1.327
298	SLD 4	4.13	0.1	26.29	3.3315	0.0061	-1.4451
298	SLD 5	1.75	1.97	31.96	4.0085	-0.0125	-0.6085
298	SLD 6	1.97	2.23	32.19	4.0291	-0.013	-0.6857
298	SLD 7	0.87	-1.69	29.79	3.5425	-0.0072	-0.3055
298	SLD 8	1.09	-1.44	30.03	3.5632	-0.0077	-0.3827
298	SLD 9	-0.55	1.81	35.86	4.3516	-0.026	0.1937
298	SLD 10	-0.32	2.07	36.1	4.3723	-0.0265	0.1165
298	SLD 11	-1.42	-1.85	33.7	3.8856	-0.0207	0.4967
298	SLD 12	-1.2	-1.6	33.93	3.9063	-0.0212	0.4195
298	SLD 13	-3.58	0.28	39.6	4.5833	-0.0397	1.2561
298	SLD 14	-3.24	0.67	39.96	4.6149	-0.0405	1.138
298	SLD 15	-3.84	-0.82	38.95	4.4435	-0.0381	1.347
298	SLD 16	-3.5	-0.43	39.31	4.4751	-0.0389	1.2289
298	SLV 1	9.11	1.61	18.04	2.7449	0.0349	-3.1909
298	SLV 2	9.91	2.52	18.87	2.8185	0.0331	-3.4659
298	SLV 3	8.5	-0.9	16.55	2.418	0.0386	-2.9786
298	SLV 4	9.3	0.01	17.38	2.4916	0.0368	-3.2536
298	SLV 5	3.72	4.27	30.6	4.0768	-0.0066	-1.2983
298	SLV 6	4.23	4.85	31.13	4.1241	-0.0077	-1.475
298	SLV 7	1.68	-4.1	25.62	2.9872	0.0057	-0.5906
298	SLV 8	2.19	-3.52	26.15	3.0345	0.0045	-0.7674
298	SLV 9	-1.64	3.89	39.74	4.8803	-0.0382	0.5783
298	SLV 10	-1.13	4.48	40.28	4.9276	-0.0393	0.4016
298	SLV 11	-3.68	-4.48	34.76	3.7907	-0.0259	1.286
298	SLV 12	-3.17	-3.89	35.29	3.838	-0.0271	1.1093
298	SLV 13	-8.75	0.37	48.52	5.4232	-0.0704	3.0646
298	SLV 14	-7.95	1.27	49.35	5.4968	-0.0722	2.7896
298	SLV 15	-9.36	-2.14	47.02	5.0963	-0.0668	3.2769
298	SLV 16	-8.56	-1.24	47.85	5.1699	-0.0685	3.0019
298	CRTFP Ux+	0	0	0	0	0	0
298	CRTFP Ux-	0	0	0	0	0	0
298	CRTFP Uy+	0	0	0	0	0	0
298	CRTFP Uy-	0	0	0	0	0	0
299	SLU 1	0.27	0.19	31.81	4.2429	-0.0375	-0.092
299	SLU 2	0.28	0.17	31.81	4.2426	-0.0375	-0.0976
299	SLU 3	0.28	0.19	32.56	4.3273	-0.0385	-0.0948
299	SLU 4	0.28	0.18	32.56	4.3271	-0.0385	-0.0982
299	SLU 5	0.29	0.16	32.28	4.2959	-0.0382	-0.0989
299	SLU 6	0.28	0.19	33.04	4.3806	-0.0392	-0.0961
299	SLU 7	0.29	0.17	33.03	4.3804	-0.0392	-0.0995
299	SLU 8	0.27	0.18	32.76	4.3495	-0.0388	-0.0946
299	SLU 9	0.28	0.17	32.76	4.3493	-0.0388	-0.098
299	SLU 10	0.27	0.25	35.31	4.6251	-0.0416	-0.0942
299	SLU 11	0.27	0.27	36.06	4.7099	-0.0426	-0.0915
299	SLU 12	0.28	0.26	36.06	4.7096	-0.0426	-0.0948
299	SLU 13	0.28	0.24	35.78	4.6784	-0.0422	-0.0955
299	SLU 14	0.27	0.27	36.54	4.7631	-0.0432	-0.0928
299	SLU 15	0.28	0.25	36.54	4.7629	-0.0432	-0.0961
299	SLU 16	0.27	0.26	36.26	4.732	-0.0428	-0.0912
299	SLU 17	0.28	0.25	36.26	4.7318	-0.0428	-0.0946
299	SLU 18	0.25	0.3	36.81	4.7894	-0.0433	-0.0872
299	SLU 19	0.26	0.29	36.81	4.7892	-0.0433	-0.0905
299	SLU 20	0.26	0.3	37.29	4.8426	-0.0439	-0.0885
299	SLU 21	0.27	0.28	37.29	4.8424	-0.0439	-0.0918
299	SLU 22	0.3	0.27	35.25	4.6249	-0.0419	-0.1033
299	SLU 23	0.32	0.25	35.25	4.6246	-0.0419	-0.1089
299	SLU 24	0.31	0.27	36	4.7093	-0.0429	-0.1062
299	SLU 25	0.32	0.26	36	4.7091	-0.0429	-0.1095
299	SLU 26	0.32	0.25	35.72	4.6778	-0.0426	-0.1102
299	SLU 27	0.31	0.27	36.48	4.7626	-0.0436	-0.1075
299	SLU 28	0.32	0.26	36.48	4.7624	-0.0436	-0.1108
299	SLU 29	0.31	0.26	36.2	4.7315	-0.0432	-0.1059
299	SLU 30	0.32	0.25	36.2	4.7313	-0.0432	-0.1093
299	SLU 31	0.31	0.33	38.75	5.0071	-0.046	-0.1055
299	SLU 32	0.3	0.35	39.5	5.0918	-0.047	-0.1028
299	SLU 33	0.31	0.34	39.5	5.0916	-0.047	-0.1062
299	SLU 34	0.31	0.32	39.23	5.0604	-0.0466	-0.1069
299	SLU 35	0.3	0.35	39.98	5.1451	-0.0476	-0.1041
299	SLU 36	0.31	0.34	39.98	5.1449	-0.0477	-0.1075
299	SLU 37	0.3	0.34	39.7	5.114	-0.0473	-0.1026
299	SLU 38	0.31	0.33	39.7	5.1138	-0.0473	-0.1059
299	SLU 39	0.29	0.39	40.25	5.1714	-0.0477	-0.0985
299	SLU 40	0.3	0.37	40.25	5.1711	-0.0477	-0.1019
299	SLU 41	0.29	0.38	40.73	5.2246	-0.0484	-0.0998
299	SLU 42	0.3	0.37	40.73	5.2244	-0.0484	-0.1032
299	SLU 43	0.34	0.22	40.17	5.3849	-0.0472	-0.1157
299	SLU 44	0.35	0.2	40.17	5.3845	-0.0472	-0.1213
299	SLU 45	0.34	0.22	40.92	5.4693	-0.0482	-0.1185
299	SLU 46	0.35	0.21	40.92	5.4691	-0.0483	-0.1219
299	SLU 47	0.36	0.19	40.64	5.4378	-0.0479	-0.1226
299	SLU 48	0.35	0.21	41.4	5.5225	-0.0489	-0.1198
299	SLU 49	0.36	0.2	41.4	5.5223	-0.0489	-0.1232
299	SLU 50	0.34	0.21	41.12	5.4914	-0.0485	-0.1183
299	SLU 51	0.35	0.19	41.12	5.4912	-0.0485	-0.1217
299	SLU 52	0.34	0.27	43.67	5.767	-0.0513	-0.1179
299	SLU 53	0.34	0.3	44.43	5.8518	-0.0523	-0.1152

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
299	SLU 54	0.34	0.29	44.43	5.8516	-0.0523	-0.1185
299	SLU 55	0.35	0.27	44.15	5.8203	-0.0519	-0.1192
299	SLU 56	0.34	0.29	44.9	5.905	-0.0529	-0.1165
299	SLU 57	0.35	0.28	44.9	5.9048	-0.053	-0.1198
299	SLU 58	0.33	0.29	44.62	5.8739	-0.0526	-0.1149
299	SLU 59	0.34	0.27	44.62	5.8737	-0.0526	-0.1183
299	SLU 60	0.32	0.33	45.18	5.9313	-0.053	-0.1109
299	SLU 61	0.33	0.32	45.17	5.9311	-0.053	-0.1142
299	SLU 62	0.33	0.33	45.65	5.9846	-0.0537	-0.1122
299	SLU 63	0.34	0.31	45.65	5.9844	-0.0537	-0.1155
299	SLU 64	0.37	0.3	43.61	5.7668	-0.0516	-0.127
299	SLU 65	0.38	0.28	43.61	5.7665	-0.0517	-0.1326
299	SLU 66	0.38	0.3	44.36	5.8512	-0.0527	-0.1299
299	SLU 67	0.39	0.29	44.36	5.851	-0.0527	-0.1332
299	SLU 68	0.39	0.27	44.09	5.8198	-0.0523	-0.1339
299	SLU 69	0.38	0.3	44.84	5.9045	-0.0533	-0.1312
299	SLU 70	0.39	0.28	44.84	5.9043	-0.0533	-0.1345
299	SLU 71	0.38	0.29	44.56	5.8734	-0.0529	-0.1296
299	SLU 72	0.39	0.28	44.56	5.8732	-0.053	-0.133
299	SLU 73	0.38	0.36	47.11	6.149	-0.0557	-0.1292
299	SLU 74	0.37	0.38	47.87	6.2338	-0.0567	-0.1265
299	SLU 75	0.38	0.37	47.87	6.2335	-0.0567	-0.1299
299	SLU 76	0.38	0.35	47.59	6.2023	-0.0564	-0.1306
299	SLU 77	0.37	0.38	48.34	6.287	-0.0574	-0.1278
299	SLU 78	0.38	0.36	48.34	6.2868	-0.0574	-0.1312
299	SLU 79	0.37	0.37	48.06	6.2559	-0.057	-0.1263
299	SLU 80	0.38	0.36	48.06	6.2557	-0.057	-0.1296
299	SLU 81	0.36	0.41	48.62	6.3133	-0.0574	-0.1222
299	SLU 82	0.37	0.4	48.62	6.3131	-0.0575	-0.1256
299	SLU 83	0.36	0.41	49.09	6.3665	-0.0581	-0.1235
299	SLU 84	0.37	0.4	49.09	6.3663	-0.0581	-0.1269
299	SLE RA 1	0.28	0.21	32.79	4.3521	-0.0388	-0.0952
299	SLE RA 2	0.29	0.2	32.79	4.3518	-0.0388	-0.0989
299	SLE RA 3	0.28	0.21	33.29	4.4083	-0.0394	-0.0971
299	SLE RA 4	0.29	0.21	33.29	4.4082	-0.0394	-0.0993
299	SLE RA 5	0.29	0.2	33.11	4.3874	-0.0392	-0.0998
299	SLE RA 6	0.28	0.21	33.61	4.4439	-0.0399	-0.098
299	SLE RA 7	0.29	0.2	33.61	4.4437	-0.0399	-0.1002
299	SLE RA 8	0.28	0.21	33.43	4.4231	-0.0396	-0.097
299	SLE RA 9	0.29	0.2	33.42	4.423	-0.0396	-0.0992
299	SLE RA 10	0.28	0.25	35.13	4.6068	-0.0415	-0.0967
299	SLE RA 11	0.28	0.27	35.63	4.6634	-0.0421	-0.0949
299	SLE RA 12	0.28	0.26	35.63	4.6632	-0.0421	-0.0971
299	SLE RA 13	0.28	0.25	35.44	4.6424	-0.0419	-0.0976
299	SLE RA 14	0.28	0.26	35.94	4.6989	-0.0426	-0.0957
299	SLE RA 15	0.28	0.25	35.94	4.6987	-0.0426	-0.098
299	SLE RA 16	0.28	0.26	35.76	4.6781	-0.0423	-0.0947
299	SLE RA 17	0.28	0.25	35.76	4.678	-0.0423	-0.097
299	SLE RA 18	0.27	0.29	36.13	4.7164	-0.0426	-0.092
299	SLE RA 19	0.27	0.28	36.13	4.7162	-0.0426	-0.0942
299	SLE RA 20	0.27	0.29	36.44	4.7519	-0.043	-0.0929
299	SLE RA 21	0.28	0.28	36.44	4.7517	-0.0431	-0.0951
299	SLE FR 1	0.28	0.21	32.79	4.3521	-0.0388	-0.0952
299	SLE FR 2	0.28	0.21	32.79	4.352	-0.0388	-0.0959
299	SLE FR 3	0.28	0.21	32.92	4.3663	-0.0389	-0.0956
299	SLE FR 4	0.28	0.23	33.79	4.4613	-0.0399	-0.095
299	SLE FR 5	0.27	0.23	33.92	4.4756	-0.0401	-0.0946
299	SLE FR 6	0.27	0.25	34.46	4.5342	-0.0407	-0.0936
299	SLE QP 1	0.28	0.21	32.79	4.3521	-0.0388	-0.0952
299	SLE QP 2	0.27	0.24	33.79	4.4614	-0.0399	-0.0942
299	SLD 1	4.04	0.87	26.69	3.6678	-0.0123	-1.4146
299	SLD 2	4.38	1.3	27.07	3.7079	-0.0134	-1.5325
299	SLD 3	3.78	-0.29	25.98	3.5343	-0.01	-1.324
299	SLD 4	4.12	0.13	26.37	3.5744	-0.011	-1.4418
299	SLD 5	1.74	2.12	32.66	4.4187	-0.035	-0.6069
299	SLD 6	1.96	2.39	32.91	4.4449	-0.0357	-0.684
299	SLD 7	0.87	-1.76	30.32	3.9736	-0.0272	-0.3049
299	SLD 8	1.09	-1.48	30.57	3.9998	-0.0279	-0.3819
299	SLD 9	-0.54	1.96	37.02	4.9229	-0.052	0.1934
299	SLD 10	-0.32	2.23	37.27	4.9491	-0.0527	0.1164
299	SLD 11	-1.42	-1.92	34.68	4.4778	-0.0441	0.4955
299	SLD 12	-1.19	-1.64	34.93	4.504	-0.0448	0.4185
299	SLD 13	-3.58	0.34	41.22	5.3483	-0.0688	1.2534
299	SLD 14	-3.23	0.76	41.6	5.3884	-0.0699	1.1355
299	SLD 15	-3.84	-0.83	40.52	5.2148	-0.0664	1.344
299	SLD 16	-3.5	-0.4	40.9	5.2549	-0.0675	1.2261
299	SLV 1	9.09	1.69	17.14	2.6028	0.0247	-3.1835
299	SLV 2	9.89	2.69	18.04	2.6962	0.0222	-3.4581
299	SLV 3	8.48	-0.96	15.52	2.2914	0.0302	-2.9718
299	SLV 4	9.28	0.03	16.42	2.3848	0.0277	-3.2464
299	SLV 5	3.71	4.53	31.1	4.36	-0.0284	-1.2949
299	SLV 6	4.22	5.17	31.67	4.4201	-0.03	-1.4714
299	SLV 7	1.68	-4.32	25.7	3.3221	-0.0102	-0.5895
299	SLV 8	2.18	-3.68	26.28	3.3821	-0.0118	-0.766
299	SLV 9	-1.64	4.16	41.31	5.5406	-0.0681	0.5775
299	SLV 10	-1.13	4.79	41.88	5.6006	-0.0697	0.401
299	SLV 11	-3.67	-4.7	35.91	4.5026	-0.0498	1.2829
299	SLV 12	-3.16	-4.06	36.49	4.5627	-0.0514	1.1064
299	SLV 13	-8.73	0.44	51.17	6.5379	-0.1075	3.058
299	SLV 14	-7.94	1.43	52.06	6.6313	-0.11	2.7834
299	SLV 15	-9.34	-2.21	49.55	6.2265	-0.102	3.2696
299	SLV 16	-8.55	-1.22	50.44	6.3199	-0.1045	2.995
299	CRTFP Ux+	0	0	0	0	0	0
299	CRTFP Ux-	0	0	0	0	0	0
299	CRTFP Uy+	0	0	0	0	0	0
299	CRTFP Uy-	0	0	0	0	0	0
300	SLU 1	0.26	0.23	33.28	5.2151	-0.0607	-0.0914

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
300	SLU 2	0.28	0.21	33.28	5.215	-0.0608	-0.097
300	SLU 3	0.27	0.23	34.07	5.3249	-0.0624	-0.0943
300	SLU 4	0.28	0.22	34.07	5.3248	-0.0624	-0.0977
300	SLU 5	0.28	0.2	33.78	5.2842	-0.0618	-0.0984
300	SLU 6	0.28	0.23	34.57	5.3942	-0.0634	-0.0956
300	SLU 7	0.29	0.21	34.57	5.3941	-0.0634	-0.099
300	SLU 8	0.27	0.22	34.28	5.3536	-0.0628	-0.0941
300	SLU 9	0.28	0.21	34.28	5.3535	-0.0628	-0.0975
300	SLU 10	0.27	0.29	36.94	5.7129	-0.0677	-0.0935
300	SLU 11	0.26	0.32	37.74	5.8229	-0.0693	-0.0908
300	SLU 12	0.27	0.31	37.74	5.8228	-0.0693	-0.0941
300	SLU 13	0.28	0.29	37.44	5.7822	-0.0687	-0.0948
300	SLU 14	0.27	0.32	38.24	5.8921	-0.0703	-0.0921
300	SLU 15	0.28	0.3	38.24	5.892	-0.0704	-0.0954
300	SLU 16	0.26	0.31	37.94	5.8516	-0.0697	-0.0906
300	SLU 17	0.27	0.29	37.94	5.8515	-0.0698	-0.0939
300	SLU 18	0.25	0.36	38.52	5.9265	-0.0706	-0.0864
300	SLU 19	0.26	0.34	38.52	5.9264	-0.0707	-0.0897
300	SLU 20	0.26	0.35	39.02	5.9957	-0.0717	-0.0877
300	SLU 21	0.26	0.34	39.02	5.9956	-0.0717	-0.0911
300	SLU 22	0.3	0.32	36.89	5.7128	-0.068	-0.1026
300	SLU 23	0.31	0.3	36.89	5.7126	-0.068	-0.1082
300	SLU 24	0.31	0.32	37.68	5.8226	-0.0696	-0.1055
300	SLU 25	0.32	0.31	37.68	5.8225	-0.0697	-0.1088
300	SLU 26	0.32	0.29	37.39	5.7819	-0.0691	-0.1095
300	SLU 27	0.31	0.32	38.18	5.8919	-0.0707	-0.1068
300	SLU 28	0.32	0.3	38.18	5.8918	-0.0707	-0.1102
300	SLU 29	0.31	0.31	37.89	5.8513	-0.0701	-0.1053
300	SLU 30	0.31	0.3	37.89	5.8512	-0.0701	-0.1086
300	SLU 31	0.3	0.38	40.56	6.2106	-0.075	-0.1047
300	SLU 32	0.3	0.41	41.35	6.3206	-0.0766	-0.102
300	SLU 33	0.31	0.39	41.35	6.3205	-0.0766	-0.1053
300	SLU 34	0.31	0.38	41.06	6.2798	-0.076	-0.106
300	SLU 35	0.3	0.4	41.85	6.3898	-0.0776	-0.1033
300	SLU 36	0.31	0.39	41.85	6.3897	-0.0776	-0.1066
300	SLU 37	0.3	0.4	41.56	6.3493	-0.077	-0.1017
300	SLU 38	0.31	0.38	41.56	6.3492	-0.077	-0.1051
300	SLU 39	0.28	0.44	42.13	6.4242	-0.0779	-0.0976
300	SLU 40	0.29	0.43	42.13	6.4241	-0.0779	-0.1009
300	SLU 41	0.29	0.44	42.63	6.4934	-0.0789	-0.0989
300	SLU 42	0.3	0.43	42.63	6.4933	-0.0789	-0.1023
300	SLU 43	0.33	0.27	42.02	6.609	-0.0765	-0.115
300	SLU 44	0.35	0.24	42.02	6.6089	-0.0765	-0.1206
300	SLU 45	0.34	0.27	42.81	6.7188	-0.0781	-0.1179
300	SLU 46	0.35	0.26	42.81	6.7187	-0.0781	-0.1213
300	SLU 47	0.35	0.24	42.52	6.6781	-0.0775	-0.122
300	SLU 48	0.35	0.27	43.31	6.7881	-0.0792	-0.1192
300	SLU 49	0.35	0.25	43.31	6.788	-0.0792	-0.1226
300	SLU 50	0.34	0.26	43.02	6.7475	-0.0786	-0.1177
300	SLU 51	0.35	0.24	43.02	6.7474	-0.0786	-0.1211
300	SLU 52	0.34	0.33	45.69	7.1068	-0.0834	-0.1171
300	SLU 53	0.33	0.36	46.48	7.2168	-0.085	-0.1144
300	SLU 54	0.34	0.34	46.48	7.2167	-0.0851	-0.1177
300	SLU 55	0.34	0.33	46.19	7.1761	-0.0845	-0.1184
300	SLU 56	0.34	0.35	46.98	7.286	-0.0861	-0.1157
300	SLU 57	0.35	0.34	46.98	7.2859	-0.0861	-0.119
300	SLU 58	0.33	0.35	46.69	7.2455	-0.0855	-0.1142
300	SLU 59	0.34	0.33	46.69	7.2454	-0.0855	-0.1175
300	SLU 60	0.32	0.39	47.26	7.3204	-0.0864	-0.11
300	SLU 61	0.33	0.38	47.26	7.3203	-0.0864	-0.1133
300	SLU 62	0.32	0.39	47.76	7.3896	-0.0874	-0.1113
300	SLU 63	0.33	0.37	47.76	7.3895	-0.0874	-0.1147
300	SLU 64	0.37	0.36	45.64	7.1067	-0.0837	-0.1262
300	SLU 65	0.38	0.33	45.64	7.1065	-0.0838	-0.1318
300	SLU 66	0.37	0.36	46.43	7.2165	-0.0854	-0.1291
300	SLU 67	0.38	0.35	46.43	7.2164	-0.0854	-0.1324
300	SLU 68	0.39	0.33	46.14	7.1758	-0.0848	-0.1331
300	SLU 69	0.38	0.35	46.93	7.2858	-0.0864	-0.1304
300	SLU 70	0.39	0.34	46.93	7.2857	-0.0864	-0.1338
300	SLU 71	0.37	0.35	46.64	7.2452	-0.0858	-0.1289
300	SLU 72	0.38	0.33	46.64	7.2451	-0.0858	-0.1322
300	SLU 73	0.37	0.42	49.3	7.6045	-0.0907	-0.1283
300	SLU 74	0.36	0.45	50.1	7.7145	-0.0923	-0.1256
300	SLU 75	0.37	0.43	50.09	7.7144	-0.0923	-0.1289
300	SLU 76	0.38	0.42	49.8	7.6737	-0.0917	-0.1296
300	SLU 77	0.37	0.44	50.6	7.7837	-0.0933	-0.1269
300	SLU 78	0.38	0.43	50.59	7.7836	-0.0934	-0.1302
300	SLU 79	0.36	0.44	50.3	7.7432	-0.0927	-0.1253
300	SLU 80	0.37	0.42	50.3	7.7431	-0.0927	-0.1287
300	SLU 81	0.35	0.48	50.88	7.8181	-0.0936	-0.1212
300	SLU 82	0.36	0.47	50.87	7.818	-0.0936	-0.1245
300	SLU 83	0.36	0.48	51.38	7.8873	-0.0947	-0.1225
300	SLU 84	0.37	0.46	51.37	7.8872	-0.0947	-0.1258
300	SLE RA 1	0.27	0.26	34.31	5.3573	-0.0628	-0.0946
300	SLE RA 2	0.28	0.24	34.31	5.3572	-0.0628	-0.0984
300	SLE RA 3	0.28	0.26	34.84	5.4305	-0.0639	-0.0965
300	SLE RA 4	0.29	0.25	34.84	5.4305	-0.0639	-0.0988
300	SLE RA 5	0.29	0.24	34.64	5.4034	-0.0635	-0.0993
300	SLE RA 6	0.28	0.25	35.17	5.4767	-0.0646	-0.0974
300	SLE RA 7	0.29	0.24	35.17	5.4766	-0.0646	-0.0997
300	SLE RA 8	0.28	0.25	34.98	5.4497	-0.0642	-0.0964
300	SLE RA 9	0.29	0.24	34.98	5.4496	-0.0642	-0.0986
300	SLE RA 10	0.28	0.3	36.75	5.6892	-0.0675	-0.096
300	SLE RA 11	0.27	0.32	37.28	5.7625	-0.0685	-0.0942
300	SLE RA 12	0.28	0.31	37.28	5.7624	-0.0685	-0.0964
300	SLE RA 13	0.28	0.29	37.09	5.7353	-0.0681	-0.0969
300	SLE RA 14	0.28	0.31	37.62	5.8087	-0.0692	-0.0951

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
300	SLE RA 15	0.28	0.3	37.62	5.8086	-0.0692	-0.0973
300	SLE RA 16	0.27	0.31	37.42	5.7816	-0.0688	-0.094
300	SLE RA 17	0.28	0.3	37.42	5.7816	-0.0688	-0.0963
300	SLE RA 18	0.27	0.34	37.8	5.8315	-0.0694	-0.0913
300	SLE RA 19	0.27	0.33	37.8	5.8315	-0.0694	-0.0935
300	SLE RA 20	0.27	0.34	38.14	5.8777	-0.0701	-0.0922
300	SLE RA 21	0.27	0.33	38.14	5.8777	-0.0701	-0.0944
300	SLE FR 1	0.27	0.26	34.31	5.3573	-0.0628	-0.0946
300	SLE FR 2	0.28	0.25	34.31	5.3573	-0.0628	-0.0954
300	SLE FR 3	0.28	0.25	34.44	5.3758	-0.0631	-0.095
300	SLE FR 4	0.27	0.28	35.36	5.4996	-0.0648	-0.0944
300	SLE FR 5	0.27	0.28	35.49	5.5181	-0.0651	-0.094
300	SLE FR 6	0.27	0.3	36.06	5.5944	-0.0661	-0.093
300	SLE QP 1	0.27	0.26	34.31	5.3573	-0.0628	-0.0946
300	SLE QP 2	0.27	0.28	35.36	5.4996	-0.0648	-0.0936
300	SLD 1	4.03	0.94	27.33	4.3002	-0.0309	-1.4108
300	SLD 2	4.37	1.41	27.75	4.3555	-0.0323	-1.5285
300	SLD 3	3.77	-0.29	26.55	4.1648	-0.0277	-1.3204
300	SLD 4	4.11	0.17	26.97	4.2201	-0.0291	-1.4381
300	SLD 5	1.74	2.27	34.06	5.3353	-0.0592	-0.6051
300	SLD 6	1.96	2.58	34.33	5.3715	-0.0601	-0.682
300	SLD 7	0.87	-1.85	31.46	4.8841	-0.0486	-0.3037
300	SLD 8	1.09	-1.54	31.73	4.9202	-0.0495	-0.3807
300	SLD 9	-0.55	2.1	38.98	6.079	-0.0801	0.1934
300	SLD 10	-0.32	2.41	39.26	6.1151	-0.081	0.1165
300	SLD 11	-1.42	-2.02	36.38	5.6277	-0.0695	0.4948
300	SLD 12	-1.19	-1.71	36.66	5.6638	-0.0704	0.4178
300	SLD 13	-3.57	0.39	43.75	6.7791	-0.1005	1.2509
300	SLD 14	-3.23	0.85	44.17	6.8343	-0.1019	1.1331
300	SLD 15	-3.83	-0.85	42.97	6.6437	-0.0973	1.3413
300	SLD 16	-3.49	-0.38	43.39	6.6989	-0.0987	1.2235
300	SLV 1	9.07	1.8	16.55	2.6901	0.0147	-3.1754
300	SLV 2	9.87	2.89	17.53	2.8188	0.0115	-3.4496
300	SLV 3	8.46	-1.02	14.75	2.3761	0.0221	-2.9643
300	SLV 4	9.26	0.06	15.73	2.5048	0.0188	-3.2385
300	SLV 5	3.7	4.83	32.27	5.111	-0.0516	-1.2913
300	SLV 6	4.21	5.53	32.9	5.1937	-0.0537	-1.4676
300	SLV 7	1.67	-4.58	26.28	4.0642	-0.027	-0.5877
300	SLV 8	2.18	-3.88	26.91	4.1469	-0.0291	-0.7639
300	SLV 9	-1.64	4.44	43.81	6.8523	-0.1005	0.5767
300	SLV 10	-1.13	5.14	44.44	6.935	-0.1026	0.4004
300	SLV 11	-3.67	-4.97	37.81	5.8055	-0.0759	1.2803
300	SLV 12	-3.16	-4.27	38.44	5.8882	-0.078	1.1041
300	SLV 13	-8.71	0.5	54.99	8.4944	-0.1484	3.0513
300	SLV 14	-7.92	1.58	55.97	8.6231	-0.1517	2.777
300	SLV 15	-9.32	-2.33	53.19	8.1804	-0.1411	3.2623
300	SLV 16	-8.53	-1.24	54.17	8.3091	-0.1443	2.9881
300	CRTFP Ux+	0	0	0	0	0	0
300	CRTFP Ux-	0	0	0	0	0	0
300	CRTFP Uy+	0	0	0	0	0	0
300	CRTFP Uy-	0	0	0	0	0	0
301	SLU 1	0.26	0.26	35.47	6.7344	-0.0854	-0.0906
301	SLU 2	0.28	0.24	35.47	6.7345	-0.0854	-0.0962
301	SLU 3	0.27	0.27	36.32	6.884	-0.0877	-0.0935
301	SLU 4	0.28	0.25	36.32	6.884	-0.0877	-0.0968
301	SLU 5	0.28	0.23	36	6.8288	-0.0869	-0.0975
301	SLU 6	0.27	0.26	36.85	6.9783	-0.0891	-0.0948
301	SLU 7	0.28	0.25	36.85	6.9783	-0.0892	-0.0981
301	SLU 8	0.27	0.25	36.54	6.9231	-0.0883	-0.0933
301	SLU 9	0.28	0.24	36.54	6.9231	-0.0883	-0.0966
301	SLU 10	0.27	0.33	39.38	7.4147	-0.0954	-0.0925
301	SLU 11	0.26	0.36	40.24	7.5642	-0.0977	-0.0898
301	SLU 12	0.27	0.35	40.24	7.5643	-0.0977	-0.0931
301	SLU 13	0.27	0.33	39.92	7.509	-0.0968	-0.0938
301	SLU 14	0.26	0.36	40.77	7.6586	-0.0991	-0.0911
301	SLU 15	0.27	0.34	40.77	7.6586	-0.0991	-0.0944
301	SLU 16	0.26	0.35	40.46	7.6033	-0.0983	-0.0896
301	SLU 17	0.27	0.33	40.46	7.6033	-0.0983	-0.0929
301	SLU 18	0.25	0.4	41.07	7.7062	-0.0996	-0.0853
301	SLU 19	0.26	0.38	41.06	7.7062	-0.0996	-0.0887
301	SLU 20	0.25	0.39	41.6	7.8005	-0.1011	-0.0866
301	SLU 21	0.26	0.38	41.6	7.8005	-0.1011	-0.09
301	SLU 22	0.29	0.36	39.34	7.4141	-0.0957	-0.1016
301	SLU 23	0.31	0.33	39.34	7.4141	-0.0957	-0.1072
301	SLU 24	0.3	0.36	40.19	7.5637	-0.098	-0.1045
301	SLU 25	0.31	0.35	40.19	7.5637	-0.098	-0.1078
301	SLU 26	0.31	0.33	39.88	7.5085	-0.0971	-0.1085
301	SLU 27	0.31	0.36	40.73	7.658	-0.0994	-0.1058
301	SLU 28	0.32	0.34	40.73	7.658	-0.0994	-0.1091
301	SLU 29	0.3	0.35	40.42	7.6028	-0.0986	-0.1043
301	SLU 30	0.31	0.33	40.42	7.6028	-0.0986	-0.1076
301	SLU 31	0.3	0.43	43.26	8.0944	-0.1056	-0.1035
301	SLU 32	0.29	0.46	44.11	8.2439	-0.1079	-0.1008
301	SLU 33	0.3	0.44	44.11	8.2439	-0.1079	-0.1041
301	SLU 34	0.3	0.42	43.8	8.1887	-0.1071	-0.1048
301	SLU 35	0.3	0.45	44.65	8.3382	-0.1094	-0.1021
301	SLU 36	0.31	0.44	44.65	8.3383	-0.1094	-0.1054
301	SLU 37	0.29	0.44	44.34	8.283	-0.1085	-0.1006
301	SLU 38	0.3	0.43	44.34	8.283	-0.1085	-0.1039
301	SLU 39	0.28	0.49	44.94	8.3859	-0.1099	-0.0963
301	SLU 40	0.29	0.48	44.94	8.3859	-0.1099	-0.0997
301	SLU 41	0.28	0.49	45.48	8.4802	-0.1113	-0.0977
301	SLU 42	0.29	0.48	45.48	8.4802	-0.1114	-0.101
301	SLU 43	0.33	0.31	44.78	8.5217	-0.1075	-0.114
301	SLU 44	0.34	0.28	44.78	8.5217	-0.1075	-0.1196
301	SLU 45	0.34	0.31	45.63	8.6713	-0.1098	-0.1169
301	SLU 46	0.35	0.3	45.63	8.6713	-0.1098	-0.1202

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
301	SLU 47	0.35	0.28	45.31	8.6161	-0.109	-0.1209
301	SLU 48	0.34	0.31	46.16	8.7656	-0.1112	-0.1182
301	SLU 49	0.35	0.29	46.16	8.7656	-0.1113	-0.1215
301	SLU 50	0.34	0.3	45.85	8.7104	-0.1104	-0.1167
301	SLU 51	0.35	0.29	45.85	8.7104	-0.1104	-0.12
301	SLU 52	0.33	0.38	48.7	9.202	-0.1175	-0.1159
301	SLU 53	0.33	0.41	49.55	9.3515	-0.1198	-0.1132
301	SLU 54	0.34	0.39	49.55	9.3515	-0.1198	-0.1165
301	SLU 55	0.34	0.38	49.23	9.2963	-0.1189	-0.1172
301	SLU 56	0.33	0.4	50.08	9.4458	-0.1212	-0.1145
301	SLU 57	0.34	0.39	50.08	9.4459	-0.1212	-0.1178
301	SLU 58	0.33	0.4	49.77	9.3906	-0.1204	-0.113
301	SLU 59	0.34	0.38	49.77	9.3906	-0.1204	-0.1163
301	SLU 60	0.31	0.45	50.38	9.4935	-0.1217	-0.1087
301	SLU 61	0.32	0.43	50.38	9.4935	-0.1217	-0.1121
301	SLU 62	0.32	0.44	50.91	9.5878	-0.1232	-0.11
301	SLU 63	0.33	0.43	50.91	9.5878	-0.1232	-0.1134
301	SLU 64	0.36	0.4	48.65	9.2014	-0.1178	-0.125
301	SLU 65	0.38	0.38	48.65	9.2014	-0.1178	-0.1306
301	SLU 66	0.37	0.41	49.5	9.351	-0.1201	-0.1279
301	SLU 67	0.38	0.39	49.5	9.351	-0.1201	-0.1312
301	SLU 68	0.38	0.37	49.19	9.2958	-0.1192	-0.1319
301	SLU 69	0.37	0.4	50.04	9.4453	-0.1215	-0.1292
301	SLU 70	0.38	0.39	50.04	9.4453	-0.1215	-0.1325
301	SLU 71	0.37	0.4	49.73	9.39	-0.1207	-0.1277
301	SLU 72	0.38	0.38	49.73	9.3901	-0.1207	-0.131
301	SLU 73	0.37	0.47	52.57	9.8817	-0.1277	-0.1269
301	SLU 74	0.36	0.5	53.42	10.0312	-0.13	-0.1242
301	SLU 75	0.37	0.49	53.42	10.0312	-0.13	-0.1275
301	SLU 76	0.37	0.47	53.11	9.976	-0.1292	-0.1282
301	SLU 77	0.36	0.5	53.96	10.1255	-0.1315	-0.1255
301	SLU 78	0.37	0.48	53.96	10.1255	-0.1315	-0.1288
301	SLU 79	0.36	0.49	53.65	10.0703	-0.1306	-0.124
301	SLU 80	0.37	0.48	53.65	10.0703	-0.1306	-0.1273
301	SLU 81	0.35	0.54	54.25	10.1732	-0.132	-0.1197
301	SLU 82	0.36	0.53	54.25	10.1732	-0.132	-0.1231
301	SLU 83	0.35	0.54	54.79	10.2675	-0.1334	-0.1211
301	SLU 84	0.36	0.52	54.79	10.2675	-0.1335	-0.1244
301	SLE RA 1	0.27	0.29	36.57	6.9286	-0.0883	-0.0938
301	SLE RA 2	0.28	0.27	36.57	6.9286	-0.0883	-0.0975
301	SLE RA 3	0.28	0.29	37.14	7.0284	-0.0899	-0.0957
301	SLE RA 4	0.28	0.28	37.14	7.0284	-0.0899	-0.0979
301	SLE RA 5	0.28	0.27	36.93	6.9915	-0.0893	-0.0983
301	SLE RA 6	0.28	0.29	37.5	7.0912	-0.0908	-0.0965
301	SLE RA 7	0.29	0.28	37.5	7.0912	-0.0908	-0.0988
301	SLE RA 8	0.28	0.28	37.29	7.0544	-0.0903	-0.0955
301	SLE RA 9	0.28	0.27	37.29	7.0544	-0.0903	-0.0977
301	SLE RA 10	0.27	0.34	39.19	7.3821	-0.095	-0.095
301	SLE RA 11	0.27	0.36	39.75	7.4818	-0.0965	-0.0932
301	SLE RA 12	0.28	0.35	39.75	7.4818	-0.0965	-0.0954
301	SLE RA 13	0.28	0.33	39.54	7.445	-0.096	-0.0959
301	SLE RA 14	0.27	0.35	40.11	7.5447	-0.0975	-0.0941
301	SLE RA 15	0.28	0.34	40.11	7.5447	-0.0975	-0.0963
301	SLE RA 16	0.27	0.35	39.9	7.5079	-0.0969	-0.0931
301	SLE RA 17	0.28	0.34	39.9	7.5079	-0.0969	-0.0953
301	SLE RA 18	0.26	0.38	40.31	7.5765	-0.0978	-0.0902
301	SLE RA 19	0.27	0.37	40.31	7.5765	-0.0978	-0.0925
301	SLE RA 20	0.26	0.38	40.67	7.6393	-0.0988	-0.0911
301	SLE RA 21	0.27	0.37	40.66	7.6393	-0.0988	-0.0933
301	SLE FR 1	0.27	0.29	36.57	6.9286	-0.0883	-0.0938
301	SLE FR 2	0.27	0.29	36.57	6.9286	-0.0883	-0.0945
301	SLE FR 3	0.27	0.29	36.72	6.9538	-0.0887	-0.0941
301	SLE FR 4	0.27	0.31	37.69	7.123	-0.0912	-0.0934
301	SLE FR 5	0.27	0.32	37.84	7.1481	-0.0916	-0.0931
301	SLE FR 6	0.27	0.34	38.44	7.2526	-0.0931	-0.092
301	SLE QP 1	0.27	0.29	36.57	6.9286	-0.0883	-0.0938
301	SLE QP 2	0.27	0.32	37.69	7.123	-0.0912	-0.0927
301	SLD 1	4.02	1.01	28.54	5.3739	-0.0502	-1.4066
301	SLD 2	4.36	1.52	29.01	5.4517	-0.0519	-1.5242
301	SLD 3	3.76	-0.3	27.66	5.2144	-0.0461	-1.3163
301	SLD 4	4.1	0.21	28.12	5.2923	-0.0479	-1.4339
301	SLD 5	1.73	2.43	36.21	6.8263	-0.0847	-0.603
301	SLD 6	1.95	2.76	36.51	6.8772	-0.0858	-0.6799
301	SLD 7	0.86	-1.95	33.26	6.2949	-0.0712	-0.3021
301	SLD 8	1.08	-1.62	33.57	6.3457	-0.0724	-0.379
301	SLD 9	-0.55	2.25	41.82	7.9002	-0.11	0.1936
301	SLD 10	-0.32	2.59	42.13	7.9511	-0.1111	0.1167
301	SLD 11	-1.42	-2.13	38.88	7.3688	-0.0965	0.4945
301	SLD 12	-1.19	-1.79	39.18	7.4197	-0.0977	0.4176
301	SLD 13	-3.57	0.42	47.26	8.9537	-0.1345	1.2485
301	SLD 14	-3.23	0.94	47.73	9.0316	-0.1363	1.1309
301	SLD 15	-3.83	-0.89	46.38	8.7943	-0.1305	1.3388
301	SLD 16	-3.49	-0.38	46.85	8.8721	-0.1322	1.2212
301	SLV 1	9.05	1.91	16.25	3.0252	0.0049	-3.1669
301	SLV 2	9.85	3.1	17.34	3.2066	0.0009	-3.4408
301	SLV 3	8.44	-1.09	14.21	2.6571	0.0143	-2.9561
301	SLV 4	9.24	0.11	15.3	2.8385	0.0102	-3.23
301	SLV 5	3.69	5.14	34.16	6.4208	-0.0758	-1.2877
301	SLV 6	4.2	5.91	34.86	6.5374	-0.0784	-1.4637
301	SLV 7	1.66	-4.86	27.37	5.1939	-0.0447	-0.5851
301	SLV 8	2.17	-4.09	28.08	5.3105	-0.0473	-0.7611
301	SLV 9	-1.63	4.72	47.31	8.9355	-0.1351	0.5757
301	SLV 10	-1.12	5.49	48.01	9.0521	-0.1377	0.3997
301	SLV 11	-3.67	-5.27	40.53	7.7086	-0.104	1.2783
301	SLV 12	-3.16	-4.51	41.23	7.8251	-0.1066	1.1023
301	SLV 13	-8.7	0.53	60.09	11.4075	-0.1926	3.0446
301	SLV 14	-7.91	1.72	61.18	11.5889	-0.1966	2.7707

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
301	SLV 15	-9.31	-2.47	58.05	11.0394	-0.1833	3.2554
301	SLV 16	-8.52	-1.28	59.14	11.2208	-0.1873	2.9815
301	CRTFP Ux+	0	0	0	0	0	0
301	CRTFP Ux-	0	0	0	0	0	0
301	CRTFP Uy+	0	0	0	0	0	0
301	CRTFP Uy-	0	0	0	0	0	0
302	SLU 1	0.26	0.28	38.4	8.846	-0.1106	-0.0895
302	SLU 2	0.27	0.26	38.4	8.8462	-0.1106	-0.0951
302	SLU 3	0.27	0.29	39.33	9.0509	-0.1136	-0.0924
302	SLU 4	0.27	0.27	39.33	9.0511	-0.1136	-0.0957
302	SLU 5	0.28	0.25	38.99	8.9754	-0.1125	-0.0964
302	SLU 6	0.27	0.28	39.92	9.1801	-0.1154	-0.0937
302	SLU 7	0.28	0.27	39.92	9.1803	-0.1154	-0.097
302	SLU 8	0.26	0.28	39.58	9.1044	-0.1143	-0.0922
302	SLU 9	0.27	0.26	39.58	9.1045	-0.1143	-0.0955
302	SLU 10	0.26	0.36	42.67	9.7808	-0.1237	-0.0912
302	SLU 11	0.26	0.39	43.6	9.9856	-0.1266	-0.0885
302	SLU 12	0.26	0.37	43.6	9.9857	-0.1266	-0.0919
302	SLU 13	0.27	0.36	43.25	9.91	-0.1255	-0.0925
302	SLU 14	0.26	0.39	44.18	10.1148	-0.1285	-0.0899
302	SLU 15	0.27	0.37	44.18	10.1149	-0.1285	-0.0932
302	SLU 16	0.25	0.38	43.84	10.039	-0.1274	-0.0883
302	SLU 17	0.26	0.36	43.84	10.0391	-0.1274	-0.0916
302	SLU 18	0.24	0.43	44.5	10.1812	-0.1292	-0.0841
302	SLU 19	0.25	0.41	44.5	10.1813	-0.1292	-0.0874
302	SLU 20	0.25	0.43	45.08	10.3104	-0.1311	-0.0854
302	SLU 21	0.26	0.41	45.08	10.3105	-0.1311	-0.0887
302	SLU 22	0.29	0.38	42.64	9.7794	-0.1239	-0.1004
302	SLU 23	0.3	0.36	42.64	9.7796	-0.1239	-0.1059
302	SLU 24	0.3	0.39	43.56	9.9843	-0.1269	-0.1032
302	SLU 25	0.31	0.37	43.56	9.9845	-0.1269	-0.1065
302	SLU 26	0.31	0.35	43.22	9.9088	-0.1258	-0.1072
302	SLU 27	0.3	0.38	44.15	10.1135	-0.1288	-0.1045
302	SLU 28	0.31	0.37	44.15	10.1137	-0.1288	-0.1078
302	SLU 29	0.3	0.38	43.81	10.0378	-0.1277	-0.103
302	SLU 30	0.31	0.36	43.81	10.0379	-0.1277	-0.1063
302	SLU 31	0.29	0.46	46.9	10.7142	-0.137	-0.1021
302	SLU 32	0.29	0.49	47.83	10.919	-0.1399	-0.0994
302	SLU 33	0.3	0.47	47.83	10.9191	-0.1399	-0.1027
302	SLU 34	0.3	0.46	47.49	10.8434	-0.1388	-0.1034
302	SLU 35	0.29	0.49	48.42	11.0482	-0.1418	-0.1007
302	SLU 36	0.3	0.47	48.42	11.0483	-0.1418	-0.104
302	SLU 37	0.29	0.48	48.07	10.9724	-0.1407	-0.0992
302	SLU 38	0.3	0.46	48.07	10.9725	-0.1407	-0.1025
302	SLU 39	0.27	0.53	48.73	11.1146	-0.1426	-0.0949
302	SLU 40	0.28	0.51	48.73	11.1147	-0.1426	-0.0982
302	SLU 41	0.28	0.53	49.31	11.2438	-0.1444	-0.0962
302	SLU 42	0.29	0.51	49.31	11.2439	-0.1444	-0.0995
302	SLU 43	0.32	0.33	48.48	11.1798	-0.1392	-0.1127
302	SLU 44	0.34	0.31	48.47	11.18	-0.1392	-0.1182
302	SLU 45	0.33	0.34	49.4	11.3847	-0.1422	-0.1155
302	SLU 46	0.34	0.32	49.4	11.3848	-0.1422	-0.1188
302	SLU 47	0.34	0.31	49.06	11.3092	-0.1411	-0.1195
302	SLU 48	0.34	0.33	49.99	11.5139	-0.144	-0.1168
302	SLU 49	0.35	0.32	49.99	11.514	-0.144	-0.1201
302	SLU 50	0.33	0.33	49.65	11.4382	-0.1429	-0.1153
302	SLU 51	0.34	0.31	49.65	11.4383	-0.143	-0.1186
302	SLU 52	0.33	0.41	52.74	12.1146	-0.1523	-0.1144
302	SLU 53	0.32	0.44	53.67	12.3193	-0.1552	-0.1117
302	SLU 54	0.33	0.43	53.67	12.3195	-0.1552	-0.115
302	SLU 55	0.33	0.41	53.33	12.2438	-0.1541	-0.1157
302	SLU 56	0.33	0.44	54.26	12.4485	-0.1571	-0.113
302	SLU 57	0.33	0.42	54.25	12.4486	-0.1571	-0.1163
302	SLU 58	0.32	0.43	53.91	12.3728	-0.156	-0.1115
302	SLU 59	0.33	0.41	53.91	12.3729	-0.156	-0.1148
302	SLU 60	0.31	0.48	54.57	12.515	-0.1579	-0.1072
302	SLU 61	0.32	0.47	54.57	12.5151	-0.1579	-0.1105
302	SLU 62	0.31	0.48	55.15	12.6441	-0.1597	-0.1085
302	SLU 63	0.32	0.46	55.15	12.6443	-0.1597	-0.1118
302	SLU 64	0.36	0.43	52.71	12.1132	-0.1525	-0.1235
302	SLU 65	0.37	0.41	52.71	12.1134	-0.1526	-0.129
302	SLU 66	0.36	0.44	53.64	12.3181	-0.1555	-0.1264
302	SLU 67	0.37	0.42	53.64	12.3182	-0.1555	-0.1297
302	SLU 68	0.37	0.41	53.29	12.2426	-0.1544	-0.1304
302	SLU 69	0.37	0.43	54.22	12.4473	-0.1574	-0.1277
302	SLU 70	0.38	0.42	54.22	12.4474	-0.1574	-0.131
302	SLU 71	0.36	0.43	53.88	12.3716	-0.1563	-0.1262
302	SLU 72	0.37	0.41	53.88	12.3717	-0.1563	-0.1295
302	SLU 73	0.36	0.51	56.97	13.048	-0.1656	-0.1252
302	SLU 74	0.35	0.54	57.9	13.2527	-0.1685	-0.1225
302	SLU 75	0.36	0.53	57.9	13.2529	-0.1686	-0.1258
302	SLU 76	0.36	0.51	57.56	13.1772	-0.1675	-0.1265
302	SLU 77	0.36	0.54	58.49	13.3819	-0.1704	-0.1238
302	SLU 78	0.37	0.52	58.49	13.3821	-0.1704	-0.1272
302	SLU 79	0.35	0.53	58.14	13.3062	-0.1693	-0.1223
302	SLU 80	0.36	0.51	58.14	13.3063	-0.1693	-0.1256
302	SLU 81	0.34	0.58	58.8	13.4484	-0.1712	-0.1181
302	SLU 82	0.35	0.57	58.8	13.4485	-0.1712	-0.1214
302	SLU 83	0.34	0.58	59.39	13.5776	-0.173	-0.1194
302	SLU 84	0.35	0.56	59.38	13.5777	-0.173	-0.1227
302	SLE RA 1	0.27	0.31	39.61	9.1127	-0.1144	-0.0926
302	SLE RA 2	0.28	0.3	39.61	9.1128	-0.1144	-0.0963
302	SLE RA 3	0.27	0.32	40.23	9.2493	-0.1164	-0.0945
302	SLE RA 4	0.28	0.3	40.23	9.2494	-0.1164	-0.0967
302	SLE RA 5	0.28	0.29	40	9.199	-0.1157	-0.0972
302	SLE RA 6	0.27	0.31	40.62	9.3354	-0.1176	-0.0954
302	SLE RA 7	0.28	0.3	40.62	9.3355	-0.1176	-0.0976

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
302	SLE RA 8	0.27	0.31	40.4	9.285	-0.1169	-0.0944
302	SLE RA 9	0.28	0.3	40.4	9.285	-0.1169	-0.0966
302	SLE RA 10	0.27	0.36	42.46	9.7359	-0.1231	-0.0938
302	SLE RA 11	0.26	0.38	43.08	9.8724	-0.1251	-0.092
302	SLE RA 12	0.27	0.37	43.08	9.8725	-0.1251	-0.0942
302	SLE RA 13	0.27	0.36	42.85	9.822	-0.1244	-0.0946
302	SLE RA 14	0.27	0.38	43.47	9.9585	-0.1263	-0.0928
302	SLE RA 15	0.27	0.37	43.47	9.9586	-0.1263	-0.0951
302	SLE RA 16	0.26	0.38	43.24	9.908	-0.1256	-0.0918
302	SLE RA 17	0.27	0.37	43.24	9.9081	-0.1256	-0.094
302	SLE RA 18	0.26	0.41	43.67	10.0028	-0.1268	-0.089
302	SLE RA 19	0.26	0.4	43.67	10.0029	-0.1268	-0.0912
302	SLE RA 20	0.26	0.41	44.07	10.0889	-0.1281	-0.0899
302	SLE RA 21	0.27	0.4	44.07	10.089	-0.1281	-0.0921
302	SLE FR 1	0.27	0.31	39.61	9.1127	-0.1144	-0.0926
302	SLE FR 2	0.27	0.31	39.61	9.1127	-0.1144	-0.0934
302	SLE FR 3	0.27	0.31	39.77	9.1471	-0.1149	-0.093
302	SLE FR 4	0.27	0.34	40.83	9.3798	-0.1181	-0.0923
302	SLE FR 5	0.26	0.34	40.99	9.4142	-0.1186	-0.0919
302	SLE FR 6	0.26	0.36	41.64	9.5578	-0.1206	-0.0908
302	SLE QP 1	0.27	0.31	39.61	9.1127	-0.1144	-0.0926
302	SLE QP 2	0.26	0.34	40.83	9.3797	-0.1181	-0.0915
302	SLD 1	4.01	1.08	30.33	6.919	-0.0696	-1.4022
302	SLD 2	4.35	1.64	30.86	7.0273	-0.0717	-1.5198
302	SLD 3	3.75	-0.32	29.32	6.7065	-0.0648	-1.312
302	SLD 4	4.09	0.24	29.85	6.8148	-0.0669	-1.4295
302	SLD 5	1.72	2.57	39.12	8.9447	-0.1105	-0.6009
302	SLD 6	1.95	2.94	39.47	9.0155	-0.1119	-0.6777
302	SLD 7	0.85	-2.07	35.75	8.2362	-0.0944	-0.3
302	SLD 8	1.08	-1.7	36.09	8.3071	-0.0958	-0.3768
302	SLD 9	-0.55	2.38	45.57	10.4524	-0.1405	0.1937
302	SLD 10	-0.33	2.75	45.91	10.5232	-0.1418	0.1169
302	SLD 11	-1.42	-2.26	42.2	9.7439	-0.1244	0.4946
302	SLD 12	-1.2	-1.89	42.54	9.8148	-0.1257	0.4178
302	SLD 13	-3.56	0.44	51.82	11.9447	-0.1694	1.2464
302	SLD 14	-3.22	1	52.34	12.053	-0.1715	1.1289
302	SLD 15	-3.82	-0.95	50.8	11.7321	-0.1646	1.3367
302	SLD 16	-3.48	-0.39	51.33	11.8405	-0.1667	1.2191
302	SLV 1	9.03	2.02	16.24	3.6147	-0.0044	-3.1581
302	SLV 2	9.82	3.33	17.46	3.8671	-0.0093	-3.4319
302	SLV 3	8.42	-1.15	13.9	3.1246	0.0067	-2.9474
302	SLV 4	9.21	0.15	15.13	3.377	0.0019	-3.2211
302	SLV 5	3.68	5.44	36.78	8.3503	-0.1001	-1.2842
302	SLV 6	4.19	6.28	37.57	8.5125	-0.1032	-1.4602
302	SLV 7	1.65	-5.15	29.01	6.7166	-0.0629	-0.5817
302	SLV 8	2.16	-4.31	29.79	6.8788	-0.0661	-0.7577
302	SLV 9	-1.63	4.99	51.87	11.8806	-0.1702	0.5746
302	SLV 10	-1.12	5.83	52.66	12.0428	-0.1733	0.3987
302	SLV 11	-3.66	-5.59	44.1	10.247	-0.1331	1.2771
302	SLV 12	-3.16	-4.75	44.88	10.4092	-0.1362	1.1012
302	SLV 13	-8.69	0.53	66.54	15.3825	-0.2381	3.0381
302	SLV 14	-7.89	1.84	67.76	15.6349	-0.243	2.7643
302	SLV 15	-9.3	-2.65	64.2	14.8924	-0.227	3.2488
302	SLV 16	-8.5	-1.34	65.43	15.1448	-0.2319	2.975
302	CRTFP Ux+	0	0	0	0	0	0
302	CRTFP Ux-	0	0	0	0	0	0
302	CRTFP Uy+	0	0	0	0	0	0
302	CRTFP Uy-	0	0	0	0	0	0
303	SLU 1	0.22	0.25	36.06	9.8511	0.9213	-0.0834
303	SLU 2	0.23	0.23	36.06	9.8514	0.9213	-0.0875
303	SLU 3	0.23	0.26	36.94	10.0862	0.9436	-0.0859
303	SLU 4	0.23	0.24	36.94	10.0863	0.9436	-0.0884
303	SLU 5	0.23	0.23	36.62	9.9996	0.9354	-0.0885
303	SLU 6	0.23	0.25	37.5	10.2343	0.9577	-0.0869
303	SLU 7	0.24	0.24	37.5	10.2345	0.9577	-0.0894
303	SLU 8	0.22	0.24	37.17	10.1475	0.9495	-0.0854
303	SLU 9	0.23	0.23	37.17	10.1477	0.9494	-0.0879
303	SLU 10	0.22	0.32	40.09	10.9257	1.0236	-0.0867
303	SLU 11	0.22	0.35	40.97	11.1604	1.0458	-0.0851
303	SLU 12	0.22	0.33	40.97	11.1606	1.0458	-0.0876
303	SLU 13	0.23	0.32	40.64	11.0739	1.0376	-0.0877
303	SLU 14	0.22	0.34	41.52	11.3086	1.0599	-0.0861
303	SLU 15	0.23	0.33	41.52	11.3088	1.0599	-0.0886
303	SLU 16	0.22	0.34	41.2	11.2218	1.0517	-0.0846
303	SLU 17	0.22	0.32	41.2	11.2219	1.0517	-0.0871
303	SLU 18	0.2	0.38	41.81	11.3858	1.0674	-0.0822
303	SLU 19	0.21	0.37	41.81	11.386	1.0674	-0.0847
303	SLU 20	0.21	0.38	42.37	11.534	1.0815	-0.0833
303	SLU 21	0.22	0.37	42.37	11.5341	1.0815	-0.0857
303	SLU 22	0.24	0.34	40.07	10.9234	1.0228	-0.0952
303	SLU 23	0.26	0.32	40.07	10.9237	1.0228	-0.0993
303	SLU 24	0.25	0.35	40.95	11.1585	1.0451	-0.0977
303	SLU 25	0.26	0.33	40.95	11.1587	1.0451	-0.1001
303	SLU 26	0.26	0.32	40.62	11.0719	1.0368	-0.1003
303	SLU 27	0.26	0.34	41.5	11.3067	1.0591	-0.0987
303	SLU 28	0.26	0.33	41.5	11.3068	1.0591	-0.1012
303	SLU 29	0.25	0.33	41.18	11.2198	1.0509	-0.0972
303	SLU 30	0.26	0.32	41.18	11.22	1.0509	-0.0996
303	SLU 31	0.25	0.41	44.09	11.998	1.125	-0.0985
303	SLU 32	0.24	0.44	44.97	12.2328	1.1473	-0.0969
303	SLU 33	0.25	0.42	44.97	12.2329	1.1473	-0.0994
303	SLU 34	0.25	0.41	44.65	12.1462	1.1391	-0.0995
303	SLU 35	0.25	0.43	45.53	12.3809	1.1614	-0.0979
303	SLU 36	0.25	0.42	45.53	12.3811	1.1614	-0.1004
303	SLU 37	0.24	0.43	45.2	12.2941	1.1532	-0.0964
303	SLU 38	0.25	0.41	45.2	12.2943	1.1532	-0.0989
303	SLU 39	0.23	0.47	45.82	12.4581	1.1689	-0.094

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
303	SLU 40	0.24	0.46	45.82	12.4583	1.1689	-0.0965
303	SLU 41	0.23	0.47	46.37	12.6063	1.1829	-0.095
303	SLU 42	0.24	0.45	46.37	12.6065	1.1829	-0.0975
303	SLU 43	0.27	0.3	45.51	12.4388	1.1629	-0.1044
303	SLU 44	0.29	0.27	45.51	12.4391	1.1629	-0.1085
303	SLU 45	0.28	0.3	46.39	12.6738	1.1852	-0.1069
303	SLU 46	0.29	0.29	46.39	12.674	1.1852	-0.1094
303	SLU 47	0.29	0.27	46.07	12.5873	1.177	-0.1095
303	SLU 48	0.28	0.3	46.95	12.822	1.1993	-0.1079
303	SLU 49	0.29	0.28	46.94	12.8222	1.1993	-0.1104
303	SLU 50	0.28	0.29	46.62	12.7352	1.1911	-0.1064
303	SLU 51	0.29	0.28	46.62	12.7353	1.1911	-0.1089
303	SLU 52	0.28	0.37	49.54	13.5134	1.2652	-0.1077
303	SLU 53	0.27	0.39	50.42	13.7481	1.2875	-0.1061
303	SLU 54	0.28	0.38	50.42	13.7483	1.2874	-0.1086
303	SLU 55	0.28	0.36	50.09	13.6615	1.2792	-0.1087
303	SLU 56	0.28	0.39	50.97	13.8963	1.3015	-0.1071
303	SLU 57	0.28	0.37	50.97	13.8965	1.3015	-0.1096
303	SLU 58	0.27	0.38	50.65	13.8094	1.2933	-0.1056
303	SLU 59	0.28	0.37	50.65	13.8096	1.2933	-0.1081
303	SLU 60	0.26	0.43	51.26	13.9735	1.309	-0.1032
303	SLU 61	0.27	0.41	51.26	13.9736	1.309	-0.1057
303	SLU 62	0.26	0.42	51.82	14.1216	1.3231	-0.1042
303	SLU 63	0.27	0.41	51.82	14.1218	1.3231	-0.1067
303	SLU 64	0.3	0.39	49.51	13.5111	1.2644	-0.1161
303	SLU 65	0.31	0.36	49.51	13.5114	1.2644	-0.1202
303	SLU 66	0.31	0.39	50.39	13.7462	1.2867	-0.1187
303	SLU 67	0.32	0.38	50.39	13.7463	1.2867	-0.1211
303	SLU 68	0.32	0.36	50.07	13.6596	1.2784	-0.1212
303	SLU 69	0.31	0.39	50.95	13.8944	1.3007	-0.1197
303	SLU 70	0.32	0.37	50.95	13.8945	1.3007	-0.1221
303	SLU 71	0.31	0.38	50.62	13.8075	1.2925	-0.1182
303	SLU 72	0.32	0.37	50.62	13.8077	1.2925	-0.1206
303	SLU 73	0.31	0.46	53.54	14.5857	1.3666	-0.1194
303	SLU 74	0.3	0.48	54.42	14.8204	1.3889	-0.1179
303	SLU 75	0.31	0.47	54.42	14.8206	1.3889	-0.1203
303	SLU 76	0.31	0.45	54.09	14.7339	1.3807	-0.1205
303	SLU 77	0.3	0.48	54.97	14.9686	1.403	-0.1189
303	SLU 78	0.31	0.46	54.97	14.9688	1.403	-0.1213
303	SLU 79	0.3	0.47	54.65	14.8818	1.3948	-0.1174
303	SLU 80	0.31	0.46	54.65	14.8819	1.3948	-0.1198
303	SLU 81	0.29	0.52	55.26	15.0458	1.4105	-0.115
303	SLU 82	0.3	0.5	55.26	15.046	1.4105	-0.1174
303	SLU 83	0.29	0.51	55.82	15.194	1.4245	-0.116
303	SLU 84	0.3	0.5	55.82	15.1942	1.4245	-0.1185
303	SLE RA 1	0.23	0.28	37.21	10.1575	0.9503	-0.0867
303	SLE RA 2	0.23	0.26	37.21	10.1577	0.9503	-0.0895
303	SLE RA 3	0.23	0.28	37.79	10.3142	0.9652	-0.0884
303	SLE RA 4	0.24	0.27	37.79	10.3143	0.9652	-0.0901
303	SLE RA 5	0.24	0.26	37.58	10.2565	0.9597	-0.0902
303	SLE RA 6	0.23	0.28	38.16	10.413	0.9745	-0.0891
303	SLE RA 7	0.24	0.27	38.16	10.4131	0.9745	-0.0908
303	SLE RA 8	0.23	0.27	37.95	10.3551	0.9691	-0.0881
303	SLE RA 9	0.24	0.26	37.95	10.3552	0.9691	-0.0897
303	SLE RA 10	0.23	0.32	39.89	10.8739	1.0185	-0.0889
303	SLE RA 11	0.22	0.34	40.48	11.0304	1.0333	-0.0879
303	SLE RA 12	0.23	0.33	40.48	11.0305	1.0333	-0.0895
303	SLE RA 13	0.23	0.32	40.26	10.9727	1.0278	-0.0896
303	SLE RA 14	0.23	0.34	40.85	11.1292	1.0427	-0.0886
303	SLE RA 15	0.23	0.33	40.85	11.1293	1.0427	-0.0902
303	SLE RA 16	0.22	0.33	40.63	11.0713	1.0372	-0.0876
303	SLE RA 17	0.23	0.32	40.63	11.0714	1.0372	-0.0892
303	SLE RA 18	0.22	0.36	41.04	11.1806	1.0477	-0.086
303	SLE RA 19	0.22	0.36	41.04	11.1807	1.0477	-0.0876
303	SLE RA 20	0.22	0.36	41.41	11.2794	1.0571	-0.0867
303	SLE RA 21	0.22	0.35	41.41	11.2795	1.0571	-0.0883
303	SLE FR 1	0.23	0.28	37.21	10.1575	0.9503	-0.0867
303	SLE FR 2	0.23	0.27	37.21	10.1575	0.9503	-0.0873
303	SLE FR 3	0.23	0.28	37.36	10.197	0.9541	-0.087
303	SLE FR 4	0.23	0.3	38.36	10.4645	0.9795	-0.0871
303	SLE FR 5	0.22	0.3	38.51	10.5039	0.9833	-0.0868
303	SLE FR 6	0.22	0.32	39.12	10.669	0.999	-0.0864
303	SLE QP 1	0.23	0.28	37.21	10.1575	0.9503	-0.0867
303	SLE QP 2	0.22	0.3	38.36	10.4644	0.9795	-0.0865
303	SLD 1	3.45	0.97	28.05	7.6203	0.7273	-1.2216
303	SLD 2	3.74	1.49	28.56	7.7449	0.74	-1.338
303	SLD 3	3.23	-0.29	27.06	7.3731	0.703	-1.1223
303	SLD 4	3.52	0.24	27.56	7.4977	0.7156	-1.2387
303	SLD 5	1.48	2.32	36.68	9.9642	0.9385	-0.557
303	SLD 6	1.67	2.66	37.02	10.0456	0.9468	-0.6331
303	SLD 7	0.73	-1.87	33.37	9.14	0.8575	-0.2261
303	SLD 8	0.92	-1.53	33.7	9.2214	0.8657	-0.3022
303	SLD 9	-0.48	2.14	43.01	11.7074	1.0933	0.1292
303	SLD 10	-0.28	2.48	43.35	11.7888	1.1016	0.0531
303	SLD 11	-1.23	-2.05	39.7	10.8833	1.0123	0.46
303	SLD 12	-1.03	-1.71	40.03	10.9647	1.0205	0.384
303	SLD 13	-3.07	0.37	49.15	13.4312	1.2434	1.0657
303	SLD 14	-2.78	0.89	49.66	13.5558	1.256	0.9493
303	SLD 15	-3.3	-0.89	48.16	13.1839	1.2191	1.1649
303	SLD 16	-3	-0.36	48.67	13.3085	1.2317	1.0486
303	SLV 1	7.77	1.83	14.21	3.8014	0.3887	-2.7418
303	SLV 2	8.46	3.05	15.39	4.0915	0.4181	-3.0129
303	SLV 3	7.25	-1.04	11.92	3.231	0.3326	-2.5111
303	SLV 4	7.93	0.18	13.1	3.5211	0.362	-2.7822
303	SLV 5	3.17	4.9	34.39	9.281	0.8822	-1.1865
303	SLV 6	3.61	5.69	35.14	9.4674	0.9011	-1.3607
303	SLV 7	1.42	-4.66	26.75	7.3796	0.6954	-0.4176

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
303	SLV 8	1.86	-3.88	27.51	7.566	0.7143	-0.5918
303	SLV 9	-1.41	4.48	49.21	13.3628	1.2447	0.4188
303	SLV 10	-0.97	5.26	49.97	13.5493	1.2636	0.2445
303	SLV 11	-3.16	-5.08	41.57	11.4614	1.0579	1.1877
303	SLV 12	-2.72	-4.3	42.33	11.6479	1.0768	1.0135
303	SLV 13	-7.49	0.43	63.62	17.4077	1.597	2.6092
303	SLV 14	-6.8	1.64	64.8	17.6978	1.6264	2.3381
303	SLV 15	-8.01	-2.44	61.33	16.8373	1.541	2.8398
303	SLV 16	-7.33	-1.22	62.51	17.1274	1.5704	2.5688
303	CRTFP Ux+	0	0	0	0	0	0
303	CRTFP Ux-	0	0	0	0	0	0
303	CRTFP Uy+	0	0	0	0	0	0
303	CRTFP Uy-	0	0	0	0	0	0
305	SLU 1	0.31	0.37	56.07	12.5534	12.1937	-0.1626
305	SLU 2	0.33	0.33	56.07	12.5536	12.1935	-0.1595
305	SLU 3	0.32	0.37	57.44	12.8596	12.4906	-0.1663
305	SLU 4	0.33	0.35	57.44	12.8597	12.4905	-0.1645
305	SLU 5	0.34	0.33	56.94	12.7467	12.3811	-0.1594
305	SLU 6	0.33	0.37	58.31	13.0527	12.6782	-0.1662
305	SLU 7	0.34	0.35	58.31	13.0529	12.6781	-0.1644
305	SLU 8	0.32	0.36	57.81	12.9397	12.5689	-0.1623
305	SLU 9	0.33	0.34	57.81	12.9398	12.5687	-0.1605
305	SLU 10	0.32	0.47	62.35	13.9547	13.5517	-0.1883
305	SLU 11	0.31	0.51	63.73	14.2607	13.8489	-0.1951
305	SLU 12	0.32	0.49	63.73	14.2608	13.8487	-0.1933
305	SLU 13	0.32	0.46	63.22	14.1478	13.7393	-0.1881
305	SLU 14	0.31	0.5	64.6	14.4538	14.0365	-0.195
305	SLU 15	0.32	0.48	64.6	14.4539	14.0363	-0.1931
305	SLU 16	0.31	0.49	64.09	14.3408	13.9271	-0.191
305	SLU 17	0.32	0.47	64.09	14.3409	13.927	-0.1892
305	SLU 18	0.29	0.56	65.04	14.5549	14.1341	-0.2036
305	SLU 19	0.3	0.54	65.04	14.5551	14.1339	-0.2018
305	SLU 20	0.3	0.55	65.91	14.7481	14.3217	-0.2035
305	SLU 21	0.31	0.53	65.91	14.7482	14.3215	-0.2017
305	SLU 22	0.35	0.5	62.32	13.9499	13.5427	-0.2033
305	SLU 23	0.37	0.47	62.32	13.95	13.5425	-0.2002
305	SLU 24	0.36	0.5	63.7	14.256	13.8396	-0.2071
305	SLU 25	0.37	0.48	63.7	14.2561	13.8395	-0.2052
305	SLU 26	0.37	0.46	63.19	14.1432	13.73	-0.2001
305	SLU 27	0.36	0.5	64.57	14.4492	14.0272	-0.2069
305	SLU 28	0.38	0.48	64.57	14.4493	14.027	-0.2051
305	SLU 29	0.36	0.49	64.06	14.3362	13.9179	-0.203
305	SLU 30	0.37	0.47	64.06	14.3363	13.9177	-0.2012
305	SLU 31	0.36	0.6	68.6	15.3511	14.9007	-0.229
305	SLU 32	0.35	0.64	69.98	15.6571	15.1979	-0.2358
305	SLU 33	0.36	0.62	69.98	15.6572	15.1977	-0.234
305	SLU 34	0.36	0.59	69.47	15.5443	15.0883	-0.2289
305	SLU 35	0.35	0.63	70.85	15.8503	15.3854	-0.2357
305	SLU 36	0.36	0.61	70.85	15.8504	15.3853	-0.2339
305	SLU 37	0.35	0.62	70.34	15.7372	15.2761	-0.2318
305	SLU 38	0.36	0.6	70.34	15.7373	15.2759	-0.2299
305	SLU 39	0.33	0.69	71.3	15.9514	15.4831	-0.2444
305	SLU 40	0.34	0.67	71.3	15.9515	15.4829	-0.2425
305	SLU 41	0.33	0.68	72.17	16.1445	15.6706	-0.2442
305	SLU 42	0.35	0.67	72.17	16.1447	15.6705	-0.2424
305	SLU 43	0.39	0.43	70.74	15.8406	15.3894	-0.1974
305	SLU 44	0.41	0.4	70.74	15.8408	15.3891	-0.1943
305	SLU 45	0.4	0.44	72.12	16.1468	15.6863	-0.2011
305	SLU 46	0.41	0.42	72.12	16.1469	15.6861	-0.1993
305	SLU 47	0.41	0.39	71.61	16.034	15.5767	-0.1942
305	SLU 48	0.41	0.43	72.99	16.34	15.8738	-0.201
305	SLU 49	0.42	0.41	72.99	16.3401	15.8737	-0.1992
305	SLU 50	0.4	0.42	72.48	16.227	15.7645	-0.1971
305	SLU 51	0.41	0.4	72.48	16.2271	15.7644	-0.1953
305	SLU 52	0.4	0.53	77.03	17.2419	16.7473	-0.2231
305	SLU 53	0.39	0.57	78.4	17.5479	17.0445	-0.2299
305	SLU 54	0.4	0.55	78.4	17.548	17.0444	-0.2281
305	SLU 55	0.4	0.53	77.9	17.4351	16.9349	-0.2229
305	SLU 56	0.39	0.56	79.27	17.7411	17.2321	-0.2298
305	SLU 57	0.4	0.55	79.27	17.7412	17.2319	-0.2279
305	SLU 58	0.39	0.55	78.77	17.628	17.1227	-0.2258
305	SLU 59	0.4	0.53	78.77	17.6281	17.1226	-0.224
305	SLU 60	0.37	0.62	79.72	17.8422	17.3297	-0.2384
305	SLU 61	0.38	0.6	79.72	17.8423	17.3296	-0.2366
305	SLU 62	0.38	0.62	80.59	18.0353	17.5173	-0.2383
305	SLU 63	0.39	0.6	80.59	18.0354	17.5171	-0.2365
305	SLU 64	0.43	0.56	77	17.2371	16.7383	-0.2381
305	SLU 65	0.45	0.53	77	17.2373	16.7381	-0.235
305	SLU 66	0.44	0.57	78.37	17.5433	17.0352	-0.2419
305	SLU 67	0.45	0.55	78.37	17.5434	17.0351	-0.24
305	SLU 68	0.45	0.52	77.87	17.4304	16.9257	-0.2349
305	SLU 69	0.44	0.56	79.24	17.7364	17.2228	-0.2417
305	SLU 70	0.46	0.54	79.24	17.7365	17.2227	-0.2399
305	SLU 71	0.44	0.55	78.74	17.6234	17.1135	-0.2378
305	SLU 72	0.45	0.53	78.74	17.6235	17.1133	-0.236
305	SLU 73	0.44	0.66	83.28	18.6384	18.0963	-0.2638
305	SLU 74	0.43	0.7	84.66	18.9444	18.3935	-0.2706
305	SLU 75	0.44	0.68	84.66	18.9445	18.3933	-0.2688
305	SLU 76	0.44	0.66	84.15	18.8315	18.2839	-0.2637
305	SLU 77	0.43	0.7	85.53	19.1375	18.5811	-0.2705
305	SLU 78	0.44	0.68	85.53	19.1376	18.5809	-0.2687
305	SLU 79	0.42	0.69	85.02	19.0245	18.4717	-0.2666
305	SLU 80	0.44	0.67	85.02	19.0246	18.4716	-0.2647
305	SLU 81	0.41	0.75	85.97	19.2386	18.6787	-0.2792
305	SLU 82	0.42	0.73	85.97	19.2387	18.6785	-0.2773
305	SLU 83	0.41	0.75	86.84	19.4318	18.8663	-0.279
305	SLU 84	0.43	0.73	86.84	19.4319	18.8661	-0.2772

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
305	SLE RA 1	0.32	0.4	57.85	12.9524	12.5792	-0.1742
305	SLE RA 2	0.34	0.38	57.85	12.9525	12.579	-0.1722
305	SLE RA 3	0.33	0.41	58.77	13.1565	12.7771	-0.1767
305	SLE RA 4	0.34	0.39	58.77	13.1566	12.777	-0.1755
305	SLE RA 5	0.34	0.38	58.43	13.0813	12.704	-0.1721
305	SLE RA 6	0.33	0.4	59.35	13.2853	12.9021	-0.1766
305	SLE RA 7	0.34	0.39	59.35	13.2854	12.902	-0.1754
305	SLE RA 8	0.33	0.4	59.01	13.2099	12.8293	-0.174
305	SLE RA 9	0.34	0.38	59.01	13.21	12.8292	-0.1728
305	SLE RA 10	0.33	0.47	62.04	13.8866	13.4845	-0.1913
305	SLE RA 11	0.32	0.5	62.96	14.0906	13.6826	-0.1959
305	SLE RA 12	0.33	0.48	62.96	14.0906	13.6825	-0.1947
305	SLE RA 13	0.33	0.47	62.62	14.0153	13.6095	-0.1912
305	SLE RA 14	0.32	0.49	63.54	14.2193	13.8076	-0.1958
305	SLE RA 15	0.33	0.48	63.54	14.2194	13.8075	-0.1946
305	SLE RA 16	0.32	0.49	63.2	14.144	13.7348	-0.1932
305	SLE RA 17	0.33	0.47	63.2	14.1441	13.7347	-0.192
305	SLE RA 18	0.31	0.53	63.84	14.2868	13.8727	-0.2016
305	SLE RA 19	0.32	0.52	63.84	14.2868	13.8726	-0.2004
305	SLE RA 20	0.31	0.53	64.42	14.4155	13.9978	-0.2015
305	SLE RA 21	0.32	0.52	64.42	14.4156	13.9977	-0.2003
305	SLE FR 1	0.32	0.4	57.85	12.9524	12.5792	-0.1742
305	SLE FR 2	0.32	0.4	57.85	12.9524	12.5791	-0.1738
305	SLE FR 3	0.32	0.4	58.09	13.0039	12.6292	-0.1742
305	SLE FR 4	0.32	0.44	59.65	13.3527	12.9672	-0.182
305	SLE FR 5	0.32	0.44	59.88	13.4042	13.0173	-0.1824
305	SLE FR 6	0.32	0.47	60.85	13.6196	13.2259	-0.1879
305	SLE QP 1	0.32	0.4	57.85	12.9524	12.5792	-0.1742
305	SLE QP 2	0.32	0.44	59.65	13.3527	12.9672	-0.1824
305	SLD 1	5.03	1.44	43.28	9.6774	9.535	-1.4705
305	SLD 2	5.47	2.23	44.1	9.8453	9.7129	-1.7609
305	SLD 3	4.69	-0.43	41.67	9.3411	9.191	-0.9835
305	SLD 4	5.14	0.36	42.49	9.509	9.3689	-1.274
305	SLD 5	2.17	3.43	57.04	12.7305	12.4278	-1.2561
305	SLD 6	2.46	3.95	57.58	12.8402	12.5441	-1.4459
305	SLD 7	1.04	-2.79	51.66	11.6095	11.2812	0.3672
305	SLD 8	1.33	-2.27	52.2	11.7192	11.3975	0.1773
305	SLD 9	-0.69	3.16	67.1	14.9862	14.537	-0.5422
305	SLD 10	-0.4	3.67	67.64	15.0959	14.6533	-0.732
305	SLD 11	-1.82	-3.07	61.72	13.8652	13.3904	1.0811
305	SLD 12	-1.53	-2.55	62.26	13.9749	13.5067	0.8912
305	SLD 13	-4.5	0.52	76.81	17.1964	16.5655	0.9091
305	SLD 14	-4.06	1.31	77.63	17.3643	16.7435	0.6187
305	SLD 15	-4.84	-1.35	75.2	16.8601	16.2215	1.3961
305	SLD 16	-4.4	-0.56	76.02	17.028	16.3995	1.1057
305	SLV 1	11.35	2.73	21.3	4.7422	4.925	-3.1855
305	SLV 2	12.38	4.57	23.2	5.1331	5.3396	-3.862
305	SLV 3	10.56	-1.53	17.58	3.9665	4.1329	-2.0711
305	SLV 4	11.59	0.31	19.48	4.3574	4.5474	-2.7475
305	SLV 5	4.64	7.28	53.46	11.879	11.685	-2.6576
305	SLV 6	5.31	8.46	54.68	12.1303	11.9514	-3.0924
305	SLV 7	2.02	-6.93	41.06	9.2934	9.0445	1.0571
305	SLV 8	2.68	-5.75	42.29	9.5446	9.3109	0.6223
305	SLV 9	-2.05	6.63	77.01	17.1608	16.6236	-0.9872
305	SLV 10	-1.38	7.81	78.24	17.412	16.89	-1.4219
305	SLV 11	-4.67	-7.58	64.61	14.5751	13.9831	2.7276
305	SLV 12	-4.01	-6.39	65.84	14.8264	14.2495	2.2928
305	SLV 13	-10.95	0.57	99.82	22.348	21.3871	2.3827
305	SLV 14	-9.92	2.42	101.72	22.7389	21.8016	1.7062
305	SLV 15	-11.74	-3.69	96.1	21.5723	20.5949	3.4971
305	SLV 16	-10.71	-1.85	98	21.9632	21.0094	2.8206
305	CRTFP Ux+	0	0	0	0	0	0
305	CRTFP Ux-	0	0	0	0	0	0
305	CRTFP Uy+	0	0	0	0	0	0
305	CRTFP Uy-	0	0	0	0	0	0
368	SLU 1	-1.2	-1.07	56.59	1.5264	-0.3113	0.0018
368	SLU 2	-1.18	-1.13	56.54	1.5254	-0.3121	0.0014
368	SLU 3	-1.24	-1.09	57.93	1.5626	-0.3186	0.0019
368	SLU 4	-1.22	-1.12	57.9	1.562	-0.3191	0.0017
368	SLU 5	-1.2	-1.15	57.4	1.5485	-0.3164	0.0015
368	SLU 6	-1.26	-1.1	58.79	1.5857	-0.323	0.002
368	SLU 7	-1.25	-1.14	58.76	1.5851	-0.3234	0.0018
368	SLU 8	-1.25	-1.1	58.3	1.5725	-0.32	0.002
368	SLU 9	-1.23	-1.13	58.27	1.572	-0.3205	0.0018
368	SLU 10	-1.26	-1.18	63.03	1.7006	-0.3586	0.0003
368	SLU 11	-1.32	-1.14	64.42	1.7378	-0.3652	0.0008
368	SLU 12	-1.3	-1.17	64.39	1.7372	-0.3656	0.0006
368	SLU 13	-1.28	-1.2	63.89	1.7237	-0.3629	0.0004
368	SLU 14	-1.34	-1.15	65.28	1.7609	-0.3695	0.0009
368	SLU 15	-1.33	-1.19	65.25	1.7603	-0.37	0.0007
368	SLU 16	-1.33	-1.15	64.79	1.7477	-0.3665	0.0009
368	SLU 17	-1.32	-1.19	64.76	1.7472	-0.367	0.0007
368	SLU 18	-1.32	-1.14	65.86	1.7767	-0.3778	0.0002
368	SLU 19	-1.3	-1.18	65.83	1.7761	-0.3782	0
368	SLU 20	-1.34	-1.16	66.72	1.7998	-0.3821	0.0003
368	SLU 21	-1.33	-1.19	66.69	1.7992	-0.3826	0.0001
368	SLU 22	-1.36	-1.07	62.75	1.6933	-0.3441	0.0022
368	SLU 23	-1.33	-1.14	62.71	1.6923	-0.3449	0.0018
368	SLU 24	-1.39	-1.09	64.1	1.7295	-0.3515	0.0023
368	SLU 25	-1.37	-1.13	64.07	1.7289	-0.3519	0.0021
368	SLU 26	-1.35	-1.15	63.57	1.7154	-0.3492	0.0019
368	SLU 27	-1.41	-1.1	64.95	1.7526	-0.3558	0.0024
368	SLU 28	-1.4	-1.14	64.93	1.752	-0.3563	0.0022
368	SLU 29	-1.4	-1.1	64.47	1.7395	-0.3528	0.0024
368	SLU 30	-1.39	-1.14	64.44	1.7389	-0.3533	0.0022
368	SLU 31	-1.41	-1.19	69.2	1.8675	-0.3914	0.0007
368	SLU 32	-1.47	-1.14	70.59	1.9047	-0.398	0.0012

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
368	SLU 33	-1.46	-1.18	70.56	1.9041	-0.3984	0.001
368	SLU 34	-1.44	-1.2	70.06	1.8906	-0.3958	0.0008
368	SLU 35	-1.49	-1.15	71.44	1.9278	-0.4023	0.0013
368	SLU 36	-1.48	-1.19	71.42	1.9272	-0.4028	0.0011
368	SLU 37	-1.48	-1.15	70.96	1.9147	-0.3994	0.0013
368	SLU 38	-1.47	-1.19	70.93	1.9141	-0.3998	0.0011
368	SLU 39	-1.47	-1.15	72.03	1.9436	-0.4106	0.0006
368	SLU 40	-1.46	-1.19	72	1.943	-0.411	0.0004
368	SLU 41	-1.5	-1.16	72.88	1.9667	-0.415	0.0007
368	SLU 42	-1.48	-1.2	72.86	1.9661	-0.4154	0.0005
368	SLU 43	-1.51	-1.39	71.45	1.9271	-0.3935	0.0022
368	SLU 44	-1.49	-1.45	71.4	1.9261	-0.3942	0.0018
368	SLU 45	-1.54	-1.4	72.79	1.9633	-0.4008	0.0023
368	SLU 46	-1.53	-1.44	72.76	1.9627	-0.4012	0.0021
368	SLU 47	-1.51	-1.47	72.26	1.9492	-0.3985	0.0019
368	SLU 48	-1.57	-1.42	73.65	1.9864	-0.4051	0.0024
368	SLU 49	-1.55	-1.46	73.62	1.9858	-0.4056	0.0022
368	SLU 50	-1.56	-1.42	73.16	1.9732	-0.4022	0.0024
368	SLU 51	-1.54	-1.45	73.13	1.9727	-0.4026	0.0022
368	SLU 52	-1.57	-1.5	77.89	2.1013	-0.4407	0.0007
368	SLU 53	-1.63	-1.46	79.28	2.1385	-0.4473	0.0012
368	SLU 54	-1.61	-1.49	79.25	2.1379	-0.4478	0.001
368	SLU 55	-1.59	-1.52	78.75	2.1244	-0.4451	0.0008
368	SLU 56	-1.65	-1.47	80.14	2.1616	-0.4517	0.0013
368	SLU 57	-1.64	-1.51	80.11	2.161	-0.4521	0.0011
368	SLU 58	-1.64	-1.47	79.65	2.1484	-0.4487	0.0013
368	SLU 59	-1.62	-1.51	79.63	2.1478	-0.4491	0.0011
368	SLU 60	-1.63	-1.46	80.72	2.1774	-0.4599	0.0006
368	SLU 61	-1.61	-1.5	80.69	2.1768	-0.4604	0.0004
368	SLU 62	-1.65	-1.48	81.58	2.2005	-0.4643	0.0007
368	SLU 63	-1.64	-1.51	81.55	2.1999	-0.4647	0.0005
368	SLU 64	-1.66	-1.39	77.61	2.094	-0.4263	0.0025
368	SLU 65	-1.64	-1.46	77.57	2.093	-0.427	0.0022
368	SLU 66	-1.7	-1.41	78.96	2.1302	-0.4336	0.0027
368	SLU 67	-1.68	-1.45	78.93	2.1296	-0.434	0.0025
368	SLU 68	-1.66	-1.47	78.43	2.1161	-0.4314	0.0023
368	SLU 69	-1.72	-1.42	79.81	2.1533	-0.438	0.0028
368	SLU 70	-1.71	-1.46	79.79	2.1527	-0.4384	0.0026
368	SLU 71	-1.71	-1.42	79.33	2.1402	-0.435	0.0028
368	SLU 72	-1.7	-1.46	79.3	2.1396	-0.4354	0.0026
368	SLU 73	-1.72	-1.51	84.06	2.2682	-0.4735	0.0011
368	SLU 74	-1.78	-1.46	85.45	2.3054	-0.4801	0.0016
368	SLU 75	-1.76	-1.5	85.42	2.3048	-0.4806	0.0014
368	SLU 76	-1.74	-1.52	84.92	2.2913	-0.4779	0.0012
368	SLU 77	-1.8	-1.47	86.31	2.3285	-0.4845	0.0017
368	SLU 78	-1.79	-1.51	86.28	2.3279	-0.4849	0.0015
368	SLU 79	-1.79	-1.47	85.82	2.3154	-0.4815	0.0017
368	SLU 80	-1.78	-1.51	85.79	2.3148	-0.482	0.0015
368	SLU 81	-1.78	-1.47	86.89	2.3443	-0.4927	0.001
368	SLU 82	-1.77	-1.5	86.86	2.3437	-0.4932	0.0008
368	SLU 83	-1.8	-1.48	87.75	2.3674	-0.4971	0.0011
368	SLU 84	-1.79	-1.52	87.72	2.3668	-0.4975	0.0009
368	SLE RA 1	-1.25	-1.07	58.35	1.5741	-0.3207	0.0019
368	SLE RA 2	-1.23	-1.11	58.32	1.5734	-0.3212	0.0016
368	SLE RA 3	-1.27	-1.08	59.24	1.5982	-0.3256	0.002
368	SLE RA 4	-1.26	-1.11	59.23	1.5978	-0.3259	0.0018
368	SLE RA 5	-1.25	-1.12	58.89	1.5888	-0.3241	0.0017
368	SLE RA 6	-1.28	-1.09	59.81	1.6136	-0.3285	0.002
368	SLE RA 7	-1.27	-1.12	59.8	1.6132	-0.3288	0.0019
368	SLE RA 8	-1.28	-1.09	59.49	1.6049	-0.3265	0.002
368	SLE RA 9	-1.27	-1.11	59.47	1.6045	-0.3268	0.0019
368	SLE RA 10	-1.28	-1.15	62.65	1.6902	-0.3522	0.0009
368	SLE RA 11	-1.32	-1.12	63.57	1.715	-0.3566	0.0012
368	SLE RA 12	-1.31	-1.14	63.55	1.7146	-0.3569	0.0011
368	SLE RA 13	-1.3	-1.16	63.22	1.7056	-0.3551	0.001
368	SLE RA 14	-1.34	-1.12	64.14	1.7304	-0.3595	0.0013
368	SLE RA 15	-1.33	-1.15	64.12	1.73	-0.3598	0.0012
368	SLE RA 16	-1.33	-1.12	63.82	1.7217	-0.3575	0.0013
368	SLE RA 17	-1.32	-1.15	63.8	1.7213	-0.3578	0.0012
368	SLE RA 18	-1.32	-1.12	64.53	1.741	-0.365	0.0008
368	SLE RA 19	-1.31	-1.15	64.51	1.7406	-0.3653	0.0007
368	SLE RA 20	-1.34	-1.13	65.1	1.7563	-0.3679	0.0009
368	SLE RA 21	-1.33	-1.15	65.08	1.7559	-0.3682	0.0008
368	SLE FR 1	-1.25	-1.07	58.35	1.5741	-0.3207	0.0019
368	SLE FR 2	-1.24	-1.08	58.34	1.574	-0.3208	0.0018
368	SLE FR 3	-1.25	-1.07	58.58	1.5803	-0.3219	0.0019
368	SLE FR 4	-1.27	-1.09	60.2	1.624	-0.3341	0.0015
368	SLE FR 5	-1.28	-1.09	60.43	1.6303	-0.3351	0.0016
368	SLE FR 6	-1.28	-1.1	61.44	1.6575	-0.3428	0.0014
368	SLE QP 1	-1.25	-1.07	58.35	1.5741	-0.3207	0.0019
368	SLE QP 2	-1.27	-1.09	60.2	1.6242	-0.334	0.0016
368	SLD 1	3.86	-0.79	66.31	1.7837	-0.1667	-0.1334
368	SLD 2	4.31	-1.09	66.03	1.777	-0.1722	-0.1397
368	SLD 3	3.49	-2.26	65.56	1.7669	-0.1901	-0.1256
368	SLD 4	3.94	-2.57	65.28	1.7602	-0.1956	-0.1319
368	SLD 5	0.74	1.3	63.22	1.6986	-0.2474	-0.0497
368	SLD 6	1.03	1.1	63.04	1.6942	-0.251	-0.0538
368	SLD 7	-0.47	-3.62	60.72	1.6428	-0.3253	-0.0236
368	SLD 8	-0.17	-3.82	60.54	1.6384	-0.3289	-0.0277
368	SLD 9	-2.36	1.65	59.86	1.6099	-0.339	0.0308
368	SLD 10	-2.07	1.45	59.68	1.6055	-0.3426	0.0267
368	SLD 11	-3.57	-3.27	57.37	1.5541	-0.417	0.057
368	SLD 12	-3.28	-3.47	57.19	1.5498	-0.4206	0.0529
368	SLD 13	-6.48	0.4	55.12	1.4881	-0.4724	0.135
368	SLD 14	-6.03	0.09	54.84	1.4814	-0.4779	0.1287
368	SLD 15	-6.85	-1.08	54.37	1.4713	-0.4957	0.1429
368	SLD 16	-6.39	-1.38	54.1	1.4647	-0.5013	0.1365

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
368	SLV 1	10.72	-0.45	74.47	1.9968	0.0571	-0.3142
368	SLV 2	11.77	-1.16	73.82	1.9813	0.0442	-0.3289
368	SLV 3	9.88	-3.78	72.77	1.9588	0.0035	-0.296
368	SLV 4	10.93	-4.49	72.12	1.9432	-0.0093	-0.3107
368	SLV 5	3.42	4.29	67.18	1.7964	-0.1332	-0.1183
368	SLV 6	4.1	3.83	66.76	1.7864	-0.1415	-0.1278
368	SLV 7	0.62	-6.84	61.5	1.6694	-0.3118	-0.0575
368	SLV 8	1.29	-7.29	61.08	1.6594	-0.3201	-0.0669
368	SLV 9	-3.83	5.12	59.32	1.5889	-0.3479	0.0701
368	SLV 10	-3.16	4.67	58.91	1.5789	-0.3562	0.0606
368	SLV 11	-6.64	-6.01	53.64	1.4619	-0.5265	0.1309
368	SLV 12	-5.96	-6.46	53.23	1.4519	-0.5348	0.1215
368	SLV 13	-13.47	2.32	48.29	1.3051	-0.6586	0.3138
368	SLV 14	-12.42	1.61	47.64	1.2896	-0.6715	0.2991
368	SLV 15	-14.31	-1.02	46.59	1.267	-0.7122	0.332
368	SLV 16	-13.26	-1.72	45.94	1.2515	-0.7251	0.3174
368	CRTFP Ux+	0	0	0	0	0	0
368	CRTFP Ux-	0	0	0	0	0	0
368	CRTFP Uy+	0	0	0	0	0	0
368	CRTFP Uy-	0	0	0	0	0	0
372	SLU 1	0.33	-0.62	57.55	1.5567	0.3779	0.0031
372	SLU 2	0.35	-0.65	57.54	1.5564	0.3782	0.0029
372	SLU 3	0.34	-0.63	58.93	1.5939	0.3866	0.0031
372	SLU 4	0.35	-0.65	58.92	1.5938	0.3868	0.0029
372	SLU 5	0.36	-0.67	58.41	1.5797	0.3833	0.0029
372	SLU 6	0.34	-0.65	59.8	1.6172	0.3917	0.0031
372	SLU 7	0.36	-0.67	59.79	1.6171	0.3919	0.0029
372	SLU 8	0.34	-0.65	59.28	1.6033	0.388	0.0032
372	SLU 9	0.35	-0.67	59.27	1.6031	0.3882	0.003
372	SLU 10	0.35	-0.64	64.31	1.7399	0.4307	0.0037
372	SLU 11	0.34	-0.62	65.71	1.7773	0.4391	0.0039
372	SLU 12	0.35	-0.64	65.7	1.7772	0.4393	0.0037
372	SLU 13	0.35	-0.66	65.18	1.7632	0.4358	0.0037
372	SLU 14	0.34	-0.64	66.57	1.8007	0.4442	0.0039
372	SLU 15	0.35	-0.65	66.56	1.8005	0.4444	0.0038
372	SLU 16	0.33	-0.64	66.06	1.7867	0.4406	0.004
372	SLU 17	0.35	-0.66	66.05	1.7866	0.4408	0.0038
372	SLU 18	0.32	-0.61	67.23	1.8187	0.4529	0.0043
372	SLU 19	0.34	-0.62	67.22	1.8186	0.4531	0.0042
372	SLU 20	0.33	-0.62	68.1	1.842	0.458	0.0043
372	SLU 21	0.34	-0.64	68.09	1.8419	0.4582	0.0042
372	SLU 22	0.38	-0.58	63.94	1.7302	0.4138	0.0029
372	SLU 23	0.4	-0.61	63.93	1.7299	0.4141	0.0027
372	SLU 24	0.39	-0.59	65.32	1.7674	0.4225	0.0029
372	SLU 25	0.4	-0.6	65.31	1.7673	0.4227	0.0027
372	SLU 26	0.4	-0.62	64.79	1.7533	0.4192	0.0027
372	SLU 27	0.39	-0.6	66.19	1.7907	0.4276	0.0029
372	SLU 28	0.4	-0.62	66.18	1.7906	0.4278	0.0027
372	SLU 29	0.38	-0.61	65.67	1.7768	0.4239	0.003
372	SLU 30	0.4	-0.63	65.66	1.7767	0.4241	0.0028
372	SLU 31	0.39	-0.59	70.7	1.9134	0.4666	0.0035
372	SLU 32	0.38	-0.57	72.1	1.9509	0.475	0.0037
372	SLU 33	0.39	-0.59	72.09	1.9507	0.4752	0.0036
372	SLU 34	0.4	-0.61	71.57	1.9367	0.4717	0.0035
372	SLU 35	0.39	-0.59	72.96	1.9742	0.4801	0.0037
372	SLU 36	0.4	-0.61	72.95	1.974	0.4803	0.0036
372	SLU 37	0.38	-0.59	72.45	1.9602	0.4765	0.0038
372	SLU 38	0.39	-0.61	72.44	1.9601	0.4767	0.0036
372	SLU 39	0.37	-0.56	73.62	1.9922	0.4888	0.0041
372	SLU 40	0.38	-0.58	73.61	1.9921	0.489	0.004
372	SLU 41	0.37	-0.57	74.48	2.0155	0.4939	0.0042
372	SLU 42	0.39	-0.59	74.48	2.0154	0.4941	0.004
372	SLU 43	0.41	-0.83	72.63	1.9642	0.479	0.0041
372	SLU 44	0.43	-0.86	72.62	1.9639	0.4793	0.0039
372	SLU 45	0.42	-0.84	74.01	2.0014	0.4877	0.0041
372	SLU 46	0.44	-0.85	74	2.0013	0.4878	0.0039
372	SLU 47	0.44	-0.87	73.48	1.9872	0.4843	0.0039
372	SLU 48	0.43	-0.85	74.87	2.0247	0.4927	0.0041
372	SLU 49	0.44	-0.87	74.86	2.0246	0.4929	0.0039
372	SLU 50	0.42	-0.86	74.36	2.0108	0.4891	0.0042
372	SLU 51	0.43	-0.88	74.35	2.0106	0.4893	0.004
372	SLU 52	0.43	-0.84	79.39	2.1474	0.5318	0.0047
372	SLU 53	0.42	-0.82	80.78	2.1848	0.5402	0.0049
372	SLU 54	0.43	-0.84	80.77	2.1847	0.5404	0.0048
372	SLU 55	0.43	-0.86	80.25	2.1707	0.5369	0.0047
372	SLU 56	0.42	-0.84	81.65	2.2082	0.5453	0.0049
372	SLU 57	0.44	-0.86	81.64	2.208	0.5454	0.0048
372	SLU 58	0.42	-0.84	81.13	2.1942	0.5416	0.005
372	SLU 59	0.43	-0.86	81.12	2.1941	0.5418	0.0048
372	SLU 60	0.41	-0.81	82.31	2.2262	0.554	0.0053
372	SLU 61	0.42	-0.83	82.3	2.2261	0.5542	0.0052
372	SLU 62	0.41	-0.82	83.17	2.2495	0.5591	0.0053
372	SLU 63	0.42	-0.84	83.16	2.2494	0.5592	0.0052
372	SLU 64	0.46	-0.78	79.02	2.1377	0.5149	0.0039
372	SLU 65	0.48	-0.81	79.01	2.1374	0.5152	0.0037
372	SLU 66	0.47	-0.79	80.4	2.1749	0.5236	0.0039
372	SLU 67	0.48	-0.81	80.39	2.1748	0.5237	0.0037
372	SLU 68	0.48	-0.83	79.87	2.1608	0.5202	0.0037
372	SLU 69	0.47	-0.8	81.26	2.1982	0.5286	0.0039
372	SLU 70	0.49	-0.82	81.25	2.1981	0.5288	0.0037
372	SLU 71	0.47	-0.81	80.75	2.1843	0.525	0.004
372	SLU 72	0.48	-0.83	80.74	2.1842	0.5252	0.0038
372	SLU 73	0.48	-0.8	85.78	2.3209	0.5677	0.0045
372	SLU 74	0.46	-0.78	87.17	2.3584	0.5761	0.0047
372	SLU 75	0.48	-0.79	87.16	2.3582	0.5763	0.0046
372	SLU 76	0.48	-0.81	86.64	2.3442	0.5728	0.0045
372	SLU 77	0.47	-0.79	88.04	2.3817	0.5812	0.0047

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
372	SLU 78	0.48	-0.81	88.03	2.3815	0.5813	0.0046
372	SLU 79	0.46	-0.8	87.52	2.3677	0.5775	0.0048
372	SLU 80	0.48	-0.82	87.51	2.3676	0.5777	0.0047
372	SLU 81	0.45	-0.76	88.7	2.3997	0.5899	0.0051
372	SLU 82	0.47	-0.78	88.69	2.3996	0.5901	0.005
372	SLU 83	0.46	-0.78	89.56	2.4231	0.595	0.0052
372	SLU 84	0.47	-0.8	89.55	2.4229	0.5951	0.005
372	SLE RA 1	0.34	-0.61	59.38	1.6062	0.3882	0.0031
372	SLE RA 2	0.36	-0.63	59.37	1.6061	0.3884	0.0029
372	SLE RA 3	0.35	-0.62	60.3	1.6311	0.394	0.003
372	SLE RA 4	0.36	-0.63	60.29	1.631	0.3941	0.0029
372	SLE RA 5	0.36	-0.64	59.95	1.6216	0.3917	0.0029
372	SLE RA 6	0.35	-0.63	60.87	1.6466	0.3973	0.0031
372	SLE RA 7	0.36	-0.64	60.87	1.6465	0.3975	0.0029
372	SLE RA 8	0.35	-0.63	60.53	1.6373	0.3949	0.0031
372	SLE RA 9	0.36	-0.64	60.53	1.6372	0.395	0.003
372	SLE RA 10	0.35	-0.62	63.89	1.7284	0.4234	0.0034
372	SLE RA 11	0.35	-0.61	64.81	1.7534	0.429	0.0036
372	SLE RA 12	0.36	-0.62	64.81	1.7533	0.4291	0.0035
372	SLE RA 13	0.36	-0.63	64.46	1.7439	0.4268	0.0035
372	SLE RA 14	0.35	-0.62	65.39	1.7689	0.4324	0.0036
372	SLE RA 15	0.36	-0.63	65.39	1.7688	0.4325	0.0035
372	SLE RA 16	0.35	-0.62	65.05	1.7596	0.4299	0.0037
372	SLE RA 17	0.35	-0.63	65.04	1.7595	0.4301	0.0035
372	SLE RA 18	0.34	-0.6	65.83	1.7809	0.4382	0.0039
372	SLE RA 19	0.35	-0.61	65.83	1.7808	0.4383	0.0038
372	SLE RA 20	0.34	-0.61	66.41	1.7965	0.4416	0.0039
372	SLE RA 21	0.35	-0.62	66.4	1.7964	0.4417	0.0038
372	SLE FR 1	0.34	-0.61	59.38	1.6062	0.3882	0.0031
372	SLE FR 2	0.35	-0.61	59.38	1.6062	0.3882	0.003
372	SLE FR 3	0.34	-0.61	59.61	1.6125	0.3895	0.0031
372	SLE FR 4	0.34	-0.61	61.31	1.6586	0.4032	0.0033
372	SLE FR 5	0.34	-0.61	61.55	1.6649	0.4045	0.0033
372	SLE FR 6	0.34	-0.6	62.6	1.6936	0.4132	0.0035
372	SLE QP 1	0.34	-0.61	59.38	1.6062	0.3882	0.0031
372	SLE QP 2	0.34	-0.61	61.31	1.6586	0.4032	0.0033
372	SLD 1	5.65	0.54	56.12	1.5229	0.5191	-0.1341
372	SLD 2	6.11	0.87	56.57	1.5339	0.5124	-0.141
372	SLD 3	5.28	-0.85	55.18	1.5012	0.5396	-0.1267
372	SLD 4	5.74	-0.52	55.63	1.5122	0.533	-0.1336
372	SLD 5	2.41	1.79	61.1	1.6489	0.408	-0.0479
372	SLD 6	2.71	2	61.4	1.6561	0.4037	-0.0524
372	SLD 7	1.19	-2.84	57.96	1.5766	0.4764	-0.0233
372	SLD 8	1.49	-2.63	58.26	1.5838	0.472	-0.0278
372	SLD 9	-0.8	1.42	64.37	1.7335	0.3343	0.0344
372	SLD 10	-0.5	1.63	64.66	1.7407	0.3299	0.0299
372	SLD 11	-2.03	-3.22	61.23	1.6612	0.4027	0.059
372	SLD 12	-1.72	-3	61.53	1.6684	0.3983	0.0545
372	SLD 13	-5.06	-0.69	67	1.8051	0.2734	0.1402
372	SLD 14	-4.6	-0.37	67.45	1.8161	0.2667	0.1333
372	SLD 15	-5.42	-2.08	66.06	1.7834	0.2939	0.1476
372	SLD 16	-4.96	-1.76	66.51	1.7944	0.2872	0.1407
372	SLV 1	12.76	2.04	49.13	1.3404	0.6749	-0.3181
372	SLV 2	13.83	2.81	50.18	1.3661	0.6594	-0.3342
372	SLV 3	11.9	-1.12	46.97	1.2907	0.7221	-0.3009
372	SLV 4	12.97	-0.36	48.03	1.3164	0.7066	-0.317
372	SLV 5	5.18	4.85	60.75	1.6341	0.4157	-0.1164
372	SLV 6	5.87	5.34	61.43	1.6506	0.4057	-0.1267
372	SLV 7	2.33	-5.69	53.56	1.4685	0.5732	-0.0592
372	SLV 8	3.01	-5.19	54.24	1.485	0.5632	-0.0695
372	SLV 9	-2.33	3.98	68.39	1.8323	0.2431	0.0761
372	SLV 10	-1.64	4.47	69.07	1.8488	0.2332	0.0658
372	SLV 11	-5.19	-6.55	61.2	1.6667	0.4006	0.1333
372	SLV 12	-4.5	-6.06	61.88	1.6832	0.3906	0.123
372	SLV 13	-12.29	-0.86	74.6	2.0009	0.0997	0.3236
372	SLV 14	-11.21	-0.09	75.66	2.0266	0.0842	0.3076
372	SLV 15	-13.14	-4.02	72.45	1.9512	0.1469	0.3408
372	SLV 16	-12.07	-3.25	73.5	1.9769	0.1314	0.3247
372	CRTFP Ux+	0	0	0	0	0	0
372	CRTFP Ux-	0	0	0	0	0	0
372	CRTFP Uy+	0	0	0	0	0	0
372	CRTFP Uy-	0	0	0	0	0	0
373	SLU 1	0.21	0.24	34.74	0.9174	9.5444	-0.0903
373	SLU 2	0.22	0.22	34.74	0.9174	9.5445	-0.0831
373	SLU 3	0.22	0.24	35.59	0.9397	9.7718	-0.0918
373	SLU 4	0.22	0.23	35.59	0.9397	9.7718	-0.0874
373	SLU 5	0.23	0.22	35.27	0.9315	9.688	-0.082
373	SLU 6	0.22	0.24	36.12	0.9537	9.9153	-0.0907
373	SLU 7	0.23	0.23	36.12	0.9537	9.9154	-0.0863
373	SLU 8	0.22	0.23	35.81	0.9455	9.8314	-0.0881
373	SLU 9	0.22	0.22	35.81	0.9455	9.8315	-0.0838
373	SLU 10	0.21	0.31	38.62	1.0197	10.5916	-0.1138
373	SLU 11	0.21	0.33	39.47	1.0419	10.819	-0.1224
373	SLU 12	0.22	0.32	39.47	1.0419	10.819	-0.1181
373	SLU 13	0.22	0.3	39.15	1.0337	10.7351	-0.1127
373	SLU 14	0.21	0.33	40	1.0559	10.9625	-0.1213
373	SLU 15	0.22	0.32	40	1.056	10.9625	-0.117
373	SLU 16	0.21	0.32	39.69	1.0477	10.8786	-0.1188
373	SLU 17	0.22	0.31	39.69	1.0477	10.8786	-0.1144
373	SLU 18	0.2	0.37	40.28	1.0635	11.0403	-0.1341
373	SLU 19	0.21	0.35	40.28	1.0635	11.0403	-0.1298
373	SLU 20	0.2	0.36	40.82	1.0775	11.1838	-0.133
373	SLU 21	0.21	0.35	40.82	1.0775	11.1839	-0.1287
373	SLU 22	0.24	0.33	38.6	1.0192	10.5824	-0.1212
373	SLU 23	0.25	0.31	38.6	1.0193	10.5824	-0.114
373	SLU 24	0.24	0.33	39.45	1.0415	10.8098	-0.1227
373	SLU 25	0.25	0.32	39.45	1.0415	10.8098	-0.1184

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
373	SLU 26	0.25	0.3	39.13	1.0333	10.7259	-0.1129
373	SLU 27	0.25	0.33	39.98	1.0555	10.9533	-0.1216
373	SLU 28	0.25	0.31	39.98	1.0555	10.9533	-0.1173
373	SLU 29	0.24	0.32	39.67	1.0473	10.8694	-0.119
373	SLU 30	0.25	0.31	39.67	1.0473	10.8694	-0.1147
373	SLU 31	0.24	0.39	42.48	1.1215	11.6295	-0.1447
373	SLU 32	0.23	0.42	43.33	1.1437	11.8569	-0.1533
373	SLU 33	0.24	0.41	43.33	1.1437	11.8569	-0.149
373	SLU 34	0.24	0.39	43.02	1.1355	11.7731	-0.1436
373	SLU 35	0.24	0.42	43.86	1.1578	12.0004	-0.1522
373	SLU 36	0.24	0.4	43.86	1.1578	12.0004	-0.1479
373	SLU 37	0.23	0.41	43.55	1.1495	11.9165	-0.1497
373	SLU 38	0.24	0.4	43.55	1.1495	11.9165	-0.1454
373	SLU 39	0.22	0.45	44.14	1.1653	12.0783	-0.165
373	SLU 40	0.23	0.44	44.14	1.1653	12.0783	-0.1607
373	SLU 41	0.23	0.45	44.68	1.1793	12.2218	-0.1639
373	SLU 42	0.23	0.44	44.68	1.1793	12.2218	-0.1596
373	SLU 43	0.27	0.28	43.83	1.1577	12.0519	-0.1068
373	SLU 44	0.28	0.26	43.83	1.1578	12.0519	-0.0996
373	SLU 45	0.27	0.29	44.68	1.18	12.2793	-0.1082
373	SLU 46	0.28	0.27	44.68	1.18	12.2793	-0.1039
373	SLU 47	0.28	0.26	44.37	1.1718	12.1954	-0.0985
373	SLU 48	0.28	0.28	45.22	1.194	12.4228	-0.1072
373	SLU 49	0.28	0.27	45.22	1.194	12.4228	-0.1028
373	SLU 50	0.27	0.28	44.91	1.1858	12.3389	-0.1046
373	SLU 51	0.28	0.26	44.91	1.1858	12.3389	-0.1003
373	SLU 52	0.27	0.35	47.72	1.26	13.099	-0.1303
373	SLU 53	0.26	0.37	48.56	1.2822	13.3264	-0.1389
373	SLU 54	0.27	0.36	48.56	1.2822	13.3264	-0.1346
373	SLU 55	0.27	0.35	48.25	1.274	13.2425	-0.1292
373	SLU 56	0.27	0.37	49.1	1.2963	13.4699	-0.1378
373	SLU 57	0.27	0.36	49.1	1.2963	13.4699	-0.1335
373	SLU 58	0.26	0.36	48.79	1.288	13.386	-0.1353
373	SLU 59	0.27	0.35	48.79	1.2881	13.386	-0.1309
373	SLU 60	0.25	0.41	49.38	1.3038	13.5478	-0.1506
373	SLU 61	0.26	0.4	49.38	1.3038	13.5478	-0.1463
373	SLU 62	0.26	0.41	49.91	1.3178	13.6913	-0.1495
373	SLU 63	0.26	0.39	49.91	1.3178	13.6913	-0.1452
373	SLU 64	0.29	0.37	47.7	1.2596	13.0898	-0.1377
373	SLU 65	0.3	0.35	47.7	1.2596	13.0899	-0.1305
373	SLU 66	0.3	0.37	48.54	1.2818	13.3172	-0.1392
373	SLU 67	0.3	0.36	48.54	1.2818	13.3173	-0.1348
373	SLU 68	0.31	0.34	48.23	1.2736	13.2334	-0.1294
373	SLU 69	0.3	0.37	49.08	1.2959	13.4607	-0.1381
373	SLU 70	0.31	0.36	49.08	1.2959	13.4608	-0.1338
373	SLU 71	0.3	0.36	48.77	1.2876	13.3769	-0.1355
373	SLU 72	0.3	0.35	48.77	1.2876	13.3769	-0.1312
373	SLU 73	0.29	0.44	51.58	1.3618	14.137	-0.1612
373	SLU 74	0.29	0.46	52.43	1.384	14.3644	-0.1698
373	SLU 75	0.3	0.45	52.43	1.3841	14.3644	-0.1655
373	SLU 76	0.3	0.43	52.11	1.3758	14.2805	-0.1601
373	SLU 77	0.29	0.46	52.96	1.3981	14.5079	-0.1687
373	SLU 78	0.3	0.44	52.96	1.3981	14.5079	-0.1644
373	SLU 79	0.29	0.45	52.65	1.3899	14.424	-0.1662
373	SLU 80	0.3	0.44	52.65	1.3899	14.424	-0.1618
373	SLU 81	0.28	0.49	53.24	1.4056	14.5857	-0.1815
373	SLU 82	0.29	0.48	53.24	1.4056	14.5858	-0.1772
373	SLU 83	0.28	0.49	53.78	1.4196	14.7292	-0.1804
373	SLU 84	0.29	0.48	53.78	1.4196	14.7293	-0.1761
373	SLE RA 1	0.22	0.26	35.84	0.9465	9.841	-0.0991
373	SLE RA 2	0.23	0.25	35.84	0.9465	9.841	-0.0943
373	SLE RA 3	0.22	0.27	36.41	0.9614	9.9926	-0.1001
373	SLE RA 4	0.23	0.26	36.41	0.9614	9.9926	-0.0972
373	SLE RA 5	0.23	0.25	36.2	0.9559	9.9367	-0.0936
373	SLE RA 6	0.22	0.27	36.76	0.9707	10.0883	-0.0994
373	SLE RA 7	0.23	0.26	36.76	0.9707	10.0883	-0.0965
373	SLE RA 8	0.22	0.26	36.55	0.9652	10.0323	-0.0977
373	SLE RA 9	0.23	0.25	36.55	0.9652	10.0323	-0.0948
373	SLE RA 10	0.22	0.31	38.43	1.0147	10.5391	-0.1148
373	SLE RA 11	0.22	0.33	38.99	1.0295	10.6907	-0.1205
373	SLE RA 12	0.22	0.32	38.99	1.0295	10.6907	-0.1177
373	SLE RA 13	0.22	0.31	38.79	1.024	10.6348	-0.114
373	SLE RA 14	0.22	0.32	39.35	1.0389	10.7863	-0.1198
373	SLE RA 15	0.22	0.32	39.35	1.0389	10.7864	-0.1169
373	SLE RA 16	0.22	0.32	39.14	1.0334	10.7304	-0.1181
373	SLE RA 17	0.22	0.31	39.14	1.0334	10.7304	-0.1152
373	SLE RA 18	0.21	0.35	39.54	1.0439	10.8382	-0.1283
373	SLE RA 19	0.21	0.34	39.54	1.0439	10.8383	-0.1254
373	SLE RA 20	0.21	0.35	39.89	1.0532	10.9339	-0.1276
373	SLE RA 21	0.22	0.34	39.89	1.0532	10.9339	-0.1247
373	SLE FR 1	0.22	0.26	35.84	0.9465	9.841	-0.0991
373	SLE FR 2	0.22	0.26	35.84	0.9465	9.841	-0.0982
373	SLE FR 3	0.22	0.26	35.98	0.9503	9.8793	-0.0988
373	SLE FR 4	0.22	0.29	36.95	0.9757	10.1402	-0.1069
373	SLE FR 5	0.22	0.29	37.09	0.9795	10.1784	-0.1076
373	SLE FR 6	0.21	0.31	37.69	0.9952	10.3396	-0.1137
373	SLE QP 1	0.22	0.26	35.84	0.9465	9.841	-0.0991
373	SLE QP 2	0.22	0.29	36.95	0.9757	10.1402	-0.1079
373	SLD 1	3.27	0.93	26.94	0.7127	7.5492	-0.3858
373	SLD 2	3.55	1.44	27.42	0.7242	7.6809	-0.5707
373	SLD 3	3.06	-0.28	25.99	0.6896	7.3005	0.0422
373	SLD 4	3.33	0.23	26.47	0.7011	7.4323	-0.1427
373	SLD 5	1.41	2.24	35.31	0.9298	9.7166	-0.8077
373	SLD 6	1.59	2.57	35.62	0.9374	9.8027	-0.9285
373	SLD 7	0.7	-1.82	32.13	0.8528	8.8879	0.619
373	SLD 8	0.88	-1.48	32.45	0.8603	8.974	0.4981
373	SLD 9	-0.45	2.06	41.45	1.0911	11.3063	-0.7139

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
373	SLD 10	-0.27	2.4	41.77	1.0986	11.3924	-0.8347
373	SLD 11	-1.16	-1.99	38.28	1.0141	10.4776	0.7128
373	SLD 12	-0.98	-1.66	38.59	1.0216	10.5637	0.5919
373	SLD 13	-2.9	0.35	47.43	1.2503	12.848	-0.0731
373	SLD 14	-2.63	0.86	47.91	1.2618	12.9798	-0.258
373	SLD 15	-3.12	-0.86	46.48	1.2272	12.5994	0.3549
373	SLD 16	-2.84	-0.35	46.96	1.2387	12.7312	0.17
373	SLV 1	7.37	1.77	13.5	0.3596	4.0696	-0.7475
373	SLV 2	8.01	2.95	14.62	0.3864	4.3764	-1.1783
373	SLV 3	6.87	-1.01	11.31	0.3063	3.4965	0.2294
373	SLV 4	7.51	0.18	12.43	0.333	3.8034	-0.2014
373	SLV 5	3.01	4.74	33.05	0.8672	9.1355	-1.7076
373	SLV 6	3.42	5.5	33.77	0.8844	9.3327	-1.9844
373	SLV 7	1.35	-4.51	25.74	0.6894	7.2254	1.5487
373	SLV 8	1.76	-3.75	26.46	0.7066	7.4226	1.2718
373	SLV 9	-1.33	4.33	47.44	1.2449	12.8577	-1.4876
373	SLV 10	-0.92	5.09	48.16	1.262	13.0549	-1.7645
373	SLV 11	-2.99	-4.92	40.13	1.067	10.9476	1.7686
373	SLV 12	-2.57	-4.16	40.85	1.0842	11.1448	1.4918
373	SLV 13	-7.08	0.4	61.47	1.6184	16.4769	-0.0144
373	SLV 14	-6.44	1.59	62.59	1.6452	16.7838	-0.4451
373	SLV 15	-7.58	-2.37	59.28	1.565	15.9039	0.9625
373	SLV 16	-6.94	-1.19	60.4	1.5918	16.2108	0.5317
373	CRTFP Ux+	0	0	0	0	0	0
373	CRTFP Ux-	0	0	0	0	0	0
373	CRTFP Uy+	0	0	0	0	0	0
373	CRTFP Uy-	0	0	0	0	0	0
375	SLU 1	-0.68	0.03	32.6	0.8474	-6.0694	0.0262
375	SLU 2	-0.67	-0.03	32.57	0.8467	-6.063	0.0093
375	SLU 3	-0.7	0.04	33.39	0.8678	-6.212	0.0285
375	SLU 4	-0.69	0	33.37	0.8673	-6.2081	0.0183
375	SLU 5	-0.68	-0.03	33.07	0.8596	-6.1536	0.0109
375	SLU 6	-0.71	0.05	33.89	0.8807	-6.3025	0.0301
375	SLU 7	-0.71	0.01	33.87	0.8802	-6.2987	0.02
375	SLU 8	-0.71	0.04	33.6	0.8732	-6.2505	0.0294
375	SLU 9	-0.7	0	33.58	0.8728	-6.2466	0.0193
375	SLU 10	-0.71	0.02	36.18	0.9402	-6.7194	0.0241
375	SLU 11	-0.75	0.1	37	0.9614	-6.8683	0.0433
375	SLU 12	-0.74	0.06	36.98	0.9609	-6.8645	0.0332
375	SLU 13	-0.73	0.03	36.68	0.9531	-6.8099	0.0257
375	SLU 14	-0.76	0.1	37.5	0.9743	-6.9589	0.0449
375	SLU 15	-0.75	0.06	37.48	0.9738	-6.9551	0.0348
375	SLU 16	-0.75	0.1	37.21	0.9668	-6.9068	0.0443
375	SLU 17	-0.75	0.06	37.19	0.9664	-6.903	0.0341
375	SLU 18	-0.75	0.11	37.75	0.9811	-7.007	0.0474
375	SLU 19	-0.74	0.07	37.73	0.9807	-7.0032	0.0372
375	SLU 20	-0.76	0.12	38.25	0.994	-7.0976	0.049
375	SLU 21	-0.75	0.08	38.23	0.9936	-7.0938	0.0389
375	SLU 22	-0.77	0.1	36.23	0.9416	-6.727	0.0452
375	SLU 23	-0.75	0.04	36.2	0.9408	-6.7207	0.0283
375	SLU 24	-0.79	0.11	37.02	0.962	-6.8696	0.0475
375	SLU 25	-0.78	0.07	37	0.9615	-6.8658	0.0373
375	SLU 26	-0.77	0.04	36.7	0.9537	-6.8112	0.0299
375	SLU 27	-0.8	0.11	37.52	0.9749	-6.9602	0.0491
375	SLU 28	-0.79	0.07	37.5	0.9744	-6.9564	0.039
375	SLU 29	-0.79	0.11	37.23	0.9674	-6.9081	0.0484
375	SLU 30	-0.79	0.07	37.21	0.9669	-6.9043	0.0383
375	SLU 31	-0.8	0.09	39.8	1.0344	-7.3771	0.0431
375	SLU 32	-0.83	0.16	40.62	1.0555	-7.526	0.0623
375	SLU 33	-0.83	0.12	40.6	1.0551	-7.5222	0.0522
375	SLU 34	-0.81	0.1	40.3	1.0473	-7.4676	0.0448
375	SLU 35	-0.85	0.17	41.12	1.0684	-7.6165	0.0639
375	SLU 36	-0.84	0.13	41.1	1.068	-7.6127	0.0538
375	SLU 37	-0.84	0.17	40.84	1.061	-7.5645	0.0633
375	SLU 38	-0.83	0.13	40.82	1.0605	-7.5607	0.0531
375	SLU 39	-0.83	0.18	41.38	1.0753	-7.6647	0.0664
375	SLU 40	-0.83	0.14	41.36	1.0748	-7.6609	0.0562
375	SLU 41	-0.85	0.19	41.88	1.0882	-7.7552	0.068
375	SLU 42	-0.84	0.15	41.86	1.0877	-7.7514	0.0579
375	SLU 43	-0.85	0.02	41.14	1.0694	-7.6647	0.0275
375	SLU 44	-0.84	-0.04	41.11	1.0686	-7.6583	0.0106
375	SLU 45	-0.87	0.03	41.93	1.0897	-7.8073	0.0298
375	SLU 46	-0.87	-0.01	41.91	1.0893	-7.8035	0.0197
375	SLU 47	-0.85	-0.04	41.61	1.0815	-7.7489	0.0123
375	SLU 48	-0.89	0.03	42.43	1.1026	-7.8978	0.0314
375	SLU 49	-0.88	-0.01	42.41	1.1022	-7.894	0.0213
375	SLU 50	-0.88	0.03	42.14	1.0952	-7.8458	0.0308
375	SLU 51	-0.87	-0.01	42.12	1.0947	-7.842	0.0206
375	SLU 52	-0.89	0.01	44.71	1.1622	-8.3147	0.0255
375	SLU 53	-0.92	0.08	45.53	1.1833	-8.4637	0.0446
375	SLU 54	-0.91	0.04	45.51	1.1829	-8.4598	0.0345
375	SLU 55	-0.9	0.02	45.21	1.1751	-8.4053	0.0271
375	SLU 56	-0.93	0.09	46.03	1.1962	-8.5542	0.0462
375	SLU 57	-0.93	0.05	46.01	1.1958	-8.5504	0.0361
375	SLU 58	-0.93	0.09	45.75	1.1888	-8.5022	0.0456
375	SLU 59	-0.92	0.05	45.73	1.1883	-8.4983	0.0355
375	SLU 60	-0.92	0.1	46.29	1.2031	-8.6024	0.0487
375	SLU 61	-0.91	0.06	46.27	1.2026	-8.5986	0.0386
375	SLU 62	-0.93	0.11	46.79	1.216	-8.6929	0.0503
375	SLU 63	-0.93	0.07	46.77	1.2155	-8.6891	0.0402
375	SLU 64	-0.94	0.09	44.77	1.1635	-8.3224	0.0465
375	SLU 65	-0.93	0.02	44.73	1.1628	-8.316	0.0296
375	SLU 66	-0.96	0.1	45.56	1.1839	-8.465	0.0488
375	SLU 67	-0.95	0.06	45.53	1.1834	-8.4611	0.0387
375	SLU 68	-0.94	0.03	45.23	1.1757	-8.4065	0.0313
375	SLU 69	-0.97	0.1	46.05	1.1968	-8.5555	0.0504
375	SLU 70	-0.97	0.06	46.03	1.1964	-8.5517	0.0403

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
375	SLU 71	-0.97	0.1	45.77	1.1893	-8.5034	0.0498
375	SLU 72	-0.96	0.06	45.75	1.1889	-8.4996	0.0396
375	SLU 73	-0.97	0.08	48.34	1.2564	-8.9724	0.0445
375	SLU 74	-1.01	0.15	49.16	1.2775	-9.1213	0.0636
375	SLU 75	-1	0.11	49.14	1.277	-9.1175	0.0535
375	SLU 76	-0.99	0.08	48.84	1.2693	-9.0629	0.0461
375	SLU 77	-1.02	0.16	49.66	1.2904	-9.2119	0.0653
375	SLU 78	-1.01	0.12	49.64	1.2899	-9.208	0.0551
375	SLU 79	-1.01	0.15	49.37	1.2829	-9.1598	0.0646
375	SLU 80	-1.01	0.11	49.35	1.2825	-9.156	0.0545
375	SLU 81	-1.01	0.17	49.92	1.2972	-9.26	0.0677
375	SLU 82	-1	0.13	49.9	1.2968	-9.2562	0.0576
375	SLU 83	-1.02	0.17	50.42	1.3101	-9.3506	0.0693
375	SLU 84	-1.01	0.13	50.4	1.3097	-9.3468	0.0592
375	SLE RA 1	-0.7	0.05	33.64	0.8743	-6.2573	0.0316
375	SLE RA 2	-0.7	0.01	33.62	0.8738	-6.253	0.0204
375	SLE RA 3	-0.72	0.06	34.16	0.8879	-6.3523	0.0331
375	SLE RA 4	-0.71	0.03	34.15	0.8876	-6.3498	0.0264
375	SLE RA 5	-0.7	0.01	33.95	0.8824	-6.3134	0.0214
375	SLE RA 6	-0.73	0.06	34.5	0.8965	-6.4127	0.0342
375	SLE RA 7	-0.72	0.04	34.48	0.8962	-6.4102	0.0275
375	SLE RA 8	-0.72	0.06	34.31	0.8915	-6.378	0.0338
375	SLE RA 9	-0.72	0.03	34.29	0.8912	-6.3755	0.027
375	SLE RA 10	-0.73	0.05	36.02	0.9362	-6.6906	0.0302
375	SLE RA 11	-0.75	0.09	36.57	0.9503	-6.7899	0.043
375	SLE RA 12	-0.74	0.07	36.56	0.95	-6.7874	0.0363
375	SLE RA 13	-0.74	0.05	36.35	0.9448	-6.751	0.0313
375	SLE RA 14	-0.76	0.1	36.9	0.9589	-6.8503	0.0441
375	SLE RA 15	-0.75	0.07	36.89	0.9586	-6.8477	0.0373
375	SLE RA 16	-0.75	0.1	36.71	0.9539	-6.8156	0.0437
375	SLE RA 17	-0.75	0.07	36.7	0.9536	-6.813	0.0369
375	SLE RA 18	-0.75	0.11	37.07	0.9635	-6.8824	0.0457
375	SLE RA 19	-0.74	0.08	37.06	0.9632	-6.8798	0.039
375	SLE RA 20	-0.76	0.11	37.41	0.9721	-6.9428	0.0468
375	SLE RA 21	-0.75	0.08	37.39	0.9718	-6.9402	0.0401
375	SLE FR 1	-0.7	0.05	33.64	0.8743	-6.2573	0.0316
375	SLE FR 2	-0.7	0.04	33.63	0.8742	-6.2564	0.0294
375	SLE FR 3	-0.71	0.06	33.77	0.8778	-6.2814	0.032
375	SLE FR 4	-0.72	0.06	34.67	0.901	-6.444	0.0336
375	SLE FR 5	-0.72	0.07	34.8	0.9045	-6.469	0.0363
375	SLE FR 6	-0.73	0.08	35.36	0.9189	-6.5698	0.0387
375	SLE QP 1	-0.7	0.05	33.64	0.8743	-6.2573	0.0316
375	SLE QP 2	-0.72	0.07	34.67	0.9011	-6.4448	0.0358
375	SLD 1	1.94	0.55	44.95	1.1663	-8.2557	0.0972
375	SLD 2	2.18	0.11	44.61	1.1584	-8.1912	-0.0177
375	SLD 3	1.74	-0.67	44.22	1.1486	-8.1235	-0.2084
375	SLD 4	1.98	-1.1	43.88	1.1407	-8.059	-0.3233
375	SLD 5	0.34	2.14	38.92	1.0089	-7.2	0.538
375	SLD 6	0.5	1.85	38.7	1.0037	-7.1579	0.4629
375	SLD 7	-0.32	-1.92	36.49	0.9499	-6.7593	-0.4806
375	SLD 8	-0.17	-2.2	36.27	0.9447	-6.7171	-0.5556
375	SLD 9	-1.27	2.34	33.07	0.8574	-6.1725	0.6273
375	SLD 10	-1.11	2.06	32.85	0.8523	-6.1304	0.5523
375	SLD 11	-1.93	-1.71	30.64	0.7984	-5.7317	-0.3912
375	SLD 12	-1.77	-2	30.42	0.7933	-5.6896	-0.4663
375	SLD 13	-3.42	1.24	25.46	0.6615	-4.8306	0.395
375	SLD 14	-3.18	0.8	25.12	0.6536	-4.7661	0.2801
375	SLD 15	-3.62	0.02	24.73	0.6438	-4.6984	0.0894
375	SLD 16	-3.38	-0.41	24.39	0.6359	-4.6339	-0.0255
375	SLV 1	5.5	1.15	58.72	1.5215	-10.6813	0.1669
375	SLV 2	6.06	0.13	57.93	1.5032	-10.5311	-0.1006
375	SLV 3	5.04	-1.61	57.05	1.4808	-10.3777	-0.5246
375	SLV 4	5.6	-2.62	56.25	1.4624	-10.2275	-0.7921
375	SLV 5	1.75	4.74	44.56	1.1521	-8.2019	1.1698
375	SLV 6	2.11	4.09	44.05	1.1403	-8.1054	0.9979
375	SLV 7	0.21	-4.43	38.98	1.0164	-7.19	-1.1352
375	SLV 8	0.57	-5.09	38.47	1.0046	-7.0935	-1.3072
375	SLV 9	-2.01	5.22	30.87	0.7975	-5.7962	1.3789
375	SLV 10	-1.65	4.57	30.36	0.7857	-5.6996	1.2069
375	SLV 11	-3.55	-3.95	25.29	0.6619	-4.7843	-0.9262
375	SLV 12	-3.19	-4.6	24.78	0.65	-4.6877	-1.0981
375	SLV 13	-7.03	2.76	13.09	0.3397	-2.6621	0.8638
375	SLV 14	-6.47	1.74	12.29	0.3213	-2.5119	0.5963
375	SLV 15	-7.49	0.01	11.41	0.299	-2.3585	0.1723
375	SLV 16	-6.94	-1.01	10.62	0.2806	-2.2084	-0.0952
375	CRTFP Ux+	0	0	0	0	0	0
375	CRTFP Ux-	0	0	0	0	0	0
375	CRTFP Uy+	0	0	0	0	0	0
375	CRTFP Uy-	0	0	0	0	0	0
378	SLU 1	0.14	-0.06	34.15	0.926	10.5114	0.0163
378	SLU 2	0.15	-0.09	34.14	0.9257	10.5061	0.0269
378	SLU 3	0.14	-0.05	34.98	0.9483	10.7631	0.0126
378	SLU 4	0.15	-0.07	34.97	0.9481	10.7599	0.019
378	SLU 5	0.15	-0.09	34.65	0.9395	10.6627	0.0266
378	SLU 6	0.14	-0.05	35.49	0.9622	10.9196	0.0122
378	SLU 7	0.15	-0.07	35.48	0.962	10.9165	0.0186
378	SLU 8	0.14	-0.06	35.18	0.9537	10.8245	0.0156
378	SLU 9	0.15	-0.08	35.17	0.9535	10.8214	0.022
378	SLU 10	0.15	-0.03	38.44	1.0429	11.8234	0.007
378	SLU 11	0.14	0.01	39.28	1.0655	12.0803	-0.0073
378	SLU 12	0.15	-0.01	39.27	1.0653	12.0772	-0.0009
378	SLU 13	0.15	-0.03	38.95	1.0567	11.98	0.0067
378	SLU 14	0.14	0.01	39.79	1.0793	12.2369	-0.0077
378	SLU 15	0.15	-0.01	39.78	1.0792	12.2337	-0.0013
378	SLU 16	0.14	0	39.48	1.0708	12.1418	-0.0043
378	SLU 17	0.15	-0.02	39.47	1.0707	12.1386	0.0021
378	SLU 18	0.14	0.02	40.29	1.0934	12.3932	-0.0122

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
378	SLU 19	0.14	0	40.29	1.0932	12.3901	-0.0058
378	SLU 20	0.14	0.02	40.81	1.1072	12.5498	-0.0125
378	SLU 21	0.15	0	40.8	1.107	12.5466	-0.0061
378	SLU 22	0.16	0.03	37.84	1.0263	11.6321	-0.0143
378	SLU 23	0.17	-0.01	37.82	1.026	11.6268	-0.0036
378	SLU 24	0.16	0.04	38.66	1.0486	11.8837	-0.018
378	SLU 25	0.17	0.02	38.65	1.0484	11.8806	-0.0116
378	SLU 26	0.17	0	38.34	1.0398	11.7834	-0.004
378	SLU 27	0.16	0.04	39.18	1.0625	12.0403	-0.0183
378	SLU 28	0.17	0.02	39.17	1.0623	12.0371	-0.0119
378	SLU 29	0.16	0.03	38.87	1.054	11.9452	-0.015
378	SLU 30	0.17	0.01	38.86	1.0538	11.942	-0.0086
378	SLU 31	0.17	0.05	42.12	1.1432	12.9441	-0.0236
378	SLU 32	0.16	0.09	42.96	1.1658	13.201	-0.0379
378	SLU 33	0.17	0.07	42.95	1.1656	13.1979	-0.0315
378	SLU 34	0.17	0.05	42.63	1.157	13.1006	-0.0239
378	SLU 35	0.16	0.09	43.48	1.1796	13.3576	-0.0382
378	SLU 36	0.17	0.07	43.47	1.1794	13.3544	-0.0319
378	SLU 37	0.16	0.08	43.16	1.1711	13.2625	-0.0349
378	SLU 38	0.17	0.07	43.15	1.1709	13.2593	-0.0285
378	SLU 39	0.16	0.11	43.98	1.1937	13.5139	-0.0427
378	SLU 40	0.16	0.09	43.97	1.1935	13.5107	-0.0363
378	SLU 41	0.16	0.11	44.49	1.2075	13.6705	-0.0431
378	SLU 42	0.17	0.09	44.48	1.2073	13.6673	-0.0367
378	SLU 43	0.17	-0.11	43.14	1.1694	13.2806	0.0317
378	SLU 44	0.18	-0.14	43.12	1.1691	13.2753	0.0423
378	SLU 45	0.17	-0.1	43.96	1.1917	13.5322	0.028
378	SLU 46	0.18	-0.11	43.95	1.1916	13.5291	0.0343
378	SLU 47	0.18	-0.14	43.63	1.1829	13.4319	0.0419
378	SLU 48	0.17	-0.1	44.47	1.2056	13.6888	0.0276
378	SLU 49	0.18	-0.11	44.46	1.2054	13.6856	0.034
378	SLU 50	0.17	-0.1	44.16	1.1971	13.5937	0.031
378	SLU 51	0.18	-0.12	44.15	1.1969	13.5905	0.0373
378	SLU 52	0.18	-0.08	47.42	1.2863	14.5926	0.0224
378	SLU 53	0.17	-0.04	48.26	1.3089	14.8495	0.008
378	SLU 54	0.18	-0.06	48.25	1.3087	14.8464	0.0144
378	SLU 55	0.18	-0.08	47.93	1.3001	14.7491	0.022
378	SLU 56	0.18	-0.04	48.77	1.3228	15.0061	0.0077
378	SLU 57	0.18	-0.06	48.76	1.3226	15.0029	0.0141
378	SLU 58	0.17	-0.05	48.46	1.3143	14.911	0.011
378	SLU 59	0.18	-0.07	48.45	1.3141	14.9078	0.0174
378	SLU 60	0.17	-0.03	49.28	1.3368	15.1624	0.0032
378	SLU 61	0.18	-0.04	49.27	1.3366	15.1592	0.0096
378	SLU 62	0.17	-0.02	49.79	1.3506	15.319	0.0029
378	SLU 63	0.18	-0.04	49.78	1.3505	15.3158	0.0092
378	SLU 64	0.19	-0.02	46.82	1.2697	14.4013	0.0011
378	SLU 65	0.2	-0.05	46.81	1.2694	14.396	0.0117
378	SLU 66	0.19	-0.01	47.65	1.292	14.6529	-0.0026
378	SLU 67	0.2	-0.03	47.64	1.2918	14.6498	0.0038
378	SLU 68	0.2	-0.05	47.32	1.2832	14.5526	0.0114
378	SLU 69	0.2	-0.01	48.16	1.3059	14.8095	-0.003
378	SLU 70	0.2	-0.03	48.15	1.3057	14.8063	0.0034
378	SLU 71	0.19	-0.02	47.85	1.2974	14.7144	0.0004
378	SLU 72	0.2	-0.04	47.84	1.2972	14.7112	0.0068
378	SLU 73	0.2	0	51.1	1.3866	15.7133	-0.0082
378	SLU 74	0.19	0.05	51.95	1.4092	15.9702	-0.0225
378	SLU 75	0.2	0.03	51.94	1.409	15.967	-0.0161
378	SLU 76	0.2	0.01	51.62	1.4004	15.8698	-0.0085
378	SLU 77	0.2	0.05	52.46	1.4231	16.1268	-0.0229
378	SLU 78	0.2	0.03	52.45	1.4229	16.1236	-0.0165
378	SLU 79	0.19	0.04	52.15	1.4146	16.0317	-0.0195
378	SLU 80	0.2	0.02	52.14	1.4144	16.0285	-0.0131
378	SLU 81	0.19	0.06	52.96	1.4371	16.2831	-0.0274
378	SLU 82	0.2	0.04	52.95	1.4369	16.2799	-0.021
378	SLU 83	0.19	0.06	53.48	1.4509	16.4396	-0.0277
378	SLU 84	0.2	0.04	53.47	1.4507	16.4365	-0.0213
378	SLE RA 1	0.14	-0.03	35.21	0.9547	10.8316	0.0076
378	SLE RA 2	0.15	-0.06	35.2	0.9544	10.8281	0.0147
378	SLE RA 3	0.14	-0.03	35.76	0.9695	10.9994	0.0051
378	SLE RA 4	0.15	-0.04	35.75	0.9694	10.9973	0.0093
378	SLE RA 5	0.15	-0.06	35.54	0.9637	10.9325	0.0144
378	SLE RA 6	0.15	-0.03	36.1	0.9788	11.1037	0.0049
378	SLE RA 7	0.15	-0.04	36.09	0.9786	11.1016	0.0091
378	SLE RA 8	0.14	-0.03	35.89	0.9731	11.0403	0.0071
378	SLE RA 9	0.15	-0.05	35.88	0.973	11.0382	0.0114
378	SLE RA 10	0.15	-0.02	38.06	1.0326	11.7063	0.0014
378	SLE RA 11	0.14	0.01	38.62	1.0477	11.8776	-0.0082
378	SLE RA 12	0.15	0	38.62	1.0475	11.8754	-0.0039
378	SLE RA 13	0.15	-0.02	38.4	1.0418	11.8106	0.0011
378	SLE RA 14	0.15	0.01	38.96	1.0569	11.9819	-0.0084
378	SLE RA 15	0.15	0	38.96	1.0568	11.9798	-0.0042
378	SLE RA 16	0.14	0	38.76	1.0512	11.9185	-0.0062
378	SLE RA 17	0.15	-0.01	38.75	1.0511	11.9164	-0.0019
378	SLE RA 18	0.14	0.02	39.3	1.0663	12.0861	-0.0114
378	SLE RA 19	0.15	0.01	39.29	1.0661	12.084	-0.0072
378	SLE RA 20	0.14	0.02	39.64	1.0755	12.1905	-0.0116
378	SLE RA 21	0.15	0.01	39.64	1.0753	12.1884	-0.0074
378	SLE FR 1	0.14	-0.03	35.21	0.9547	10.8316	0.0076
378	SLE FR 2	0.14	-0.04	35.2	0.9546	10.8309	0.009
378	SLE FR 3	0.14	-0.03	35.34	0.9583	10.8734	0.0075
378	SLE FR 4	0.14	-0.02	36.43	0.9881	11.2073	0.0033
378	SLE FR 5	0.14	-0.02	36.57	0.9918	11.2497	0.0018
378	SLE FR 6	0.14	-0.01	37.25	1.0105	11.4589	-0.0019
378	SLE QP 1	0.14	-0.03	35.21	0.9547	10.8316	0.0076
378	SLE QP 2	0.14	-0.02	36.43	0.9881	11.208	0.0019
378	SLD 1	3.45	0.59	37	1.0042	11.4411	-0.2748
378	SLD 2	3.72	0.62	37.08	1.0062	11.4626	-0.2917

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
378	SLD 3	3.22	-0.4	36.58	0.9958	11.3134	0.0737
378	SLD 4	3.5	-0.37	36.67	0.9978	11.3349	0.0567
378	SLD 5	1.43	1.66	37.22	1.0054	11.4678	-0.6066
378	SLD 6	1.61	1.68	37.27	1.0067	11.4818	-0.6177
378	SLD 7	0.67	-1.64	35.83	0.9773	11.0421	0.5549
378	SLD 8	0.86	-1.62	35.89	0.9786	11.0562	0.5438
378	SLD 9	-0.57	1.59	36.98	0.9977	11.3598	-0.5401
378	SLD 10	-0.39	1.6	37.04	0.999	11.3738	-0.5512
378	SLD 11	-1.32	-1.72	35.59	0.9696	10.9341	0.6214
378	SLD 12	-1.14	-1.7	35.65	0.9709	10.9481	0.6104
378	SLD 13	-3.21	0.33	36.2	0.9785	11.081	-0.053
378	SLD 14	-2.94	0.36	36.29	0.9805	11.1025	-0.07
378	SLD 15	-3.44	-0.66	35.79	0.9701	10.9533	0.2955
378	SLD 16	-3.16	-0.63	35.87	0.9721	10.9748	0.2785
378	SLV 1	7.87	1.37	37.73	1.0254	11.7494	-0.6327
378	SLV 2	8.52	1.44	37.94	1.0301	11.7994	-0.6721
378	SLV 3	7.34	-0.88	36.79	1.0062	11.4588	0.1574
378	SLV 4	7.99	-0.81	36.99	1.0109	11.5088	0.1179
378	SLV 5	3.15	3.8	38.22	1.0277	11.8026	-1.3799
378	SLV 6	3.57	3.84	38.35	1.0307	11.8348	-1.4053
378	SLV 7	1.39	-3.7	35.07	0.9636	10.8339	1.2535
378	SLV 8	1.81	-3.65	35.2	0.9666	10.866	1.2281
378	SLV 9	-1.52	3.62	37.67	1.0097	11.5499	-1.2244
378	SLV 10	-1.11	3.66	37.8	1.0127	11.5821	-1.2497
378	SLV 11	-3.28	-3.88	34.51	0.9456	10.5812	1.409
378	SLV 12	-2.86	-3.83	34.65	0.9486	10.6133	1.3836
378	SLV 13	-7.71	0.77	35.88	0.9654	10.9071	-0.1141
378	SLV 14	-7.06	0.84	36.08	0.9701	10.9572	-0.1536
378	SLV 15	-8.24	-1.48	34.93	0.9461	10.6165	0.6759
378	SLV 16	-7.59	-1.41	35.14	0.9508	10.6665	0.6364
378	CRTFP Ux+	0	0	0	0	0	0
378	CRTFP Ux-	0	0	0	0	0	0
378	CRTFP Uy+	0	0	0	0	0	0
378	CRTFP Uy-	0	0	0	0	0	0
382	SLU 1	-1.22	-1.22	63.94	-0.0609	-0.3346	-0.0361
382	SLU 2	-1.19	-1.3	63.9	-0.0605	-0.3355	-0.0356
382	SLU 3	-1.25	-1.24	65.46	-0.0623	-0.3426	-0.0371
382	SLU 4	-1.24	-1.28	65.43	-0.0621	-0.3431	-0.0368
382	SLU 5	-1.22	-1.31	64.87	-0.0615	-0.3401	-0.0362
382	SLU 6	-1.28	-1.25	66.42	-0.0633	-0.3473	-0.0377
382	SLU 7	-1.26	-1.3	66.4	-0.0631	-0.3478	-0.0374
382	SLU 8	-1.27	-1.25	65.87	-0.0629	-0.344	-0.0373
382	SLU 9	-1.25	-1.3	65.85	-0.0627	-0.3445	-0.037
382	SLU 10	-1.27	-1.35	71.24	-0.067	-0.3865	-0.0395
382	SLU 11	-1.33	-1.3	72.8	-0.0688	-0.3936	-0.041
382	SLU 12	-1.31	-1.34	72.78	-0.0686	-0.3941	-0.0407
382	SLU 13	-1.29	-1.37	72.21	-0.068	-0.3912	-0.0401
382	SLU 14	-1.35	-1.31	73.77	-0.0698	-0.3983	-0.0416
382	SLU 15	-1.34	-1.36	73.74	-0.0696	-0.3988	-0.0413
382	SLU 16	-1.34	-1.31	73.22	-0.0693	-0.395	-0.0412
382	SLU 17	-1.33	-1.35	73.19	-0.0691	-0.3955	-0.0409
382	SLU 18	-1.33	-1.3	74.43	-0.0702	-0.4075	-0.0416
382	SLU 19	-1.31	-1.35	74.41	-0.0699	-0.408	-0.0413
382	SLU 20	-1.35	-1.32	75.4	-0.0711	-0.4122	-0.0423
382	SLU 21	-1.34	-1.36	75.37	-0.0709	-0.4127	-0.042
382	SLU 22	-1.37	-1.22	70.94	-0.0664	-0.37	-0.0409
382	SLU 23	-1.35	-1.3	70.9	-0.066	-0.3708	-0.0404
382	SLU 24	-1.41	-1.24	72.46	-0.0678	-0.3779	-0.0419
382	SLU 25	-1.39	-1.29	72.43	-0.0676	-0.3785	-0.0416
382	SLU 26	-1.37	-1.31	71.86	-0.067	-0.3755	-0.041
382	SLU 27	-1.43	-1.26	73.42	-0.0688	-0.3826	-0.0425
382	SLU 28	-1.42	-1.3	73.4	-0.0686	-0.3831	-0.0422
382	SLU 29	-1.42	-1.26	72.87	-0.0684	-0.3793	-0.0421
382	SLU 30	-1.41	-1.3	72.85	-0.0681	-0.3798	-0.0418
382	SLU 31	-1.42	-1.36	78.24	-0.0725	-0.4218	-0.0443
382	SLU 32	-1.48	-1.3	79.8	-0.0743	-0.429	-0.0457
382	SLU 33	-1.47	-1.34	79.78	-0.0741	-0.4295	-0.0454
382	SLU 34	-1.45	-1.37	79.21	-0.0735	-0.4265	-0.0449
382	SLU 35	-1.51	-1.31	80.77	-0.0753	-0.4336	-0.0464
382	SLU 36	-1.49	-1.36	80.74	-0.0751	-0.4341	-0.0461
382	SLU 37	-1.5	-1.31	80.22	-0.0748	-0.4303	-0.046
382	SLU 38	-1.48	-1.36	80.19	-0.0746	-0.4308	-0.0457
382	SLU 39	-1.48	-1.31	81.43	-0.0756	-0.4429	-0.0464
382	SLU 40	-1.47	-1.35	81.41	-0.0754	-0.4434	-0.0461
382	SLU 41	-1.51	-1.32	82.4	-0.0766	-0.4475	-0.047
382	SLU 42	-1.49	-1.36	82.37	-0.0764	-0.448	-0.0467
382	SLU 43	-1.53	-1.59	80.72	-0.0773	-0.4229	-0.0453
382	SLU 44	-1.51	-1.66	80.68	-0.0769	-0.4238	-0.0448
382	SLU 45	-1.57	-1.61	82.24	-0.0787	-0.4309	-0.0463
382	SLU 46	-1.55	-1.65	82.21	-0.0785	-0.4314	-0.046
382	SLU 47	-1.53	-1.68	81.65	-0.0779	-0.4284	-0.0454
382	SLU 48	-1.59	-1.62	83.21	-0.0797	-0.4355	-0.0469
382	SLU 49	-1.58	-1.67	83.18	-0.0795	-0.4361	-0.0466
382	SLU 50	-1.58	-1.62	82.66	-0.0793	-0.4322	-0.0465
382	SLU 51	-1.57	-1.66	82.63	-0.079	-0.4327	-0.0462
382	SLU 52	-1.58	-1.72	88.03	-0.0834	-0.4748	-0.0487
382	SLU 53	-1.64	-1.66	89.58	-0.0852	-0.4819	-0.0502
382	SLU 54	-1.63	-1.71	89.56	-0.085	-0.4824	-0.0499
382	SLU 55	-1.61	-1.73	88.99	-0.0844	-0.4794	-0.0493
382	SLU 56	-1.67	-1.68	90.55	-0.0862	-0.4866	-0.0508
382	SLU 57	-1.65	-1.72	90.53	-0.086	-0.4871	-0.0505
382	SLU 58	-1.66	-1.68	90	-0.0857	-0.4832	-0.0504
382	SLU 59	-1.64	-1.72	89.98	-0.0855	-0.4838	-0.0501
382	SLU 60	-1.64	-1.67	91.21	-0.0865	-0.4958	-0.0508
382	SLU 61	-1.62	-1.71	91.19	-0.0863	-0.4963	-0.0505
382	SLU 62	-1.66	-1.68	92.18	-0.0875	-0.5005	-0.0515
382	SLU 63	-1.65	-1.73	92.16	-0.0873	-0.501	-0.0512

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
382	SLU 64	-1.69	-1.59	87.72	-0.0828	-0.4582	-0.0501
382	SLU 65	-1.66	-1.67	87.68	-0.0824	-0.4591	-0.0496
382	SLU 66	-1.72	-1.61	89.24	-0.0842	-0.4662	-0.0511
382	SLU 67	-1.71	-1.65	89.21	-0.084	-0.4667	-0.0508
382	SLU 68	-1.69	-1.68	88.65	-0.0834	-0.4638	-0.0502
382	SLU 69	-1.75	-1.62	90.2	-0.0852	-0.4709	-0.0517
382	SLU 70	-1.73	-1.67	90.18	-0.085	-0.4714	-0.0514
382	SLU 71	-1.74	-1.62	89.65	-0.0847	-0.4676	-0.0513
382	SLU 72	-1.72	-1.67	89.63	-0.0845	-0.4681	-0.051
382	SLU 73	-1.74	-1.72	95.02	-0.0889	-0.5101	-0.0535
382	SLU 74	-1.8	-1.66	96.58	-0.0907	-0.5172	-0.0549
382	SLU 75	-1.78	-1.71	96.56	-0.0905	-0.5177	-0.0546
382	SLU 76	-1.76	-1.74	95.99	-0.0899	-0.5148	-0.0541
382	SLU 77	-1.82	-1.68	97.55	-0.0917	-0.5219	-0.0556
382	SLU 78	-1.81	-1.72	97.52	-0.0915	-0.5224	-0.0553
382	SLU 79	-1.81	-1.68	97	-0.0912	-0.5186	-0.0552
382	SLU 80	-1.8	-1.72	96.97	-0.091	-0.5191	-0.0549
382	SLU 81	-1.79	-1.67	98.21	-0.092	-0.5311	-0.0556
382	SLU 82	-1.78	-1.72	98.19	-0.0918	-0.5316	-0.0553
382	SLU 83	-1.82	-1.69	99.18	-0.093	-0.5358	-0.0562
382	SLU 84	-1.8	-1.73	99.16	-0.0928	-0.5363	-0.0559
382	SLE RA 1	-1.26	-1.22	65.94	-0.0625	-0.3447	-0.0375
382	SLE RA 2	-1.25	-1.27	65.91	-0.0622	-0.3453	-0.0371
382	SLE RA 3	-1.29	-1.23	66.95	-0.0634	-0.35	-0.0381
382	SLE RA 4	-1.28	-1.26	66.93	-0.0633	-0.3504	-0.0379
382	SLE RA 5	-1.26	-1.28	66.56	-0.0629	-0.3484	-0.0376
382	SLE RA 6	-1.3	-1.24	67.59	-0.0641	-0.3532	-0.0385
382	SLE RA 7	-1.29	-1.27	67.58	-0.0639	-0.3535	-0.0383
382	SLE RA 8	-1.3	-1.24	67.23	-0.0638	-0.3509	-0.0383
382	SLE RA 9	-1.29	-1.27	67.21	-0.0636	-0.3513	-0.0381
382	SLE RA 10	-1.3	-1.31	70.81	-0.0665	-0.3793	-0.0397
382	SLE RA 11	-1.34	-1.27	71.85	-0.0677	-0.3841	-0.0407
382	SLE RA 12	-1.33	-1.3	71.83	-0.0676	-0.3844	-0.0405
382	SLE RA 13	-1.31	-1.32	71.45	-0.0672	-0.3824	-0.0401
382	SLE RA 14	-1.35	-1.28	72.49	-0.0684	-0.3872	-0.0411
382	SLE RA 15	-1.34	-1.31	72.47	-0.0683	-0.3875	-0.0409
382	SLE RA 16	-1.35	-1.28	72.12	-0.0681	-0.385	-0.0409
382	SLE RA 17	-1.34	-1.31	72.11	-0.068	-0.3853	-0.0407
382	SLE RA 18	-1.34	-1.28	72.93	-0.0686	-0.3933	-0.0412
382	SLE RA 19	-1.33	-1.31	72.92	-0.0685	-0.3937	-0.041
382	SLE RA 20	-1.35	-1.29	73.58	-0.0693	-0.3964	-0.0416
382	SLE RA 21	-1.34	-1.32	73.56	-0.0692	-0.3968	-0.0414
382	SLE FR 1	-1.26	-1.22	65.94	-0.0625	-0.3447	-0.0375
382	SLE FR 2	-1.26	-1.23	65.93	-0.0624	-0.3448	-0.0374
382	SLE FR 3	-1.27	-1.23	66.2	-0.0627	-0.346	-0.0376
382	SLE FR 4	-1.28	-1.25	68.03	-0.0643	-0.3594	-0.0385
382	SLE FR 5	-1.29	-1.24	68.3	-0.0646	-0.3606	-0.0387
382	SLE FR 6	-1.3	-1.25	69.44	-0.0655	-0.369	-0.0393
382	SLE QP 1	-1.26	-1.22	65.94	-0.0625	-0.3447	-0.0375
382	SLE QP 2	-1.29	-1.24	68.04	-0.0643	-0.3593	-0.0386
382	SLD 1	4.62	-0.88	74.72	-0.0785	-0.1672	-0.0208
382	SLD 2	5.1	-1.23	74.44	-0.0769	-0.1732	-0.0113
382	SLD 3	4.22	-2.6	74.03	-0.0721	-0.1951	-0.0263
382	SLD 4	4.7	-2.95	73.75	-0.0705	-0.2011	-0.0168
382	SLD 5	1.01	1.55	71.14	-0.0785	-0.2582	-0.0266
382	SLD 6	1.33	1.31	70.96	-0.0775	-0.2621	-0.0203
382	SLD 7	-0.33	-4.2	68.84	-0.0572	-0.3514	-0.045
382	SLD 8	-0.02	-4.43	68.65	-0.0562	-0.3553	-0.0387
382	SLD 9	-2.56	1.95	67.42	-0.0724	-0.3633	-0.0384
382	SLD 10	-2.24	1.72	67.24	-0.0714	-0.3673	-0.0322
382	SLD 11	-3.9	-3.79	65.12	-0.0511	-0.4565	-0.0568
382	SLD 12	-3.58	-4.02	64.94	-0.0501	-0.4604	-0.0506
382	SLD 13	-7.27	0.48	62.33	-0.0581	-0.5175	-0.0604
382	SLD 14	-6.79	0.12	62.05	-0.0566	-0.5235	-0.0509
382	SLD 15	-7.67	-1.25	61.63	-0.0517	-0.5455	-0.0659
382	SLD 16	-7.19	-1.6	61.36	-0.0502	-0.5515	-0.0564
382	SLV 1	12.53	-0.46	83.65	-0.0972	0.0899	0.003
382	SLV 2	13.66	-1.28	83	-0.0935	0.0759	0.0253
382	SLV 3	11.59	-4.36	82.07	-0.0827	0.0259	-0.0098
382	SLV 4	12.72	-5.18	81.43	-0.079	0.012	0.0124
382	SLV 5	4.09	5.05	75.22	-0.0968	-0.1252	-0.0104
382	SLV 6	4.81	4.52	74.81	-0.0945	-0.1342	0.0039
382	SLV 7	0.96	-7.95	69.97	-0.0484	-0.3383	-0.0533
382	SLV 8	1.69	-8.48	69.56	-0.0461	-0.3473	-0.039
382	SLV 9	-4.26	6	66.52	-0.0826	-0.3713	-0.0382
382	SLV 10	-3.53	5.47	66.11	-0.0802	-0.3803	-0.0239
382	SLV 11	-7.38	-7	61.27	-0.0342	-0.5844	-0.0811
382	SLV 12	-6.66	-7.53	60.86	-0.0318	-0.5934	-0.0668
382	SLV 13	-15.29	2.7	54.65	-0.0496	-0.7306	-0.0896
382	SLV 14	-14.17	1.88	54	-0.0459	-0.7446	-0.0673
382	SLV 15	-16.23	-1.19	53.07	-0.0351	-0.7945	-0.1025
382	SLV 16	-15.1	-2.02	52.43	-0.0314	-0.8085	-0.0802
382	CRTFP Ux+	0	0	0	0	0	0
382	CRTFP Ux-	0	0	0	0	0	0
386	SLU 1	0.34	-0.7	65.2	-0.0568	0.4107	0.0058
386	SLU 2	0.36	-0.74	65.19	-0.0567	0.4111	0.0063
386	SLU 3	0.35	-0.71	66.76	-0.0582	0.4203	0.0059
386	SLU 4	0.36	-0.73	66.76	-0.0581	0.4205	0.0062
386	SLU 5	0.36	-0.75	66.17	-0.0576	0.4166	0.0063
386	SLU 6	0.35	-0.73	67.74	-0.0592	0.4257	0.0059
386	SLU 7	0.37	-0.75	67.73	-0.0591	0.4259	0.0062
386	SLU 8	0.35	-0.74	67.16	-0.0587	0.4216	0.0059
386	SLU 9	0.36	-0.76	67.15	-0.0586	0.4218	0.0062
386	SLU 10	0.35	-0.72	72.88	-0.0627	0.4686	0.0063
386	SLU 11	0.34	-0.69	74.45	-0.0643	0.4778	0.0059
386	SLU 12	0.36	-0.71	74.45	-0.0642	0.478	0.0061
386	SLU 13	0.36	-0.74	73.86	-0.0637	0.4741	0.0063

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
386	SLU 14	0.35	-0.71	75.43	-0.0652	0.4833	0.0059
386	SLU 15	0.36	-0.73	75.42	-0.0651	0.4835	0.0061
386	SLU 16	0.34	-0.72	74.84	-0.0648	0.4791	0.0058
386	SLU 17	0.35	-0.74	74.84	-0.0647	0.4794	0.0061
386	SLU 18	0.33	-0.68	76.19	-0.0655	0.4929	0.0057
386	SLU 19	0.34	-0.7	76.18	-0.0654	0.4931	0.006
386	SLU 20	0.33	-0.69	77.16	-0.0664	0.4984	0.0058
386	SLU 21	0.35	-0.71	77.16	-0.0663	0.4986	0.006
386	SLU 22	0.39	-0.64	72.48	-0.0618	0.4488	0.0065
386	SLU 23	0.41	-0.68	72.47	-0.0616	0.4491	0.007
386	SLU 24	0.4	-0.65	74.04	-0.0632	0.4583	0.0066
386	SLU 25	0.41	-0.67	74.03	-0.0631	0.4585	0.0069
386	SLU 26	0.41	-0.7	73.44	-0.0626	0.4546	0.007
386	SLU 27	0.4	-0.67	75.01	-0.0641	0.4637	0.0066
386	SLU 28	0.42	-0.69	75.01	-0.064	0.464	0.0069
386	SLU 29	0.4	-0.68	74.43	-0.0637	0.4596	0.0065
386	SLU 30	0.41	-0.7	74.42	-0.0636	0.4599	0.0068
386	SLU 31	0.4	-0.66	80.16	-0.0677	0.5067	0.0069
386	SLU 32	0.39	-0.64	81.73	-0.0692	0.5158	0.0065
386	SLU 33	0.4	-0.66	81.72	-0.0691	0.5161	0.0068
386	SLU 34	0.41	-0.68	81.13	-0.0686	0.5121	0.0069
386	SLU 35	0.4	-0.65	82.7	-0.0702	0.5213	0.0065
386	SLU 36	0.41	-0.67	82.7	-0.0701	0.5215	0.0068
386	SLU 37	0.39	-0.66	82.12	-0.0697	0.5172	0.0064
386	SLU 38	0.4	-0.68	82.11	-0.0696	0.5174	0.0067
386	SLU 39	0.38	-0.62	83.46	-0.0704	0.5309	0.0064
386	SLU 40	0.39	-0.64	83.46	-0.0703	0.5312	0.0067
386	SLU 41	0.38	-0.64	84.44	-0.0714	0.5364	0.0064
386	SLU 42	0.4	-0.66	84.43	-0.0713	0.5366	0.0067
386	SLU 43	0.42	-0.93	82.27	-0.0722	0.5209	0.0074
386	SLU 44	0.45	-0.97	82.26	-0.072	0.5213	0.0079
386	SLU 45	0.43	-0.94	83.83	-0.0736	0.5305	0.0075
386	SLU 46	0.45	-0.96	83.82	-0.0735	0.5307	0.0077
386	SLU 47	0.45	-0.98	83.24	-0.073	0.5267	0.0079
386	SLU 48	0.44	-0.96	84.81	-0.0745	0.5359	0.0075
386	SLU 49	0.45	-0.98	84.8	-0.0744	0.5361	0.0077
386	SLU 50	0.43	-0.97	84.22	-0.0741	0.5318	0.0074
386	SLU 51	0.44	-0.99	84.22	-0.074	0.532	0.0077
386	SLU 52	0.44	-0.95	89.95	-0.0781	0.5788	0.0078
386	SLU 53	0.43	-0.92	91.52	-0.0796	0.588	0.0074
386	SLU 54	0.44	-0.94	91.51	-0.0795	0.5882	0.0077
386	SLU 55	0.44	-0.97	90.92	-0.079	0.5843	0.0078
386	SLU 56	0.43	-0.94	92.49	-0.0806	0.5934	0.0074
386	SLU 57	0.44	-0.96	92.49	-0.0805	0.5937	0.0077
386	SLU 58	0.42	-0.95	91.91	-0.0801	0.5893	0.0073
386	SLU 59	0.44	-0.97	91.9	-0.08	0.5895	0.0076
386	SLU 60	0.41	-0.91	93.25	-0.0809	0.6031	0.0073
386	SLU 61	0.43	-0.93	93.25	-0.0808	0.6033	0.0076
386	SLU 62	0.42	-0.92	94.23	-0.0818	0.6085	0.0073
386	SLU 63	0.43	-0.94	94.22	-0.0817	0.6088	0.0076
386	SLU 64	0.47	-0.87	89.54	-0.0771	0.5589	0.008
386	SLU 65	0.49	-0.91	89.53	-0.077	0.5593	0.0085
386	SLU 66	0.48	-0.88	91.1	-0.0785	0.5685	0.0081
386	SLU 67	0.5	-0.9	91.1	-0.0784	0.5687	0.0084
386	SLU 68	0.5	-0.93	90.51	-0.0779	0.5648	0.0085
386	SLU 69	0.49	-0.9	92.08	-0.0795	0.5739	0.0081
386	SLU 70	0.5	-0.92	92.08	-0.0794	0.5742	0.0084
386	SLU 71	0.48	-0.91	91.5	-0.079	0.5698	0.008
386	SLU 72	0.49	-0.93	91.49	-0.0789	0.57	0.0083
386	SLU 73	0.49	-0.89	97.22	-0.083	0.6168	0.0084
386	SLU 74	0.48	-0.87	98.79	-0.0846	0.626	0.008
386	SLU 75	0.49	-0.89	98.79	-0.0845	0.6262	0.0083
386	SLU 76	0.49	-0.91	98.2	-0.084	0.6223	0.0084
386	SLU 77	0.48	-0.88	99.77	-0.0855	0.6315	0.008
386	SLU 78	0.49	-0.9	99.76	-0.0854	0.6317	0.0083
386	SLU 79	0.47	-0.89	99.19	-0.0851	0.6273	0.008
386	SLU 80	0.49	-0.91	99.18	-0.085	0.6276	0.0083
386	SLU 81	0.46	-0.85	100.53	-0.0858	0.6411	0.0079
386	SLU 82	0.48	-0.87	100.52	-0.0857	0.6413	0.0082
386	SLU 83	0.47	-0.87	101.5	-0.0868	0.6466	0.0079
386	SLU 84	0.48	-0.89	101.5	-0.0866	0.6468	0.0082
386	SLE RA 1	0.35	-0.68	67.28	-0.0583	0.4216	0.006
386	SLE RA 2	0.37	-0.71	67.27	-0.0581	0.4218	0.0063
386	SLE RA 3	0.36	-0.69	68.32	-0.0592	0.428	0.0061
386	SLE RA 4	0.37	-0.71	68.32	-0.0591	0.4281	0.0063
386	SLE RA 5	0.37	-0.72	67.93	-0.0588	0.4255	0.0064
386	SLE RA 6	0.36	-0.7	68.97	-0.0598	0.4316	0.0061
386	SLE RA 7	0.37	-0.72	68.97	-0.0597	0.4317	0.0063
386	SLE RA 8	0.36	-0.71	68.58	-0.0595	0.4288	0.006
386	SLE RA 9	0.37	-0.72	68.58	-0.0594	0.429	0.0062
386	SLE RA 10	0.36	-0.7	72.4	-0.0622	0.4602	0.0063
386	SLE RA 11	0.35	-0.68	73.45	-0.0632	0.4663	0.006
386	SLE RA 12	0.36	-0.69	73.44	-0.0631	0.4665	0.0062
386	SLE RA 13	0.37	-0.71	73.05	-0.0628	0.4638	0.0063
386	SLE RA 14	0.36	-0.69	74.1	-0.0638	0.4699	0.006
386	SLE RA 15	0.37	-0.71	74.09	-0.0638	0.4701	0.0062
386	SLE RA 16	0.35	-0.7	73.71	-0.0636	0.4672	0.006
386	SLE RA 17	0.36	-0.71	73.7	-0.0635	0.4674	0.0062
386	SLE RA 18	0.35	-0.67	74.6	-0.064	0.4764	0.006
386	SLE RA 19	0.36	-0.68	74.6	-0.064	0.4765	0.0062
386	SLE RA 20	0.35	-0.68	75.25	-0.0647	0.48	0.006
386	SLE RA 21	0.36	-0.69	75.25	-0.0646	0.4802	0.0062
386	SLE FR 1	0.35	-0.68	67.28	-0.0583	0.4216	0.006
386	SLE FR 2	0.36	-0.69	67.28	-0.0582	0.4216	0.0061
386	SLE FR 3	0.35	-0.69	67.54	-0.0585	0.423	0.006
386	SLE FR 4	0.35	-0.68	69.48	-0.06	0.4381	0.0061
386	SLE FR 5	0.35	-0.68	69.74	-0.0602	0.4395	0.006

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
386	SLE FR 6	0.35	-0.68	70.94	-0.0611	0.449	0.006
386	SLE QP 1	0.35	-0.68	67.28	-0.0583	0.4216	0.006
386	SLE QP 2	0.35	-0.68	69.48	-0.06	0.438	0.006
386	SLD 1	6.43	0.64	63.79	-0.0485	0.5638	0.0321
386	SLD 2	6.93	1.03	64.25	-0.0508	0.5562	0.0412
386	SLD 3	6.03	-0.98	62.9	-0.0417	0.5876	0.0256
386	SLD 4	6.53	-0.6	63.35	-0.044	0.58	0.0347
386	SLD 5	2.7	2.11	69.05	-0.0664	0.4409	0.022
386	SLD 6	3.02	2.36	69.35	-0.0679	0.436	0.028
386	SLD 7	1.36	-3.3	66.06	-0.0438	0.5204	0.0005
386	SLD 8	1.68	-3.05	66.36	-0.0453	0.5155	0.0065
386	SLD 9	-0.98	1.69	72.6	-0.0746	0.3606	0.0056
386	SLD 10	-0.65	1.94	72.9	-0.0762	0.3557	0.0115
386	SLD 11	-2.32	-3.72	69.6	-0.052	0.4401	-0.0159
386	SLD 12	-2	-3.47	69.9	-0.0536	0.4351	-0.01
386	SLD 13	-5.83	-0.76	75.6	-0.0759	0.296	-0.0227
386	SLD 14	-5.33	-0.38	76.06	-0.0783	0.2884	-0.0136
386	SLD 15	-6.23	-2.38	74.7	-0.0691	0.3198	-0.0292
386	SLD 16	-5.73	-2	75.16	-0.0715	0.3123	-0.0201
386	SLV 1	14.59	2.37	56.15	-0.0328	0.7328	0.067
386	SLV 2	15.74	3.26	57.22	-0.0383	0.7152	0.0883
386	SLV 3	13.65	-1.32	54.09	-0.0174	0.7876	0.0519
386	SLV 4	14.8	-0.43	55.16	-0.0229	0.77	0.0732
386	SLV 5	5.85	5.68	68.42	-0.0743	0.4463	0.0436
386	SLV 6	6.59	6.25	69.11	-0.0778	0.435	0.0573
386	SLV 7	2.71	-6.62	61.56	-0.0229	0.629	-0.0068
386	SLV 8	3.45	-6.05	62.24	-0.0264	0.6177	0.0069
386	SLV 9	-2.75	4.69	76.71	-0.0936	0.2583	0.0052
386	SLV 10	-2.01	5.26	77.4	-0.0971	0.247	0.0188
386	SLV 11	-5.89	-7.61	69.85	-0.0421	0.441	-0.0452
386	SLV 12	-5.15	-7.04	70.53	-0.0457	0.4297	-0.0316
386	SLV 13	-14.1	-0.93	83.8	-0.0971	0.1061	-0.0611
386	SLV 14	-12.94	-0.04	84.86	-0.1026	0.0885	-0.0399
386	SLV 15	-15.04	-4.62	81.74	-0.0817	0.1609	-0.0763
386	SLV 16	-13.89	-3.73	82.8	-0.0871	0.1433	-0.055
386	CRTFP Ux+	0	0	0	0	0	0
386	CRTFP Ux-	0	0	0	0	0	0
386	CRTFP Uy+	0	0	0	0	0	0
386	CRTFP Uy-	0	0	0	0	0	0
387	SLU 1	0.27	0.28	38.44	-0.0618	9.459	-0.0978
387	SLU 2	0.28	0.25	38.44	-0.0617	9.4595	-0.0889
387	SLU 3	0.28	0.28	39.37	-0.0634	9.6794	-0.0993
387	SLU 4	0.29	0.27	39.37	-0.0634	9.6797	-0.094
387	SLU 5	0.29	0.25	39.03	-0.0628	9.5982	-0.0875
387	SLU 6	0.28	0.28	39.96	-0.0645	9.8182	-0.0979
387	SLU 7	0.29	0.26	39.96	-0.0645	9.8185	-0.0926
387	SLU 8	0.28	0.27	39.62	-0.0639	9.7366	-0.095
387	SLU 9	0.29	0.25	39.62	-0.0639	9.7368	-0.0897
387	SLU 10	0.28	0.35	42.73	-0.0688	10.485	-0.125
387	SLU 11	0.27	0.38	43.66	-0.0705	10.705	-0.1354
387	SLU 12	0.28	0.37	43.66	-0.0705	10.7053	-0.13
387	SLU 13	0.28	0.35	43.32	-0.0699	10.6238	-0.1236
387	SLU 14	0.27	0.38	44.25	-0.0716	10.8438	-0.134
387	SLU 15	0.28	0.36	44.25	-0.0716	10.844	-0.1286
387	SLU 16	0.27	0.37	43.9	-0.071	10.7621	-0.1311
387	SLU 17	0.28	0.36	43.9	-0.071	10.7624	-0.1258
387	SLU 18	0.26	0.42	44.56	-0.0719	10.9241	-0.1494
387	SLU 19	0.27	0.41	44.56	-0.0719	10.9243	-0.144
387	SLU 20	0.26	0.42	45.15	-0.073	11.0628	-0.148
387	SLU 21	0.27	0.4	45.15	-0.0729	11.0631	-0.1426
387	SLU 22	0.3	0.38	42.71	-0.0687	10.4745	-0.133
387	SLU 23	0.31	0.35	42.71	-0.0687	10.4749	-0.1241
387	SLU 24	0.31	0.38	43.64	-0.0704	10.6949	-0.1345
387	SLU 25	0.32	0.37	43.64	-0.0703	10.6952	-0.1291
387	SLU 26	0.32	0.35	43.3	-0.0697	10.6137	-0.1227
387	SLU 27	0.31	0.38	44.23	-0.0715	10.8337	-0.1331
387	SLU 28	0.32	0.36	44.23	-0.0714	10.834	-0.1277
387	SLU 29	0.31	0.37	43.89	-0.0709	10.752	-0.1302
387	SLU 30	0.32	0.35	43.89	-0.0708	10.7523	-0.1249
387	SLU 31	0.31	0.45	47	-0.0757	11.5005	-0.1602
387	SLU 32	0.3	0.48	47.93	-0.0774	11.7205	-0.1705
387	SLU 33	0.31	0.47	47.93	-0.0774	11.7207	-0.1652
387	SLU 34	0.31	0.45	47.59	-0.0768	11.6393	-0.1588
387	SLU 35	0.3	0.48	48.52	-0.0785	11.8593	-0.1691
387	SLU 36	0.31	0.46	48.52	-0.0785	11.8595	-0.1638
387	SLU 37	0.3	0.47	48.17	-0.0779	11.7776	-0.1663
387	SLU 38	0.31	0.46	48.17	-0.0779	11.7779	-0.161
387	SLU 39	0.29	0.52	48.83	-0.0788	11.9395	-0.1845
387	SLU 40	0.3	0.51	48.83	-0.0788	11.9398	-0.1792
387	SLU 41	0.29	0.52	49.42	-0.0799	12.0783	-0.1831
387	SLU 42	0.3	0.5	49.42	-0.0799	12.0786	-0.1778
387	SLU 43	0.34	0.33	48.51	-0.0779	11.9485	-0.1151
387	SLU 44	0.35	0.3	48.51	-0.0779	11.949	-0.1062
387	SLU 45	0.35	0.33	49.44	-0.0796	12.169	-0.1165
387	SLU 46	0.36	0.31	49.44	-0.0796	12.1692	-0.1112
387	SLU 47	0.36	0.3	49.1	-0.079	12.0878	-0.1048
387	SLU 48	0.35	0.33	50.03	-0.0807	12.3078	-0.1151
387	SLU 49	0.36	0.31	50.03	-0.0807	12.308	-0.1098
387	SLU 50	0.35	0.32	49.69	-0.0801	12.2261	-0.1123
387	SLU 51	0.36	0.3	49.69	-0.0801	12.2264	-0.107
387	SLU 52	0.35	0.4	52.8	-0.085	12.9745	-0.1423
387	SLU 53	0.34	0.43	53.73	-0.0867	13.1945	-0.1526
387	SLU 54	0.35	0.42	53.73	-0.0867	13.1948	-0.1473
387	SLU 55	0.35	0.4	53.39	-0.086	13.1133	-0.1409
387	SLU 56	0.35	0.43	54.32	-0.0878	13.3333	-0.1512
387	SLU 57	0.35	0.41	54.32	-0.0877	13.3336	-0.1459
387	SLU 58	0.34	0.42	53.97	-0.0872	13.2516	-0.1484

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
387	SLU 59	0.35	0.4	53.97	-0.0871	13.2519	-0.1431
387	SLU 60	0.33	0.47	54.63	-0.088	13.4136	-0.1666
387	SLU 61	0.34	0.46	54.63	-0.088	13.4139	-0.1613
387	SLU 62	0.33	0.47	55.22	-0.0891	13.5524	-0.1652
387	SLU 63	0.34	0.45	55.22	-0.0891	13.5526	-0.1599
387	SLU 64	0.37	0.43	52.78	-0.0848	12.964	-0.1503
387	SLU 65	0.38	0.4	52.78	-0.0848	12.9645	-0.1414
387	SLU 66	0.38	0.43	53.71	-0.0865	13.1845	-0.1517
387	SLU 67	0.39	0.41	53.71	-0.0865	13.1847	-0.1464
387	SLU 68	0.39	0.4	53.37	-0.0859	13.1033	-0.14
387	SLU 69	0.38	0.43	54.3	-0.0876	13.3232	-0.1503
387	SLU 70	0.39	0.41	54.3	-0.0876	13.3235	-0.145
387	SLU 71	0.38	0.42	53.96	-0.087	13.2416	-0.1475
387	SLU 72	0.39	0.4	53.96	-0.087	13.2418	-0.1422
387	SLU 73	0.38	0.5	57.07	-0.0919	13.99	-0.1775
387	SLU 74	0.37	0.53	58	-0.0936	14.21	-0.1878
387	SLU 75	0.38	0.52	58	-0.0936	14.2103	-0.1825
387	SLU 76	0.38	0.5	57.65	-0.093	14.1288	-0.1761
387	SLU 77	0.38	0.53	58.59	-0.0947	14.3488	-0.1864
387	SLU 78	0.38	0.51	58.59	-0.0947	14.3491	-0.1811
387	SLU 79	0.37	0.52	58.24	-0.0941	14.2671	-0.1836
387	SLU 80	0.38	0.51	58.24	-0.0941	14.2674	-0.1782
387	SLU 81	0.36	0.57	58.9	-0.095	14.4291	-0.2018
387	SLU 82	0.37	0.56	58.9	-0.0949	14.4293	-0.1965
387	SLU 83	0.36	0.57	59.49	-0.096	14.5679	-0.2004
387	SLU 84	0.37	0.55	59.49	-0.096	14.5681	-0.1951
387	SLE RA 1	0.28	0.31	39.66	-0.0637	9.7491	-0.1079
387	SLE RA 2	0.29	0.29	39.66	-0.0637	9.7494	-0.102
387	SLE RA 3	0.28	0.31	40.28	-0.0649	9.8961	-0.1088
387	SLE RA 4	0.29	0.3	40.28	-0.0648	9.8963	-0.1053
387	SLE RA 5	0.29	0.29	40.05	-0.0644	9.842	-0.101
387	SLE RA 6	0.29	0.31	40.68	-0.0656	9.9886	-0.1079
387	SLE RA 7	0.29	0.3	40.68	-0.0656	9.9888	-0.1044
387	SLE RA 8	0.28	0.3	40.45	-0.0652	9.9342	-0.106
387	SLE RA 9	0.29	0.29	40.45	-0.0652	9.9344	-0.1024
387	SLE RA 10	0.28	0.36	42.52	-0.0684	10.4331	-0.126
387	SLE RA 11	0.28	0.38	43.14	-0.0696	10.5798	-0.1329
387	SLE RA 12	0.28	0.37	43.14	-0.0696	10.58	-0.1293
387	SLE RA 13	0.29	0.35	42.91	-0.0692	10.5257	-0.1251
387	SLE RA 14	0.28	0.37	43.53	-0.0703	10.6723	-0.132
387	SLE RA 15	0.29	0.36	43.53	-0.0703	10.6725	-0.1284
387	SLE RA 16	0.28	0.37	43.3	-0.0699	10.6179	-0.13
387	SLE RA 17	0.28	0.36	43.3	-0.0699	10.6181	-0.1265
387	SLE RA 18	0.27	0.4	43.74	-0.0705	10.7258	-0.1422
387	SLE RA 19	0.28	0.39	43.74	-0.0705	10.726	-0.1387
387	SLE RA 20	0.27	0.4	44.14	-0.0712	10.8184	-0.1413
387	SLE RA 21	0.28	0.39	44.14	-0.0712	10.8185	-0.1377
387	SLE FR 1	0.28	0.31	39.66	-0.0637	9.7491	-0.1079
387	SLE FR 2	0.28	0.3	39.66	-0.0637	9.7492	-0.1067
387	SLE FR 3	0.28	0.3	39.82	-0.064	9.7861	-0.1075
387	SLE FR 4	0.28	0.33	40.89	-0.0658	10.0422	-0.117
387	SLE FR 5	0.28	0.33	41.04	-0.0661	10.0792	-0.1178
387	SLE FR 6	0.27	0.35	41.7	-0.0671	10.2375	-0.125
387	SLE QP 1	0.28	0.31	39.66	-0.0637	9.7491	-0.1079
387	SLE QP 2	0.28	0.33	40.89	-0.0658	10.0422	-0.1182
387	SLD 1	3.75	1.09	29.87	-0.0462	7.528	-0.3806
387	SLD 2	4.04	1.68	30.35	-0.049	7.6424	-0.5875
387	SLD 3	3.52	-0.33	28.91	-0.0408	7.3131	0.1166
387	SLD 4	3.81	0.26	29.39	-0.0436	7.4275	-0.0903
387	SLD 5	1.62	2.61	38.95	-0.0675	9.5936	-0.9145
387	SLD 6	1.8	3	39.26	-0.0694	9.6684	-1.0496
387	SLD 7	0.85	-2.13	35.75	-0.0496	8.8773	0.7429
387	SLD 8	1.04	-1.74	36.06	-0.0515	8.952	0.6078
387	SLD 9	-0.48	2.41	45.71	-0.08	11.1323	-0.8441
387	SLD 10	-0.3	2.8	46.02	-0.0819	11.207	-0.9793
387	SLD 11	-1.25	-2.33	42.51	-0.0622	10.4159	0.8133
387	SLD 12	-1.07	-1.94	42.82	-0.064	10.4907	0.6781
387	SLD 13	-3.25	0.41	52.38	-0.0879	12.6568	-0.1461
387	SLD 14	-2.97	1	52.86	-0.0907	12.7712	-0.3529
387	SLD 15	-3.48	-1.01	51.42	-0.0825	12.4419	0.3511
387	SLD 16	-3.2	-0.42	51.9	-0.0854	12.5563	0.1443
387	SLV 1	8.41	2.06	15.08	-0.0198	4.1525	-0.7198
387	SLV 2	9.07	3.45	16.19	-0.0264	4.419	-1.2016
387	SLV 3	7.87	-1.18	12.87	-0.0075	3.656	0.4148
387	SLV 4	8.53	0.2	13.97	-0.0141	3.9225	-0.067
387	SLV 5	3.42	5.54	36.32	-0.0694	8.9826	-1.937
387	SLV 6	3.84	6.43	37.03	-0.0736	9.1539	-2.2466
387	SLV 7	1.63	-5.28	28.93	-0.0286	7.3277	1.8451
387	SLV 8	2.05	-4.39	29.64	-0.0328	7.4989	1.5355
387	SLV 9	-1.5	5.06	52.13	-0.0987	12.5854	-1.7719
387	SLV 10	-1.07	5.95	52.84	-0.1029	12.7566	-2.0815
387	SLV 11	-3.29	-5.76	44.74	-0.0579	10.9304	2.0103
387	SLV 12	-2.87	-4.87	45.46	-0.0621	11.1017	1.7007
387	SLV 13	-7.98	0.47	67.8	-0.1174	16.1618	-0.1694
387	SLV 14	-7.32	1.85	68.91	-0.124	16.4283	-0.6511
387	SLV 15	-8.52	-2.78	65.58	-0.1052	15.6653	0.9653
387	SLV 16	-7.86	-1.39	66.69	-0.1118	15.9318	0.4835
387	CRTFP Ux+	0	0	0	0	0	0
387	CRTFP Ux-	0	0	0	0	0	0
387	CRTFP Uy+	0	0	0	0	0	0
387	CRTFP Uy-	0	0	0	0	0	0
389	SLU 1	-0.72	0.03	35.4	-0.0715	-5.507	0.0052
389	SLU 2	-0.71	-0.05	35.37	-0.0712	-5.502	-0.014
389	SLU 3	-0.74	0.04	36.25	-0.0734	-5.6325	0.0071
389	SLU 4	-0.73	-0.01	36.23	-0.0732	-5.6295	-0.0044
389	SLU 5	-0.72	-0.04	35.91	-0.0724	-5.5816	-0.0126
389	SLU 6	-0.75	0.05	36.79	-0.0746	-5.712	0.0085

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
389	SLU 7	-0.74	0	36.77	-0.0744	-5.709	-0.003
389	SLU 8	-0.75	0.04	36.48	-0.0739	-5.6661	0.008
389	SLU 9	-0.74	0	36.46	-0.0737	-5.6631	-0.0035
389	SLU 10	-0.75	0.02	39.28	-0.0791	-6.087	0.0014
389	SLU 11	-0.78	0.1	40.17	-0.0813	-6.2175	0.0225
389	SLU 12	-0.78	0.06	40.15	-0.0811	-6.2145	0.011
389	SLU 13	-0.77	0.02	39.82	-0.0803	-6.1665	0.0028
389	SLU 14	-0.8	0.11	40.71	-0.0825	-6.297	0.0239
389	SLU 15	-0.79	0.06	40.69	-0.0823	-6.294	0.0124
389	SLU 16	-0.79	0.11	40.39	-0.0818	-6.2511	0.0233
389	SLU 17	-0.78	0.06	40.37	-0.0817	-6.2481	0.0118
389	SLU 18	-0.78	0.12	40.99	-0.0828	-6.3427	0.0271
389	SLU 19	-0.78	0.07	40.97	-0.0826	-6.3397	0.0156
389	SLU 20	-0.8	0.13	41.53	-0.084	-6.4222	0.0285
389	SLU 21	-0.79	0.08	41.51	-0.0838	-6.4193	0.017
389	SLU 22	-0.81	0.11	39.34	-0.0794	-6.0921	0.024
389	SLU 23	-0.8	0.03	39.31	-0.0791	-6.0871	0.0048
389	SLU 24	-0.83	0.12	40.19	-0.0812	-6.2176	0.0259
389	SLU 25	-0.82	0.07	40.17	-0.0811	-6.2146	0.0144
389	SLU 26	-0.81	0.04	39.85	-0.0803	-6.1666	0.0062
389	SLU 27	-0.84	0.12	40.73	-0.0824	-6.2971	0.0273
389	SLU 28	-0.83	0.08	40.71	-0.0823	-6.2941	0.0158
389	SLU 29	-0.83	0.12	40.42	-0.0818	-6.2512	0.0268
389	SLU 30	-0.83	0.07	40.4	-0.0816	-6.2482	0.0153
389	SLU 31	-0.84	0.09	43.22	-0.087	-6.6721	0.0202
389	SLU 32	-0.87	0.18	44.1	-0.0891	-6.8025	0.0413
389	SLU 33	-0.87	0.13	44.08	-0.089	-6.7996	0.0298
389	SLU 34	-0.86	0.1	43.76	-0.0882	-6.7516	0.0216
389	SLU 35	-0.89	0.19	44.64	-0.0903	-6.8821	0.0427
389	SLU 36	-0.88	0.14	44.62	-0.0902	-6.8791	0.0312
389	SLU 37	-0.88	0.18	44.33	-0.0897	-6.8361	0.0422
389	SLU 38	-0.87	0.14	44.31	-0.0895	-6.8332	0.0307
389	SLU 39	-0.87	0.2	44.93	-0.0907	-6.9278	0.046
389	SLU 40	-0.87	0.15	44.91	-0.0905	-6.9248	0.0345
389	SLU 41	-0.89	0.2	45.47	-0.0919	-7.0073	0.0474
389	SLU 42	-0.88	0.16	45.45	-0.0917	-7.0043	0.0359
389	SLU 43	-0.9	0.01	44.67	-0.0902	-6.9585	0.0003
389	SLU 44	-0.89	-0.06	44.64	-0.09	-6.9535	-0.0189
389	SLU 45	-0.92	0.02	45.52	-0.0921	-7.084	0.0022
389	SLU 46	-0.92	-0.02	45.51	-0.0919	-7.081	-0.0093
389	SLU 47	-0.9	-0.06	45.18	-0.0912	-7.0331	-0.0175
389	SLU 48	-0.94	0.03	46.06	-0.0933	-7.1635	0.0036
389	SLU 49	-0.93	-0.02	46.04	-0.0932	-7.1605	-0.0079
389	SLU 50	-0.93	0.03	45.75	-0.0926	-7.1176	0.0031
389	SLU 51	-0.92	-0.02	45.73	-0.0925	-7.1146	-0.0084
389	SLU 52	-0.94	0	48.55	-0.0979	-7.5385	-0.0035
389	SLU 53	-0.97	0.09	49.44	-0.1	-7.669	0.0176
389	SLU 54	-0.96	0.04	49.42	-0.0998	-7.666	0.0061
389	SLU 55	-0.95	0.01	49.09	-0.0991	-7.618	-0.0021
389	SLU 56	-0.98	0.09	49.98	-0.1012	-7.7485	0.019
389	SLU 57	-0.98	0.04	49.96	-0.1011	-7.7455	0.0074
389	SLU 58	-0.98	0.09	49.66	-0.1005	-7.7026	0.0184
389	SLU 59	-0.97	0.04	49.65	-0.1004	-7.6996	0.0069
389	SLU 60	-0.97	0.1	50.26	-0.1015	-7.7942	0.0222
389	SLU 61	-0.96	0.06	50.24	-0.1014	-7.7912	0.0107
389	SLU 62	-0.98	0.11	50.8	-0.1027	-7.8737	0.0236
389	SLU 63	-0.98	0.06	50.78	-0.1026	-7.8708	0.0121
389	SLU 64	-0.99	0.09	48.61	-0.0981	-7.5436	0.0191
389	SLU 65	-0.98	0.01	48.58	-0.0979	-7.5386	-0.0001
389	SLU 66	-1.01	0.1	49.46	-0.1	-7.669	0.021
389	SLU 67	-1.01	0.05	49.44	-0.0998	-7.6661	0.0095
389	SLU 68	-0.99	0.02	49.12	-0.0991	-7.6181	0.0013
389	SLU 69	-1.03	0.11	50	-0.1012	-7.7486	0.0224
389	SLU 70	-1.02	0.06	49.98	-0.101	-7.7456	0.0109
389	SLU 71	-1.02	0.1	49.69	-0.1005	-7.7027	0.0219
389	SLU 72	-1.01	0.06	49.67	-0.1004	-7.6997	0.0104
389	SLU 73	-1.03	0.08	52.49	-0.1058	-8.1236	0.0153
389	SLU 74	-1.06	0.16	53.37	-0.1079	-8.254	0.0364
389	SLU 75	-1.05	0.12	53.35	-0.1077	-8.2511	0.0249
389	SLU 76	-1.04	0.08	53.03	-0.107	-8.2031	0.0167
389	SLU 77	-1.07	0.17	53.91	-0.1091	-8.3336	0.0378
389	SLU 78	-1.07	0.12	53.89	-0.1089	-8.3306	0.0263
389	SLU 79	-1.07	0.17	53.6	-0.1084	-8.2876	0.0373
389	SLU 80	-1.06	0.12	53.58	-0.1083	-8.2847	0.0258
389	SLU 81	-1.06	0.18	54.2	-0.1094	-8.3793	0.0411
389	SLU 82	-1.05	0.13	54.18	-0.1093	-8.3763	0.0296
389	SLU 83	-1.07	0.19	54.74	-0.1106	-8.4588	0.0425
389	SLU 84	-1.07	0.14	54.72	-0.1105	-8.4558	0.031
389	SLE RA 1	-0.74	0.05	36.53	-0.0737	-5.6742	0.0106
389	SLE RA 2	-0.74	0	36.51	-0.0736	-5.6708	-0.0022
389	SLE RA 3	-0.76	0.06	37.09	-0.075	-5.7578	0.0118
389	SLE RA 4	-0.75	0.03	37.08	-0.0749	-5.7558	0.0042
389	SLE RA 5	-0.74	0.01	36.87	-0.0744	-5.7239	-0.0013
389	SLE RA 6	-0.77	0.06	37.45	-0.0758	-5.8108	0.0128
389	SLE RA 7	-0.76	0.03	37.44	-0.0757	-5.8088	0.0051
389	SLE RA 8	-0.76	0.06	37.25	-0.0753	-5.7802	0.0124
389	SLE RA 9	-0.76	0.03	37.23	-0.0752	-5.7782	0.0048
389	SLE RA 10	-0.77	0.04	39.11	-0.0788	-6.0608	0.008
389	SLE RA 11	-0.79	0.1	39.7	-0.0803	-6.1478	0.0221
389	SLE RA 12	-0.78	0.07	39.69	-0.0802	-6.1458	0.0144
389	SLE RA 13	-0.78	0.05	39.47	-0.0796	-6.1139	0.009
389	SLE RA 14	-0.8	0.1	40.06	-0.0811	-6.2008	0.023
389	SLE RA 15	-0.79	0.07	40.05	-0.081	-6.1988	0.0153
389	SLE RA 16	-0.79	0.1	39.85	-0.0806	-6.1702	0.0227
389	SLE RA 17	-0.79	0.07	39.84	-0.0805	-6.1682	0.015
389	SLE RA 18	-0.79	0.11	40.25	-0.0813	-6.2313	0.0252
389	SLE RA 19	-0.78	0.08	40.24	-0.0812	-6.2293	0.0175

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
389	SLE RA 20	-0.8	0.12	40.61	-0.0821	-6.2843	0.0261
389	SLE RA 21	-0.79	0.09	40.6	-0.082	-6.2823	0.0185
389	SLE FR 1	-0.74	0.05	36.53	-0.0737	-5.6742	0.0106
389	SLE FR 2	-0.74	0.04	36.52	-0.0737	-5.6735	0.008
389	SLE FR 3	-0.75	0.06	36.67	-0.0741	-5.6954	0.0109
389	SLE FR 4	-0.75	0.06	37.64	-0.076	-5.8406	0.0124
389	SLE FR 5	-0.76	0.07	37.79	-0.0763	-5.8625	0.0153
389	SLE FR 6	-0.77	0.08	38.39	-0.0775	-5.9527	0.0179
389	SLE QP 1	-0.74	0.05	36.53	-0.0737	-5.6742	0.0106
389	SLE QP 2	-0.76	0.07	37.65	-0.076	-5.8413	0.015
389	SLD 1	2.21	0.63	48.72	-0.102	-7.4436	0.1572
389	SLD 2	2.45	0.13	48.39	-0.0997	-7.3918	0.0321
389	SLD 3	2.01	-0.78	47.98	-0.0978	-7.3324	-0.1944
389	SLD 4	2.25	-1.29	47.66	-0.0955	-7.2806	-0.3195
389	SLD 5	0.39	2.47	42.14	-0.0905	-6.4998	0.6129
389	SLD 6	0.54	2.14	41.93	-0.089	-6.4659	0.5312
389	SLD 7	-0.26	-2.23	39.69	-0.0767	-6.1291	-0.5589
389	SLD 8	-0.11	-2.56	39.47	-0.0752	-6.0953	-0.6407
389	SLD 9	-1.41	2.71	35.82	-0.0768	-5.5873	0.6706
389	SLD 10	-1.25	2.38	35.6	-0.0753	-5.5535	0.5888
389	SLD 11	-2.06	-1.99	33.36	-0.063	-5.2167	-0.5012
389	SLD 12	-1.9	-2.33	33.15	-0.0615	-5.1828	-0.583
389	SLD 13	-3.77	1.43	27.63	-0.0565	-4.402	0.3494
389	SLD 14	-3.53	0.92	27.31	-0.0542	-4.3502	0.2243
389	SLD 15	-3.96	0.02	26.9	-0.0523	-4.2908	-0.0021
389	SLD 16	-3.72	-0.49	26.57	-0.05	-4.239	-0.1273
389	SLV 1	6.18	1.32	63.56	-0.1366	-9.5902	0.3335
389	SLV 2	6.74	0.15	62.8	-0.1313	-9.4696	0.0421
389	SLV 3	5.73	-1.87	61.87	-0.1272	-9.3345	-0.462
389	SLV 4	6.29	-3.05	61.1	-0.1219	-9.2139	-0.7534
389	SLV 5	1.92	5.49	48.12	-0.1094	-7.3745	1.3669
389	SLV 6	2.28	4.73	47.63	-0.1059	-7.297	1.1796
389	SLV 7	0.41	-5.15	42.47	-0.078	-6.5221	-1.2846
389	SLV 8	0.76	-5.91	41.98	-0.0746	-6.4446	-1.4719
389	SLV 9	-2.28	6.05	33.31	-0.0774	-5.238	1.5018
389	SLV 10	-1.92	5.29	32.82	-0.074	-5.1605	1.3146
389	SLV 11	-3.79	-4.59	27.66	-0.0461	-4.3856	-1.1497
389	SLV 12	-3.43	-5.35	27.17	-0.0426	-4.3081	-1.337
389	SLV 13	-7.8	3.19	14.19	-0.0301	-2.4687	0.7833
389	SLV 14	-7.24	2.01	13.42	-0.0248	-2.3481	0.4919
389	SLV 15	-8.25	0	12.49	-0.0207	-2.213	-0.0122
389	SLV 16	-7.7	-1.18	11.73	-0.0154	-2.0924	-0.3036
389	CRTFP Ux+	0	0	0	0	0	0
389	CRTFP Ux-	0	0	0	0	0	0
389	CRTFP Uy+	0	0	0	0	0	0
389	CRTFP Uy-	0	0	0	0	0	0
392	SLU 1	0.17	-0.07	38.59	-0.0229	11.1812	0.0231
392	SLU 2	0.18	-0.1	38.58	-0.0227	11.177	0.0359
392	SLU 3	0.17	-0.05	39.52	-0.0235	11.4463	0.019
392	SLU 4	0.18	-0.08	39.51	-0.0234	11.4438	0.0266
392	SLU 5	0.18	-0.1	39.15	-0.0232	11.3414	0.0355
392	SLU 6	0.17	-0.05	40.1	-0.024	11.6107	0.0186
392	SLU 7	0.18	-0.07	40.09	-0.0239	11.6082	0.0263
392	SLU 8	0.17	-0.06	39.74	-0.0238	11.5099	0.0224
392	SLU 9	0.18	-0.09	39.73	-0.0237	11.5074	0.0301
392	SLU 10	0.19	-0.04	43.46	-0.0245	12.5802	0.0131
392	SLU 11	0.18	0.01	44.41	-0.0253	12.8494	-0.0038
392	SLU 12	0.19	-0.01	44.4	-0.0252	12.847	0.0039
392	SLU 13	0.19	-0.04	44.04	-0.025	12.7446	0.0128
392	SLU 14	0.18	0.01	44.98	-0.0257	13.0138	-0.0041
392	SLU 15	0.19	-0.01	44.97	-0.0256	13.0113	0.0035
392	SLU 16	0.18	0	44.63	-0.0256	12.9131	-0.0003
392	SLU 17	0.19	-0.02	44.62	-0.0255	12.9106	0.0073
392	SLU 18	0.18	0.03	45.57	-0.0254	13.1857	-0.0094
392	SLU 19	0.19	0	45.56	-0.0253	13.1832	-0.0017
392	SLU 20	0.18	0.03	46.15	-0.0259	13.3501	-0.0097
392	SLU 21	0.19	0.01	46.14	-0.0258	13.3476	-0.0021
392	SLU 22	0.19	0.03	42.77	-0.0247	12.3705	-0.0115
392	SLU 23	0.21	0	42.76	-0.0245	12.3663	0.0012
392	SLU 24	0.2	0.05	43.7	-0.0253	12.6356	-0.0157
392	SLU 25	0.21	0.02	43.69	-0.0252	12.6331	-0.008
392	SLU 26	0.21	0	43.33	-0.025	12.5307	0.0009
392	SLU 27	0.2	0.05	44.28	-0.0258	12.7999	-0.016
392	SLU 28	0.21	0.02	44.27	-0.0257	12.7975	-0.0084
392	SLU 29	0.2	0.04	43.92	-0.0256	12.6992	-0.0122
392	SLU 30	0.2	0.01	43.92	-0.0255	12.6967	-0.0046
392	SLU 31	0.21	0.06	47.64	-0.0263	13.7695	-0.0215
392	SLU 32	0.2	0.11	48.59	-0.0271	14.0387	-0.0384
392	SLU 33	0.21	0.09	48.58	-0.027	14.0362	-0.0308
392	SLU 34	0.22	0.06	48.22	-0.0268	13.9338	-0.0219
392	SLU 35	0.21	0.11	49.16	-0.0275	14.2031	-0.0388
392	SLU 36	0.21	0.09	49.15	-0.0274	14.2006	-0.0311
392	SLU 37	0.2	0.1	48.81	-0.0274	14.1024	-0.035
392	SLU 38	0.21	0.08	48.8	-0.0273	14.0999	-0.0273
392	SLU 39	0.2	0.13	49.75	-0.0272	14.375	-0.044
392	SLU 40	0.21	0.1	49.74	-0.0271	14.3725	-0.0364
392	SLU 41	0.21	0.13	50.33	-0.0277	14.5393	-0.0444
392	SLU 42	0.21	0.1	50.32	-0.0276	14.5368	-0.0367
392	SLU 43	0.21	-0.12	48.73	-0.0291	14.1278	0.042
392	SLU 44	0.22	-0.16	48.72	-0.0289	14.1236	0.0547
392	SLU 45	0.21	-0.11	49.66	-0.0297	14.3929	0.0378
392	SLU 46	0.22	-0.13	49.66	-0.0296	14.3904	0.0455
392	SLU 47	0.22	-0.15	49.3	-0.0294	14.288	0.0543
392	SLU 48	0.22	-0.11	50.24	-0.0302	14.5573	0.0375
392	SLU 49	0.22	-0.13	50.23	-0.0301	14.5548	0.0451
392	SLU 50	0.21	-0.12	49.89	-0.0301	14.4565	0.0412
392	SLU 51	0.22	-0.14	49.88	-0.03	14.454	0.0489

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
392	SLU 52	0.23	-0.09	53.61	-0.0307	15.5268	0.032
392	SLU 53	0.22	-0.04	54.55	-0.0315	15.796	0.0151
392	SLU 54	0.23	-0.07	54.54	-0.0314	15.7936	0.0227
392	SLU 55	0.23	-0.09	54.18	-0.0312	15.6912	0.0316
392	SLU 56	0.22	-0.04	55.13	-0.032	15.9604	0.0147
392	SLU 57	0.23	-0.06	55.12	-0.0319	15.9579	0.0223
392	SLU 58	0.22	-0.05	54.77	-0.0318	15.8597	0.0185
392	SLU 59	0.23	-0.07	54.76	-0.0317	15.8572	0.0261
392	SLU 60	0.22	-0.03	55.71	-0.0316	16.1323	0.0095
392	SLU 61	0.23	-0.05	55.7	-0.0315	16.1298	0.0171
392	SLU 62	0.22	-0.03	56.29	-0.0321	16.2967	0.0091
392	SLU 63	0.23	-0.05	56.28	-0.032	16.2942	0.0167
392	SLU 64	0.23	-0.02	52.91	-0.0309	15.3171	0.0073
392	SLU 65	0.25	-0.06	52.9	-0.0308	15.3129	0.0201
392	SLU 66	0.24	-0.01	53.84	-0.0315	15.5822	0.0032
392	SLU 67	0.25	-0.03	53.84	-0.0314	15.5797	0.0108
392	SLU 68	0.25	-0.06	53.48	-0.0312	15.4773	0.0197
392	SLU 69	0.24	-0.01	54.42	-0.032	15.7465	0.0028
392	SLU 70	0.25	-0.03	54.41	-0.0319	15.7441	0.0104
392	SLU 71	0.24	-0.02	54.07	-0.0319	15.6458	0.0066
392	SLU 72	0.25	-0.04	54.06	-0.0318	15.6433	0.0142
392	SLU 73	0.26	0.01	57.79	-0.0325	16.7161	-0.0027
392	SLU 74	0.25	0.06	58.73	-0.0333	16.9853	-0.0196
392	SLU 75	0.25	0.03	58.72	-0.0332	16.9828	-0.0119
392	SLU 76	0.26	0.01	58.36	-0.033	16.8804	-0.0031
392	SLU 77	0.25	0.06	59.31	-0.0338	17.1497	-0.0199
392	SLU 78	0.26	0.03	59.3	-0.0337	17.1472	-0.0123
392	SLU 79	0.25	0.05	58.95	-0.0336	17.049	-0.0162
392	SLU 80	0.25	0.02	58.94	-0.0335	17.0465	-0.0085
392	SLU 81	0.25	0.07	59.89	-0.0334	17.3216	-0.0252
392	SLU 82	0.25	0.05	59.89	-0.0334	17.3191	-0.0175
392	SLU 83	0.25	0.07	60.47	-0.0339	17.4859	-0.0256
392	SLU 84	0.26	0.05	60.46	-0.0338	17.4835	-0.0179
392	SLE RA 1	0.18	-0.04	39.78	-0.0234	11.521	0.0132
392	SLE RA 2	0.18	-0.06	39.78	-0.0233	11.5182	0.0217
392	SLE RA 3	0.18	-0.03	40.4	-0.0238	11.6977	0.0105
392	SLE RA 4	0.18	-0.04	40.4	-0.0237	11.6961	0.0156
392	SLE RA 5	0.19	-0.06	40.16	-0.0236	11.6278	0.0215
392	SLE RA 6	0.18	-0.03	40.79	-0.0241	11.8073	0.0102
392	SLE RA 7	0.18	-0.04	40.78	-0.024	11.8056	0.0153
392	SLE RA 8	0.18	-0.04	40.55	-0.024	11.7401	0.0128
392	SLE RA 9	0.18	-0.05	40.55	-0.0239	11.7385	0.0179
392	SLE RA 10	0.19	-0.02	43.03	-0.0245	12.4536	0.0066
392	SLE RA 11	0.18	0.01	43.66	-0.025	12.6332	-0.0047
392	SLE RA 12	0.19	0	43.66	-0.0249	12.6315	0.0004
392	SLE RA 13	0.19	-0.02	43.42	-0.0248	12.5632	0.0063
392	SLE RA 14	0.18	0.01	44.05	-0.0253	12.7427	-0.0049
392	SLE RA 15	0.19	0	44.04	-0.0252	12.7411	0.0002
392	SLE RA 16	0.18	0.01	43.81	-0.0252	12.6756	-0.0024
392	SLE RA 17	0.19	-0.01	43.8	-0.0251	12.6739	0.0027
392	SLE RA 18	0.18	0.02	44.44	-0.0251	12.8573	-0.0084
392	SLE RA 19	0.19	0.01	44.43	-0.025	12.8557	-0.0033
392	SLE RA 20	0.18	0.02	44.82	-0.0254	12.9669	-0.0087
392	SLE RA 21	0.19	0.01	44.82	-0.0253	12.9652	-0.0036
392	SLE FR 1	0.18	-0.04	39.78	-0.0234	11.521	0.0132
392	SLE FR 2	0.18	-0.04	39.78	-0.0234	11.5204	0.0149
392	SLE FR 3	0.18	-0.04	39.94	-0.0235	11.5648	0.0132
392	SLE FR 4	0.18	-0.02	41.18	-0.0239	11.9213	0.0084
392	SLE FR 5	0.18	-0.02	41.33	-0.024	11.9657	0.0066
392	SLE FR 6	0.18	-0.01	42.11	-0.0242	12.1891	0.0024
392	SLE QP 1	0.18	-0.04	39.78	-0.0234	11.521	0.0132
392	SLE QP 2	0.18	-0.02	41.18	-0.0239	11.9219	0.0067
392	SLD 1	3.84	0.69	41.82	-0.0246	12.1593	-0.2398
392	SLD 2	4.13	0.72	41.9	-0.0251	12.1766	-0.2501
392	SLD 3	3.6	-0.46	41.46	-0.0205	12.0614	0.1618
392	SLD 4	3.89	-0.43	41.54	-0.0211	12.0787	0.1515
392	SLD 5	1.59	1.93	41.9	-0.0301	12.1384	-0.6745
392	SLD 6	1.78	1.95	41.96	-0.0305	12.1497	-0.6812
392	SLD 7	0.79	-1.9	40.7	-0.0167	11.8123	0.6641
392	SLD 8	0.98	-1.88	40.76	-0.017	11.8236	0.6574
392	SLD 9	-0.62	1.84	41.6	-0.0307	12.0202	-0.6439
392	SLD 10	-0.43	1.86	41.66	-0.0311	12.0315	-0.6506
392	SLD 11	-1.42	-1.99	40.4	-0.0173	11.694	0.6947
392	SLD 12	-1.24	-1.97	40.46	-0.0177	11.7053	0.6879
392	SLD 13	-3.54	0.39	40.82	-0.0267	11.765	-0.138
392	SLD 14	-3.25	0.42	40.9	-0.0272	11.7823	-0.1483
392	SLD 15	-3.78	-0.76	40.46	-0.0226	11.6672	0.2636
392	SLD 16	-3.49	-0.73	40.54	-0.0232	11.6845	0.2533
392	SLV 1	8.76	1.59	42.66	-0.0253	12.4745	-0.5548
392	SLV 2	9.42	1.67	42.86	-0.0267	12.5147	-0.5788
392	SLV 3	8.19	-1.01	41.84	-0.0162	12.2512	0.3554
392	SLV 4	8.86	-0.93	42.04	-0.0175	12.2915	0.3315
392	SLV 5	3.49	4.4	42.84	-0.0379	12.4193	-1.5382
392	SLV 6	3.92	4.45	42.96	-0.0388	12.4452	-1.5536
392	SLV 7	1.62	-4.28	40.1	-0.0075	11.6752	1.4961
392	SLV 8	2.05	-4.23	40.22	-0.0084	11.7011	1.4807
392	SLV 9	-1.69	4.19	42.14	-0.0394	12.1426	-1.4672
392	SLV 10	-1.26	4.24	42.26	-0.0402	12.1685	-1.4826
392	SLV 11	-3.56	-4.49	39.4	-0.009	11.3986	1.5671
392	SLV 12	-3.13	-4.44	39.52	-0.0098	11.4244	1.5517
392	SLV 13	-8.51	0.89	40.32	-0.0302	11.5522	-0.318
392	SLV 14	-7.84	0.97	40.52	-0.0315	11.5925	-0.3419
392	SLV 15	-9.07	-1.71	39.5	-0.0211	11.329	0.5923
392	SLV 16	-8.4	-1.63	39.7	-0.0224	11.3693	0.5683
392	CRTFP Ux+	0	0	0	0	0	0
392	CRTFP Ux-	0	0	0	0	0	0
392	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
392	CRTFP Uy-	0	0	0	0	0	0
396	SLU 1	-1.04	-1.19	62.33	-0.0432	-0.3057	-0.0325
396	SLU 2	-1.02	-1.27	62.3	-0.0428	-0.3065	-0.0319
396	SLU 3	-1.07	-1.21	63.81	-0.0442	-0.3131	-0.0335
396	SLU 4	-1.05	-1.25	63.79	-0.044	-0.3136	-0.0331
396	SLU 5	-1.04	-1.28	63.24	-0.0436	-0.3108	-0.0325
396	SLU 6	-1.09	-1.22	64.75	-0.0449	-0.3173	-0.034
396	SLU 7	-1.08	-1.27	64.73	-0.0447	-0.3178	-0.0337
396	SLU 8	-1.08	-1.22	64.21	-0.0446	-0.3142	-0.0337
396	SLU 9	-1.07	-1.27	64.19	-0.0444	-0.3147	-0.0333
396	SLU 10	-1.07	-1.32	69.48	-0.0469	-0.3543	-0.0355
396	SLU 11	-1.12	-1.26	70.99	-0.0483	-0.3609	-0.037
396	SLU 12	-1.11	-1.3	70.97	-0.0481	-0.3614	-0.0367
396	SLU 13	-1.09	-1.33	70.42	-0.0476	-0.3586	-0.0361
396	SLU 14	-1.14	-1.27	71.93	-0.049	-0.3651	-0.0376
396	SLU 15	-1.13	-1.32	71.91	-0.0488	-0.3656	-0.0372
396	SLU 16	-1.14	-1.27	71.39	-0.0487	-0.3619	-0.0372
396	SLU 17	-1.12	-1.32	71.37	-0.0485	-0.3624	-0.0369
396	SLU 18	-1.12	-1.27	72.59	-0.049	-0.374	-0.0376
396	SLU 19	-1.1	-1.31	72.57	-0.0488	-0.3745	-0.0373
396	SLU 20	-1.14	-1.28	73.53	-0.0497	-0.3782	-0.0382
396	SLU 21	-1.13	-1.33	73.51	-0.0495	-0.3787	-0.0378
396	SLU 22	-1.17	-1.19	69.19	-0.0465	-0.338	-0.0372
396	SLU 23	-1.14	-1.26	69.16	-0.0461	-0.3389	-0.0366
396	SLU 24	-1.2	-1.21	70.67	-0.0475	-0.3454	-0.0381
396	SLU 25	-1.18	-1.25	70.65	-0.0473	-0.3459	-0.0378
396	SLU 26	-1.17	-1.28	70.1	-0.0469	-0.3431	-0.0372
396	SLU 27	-1.22	-1.22	71.61	-0.0482	-0.3497	-0.0387
396	SLU 28	-1.2	-1.27	71.59	-0.048	-0.3502	-0.0384
396	SLU 29	-1.21	-1.22	71.07	-0.0479	-0.3465	-0.0384
396	SLU 30	-1.2	-1.26	71.06	-0.0477	-0.347	-0.038
396	SLU 31	-1.2	-1.32	76.34	-0.0502	-0.3867	-0.0402
396	SLU 32	-1.25	-1.26	77.85	-0.0516	-0.3932	-0.0417
396	SLU 33	-1.24	-1.3	77.84	-0.0514	-0.3937	-0.0413
396	SLU 34	-1.22	-1.33	77.28	-0.0509	-0.3909	-0.0407
396	SLU 35	-1.27	-1.27	78.79	-0.0523	-0.3975	-0.0423
396	SLU 36	-1.26	-1.32	78.78	-0.0521	-0.398	-0.0419
396	SLU 37	-1.27	-1.27	78.25	-0.052	-0.3943	-0.0419
396	SLU 38	-1.25	-1.32	78.24	-0.0518	-0.3948	-0.0416
396	SLU 39	-1.25	-1.26	79.45	-0.0523	-0.4063	-0.0423
396	SLU 40	-1.23	-1.31	79.43	-0.0521	-0.4068	-0.0419
396	SLU 41	-1.27	-1.28	80.39	-0.053	-0.4105	-0.0429
396	SLU 42	-1.26	-1.32	80.37	-0.0528	-0.411	-0.0425
396	SLU 43	-1.31	-1.55	78.68	-0.055	-0.3863	-0.0407
396	SLU 44	-1.28	-1.62	78.65	-0.0547	-0.3872	-0.0401
396	SLU 45	-1.34	-1.57	80.15	-0.056	-0.3937	-0.0416
396	SLU 46	-1.32	-1.61	80.14	-0.0558	-0.3942	-0.0413
396	SLU 47	-1.3	-1.64	79.59	-0.0554	-0.3914	-0.0407
396	SLU 48	-1.36	-1.58	81.1	-0.0567	-0.3979	-0.0422
396	SLU 49	-1.34	-1.62	81.08	-0.0565	-0.3984	-0.0419
396	SLU 50	-1.35	-1.58	80.56	-0.0564	-0.3948	-0.0419
396	SLU 51	-1.33	-1.62	80.54	-0.0562	-0.3953	-0.0415
396	SLU 52	-1.34	-1.68	85.83	-0.0588	-0.4349	-0.0437
396	SLU 53	-1.39	-1.62	87.34	-0.0601	-0.4415	-0.0452
396	SLU 54	-1.38	-1.66	87.32	-0.0599	-0.442	-0.0448
396	SLU 55	-1.36	-1.69	86.77	-0.0595	-0.4392	-0.0442
396	SLU 56	-1.41	-1.63	88.28	-0.0608	-0.4457	-0.0458
396	SLU 57	-1.4	-1.68	88.26	-0.0606	-0.4462	-0.0454
396	SLU 58	-1.4	-1.63	87.74	-0.0605	-0.4426	-0.0454
396	SLU 59	-1.39	-1.68	87.72	-0.0603	-0.4431	-0.0451
396	SLU 60	-1.39	-1.62	88.93	-0.0609	-0.4546	-0.0458
396	SLU 61	-1.37	-1.67	88.92	-0.0607	-0.4551	-0.0454
396	SLU 62	-1.41	-1.64	89.87	-0.0616	-0.4588	-0.0464
396	SLU 63	-1.39	-1.68	89.86	-0.0614	-0.4593	-0.046
396	SLU 64	-1.44	-1.55	85.54	-0.0583	-0.4187	-0.0454
396	SLU 65	-1.41	-1.62	85.51	-0.058	-0.4195	-0.0448
396	SLU 66	-1.46	-1.56	87.02	-0.0593	-0.4261	-0.0463
396	SLU 67	-1.45	-1.61	87	-0.0591	-0.4266	-0.0459
396	SLU 68	-1.43	-1.64	86.45	-0.0587	-0.4237	-0.0453
396	SLU 69	-1.49	-1.58	87.96	-0.06	-0.4303	-0.0469
396	SLU 70	-1.47	-1.62	87.94	-0.0598	-0.4308	-0.0465
396	SLU 71	-1.48	-1.58	87.42	-0.0597	-0.4271	-0.0465
396	SLU 72	-1.46	-1.62	87.4	-0.0595	-0.4276	-0.0462
396	SLU 73	-1.47	-1.67	92.69	-0.0621	-0.4673	-0.0483
396	SLU 74	-1.52	-1.62	94.2	-0.0634	-0.4738	-0.0499
396	SLU 75	-1.51	-1.66	94.18	-0.0632	-0.4743	-0.0495
396	SLU 76	-1.49	-1.69	93.63	-0.0628	-0.4715	-0.0489
396	SLU 77	-1.54	-1.63	95.14	-0.0641	-0.4781	-0.0504
396	SLU 78	-1.53	-1.68	95.12	-0.0639	-0.4786	-0.0501
396	SLU 79	-1.53	-1.63	94.6	-0.0638	-0.4749	-0.0501
396	SLU 80	-1.52	-1.67	94.58	-0.0636	-0.4754	-0.0497
396	SLU 81	-1.51	-1.62	95.8	-0.0641	-0.4869	-0.0505
396	SLU 82	-1.5	-1.67	95.78	-0.0639	-0.4874	-0.0501
396	SLU 83	-1.54	-1.64	96.74	-0.0649	-0.4912	-0.051
396	SLU 84	-1.52	-1.68	96.72	-0.0647	-0.4917	-0.0507
396	SLE RA 1	-1.08	-1.19	64.29	-0.0441	-0.3149	-0.0339
396	SLE RA 2	-1.06	-1.24	64.27	-0.0439	-0.3155	-0.0335
396	SLE RA 3	-1.1	-1.2	65.28	-0.0448	-0.3199	-0.0345
396	SLE RA 4	-1.09	-1.23	65.26	-0.0447	-0.3202	-0.0343
396	SLE RA 5	-1.07	-1.25	64.9	-0.0444	-0.3183	-0.0339
396	SLE RA 6	-1.11	-1.21	65.9	-0.0453	-0.3227	-0.0349
396	SLE RA 7	-1.1	-1.24	65.89	-0.0451	-0.323	-0.0346
396	SLE RA 8	-1.1	-1.21	65.54	-0.0451	-0.3206	-0.0346
396	SLE RA 9	-1.09	-1.24	65.53	-0.0449	-0.3209	-0.0344
396	SLE RA 10	-1.1	-1.28	69.06	-0.0466	-0.3474	-0.0358
396	SLE RA 11	-1.13	-1.24	70.06	-0.0475	-0.3517	-0.0369
396	SLE RA 12	-1.12	-1.27	70.05	-0.0474	-0.3521	-0.0366

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
396	SLE RA 13	-1.11	-1.29	69.69	-0.0471	-0.3502	-0.0362
396	SLE RA 14	-1.15	-1.25	70.69	-0.048	-0.3545	-0.0373
396	SLE RA 15	-1.14	-1.28	70.68	-0.0479	-0.3549	-0.037
396	SLE RA 16	-1.14	-1.25	70.33	-0.0478	-0.3524	-0.037
396	SLE RA 17	-1.13	-1.28	70.32	-0.0477	-0.3528	-0.0368
396	SLE RA 18	-1.13	-1.24	71.13	-0.048	-0.3605	-0.0373
396	SLE RA 19	-1.12	-1.27	71.12	-0.0479	-0.3608	-0.037
396	SLE RA 20	-1.14	-1.25	71.76	-0.0485	-0.3633	-0.0376
396	SLE RA 21	-1.13	-1.28	71.74	-0.0484	-0.3636	-0.0374
396	SLE FR 1	-1.08	-1.19	64.29	-0.0441	-0.3149	-0.0339
396	SLE FR 2	-1.07	-1.2	64.29	-0.0441	-0.3151	-0.0338
396	SLE FR 3	-1.08	-1.19	64.54	-0.0443	-0.3161	-0.034
396	SLE FR 4	-1.09	-1.22	66.34	-0.0452	-0.3287	-0.0348
396	SLE FR 5	-1.1	-1.21	66.59	-0.0455	-0.3297	-0.035
396	SLE FR 6	-1.1	-1.22	67.71	-0.0461	-0.3377	-0.0356
396	SLE QP 1	-1.08	-1.19	64.29	-0.0441	-0.3149	-0.0339
396	SLE QP 2	-1.09	-1.21	66.34	-0.0453	-0.3286	-0.0349
396	SLD 1	4.71	-0.83	72.65	-0.0565	-0.1383	-0.0129
396	SLD 2	5.14	-1.18	72.42	-0.055	-0.1439	-0.0019
396	SLD 3	4.33	-2.55	72.13	-0.0506	-0.1673	-0.0196
396	SLD 4	4.76	-2.91	71.9	-0.0491	-0.1729	-0.0087
396	SLD 5	1.14	1.59	69.06	-0.058	-0.2267	-0.0199
396	SLD 6	1.42	1.35	68.91	-0.057	-0.2303	-0.0128
396	SLD 7	-0.11	-4.16	67.33	-0.0381	-0.3231	-0.0425
396	SLD 8	0.17	-4.39	67.18	-0.0371	-0.3267	-0.0354
396	SLD 9	-2.35	1.98	65.5	-0.0535	-0.3305	-0.0344
396	SLD 10	-2.07	1.75	65.35	-0.0525	-0.3341	-0.0273
396	SLD 11	-3.61	-3.77	63.77	-0.0336	-0.4269	-0.057
396	SLD 12	-3.33	-4	63.62	-0.0326	-0.4305	-0.0498
396	SLD 13	-6.94	0.49	60.78	-0.0415	-0.4843	-0.0611
396	SLD 14	-6.51	0.14	60.55	-0.04	-0.4899	-0.0501
396	SLD 15	-7.32	-1.23	60.26	-0.0355	-0.5133	-0.0679
396	SLD 16	-6.89	-1.58	60.03	-0.034	-0.5188	-0.0569
396	SLV 1	12.48	-0.39	81.09	-0.0714	0.1161	0.0166
396	SLV 2	13.48	-1.21	80.56	-0.0679	0.103	0.0421
396	SLV 3	11.6	-4.29	79.91	-0.0579	0.05	0.0009
396	SLV 4	12.6	-5.12	79.37	-0.0544	0.037	0.0264
396	SLV 5	4.14	5.1	72.66	-0.0743	-0.0928	0
396	SLV 6	4.78	4.57	72.32	-0.072	-0.1011	0.0164
396	SLV 7	1.22	-7.91	68.7	-0.0292	-0.313	-0.0524
396	SLV 8	1.86	-8.44	68.36	-0.0269	-0.3213	-0.036
396	SLV 9	-4.04	6.03	64.33	-0.0637	-0.3359	-0.0338
396	SLV 10	-3.4	5.5	63.99	-0.0614	-0.3442	-0.0174
396	SLV 11	-6.96	-6.98	60.37	-0.0186	-0.556	-0.0862
396	SLV 12	-6.32	-7.51	60.02	-0.0163	-0.5644	-0.0698
396	SLV 13	-14.78	2.7	53.31	-0.0362	-0.6942	-0.0962
396	SLV 14	-13.78	1.88	52.78	-0.0327	-0.7072	-0.0707
396	SLV 15	-15.66	-1.2	52.13	-0.0227	-0.7602	-0.1119
396	SLV 16	-14.66	-2.02	51.59	-0.0191	-0.7732	-0.0864
396	CRTFP Ux+	0	0	0	0	0	0
396	CRTFP Ux-	0	0	0	0	0	0
400	SLU 1	0.33	-0.67	63.7	-0.0407	0.3805	-0.0023
400	SLU 2	0.35	-0.7	63.69	-0.0405	0.3809	-0.0018
400	SLU 3	0.34	-0.68	65.22	-0.0416	0.3894	-0.0024
400	SLU 4	0.35	-0.7	65.22	-0.0415	0.3897	-0.0021
400	SLU 5	0.36	-0.72	64.64	-0.0412	0.3858	-0.0019
400	SLU 6	0.35	-0.69	66.17	-0.0423	0.3944	-0.0025
400	SLU 7	0.36	-0.72	66.17	-0.0422	0.3946	-0.0022
400	SLU 8	0.34	-0.7	65.6	-0.0421	0.3904	-0.0026
400	SLU 9	0.35	-0.72	65.6	-0.042	0.3906	-0.0023
400	SLU 10	0.35	-0.68	71.23	-0.0444	0.4347	-0.0027
400	SLU 11	0.34	-0.66	72.76	-0.0456	0.4432	-0.0033
400	SLU 12	0.35	-0.68	72.75	-0.0455	0.4435	-0.003
400	SLU 13	0.35	-0.7	72.18	-0.0451	0.4396	-0.0028
400	SLU 14	0.34	-0.67	73.71	-0.0463	0.4482	-0.0034
400	SLU 15	0.36	-0.7	73.7	-0.0462	0.4484	-0.0031
400	SLU 16	0.34	-0.68	73.13	-0.046	0.4442	-0.0034
400	SLU 17	0.35	-0.7	73.13	-0.0459	0.4444	-0.0031
400	SLU 18	0.33	-0.64	74.46	-0.0463	0.4573	-0.0036
400	SLU 19	0.34	-0.66	74.46	-0.0462	0.4576	-0.0033
400	SLU 20	0.33	-0.66	75.41	-0.047	0.4623	-0.0037
400	SLU 21	0.34	-0.68	75.41	-0.0469	0.4625	-0.0034
400	SLU 22	0.38	-0.61	70.85	-0.0437	0.4145	-0.0023
400	SLU 23	0.4	-0.64	70.84	-0.0435	0.4149	-0.0018
400	SLU 24	0.39	-0.62	72.37	-0.0447	0.4235	-0.0024
400	SLU 25	0.4	-0.64	72.37	-0.0446	0.4237	-0.0021
400	SLU 26	0.4	-0.66	71.8	-0.0442	0.4199	-0.0019
400	SLU 27	0.4	-0.63	73.32	-0.0454	0.4284	-0.0025
400	SLU 28	0.41	-0.66	73.32	-0.0453	0.4287	-0.0022
400	SLU 29	0.39	-0.64	72.75	-0.0451	0.4244	-0.0025
400	SLU 30	0.4	-0.66	72.75	-0.045	0.4247	-0.0022
400	SLU 31	0.4	-0.62	78.38	-0.0475	0.4687	-0.0027
400	SLU 32	0.39	-0.6	79.91	-0.0486	0.4773	-0.0033
400	SLU 33	0.4	-0.62	79.91	-0.0485	0.4775	-0.003
400	SLU 34	0.4	-0.64	79.33	-0.0482	0.4737	-0.0028
400	SLU 35	0.39	-0.61	80.86	-0.0493	0.4822	-0.0034
400	SLU 36	0.4	-0.64	80.86	-0.0492	0.4825	-0.0031
400	SLU 37	0.39	-0.62	80.29	-0.049	0.4782	-0.0034
400	SLU 38	0.4	-0.64	80.28	-0.0489	0.4785	-0.0031
400	SLU 39	0.38	-0.58	81.61	-0.0493	0.4914	-0.0036
400	SLU 40	0.39	-0.6	81.61	-0.0492	0.4916	-0.0032
400	SLU 41	0.38	-0.6	82.56	-0.05	0.4963	-0.0037
400	SLU 42	0.39	-0.62	82.56	-0.0499	0.4966	-0.0034
400	SLU 43	0.42	-0.89	80.35	-0.0518	0.4829	-0.0031
400	SLU 44	0.44	-0.93	80.35	-0.0517	0.4833	-0.0025
400	SLU 45	0.43	-0.9	81.88	-0.0528	0.4919	-0.0031
400	SLU 46	0.44	-0.92	81.88	-0.0527	0.4921	-0.0028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
400	SLU 47	0.44	-0.94	81.3	-0.0524	0.4883	-0.0026
400	SLU 48	0.43	-0.92	82.83	-0.0535	0.4968	-0.0033
400	SLU 49	0.44	-0.94	82.83	-0.0534	0.4971	-0.0029
400	SLU 50	0.43	-0.92	82.26	-0.0532	0.4928	-0.0033
400	SLU 51	0.44	-0.95	82.25	-0.0531	0.4931	-0.003
400	SLU 52	0.43	-0.9	87.88	-0.0556	0.5372	-0.0034
400	SLU 53	0.42	-0.88	89.41	-0.0567	0.5457	-0.004
400	SLU 54	0.44	-0.9	89.41	-0.0566	0.5459	-0.0037
400	SLU 55	0.44	-0.92	88.83	-0.0563	0.5421	-0.0035
400	SLU 56	0.43	-0.9	90.36	-0.0574	0.5506	-0.0041
400	SLU 57	0.44	-0.92	90.36	-0.0573	0.5509	-0.0038
400	SLU 58	0.42	-0.9	89.79	-0.0572	0.5466	-0.0042
400	SLU 59	0.43	-0.92	89.79	-0.0571	0.5469	-0.0038
400	SLU 60	0.41	-0.86	91.12	-0.0574	0.5598	-0.0043
400	SLU 61	0.42	-0.88	91.11	-0.0574	0.5601	-0.004
400	SLU 62	0.42	-0.88	92.07	-0.0581	0.5648	-0.0044
400	SLU 63	0.43	-0.9	92.07	-0.058	0.565	-0.0041
400	SLU 64	0.46	-0.83	87.51	-0.0549	0.517	-0.003
400	SLU 65	0.48	-0.87	87.5	-0.0547	0.5174	-0.0025
400	SLU 66	0.47	-0.84	89.03	-0.0558	0.5259	-0.0031
400	SLU 67	0.49	-0.86	89.03	-0.0557	0.5262	-0.0028
400	SLU 68	0.49	-0.88	88.45	-0.0554	0.5223	-0.0026
400	SLU 69	0.48	-0.86	89.98	-0.0565	0.5309	-0.0032
400	SLU 70	0.49	-0.88	89.98	-0.0564	0.5311	-0.0029
400	SLU 71	0.47	-0.86	89.41	-0.0562	0.5269	-0.0033
400	SLU 72	0.48	-0.89	89.41	-0.0562	0.5271	-0.0029
400	SLU 73	0.48	-0.84	95.04	-0.0586	0.5712	-0.0034
400	SLU 74	0.47	-0.82	96.57	-0.0598	0.5797	-0.004
400	SLU 75	0.48	-0.84	96.56	-0.0597	0.58	-0.0037
400	SLU 76	0.49	-0.86	95.99	-0.0593	0.5762	-0.0035
400	SLU 77	0.48	-0.84	97.52	-0.0605	0.5847	-0.0041
400	SLU 78	0.49	-0.86	97.51	-0.0604	0.5849	-0.0038
400	SLU 79	0.47	-0.84	96.94	-0.0602	0.5807	-0.0041
400	SLU 80	0.48	-0.86	96.94	-0.0601	0.5809	-0.0038
400	SLU 81	0.46	-0.8	98.27	-0.0605	0.5939	-0.0043
400	SLU 82	0.47	-0.82	98.27	-0.0604	0.5941	-0.004
400	SLU 83	0.46	-0.82	99.22	-0.0612	0.5988	-0.0044
400	SLU 84	0.48	-0.84	99.22	-0.0611	0.5991	-0.0041
400	SLE RA 1	0.35	-0.65	65.74	-0.0415	0.3902	-0.0023
400	SLE RA 2	0.36	-0.68	65.74	-0.0414	0.3905	-0.002
400	SLE RA 3	0.35	-0.66	66.76	-0.0422	0.3962	-0.0024
400	SLE RA 4	0.36	-0.67	66.75	-0.0421	0.3963	-0.0022
400	SLE RA 5	0.36	-0.69	66.37	-0.0419	0.3938	-0.0021
400	SLE RA 6	0.36	-0.67	67.39	-0.0426	0.3995	-0.0025
400	SLE RA 7	0.36	-0.68	67.39	-0.0426	0.3996	-0.0023
400	SLE RA 8	0.35	-0.67	67.01	-0.0425	0.3968	-0.0025
400	SLE RA 9	0.36	-0.69	67.01	-0.0424	0.397	-0.0023
400	SLE RA 10	0.36	-0.66	70.76	-0.044	0.4263	-0.0026
400	SLE RA 11	0.35	-0.64	71.78	-0.0448	0.432	-0.003
400	SLE RA 12	0.36	-0.66	71.78	-0.0447	0.4322	-0.0028
400	SLE RA 13	0.36	-0.67	71.39	-0.0445	0.4296	-0.0026
400	SLE RA 14	0.35	-0.65	72.41	-0.0453	0.4353	-0.0031
400	SLE RA 15	0.36	-0.67	72.41	-0.0452	0.4355	-0.0028
400	SLE RA 16	0.35	-0.66	72.03	-0.0451	0.4327	-0.0031
400	SLE RA 17	0.36	-0.67	72.03	-0.045	0.4328	-0.0029
400	SLE RA 18	0.34	-0.63	72.92	-0.0453	0.4414	-0.0032
400	SLE RA 19	0.35	-0.65	72.91	-0.0452	0.4416	-0.003
400	SLE RA 20	0.35	-0.64	73.55	-0.0457	0.4447	-0.0032
400	SLE RA 21	0.35	-0.66	73.55	-0.0457	0.4449	-0.003
400	SLE FR 1	0.35	-0.65	65.74	-0.0415	0.3902	-0.0023
400	SLE FR 2	0.35	-0.66	65.74	-0.0415	0.3902	-0.0023
400	SLE FR 3	0.35	-0.66	65.99	-0.0417	0.3915	-0.0024
400	SLE FR 4	0.35	-0.65	67.89	-0.0426	0.4056	-0.0025
400	SLE FR 5	0.35	-0.65	68.15	-0.0428	0.4069	-0.0026
400	SLE FR 6	0.34	-0.64	69.33	-0.0434	0.4158	-0.0027
400	SLE QP 1	0.35	-0.65	65.74	-0.0415	0.3902	-0.0023
400	SLE QP 2	0.35	-0.65	67.89	-0.0427	0.4056	-0.0026
400	SLD 1	6.27	0.66	62.53	-0.0337	0.5218	0.0313
400	SLD 2	6.71	1.04	62.92	-0.036	0.5144	0.0418
400	SLD 3	5.89	-0.97	61.82	-0.0275	0.5458	0.0243
400	SLD 4	6.34	-0.58	62.21	-0.0297	0.5384	0.0348
400	SLD 5	2.61	2.14	67.29	-0.0491	0.4054	0.0164
400	SLD 6	2.9	2.39	67.54	-0.0506	0.4006	0.0233
400	SLD 7	1.36	-3.27	64.93	-0.0282	0.4853	-0.0071
400	SLD 8	1.65	-3.02	65.19	-0.0296	0.4804	-0.0002
400	SLD 9	-0.96	1.73	70.6	-0.0557	0.3307	-0.005
400	SLD 10	-0.67	1.98	70.85	-0.0571	0.3259	0.0019
400	SLD 11	-2.21	-3.68	68.25	-0.0347	0.4105	-0.0284
400	SLD 12	-1.92	-3.43	68.5	-0.0362	0.4057	-0.0216
400	SLD 13	-5.64	-0.71	73.58	-0.0556	0.2727	-0.04
400	SLD 14	-5.2	-0.33	73.96	-0.0578	0.2653	-0.0294
400	SLD 15	-6.02	-2.33	72.87	-0.0493	0.2967	-0.047
400	SLD 16	-5.58	-1.95	73.26	-0.0516	0.2893	-0.0365
400	SLV 1	14.2	2.35	55.33	-0.0216	0.6781	0.0768
400	SLV 2	15.23	3.24	56.23	-0.0268	0.6609	0.1013
400	SLV 3	13.33	-1.34	53.7	-0.0073	0.7331	0.0603
400	SLV 4	14.36	-0.45	54.6	-0.0125	0.7159	0.0848
400	SLV 5	5.65	5.7	66.43	-0.0571	0.4069	0.042
400	SLV 6	6.31	6.27	67	-0.0605	0.3959	0.0578
400	SLV 7	2.74	-6.6	61.02	-0.0095	0.5901	-0.0129
400	SLV 8	3.4	-6.03	61.6	-0.0128	0.5791	0.0029
400	SLV 9	-2.71	4.74	74.18	-0.0725	0.2321	-0.008
400	SLV 10	-2.05	5.31	74.76	-0.0758	0.221	0.0077
400	SLV 11	-5.62	-7.56	68.78	-0.0248	0.4153	-0.0629
400	SLV 12	-4.96	-6.99	69.36	-0.0282	0.4042	-0.0472
400	SLV 13	-13.67	-0.84	81.18	-0.0728	0.0953	-0.09
400	SLV 14	-12.64	0.05	82.08	-0.078	0.078	-0.0655

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
400	SLV 15	-14.54	-4.53	79.56	-0.0585	0.1502	-0.1065
400	SLV 16	-13.51	-3.64	80.46	-0.0637	0.133	-0.0819
400	CRTFP Ux+	0	0	0	0	0	0
400	CRTFP Ux-	0	0	0	0	0	0
400	CRTFP Uy+	0	0	0	0	0	0
400	CRTFP Uy-	0	0	0	0	0	0
401	SLU 1	0.31	0.27	36.91	-0.037	8.2863	-0.0969
401	SLU 2	0.32	0.25	36.91	-0.037	8.2872	-0.088
401	SLU 3	0.32	0.28	37.8	-0.038	8.4751	-0.0983
401	SLU 4	0.33	0.26	37.8	-0.038	8.4757	-0.093
401	SLU 5	0.33	0.24	37.47	-0.0377	8.4057	-0.0866
401	SLU 6	0.32	0.27	38.36	-0.0387	8.5936	-0.0969
401	SLU 7	0.33	0.26	38.36	-0.0387	8.5941	-0.0915
401	SLU 8	0.32	0.26	38.03	-0.0384	8.5232	-0.094
401	SLU 9	0.33	0.25	38.03	-0.0383	8.5237	-0.0887
401	SLU 10	0.32	0.35	41.02	-0.041	9.1784	-0.1241
401	SLU 11	0.32	0.38	41.91	-0.0421	9.3663	-0.1344
401	SLU 12	0.32	0.36	41.91	-0.042	9.3668	-0.1291
401	SLU 13	0.32	0.35	41.58	-0.0417	9.2968	-0.1227
401	SLU 14	0.32	0.38	42.47	-0.0427	9.4848	-0.133
401	SLU 15	0.33	0.36	42.47	-0.0427	9.4853	-0.1276
401	SLU 16	0.32	0.37	42.14	-0.0424	9.4144	-0.1301
401	SLU 17	0.32	0.35	42.14	-0.0424	9.4149	-0.1248
401	SLU 18	0.31	0.42	42.78	-0.0427	9.5594	-0.1485
401	SLU 19	0.31	0.4	42.78	-0.0427	9.5599	-0.1431
401	SLU 20	0.31	0.42	43.34	-0.0434	9.6779	-0.147
401	SLU 21	0.32	0.4	43.34	-0.0434	9.6784	-0.1417
401	SLU 22	0.34	0.37	41.01	-0.0409	9.1677	-0.132
401	SLU 23	0.35	0.35	41.01	-0.0409	9.1686	-0.1231
401	SLU 24	0.35	0.38	41.9	-0.0419	9.3565	-0.1335
401	SLU 25	0.36	0.36	41.9	-0.0419	9.357	-0.1281
401	SLU 26	0.36	0.34	41.57	-0.0415	9.287	-0.1217
401	SLU 27	0.36	0.37	42.46	-0.0426	9.4749	-0.132
401	SLU 28	0.36	0.36	42.46	-0.0426	9.4755	-0.1267
401	SLU 29	0.35	0.36	42.13	-0.0423	9.4046	-0.1292
401	SLU 30	0.36	0.35	42.13	-0.0422	9.4051	-0.1238
401	SLU 31	0.35	0.45	45.12	-0.0449	10.0597	-0.1592
401	SLU 32	0.35	0.48	46.01	-0.046	10.2477	-0.1696
401	SLU 33	0.36	0.46	46.01	-0.0459	10.2482	-0.1642
401	SLU 34	0.36	0.45	45.68	-0.0456	10.1782	-0.1578
401	SLU 35	0.35	0.48	46.57	-0.0466	10.3661	-0.1681
401	SLU 36	0.36	0.46	46.57	-0.0466	10.3666	-0.1628
401	SLU 37	0.35	0.47	46.24	-0.0463	10.2957	-0.1653
401	SLU 38	0.36	0.45	46.24	-0.0463	10.2963	-0.1599
401	SLU 39	0.34	0.52	46.88	-0.0466	10.4408	-0.1836
401	SLU 40	0.35	0.5	46.88	-0.0466	10.4413	-0.1782
401	SLU 41	0.34	0.52	47.44	-0.0473	10.5592	-0.1822
401	SLU 42	0.35	0.5	47.44	-0.0473	10.5597	-0.1768
401	SLU 43	0.39	0.32	46.57	-0.0468	10.47	-0.1139
401	SLU 44	0.4	0.29	46.57	-0.0467	10.4709	-0.105
401	SLU 45	0.4	0.32	47.46	-0.0478	10.6588	-0.1153
401	SLU 46	0.41	0.31	47.46	-0.0478	10.6594	-0.11
401	SLU 47	0.41	0.29	47.13	-0.0474	10.5894	-0.1036
401	SLU 48	0.41	0.32	48.02	-0.0485	10.7773	-0.1139
401	SLU 49	0.41	0.3	48.02	-0.0485	10.7778	-0.1086
401	SLU 50	0.4	0.31	47.69	-0.0481	10.7069	-0.1111
401	SLU 51	0.41	0.3	47.69	-0.0481	10.7075	-0.1057
401	SLU 52	0.4	0.4	50.69	-0.0508	11.3621	-0.1411
401	SLU 53	0.4	0.43	51.58	-0.0518	11.55	-0.1514
401	SLU 54	0.4	0.41	51.58	-0.0518	11.5506	-0.1461
401	SLU 55	0.41	0.39	51.25	-0.0514	11.4805	-0.1397
401	SLU 56	0.4	0.42	52.14	-0.0525	11.6685	-0.15
401	SLU 57	0.41	0.41	52.14	-0.0525	11.669	-0.1447
401	SLU 58	0.4	0.41	51.81	-0.0522	11.5981	-0.1472
401	SLU 59	0.41	0.4	51.81	-0.0521	11.5986	-0.1418
401	SLU 60	0.39	0.47	52.45	-0.0525	11.7431	-0.1655
401	SLU 61	0.4	0.45	52.45	-0.0525	11.7437	-0.1601
401	SLU 62	0.39	0.46	53.01	-0.0532	11.8616	-0.1641
401	SLU 63	0.4	0.45	53.01	-0.0532	11.8621	-0.1587
401	SLU 64	0.42	0.42	50.67	-0.0507	11.3514	-0.1491
401	SLU 65	0.44	0.39	50.67	-0.0506	11.3523	-0.1401
401	SLU 66	0.43	0.42	51.56	-0.0517	11.5402	-0.1505
401	SLU 67	0.44	0.41	51.56	-0.0517	11.5407	-0.1451
401	SLU 68	0.44	0.39	51.23	-0.0513	11.4707	-0.1387
401	SLU 69	0.44	0.42	52.12	-0.0524	11.6587	-0.149
401	SLU 70	0.44	0.4	52.12	-0.0524	11.6592	-0.1437
401	SLU 71	0.43	0.41	51.79	-0.052	11.5883	-0.1462
401	SLU 72	0.44	0.4	51.79	-0.052	11.5888	-0.1409
401	SLU 73	0.43	0.5	54.79	-0.0546	12.2434	-0.1762
401	SLU 74	0.43	0.53	55.68	-0.0557	12.4314	-0.1866
401	SLU 75	0.44	0.51	55.68	-0.0557	12.4319	-0.1812
401	SLU 76	0.44	0.49	55.35	-0.0553	12.3619	-0.1748
401	SLU 77	0.43	0.52	56.24	-0.0564	12.5498	-0.1851
401	SLU 78	0.44	0.51	56.24	-0.0564	12.5504	-0.1798
401	SLU 79	0.43	0.51	55.91	-0.0561	12.4794	-0.1823
401	SLU 80	0.44	0.5	55.91	-0.056	12.48	-0.1769
401	SLU 81	0.42	0.57	56.55	-0.0564	12.6245	-0.2006
401	SLU 82	0.43	0.55	56.55	-0.0564	12.625	-0.1953
401	SLU 83	0.43	0.56	57.11	-0.0571	12.7429	-0.1992
401	SLU 84	0.43	0.55	57.11	-0.0571	12.7435	-0.1938
401	SLE RA 1	0.32	0.3	38.08	-0.0381	8.5381	-0.1069
401	SLE RA 2	0.33	0.28	38.08	-0.0381	8.5387	-0.101
401	SLE RA 3	0.33	0.3	38.67	-0.0388	8.664	-0.1079
401	SLE RA 4	0.33	0.29	38.67	-0.0388	8.6644	-0.1043
401	SLE RA 5	0.33	0.28	38.45	-0.0386	8.6177	-0.1
401	SLE RA 6	0.33	0.3	39.04	-0.0393	8.743	-0.1069
401	SLE RA 7	0.33	0.29	39.05	-0.0393	8.7433	-0.1034

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
401	SLE RA 8	0.33	0.3	38.82	-0.039	8.6961	-0.105
401	SLE RA 9	0.33	0.29	38.83	-0.039	8.6964	-0.1015
401	SLE RA 10	0.33	0.35	40.82	-0.0408	9.1328	-0.1251
401	SLE RA 11	0.32	0.37	41.41	-0.0415	9.2581	-0.1319
401	SLE RA 12	0.33	0.36	41.41	-0.0415	9.2585	-0.1284
401	SLE RA 13	0.33	0.35	41.19	-0.0412	9.2118	-0.1241
401	SLE RA 14	0.33	0.37	41.79	-0.0419	9.3371	-0.131
401	SLE RA 15	0.33	0.36	41.79	-0.0419	9.3374	-0.1274
401	SLE RA 16	0.32	0.36	41.57	-0.0417	9.2902	-0.1291
401	SLE RA 17	0.33	0.35	41.57	-0.0417	9.2905	-0.1255
401	SLE RA 18	0.32	0.4	41.99	-0.0419	9.3869	-0.1413
401	SLE RA 19	0.32	0.39	42	-0.0419	9.3872	-0.1377
401	SLE RA 20	0.32	0.4	42.37	-0.0424	9.4658	-0.1404
401	SLE RA 21	0.32	0.39	42.37	-0.0424	9.4662	-0.1368
401	SLE FR 1	0.32	0.3	38.08	-0.0381	8.5381	-0.1069
401	SLE FR 2	0.32	0.3	38.08	-0.0381	8.5382	-0.1057
401	SLE FR 3	0.32	0.3	38.23	-0.0383	8.5697	-0.1066
401	SLE FR 4	0.32	0.33	39.25	-0.0393	8.7929	-0.1161
401	SLE FR 5	0.32	0.33	39.4	-0.0395	8.8243	-0.1169
401	SLE FR 6	0.32	0.35	40.04	-0.04	8.9625	-0.1241
401	SLE QP 1	0.32	0.3	38.08	-0.0381	8.5381	-0.1069
401	SLE QP 2	0.32	0.33	39.25	-0.0393	8.7927	-0.1172
401	SLD 1	3.69	1.09	28.74	-0.027	6.6419	-0.3803
401	SLD 2	3.93	1.68	29.14	-0.0296	6.7214	-0.5875
401	SLD 3	3.47	-0.34	27.92	-0.0223	6.489	0.1182
401	SLD 4	3.72	0.26	28.31	-0.0248	6.5686	-0.089
401	SLD 5	1.61	2.61	37.28	-0.0424	8.3653	-0.9157
401	SLD 6	1.77	3	37.53	-0.044	8.4173	-1.0511
401	SLD 7	0.9	-2.14	34.54	-0.0265	7.8557	0.7462
401	SLD 8	1.06	-1.75	34.79	-0.0281	7.9077	0.6108
401	SLD 9	-0.42	2.41	43.71	-0.0504	9.6778	-0.8453
401	SLD 10	-0.26	2.8	43.97	-0.0521	9.7298	-0.9807
401	SLD 11	-1.14	-2.34	40.97	-0.0345	9.1682	0.8166
401	SLD 12	-0.97	-1.95	41.23	-0.0361	9.2202	0.6812
401	SLD 13	-3.08	0.41	50.19	-0.0537	11.0169	-0.1455
401	SLD 14	-2.83	1	50.59	-0.0563	11.0965	-0.3527
401	SLD 15	-3.3	-1.02	49.37	-0.049	10.8641	0.353
401	SLD 16	-3.05	-0.42	49.76	-0.0515	10.9436	0.1458
401	SLV 1	8.2	2.06	14.63	-0.0105	3.7553	-0.7203
401	SLV 2	8.77	3.45	15.55	-0.0164	3.9407	-1.2029
401	SLV 3	7.7	-1.19	12.73	0.0004	3.4006	0.4174
401	SLV 4	8.27	0.2	13.65	-0.0055	3.5859	-0.0652
401	SLV 5	3.34	5.55	34.6	-0.0462	7.7878	-1.941
401	SLV 6	3.71	6.44	35.19	-0.0499	7.9069	-2.2511
401	SLV 7	1.67	-5.3	28.25	-0.0098	6.6053	1.8513
401	SLV 8	2.05	-4.41	28.84	-0.0136	6.7244	1.5412
401	SLV 9	-1.41	5.07	49.67	-0.0649	10.8611	-1.7757
401	SLV 10	-1.04	5.96	50.25	-0.0687	10.9802	-2.0858
401	SLV 11	-3.08	-5.78	43.32	-0.0286	9.6786	2.0167
401	SLV 12	-2.7	-4.88	43.91	-0.0324	9.7977	1.7065
401	SLV 13	-7.64	0.47	64.86	-0.073	13.9996	-0.1693
401	SLV 14	-7.06	1.85	65.77	-0.0789	14.1849	-0.6519
401	SLV 15	-8.14	-2.79	62.96	-0.0621	13.6448	0.9684
401	SLV 16	-7.56	-1.4	63.87	-0.068	13.8302	0.4858
401	CRTFP Ux+	0	0	0	0	0	0
401	CRTFP Ux-	0	0	0	0	0	0
401	CRTFP Uy+	0	0	0	0	0	0
401	CRTFP Uy-	0	0	0	0	0	0
403	SLU 1	-0.63	0.02	33.68	-0.0445	-4.4496	0.0025
403	SLU 2	-0.62	-0.06	33.66	-0.0443	-4.4467	-0.0167
403	SLU 3	-0.65	0.03	34.49	-0.0457	-4.5474	0.0044
403	SLU 4	-0.65	-0.02	34.47	-0.0456	-4.5457	-0.0072
403	SLU 5	-0.64	-0.05	34.17	-0.0451	-4.5085	-0.0154
403	SLU 6	-0.66	0.03	35	-0.0465	-4.6092	0.0057
403	SLU 7	-0.66	-0.01	34.98	-0.0463	-4.6075	-0.0058
403	SLU 8	-0.66	0.03	34.7	-0.0461	-4.5732	0.0052
403	SLU 9	-0.65	-0.01	34.69	-0.0459	-4.5715	-0.0063
403	SLU 10	-0.66	0.01	37.39	-0.0489	-4.9126	-0.0016
403	SLU 11	-0.69	0.09	38.22	-0.0503	-5.0132	0.0195
403	SLU 12	-0.68	0.04	38.2	-0.0502	-5.0115	0.008
403	SLU 13	-0.67	0.01	37.9	-0.0497	-4.9744	-0.0002
403	SLU 14	-0.7	0.1	38.73	-0.0511	-5.075	0.0209
403	SLU 15	-0.7	0.05	38.71	-0.051	-5.0733	0.0093
403	SLU 16	-0.7	0.09	38.43	-0.0507	-5.039	0.0204
403	SLU 17	-0.69	0.05	38.42	-0.0506	-5.0373	0.0088
403	SLU 18	-0.69	0.11	39.01	-0.0511	-5.1151	0.0242
403	SLU 19	-0.68	0.06	38.99	-0.051	-5.1134	0.0126
403	SLU 20	-0.7	0.12	39.52	-0.0519	-5.1769	0.0255
403	SLU 21	-0.69	0.07	39.5	-0.0518	-5.1752	0.014
403	SLU 22	-0.71	0.1	37.44	-0.0491	-4.9141	0.0211
403	SLU 23	-0.7	0.02	37.41	-0.0489	-4.9112	0.0018
403	SLU 24	-0.73	0.11	38.24	-0.0503	-5.0119	0.0229
403	SLU 25	-0.72	0.06	38.23	-0.0502	-5.0102	0.0114
403	SLU 26	-0.71	0.03	37.92	-0.0497	-4.973	0.0032
403	SLU 27	-0.74	0.11	38.75	-0.0511	-5.0737	0.0243
403	SLU 28	-0.74	0.06	38.74	-0.0509	-5.072	0.0127
403	SLU 29	-0.74	0.11	38.46	-0.0507	-5.0377	0.0238
403	SLU 30	-0.73	0.06	38.44	-0.0505	-5.036	0.0122
403	SLU 31	-0.74	0.08	41.14	-0.0535	-5.3771	0.017
403	SLU 32	-0.77	0.17	41.97	-0.0549	-5.4778	0.0381
403	SLU 33	-0.76	0.12	41.95	-0.0548	-5.476	0.0265
403	SLU 34	-0.75	0.09	41.65	-0.0543	-5.4389	0.0183
403	SLU 35	-0.78	0.17	42.48	-0.0557	-5.5396	0.0394
403	SLU 36	-0.77	0.13	42.46	-0.0556	-5.5378	0.0279
403	SLU 37	-0.77	0.17	42.18	-0.0553	-5.5036	0.039
403	SLU 38	-0.77	0.12	42.17	-0.0552	-5.5018	0.0274
403	SLU 39	-0.77	0.19	42.76	-0.0558	-5.5796	0.0427

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
403	SLU 40	-0.76	0.14	42.74	-0.0556	-5.5779	0.0312
403	SLU 41	-0.78	0.19	43.27	-0.0565	-5.6414	0.0441
403	SLU 42	-0.77	0.15	43.25	-0.0564	-5.6397	0.0325
403	SLU 43	-0.8	0	42.5	-0.0563	-5.6252	-0.0031
403	SLU 44	-0.79	-0.08	42.48	-0.0561	-5.6223	-0.0224
403	SLU 45	-0.81	0.01	43.31	-0.0575	-5.723	-0.0012
403	SLU 46	-0.81	-0.04	43.29	-0.0573	-5.7213	-0.0128
403	SLU 47	-0.8	-0.07	42.99	-0.0568	-5.6841	-0.021
403	SLU 48	-0.83	0.02	43.82	-0.0582	-5.7848	0.0001
403	SLU 49	-0.82	-0.03	43.8	-0.0581	-5.7831	-0.0115
403	SLU 50	-0.82	0.01	43.52	-0.0578	-5.7488	-0.0004
403	SLU 51	-0.82	-0.03	43.51	-0.0577	-5.7471	-0.0119
403	SLU 52	-0.83	-0.01	46.2	-0.0607	-6.0882	-0.0072
403	SLU 53	-0.85	0.07	47.03	-0.0621	-6.1889	0.0139
403	SLU 54	-0.85	0.03	47.02	-0.062	-6.1871	0.0023
403	SLU 55	-0.84	-0.01	46.71	-0.0615	-6.15	-0.0058
403	SLU 56	-0.87	0.08	47.54	-0.0629	-6.2506	0.0153
403	SLU 57	-0.86	0.03	47.53	-0.0627	-6.2489	0.0037
403	SLU 58	-0.86	0.08	47.25	-0.0625	-6.2147	0.0148
403	SLU 59	-0.85	0.03	47.23	-0.0623	-6.2129	0.0032
403	SLU 60	-0.85	0.09	47.83	-0.0629	-6.2907	0.0186
403	SLU 61	-0.85	0.04	47.81	-0.0628	-6.289	0.007
403	SLU 62	-0.86	0.1	48.34	-0.0637	-6.3525	0.0199
403	SLU 63	-0.86	0.05	48.32	-0.0635	-6.3508	0.0084
403	SLU 64	-0.87	0.08	46.25	-0.0609	-6.0897	0.0155
403	SLU 65	-0.87	0	46.23	-0.0607	-6.0869	-0.0038
403	SLU 66	-0.89	0.09	47.06	-0.0621	-6.1875	0.0173
403	SLU 67	-0.89	0.04	47.05	-0.0619	-6.1858	0.0058
403	SLU 68	-0.88	0.01	46.74	-0.0615	-6.1487	-0.0024
403	SLU 69	-0.9	0.09	47.57	-0.0629	-6.2493	0.0187
403	SLU 70	-0.9	0.04	47.56	-0.0627	-6.2476	0.0071
403	SLU 71	-0.9	0.09	47.27	-0.0625	-6.2133	0.0182
403	SLU 72	-0.89	0.04	47.26	-0.0623	-6.2116	0.0066
403	SLU 73	-0.9	0.06	49.96	-0.0653	-6.5527	0.0114
403	SLU 74	-0.93	0.15	50.79	-0.0667	-6.6534	0.0325
403	SLU 75	-0.93	0.1	50.77	-0.0666	-6.6517	0.0209
403	SLU 76	-0.92	0.07	50.47	-0.0661	-6.6145	0.0127
403	SLU 77	-0.94	0.15	51.3	-0.0675	-6.7152	0.0338
403	SLU 78	-0.94	0.11	51.28	-0.0673	-6.7134	0.0223
403	SLU 79	-0.94	0.15	51	-0.0671	-6.6792	0.0333
403	SLU 80	-0.93	0.1	50.99	-0.0669	-6.6775	0.0218
403	SLU 81	-0.93	0.17	51.58	-0.0675	-6.7552	0.0371
403	SLU 82	-0.92	0.12	51.56	-0.0674	-6.7535	0.0256
403	SLU 83	-0.94	0.17	52.09	-0.0683	-6.817	0.0385
403	SLU 84	-0.94	0.13	52.07	-0.0682	-6.8153	0.0269
403	SLE RA 1	-0.66	0.04	34.76	-0.0458	-4.5823	0.0078
403	SLE RA 2	-0.65	-0.01	34.74	-0.0457	-4.5804	-0.005
403	SLE RA 3	-0.67	0.05	35.29	-0.0466	-4.6475	0.0091
403	SLE RA 4	-0.66	0.02	35.28	-0.0465	-4.6464	0.0013
403	SLE RA 5	-0.66	0	35.08	-0.0462	-4.6216	-0.0041
403	SLE RA 6	-0.68	0.05	35.63	-0.0471	-4.6887	0.01
403	SLE RA 7	-0.67	0.02	35.62	-0.047	-4.6876	0.0023
403	SLE RA 8	-0.67	0.05	35.44	-0.0469	-4.6647	0.0096
403	SLE RA 9	-0.67	0.02	35.43	-0.0468	-4.6636	0.0019
403	SLE RA 10	-0.68	0.03	37.22	-0.0488	-4.891	0.0051
403	SLE RA 11	-0.69	0.09	37.78	-0.0497	-4.9581	0.0192
403	SLE RA 12	-0.69	0.06	37.77	-0.0496	-4.9569	0.0114
403	SLE RA 13	-0.68	0.04	37.56	-0.0493	-4.9322	0.006
403	SLE RA 14	-0.7	0.09	38.12	-0.0502	-4.9993	0.0201
403	SLE RA 15	-0.7	0.06	38.11	-0.0501	-4.9981	0.0124
403	SLE RA 16	-0.7	0.09	37.92	-0.05	-4.9753	0.0197
403	SLE RA 17	-0.69	0.06	37.91	-0.0499	-4.9741	0.012
403	SLE RA 18	-0.69	0.1	38.3	-0.0503	-5.026	0.0223
403	SLE RA 19	-0.69	0.07	38.29	-0.0502	-5.0248	0.0146
403	SLE RA 20	-0.7	0.11	38.64	-0.0508	-5.0672	0.0232
403	SLE RA 21	-0.7	0.07	38.63	-0.0507	-5.066	0.0155
403	SLE FR 1	-0.66	0.04	34.76	-0.0458	-4.5823	0.0078
403	SLE FR 2	-0.65	0.03	34.75	-0.0458	-4.5819	0.0053
403	SLE FR 3	-0.66	0.04	34.89	-0.0461	-4.5988	0.0082
403	SLE FR 4	-0.67	0.05	35.82	-0.0471	-4.715	0.0096
403	SLE FR 5	-0.67	0.06	35.96	-0.0474	-4.7319	0.0125
403	SLE FR 6	-0.67	0.07	36.53	-0.0481	-4.8042	0.015
403	SLE QP 1	-0.66	0.04	34.76	-0.0458	-4.5823	0.0078
403	SLE QP 2	-0.67	0.06	35.82	-0.0472	-4.7154	0.0122
403	SLD 1	2.18	0.62	46.27	-0.0644	-5.9724	0.155
403	SLD 2	2.38	0.12	46	-0.0624	-5.9404	0.0296
403	SLD 3	2.01	-0.79	45.62	-0.0607	-5.8927	-0.198
403	SLD 4	2.21	-1.3	45.36	-0.0586	-5.8606	-0.3234
403	SLD 5	0.41	2.46	39.98	-0.0584	-5.2191	0.6125
403	SLD 6	0.54	2.13	39.8	-0.057	-5.1982	0.5306
403	SLD 7	-0.16	-2.25	37.83	-0.0459	-4.9533	-0.5641
403	SLD 8	-0.03	-2.58	37.66	-0.0446	-4.9324	-0.6461
403	SLD 9	-1.31	2.7	33.98	-0.0498	-4.4985	0.6704
403	SLD 10	-1.17	2.37	33.81	-0.0484	-4.4775	0.5884
403	SLD 11	-1.88	-2.01	31.84	-0.0373	-4.2327	-0.5063
403	SLD 12	-1.74	-2.34	31.66	-0.036	-4.2117	-0.5882
403	SLD 13	-3.54	1.42	26.28	-0.0357	-3.5702	0.3477
403	SLD 14	-3.34	0.91	26.02	-0.0337	-3.5382	0.2223
403	SLD 15	-3.71	0.01	25.64	-0.032	-3.4905	-0.0052
403	SLD 16	-3.51	-0.5	25.37	-0.0299	-3.4584	-0.1306
403	SLV 1	5.98	1.32	60.27	-0.0874	-7.6571	0.332
403	SLV 2	6.46	0.14	59.65	-0.0826	-7.5824	0.0399
403	SLV 3	5.59	-1.88	58.79	-0.0789	-7.4729	-0.4667
403	SLV 4	6.06	-3.06	58.17	-0.0742	-7.3983	-0.7588
403	SLV 5	1.85	5.49	45.51	-0.0729	-5.89	1.3696
403	SLV 6	2.16	4.73	45.11	-0.0699	-5.842	1.1818
403	SLV 7	0.52	-5.17	40.56	-0.0446	-5.2762	-1.2928

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
403	SLV 8	0.83	-5.93	40.17	-0.0416	-5.2282	-1.4806
403	SLV 9	-2.16	6.05	31.47	-0.0528	-4.2027	1.5049
403	SLV 10	-1.86	5.29	31.08	-0.0497	-4.1547	1.3172
403	SLV 11	-3.49	-4.61	26.53	-0.0245	-3.5888	-1.1575
403	SLV 12	-3.18	-5.37	26.13	-0.0214	-3.5408	-1.3452
403	SLV 13	-7.39	3.18	13.47	-0.0202	-2.0326	0.7831
403	SLV 14	-6.92	2.01	12.85	-0.0154	-1.9579	0.491
403	SLV 15	-7.79	-0.01	11.99	-0.0117	-1.8484	-0.0156
403	SLV 16	-7.32	-1.19	11.37	-0.0069	-1.7737	-0.3077
403	CRTFP Ux+	0	0	0	0	0	0
403	CRTFP Ux-	0	0	0	0	0	0
403	CRTFP Uy+	0	0	0	0	0	0
403	CRTFP Uy-	0	0	0	0	0	0
406	SLU 1	0.16	-0.07	38.23	-0.0014	10.8772	0.0234
406	SLU 2	0.17	-0.1	38.23	-0.0013	10.8744	0.0361
406	SLU 3	0.16	-0.05	39.15	-0.0015	11.1337	0.0193
406	SLU 4	0.17	-0.08	39.15	-0.0015	11.132	0.0269
406	SLU 5	0.17	-0.1	38.79	-0.0015	11.033	0.0358
406	SLU 6	0.16	-0.05	39.72	-0.0017	11.2922	0.0189
406	SLU 7	0.17	-0.07	39.72	-0.0016	11.2906	0.0266
406	SLU 8	0.16	-0.06	39.37	-0.0017	11.1943	0.0227
406	SLU 9	0.17	-0.08	39.36	-0.0017	11.1927	0.0303
406	SLU 10	0.18	-0.04	43.1	-0.0002	12.2508	0.0139
406	SLU 11	0.18	0.01	44.03	-0.0005	12.51	-0.0029
406	SLU 12	0.18	-0.01	44.02	-0.0004	12.5084	0.0047
406	SLU 13	0.19	-0.04	43.67	-0.0004	12.4094	0.0136
406	SLU 14	0.18	0.01	44.6	-0.0006	12.6686	-0.0033
406	SLU 15	0.19	-0.01	44.59	-0.0005	12.6669	0.0044
406	SLU 16	0.18	0	44.24	-0.0007	12.5707	0.0005
406	SLU 17	0.18	-0.02	44.24	-0.0006	12.5691	0.0081
406	SLU 18	0.18	0.02	45.2	0.0001	12.8434	-0.0083
406	SLU 19	0.18	0	45.19	0.0002	12.8418	-0.0007
406	SLU 20	0.18	0.03	45.77	0	13.002	-0.0087
406	SLU 21	0.19	0	45.76	0	13.0004	-0.001
406	SLU 22	0.18	0.03	42.4	-0.0008	12.0384	-0.0112
406	SLU 23	0.19	0	42.39	-0.0007	12.0356	0.0016
406	SLU 24	0.18	0.05	43.32	-0.0009	12.2948	-0.0153
406	SLU 25	0.19	0.02	43.31	-0.0008	12.2932	-0.0076
406	SLU 26	0.19	0	42.96	-0.0008	12.1942	0.0012
406	SLU 27	0.19	0.05	43.89	-0.001	12.4534	-0.0156
406	SLU 28	0.19	0.02	43.88	-0.001	12.4518	-0.008
406	SLU 29	0.18	0.04	43.53	-0.0011	12.3555	-0.0119
406	SLU 30	0.19	0.01	43.53	-0.001	12.3539	-0.0042
406	SLU 31	0.21	0.06	47.27	0.0004	13.412	-0.0206
406	SLU 32	0.2	0.11	48.19	0.0002	13.6712	-0.0375
406	SLU 33	0.21	0.09	48.19	0.0003	13.6696	-0.0299
406	SLU 34	0.21	0.06	47.83	0.0003	13.5706	-0.021
406	SLU 35	0.2	0.11	48.76	0	13.8298	-0.0379
406	SLU 36	0.21	0.09	48.76	0.0001	13.8281	-0.0302
406	SLU 37	0.2	0.1	48.41	0	13.7319	-0.0341
406	SLU 38	0.21	0.08	48.4	0.0001	13.7303	-0.0264
406	SLU 39	0.2	0.12	49.36	0.0007	14.0046	-0.0429
406	SLU 40	0.21	0.1	49.36	0.0008	14.003	-0.0353
406	SLU 41	0.2	0.12	49.93	0.0006	14.1632	-0.0433
406	SLU 42	0.21	0.1	49.93	0.0007	14.1616	-0.0356
406	SLU 43	0.2	-0.12	48.28	-0.0021	13.7422	0.0423
406	SLU 44	0.21	-0.15	48.27	-0.002	13.7395	0.055
406	SLU 45	0.2	-0.11	49.2	-0.0022	13.9987	0.0382
406	SLU 46	0.21	-0.13	49.19	-0.0021	13.997	0.0458
406	SLU 47	0.21	-0.15	48.84	-0.0021	13.898	0.0547
406	SLU 48	0.2	-0.11	49.76	-0.0023	14.1573	0.0378
406	SLU 49	0.21	-0.13	49.76	-0.0023	14.1556	0.0454
406	SLU 50	0.2	-0.12	49.41	-0.0024	14.0594	0.0416
406	SLU 51	0.21	-0.14	49.41	-0.0023	14.0577	0.0492
406	SLU 52	0.22	-0.09	53.14	-0.0009	15.1158	0.0328
406	SLU 53	0.22	-0.04	54.07	-0.0011	15.3751	0.016
406	SLU 54	0.22	-0.07	54.07	-0.001	15.3734	0.0236
406	SLU 55	0.22	-0.09	53.71	-0.001	15.2744	0.0325
406	SLU 56	0.22	-0.04	54.64	-0.0013	15.5336	0.0156
406	SLU 57	0.22	-0.06	54.63	-0.0012	15.532	0.0232
406	SLU 58	0.22	-0.05	54.29	-0.0013	15.4357	0.0194
406	SLU 59	0.22	-0.08	54.28	-0.0012	15.4341	0.027
406	SLU 60	0.22	-0.03	55.24	-0.0006	15.7085	0.0106
406	SLU 61	0.22	-0.05	55.24	-0.0005	15.7068	0.0182
406	SLU 62	0.22	-0.03	55.81	-0.0007	15.867	0.0102
406	SLU 63	0.23	-0.05	55.8	-0.0006	15.8654	0.0178
406	SLU 64	0.22	-0.02	52.44	-0.0014	14.9034	0.0077
406	SLU 65	0.23	-0.06	52.43	-0.0013	14.9007	0.0204
406	SLU 66	0.22	-0.01	53.36	-0.0016	15.1599	0.0036
406	SLU 67	0.23	-0.03	53.36	-0.0015	15.1582	0.0112
406	SLU 68	0.23	-0.05	53	-0.0015	15.0592	0.0201
406	SLU 69	0.23	-0.01	53.93	-0.0017	15.3185	0.0032
406	SLU 70	0.23	-0.03	53.92	-0.0016	15.3168	0.0109
406	SLU 71	0.22	-0.02	53.58	-0.0017	15.2206	0.007
406	SLU 72	0.23	-0.04	53.57	-0.0017	15.2189	0.0146
406	SLU 73	0.25	0.01	57.31	-0.0002	16.277	-0.0018
406	SLU 74	0.24	0.05	58.24	-0.0005	16.5363	-0.0186
406	SLU 75	0.25	0.03	58.23	-0.0004	16.5346	-0.011
406	SLU 76	0.25	0.01	57.88	-0.0004	16.4356	-0.0021
406	SLU 77	0.24	0.06	58.8	-0.0006	16.6948	-0.019
406	SLU 78	0.25	0.03	58.8	-0.0005	16.6932	-0.0113
406	SLU 79	0.24	0.04	58.45	-0.0007	16.5969	-0.0152
406	SLU 80	0.25	0.02	58.45	-0.0006	16.5953	-0.0076
406	SLU 81	0.24	0.07	59.41	0.0001	16.8697	-0.024
406	SLU 82	0.25	0.05	59.4	0.0002	16.868	-0.0164
406	SLU 83	0.24	0.07	59.97	-0.0001	17.0282	-0.0244
406	SLU 84	0.25	0.05	59.97	0	17.0266	-0.0167

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
406	SLE RA 1	0.16	-0.04	39.42	-0.0013	11.209	0.0135
406	SLE RA 2	0.17	-0.06	39.42	-0.0012	11.2071	0.022
406	SLE RA 3	0.17	-0.03	40.04	-0.0013	11.3799	0.0108
406	SLE RA 4	0.17	-0.04	40.03	-0.0013	11.3788	0.0159
406	SLE RA 5	0.17	-0.06	39.8	-0.0013	11.3128	0.0218
406	SLE RA 6	0.17	-0.03	40.42	-0.0014	11.4856	0.0105
406	SLE RA 7	0.17	-0.04	40.41	-0.0014	11.4845	0.0156
406	SLE RA 8	0.17	-0.04	40.18	-0.0015	11.4204	0.0131
406	SLE RA 9	0.17	-0.05	40.18	-0.0014	11.4193	0.0181
406	SLE RA 10	0.18	-0.02	42.67	-0.0005	12.1247	0.0072
406	SLE RA 11	0.18	0.01	43.29	-0.0006	12.2975	-0.004
406	SLE RA 12	0.18	0	43.28	-0.0006	12.2964	0.0011
406	SLE RA 13	0.18	-0.02	43.05	-0.0006	12.2304	0.007
406	SLE RA 14	0.18	0.01	43.67	-0.0007	12.4032	-0.0043
406	SLE RA 15	0.18	0	43.66	-0.0007	12.4021	0.0008
406	SLE RA 16	0.18	0.01	43.43	-0.0007	12.338	-0.0018
406	SLE RA 17	0.18	-0.01	43.43	-0.0007	12.3369	0.0033
406	SLE RA 18	0.18	0.02	44.07	-0.0002	12.5198	-0.0076
406	SLE RA 19	0.18	0.01	44.06	-0.0002	12.5187	-0.0025
406	SLE RA 20	0.18	0.02	44.45	-0.0003	12.6255	-0.0079
406	SLE RA 21	0.18	0.01	44.44	-0.0003	12.6244	-0.0028
406	SLE FR 1	0.16	-0.04	39.42	-0.0013	11.209	0.0135
406	SLE FR 2	0.16	-0.04	39.42	-0.0012	11.2086	0.0152
406	SLE FR 3	0.16	-0.04	39.58	-0.0013	11.2512	0.0134
406	SLE FR 4	0.17	-0.02	40.82	-0.0009	11.6018	0.0089
406	SLE FR 5	0.17	-0.02	40.97	-0.001	11.6445	0.0071
406	SLE FR 6	0.17	-0.01	41.75	-0.0007	11.8644	0.0029
406	SLE QP 1	0.16	-0.04	39.42	-0.0013	11.209	0.0135
406	SLE QP 2	0.17	-0.02	40.82	-0.0009	11.6022	0.0072
406	SLD 1	3.65	0.69	41.4	-0.0037	11.7858	-0.2397
406	SLD 2	3.9	0.72	41.47	-0.0042	11.7974	-0.2502
406	SLD 3	3.44	-0.46	41.14	-0.0005	11.7211	0.1622
406	SLD 4	3.68	-0.43	41.21	-0.0009	11.7327	0.1517
406	SLD 5	1.5	1.93	41.38	-0.0067	11.7534	-0.6746
406	SLD 6	1.66	1.95	41.42	-0.007	11.761	-0.6815
406	SLD 7	0.78	-1.9	40.51	0.0043	11.5377	0.6651
406	SLD 8	0.94	-1.88	40.55	0.004	11.5452	0.6583
406	SLD 9	-0.6	1.84	41.08	-0.0058	11.6592	-0.6439
406	SLD 10	-0.44	1.86	41.13	-0.0062	11.6667	-0.6507
406	SLD 11	-1.32	-1.99	40.21	0.0051	11.4435	0.6958
406	SLD 12	-1.16	-1.97	40.26	0.0048	11.451	0.689
406	SLD 13	-3.35	0.39	40.42	-0.001	11.4718	-0.1374
406	SLD 14	-3.1	0.42	40.49	-0.0014	11.4833	-0.1478
406	SLD 15	-3.56	-0.76	40.16	0.0023	11.407	0.2646
406	SLD 16	-3.32	-0.73	40.23	0.0018	11.4186	0.2541
406	SLV 1	8.33	1.6	42.18	-0.0074	12.0303	-0.5553
406	SLV 2	8.89	1.68	42.34	-0.0085	12.0572	-0.5797
406	SLV 3	7.82	-1.01	41.58	0.0001	11.8819	0.3557
406	SLV 4	8.39	-0.93	41.74	-0.0011	11.9087	0.3314
406	SLV 5	3.28	4.41	42.1	-0.014	11.9511	-1.5392
406	SLV 6	3.65	4.46	42.21	-0.0147	11.9684	-1.5548
406	SLV 7	1.61	-4.28	40.11	0.0109	11.4564	1.4977
406	SLV 8	1.97	-4.23	40.22	0.0101	11.4737	1.482
406	SLV 9	-1.63	4.19	41.42	-0.012	11.7308	-1.4677
406	SLV 10	-1.27	4.24	41.52	-0.0128	11.748	-1.4833
406	SLV 11	-3.31	-4.49	39.43	0.0128	11.236	1.5692
406	SLV 12	-2.95	-4.44	39.53	0.0121	11.2533	1.5535
406	SLV 13	-8.06	0.89	39.89	-0.0008	11.2957	-0.317
406	SLV 14	-7.49	0.97	40.05	-0.002	11.3226	-0.3414
406	SLV 15	-8.56	-1.72	39.29	0.0066	11.1473	0.594
406	SLV 16	-7.99	-1.64	39.46	0.0055	11.1741	0.5697
406	CRTFP Ux+	0	0	0	0	0	0
406	CRTFP Ux-	0	0	0	0	0	0
406	CRTFP Uy+	0	0	0	0	0	0
406	CRTFP Uy-	0	0	0	0	0	0
409	SLU 1	-1.76	-0.63	120.17	2.5981	-0.4978	-0.1541
409	SLU 2	-1.73	-0.77	120.15	2.6047	-0.4972	-0.1515
409	SLU 3	-1.81	-0.6	123.05	2.6597	-0.5102	-0.1588
409	SLU 4	-1.78	-0.69	123.04	2.6636	-0.5098	-0.1573
409	SLU 5	-1.76	-0.78	121.94	2.6401	-0.5047	-0.1548
409	SLU 6	-1.84	-0.61	124.84	2.695	-0.5177	-0.1622
409	SLU 7	-1.81	-0.69	124.83	2.6989	-0.5173	-0.1606
409	SLU 8	-1.82	-0.64	123.75	2.6689	-0.5129	-0.1607
409	SLU 9	-1.8	-0.72	123.74	2.6728	-0.5125	-0.1591
409	SLU 10	-1.83	-0.71	135.28	2.9908	-0.5795	-0.1681
409	SLU 11	-1.91	-0.54	138.18	3.0457	-0.5925	-0.1755
409	SLU 12	-1.89	-0.62	138.17	3.0497	-0.5921	-0.1739
409	SLU 13	-1.86	-0.71	137.07	3.0261	-0.587	-0.1714
409	SLU 14	-1.94	-0.54	139.97	3.0811	-0.6	-0.1788
409	SLU 15	-1.92	-0.62	139.96	3.085	-0.5997	-0.1772
409	SLU 16	-1.92	-0.57	138.87	3.0549	-0.5952	-0.1773
409	SLU 17	-1.9	-0.66	138.86	3.0589	-0.5948	-0.1758
409	SLU 18	-1.91	-0.54	141.78	3.1497	-0.6154	-0.1778
409	SLU 19	-1.89	-0.62	141.77	3.1536	-0.615	-0.1763
409	SLU 20	-1.94	-0.54	143.57	3.185	-0.6229	-0.1812
409	SLU 21	-1.92	-0.62	143.56	3.189	-0.6225	-0.1796
409	SLU 22	-1.97	-0.34	133.3	2.9195	-0.555	-0.1757
409	SLU 23	-1.93	-0.48	133.29	2.9261	-0.5544	-0.1731
409	SLU 24	-2.02	-0.31	136.19	2.981	-0.5674	-0.1805
409	SLU 25	-1.99	-0.4	136.18	2.9849	-0.5671	-0.1789
409	SLU 26	-1.96	-0.48	135.08	2.9614	-0.562	-0.1764
409	SLU 27	-2.05	-0.32	137.98	3.0164	-0.575	-0.1838
409	SLU 28	-2.02	-0.4	137.97	3.0203	-0.5746	-0.1823
409	SLU 29	-2.03	-0.35	136.88	2.9902	-0.5701	-0.1824
409	SLU 30	-2.01	-0.43	136.87	2.9942	-0.5698	-0.1808
409	SLU 31	-2.03	-0.41	148.41	3.3121	-0.6367	-0.1898
409	SLU 32	-2.12	-0.25	151.31	3.3671	-0.6498	-0.1972

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
409	SLU 33	-2.09	-0.33	151.3	3.371	-0.6494	-0.1956
409	SLU 34	-2.06	-0.42	150.2	3.3475	-0.6443	-0.1931
409	SLU 35	-2.15	-0.25	153.1	3.4024	-0.6573	-0.2005
409	SLU 36	-2.12	-0.33	153.09	3.4064	-0.6569	-0.1989
409	SLU 37	-2.13	-0.28	152.01	3.3763	-0.6524	-0.199
409	SLU 38	-2.11	-0.36	152	3.3802	-0.6521	-0.1974
409	SLU 39	-2.12	-0.25	154.91	3.471	-0.6726	-0.1995
409	SLU 40	-2.09	-0.33	154.9	3.475	-0.6723	-0.1979
409	SLU 41	-2.15	-0.25	156.7	3.5064	-0.6802	-0.2028
409	SLU 42	-2.12	-0.33	156.69	3.5103	-0.6798	-0.2013
409	SLU 43	-2.22	-0.93	151.72	3.2674	-0.6275	-0.1929
409	SLU 44	-2.18	-1.06	151.7	3.274	-0.6268	-0.1902
409	SLU 45	-2.27	-0.89	154.6	3.3289	-0.6399	-0.1976
409	SLU 46	-2.24	-0.98	154.59	3.3329	-0.6395	-0.1961
409	SLU 47	-2.21	-1.07	153.49	3.3093	-0.6344	-0.1936
409	SLU 48	-2.3	-0.9	156.39	3.3643	-0.6474	-0.2009
409	SLU 49	-2.27	-0.98	156.38	3.3682	-0.647	-0.1994
409	SLU 50	-2.28	-0.93	155.3	3.3381	-0.6426	-0.1995
409	SLU 51	-2.26	-1.01	155.28	3.3421	-0.6422	-0.1979
409	SLU 52	-2.28	-1	166.82	3.66	-0.7092	-0.2069
409	SLU 53	-2.37	-0.83	169.73	3.715	-0.7222	-0.2143
409	SLU 54	-2.34	-0.91	169.72	3.7189	-0.7218	-0.2127
409	SLU 55	-2.31	-1	168.61	3.6954	-0.7167	-0.2102
409	SLU 56	-2.4	-0.83	171.51	3.7503	-0.7297	-0.2176
409	SLU 57	-2.37	-0.91	171.5	3.7543	-0.7294	-0.216
409	SLU 58	-2.38	-0.86	170.42	3.7242	-0.7249	-0.2161
409	SLU 59	-2.36	-0.95	170.41	3.7281	-0.7245	-0.2146
409	SLU 60	-2.37	-0.83	173.32	3.8189	-0.7451	-0.2166
409	SLU 61	-2.34	-0.91	173.31	3.8229	-0.7447	-0.2151
409	SLU 62	-2.4	-0.83	175.11	3.8543	-0.7526	-0.2199
409	SLU 63	-2.37	-0.91	175.1	3.8582	-0.7522	-0.2184
409	SLU 64	-2.43	-0.63	164.85	3.5888	-0.6847	-0.2145
409	SLU 65	-2.39	-0.77	164.83	3.5953	-0.6841	-0.2119
409	SLU 66	-2.47	-0.6	167.74	3.6503	-0.6971	-0.2193
409	SLU 67	-2.45	-0.69	167.73	3.6542	-0.6968	-0.2177
409	SLU 68	-2.42	-0.77	166.62	3.6307	-0.6917	-0.2152
409	SLU 69	-2.5	-0.61	169.53	3.6856	-0.7047	-0.2226
409	SLU 70	-2.48	-0.69	169.51	3.6896	-0.7043	-0.221
409	SLU 71	-2.49	-0.64	168.43	3.6595	-0.6998	-0.2212
409	SLU 72	-2.47	-0.72	168.42	3.6634	-0.6995	-0.2196
409	SLU 73	-2.49	-0.7	179.96	3.9814	-0.7664	-0.2286
409	SLU 74	-2.57	-0.54	182.86	4.0363	-0.7795	-0.2359
409	SLU 75	-2.55	-0.62	182.85	4.0403	-0.7791	-0.2344
409	SLU 76	-2.52	-0.71	181.75	4.0168	-0.774	-0.2319
409	SLU 77	-2.6	-0.54	184.65	4.0717	-0.787	-0.2393
409	SLU 78	-2.58	-0.62	184.64	4.0756	-0.7866	-0.2377
409	SLU 79	-2.59	-0.57	183.56	4.0456	-0.7821	-0.2378
409	SLU 80	-2.57	-0.65	183.54	4.0495	-0.7818	-0.2362
409	SLU 81	-2.57	-0.54	186.46	4.1403	-0.8023	-0.2383
409	SLU 82	-2.55	-0.62	186.45	4.1442	-0.802	-0.2367
409	SLU 83	-2.6	-0.54	188.25	4.1757	-0.8099	-0.2416
409	SLU 84	-2.58	-0.62	188.24	4.1796	-0.8095	-0.24
409	SLE RA 1	-1.82	-0.55	123.92	2.69	-0.5141	-0.1603
409	SLE RA 2	-1.8	-0.64	123.91	2.6943	-0.5137	-0.1585
409	SLE RA 3	-1.85	-0.53	125.84	2.731	-0.5224	-0.1634
409	SLE RA 4	-1.84	-0.59	125.84	2.7336	-0.5222	-0.1624
409	SLE RA 5	-1.82	-0.65	125.1	2.7179	-0.5187	-0.1607
409	SLE RA 6	-1.87	-0.53	127.04	2.7545	-0.5274	-0.1656
409	SLE RA 7	-1.86	-0.59	127.03	2.7572	-0.5272	-0.1646
409	SLE RA 8	-1.86	-0.55	126.31	2.7371	-0.5242	-0.1647
409	SLE RA 9	-1.85	-0.61	126.3	2.7397	-0.5239	-0.1636
409	SLE RA 10	-1.87	-0.6	133.99	2.9517	-0.5686	-0.1696
409	SLE RA 11	-1.92	-0.49	135.93	2.9883	-0.5773	-0.1745
409	SLE RA 12	-1.9	-0.54	135.92	2.991	-0.577	-0.1735
409	SLE RA 13	-1.89	-0.6	135.19	2.9753	-0.5736	-0.1718
409	SLE RA 14	-1.94	-0.49	137.12	3.0119	-0.5823	-0.1767
409	SLE RA 15	-1.92	-0.54	137.11	3.0145	-0.5821	-0.1757
409	SLE RA 16	-1.93	-0.51	136.39	2.9945	-0.5791	-0.1758
409	SLE RA 17	-1.92	-0.57	136.38	2.9971	-0.5788	-0.1747
409	SLE RA 18	-1.92	-0.49	138.33	3.0576	-0.5925	-0.1761
409	SLE RA 19	-1.9	-0.54	138.32	3.0603	-0.5923	-0.1751
409	SLE RA 20	-1.94	-0.49	139.52	3.0812	-0.5976	-0.1783
409	SLE RA 21	-1.92	-0.54	139.51	3.0838	-0.5973	-0.1773
409	SLE FR 1	-1.82	-0.55	123.92	2.69	-0.5141	-0.1603
409	SLE FR 2	-1.82	-0.57	123.92	2.6908	-0.514	-0.1599
409	SLE FR 3	-1.83	-0.55	124.4	2.6994	-0.5161	-0.1611
409	SLE FR 4	-1.85	-0.55	128.24	2.8011	-0.5376	-0.1647
409	SLE FR 5	-1.86	-0.53	128.72	2.8097	-0.5397	-0.1659
409	SLE FR 6	-1.87	-0.52	131.12	2.8738	-0.5533	-0.1682
409	SLE QP 1	-1.82	-0.55	123.92	2.69	-0.5141	-0.1603
409	SLE QP 2	-1.85	-0.53	128.24	2.8003	-0.5377	-0.165
409	SLD 1	9.56	2.15	127.08	2.6614	-0.4988	-0.3463
409	SLD 2	10.3	1.92	127.06	2.6679	-0.4997	-0.3095
409	SLD 3	8.88	-1.79	126.76	2.8034	-0.4831	-0.3131
409	SLD 4	9.62	-2.02	126.74	2.81	-0.484	-0.2763
409	SLD 5	2.47	6.28	128.38	2.5419	-0.5497	-0.2762
409	SLD 6	2.96	6.13	128.37	2.5462	-0.5503	-0.2522
409	SLD 7	0.2	-6.83	127.32	3.0156	-0.4973	-0.1656
409	SLD 8	0.69	-6.98	127.31	3.0198	-0.4979	-0.1415
409	SLD 9	-4.39	5.92	129.18	2.5807	-0.5774	-0.1885
409	SLD 10	-3.91	5.77	129.16	2.585	-0.578	-0.1644
409	SLD 11	-6.66	-7.19	128.12	3.0543	-0.525	-0.0778
409	SLD 12	-6.18	-7.34	128.11	3.0586	-0.5256	-0.0538
409	SLD 13	-13.32	0.95	129.74	2.7906	-0.5913	-0.0537
409	SLD 14	-12.58	0.72	129.72	2.7971	-0.5922	-0.0169
409	SLD 15	-14	-2.98	129.43	2.9326	-0.5756	-0.0205
409	SLD 16	-13.26	-3.21	129.4	2.9392	-0.5765	0.0163

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
409	SLV 1	24.84	5.58	125.49	2.4785	-0.4462	-0.5883
409	SLV 2	26.57	5.05	125.44	2.4937	-0.4484	-0.5025
409	SLV 3	23.25	-3.32	124.75	2.8002	-0.4105	-0.5124
409	SLV 4	24.98	-3.86	124.7	2.8154	-0.4127	-0.4266
409	SLV 5	8.27	14.91	128.55	2.2132	-0.5641	-0.4218
409	SLV 6	9.38	14.56	128.51	2.223	-0.5655	-0.3667
409	SLV 7	2.98	-14.79	126.08	3.2855	-0.4449	-0.1688
409	SLV 8	4.09	-15.13	126.05	3.2953	-0.4463	-0.1137
409	SLV 9	-7.79	14.07	130.44	2.3052	-0.629	-0.2164
409	SLV 10	-6.68	13.72	130.41	2.315	-0.6304	-0.1613
409	SLV 11	-13.08	-15.63	127.97	3.3775	-0.5098	0.0367
409	SLV 12	-11.97	-15.97	127.94	3.3873	-0.5112	0.0918
409	SLV 13	-28.69	2.8	131.79	2.7851	-0.6626	0.0966
409	SLV 14	-26.96	2.26	131.74	2.8003	-0.6648	0.1823
409	SLV 15	-30.27	-6.11	131.05	3.1068	-0.6269	0.1725
409	SLV 16	-28.54	-6.65	131	3.122	-0.6291	0.2583
409	CRTFP Ux+	0	0	0	0	0	0
409	CRTFP Ux-	0	0	0	0	0	0
409	CRTFP Uy+	0	0	0	0	0	0
409	CRTFP Uy-	0	0	0	0	0	0
411	SLU 1	-0.88	-1.16	61.19	-0.0307	-0.2771	-0.0285
411	SLU 2	-0.86	-1.23	61.17	-0.0304	-0.2779	-0.0278
411	SLU 3	-0.9	-1.17	62.64	-0.0314	-0.2839	-0.0293
411	SLU 4	-0.89	-1.22	62.63	-0.0312	-0.2844	-0.0289
411	SLU 5	-0.88	-1.25	62.09	-0.0309	-0.2817	-0.0283
411	SLU 6	-0.92	-1.19	63.56	-0.0319	-0.2877	-0.0298
411	SLU 7	-0.91	-1.23	63.55	-0.0317	-0.2882	-0.0294
411	SLU 8	-0.91	-1.19	63.03	-0.0318	-0.2847	-0.0295
411	SLU 9	-0.9	-1.23	63.02	-0.0316	-0.2852	-0.0291
411	SLU 10	-0.9	-1.28	68.25	-0.0327	-0.3225	-0.031
411	SLU 11	-0.94	-1.22	69.72	-0.0337	-0.3285	-0.0325
411	SLU 12	-0.93	-1.27	69.71	-0.0335	-0.329	-0.0321
411	SLU 13	-0.91	-1.29	69.17	-0.0332	-0.3263	-0.0315
411	SLU 14	-0.96	-1.24	70.64	-0.0342	-0.3323	-0.033
411	SLU 15	-0.95	-1.28	70.63	-0.0341	-0.3328	-0.0326
411	SLU 16	-0.95	-1.23	70.11	-0.0341	-0.3293	-0.0327
411	SLU 17	-0.94	-1.28	70.1	-0.0339	-0.3298	-0.0323
411	SLU 18	-0.93	-1.23	71.3	-0.034	-0.3408	-0.033
411	SLU 19	-0.92	-1.27	71.29	-0.0338	-0.3413	-0.0326
411	SLU 20	-0.95	-1.24	72.22	-0.0345	-0.3447	-0.0335
411	SLU 21	-0.94	-1.28	72.21	-0.0344	-0.3451	-0.0331
411	SLU 22	-0.98	-1.15	67.97	-0.0324	-0.3065	-0.0328
411	SLU 23	-0.96	-1.23	67.95	-0.0321	-0.3073	-0.0322
411	SLU 24	-1.01	-1.17	69.42	-0.0331	-0.3133	-0.0337
411	SLU 25	-1	-1.21	69.41	-0.0329	-0.3138	-0.0333
411	SLU 26	-0.98	-1.24	68.87	-0.0326	-0.3111	-0.0327
411	SLU 27	-1.03	-1.18	70.35	-0.0336	-0.3171	-0.0342
411	SLU 28	-1.01	-1.23	70.33	-0.0334	-0.3176	-0.0338
411	SLU 29	-1.02	-1.18	69.81	-0.0335	-0.3141	-0.0339
411	SLU 30	-1.01	-1.23	69.8	-0.0333	-0.3146	-0.0335
411	SLU 31	-1	-1.27	75.03	-0.0344	-0.3519	-0.0353
411	SLU 32	-1.05	-1.22	76.51	-0.0354	-0.3579	-0.0369
411	SLU 33	-1.03	-1.26	76.5	-0.0352	-0.3584	-0.0365
411	SLU 34	-1.02	-1.29	75.96	-0.0349	-0.3557	-0.0359
411	SLU 35	-1.06	-1.23	77.43	-0.0359	-0.3617	-0.0374
411	SLU 36	-1.05	-1.27	77.42	-0.0357	-0.3622	-0.037
411	SLU 37	-1.06	-1.23	76.9	-0.0358	-0.3587	-0.037
411	SLU 38	-1.05	-1.27	76.88	-0.0356	-0.3592	-0.0366
411	SLU 39	-1.04	-1.22	78.09	-0.0357	-0.3702	-0.0374
411	SLU 40	-1.03	-1.27	78.08	-0.0355	-0.3707	-0.037
411	SLU 41	-1.06	-1.24	79.01	-0.0362	-0.3741	-0.0379
411	SLU 42	-1.04	-1.28	79	-0.0361	-0.3745	-0.0375
411	SLU 43	-1.1	-1.51	77.21	-0.0394	-0.3502	-0.0355
411	SLU 44	-1.09	-1.58	77.2	-0.039	-0.351	-0.0348
411	SLU 45	-1.13	-1.52	78.67	-0.04	-0.357	-0.0363
411	SLU 46	-1.12	-1.57	78.66	-0.0399	-0.3575	-0.0359
411	SLU 47	-1.1	-1.59	78.12	-0.0396	-0.3548	-0.0353
411	SLU 48	-1.15	-1.54	79.59	-0.0406	-0.3608	-0.0369
411	SLU 49	-1.14	-1.58	79.58	-0.0404	-0.3613	-0.0365
411	SLU 50	-1.14	-1.53	79.06	-0.0404	-0.3578	-0.0365
411	SLU 51	-1.13	-1.58	79.05	-0.0402	-0.3583	-0.0361
411	SLU 52	-1.12	-1.63	84.28	-0.0414	-0.3956	-0.038
411	SLU 53	-1.17	-1.57	85.75	-0.0424	-0.4016	-0.0395
411	SLU 54	-1.16	-1.61	85.74	-0.0422	-0.4021	-0.0391
411	SLU 55	-1.14	-1.64	85.2	-0.0419	-0.3994	-0.0385
411	SLU 56	-1.19	-1.58	86.67	-0.0429	-0.4054	-0.04
411	SLU 57	-1.17	-1.63	86.66	-0.0427	-0.4059	-0.0396
411	SLU 58	-1.18	-1.58	86.14	-0.0427	-0.4024	-0.0397
411	SLU 59	-1.17	-1.63	86.13	-0.0425	-0.4029	-0.0393
411	SLU 60	-1.16	-1.58	87.33	-0.0427	-0.4139	-0.04
411	SLU 61	-1.15	-1.62	87.32	-0.0425	-0.4144	-0.0396
411	SLU 62	-1.18	-1.59	88.25	-0.0432	-0.4177	-0.0405
411	SLU 63	-1.17	-1.63	88.24	-0.043	-0.4182	-0.0402
411	SLU 64	-1.21	-1.5	84	-0.0411	-0.3796	-0.0399
411	SLU 65	-1.19	-1.58	83.98	-0.0407	-0.3804	-0.0392
411	SLU 66	-1.24	-1.52	85.45	-0.0417	-0.3864	-0.0407
411	SLU 67	-1.22	-1.56	85.44	-0.0416	-0.3869	-0.0403
411	SLU 68	-1.21	-1.59	84.9	-0.0413	-0.3842	-0.0397
411	SLU 69	-1.25	-1.53	86.38	-0.0423	-0.3902	-0.0412
411	SLU 70	-1.24	-1.58	86.36	-0.0421	-0.3907	-0.0408
411	SLU 71	-1.25	-1.53	85.84	-0.0421	-0.3872	-0.0409
411	SLU 72	-1.24	-1.57	85.83	-0.0419	-0.3877	-0.0405
411	SLU 73	-1.23	-1.62	91.06	-0.043	-0.425	-0.0424
411	SLU 74	-1.27	-1.56	92.54	-0.0441	-0.431	-0.0439
411	SLU 75	-1.26	-1.61	92.52	-0.0439	-0.4315	-0.0435
411	SLU 76	-1.25	-1.64	91.98	-0.0436	-0.4288	-0.0429
411	SLU 77	-1.29	-1.58	93.46	-0.0446	-0.4348	-0.0444

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
411	SLU 78	-1.28	-1.62	93.45	-0.0444	-0.4353	-0.044
411	SLU 79	-1.28	-1.58	92.93	-0.0444	-0.4318	-0.0441
411	SLU 80	-1.27	-1.62	92.91	-0.0442	-0.4323	-0.0437
411	SLU 81	-1.26	-1.57	94.12	-0.0444	-0.4433	-0.0444
411	SLU 82	-1.25	-1.61	94.11	-0.0442	-0.4438	-0.044
411	SLU 83	-1.28	-1.58	95.04	-0.0449	-0.4471	-0.0449
411	SLU 84	-1.27	-1.63	95.03	-0.0447	-0.4476	-0.0445
411	SLE RA 1	-0.91	-1.16	63.12	-0.0312	-0.2855	-0.0297
411	SLE RA 2	-0.89	-1.21	63.11	-0.031	-0.286	-0.0293
411	SLE RA 3	-0.92	-1.17	64.09	-0.0317	-0.29	-0.0303
411	SLE RA 4	-0.92	-1.2	64.09	-0.0315	-0.2904	-0.03
411	SLE RA 5	-0.91	-1.21	63.73	-0.0313	-0.2886	-0.0296
411	SLE RA 6	-0.94	-1.18	64.71	-0.032	-0.2926	-0.0306
411	SLE RA 7	-0.93	-1.21	64.7	-0.0319	-0.2929	-0.0304
411	SLE RA 8	-0.93	-1.17	64.35	-0.0319	-0.2906	-0.0304
411	SLE RA 9	-0.92	-1.2	64.35	-0.0318	-0.2909	-0.0301
411	SLE RA 10	-0.92	-1.24	67.83	-0.0325	-0.3158	-0.0314
411	SLE RA 11	-0.95	-1.2	68.81	-0.0332	-0.3198	-0.0324
411	SLE RA 12	-0.94	-1.23	68.81	-0.0331	-0.3201	-0.0321
411	SLE RA 13	-0.93	-1.25	68.45	-0.0329	-0.3183	-0.0317
411	SLE RA 14	-0.96	-1.21	69.43	-0.0336	-0.3223	-0.0327
411	SLE RA 15	-0.95	-1.24	69.42	-0.0334	-0.3227	-0.0325
411	SLE RA 16	-0.96	-1.21	69.07	-0.0334	-0.3203	-0.0325
411	SLE RA 17	-0.95	-1.24	69.07	-0.0333	-0.3207	-0.0322
411	SLE RA 18	-0.94	-1.2	69.87	-0.0334	-0.328	-0.0327
411	SLE RA 19	-0.94	-1.23	69.86	-0.0333	-0.3283	-0.0325
411	SLE RA 20	-0.96	-1.21	70.48	-0.0338	-0.3305	-0.0331
411	SLE RA 21	-0.95	-1.24	70.48	-0.0336	-0.3309	-0.0328
411	SLE FR 1	-0.91	-1.16	63.12	-0.0312	-0.2855	-0.0297
411	SLE FR 2	-0.91	-1.17	63.12	-0.0312	-0.2856	-0.0296
411	SLE FR 3	-0.91	-1.16	63.37	-0.0314	-0.2865	-0.0298
411	SLE FR 4	-0.92	-1.18	65.15	-0.0318	-0.2984	-0.0305
411	SLE FR 5	-0.92	-1.17	65.39	-0.032	-0.2993	-0.0307
411	SLE FR 6	-0.93	-1.18	66.5	-0.0323	-0.3068	-0.0312
411	SLE QP 1	-0.91	-1.16	63.12	-0.0312	-0.2855	-0.0297
411	SLE QP 2	-0.92	-1.17	65.15	-0.0319	-0.2983	-0.0306
411	SLD 1	4.76	-0.78	71.18	-0.0411	-0.1097	-0.0072
411	SLD 2	5.13	-1.13	70.99	-0.0396	-0.1149	0.0046
411	SLD 3	4.42	-2.5	70.8	-0.0354	-0.1397	-0.0148
411	SLD 4	4.78	-2.85	70.61	-0.034	-0.1448	-0.0031
411	SLD 5	1.25	1.63	67.56	-0.0435	-0.1953	-0.0141
411	SLD 6	1.49	1.4	67.44	-0.0425	-0.1987	-0.0064
411	SLD 7	0.09	-4.12	66.3	-0.0246	-0.2952	-0.0395
411	SLD 8	0.33	-4.35	66.18	-0.0237	-0.2986	-0.0318
411	SLD 9	-2.17	2.01	64.12	-0.0401	-0.2979	-0.0294
411	SLD 10	-1.93	1.78	64	-0.0391	-0.3013	-0.0217
411	SLD 11	-3.33	-3.74	62.85	-0.0212	-0.3978	-0.0548
411	SLD 12	-3.08	-3.97	62.73	-0.0203	-0.4012	-0.0471
411	SLD 13	-6.62	0.52	59.68	-0.0298	-0.4517	-0.0582
411	SLD 14	-6.25	0.16	59.5	-0.0283	-0.4568	-0.0464
411	SLD 15	-6.97	-1.21	59.3	-0.0241	-0.4816	-0.0658
411	SLD 16	-6.6	-1.56	59.12	-0.0227	-0.4868	-0.054
411	SLV 1	12.37	-0.32	79.24	-0.0533	0.1424	0.0241
411	SLV 2	13.23	-1.14	78.82	-0.0498	0.1303	0.0515
411	SLV 3	11.57	-4.23	78.37	-0.0404	0.074	0.0065
411	SLV 4	12.42	-5.04	77.94	-0.037	0.0619	0.0339
411	SLV 5	4.15	5.14	70.78	-0.0583	-0.0603	0.0078
411	SLV 6	4.7	4.62	70.5	-0.0561	-0.068	0.0254
411	SLV 7	1.45	-7.87	67.86	-0.0156	-0.2883	-0.0509
411	SLV 8	2	-8.39	67.59	-0.0134	-0.296	-0.0333
411	SLV 9	-3.84	6.05	62.71	-0.0504	-0.3005	-0.0279
411	SLV 10	-3.29	5.53	62.44	-0.0482	-0.3083	-0.0103
411	SLV 11	-6.54	-6.96	59.79	-0.0076	-0.5285	-0.0866
411	SLV 12	-5.99	-7.48	59.52	-0.0054	-0.5362	-0.069
411	SLV 13	-14.26	2.7	52.35	-0.0268	-0.6584	-0.0951
411	SLV 14	-13.4	1.89	51.93	-0.0233	-0.6705	-0.0677
411	SLV 15	-15.07	-1.2	51.48	-0.0139	-0.7268	-0.1127
411	SLV 16	-14.21	-2.02	51.05	-0.0105	-0.7389	-0.0853
411	CRTFP Ux+	0	0	0	0	0	0
411	CRTFP Ux-	0	0	0	0	0	0
415	SLU 1	0.37	-0.63	62.6	-0.0305	0.3508	-0.0087
415	SLU 2	0.38	-0.67	62.6	-0.0304	0.3512	-0.0081
415	SLU 3	0.38	-0.64	64.1	-0.0313	0.3591	-0.0089
415	SLU 4	0.39	-0.66	64.1	-0.0312	0.3594	-0.0085
415	SLU 5	0.39	-0.69	63.53	-0.0309	0.3557	-0.0083
415	SLU 6	0.38	-0.66	65.03	-0.0318	0.3636	-0.0091
415	SLU 7	0.39	-0.68	65.03	-0.0317	0.3639	-0.0088
415	SLU 8	0.38	-0.67	64.46	-0.0316	0.3597	-0.0091
415	SLU 9	0.39	-0.69	64.46	-0.0315	0.36	-0.0088
415	SLU 10	0.39	-0.65	70.03	-0.0329	0.4014	-0.0096
415	SLU 11	0.38	-0.62	71.53	-0.0338	0.4093	-0.0103
415	SLU 12	0.39	-0.64	71.53	-0.0338	0.4096	-0.01
415	SLU 13	0.39	-0.66	70.96	-0.0335	0.4059	-0.0098
415	SLU 14	0.39	-0.63	72.46	-0.0344	0.4138	-0.0105
415	SLU 15	0.4	-0.66	72.46	-0.0343	0.414	-0.0102
415	SLU 16	0.38	-0.64	71.89	-0.0342	0.4099	-0.0105
415	SLU 17	0.39	-0.66	71.9	-0.0341	0.4102	-0.0102
415	SLU 18	0.37	-0.6	73.22	-0.0342	0.4224	-0.0107
415	SLU 19	0.38	-0.62	73.22	-0.0341	0.4227	-0.0104
415	SLU 20	0.38	-0.62	74.15	-0.0348	0.4269	-0.011
415	SLU 21	0.39	-0.64	74.15	-0.0347	0.4272	-0.0106
415	SLU 22	0.41	-0.57	69.67	-0.0324	0.3809	-0.0091
415	SLU 23	0.43	-0.61	69.67	-0.0322	0.3813	-0.0086
415	SLU 24	0.43	-0.58	71.17	-0.0331	0.3892	-0.0093
415	SLU 25	0.44	-0.6	71.17	-0.0331	0.3895	-0.009
415	SLU 26	0.44	-0.62	70.61	-0.0328	0.3858	-0.0088
415	SLU 27	0.43	-0.6	72.1	-0.0337	0.3937	-0.0096

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
415	SLU 28	0.44	-0.62	72.1	-0.0336	0.394	-0.0092
415	SLU 29	0.43	-0.6	71.54	-0.0335	0.3898	-0.0095
415	SLU 30	0.44	-0.63	71.54	-0.0334	0.3901	-0.0092
415	SLU 31	0.44	-0.58	77.11	-0.0348	0.4315	-0.01
415	SLU 32	0.43	-0.55	78.61	-0.0357	0.4394	-0.0108
415	SLU 33	0.44	-0.58	78.61	-0.0356	0.4397	-0.0105
415	SLU 34	0.44	-0.6	78.04	-0.0354	0.436	-0.0102
415	SLU 35	0.43	-0.57	79.54	-0.0363	0.4439	-0.011
415	SLU 36	0.44	-0.59	79.54	-0.0362	0.4442	-0.0107
415	SLU 37	0.43	-0.58	78.97	-0.0361	0.44	-0.011
415	SLU 38	0.44	-0.6	78.97	-0.036	0.4403	-0.0107
415	SLU 39	0.42	-0.54	80.3	-0.0361	0.4526	-0.0112
415	SLU 40	0.43	-0.56	80.3	-0.036	0.4528	-0.0109
415	SLU 41	0.42	-0.55	81.23	-0.0366	0.457	-0.0114
415	SLU 42	0.44	-0.57	81.23	-0.0365	0.4573	-0.0111
415	SLU 43	0.46	-0.85	78.95	-0.039	0.4456	-0.0111
415	SLU 44	0.48	-0.88	78.95	-0.0389	0.4461	-0.0106
415	SLU 45	0.47	-0.85	80.45	-0.0398	0.454	-0.0113
415	SLU 46	0.48	-0.88	80.45	-0.0397	0.4543	-0.011
415	SLU 47	0.48	-0.9	79.88	-0.0394	0.4506	-0.0108
415	SLU 48	0.48	-0.87	81.38	-0.0404	0.4585	-0.0115
415	SLU 49	0.49	-0.89	81.38	-0.0403	0.4588	-0.0112
415	SLU 50	0.47	-0.88	80.81	-0.0402	0.4546	-0.0115
415	SLU 51	0.48	-0.9	80.81	-0.0401	0.4549	-0.0112
415	SLU 52	0.48	-0.86	86.38	-0.0415	0.4963	-0.012
415	SLU 53	0.47	-0.83	87.88	-0.0424	0.5042	-0.0128
415	SLU 54	0.48	-0.85	87.88	-0.0423	0.5045	-0.0124
415	SLU 55	0.48	-0.87	87.32	-0.042	0.5008	-0.0122
415	SLU 56	0.48	-0.85	88.81	-0.0429	0.5087	-0.013
415	SLU 57	0.49	-0.87	88.81	-0.0428	0.5089	-0.0127
415	SLU 58	0.47	-0.85	88.25	-0.0427	0.5048	-0.013
415	SLU 59	0.48	-0.88	88.25	-0.0426	0.5051	-0.0126
415	SLU 60	0.46	-0.81	89.57	-0.0427	0.5173	-0.0132
415	SLU 61	0.47	-0.83	89.57	-0.0426	0.5176	-0.0129
415	SLU 62	0.47	-0.83	90.5	-0.0433	0.5218	-0.0134
415	SLU 63	0.48	-0.85	90.5	-0.0432	0.5221	-0.0131
415	SLU 64	0.51	-0.78	86.03	-0.0409	0.4758	-0.0116
415	SLU 65	0.52	-0.82	86.03	-0.0408	0.4762	-0.011
415	SLU 66	0.52	-0.79	87.53	-0.0417	0.4841	-0.0118
415	SLU 67	0.53	-0.81	87.53	-0.0416	0.4844	-0.0114
415	SLU 68	0.53	-0.84	86.96	-0.0413	0.4807	-0.0112
415	SLU 69	0.52	-0.81	88.46	-0.0422	0.4886	-0.012
415	SLU 70	0.53	-0.83	88.46	-0.0421	0.4889	-0.0117
415	SLU 71	0.52	-0.82	87.89	-0.042	0.4847	-0.012
415	SLU 72	0.53	-0.84	87.89	-0.0419	0.485	-0.0117
415	SLU 73	0.53	-0.79	93.46	-0.0433	0.5264	-0.0125
415	SLU 74	0.52	-0.77	94.96	-0.0442	0.5343	-0.0132
415	SLU 75	0.53	-0.79	94.96	-0.0441	0.5346	-0.0129
415	SLU 76	0.53	-0.81	94.39	-0.0439	0.5309	-0.0127
415	SLU 77	0.53	-0.78	95.89	-0.0448	0.5388	-0.0134
415	SLU 78	0.54	-0.8	95.89	-0.0447	0.5391	-0.0131
415	SLU 79	0.52	-0.79	95.32	-0.0446	0.5349	-0.0134
415	SLU 80	0.53	-0.81	95.33	-0.0445	0.5352	-0.0131
415	SLU 81	0.51	-0.75	96.65	-0.0446	0.5475	-0.0136
415	SLU 82	0.52	-0.77	96.65	-0.0445	0.5477	-0.0133
415	SLU 83	0.52	-0.76	97.58	-0.0451	0.5519	-0.0139
415	SLU 84	0.53	-0.79	97.58	-0.045	0.5522	-0.0135
415	SLE RA 1	0.38	-0.62	64.62	-0.0311	0.3594	-0.0088
415	SLE RA 2	0.39	-0.64	64.62	-0.031	0.3597	-0.0084
415	SLE RA 3	0.39	-0.62	65.62	-0.0316	0.3649	-0.0089
415	SLE RA 4	0.39	-0.64	65.62	-0.0315	0.3651	-0.0087
415	SLE RA 5	0.39	-0.65	65.24	-0.0313	0.3626	-0.0086
415	SLE RA 6	0.39	-0.63	66.24	-0.0319	0.3679	-0.0091
415	SLE RA 7	0.4	-0.65	66.24	-0.0319	0.3681	-0.0089
415	SLE RA 8	0.39	-0.64	65.86	-0.0318	0.3653	-0.0091
415	SLE RA 9	0.39	-0.65	65.86	-0.0317	0.3655	-0.0089
415	SLE RA 10	0.39	-0.62	69.58	-0.0327	0.3931	-0.0094
415	SLE RA 11	0.39	-0.61	70.57	-0.0333	0.3984	-0.0099
415	SLE RA 12	0.4	-0.62	70.57	-0.0332	0.3986	-0.0097
415	SLE RA 13	0.4	-0.63	70.2	-0.033	0.3961	-0.0095
415	SLE RA 14	0.39	-0.62	71.2	-0.0336	0.4014	-0.0101
415	SLE RA 15	0.4	-0.63	71.2	-0.0336	0.4016	-0.0098
415	SLE RA 16	0.39	-0.62	70.82	-0.0335	0.3988	-0.01
415	SLE RA 17	0.4	-0.64	70.82	-0.0335	0.399	-0.0098
415	SLE RA 18	0.38	-0.59	71.7	-0.0335	0.4072	-0.0102
415	SLE RA 19	0.39	-0.61	71.7	-0.0334	0.4073	-0.01
415	SLE RA 20	0.39	-0.6	72.32	-0.0339	0.4101	-0.0103
415	SLE RA 21	0.39	-0.62	72.32	-0.0338	0.4103	-0.0101
415	SLE FR 1	0.38	-0.62	64.62	-0.0311	0.3594	-0.0088
415	SLE FR 2	0.38	-0.62	64.62	-0.031	0.3594	-0.0087
415	SLE FR 3	0.38	-0.62	64.87	-0.0312	0.3606	-0.0089
415	SLE FR 4	0.38	-0.61	66.74	-0.0318	0.3738	-0.0091
415	SLE FR 5	0.38	-0.61	66.99	-0.0319	0.3749	-0.0093
415	SLE FR 6	0.38	-0.6	68.16	-0.0323	0.3833	-0.0095
415	SLE QP 1	0.38	-0.62	64.62	-0.0311	0.3594	-0.0088
415	SLE QP 2	0.38	-0.61	66.74	-0.0318	0.3737	-0.0092
415	SLD 1	6.11	0.67	61.63	-0.0249	0.4807	0.0282
415	SLD 2	6.5	1.05	61.95	-0.0271	0.4735	0.0396
415	SLD 3	5.77	-0.95	61.1	-0.0189	0.5048	0.0208
415	SLD 4	6.15	-0.57	61.42	-0.021	0.4976	0.0322
415	SLD 5	2.55	2.17	65.96	-0.0385	0.3705	0.0112
415	SLD 6	2.8	2.42	66.17	-0.0399	0.3658	0.0186
415	SLD 7	1.41	-3.24	64.19	-0.0184	0.4509	-0.0134
415	SLD 8	1.66	-2.99	64.4	-0.0198	0.4462	-0.006
415	SLD 9	-0.9	1.77	69.09	-0.0438	0.3012	-0.0125
415	SLD 10	-0.65	2.02	69.3	-0.0452	0.2965	-0.005
415	SLD 11	-2.04	-3.64	67.32	-0.0237	0.3816	-0.0371

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
415	SLD 12	-1.79	-3.39	67.53	-0.0251	0.3769	-0.0296
415	SLD 13	-5.39	-0.65	72.07	-0.0426	0.2498	-0.0507
415	SLD 14	-5.01	-0.27	72.39	-0.0447	0.2426	-0.0393
415	SLD 15	-5.73	-2.27	71.54	-0.0365	0.2739	-0.0581
415	SLD 16	-5.35	-1.89	71.85	-0.0387	0.2667	-0.0467
415	SLV 1	13.79	2.34	54.77	-0.0155	0.6246	0.0784
415	SLV 2	14.68	3.23	55.51	-0.0205	0.6077	0.105
415	SLV 3	12.99	-1.35	53.55	-0.0018	0.6798	0.0612
415	SLV 4	13.88	-0.46	54.29	-0.0068	0.663	0.0877
415	SLV 5	5.46	5.72	64.88	-0.0468	0.368	0.0387
415	SLV 6	6.04	6.29	65.36	-0.05	0.3572	0.0558
415	SLV 7	2.8	-6.58	60.8	-0.0012	0.5522	-0.0188
415	SLV 8	3.37	-6.01	61.28	-0.0044	0.5414	-0.0018
415	SLV 9	-2.61	4.79	72.21	-0.0592	0.206	-0.0166
415	SLV 10	-2.04	5.36	72.69	-0.0624	0.1952	0.0004
415	SLV 11	-5.28	-7.51	68.13	-0.0136	0.3902	-0.0742
415	SLV 12	-4.7	-6.94	68.6	-0.0168	0.3794	-0.0572
415	SLV 13	-13.12	-0.76	79.2	-0.0568	0.0844	-0.1062
415	SLV 14	-12.23	0.13	79.94	-0.0618	0.0676	-0.0796
415	SLV 15	-13.92	-4.44	77.97	-0.0431	0.1397	-0.1234
415	SLV 16	-13.03	-3.56	78.72	-0.0481	0.1228	-0.0969
415	CRTFP Ux+	0	0	0	0	0	0
415	CRTFP Ux-	0	0	0	0	0	0
415	CRTFP Uy+	0	0	0	0	0	0
415	CRTFP Uy-	0	0	0	0	0	0
416	SLU 1	0.36	0.27	36.15	-0.0122	7.7265	-0.0961
416	SLU 2	0.37	0.24	36.15	-0.0122	7.7278	-0.0871
416	SLU 3	0.37	0.27	37.01	-0.0126	7.8998	-0.0975
416	SLU 4	0.38	0.26	37.02	-0.0126	7.9006	-0.0921
416	SLU 5	0.38	0.24	36.7	-0.0125	7.8361	-0.0857
416	SLU 6	0.38	0.27	37.56	-0.0129	8.0081	-0.096
416	SLU 7	0.39	0.25	37.56	-0.0129	8.0089	-0.0907
416	SLU 8	0.38	0.26	37.24	-0.0128	7.9431	-0.0932
416	SLU 9	0.38	0.25	37.24	-0.0127	7.9439	-0.0878
416	SLU 10	0.38	0.35	40.19	-0.0131	8.5593	-0.1232
416	SLU 11	0.38	0.38	41.05	-0.0135	8.7313	-0.1336
416	SLU 12	0.38	0.36	41.05	-0.0135	8.7321	-0.1282
416	SLU 13	0.38	0.34	40.73	-0.0134	8.6676	-0.1218
416	SLU 14	0.38	0.37	41.6	-0.0138	8.8396	-0.1321
416	SLU 15	0.39	0.36	41.6	-0.0138	8.8404	-0.1268
416	SLU 16	0.38	0.36	41.27	-0.0137	8.7746	-0.1293
416	SLU 17	0.38	0.35	41.28	-0.0137	8.7754	-0.1239
416	SLU 18	0.37	0.42	41.91	-0.0136	8.9143	-0.1477
416	SLU 19	0.38	0.4	41.92	-0.0135	8.9151	-0.1423
416	SLU 20	0.38	0.41	42.46	-0.0138	9.0226	-0.1462
416	SLU 21	0.38	0.4	42.46	-0.0138	9.0234	-0.1408
416	SLU 22	0.4	0.37	40.17	-0.0131	8.548	-0.1312
416	SLU 23	0.41	0.34	40.18	-0.013	8.5494	-0.1222
416	SLU 24	0.41	0.37	41.04	-0.0135	8.7214	-0.1326
416	SLU 25	0.42	0.36	41.04	-0.0134	8.7222	-0.1272
416	SLU 26	0.42	0.34	40.72	-0.0133	8.6577	-0.1208
416	SLU 27	0.42	0.37	41.59	-0.0137	8.8297	-0.1311
416	SLU 28	0.42	0.35	41.59	-0.0137	8.8305	-0.1257
416	SLU 29	0.41	0.36	41.27	-0.0136	8.7646	-0.1283
416	SLU 30	0.42	0.35	41.27	-0.0136	8.7654	-0.1229
416	SLU 31	0.41	0.45	44.21	-0.014	9.3809	-0.1583
416	SLU 32	0.41	0.48	45.08	-0.0144	9.5529	-0.1687
416	SLU 33	0.42	0.46	45.08	-0.0144	9.5537	-0.1633
416	SLU 34	0.42	0.44	44.76	-0.0142	9.4892	-0.1569
416	SLU 35	0.42	0.47	45.62	-0.0147	9.6612	-0.1672
416	SLU 36	0.43	0.46	45.63	-0.0146	9.662	-0.1618
416	SLU 37	0.42	0.46	45.3	-0.0146	9.5961	-0.1644
416	SLU 38	0.42	0.45	45.3	-0.0145	9.5969	-0.159
416	SLU 39	0.41	0.52	45.94	-0.0144	9.7359	-0.1827
416	SLU 40	0.41	0.5	45.94	-0.0144	9.7367	-0.1774
416	SLU 41	0.41	0.51	46.49	-0.0147	9.8442	-0.1813
416	SLU 42	0.42	0.5	46.49	-0.0147	9.845	-0.1759
416	SLU 43	0.46	0.32	45.61	-0.0156	9.7627	-0.1129
416	SLU 44	0.47	0.29	45.61	-0.0156	9.7641	-0.104
416	SLU 45	0.47	0.32	46.48	-0.016	9.9361	-0.1143
416	SLU 46	0.48	0.3	46.48	-0.016	9.9369	-0.1089
416	SLU 47	0.48	0.29	46.16	-0.0158	9.8724	-0.1025
416	SLU 48	0.48	0.32	47.02	-0.0163	10.0444	-0.1128
416	SLU 49	0.48	0.3	47.03	-0.0162	10.0452	-0.1075
416	SLU 50	0.47	0.31	46.7	-0.0161	9.9793	-0.11
416	SLU 51	0.48	0.29	46.7	-0.0161	9.9801	-0.1046
416	SLU 52	0.47	0.39	49.65	-0.0165	10.5956	-0.14
416	SLU 53	0.48	0.42	50.52	-0.0169	10.7676	-0.1504
416	SLU 54	0.48	0.41	50.52	-0.0169	10.7684	-0.145
416	SLU 55	0.48	0.39	50.2	-0.0168	10.7039	-0.1386
416	SLU 56	0.48	0.42	51.06	-0.0172	10.8759	-0.1489
416	SLU 57	0.49	0.4	51.06	-0.0172	10.8767	-0.1436
416	SLU 58	0.48	0.41	50.74	-0.0171	10.8108	-0.1461
416	SLU 59	0.48	0.39	50.74	-0.0171	10.8116	-0.1407
416	SLU 60	0.47	0.46	51.38	-0.0169	10.9506	-0.1645
416	SLU 61	0.47	0.45	51.38	-0.0169	10.9514	-0.1591
416	SLU 62	0.47	0.46	51.92	-0.0172	11.0589	-0.163
416	SLU 63	0.48	0.44	51.92	-0.0172	11.0597	-0.1576
416	SLU 64	0.5	0.42	49.64	-0.0165	10.5843	-0.148
416	SLU 65	0.51	0.39	49.64	-0.0164	10.5857	-0.139
416	SLU 66	0.51	0.42	50.51	-0.0168	10.7576	-0.1494
416	SLU 67	0.51	0.4	50.51	-0.0168	10.7585	-0.144
416	SLU 68	0.51	0.39	50.19	-0.0167	10.694	-0.1376
416	SLU 69	0.51	0.41	51.05	-0.0171	10.8659	-0.1479
416	SLU 70	0.52	0.4	51.05	-0.0171	10.8668	-0.1425
416	SLU 71	0.51	0.41	50.73	-0.017	10.8009	-0.1451
416	SLU 72	0.51	0.39	50.73	-0.017	10.8017	-0.1397

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
416	SLU 73	0.51	0.49	53.68	-0.0173	11.4172	-0.1751
416	SLU 74	0.51	0.52	54.54	-0.0178	11.5891	-0.1855
416	SLU 75	0.52	0.51	54.54	-0.0178	11.59	-0.1801
416	SLU 76	0.52	0.49	54.22	-0.0176	11.5255	-0.1737
416	SLU 77	0.52	0.52	55.09	-0.018	11.6974	-0.184
416	SLU 78	0.52	0.5	55.09	-0.018	11.6983	-0.1786
416	SLU 79	0.51	0.51	54.77	-0.0179	11.6324	-0.1812
416	SLU 80	0.52	0.49	54.77	-0.0179	11.6332	-0.1758
416	SLU 81	0.5	0.56	55.4	-0.0178	11.7721	-0.1996
416	SLU 82	0.51	0.55	55.41	-0.0178	11.773	-0.1942
416	SLU 83	0.51	0.56	55.95	-0.0181	11.8804	-0.1981
416	SLU 84	0.51	0.54	55.95	-0.018	11.8813	-0.1927
416	SLE RA 1	0.38	0.3	37.3	-0.0125	7.9612	-0.1061
416	SLE RA 2	0.38	0.28	37.3	-0.0124	7.9621	-0.1002
416	SLE RA 3	0.38	0.3	37.88	-0.0127	8.0768	-0.107
416	SLE RA 4	0.39	0.29	37.88	-0.0127	8.0773	-0.1035
416	SLE RA 5	0.39	0.28	37.66	-0.0126	8.0343	-0.0992
416	SLE RA 6	0.39	0.3	38.24	-0.0129	8.149	-0.1061
416	SLE RA 7	0.39	0.29	38.24	-0.0129	8.1495	-0.1025
416	SLE RA 8	0.38	0.29	38.02	-0.0128	8.1056	-0.1042
416	SLE RA 9	0.39	0.28	38.03	-0.0128	8.1061	-0.1006
416	SLE RA 10	0.38	0.35	39.99	-0.0131	8.5164	-0.1242
416	SLE RA 11	0.38	0.37	40.57	-0.0134	8.6311	-0.1311
416	SLE RA 12	0.39	0.36	40.57	-0.0133	8.6316	-0.1275
416	SLE RA 13	0.39	0.35	40.35	-0.0132	8.5886	-0.1232
416	SLE RA 14	0.39	0.37	40.93	-0.0135	8.7033	-0.1301
416	SLE RA 15	0.39	0.36	40.93	-0.0135	8.7038	-0.1266
416	SLE RA 16	0.38	0.36	40.72	-0.0135	8.6599	-0.1283
416	SLE RA 17	0.39	0.35	40.72	-0.0134	8.6605	-0.1247
416	SLE RA 18	0.38	0.4	41.14	-0.0134	8.7531	-0.1405
416	SLE RA 19	0.38	0.39	41.14	-0.0133	8.7536	-0.1369
416	SLE RA 20	0.38	0.39	41.51	-0.0135	8.8253	-0.1395
416	SLE RA 21	0.39	0.38	41.51	-0.0135	8.8258	-0.136
416	SLE FR 1	0.38	0.3	37.3	-0.0125	7.9612	-0.1061
416	SLE FR 2	0.38	0.29	37.3	-0.0125	7.9614	-0.1049
416	SLE FR 3	0.38	0.3	37.44	-0.0125	7.9901	-0.1057
416	SLE FR 4	0.38	0.32	38.45	-0.0127	8.1989	-0.1152
416	SLE FR 5	0.38	0.33	38.6	-0.0128	8.2276	-0.1161
416	SLE FR 6	0.38	0.35	39.22	-0.0129	8.3571	-0.1233
416	SLE QP 1	0.38	0.3	37.3	-0.0125	7.9612	-0.1061
416	SLE QP 2	0.38	0.33	38.45	-0.0127	8.1988	-0.1164
416	SLD 1	3.63	1.08	28.22	-0.0079	6.2343	-0.3801
416	SLD 2	3.85	1.68	28.54	-0.0102	6.286	-0.5876
416	SLD 3	3.43	-0.34	27.5	-0.0037	6.1214	0.1195
416	SLD 4	3.65	0.25	27.82	-0.006	6.1731	-0.088
416	SLD 5	1.62	2.61	36.41	-0.0173	7.7715	-0.9166
416	SLD 6	1.76	3	36.61	-0.0187	7.8053	-1.0523
416	SLD 7	0.95	-2.15	34.03	-0.0033	7.3952	0.7488
416	SLD 8	1.09	-1.76	34.24	-0.0047	7.4289	0.6132
416	SLD 9	-0.34	2.41	42.66	-0.0207	8.9686	-0.8461
416	SLD 10	-0.2	2.8	42.87	-0.0222	9.0023	-0.9817
416	SLD 11	-1.01	-2.35	40.29	-0.0067	8.5922	0.8194
416	SLD 12	-0.87	-1.96	40.49	-0.0082	8.626	0.6838
416	SLD 13	-2.9	0.4	49.08	-0.0195	10.2245	-0.1449
416	SLD 14	-2.68	1	49.4	-0.0217	10.2761	-0.3524
416	SLD 15	-3.1	-1.03	48.37	-0.0153	10.1116	0.3548
416	SLD 16	-2.88	-0.43	48.68	-0.0175	10.1632	0.1472
416	SLV 1	8	2.06	14.49	-0.0014	3.5989	-0.7209
416	SLV 2	8.5	3.45	15.23	-0.0066	3.7193	-1.2042
416	SLV 3	7.53	-1.2	12.83	0.0082	3.3354	0.4193
416	SLV 4	8.03	0.19	13.57	0.003	3.4558	-0.0641
416	SLV 5	3.29	5.55	33.65	-0.023	7.1979	-1.9442
416	SLV 6	3.61	6.44	34.12	-0.0263	7.2752	-2.2548
416	SLV 7	1.73	-5.31	28.13	0.009	6.3195	1.8563
416	SLV 8	2.05	-4.42	28.6	0.0056	6.3968	1.5457
416	SLV 9	-1.3	5.07	48.3	-0.0311	10.0007	-1.7785
416	SLV 10	-0.97	5.96	48.78	-0.0344	10.0781	-2.0892
416	SLV 11	-2.86	-5.79	42.78	0.0008	9.1223	2.0219
416	SLV 12	-2.54	-4.9	43.26	-0.0025	9.1997	1.7113
416	SLV 13	-7.28	0.46	63.33	-0.0285	12.9418	-0.1688
416	SLV 14	-6.78	1.85	64.07	-0.0337	13.0621	-0.6522
416	SLV 15	-7.75	-2.8	61.67	-0.0189	12.6782	0.9714
416	SLV 16	-7.25	-1.41	62.42	-0.0241	12.7986	0.488
416	CRTFP Ux+	0	0	0	0	0	0
416	CRTFP Ux-	0	0	0	0	0	0
416	CRTFP Uy+	0	0	0	0	0	0
416	CRTFP Uy-	0	0	0	0	0	0
419	SLU 1	-0.55	0.01	32.74	-0.0195	-3.9093	0
419	SLU 2	-0.54	-0.07	32.72	-0.0193	-3.9082	-0.0193
419	SLU 3	-0.57	0.02	33.52	-0.02	-3.9928	0.0018
419	SLU 4	-0.56	-0.03	33.51	-0.0199	-3.9921	-0.0098
419	SLU 5	-0.55	-0.06	33.21	-0.0196	-3.9607	-0.018
419	SLU 6	-0.58	0.02	34.01	-0.0204	-4.0453	0.0031
419	SLU 7	-0.57	-0.02	34	-0.0203	-4.0446	-0.0085
419	SLU 8	-0.57	0.02	33.72	-0.0202	-4.0143	0.0026
419	SLU 9	-0.57	-0.02	33.71	-0.0201	-4.0136	-0.009
419	SLU 10	-0.57	-0.01	36.36	-0.0209	-4.317	-0.0044
419	SLU 11	-0.6	0.08	37.15	-0.0216	-4.4016	0.0167
419	SLU 12	-0.59	0.03	37.14	-0.0215	-4.4009	0.0051
419	SLU 13	-0.58	0	36.85	-0.0212	-4.3695	-0.0031
419	SLU 14	-0.61	0.08	37.65	-0.022	-4.4541	0.018
419	SLU 15	-0.6	0.04	37.64	-0.0218	-4.4534	0.0064
419	SLU 16	-0.6	0.08	37.36	-0.0218	-4.4231	0.0175
419	SLU 17	-0.6	0.04	37.35	-0.0217	-4.4224	0.0059
419	SLU 18	-0.59	0.1	37.93	-0.0217	-4.4933	0.0213
419	SLU 19	-0.59	0.05	37.92	-0.0216	-4.4926	0.0097
419	SLU 20	-0.6	0.1	38.42	-0.0221	-4.5458	0.0226

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
419	SLU 21	-0.6	0.06	38.41	-0.022	-4.5451	0.011
419	SLU 22	-0.62	0.09	36.4	-0.0211	-4.3156	0.0183
419	SLU 23	-0.61	0.01	36.38	-0.0208	-4.3144	-0.001
419	SLU 24	-0.63	0.09	37.18	-0.0216	-4.399	0.0201
419	SLU 25	-0.63	0.05	37.17	-0.0215	-4.3983	0.0085
419	SLU 26	-0.62	0.01	36.87	-0.0212	-4.3669	0.0003
419	SLU 27	-0.64	0.1	37.67	-0.0219	-4.4515	0.0214
419	SLU 28	-0.64	0.05	37.66	-0.0218	-4.4508	0.0098
419	SLU 29	-0.64	0.1	37.39	-0.0218	-4.4206	0.0209
419	SLU 30	-0.63	0.05	37.38	-0.0216	-4.4199	0.0093
419	SLU 31	-0.64	0.07	40.02	-0.0224	-4.7232	0.0139
419	SLU 32	-0.66	0.15	40.82	-0.0231	-4.8078	0.035
419	SLU 33	-0.66	0.11	40.8	-0.023	-4.8071	0.0234
419	SLU 34	-0.65	0.07	40.51	-0.0228	-4.7757	0.0152
419	SLU 35	-0.67	0.16	41.31	-0.0235	-4.8603	0.0363
419	SLU 36	-0.67	0.11	41.3	-0.0234	-4.8596	0.0247
419	SLU 37	-0.67	0.16	41.02	-0.0233	-4.8294	0.0358
419	SLU 38	-0.66	0.11	41.01	-0.0232	-4.8287	0.0242
419	SLU 39	-0.66	0.17	41.59	-0.0233	-4.8996	0.0396
419	SLU 40	-0.65	0.13	41.58	-0.0232	-4.8989	0.028
419	SLU 41	-0.67	0.18	42.09	-0.0236	-4.9521	0.0409
419	SLU 42	-0.66	0.13	42.08	-0.0235	-4.9514	0.0293
419	SLU 43	-0.69	-0.01	41.3	-0.0248	-4.9428	-0.0063
419	SLU 44	-0.69	-0.09	41.29	-0.0246	-4.9417	-0.0256
419	SLU 45	-0.71	0	42.09	-0.0253	-5.0263	-0.0045
419	SLU 46	-0.7	-0.05	42.07	-0.0252	-5.0256	-0.0161
419	SLU 47	-0.7	-0.08	41.78	-0.025	-4.9942	-0.0243
419	SLU 48	-0.72	0	42.58	-0.0257	-5.0788	-0.0032
419	SLU 49	-0.71	-0.05	42.57	-0.0256	-5.0781	-0.0148
419	SLU 50	-0.71	0	42.29	-0.0255	-5.0478	-0.0036
419	SLU 51	-0.71	-0.05	42.28	-0.0254	-5.0471	-0.0152
419	SLU 52	-0.72	-0.03	44.92	-0.0262	-5.3505	-0.0107
419	SLU 53	-0.74	0.06	45.72	-0.0269	-5.4351	0.0104
419	SLU 54	-0.73	0.01	45.71	-0.0268	-5.4344	-0.0012
419	SLU 55	-0.73	-0.02	45.42	-0.0265	-5.403	-0.0094
419	SLU 56	-0.75	0.06	46.21	-0.0273	-5.4876	0.0117
419	SLU 57	-0.74	0.02	46.2	-0.0271	-5.4869	0.0001
419	SLU 58	-0.74	0.06	45.93	-0.0271	-5.4566	0.0113
419	SLU 59	-0.74	0.01	45.92	-0.027	-5.4559	-0.0003
419	SLU 60	-0.74	0.08	46.5	-0.0271	-5.5268	0.015
419	SLU 61	-0.73	0.03	46.49	-0.0269	-5.5261	0.0034
419	SLU 62	-0.75	0.08	46.99	-0.0274	-5.5793	0.0164
419	SLU 63	-0.74	0.03	46.98	-0.0273	-5.5786	0.0047
419	SLU 64	-0.76	0.06	44.97	-0.0264	-5.3491	0.012
419	SLU 65	-0.75	-0.01	44.95	-0.0262	-5.3479	-0.0073
419	SLU 66	-0.77	0.07	45.75	-0.0269	-5.4325	0.0138
419	SLU 67	-0.77	0.02	45.74	-0.0268	-5.4318	0.0022
419	SLU 68	-0.76	-0.01	45.44	-0.0265	-5.4004	-0.006
419	SLU 69	-0.78	0.08	46.24	-0.0273	-5.485	0.0151
419	SLU 70	-0.78	0.03	46.23	-0.0271	-5.4843	0.0035
419	SLU 71	-0.78	0.07	45.95	-0.0271	-5.4541	0.0147
419	SLU 72	-0.77	0.03	45.94	-0.027	-5.4534	0.0031
419	SLU 73	-0.78	0.05	48.58	-0.0277	-5.7567	0.0076
419	SLU 74	-0.8	0.13	49.38	-0.0285	-5.8413	0.0287
419	SLU 75	-0.8	0.08	49.37	-0.0283	-5.8406	0.0171
419	SLU 76	-0.79	0.05	49.08	-0.0281	-5.8092	0.0089
419	SLU 77	-0.81	0.14	49.88	-0.0288	-5.8938	0.03
419	SLU 78	-0.81	0.09	49.86	-0.0287	-5.8931	0.0184
419	SLU 79	-0.81	0.13	49.59	-0.0287	-5.8629	0.0296
419	SLU 80	-0.8	0.09	49.58	-0.0285	-5.8622	0.018
419	SLU 81	-0.8	0.15	50.16	-0.0286	-5.9331	0.0333
419	SLU 82	-0.8	0.1	50.15	-0.0285	-5.9324	0.0217
419	SLU 83	-0.81	0.16	50.65	-0.029	-5.9856	0.0347
419	SLU 84	-0.81	0.11	50.64	-0.0288	-5.9849	0.023
419	SLE RA 1	-0.57	0.03	33.78	-0.0199	-4.0254	0.0052
419	SLE RA 2	-0.56	-0.02	33.77	-0.0198	-4.0246	-0.0077
419	SLE RA 3	-0.58	0.04	34.3	-0.0203	-4.081	0.0064
419	SLE RA 4	-0.58	0.01	34.3	-0.0202	-4.0806	-0.0013
419	SLE RA 5	-0.57	-0.02	34.1	-0.02	-4.0596	-0.0068
419	SLE RA 6	-0.59	0.04	34.63	-0.0205	-4.116	0.0073
419	SLE RA 7	-0.58	0.01	34.63	-0.0205	-4.1156	-0.0004
419	SLE RA 8	-0.58	0.04	34.44	-0.0204	-4.0954	0.007
419	SLE RA 9	-0.58	0.01	34.43	-0.0203	-4.0949	-0.0007
419	SLE RA 10	-0.58	0.02	36.2	-0.0208	-4.2972	0.0023
419	SLE RA 11	-0.6	0.08	36.73	-0.0213	-4.3536	0.0164
419	SLE RA 12	-0.6	0.05	36.72	-0.0213	-4.3531	0.0086
419	SLE RA 13	-0.59	0.02	36.52	-0.0211	-4.3322	0.0032
419	SLE RA 14	-0.61	0.08	37.06	-0.0216	-4.3886	0.0172
419	SLE RA 15	-0.6	0.05	37.05	-0.0215	-4.3881	0.0095
419	SLE RA 16	-0.6	0.08	36.87	-0.0215	-4.3679	0.0169
419	SLE RA 17	-0.6	0.05	36.86	-0.0214	-4.3675	0.0092
419	SLE RA 18	-0.6	0.09	37.25	-0.0214	-4.4147	0.0194
419	SLE RA 19	-0.59	0.06	37.24	-0.0213	-4.4143	0.0117
419	SLE RA 20	-0.6	0.09	37.58	-0.0217	-4.4497	0.0203
419	SLE RA 21	-0.6	0.06	37.57	-0.0216	-4.4493	0.0126
419	SLE FR 1	-0.57	0.03	33.78	-0.0199	-4.0254	0.0052
419	SLE FR 2	-0.57	0.02	33.78	-0.0199	-4.0252	0.0027
419	SLE FR 3	-0.57	0.03	33.92	-0.02	-4.0394	0.0056
419	SLE FR 4	-0.58	0.04	34.82	-0.0204	-4.142	0.0069
419	SLE FR 5	-0.58	0.05	34.95	-0.0205	-4.1562	0.0098
419	SLE FR 6	-0.58	0.06	35.52	-0.0207	-4.2201	0.0123
419	SLE QP 1	-0.57	0.03	33.78	-0.0199	-4.0254	0.0052
419	SLE QP 2	-0.58	0.05	34.82	-0.0204	-4.1422	0.0095
419	SLD 1	2.16	0.61	44.9	-0.0294	-5.2232	0.152
419	SLD 2	2.33	0.1	44.69	-0.0276	-5.2068	0.0264
419	SLD 3	2	-0.81	44.33	-0.026	-5.1593	-0.2019
419	SLD 4	2.17	-1.31	44.12	-0.0241	-5.1429	-0.3275

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
419	SLD 5	0.45	2.45	38.75	-0.0286	-4.5663	0.6113
419	SLD 6	0.56	2.12	38.62	-0.0274	-4.5556	0.5292
419	SLD 7	-0.07	-2.26	36.84	-0.0172	-4.3533	-0.5685
419	SLD 8	0.04	-2.6	36.71	-0.016	-4.3426	-0.6506
419	SLD 9	-1.2	2.69	32.94	-0.0248	-3.9418	0.6696
419	SLD 10	-1.09	2.36	32.8	-0.0236	-3.9311	0.5875
419	SLD 11	-1.71	-2.02	31.03	-0.0134	-3.7288	-0.5102
419	SLD 12	-1.6	-2.36	30.89	-0.0122	-3.7181	-0.5923
419	SLD 13	-3.33	1.41	25.52	-0.0166	-3.1414	0.3465
419	SLD 14	-3.16	0.9	25.32	-0.0148	-3.1251	0.2209
419	SLD 15	-3.48	0	24.95	-0.0132	-3.0775	-0.0074
419	SLD 16	-3.31	-0.51	24.74	-0.0114	-3.0612	-0.133
419	SLV 1	5.82	1.3	58.41	-0.0414	-6.6727	0.3287
419	SLV 2	6.22	0.12	57.93	-0.0371	-6.6345	0.0361
419	SLV 3	5.46	-1.9	57.09	-0.0336	-6.524	-0.4722
419	SLV 4	5.85	-3.08	56.6	-0.0293	-6.4858	-0.7648
419	SLV 5	1.82	5.49	43.99	-0.0392	-5.1333	1.3701
419	SLV 6	2.08	4.73	43.68	-0.0364	-5.1088	1.182
419	SLV 7	0.62	-5.19	39.57	-0.0133	-4.6378	-1.2995
419	SLV 8	0.87	-5.95	39.26	-0.0105	-4.6133	-1.4876
419	SLV 9	-2.03	6.05	30.38	-0.0302	-3.6711	1.5066
419	SLV 10	-1.77	5.29	30.07	-0.0275	-3.6466	1.3185
419	SLV 11	-3.23	-4.63	25.96	-0.0043	-3.1756	-1.163
419	SLV 12	-2.98	-5.39	25.65	-0.0016	-3.151	-1.3511
419	SLV 13	-7.01	3.18	13.04	-0.0115	-1.7985	0.7838
419	SLV 14	-6.61	2	12.56	-0.0072	-1.7604	0.4912
419	SLV 15	-7.37	-0.03	11.72	-0.0037	-1.6499	-0.0171
419	SLV 16	-6.97	-1.21	11.23	0.0006	-1.6117	-0.3097
419	CRTFP Ux+	0	0	0	0	0	0
419	CRTFP Ux-	0	0	0	0	0	0
419	CRTFP Uy+	0	0	0	0	0	0
419	CRTFP Uy-	0	0	0	0	0	0
422	SLU 1	0.14	-0.06	38.46	0.0159	11.1935	0.0232
422	SLU 2	0.15	-0.1	38.46	0.016	11.1917	0.0359
422	SLU 3	0.14	-0.05	39.38	0.0162	11.4577	0.0191
422	SLU 4	0.15	-0.07	39.38	0.0163	11.4566	0.0267
422	SLU 5	0.15	-0.1	39.02	0.0161	11.355	0.0355
422	SLU 6	0.14	-0.05	39.95	0.0163	11.6209	0.0187
422	SLU 7	0.15	-0.07	39.95	0.0164	11.6199	0.0263
422	SLU 8	0.14	-0.06	39.6	0.0161	11.52	0.0225
422	SLU 9	0.15	-0.08	39.59	0.0162	11.519	0.0301
422	SLU 10	0.17	-0.04	43.4	0.0194	12.6272	0.0143
422	SLU 11	0.16	0.01	44.33	0.0196	12.8932	-0.0025
422	SLU 12	0.17	-0.01	44.32	0.0196	12.8921	0.0052
422	SLU 13	0.17	-0.04	43.96	0.0195	12.7905	0.014
422	SLU 14	0.17	0.01	44.89	0.0197	13.0564	-0.0028
422	SLU 15	0.17	-0.01	44.89	0.0198	13.0554	0.0048
422	SLU 16	0.17	0	44.54	0.0195	12.9555	0.0009
422	SLU 17	0.17	-0.02	44.53	0.0196	12.9545	0.0086
422	SLU 18	0.17	0.02	45.52	0.0207	13.2442	-0.0076
422	SLU 19	0.18	0	45.52	0.0207	13.2432	0
422	SLU 20	0.17	0.02	46.09	0.0208	13.4075	-0.008
422	SLU 21	0.18	0	46.09	0.0209	13.4064	-0.0003
422	SLU 22	0.16	0.03	42.67	0.0185	12.3999	-0.0114
422	SLU 23	0.17	0	42.67	0.0187	12.3981	0.0013
422	SLU 24	0.16	0.05	43.6	0.0189	12.6641	-0.0155
422	SLU 25	0.17	0.02	43.59	0.0189	12.663	-0.0079
422	SLU 26	0.17	0	43.24	0.0188	12.5614	0.001
422	SLU 27	0.17	0.05	44.17	0.019	12.8273	-0.0159
422	SLU 28	0.17	0.03	44.16	0.0191	12.8263	-0.0082
422	SLU 29	0.16	0.04	43.81	0.0188	12.7264	-0.0121
422	SLU 30	0.17	0.01	43.81	0.0189	12.7254	-0.0045
422	SLU 31	0.19	0.06	47.61	0.022	13.8337	-0.0202
422	SLU 32	0.19	0.11	48.54	0.0222	14.0996	-0.037
422	SLU 33	0.19	0.09	48.54	0.0223	14.0985	-0.0294
422	SLU 34	0.19	0.06	48.18	0.0221	13.9969	-0.0206
422	SLU 35	0.19	0.11	49.11	0.0223	14.2628	-0.0374
422	SLU 36	0.19	0.09	49.1	0.0224	14.2618	-0.0298
422	SLU 37	0.19	0.1	48.75	0.0221	14.1619	-0.0336
422	SLU 38	0.19	0.08	48.75	0.0222	14.1609	-0.026
422	SLU 39	0.19	0.12	49.74	0.0233	14.4506	-0.0422
422	SLU 40	0.2	0.1	49.73	0.0234	14.4496	-0.0345
422	SLU 41	0.19	0.12	50.3	0.0234	14.6139	-0.0425
422	SLU 42	0.2	0.1	50.3	0.0235	14.6128	-0.0349
422	SLU 43	0.17	-0.12	48.55	0.0198	14.1379	0.042
422	SLU 44	0.18	-0.15	48.55	0.0199	14.1362	0.0547
422	SLU 45	0.17	-0.11	49.48	0.0201	14.4021	0.0379
422	SLU 46	0.18	-0.13	49.47	0.0201	14.401	0.0455
422	SLU 47	0.18	-0.15	49.12	0.02	14.2994	0.0543
422	SLU 48	0.18	-0.1	50.04	0.0202	14.5653	0.0375
422	SLU 49	0.18	-0.13	50.04	0.0203	14.5643	0.0451
422	SLU 50	0.18	-0.12	49.69	0.02	14.4644	0.0413
422	SLU 51	0.18	-0.14	49.69	0.0201	14.4634	0.0489
422	SLU 52	0.2	-0.09	53.49	0.0232	15.5717	0.0331
422	SLU 53	0.2	-0.04	54.42	0.0234	15.8376	0.0163
422	SLU 54	0.2	-0.07	54.42	0.0235	15.8365	0.0239
422	SLU 55	0.21	-0.09	54.06	0.0233	15.7349	0.0328
422	SLU 56	0.2	-0.04	54.99	0.0235	16.0008	0.016
422	SLU 57	0.21	-0.07	54.98	0.0236	15.9998	0.0236
422	SLU 58	0.2	-0.05	54.63	0.0233	15.8999	0.0197
422	SLU 59	0.21	-0.08	54.63	0.0234	15.8989	0.0273
422	SLU 60	0.2	-0.03	55.62	0.0245	16.1886	0.0112
422	SLU 61	0.21	-0.05	55.61	0.0246	16.1876	0.0188
422	SLU 62	0.21	-0.03	56.18	0.0247	16.3519	0.0108
422	SLU 63	0.21	-0.05	56.18	0.0247	16.3508	0.0185
422	SLU 64	0.19	-0.02	52.77	0.0224	15.3443	0.0074
422	SLU 65	0.2	-0.05	52.76	0.0225	15.3426	0.0201

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
422	SLU 66	0.2	-0.01	53.69	0.0227	15.6085	0.0033
422	SLU 67	0.2	-0.03	53.69	0.0228	15.6074	0.0109
422	SLU 68	0.2	-0.05	53.33	0.0226	15.5058	0.0198
422	SLU 69	0.2	-0.01	54.26	0.0229	15.7718	0.0029
422	SLU 70	0.2	-0.03	54.26	0.0229	15.7707	0.0106
422	SLU 71	0.2	-0.02	53.9	0.0227	15.6708	0.0067
422	SLU 72	0.2	-0.04	53.9	0.0227	15.6698	0.0143
422	SLU 73	0.22	0.01	57.71	0.0259	16.7781	-0.0014
422	SLU 74	0.22	0.05	58.63	0.0261	17.044	-0.0182
422	SLU 75	0.22	0.03	58.63	0.0261	17.0429	-0.0106
422	SLU 76	0.23	0.01	58.27	0.026	16.9413	-0.0018
422	SLU 77	0.22	0.06	59.2	0.0262	17.2073	-0.0186
422	SLU 78	0.23	0.03	59.2	0.0263	17.2062	-0.011
422	SLU 79	0.22	0.04	58.85	0.026	17.1064	-0.0148
422	SLU 80	0.23	0.02	58.84	0.0261	17.1053	-0.0072
422	SLU 81	0.22	0.07	59.83	0.0272	17.3951	-0.0234
422	SLU 82	0.23	0.05	59.83	0.0272	17.394	-0.0157
422	SLU 83	0.23	0.07	60.4	0.0273	17.5583	-0.0237
422	SLU 84	0.23	0.05	60.39	0.0274	17.5573	-0.0161
422	SLE RA 1	0.14	-0.04	39.66	0.0167	11.5382	0.0133
422	SLE RA 2	0.15	-0.06	39.66	0.0167	11.537	0.0218
422	SLE RA 3	0.15	-0.03	40.28	0.0169	11.7143	0.0106
422	SLE RA 4	0.15	-0.04	40.28	0.0169	11.7136	0.0156
422	SLE RA 5	0.15	-0.06	40.04	0.0168	11.6458	0.0215
422	SLE RA 6	0.15	-0.03	40.66	0.017	11.8231	0.0103
422	SLE RA 7	0.15	-0.04	40.66	0.017	11.8224	0.0154
422	SLE RA 8	0.15	-0.03	40.42	0.0168	11.7559	0.0128
422	SLE RA 9	0.15	-0.05	40.42	0.0169	11.7552	0.0179
422	SLE RA 10	0.16	-0.02	42.96	0.019	12.494	0.0074
422	SLE RA 11	0.16	0.01	43.58	0.0191	12.6713	-0.0038
422	SLE RA 12	0.16	0	43.57	0.0191	12.6706	0.0013
422	SLE RA 13	0.17	-0.02	43.33	0.019	12.6029	0.0072
422	SLE RA 14	0.16	0.01	43.95	0.0192	12.7801	-0.004
422	SLE RA 15	0.17	0	43.95	0.0192	12.7794	0.001
422	SLE RA 16	0.16	0.01	43.72	0.019	12.7129	-0.0015
422	SLE RA 17	0.17	-0.01	43.71	0.0191	12.7122	0.0036
422	SLE RA 18	0.16	0.02	44.37	0.0198	12.9053	-0.0072
422	SLE RA 19	0.17	0.01	44.37	0.0199	12.9046	-0.0021
422	SLE RA 20	0.17	0.02	44.75	0.0199	13.0142	-0.0075
422	SLE RA 21	0.17	0.01	44.75	0.02	13.0135	-0.0024
422	SLE FR 1	0.14	-0.04	39.66	0.0167	11.5382	0.0133
422	SLE FR 2	0.14	-0.04	39.66	0.0167	11.538	0.015
422	SLE FR 3	0.14	-0.04	39.82	0.0167	11.5817	0.0132
422	SLE FR 4	0.15	-0.02	41.08	0.0176	11.9481	0.0088
422	SLE FR 5	0.15	-0.02	41.23	0.0176	11.9919	0.007
422	SLE FR 6	0.15	-0.01	42.02	0.0182	12.2218	0.003
422	SLE QP 1	0.14	-0.04	39.66	0.0167	11.5382	0.0133
422	SLE QP 2	0.15	-0.02	41.08	0.0176	11.9483	0.0071
422	SLD 1	3.47	0.69	41.58	0.0141	12.0709	-0.2404
422	SLD 2	3.67	0.73	41.64	0.0136	12.0784	-0.2512
422	SLD 3	3.28	-0.46	41.4	0.017	12.0253	0.1617
422	SLD 4	3.48	-0.42	41.46	0.0166	12.0327	0.1509
422	SLD 5	1.4	1.93	41.5	0.0122	12.0531	-0.6751
422	SLD 6	1.53	1.96	41.53	0.0119	12.0579	-0.6822
422	SLD 7	0.76	-1.9	40.89	0.022	11.9008	0.6654
422	SLD 8	0.89	-1.88	40.92	0.0217	11.9057	0.6583
422	SLD 9	-0.59	1.84	41.23	0.0135	11.991	-0.644
422	SLD 10	-0.47	1.86	41.27	0.0132	11.9958	-0.6511
422	SLD 11	-1.23	-1.99	40.62	0.0233	11.8387	0.6965
422	SLD 12	-1.1	-1.97	40.66	0.023	11.8436	0.6894
422	SLD 13	-3.18	0.39	40.7	0.0186	11.864	-0.1366
422	SLD 14	-2.98	0.42	40.75	0.0182	11.8714	-0.1475
422	SLD 15	-3.37	-0.76	40.52	0.0216	11.8183	0.2655
422	SLD 16	-3.17	-0.73	40.57	0.0211	11.8257	0.2547
422	SLV 1	7.92	1.6	42.26	0.0095	12.2346	-0.5568
422	SLV 2	8.39	1.68	42.39	0.0084	12.2519	-0.582
422	SLV 3	7.48	-1.01	41.84	0.0162	12.1289	0.3548
422	SLV 4	7.94	-0.92	41.97	0.0151	12.1461	0.3296
422	SLV 5	3.08	4.41	42.05	0.0052	12.1916	-1.5403
422	SLV 6	3.38	4.46	42.13	0.0045	12.2027	-1.5565
422	SLV 7	1.59	-4.28	40.64	0.0275	11.8391	1.4983
422	SLV 8	1.89	-4.23	40.72	0.0268	11.8503	1.4821
422	SLV 9	-1.59	4.19	41.43	0.0084	12.0464	-1.4678
422	SLV 10	-1.29	4.25	41.51	0.0077	12.0575	-1.484
422	SLV 11	-3.08	-4.5	40.02	0.0307	11.6939	1.5707
422	SLV 12	-2.78	-4.45	40.1	0.03	11.705	1.5546
422	SLV 13	-7.64	0.89	40.19	0.0201	11.7505	-0.3153
422	SLV 14	-7.18	0.97	40.32	0.019	11.7678	-0.3405
422	SLV 15	-8.09	-1.72	39.77	0.0268	11.6448	0.5963
422	SLV 16	-7.62	-1.64	39.9	0.0257	11.6621	0.5711
422	CRTFP Ux+	0	0	0	0	0	0
422	CRTFP Ux-	0	0	0	0	0	0
422	CRTFP Uy+	0	0	0	0	0	0
422	CRTFP Uy-	0	0	0	0	0	0
425	SLU 1	-0.74	-1.12	60.38	-0.0214	-0.2488	-0.0239
425	SLU 2	-0.72	-1.2	60.37	-0.0211	-0.2496	-0.0233
425	SLU 3	-0.76	-1.14	61.81	-0.0219	-0.255	-0.0247
425	SLU 4	-0.75	-1.18	61.81	-0.0217	-0.2555	-0.0243
425	SLU 5	-0.74	-1.21	61.27	-0.0215	-0.253	-0.0237
425	SLU 6	-0.78	-1.15	62.72	-0.0223	-0.2584	-0.0251
425	SLU 7	-0.77	-1.19	62.71	-0.0221	-0.2589	-0.0247
425	SLU 8	-0.77	-1.15	62.19	-0.0222	-0.2555	-0.0248
425	SLU 9	-0.76	-1.19	62.19	-0.022	-0.256	-0.0244
425	SLU 10	-0.75	-1.24	67.4	-0.022	-0.2911	-0.026
425	SLU 11	-0.78	-1.18	68.85	-0.0228	-0.2965	-0.0274
425	SLU 12	-0.77	-1.22	68.84	-0.0226	-0.297	-0.027
425	SLU 13	-0.76	-1.25	68.31	-0.0224	-0.2945	-0.0265

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
425	SLU 14	-0.8	-1.19	69.75	-0.0231	-0.2999	-0.0279
425	SLU 15	-0.79	-1.24	69.75	-0.023	-0.3004	-0.0275
425	SLU 16	-0.79	-1.19	69.22	-0.0231	-0.297	-0.0276
425	SLU 17	-0.78	-1.24	69.22	-0.0229	-0.2975	-0.0272
425	SLU 18	-0.77	-1.18	70.42	-0.0227	-0.308	-0.0279
425	SLU 19	-0.76	-1.23	70.42	-0.0225	-0.3085	-0.0275
425	SLU 20	-0.79	-1.2	71.33	-0.0231	-0.3114	-0.0283
425	SLU 21	-0.78	-1.24	71.33	-0.0229	-0.3119	-0.0279
425	SLU 22	-0.82	-1.11	67.13	-0.0219	-0.2752	-0.0279
425	SLU 23	-0.81	-1.19	67.12	-0.0215	-0.276	-0.0272
425	SLU 24	-0.84	-1.13	68.57	-0.0223	-0.2815	-0.0286
425	SLU 25	-0.83	-1.17	68.56	-0.0221	-0.282	-0.0282
425	SLU 26	-0.82	-1.2	68.03	-0.0219	-0.2794	-0.0276
425	SLU 27	-0.86	-1.14	69.47	-0.0227	-0.2849	-0.0291
425	SLU 28	-0.85	-1.19	69.47	-0.0225	-0.2854	-0.0287
425	SLU 29	-0.85	-1.14	68.95	-0.0226	-0.282	-0.0288
425	SLU 30	-0.84	-1.18	68.94	-0.0224	-0.2825	-0.0284
425	SLU 31	-0.83	-1.23	74.15	-0.0224	-0.3175	-0.0299
425	SLU 32	-0.87	-1.17	75.6	-0.0232	-0.323	-0.0314
425	SLU 33	-0.86	-1.22	75.59	-0.023	-0.3235	-0.031
425	SLU 34	-0.85	-1.24	75.06	-0.0228	-0.3209	-0.0304
425	SLU 35	-0.88	-1.18	76.51	-0.0236	-0.3264	-0.0318
425	SLU 36	-0.87	-1.23	76.5	-0.0234	-0.3269	-0.0314
425	SLU 37	-0.88	-1.18	75.98	-0.0235	-0.3235	-0.0315
425	SLU 38	-0.87	-1.23	75.97	-0.0233	-0.324	-0.0311
425	SLU 39	-0.86	-1.18	77.18	-0.0231	-0.3345	-0.0318
425	SLU 40	-0.85	-1.22	77.17	-0.0229	-0.335	-0.0314
425	SLU 41	-0.87	-1.19	78.09	-0.0235	-0.3379	-0.0322
425	SLU 42	-0.86	-1.23	78.08	-0.0233	-0.3384	-0.0318
425	SLU 43	-0.93	-1.46	76.18	-0.0277	-0.3143	-0.0298
425	SLU 44	-0.92	-1.53	76.17	-0.0274	-0.3151	-0.0291
425	SLU 45	-0.95	-1.48	77.61	-0.0282	-0.3206	-0.0305
425	SLU 46	-0.94	-1.52	77.6	-0.028	-0.321	-0.0301
425	SLU 47	-0.93	-1.55	77.07	-0.0278	-0.3185	-0.0295
425	SLU 48	-0.97	-1.49	78.52	-0.0285	-0.3239	-0.031
425	SLU 49	-0.96	-1.53	78.51	-0.0284	-0.3244	-0.0306
425	SLU 50	-0.96	-1.49	77.99	-0.0285	-0.3211	-0.0307
425	SLU 51	-0.95	-1.53	77.98	-0.0283	-0.3216	-0.0303
425	SLU 52	-0.94	-1.58	83.2	-0.0283	-0.3566	-0.0318
425	SLU 53	-0.98	-1.52	84.64	-0.029	-0.3621	-0.0333
425	SLU 54	-0.97	-1.56	84.64	-0.0288	-0.3625	-0.0329
425	SLU 55	-0.96	-1.59	84.11	-0.0287	-0.36	-0.0323
425	SLU 56	-0.99	-1.53	85.55	-0.0294	-0.3654	-0.0337
425	SLU 57	-0.98	-1.58	85.54	-0.0292	-0.3659	-0.0333
425	SLU 58	-0.99	-1.53	85.02	-0.0293	-0.3626	-0.0334
425	SLU 59	-0.98	-1.58	85.02	-0.0292	-0.3631	-0.033
425	SLU 60	-0.97	-1.52	86.22	-0.0289	-0.3736	-0.0337
425	SLU 61	-0.96	-1.57	86.22	-0.0288	-0.3741	-0.0333
425	SLU 62	-0.98	-1.54	87.13	-0.0293	-0.377	-0.0341
425	SLU 63	-0.97	-1.58	87.12	-0.0292	-0.3775	-0.0337
425	SLU 64	-1.02	-1.45	82.93	-0.0281	-0.3408	-0.0337
425	SLU 65	-1	-1.53	82.92	-0.0278	-0.3416	-0.033
425	SLU 66	-1.04	-1.47	84.36	-0.0286	-0.347	-0.0345
425	SLU 67	-1.03	-1.51	84.36	-0.0284	-0.3475	-0.034
425	SLU 68	-1.02	-1.54	83.83	-0.0282	-0.345	-0.0335
425	SLU 69	-1.05	-1.48	85.27	-0.029	-0.3504	-0.0349
425	SLU 70	-1.04	-1.52	85.26	-0.0288	-0.3509	-0.0345
425	SLU 71	-1.05	-1.48	84.74	-0.0289	-0.3476	-0.0346
425	SLU 72	-1.04	-1.52	84.74	-0.0287	-0.3481	-0.0342
425	SLU 73	-1.02	-1.57	89.95	-0.0287	-0.3831	-0.0358
425	SLU 74	-1.06	-1.51	91.4	-0.0295	-0.3885	-0.0372
425	SLU 75	-1.05	-1.56	91.39	-0.0293	-0.389	-0.0368
425	SLU 76	-1.04	-1.58	90.86	-0.0291	-0.3865	-0.0362
425	SLU 77	-1.08	-1.52	92.3	-0.0299	-0.3919	-0.0377
425	SLU 78	-1.07	-1.57	92.3	-0.0297	-0.3924	-0.0372
425	SLU 79	-1.07	-1.52	91.78	-0.0298	-0.3891	-0.0374
425	SLU 80	-1.06	-1.57	91.77	-0.0296	-0.3896	-0.0369
425	SLU 81	-1.05	-1.52	92.98	-0.0294	-0.4001	-0.0376
425	SLU 82	-1.04	-1.56	92.97	-0.0292	-0.4006	-0.0372
425	SLU 83	-1.06	-1.53	93.88	-0.0298	-0.4035	-0.0381
425	SLU 84	-1.05	-1.57	93.88	-0.0296	-0.4039	-0.0377
425	SLE RA 1	-0.76	-1.12	62.31	-0.0215	-0.2563	-0.0251
425	SLE RA 2	-0.75	-1.17	62.3	-0.0213	-0.2569	-0.0246
425	SLE RA 3	-0.78	-1.13	63.26	-0.0219	-0.2605	-0.0256
425	SLE RA 4	-0.77	-1.16	63.26	-0.0217	-0.2608	-0.0253
425	SLE RA 5	-0.76	-1.18	62.9	-0.0216	-0.2591	-0.0249
425	SLE RA 6	-0.79	-1.14	63.87	-0.0221	-0.2627	-0.0259
425	SLE RA 7	-0.78	-1.17	63.86	-0.022	-0.2631	-0.0256
425	SLE RA 8	-0.78	-1.14	63.52	-0.0221	-0.2608	-0.0257
425	SLE RA 9	-0.78	-1.17	63.51	-0.0219	-0.2612	-0.0254
425	SLE RA 10	-0.77	-1.2	66.99	-0.0219	-0.2845	-0.0264
425	SLE RA 11	-0.79	-1.16	67.95	-0.0224	-0.2882	-0.0274
425	SLE RA 12	-0.79	-1.19	67.95	-0.0223	-0.2885	-0.0271
425	SLE RA 13	-0.78	-1.21	67.59	-0.0222	-0.2868	-0.0267
425	SLE RA 14	-0.8	-1.17	68.56	-0.0227	-0.2904	-0.0277
425	SLE RA 15	-0.8	-1.2	68.55	-0.0226	-0.2907	-0.0274
425	SLE RA 16	-0.8	-1.17	68.21	-0.0226	-0.2885	-0.0275
425	SLE RA 17	-0.79	-1.2	68.2	-0.0225	-0.2888	-0.0272
425	SLE RA 18	-0.78	-1.16	69.01	-0.0224	-0.2959	-0.0277
425	SLE RA 19	-0.78	-1.19	69	-0.0223	-0.2962	-0.0274
425	SLE RA 20	-0.8	-1.17	69.61	-0.0226	-0.2981	-0.028
425	SLE RA 21	-0.79	-1.2	69.61	-0.0225	-0.2984	-0.0277
425	SLE FR 1	-0.76	-1.12	62.31	-0.0215	-0.2563	-0.0251
425	SLE FR 2	-0.76	-1.13	62.31	-0.0215	-0.2564	-0.025
425	SLE FR 3	-0.77	-1.12	62.55	-0.0216	-0.2572	-0.0252
425	SLE FR 4	-0.77	-1.14	64.32	-0.0218	-0.2683	-0.0258
425	SLE FR 5	-0.77	-1.14	64.56	-0.0219	-0.2691	-0.026

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
425	SLE FR 6	-0.77	-1.14	65.66	-0.022	-0.2761	-0.0264
425	SLE QP 1	-0.76	-1.12	62.31	-0.0215	-0.2563	-0.0251
425	SLE QP 2	-0.77	-1.13	64.32	-0.0218	-0.2682	-0.0258
425	SLD 1	4.8	-0.73	70.14	-0.0295	-0.0811	-0.0032
425	SLD 2	5.1	-1.08	70	-0.0281	-0.0859	0.0088
425	SLD 3	4.48	-2.45	69.84	-0.0242	-0.1122	-0.0112
425	SLD 4	4.78	-2.8	69.71	-0.0227	-0.117	0.0008
425	SLD 5	1.33	1.67	66.53	-0.0325	-0.164	-0.009
425	SLD 6	1.53	1.44	66.44	-0.0315	-0.1672	-0.0012
425	SLD 7	0.27	-4.08	65.55	-0.0147	-0.2677	-0.0357
425	SLD 8	0.47	-4.31	65.46	-0.0137	-0.2709	-0.0279
425	SLD 9	-2.01	2.05	63.17	-0.0299	-0.2655	-0.0238
425	SLD 10	-1.81	1.82	63.08	-0.0289	-0.2686	-0.0159
425	SLD 11	-3.07	-3.7	62.19	-0.0121	-0.3692	-0.0505
425	SLD 12	-2.87	-3.93	62.1	-0.0111	-0.3723	-0.0427
425	SLD 13	-6.32	0.54	58.93	-0.0209	-0.4194	-0.0525
425	SLD 14	-6.02	0.19	58.79	-0.0194	-0.4242	-0.0404
425	SLD 15	-6.64	-1.19	58.63	-0.0155	-0.4505	-0.0605
425	SLD 16	-6.34	-1.54	58.5	-0.0141	-0.4553	-0.0485
425	SLV 1	12.25	-0.25	77.93	-0.0397	0.1689	0.027
425	SLV 2	12.96	-1.07	77.61	-0.0363	0.1578	0.055
425	SLV 3	11.51	-4.15	77.25	-0.0276	0.098	0.0085
425	SLV 4	12.22	-4.97	76.93	-0.0242	0.0869	0.0365
425	SLV 5	4.14	5.19	69.5	-0.0462	-0.0276	0.0133
425	SLV 6	4.59	4.66	69.29	-0.044	-0.0347	0.0313
425	SLV 7	1.67	-7.82	67.21	-0.0057	-0.264	-0.0484
425	SLV 8	2.12	-8.34	67.01	-0.0035	-0.2712	-0.0304
425	SLV 9	-3.66	6.07	61.63	-0.0401	-0.2652	-0.0213
425	SLV 10	-3.21	5.55	61.42	-0.0379	-0.2723	-0.0033
425	SLV 11	-6.13	-6.93	59.34	0.0004	-0.5017	-0.083
425	SLV 12	-5.68	-7.45	59.14	0.0026	-0.5088	-0.065
425	SLV 13	-13.76	2.7	51.7	-0.0194	-0.6232	-0.0882
425	SLV 14	-13.05	1.89	51.39	-0.016	-0.6343	-0.0602
425	SLV 15	-14.5	-1.2	51.02	-0.0073	-0.6942	-0.1067
425	SLV 16	-13.79	-2.01	50.7	-0.0039	-0.7053	-0.0787
425	CRTFP Ux+	0	0	0	0	0	0
425	CRTFP Ux-	0	0	0	0	0	0
429	SLU 1	0.43	-0.6	61.75	-0.0244	0.3216	-0.0131
429	SLU 2	0.44	-0.63	61.75	-0.0243	0.3221	-0.0125
429	SLU 3	0.44	-0.61	63.22	-0.0251	0.3293	-0.0134
429	SLU 4	0.45	-0.63	63.23	-0.025	0.3296	-0.0131
429	SLU 5	0.45	-0.65	62.67	-0.0248	0.3261	-0.0128
429	SLU 6	0.45	-0.62	64.14	-0.0255	0.3333	-0.0137
429	SLU 7	0.45	-0.64	64.14	-0.0254	0.3336	-0.0133
429	SLU 8	0.44	-0.63	63.58	-0.0254	0.3296	-0.0136
429	SLU 9	0.45	-0.65	63.58	-0.0253	0.3299	-0.0133
429	SLU 10	0.45	-0.61	69.12	-0.026	0.3687	-0.0143
429	SLU 11	0.45	-0.58	70.59	-0.0268	0.376	-0.0152
429	SLU 12	0.46	-0.6	70.6	-0.0267	0.3763	-0.0149
429	SLU 13	0.46	-0.62	70.04	-0.0265	0.3727	-0.0146
429	SLU 14	0.46	-0.59	71.51	-0.0272	0.38	-0.0155
429	SLU 15	0.47	-0.61	71.51	-0.0271	0.3803	-0.0151
429	SLU 16	0.45	-0.6	70.95	-0.0271	0.3762	-0.0154
429	SLU 17	0.46	-0.62	70.95	-0.027	0.3765	-0.0151
429	SLU 18	0.44	-0.56	72.27	-0.0269	0.3882	-0.0157
429	SLU 19	0.45	-0.58	72.28	-0.0268	0.3885	-0.0153
429	SLU 20	0.45	-0.57	73.19	-0.0273	0.3922	-0.0159
429	SLU 21	0.46	-0.6	73.19	-0.0272	0.3925	-0.0156
429	SLU 22	0.48	-0.53	68.78	-0.0256	0.3478	-0.0139
429	SLU 23	0.49	-0.57	68.78	-0.0255	0.3483	-0.0133
429	SLU 24	0.49	-0.54	70.25	-0.0262	0.3556	-0.0142
429	SLU 25	0.5	-0.56	70.26	-0.0262	0.3559	-0.0139
429	SLU 26	0.5	-0.58	69.7	-0.0259	0.3523	-0.0136
429	SLU 27	0.5	-0.55	71.17	-0.0267	0.3596	-0.0145
429	SLU 28	0.51	-0.58	71.17	-0.0266	0.3599	-0.0141
429	SLU 29	0.49	-0.56	70.61	-0.0266	0.3558	-0.0144
429	SLU 30	0.5	-0.59	70.61	-0.0265	0.3561	-0.0141
429	SLU 31	0.51	-0.54	76.15	-0.0272	0.3949	-0.0151
429	SLU 32	0.5	-0.51	77.62	-0.0279	0.4022	-0.016
429	SLU 33	0.51	-0.53	77.63	-0.0279	0.4025	-0.0157
429	SLU 34	0.51	-0.56	77.07	-0.0276	0.3989	-0.0154
429	SLU 35	0.51	-0.53	78.54	-0.0284	0.4062	-0.0163
429	SLU 36	0.52	-0.55	78.54	-0.0283	0.4065	-0.0159
429	SLU 37	0.51	-0.54	77.98	-0.0283	0.4024	-0.0162
429	SLU 38	0.51	-0.56	77.98	-0.0282	0.4027	-0.0159
429	SLU 39	0.5	-0.49	79.3	-0.028	0.4144	-0.0165
429	SLU 40	0.51	-0.51	79.31	-0.028	0.4147	-0.0161
429	SLU 41	0.5	-0.51	80.22	-0.0285	0.4184	-0.0167
429	SLU 42	0.51	-0.53	80.22	-0.0284	0.4187	-0.0164
429	SLU 43	0.54	-0.8	77.86	-0.0313	0.409	-0.0168
429	SLU 44	0.55	-0.84	77.87	-0.0312	0.4095	-0.0162
429	SLU 45	0.55	-0.81	79.34	-0.032	0.4168	-0.0171
429	SLU 46	0.56	-0.83	79.34	-0.0319	0.4171	-0.0167
429	SLU 47	0.56	-0.85	78.78	-0.0317	0.4135	-0.0165
429	SLU 48	0.56	-0.82	80.25	-0.0325	0.4208	-0.0173
429	SLU 49	0.56	-0.85	80.26	-0.0324	0.4211	-0.017
429	SLU 50	0.55	-0.83	79.69	-0.0323	0.417	-0.0173
429	SLU 51	0.56	-0.85	79.69	-0.0322	0.4173	-0.017
429	SLU 52	0.56	-0.81	85.23	-0.0329	0.4561	-0.018
429	SLU 53	0.56	-0.78	86.71	-0.0337	0.4634	-0.0189
429	SLU 54	0.57	-0.8	86.71	-0.0336	0.4637	-0.0185
429	SLU 55	0.57	-0.82	86.15	-0.0334	0.4601	-0.0183
429	SLU 56	0.57	-0.8	87.62	-0.0342	0.4674	-0.0191
429	SLU 57	0.58	-0.82	87.62	-0.0341	0.4677	-0.0188
429	SLU 58	0.56	-0.8	87.06	-0.034	0.4636	-0.0191
429	SLU 59	0.57	-0.83	87.06	-0.0339	0.4639	-0.0188
429	SLU 60	0.55	-0.76	88.39	-0.0338	0.4756	-0.0193

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
429	SLU 61	0.56	-0.78	88.39	-0.0337	0.4759	-0.019
429	SLU 62	0.56	-0.78	89.3	-0.0343	0.4796	-0.0196
429	SLU 63	0.57	-0.8	89.31	-0.0342	0.4799	-0.0193
429	SLU 64	0.59	-0.73	84.89	-0.0325	0.4353	-0.0176
429	SLU 65	0.6	-0.77	84.9	-0.0324	0.4358	-0.017
429	SLU 66	0.6	-0.74	86.37	-0.0332	0.4431	-0.0179
429	SLU 67	0.61	-0.76	86.37	-0.0331	0.4434	-0.0175
429	SLU 68	0.61	-0.79	85.81	-0.0329	0.4398	-0.0173
429	SLU 69	0.61	-0.76	87.28	-0.0336	0.4471	-0.0181
429	SLU 70	0.62	-0.78	87.29	-0.0336	0.4474	-0.0178
429	SLU 71	0.6	-0.77	86.72	-0.0335	0.4433	-0.0181
429	SLU 72	0.61	-0.79	86.73	-0.0334	0.4436	-0.0178
429	SLU 73	0.62	-0.74	92.26	-0.0341	0.4824	-0.0188
429	SLU 74	0.61	-0.71	93.74	-0.0349	0.4897	-0.0197
429	SLU 75	0.62	-0.73	93.74	-0.0348	0.49	-0.0193
429	SLU 76	0.62	-0.76	93.18	-0.0346	0.4864	-0.0191
429	SLU 77	0.62	-0.73	94.65	-0.0353	0.4937	-0.0199
429	SLU 78	0.63	-0.75	94.66	-0.0353	0.494	-0.0196
429	SLU 79	0.62	-0.74	94.09	-0.0352	0.4899	-0.0199
429	SLU 80	0.62	-0.76	94.09	-0.0351	0.4902	-0.0196
429	SLU 81	0.61	-0.69	95.42	-0.035	0.5019	-0.0201
429	SLU 82	0.62	-0.71	95.42	-0.0349	0.5022	-0.0198
429	SLU 83	0.61	-0.71	96.33	-0.0354	0.5059	-0.0204
429	SLU 84	0.62	-0.73	96.34	-0.0354	0.5062	-0.0201
429	SLE RA 1	0.44	-0.58	63.76	-0.0248	0.3291	-0.0133
429	SLE RA 2	0.45	-0.6	63.76	-0.0247	0.3294	-0.013
429	SLE RA 3	0.45	-0.58	64.74	-0.0252	0.3342	-0.0135
429	SLE RA 4	0.46	-0.6	64.74	-0.0251	0.3344	-0.0133
429	SLE RA 5	0.46	-0.61	64.37	-0.025	0.3321	-0.0131
429	SLE RA 6	0.45	-0.59	65.35	-0.0255	0.3369	-0.0137
429	SLE RA 7	0.46	-0.61	65.35	-0.0254	0.3371	-0.0135
429	SLE RA 8	0.45	-0.6	64.98	-0.0254	0.3344	-0.0137
429	SLE RA 9	0.46	-0.61	64.98	-0.0253	0.3346	-0.0135
429	SLE RA 10	0.46	-0.58	68.67	-0.0258	0.3605	-0.0141
429	SLE RA 11	0.46	-0.57	69.65	-0.0263	0.3653	-0.0147
429	SLE RA 12	0.46	-0.58	69.65	-0.0263	0.3655	-0.0145
429	SLE RA 13	0.46	-0.59	69.28	-0.0261	0.3631	-0.0143
429	SLE RA 14	0.46	-0.58	70.26	-0.0266	0.368	-0.0149
429	SLE RA 15	0.47	-0.59	70.26	-0.0266	0.3682	-0.0147
429	SLE RA 16	0.46	-0.58	69.89	-0.0265	0.3655	-0.0149
429	SLE RA 17	0.46	-0.6	69.89	-0.0265	0.3657	-0.0147
429	SLE RA 18	0.45	-0.55	70.77	-0.0264	0.3735	-0.015
429	SLE RA 19	0.46	-0.57	70.78	-0.0263	0.3737	-0.0148
429	SLE RA 20	0.46	-0.56	71.38	-0.0267	0.3761	-0.0152
429	SLE RA 21	0.46	-0.58	71.39	-0.0266	0.3763	-0.015
429	SLE FR 1	0.44	-0.58	63.76	-0.0248	0.3291	-0.0133
429	SLE FR 2	0.44	-0.58	63.76	-0.0247	0.3291	-0.0133
429	SLE FR 3	0.44	-0.58	64	-0.0249	0.3301	-0.0134
429	SLE FR 4	0.45	-0.58	65.86	-0.0252	0.3424	-0.0138
429	SLE FR 5	0.45	-0.58	66.11	-0.0254	0.3434	-0.0139
429	SLE FR 6	0.45	-0.57	67.26	-0.0256	0.3513	-0.0142
429	SLE QP 1	0.44	-0.58	63.76	-0.0248	0.3291	-0.0133
429	SLE QP 2	0.45	-0.57	65.86	-0.0252	0.3424	-0.0138
429	SLD 1	5.98	0.69	60.95	-0.02	0.4403	0.0236
429	SLD 2	6.3	1.07	61.2	-0.0221	0.4333	0.0353
429	SLD 3	5.67	-0.93	60.57	-0.0141	0.4647	0.0161
429	SLD 4	5.99	-0.55	60.83	-0.0163	0.4576	0.0279
429	SLD 5	2.52	2.2	64.92	-0.0322	0.3361	0.0066
429	SLD 6	2.73	2.45	65.08	-0.0336	0.3315	0.0143
429	SLD 7	1.48	-3.2	63.66	-0.0126	0.4172	-0.0183
429	SLD 8	1.69	-2.96	63.82	-0.014	0.4126	-0.0106
429	SLD 9	-0.8	1.81	67.9	-0.0365	0.2721	-0.0171
429	SLD 10	-0.59	2.06	68.07	-0.0379	0.2675	-0.0094
429	SLD 11	-1.84	-3.59	66.64	-0.0169	0.3533	-0.042
429	SLD 12	-1.63	-3.34	66.8	-0.0183	0.3487	-0.0343
429	SLD 13	-5.1	-0.59	70.9	-0.0342	0.2271	-0.0555
429	SLD 14	-4.78	-0.21	71.15	-0.0364	0.2201	-0.0438
429	SLD 15	-5.41	-2.21	70.52	-0.0284	0.2515	-0.063
429	SLD 16	-5.09	-1.83	70.77	-0.0305	0.2444	-0.0512
429	SLV 1	13.39	2.33	54.37	-0.0127	0.5721	0.0737
429	SLV 2	14.14	3.21	54.95	-0.0177	0.5556	0.1011
429	SLV 3	12.66	-1.36	53.49	0.0006	0.6278	0.0563
429	SLV 4	13.41	-0.47	54.07	-0.0044	0.6113	0.0837
429	SLV 5	5.3	5.74	63.65	-0.0409	0.3296	0.0342
429	SLV 6	5.79	6.3	64.02	-0.0441	0.319	0.0518
429	SLV 7	2.88	-6.55	60.72	0.0036	0.5153	-0.024
429	SLV 8	3.36	-5.98	61.09	0.0004	0.5047	-0.0064
429	SLV 9	-2.47	4.84	70.63	-0.0509	0.18	-0.0213
429	SLV 10	-1.99	5.4	71.01	-0.0541	0.1694	-0.0037
429	SLV 11	-4.9	-7.45	67.7	-0.0064	0.3657	-0.0795
429	SLV 12	-4.41	-6.88	68.08	-0.0096	0.3551	-0.0619
429	SLV 13	-12.52	-0.67	77.65	-0.0461	0.0735	-0.1114
429	SLV 14	-11.77	0.21	78.23	-0.0511	0.057	-0.0839
429	SLV 15	-13.25	-4.35	76.77	-0.0328	0.1292	-0.1288
429	SLV 16	-12.5	-3.47	77.35	-0.0378	0.1127	-0.1014
429	CRTFP Ux+	0	0	0	0	0	0
429	CRTFP Ux-	0	0	0	0	0	0
429	CRTFP Uy+	0	0	0	0	0	0
429	CRTFP Uy-	0	0	0	0	0	0
430	SLU 1	0.43	0.27	36.14	0.0109	7.7468	-0.0954
430	SLU 2	0.44	0.24	36.14	0.011	7.7486	-0.0864
430	SLU 3	0.44	0.27	37	0.0112	7.9199	-0.0968
430	SLU 4	0.45	0.25	37.01	0.0112	7.921	-0.0914
430	SLU 5	0.45	0.24	36.69	0.0111	7.8564	-0.085
430	SLU 6	0.45	0.27	37.55	0.0113	8.0276	-0.0953
430	SLU 7	0.45	0.25	37.55	0.0113	8.0288	-0.0899
430	SLU 8	0.45	0.26	37.22	0.0112	7.9623	-0.0925

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
430	SLU 9	0.45	0.24	37.23	0.0112	7.9634	-0.0871
430	SLU 10	0.45	0.34	40.2	0.0129	8.5913	-0.1225
430	SLU 11	0.45	0.37	41.06	0.0131	8.7626	-0.1329
430	SLU 12	0.46	0.36	41.06	0.0131	8.7637	-0.1275
430	SLU 13	0.46	0.34	40.74	0.013	8.6991	-0.1211
430	SLU 14	0.46	0.37	41.6	0.0132	8.8703	-0.1314
430	SLU 15	0.47	0.35	41.6	0.0132	8.8715	-0.126
430	SLU 16	0.46	0.36	41.28	0.0131	8.8049	-0.1286
430	SLU 17	0.46	0.34	41.28	0.0131	8.8061	-0.1232
430	SLU 18	0.45	0.41	41.93	0.0137	8.9506	-0.147
430	SLU 19	0.45	0.4	41.93	0.0137	8.9517	-0.1416
430	SLU 20	0.45	0.41	42.47	0.0138	9.0583	-0.1455
430	SLU 21	0.46	0.39	42.48	0.0138	9.0595	-0.1401
430	SLU 22	0.47	0.37	40.18	0.0129	8.5791	-0.1305
430	SLU 23	0.48	0.34	40.19	0.013	8.581	-0.1215
430	SLU 24	0.48	0.37	41.05	0.0132	8.7522	-0.1318
430	SLU 25	0.49	0.35	41.05	0.0132	8.7534	-0.1264
430	SLU 26	0.49	0.34	40.73	0.0131	8.6888	-0.12
430	SLU 27	0.49	0.37	41.59	0.0133	8.86	-0.1303
430	SLU 28	0.5	0.35	41.6	0.0133	8.8611	-0.1249
430	SLU 29	0.49	0.36	41.27	0.0132	8.7946	-0.1275
430	SLU 30	0.49	0.34	41.27	0.0132	8.7958	-0.1221
430	SLU 31	0.49	0.44	44.24	0.0149	9.4237	-0.1576
430	SLU 32	0.5	0.47	45.11	0.0151	9.5949	-0.1679
430	SLU 33	0.5	0.46	45.11	0.0151	9.5961	-0.1625
430	SLU 34	0.5	0.44	44.79	0.015	9.5315	-0.1561
430	SLU 35	0.5	0.47	45.65	0.0152	9.7027	-0.1664
430	SLU 36	0.51	0.45	45.65	0.0152	9.7038	-0.161
430	SLU 37	0.5	0.46	45.33	0.0151	9.6373	-0.1636
430	SLU 38	0.5	0.44	45.33	0.0151	9.6385	-0.1582
430	SLU 39	0.49	0.51	45.98	0.0157	9.783	-0.182
430	SLU 40	0.49	0.5	45.98	0.0157	9.7841	-0.1766
430	SLU 41	0.5	0.51	46.52	0.0158	9.8907	-0.1805
430	SLU 42	0.5	0.49	46.52	0.0159	9.8918	-0.1752
430	SLU 43	0.55	0.31	45.59	0.0135	9.7854	-0.1121
430	SLU 44	0.55	0.29	45.6	0.0136	9.7873	-0.1031
430	SLU 45	0.56	0.32	46.46	0.0138	9.9585	-0.1134
430	SLU 46	0.56	0.3	46.46	0.0138	9.9597	-0.108
430	SLU 47	0.56	0.28	46.14	0.0137	9.895	-0.1016
430	SLU 48	0.57	0.31	47	0.0139	10.0663	-0.1119
430	SLU 49	0.57	0.3	47	0.0139	10.0674	-0.1065
430	SLU 50	0.56	0.3	46.68	0.0137	10.0009	-0.1091
430	SLU 51	0.56	0.29	46.68	0.0138	10.002	-0.1037
430	SLU 52	0.57	0.39	49.65	0.0155	10.63	-0.1392
430	SLU 53	0.57	0.42	50.51	0.0157	10.8012	-0.1495
430	SLU 54	0.57	0.4	50.52	0.0157	10.8023	-0.1441
430	SLU 55	0.57	0.38	50.19	0.0156	10.7377	-0.1377
430	SLU 56	0.58	0.41	51.06	0.0158	10.909	-0.148
430	SLU 57	0.58	0.4	51.06	0.0158	10.9101	-0.1426
430	SLU 58	0.57	0.41	50.73	0.0157	10.8436	-0.1452
430	SLU 59	0.58	0.39	50.74	0.0157	10.8447	-0.1398
430	SLU 60	0.56	0.46	51.38	0.0163	10.9892	-0.1636
430	SLU 61	0.57	0.44	51.39	0.0163	10.9904	-0.1582
430	SLU 62	0.57	0.45	51.93	0.0164	11.097	-0.1622
430	SLU 63	0.57	0.44	51.93	0.0164	11.0981	-0.1568
430	SLU 64	0.59	0.41	49.64	0.0155	10.6178	-0.1471
430	SLU 65	0.6	0.39	49.64	0.0156	10.6197	-0.1381
430	SLU 66	0.6	0.42	50.51	0.0158	10.7909	-0.1484
430	SLU 67	0.6	0.4	50.51	0.0158	10.792	-0.143
430	SLU 68	0.6	0.38	50.19	0.0157	10.7274	-0.1366
430	SLU 69	0.61	0.41	51.05	0.0159	10.8986	-0.147
430	SLU 70	0.61	0.4	51.05	0.0159	10.8998	-0.1416
430	SLU 71	0.6	0.4	50.73	0.0158	10.8333	-0.1441
430	SLU 72	0.61	0.39	50.73	0.0158	10.8344	-0.1387
430	SLU 73	0.61	0.49	53.7	0.0175	11.4623	-0.1742
430	SLU 74	0.61	0.52	54.56	0.0177	11.6336	-0.1845
430	SLU 75	0.61	0.5	54.56	0.0177	11.6347	-0.1791
430	SLU 76	0.61	0.48	54.24	0.0176	11.5701	-0.1727
430	SLU 77	0.62	0.51	55.1	0.0178	11.7413	-0.1831
430	SLU 78	0.62	0.5	55.11	0.0178	11.7425	-0.1777
430	SLU 79	0.61	0.51	54.78	0.0177	11.676	-0.1802
430	SLU 80	0.62	0.49	54.78	0.0177	11.6771	-0.1748
430	SLU 81	0.6	0.56	55.43	0.0183	11.8216	-0.1987
430	SLU 82	0.61	0.54	55.43	0.0183	11.8227	-0.1933
430	SLU 83	0.61	0.55	55.97	0.0184	11.9294	-0.1972
430	SLU 84	0.62	0.54	55.98	0.0184	11.9305	-0.1918
430	SLE RA 1	0.44	0.29	37.29	0.0115	7.9846	-0.1055
430	SLE RA 2	0.45	0.28	37.3	0.0115	7.9858	-0.0995
430	SLE RA 3	0.45	0.3	37.87	0.0117	8.1	-0.1064
430	SLE RA 4	0.45	0.29	37.87	0.0117	8.1007	-0.1028
430	SLE RA 5	0.45	0.27	37.66	0.0116	8.0577	-0.0985
430	SLE RA 6	0.46	0.29	38.23	0.0117	8.1718	-0.1054
430	SLE RA 7	0.46	0.28	38.24	0.0117	8.1726	-0.1018
430	SLE RA 8	0.45	0.29	38.02	0.0117	8.1282	-0.1035
430	SLE RA 9	0.46	0.28	38.02	0.0117	8.129	-0.0999
430	SLE RA 10	0.46	0.35	40	0.0128	8.5476	-0.1235
430	SLE RA 11	0.46	0.37	40.57	0.013	8.6618	-0.1304
430	SLE RA 12	0.46	0.36	40.58	0.013	8.6625	-0.1268
430	SLE RA 13	0.46	0.34	40.36	0.0129	8.6195	-0.1225
430	SLE RA 14	0.46	0.36	40.94	0.013	8.7336	-0.1294
430	SLE RA 15	0.47	0.35	40.94	0.013	8.7344	-0.1258
430	SLE RA 16	0.46	0.36	40.72	0.013	8.69	-0.1275
430	SLE RA 17	0.46	0.35	40.72	0.013	8.6908	-0.1239
430	SLE RA 18	0.45	0.39	41.16	0.0134	8.7871	-0.1398
430	SLE RA 19	0.46	0.38	41.16	0.0134	8.7879	-0.1362
430	SLE RA 20	0.46	0.39	41.52	0.0134	8.859	-0.1388
430	SLE RA 21	0.46	0.38	41.52	0.0135	8.8597	-0.1352

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
430	SLE FR 1	0.44	0.29	37.29	0.0115	7.9846	-0.1055
430	SLE FR 2	0.44	0.29	37.3	0.0115	7.9848	-0.1043
430	SLE FR 3	0.45	0.29	37.44	0.0115	8.0133	-0.1051
430	SLE FR 4	0.45	0.32	38.45	0.0121	8.2256	-0.1146
430	SLE FR 5	0.45	0.32	38.6	0.0121	8.2541	-0.1154
430	SLE FR 6	0.45	0.34	39.22	0.0124	8.3859	-0.1226
430	SLE QP 1	0.44	0.29	37.29	0.0115	7.9846	-0.1055
430	SLE QP 2	0.45	0.32	38.45	0.0121	8.2253	-0.1158
430	SLD 1	3.6	1.08	28.28	0.0094	6.2829	-0.3799
430	SLD 2	3.79	1.68	28.53	0.0075	6.3129	-0.5877
430	SLD 3	3.42	-0.35	27.64	0.0131	6.1834	0.1205
430	SLD 4	3.6	0.25	27.89	0.0111	6.2134	-0.0873
430	SLD 5	1.65	2.61	36.32	0.0061	7.7882	-0.9173
430	SLD 6	1.77	3	36.48	0.0048	7.8078	-1.0531
430	SLD 7	1.02	-2.15	34.2	0.0183	7.4566	0.7508
430	SLD 8	1.14	-1.76	34.37	0.017	7.4762	0.615
430	SLD 9	-0.24	2.41	42.54	0.0071	8.9745	-0.8465
430	SLD 10	-0.12	2.8	42.7	0.0058	8.9941	-0.9824
430	SLD 11	-0.88	-2.36	40.42	0.0194	8.6429	0.8215
430	SLD 12	-0.76	-1.97	40.59	0.0181	8.6625	0.6857
430	SLD 13	-2.71	0.4	49.01	0.013	10.2373	-0.1442
430	SLD 14	-2.52	1	49.26	0.011	10.2673	-0.352
430	SLD 15	-2.9	-1.03	48.38	0.0167	10.1378	0.3562
430	SLD 16	-2.71	-0.43	48.63	0.0147	10.1678	0.1484
430	SLV 1	7.84	2.06	14.62	0.006	3.6775	-0.7213
430	SLV 2	8.26	3.45	15.21	0.0014	3.7472	-1.2053
430	SLV 3	7.39	-1.2	13.14	0.0144	3.4449	0.4206
430	SLV 4	7.82	0.19	13.73	0.0098	3.5146	-0.0634
430	SLV 5	3.26	5.55	33.45	-0.0016	7.2018	-1.9464
430	SLV 6	3.54	6.45	33.82	-0.0046	7.2466	-2.2575
430	SLV 7	1.79	-5.32	28.52	0.0262	6.4265	1.86
430	SLV 8	2.06	-4.43	28.9	0.0233	6.4713	1.5489
430	SLV 9	-1.17	5.07	48.01	0.0009	9.9794	-1.7805
430	SLV 10	-0.89	5.97	48.39	-0.0021	10.0242	-2.0915
430	SLV 11	-2.64	-5.8	43.08	0.0287	9.2041	2.026
430	SLV 12	-2.37	-4.91	43.46	0.0258	9.2489	1.7149
430	SLV 13	-6.93	0.46	63.17	0.0144	12.9361	-0.1681
430	SLV 14	-6.5	1.85	63.76	0.0098	13.0058	-0.6521
430	SLV 15	-7.37	-2.8	61.69	0.0227	12.7035	0.9738
430	SLV 16	-6.94	-1.41	62.28	0.0181	12.7732	0.4898
430	CRTFP Ux+	0	0	0	0	0	0
430	CRTFP Ux-	0	0	0	0	0	0
430	CRTFP Uy+	0	0	0	0	0	0
430	CRTFP Uy-	0	0	0	0	0	0
433	SLU 1	-0.48	0	32.5	0.0027	-3.8352	-0.0024
433	SLU 2	-0.47	-0.08	32.48	0.0029	-3.8355	-0.0218
433	SLU 3	-0.49	0.01	33.27	0.0028	-3.9164	-0.0007
433	SLU 4	-0.49	-0.04	33.26	0.0029	-3.9165	-0.0124
433	SLU 5	-0.48	-0.07	32.97	0.0029	-3.8863	-0.0205
433	SLU 6	-0.5	0.01	33.76	0.0028	-3.9672	0.0005
433	SLU 7	-0.5	-0.04	33.75	0.0029	-3.9673	-0.0111
433	SLU 8	-0.5	0.01	33.47	0.0027	-3.9368	0.0001
433	SLU 9	-0.49	-0.04	33.46	0.0028	-3.937	-0.0115
433	SLU 10	-0.49	-0.02	36.11	0.0041	-4.2435	-0.0072
433	SLU 11	-0.51	0.07	36.9	0.0039	-4.3243	0.0139
433	SLU 12	-0.51	0.02	36.89	0.0041	-4.3245	0.0023
433	SLU 13	-0.5	-0.01	36.6	0.0041	-4.2943	-0.0059
433	SLU 14	-0.52	0.07	37.39	0.0039	-4.3751	0.0152
433	SLU 15	-0.52	0.02	37.38	0.0041	-4.3753	0.0035
433	SLU 16	-0.52	0.07	37.1	0.0039	-4.3448	0.0148
433	SLU 17	-0.51	0.02	37.1	0.004	-4.3449	0.0031
433	SLU 18	-0.51	0.08	37.68	0.0044	-4.418	0.0185
433	SLU 19	-0.51	0.04	37.67	0.0045	-4.4182	0.0069
433	SLU 20	-0.52	0.09	38.17	0.0044	-4.4688	0.0198
433	SLU 21	-0.51	0.04	38.16	0.0045	-4.469	0.0081
433	SLU 22	-0.53	0.07	36.15	0.0039	-4.2396	0.0156
433	SLU 23	-0.53	-0.01	36.14	0.0041	-4.2399	-0.0038
433	SLU 24	-0.54	0.08	36.93	0.004	-4.3207	0.0173
433	SLU 25	-0.54	0.03	36.92	0.0041	-4.3209	0.0056
433	SLU 26	-0.53	0	36.63	0.0041	-4.2907	-0.0025
433	SLU 27	-0.55	0.08	37.41	0.004	-4.3715	0.0186
433	SLU 28	-0.55	0.04	37.41	0.0041	-4.3717	0.0069
433	SLU 29	-0.55	0.08	37.13	0.0039	-4.3412	0.0181
433	SLU 30	-0.55	0.04	37.12	0.004	-4.3414	0.0065
433	SLU 31	-0.55	0.05	39.77	0.0053	-4.6478	0.0108
433	SLU 32	-0.57	0.14	40.56	0.0051	-4.7287	0.0319
433	SLU 33	-0.56	0.09	40.55	0.0052	-4.7288	0.0203
433	SLU 34	-0.56	0.06	40.26	0.0053	-4.6986	0.0121
433	SLU 35	-0.58	0.14	41.04	0.0051	-4.7795	0.0332
433	SLU 36	-0.57	0.1	41.04	0.0052	-4.7796	0.0216
433	SLU 37	-0.57	0.14	40.76	0.0051	-4.7491	0.0328
433	SLU 38	-0.57	0.1	40.75	0.0052	-4.7493	0.0211
433	SLU 39	-0.56	0.16	41.34	0.0056	-4.8224	0.0365
433	SLU 40	-0.56	0.11	41.33	0.0057	-4.8225	0.0249
433	SLU 41	-0.57	0.16	41.83	0.0056	-4.8732	0.0378
433	SLU 42	-0.57	0.12	41.82	0.0057	-4.8733	0.0262
433	SLU 43	-0.6	-0.03	40.99	0.0032	-4.8472	-0.0093
433	SLU 44	-0.6	-0.1	40.98	0.0033	-4.8475	-0.0287
433	SLU 45	-0.62	-0.02	41.76	0.0032	-4.9283	-0.0076
433	SLU 46	-0.61	-0.07	41.76	0.0033	-4.9285	-0.0193
433	SLU 47	-0.61	-0.1	41.47	0.0033	-4.8983	-0.0274
433	SLU 48	-0.63	-0.01	42.25	0.0032	-4.9791	-0.0064
433	SLU 49	-0.62	-0.06	42.25	0.0033	-4.9793	-0.018
433	SLU 50	-0.62	-0.02	41.97	0.0031	-4.9488	-0.0068
433	SLU 51	-0.62	-0.06	41.96	0.0033	-4.9489	-0.0184
433	SLU 52	-0.62	-0.04	44.61	0.0045	-5.2554	-0.0141
433	SLU 53	-0.64	0.04	45.4	0.0044	-5.3362	0.007

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
433	SLU 54	-0.63	-0.01	45.39	0.0045	-5.3364	-0.0046
433	SLU 55	-0.63	-0.04	45.1	0.0045	-5.3062	-0.0128
433	SLU 56	-0.65	0.05	45.88	0.0044	-5.387	0.0083
433	SLU 57	-0.64	0	45.88	0.0045	-5.3872	-0.0034
433	SLU 58	-0.64	0.04	45.6	0.0043	-5.3567	0.0079
433	SLU 59	-0.64	0	45.59	0.0044	-5.3569	-0.0038
433	SLU 60	-0.63	0.06	46.18	0.0048	-5.4299	0.0116
433	SLU 61	-0.63	0.01	46.17	0.0049	-5.4301	0
433	SLU 62	-0.64	0.06	46.67	0.0048	-5.4807	0.0129
433	SLU 63	-0.64	0.02	46.66	0.0049	-5.4809	0.0012
433	SLU 64	-0.66	0.05	44.65	0.0043	-5.2515	0.0087
433	SLU 65	-0.65	-0.03	44.64	0.0045	-5.2518	-0.0107
433	SLU 66	-0.67	0.05	45.42	0.0044	-5.3327	0.0104
433	SLU 67	-0.67	0.01	45.41	0.0045	-5.3328	-0.0013
433	SLU 68	-0.66	-0.03	45.12	0.0045	-5.3026	-0.0094
433	SLU 69	-0.68	0.06	45.91	0.0044	-5.3835	0.0116
433	SLU 70	-0.67	0.01	45.9	0.0045	-5.3836	0
433	SLU 71	-0.68	0.06	45.62	0.0043	-5.3531	0.0112
433	SLU 72	-0.67	0.01	45.62	0.0044	-5.3533	-0.0004
433	SLU 73	-0.67	0.03	48.27	0.0057	-5.6598	0.0039
433	SLU 74	-0.69	0.11	49.05	0.0055	-5.7406	0.025
433	SLU 75	-0.69	0.07	49.04	0.0057	-5.7408	0.0134
433	SLU 76	-0.68	0.03	48.75	0.0057	-5.7106	0.0052
433	SLU 77	-0.7	0.12	49.54	0.0055	-5.7914	0.0263
433	SLU 78	-0.7	0.07	49.53	0.0057	-5.7916	0.0147
433	SLU 79	-0.7	0.12	49.25	0.0055	-5.7611	0.0259
433	SLU 80	-0.69	0.07	49.25	0.0056	-5.7612	0.0142
433	SLU 81	-0.69	0.13	49.83	0.006	-5.8343	0.0296
433	SLU 82	-0.68	0.09	49.83	0.0061	-5.8345	0.018
433	SLU 83	-0.7	0.14	50.32	0.006	-5.8851	0.0309
433	SLU 84	-0.69	0.09	50.31	0.0061	-5.8853	0.0192
433	SLE RA 1	-0.49	0.02	33.54	0.0031	-3.9508	0.0027
433	SLE RA 2	-0.49	-0.03	33.53	0.0032	-3.951	-0.0102
433	SLE RA 3	-0.5	0.02	34.06	0.0031	-4.0049	0.0039
433	SLE RA 4	-0.5	-0.01	34.05	0.0032	-4.005	-0.0039
433	SLE RA 5	-0.5	-0.03	33.86	0.0032	-3.9848	-0.0094
433	SLE RA 6	-0.51	0.03	34.38	0.0031	-4.0387	0.0047
433	SLE RA 7	-0.51	0	34.38	0.0032	-4.0388	-0.0031
433	SLE RA 8	-0.51	0.03	34.19	0.0031	-4.0185	0.0044
433	SLE RA 9	-0.5	0	34.19	0.0031	-4.0186	-0.0033
433	SLE RA 10	-0.5	0.01	35.95	0.004	-4.2229	-0.0004
433	SLE RA 11	-0.52	0.06	36.48	0.0039	-4.2768	0.0136
433	SLE RA 12	-0.51	0.03	36.47	0.004	-4.2769	0.0059
433	SLE RA 13	-0.51	0.01	36.28	0.004	-4.2568	0.0004
433	SLE RA 14	-0.52	0.07	36.8	0.0039	-4.3107	0.0145
433	SLE RA 15	-0.52	0.04	36.8	0.004	-4.3108	0.0067
433	SLE RA 16	-0.52	0.07	36.61	0.0039	-4.2905	0.0142
433	SLE RA 17	-0.52	0.04	36.61	0.0039	-4.2906	0.0064
433	SLE RA 18	-0.51	0.08	37	0.0042	-4.3393	0.0167
433	SLE RA 19	-0.51	0.05	36.99	0.0043	-4.3394	0.0089
433	SLE RA 20	-0.52	0.08	37.32	0.0042	-4.3731	0.0175
433	SLE RA 21	-0.52	0.05	37.32	0.0043	-4.3733	0.0098
433	SLE FR 1	-0.49	0.02	33.54	0.0031	-3.9508	0.0027
433	SLE FR 2	-0.49	0.01	33.54	0.0031	-3.9508	0.0001
433	SLE FR 3	-0.5	0.02	33.67	0.0031	-3.9643	0.0031
433	SLE FR 4	-0.5	0.03	34.58	0.0034	-4.0674	0.0043
433	SLE FR 5	-0.5	0.04	34.71	0.0034	-4.0809	0.0072
433	SLE FR 6	-0.5	0.05	35.27	0.0036	-4.145	0.0097
433	SLE QP 1	-0.49	0.02	33.54	0.0031	-3.9508	0.0027
433	SLE QP 2	-0.5	0.04	34.58	0.0034	-4.0673	0.0069
433	SLD 1	2.15	0.6	44.53	0.0024	-5.0614	0.1486
433	SLD 2	2.29	0.09	44.37	0.004	-5.0573	0.0228
433	SLD 3	2.01	-0.82	44	0.0055	-5.1271	-0.2058
433	SLD 4	2.15	-1.33	43.85	0.0072	-5.123	-0.3316
433	SLD 5	0.49	2.44	38.39	-0.002	-4.2666	0.6091
433	SLD 6	0.59	2.11	38.29	-0.0009	-4.2639	0.5269
433	SLD 7	0.01	-2.28	36.63	0.0086	-4.4856	-0.5722
433	SLD 8	0.1	-2.61	36.53	0.0097	-4.483	-0.6544
433	SLD 9	-1.1	2.68	32.62	-0.0029	-3.6517	0.6682
433	SLD 10	-1.01	2.35	32.52	-0.0018	-3.649	0.586
433	SLD 11	-1.59	-2.04	30.87	0.0077	-3.8707	-0.5131
433	SLD 12	-1.49	-2.37	30.77	0.0088	-3.868	-0.5953
433	SLD 13	-3.15	1.4	25.31	-0.0004	-3.0116	0.3454
433	SLD 14	-3.01	0.89	25.15	0.0013	-3.0076	0.2197
433	SLD 15	-3.29	-0.02	24.78	0.0028	-3.0774	-0.009
433	SLD 16	-3.15	-0.52	24.63	0.0044	-3.0733	-0.1347
433	SLV 1	5.71	1.29	57.87	0.0011	-6.3947	0.324
433	SLV 2	6.04	0.11	57.51	0.005	-6.3852	0.031
433	SLV 3	5.37	-1.92	56.65	0.0084	-6.5481	-0.4779
433	SLV 4	5.7	-3.1	56.29	0.0123	-6.5386	-0.7709
433	SLV 5	1.82	5.48	43.48	-0.0089	-4.5346	1.3685
433	SLV 6	2.03	4.72	43.25	-0.0064	-4.5285	1.1802
433	SLV 7	0.69	-5.21	39.4	0.0152	-5.0458	-1.3045
433	SLV 8	0.9	-5.97	39.17	0.0177	-5.0397	-1.4928
433	SLV 9	-1.9	6.04	29.98	-0.0109	-3.095	1.5067
433	SLV 10	-1.69	5.28	29.75	-0.0084	-3.0889	1.3184
433	SLV 11	-3.03	-4.64	25.9	0.0132	-3.6062	-1.1663
433	SLV 12	-2.82	-5.4	25.67	0.0157	-3.6001	-1.3546
433	SLV 13	-6.7	3.17	12.87	-0.0054	-1.596	0.7847
433	SLV 14	-6.37	1.99	12.51	-0.0015	-1.5865	0.4917
433	SLV 15	-7.04	-0.04	11.64	0.0018	-1.7494	-0.0172
433	SLV 16	-6.71	-1.22	11.28	0.0057	-1.7399	-0.3102
433	CRTFP Ux+	0	0	0	0	0	0
433	CRTFP Ux-	0	0	0	0	0	0
433	CRTFP Uy+	0	0	0	0	0	0
433	CRTFP Uy-	0	0	0	0	0	0
436	SLU 1	0.11	-0.06	36.71	-0.4355	11.2891	0.0219

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
436	SLU 2	0.12	-0.09	36.71	-0.4354	11.2883	0.0339
436	SLU 3	0.11	-0.05	37.59	-0.446	11.558	0.0181
436	SLU 4	0.12	-0.07	37.59	-0.4459	11.5575	0.0253
436	SLU 5	0.12	-0.09	37.24	-0.4418	11.4552	0.0336
436	SLU 6	0.12	-0.05	38.13	-0.4524	11.7249	0.0178
436	SLU 7	0.12	-0.07	38.12	-0.4524	11.7244	0.025
436	SLU 8	0.12	-0.06	37.79	-0.4484	11.6229	0.0213
436	SLU 9	0.12	-0.08	37.78	-0.4483	11.6224	0.0285
436	SLU 10	0.15	-0.04	41.46	-0.4908	12.7593	0.0147
436	SLU 11	0.14	0.01	42.34	-0.5014	13.029	-0.0011
436	SLU 12	0.15	-0.01	42.34	-0.5013	13.0285	0.006
436	SLU 13	0.15	-0.03	42	-0.4972	12.9261	0.0144
436	SLU 14	0.15	0.01	42.88	-0.5078	13.1959	-0.0015
436	SLU 15	0.15	-0.01	42.88	-0.5077	13.1954	0.0057
436	SLU 16	0.14	0	42.54	-0.5038	13.0938	0.0021
436	SLU 17	0.15	-0.02	42.54	-0.5037	13.0934	0.0093
436	SLU 18	0.15	0.02	43.5	-0.5146	13.3905	-0.0056
436	SLU 19	0.15	0	43.49	-0.5145	13.39	0.0016
436	SLU 20	0.15	0.02	44.03	-0.5211	13.5574	-0.0059
436	SLU 21	0.16	0	44.03	-0.521	13.5569	0.0013
436	SLU 22	0.13	0.04	40.76	-0.4827	12.523	-0.0105
436	SLU 23	0.14	0	40.75	-0.4826	12.5222	0.0015
436	SLU 24	0.13	0.05	41.64	-0.4932	12.7919	-0.0143
436	SLU 25	0.14	0.03	41.63	-0.4931	12.7914	-0.0071
436	SLU 26	0.14	0	41.29	-0.4891	12.6891	0.0012
436	SLU 27	0.14	0.05	42.17	-0.4997	12.9588	-0.0146
436	SLU 28	0.14	0.03	42.17	-0.4996	12.9583	-0.0074
436	SLU 29	0.13	0.04	41.83	-0.4957	12.8568	-0.0111
436	SLU 30	0.14	0.02	41.83	-0.4956	12.8563	-0.0039
436	SLU 31	0.16	0.06	45.5	-0.538	13.9931	-0.0177
436	SLU 32	0.16	0.1	46.39	-0.5486	14.2628	-0.0335
436	SLU 33	0.16	0.08	46.39	-0.5485	14.2624	-0.0263
436	SLU 34	0.17	0.06	46.04	-0.5444	14.16	-0.018
436	SLU 35	0.16	0.1	46.92	-0.555	14.4297	-0.0338
436	SLU 36	0.17	0.08	46.92	-0.555	14.4292	-0.0266
436	SLU 37	0.16	0.09	46.58	-0.551	14.3277	-0.0303
436	SLU 38	0.17	0.07	46.58	-0.551	14.3272	-0.0231
436	SLU 39	0.17	0.12	47.54	-0.5618	14.6244	-0.0379
436	SLU 40	0.17	0.1	47.54	-0.5618	14.6239	-0.0307
436	SLU 41	0.17	0.12	48.08	-0.5683	14.7912	-0.0382
436	SLU 42	0.18	0.1	48.08	-0.5682	14.7908	-0.031
436	SLU 43	0.14	-0.11	46.33	-0.55	14.2528	0.0396
436	SLU 44	0.14	-0.14	46.33	-0.5498	14.252	0.0516
436	SLU 45	0.14	-0.1	47.21	-0.5604	14.5217	0.0358
436	SLU 46	0.15	-0.12	47.21	-0.5604	14.5212	0.043
436	SLU 47	0.15	-0.14	46.87	-0.5563	14.4189	0.0513
436	SLU 48	0.14	-0.09	47.75	-0.5669	14.6886	0.0354
436	SLU 49	0.15	-0.11	47.75	-0.5668	14.6881	0.0426
436	SLU 50	0.14	-0.1	47.41	-0.5629	14.5866	0.039
436	SLU 51	0.15	-0.12	47.41	-0.5628	14.5861	0.0462
436	SLU 52	0.17	-0.08	51.08	-0.6052	15.723	0.0324
436	SLU 53	0.17	-0.04	51.96	-0.6158	15.9927	0.0165
436	SLU 54	0.17	-0.06	51.96	-0.6157	15.9922	0.0237
436	SLU 55	0.18	-0.08	51.62	-0.6117	15.8898	0.032
436	SLU 56	0.17	-0.04	52.5	-0.6223	16.1596	0.0162
436	SLU 57	0.18	-0.06	52.5	-0.6222	16.1591	0.0234
436	SLU 58	0.17	-0.05	52.16	-0.6183	16.0576	0.0197
436	SLU 59	0.18	-0.07	52.16	-0.6182	16.0571	0.0269
436	SLU 60	0.18	-0.03	53.12	-0.6291	16.3542	0.0121
436	SLU 61	0.18	-0.05	53.12	-0.629	16.3537	0.0193
436	SLU 62	0.18	-0.03	53.66	-0.6355	16.5211	0.0118
436	SLU 63	0.18	-0.05	53.66	-0.6355	16.5206	0.019
436	SLU 64	0.16	-0.01	50.38	-0.5972	15.4867	0.0072
436	SLU 65	0.16	-0.05	50.38	-0.5971	15.4859	0.0192
436	SLU 66	0.16	0	51.26	-0.6077	15.7556	0.0034
436	SLU 67	0.16	-0.02	51.26	-0.6076	15.7551	0.0106
436	SLU 68	0.16	-0.05	50.92	-0.6035	15.6528	0.0189
436	SLU 69	0.16	0	51.8	-0.6141	15.9225	0.0031
436	SLU 70	0.17	-0.02	51.8	-0.614	15.922	0.0103
436	SLU 71	0.16	-0.01	51.46	-0.6101	15.8205	0.0066
436	SLU 72	0.17	-0.03	51.46	-0.61	15.82	0.0138
436	SLU 73	0.19	0.01	55.13	-0.6524	16.9568	0
436	SLU 74	0.19	0.05	56.01	-0.663	17.2265	-0.0158
436	SLU 75	0.19	0.03	56.01	-0.663	17.2261	-0.0086
436	SLU 76	0.19	0.01	55.67	-0.6589	17.1237	-0.0003
436	SLU 77	0.19	0.05	56.55	-0.6695	17.3934	-0.0162
436	SLU 78	0.19	0.03	56.55	-0.6694	17.3929	-0.009
436	SLU 79	0.19	0.04	56.21	-0.6655	17.2914	-0.0126
436	SLU 80	0.19	0.02	56.21	-0.6654	17.2909	-0.0054
436	SLU 81	0.2	0.07	57.17	-0.6763	17.5881	-0.0203
436	SLU 82	0.2	0.05	57.17	-0.6762	17.5876	-0.0131
436	SLU 83	0.2	0.07	57.71	-0.6828	17.7549	-0.0206
436	SLU 84	0.2	0.05	57.71	-0.6827	17.7545	-0.0134
436	SLE RA 1	0.12	-0.03	37.86	-0.449	11.6417	0.0127
436	SLE RA 2	0.12	-0.05	37.86	-0.4489	11.6411	0.0207
436	SLE RA 3	0.12	-0.02	38.45	-0.456	11.8209	0.0101
436	SLE RA 4	0.12	-0.04	38.45	-0.4559	11.8206	0.0149
436	SLE RA 5	0.12	-0.05	38.22	-0.4532	11.7524	0.0205
436	SLE RA 6	0.12	-0.02	38.81	-0.4603	11.9322	0.0099
436	SLE RA 7	0.12	-0.04	38.81	-0.4602	11.9319	0.0147
436	SLE RA 8	0.12	-0.03	38.58	-0.4576	11.8642	0.0122
436	SLE RA 9	0.12	-0.04	38.58	-0.4576	11.8639	0.017
436	SLE RA 10	0.14	-0.02	41.03	-0.4858	12.6218	0.0078
436	SLE RA 11	0.14	0.01	41.62	-0.4929	12.8016	-0.0027
436	SLE RA 12	0.14	0	41.62	-0.4928	12.8012	0.0021
436	SLE RA 13	0.14	-0.02	41.39	-0.4901	12.733	0.0076
436	SLE RA 14	0.14	0.01	41.98	-0.4972	12.9128	-0.0029

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
436	SLE RA 15	0.14	0	41.98	-0.4972	12.9125	0.0019
436	SLE RA 16	0.14	0.01	41.75	-0.4945	12.8448	-0.0006
436	SLE RA 17	0.14	-0.01	41.75	-0.4945	12.8445	0.0042
436	SLE RA 18	0.14	0.02	42.39	-0.5017	13.0426	-0.0056
436	SLE RA 19	0.14	0.01	42.39	-0.5017	13.0422	-0.0008
436	SLE RA 20	0.14	0.02	42.75	-0.506	13.1538	-0.0059
436	SLE RA 21	0.15	0.01	42.75	-0.506	13.1535	-0.0011
436	SLE FR 1	0.12	-0.03	37.86	-0.449	11.6417	0.0127
436	SLE FR 2	0.12	-0.04	37.86	-0.449	11.6416	0.0143
436	SLE FR 3	0.12	-0.03	38.01	-0.4507	11.6862	0.0126
436	SLE FR 4	0.12	-0.02	39.22	-0.4648	12.0618	0.0088
436	SLE FR 5	0.12	-0.01	39.37	-0.4665	12.1065	0.0071
436	SLE FR 6	0.13	0	40.13	-0.4754	12.3421	0.0035
436	SLE QP 1	0.12	-0.03	37.86	-0.449	11.6417	0.0127
436	SLE QP 2	0.12	-0.01	39.22	-0.4648	12.062	0.0072
436	SLD 1	3.13	0.66	39.62	-0.4725	12.1369	-0.1262
436	SLD 2	3.28	0.69	39.66	-0.4734	12.141	-0.1352
436	SLD 3	2.97	-0.43	39.5	-0.469	12.1011	0.2518
436	SLD 4	3.12	-0.39	39.54	-0.4699	12.1052	0.2428
436	SLD 5	1.24	1.82	39.52	-0.4722	12.1381	-0.6046
436	SLD 6	1.34	1.84	39.54	-0.4728	12.1408	-0.6104
436	SLD 7	0.71	-1.78	39.12	-0.4606	12.0186	0.6555
436	SLD 8	0.8	-1.76	39.14	-0.4612	12.0213	0.6496
436	SLD 9	-0.56	1.73	39.3	-0.4684	12.1026	-0.6353
436	SLD 10	-0.46	1.75	39.33	-0.469	12.1053	-0.6411
436	SLD 11	-1.09	-1.87	38.9	-0.4568	11.9831	0.6248
436	SLD 12	-1	-1.85	38.93	-0.4574	11.9858	0.6189
436	SLD 13	-2.87	0.36	38.9	-0.4597	12.0187	-0.2285
436	SLD 14	-2.72	0.4	38.94	-0.4606	12.0228	-0.2375
436	SLD 15	-3.03	-0.72	38.78	-0.4562	11.9829	0.1495
436	SLD 16	-2.88	-0.68	38.82	-0.4571	11.987	0.1406
436	SLV 1	7.16	1.51	40.15	-0.4827	12.2374	-0.2917
436	SLV 2	7.5	1.59	40.24	-0.4848	12.2469	-0.3126
436	SLV 3	6.78	-0.94	39.87	-0.4748	12.1537	0.5651
436	SLV 4	7.13	-0.86	39.96	-0.4768	12.1633	0.5442
436	SLV 5	2.75	4.15	39.91	-0.4819	12.2398	-1.3785
436	SLV 6	2.97	4.2	39.97	-0.4832	12.246	-1.3919
436	SLV 7	1.49	-4.02	38.98	-0.4554	11.961	1.4777
436	SLV 8	1.71	-3.97	39.04	-0.4567	11.9671	1.4643
436	SLV 9	-1.46	3.94	39.41	-0.4729	12.1568	-1.4499
436	SLV 10	-1.24	3.99	39.47	-0.4742	12.1629	-1.4633
436	SLV 11	-2.72	-4.23	38.48	-0.4464	11.8779	1.4062
436	SLV 12	-2.5	-4.18	38.54	-0.4478	11.8841	1.3928
436	SLV 13	-6.88	0.83	38.48	-0.4528	11.9606	-0.5299
436	SLV 14	-6.53	0.91	38.57	-0.4549	11.9702	-0.5508
436	SLV 15	-7.26	-1.62	38.2	-0.4448	11.877	0.327
436	SLV 16	-6.91	-1.54	38.29	-0.4469	11.8865	0.3061
436	CRTFP Ux+	0	0	0	0	0	0
436	CRTFP Ux-	0	0	0	0	0	0
436	CRTFP Uy+	0	0	0	0	0	0
436	CRTFP Uy-	0	0	0	0	0	0
440	SLU 1	-0.63	-1.08	59.83	-0.0139	-0.2206	-0.0191
440	SLU 2	-0.61	-1.16	59.83	-0.0137	-0.2214	-0.0184
440	SLU 3	-0.64	-1.1	61.25	-0.0142	-0.2263	-0.0197
440	SLU 4	-0.64	-1.14	61.25	-0.014	-0.2268	-0.0193
440	SLU 5	-0.63	-1.17	60.72	-0.0139	-0.2244	-0.0188
440	SLU 6	-0.66	-1.11	62.15	-0.0145	-0.2293	-0.0201
440	SLU 7	-0.65	-1.16	62.15	-0.0143	-0.2297	-0.0197
440	SLU 8	-0.65	-1.11	61.62	-0.0145	-0.2266	-0.0198
440	SLU 9	-0.65	-1.16	61.62	-0.0143	-0.227	-0.0194
440	SLU 10	-0.62	-1.2	66.85	-0.0133	-0.2598	-0.0207
440	SLU 11	-0.65	-1.14	68.28	-0.0139	-0.2647	-0.022
440	SLU 12	-0.65	-1.18	68.28	-0.0137	-0.2652	-0.0216
440	SLU 13	-0.64	-1.21	67.75	-0.0136	-0.2628	-0.0211
440	SLU 14	-0.67	-1.15	69.17	-0.0141	-0.2677	-0.0224
440	SLU 15	-0.66	-1.2	69.17	-0.014	-0.2682	-0.022
440	SLU 16	-0.66	-1.15	68.65	-0.0141	-0.265	-0.0221
440	SLU 17	-0.66	-1.19	68.65	-0.014	-0.2655	-0.0217
440	SLU 18	-0.64	-1.14	69.86	-0.0134	-0.2755	-0.0223
440	SLU 19	-0.63	-1.19	69.86	-0.0133	-0.276	-0.0219
440	SLU 20	-0.65	-1.15	70.76	-0.0137	-0.2785	-0.0227
440	SLU 21	-0.65	-1.2	70.76	-0.0135	-0.279	-0.0223
440	SLU 22	-0.69	-1.07	66.59	-0.0133	-0.2442	-0.0224
440	SLU 23	-0.68	-1.15	66.59	-0.013	-0.245	-0.0218
440	SLU 24	-0.71	-1.09	68.01	-0.0136	-0.2499	-0.0231
440	SLU 25	-0.7	-1.13	68.01	-0.0134	-0.2503	-0.0227
440	SLU 26	-0.69	-1.16	67.48	-0.0133	-0.248	-0.0221
440	SLU 27	-0.72	-1.1	68.91	-0.0138	-0.2528	-0.0234
440	SLU 28	-0.71	-1.14	68.91	-0.0137	-0.2533	-0.023
440	SLU 29	-0.72	-1.1	68.38	-0.0139	-0.2501	-0.0232
440	SLU 30	-0.71	-1.14	68.38	-0.0137	-0.2506	-0.0228
440	SLU 31	-0.69	-1.19	73.61	-0.0126	-0.2834	-0.024
440	SLU 32	-0.72	-1.13	75.03	-0.0132	-0.2883	-0.0253
440	SLU 33	-0.71	-1.17	75.03	-0.013	-0.2888	-0.0249
440	SLU 34	-0.7	-1.2	74.51	-0.0129	-0.2864	-0.0244
440	SLU 35	-0.73	-1.14	75.93	-0.0135	-0.2913	-0.0257
440	SLU 36	-0.72	-1.18	75.93	-0.0133	-0.2917	-0.0253
440	SLU 37	-0.73	-1.14	75.4	-0.0135	-0.2885	-0.0255
440	SLU 38	-0.72	-1.18	75.4	-0.0133	-0.289	-0.0251
440	SLU 39	-0.7	-1.13	76.62	-0.0128	-0.2991	-0.0257
440	SLU 40	-0.7	-1.17	76.62	-0.0126	-0.2996	-0.0253
440	SLU 41	-0.72	-1.14	77.52	-0.0131	-0.302	-0.0261
440	SLU 42	-0.71	-1.19	77.52	-0.0129	-0.3025	-0.0256
440	SLU 43	-0.79	-1.41	75.46	-0.0183	-0.2787	-0.0237
440	SLU 44	-0.78	-1.49	75.46	-0.0181	-0.2795	-0.023
440	SLU 45	-0.81	-1.43	76.88	-0.0186	-0.2844	-0.0243
440	SLU 46	-0.8	-1.47	76.88	-0.0185	-0.2849	-0.0239

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
440	SLU 47	-0.79	-1.5	76.36	-0.0183	-0.2825	-0.0234
440	SLU 48	-0.82	-1.44	77.78	-0.0189	-0.2874	-0.0247
440	SLU 49	-0.82	-1.49	77.78	-0.0187	-0.2878	-0.0243
440	SLU 50	-0.82	-1.44	77.25	-0.0189	-0.2847	-0.0244
440	SLU 51	-0.81	-1.48	77.25	-0.0187	-0.2851	-0.024
440	SLU 52	-0.79	-1.53	82.48	-0.0177	-0.3179	-0.0253
440	SLU 53	-0.82	-1.47	83.91	-0.0183	-0.3228	-0.0266
440	SLU 54	-0.81	-1.51	83.91	-0.0181	-0.3233	-0.0262
440	SLU 55	-0.8	-1.54	83.38	-0.018	-0.3209	-0.0256
440	SLU 56	-0.83	-1.48	84.81	-0.0185	-0.3258	-0.0269
440	SLU 57	-0.82	-1.53	84.81	-0.0184	-0.3263	-0.0265
440	SLU 58	-0.83	-1.48	84.28	-0.0186	-0.3231	-0.0267
440	SLU 59	-0.82	-1.52	84.28	-0.0184	-0.3236	-0.0263
440	SLU 60	-0.81	-1.47	85.5	-0.0178	-0.3336	-0.0269
440	SLU 61	-0.8	-1.52	85.5	-0.0177	-0.3341	-0.0265
440	SLU 62	-0.82	-1.48	86.39	-0.0181	-0.3366	-0.0273
440	SLU 63	-0.81	-1.53	86.39	-0.0179	-0.3371	-0.0269
440	SLU 64	-0.86	-1.4	82.22	-0.0177	-0.3023	-0.027
440	SLU 65	-0.84	-1.48	82.22	-0.0174	-0.3031	-0.0263
440	SLU 66	-0.87	-1.42	83.64	-0.018	-0.308	-0.0276
440	SLU 67	-0.87	-1.46	83.64	-0.0178	-0.3085	-0.0272
440	SLU 68	-0.86	-1.49	83.11	-0.0177	-0.3061	-0.0267
440	SLU 69	-0.89	-1.43	84.54	-0.0183	-0.3109	-0.028
440	SLU 70	-0.88	-1.47	84.54	-0.0181	-0.3114	-0.0276
440	SLU 71	-0.88	-1.43	84.01	-0.0183	-0.3082	-0.0278
440	SLU 72	-0.88	-1.47	84.01	-0.0181	-0.3087	-0.0274
440	SLU 73	-0.85	-1.52	89.24	-0.0171	-0.3415	-0.0286
440	SLU 74	-0.88	-1.46	90.67	-0.0176	-0.3464	-0.0299
440	SLU 75	-0.88	-1.5	90.67	-0.0174	-0.3469	-0.0295
440	SLU 76	-0.87	-1.53	90.14	-0.0173	-0.3445	-0.029
440	SLU 77	-0.9	-1.47	91.56	-0.0179	-0.3494	-0.0303
440	SLU 78	-0.89	-1.51	91.56	-0.0177	-0.3498	-0.0299
440	SLU 79	-0.89	-1.47	91.04	-0.0179	-0.3466	-0.03
440	SLU 80	-0.89	-1.51	91.04	-0.0177	-0.3471	-0.0296
440	SLU 81	-0.87	-1.46	92.25	-0.0172	-0.3572	-0.0302
440	SLU 82	-0.86	-1.5	92.25	-0.017	-0.3577	-0.0298
440	SLU 83	-0.88	-1.47	93.15	-0.0175	-0.3601	-0.0306
440	SLU 84	-0.88	-1.52	93.15	-0.0173	-0.3606	-0.0302
440	SLE RA 1	-0.64	-1.08	61.76	-0.0138	-0.2274	-0.02
440	SLE RA 2	-0.64	-1.13	61.76	-0.0136	-0.2279	-0.0196
440	SLE RA 3	-0.66	-1.09	62.71	-0.0139	-0.2311	-0.0205
440	SLE RA 4	-0.65	-1.12	62.71	-0.0138	-0.2315	-0.0202
440	SLE RA 5	-0.65	-1.14	62.36	-0.0138	-0.2299	-0.0198
440	SLE RA 6	-0.66	-1.1	63.31	-0.0141	-0.2331	-0.0207
440	SLE RA 7	-0.66	-1.13	63.31	-0.014	-0.2334	-0.0204
440	SLE RA 8	-0.66	-1.1	62.95	-0.0141	-0.2313	-0.0206
440	SLE RA 9	-0.66	-1.13	62.95	-0.014	-0.2316	-0.0203
440	SLE RA 10	-0.64	-1.16	66.44	-0.0133	-0.2535	-0.0211
440	SLE RA 11	-0.66	-1.12	67.39	-0.0137	-0.2568	-0.022
440	SLE RA 12	-0.66	-1.15	67.39	-0.0136	-0.2571	-0.0217
440	SLE RA 13	-0.65	-1.17	67.04	-0.0135	-0.2555	-0.0214
440	SLE RA 14	-0.67	-1.13	67.99	-0.0139	-0.2587	-0.0222
440	SLE RA 15	-0.67	-1.15	67.99	-0.0138	-0.2591	-0.022
440	SLE RA 16	-0.67	-1.13	67.64	-0.0139	-0.2569	-0.0221
440	SLE RA 17	-0.66	-1.15	67.64	-0.0138	-0.2572	-0.0218
440	SLE RA 18	-0.65	-1.12	68.45	-0.0134	-0.2639	-0.0222
440	SLE RA 19	-0.65	-1.15	68.45	-0.0133	-0.2643	-0.0219
440	SLE RA 20	-0.66	-1.13	69.05	-0.0136	-0.2659	-0.0225
440	SLE RA 21	-0.66	-1.16	69.05	-0.0135	-0.2662	-0.0222
440	SLE FR 1	-0.64	-1.08	61.76	-0.0138	-0.2274	-0.02
440	SLE FR 2	-0.64	-1.09	61.76	-0.0137	-0.2275	-0.02
440	SLE FR 3	-0.65	-1.08	62	-0.0138	-0.2281	-0.0201
440	SLE FR 4	-0.65	-1.1	63.77	-0.0136	-0.2384	-0.0206
440	SLE FR 5	-0.65	-1.1	64.01	-0.0137	-0.2391	-0.0208
440	SLE FR 6	-0.65	-1.1	65.1	-0.0136	-0.2456	-0.0211
440	SLE QP 1	-0.64	-1.08	61.76	-0.0138	-0.2274	-0.02
440	SLE QP 2	-0.65	-1.09	63.77	-0.0137	-0.2383	-0.0207
440	SLD 1	4.81	-0.68	69.45	-0.0203	-0.0526	-0.0004
440	SLD 2	5.05	-1.02	69.36	-0.0189	-0.0569	0.0115
440	SLD 3	4.52	-2.4	69.16	-0.0154	-0.0849	-0.0083
440	SLD 4	4.76	-2.75	69.07	-0.0139	-0.0893	0.0035
440	SLD 5	1.39	1.71	65.94	-0.0234	-0.1328	-0.0046
440	SLD 6	1.55	1.48	65.88	-0.0225	-0.1357	0.0032
440	SLD 7	0.42	-4.03	64.95	-0.0069	-0.2406	-0.0312
440	SLD 8	0.57	-4.26	64.89	-0.006	-0.2434	-0.0235
440	SLD 9	-1.87	2.08	62.64	-0.0213	-0.2332	-0.0179
440	SLD 10	-1.71	1.85	62.58	-0.0204	-0.2361	-0.0102
440	SLD 11	-2.84	-3.66	61.66	-0.0049	-0.341	-0.0445
440	SLD 12	-2.69	-3.89	61.6	-0.0039	-0.3439	-0.0368
440	SLD 13	-6.06	0.56	58.46	-0.0134	-0.3874	-0.0449
440	SLD 14	-5.82	0.21	58.37	-0.0119	-0.3918	-0.033
440	SLD 15	-6.35	-1.16	58.17	-0.0084	-0.4197	-0.0528
440	SLD 16	-6.11	-1.51	58.08	-0.007	-0.4241	-0.041
440	SLV 1	12.13	-0.19	77.07	-0.0291	0.1957	0.0268
440	SLV 2	12.69	-1	76.86	-0.0257	0.1855	0.0544
440	SLV 3	11.45	-4.08	76.38	-0.0179	0.122	0.0084
440	SLV 4	12.01	-4.89	76.17	-0.0145	0.1118	0.0359
440	SLV 5	4.12	5.23	68.84	-0.0359	0.0054	0.0168
440	SLV 6	4.48	4.71	68.71	-0.0337	-0.0012	0.0345
440	SLV 7	1.85	-7.76	66.54	0.0015	-0.2402	-0.0447
440	SLV 8	2.21	-8.28	66.41	0.0037	-0.2468	-0.027
440	SLV 9	-3.51	6.1	61.13	-0.031	-0.2299	-0.0144
440	SLV 10	-3.15	5.58	60.99	-0.0288	-0.2364	0.0033
440	SLV 11	-5.78	-6.89	58.83	0.0064	-0.4755	-0.0759
440	SLV 12	-5.42	-7.41	58.69	0.0086	-0.482	-0.0582
440	SLV 13	-13.3	2.71	51.36	-0.0128	-0.5885	-0.0773
440	SLV 14	-12.74	1.9	51.15	-0.0094	-0.5986	-0.0498

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
440	SLV 15	-13.98	-1.19	50.67	-0.0016	-0.6621	-0.0957
440	SLV 16	-13.42	-2	50.46	0.0018	-0.6723	-0.0682
440	CRTFP Ux+	0	0	0	0	0	0
440	CRTFP Ux-	0	0	0	0	0	0
444	SLU 1	0.51	-0.56	61.05	-0.0207	0.2928	-0.0156
444	SLU 2	0.52	-0.6	61.06	-0.0205	0.2934	-0.015
444	SLU 3	0.52	-0.57	62.5	-0.0213	0.3	-0.0159
444	SLU 4	0.53	-0.59	62.51	-0.0212	0.3004	-0.0156
444	SLU 5	0.53	-0.61	61.96	-0.021	0.2969	-0.0153
444	SLU 6	0.53	-0.58	63.41	-0.0217	0.3036	-0.0162
444	SLU 7	0.54	-0.6	63.41	-0.0216	0.3039	-0.0159
444	SLU 8	0.52	-0.59	62.85	-0.0216	0.2999	-0.0162
444	SLU 9	0.53	-0.61	62.86	-0.0215	0.3002	-0.0158
444	SLU 10	0.54	-0.56	68.38	-0.0217	0.3365	-0.0169
444	SLU 11	0.54	-0.53	69.83	-0.0224	0.3432	-0.0178
444	SLU 12	0.55	-0.56	69.84	-0.0223	0.3435	-0.0175
444	SLU 13	0.55	-0.58	69.28	-0.0221	0.34	-0.0172
444	SLU 14	0.55	-0.55	70.73	-0.0228	0.3467	-0.0181
444	SLU 15	0.56	-0.57	70.74	-0.0228	0.347	-0.0178
444	SLU 16	0.55	-0.56	70.17	-0.0227	0.343	-0.0181
444	SLU 17	0.55	-0.58	70.18	-0.0226	0.3433	-0.0178
444	SLU 18	0.54	-0.51	71.51	-0.0223	0.3544	-0.0183
444	SLU 19	0.54	-0.54	71.52	-0.0222	0.3548	-0.018
444	SLU 20	0.55	-0.53	72.41	-0.0227	0.358	-0.0186
444	SLU 21	0.55	-0.55	72.42	-0.0227	0.3583	-0.0183
444	SLU 22	0.56	-0.49	68.05	-0.0215	0.3152	-0.0166
444	SLU 23	0.57	-0.53	68.06	-0.0213	0.3158	-0.016
444	SLU 24	0.58	-0.5	69.5	-0.0221	0.3224	-0.0169
444	SLU 25	0.58	-0.52	69.51	-0.022	0.3228	-0.0166
444	SLU 26	0.58	-0.54	68.96	-0.0218	0.3193	-0.0163
444	SLU 27	0.59	-0.51	70.41	-0.0225	0.326	-0.0172
444	SLU 28	0.59	-0.53	70.41	-0.0224	0.3263	-0.0169
444	SLU 29	0.58	-0.52	69.85	-0.0224	0.3223	-0.0172
444	SLU 30	0.59	-0.54	69.86	-0.0223	0.3226	-0.0168
444	SLU 31	0.6	-0.49	75.38	-0.0225	0.3589	-0.0179
444	SLU 32	0.6	-0.46	76.83	-0.0232	0.3656	-0.0188
444	SLU 33	0.61	-0.49	76.84	-0.0231	0.3659	-0.0185
444	SLU 34	0.61	-0.51	76.28	-0.0229	0.3624	-0.0182
444	SLU 35	0.61	-0.48	77.73	-0.0236	0.3691	-0.0191
444	SLU 36	0.62	-0.5	77.74	-0.0235	0.3694	-0.0188
444	SLU 37	0.6	-0.49	77.17	-0.0235	0.3654	-0.0191
444	SLU 38	0.61	-0.51	77.18	-0.0234	0.3657	-0.0188
444	SLU 39	0.6	-0.44	78.51	-0.0231	0.3768	-0.0193
444	SLU 40	0.6	-0.47	78.52	-0.023	0.3772	-0.019
444	SLU 41	0.6	-0.46	79.41	-0.0235	0.3804	-0.0196
444	SLU 42	0.61	-0.48	79.42	-0.0234	0.3807	-0.0193
444	SLU 43	0.64	-0.75	76.96	-0.0266	0.373	-0.0199
444	SLU 44	0.65	-0.79	76.97	-0.0265	0.3735	-0.0194
444	SLU 45	0.65	-0.76	78.42	-0.0272	0.3802	-0.0203
444	SLU 46	0.66	-0.78	78.42	-0.0271	0.3805	-0.0199
444	SLU 47	0.66	-0.8	77.87	-0.0269	0.377	-0.0197
444	SLU 48	0.66	-0.77	79.32	-0.0277	0.3837	-0.0206
444	SLU 49	0.67	-0.8	79.33	-0.0276	0.384	-0.0202
444	SLU 50	0.65	-0.78	78.76	-0.0275	0.38	-0.0205
444	SLU 51	0.66	-0.8	78.77	-0.0274	0.3804	-0.0202
444	SLU 52	0.67	-0.76	84.3	-0.0276	0.4166	-0.0213
444	SLU 53	0.68	-0.73	85.74	-0.0283	0.4233	-0.0222
444	SLU 54	0.68	-0.75	85.75	-0.0282	0.4236	-0.0218
444	SLU 55	0.68	-0.77	85.2	-0.028	0.4202	-0.0216
444	SLU 56	0.68	-0.74	86.65	-0.0288	0.4268	-0.0225
444	SLU 57	0.69	-0.76	86.65	-0.0287	0.4272	-0.0221
444	SLU 58	0.68	-0.75	86.09	-0.0286	0.4232	-0.0224
444	SLU 59	0.68	-0.77	86.09	-0.0286	0.4235	-0.0221
444	SLU 60	0.67	-0.71	87.43	-0.0282	0.4346	-0.0227
444	SLU 61	0.68	-0.73	87.43	-0.0281	0.4349	-0.0223
444	SLU 62	0.68	-0.72	88.33	-0.0287	0.4381	-0.0229
444	SLU 63	0.69	-0.74	88.33	-0.0286	0.4384	-0.0226
444	SLU 64	0.7	-0.68	83.96	-0.0274	0.3954	-0.0209
444	SLU 65	0.71	-0.72	83.97	-0.0273	0.3959	-0.0204
444	SLU 66	0.71	-0.69	85.42	-0.028	0.4026	-0.0213
444	SLU 67	0.72	-0.71	85.42	-0.0279	0.4029	-0.0209
444	SLU 68	0.72	-0.73	84.87	-0.0277	0.3995	-0.0207
444	SLU 69	0.72	-0.7	86.32	-0.0284	0.4061	-0.0216
444	SLU 70	0.73	-0.73	86.33	-0.0284	0.4065	-0.0212
444	SLU 71	0.71	-0.71	85.76	-0.0283	0.4025	-0.0215
444	SLU 72	0.72	-0.73	85.77	-0.0282	0.4028	-0.0212
444	SLU 73	0.73	-0.69	91.3	-0.0284	0.4391	-0.0223
444	SLU 74	0.73	-0.66	92.74	-0.0291	0.4457	-0.0232
444	SLU 75	0.74	-0.68	92.75	-0.029	0.4461	-0.0228
444	SLU 76	0.74	-0.7	92.2	-0.0288	0.4426	-0.0226
444	SLU 77	0.74	-0.67	93.65	-0.0296	0.4493	-0.0235
444	SLU 78	0.75	-0.69	93.65	-0.0295	0.4496	-0.0231
444	SLU 79	0.73	-0.68	93.09	-0.0294	0.4456	-0.0234
444	SLU 80	0.74	-0.7	93.09	-0.0293	0.4459	-0.0231
444	SLU 81	0.73	-0.64	94.43	-0.029	0.457	-0.0236
444	SLU 82	0.73	-0.66	94.43	-0.0289	0.4573	-0.0233
444	SLU 83	0.74	-0.65	95.33	-0.0295	0.4605	-0.0239
444	SLU 84	0.74	-0.67	95.33	-0.0294	0.4609	-0.0236
444	SLE RA 1	0.52	-0.54	63.05	-0.0209	0.2992	-0.0159
444	SLE RA 2	0.53	-0.56	63.05	-0.0208	0.2996	-0.0155
444	SLE RA 3	0.53	-0.54	64.02	-0.0213	0.304	-0.0161
444	SLE RA 4	0.54	-0.56	64.02	-0.0212	0.3042	-0.0159
444	SLE RA 5	0.54	-0.57	63.65	-0.0211	0.3019	-0.0157
444	SLE RA 6	0.54	-0.55	64.62	-0.0216	0.3064	-0.0163
444	SLE RA 7	0.54	-0.57	64.62	-0.0215	0.3066	-0.0161
444	SLE RA 8	0.53	-0.56	64.25	-0.0215	0.3039	-0.0163
444	SLE RA 9	0.54	-0.58	64.25	-0.0215	0.3041	-0.016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
444	SLE RA 10	0.54	-0.54	67.94	-0.0216	0.3283	-0.0168
444	SLE RA 11	0.55	-0.52	68.9	-0.0221	0.3328	-0.0174
444	SLE RA 12	0.55	-0.54	68.91	-0.022	0.333	-0.0172
444	SLE RA 13	0.55	-0.55	68.54	-0.0219	0.3307	-0.017
444	SLE RA 14	0.55	-0.53	69.5	-0.0224	0.3351	-0.0176
444	SLE RA 15	0.56	-0.55	69.51	-0.0223	0.3354	-0.0174
444	SLE RA 16	0.55	-0.54	69.13	-0.0223	0.3327	-0.0175
444	SLE RA 17	0.55	-0.55	69.14	-0.0222	0.3329	-0.0173
444	SLE RA 18	0.54	-0.51	70.02	-0.022	0.3403	-0.0177
444	SLE RA 19	0.55	-0.52	70.03	-0.0219	0.3405	-0.0175
444	SLE RA 20	0.55	-0.52	70.62	-0.0223	0.3426	-0.0179
444	SLE RA 21	0.55	-0.53	70.63	-0.0222	0.3429	-0.0177
444	SLE FR 1	0.52	-0.54	63.05	-0.0209	0.2992	-0.0159
444	SLE FR 2	0.52	-0.54	63.05	-0.0209	0.2993	-0.0158
444	SLE FR 3	0.52	-0.54	63.29	-0.021	0.3002	-0.016
444	SLE FR 4	0.53	-0.54	65.14	-0.0212	0.3116	-0.0163
444	SLE FR 5	0.53	-0.53	65.38	-0.0214	0.3125	-0.0165
444	SLE FR 6	0.53	-0.52	66.54	-0.0215	0.3198	-0.0168
444	SLE QP 1	0.52	-0.54	63.05	-0.0209	0.2992	-0.0159
444	SLE QP 2	0.53	-0.53	65.14	-0.0212	0.3115	-0.0164
444	SLD 1	5.88	0.71	60.41	-0.0175	0.4007	0.018
444	SLD 2	6.13	1.08	60.59	-0.0196	0.3938	0.0297
444	SLD 3	5.59	-0.91	60.13	-0.0117	0.4253	0.0107
444	SLD 4	5.85	-0.53	60.32	-0.0138	0.4184	0.0224
444	SLD 5	2.52	2.23	64.1	-0.0285	0.3021	0.0029
444	SLD 6	2.69	2.47	64.22	-0.0299	0.2976	0.0105
444	SLD 7	1.57	-3.17	63.19	-0.0092	0.3843	-0.0214
444	SLD 8	1.74	-2.92	63.31	-0.0106	0.3798	-0.0138
444	SLD 9	-0.68	1.86	66.97	-0.0319	0.2433	-0.0191
444	SLD 10	-0.51	2.1	67.09	-0.0333	0.2388	-0.0114
444	SLD 11	-1.63	-3.54	66.06	-0.0126	0.3255	-0.0434
444	SLD 12	-1.46	-3.29	66.18	-0.014	0.321	-0.0357
444	SLD 13	-4.79	-0.53	69.96	-0.0287	0.2047	-0.0553
444	SLD 14	-4.53	-0.15	70.15	-0.0308	0.1977	-0.0436
444	SLD 15	-5.08	-2.15	69.69	-0.0229	0.2293	-0.0625
444	SLD 16	-4.82	-1.77	69.87	-0.025	0.2224	-0.0509
444	SLV 1	13.04	2.32	54.06	-0.0123	0.5206	0.0642
444	SLV 2	13.64	3.2	54.49	-0.0172	0.5044	0.0914
444	SLV 3	12.38	-1.36	53.42	0.0009	0.5769	0.0472
444	SLV 4	12.98	-0.48	53.85	-0.004	0.5608	0.0744
444	SLV 5	5.18	5.75	62.71	-0.0377	0.2916	0.029
444	SLV 6	5.57	6.32	62.98	-0.0409	0.2812	0.0465
444	SLV 7	2.98	-6.51	60.58	0.0063	0.4794	-0.0279
444	SLV 8	3.36	-5.95	60.86	0.0031	0.469	-0.0104
444	SLV 9	-2.31	4.88	69.42	-0.0456	0.1541	-0.0225
444	SLV 10	-1.92	5.45	69.69	-0.0488	0.1437	-0.005
444	SLV 11	-4.51	-7.38	67.3	-0.0016	0.3419	-0.0793
444	SLV 12	-4.12	-6.81	67.57	-0.0048	0.3315	-0.0618
444	SLV 13	-11.92	-0.58	76.43	-0.0385	0.0623	-0.1072
444	SLV 14	-11.32	0.3	76.86	-0.0434	0.0462	-0.08
444	SLV 15	-12.58	-4.26	75.79	-0.0253	0.1187	-0.1243
444	SLV 16	-11.98	-3.38	76.22	-0.0302	0.1025	-0.097
444	CRTFP Ux+	0	0	0	0	0	0
444	CRTFP Ux-	0	0	0	0	0	0
444	CRTFP Uy+	0	0	0	0	0	0
444	CRTFP Uy-	0	0	0	0	0	0
445	SLU 1	0.51	0.26	36.81	0.0308	8.2896	-0.0949
445	SLU 2	0.51	0.24	36.81	0.0308	8.292	-0.0859
445	SLU 3	0.52	0.27	37.69	0.0315	8.4762	-0.0963
445	SLU 4	0.52	0.25	37.69	0.0316	8.4777	-0.0908
445	SLU 5	0.52	0.23	37.36	0.0313	8.4079	-0.0844
445	SLU 6	0.53	0.26	38.24	0.032	8.5921	-0.0948
445	SLU 7	0.53	0.25	38.24	0.032	8.5935	-0.0893
445	SLU 8	0.52	0.26	37.91	0.0317	8.5213	-0.092
445	SLU 9	0.53	0.24	37.91	0.0317	8.5228	-0.0865
445	SLU 10	0.53	0.34	40.97	0.0352	9.2096	-0.122
445	SLU 11	0.54	0.37	41.84	0.0359	9.3938	-0.1323
445	SLU 12	0.54	0.35	41.85	0.036	9.3953	-0.1269
445	SLU 13	0.54	0.34	41.52	0.0357	9.3255	-0.1205
445	SLU 14	0.55	0.37	42.39	0.0364	9.5097	-0.1308
445	SLU 15	0.55	0.35	42.4	0.0364	9.5111	-0.1254
445	SLU 16	0.54	0.36	42.06	0.0361	9.4389	-0.128
445	SLU 17	0.55	0.34	42.07	0.0361	9.4404	-0.1226
445	SLU 18	0.54	0.41	42.74	0.0371	9.6005	-0.1465
445	SLU 19	0.54	0.39	42.74	0.0371	9.6019	-0.1411
445	SLU 20	0.54	0.41	43.29	0.0375	9.7163	-0.145
445	SLU 21	0.55	0.39	43.3	0.0375	9.7178	-0.1396
445	SLU 22	0.56	0.36	40.95	0.0352	9.1964	-0.1299
445	SLU 23	0.56	0.34	40.96	0.0353	9.1988	-0.1209
445	SLU 24	0.57	0.37	41.84	0.036	9.383	-0.1312
445	SLU 25	0.57	0.35	41.84	0.036	9.3845	-0.1258
445	SLU 26	0.57	0.33	41.51	0.0357	9.3147	-0.1194
445	SLU 27	0.58	0.36	42.39	0.0364	9.4989	-0.1297
445	SLU 28	0.58	0.35	42.39	0.0364	9.5003	-0.1243
445	SLU 29	0.57	0.35	42.06	0.0361	9.4281	-0.1269
445	SLU 30	0.57	0.34	42.06	0.0361	9.4296	-0.1215
445	SLU 31	0.58	0.44	45.12	0.0397	10.1165	-0.1569
445	SLU 32	0.59	0.47	45.99	0.0404	10.3006	-0.1673
445	SLU 33	0.59	0.45	46	0.0404	10.3021	-0.1619
445	SLU 34	0.59	0.44	45.67	0.0401	10.2323	-0.1555
445	SLU 35	0.6	0.46	46.54	0.0408	10.4165	-0.1658
445	SLU 36	0.6	0.45	46.55	0.0408	10.4179	-0.1604
445	SLU 37	0.59	0.46	46.21	0.0405	10.3457	-0.163
445	SLU 38	0.59	0.44	46.22	0.0405	10.3472	-0.1576
445	SLU 39	0.58	0.51	46.89	0.0415	10.5073	-0.1814
445	SLU 40	0.59	0.49	46.89	0.0416	10.5087	-0.176
445	SLU 41	0.59	0.51	47.44	0.042	10.6231	-0.1799

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
445	SLU 42	0.59	0.49	47.45	0.042	10.6246	-0.1745
445	SLU 43	0.65	0.31	46.42	0.0385	10.4656	-0.1114
445	SLU 44	0.65	0.28	46.43	0.0385	10.468	-0.1024
445	SLU 45	0.66	0.31	47.31	0.0392	10.6522	-0.1128
445	SLU 46	0.66	0.3	47.31	0.0393	10.6536	-0.1073
445	SLU 47	0.66	0.28	46.98	0.039	10.5838	-0.1009
445	SLU 48	0.67	0.31	47.86	0.0397	10.768	-0.1113
445	SLU 49	0.67	0.29	47.86	0.0397	10.7695	-0.1058
445	SLU 50	0.66	0.3	47.53	0.0394	10.6973	-0.1084
445	SLU 51	0.66	0.28	47.53	0.0394	10.6987	-0.103
445	SLU 52	0.67	0.39	50.59	0.043	11.3856	-0.1385
445	SLU 53	0.68	0.41	51.46	0.0436	11.5698	-0.1488
445	SLU 54	0.68	0.4	51.46	0.0437	11.5712	-0.1434
445	SLU 55	0.68	0.38	51.14	0.0434	11.5015	-0.137
445	SLU 56	0.69	0.41	52.01	0.0441	11.6857	-0.1473
445	SLU 57	0.69	0.4	52.02	0.0441	11.6871	-0.1419
445	SLU 58	0.68	0.4	51.68	0.0438	11.6149	-0.1445
445	SLU 59	0.68	0.39	51.69	0.0438	11.6163	-0.1391
445	SLU 60	0.67	0.46	52.36	0.0448	11.7764	-0.163
445	SLU 61	0.68	0.44	52.36	0.0448	11.7779	-0.1575
445	SLU 62	0.68	0.45	52.91	0.0452	11.8923	-0.1615
445	SLU 63	0.68	0.44	52.92	0.0453	11.8937	-0.1561
445	SLU 64	0.69	0.41	50.57	0.043	11.3724	-0.1464
445	SLU 65	0.7	0.38	50.58	0.043	11.3748	-0.1374
445	SLU 66	0.71	0.41	51.46	0.0437	11.559	-0.1477
445	SLU 67	0.71	0.4	51.46	0.0437	11.5605	-0.1423
445	SLU 68	0.71	0.38	51.13	0.0434	11.4907	-0.1359
445	SLU 69	0.71	0.41	52.01	0.0441	11.6749	-0.1462
445	SLU 70	0.72	0.39	52.01	0.0441	11.6763	-0.1408
445	SLU 71	0.71	0.4	51.68	0.0438	11.6041	-0.1434
445	SLU 72	0.71	0.38	51.68	0.0438	11.6055	-0.138
445	SLU 73	0.72	0.49	54.73	0.0474	12.2924	-0.1734
445	SLU 74	0.72	0.51	55.61	0.0481	12.4766	-0.1838
445	SLU 75	0.73	0.5	55.61	0.0481	12.4781	-0.1784
445	SLU 76	0.72	0.48	55.29	0.0478	12.4083	-0.1719
445	SLU 77	0.73	0.51	56.16	0.0485	12.5925	-0.1823
445	SLU 78	0.74	0.49	56.17	0.0486	12.5939	-0.1769
445	SLU 79	0.73	0.5	55.83	0.0482	12.5217	-0.1795
445	SLU 80	0.73	0.49	55.84	0.0483	12.5232	-0.1741
445	SLU 81	0.72	0.55	56.51	0.0493	12.6833	-0.1979
445	SLU 82	0.72	0.54	56.51	0.0493	12.6847	-0.1925
445	SLU 83	0.73	0.55	57.06	0.0497	12.7991	-0.1964
445	SLU 84	0.73	0.53	57.07	0.0497	12.8006	-0.191
445	SLE RA 1	0.52	0.29	37.99	0.0321	8.5487	-0.1049
445	SLE RA 2	0.53	0.28	38	0.0321	8.5503	-0.0989
445	SLE RA 3	0.53	0.29	38.58	0.0326	8.6731	-0.1058
445	SLE RA 4	0.53	0.28	38.58	0.0326	8.6741	-0.1022
445	SLE RA 5	0.53	0.27	38.36	0.0324	8.6275	-0.0979
445	SLE RA 6	0.54	0.29	38.95	0.0328	8.7503	-0.1048
445	SLE RA 7	0.54	0.28	38.95	0.0329	8.7513	-0.1012
445	SLE RA 8	0.53	0.29	38.73	0.0326	8.7032	-0.1029
445	SLE RA 9	0.53	0.28	38.73	0.0327	8.7041	-0.0993
445	SLE RA 10	0.54	0.34	40.77	0.035	9.162	-0.123
445	SLE RA 11	0.54	0.36	41.35	0.0355	9.2848	-0.1299
445	SLE RA 12	0.55	0.35	41.35	0.0355	9.2858	-0.1262
445	SLE RA 13	0.54	0.34	41.13	0.0353	9.2393	-0.122
445	SLE RA 14	0.55	0.36	41.72	0.0358	9.3621	-0.1289
445	SLE RA 15	0.55	0.35	41.72	0.0358	9.363	-0.1253
445	SLE RA 16	0.55	0.35	41.5	0.0356	9.3149	-0.127
445	SLE RA 17	0.55	0.34	41.5	0.0356	9.3159	-0.1234
445	SLE RA 18	0.54	0.39	41.95	0.0363	9.4226	-0.1393
445	SLE RA 19	0.54	0.38	41.95	0.0363	9.4236	-0.1357
445	SLE RA 20	0.55	0.39	42.32	0.0366	9.4998	-0.1383
445	SLE RA 21	0.55	0.38	42.32	0.0366	9.5008	-0.1347
445	SLE FR 1	0.52	0.29	37.99	0.0321	8.5487	-0.1049
445	SLE FR 2	0.52	0.29	37.99	0.0321	8.549	-0.1037
445	SLE FR 3	0.52	0.29	38.14	0.0322	8.5796	-0.1045
445	SLE FR 4	0.53	0.32	39.18	0.0333	8.8112	-0.114
445	SLE FR 5	0.53	0.32	39.33	0.0334	8.8418	-0.1148
445	SLE FR 6	0.53	0.34	39.97	0.0342	8.9857	-0.1221
445	SLE QP 1	0.52	0.29	37.99	0.0321	8.5487	-0.1049
445	SLE QP 2	0.53	0.32	39.18	0.0333	8.8109	-0.1152
445	SLD 1	3.6	1.08	28.86	0.0249	6.6334	-0.3798
445	SLD 2	3.75	1.68	29.05	0.0231	6.6471	-0.5878
445	SLD 3	3.42	-0.35	28.27	0.028	6.7418	0.1211
445	SLD 4	3.57	0.25	28.47	0.0263	6.7555	-0.0869
445	SLD 5	1.7	2.61	36.94	0.0263	7.9909	-0.9175
445	SLD 6	1.8	3	37.07	0.0252	7.9998	-1.0535
445	SLD 7	1.09	-2.16	34.98	0.0368	8.3521	0.7521
445	SLD 8	1.19	-1.77	35.11	0.0357	8.361	0.6162
445	SLD 9	-0.14	2.41	43.25	0.031	9.2607	-0.8467
445	SLD 10	-0.04	2.8	43.38	0.0298	9.2697	-0.9826
445	SLD 11	-0.74	-2.36	41.29	0.0415	9.6219	0.823
445	SLD 12	-0.64	-1.97	41.42	0.0404	9.6309	0.687
445	SLD 13	-2.52	0.4	49.89	0.0404	10.8663	-0.1436
445	SLD 14	-2.36	0.99	50.08	0.0386	10.88	-0.3516
445	SLD 15	-2.7	-1.03	49.3	0.0435	10.9747	0.3573
445	SLD 16	-2.54	-0.44	49.5	0.0418	10.9884	0.1493
445	SLV 1	7.71	2.06	15.02	0.0136	3.7137	-0.7216
445	SLV 2	8.07	3.45	15.47	0.0096	3.7456	-1.2061
445	SLV 3	7.29	-1.21	13.65	0.0208	3.966	0.4214
445	SLV 4	7.65	0.18	14.1	0.0167	3.9979	-0.0631
445	SLV 5	3.26	5.56	33.93	0.0172	6.8936	-1.9477
445	SLV 6	3.49	6.45	34.23	0.0146	6.9141	-2.259
445	SLV 7	1.86	-5.33	29.36	0.0412	7.7346	1.8623
445	SLV 8	2.09	-4.43	29.65	0.0386	7.7551	1.5509
445	SLV 9	-1.03	5.08	48.71	0.0281	9.8666	-1.7814

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
445	SLV 10	-0.8	5.97	49	0.0255	9.8871	-2.0928
445	SLV 11	-2.44	-5.81	44.13	0.0521	10.7077	2.0286
445	SLV 12	-2.2	-4.91	44.42	0.0495	10.7282	1.7172
445	SLV 13	-6.6	0.46	64.26	0.0499	13.6238	-0.1674
445	SLV 14	-6.24	1.85	64.71	0.0459	13.6558	-0.6519
445	SLV 15	-7.02	-2.81	62.88	0.0571	13.8762	0.9756
445	SLV 16	-6.66	-1.42	63.34	0.0531	13.9081	0.4911
445	CRTFP Ux+	0	0	0	0	0	0
445	CRTFP Ux-	0	0	0	0	0	0
445	CRTFP Uy+	0	0	0	0	0	0
445	CRTFP Uy-	0	0	0	0	0	0
452	SLU 1	-0.42	-0.01	32.86	0.0213	-4.1709	-0.0048
452	SLU 2	-0.42	-0.09	32.85	0.0214	-4.1724	-0.0243
452	SLU 3	-0.44	-0.01	33.64	0.0218	-4.2603	-0.0032
452	SLU 4	-0.43	-0.05	33.64	0.0219	-4.2612	-0.0149
452	SLU 5	-0.43	-0.09	33.35	0.0217	-4.2282	-0.023
452	SLU 6	-0.44	0	34.14	0.0221	-4.3161	-0.002
452	SLU 7	-0.44	-0.05	34.13	0.0222	-4.3169	-0.0136
452	SLU 8	-0.44	0	33.85	0.0219	-4.2825	-0.0024
452	SLU 9	-0.44	-0.05	33.84	0.022	-4.2833	-0.014
452	SLU 10	-0.43	-0.03	36.55	0.0249	-4.6289	-0.0099
452	SLU 11	-0.45	0.05	37.34	0.0252	-4.7168	0.0111
452	SLU 12	-0.45	0	37.34	0.0253	-4.7177	-0.0005
452	SLU 13	-0.44	-0.03	37.05	0.0252	-4.6847	-0.0087
452	SLU 14	-0.46	0.06	37.84	0.0255	-4.7726	0.0124
452	SLU 15	-0.46	0.01	37.83	0.0256	-4.7735	0.0007
452	SLU 16	-0.46	0.05	37.55	0.0253	-4.739	0.012
452	SLU 17	-0.45	0.01	37.54	0.0254	-4.7399	0.0003
452	SLU 18	-0.45	0.07	38.15	0.0262	-4.8231	0.0157
452	SLU 19	-0.44	0.02	38.14	0.0263	-4.824	0.004
452	SLU 20	-0.45	0.07	38.64	0.0265	-4.8789	0.0169
452	SLU 21	-0.45	0.03	38.64	0.0266	-4.8798	0.0053
452	SLU 22	-0.47	0.06	36.59	0.0247	-4.6231	0.0129
452	SLU 23	-0.46	-0.02	36.58	0.0249	-4.6246	-0.0065
452	SLU 24	-0.48	0.06	37.37	0.0252	-4.7125	0.0145
452	SLU 25	-0.48	0.02	37.37	0.0253	-4.7134	0.0028
452	SLU 26	-0.47	-0.01	37.07	0.0252	-4.6803	-0.0053
452	SLU 27	-0.49	0.07	37.86	0.0255	-4.7682	0.0157
452	SLU 28	-0.48	0.02	37.86	0.0256	-4.7691	0.0041
452	SLU 29	-0.49	0.07	37.57	0.0253	-4.7346	0.0153
452	SLU 30	-0.48	0.02	37.57	0.0254	-4.7355	0.0037
452	SLU 31	-0.48	0.04	40.28	0.0284	-5.0811	0.0078
452	SLU 32	-0.5	0.12	41.07	0.0287	-5.169	0.0288
452	SLU 33	-0.49	0.08	41.07	0.0288	-5.1699	0.0172
452	SLU 34	-0.49	0.04	40.77	0.0287	-5.1369	0.009
452	SLU 35	-0.5	0.13	41.56	0.029	-5.2248	0.0301
452	SLU 36	-0.5	0.08	41.56	0.0291	-5.2257	0.0184
452	SLU 37	-0.5	0.13	41.27	0.0288	-5.1912	0.0297
452	SLU 38	-0.5	0.08	41.27	0.0289	-5.1921	0.018
452	SLU 39	-0.49	0.14	41.87	0.0297	-5.2753	0.0334
452	SLU 40	-0.49	0.09	41.87	0.0298	-5.2762	0.0217
452	SLU 41	-0.5	0.15	42.37	0.03	-5.3311	0.0346
452	SLU 42	-0.49	0.1	42.36	0.0301	-5.3319	0.023
452	SLU 43	-0.54	-0.04	41.44	0.0265	-5.2671	-0.0124
452	SLU 44	-0.53	-0.12	41.44	0.0266	-5.2686	-0.0318
452	SLU 45	-0.55	-0.04	42.22	0.027	-5.3565	-0.0107
452	SLU 46	-0.54	-0.08	42.22	0.0271	-5.3574	-0.0224
452	SLU 47	-0.54	-0.12	41.93	0.0269	-5.3244	-0.0305
452	SLU 48	-0.56	-0.03	42.72	0.0273	-5.4123	-0.0095
452	SLU 49	-0.55	-0.08	42.71	0.0274	-5.4132	-0.0212
452	SLU 50	-0.55	-0.03	42.43	0.0271	-5.3787	-0.0099
452	SLU 51	-0.55	-0.08	42.42	0.0272	-5.3796	-0.0215
452	SLU 52	-0.55	-0.06	45.14	0.0301	-5.7252	-0.0174
452	SLU 53	-0.56	0.02	45.92	0.0304	-5.8131	0.0036
452	SLU 54	-0.56	-0.02	45.92	0.0305	-5.8139	-0.008
452	SLU 55	-0.55	-0.06	45.63	0.0304	-5.7809	-0.0162
452	SLU 56	-0.57	0.03	46.42	0.0307	-5.8688	0.0048
452	SLU 57	-0.57	-0.02	46.41	0.0308	-5.8697	-0.0068
452	SLU 58	-0.57	0.03	46.13	0.0305	-5.8352	0.0045
452	SLU 59	-0.56	-0.02	46.12	0.0306	-5.8361	-0.0072
452	SLU 60	-0.56	0.04	46.73	0.0314	-5.9193	0.0082
452	SLU 61	-0.55	-0.01	46.72	0.0315	-5.9202	-0.0035
452	SLU 62	-0.57	0.05	47.22	0.0317	-5.9751	0.0094
452	SLU 63	-0.56	0	47.22	0.0318	-5.976	-0.0023
452	SLU 64	-0.58	0.03	45.17	0.0299	-5.7193	0.0054
452	SLU 65	-0.57	-0.05	45.16	0.0301	-5.7208	-0.0141
452	SLU 66	-0.59	0.04	45.95	0.0304	-5.8087	0.007
452	SLU 67	-0.59	-0.01	45.95	0.0305	-5.8096	-0.0047
452	SLU 68	-0.58	-0.04	45.65	0.0304	-5.7766	-0.0128
452	SLU 69	-0.6	0.04	46.44	0.0307	-5.8645	0.0082
452	SLU 70	-0.6	-0.01	46.44	0.0308	-5.8654	-0.0035
452	SLU 71	-0.6	0.04	46.15	0.0305	-5.8309	0.0078
452	SLU 72	-0.59	-0.01	46.15	0.0306	-5.8318	-0.0038
452	SLU 73	-0.59	0.01	48.86	0.0336	-6.1773	0.0003
452	SLU 74	-0.61	0.09	49.65	0.0339	-6.2652	0.0213
452	SLU 75	-0.6	0.05	49.65	0.034	-6.2661	0.0097
452	SLU 76	-0.6	0.01	49.35	0.0339	-6.2331	0.0015
452	SLU 77	-0.62	0.1	50.14	0.0342	-6.321	0.0226
452	SLU 78	-0.61	0.05	50.14	0.0343	-6.3219	0.0109
452	SLU 79	-0.61	0.1	49.85	0.034	-6.2874	0.0222
452	SLU 80	-0.61	0.05	49.85	0.0341	-6.2883	0.0105
452	SLU 81	-0.6	0.11	50.45	0.0349	-6.3715	0.0259
452	SLU 82	-0.6	0.07	50.45	0.035	-6.3724	0.0142
452	SLU 83	-0.61	0.12	50.95	0.0352	-6.4273	0.0271
452	SLU 84	-0.61	0.07	50.94	0.0353	-6.4282	0.0154
452	SLE RA 1	-0.44	0.01	33.93	0.0223	-4.3001	0.0002
452	SLE RA 2	-0.43	-0.04	33.92	0.0224	-4.3011	-0.0127

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
452	SLE RA 3	-0.44	0.01	34.45	0.0226	-4.3597	0.0013
452	SLE RA 4	-0.44	-0.02	34.44	0.0227	-4.3603	-0.0065
452	SLE RA 5	-0.44	-0.04	34.25	0.0226	-4.3383	-0.0119
452	SLE RA 6	-0.45	0.01	34.78	0.0228	-4.3969	0.0021
452	SLE RA 7	-0.45	-0.02	34.77	0.0229	-4.3975	-0.0056
452	SLE RA 8	-0.45	0.01	34.58	0.0227	-4.3745	0.0019
452	SLE RA 9	-0.45	-0.02	34.58	0.0227	-4.3751	-0.0059
452	SLE RA 10	-0.44	-0.01	36.39	0.0247	-4.6054	-0.0031
452	SLE RA 11	-0.45	0.05	36.91	0.0249	-4.664	0.0109
452	SLE RA 12	-0.45	0.02	36.91	0.025	-4.6646	0.0031
452	SLE RA 13	-0.45	0	36.72	0.0249	-4.6426	-0.0023
452	SLE RA 14	-0.46	0.05	37.24	0.0251	-4.7012	0.0117
452	SLE RA 15	-0.46	0.02	37.24	0.0252	-4.7018	0.0039
452	SLE RA 16	-0.46	0.05	37.05	0.025	-4.6788	0.0114
452	SLE RA 17	-0.46	0.02	37.05	0.025	-4.6794	0.0037
452	SLE RA 18	-0.45	0.06	37.45	0.0255	-4.7349	0.0139
452	SLE RA 19	-0.45	0.03	37.45	0.0256	-4.7355	0.0061
452	SLE RA 20	-0.46	0.07	37.78	0.0257	-4.7721	0.0147
452	SLE RA 21	-0.45	0.03	37.78	0.0258	-4.7727	0.007
452	SLE FR 1	-0.44	0.01	33.93	0.0223	-4.3001	0.0002
452	SLE FR 2	-0.44	0	33.92	0.0223	-4.3003	-0.0024
452	SLE FR 3	-0.44	0.01	34.06	0.0223	-4.315	0.0006
452	SLE FR 4	-0.44	0.01	34.98	0.0233	-4.4307	0.0017
452	SLE FR 5	-0.44	0.02	35.11	0.0233	-4.4454	0.0047
452	SLE FR 6	-0.44	0.03	35.69	0.0239	-4.5175	0.0071
452	SLE QP 1	-0.44	0.01	33.93	0.0223	-4.3001	0.0002
452	SLE QP 2	-0.44	0.02	34.98	0.0232	-4.4305	0.0043
452	SLD 1	2.17	0.58	45.02	0.0281	-5.5231	0.1447
452	SLD 2	2.28	0.08	44.91	0.0297	-5.5284	0.0188
452	SLD 3	2.02	-0.83	44.51	0.0311	-5.6028	-0.2097
452	SLD 4	2.14	-1.34	44.41	0.0326	-5.6082	-0.3355
452	SLD 5	0.54	2.43	38.78	0.0199	-4.6365	0.6061
452	SLD 6	0.61	2.1	38.71	0.0209	-4.6399	0.5238
452	SLD 7	0.06	-2.29	37.09	0.0298	-4.9022	-0.575
452	SLD 8	0.14	-2.62	37.02	0.0308	-4.9057	-0.6573
452	SLD 9	-1.02	2.67	32.94	0.0157	-3.9554	0.6659
452	SLD 10	-0.94	2.34	32.87	0.0167	-3.9589	0.5837
452	SLD 11	-1.5	-2.05	31.25	0.0255	-4.2211	-0.5152
452	SLD 12	-1.42	-2.38	31.18	0.0265	-4.2246	-0.5974
452	SLD 13	-3.02	1.39	25.56	0.0138	-3.2529	0.3442
452	SLD 14	-2.91	0.88	25.45	0.0154	-3.2583	0.2183
452	SLD 15	-3.16	-0.03	25.05	0.0168	-3.3327	-0.0102
452	SLD 16	-3.05	-0.53	24.94	0.0183	-3.338	-0.136
452	SLV 1	5.66	1.27	58.48	0.0348	-6.9886	0.3184
452	SLV 2	5.93	0.09	58.23	0.0384	-7.001	0.0252
452	SLV 3	5.33	-1.93	57.3	0.0415	-7.1744	-0.4834
452	SLV 4	5.59	-3.11	57.05	0.0451	-7.1868	-0.7765
452	SLV 5	1.85	5.46	43.87	0.0158	-4.914	1.3648
452	SLV 6	2.02	4.7	43.71	0.0181	-4.922	1.1764
452	SLV 7	0.74	-5.22	39.92	0.0384	-5.5334	-1.3078
452	SLV 8	0.91	-5.98	39.76	0.0407	-5.5414	-1.4962
452	SLV 9	-1.79	6.03	30.2	0.0058	-3.3197	1.5048
452	SLV 10	-1.62	5.27	30.04	0.0081	-3.3277	1.3164
452	SLV 11	-2.9	-4.66	26.25	0.0283	-3.9391	-1.1677
452	SLV 12	-2.73	-5.41	26.09	0.0306	-3.9471	-1.3561
452	SLV 13	-6.48	3.16	12.92	0.0014	-1.6743	0.7852
452	SLV 14	-6.21	1.98	12.67	0.0049	-1.6867	0.4921
452	SLV 15	-6.81	-0.05	11.73	0.0081	-1.8601	-0.0166
452	SLV 16	-6.54	-1.23	11.48	0.0117	-1.8725	-0.3097
452	CRTFP Ux+	0	0	0	0	0	0
452	CRTFP Ux-	0	0	0	0	0	0
452	CRTFP Uy+	0	0	0	0	0	0
452	CRTFP Uy-	0	0	0	0	0	0
455	SLU 1	0.11	-0.06	46.34	0.4728	15.6055	0.0218
455	SLU 2	0.12	-0.1	46.35	0.473	15.606	0.0365
455	SLU 3	0.11	-0.05	47.45	0.484	15.9849	0.0169
455	SLU 4	0.12	-0.07	47.45	0.4841	15.9853	0.0257
455	SLU 5	0.12	-0.1	47.02	0.4798	15.8445	0.036
455	SLU 6	0.12	-0.05	48.13	0.4908	16.2234	0.0163
455	SLU 7	0.12	-0.07	48.13	0.4909	16.2237	0.0252
455	SLU 8	0.12	-0.06	47.7	0.4863	16.0824	0.0208
455	SLU 9	0.12	-0.08	47.7	0.4865	16.0827	0.0296
455	SLU 10	0.15	-0.04	52.38	0.536	17.6772	0.0125
455	SLU 11	0.15	0.02	53.49	0.547	18.0561	-0.0071
455	SLU 12	0.16	-0.01	53.49	0.5472	18.0564	0.0017
455	SLU 13	0.16	-0.03	53.06	0.5428	17.9156	0.012
455	SLU 14	0.16	0.02	54.17	0.5538	18.2945	-0.0076
455	SLU 15	0.16	0	54.17	0.554	18.2949	0.0012
455	SLU 16	0.15	0.01	53.74	0.5494	18.1535	-0.0032
455	SLU 17	0.16	-0.02	53.74	0.5495	18.1538	0.0056
455	SLU 18	0.16	0.03	54.97	0.5628	18.5642	-0.0124
455	SLU 19	0.17	0.01	54.97	0.563	18.5646	-0.0036
455	SLU 20	0.17	0.04	55.65	0.5696	18.8027	-0.013
455	SLU 21	0.17	0.01	55.65	0.5697	18.803	-0.0042
455	SLU 22	0.13	0.05	51.49	0.5267	17.3447	-0.0191
455	SLU 23	0.13	0.01	51.49	0.5269	17.3453	-0.0044
455	SLU 24	0.13	0.07	52.6	0.5379	17.7242	-0.024
455	SLU 25	0.14	0.04	52.6	0.5381	17.7245	-0.0152
455	SLU 26	0.14	0.01	52.17	0.5337	17.5837	-0.0049
455	SLU 27	0.14	0.07	53.27	0.5447	17.9627	-0.0245
455	SLU 28	0.14	0.05	53.27	0.5448	17.963	-0.0157
455	SLU 29	0.14	0.06	52.84	0.5403	17.8216	-0.0201
455	SLU 30	0.14	0.03	52.84	0.5404	17.822	-0.0113
455	SLU 31	0.17	0.08	57.53	0.59	19.4164	-0.0284
455	SLU 32	0.17	0.14	58.63	0.601	19.7953	-0.048
455	SLU 33	0.17	0.11	58.64	0.6011	19.7957	-0.0392
455	SLU 34	0.18	0.08	58.2	0.5967	19.6549	-0.0289

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
455	SLU 35	0.17	0.14	59.31	0.6078	20.0338	-0.0485
455	SLU 36	0.18	0.11	59.31	0.6079	20.0341	-0.0397
455	SLU 37	0.17	0.13	58.88	0.6033	19.8928	-0.0441
455	SLU 38	0.18	0.1	58.88	0.6034	19.8931	-0.0353
455	SLU 39	0.18	0.15	60.11	0.6168	20.3035	-0.0533
455	SLU 40	0.19	0.13	60.11	0.6169	20.3038	-0.0445
455	SLU 41	0.19	0.15	60.79	0.6235	20.5419	-0.0539
455	SLU 42	0.19	0.13	60.79	0.6237	20.5423	-0.0451
455	SLU 43	0.14	-0.12	58.48	0.5961	19.6908	0.0424
455	SLU 44	0.14	-0.16	58.49	0.5963	19.6913	0.0571
455	SLU 45	0.14	-0.11	59.59	0.6073	20.0703	0.0374
455	SLU 46	0.14	-0.13	59.59	0.6075	20.0706	0.0463
455	SLU 47	0.15	-0.16	59.16	0.6031	19.9298	0.0565
455	SLU 48	0.14	-0.1	60.27	0.6141	20.3087	0.0369
455	SLU 49	0.15	-0.13	60.27	0.6142	20.3091	0.0457
455	SLU 50	0.14	-0.12	59.84	0.6097	20.1677	0.0413
455	SLU 51	0.15	-0.14	59.84	0.6098	20.168	0.0501
455	SLU 52	0.18	-0.09	64.52	0.6594	21.7625	0.0331
455	SLU 53	0.18	-0.04	65.63	0.6704	22.1414	0.0134
455	SLU 54	0.18	-0.06	65.63	0.6705	22.1417	0.0223
455	SLU 55	0.18	-0.09	65.2	0.6661	22.0009	0.0326
455	SLU 56	0.18	-0.04	66.31	0.6772	22.3799	0.0129
455	SLU 57	0.19	-0.06	66.31	0.6773	22.3802	0.0217
455	SLU 58	0.18	-0.05	65.88	0.6727	22.2388	0.0173
455	SLU 59	0.18	-0.08	65.88	0.6728	22.2392	0.0261
455	SLU 60	0.19	-0.02	67.11	0.6862	22.6495	0.0081
455	SLU 61	0.19	-0.05	67.11	0.6863	22.6499	0.0169
455	SLU 62	0.19	-0.02	67.79	0.6929	22.888	0.0076
455	SLU 63	0.2	-0.05	67.79	0.6931	22.8883	0.0164
455	SLU 64	0.15	0	63.63	0.65	21.43	0.0015
455	SLU 65	0.16	-0.05	63.63	0.6502	21.4306	0.0162
455	SLU 66	0.16	0.01	64.74	0.6613	21.8095	-0.0034
455	SLU 67	0.16	-0.01	64.74	0.6614	21.8099	0.0054
455	SLU 68	0.16	-0.04	64.31	0.657	21.6691	0.0157
455	SLU 69	0.16	0.01	65.41	0.6681	22.048	-0.004
455	SLU 70	0.17	-0.01	65.41	0.6682	22.0483	0.0048
455	SLU 71	0.16	0	64.98	0.6636	21.907	0.0004
455	SLU 72	0.17	-0.03	64.98	0.6637	21.9073	0.0093
455	SLU 73	0.2	0.02	69.67	0.7133	23.5017	-0.0078
455	SLU 74	0.2	0.08	70.77	0.7243	23.8807	-0.0274
455	SLU 75	0.2	0.05	70.78	0.7244	23.881	-0.0186
455	SLU 76	0.2	0.02	70.34	0.7201	23.7402	-0.0083
455	SLU 77	0.2	0.08	71.45	0.7311	24.1191	-0.028
455	SLU 78	0.2	0.05	71.45	0.7312	24.1195	-0.0192
455	SLU 79	0.2	0.07	71.02	0.7267	23.9781	-0.0236
455	SLU 80	0.2	0.04	71.02	0.7268	23.9784	-0.0147
455	SLU 81	0.21	0.09	72.25	0.7401	24.3888	-0.0328
455	SLU 82	0.21	0.07	72.25	0.7402	24.3891	-0.024
455	SLU 83	0.21	0.09	72.93	0.7469	24.6273	-0.0333
455	SLU 84	0.22	0.07	72.93	0.747	24.6276	-0.0245
455	SLE RA 1	0.12	-0.03	47.81	0.4882	16.1024	0.0101
455	SLE RA 2	0.12	-0.06	47.82	0.4883	16.1028	0.0199
455	SLE RA 3	0.12	-0.02	48.55	0.4957	16.3554	0.0068
455	SLE RA 4	0.12	-0.04	48.55	0.4957	16.3556	0.0127
455	SLE RA 5	0.12	-0.06	48.27	0.4928	16.2617	0.0196
455	SLE RA 6	0.12	-0.02	49	0.5002	16.5144	0.0065
455	SLE RA 7	0.12	-0.03	49.01	0.5003	16.5146	0.0124
455	SLE RA 8	0.12	-0.03	48.72	0.4972	16.4203	0.0094
455	SLE RA 9	0.12	-0.04	48.72	0.4973	16.4206	0.0153
455	SLE RA 10	0.14	-0.01	51.84	0.5303	17.4835	0.0039
455	SLE RA 11	0.14	0.03	52.58	0.5377	17.7361	-0.0092
455	SLE RA 12	0.15	0.01	52.58	0.5378	17.7364	-0.0033
455	SLE RA 13	0.15	-0.01	52.29	0.5349	17.6425	0.0036
455	SLE RA 14	0.15	0.03	53.03	0.5422	17.8951	-0.0095
455	SLE RA 15	0.15	0.01	53.03	0.5423	17.8953	-0.0036
455	SLE RA 16	0.14	0.02	52.74	0.5392	17.8011	-0.0066
455	SLE RA 17	0.15	0	52.74	0.5393	17.8013	-0.0007
455	SLE RA 18	0.15	0.04	53.56	0.5482	18.0749	-0.0127
455	SLE RA 19	0.15	0.02	53.56	0.5483	18.0751	-0.0068
455	SLE RA 20	0.15	0.04	54.02	0.5527	18.2339	-0.0131
455	SLE RA 21	0.16	0.02	54.02	0.5528	18.2341	-0.0072
455	SLE FR 1	0.12	-0.03	47.81	0.4882	16.1024	0.0101
455	SLE FR 2	0.12	-0.03	47.81	0.4882	16.1025	0.0121
455	SLE FR 3	0.12	-0.03	47.99	0.49	16.166	0.01
455	SLE FR 4	0.13	-0.01	49.54	0.5062	16.6942	0.0052
455	SLE FR 5	0.13	-0.01	49.72	0.508	16.7577	0.0031
455	SLE FR 6	0.13	0	50.69	0.5182	17.0886	-0.0013
455	SLE QP 1	0.12	-0.03	47.81	0.4882	16.1024	0.0101
455	SLE QP 2	0.13	-0.01	49.54	0.5062	16.6941	0.0033
455	SLD 1	3.77	0.82	49.96	0.5015	16.6608	-0.3073
455	SLD 2	3.91	0.87	49.99	0.5009	16.6626	-0.3222
455	SLD 3	3.59	-0.52	49.82	0.5075	16.5944	0.1618
455	SLD 4	3.73	-0.47	49.85	0.5069	16.5962	0.1469
455	SLD 5	1.48	2.27	49.86	0.4958	16.7846	-0.7987
455	SLD 6	1.57	2.29	49.88	0.4954	16.7858	-0.8084
455	SLD 7	0.86	-2.2	49.41	0.5158	16.5631	0.7649
455	SLD 8	0.95	-2.17	49.43	0.5154	16.5643	0.7552
455	SLD 9	-0.7	2.16	49.64	0.497	16.824	-0.7486
455	SLD 10	-0.61	2.18	49.66	0.4966	16.8251	-0.7583
455	SLD 11	-1.32	-2.31	49.19	0.517	16.6025	0.815
455	SLD 12	-1.22	-2.28	49.21	0.5166	16.6037	0.8053
455	SLD 13	-3.47	0.45	49.22	0.5055	16.7921	-0.1403
455	SLD 14	-3.33	0.5	49.25	0.5049	16.7939	-0.1552
455	SLD 15	-3.66	-0.89	49.09	0.5115	16.7257	0.3288
455	SLD 16	-3.52	-0.84	49.12	0.5109	16.7275	0.3139
455	SLV 1	8.65	1.89	50.52	0.4953	16.614	-0.7059
455	SLV 2	8.98	1.99	50.59	0.494	16.6182	-0.7406

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
455	SLV 3	8.22	-1.15	50.21	0.5089	16.4618	0.3574
455	SLV 4	8.55	-1.05	50.28	0.5076	16.466	0.3228
455	SLV 5	3.28	5.15	50.29	0.4826	16.9003	-1.8163
455	SLV 6	3.49	5.22	50.34	0.4817	16.903	-1.8385
455	SLV 7	1.84	-4.98	49.25	0.5278	16.3928	1.7282
455	SLV 8	2.05	-4.91	49.3	0.527	16.3955	1.7059
455	SLV 9	-1.8	4.89	49.78	0.4854	16.9928	-1.6993
455	SLV 10	-1.59	4.96	49.82	0.4845	16.9955	-1.7216
455	SLV 11	-3.24	-5.24	48.74	0.5307	16.4853	1.8451
455	SLV 12	-3.03	-5.17	48.78	0.5298	16.488	1.8228
455	SLV 13	-8.3	1.03	48.8	0.5048	16.9223	-0.3162
455	SLV 14	-7.97	1.13	48.87	0.5035	16.9265	-0.3508
455	SLV 15	-8.73	-2.01	48.49	0.5184	16.77	0.7471
455	SLV 16	-8.4	-1.91	48.56	0.517	16.7743	0.7125
455	CRTFP Ux+	0	0	0	0	0	0
455	CRTFP Ux-	0	0	0	0	0	0
455	CRTFP Uy+	0	0	0	0	0	0
455	CRTFP Uy-	0	0	0	0	0	0
459	SLU 1	-0.54	-1.05	59.49	-0.0076	-0.1926	-0.014
459	SLU 2	-0.53	-1.12	59.5	-0.0074	-0.1934	-0.0133
459	SLU 3	-0.55	-1.06	60.91	-0.0077	-0.1977	-0.0145
459	SLU 4	-0.55	-1.1	60.92	-0.0076	-0.1982	-0.0141
459	SLU 5	-0.54	-1.13	60.39	-0.0076	-0.196	-0.0136
459	SLU 6	-0.56	-1.07	61.8	-0.0079	-0.2003	-0.0148
459	SLU 7	-0.56	-1.12	61.81	-0.0078	-0.2008	-0.0144
459	SLU 8	-0.56	-1.07	61.27	-0.008	-0.1977	-0.0146
459	SLU 9	-0.56	-1.12	61.28	-0.0078	-0.1982	-0.0142
459	SLU 10	-0.53	-1.16	66.56	-0.0059	-0.2288	-0.0151
459	SLU 11	-0.55	-1.1	67.97	-0.0063	-0.2331	-0.0162
459	SLU 12	-0.55	-1.14	67.97	-0.0062	-0.2336	-0.0158
459	SLU 13	-0.54	-1.17	67.45	-0.0061	-0.2313	-0.0154
459	SLU 14	-0.56	-1.11	68.85	-0.0065	-0.2357	-0.0165
459	SLU 15	-0.56	-1.15	68.86	-0.0064	-0.2361	-0.0161
459	SLU 16	-0.56	-1.11	68.33	-0.0066	-0.2331	-0.0163
459	SLU 17	-0.56	-1.15	68.33	-0.0064	-0.2336	-0.0159
459	SLU 18	-0.54	-1.1	69.57	-0.0056	-0.2432	-0.0164
459	SLU 19	-0.53	-1.14	69.58	-0.0054	-0.2436	-0.0161
459	SLU 20	-0.55	-1.11	70.46	-0.0058	-0.2457	-0.0167
459	SLU 21	-0.54	-1.16	70.46	-0.0056	-0.2462	-0.0164
459	SLU 22	-0.59	-1.03	66.29	-0.006	-0.2133	-0.0166
459	SLU 23	-0.58	-1.1	66.29	-0.0058	-0.2141	-0.016
459	SLU 24	-0.6	-1.04	67.7	-0.0061	-0.2184	-0.0171
459	SLU 25	-0.6	-1.09	67.71	-0.006	-0.2189	-0.0167
459	SLU 26	-0.59	-1.12	67.18	-0.0059	-0.2166	-0.0163
459	SLU 27	-0.61	-1.06	68.59	-0.0063	-0.221	-0.0174
459	SLU 28	-0.61	-1.1	68.6	-0.0062	-0.2214	-0.017
459	SLU 29	-0.61	-1.06	68.07	-0.0064	-0.2184	-0.0172
459	SLU 30	-0.61	-1.1	68.07	-0.0062	-0.2189	-0.0168
459	SLU 31	-0.58	-1.14	73.35	-0.0043	-0.2495	-0.0177
459	SLU 32	-0.6	-1.08	74.76	-0.0047	-0.2538	-0.0188
459	SLU 33	-0.59	-1.12	74.76	-0.0046	-0.2543	-0.0184
459	SLU 34	-0.59	-1.15	74.24	-0.0045	-0.252	-0.018
459	SLU 35	-0.61	-1.09	75.65	-0.0049	-0.2563	-0.0191
459	SLU 36	-0.61	-1.14	75.65	-0.0047	-0.2568	-0.0187
459	SLU 37	-0.61	-1.09	75.12	-0.005	-0.2538	-0.0189
459	SLU 38	-0.6	-1.14	75.12	-0.0048	-0.2542	-0.0185
459	SLU 39	-0.59	-1.08	76.36	-0.004	-0.2638	-0.0191
459	SLU 40	-0.58	-1.13	76.37	-0.0038	-0.2643	-0.0187
459	SLU 41	-0.6	-1.1	77.25	-0.0042	-0.2664	-0.0194
459	SLU 42	-0.59	-1.14	77.26	-0.004	-0.2669	-0.019
459	SLU 43	-0.68	-1.37	75.01	-0.0105	-0.2433	-0.0173
459	SLU 44	-0.68	-1.44	75.02	-0.0102	-0.2441	-0.0166
459	SLU 45	-0.7	-1.38	76.43	-0.0106	-0.2484	-0.0177
459	SLU 46	-0.69	-1.42	76.44	-0.0104	-0.2489	-0.0174
459	SLU 47	-0.69	-1.45	75.91	-0.0104	-0.2467	-0.0169
459	SLU 48	-0.71	-1.39	77.32	-0.0108	-0.251	-0.018
459	SLU 49	-0.7	-1.44	77.33	-0.0106	-0.2515	-0.0177
459	SLU 50	-0.71	-1.39	76.79	-0.0108	-0.2484	-0.0179
459	SLU 51	-0.7	-1.44	76.8	-0.0107	-0.2489	-0.0175
459	SLU 52	-0.67	-1.48	82.08	-0.0088	-0.2795	-0.0183
459	SLU 53	-0.7	-1.42	83.48	-0.0092	-0.2838	-0.0195
459	SLU 54	-0.69	-1.46	83.49	-0.009	-0.2843	-0.0191
459	SLU 55	-0.69	-1.49	82.96	-0.009	-0.282	-0.0186
459	SLU 56	-0.71	-1.43	84.37	-0.0093	-0.2864	-0.0198
459	SLU 57	-0.7	-1.47	84.38	-0.0092	-0.2868	-0.0194
459	SLU 58	-0.71	-1.43	83.85	-0.0094	-0.2838	-0.0196
459	SLU 59	-0.7	-1.47	83.85	-0.0093	-0.2843	-0.0192
459	SLU 60	-0.68	-1.42	85.09	-0.0084	-0.2939	-0.0197
459	SLU 61	-0.68	-1.46	85.09	-0.0083	-0.2943	-0.0193
459	SLU 62	-0.69	-1.43	85.98	-0.0086	-0.2964	-0.02
459	SLU 63	-0.69	-1.48	85.98	-0.0085	-0.2969	-0.0196
459	SLU 64	-0.73	-1.35	81.81	-0.0089	-0.264	-0.0199
459	SLU 65	-0.72	-1.42	81.81	-0.0086	-0.2648	-0.0192
459	SLU 66	-0.75	-1.36	83.22	-0.009	-0.2691	-0.0204
459	SLU 67	-0.74	-1.41	83.23	-0.0088	-0.2696	-0.02
459	SLU 68	-0.74	-1.44	82.7	-0.0088	-0.2673	-0.0195
459	SLU 69	-0.76	-1.38	84.11	-0.0092	-0.2717	-0.0207
459	SLU 70	-0.75	-1.42	84.12	-0.009	-0.2721	-0.0203
459	SLU 71	-0.76	-1.38	83.59	-0.0092	-0.2691	-0.0205
459	SLU 72	-0.75	-1.42	83.59	-0.0091	-0.2696	-0.0201
459	SLU 73	-0.72	-1.46	88.87	-0.0072	-0.3002	-0.021
459	SLU 74	-0.75	-1.4	90.28	-0.0076	-0.3045	-0.0221
459	SLU 75	-0.74	-1.44	90.28	-0.0074	-0.305	-0.0217
459	SLU 76	-0.73	-1.47	89.76	-0.0074	-0.3027	-0.0213
459	SLU 77	-0.76	-1.41	91.17	-0.0077	-0.307	-0.0224
459	SLU 78	-0.75	-1.46	91.17	-0.0076	-0.3075	-0.022
459	SLU 79	-0.75	-1.41	90.64	-0.0078	-0.3045	-0.0222

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
459	SLU 80	-0.75	-1.46	90.64	-0.0076	-0.3049	-0.0218
459	SLU 81	-0.73	-1.4	91.88	-0.0068	-0.3145	-0.0224
459	SLU 82	-0.73	-1.45	91.89	-0.0067	-0.315	-0.022
459	SLU 83	-0.74	-1.41	92.77	-0.007	-0.3171	-0.0227
459	SLU 84	-0.74	-1.46	92.78	-0.0069	-0.3176	-0.0223
459	SLE RA 1	-0.55	-1.04	61.44	-0.0072	-0.1985	-0.0147
459	SLE RA 2	-0.55	-1.09	61.44	-0.007	-0.1991	-0.0143
459	SLE RA 3	-0.56	-1.05	62.38	-0.0072	-0.2019	-0.015
459	SLE RA 4	-0.56	-1.08	62.38	-0.0071	-0.2023	-0.0148
459	SLE RA 5	-0.55	-1.1	62.03	-0.0071	-0.2008	-0.0145
459	SLE RA 6	-0.57	-1.06	62.97	-0.0074	-0.2036	-0.0152
459	SLE RA 7	-0.57	-1.09	62.98	-0.0073	-0.204	-0.015
459	SLE RA 8	-0.57	-1.06	62.62	-0.0074	-0.2019	-0.0151
459	SLE RA 9	-0.57	-1.09	62.62	-0.0073	-0.2022	-0.0149
459	SLE RA 10	-0.55	-1.12	66.14	-0.006	-0.2226	-0.0154
459	SLE RA 11	-0.56	-1.08	67.08	-0.0063	-0.2255	-0.0162
459	SLE RA 12	-0.56	-1.1	67.09	-0.0062	-0.2258	-0.0159
459	SLE RA 13	-0.55	-1.12	66.74	-0.0062	-0.2243	-0.0156
459	SLE RA 14	-0.57	-1.08	67.68	-0.0064	-0.2272	-0.0164
459	SLE RA 15	-0.57	-1.11	67.68	-0.0063	-0.2275	-0.0161
459	SLE RA 16	-0.57	-1.08	67.32	-0.0065	-0.2255	-0.0163
459	SLE RA 17	-0.56	-1.11	67.33	-0.0064	-0.2258	-0.016
459	SLE RA 18	-0.55	-1.08	68.15	-0.0058	-0.2322	-0.0164
459	SLE RA 19	-0.55	-1.11	68.16	-0.0057	-0.2325	-0.0161
459	SLE RA 20	-0.56	-1.09	68.75	-0.0059	-0.2339	-0.0166
459	SLE RA 21	-0.56	-1.11	68.75	-0.0058	-0.2342	-0.0163
459	SLE FR 1	-0.55	-1.04	61.44	-0.0072	-0.1985	-0.0147
459	SLE FR 2	-0.55	-1.05	61.44	-0.0071	-0.1986	-0.0146
459	SLE FR 3	-0.56	-1.05	61.67	-0.0072	-0.1992	-0.0148
459	SLE FR 4	-0.55	-1.06	63.45	-0.0067	-0.2087	-0.0151
459	SLE FR 5	-0.56	-1.06	63.69	-0.0068	-0.2093	-0.0153
459	SLE FR 6	-0.55	-1.06	64.79	-0.0065	-0.2154	-0.0155
459	SLE QP 1	-0.55	-1.04	61.44	-0.0072	-0.1985	-0.0147
459	SLE QP 2	-0.55	-1.05	63.45	-0.0068	-0.2086	-0.0152
459	SLD 1	4.82	-0.63	68.7	-0.0126	-0.024	0.002
459	SLD 2	5	-0.97	68.65	-0.0112	-0.028	0.0132
459	SLD 3	4.55	-2.34	69.06	-0.0083	-0.0576	-0.0055
459	SLD 4	4.73	-2.69	69.01	-0.0069	-0.0616	0.0056
459	SLD 5	1.44	1.74	64.48	-0.0152	-0.1015	-0.0005
459	SLD 6	1.56	1.52	64.45	-0.0143	-0.1041	0.0068
459	SLD 7	0.53	-3.99	65.69	-0.001	-0.2136	-0.0258
459	SLD 8	0.65	-4.21	65.66	-0.0001	-0.2162	-0.0185
459	SLD 9	-1.76	2.11	61.24	-0.0134	-0.201	-0.012
459	SLD 10	-1.64	1.88	61.21	-0.0125	-0.2036	-0.0047
459	SLD 11	-2.66	-3.62	62.45	0.0008	-0.3131	-0.0372
459	SLD 12	-2.54	-3.85	62.42	0.0017	-0.3157	-0.0299
459	SLD 13	-5.83	0.58	57.89	-0.0066	-0.3557	-0.036
459	SLD 14	-5.65	0.24	57.84	-0.0052	-0.3597	-0.0249
459	SLD 15	-6.11	-1.13	58.25	-0.0023	-0.3893	-0.0436
459	SLD 16	-5.93	-1.48	58.2	-0.0009	-0.3933	-0.0325
459	SLV 1	12.02	-0.12	75.73	-0.0203	0.2227	0.0251
459	SLV 2	12.44	-0.93	75.62	-0.0171	0.2134	0.0511
459	SLV 3	11.38	-4.01	76.57	-0.0106	0.1461	0.0076
459	SLV 4	11.8	-4.81	76.46	-0.0073	0.1368	0.0336
459	SLV 5	4.11	5.26	65.87	-0.0261	0.0385	0.019
459	SLV 6	4.38	4.75	65.8	-0.024	0.0326	0.0356
459	SLV 7	2	-7.7	68.69	0.0063	-0.2168	-0.0393
459	SLV 8	2.27	-8.22	68.62	0.0084	-0.2228	-0.0227
459	SLV 9	-3.37	6.11	58.28	-0.0219	-0.1945	-0.0078
459	SLV 10	-3.1	5.6	58.21	-0.0198	-0.2005	0.0089
459	SLV 11	-5.48	-6.85	61.1	0.0105	-0.4498	-0.0661
459	SLV 12	-5.21	-7.37	61.03	0.0126	-0.4558	-0.0494
459	SLV 13	-12.91	2.71	50.44	-0.0062	-0.5541	-0.064
459	SLV 14	-12.49	1.9	50.33	-0.003	-0.5633	-0.038
459	SLV 15	-13.54	-1.18	51.28	0.0035	-0.6307	-0.0815
459	SLV 16	-13.12	-1.98	51.17	0.0068	-0.64	-0.0555
459	CRTFP Ux+	0	0	0	0	0	0
459	CRTFP Ux-	0	0	0	0	0	0
463	SLU 1	0.59	-0.52	60.45	-0.0179	0.2645	-0.0161
463	SLU 2	0.6	-0.56	60.46	-0.0178	0.2651	-0.0155
463	SLU 3	0.61	-0.53	61.89	-0.0185	0.2711	-0.0164
463	SLU 4	0.61	-0.55	61.89	-0.0184	0.2715	-0.0161
463	SLU 5	0.61	-0.57	61.35	-0.0182	0.2681	-0.0158
463	SLU 6	0.62	-0.54	62.77	-0.0189	0.2742	-0.0167
463	SLU 7	0.62	-0.56	62.78	-0.0188	0.2746	-0.0164
463	SLU 8	0.61	-0.55	62.22	-0.0188	0.2706	-0.0167
463	SLU 9	0.62	-0.57	62.23	-0.0187	0.271	-0.0163
463	SLU 10	0.63	-0.52	67.76	-0.0184	0.3048	-0.0173
463	SLU 11	0.64	-0.49	69.18	-0.0191	0.3108	-0.0182
463	SLU 12	0.65	-0.51	69.19	-0.019	0.3112	-0.0179
463	SLU 13	0.64	-0.54	68.64	-0.0189	0.3078	-0.0176
463	SLU 14	0.65	-0.51	70.07	-0.0196	0.3139	-0.0185
463	SLU 15	0.66	-0.53	70.08	-0.0195	0.3143	-0.0182
463	SLU 16	0.65	-0.51	69.52	-0.0194	0.3103	-0.0184
463	SLU 17	0.65	-0.54	69.53	-0.0193	0.3107	-0.0181
463	SLU 18	0.64	-0.47	70.87	-0.0189	0.3212	-0.0186
463	SLU 19	0.64	-0.49	70.88	-0.0188	0.3216	-0.0183
463	SLU 20	0.65	-0.48	71.76	-0.0193	0.3243	-0.0189
463	SLU 21	0.65	-0.51	71.77	-0.0192	0.3246	-0.0186
463	SLU 22	0.66	-0.45	67.43	-0.0184	0.2831	-0.0171
463	SLU 23	0.66	-0.48	67.44	-0.0183	0.2837	-0.0166
463	SLU 24	0.67	-0.45	68.87	-0.019	0.2898	-0.0175
463	SLU 25	0.68	-0.47	68.87	-0.0189	0.2901	-0.0171
463	SLU 26	0.67	-0.5	68.33	-0.0187	0.2867	-0.0169
463	SLU 27	0.68	-0.47	69.75	-0.0194	0.2928	-0.0177
463	SLU 28	0.69	-0.49	69.76	-0.0193	0.2932	-0.0174
463	SLU 29	0.68	-0.48	69.2	-0.0193	0.2892	-0.0177

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
463	SLU 30	0.68	-0.5	69.21	-0.0192	0.2896	-0.0174
463	SLU 31	0.7	-0.45	74.74	-0.0189	0.3234	-0.0184
463	SLU 32	0.71	-0.42	76.16	-0.0196	0.3295	-0.0192
463	SLU 33	0.71	-0.44	76.17	-0.0196	0.3298	-0.0189
463	SLU 34	0.71	-0.46	75.62	-0.0194	0.3264	-0.0186
463	SLU 35	0.72	-0.43	77.05	-0.0201	0.3325	-0.0195
463	SLU 36	0.72	-0.45	77.06	-0.02	0.3329	-0.0192
463	SLU 37	0.71	-0.44	76.5	-0.0199	0.3289	-0.0195
463	SLU 38	0.71	-0.46	76.51	-0.0199	0.3293	-0.0192
463	SLU 39	0.7	-0.4	77.85	-0.0194	0.3398	-0.0197
463	SLU 40	0.71	-0.42	77.86	-0.0193	0.3402	-0.0193
463	SLU 41	0.71	-0.41	78.74	-0.0198	0.3429	-0.0199
463	SLU 42	0.72	-0.43	78.75	-0.0197	0.3432	-0.0196
463	SLU 43	0.75	-0.7	76.19	-0.0231	0.3375	-0.0205
463	SLU 44	0.76	-0.74	76.2	-0.023	0.338	-0.02
463	SLU 45	0.77	-0.71	77.63	-0.0237	0.3441	-0.0209
463	SLU 46	0.77	-0.73	77.64	-0.0236	0.3445	-0.0206
463	SLU 47	0.77	-0.75	77.09	-0.0234	0.3411	-0.0203
463	SLU 48	0.78	-0.72	78.51	-0.0241	0.3472	-0.0212
463	SLU 49	0.78	-0.74	78.52	-0.024	0.3475	-0.0209
463	SLU 50	0.77	-0.73	77.96	-0.024	0.3436	-0.0211
463	SLU 51	0.77	-0.75	77.97	-0.0239	0.3439	-0.0208
463	SLU 52	0.79	-0.7	83.5	-0.0236	0.3777	-0.0218
463	SLU 53	0.8	-0.67	84.92	-0.0243	0.3838	-0.0227
463	SLU 54	0.8	-0.69	84.93	-0.0242	0.3842	-0.0224
463	SLU 55	0.8	-0.72	84.39	-0.0241	0.3808	-0.0221
463	SLU 56	0.81	-0.69	85.81	-0.0248	0.3869	-0.023
463	SLU 57	0.81	-0.71	85.82	-0.0247	0.3872	-0.0226
463	SLU 58	0.8	-0.7	85.26	-0.0246	0.3833	-0.0229
463	SLU 59	0.81	-0.72	85.27	-0.0245	0.3836	-0.0226
463	SLU 60	0.8	-0.65	86.61	-0.0241	0.3942	-0.0231
463	SLU 61	0.8	-0.67	86.62	-0.024	0.3945	-0.0228
463	SLU 62	0.81	-0.67	87.5	-0.0245	0.3972	-0.0234
463	SLU 63	0.81	-0.69	87.51	-0.0244	0.3976	-0.0231
463	SLU 64	0.81	-0.63	83.17	-0.0236	0.3561	-0.0216
463	SLU 65	0.82	-0.66	83.18	-0.0235	0.3566	-0.021
463	SLU 66	0.83	-0.63	84.61	-0.0242	0.3627	-0.0219
463	SLU 67	0.83	-0.66	84.61	-0.0241	0.3631	-0.0216
463	SLU 68	0.83	-0.68	84.07	-0.0239	0.3597	-0.0213
463	SLU 69	0.84	-0.65	85.49	-0.0246	0.3658	-0.0222
463	SLU 70	0.84	-0.67	85.5	-0.0245	0.3661	-0.0219
463	SLU 71	0.83	-0.66	84.94	-0.0245	0.3622	-0.0222
463	SLU 72	0.84	-0.68	84.95	-0.0244	0.3626	-0.0218
463	SLU 73	0.85	-0.63	90.48	-0.0241	0.3963	-0.0228
463	SLU 74	0.86	-0.6	91.9	-0.0248	0.4024	-0.0237
463	SLU 75	0.87	-0.62	91.91	-0.0248	0.4028	-0.0234
463	SLU 76	0.86	-0.64	91.37	-0.0246	0.3994	-0.0231
463	SLU 77	0.87	-0.61	92.79	-0.0253	0.4055	-0.024
463	SLU 78	0.88	-0.64	92.8	-0.0252	0.4058	-0.0237
463	SLU 79	0.87	-0.62	92.24	-0.0252	0.4019	-0.0239
463	SLU 80	0.87	-0.64	92.25	-0.0251	0.4023	-0.0236
463	SLU 81	0.86	-0.58	93.59	-0.0246	0.4128	-0.0241
463	SLU 82	0.86	-0.6	93.6	-0.0245	0.4131	-0.0238
463	SLU 83	0.87	-0.59	94.48	-0.025	0.4158	-0.0244
463	SLU 84	0.87	-0.61	94.49	-0.0249	0.4162	-0.0241
463	SLE RA 1	0.61	-0.5	62.44	-0.0181	0.2698	-0.0164
463	SLE RA 2	0.62	-0.52	62.45	-0.018	0.2702	-0.016
463	SLE RA 3	0.62	-0.5	63.4	-0.0184	0.2742	-0.0166
463	SLE RA 4	0.63	-0.52	63.41	-0.0184	0.2745	-0.0164
463	SLE RA 5	0.62	-0.53	63.04	-0.0183	0.2722	-0.0162
463	SLE RA 6	0.63	-0.51	63.99	-0.0187	0.2763	-0.0168
463	SLE RA 7	0.63	-0.53	64	-0.0187	0.2765	-0.0166
463	SLE RA 8	0.62	-0.52	63.62	-0.0186	0.2739	-0.0168
463	SLE RA 9	0.63	-0.53	63.63	-0.0186	0.2741	-0.0165
463	SLE RA 10	0.64	-0.5	67.31	-0.0184	0.2967	-0.0172
463	SLE RA 11	0.64	-0.48	68.26	-0.0189	0.3007	-0.0178
463	SLE RA 12	0.65	-0.49	68.27	-0.0188	0.3009	-0.0176
463	SLE RA 13	0.65	-0.51	67.91	-0.0187	0.2987	-0.0174
463	SLE RA 14	0.65	-0.49	68.86	-0.0192	0.3028	-0.018
463	SLE RA 15	0.65	-0.5	68.86	-0.0191	0.303	-0.0178
463	SLE RA 16	0.65	-0.5	68.49	-0.0191	0.3004	-0.0179
463	SLE RA 17	0.65	-0.51	68.49	-0.019	0.3006	-0.0177
463	SLE RA 18	0.64	-0.47	69.39	-0.0187	0.3076	-0.0181
463	SLE RA 19	0.65	-0.48	69.4	-0.0186	0.3078	-0.0179
463	SLE RA 20	0.65	-0.48	69.98	-0.019	0.3097	-0.0183
463	SLE RA 21	0.65	-0.49	69.99	-0.0189	0.3099	-0.018
463	SLE FR 1	0.61	-0.5	62.44	-0.0181	0.2698	-0.0164
463	SLE FR 2	0.61	-0.5	62.44	-0.018	0.2699	-0.0163
463	SLE FR 3	0.61	-0.5	62.68	-0.0182	0.2706	-0.0164
463	SLE FR 4	0.62	-0.49	64.53	-0.0182	0.2812	-0.0168
463	SLE FR 5	0.62	-0.49	64.76	-0.0184	0.282	-0.017
463	SLE FR 6	0.63	-0.48	65.91	-0.0184	0.2887	-0.0172
463	SLE QP 1	0.61	-0.5	62.44	-0.0181	0.2698	-0.0164
463	SLE QP 2	0.62	-0.49	64.52	-0.0183	0.2812	-0.0169
463	SLD 1	5.8	0.73	59.96	-0.016	0.3618	0.0124
463	SLD 2	6	1.1	60.08	-0.0182	0.355	0.0236
463	SLD 3	5.54	-0.89	59.7	-0.0103	0.3868	0.0055
463	SLD 4	5.74	-0.51	59.82	-0.0124	0.38	0.0167
463	SLD 5	2.54	2.26	63.54	-0.026	0.2686	0.0004
463	SLD 6	2.67	2.5	63.61	-0.0273	0.2642	0.0077
463	SLD 7	1.67	-3.12	62.65	-0.0067	0.352	-0.0226
463	SLD 8	1.8	-2.88	62.73	-0.0081	0.3475	-0.0153
463	SLD 9	-0.56	1.9	66.32	-0.0284	0.2148	-0.0185
463	SLD 10	-0.43	2.14	66.4	-0.0298	0.2103	-0.0111
463	SLD 11	-1.42	-3.48	65.43	-0.0092	0.2981	-0.0414
463	SLD 12	-1.29	-3.24	65.51	-0.0106	0.2937	-0.0341
463	SLD 13	-4.5	-0.47	69.23	-0.0241	0.1823	-0.0504

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
463	SLD 14	-4.3	-0.09	69.35	-0.0262	0.1755	-0.0392
463	SLD 15	-4.76	-2.08	68.97	-0.0183	0.2073	-0.0573
463	SLD 16	-4.56	-1.71	69.09	-0.0205	0.2005	-0.0461
463	SLV 1	12.75	2.31	53.84	-0.0129	0.4703	0.0516
463	SLV 2	13.21	3.18	54.12	-0.0178	0.4544	0.0777
463	SLV 3	12.14	-1.36	53.23	0.0002	0.5274	0.0355
463	SLV 4	12.6	-0.49	53.5	-0.0047	0.5115	0.0616
463	SLV 5	5.1	5.77	62.21	-0.0357	0.254	0.0236
463	SLV 6	5.4	6.33	62.38	-0.0389	0.2438	0.0404
463	SLV 7	3.08	-6.47	60.16	0.0081	0.4443	-0.0301
463	SLV 8	3.37	-5.91	60.33	0.0049	0.4341	-0.0133
463	SLV 9	-2.13	4.93	68.72	-0.0414	0.1282	-0.0204
463	SLV 10	-1.84	5.49	68.89	-0.0446	0.118	-0.0037
463	SLV 11	-4.16	-7.31	66.67	0.0024	0.3185	-0.0742
463	SLV 12	-3.86	-6.75	66.84	-0.0008	0.3083	-0.0574
463	SLV 13	-11.36	-0.49	75.55	-0.0318	0.0508	-0.0953
463	SLV 14	-10.9	0.38	75.82	-0.0367	0.0349	-0.0692
463	SLV 15	-11.97	-4.16	74.93	-0.0187	0.1079	-0.1114
463	SLV 16	-11.51	-3.29	75.21	-0.0236	0.092	-0.0853
463	CRTFP Ux+	0	0	0	0	0	0
463	CRTFP Ux-	0	0	0	0	0	0
463	CRTFP Uy+	0	0	0	0	0	0
463	CRTFP Uy-	0	0	0	0	0	0
464	SLU 1	0.59	0.26	38.01	0.0453	9.2632	-0.0946
464	SLU 2	0.59	0.24	38.02	0.0453	9.2661	-0.0856
464	SLU 3	0.61	0.27	38.93	0.0464	9.4746	-0.0959
464	SLU 4	0.61	0.25	38.93	0.0464	9.4764	-0.0905
464	SLU 5	0.6	0.23	38.59	0.046	9.3972	-0.0841
464	SLU 6	0.62	0.26	39.5	0.0471	9.6057	-0.0944
464	SLU 7	0.62	0.25	39.5	0.0471	9.6074	-0.089
464	SLU 8	0.61	0.25	39.15	0.0466	9.5254	-0.0916
464	SLU 9	0.61	0.24	39.16	0.0467	9.5271	-0.0862
464	SLU 10	0.62	0.34	42.34	0.0515	10.3108	-0.1216
464	SLU 11	0.63	0.37	43.25	0.0526	10.5193	-0.132
464	SLU 12	0.64	0.35	43.25	0.0526	10.521	-0.1265
464	SLU 13	0.63	0.33	42.91	0.0522	10.4419	-0.1201
464	SLU 14	0.64	0.36	43.82	0.0533	10.6504	-0.1305
464	SLU 15	0.65	0.35	43.82	0.0533	10.6521	-0.125
464	SLU 16	0.64	0.36	43.48	0.0528	10.5701	-0.1277
464	SLU 17	0.64	0.34	43.48	0.0529	10.5718	-0.1222
464	SLU 18	0.63	0.41	44.19	0.0541	10.7556	-0.1461
464	SLU 19	0.63	0.39	44.19	0.0542	10.7573	-0.1407
464	SLU 20	0.64	0.4	44.76	0.0548	10.8867	-0.1446
464	SLU 21	0.64	0.39	44.76	0.0548	10.8884	-0.1392
464	SLU 22	0.65	0.36	42.33	0.0515	10.2968	-0.1296
464	SLU 23	0.65	0.34	42.34	0.0516	10.2997	-0.1205
464	SLU 24	0.66	0.37	43.24	0.0526	10.5082	-0.1308
464	SLU 25	0.66	0.35	43.25	0.0527	10.5099	-0.1254
464	SLU 26	0.66	0.33	42.91	0.0522	10.4308	-0.119
464	SLU 27	0.67	0.36	43.81	0.0533	10.6393	-0.1293
464	SLU 28	0.67	0.35	43.82	0.0533	10.641	-0.1239
464	SLU 29	0.66	0.35	43.47	0.0529	10.559	-0.1265
464	SLU 30	0.67	0.34	43.48	0.0529	10.5607	-0.1211
464	SLU 31	0.68	0.44	46.66	0.0578	11.3444	-0.1565
464	SLU 32	0.69	0.47	47.57	0.0588	11.5529	-0.1669
464	SLU 33	0.69	0.45	47.57	0.0589	11.5546	-0.1614
464	SLU 34	0.69	0.43	47.23	0.0584	11.4754	-0.155
464	SLU 35	0.7	0.46	48.14	0.0595	11.6839	-0.1654
464	SLU 36	0.7	0.45	48.14	0.0595	11.6857	-0.1599
464	SLU 37	0.69	0.46	47.8	0.0591	11.6036	-0.1626
464	SLU 38	0.69	0.44	47.8	0.0591	11.6054	-0.1571
464	SLU 39	0.68	0.51	48.51	0.0604	11.7892	-0.181
464	SLU 40	0.69	0.49	48.51	0.0604	11.7909	-0.1756
464	SLU 41	0.69	0.5	49.08	0.061	11.9203	-0.1795
464	SLU 42	0.7	0.49	49.08	0.0611	11.922	-0.1741
464	SLU 43	0.75	0.31	47.94	0.0568	11.6878	-0.1111
464	SLU 44	0.75	0.28	47.95	0.0568	11.6907	-0.102
464	SLU 45	0.77	0.31	48.85	0.0579	11.8992	-0.1123
464	SLU 46	0.77	0.3	48.85	0.0579	11.901	-0.1069
464	SLU 47	0.76	0.28	48.52	0.0575	11.8218	-0.1005
464	SLU 48	0.78	0.31	49.42	0.0585	12.0303	-0.1108
464	SLU 49	0.78	0.29	49.42	0.0586	12.032	-0.1054
464	SLU 50	0.77	0.3	49.08	0.0581	11.95	-0.108
464	SLU 51	0.77	0.28	49.08	0.0581	11.9517	-0.1026
464	SLU 52	0.78	0.38	52.27	0.063	12.7354	-0.138
464	SLU 53	0.79	0.41	53.17	0.0641	12.9439	-0.1484
464	SLU 54	0.8	0.4	53.18	0.0641	12.9456	-0.1429
464	SLU 55	0.79	0.38	52.84	0.0637	12.8665	-0.1365
464	SLU 56	0.8	0.41	53.74	0.0647	13.075	-0.1469
464	SLU 57	0.81	0.39	53.75	0.0647	13.0767	-0.1414
464	SLU 58	0.8	0.4	53.4	0.0643	12.9946	-0.1441
464	SLU 59	0.8	0.39	53.4	0.0643	12.9964	-0.1386
464	SLU 60	0.79	0.45	54.11	0.0656	13.1802	-0.1625
464	SLU 61	0.79	0.44	54.12	0.0656	13.1819	-0.1571
464	SLU 62	0.8	0.45	54.68	0.0663	13.3113	-0.161
464	SLU 63	0.8	0.43	54.69	0.0663	13.313	-0.1556
464	SLU 64	0.8	0.41	52.26	0.063	12.7214	-0.146
464	SLU 65	0.81	0.38	52.26	0.063	12.7243	-0.1369
464	SLU 66	0.82	0.41	53.17	0.0641	12.9328	-0.1473
464	SLU 67	0.82	0.39	53.17	0.0641	12.9345	-0.1418
464	SLU 68	0.82	0.38	52.83	0.0637	12.8554	-0.1354
464	SLU 69	0.83	0.41	53.74	0.0648	13.0639	-0.1458
464	SLU 70	0.83	0.39	53.74	0.0648	13.0656	-0.1403
464	SLU 71	0.82	0.4	53.4	0.0643	12.9836	-0.143
464	SLU 72	0.83	0.38	53.4	0.0644	12.9853	-0.1375
464	SLU 73	0.84	0.48	56.59	0.0692	13.769	-0.1729
464	SLU 74	0.85	0.51	57.49	0.0703	13.9775	-0.1833

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
464	SLU 75	0.85	0.5	57.5	0.0703	13.9792	-0.1779
464	SLU 76	0.84	0.48	57.16	0.0699	13.9	-0.1714
464	SLU 77	0.86	0.51	58.06	0.071	14.1085	-0.1818
464	SLU 78	0.86	0.49	58.06	0.071	14.1103	-0.1764
464	SLU 79	0.85	0.5	57.72	0.0705	14.0282	-0.179
464	SLU 80	0.85	0.48	57.72	0.0705	14.03	-0.1736
464	SLU 81	0.84	0.55	58.43	0.0718	14.2138	-0.1975
464	SLU 82	0.85	0.54	58.44	0.0719	14.2155	-0.192
464	SLU 83	0.85	0.55	59	0.0725	14.3449	-0.1959
464	SLU 84	0.86	0.53	59.01	0.0725	14.3466	-0.1905
464	SLE RA 1	0.61	0.29	39.25	0.0471	9.5585	-0.1046
464	SLE RA 2	0.61	0.27	39.25	0.0471	9.5605	-0.0986
464	SLE RA 3	0.62	0.29	39.86	0.0478	9.6995	-0.1055
464	SLE RA 4	0.62	0.28	39.86	0.0478	9.7006	-0.1018
464	SLE RA 5	0.62	0.27	39.63	0.0476	9.6479	-0.0976
464	SLE RA 6	0.62	0.29	40.24	0.0483	9.7869	-0.1045
464	SLE RA 7	0.62	0.28	40.24	0.0483	9.788	-0.1008
464	SLE RA 8	0.62	0.29	40.01	0.048	9.7333	-0.1026
464	SLE RA 9	0.62	0.27	40.01	0.048	9.7345	-0.099
464	SLE RA 10	0.63	0.34	42.14	0.0512	10.2569	-0.1226
464	SLE RA 11	0.64	0.36	42.74	0.052	10.3959	-0.1295
464	SLE RA 12	0.64	0.35	42.74	0.052	10.3971	-0.1259
464	SLE RA 13	0.63	0.34	42.52	0.0517	10.3443	-0.1216
464	SLE RA 14	0.64	0.36	43.12	0.0524	10.4833	-0.1285
464	SLE RA 15	0.64	0.35	43.12	0.0524	10.4844	-0.1249
464	SLE RA 16	0.64	0.35	42.89	0.0521	10.4298	-0.1266
464	SLE RA 17	0.64	0.34	42.89	0.0521	10.4309	-0.123
464	SLE RA 18	0.63	0.39	43.37	0.053	10.5534	-0.1389
464	SLE RA 19	0.63	0.38	43.37	0.053	10.5546	-0.1353
464	SLE RA 20	0.64	0.39	43.75	0.0534	10.6408	-0.1379
464	SLE RA 21	0.64	0.38	43.75	0.0534	10.642	-0.1343
464	SLE FR 1	0.61	0.29	39.25	0.0471	9.5585	-0.1046
464	SLE FR 2	0.61	0.29	39.25	0.0471	9.5589	-0.1034
464	SLE FR 3	0.61	0.29	39.4	0.0473	9.5935	-0.1042
464	SLE FR 4	0.62	0.32	40.48	0.0489	9.8574	-0.1137
464	SLE FR 5	0.62	0.32	40.64	0.049	9.892	-0.1145
464	SLE FR 6	0.62	0.34	41.31	0.05	10.056	-0.1218
464	SLE QP 1	0.61	0.29	39.25	0.0471	9.5585	-0.1046
464	SLE QP 2	0.61	0.32	40.48	0.0489	9.857	-0.1149
464	SLD 1	3.61	1.08	29.86	0.036	7.4073	-0.3795
464	SLD 2	3.74	1.68	30.01	0.0344	7.4096	-0.5877
464	SLD 3	3.44	-0.35	29.29	0.0386	7.5343	0.1215
464	SLD 4	3.57	0.24	29.44	0.0371	7.5367	-0.0867
464	SLD 5	1.75	2.61	38.14	0.0412	8.929	-0.9174
464	SLD 6	1.84	3	38.23	0.0402	8.9305	-1.0534
464	SLD 7	1.18	-2.16	36.24	0.0501	9.3525	0.7527
464	SLD 8	1.26	-1.77	36.33	0.0491	9.354	0.6166
464	SLD 9	-0.03	2.41	44.64	0.0486	10.36	-0.8465
464	SLD 10	0.05	2.8	44.73	0.0476	10.3616	-0.9825
464	SLD 11	-0.61	-2.36	42.74	0.0575	10.7835	0.8236
464	SLD 12	-0.53	-1.97	42.83	0.0565	10.785	0.6876
464	SLD 13	-2.34	0.4	51.53	0.0606	12.1774	-0.1431
464	SLD 14	-2.21	0.99	51.67	0.0591	12.1797	-0.3513
464	SLD 15	-2.51	-1.04	50.96	0.0633	12.3044	0.3579
464	SLD 16	-2.38	-0.44	51.1	0.0618	12.3067	0.1497
464	SLV 1	7.63	2.06	15.62	0.0187	4.1233	-0.7216
464	SLV 2	7.92	3.45	15.95	0.0152	4.1286	-1.2064
464	SLV 3	7.23	-1.21	14.29	0.0248	4.4182	0.4217
464	SLV 4	7.52	0.18	14.62	0.0212	4.4235	-0.0631
464	SLV 5	3.28	5.56	34.99	0.0313	7.6887	-1.9478
464	SLV 6	3.47	6.45	35.2	0.029	7.6922	-2.2594
464	SLV 7	1.94	-5.33	30.55	0.0514	8.6717	1.8631
464	SLV 8	2.13	-4.44	30.76	0.0491	8.6751	1.5515
464	SLV 9	-0.9	5.08	50.2	0.0486	11.0389	-1.7814
464	SLV 10	-0.71	5.97	50.42	0.0463	11.0423	-2.0929
464	SLV 11	-2.24	-5.81	45.77	0.0687	12.0219	2.0296
464	SLV 12	-2.05	-4.92	45.98	0.0664	12.0253	1.718
464	SLV 13	-6.29	0.46	66.34	0.0765	15.2905	-0.1667
464	SLV 14	-6	1.85	66.68	0.0729	15.2959	-0.6515
464	SLV 15	-6.69	-2.81	65.01	0.0825	15.5854	0.9766
464	SLV 16	-6.4	-1.42	65.35	0.079	15.5908	0.4917
464	CRTFP Ux+	0	0	0	0	0	0
464	CRTFP Ux-	0	0	0	0	0	0
464	CRTFP Uy+	0	0	0	0	0	0
464	CRTFP Uy-	0	0	0	0	0	0
467	SLU 1	-0.4	-0.03	33.7	0.0347	-4.849	-0.0072
467	SLU 2	-0.39	-0.11	33.7	0.0349	-4.8514	-0.0267
467	SLU 3	-0.41	-0.02	34.51	0.0356	-4.9555	-0.0057
467	SLU 4	-0.4	-0.07	34.51	0.0357	-4.9569	-0.0174
467	SLU 5	-0.4	-0.1	34.21	0.0354	-4.9177	-0.0255
467	SLU 6	-0.42	-0.02	35.01	0.0361	-5.0219	-0.0045
467	SLU 7	-0.41	-0.06	35.01	0.0362	-5.0233	-0.0162
467	SLU 8	-0.41	-0.02	34.71	0.0358	-4.9818	-0.0049
467	SLU 9	-0.41	-0.06	34.71	0.0359	-4.9832	-0.0166
467	SLU 10	-0.4	-0.05	37.53	0.04	-5.3975	-0.0127
467	SLU 11	-0.42	0.04	38.34	0.0407	-5.5016	0.0083
467	SLU 12	-0.41	-0.01	38.34	0.0408	-5.503	-0.0034
467	SLU 13	-0.41	-0.04	38.04	0.0405	-5.4639	-0.0115
467	SLU 14	-0.43	0.04	38.84	0.0412	-5.568	0.0095
467	SLU 15	-0.42	-0.01	38.84	0.0413	-5.5694	-0.0022
467	SLU 16	-0.42	0.04	38.54	0.0409	-5.5279	0.0092
467	SLU 17	-0.42	-0.01	38.54	0.041	-5.5293	-0.0025
467	SLU 18	-0.41	0.05	39.17	0.042	-5.6292	0.0128
467	SLU 19	-0.41	0.01	39.17	0.0421	-5.6306	0.0011
467	SLU 20	-0.42	0.06	39.68	0.0426	-5.6955	0.014
467	SLU 21	-0.42	0.01	39.68	0.0427	-5.697	0.0023
467	SLU 22	-0.43	0.04	37.56	0.0399	-5.3905	0.0101

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
467	SLU 23	-0.43	-0.03	37.56	0.04	-5.3929	-0.0093
467	SLU 24	-0.45	0.05	38.36	0.0407	-5.497	0.0117
467	SLU 25	-0.44	0	38.36	0.0408	-5.4984	0
467	SLU 26	-0.44	-0.03	38.06	0.0406	-5.4592	-0.0081
467	SLU 27	-0.45	0.05	38.87	0.0412	-5.5634	0.0128
467	SLU 28	-0.45	0.01	38.87	0.0413	-5.5648	0.0012
467	SLU 29	-0.45	0.05	38.57	0.0409	-5.5233	0.0125
467	SLU 30	-0.45	0.01	38.57	0.041	-5.5247	0.0008
467	SLU 31	-0.44	0.02	41.39	0.0451	-5.939	0.0047
467	SLU 32	-0.46	0.11	42.19	0.0458	-6.0431	0.0257
467	SLU 33	-0.45	0.06	42.19	0.0459	-6.0445	0.014
467	SLU 34	-0.45	0.03	41.89	0.0457	-6.0054	0.0059
467	SLU 35	-0.46	0.11	42.7	0.0464	-6.1095	0.0269
467	SLU 36	-0.46	0.06	42.7	0.0465	-6.1109	0.0152
467	SLU 37	-0.46	0.11	42.4	0.046	-6.0694	0.0265
467	SLU 38	-0.46	0.06	42.4	0.0461	-6.0708	0.0149
467	SLU 39	-0.45	0.12	43.03	0.0472	-6.1707	0.0302
467	SLU 40	-0.45	0.08	43.03	0.0473	-6.1721	0.0185
467	SLU 41	-0.46	0.13	43.53	0.0477	-6.237	0.0314
467	SLU 42	-0.45	0.08	43.53	0.0478	-6.2385	0.0197
467	SLU 43	-0.5	-0.06	42.49	0.0434	-6.118	-0.0154
467	SLU 44	-0.5	-0.14	42.49	0.0436	-6.1204	-0.0348
467	SLU 45	-0.51	-0.05	43.3	0.0443	-6.2245	-0.0139
467	SLU 46	-0.51	-0.1	43.3	0.0444	-6.2259	-0.0255
467	SLU 47	-0.51	-0.13	43	0.0441	-6.1868	-0.0336
467	SLU 48	-0.52	-0.05	43.8	0.0448	-6.2909	-0.0127
467	SLU 49	-0.52	-0.1	43.8	0.0449	-6.2923	-0.0243
467	SLU 50	-0.52	-0.05	43.5	0.0445	-6.2508	-0.013
467	SLU 51	-0.52	-0.1	43.5	0.0445	-6.2522	-0.0247
467	SLU 52	-0.51	-0.08	46.32	0.0487	-6.6665	-0.0208
467	SLU 53	-0.52	0	47.13	0.0494	-6.7706	0.0002
467	SLU 54	-0.52	-0.04	47.12	0.0495	-6.7721	-0.0115
467	SLU 55	-0.52	-0.08	46.83	0.0492	-6.7329	-0.0196
467	SLU 56	-0.53	0.01	47.63	0.0499	-6.837	0.0014
467	SLU 57	-0.53	-0.04	47.63	0.05	-6.8384	-0.0103
467	SLU 58	-0.53	0.01	47.33	0.0496	-6.7969	0.001
467	SLU 59	-0.53	-0.04	47.33	0.0497	-6.7983	-0.0107
467	SLU 60	-0.52	0.02	47.96	0.0507	-6.8982	0.0047
467	SLU 61	-0.52	-0.03	47.96	0.0508	-6.8996	-0.007
467	SLU 62	-0.53	0.03	48.47	0.0512	-6.9646	0.0058
467	SLU 63	-0.52	-0.02	48.47	0.0513	-6.966	-0.0058
467	SLU 64	-0.54	0.01	46.35	0.0485	-6.6595	0.002
467	SLU 65	-0.54	-0.07	46.35	0.0487	-6.6619	-0.0174
467	SLU 66	-0.55	0.02	47.15	0.0494	-6.766	0.0035
467	SLU 67	-0.55	-0.03	47.15	0.0495	-6.7674	-0.0081
467	SLU 68	-0.54	-0.06	46.85	0.0492	-6.7283	-0.0163
467	SLU 69	-0.56	0.02	47.66	0.0499	-6.8324	0.0047
467	SLU 70	-0.56	-0.03	47.66	0.05	-6.8338	-0.007
467	SLU 71	-0.56	0.02	47.36	0.0496	-6.7923	0.0044
467	SLU 72	-0.55	-0.03	47.36	0.0497	-6.7937	-0.0073
467	SLU 73	-0.55	-0.01	50.18	0.0538	-7.208	-0.0034
467	SLU 74	-0.56	0.07	50.98	0.0545	-7.3121	0.0176
467	SLU 75	-0.56	0.03	50.98	0.0546	-7.3136	0.0059
467	SLU 76	-0.55	-0.01	50.68	0.0543	-7.2744	-0.0022
467	SLU 77	-0.57	0.08	51.49	0.055	-7.3785	0.0187
467	SLU 78	-0.57	0.03	51.49	0.0551	-7.3799	0.0071
467	SLU 79	-0.57	0.08	51.19	0.0547	-7.3384	0.0184
467	SLU 80	-0.56	0.03	51.19	0.0548	-7.3398	0.0067
467	SLU 81	-0.56	0.09	51.82	0.0558	-7.4397	0.0221
467	SLU 82	-0.55	0.04	51.82	0.0559	-7.4411	0.0104
467	SLU 83	-0.56	0.1	52.32	0.0564	-7.5061	0.0232
467	SLU 84	-0.56	0.05	52.32	0.0565	-7.5075	0.0116
467	SLE RA 1	-0.41	-0.01	34.81	0.0362	-5.0037	-0.0023
467	SLE RA 2	-0.4	-0.06	34.81	0.0363	-5.0053	-0.0152
467	SLE RA 3	-0.42	0	35.34	0.0368	-5.0747	-0.0013
467	SLE RA 4	-0.41	-0.03	35.34	0.0368	-5.0756	-0.009
467	SLE RA 5	-0.41	-0.06	35.14	0.0367	-5.0495	-0.0145
467	SLE RA 6	-0.42	0	35.68	0.0371	-5.119	-0.0005
467	SLE RA 7	-0.42	-0.03	35.68	0.0372	-5.1199	-0.0083
467	SLE RA 8	-0.42	0	35.48	0.0369	-5.0922	-0.0007
467	SLE RA 9	-0.42	-0.03	35.48	0.037	-5.0932	-0.0085
467	SLE RA 10	-0.41	-0.02	37.36	0.0397	-5.3694	-0.0059
467	SLE RA 11	-0.42	0.03	37.89	0.0402	-5.4388	0.0081
467	SLE RA 12	-0.42	0	37.89	0.0403	-5.4397	0.0003
467	SLE RA 13	-0.42	-0.02	37.69	0.0401	-5.4136	-0.0051
467	SLE RA 14	-0.43	0.04	38.23	0.0405	-5.483	0.0089
467	SLE RA 15	-0.42	0.01	38.23	0.0406	-5.484	0.0011
467	SLE RA 16	-0.43	0.04	38.03	0.0403	-5.4563	0.0087
467	SLE RA 17	-0.42	0.01	38.03	0.0404	-5.4572	0.0009
467	SLE RA 18	-0.42	0.05	38.45	0.0411	-5.5238	0.0111
467	SLE RA 19	-0.42	0.02	38.45	0.0411	-5.5248	0.0033
467	SLE RA 20	-0.42	0.05	38.79	0.0414	-5.5681	0.0119
467	SLE RA 21	-0.42	0.02	38.79	0.0415	-5.569	0.0041
467	SLE FR 1	-0.41	-0.01	34.81	0.0362	-5.0037	-0.0023
467	SLE FR 2	-0.41	-0.02	34.81	0.0362	-5.004	-0.0049
467	SLE FR 3	-0.41	-0.01	34.94	0.0363	-5.0214	-0.002
467	SLE FR 4	-0.41	0	35.9	0.0377	-5.1601	-0.0009
467	SLE FR 5	-0.41	0.01	36.03	0.0378	-5.1774	0.002
467	SLE FR 6	-0.41	0.02	36.63	0.0386	-5.2638	0.0044
467	SLE QP 1	-0.41	-0.01	34.81	0.0362	-5.0037	-0.0023
467	SLE QP 2	-0.41	0.01	35.9	0.0377	-5.1597	0.0017
467	SLD 1	2.04	0.56	46.2	0.0471	-6.4532	0.1405
467	SLD 2	2.13	0.06	46.13	0.0485	-6.4652	0.0147
467	SLD 3	2.19	-0.85	45.68	0.0498	-6.5509	-0.2132
467	SLD 4	2.28	-1.36	45.62	0.0512	-6.5629	-0.339
467	SLD 5	0.09	2.41	39.78	0.0362	-5.3975	0.6021
467	SLD 6	0.15	2.08	39.74	0.0371	-5.4053	0.5199

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
467	SLD 7	0.57	-2.3	38.07	0.0451	-5.7231	-0.5771
467	SLD 8	0.63	-2.64	38.03	0.046	-5.731	-0.6593
467	SLD 9	-1.45	2.65	33.77	0.0293	-4.5885	0.6627
467	SLD 10	-1.39	2.32	33.73	0.0302	-4.5963	0.5805
467	SLD 11	-0.97	-2.06	32.06	0.0382	-4.9142	-0.5165
467	SLD 12	-0.92	-2.39	32.02	0.0391	-4.922	-0.5987
467	SLD 13	-3.1	1.37	26.18	0.0241	-3.7566	0.3425
467	SLD 14	-3.01	0.87	26.11	0.0255	-3.7686	0.2167
467	SLD 15	-2.95	-0.04	25.67	0.0268	-3.8543	-0.0113
467	SLD 16	-2.87	-0.55	25.6	0.0282	-3.8663	-0.1371
467	SLV 1	5.33	1.25	60.01	0.0599	-8.1881	0.3122
467	SLV 2	5.54	0.07	59.86	0.0631	-8.216	0.0192
467	SLV 3	5.66	-1.95	58.81	0.066	-8.4155	-0.4883
467	SLV 4	5.87	-3.13	58.66	0.0692	-8.4434	-0.7812
467	SLV 5	0.77	5.44	44.97	0.0345	-5.7185	1.3591
467	SLV 6	0.91	4.68	44.88	0.0366	-5.7364	1.1708
467	SLV 7	1.88	-5.23	40.98	0.0549	-6.4767	-1.3091
467	SLV 8	2.01	-5.99	40.89	0.057	-6.4946	-1.4974
467	SLV 9	-2.83	6.01	30.91	0.0184	-3.8249	1.5008
467	SLV 10	-2.7	5.25	30.82	0.0205	-3.8428	1.3125
467	SLV 11	-1.73	-4.66	26.92	0.0387	-4.5831	-1.1673
467	SLV 12	-1.6	-5.42	26.83	0.0408	-4.601	-1.3556
467	SLV 13	-6.69	3.15	13.14	0.0061	-1.8761	0.7847
467	SLV 14	-6.49	1.97	12.99	0.0094	-1.9039	0.4917
467	SLV 15	-6.36	-0.05	11.94	0.0122	-2.1035	-0.0158
467	SLV 16	-6.15	-1.23	11.79	0.0155	-2.1314	-0.3087
467	CRTFP Ux+	0	0	0	0	0	0
467	CRTFP Ux-	0	0	0	0	0	0
467	CRTFP Uy+	0	0	0	0	0	0
467	CRTFP Uy-	0	0	0	0	0	0
471	SLU 1	-0.34	-0.79	154.33	-5.527	34.3453	0.0784
471	SLU 2	-0.33	-0.96	154.36	-5.5241	34.3553	0.1211
471	SLU 3	-0.35	-0.75	158.05	-5.6534	35.182	0.0675
471	SLU 4	-0.34	-0.85	158.07	-5.6516	35.1879	0.0931
471	SLU 5	-0.33	-0.96	156.64	-5.6038	34.8683	0.1207
471	SLU 6	-0.35	-0.76	160.33	-5.7331	35.695	0.067
471	SLU 7	-0.34	-0.86	160.35	-5.7313	35.701	0.0927
471	SLU 8	-0.35	-0.8	158.89	-5.6865	35.3714	0.0775
471	SLU 9	-0.34	-0.9	158.91	-5.6847	35.3774	0.1032
471	SLU 10	-0.26	-0.9	174.49	-6.2441	38.7357	0.0972
471	SLU 11	-0.28	-0.7	178.18	-6.3734	39.5624	0.0435
471	SLU 12	-0.27	-0.8	178.19	-6.3717	39.5684	0.0692
471	SLU 13	-0.27	-0.9	176.77	-6.3238	39.2487	0.0968
471	SLU 14	-0.28	-0.7	180.46	-6.4531	40.0754	0.0431
471	SLU 15	-0.28	-0.8	180.47	-6.4514	40.0814	0.0687
471	SLU 16	-0.28	-0.74	179.02	-6.4065	39.7518	0.0536
471	SLU 17	-0.27	-0.84	179.04	-6.4047	39.7578	0.0792
471	SLU 18	-0.25	-0.71	183.08	-6.5557	40.6031	0.0442
471	SLU 19	-0.24	-0.81	183.1	-6.5539	40.609	0.0698
471	SLU 20	-0.25	-0.71	185.36	-6.6354	41.1161	0.0438
471	SLU 21	-0.24	-0.81	185.38	-6.6336	41.1221	0.0694
471	SLU 22	-0.36	-0.45	171.76	-6.0884	38.2456	-0.0162
471	SLU 23	-0.34	-0.61	171.79	-6.0854	38.2556	0.0265
471	SLU 24	-0.36	-0.41	175.48	-6.2147	39.0823	-0.0271
471	SLU 25	-0.35	-0.51	175.5	-6.2129	39.0882	-0.0015
471	SLU 26	-0.35	-0.62	174.07	-6.1651	38.7686	0.0261
471	SLU 27	-0.37	-0.41	177.76	-6.2944	39.5953	-0.0276
471	SLU 28	-0.36	-0.51	177.78	-6.2927	39.6013	-0.0019
471	SLU 29	-0.37	-0.45	176.32	-6.2478	39.2717	-0.0171
471	SLU 30	-0.36	-0.55	176.34	-6.246	39.2776	0.0086
471	SLU 31	-0.28	-0.56	191.92	-6.8054	42.636	0.0026
471	SLU 32	-0.3	-0.35	195.6	-6.9348	43.4627	-0.0511
471	SLU 33	-0.29	-0.45	195.62	-6.933	43.4687	-0.0254
471	SLU 34	-0.28	-0.56	194.2	-6.8852	43.149	0.0022
471	SLU 35	-0.3	-0.36	197.88	-7.0145	43.9757	-0.0515
471	SLU 36	-0.29	-0.46	197.9	-7.0127	43.9817	-0.0259
471	SLU 37	-0.3	-0.4	196.45	-6.9678	43.6521	-0.041
471	SLU 38	-0.29	-0.5	196.46	-6.9661	43.6581	-0.0154
471	SLU 39	-0.27	-0.36	200.51	-7.117	44.5034	-0.0504
471	SLU 40	-0.26	-0.46	200.53	-7.1152	44.5093	-0.0248
471	SLU 41	-0.27	-0.37	202.79	-7.1967	45.0164	-0.0508
471	SLU 42	-0.26	-0.47	202.81	-7.1949	45.0224	-0.0252
471	SLU 43	-0.44	-1.15	194.66	-6.9927	43.3117	0.1343
471	SLU 44	-0.43	-1.31	194.69	-6.9897	43.3216	0.1771
471	SLU 45	-0.44	-1.11	198.38	-7.119	44.1484	0.1234
471	SLU 46	-0.44	-1.21	198.39	-7.1173	44.1543	0.149
471	SLU 47	-0.43	-1.32	196.97	-7.0694	43.8346	0.1766
471	SLU 48	-0.45	-1.11	200.66	-7.1988	44.6614	0.123
471	SLU 49	-0.44	-1.21	200.67	-7.197	44.6673	0.1486
471	SLU 50	-0.45	-1.15	199.22	-7.1521	44.3378	0.1335
471	SLU 51	-0.44	-1.25	199.24	-7.1503	44.3437	0.1591
471	SLU 52	-0.36	-1.25	214.81	-7.7098	47.702	0.1531
471	SLU 53	-0.38	-1.05	218.5	-7.8391	48.5288	0.0995
471	SLU 54	-0.37	-1.15	218.52	-7.8373	48.5347	0.1251
471	SLU 55	-0.36	-1.26	217.09	-7.7895	48.2151	0.1527
471	SLU 56	-0.38	-1.06	220.78	-7.9188	49.0418	0.0991
471	SLU 57	-0.37	-1.16	220.8	-7.917	49.0478	0.1247
471	SLU 58	-0.38	-1.1	219.34	-7.8722	48.7182	0.1096
471	SLU 59	-0.37	-1.2	219.36	-7.8704	48.7241	0.1352
471	SLU 60	-0.35	-1.06	223.41	-8.0213	49.5694	0.1001
471	SLU 61	-0.34	-1.16	223.43	-8.0195	49.5754	0.1258
471	SLU 62	-0.35	-1.07	225.69	-8.101	50.0825	0.0997
471	SLU 63	-0.34	-1.17	225.71	-8.0993	50.0884	0.1254
471	SLU 64	-0.46	-0.8	212.09	-7.554	47.212	0.0397
471	SLU 65	-0.44	-0.97	212.12	-7.5511	47.2219	0.0825
471	SLU 66	-0.46	-0.77	215.81	-7.6804	48.0487	0.0288
471	SLU 67	-0.45	-0.87	215.82	-7.6786	48.0546	0.0544

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
471	SLU 68	-0.44	-0.97	214.4	-7.6308	47.7349	0.082
471	SLU 69	-0.46	-0.77	218.08	-7.7601	48.5617	0.0284
471	SLU 70	-0.45	-0.87	218.1	-7.7583	48.5676	0.054
471	SLU 71	-0.46	-0.81	216.65	-7.7135	48.2381	0.0389
471	SLU 72	-0.45	-0.91	216.67	-7.7117	48.244	0.0645
471	SLU 73	-0.38	-0.91	232.24	-8.2711	51.6023	0.0585
471	SLU 74	-0.4	-0.71	235.93	-8.4004	52.4291	0.0049
471	SLU 75	-0.39	-0.81	235.95	-8.3986	52.435	0.0305
471	SLU 76	-0.38	-0.91	234.52	-8.3508	52.1154	0.0581
471	SLU 77	-0.4	-0.71	238.21	-8.4801	52.9421	0.0045
471	SLU 78	-0.39	-0.81	238.23	-8.4784	52.948	0.0301
471	SLU 79	-0.4	-0.75	236.77	-8.4335	52.6185	0.015
471	SLU 80	-0.39	-0.85	236.79	-8.4317	52.6244	0.0406
471	SLU 81	-0.36	-0.72	240.84	-8.5827	53.4697	0.0055
471	SLU 82	-0.36	-0.82	240.85	-8.5809	53.4757	0.0312
471	SLU 83	-0.37	-0.72	243.12	-8.6624	53.9828	0.0051
471	SLU 84	-0.36	-0.82	243.13	-8.6606	53.9887	0.0308
471	SLE RA 1	-0.35	-0.69	159.31	-5.6874	35.4597	0.0514
471	SLE RA 2	-0.34	-0.8	159.33	-5.6854	35.4663	0.0798
471	SLE RA 3	-0.35	-0.67	161.79	-5.7717	36.0175	0.0441
471	SLE RA 4	-0.34	-0.73	161.8	-5.7705	36.0215	0.0612
471	SLE RA 5	-0.34	-0.81	160.85	-5.7386	35.8083	0.0796
471	SLE RA 6	-0.35	-0.67	163.31	-5.8248	36.3595	0.0438
471	SLE RA 7	-0.35	-0.74	163.32	-5.8236	36.3635	0.0609
471	SLE RA 8	-0.35	-0.7	162.35	-5.7937	36.1438	0.0508
471	SLE RA 9	-0.35	-0.76	162.37	-5.7925	36.1477	0.0679
471	SLE RA 10	-0.29	-0.76	172.75	-6.1655	38.3866	0.0639
471	SLE RA 11	-0.31	-0.63	175.21	-6.2517	38.9378	0.0281
471	SLE RA 12	-0.3	-0.7	175.22	-6.2505	38.9417	0.0452
471	SLE RA 13	-0.3	-0.77	174.27	-6.2186	38.7286	0.0636
471	SLE RA 14	-0.31	-0.63	176.73	-6.3048	39.2798	0.0278
471	SLE RA 15	-0.3	-0.7	176.74	-6.3036	39.2837	0.0449
471	SLE RA 16	-0.31	-0.66	175.77	-6.2737	39.064	0.0348
471	SLE RA 17	-0.3	-0.73	175.78	-6.2725	39.068	0.0519
471	SLE RA 18	-0.29	-0.64	178.48	-6.3732	39.6315	0.0286
471	SLE RA 19	-0.28	-0.7	178.49	-6.372	39.6355	0.0457
471	SLE RA 20	-0.29	-0.64	180	-6.4263	39.9736	0.0283
471	SLE RA 21	-0.28	-0.71	180.01	-6.4251	39.9775	0.0454
471	SLE FR 1	-0.35	-0.69	159.31	-5.6874	35.4597	0.0514
471	SLE FR 2	-0.35	-0.71	159.32	-5.687	35.461	0.0571
471	SLE FR 3	-0.35	-0.69	159.92	-5.7087	35.5965	0.0512
471	SLE FR 4	-0.33	-0.7	165.07	-5.8927	36.7126	0.0502
471	SLE FR 5	-0.33	-0.68	165.67	-5.9144	36.8481	0.0444
471	SLE FR 6	-0.32	-0.66	168.9	-6.0303	37.5456	0.04
471	SLE QP 1	-0.35	-0.69	159.31	-5.6874	35.4597	0.0514
471	SLE QP 2	-0.33	-0.68	165.06	-5.8931	36.7113	0.0445
471	SLD 1	12.7	2.62	162.71	-5.8663	36.1233	-0.1172
471	SLD 2	13.09	2.35	162.71	-5.869	36.1276	0.0088
471	SLD 3	12.06	-2.17	163.75	-5.803	36.4311	1.0306
471	SLD 4	12.45	-2.44	163.74	-5.8058	36.4354	1.1567
471	SLD 5	4.48	7.63	162.79	-5.9806	36.0673	-1.7672
471	SLD 6	4.73	7.46	162.79	-5.9824	36.0701	-1.6849
471	SLD 7	2.35	-8.35	166.24	-5.7696	37.0933	2.059
471	SLD 8	2.6	-8.52	166.24	-5.7714	37.096	2.1414
471	SLD 9	-3.26	7.17	163.89	-6.0148	36.3265	-2.0523
471	SLD 10	-3.01	7	163.89	-6.0166	36.3293	-1.97
471	SLD 11	-5.39	-8.81	167.34	-5.8039	37.3524	1.7739
471	SLD 12	-5.14	-8.98	167.34	-5.8057	37.3552	1.8563
471	SLD 13	-13.11	1.09	166.38	-5.9805	36.9871	-1.0676
471	SLD 14	-12.72	0.82	166.38	-5.9833	36.9914	-0.9416
471	SLD 15	-13.75	-3.7	167.42	-5.9172	37.2949	0.0803
471	SLD 16	-13.36	-3.97	167.42	-5.92	37.2992	0.2063
471	SLV 1	30.15	6.85	159.55	-5.8258	35.333	-0.29
471	SLV 2	31.06	6.22	159.55	-5.8322	35.3429	0.0035
471	SLV 3	28.66	-4.01	161.89	-5.6811	36.0284	2.3089
471	SLV 4	29.57	-4.63	161.89	-5.6876	36.0383	2.6024
471	SLV 5	10.92	18.16	159.87	-6.0911	35.2413	-4.0478
471	SLV 6	11.5	17.76	159.86	-6.0953	35.2477	-3.8592
471	SLV 7	5.96	-18.04	167.66	-5.6091	37.5595	4.6152
471	SLV 8	6.54	-18.44	167.65	-5.6133	37.5658	4.8039
471	SLV 9	-7.2	17.09	162.47	-6.173	35.8567	-4.7148
471	SLV 10	-6.61	16.68	162.47	-6.1772	35.8631	-4.5262
471	SLV 11	-12.16	-19.11	170.26	-5.691	38.1748	3.9482
471	SLV 12	-11.57	-19.51	170.26	-5.6951	38.1812	4.1369
471	SLV 13	-30.23	3.28	168.24	-6.0987	37.3842	-2.5134
471	SLV 14	-29.32	2.66	168.24	-6.1051	37.3941	-2.2198
471	SLV 15	-31.71	-7.58	170.58	-5.9541	38.0796	0.0855
471	SLV 16	-30.81	-8.2	170.58	-5.9605	38.0895	0.3791
471	CRTFP Ux+	0	0	0	0	0	0
471	CRTFP Ux-	0	0	0	0	0	0
471	CRTFP Uy+	0	0	0	0	0	0
471	CRTFP Uy-	0	0	0	0	0	0
472	SLU 1	-0.02	-0.33	56.51	-0.7964	-0.0733	0.0038
472	SLU 2	-0.01	-0.38	56.51	-0.7924	-0.0731	0.0039
472	SLU 3	-0.02	-0.32	57.85	-0.7927	-0.0747	0.0039
472	SLU 4	-0.02	-0.35	57.85	-0.7903	-0.0745	0.004
472	SLU 5	-0.01	-0.38	57.33	-0.7909	-0.0739	0.0039
472	SLU 6	-0.02	-0.32	58.67	-0.7911	-0.0755	0.004
472	SLU 7	-0.02	-0.35	58.67	-0.7888	-0.0753	0.004
472	SLU 8	-0.02	-0.33	58.15	-0.7932	-0.075	0.004
472	SLU 9	-0.02	-0.36	58.15	-0.7909	-0.0748	0.004
472	SLU 10	0.02	-0.37	64.09	-1.1642	-0.0854	0.0045
472	SLU 11	0.01	-0.31	65.42	-1.1644	-0.0869	0.0046
472	SLU 12	0.02	-0.34	65.43	-1.1621	-0.0868	0.0046
472	SLU 13	0.02	-0.37	64.91	-1.1626	-0.0862	0.0046
472	SLU 14	0.01	-0.31	66.25	-1.1629	-0.0878	0.0047
472	SLU 15	0.02	-0.34	66.25	-1.1605	-0.0876	0.0047

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
472	SLU 16	0.01	-0.32	65.73	-1.165	-0.0872	0.0046
472	SLU 17	0.02	-0.35	65.73	-1.1626	-0.0871	0.0046
472	SLU 18	0.02	-0.31	67.33	-1.3274	-0.0909	0.0048
472	SLU 19	0.03	-0.35	67.33	-1.3251	-0.0908	0.0048
472	SLU 20	0.03	-0.32	68.15	-1.3259	-0.0917	0.0048
472	SLU 21	0.03	-0.35	68.15	-1.3235	-0.0916	0.0049
472	SLU 22	-0.02	-0.22	62.84	-0.9014	-0.0801	0.0043
472	SLU 23	-0.01	-0.27	62.84	-0.8975	-0.0799	0.0044
472	SLU 24	-0.01	-0.21	64.18	-0.8978	-0.0814	0.0044
472	SLU 25	-0.01	-0.24	64.18	-0.8954	-0.0813	0.0045
472	SLU 26	-0.01	-0.27	63.67	-0.8959	-0.0807	0.0044
472	SLU 27	-0.01	-0.21	65	-0.8962	-0.0822	0.0045
472	SLU 28	-0.01	-0.24	65	-0.8938	-0.0821	0.0045
472	SLU 29	-0.01	-0.22	64.48	-0.8983	-0.0817	0.0045
472	SLU 30	-0.01	-0.25	64.49	-0.8959	-0.0816	0.0045
472	SLU 31	0.02	-0.26	70.42	-1.2692	-0.0922	0.005
472	SLU 32	0.02	-0.2	71.76	-1.2695	-0.0937	0.0051
472	SLU 33	0.02	-0.23	71.76	-1.2671	-0.0936	0.0051
472	SLU 34	0.02	-0.26	71.24	-1.2677	-0.093	0.0051
472	SLU 35	0.02	-0.2	72.58	-1.2679	-0.0945	0.0052
472	SLU 36	0.02	-0.23	72.58	-1.2656	-0.0944	0.0052
472	SLU 37	0.02	-0.21	72.06	-1.27	-0.094	0.0051
472	SLU 38	0.02	-0.25	72.06	-1.2677	-0.0939	0.0051
472	SLU 39	0.03	-0.21	73.67	-1.4325	-0.0977	0.0053
472	SLU 40	0.03	-0.24	73.67	-1.4301	-0.0975	0.0053
472	SLU 41	0.03	-0.21	74.49	-1.4309	-0.0985	0.0053
472	SLU 42	0.03	-0.24	74.49	-1.4286	-0.0984	0.0054
472	SLU 43	-0.03	-0.46	71.29	-0.9993	-0.093	0.0048
472	SLU 44	-0.02	-0.52	71.29	-0.9953	-0.0928	0.0048
472	SLU 45	-0.03	-0.45	72.63	-0.9956	-0.0943	0.0049
472	SLU 46	-0.02	-0.48	72.63	-0.9932	-0.0942	0.0049
472	SLU 47	-0.02	-0.52	72.11	-0.9938	-0.0936	0.0049
472	SLU 48	-0.03	-0.45	73.45	-0.994	-0.0951	0.005
472	SLU 49	-0.02	-0.49	73.45	-0.9917	-0.095	0.005
472	SLU 50	-0.03	-0.47	72.93	-0.9961	-0.0946	0.0049
472	SLU 51	-0.02	-0.5	72.93	-0.9938	-0.0945	0.005
472	SLU 52	0.01	-0.51	78.87	-1.3671	-0.1051	0.0055
472	SLU 53	0	-0.44	80.21	-1.3673	-0.1066	0.0056
472	SLU 54	0.01	-0.47	80.21	-1.365	-0.1065	0.0056
472	SLU 55	0.01	-0.51	79.69	-1.3655	-0.1059	0.0056
472	SLU 56	0.01	-0.44	81.03	-1.3658	-0.1074	0.0056
472	SLU 57	0.01	-0.48	81.03	-1.3634	-0.1073	0.0057
472	SLU 58	0.01	-0.46	80.51	-1.3679	-0.1069	0.0056
472	SLU 59	0.01	-0.49	80.51	-1.3655	-0.1068	0.0056
472	SLU 60	0.02	-0.45	82.11	-1.5303	-0.1106	0.0057
472	SLU 61	0.02	-0.48	82.11	-1.528	-0.1104	0.0058
472	SLU 62	0.02	-0.45	82.93	-1.5288	-0.1114	0.0058
472	SLU 63	0.02	-0.48	82.94	-1.5264	-0.1112	0.0058
472	SLU 64	-0.02	-0.35	77.62	-1.1043	-0.0998	0.0053
472	SLU 65	-0.02	-0.41	77.63	-1.1004	-0.0996	0.0053
472	SLU 66	-0.02	-0.34	78.96	-1.1006	-0.1011	0.0054
472	SLU 67	-0.02	-0.38	78.96	-1.0983	-0.101	0.0054
472	SLU 68	-0.02	-0.41	78.45	-1.0988	-0.1004	0.0054
472	SLU 69	-0.02	-0.35	79.78	-1.0991	-0.1019	0.0055
472	SLU 70	-0.02	-0.38	79.78	-1.0967	-0.1018	0.0055
472	SLU 71	-0.02	-0.36	79.27	-1.1012	-0.1014	0.0054
472	SLU 72	-0.02	-0.39	79.27	-1.0988	-0.1013	0.0055
472	SLU 73	0.01	-0.4	85.2	-1.4721	-0.1119	0.006
472	SLU 74	0.01	-0.33	86.54	-1.4724	-0.1134	0.0061
472	SLU 75	0.01	-0.37	86.54	-1.47	-0.1133	0.0061
472	SLU 76	0.01	-0.4	86.02	-1.4706	-0.1127	0.0061
472	SLU 77	0.01	-0.34	87.36	-1.4708	-0.1142	0.0061
472	SLU 78	0.01	-0.37	87.36	-1.4684	-0.1141	0.0062
472	SLU 79	0.01	-0.35	86.84	-1.4729	-0.1137	0.0061
472	SLU 80	0.01	-0.38	86.84	-1.4706	-0.1136	0.0061
472	SLU 81	0.02	-0.34	88.45	-1.6354	-0.1173	0.0062
472	SLU 82	0.02	-0.37	88.45	-1.633	-0.1172	0.0063
472	SLU 83	0.02	-0.34	89.27	-1.6338	-0.1182	0.0063
472	SLU 84	0.03	-0.37	89.27	-1.6314	-0.118	0.0063
472	SLE RA 1	-0.02	-0.3	58.32	-0.8264	-0.0753	0.004
472	SLE RA 2	-0.02	-0.33	58.32	-0.8238	-0.0751	0.004
472	SLE RA 3	-0.02	-0.29	59.21	-0.8239	-0.0762	0.004
472	SLE RA 4	-0.02	-0.31	59.21	-0.8224	-0.0761	0.0041
472	SLE RA 5	-0.01	-0.33	58.87	-0.8227	-0.0757	0.004
472	SLE RA 6	-0.02	-0.29	59.76	-0.8229	-0.0767	0.0041
472	SLE RA 7	-0.02	-0.31	59.76	-0.8213	-0.0766	0.0041
472	SLE RA 8	-0.02	-0.3	59.41	-0.8243	-0.0764	0.0041
472	SLE RA 9	-0.02	-0.32	59.41	-0.8227	-0.0763	0.0041
472	SLE RA 10	0.01	-0.33	63.37	-1.0716	-0.0833	0.0044
472	SLE RA 11	0	-0.28	64.26	-1.0718	-0.0843	0.0045
472	SLE RA 12	0.01	-0.3	64.26	-1.0702	-0.0843	0.0045
472	SLE RA 13	0.01	-0.33	63.92	-1.0705	-0.0839	0.0045
472	SLE RA 14	0	-0.28	64.81	-1.0707	-0.0849	0.0045
472	SLE RA 15	0.01	-0.31	64.81	-1.0691	-0.0848	0.0045
472	SLE RA 16	0	-0.29	64.46	-1.0721	-0.0845	0.0045
472	SLE RA 17	0.01	-0.31	64.46	-1.0706	-0.0845	0.0045
472	SLE RA 18	0.01	-0.29	65.53	-1.1804	-0.087	0.0046
472	SLE RA 19	0.01	-0.31	65.53	-1.1789	-0.0869	0.0046
472	SLE RA 20	0.01	-0.29	66.08	-1.1794	-0.0875	0.0046
472	SLE RA 21	0.01	-0.31	66.08	-1.1778	-0.0874	0.0047
472	SLE FR 1	-0.02	-0.3	58.32	-0.8264	-0.0753	0.004
472	SLE FR 2	-0.02	-0.3	58.32	-0.8259	-0.0752	0.004
472	SLE FR 3	-0.02	-0.3	58.54	-0.826	-0.0755	0.004
472	SLE FR 4	-0.01	-0.3	60.48	-0.9321	-0.0788	0.0042
472	SLE FR 5	-0.01	-0.29	60.7	-0.9322	-0.079	0.0042
472	SLE FR 6	0	-0.29	61.93	-1.0034	-0.0811	0.0043
472	SLE QP 1	-0.02	-0.3	58.32	-0.8264	-0.0753	0.004

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
472	SLE QP 2	-0.01	-0.29	60.48	-0.9326	-0.0788	0.0042
472	SLD 1	4.3	0.8	59.6	-1.0087	-0.0673	0.0071
472	SLD 2	4.42	0.77	59.59	-1.01	-0.0666	0.0085
472	SLD 3	4.09	-0.8	59.81	-0.9123	-0.0626	0.006
472	SLD 4	4.21	-0.83	59.8	-0.9136	-0.0619	0.0074
472	SLD 5	1.58	2.47	59.9	-1.1015	-0.0827	0.0065
472	SLD 6	1.66	2.46	59.89	-1.1023	-0.0822	0.0075
472	SLD 7	0.88	-2.88	60.6	-0.78	-0.0668	0.0027
472	SLD 8	0.96	-2.9	60.59	-0.7809	-0.0664	0.0036
472	SLD 9	-0.98	2.31	60.38	-1.0844	-0.0912	0.0047
472	SLD 10	-0.9	2.29	60.36	-1.0852	-0.0907	0.0056
472	SLD 11	-1.68	-3.04	61.07	-0.7629	-0.0753	0.0009
472	SLD 12	-1.6	-3.06	61.06	-0.7637	-0.0749	0.0018
472	SLD 13	-4.23	0.25	61.17	-0.9517	-0.0957	0.001
472	SLD 14	-4.11	0.22	61.15	-0.953	-0.095	0.0024
472	SLD 15	-4.44	-1.36	61.38	-0.8552	-0.0909	-0.0002
472	SLD 16	-4.32	-1.39	61.36	-0.8565	-0.0902	0.0012
472	SLV 1	10.07	2.21	58.42	-1.1074	-0.0519	0.0111
472	SLV 2	10.36	2.14	58.38	-1.1105	-0.0502	0.0144
472	SLV 3	9.58	-1.43	58.9	-0.8888	-0.0411	0.0084
472	SLV 4	9.87	-1.5	58.86	-0.8918	-0.0394	0.0117
472	SLV 5	3.71	5.98	59.15	-1.3161	-0.0874	0.0098
472	SLV 6	3.89	5.94	59.12	-1.3181	-0.0863	0.0119
472	SLV 7	2.07	-6.14	60.74	-0.5873	-0.0514	0.0008
472	SLV 8	2.26	-6.18	60.71	-0.5893	-0.0503	0.0029
472	SLV 9	-2.28	5.59	60.25	-1.2759	-0.1073	0.0054
472	SLV 10	-2.09	5.55	60.23	-1.2779	-0.1062	0.0076
472	SLV 11	-3.91	-6.53	61.84	-0.5471	-0.0713	-0.0036
472	SLV 12	-3.73	-6.57	61.82	-0.5491	-0.0702	-0.0015
472	SLV 13	-9.89	0.91	62.11	-0.9734	-0.1182	-0.0033
472	SLV 14	-9.6	0.84	62.07	-0.9765	-0.1165	-0.0001
472	SLV 15	-10.38	-2.73	62.58	-0.7548	-0.1074	-0.006
472	SLV 16	-10.09	-2.79	62.55	-0.7578	-0.1057	-0.0028
472	CRTFP Ux+	0	0	0	0	0	0
472	CRTFP Ux-	0	0	0	0	0	0
472	CRTFP Uy+	0	0	0	0	0	0
472	CRTFP Uy-	0	0	0	0	0	0
473	SLU 1	0.06	-0.26	90.16	0.8895	-8.2724	0
473	SLU 2	0.07	-0.35	90.16	0.8984	-8.2725	-0.0075
473	SLU 3	0.07	-0.24	92.29	0.9171	-8.4682	0.0028
473	SLU 4	0.07	-0.29	92.29	0.9224	-8.4683	-0.0017
473	SLU 5	0.07	-0.34	91.46	0.9139	-8.3922	-0.0071
473	SLU 6	0.07	-0.24	93.59	0.9326	-8.588	0.0033
473	SLU 7	0.08	-0.29	93.59	0.9379	-8.588	-0.0012
473	SLU 8	0.07	-0.26	92.77	0.9206	-8.5119	0.0009
473	SLU 9	0.07	-0.31	92.77	0.9259	-8.5119	-0.0036
473	SLU 10	0.13	-0.28	102.22	0.9587	-9.3685	0.0041
473	SLU 11	0.13	-0.17	104.35	0.9774	-9.5643	0.0145
473	SLU 12	0.13	-0.22	104.35	0.9827	-9.5643	0.01
473	SLU 13	0.13	-0.28	103.53	0.9743	-9.4882	0.0046
473	SLU 14	0.13	-0.17	105.66	0.9929	-9.684	0.0149
473	SLU 15	0.13	-0.22	105.66	0.9983	-9.6841	0.0104
473	SLU 16	0.13	-0.19	104.83	0.981	-9.6079	0.0125
473	SLU 17	0.13	-0.24	104.83	0.9863	-9.6079	0.008
473	SLU 18	0.15	-0.17	107.39	0.9757	-9.8382	0.0166
473	SLU 19	0.15	-0.22	107.39	0.9811	-9.8382	0.0121
473	SLU 20	0.15	-0.17	108.7	0.9913	-9.9579	0.0171
473	SLU 21	0.16	-0.22	108.69	0.9966	-9.9579	0.0126
473	SLU 22	0.08	-0.06	100.22	0.9956	-9.1925	0.0218
473	SLU 23	0.09	-0.14	100.22	1.0044	-9.1925	0.0143
473	SLU 24	0.09	-0.03	102.35	1.0231	-9.3883	0.0246
473	SLU 25	0.09	-0.08	102.35	1.0284	-9.3884	0.0201
473	SLU 26	0.09	-0.14	101.52	1.02	-9.3123	0.0148
473	SLU 27	0.09	-0.03	103.65	1.0386	-9.5081	0.0251
473	SLU 28	0.09	-0.08	103.65	1.0439	-9.5081	0.0206
473	SLU 29	0.09	-0.06	102.83	1.0266	-9.4319	0.0227
473	SLU 30	0.09	-0.11	102.83	1.032	-9.432	0.0182
473	SLU 31	0.15	-0.08	112.28	1.0648	-10.2886	0.026
473	SLU 32	0.14	0.03	114.41	1.0834	-10.4844	0.0363
473	SLU 33	0.15	-0.02	114.41	1.0887	-10.4844	0.0318
473	SLU 34	0.15	-0.07	113.58	1.0803	-10.4083	0.0264
473	SLU 35	0.15	0.03	115.71	1.099	-10.6041	0.0367
473	SLU 36	0.15	-0.02	115.71	1.1043	-10.6042	0.0323
473	SLU 37	0.15	0.01	114.89	1.087	-10.528	0.0344
473	SLU 38	0.15	-0.04	114.89	1.0923	-10.528	0.0299
473	SLU 39	0.17	0.04	117.45	1.0818	-10.7582	0.0384
473	SLU 40	0.17	-0.01	117.45	1.0871	-10.7583	0.034
473	SLU 41	0.17	0.04	118.75	1.0973	-10.878	0.0389
473	SLU 42	0.17	-0.01	118.75	1.1026	-10.878	0.0344
473	SLU 43	0.08	-0.41	113.76	1.12	-10.4386	-0.0075
473	SLU 44	0.08	-0.49	113.76	1.1289	-10.4387	-0.015
473	SLU 45	0.08	-0.39	115.89	1.1476	-10.6345	-0.0047
473	SLU 46	0.09	-0.44	115.89	1.1529	-10.6345	-0.0092
473	SLU 47	0.09	-0.49	115.06	1.1444	-10.5585	-0.0146
473	SLU 48	0.08	-0.39	117.19	1.1631	-10.7542	-0.0042
473	SLU 49	0.09	-0.44	117.19	1.1684	-10.7543	-0.0087
473	SLU 50	0.08	-0.41	116.37	1.1511	-10.6781	-0.0066
473	SLU 51	0.09	-0.46	116.37	1.1564	-10.6782	-0.0111
473	SLU 52	0.14	-0.43	125.82	1.1892	-11.5348	-0.0033
473	SLU 53	0.14	-0.32	127.95	1.2079	-11.7306	0.007
473	SLU 54	0.14	-0.37	127.95	1.2132	-11.7306	0.0025
473	SLU 55	0.15	-0.43	127.13	1.2048	-11.6545	-0.0029
473	SLU 56	0.14	-0.32	129.26	1.2235	-11.8503	0.0074
473	SLU 57	0.15	-0.37	129.26	1.2288	-11.8503	0.0029
473	SLU 58	0.14	-0.34	128.43	1.2115	-11.7742	0.005
473	SLU 59	0.15	-0.39	128.43	1.2168	-11.7742	0.0006
473	SLU 60	0.16	-0.32	130.99	1.2063	-12.0044	0.0091

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
473	SLU 61	0.17	-0.37	130.99	1.2116	-12.0045	0.0046
473	SLU 62	0.16	-0.32	132.29	1.2218	-12.1242	0.0096
473	SLU 63	0.17	-0.37	132.29	1.2271	-12.1242	0.0051
473	SLU 64	0.09	-0.21	123.82	1.2261	-11.3587	0.0143
473	SLU 65	0.1	-0.29	123.81	1.2349	-11.3588	0.0068
473	SLU 66	0.1	-0.18	125.95	1.2536	-11.5546	0.0171
473	SLU 67	0.1	-0.23	125.95	1.2589	-11.5546	0.0126
473	SLU 68	0.11	-0.29	125.12	1.2505	-11.4785	0.0073
473	SLU 69	0.1	-0.18	127.25	1.2691	-11.6743	0.0176
473	SLU 70	0.11	-0.23	127.25	1.2744	-11.6744	0.0131
473	SLU 71	0.1	-0.21	126.43	1.2571	-11.5982	0.0152
473	SLU 72	0.11	-0.25	126.42	1.2625	-11.5982	0.0107
473	SLU 73	0.16	-0.22	135.88	1.2953	-12.4548	0.0185
473	SLU 74	0.16	-0.12	138.01	1.3139	-12.6506	0.0288
473	SLU 75	0.16	-0.17	138.01	1.3193	-12.6507	0.0243
473	SLU 76	0.16	-0.22	137.18	1.3108	-12.5746	0.0189
473	SLU 77	0.16	-0.12	139.31	1.3295	-12.7704	0.0293
473	SLU 78	0.17	-0.17	139.31	1.3348	-12.7704	0.0248
473	SLU 79	0.16	-0.14	138.49	1.3175	-12.6942	0.0269
473	SLU 80	0.16	-0.19	138.49	1.3228	-12.6943	0.0224
473	SLU 81	0.18	-0.11	141.05	1.3123	-12.9245	0.031
473	SLU 82	0.18	-0.16	141.05	1.3176	-12.9245	0.0265
473	SLU 83	0.18	-0.11	142.35	1.3278	-13.0442	0.0314
473	SLU 84	0.19	-0.16	142.35	1.3331	-13.0443	0.0269
473	SLE RA 1	0.07	-0.2	93.03	0.9198	-8.5353	0.0062
473	SLE RA 2	0.07	-0.26	93.03	0.9257	-8.5353	0.0012
473	SLE RA 3	0.07	-0.19	94.45	0.9382	-8.6658	0.0081
473	SLE RA 4	0.08	-0.22	94.45	0.9417	-8.6659	0.0051
473	SLE RA 5	0.08	-0.26	93.9	0.9361	-8.6151	0.0015
473	SLE RA 6	0.07	-0.19	95.32	0.9485	-8.7457	0.0084
473	SLE RA 7	0.08	-0.22	95.32	0.9521	-8.7457	0.0054
473	SLE RA 8	0.07	-0.2	94.77	0.9405	-8.6949	0.0068
473	SLE RA 9	0.08	-0.24	94.77	0.9441	-8.6949	0.0038
473	SLE RA 10	0.11	-0.22	101.07	0.966	-9.266	0.009
473	SLE RA 11	0.11	-0.14	102.49	0.9784	-9.3965	0.0159
473	SLE RA 12	0.11	-0.18	102.49	0.9819	-9.3966	0.0129
473	SLE RA 13	0.12	-0.22	101.94	0.9763	-9.3458	0.0093
473	SLE RA 14	0.11	-0.14	103.36	0.9888	-9.4764	0.0162
473	SLE RA 15	0.12	-0.18	103.36	0.9923	-9.4764	0.0132
473	SLE RA 16	0.11	-0.16	102.81	0.9808	-9.4256	0.0146
473	SLE RA 17	0.12	-0.19	102.81	0.9843	-9.4256	0.0116
473	SLE RA 18	0.12	-0.14	104.52	0.9773	-9.5791	0.0173
473	SLE RA 19	0.13	-0.17	104.52	0.9808	-9.5791	0.0143
473	SLE RA 20	0.13	-0.14	105.39	0.9877	-9.6589	0.0176
473	SLE RA 21	0.13	-0.17	105.39	0.9912	-9.659	0.0146
473	SLE FR 1	0.07	-0.2	93.03	0.9198	-8.5353	0.0062
473	SLE FR 2	0.07	-0.22	93.03	0.921	-8.5353	0.0052
473	SLE FR 3	0.07	-0.2	93.38	0.924	-8.5672	0.0063
473	SLE FR 4	0.09	-0.2	96.48	0.9383	-8.8484	0.0085
473	SLE FR 5	0.09	-0.19	96.83	0.9412	-8.8804	0.0097
473	SLE FR 6	0.1	-0.17	98.78	0.9486	-9.0572	0.0118
473	SLE QP 1	0.07	-0.2	93.03	0.9198	-8.5353	0.0062
473	SLE QP 2	0.09	-0.19	96.48	0.9371	-8.8484	0.0095
473	SLD 1	6.91	1.52	95.32	0.6646	-8.7754	0.1595
473	SLD 2	7.11	1.53	95.29	0.6555	-8.7735	0.1638
473	SLD 3	6.58	-1.02	95.03	0.8891	-8.7484	-0.0751
473	SLD 4	6.77	-1.01	95	0.8801	-8.7465	-0.0707
473	SLD 5	2.6	4.18	96.58	0.5164	-8.8677	0.4095
473	SLD 6	2.73	4.18	96.55	0.5104	-8.8665	0.4123
473	SLD 7	1.49	-4.29	95.61	1.2648	-8.7779	-0.3723
473	SLD 8	1.62	-4.29	95.59	1.2589	-8.7767	-0.3695
473	SLD 9	-1.45	3.92	97.37	0.6152	-8.9202	0.3886
473	SLD 10	-1.32	3.92	97.35	0.6093	-8.919	0.3914
473	SLD 11	-2.56	-4.55	96.4	1.3637	-8.8304	-0.3932
473	SLD 12	-2.43	-4.55	96.38	1.3578	-8.8291	-0.3904
473	SLD 13	-6.6	0.64	97.96	0.9941	-8.9503	0.0898
473	SLD 14	-6.4	0.65	97.93	0.985	-8.9484	0.0942
473	SLD 15	-6.93	-1.9	97.67	1.2186	-8.9234	-0.1447
473	SLD 16	-6.74	-1.89	97.64	1.2096	-8.9215	-0.1404
473	SLV 1	16.05	3.71	93.75	0.3064	-8.6765	0.3515
473	SLV 2	16.51	3.72	93.67	0.2853	-8.6722	0.3616
473	SLV 3	15.27	-2.04	93.08	0.8156	-8.6143	-0.1801
473	SLV 4	15.73	-2.03	93	0.7946	-8.6099	-0.17
473	SLV 5	5.97	9.71	96.69	-0.0209	-8.892	0.9166
473	SLV 6	6.27	9.72	96.64	-0.0344	-8.8892	0.9231
473	SLV 7	3.39	-9.47	94.46	1.6766	-8.6845	-0.8554
473	SLV 8	3.68	-9.47	94.41	1.6631	-8.6817	-0.8489
473	SLV 9	-3.51	9.1	98.55	0.2111	-9.0152	0.8679
473	SLV 10	-3.22	9.1	98.5	0.1975	-9.0124	0.8744
473	SLV 11	-6.1	-10.09	96.32	1.9086	-8.8076	-0.9041
473	SLV 12	-5.8	-10.08	96.27	1.895	-8.8048	-0.8976
473	SLV 13	-15.56	1.66	99.95	1.0796	-9.0869	0.1891
473	SLV 14	-15.1	1.67	99.88	1.0585	-9.0826	0.1992
473	SLV 15	-16.34	-4.09	99.28	1.5888	-9.0247	-0.3425
473	SLV 16	-15.88	-4.09	99.21	1.5678	-9.0203	-0.3324
473	CRTFP Ux+	0	0	0	0	0	0
473	CRTFP Ux-	0	0	0	0	0	0
473	CRTFP Uy+	0	0	0	0	0	0
473	CRTFP Uy-	0	0	0	0	0	0
475	SLU 1	0.18	-0.1	89.3	-0.4057	45.7609	0.051
475	SLU 2	0.18	-0.18	89.31	-0.4033	45.7639	0.0924
475	SLU 3	0.18	-0.07	91.43	-0.4154	46.8492	0.0368
475	SLU 4	0.19	-0.12	91.44	-0.414	46.8509	0.0616
475	SLU 5	0.19	-0.17	90.61	-0.4097	46.4293	0.0907
475	SLU 6	0.19	-0.07	92.73	-0.4218	47.5146	0.0351
475	SLU 7	0.19	-0.12	92.73	-0.4203	47.5164	0.0599
475	SLU 8	0.19	-0.09	91.9	-0.4185	47.0917	0.0476

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
475	SLU 9	0.19	-0.14	91.9	-0.417	47.0935	0.0725
475	SLU 10	0.25	-0.06	101.05	-0.4539	51.8073	0.0321
475	SLU 11	0.25	0.05	103.17	-0.466	52.8926	-0.0235
475	SLU 12	0.26	0	103.17	-0.4646	52.8944	0.0013
475	SLU 13	0.26	-0.05	102.34	-0.4603	52.4727	0.0304
475	SLU 14	0.26	0.05	104.46	-0.4724	53.558	-0.0252
475	SLU 15	0.26	0.01	104.47	-0.471	53.5598	-0.0003
475	SLU 16	0.25	0.03	103.63	-0.4691	53.1352	-0.0127
475	SLU 17	0.26	-0.02	103.64	-0.4677	53.137	0.0122
475	SLU 18	0.27	0.07	106.07	-0.478	54.3944	-0.0351
475	SLU 19	0.28	0.03	106.07	-0.4766	54.3962	-0.0103
475	SLU 20	0.28	0.08	107.37	-0.4844	55.0598	-0.0368
475	SLU 21	0.28	0.03	107.37	-0.483	55.0616	-0.012
475	SLU 22	0.21	0.13	99.27	-0.4414	50.8631	-0.064
475	SLU 23	0.21	0.05	99.28	-0.439	50.866	-0.0226
475	SLU 24	0.21	0.15	101.4	-0.4511	51.9513	-0.0782
475	SLU 25	0.22	0.11	101.4	-0.4497	51.9531	-0.0533
475	SLU 26	0.22	0.05	100.57	-0.4454	51.5314	-0.0242
475	SLU 27	0.22	0.16	102.69	-0.4575	52.6167	-0.0799
475	SLU 28	0.22	0.11	102.7	-0.456	52.6185	-0.055
475	SLU 29	0.22	0.13	101.86	-0.4542	52.1939	-0.0673
475	SLU 30	0.22	0.09	101.87	-0.4527	52.1957	-0.0425
475	SLU 31	0.28	0.17	111.01	-0.4896	56.9095	-0.0828
475	SLU 32	0.28	0.28	113.13	-0.5017	57.9948	-0.1385
475	SLU 33	0.29	0.23	113.14	-0.5003	57.9966	-0.1136
475	SLU 34	0.29	0.17	112.31	-0.496	57.5749	-0.0845
475	SLU 35	0.29	0.28	114.43	-0.5081	58.6602	-0.1402
475	SLU 36	0.29	0.23	114.43	-0.5067	58.662	-0.1153
475	SLU 37	0.28	0.25	113.6	-0.5048	58.2374	-0.1276
475	SLU 38	0.29	0.21	113.6	-0.5034	58.2391	-0.1028
475	SLU 39	0.3	0.3	116.03	-0.5137	59.4966	-0.1501
475	SLU 40	0.31	0.25	116.04	-0.5123	59.4984	-0.1252
475	SLU 41	0.31	0.3	117.33	-0.5201	60.162	-0.1518
475	SLU 42	0.31	0.25	117.34	-0.5187	60.1638	-0.1269
475	SLU 43	0.22	-0.2	112.68	-0.5152	57.7399	0.1057
475	SLU 44	0.23	-0.28	112.68	-0.5128	57.7428	0.1471
475	SLU 45	0.22	-0.18	114.8	-0.5249	58.8281	0.0915
475	SLU 46	0.23	-0.22	114.81	-0.5234	58.8299	0.1163
475	SLU 47	0.23	-0.28	113.98	-0.5192	58.4082	0.1454
475	SLU 48	0.23	-0.17	116.1	-0.5313	59.4936	0.0898
475	SLU 49	0.24	-0.22	116.11	-0.5298	59.4953	0.1146
475	SLU 50	0.23	-0.2	115.27	-0.528	59.0707	0.1023
475	SLU 51	0.23	-0.25	115.28	-0.5265	59.0725	0.1272
475	SLU 52	0.29	-0.16	124.42	-0.5634	63.7863	0.0868
475	SLU 53	0.29	-0.06	126.54	-0.5755	64.8716	0.0312
475	SLU 54	0.3	-0.1	126.55	-0.5741	64.8734	0.056
475	SLU 55	0.3	-0.16	125.72	-0.5698	64.4517	0.0851
475	SLU 56	0.3	-0.05	127.84	-0.5819	65.537	0.0295
475	SLU 57	0.3	-0.1	127.84	-0.5805	65.5388	0.0544
475	SLU 58	0.3	-0.08	127.01	-0.5786	65.1142	0.042
475	SLU 59	0.3	-0.12	127.01	-0.5771	65.1159	0.0669
475	SLU 60	0.31	-0.03	129.44	-0.5875	66.3734	0.0196
475	SLU 61	0.32	-0.08	129.45	-0.5861	66.3752	0.0444
475	SLU 62	0.32	-0.03	130.74	-0.5939	67.0388	0.0179
475	SLU 63	0.33	-0.08	130.75	-0.5925	67.0406	0.0427
475	SLU 64	0.25	0.02	122.64	-0.5509	62.842	-0.0093
475	SLU 65	0.26	-0.06	122.65	-0.5485	62.845	0.0322
475	SLU 66	0.26	0.05	124.77	-0.5606	63.9303	-0.0235
475	SLU 67	0.26	0	124.77	-0.5591	63.9321	0.0014
475	SLU 68	0.26	-0.06	123.95	-0.5549	63.5104	0.0305
475	SLU 69	0.26	0.05	126.07	-0.567	64.5957	-0.0252
475	SLU 70	0.27	0	126.07	-0.5655	64.5975	-0.0003
475	SLU 71	0.26	0.03	125.24	-0.5637	64.1729	-0.0126
475	SLU 72	0.26	-0.02	125.24	-0.5622	64.1746	0.0122
475	SLU 73	0.32	0.06	134.39	-0.5991	68.8884	-0.0281
475	SLU 74	0.32	0.17	136.51	-0.6112	69.9738	-0.0838
475	SLU 75	0.33	0.12	136.51	-0.6098	69.9755	-0.0589
475	SLU 76	0.33	0.06	135.68	-0.6055	69.5539	-0.0298
475	SLU 77	0.33	0.17	137.8	-0.6176	70.6392	-0.0855
475	SLU 78	0.33	0.12	137.81	-0.6161	70.6409	-0.0606
475	SLU 79	0.33	0.15	136.97	-0.6143	70.2163	-0.0729
475	SLU 80	0.33	0.1	136.98	-0.6128	70.2181	-0.0481
475	SLU 81	0.35	0.19	139.41	-0.6232	71.4756	-0.0954
475	SLU 82	0.35	0.14	139.41	-0.6218	71.4773	-0.0705
475	SLU 83	0.35	0.2	140.7	-0.6296	72.141	-0.0971
475	SLU 84	0.36	0.15	140.71	-0.6281	72.1427	-0.0722
475	SLE RA 1	0.18	-0.03	92.15	-0.4159	47.2187	0.0181
475	SLE RA 2	0.19	-0.09	92.16	-0.4143	47.2206	0.0457
475	SLE RA 3	0.19	-0.02	93.57	-0.4224	47.9442	0.0086
475	SLE RA 4	0.19	-0.05	93.57	-0.4214	47.9454	0.0252
475	SLE RA 5	0.19	-0.09	93.02	-0.4186	47.6643	0.0446
475	SLE RA 6	0.19	-0.01	94.43	-0.4266	48.3878	0.0075
475	SLE RA 7	0.2	-0.05	94.44	-0.4257	48.389	0.0241
475	SLE RA 8	0.19	-0.03	93.88	-0.4244	48.1059	0.0159
475	SLE RA 9	0.19	-0.06	93.88	-0.4235	48.1071	0.0325
475	SLE RA 10	0.24	-0.01	99.98	-0.4481	51.2496	0.0056
475	SLE RA 11	0.23	0.07	101.39	-0.4561	51.9732	-0.0315
475	SLE RA 12	0.24	0.03	101.4	-0.4552	51.9743	-0.015
475	SLE RA 13	0.24	0	100.84	-0.4523	51.6932	0.0044
475	SLE RA 14	0.24	0.07	102.26	-0.4604	52.4168	-0.0327
475	SLE RA 15	0.24	0.04	102.26	-0.4594	52.4179	-0.0161
475	SLE RA 16	0.24	0.05	101.7	-0.4582	52.1349	-0.0243
475	SLE RA 17	0.24	0.02	101.71	-0.4572	52.136	-0.0077
475	SLE RA 18	0.25	0.08	103.33	-0.4641	52.9744	-0.0393
475	SLE RA 19	0.25	0.05	103.33	-0.4632	52.9755	-0.0227
475	SLE RA 20	0.25	0.08	104.19	-0.4684	53.418	-0.0404
475	SLE RA 21	0.26	0.05	104.2	-0.4674	53.4191	-0.0238

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
475	SLE FR 1	0.18	-0.03	92.15	-0.4159	47.2187	0.0181
475	SLE FR 2	0.19	-0.04	92.15	-0.4156	47.2191	0.0236
475	SLE FR 3	0.19	-0.03	92.5	-0.4176	47.3961	0.0177
475	SLE FR 4	0.2	-0.01	95.5	-0.4301	48.9458	0.0064
475	SLE FR 5	0.2	0	95.85	-0.4321	49.1228	0.0005
475	SLE FR 6	0.22	0.02	97.74	-0.44	50.0965	-0.0106
475	SLE QP 1	0.18	-0.03	92.15	-0.4159	47.2187	0.0181
475	SLE QP 2	0.2	0	95.5	-0.4304	48.9454	0.0009
475	SLD 1	7.09	1.61	95.67	-0.4809	48.6264	-0.8099
475	SLD 2	7.29	1.68	95.67	-0.4873	48.6234	-0.8399
475	SLD 3	6.76	-0.94	96.03	-0.4164	48.8012	0.4982
475	SLD 4	6.96	-0.87	96.04	-0.4227	48.7983	0.4683
475	SLD 5	2.74	4.34	94.99	-0.5423	48.585	-2.2211
475	SLD 6	2.88	4.39	95	-0.5465	48.5831	-2.2406
475	SLD 7	1.62	-4.16	96.22	-0.3272	49.1679	2.1394
475	SLD 8	1.76	-4.12	96.22	-0.3313	49.1659	2.1198
475	SLD 9	-1.35	4.12	94.78	-0.5294	48.7249	-2.118
475	SLD 10	-1.22	4.16	94.79	-0.5336	48.7229	-2.1376
475	SLD 11	-2.47	-4.38	96.01	-0.3143	49.3077	2.2424
475	SLD 12	-2.34	-4.34	96.01	-0.3185	49.3057	2.2229
475	SLD 13	-6.55	0.87	94.96	-0.438	49.0925	-0.4665
475	SLD 14	-6.35	0.94	94.97	-0.4444	49.0895	-0.4964
475	SLD 15	-6.89	-1.68	95.33	-0.3735	49.2674	0.8417
475	SLD 16	-6.69	-1.61	95.34	-0.3798	49.2644	0.8117
475	SLV 1	16.32	3.67	95.9	-0.5464	48.1996	-1.8466
475	SLV 2	16.79	3.83	95.92	-0.5611	48.1927	-1.9163
475	SLV 3	15.54	-2.11	96.74	-0.4	48.5998	1.1184
475	SLV 4	16.01	-1.96	96.76	-0.4147	48.5929	1.0487
475	SLV 5	6.15	9.84	94.34	-0.6848	48.1159	-5.0383
475	SLV 6	6.45	9.95	94.35	-0.6943	48.1115	-5.0831
475	SLV 7	3.54	-9.43	97.15	-0.1966	49.4498	4.845
475	SLV 8	3.84	-9.33	97.16	-0.2061	49.4454	4.8002
475	SLV 9	-3.43	9.33	93.85	-0.6547	48.4454	-4.7984
475	SLV 10	-3.13	9.43	93.86	-0.6642	48.4409	-4.8432
475	SLV 11	-6.04	-9.94	96.65	-0.1665	49.7793	5.0849
475	SLV 12	-5.74	-9.84	96.66	-0.176	49.7748	5.0401
475	SLV 13	-15.6	1.96	94.25	-0.4461	49.2979	-1.0469
475	SLV 14	-15.13	2.12	94.27	-0.4608	49.291	-1.1166
475	SLV 15	-16.39	-3.83	95.09	-0.2996	49.6981	1.9181
475	SLV 16	-15.92	-3.67	95.11	-0.3144	49.6911	1.8484
475	CRTFP Ux+	0	0	0	0	0	0
475	CRTFP Ux-	0	0	0	0	0	0
475	CRTFP Uy+	0	0	0	0	0	0
475	CRTFP Uy-	0	0	0	0	0	0
477	SLU 1	-0.48	-1.01	59.34	-0.0027	-0.1647	-0.0086
477	SLU 2	-0.47	-1.08	59.35	-0.0025	-0.1655	-0.0081
477	SLU 3	-0.49	-1.02	60.75	-0.0027	-0.1693	-0.009
477	SLU 4	-0.49	-1.07	60.76	-0.0025	-0.1698	-0.0086
477	SLU 5	-0.48	-1.1	60.24	-0.0026	-0.1677	-0.0083
477	SLU 6	-0.5	-1.03	61.64	-0.0028	-0.1714	-0.0092
477	SLU 7	-0.5	-1.08	61.65	-0.0027	-0.1719	-0.0088
477	SLU 8	-0.5	-1.03	61.11	-0.0029	-0.169	-0.0091
477	SLU 9	-0.5	-1.08	61.12	-0.0028	-0.1695	-0.0087
477	SLU 10	-0.47	-1.12	66.46	-0.0002	-0.1979	-0.0092
477	SLU 11	-0.48	-1.05	67.86	-0.0004	-0.2017	-0.0101
477	SLU 12	-0.48	-1.1	67.87	-0.0003	-0.2021	-0.0098
477	SLU 13	-0.48	-1.13	67.35	-0.0003	-0.2	-0.0094
477	SLU 14	-0.49	-1.07	68.75	-0.0005	-0.2038	-0.0103
477	SLU 15	-0.49	-1.11	68.76	-0.0004	-0.2043	-0.01
477	SLU 16	-0.49	-1.07	68.22	-0.0006	-0.2014	-0.0102
477	SLU 17	-0.49	-1.11	68.23	-0.0005	-0.2018	-0.0099
477	SLU 18	-0.47	-1.06	69.5	0.0006	-0.211	-0.0103
477	SLU 19	-0.46	-1.1	69.51	0.0007	-0.2115	-0.0099
477	SLU 20	-0.48	-1.07	70.38	0.0005	-0.2131	-0.0105
477	SLU 21	-0.47	-1.11	70.39	0.0006	-0.2136	-0.0101
477	SLU 22	-0.52	-0.99	66.19	-0.0003	-0.1825	-0.0104
477	SLU 23	-0.51	-1.06	66.21	-0.0001	-0.1833	-0.0098
477	SLU 24	-0.53	-1	67.61	-0.0003	-0.1871	-0.0107
477	SLU 25	-0.52	-1.05	67.62	-0.0001	-0.1876	-0.0104
477	SLU 26	-0.52	-1.08	67.09	-0.0002	-0.1855	-0.01
477	SLU 27	-0.54	-1.01	68.49	-0.0004	-0.1892	-0.011
477	SLU 28	-0.53	-1.06	68.5	-0.0003	-0.1897	-0.0106
477	SLU 29	-0.54	-1.01	67.96	-0.0005	-0.1868	-0.0108
477	SLU 30	-0.53	-1.06	67.97	-0.0004	-0.1873	-0.0105
477	SLU 31	-0.5	-1.1	73.32	0.0022	-0.2157	-0.011
477	SLU 32	-0.52	-1.03	74.72	0.002	-0.2195	-0.0119
477	SLU 33	-0.52	-1.08	74.73	0.0021	-0.2199	-0.0115
477	SLU 34	-0.51	-1.11	74.2	0.0021	-0.2178	-0.0112
477	SLU 35	-0.53	-1.05	75.61	0.0019	-0.2216	-0.0121
477	SLU 36	-0.53	-1.09	75.61	0.002	-0.2221	-0.0117
477	SLU 37	-0.53	-1.05	75.07	0.0018	-0.2192	-0.012
477	SLU 38	-0.52	-1.09	75.08	0.0019	-0.2196	-0.0116
477	SLU 39	-0.5	-1.04	76.35	0.003	-0.2288	-0.012
477	SLU 40	-0.5	-1.08	76.36	0.0031	-0.2292	-0.0117
477	SLU 41	-0.51	-1.05	77.24	0.0028	-0.2309	-0.0123
477	SLU 42	-0.51	-1.09	77.25	0.003	-0.2314	-0.0119
477	SLU 43	-0.61	-1.32	74.79	-0.0043	-0.2081	-0.0106
477	SLU 44	-0.61	-1.39	74.8	-0.0041	-0.2089	-0.01
477	SLU 45	-0.62	-1.33	76.2	-0.0043	-0.2126	-0.0109
477	SLU 46	-0.62	-1.38	76.21	-0.0042	-0.2131	-0.0106
477	SLU 47	-0.62	-1.4	75.69	-0.0042	-0.211	-0.0103
477	SLU 48	-0.63	-1.34	77.09	-0.0044	-0.2148	-0.0112
477	SLU 49	-0.63	-1.39	77.1	-0.0043	-0.2152	-0.0108
477	SLU 50	-0.63	-1.34	76.56	-0.0045	-0.2123	-0.0111
477	SLU 51	-0.63	-1.39	76.57	-0.0044	-0.2128	-0.0107
477	SLU 52	-0.6	-1.43	81.91	-0.0018	-0.2412	-0.0112
477	SLU 53	-0.61	-1.36	83.32	-0.002	-0.245	-0.0121

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
477	SLU 54	-0.61	-1.41	83.32	-0.0019	-0.2455	-0.0117
477	SLU 55	-0.61	-1.44	82.8	-0.0019	-0.2433	-0.0114
477	SLU 56	-0.62	-1.38	84.2	-0.0021	-0.2471	-0.0123
477	SLU 57	-0.62	-1.42	84.21	-0.002	-0.2476	-0.012
477	SLU 58	-0.62	-1.38	83.67	-0.0023	-0.2447	-0.0122
477	SLU 59	-0.62	-1.42	83.68	-0.0021	-0.2452	-0.0118
477	SLU 60	-0.6	-1.37	84.95	-0.0011	-0.2543	-0.0123
477	SLU 61	-0.59	-1.41	84.96	-0.0009	-0.2548	-0.0119
477	SLU 62	-0.61	-1.38	85.83	-0.0012	-0.2564	-0.0125
477	SLU 63	-0.61	-1.42	85.84	-0.001	-0.2569	-0.0121
477	SLU 64	-0.65	-1.3	81.64	-0.0019	-0.2259	-0.0124
477	SLU 65	-0.64	-1.37	81.66	-0.0017	-0.2266	-0.0118
477	SLU 66	-0.66	-1.31	83.06	-0.0019	-0.2304	-0.0127
477	SLU 67	-0.66	-1.36	83.07	-0.0018	-0.2309	-0.0124
477	SLU 68	-0.65	-1.39	82.54	-0.0018	-0.2288	-0.012
477	SLU 69	-0.67	-1.32	83.94	-0.002	-0.2325	-0.0129
477	SLU 70	-0.67	-1.37	83.95	-0.0019	-0.233	-0.0126
477	SLU 71	-0.67	-1.32	83.41	-0.0021	-0.2301	-0.0128
477	SLU 72	-0.66	-1.37	83.42	-0.002	-0.2306	-0.0125
477	SLU 73	-0.63	-1.41	88.77	0.0006	-0.259	-0.013
477	SLU 74	-0.65	-1.34	90.17	0.0004	-0.2628	-0.0139
477	SLU 75	-0.65	-1.39	90.18	0.0005	-0.2633	-0.0135
477	SLU 76	-0.64	-1.42	89.66	0.0005	-0.2611	-0.0132
477	SLU 77	-0.66	-1.36	91.06	0.0003	-0.2649	-0.0141
477	SLU 78	-0.66	-1.4	91.06	0.0004	-0.2654	-0.0137
477	SLU 79	-0.66	-1.36	90.53	0.0001	-0.2625	-0.014
477	SLU 80	-0.66	-1.4	90.53	0.0003	-0.263	-0.0136
477	SLU 81	-0.63	-1.35	91.8	0.0013	-0.2721	-0.014
477	SLU 82	-0.63	-1.39	91.81	0.0015	-0.2726	-0.0137
477	SLU 83	-0.65	-1.36	92.69	0.0012	-0.2742	-0.0142
477	SLU 84	-0.64	-1.4	92.7	0.0014	-0.2747	-0.0139
477	SLE RA 1	-0.49	-1	61.3	-0.002	-0.1698	-0.0091
477	SLE RA 2	-0.49	-1.05	61.31	-0.0018	-0.1704	-0.0088
477	SLE RA 3	-0.5	-1.01	62.24	-0.002	-0.1729	-0.0094
477	SLE RA 4	-0.5	-1.04	62.25	-0.0019	-0.1732	-0.0091
477	SLE RA 5	-0.49	-1.06	61.9	-0.0019	-0.1718	-0.0089
477	SLE RA 6	-0.5	-1.02	62.83	-0.0021	-0.1743	-0.0095
477	SLE RA 7	-0.5	-1.05	62.84	-0.002	-0.1746	-0.0093
477	SLE RA 8	-0.5	-1.02	62.48	-0.0021	-0.1727	-0.0094
477	SLE RA 9	-0.5	-1.05	62.48	-0.0021	-0.173	-0.0092
477	SLE RA 10	-0.48	-1.07	66.05	-0.0003	-0.1919	-0.0095
477	SLE RA 11	-0.49	-1.03	66.98	-0.0005	-0.1944	-0.0101
477	SLE RA 12	-0.49	-1.06	66.99	-0.0004	-0.1948	-0.0099
477	SLE RA 13	-0.49	-1.08	66.64	-0.0004	-0.1934	-0.0097
477	SLE RA 14	-0.5	-1.04	67.57	-0.0005	-0.1959	-0.0103
477	SLE RA 15	-0.5	-1.07	67.58	-0.0005	-0.1962	-0.01
477	SLE RA 16	-0.5	-1.04	67.22	-0.0006	-0.1942	-0.0102
477	SLE RA 17	-0.5	-1.07	67.22	-0.0005	-0.1946	-0.01
477	SLE RA 18	-0.48	-1.04	68.07	0.0002	-0.2007	-0.0102
477	SLE RA 19	-0.48	-1.06	68.08	0.0003	-0.201	-0.01
477	SLE RA 20	-0.49	-1.04	68.66	0.0001	-0.2021	-0.0104
477	SLE RA 21	-0.49	-1.07	68.66	0.0002	-0.2024	-0.0101
477	SLE FR 1	-0.49	-1	61.3	-0.002	-0.1698	-0.0091
477	SLE FR 2	-0.49	-1.01	61.3	-0.002	-0.1699	-0.0091
477	SLE FR 3	-0.49	-1.01	61.53	-0.002	-0.1704	-0.0092
477	SLE FR 4	-0.49	-1.02	63.33	-0.0013	-0.1792	-0.0094
477	SLE FR 5	-0.49	-1.02	63.56	-0.0014	-0.1796	-0.0095
477	SLE FR 6	-0.49	-1.02	64.68	-0.0009	-0.1852	-0.0097
477	SLE QP 1	-0.49	-1	61.3	-0.002	-0.1698	-0.0091
477	SLE QP 2	-0.49	-1.01	63.33	-0.0013	-0.1791	-0.0095
477	SLD 1	4.82	-0.58	68.43	-0.0064	0.0047	0.0046
477	SLD 2	4.94	-0.92	68.43	-0.0051	0.0011	0.0146
477	SLD 3	4.56	-2.29	68.88	-0.0032	-0.0303	-0.0022
477	SLD 4	4.68	-2.63	68.88	-0.0019	-0.034	0.0078
477	SLD 5	1.47	1.78	64.18	-0.0079	-0.0702	0.0032
477	SLD 6	1.55	1.55	64.18	-0.0071	-0.0726	0.0098
477	SLD 7	0.61	-3.94	65.67	0.0027	-0.1869	-0.0193
477	SLD 8	0.7	-4.16	65.67	0.0035	-0.1893	-0.0128
477	SLD 9	-1.67	2.13	60.99	-0.0062	-0.1689	-0.0062
477	SLD 10	-1.59	1.91	60.98	-0.0054	-0.1712	0.0004
477	SLD 11	-2.53	-3.58	62.48	0.0044	-0.2856	-0.0287
477	SLD 12	-2.45	-3.81	62.47	0.0052	-0.2879	-0.0222
477	SLD 13	-5.66	0.61	57.78	-0.0007	-0.3242	-0.0268
477	SLD 14	-5.54	0.26	57.78	0.0005	-0.3278	-0.0167
477	SLD 15	-5.92	-1.11	58.23	0.0025	-0.3592	-0.0335
477	SLD 16	-5.79	-1.45	58.22	0.0037	-0.3628	-0.0235
477	SLV 1	11.92	-0.06	75.28	-0.0131	0.25	0.0233
477	SLV 2	12.21	-0.86	75.27	-0.0102	0.2416	0.0467
477	SLV 3	11.32	-3.94	76.31	-0.0058	0.1703	0.0076
477	SLV 4	11.61	-4.74	76.3	-0.0029	0.1619	0.031
477	SLV 5	4.1	5.29	65.35	-0.0164	0.072	0.0201
477	SLV 6	4.28	4.78	65.34	-0.0145	0.0666	0.0352
477	SLV 7	2.1	-7.64	68.79	0.0079	-0.1937	-0.0321
477	SLV 8	2.28	-8.15	68.78	0.0097	-0.1991	-0.0171
477	SLV 9	-3.26	6.12	57.87	-0.0124	-0.159	-0.0018
477	SLV 10	-3.07	5.61	57.86	-0.0105	-0.1644	0.0132
477	SLV 11	-5.26	-6.81	61.32	0.0119	-0.4248	-0.0541
477	SLV 12	-5.07	-7.32	61.31	0.0137	-0.4301	-0.0391
477	SLV 13	-12.59	2.71	50.36	0.0002	-0.5201	-0.05
477	SLV 14	-12.3	1.91	50.34	0.0031	-0.5285	-0.0266
477	SLV 15	-13.19	-1.17	51.39	0.0075	-0.5998	-0.0657
477	SLV 16	-12.9	-1.97	51.38	0.0104	-0.6082	-0.0423
477	CRTFP Ux+	0	0	0	0	0	0
477	CRTFP Ux-	0	0	0	0	0	0
481	SLU 1	0.68	-0.48	59.93	-0.0148	0.2365	-0.0145
481	SLU 2	0.68	-0.51	59.95	-0.0146	0.2372	-0.014
481	SLU 3	0.7	-0.48	61.36	-0.0153	0.2427	-0.0148

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
481	SLU 4	0.7	-0.51	61.37	-0.0152	0.243	-0.0145
481	SLU 5	0.7	-0.53	60.83	-0.015	0.2398	-0.0142
481	SLU 6	0.71	-0.5	62.23	-0.0157	0.2453	-0.015
481	SLU 7	0.71	-0.52	62.24	-0.0156	0.2456	-0.0147
481	SLU 8	0.7	-0.51	61.68	-0.0156	0.2418	-0.015
481	SLU 9	0.7	-0.53	61.69	-0.0155	0.2421	-0.0147
481	SLU 10	0.72	-0.48	67.24	-0.0148	0.2735	-0.0154
481	SLU 11	0.74	-0.44	68.64	-0.0154	0.279	-0.0162
481	SLU 12	0.74	-0.47	68.65	-0.0154	0.2794	-0.0159
481	SLU 13	0.74	-0.49	68.11	-0.0152	0.2761	-0.0157
481	SLU 14	0.75	-0.46	69.52	-0.0158	0.2816	-0.0165
481	SLU 15	0.75	-0.48	69.53	-0.0158	0.282	-0.0162
481	SLU 16	0.74	-0.47	68.97	-0.0157	0.2781	-0.0164
481	SLU 17	0.75	-0.49	68.98	-0.0157	0.2785	-0.0161
481	SLU 18	0.74	-0.42	70.34	-0.015	0.2884	-0.0165
481	SLU 19	0.74	-0.44	70.35	-0.0149	0.2888	-0.0162
481	SLU 20	0.75	-0.44	71.21	-0.0154	0.2911	-0.0168
481	SLU 21	0.75	-0.46	71.23	-0.0153	0.2914	-0.0165
481	SLU 22	0.75	-0.4	66.9	-0.015	0.2514	-0.0154
481	SLU 23	0.75	-0.44	66.92	-0.0148	0.252	-0.0149
481	SLU 24	0.76	-0.41	68.33	-0.0155	0.2575	-0.0157
481	SLU 25	0.77	-0.43	68.34	-0.0154	0.2579	-0.0154
481	SLU 26	0.76	-0.45	67.8	-0.0152	0.2546	-0.0152
481	SLU 27	0.78	-0.42	69.2	-0.0159	0.2601	-0.0159
481	SLU 28	0.78	-0.44	69.21	-0.0158	0.2605	-0.0157
481	SLU 29	0.77	-0.43	68.65	-0.0158	0.2566	-0.0159
481	SLU 30	0.77	-0.45	68.66	-0.0157	0.257	-0.0156
481	SLU 31	0.79	-0.4	74.21	-0.015	0.2883	-0.0163
481	SLU 32	0.81	-0.37	75.61	-0.0156	0.2938	-0.0171
481	SLU 33	0.81	-0.39	75.62	-0.0155	0.2942	-0.0168
481	SLU 34	0.8	-0.41	75.08	-0.0154	0.2909	-0.0166
481	SLU 35	0.82	-0.38	76.49	-0.016	0.2964	-0.0174
481	SLU 36	0.82	-0.4	76.5	-0.0159	0.2968	-0.0171
481	SLU 37	0.81	-0.39	75.94	-0.0159	0.2929	-0.0173
481	SLU 38	0.81	-0.41	75.95	-0.0158	0.2933	-0.017
481	SLU 39	0.81	-0.35	77.31	-0.0152	0.3033	-0.0174
481	SLU 40	0.81	-0.37	77.32	-0.0151	0.3036	-0.0171
481	SLU 41	0.82	-0.36	78.18	-0.0156	0.3059	-0.0177
481	SLU 42	0.82	-0.38	78.19	-0.0155	0.3063	-0.0174
481	SLU 43	0.86	-0.65	75.52	-0.0192	0.3024	-0.0185
481	SLU 44	0.86	-0.68	75.54	-0.019	0.303	-0.018
481	SLU 45	0.88	-0.65	76.95	-0.0197	0.3085	-0.0188
481	SLU 46	0.88	-0.68	76.96	-0.0196	0.3089	-0.0185
481	SLU 47	0.88	-0.7	76.42	-0.0194	0.3057	-0.0183
481	SLU 48	0.89	-0.67	77.82	-0.0201	0.3111	-0.0191
481	SLU 49	0.89	-0.69	77.83	-0.02	0.3115	-0.0188
481	SLU 50	0.88	-0.68	77.27	-0.02	0.3076	-0.019
481	SLU 51	0.88	-0.7	77.28	-0.0199	0.308	-0.0187
481	SLU 52	0.9	-0.65	82.83	-0.0192	0.3394	-0.0194
481	SLU 53	0.92	-0.61	84.23	-0.0198	0.3449	-0.0202
481	SLU 54	0.92	-0.64	84.24	-0.0197	0.3452	-0.0199
481	SLU 55	0.92	-0.66	83.7	-0.0196	0.342	-0.0197
481	SLU 56	0.93	-0.63	85.11	-0.0202	0.3475	-0.0205
481	SLU 57	0.93	-0.65	85.12	-0.0201	0.3478	-0.0202
481	SLU 58	0.92	-0.64	84.56	-0.0201	0.344	-0.0204
481	SLU 59	0.93	-0.66	84.57	-0.02	0.3443	-0.0201
481	SLU 60	0.92	-0.59	85.93	-0.0194	0.3543	-0.0205
481	SLU 61	0.92	-0.61	85.94	-0.0193	0.3547	-0.0202
481	SLU 62	0.93	-0.61	86.81	-0.0198	0.3569	-0.0208
481	SLU 63	0.93	-0.63	86.82	-0.0197	0.3573	-0.0205
481	SLU 64	0.93	-0.57	82.49	-0.0193	0.3173	-0.0194
481	SLU 65	0.93	-0.61	82.51	-0.0192	0.3179	-0.0189
481	SLU 66	0.94	-0.58	83.92	-0.0199	0.3234	-0.0197
481	SLU 67	0.95	-0.6	83.93	-0.0198	0.3237	-0.0194
481	SLU 68	0.94	-0.62	83.39	-0.0196	0.3205	-0.0192
481	SLU 69	0.96	-0.59	84.79	-0.0203	0.326	-0.02
481	SLU 70	0.96	-0.61	84.8	-0.0202	0.3263	-0.0197
481	SLU 71	0.95	-0.6	84.24	-0.0202	0.3225	-0.0199
481	SLU 72	0.95	-0.62	84.25	-0.0201	0.3228	-0.0196
481	SLU 73	0.97	-0.57	89.8	-0.0193	0.3542	-0.0204
481	SLU 74	0.99	-0.54	91.2	-0.02	0.3597	-0.0211
481	SLU 75	0.99	-0.56	91.21	-0.0199	0.3601	-0.0209
481	SLU 76	0.98	-0.58	90.67	-0.0197	0.3568	-0.0206
481	SLU 77	1	-0.55	92.08	-0.0204	0.3623	-0.0214
481	SLU 78	1	-0.57	92.09	-0.0203	0.3627	-0.0211
481	SLU 79	0.99	-0.56	91.53	-0.0203	0.3588	-0.0213
481	SLU 80	0.99	-0.58	91.54	-0.0202	0.3592	-0.021
481	SLU 81	0.99	-0.52	92.9	-0.0195	0.3691	-0.0214
481	SLU 82	0.99	-0.54	92.91	-0.0195	0.3695	-0.0212
481	SLU 83	1	-0.53	93.77	-0.02	0.3718	-0.0217
481	SLU 84	1	-0.55	93.79	-0.0199	0.3721	-0.0214
481	SLE RA 1	0.7	-0.46	61.92	-0.0148	0.2408	-0.0147
481	SLE RA 2	0.7	-0.48	61.94	-0.0147	0.2412	-0.0144
481	SLE RA 3	0.71	-0.46	62.87	-0.0152	0.2449	-0.0149
481	SLE RA 4	0.71	-0.47	62.88	-0.0151	0.2451	-0.0147
481	SLE RA 5	0.71	-0.49	62.52	-0.015	0.2429	-0.0146
481	SLE RA 6	0.72	-0.47	63.46	-0.0155	0.2466	-0.0151
481	SLE RA 7	0.72	-0.48	63.46	-0.0154	0.2468	-0.0149
481	SLE RA 8	0.71	-0.48	63.09	-0.0154	0.2443	-0.0151
481	SLE RA 9	0.72	-0.49	63.1	-0.0153	0.2445	-0.0149
481	SLE RA 10	0.73	-0.45	66.79	-0.0148	0.2654	-0.0154
481	SLE RA 11	0.74	-0.43	67.73	-0.0153	0.2691	-0.0159
481	SLE RA 12	0.74	-0.45	67.74	-0.0152	0.2693	-0.0157
481	SLE RA 13	0.74	-0.46	67.38	-0.0151	0.2672	-0.0155
481	SLE RA 14	0.74	-0.44	68.31	-0.0155	0.2708	-0.0161
481	SLE RA 15	0.75	-0.46	68.32	-0.0155	0.2711	-0.0159
481	SLE RA 16	0.74	-0.45	67.95	-0.0155	0.2685	-0.016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
481	SLE RA 17	0.74	-0.46	67.95	-0.0154	0.2687	-0.0158
481	SLE RA 18	0.74	-0.42	68.86	-0.015	0.2754	-0.0161
481	SLE RA 19	0.74	-0.43	68.87	-0.0149	0.2756	-0.0159
481	SLE RA 20	0.74	-0.43	69.45	-0.0152	0.2771	-0.0163
481	SLE RA 21	0.75	-0.44	69.45	-0.0152	0.2774	-0.0161
481	SLE FR 1	0.7	-0.46	61.92	-0.0148	0.2408	-0.0147
481	SLE FR 2	0.7	-0.46	61.93	-0.0148	0.2409	-0.0147
481	SLE FR 3	0.7	-0.46	62.16	-0.015	0.2415	-0.0148
481	SLE FR 4	0.71	-0.45	64.01	-0.0149	0.2512	-0.0151
481	SLE FR 5	0.71	-0.45	64.24	-0.015	0.2519	-0.0152
481	SLE FR 6	0.72	-0.44	65.39	-0.0149	0.2581	-0.0154
481	SLE QP 1	0.7	-0.46	61.92	-0.0148	0.2408	-0.0147
481	SLE QP 2	0.71	-0.45	64.01	-0.0149	0.2512	-0.0151
481	SLD 1	5.76	0.75	59.25	-0.0143	0.3238	0.0073
481	SLD 2	5.9	1.12	59.3	-0.0164	0.3171	0.0176
481	SLD 3	5.52	-0.86	59.61	-0.0085	0.3492	0.001
481	SLD 4	5.66	-0.49	59.66	-0.0106	0.3425	0.0113
481	SLD 5	2.57	2.29	62.02	-0.0231	0.2355	-0.0007
481	SLD 6	2.66	2.53	62.05	-0.0244	0.2312	0.0061
481	SLD 7	1.76	-3.08	63.23	-0.0039	0.3203	-0.0217
481	SLD 8	1.85	-2.83	63.26	-0.0052	0.316	-0.0149
481	SLD 9	-0.43	1.94	64.75	-0.0245	0.1864	-0.0153
481	SLD 10	-0.34	2.19	64.78	-0.0259	0.182	-0.0086
481	SLD 11	-1.24	-3.42	65.96	-0.0053	0.2712	-0.0364
481	SLD 12	-1.15	-3.18	65.99	-0.0067	0.2668	-0.0296
481	SLD 13	-4.24	-0.4	68.35	-0.0191	0.1598	-0.0416
481	SLD 14	-4.1	-0.03	68.4	-0.0213	0.1531	-0.0313
481	SLD 15	-4.49	-2.01	68.71	-0.0134	0.1853	-0.0479
481	SLD 16	-4.35	-1.64	68.76	-0.0155	0.1786	-0.0376
481	SLV 1	12.54	2.3	52.88	-0.0133	0.4213	0.0374
481	SLV 2	12.86	3.17	53	-0.0182	0.4057	0.0615
481	SLV 3	11.97	-1.36	53.71	-0.0001	0.4793	0.0227
481	SLV 4	12.3	-0.49	53.83	-0.0051	0.4638	0.0468
481	SLV 5	5.06	5.78	59.39	-0.0335	0.2169	0.0189
481	SLV 6	5.27	6.34	59.47	-0.0367	0.2068	0.0344
481	SLV 7	3.17	-6.42	62.15	0.0103	0.4103	-0.0303
481	SLV 8	3.38	-5.86	62.23	0.0071	0.4003	-0.0148
481	SLV 9	-1.97	4.97	65.78	-0.0369	0.102	-0.0155
481	SLV 10	-1.75	5.53	65.86	-0.0401	0.092	0
481	SLV 11	-3.85	-7.23	68.54	0.0069	0.2955	-0.0646
481	SLV 12	-3.64	-6.67	68.62	0.0037	0.2855	-0.0492
481	SLV 13	-10.88	-0.4	74.18	-0.0247	0.0386	-0.077
481	SLV 14	-10.55	0.47	74.31	-0.0296	0.023	-0.053
481	SLV 15	-11.44	-4.06	75.01	-0.0115	0.0966	-0.0918
481	SLV 16	-11.12	-3.19	75.14	-0.0165	0.081	-0.0677
481	CRTFP Ux+	0	0	0	0	0	0
481	CRTFP Ux-	0	0	0	0	0	0
481	CRTFP Uy+	0	0	0	0	0	0
481	CRTFP Uy-	0	0	0	0	0	0
482	SLU 1	0.68	0.26	39.56	0.0517	10.53	-0.0946
482	SLU 2	0.68	0.24	39.57	0.0517	10.5332	-0.0855
482	SLU 3	0.69	0.27	40.51	0.053	10.7738	-0.0959
482	SLU 4	0.69	0.25	40.51	0.053	10.7758	-0.0904
482	SLU 5	0.69	0.23	40.16	0.0525	10.6845	-0.084
482	SLU 6	0.7	0.26	41.1	0.0538	10.9251	-0.0944
482	SLU 7	0.71	0.25	41.1	0.0538	10.927	-0.0889
482	SLU 8	0.7	0.25	40.74	0.0533	10.8324	-0.0916
482	SLU 9	0.7	0.24	40.75	0.0533	10.8344	-0.0862
482	SLU 10	0.71	0.34	44.1	0.0586	11.7394	-0.1215
482	SLU 11	0.73	0.37	45.04	0.0599	11.98	-0.1319
482	SLU 12	0.73	0.35	45.04	0.0599	11.982	-0.1265
482	SLU 13	0.72	0.33	44.69	0.0594	11.8906	-0.12
482	SLU 14	0.74	0.36	45.63	0.0607	12.1312	-0.1304
482	SLU 15	0.74	0.35	45.64	0.0607	12.1332	-0.1249
482	SLU 16	0.73	0.36	45.27	0.0602	12.0386	-0.1276
482	SLU 17	0.73	0.34	45.28	0.0602	12.0406	-0.1222
482	SLU 18	0.73	0.41	46.03	0.0616	12.2531	-0.1461
482	SLU 19	0.73	0.39	46.04	0.0616	12.2551	-0.1406
482	SLU 20	0.74	0.4	46.62	0.0624	12.4043	-0.1446
482	SLU 21	0.74	0.39	46.63	0.0624	12.4063	-0.1391
482	SLU 22	0.74	0.36	44.09	0.0587	11.7254	-0.1295
482	SLU 23	0.74	0.34	44.09	0.0587	11.7286	-0.1204
482	SLU 24	0.75	0.37	45.04	0.06	11.9692	-0.1308
482	SLU 25	0.75	0.35	45.04	0.06	11.9712	-0.1253
482	SLU 26	0.75	0.33	44.69	0.0595	11.8798	-0.1189
482	SLU 27	0.76	0.36	45.63	0.0607	12.1204	-0.1293
482	SLU 28	0.77	0.35	45.63	0.0608	12.1224	-0.1238
482	SLU 29	0.76	0.35	45.27	0.0602	12.0278	-0.1265
482	SLU 30	0.76	0.34	45.28	0.0603	12.0298	-0.121
482	SLU 31	0.77	0.44	48.63	0.0656	12.9348	-0.1564
482	SLU 32	0.79	0.47	49.57	0.0669	13.1754	-0.1668
482	SLU 33	0.79	0.45	49.57	0.0669	13.1773	-0.1613
482	SLU 34	0.78	0.43	49.22	0.0664	13.086	-0.1549
482	SLU 35	0.8	0.46	50.16	0.0677	13.3266	-0.1653
482	SLU 36	0.8	0.45	50.16	0.0677	13.3286	-0.1598
482	SLU 37	0.79	0.46	49.8	0.0672	13.234	-0.1625
482	SLU 38	0.8	0.44	49.81	0.0672	13.2359	-0.157
482	SLU 39	0.79	0.51	50.56	0.0686	13.4485	-0.181
482	SLU 40	0.79	0.49	50.56	0.0686	13.4504	-0.1755
482	SLU 41	0.8	0.5	51.15	0.0694	13.5997	-0.1794
482	SLU 42	0.8	0.49	51.16	0.0694	13.6017	-0.174
482	SLU 43	0.86	0.31	49.87	0.0648	13.2792	-0.1111
482	SLU 44	0.86	0.28	49.88	0.0648	13.2824	-0.102
482	SLU 45	0.87	0.31	50.82	0.0661	13.523	-0.1123
482	SLU 46	0.88	0.3	50.83	0.0661	13.5249	-0.1069
482	SLU 47	0.87	0.28	50.47	0.0656	13.4336	-0.1005
482	SLU 48	0.89	0.31	51.41	0.0669	13.6742	-0.1108

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
482	SLU 49	0.89	0.29	51.42	0.0669	13.6762	-0.1054
482	SLU 50	0.88	0.3	51.06	0.0664	13.5816	-0.108
482	SLU 51	0.88	0.28	51.06	0.0664	13.5835	-0.1026
482	SLU 52	0.89	0.38	54.41	0.0718	14.4886	-0.138
482	SLU 53	0.91	0.41	55.35	0.073	14.7292	-0.1483
482	SLU 54	0.91	0.4	55.36	0.073	14.7311	-0.1429
482	SLU 55	0.91	0.38	55	0.0725	14.6398	-0.1365
482	SLU 56	0.92	0.41	55.95	0.0738	14.8804	-0.1468
482	SLU 57	0.92	0.39	55.95	0.0738	14.8823	-0.1414
482	SLU 58	0.92	0.4	55.59	0.0733	14.7878	-0.144
482	SLU 59	0.92	0.39	55.59	0.0733	14.7897	-0.1386
482	SLU 60	0.91	0.45	56.35	0.0747	15.0023	-0.1625
482	SLU 61	0.91	0.44	56.35	0.0747	15.0042	-0.1571
482	SLU 62	0.92	0.45	56.94	0.0755	15.1535	-0.161
482	SLU 63	0.92	0.43	56.94	0.0755	15.1554	-0.1555
482	SLU 64	0.92	0.41	54.4	0.0718	14.4745	-0.1459
482	SLU 65	0.92	0.38	54.41	0.0718	14.4778	-0.1368
482	SLU 66	0.94	0.41	55.35	0.0731	14.7184	-0.1472
482	SLU 67	0.94	0.39	55.36	0.0731	14.7203	-0.1418
482	SLU 68	0.93	0.38	55	0.0726	14.629	-0.1353
482	SLU 69	0.95	0.41	55.94	0.0739	14.8696	-0.1457
482	SLU 70	0.95	0.39	55.95	0.0739	14.8715	-0.1402
482	SLU 71	0.94	0.4	55.59	0.0734	14.777	-0.1429
482	SLU 72	0.94	0.38	55.59	0.0734	14.7789	-0.1375
482	SLU 73	0.96	0.48	58.94	0.0787	15.684	-0.1729
482	SLU 74	0.97	0.51	59.88	0.08	15.9246	-0.1832
482	SLU 75	0.97	0.5	59.89	0.08	15.9265	-0.1778
482	SLU 76	0.97	0.48	59.53	0.0795	15.8352	-0.1713
482	SLU 77	0.98	0.51	60.47	0.0808	16.0758	-0.1817
482	SLU 78	0.98	0.49	60.48	0.0808	16.0777	-0.1763
482	SLU 79	0.98	0.5	60.12	0.0803	15.9831	-0.1789
482	SLU 80	0.98	0.48	60.12	0.0803	15.9851	-0.1735
482	SLU 81	0.97	0.55	60.87	0.0817	16.1976	-0.1974
482	SLU 82	0.97	0.54	60.88	0.0817	16.1996	-0.1919
482	SLU 83	0.98	0.55	61.47	0.0825	16.3489	-0.1959
482	SLU 84	0.98	0.53	61.47	0.0825	16.3508	-0.1904
482	SLE RA 1	0.69	0.29	40.85	0.0537	10.8715	-0.1046
482	SLE RA 2	0.69	0.27	40.86	0.0537	10.8737	-0.0985
482	SLE RA 3	0.7	0.29	41.48	0.0546	11.0341	-0.1054
482	SLE RA 4	0.71	0.28	41.49	0.0546	11.0354	-0.1018
482	SLE RA 5	0.7	0.27	41.25	0.0542	10.9745	-0.0975
482	SLE RA 6	0.71	0.29	41.88	0.0551	11.1349	-0.1044
482	SLE RA 7	0.71	0.28	41.88	0.0551	11.1362	-0.1008
482	SLE RA 8	0.71	0.29	41.64	0.0547	11.0732	-0.1026
482	SLE RA 9	0.71	0.27	41.65	0.0547	11.0745	-0.0989
482	SLE RA 10	0.72	0.34	43.88	0.0583	11.6778	-0.1225
482	SLE RA 11	0.73	0.36	44.51	0.0592	11.8382	-0.1295
482	SLE RA 12	0.73	0.35	44.51	0.0592	11.8395	-0.1258
482	SLE RA 13	0.73	0.34	44.27	0.0588	11.7786	-0.1215
482	SLE RA 14	0.74	0.36	44.9	0.0597	11.939	-0.1284
482	SLE RA 15	0.74	0.35	44.9	0.0597	11.9403	-0.1248
482	SLE RA 16	0.73	0.35	44.66	0.0594	11.8773	-0.1266
482	SLE RA 17	0.73	0.34	44.67	0.0594	11.8786	-0.1229
482	SLE RA 18	0.73	0.39	45.17	0.0603	12.0203	-0.1389
482	SLE RA 19	0.73	0.38	45.17	0.0603	12.0216	-0.1353
482	SLE RA 20	0.73	0.39	45.56	0.0608	12.1211	-0.1379
482	SLE RA 21	0.74	0.38	45.57	0.0608	12.1224	-0.1342
482	SLE FR 1	0.69	0.29	40.85	0.0537	10.8715	-0.1046
482	SLE FR 2	0.69	0.29	40.85	0.0537	10.872	-0.1034
482	SLE FR 3	0.7	0.29	41.01	0.0539	10.9119	-0.1042
482	SLE FR 4	0.7	0.32	42.15	0.0557	11.2166	-0.1137
482	SLE FR 5	0.71	0.32	42.3	0.0559	11.2565	-0.1145
482	SLE FR 6	0.71	0.34	43.01	0.057	11.4459	-0.1217
482	SLE QP 1	0.69	0.29	40.85	0.0537	10.8715	-0.1046
482	SLE QP 2	0.7	0.32	42.15	0.0557	11.2162	-0.1149
482	SLD 1	3.64	1.08	31.12	0.0408	8.404	-0.3794
482	SLD 2	3.74	1.68	31.22	0.0395	8.3993	-0.5876
482	SLD 3	3.48	-0.35	30.55	0.0429	8.5506	0.1214
482	SLD 4	3.57	0.24	30.65	0.0416	8.5459	-0.0868
482	SLD 5	1.82	2.61	39.69	0.0483	10.151	-0.917
482	SLD 6	1.88	3	39.76	0.0474	10.148	-1.053
482	SLD 7	1.27	-2.16	37.78	0.0553	10.6396	0.7524
482	SLD 8	1.33	-1.77	37.85	0.0544	10.6366	0.6163
482	SLD 9	0.07	2.41	46.45	0.057	11.7957	-0.8461
482	SLD 10	0.14	2.8	46.51	0.0561	11.7927	-0.9821
482	SLD 11	-0.47	-2.36	44.54	0.0639	12.2844	0.8233
482	SLD 12	-0.41	-1.97	44.6	0.0631	12.2813	0.6872
482	SLD 13	-2.17	0.4	53.64	0.0698	13.8864	-0.143
482	SLD 14	-2.07	0.99	53.74	0.0685	13.8818	-0.3512
482	SLD 15	-2.33	-1.03	53.07	0.0719	14.033	0.3578
482	SLD 16	-2.23	-0.44	53.17	0.0705	14.0283	0.1496
482	SLV 1	7.57	2.06	16.34	0.0209	4.6342	-0.7212
482	SLV 2	7.8	3.45	16.57	0.0179	4.6234	-1.2061
482	SLV 3	7.19	-1.21	15	0.0257	4.9744	0.4216
482	SLV 4	7.42	0.18	15.23	0.0226	4.9636	-0.0633
482	SLV 5	3.3	5.56	36.4	0.0385	8.7275	-1.9469
482	SLV 6	3.45	6.45	36.55	0.0366	8.7205	-2.2586
482	SLV 7	2.03	-5.33	31.93	0.0545	9.8615	1.8624
482	SLV 8	2.18	-4.44	32.08	0.0525	9.8545	1.5507
482	SLV 9	-0.77	5.08	52.21	0.0589	12.5778	-1.7805
482	SLV 10	-0.63	5.97	52.36	0.0569	12.5708	-2.0922
482	SLV 11	-2.04	-5.81	47.75	0.0748	13.7118	2.0288
482	SLV 12	-1.9	-4.92	47.9	0.0728	13.7049	1.7171
482	SLV 13	-6.01	0.46	69.06	0.0887	17.4687	-0.1665
482	SLV 14	-5.79	1.85	69.29	0.0856	17.4579	-0.6514
482	SLV 15	-6.4	-2.81	67.72	0.0935	17.8089	0.9763
482	SLV 16	-6.17	-1.42	67.95	0.0904	17.7981	0.4914

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
482	CRTFP Ux+	0	0	0	0	0	0
482	CRTFP Ux-	0	0	0	0	0	0
482	CRTFP Uy+	0	0	0	0	0	0
482	CRTFP Uy-	0	0	0	0	0	0
487	SLU 1	0.11	-0.03	32.95	-0.009	11.066	0.0089
487	SLU 2	0.11	-0.06	32.96	-0.0089	11.0677	0.0192
487	SLU 3	0.12	-0.02	33.74	-0.0092	11.3275	0.0052
487	SLU 4	0.12	-0.04	33.75	-0.0091	11.3285	0.0114
487	SLU 5	0.12	-0.06	33.44	-0.009	11.2274	0.0187
487	SLU 6	0.12	-0.02	34.22	-0.0093	11.4872	0.0047
487	SLU 7	0.12	-0.04	34.22	-0.0093	11.4882	0.0109
487	SLU 8	0.12	-0.03	33.91	-0.0093	11.3855	0.0079
487	SLU 9	0.12	-0.04	33.92	-0.0092	11.3865	0.0141
487	SLU 10	0.14	-0.01	37.28	-0.01	12.5265	0.0028
487	SLU 11	0.14	0.03	38.06	-0.0103	12.7863	-0.0112
487	SLU 12	0.14	0.01	38.06	-0.0103	12.7873	-0.005
487	SLU 13	0.14	-0.01	37.76	-0.0102	12.6863	0.0023
487	SLU 14	0.14	0.03	38.54	-0.0105	12.9461	-0.0117
487	SLU 15	0.15	0.01	38.54	-0.0104	12.9471	-0.0055
487	SLU 16	0.14	0.02	38.23	-0.0104	12.8443	-0.0085
487	SLU 17	0.14	0	38.23	-0.0103	12.8453	-0.0023
487	SLU 18	0.15	0.04	39.12	-0.0106	13.15	-0.0145
487	SLU 19	0.15	0.02	39.12	-0.0105	13.1511	-0.0083
487	SLU 20	0.15	0.04	39.6	-0.0107	13.3098	-0.015
487	SLU 21	0.15	0.02	39.6	-0.0107	13.3108	-0.0088
487	SLU 22	0.13	0.05	36.65	-0.0095	12.2987	-0.0207
487	SLU 23	0.13	0.02	36.66	-0.0094	12.3004	-0.0103
487	SLU 24	0.13	0.06	37.44	-0.0097	12.5602	-0.0243
487	SLU 25	0.13	0.05	37.44	-0.0096	12.5612	-0.0181
487	SLU 26	0.13	0.03	37.14	-0.0095	12.4601	-0.0108
487	SLU 27	0.13	0.07	37.92	-0.0099	12.7199	-0.0248
487	SLU 28	0.13	0.05	37.92	-0.0098	12.7209	-0.0186
487	SLU 29	0.13	0.06	37.61	-0.0098	12.6182	-0.0217
487	SLU 30	0.13	0.04	37.61	-0.0097	12.6192	-0.0155
487	SLU 31	0.16	0.07	40.98	-0.0105	13.7592	-0.0267
487	SLU 32	0.16	0.11	41.76	-0.0108	14.019	-0.0407
487	SLU 33	0.16	0.09	41.76	-0.0108	14.02	-0.0345
487	SLU 34	0.16	0.07	41.45	-0.0107	13.919	-0.0272
487	SLU 35	0.16	0.11	42.23	-0.011	14.1788	-0.0412
487	SLU 36	0.16	0.09	42.24	-0.0109	14.1798	-0.035
487	SLU 37	0.16	0.1	41.93	-0.0109	14.077	-0.0381
487	SLU 38	0.16	0.09	41.93	-0.0108	14.078	-0.0319
487	SLU 39	0.16	0.12	42.82	-0.0111	14.3827	-0.0441
487	SLU 40	0.17	0.1	42.82	-0.011	14.3838	-0.0379
487	SLU 41	0.17	0.12	43.3	-0.0112	14.5425	-0.0446
487	SLU 42	0.17	0.1	43.3	-0.0112	14.5435	-0.0384
487	SLU 43	0.14	-0.07	41.57	-0.0115	13.9631	0.0217
487	SLU 44	0.14	-0.1	41.58	-0.0114	13.9648	0.032
487	SLU 45	0.14	-0.06	42.36	-0.0117	14.2246	0.018
487	SLU 46	0.14	-0.08	42.36	-0.0117	14.2256	0.0242
487	SLU 47	0.14	-0.1	42.06	-0.0115	14.1246	0.0315
487	SLU 48	0.15	-0.06	42.84	-0.0119	14.3844	0.0175
487	SLU 49	0.15	-0.07	42.84	-0.0118	14.3854	0.0237
487	SLU 50	0.14	-0.07	42.53	-0.0118	14.2826	0.0207
487	SLU 51	0.15	-0.08	42.53	-0.0117	14.2836	0.0269
487	SLU 52	0.17	-0.05	45.9	-0.0125	15.4237	0.0156
487	SLU 53	0.17	-0.01	46.68	-0.0128	15.6835	0.0016
487	SLU 54	0.17	-0.03	46.68	-0.0128	15.6845	0.0078
487	SLU 55	0.17	-0.05	46.37	-0.0127	15.5834	0.0151
487	SLU 56	0.17	-0.01	47.15	-0.013	15.8432	0.0011
487	SLU 57	0.17	-0.03	47.16	-0.0129	15.8442	0.0073
487	SLU 58	0.17	-0.02	46.85	-0.0129	15.7415	0.0043
487	SLU 59	0.17	-0.04	46.85	-0.0129	15.7425	0.0105
487	SLU 60	0.18	0	47.74	-0.0131	16.0472	-0.0017
487	SLU 61	0.18	-0.02	47.74	-0.013	16.0482	0.0045
487	SLU 62	0.18	0	48.22	-0.0132	16.2069	-0.0022
487	SLU 63	0.18	-0.02	48.22	-0.0132	16.208	0.004
487	SLU 64	0.16	0.02	45.27	-0.012	15.1958	-0.0079
487	SLU 65	0.16	-0.01	45.28	-0.0119	15.1975	0.0025
487	SLU 66	0.16	0.03	46.06	-0.0122	15.4573	-0.0116
487	SLU 67	0.16	0.01	46.06	-0.0122	15.4583	-0.0053
487	SLU 68	0.16	-0.01	45.76	-0.012	15.3573	0.002
487	SLU 69	0.16	0.03	46.54	-0.0124	15.6171	-0.0121
487	SLU 70	0.16	0.01	46.54	-0.0123	15.6181	-0.0058
487	SLU 71	0.16	0.02	46.23	-0.0123	15.5153	-0.0089
487	SLU 72	0.16	0	46.23	-0.0122	15.5163	-0.0027
487	SLU 73	0.18	0.03	49.59	-0.013	16.6564	-0.0139
487	SLU 74	0.19	0.07	50.37	-0.0133	16.9162	-0.0279
487	SLU 75	0.19	0.06	50.38	-0.0133	16.9172	-0.0217
487	SLU 76	0.19	0.03	50.07	-0.0132	16.8161	-0.0144
487	SLU 77	0.19	0.07	50.85	-0.0135	17.0759	-0.0284
487	SLU 78	0.19	0.06	50.86	-0.0134	17.0769	-0.0222
487	SLU 79	0.19	0.07	50.54	-0.0134	16.9742	-0.0253
487	SLU 80	0.19	0.05	50.55	-0.0134	16.9752	-0.0191
487	SLU 81	0.19	0.08	51.44	-0.0136	17.2799	-0.0313
487	SLU 82	0.19	0.07	51.44	-0.0136	17.2809	-0.0251
487	SLU 83	0.2	0.08	51.92	-0.0138	17.4396	-0.0318
487	SLU 84	0.2	0.07	51.92	-0.0137	17.4407	-0.0256
487	SLE RA 1	0.12	-0.01	34.01	-0.0091	11.4182	0.0004
487	SLE RA 2	0.12	-0.03	34.02	-0.0091	11.4193	0.0073
487	SLE RA 3	0.12	0	34.53	-0.0093	11.5925	-0.002
487	SLE RA 4	0.12	-0.01	34.54	-0.0092	11.5932	0.0021
487	SLE RA 5	0.12	-0.02	34.33	-0.0092	11.5258	0.007
487	SLE RA 6	0.12	0	34.85	-0.0094	11.699	-0.0023
487	SLE RA 7	0.12	-0.01	34.86	-0.0093	11.6997	0.0018
487	SLE RA 8	0.12	0	34.65	-0.0093	11.6312	-0.0002
487	SLE RA 9	0.12	-0.02	34.65	-0.0093	11.6318	0.0039

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
487	SLE RA 10	0.14	0.01	36.89	-0.0098	12.3919	-0.0036
487	SLE RA 11	0.14	0.03	37.41	-0.01	12.5651	-0.0129
487	SLE RA 12	0.14	0.02	37.42	-0.01	12.5657	-0.0088
487	SLE RA 13	0.14	0.01	37.21	-0.0099	12.4984	-0.0039
487	SLE RA 14	0.14	0.03	37.73	-0.0101	12.6716	-0.0133
487	SLE RA 15	0.14	0.02	37.73	-0.0101	12.6722	-0.0091
487	SLE RA 16	0.14	0.03	37.53	-0.0101	12.6037	-0.0112
487	SLE RA 17	0.14	0.02	37.53	-0.01	12.6044	-0.007
487	SLE RA 18	0.14	0.04	38.12	-0.0102	12.8076	-0.0152
487	SLE RA 19	0.14	0.03	38.12	-0.0102	12.8082	-0.011
487	SLE RA 20	0.14	0.04	38.44	-0.0103	12.9141	-0.0155
487	SLE RA 21	0.14	0.03	38.44	-0.0103	12.9147	-0.0114
487	SLE FR 1	0.12	-0.01	34.01	-0.0091	11.4182	0.0004
487	SLE FR 2	0.12	-0.01	34.01	-0.0091	11.4184	0.0018
487	SLE FR 3	0.12	-0.01	34.14	-0.0092	11.4608	0.0003
487	SLE FR 4	0.12	0	35.24	-0.0094	11.8352	-0.0029
487	SLE FR 5	0.12	0.01	35.37	-0.0095	11.8776	-0.0044
487	SLE FR 6	0.13	0.02	36.07	-0.0097	12.1129	-0.0074
487	SLE QP 1	0.12	-0.01	34.01	-0.0091	11.4182	0.0004
487	SLE QP 2	0.12	0.01	35.24	-0.0094	11.835	-0.0043
487	SLD 1	2.69	0.6	35.39	-0.009	11.7536	-0.2118
487	SLD 2	2.75	0.63	35.39	-0.0092	11.7492	-0.2227
487	SLD 3	2.57	-0.35	35.62	-0.0062	11.8181	0.1196
487	SLD 4	2.63	-0.31	35.62	-0.0065	11.8137	0.1087
487	SLD 5	1.07	1.62	34.94	-0.0134	11.7136	-0.5673
487	SLD 6	1.11	1.64	34.94	-0.0135	11.7107	-0.5745
487	SLD 7	0.66	-1.54	35.71	-0.0043	11.9285	0.5376
487	SLD 8	0.7	-1.52	35.71	-0.0045	11.9256	0.5305
487	SLD 9	-0.45	1.54	34.78	-0.0144	11.7444	-0.539
487	SLD 10	-0.41	1.56	34.78	-0.0146	11.7415	-0.5461
487	SLD 11	-0.86	-1.62	35.55	-0.0053	11.9593	0.566
487	SLD 12	-0.82	-1.6	35.55	-0.0055	11.9564	0.5588
487	SLD 13	-2.38	0.33	34.87	-0.0124	11.8563	-0.1172
487	SLD 14	-2.32	0.36	34.86	-0.0126	11.8519	-0.1281
487	SLD 15	-2.5	-0.62	35.1	-0.0097	11.9208	0.2142
487	SLD 16	-2.44	-0.59	35.1	-0.0099	11.9164	0.2033
487	SLV 1	6.13	1.36	35.6	-0.0082	11.6458	-0.4775
487	SLV 2	6.26	1.43	35.59	-0.0088	11.6355	-0.5029
487	SLV 3	5.84	-0.79	36.12	-0.002	11.7922	0.2739
487	SLV 4	5.98	-0.71	36.12	-0.0027	11.782	0.2485
487	SLV 5	2.33	3.66	34.56	-0.0183	11.5579	-1.2815
487	SLV 6	2.42	3.71	34.55	-0.0187	11.5513	-1.2978
487	SLV 7	1.38	-3.5	36.3	0.0022	12.046	1.2231
487	SLV 8	1.47	-3.45	36.3	0.0018	12.0394	1.2068
487	SLV 9	-1.22	3.47	34.19	-0.0207	11.6305	-1.2153
487	SLV 10	-1.14	3.52	34.18	-0.0211	11.6239	-1.2316
487	SLV 11	-2.17	-3.69	35.94	-0.0002	12.1187	1.2893
487	SLV 12	-2.09	-3.64	35.93	-0.0006	12.1121	1.273
487	SLV 13	-5.73	0.73	34.37	-0.0162	11.888	-0.257
487	SLV 14	-5.6	0.8	34.36	-0.0168	11.8777	-0.2824
487	SLV 15	-6.02	-1.42	34.89	-0.01	12.0344	0.4944
487	SLV 16	-5.88	-1.34	34.89	-0.0107	12.0242	0.469
487	CRTFP Ux+	0	0	0	0	0	0
487	CRTFP Ux-	0	0	0	0	0	0
487	CRTFP Uy+	0	0	0	0	0	0
487	CRTFP Uy-	0	0	0	0	0	0
488	SLU 1	-0.4	-0.04	34.84	0.0408	-5.7788	-0.0097
488	SLU 2	-0.4	-0.12	34.85	0.041	-5.7817	-0.0291
488	SLU 3	-0.41	-0.04	35.68	0.0418	-5.9091	-0.0082
488	SLU 4	-0.41	-0.08	35.68	0.0419	-5.9108	-0.0199
488	SLU 5	-0.4	-0.11	35.37	0.0416	-5.8629	-0.028
488	SLU 6	-0.42	-0.03	36.2	0.0425	-5.9903	-0.0071
488	SLU 7	-0.42	-0.08	36.2	0.0426	-5.992	-0.0188
488	SLU 8	-0.42	-0.03	35.89	0.0421	-5.9413	-0.0074
488	SLU 9	-0.41	-0.08	35.89	0.0422	-5.943	-0.0191
488	SLU 10	-0.4	-0.06	38.84	0.0468	-6.4466	-0.0154
488	SLU 11	-0.42	0.02	39.67	0.0476	-6.574	0.0055
488	SLU 12	-0.42	-0.03	39.67	0.0477	-6.5757	-0.0062
488	SLU 13	-0.41	-0.06	39.36	0.0474	-6.5278	-0.0143
488	SLU 14	-0.43	0.02	40.19	0.0483	-6.6552	0.0066
488	SLU 15	-0.42	-0.02	40.19	0.0484	-6.657	-0.0051
488	SLU 16	-0.42	0.02	39.88	0.0479	-6.6062	0.0063
488	SLU 17	-0.42	-0.02	39.88	0.048	-6.6079	-0.0054
488	SLU 18	-0.41	0.04	40.55	0.0491	-6.7287	0.0099
488	SLU 19	-0.41	-0.01	40.55	0.0492	-6.7304	-0.0018
488	SLU 20	-0.42	0.04	41.07	0.0497	-6.8099	0.011
488	SLU 21	-0.42	-0.01	41.07	0.0498	-6.8117	-0.0006
488	SLU 22	-0.43	0.03	38.86	0.0467	-6.4396	0.0074
488	SLU 23	-0.43	-0.05	38.87	0.0468	-6.4425	-0.0121
488	SLU 24	-0.45	0.03	39.7	0.0477	-6.5699	0.0088
488	SLU 25	-0.44	-0.01	39.7	0.0478	-6.5716	-0.0029
488	SLU 26	-0.44	-0.05	39.39	0.0474	-6.5238	-0.0109
488	SLU 27	-0.45	0.04	40.22	0.0483	-6.6512	0.0099
488	SLU 28	-0.45	-0.01	40.22	0.0484	-6.6529	-0.0017
488	SLU 29	-0.45	0.04	39.91	0.0479	-6.6021	0.0096
488	SLU 30	-0.45	-0.01	39.91	0.048	-6.6039	-0.002
488	SLU 31	-0.44	0	42.86	0.0526	-7.1075	0.0016
488	SLU 32	-0.45	0.09	43.69	0.0535	-7.2348	0.0225
488	SLU 33	-0.45	0.04	43.69	0.0536	-7.2366	0.0108
488	SLU 34	-0.45	0.01	43.38	0.0532	-7.1887	0.0028
488	SLU 35	-0.46	0.09	44.21	0.0541	-7.3161	0.0236
488	SLU 36	-0.46	0.05	44.21	0.0542	-7.3178	0.012
488	SLU 37	-0.46	0.09	43.9	0.0537	-7.2671	0.0233
488	SLU 38	-0.46	0.04	43.9	0.0538	-7.2688	0.0117
488	SLU 39	-0.45	0.11	44.57	0.0549	-7.3895	0.0269
488	SLU 40	-0.44	0.06	44.57	0.055	-7.3913	0.0153
488	SLU 41	-0.45	0.11	45.09	0.0556	-7.4708	0.0281

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
488	SLU 42	-0.45	0.06	45.09	0.0557	-7.4725	0.0164
488	SLU 43	-0.51	-0.08	43.92	0.0511	-7.2858	-0.0184
488	SLU 44	-0.5	-0.15	43.92	0.0512	-7.2887	-0.0378
488	SLU 45	-0.52	-0.07	44.75	0.0521	-7.4161	-0.017
488	SLU 46	-0.52	-0.12	44.75	0.0522	-7.4178	-0.0286
488	SLU 47	-0.51	-0.15	44.44	0.0518	-7.37	-0.0367
488	SLU 48	-0.53	-0.07	45.27	0.0527	-7.4974	-0.0158
488	SLU 49	-0.52	-0.11	45.27	0.0528	-7.4991	-0.0275
488	SLU 50	-0.53	-0.07	44.96	0.0523	-7.4483	-0.0161
488	SLU 51	-0.52	-0.11	44.97	0.0524	-7.4501	-0.0278
488	SLU 52	-0.51	-0.1	47.92	0.057	-7.9537	-0.0242
488	SLU 53	-0.53	-0.02	48.74	0.0579	-8.081	-0.0033
488	SLU 54	-0.53	-0.06	48.75	0.058	-8.0828	-0.0149
488	SLU 55	-0.52	-0.1	48.44	0.0576	-8.0349	-0.023
488	SLU 56	-0.54	-0.01	49.27	0.0585	-8.1623	-0.0021
488	SLU 57	-0.53	-0.06	49.27	0.0586	-8.164	-0.0138
488	SLU 58	-0.53	-0.01	48.96	0.0581	-8.1133	-0.0025
488	SLU 59	-0.53	-0.06	48.96	0.0582	-8.115	-0.0141
488	SLU 60	-0.52	0	49.62	0.0594	-8.2357	0.0012
488	SLU 61	-0.52	-0.05	49.63	0.0594	-8.2375	-0.0105
488	SLU 62	-0.53	0.01	50.15	0.06	-8.317	0.0023
488	SLU 63	-0.53	-0.04	50.15	0.0601	-8.3187	-0.0094
488	SLU 64	-0.54	-0.01	47.94	0.0569	-7.9467	-0.0014
488	SLU 65	-0.54	-0.09	47.94	0.0571	-7.9496	-0.0208
488	SLU 66	-0.55	0	48.77	0.0579	-8.077	0.0001
488	SLU 67	-0.55	-0.05	48.77	0.058	-8.0787	-0.0116
488	SLU 68	-0.55	-0.08	48.47	0.0577	-8.0308	-0.0197
488	SLU 69	-0.56	0	49.29	0.0586	-8.1582	0.0012
488	SLU 70	-0.56	-0.05	49.29	0.0586	-8.1599	-0.0105
488	SLU 71	-0.56	0	48.98	0.0582	-8.1092	0.0009
488	SLU 72	-0.56	-0.05	48.99	0.0583	-8.1109	-0.0108
488	SLU 73	-0.55	-0.03	51.94	0.0629	-8.6145	-0.0071
488	SLU 74	-0.56	0.05	52.76	0.0637	-8.7419	0.0138
488	SLU 75	-0.56	0.01	52.77	0.0638	-8.7436	0.0021
488	SLU 76	-0.55	-0.03	52.46	0.0635	-8.6958	-0.006
488	SLU 77	-0.57	0.06	53.29	0.0644	-8.8231	0.0149
488	SLU 78	-0.57	0.01	53.29	0.0644	-8.8249	0.0032
488	SLU 79	-0.57	0.06	52.98	0.064	-8.7741	0.0146
488	SLU 80	-0.56	0.01	52.98	0.064	-8.7759	0.0029
488	SLU 81	-0.56	0.07	53.64	0.0652	-8.8966	0.0182
488	SLU 82	-0.55	0.02	53.65	0.0653	-8.8983	0.0065
488	SLU 83	-0.56	0.07	54.17	0.0658	-8.9778	0.0193
488	SLU 84	-0.56	0.03	54.17	0.0659	-8.9796	0.0077
488	SLE RA 1	-0.41	-0.02	35.99	0.0425	-5.9676	-0.0048
488	SLE RA 2	-0.41	-0.07	36	0.0426	-5.9695	-0.0178
488	SLE RA 3	-0.42	-0.02	36.55	0.0432	-6.0544	-0.0038
488	SLE RA 4	-0.42	-0.05	36.55	0.0432	-6.0556	-0.0116
488	SLE RA 5	-0.41	-0.07	36.34	0.043	-6.0237	-0.017
488	SLE RA 6	-0.42	-0.01	36.9	0.0436	-6.1086	-0.0031
488	SLE RA 7	-0.42	-0.05	36.9	0.0437	-6.1098	-0.0109
488	SLE RA 8	-0.42	-0.02	36.69	0.0433	-6.0759	-0.0033
488	SLE RA 9	-0.42	-0.05	36.69	0.0434	-6.0771	-0.0111
488	SLE RA 10	-0.41	-0.04	38.66	0.0465	-6.4128	-0.0086
488	SLE RA 11	-0.42	0.02	39.21	0.047	-6.4977	0.0053
488	SLE RA 12	-0.42	-0.01	39.21	0.0471	-6.4989	-0.0025
488	SLE RA 13	-0.42	-0.03	39.01	0.0469	-6.467	-0.0079
488	SLE RA 14	-0.43	0.02	39.56	0.0475	-6.5519	0.006
488	SLE RA 15	-0.43	-0.01	39.56	0.0475	-6.553	-0.0017
488	SLE RA 16	-0.43	0.02	39.35	0.0472	-6.5192	0.0058
488	SLE RA 17	-0.42	-0.01	39.35	0.0473	-6.5204	-0.0019
488	SLE RA 18	-0.42	0.03	39.8	0.048	-6.6009	0.0082
488	SLE RA 19	-0.42	0	39.8	0.0481	-6.602	0.0005
488	SLE RA 20	-0.42	0.03	40.14	0.0484	-6.655	0.009
488	SLE RA 21	-0.42	0	40.15	0.0485	-6.6562	0.0012
488	SLE FR 1	-0.41	-0.02	35.99	0.0425	-5.9676	-0.0048
488	SLE FR 2	-0.41	-0.03	35.99	0.0425	-5.968	-0.0074
488	SLE FR 3	-0.41	-0.02	36.13	0.0427	-5.9893	-0.0045
488	SLE FR 4	-0.41	-0.02	37.13	0.0442	-6.158	-0.0035
488	SLE FR 5	-0.42	0	37.27	0.0443	-6.1793	-0.0006
488	SLE FR 6	-0.41	0	37.89	0.0453	-6.2842	0.0017
488	SLE QP 1	-0.41	-0.02	35.99	0.0425	-5.9676	-0.0048
488	SLE QP 2	-0.41	-0.01	37.13	0.0442	-6.1576	-0.0009
488	SLD 1	2.06	0.55	47.79	0.0557	-7.7247	0.1364
488	SLD 2	2.12	0.04	47.77	0.0569	-7.7401	0.0108
488	SLD 3	2.2	-0.87	47.26	0.0579	-7.8382	-0.2163
488	SLD 4	2.26	-1.37	47.24	0.0591	-7.8536	-0.3418
488	SLD 5	0.1	2.39	41.14	0.0441	-6.4529	0.5973
488	SLD 6	0.14	2.06	41.13	0.0449	-6.463	0.5153
488	SLD 7	0.57	-2.32	39.37	0.0513	-6.8311	-0.5782
488	SLD 8	0.62	-2.65	39.35	0.0521	-6.8412	-0.6602
488	SLD 9	-1.44	2.63	34.92	0.0362	-5.474	0.6585
488	SLD 10	-1.4	2.3	34.9	0.037	-5.4841	0.5764
488	SLD 11	-0.97	-2.07	33.14	0.0434	-5.8522	-0.517
488	SLD 12	-0.93	-2.4	33.12	0.0442	-5.8622	-0.5991
488	SLD 13	-3.09	1.36	27.03	0.0292	-4.4616	0.3401
488	SLD 14	-3.02	0.85	27.01	0.0304	-4.477	0.2145
488	SLD 15	-2.95	-0.05	26.5	0.0314	-4.575	-0.0126
488	SLD 16	-2.88	-0.56	26.47	0.0326	-4.5905	-0.1382
488	SLV 1	5.36	1.23	62.09	0.0712	-9.8264	0.306
488	SLV 2	5.52	0.05	62.03	0.0741	-9.8623	0.0135
488	SLV 3	5.69	-1.97	60.84	0.0762	-10.0907	-0.4919
488	SLV 4	5.84	-3.14	60.78	0.0791	-10.1266	-0.7844
488	SLV 5	0.79	5.41	46.52	0.0442	-6.8512	1.3515
488	SLV 6	0.89	4.65	46.49	0.0461	-6.8743	1.1635
488	SLV 7	1.89	-5.24	42.36	0.0608	-7.7322	-1.3083
488	SLV 8	1.99	-5.99	42.33	0.0627	-7.7553	-1.4963
488	SLV 9	-2.82	5.98	31.94	0.0256	-4.5599	1.4945

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
488	SLV 10	-2.72	5.22	31.91	0.0275	-4.5829	1.3065
488	SLV 11	-1.72	-4.67	27.78	0.0422	-5.4409	-1.1653
488	SLV 12	-1.62	-5.42	27.75	0.0441	-5.464	-1.3533
488	SLV 13	-6.67	3.13	13.49	0.0092	-2.1886	0.7826
488	SLV 14	-6.52	1.95	13.43	0.0121	-2.2245	0.4901
488	SLV 15	-6.34	-0.06	12.24	0.0142	-2.4529	-0.0153
488	SLV 16	-6.19	-1.24	12.18	0.0171	-2.4888	-0.3078
488	CRTFP Ux+	0	0	0	0	0	0
488	CRTFP Ux-	0	0	0	0	0	0
488	CRTFP Uy+	0	0	0	0	0	0
488	CRTFP Uy-	0	0	0	0	0	0
494	SLU 1	-0.45	-0.97	59.3	0	-0.137	-0.0031
494	SLU 2	-0.45	-1.05	59.32	0.0002	-0.1378	-0.0026
494	SLU 3	-0.46	-0.98	60.72	0.0001	-0.141	-0.0033
494	SLU 4	-0.46	-1.03	60.73	0.0002	-0.1414	-0.003
494	SLU 5	-0.46	-1.06	60.21	0.0001	-0.1395	-0.0028
494	SLU 6	-0.47	-1	61.6	0	-0.1427	-0.0034
494	SLU 7	-0.47	-1.04	61.61	0.0001	-0.1432	-0.0031
494	SLU 8	-0.47	-1	61.07	-0.0001	-0.1404	-0.0034
494	SLU 9	-0.47	-1.04	61.08	0	-0.1409	-0.0031
494	SLU 10	-0.43	-1.07	66.51	0.0028	-0.1671	-0.0031
494	SLU 11	-0.45	-1.01	67.91	0.0028	-0.1704	-0.0038
494	SLU 12	-0.44	-1.06	67.92	0.0029	-0.1708	-0.0035
494	SLU 13	-0.44	-1.09	67.39	0.0028	-0.1689	-0.0033
494	SLU 14	-0.46	-1.02	68.79	0.0027	-0.1721	-0.0039
494	SLU 15	-0.45	-1.07	68.8	0.0028	-0.1725	-0.0036
494	SLU 16	-0.45	-1.02	68.26	0.0026	-0.1698	-0.0039
494	SLU 17	-0.45	-1.07	68.27	0.0027	-0.1703	-0.0036
494	SLU 18	-0.43	-1.01	69.57	0.0039	-0.179	-0.0039
494	SLU 19	-0.43	-1.06	69.59	0.0039	-0.1794	-0.0036
494	SLU 20	-0.44	-1.03	70.46	0.0038	-0.1807	-0.004
494	SLU 21	-0.44	-1.07	70.47	0.0039	-0.1811	-0.0037
494	SLU 22	-0.48	-0.95	66.24	0.0029	-0.1519	-0.0039
494	SLU 23	-0.48	-1.02	66.26	0.003	-0.1527	-0.0034
494	SLU 24	-0.49	-0.96	67.66	0.0029	-0.1559	-0.0041
494	SLU 25	-0.49	-1.01	67.67	0.003	-0.1564	-0.0038
494	SLU 26	-0.48	-1.03	67.14	0.0029	-0.1544	-0.0036
494	SLU 27	-0.5	-0.97	68.54	0.0029	-0.1576	-0.0042
494	SLU 28	-0.5	-1.02	68.55	0.003	-0.1581	-0.0039
494	SLU 29	-0.5	-0.97	68.01	0.0027	-0.1553	-0.0042
494	SLU 30	-0.5	-1.02	68.02	0.0028	-0.1558	-0.0039
494	SLU 31	-0.46	-1.05	73.45	0.0057	-0.1821	-0.0039
494	SLU 32	-0.48	-0.99	74.85	0.0056	-0.1853	-0.0046
494	SLU 33	-0.47	-1.03	74.86	0.0057	-0.1857	-0.0043
494	SLU 34	-0.47	-1.06	74.33	0.0056	-0.1838	-0.0041
494	SLU 35	-0.48	-1	75.73	0.0055	-0.187	-0.0047
494	SLU 36	-0.48	-1.05	75.74	0.0056	-0.1875	-0.0044
494	SLU 37	-0.48	-1	75.19	0.0054	-0.1847	-0.0047
494	SLU 38	-0.48	-1.05	75.21	0.0055	-0.1852	-0.0044
494	SLU 39	-0.46	-0.99	76.51	0.0067	-0.1939	-0.0046
494	SLU 40	-0.46	-1.04	76.52	0.0068	-0.1944	-0.0043
494	SLU 41	-0.47	-1	77.39	0.0066	-0.1956	-0.0048
494	SLU 42	-0.47	-1.05	77.41	0.0067	-0.1961	-0.0045
494	SLU 43	-0.57	-1.27	74.71	-0.0009	-0.173	-0.0038
494	SLU 44	-0.57	-1.35	74.73	-0.0008	-0.1737	-0.0033
494	SLU 45	-0.58	-1.28	76.13	-0.0009	-0.177	-0.004
494	SLU 46	-0.58	-1.33	76.14	-0.0008	-0.1774	-0.0037
494	SLU 47	-0.58	-1.36	75.62	-0.0009	-0.1755	-0.0034
494	SLU 48	-0.59	-1.29	77.01	-0.0009	-0.1787	-0.0041
494	SLU 49	-0.59	-1.34	77.03	-0.0009	-0.1791	-0.0038
494	SLU 50	-0.59	-1.3	76.48	-0.0011	-0.1764	-0.0041
494	SLU 51	-0.59	-1.34	76.49	-0.001	-0.1769	-0.0038
494	SLU 52	-0.56	-1.37	81.92	0.0019	-0.2031	-0.0038
494	SLU 53	-0.57	-1.31	83.32	0.0018	-0.2063	-0.0045
494	SLU 54	-0.57	-1.36	83.33	0.0019	-0.2068	-0.0042
494	SLU 55	-0.57	-1.39	82.81	0.0018	-0.2048	-0.0039
494	SLU 56	-0.58	-1.32	84.2	0.0017	-0.2081	-0.0046
494	SLU 57	-0.58	-1.37	84.22	0.0018	-0.2085	-0.0043
494	SLU 58	-0.58	-1.32	83.67	0.0016	-0.2058	-0.0046
494	SLU 59	-0.58	-1.37	83.68	0.0017	-0.2062	-0.0043
494	SLU 60	-0.55	-1.31	84.99	0.0029	-0.2149	-0.0045
494	SLU 61	-0.55	-1.36	85	0.003	-0.2154	-0.0042
494	SLU 62	-0.56	-1.33	85.87	0.0028	-0.2167	-0.0047
494	SLU 63	-0.56	-1.37	85.88	0.0029	-0.2171	-0.0044
494	SLU 64	-0.6	-1.25	81.65	0.0019	-0.1879	-0.0046
494	SLU 65	-0.6	-1.32	81.67	0.0021	-0.1887	-0.0041
494	SLU 66	-0.61	-1.26	83.07	0.002	-0.1919	-0.0047
494	SLU 67	-0.61	-1.3	83.08	0.0021	-0.1923	-0.0044
494	SLU 68	-0.61	-1.33	82.56	0.002	-0.1904	-0.0042
494	SLU 69	-0.62	-1.27	83.95	0.0019	-0.1936	-0.0049
494	SLU 70	-0.62	-1.32	83.96	0.002	-0.1941	-0.0046
494	SLU 71	-0.62	-1.27	83.42	0.0018	-0.1913	-0.0049
494	SLU 72	-0.62	-1.32	83.43	0.0019	-0.1918	-0.0046
494	SLU 73	-0.59	-1.35	88.86	0.0047	-0.218	-0.0046
494	SLU 74	-0.6	-1.29	90.26	0.0047	-0.2213	-0.0052
494	SLU 75	-0.6	-1.33	90.27	0.0047	-0.2217	-0.0049
494	SLU 76	-0.6	-1.36	89.75	0.0047	-0.2198	-0.0047
494	SLU 77	-0.61	-1.3	91.14	0.0046	-0.223	-0.0054
494	SLU 78	-0.61	-1.35	91.15	0.0047	-0.2234	-0.0051
494	SLU 79	-0.61	-1.3	90.61	0.0044	-0.2207	-0.0054
494	SLU 80	-0.61	-1.35	90.62	0.0045	-0.2212	-0.0051
494	SLU 81	-0.58	-1.29	91.92	0.0057	-0.2299	-0.0053
494	SLU 82	-0.58	-1.34	91.94	0.0058	-0.2303	-0.005
494	SLU 83	-0.59	-1.3	92.81	0.0057	-0.2316	-0.0054
494	SLU 84	-0.59	-1.35	92.82	0.0057	-0.232	-0.0051
494	SLE RA 1	-0.46	-0.97	61.28	0.0009	-0.1412	-0.0034
494	SLE RA 2	-0.46	-1.02	61.3	0.0009	-0.1418	-0.003

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
494	SLE RA 3	-0.46	-0.97	62.23	0.0009	-0.1439	-0.0035
494	SLE RA 4	-0.46	-1	62.24	0.0009	-0.1442	-0.0033
494	SLE RA 5	-0.46	-1.02	61.89	0.0009	-0.1429	-0.0031
494	SLE RA 6	-0.47	-0.98	62.82	0.0008	-0.1451	-0.0035
494	SLE RA 7	-0.47	-1.01	62.83	0.0009	-0.1454	-0.0033
494	SLE RA 8	-0.47	-0.98	62.46	0.0008	-0.1435	-0.0035
494	SLE RA 9	-0.47	-1.01	62.47	0.0008	-0.1438	-0.0033
494	SLE RA 10	-0.45	-1.03	66.09	0.0027	-0.1614	-0.0034
494	SLE RA 11	-0.46	-0.99	67.02	0.0027	-0.1635	-0.0038
494	SLE RA 12	-0.45	-1.02	67.03	0.0027	-0.1638	-0.0036
494	SLE RA 13	-0.45	-1.04	66.68	0.0027	-0.1625	-0.0035
494	SLE RA 14	-0.46	-1	67.61	0.0026	-0.1646	-0.0039
494	SLE RA 15	-0.46	-1.03	67.62	0.0027	-0.165	-0.0037
494	SLE RA 16	-0.46	-1	67.25	0.0025	-0.1631	-0.0039
494	SLE RA 17	-0.46	-1.03	67.26	0.0026	-0.1634	-0.0037
494	SLE RA 18	-0.44	-0.99	68.13	0.0034	-0.1692	-0.0038
494	SLE RA 19	-0.44	-1.02	68.14	0.0035	-0.1695	-0.0036
494	SLE RA 20	-0.45	-1	68.72	0.0033	-0.1704	-0.0039
494	SLE RA 21	-0.45	-1.03	68.73	0.0034	-0.1707	-0.0037
494	SLE FR 1	-0.46	-0.97	61.28	0.0009	-0.1412	-0.0034
494	SLE FR 2	-0.46	-0.98	61.29	0.0009	-0.1414	-0.0033
494	SLE FR 3	-0.46	-0.97	61.52	0.0008	-0.1417	-0.0034
494	SLE FR 4	-0.45	-0.98	63.34	0.0016	-0.1497	-0.0034
494	SLE FR 5	-0.46	-0.98	63.57	0.0016	-0.1501	-0.0035
494	SLE FR 6	-0.45	-0.98	64.71	0.0021	-0.1552	-0.0036
494	SLE QP 1	-0.46	-0.97	61.28	0.0009	-0.1412	-0.0034
494	SLE QP 2	-0.45	-0.97	63.34	0.0016	-0.1496	-0.0035
494	SLD 1	4.8	-0.53	68.32	-0.0025	0.0334	0.0078
494	SLD 2	4.88	-0.87	68.35	-0.0015	0.0302	0.0164
494	SLD 3	4.55	-2.24	68.83	-0.0009	-0.0031	0.0022
494	SLD 4	4.63	-2.58	68.86	0.0001	-0.0063	0.0107
494	SLD 5	1.49	1.81	64.06	-0.0023	-0.0389	0.007
494	SLD 6	1.54	1.59	64.08	-0.0016	-0.041	0.0126
494	SLD 7	0.66	-3.89	65.75	0.0031	-0.1604	-0.0119
494	SLD 8	0.71	-4.11	65.77	0.0038	-0.1625	-0.0063
494	SLD 9	-1.61	2.16	60.91	-0.0006	-0.1368	-0.0007
494	SLD 10	-1.56	1.94	60.93	0.0001	-0.1389	0.0049
494	SLD 11	-2.44	-3.54	62.6	0.0048	-0.2583	-0.0196
494	SLD 12	-2.39	-3.76	62.62	0.0055	-0.2604	-0.014
494	SLD 13	-5.53	0.63	57.82	0.0031	-0.293	-0.0177
494	SLD 14	-5.46	0.29	57.85	0.0042	-0.2962	-0.0092
494	SLD 15	-5.78	-1.08	58.33	0.0047	-0.3295	-0.0234
494	SLD 16	-5.71	-1.42	58.36	0.0058	-0.3327	-0.0149
494	SLV 1	11.84	0	75.01	-0.0081	0.2778	0.023
494	SLV 2	12.01	-0.79	75.08	-0.0057	0.2702	0.0429
494	SLV 3	11.26	-3.87	76.17	-0.0044	0.1947	0.0099
494	SLV 4	11.43	-4.66	76.25	-0.002	0.1872	0.0298
494	SLV 5	4.09	5.32	65.05	-0.0073	0.1057	0.021
494	SLV 6	4.2	4.81	65.1	-0.0058	0.1009	0.0338
494	SLV 7	2.15	-7.57	68.95	0.005	-0.1709	-0.0229
494	SLV 8	2.26	-8.08	69	0.0066	-0.1758	-0.0101
494	SLV 9	-3.17	6.13	57.68	-0.0033	-0.1235	0.0031
494	SLV 10	-3.05	5.62	57.73	-0.0018	-0.1284	0.0159
494	SLV 11	-5.11	-6.76	61.58	0.009	-0.4002	-0.0408
494	SLV 12	-4.99	-7.27	61.62	0.0106	-0.405	-0.028
494	SLV 13	-12.34	2.71	50.43	0.0052	-0.4865	-0.0368
494	SLV 14	-12.16	1.92	50.5	0.0076	-0.494	-0.0169
494	SLV 15	-12.92	-1.16	51.6	0.0089	-0.5695	-0.0499
494	SLV 16	-12.75	-1.95	51.67	0.0113	-0.577	-0.0301
494	CRTFP Ux+	0	0	0	0	0	0
494	CRTFP Ux-	0	0	0	0	0	0
498	SLU 1	0.75	-0.44	59.54	-0.0098	0.2089	-0.0107
498	SLU 2	0.75	-0.47	59.57	-0.0097	0.2096	-0.0103
498	SLU 3	0.77	-0.44	60.95	-0.0102	0.2145	-0.0109
498	SLU 4	0.77	-0.46	60.97	-0.0101	0.2149	-0.0107
498	SLU 5	0.76	-0.48	60.43	-0.01	0.2118	-0.0105
498	SLU 6	0.78	-0.45	61.82	-0.0106	0.2167	-0.0111
498	SLU 7	0.78	-0.47	61.83	-0.0105	0.2171	-0.0109
498	SLU 8	0.77	-0.46	61.27	-0.0105	0.2133	-0.0111
498	SLU 9	0.78	-0.48	61.28	-0.0104	0.2137	-0.0108
498	SLU 10	0.8	-0.43	66.86	-0.0091	0.2426	-0.0111
498	SLU 11	0.82	-0.4	68.24	-0.0096	0.2475	-0.0118
498	SLU 12	0.82	-0.42	68.26	-0.0095	0.2479	-0.0115
498	SLU 13	0.81	-0.44	67.72	-0.0094	0.2448	-0.0113
498	SLU 14	0.83	-0.41	69.11	-0.01	0.2497	-0.0119
498	SLU 15	0.83	-0.43	69.12	-0.0099	0.2501	-0.0117
498	SLU 16	0.82	-0.42	68.56	-0.0099	0.2463	-0.0119
498	SLU 17	0.82	-0.44	68.58	-0.0098	0.2467	-0.0116
498	SLU 18	0.82	-0.37	69.96	-0.009	0.2561	-0.0119
498	SLU 19	0.82	-0.4	69.97	-0.0089	0.2565	-0.0116
498	SLU 20	0.83	-0.39	70.82	-0.0093	0.2583	-0.0121
498	SLU 21	0.83	-0.41	70.84	-0.0092	0.2587	-0.0118
498	SLU 22	0.82	-0.36	66.52	-0.0094	0.22	-0.0113
498	SLU 23	0.82	-0.39	66.54	-0.0093	0.2207	-0.0109
498	SLU 24	0.84	-0.36	67.93	-0.0098	0.2256	-0.0116
498	SLU 25	0.84	-0.38	67.94	-0.0097	0.226	-0.0113
498	SLU 26	0.84	-0.4	67.4	-0.0096	0.2228	-0.0111
498	SLU 27	0.85	-0.37	68.79	-0.0102	0.2277	-0.0117
498	SLU 28	0.86	-0.39	68.8	-0.0101	0.2281	-0.0115
498	SLU 29	0.85	-0.38	68.24	-0.0101	0.2243	-0.0117
498	SLU 30	0.85	-0.4	68.26	-0.01	0.2247	-0.0114
498	SLU 31	0.87	-0.35	73.83	-0.0087	0.2537	-0.0117
498	SLU 32	0.89	-0.32	75.22	-0.0092	0.2586	-0.0124
498	SLU 33	0.89	-0.34	75.23	-0.0091	0.259	-0.0121
498	SLU 34	0.88	-0.36	74.69	-0.009	0.2558	-0.0119
498	SLU 35	0.9	-0.33	76.08	-0.0096	0.2607	-0.0125
498	SLU 36	0.9	-0.35	76.09	-0.0095	0.2611	-0.0123

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
498	SLU 37	0.89	-0.34	75.53	-0.0095	0.2573	-0.0125
498	SLU 38	0.9	-0.36	75.55	-0.0094	0.2577	-0.0122
498	SLU 39	0.89	-0.29	76.93	-0.0086	0.2672	-0.0125
498	SLU 40	0.89	-0.32	76.95	-0.0085	0.2676	-0.0123
498	SLU 41	0.9	-0.31	77.79	-0.0089	0.2693	-0.0127
498	SLU 42	0.9	-0.33	77.81	-0.0088	0.2697	-0.0124
498	SLU 43	0.95	-0.59	75.02	-0.0129	0.2678	-0.0137
498	SLU 44	0.95	-0.63	75.04	-0.0127	0.2685	-0.0133
498	SLU 45	0.97	-0.6	76.43	-0.0133	0.2734	-0.0139
498	SLU 46	0.97	-0.62	76.44	-0.0132	0.2738	-0.0137
498	SLU 47	0.96	-0.64	75.9	-0.0131	0.2707	-0.0135
498	SLU 48	0.98	-0.61	77.29	-0.0136	0.2756	-0.0141
498	SLU 49	0.98	-0.63	77.3	-0.0136	0.276	-0.0139
498	SLU 50	0.97	-0.62	76.74	-0.0136	0.2721	-0.0141
498	SLU 51	0.98	-0.64	76.76	-0.0135	0.2725	-0.0138
498	SLU 52	1	-0.59	82.33	-0.0122	0.3015	-0.0141
498	SLU 53	1.02	-0.55	83.72	-0.0127	0.3064	-0.0148
498	SLU 54	1.02	-0.58	83.73	-0.0126	0.3068	-0.0145
498	SLU 55	1.01	-0.6	83.19	-0.0125	0.3037	-0.0143
498	SLU 56	1.03	-0.57	84.58	-0.0131	0.3086	-0.0149
498	SLU 57	1.03	-0.59	84.59	-0.013	0.309	-0.0147
498	SLU 58	1.02	-0.58	84.03	-0.013	0.3051	-0.0149
498	SLU 59	1.02	-0.6	84.05	-0.0129	0.3055	-0.0146
498	SLU 60	1.02	-0.53	85.43	-0.0121	0.315	-0.0149
498	SLU 61	1.02	-0.55	85.45	-0.012	0.3154	-0.0146
498	SLU 62	1.03	-0.55	86.3	-0.0124	0.3171	-0.0151
498	SLU 63	1.03	-0.57	86.31	-0.0123	0.3175	-0.0148
498	SLU 64	1.02	-0.51	81.99	-0.0125	0.2789	-0.0143
498	SLU 65	1.02	-0.55	82.01	-0.0123	0.2796	-0.0139
498	SLU 66	1.04	-0.52	83.4	-0.0129	0.2845	-0.0146
498	SLU 67	1.04	-0.54	83.41	-0.0128	0.2849	-0.0143
498	SLU 68	1.04	-0.56	82.88	-0.0127	0.2817	-0.0141
498	SLU 69	1.05	-0.53	84.26	-0.0132	0.2866	-0.0147
498	SLU 70	1.06	-0.55	84.28	-0.0132	0.287	-0.0145
498	SLU 71	1.05	-0.54	83.71	-0.0132	0.2832	-0.0147
498	SLU 72	1.05	-0.56	83.73	-0.0131	0.2836	-0.0144
498	SLU 73	1.07	-0.51	89.3	-0.0118	0.3126	-0.0147
498	SLU 74	1.09	-0.47	90.69	-0.0123	0.3175	-0.0154
498	SLU 75	1.09	-0.5	90.7	-0.0122	0.3179	-0.0151
498	SLU 76	1.08	-0.52	90.17	-0.0121	0.3147	-0.0149
498	SLU 77	1.1	-0.49	91.55	-0.0127	0.3196	-0.0156
498	SLU 78	1.1	-0.51	91.57	-0.0126	0.32	-0.0153
498	SLU 79	1.09	-0.5	91.01	-0.0126	0.3162	-0.0155
498	SLU 80	1.1	-0.52	91.02	-0.0125	0.3166	-0.0152
498	SLU 81	1.09	-0.45	92.4	-0.0117	0.3261	-0.0155
498	SLU 82	1.09	-0.47	92.42	-0.0116	0.3265	-0.0153
498	SLU 83	1.1	-0.47	93.27	-0.012	0.3282	-0.0157
498	SLU 84	1.1	-0.49	93.28	-0.0119	0.3286	-0.0154
498	SLE RA 1	0.77	-0.41	61.54	-0.0097	0.2121	-0.0109
498	SLE RA 2	0.77	-0.44	61.55	-0.0096	0.2126	-0.0106
498	SLE RA 3	0.78	-0.42	62.48	-0.01	0.2158	-0.011
498	SLE RA 4	0.78	-0.43	62.49	-0.0099	0.2161	-0.0109
498	SLE RA 5	0.78	-0.45	62.13	-0.0098	0.214	-0.0107
498	SLE RA 6	0.79	-0.42	63.05	-0.0102	0.2173	-0.0112
498	SLE RA 7	0.79	-0.44	63.06	-0.0101	0.2175	-0.011
498	SLE RA 8	0.79	-0.43	62.69	-0.0102	0.215	-0.0111
498	SLE RA 9	0.79	-0.45	62.7	-0.0101	0.2152	-0.011
498	SLE RA 10	0.8	-0.41	66.41	-0.0092	0.2346	-0.0112
498	SLE RA 11	0.81	-0.39	67.34	-0.0096	0.2378	-0.0116
498	SLE RA 12	0.82	-0.4	67.35	-0.0095	0.2381	-0.0114
498	SLE RA 13	0.81	-0.42	66.99	-0.0094	0.236	-0.0113
498	SLE RA 14	0.82	-0.4	67.91	-0.0098	0.2393	-0.0117
498	SLE RA 15	0.82	-0.41	67.92	-0.0097	0.2395	-0.0115
498	SLE RA 16	0.82	-0.4	67.55	-0.0098	0.237	-0.0117
498	SLE RA 17	0.82	-0.42	67.56	-0.0097	0.2373	-0.0115
498	SLE RA 18	0.81	-0.37	68.48	-0.0091	0.2435	-0.0117
498	SLE RA 19	0.82	-0.39	68.49	-0.0091	0.2438	-0.0115
498	SLE RA 20	0.82	-0.38	69.06	-0.0094	0.245	-0.0118
498	SLE RA 21	0.82	-0.39	69.06	-0.0093	0.2452	-0.0116
498	SLE FR 1	0.77	-0.41	61.54	-0.0097	0.2121	-0.0109
498	SLE FR 2	0.77	-0.42	61.54	-0.0097	0.2122	-0.0108
498	SLE FR 3	0.77	-0.42	61.77	-0.0098	0.2127	-0.0109
498	SLE FR 4	0.78	-0.41	63.62	-0.0095	0.2216	-0.0111
498	SLE FR 5	0.79	-0.4	63.85	-0.0096	0.2221	-0.0112
498	SLE FR 6	0.79	-0.39	65.01	-0.0094	0.2278	-0.0113
498	SLE QP 1	0.77	-0.41	61.54	-0.0097	0.2121	-0.0109
498	SLE QP 2	0.78	-0.4	63.62	-0.0095	0.2215	-0.0111
498	SLD 1	5.75	0.77	58.84	-0.0134	0.2866	0.0036
498	SLD 2	5.84	1.14	58.82	-0.0155	0.2801	0.0127
498	SLD 3	5.52	-0.83	59.35	-0.0075	0.3126	-0.002
498	SLD 4	5.61	-0.46	59.33	-0.0097	0.306	0.0071
498	SLD 5	2.61	2.32	61.42	-0.0192	0.2029	0.0002
498	SLD 6	2.67	2.56	61.41	-0.0206	0.1986	0.0062
498	SLD 7	1.84	-3.03	63.11	0.0003	0.2893	-0.0185
498	SLD 8	1.89	-2.79	63.1	-0.0011	0.285	-0.0126
498	SLD 9	-0.33	1.99	64.14	-0.018	0.158	-0.0097
498	SLD 10	-0.27	2.23	64.13	-0.0194	0.1537	-0.0037
498	SLD 11	-1.1	-3.36	65.83	0.0015	0.2445	-0.0284
498	SLD 12	-1.04	-3.12	65.82	0.0001	0.2402	-0.0225
498	SLD 13	-4.04	-0.34	67.91	-0.0094	0.1371	-0.0294
498	SLD 14	-3.95	0.03	67.89	-0.0115	0.1305	-0.0203
498	SLD 15	-4.27	-1.94	68.42	-0.0035	0.163	-0.035
498	SLD 16	-4.18	-1.57	68.4	-0.0057	0.1564	-0.0259
498	SLV 1	12.4	2.29	52.44	-0.0184	0.3741	0.0235
498	SLV 2	12.61	3.15	52.41	-0.0233	0.3587	0.0447
498	SLV 3	11.86	-1.36	53.6	-0.005	0.4332	0.0103
498	SLV 4	12.07	-0.49	53.56	-0.01	0.4178	0.0315

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
498	SLV 5	5.05	5.79	58.51	-0.0316	0.1803	0.0155
498	SLV 6	5.19	6.35	58.49	-0.0348	0.1704	0.0291
498	SLV 7	3.25	-6.37	62.37	0.0129	0.3773	-0.0282
498	SLV 8	3.39	-5.81	62.35	0.0097	0.3675	-0.0146
498	SLV 9	-1.82	5.01	64.89	-0.0288	0.0756	-0.0077
498	SLV 10	-1.69	5.57	64.86	-0.032	0.0658	0.006
498	SLV 11	-3.62	-7.15	68.74	0.0157	0.2727	-0.0514
498	SLV 12	-3.49	-6.59	68.72	0.0125	0.2628	-0.0378
498	SLV 13	-10.51	-0.31	73.67	-0.0091	0.0252	-0.0538
498	SLV 14	-10.3	0.56	73.64	-0.0141	0.0099	-0.0326
498	SLV 15	-11.05	-3.95	74.83	0.0043	0.0844	-0.0669
498	SLV 16	-10.84	-3.09	74.8	-0.0007	0.069	-0.0457
498	CRTFP Ux+	0	0	0	0	0	0
498	CRTFP Ux-	0	0	0	0	0	0
498	CRTFP Uy+	0	0	0	0	0	0
498	CRTFP Uy-	0	0	0	0	0	0
499	SLU 1	0.75	0.27	41.13	0.0462	11.8968	-0.0952
499	SLU 2	0.75	0.24	41.13	0.0462	11.9002	-0.0861
499	SLU 3	0.77	0.27	42.11	0.0474	12.1757	-0.0965
499	SLU 4	0.77	0.25	42.12	0.0474	12.1777	-0.091
499	SLU 5	0.76	0.24	41.75	0.0469	12.0733	-0.0846
499	SLU 6	0.78	0.26	42.73	0.048	12.3488	-0.0949
499	SLU 7	0.78	0.25	42.73	0.048	12.3509	-0.0895
499	SLU 8	0.78	0.26	42.36	0.0476	12.243	-0.0922
499	SLU 9	0.78	0.24	42.36	0.0476	12.2451	-0.0867
499	SLU 10	0.8	0.34	45.87	0.0523	13.2774	-0.1221
499	SLU 11	0.81	0.37	46.85	0.0535	13.5529	-0.1325
499	SLU 12	0.82	0.36	46.86	0.0535	13.5549	-0.127
499	SLU 13	0.81	0.34	46.49	0.053	13.4505	-0.1206
499	SLU 14	0.83	0.37	47.47	0.0542	13.7261	-0.131
499	SLU 15	0.83	0.35	47.47	0.0542	13.7281	-0.1255
499	SLU 16	0.82	0.36	47.1	0.0537	13.6203	-0.1282
499	SLU 17	0.82	0.34	47.1	0.0537	13.6223	-0.1227
499	SLU 18	0.81	0.41	47.9	0.055	13.8642	-0.1466
499	SLU 19	0.81	0.4	47.9	0.055	13.8662	-0.1412
499	SLU 20	0.83	0.41	48.51	0.0556	14.0374	-0.1451
499	SLU 21	0.83	0.39	48.52	0.0557	14.0394	-0.1396
499	SLU 22	0.82	0.36	45.87	0.0524	13.2646	-0.1301
499	SLU 23	0.82	0.34	45.87	0.0525	13.268	-0.1209
499	SLU 24	0.84	0.37	46.85	0.0536	13.5435	-0.1313
499	SLU 25	0.84	0.35	46.86	0.0536	13.5455	-0.1259
499	SLU 26	0.83	0.33	46.49	0.0531	13.4411	-0.1194
499	SLU 27	0.85	0.36	47.47	0.0543	13.7167	-0.1298
499	SLU 28	0.85	0.35	47.47	0.0543	13.7187	-0.1244
499	SLU 29	0.84	0.36	47.1	0.0538	13.6109	-0.127
499	SLU 30	0.84	0.34	47.1	0.0538	13.6129	-0.1216
499	SLU 31	0.86	0.44	50.61	0.0586	14.6452	-0.157
499	SLU 32	0.88	0.47	51.59	0.0597	14.9207	-0.1673
499	SLU 33	0.88	0.45	51.6	0.0597	14.9228	-0.1619
499	SLU 34	0.88	0.44	51.23	0.0593	14.8183	-0.1554
499	SLU 35	0.89	0.47	52.21	0.0604	15.0939	-0.1658
499	SLU 36	0.89	0.45	52.21	0.0604	15.0959	-0.1604
499	SLU 37	0.89	0.46	51.84	0.0599	14.9881	-0.1631
499	SLU 38	0.89	0.44	51.84	0.0599	14.9901	-0.1576
499	SLU 39	0.88	0.51	52.64	0.0612	15.232	-0.1815
499	SLU 40	0.88	0.5	52.64	0.0612	15.2341	-0.176
499	SLU 41	0.89	0.51	53.25	0.0619	15.4052	-0.18
499	SLU 42	0.89	0.49	53.26	0.0619	15.4072	-0.1745
499	SLU 43	0.95	0.31	51.84	0.058	14.9969	-0.1118
499	SLU 44	0.95	0.29	51.85	0.058	15.0002	-0.1027
499	SLU 45	0.97	0.31	52.83	0.0591	15.2758	-0.1131
499	SLU 46	0.97	0.3	52.83	0.0591	15.2778	-0.1076
499	SLU 47	0.97	0.28	52.46	0.0587	15.1734	-0.1012
499	SLU 48	0.99	0.31	53.44	0.0598	15.4489	-0.1115
499	SLU 49	0.99	0.29	53.45	0.0598	15.4509	-0.1061
499	SLU 50	0.98	0.3	53.07	0.0593	15.3431	-0.1088
499	SLU 51	0.98	0.29	53.08	0.0593	15.3451	-0.1033
499	SLU 52	1	0.39	56.59	0.0641	16.3774	-0.1387
499	SLU 53	1.02	0.42	57.57	0.0652	16.653	-0.1491
499	SLU 54	1.02	0.4	57.57	0.0652	16.655	-0.1436
499	SLU 55	1.01	0.38	57.2	0.0648	16.5506	-0.1372
499	SLU 56	1.03	0.41	58.18	0.0659	16.8261	-0.1476
499	SLU 57	1.03	0.4	58.19	0.0659	16.8281	-0.1421
499	SLU 58	1.02	0.4	57.81	0.0655	16.7203	-0.1448
499	SLU 59	1.02	0.39	57.82	0.0655	16.7224	-0.1393
499	SLU 60	1.02	0.46	58.61	0.0667	16.9643	-0.1632
499	SLU 61	1.02	0.44	58.61	0.0667	16.9663	-0.1578
499	SLU 62	1.03	0.45	59.23	0.0674	17.1374	-0.1617
499	SLU 63	1.03	0.44	59.23	0.0674	17.1395	-0.1562
499	SLU 64	1.02	0.41	56.58	0.0642	16.3647	-0.1467
499	SLU 65	1.02	0.38	56.59	0.0642	16.368	-0.1375
499	SLU 66	1.04	0.41	57.57	0.0653	16.6436	-0.1479
499	SLU 67	1.04	0.4	57.57	0.0653	16.6456	-0.1425
499	SLU 68	1.03	0.38	57.2	0.0649	16.5412	-0.136
499	SLU 69	1.05	0.41	58.18	0.066	16.8167	-0.1464
499	SLU 70	1.05	0.39	58.19	0.066	16.8187	-0.141
499	SLU 71	1.05	0.4	57.81	0.0656	16.7109	-0.1436
499	SLU 72	1.05	0.39	57.82	0.0656	16.713	-0.1382
499	SLU 73	1.07	0.49	61.33	0.0703	17.7452	-0.1736
499	SLU 74	1.08	0.52	62.31	0.0714	18.0208	-0.1839
499	SLU 75	1.08	0.5	62.31	0.0714	18.0228	-0.1785
499	SLU 76	1.08	0.48	61.94	0.071	17.9184	-0.172
499	SLU 77	1.1	0.51	62.92	0.0721	18.1939	-0.1824
499	SLU 78	1.1	0.5	62.93	0.0721	18.196	-0.177
499	SLU 79	1.09	0.5	62.55	0.0717	18.0881	-0.1797
499	SLU 80	1.09	0.49	62.56	0.0717	18.0902	-0.1742
499	SLU 81	1.08	0.56	63.35	0.0729	18.3321	-0.1981

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
499	SLU 82	1.08	0.54	63.35	0.0729	18.3341	-0.1926
499	SLU 83	1.1	0.55	63.97	0.0736	18.5052	-0.1966
499	SLU 84	1.1	0.54	63.97	0.0736	18.5073	-0.1911
499	SLE RA 1	0.77	0.29	42.48	0.048	12.2876	-0.1052
499	SLE RA 2	0.77	0.28	42.49	0.048	12.2898	-0.0991
499	SLE RA 3	0.78	0.3	43.14	0.0488	12.4735	-0.106
499	SLE RA 4	0.78	0.29	43.14	0.0488	12.4749	-0.1024
499	SLE RA 5	0.78	0.27	42.9	0.0485	12.4053	-0.0981
499	SLE RA 6	0.79	0.29	43.55	0.0492	12.589	-0.105
499	SLE RA 7	0.79	0.28	43.55	0.0492	12.5903	-0.1013
499	SLE RA 8	0.79	0.29	43.3	0.0489	12.5184	-0.1031
499	SLE RA 9	0.79	0.28	43.31	0.0489	12.5198	-0.0995
499	SLE RA 10	0.8	0.34	45.65	0.0521	13.208	-0.1231
499	SLE RA 11	0.81	0.36	46.3	0.0528	13.3917	-0.13
499	SLE RA 12	0.81	0.35	46.3	0.0528	13.393	-0.1264
499	SLE RA 13	0.81	0.34	46.06	0.0525	13.3234	-0.1221
499	SLE RA 14	0.82	0.36	46.71	0.0533	13.5071	-0.129
499	SLE RA 15	0.82	0.35	46.71	0.0533	13.5084	-0.1254
499	SLE RA 16	0.82	0.36	46.46	0.053	13.4366	-0.1271
499	SLE RA 17	0.82	0.35	46.46	0.053	13.4379	-0.1235
499	SLE RA 18	0.81	0.39	46.99	0.0538	13.5992	-0.1394
499	SLE RA 19	0.81	0.38	47	0.0538	13.6006	-0.1358
499	SLE RA 20	0.82	0.39	47.4	0.0543	13.7146	-0.1384
499	SLE RA 21	0.82	0.38	47.41	0.0543	13.716	-0.1348
499	SLE FR 1	0.77	0.29	42.48	0.048	12.2876	-0.1052
499	SLE FR 2	0.77	0.29	42.48	0.048	12.288	-0.1039
499	SLE FR 3	0.77	0.29	42.64	0.0482	12.3338	-0.1048
499	SLE FR 4	0.78	0.32	43.84	0.0497	12.6815	-0.1142
499	SLE FR 5	0.79	0.32	44	0.0499	12.7272	-0.115
499	SLE FR 6	0.79	0.34	44.74	0.0509	12.9434	-0.1223
499	SLE QP 1	0.77	0.29	42.48	0.048	12.2876	-0.1052
499	SLE QP 2	0.78	0.32	43.83	0.0497	12.6811	-0.1154
499	SLD 1	3.67	1.08	32.4	0.0365	9.4765	-0.3794
499	SLD 2	3.74	1.68	32.46	0.0354	9.4692	-0.5876
499	SLD 3	3.51	-0.35	31.81	0.038	9.6393	0.1208
499	SLD 4	3.58	0.25	31.87	0.0368	9.632	-0.0873
499	SLD 5	1.87	2.62	41.28	0.0438	11.4742	-0.9165
499	SLD 6	1.91	3.01	41.32	0.0431	11.4694	-1.0525
499	SLD 7	1.36	-2.16	39.33	0.0485	12.0167	0.7509
499	SLD 8	1.4	-1.77	39.37	0.0478	12.0119	0.6149
499	SLD 9	0.16	2.41	48.3	0.0517	13.3503	-0.8457
499	SLD 10	0.21	2.8	48.34	0.0509	13.3455	-0.9818
499	SLD 11	-0.35	-2.36	46.34	0.0564	13.8928	0.8217
499	SLD 12	-0.3	-1.97	46.39	0.0556	13.888	0.6856
499	SLD 13	-2.02	0.4	55.8	0.0627	15.7302	-0.1435
499	SLD 14	-1.95	1	55.86	0.0615	15.7228	-0.3517
499	SLD 15	-2.17	-1.03	55.21	0.0641	15.8929	0.3567
499	SLD 16	-2.1	-0.43	55.27	0.063	15.8856	0.1485
499	SLV 1	7.53	2.06	17.06	0.0189	5.1806	-0.7206
499	SLV 2	7.69	3.45	17.2	0.0163	5.1635	-1.2054
499	SLV 3	7.17	-1.21	15.69	0.0221	5.559	0.4209
499	SLV 4	7.34	0.18	15.83	0.0195	5.5419	-0.0639
499	SLV 5	3.32	5.56	37.86	0.036	9.86	-1.9452
499	SLV 6	3.42	6.45	37.95	0.0344	9.849	-2.2568
499	SLV 7	2.14	-5.33	33.28	0.0468	11.1212	1.8598
499	SLV 8	2.24	-4.43	33.37	0.0451	11.1103	1.5482
499	SLV 9	-0.67	5.08	54.29	0.0544	14.2519	-1.7791
499	SLV 10	-0.57	5.97	54.39	0.0527	14.2409	-2.0907
499	SLV 11	-1.85	-5.81	49.71	0.0651	15.5131	2.0259
499	SLV 12	-1.75	-4.91	49.81	0.0635	15.5021	1.7143
499	SLV 13	-5.77	0.46	71.84	0.08	19.8202	-0.167
499	SLV 14	-5.61	1.85	71.98	0.0774	19.8031	-0.6518
499	SLV 15	-6.12	-2.8	70.46	0.0832	20.1986	0.9745
499	SLV 16	-5.96	-1.41	70.61	0.0806	20.1815	0.4897
499	CRTFP Ux+	0	0	0	0	0	0
499	CRTFP Ux-	0	0	0	0	0	0
499	CRTFP Uy+	0	0	0	0	0	0
499	CRTFP Uy-	0	0	0	0	0	0
503	SLU 1	0.18	-0.02	32.51	-0.0158	10.7808	0.0062
503	SLU 2	0.18	-0.05	32.52	-0.0157	10.7838	0.0165
503	SLU 3	0.18	-0.01	33.28	-0.0162	11.0352	0.0024
503	SLU 4	0.18	-0.03	33.29	-0.0161	11.0371	0.0086
503	SLU 5	0.18	-0.05	32.99	-0.016	10.939	0.0159
503	SLU 6	0.18	-0.01	33.75	-0.0164	11.1904	0.0019
503	SLU 7	0.18	-0.03	33.76	-0.0164	11.1922	0.0081
503	SLU 8	0.18	-0.02	33.45	-0.0163	11.0911	0.0051
503	SLU 9	0.18	-0.04	33.46	-0.0162	11.0929	0.0113
503	SLU 10	0.21	-0.01	36.77	-0.0179	12.2003	0.0001
503	SLU 11	0.21	0.03	37.54	-0.0183	12.4517	-0.0139
503	SLU 12	0.21	0.02	37.55	-0.0183	12.4535	-0.0077
503	SLU 13	0.21	0	37.25	-0.0181	12.3554	-0.0004
503	SLU 14	0.21	0.04	38.01	-0.0186	12.6068	-0.0145
503	SLU 15	0.21	0.02	38.02	-0.0185	12.6087	-0.0083
503	SLU 16	0.21	0.03	37.71	-0.0184	12.5075	-0.0113
503	SLU 17	0.21	0.01	37.71	-0.0184	12.5094	-0.0051
503	SLU 18	0.22	0.04	38.59	-0.0189	12.8043	-0.0172
503	SLU 19	0.22	0.03	38.59	-0.0188	12.8061	-0.011
503	SLU 20	0.22	0.05	39.06	-0.0191	12.9594	-0.0178
503	SLU 21	0.22	0.03	39.07	-0.0191	12.9612	-0.0116
503	SLU 22	0.2	0.06	36.17	-0.0171	11.9858	-0.0236
503	SLU 23	0.2	0.03	36.18	-0.017	11.9889	-0.0133
503	SLU 24	0.2	0.07	36.95	-0.0175	12.2403	-0.0273
503	SLU 25	0.2	0.05	36.95	-0.0174	12.2421	-0.0211
503	SLU 26	0.2	0.03	36.65	-0.0172	12.144	-0.0138
503	SLU 27	0.21	0.07	37.42	-0.0177	12.3954	-0.0279
503	SLU 28	0.21	0.06	37.43	-0.0177	12.3973	-0.0217
503	SLU 29	0.2	0.06	37.12	-0.0176	12.2961	-0.0247

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
503	SLU 30	0.2	0.05	37.12	-0.0175	12.298	-0.0185
503	SLU 31	0.23	0.08	40.44	-0.0191	13.4053	-0.0297
503	SLU 32	0.23	0.12	41.2	-0.0196	13.6567	-0.0437
503	SLU 33	0.23	0.1	41.21	-0.0196	13.6585	-0.0375
503	SLU 34	0.23	0.08	40.91	-0.0194	13.5605	-0.0302
503	SLU 35	0.23	0.12	41.68	-0.0199	13.8119	-0.0442
503	SLU 36	0.24	0.1	41.68	-0.0198	13.8137	-0.0381
503	SLU 37	0.23	0.11	41.37	-0.0197	13.7126	-0.0411
503	SLU 38	0.23	0.09	41.38	-0.0197	13.7144	-0.0349
503	SLU 39	0.24	0.13	42.25	-0.0202	14.0093	-0.047
503	SLU 40	0.24	0.11	42.26	-0.0201	14.0111	-0.0408
503	SLU 41	0.24	0.13	42.72	-0.0204	14.1644	-0.0475
503	SLU 42	0.24	0.11	42.73	-0.0203	14.1663	-0.0413
503	SLU 43	0.22	-0.06	41	-0.0201	13.6019	0.0182
503	SLU 44	0.22	-0.09	41.01	-0.02	13.6049	0.0285
503	SLU 45	0.23	-0.05	41.78	-0.0205	13.8563	0.0145
503	SLU 46	0.23	-0.07	41.78	-0.0204	13.8582	0.0207
503	SLU 47	0.23	-0.09	41.48	-0.0203	13.7601	0.028
503	SLU 48	0.23	-0.05	42.25	-0.0207	14.0115	0.0139
503	SLU 49	0.23	-0.06	42.26	-0.0207	14.0133	0.0201
503	SLU 50	0.23	-0.06	41.94	-0.0206	13.9122	0.0171
503	SLU 51	0.23	-0.07	41.95	-0.0205	13.914	0.0233
503	SLU 52	0.25	-0.04	45.27	-0.0222	15.0213	0.0122
503	SLU 53	0.26	0	46.03	-0.0227	15.2728	-0.0019
503	SLU 54	0.26	-0.02	46.04	-0.0226	15.2746	0.0043
503	SLU 55	0.26	-0.04	45.74	-0.0224	15.1765	0.0116
503	SLU 56	0.26	0	46.51	-0.0229	15.4279	-0.0024
503	SLU 57	0.26	-0.02	46.51	-0.0228	15.4297	0.0038
503	SLU 58	0.26	-0.01	46.2	-0.0228	15.3286	0.0008
503	SLU 59	0.26	-0.03	46.21	-0.0227	15.3304	0.0069
503	SLU 60	0.26	0.01	47.08	-0.0232	15.6253	-0.0052
503	SLU 61	0.26	-0.01	47.09	-0.0231	15.6272	0.001
503	SLU 62	0.27	0.01	47.55	-0.0234	15.7805	-0.0057
503	SLU 63	0.27	-0.01	47.56	-0.0234	15.7823	0.0005
503	SLU 64	0.24	0.03	44.67	-0.0214	14.8069	-0.0116
503	SLU 65	0.24	0	44.68	-0.0213	14.8099	-0.0012
503	SLU 66	0.25	0.04	45.44	-0.0218	15.0614	-0.0153
503	SLU 67	0.25	0.02	45.45	-0.0217	15.0632	-0.0091
503	SLU 68	0.25	0	45.15	-0.0215	14.9651	-0.0018
503	SLU 69	0.25	0.04	45.91	-0.022	15.2165	-0.0158
503	SLU 70	0.25	0.02	45.92	-0.022	15.2183	-0.0096
503	SLU 71	0.25	0.03	45.61	-0.0219	15.1172	-0.0126
503	SLU 72	0.25	0.01	45.62	-0.0218	15.119	-0.0065
503	SLU 73	0.27	0.04	48.94	-0.0234	16.2264	-0.0176
503	SLU 74	0.28	0.08	49.7	-0.0239	16.4778	-0.0316
503	SLU 75	0.28	0.07	49.71	-0.0239	16.4796	-0.0255
503	SLU 76	0.28	0.04	49.41	-0.0237	16.3815	-0.0182
503	SLU 77	0.28	0.08	50.17	-0.0242	16.6329	-0.0322
503	SLU 78	0.28	0.07	50.18	-0.0241	16.6348	-0.026
503	SLU 79	0.28	0.08	49.87	-0.024	16.5336	-0.029
503	SLU 80	0.28	0.06	49.87	-0.024	16.5355	-0.0228
503	SLU 81	0.28	0.09	50.75	-0.0245	16.8304	-0.0349
503	SLU 82	0.29	0.07	50.76	-0.0244	16.8322	-0.0288
503	SLU 83	0.29	0.09	51.22	-0.0247	16.9855	-0.0355
503	SLU 84	0.29	0.08	51.23	-0.0246	16.9874	-0.0293
503	SLE RA 1	0.18	0	33.55	-0.0162	11.1251	-0.0023
503	SLE RA 2	0.18	-0.02	33.56	-0.0161	11.1271	0.0045
503	SLE RA 3	0.18	0.01	34.07	-0.0164	11.2947	-0.0048
503	SLE RA 4	0.19	0	34.08	-0.0164	11.2959	-0.0007
503	SLE RA 5	0.18	-0.02	33.88	-0.0163	11.2305	0.0042
503	SLE RA 6	0.19	0.01	34.39	-0.0166	11.3982	-0.0052
503	SLE RA 7	0.19	0	34.39	-0.0166	11.3994	-0.0011
503	SLE RA 8	0.19	0	34.18	-0.0165	11.3319	-0.0031
503	SLE RA 9	0.19	-0.01	34.19	-0.0165	11.3332	0.0011
503	SLE RA 10	0.2	0.01	36.4	-0.0175	12.0714	-0.0064
503	SLE RA 11	0.2	0.04	36.91	-0.0179	12.239	-0.0157
503	SLE RA 12	0.21	0.03	36.91	-0.0178	12.2402	-0.0116
503	SLE RA 13	0.2	0.01	36.71	-0.0177	12.1748	-0.0067
503	SLE RA 14	0.21	0.04	37.22	-0.018	12.3424	-0.0161
503	SLE RA 15	0.21	0.03	37.23	-0.018	12.3437	-0.012
503	SLE RA 16	0.21	0.03	37.02	-0.0179	12.2762	-0.014
503	SLE RA 17	0.21	0.02	37.02	-0.0179	12.2775	-0.0099
503	SLE RA 18	0.21	0.05	37.61	-0.0182	12.4741	-0.0179
503	SLE RA 19	0.21	0.03	37.61	-0.0182	12.4753	-0.0138
503	SLE RA 20	0.21	0.05	37.92	-0.0184	12.5775	-0.0183
503	SLE RA 21	0.21	0.03	37.93	-0.0183	12.5787	-0.0142
503	SLE FR 1	0.18	0	33.55	-0.0162	11.1251	-0.0023
503	SLE FR 2	0.18	0	33.55	-0.0162	11.1255	-0.001
503	SLE FR 3	0.18	0	33.68	-0.0162	11.1664	-0.0025
503	SLE FR 4	0.19	0.01	34.77	-0.0168	11.5302	-0.0056
503	SLE FR 5	0.19	0.02	34.9	-0.0169	11.5711	-0.0072
503	SLE FR 6	0.2	0.02	35.58	-0.0172	11.7996	-0.0101
503	SLE QP 1	0.18	0	33.55	-0.0162	11.1251	-0.0023
503	SLE QP 2	0.19	0.01	34.77	-0.0168	11.5298	-0.007
503	SLD 1	2.76	0.61	34.93	-0.0161	11.5284	-0.2145
503	SLD 2	2.8	0.64	34.92	-0.0164	11.5219	-0.2255
503	SLD 3	2.64	-0.34	35.26	-0.0133	11.6249	0.1166
503	SLD 4	2.68	-0.31	35.25	-0.0135	11.6184	0.1056
503	SLD 5	1.14	1.62	34.33	-0.0209	11.3841	-0.5694
503	SLD 6	1.16	1.64	34.32	-0.0211	11.3798	-0.5766
503	SLD 7	0.74	-1.53	35.41	-0.0113	11.7059	0.5341
503	SLD 8	0.76	-1.51	35.4	-0.0115	11.7016	0.5269
503	SLD 9	-0.38	1.54	34.14	-0.0221	11.3579	-0.5409
503	SLD 10	-0.36	1.56	34.13	-0.0223	11.3536	-0.5481
503	SLD 11	-0.78	-1.61	35.22	-0.0125	11.6797	0.5625
503	SLD 12	-0.76	-1.59	35.21	-0.0127	11.6755	0.5554
503	SLD 13	-2.3	0.34	34.29	-0.0201	11.4411	-0.1196

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
503	SLD 14	-2.26	0.37	34.28	-0.0203	11.4346	-0.1306
503	SLD 15	-2.42	-0.61	34.62	-0.0172	11.5377	0.2114
503	SLD 16	-2.38	-0.58	34.61	-0.0175	11.5312	0.2004
503	SLV 1	6.21	1.36	35.16	-0.0152	11.5305	-0.48
503	SLV 2	6.3	1.44	35.14	-0.0157	11.5153	-0.5056
503	SLV 3	5.93	-0.78	35.9	-0.0086	11.7492	0.2704
503	SLV 4	6.02	-0.7	35.87	-0.0092	11.7341	0.2448
503	SLV 5	2.41	3.66	33.78	-0.0261	11.2007	-1.2826
503	SLV 6	2.47	3.71	33.76	-0.0265	11.191	-1.2991
503	SLV 7	1.47	-3.49	36.23	-0.0044	11.93	1.2187
503	SLV 8	1.53	-3.44	36.21	-0.0047	11.9203	1.2023
503	SLV 9	-1.15	3.47	33.33	-0.0289	11.1392	-1.2163
503	SLV 10	-1.09	3.52	33.31	-0.0292	11.1295	-1.2327
503	SLV 11	-2.09	-3.68	35.78	-0.0071	11.8685	1.285
503	SLV 12	-2.03	-3.63	35.76	-0.0075	11.8588	1.2686
503	SLV 13	-5.64	0.73	33.67	-0.0244	11.3254	-0.2589
503	SLV 14	-5.55	0.81	33.64	-0.025	11.3103	-0.2844
503	SLV 15	-5.93	-1.41	34.4	-0.0179	11.5442	0.4915
503	SLV 16	-5.83	-1.34	34.38	-0.0184	11.5291	0.466
503	CRTFP Ux+	0	0	0	0	0	0
503	CRTFP Ux-	0	0	0	0	0	0
503	CRTFP Uy+	0	0	0	0	0	0
503	CRTFP Uy-	0	0	0	0	0	0
504	SLU 1	-0.43	-0.05	36.01	0.0357	-6.8369	-0.012
504	SLU 2	-0.43	-0.13	36.02	0.0359	-6.8398	-0.0314
504	SLU 3	-0.44	-0.05	36.87	0.0367	-6.9946	-0.0106
504	SLU 4	-0.44	-0.1	36.87	0.0367	-6.9963	-0.0223
504	SLU 5	-0.44	-0.13	36.56	0.0364	-6.9383	-0.0303
504	SLU 6	-0.45	-0.04	37.41	0.0372	-7.0931	-0.0095
504	SLU 7	-0.45	-0.09	37.41	0.0373	-7.0948	-0.0212
504	SLU 8	-0.45	-0.05	37.09	0.0369	-7.0339	-0.0098
504	SLU 9	-0.45	-0.09	37.09	0.0369	-7.0357	-0.0215
504	SLU 10	-0.44	-0.08	40.17	0.0409	-7.6364	-0.018
504	SLU 11	-0.45	0	41.03	0.0417	-7.7912	0.0027
504	SLU 12	-0.45	-0.04	41.03	0.0417	-7.7929	-0.0089
504	SLU 13	-0.45	-0.07	40.71	0.0414	-7.7349	-0.017
504	SLU 14	-0.46	0.01	41.57	0.0422	-7.8897	0.0038
504	SLU 15	-0.46	-0.04	41.57	0.0423	-7.8914	-0.0079
504	SLU 16	-0.46	0.01	41.25	0.0419	-7.8305	0.0035
504	SLU 17	-0.46	-0.04	41.25	0.042	-7.8322	-0.0081
504	SLU 18	-0.45	0.02	41.95	0.0429	-7.9749	0.0071
504	SLU 19	-0.44	-0.02	41.95	0.043	-7.9766	-0.0046
504	SLU 20	-0.45	0.03	42.49	0.0435	-8.0734	0.0082
504	SLU 21	-0.45	-0.02	42.49	0.0435	-8.0751	-0.0035
504	SLU 22	-0.47	0.01	40.19	0.0409	-7.6313	0.0047
504	SLU 23	-0.46	-0.07	40.2	0.041	-7.6342	-0.0147
504	SLU 24	-0.48	0.02	41.06	0.0418	-7.789	0.0061
504	SLU 25	-0.48	-0.03	41.06	0.0418	-7.7907	-0.0056
504	SLU 26	-0.47	-0.06	40.74	0.0415	-7.7327	-0.0136
504	SLU 27	-0.49	0.02	41.6	0.0423	-7.8875	0.0071
504	SLU 28	-0.48	-0.02	41.6	0.0424	-7.8893	-0.0045
504	SLU 29	-0.48	0.02	41.28	0.042	-7.8284	0.0069
504	SLU 30	-0.48	-0.03	41.28	0.0421	-7.8301	-0.0048
504	SLU 31	-0.47	-0.01	44.36	0.046	-8.4308	-0.0014
504	SLU 32	-0.49	0.07	45.21	0.0468	-8.5856	0.0194
504	SLU 33	-0.49	0.02	45.22	0.0469	-8.5873	0.0077
504	SLU 34	-0.48	-0.01	44.9	0.0466	-8.5293	-0.0003
504	SLU 35	-0.5	0.08	45.75	0.0474	-8.6841	0.0205
504	SLU 36	-0.49	0.03	45.76	0.0474	-8.6858	0.0088
504	SLU 37	-0.49	0.07	45.43	0.047	-8.6249	0.0202
504	SLU 38	-0.49	0.03	45.44	0.0471	-8.6267	0.0086
504	SLU 39	-0.48	0.09	46.13	0.048	-8.7693	0.0238
504	SLU 40	-0.48	0.04	46.14	0.0481	-8.771	0.0121
504	SLU 41	-0.49	0.09	46.67	0.0486	-8.8678	0.0248
504	SLU 42	-0.49	0.05	46.68	0.0487	-8.8695	0.0132
504	SLU 43	-0.55	-0.09	45.37	0.0447	-8.6156	-0.0213
504	SLU 44	-0.55	-0.17	45.38	0.0448	-8.6185	-0.0407
504	SLU 45	-0.56	-0.09	46.24	0.0456	-8.7733	-0.0199
504	SLU 46	-0.56	-0.13	46.24	0.0457	-8.775	-0.0316
504	SLU 47	-0.56	-0.17	45.92	0.0454	-8.717	-0.0396
504	SLU 48	-0.57	-0.08	46.78	0.0462	-8.8718	-0.0188
504	SLU 49	-0.57	-0.13	46.78	0.0462	-8.8736	-0.0305
504	SLU 50	-0.57	-0.08	46.46	0.0458	-8.8126	-0.0191
504	SLU 51	-0.57	-0.13	46.46	0.0459	-8.8144	-0.0308
504	SLU 52	-0.56	-0.12	49.54	0.0498	-9.4151	-0.0274
504	SLU 53	-0.57	-0.03	50.39	0.0506	-9.5699	-0.0066
504	SLU 54	-0.57	-0.08	50.4	0.0507	-9.5716	-0.0182
504	SLU 55	-0.57	-0.11	50.08	0.0504	-9.5136	-0.0263
504	SLU 56	-0.58	-0.03	50.93	0.0512	-9.6684	-0.0055
504	SLU 57	-0.58	-0.08	50.94	0.0513	-9.6701	-0.0172
504	SLU 58	-0.58	-0.03	50.61	0.0509	-9.6092	-0.0058
504	SLU 59	-0.57	-0.08	50.62	0.0509	-9.611	-0.0174
504	SLU 60	-0.56	-0.02	51.31	0.0519	-9.7536	-0.0022
504	SLU 61	-0.56	-0.06	51.32	0.0519	-9.7553	-0.0139
504	SLU 62	-0.57	-0.01	51.85	0.0524	-9.8521	-0.0011
504	SLU 63	-0.57	-0.06	51.86	0.0525	-9.8538	-0.0128
504	SLU 64	-0.59	-0.03	49.56	0.0498	-9.41	-0.0046
504	SLU 65	-0.58	-0.1	49.57	0.0499	-9.4129	-0.024
504	SLU 66	-0.6	-0.02	50.42	0.0507	-9.5677	-0.0033
504	SLU 67	-0.59	-0.07	50.43	0.0508	-9.5695	-0.0149
504	SLU 68	-0.59	-0.1	50.11	0.0505	-9.5114	-0.0229
504	SLU 69	-0.61	-0.02	50.96	0.0513	-9.6662	-0.0022
504	SLU 70	-0.6	-0.06	50.97	0.0514	-9.668	-0.0138
504	SLU 71	-0.6	-0.02	50.64	0.051	-9.6071	-0.0024
504	SLU 72	-0.6	-0.06	50.65	0.051	-9.6088	-0.0141
504	SLU 73	-0.59	-0.05	53.73	0.055	-10.2095	-0.0107
504	SLU 74	-0.61	0.03	54.58	0.0558	-10.3643	0.0101

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
504	SLU 75	-0.6	-0.01	54.58	0.0558	-10.366	-0.0016
504	SLU 76	-0.6	-0.05	54.27	0.0555	-10.308	-0.0096
504	SLU 77	-0.61	0.04	55.12	0.0563	-10.4628	0.0112
504	SLU 78	-0.61	-0.01	55.12	0.0564	-10.4645	-0.0005
504	SLU 79	-0.61	0.04	54.8	0.056	-10.4036	0.0109
504	SLU 80	-0.61	-0.01	54.8	0.056	-10.4054	-0.0008
504	SLU 81	-0.6	0.05	55.5	0.057	-10.548	0.0145
504	SLU 82	-0.6	0	55.5	0.0571	-10.5497	0.0028
504	SLU 83	-0.61	0.05	56.04	0.0576	-10.6465	0.0155
504	SLU 84	-0.6	0.01	56.05	0.0576	-10.6482	0.0039
504	SLE RA 1	-0.44	-0.03	37.2	0.0372	-7.0639	-0.0072
504	SLE RA 2	-0.44	-0.09	37.21	0.0373	-7.0658	-0.0201
504	SLE RA 3	-0.45	-0.03	37.78	0.0378	-7.169	-0.0063
504	SLE RA 4	-0.45	-0.06	37.78	0.0379	-7.1702	-0.0141
504	SLE RA 5	-0.45	-0.08	37.57	0.0377	-7.1315	-0.0194
504	SLE RA 6	-0.46	-0.03	38.14	0.0382	-7.2347	-0.0056
504	SLE RA 7	-0.45	-0.06	38.14	0.0382	-7.2358	-0.0133
504	SLE RA 8	-0.45	-0.03	37.92	0.038	-7.1952	-0.0058
504	SLE RA 9	-0.45	-0.06	37.93	0.038	-7.1964	-0.0135
504	SLE RA 10	-0.45	-0.05	39.98	0.0406	-7.5969	-0.0113
504	SLE RA 11	-0.46	0	40.55	0.0412	-7.7001	0.0026
504	SLE RA 12	-0.45	-0.03	40.55	0.0412	-7.7012	-0.0052
504	SLE RA 13	-0.45	-0.05	40.34	0.041	-7.6625	-0.0105
504	SLE RA 14	-0.46	0.01	40.91	0.0415	-7.7657	0.0033
504	SLE RA 15	-0.46	-0.02	40.91	0.0416	-7.7669	-0.0045
504	SLE RA 16	-0.46	0.01	40.7	0.0413	-7.7263	0.0031
504	SLE RA 17	-0.46	-0.02	40.7	0.0413	-7.7274	-0.0046
504	SLE RA 18	-0.45	0.02	41.16	0.042	-7.8225	0.0055
504	SLE RA 19	-0.45	-0.02	41.17	0.042	-7.8237	-0.0023
504	SLE RA 20	-0.46	0.02	41.52	0.0424	-7.8882	0.0062
504	SLE RA 21	-0.46	-0.01	41.53	0.0424	-7.8894	-0.0015
504	SLE FR 1	-0.44	-0.03	37.2	0.0372	-7.0639	-0.0072
504	SLE FR 2	-0.44	-0.05	37.21	0.0372	-7.0643	-0.0098
504	SLE FR 3	-0.45	-0.03	37.35	0.0374	-7.0902	-0.0069
504	SLE FR 4	-0.44	-0.03	38.39	0.0387	-7.2919	-0.006
504	SLE FR 5	-0.45	-0.02	38.54	0.0388	-7.3178	-0.0031
504	SLE FR 6	-0.45	-0.01	39.18	0.0396	-7.4432	-0.0009
504	SLE QP 1	-0.44	-0.03	37.2	0.0372	-7.0639	-0.0072
504	SLE QP 2	-0.45	-0.02	38.39	0.0386	-7.2915	-0.0034
504	SLD 1	2.05	0.53	48.86	0.0485	-9.162	0.1326
504	SLD 2	2.09	0.02	48.87	0.0496	-9.1769	0.0074
504	SLD 3	2.19	-0.88	49.41	0.0498	-9.2845	-0.2184
504	SLD 4	2.23	-1.38	49.42	0.0508	-9.2994	-0.3436
504	SLD 5	0.09	2.37	40.68	0.0395	-7.6641	0.5919
504	SLD 6	0.11	2.04	40.69	0.0401	-7.6739	0.5101
504	SLD 7	0.55	-2.32	42.54	0.0438	-8.0726	-0.5781
504	SLD 8	0.57	-2.65	42.55	0.0444	-8.0824	-0.66
504	SLD 9	-1.46	2.61	34.23	0.0328	-6.5006	0.6532
504	SLD 10	-1.44	2.28	34.24	0.0335	-6.5103	0.5714
504	SLD 11	-1.01	-2.08	36.1	0.0372	-6.9091	-0.5169
504	SLD 12	-0.98	-2.41	36.1	0.0378	-6.9189	-0.5987
504	SLD 13	-3.12	1.34	27.36	0.0264	-5.2835	0.3369
504	SLD 14	-3.08	0.84	27.37	0.0275	-5.2985	0.2116
504	SLD 15	-2.98	-0.06	27.92	0.0277	-5.4061	-0.0142
504	SLD 16	-2.94	-0.57	27.93	0.0288	-5.421	-0.1394
504	SLV 1	5.4	1.21	62.89	0.0618	-11.67	0.3007
504	SLV 2	5.49	0.03	62.91	0.0642	-11.7047	0.009
504	SLV 3	5.71	-1.98	64.19	0.0648	-11.956	-0.4936
504	SLV 4	5.81	-3.15	64.21	0.0671	-11.9908	-0.7853
504	SLV 5	0.81	5.38	43.76	0.0407	-8.1652	1.3424
504	SLV 6	0.87	4.62	43.77	0.0422	-8.1876	1.1549
504	SLV 7	1.87	-5.23	48.11	0.0506	-9.1187	-1.3051
504	SLV 8	1.93	-5.99	48.12	0.0521	-9.1411	-1.4926
504	SLV 9	-2.82	5.95	28.66	0.0252	-5.4419	1.4858
504	SLV 10	-2.76	5.2	28.67	0.0267	-5.4642	1.2983
504	SLV 11	-1.76	-4.66	33.01	0.0351	-6.3954	-1.1617
504	SLV 12	-1.7	-5.42	33.03	0.0366	-6.4178	-1.3492
504	SLV 13	-6.7	3.11	12.57	0.0101	-2.5922	0.7785
504	SLV 14	-6.61	1.94	12.59	0.0125	-2.6269	0.4868
504	SLV 15	-6.38	-0.07	13.87	0.0131	-2.8782	-0.0157
504	SLV 16	-6.29	-1.25	13.9	0.0155	-2.913	-0.3075
504	CRTFP Ux+	0	0	0	0	0	0
504	CRTFP Ux-	0	0	0	0	0	0
504	CRTFP Uy+	0	0	0	0	0	0
504	CRTFP Uy-	0	0	0	0	0	0
511	SLU 1	-0.38	-0.8	50.82	-1.4193	-0.0964	-0.009
511	SLU 2	-0.38	-0.87	50.84	-1.4199	-0.0971	-0.0086
511	SLU 3	-0.39	-0.81	52.04	-1.4533	-0.0994	-0.0092
511	SLU 4	-0.39	-0.85	52.05	-1.4536	-0.0998	-0.009
511	SLU 5	-0.39	-0.88	51.6	-1.441	-0.0982	-0.0089
511	SLU 6	-0.4	-0.82	52.79	-1.4744	-0.1006	-0.0094
511	SLU 7	-0.4	-0.86	52.8	-1.4747	-0.101	-0.0092
511	SLU 8	-0.4	-0.82	52.33	-1.4615	-0.0987	-0.0095
511	SLU 9	-0.4	-0.86	52.34	-1.4619	-0.0991	-0.0093
511	SLU 10	-0.37	-0.89	57.07	-1.5922	-0.1201	-0.0082
511	SLU 11	-0.38	-0.84	58.26	-1.6256	-0.1224	-0.0087
511	SLU 12	-0.38	-0.87	58.28	-1.6259	-0.1228	-0.0085
511	SLU 13	-0.38	-0.9	57.82	-1.6133	-0.1213	-0.0084
511	SLU 14	-0.39	-0.84	59.02	-1.6467	-0.1236	-0.009
511	SLU 15	-0.39	-0.88	59.03	-1.647	-0.124	-0.0088
511	SLU 16	-0.38	-0.85	58.56	-1.6339	-0.1217	-0.009
511	SLU 17	-0.38	-0.88	58.57	-1.6342	-0.1221	-0.0088
511	SLU 18	-0.36	-0.84	59.72	-1.6655	-0.1293	-0.0083
511	SLU 19	-0.36	-0.87	59.73	-1.6658	-0.1297	-0.0081
511	SLU 20	-0.37	-0.85	60.47	-1.6866	-0.1305	-0.0085
511	SLU 21	-0.37	-0.88	60.48	-1.6869	-0.1309	-0.0083
511	SLU 22	-0.41	-0.78	56.84	-1.5856	-0.107	-0.0094

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
511	SLU 23	-0.41	-0.85	56.86	-1.5861	-0.1077	-0.0091
511	SLU 24	-0.41	-0.79	58.05	-1.6195	-0.1101	-0.0096
511	SLU 25	-0.41	-0.83	58.07	-1.6198	-0.1105	-0.0094
511	SLU 26	-0.41	-0.85	57.61	-1.6072	-0.1089	-0.0093
511	SLU 27	-0.42	-0.8	58.81	-1.6406	-0.1112	-0.0099
511	SLU 28	-0.42	-0.84	58.82	-1.6409	-0.1116	-0.0097
511	SLU 29	-0.42	-0.8	58.35	-1.6278	-0.1093	-0.0099
511	SLU 30	-0.42	-0.84	58.36	-1.6281	-0.1097	-0.0097
511	SLU 31	-0.39	-0.87	63.09	-1.7584	-0.1307	-0.0086
511	SLU 32	-0.4	-0.81	64.28	-1.7918	-0.1331	-0.0092
511	SLU 33	-0.4	-0.85	64.29	-1.7922	-0.1335	-0.009
511	SLU 34	-0.4	-0.88	63.84	-1.7796	-0.1319	-0.0089
511	SLU 35	-0.41	-0.82	65.04	-1.8129	-0.1342	-0.0094
511	SLU 36	-0.41	-0.86	65.05	-1.8133	-0.1346	-0.0092
511	SLU 37	-0.41	-0.82	64.57	-1.8001	-0.1324	-0.0095
511	SLU 38	-0.41	-0.86	64.59	-1.8005	-0.1328	-0.0093
511	SLU 39	-0.39	-0.81	65.73	-1.8318	-0.1399	-0.0088
511	SLU 40	-0.39	-0.85	65.75	-1.8321	-0.1403	-0.0086
511	SLU 41	-0.4	-0.82	66.49	-1.8529	-0.1411	-0.009
511	SLU 42	-0.4	-0.86	66.5	-1.8532	-0.1415	-0.0088
511	SLU 43	-0.49	-1.05	64.01	-1.7881	-0.1217	-0.0115
511	SLU 44	-0.49	-1.12	64.03	-1.7887	-0.1224	-0.0111
511	SLU 45	-0.5	-1.06	65.22	-1.822	-0.1247	-0.0117
511	SLU 46	-0.5	-1.1	65.23	-1.8224	-0.1251	-0.0115
511	SLU 47	-0.5	-1.12	64.78	-1.8098	-0.1235	-0.0114
511	SLU 48	-0.5	-1.07	65.98	-1.8432	-0.1259	-0.0119
511	SLU 49	-0.5	-1.11	65.99	-1.8435	-0.1263	-0.0117
511	SLU 50	-0.5	-1.07	65.52	-1.8303	-0.124	-0.012
511	SLU 51	-0.5	-1.11	65.53	-1.8307	-0.1244	-0.0118
511	SLU 52	-0.48	-1.14	70.25	-1.961	-0.1454	-0.0107
511	SLU 53	-0.48	-1.08	71.45	-1.9944	-0.1477	-0.0112
511	SLU 54	-0.48	-1.12	71.46	-1.9947	-0.1481	-0.011
511	SLU 55	-0.48	-1.15	71.01	-1.9821	-0.1465	-0.0109
511	SLU 56	-0.49	-1.09	72.2	-2.0155	-0.1489	-0.0115
511	SLU 57	-0.49	-1.13	72.21	-2.0158	-0.1493	-0.0113
511	SLU 58	-0.49	-1.09	71.74	-2.0027	-0.147	-0.0115
511	SLU 59	-0.49	-1.13	71.75	-2.003	-0.1474	-0.0113
511	SLU 60	-0.47	-1.08	72.9	-2.0343	-0.1546	-0.0108
511	SLU 61	-0.47	-1.12	72.91	-2.0346	-0.155	-0.0106
511	SLU 62	-0.48	-1.09	73.66	-2.0554	-0.1557	-0.0111
511	SLU 63	-0.48	-1.13	73.67	-2.0557	-0.1561	-0.0109
511	SLU 64	-0.51	-1.03	70.02	-1.9544	-0.1323	-0.012
511	SLU 65	-0.51	-1.09	70.04	-1.9549	-0.133	-0.0116
511	SLU 66	-0.52	-1.04	71.24	-1.9883	-0.1353	-0.0122
511	SLU 67	-0.52	-1.08	71.25	-1.9886	-0.1357	-0.012
511	SLU 68	-0.52	-1.1	70.8	-1.976	-0.1341	-0.0119
511	SLU 69	-0.53	-1.05	71.99	-2.0094	-0.1365	-0.0124
511	SLU 70	-0.53	-1.09	72	-2.0097	-0.1369	-0.0122
511	SLU 71	-0.53	-1.05	71.53	-1.9966	-0.1346	-0.0125
511	SLU 72	-0.53	-1.09	71.54	-1.9969	-0.135	-0.0123
511	SLU 73	-0.5	-1.12	76.27	-2.1272	-0.156	-0.0112
511	SLU 74	-0.51	-1.06	77.47	-2.1606	-0.1584	-0.0117
511	SLU 75	-0.51	-1.1	77.48	-2.161	-0.1588	-0.0115
511	SLU 76	-0.51	-1.13	77.02	-2.1484	-0.1572	-0.0114
511	SLU 77	-0.52	-1.07	78.22	-2.1817	-0.1595	-0.012
511	SLU 78	-0.52	-1.11	78.23	-2.1821	-0.1599	-0.0118
511	SLU 79	-0.52	-1.07	77.76	-2.1689	-0.1576	-0.012
511	SLU 80	-0.51	-1.11	77.77	-2.1692	-0.158	-0.0118
511	SLU 81	-0.49	-1.06	78.92	-2.2006	-0.1652	-0.0113
511	SLU 82	-0.49	-1.1	78.93	-2.2009	-0.1656	-0.0111
511	SLU 83	-0.5	-1.07	79.67	-2.2217	-0.1664	-0.0115
511	SLU 84	-0.5	-1.11	79.68	-2.222	-0.1668	-0.0113
511	SLE RA 1	-0.39	-0.8	52.54	-1.4668	-0.0995	-0.0091
511	SLE RA 2	-0.39	-0.84	52.56	-1.4672	-0.0999	-0.0089
511	SLE RA 3	-0.39	-0.8	53.35	-1.4895	-0.1015	-0.0092
511	SLE RA 4	-0.39	-0.83	53.36	-1.4897	-0.1017	-0.0091
511	SLE RA 5	-0.39	-0.85	53.06	-1.4813	-0.1007	-0.009
511	SLE RA 6	-0.4	-0.81	53.85	-1.5035	-0.1022	-0.0094
511	SLE RA 7	-0.4	-0.84	53.86	-1.5037	-0.1025	-0.0093
511	SLE RA 8	-0.4	-0.81	53.55	-1.495	-0.101	-0.0094
511	SLE RA 9	-0.4	-0.84	53.56	-1.4952	-0.1013	-0.0093
511	SLE RA 10	-0.38	-0.85	56.71	-1.5821	-0.1152	-0.0086
511	SLE RA 11	-0.39	-0.82	57.5	-1.6043	-0.1168	-0.0089
511	SLE RA 12	-0.39	-0.84	57.51	-1.6045	-0.1171	-0.0088
511	SLE RA 13	-0.39	-0.86	57.21	-1.5961	-0.116	-0.0087
511	SLE RA 14	-0.39	-0.83	58.01	-1.6184	-0.1176	-0.0091
511	SLE RA 15	-0.39	-0.85	58.01	-1.6186	-0.1178	-0.009
511	SLE RA 16	-0.39	-0.83	57.7	-1.6099	-0.1163	-0.0091
511	SLE RA 17	-0.39	-0.85	57.71	-1.6101	-0.1166	-0.009
511	SLE RA 18	-0.38	-0.82	58.47	-1.631	-0.1214	-0.0086
511	SLE RA 19	-0.38	-0.84	58.48	-1.6312	-0.1216	-0.0085
511	SLE RA 20	-0.38	-0.83	58.97	-1.645	-0.1221	-0.0088
511	SLE RA 21	-0.38	-0.85	58.98	-1.6452	-0.1224	-0.0087
511	SLE FR 1	-0.39	-0.8	52.54	-1.4668	-0.0995	-0.0091
511	SLE FR 2	-0.39	-0.81	52.54	-1.4669	-0.0995	-0.009
511	SLE FR 3	-0.39	-0.8	52.74	-1.4725	-0.0998	-0.0092
511	SLE FR 4	-0.39	-0.81	54.32	-1.5161	-0.1061	-0.0089
511	SLE FR 5	-0.39	-0.81	54.52	-1.5217	-0.1063	-0.009
511	SLE FR 6	-0.38	-0.81	55.51	-1.5489	-0.1104	-0.0089
511	SLE QP 1	-0.39	-0.8	52.54	-1.4668	-0.0995	-0.0091
511	SLE QP 2	-0.39	-0.8	54.32	-1.5161	-0.106	-0.009
511	SLD 1	4.09	-0.42	58.51	-1.6348	0.0513	0.1226
511	SLD 2	4.12	-0.71	58.56	-1.6356	0.0488	0.129
511	SLD 3	3.88	-1.88	58.96	-1.6475	0.0187	0.1153
511	SLD 4	3.91	-2.17	59.01	-1.6484	0.0162	0.1217
511	SLD 5	1.27	1.58	54.9	-1.5321	-0.0089	0.0403
511	SLD 6	1.29	1.39	54.93	-1.5327	-0.0106	0.0445

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
511	SLD 7	0.57	-3.29	56.38	-1.5747	-0.1176	0.0162
511	SLD 8	0.59	-3.48	56.41	-1.5753	-0.1193	0.0204
511	SLD 9	-1.36	1.87	52.23	-1.4568	-0.0928	-0.0383
511	SLD 10	-1.34	1.68	52.26	-1.4574	-0.0944	-0.0341
511	SLD 11	-2.06	-3	53.71	-1.4994	-0.2015	-0.0625
511	SLD 12	-2.04	-3.19	53.75	-1.5	-0.2031	-0.0583
511	SLD 13	-4.68	0.56	49.63	-1.3837	-0.2283	-0.1397
511	SLD 14	-4.65	0.27	49.68	-1.3846	-0.2308	-0.1332
511	SLD 15	-4.89	-0.9	50.08	-1.3965	-0.2609	-0.1469
511	SLD 16	-4.86	-1.19	50.13	-1.3974	-0.2634	-0.1405
511	SLV 1	10.08	0.05	64.14	-1.794	0.2614	0.2987
511	SLV 2	10.15	-0.63	64.26	-1.7961	0.2556	0.3137
511	SLV 3	9.59	-3.25	65.17	-1.8234	0.1871	0.2818
511	SLV 4	9.66	-3.93	65.28	-1.8255	0.1813	0.2968
511	SLV 5	3.49	4.57	55.69	-1.5545	0.1178	0.1064
511	SLV 6	3.53	4.14	55.77	-1.5558	0.114	0.116
511	SLV 7	1.85	-6.43	59.11	-1.6525	-0.1297	0.0501
511	SLV 8	1.89	-6.87	59.18	-1.6538	-0.1334	0.0597
511	SLV 9	-2.66	5.26	49.46	-1.3783	-0.0787	-0.0776
511	SLV 10	-2.62	4.82	49.53	-1.3796	-0.0824	-0.068
511	SLV 11	-4.3	-5.75	52.87	-1.4763	-0.3261	-0.134
511	SLV 12	-4.26	-6.18	52.95	-1.4776	-0.3298	-0.1243
511	SLV 13	-10.43	2.32	43.36	-1.2067	-0.3934	-0.3147
511	SLV 14	-10.36	1.65	43.48	-1.2087	-0.3992	-0.2998
511	SLV 15	-10.92	-0.98	44.39	-1.2361	-0.4676	-0.3316
511	SLV 16	-10.85	-1.66	44.5	-1.2381	-0.4734	-0.3167
511	CRTFP Ux+	0	0	0	0	0	0
511	CRTFP Ux-	0	0	0	0	0	0
514	SLU 1	0.68	-0.34	50.88	-1.4215	0.1588	0.0147
514	SLU 2	0.68	-0.37	50.9	-1.422	0.1594	0.015
514	SLU 3	0.7	-0.34	52.08	-1.4551	0.1632	0.0151
514	SLU 4	0.7	-0.36	52.09	-1.4554	0.1635	0.0153
514	SLU 5	0.69	-0.38	51.64	-1.4426	0.1609	0.0152
514	SLU 6	0.71	-0.35	52.81	-1.4757	0.1647	0.0153
514	SLU 7	0.71	-0.37	52.83	-1.476	0.165	0.0155
514	SLU 8	0.7	-0.36	52.34	-1.4626	0.1618	0.0152
514	SLU 9	0.7	-0.38	52.36	-1.463	0.1622	0.0154
514	SLU 10	0.72	-0.33	57.18	-1.5962	0.1853	0.0162
514	SLU 11	0.74	-0.3	58.36	-1.6292	0.1891	0.0162
514	SLU 12	0.74	-0.32	58.37	-1.6296	0.1894	0.0164
514	SLU 13	0.73	-0.34	57.91	-1.6168	0.1868	0.0164
514	SLU 14	0.75	-0.31	59.09	-1.6498	0.1906	0.0165
514	SLU 15	0.75	-0.33	59.1	-1.6502	0.1909	0.0167
514	SLU 16	0.74	-0.32	58.62	-1.6368	0.1877	0.0164
514	SLU 17	0.75	-0.34	58.63	-1.6371	0.1881	0.0166
514	SLU 18	0.74	-0.28	59.84	-1.6703	0.1958	0.0163
514	SLU 19	0.74	-0.3	59.86	-1.6706	0.1961	0.0165
514	SLU 20	0.75	-0.29	60.58	-1.6908	0.1973	0.0166
514	SLU 21	0.75	-0.31	60.59	-1.6912	0.1977	0.0168
514	SLU 22	0.74	-0.27	56.88	-1.588	0.1654	0.0163
514	SLU 23	0.74	-0.3	56.9	-1.5886	0.166	0.0166
514	SLU 24	0.76	-0.27	58.08	-1.6216	0.1698	0.0167
514	SLU 25	0.76	-0.29	58.09	-1.622	0.1702	0.0169
514	SLU 26	0.76	-0.31	57.63	-1.6091	0.1675	0.0169
514	SLU 27	0.77	-0.28	58.81	-1.6422	0.1713	0.017
514	SLU 28	0.77	-0.3	58.82	-1.6425	0.1717	0.0172
514	SLU 29	0.77	-0.29	58.34	-1.6292	0.1684	0.0168
514	SLU 30	0.77	-0.31	58.35	-1.6295	0.1688	0.017
514	SLU 31	0.79	-0.26	63.18	-1.7627	0.1919	0.0178
514	SLU 32	0.8	-0.23	64.35	-1.7958	0.1957	0.0179
514	SLU 33	0.8	-0.25	64.37	-1.7961	0.1961	0.0181
514	SLU 34	0.8	-0.27	63.91	-1.7833	0.1934	0.0181
514	SLU 35	0.82	-0.24	65.08	-1.8164	0.1972	0.0182
514	SLU 36	0.82	-0.26	65.1	-1.8167	0.1976	0.0183
514	SLU 37	0.81	-0.25	64.62	-1.8033	0.1943	0.018
514	SLU 38	0.81	-0.27	64.63	-1.8036	0.1947	0.0182
514	SLU 39	0.8	-0.21	65.84	-1.8368	0.2024	0.018
514	SLU 40	0.81	-0.23	65.86	-1.8371	0.2028	0.0182
514	SLU 41	0.82	-0.22	66.57	-1.8574	0.2039	0.0183
514	SLU 42	0.82	-0.24	66.59	-1.8577	0.2043	0.0184
514	SLU 43	0.86	-0.46	64.09	-1.7908	0.2042	0.0185
514	SLU 44	0.86	-0.49	64.11	-1.7914	0.2048	0.0188
514	SLU 45	0.88	-0.47	65.29	-1.8244	0.2085	0.0189
514	SLU 46	0.88	-0.48	65.3	-1.8248	0.2089	0.0191
514	SLU 47	0.87	-0.5	64.84	-1.812	0.2063	0.0191
514	SLU 48	0.89	-0.48	66.02	-1.845	0.21	0.0192
514	SLU 49	0.89	-0.49	66.03	-1.8454	0.2104	0.0194
514	SLU 50	0.88	-0.48	65.55	-1.832	0.2072	0.019
514	SLU 51	0.88	-0.5	65.57	-1.8323	0.2075	0.0192
514	SLU 52	0.9	-0.45	70.39	-1.9655	0.2307	0.02
514	SLU 53	0.92	-0.42	71.56	-1.9986	0.2344	0.0201
514	SLU 54	0.92	-0.44	71.58	-1.9989	0.2348	0.0203
514	SLU 55	0.92	-0.46	71.12	-1.9861	0.2322	0.0203
514	SLU 56	0.93	-0.44	72.3	-2.0192	0.2359	0.0204
514	SLU 57	0.93	-0.45	72.31	-2.0195	0.2363	0.0205
514	SLU 58	0.93	-0.44	71.83	-2.0061	0.2331	0.0202
514	SLU 59	0.93	-0.46	71.84	-2.0065	0.2334	0.0204
514	SLU 60	0.92	-0.41	73.05	-2.0396	0.2411	0.0202
514	SLU 61	0.92	-0.42	73.07	-2.04	0.2415	0.0204
514	SLU 62	0.93	-0.42	73.79	-2.0602	0.2427	0.0204
514	SLU 63	0.93	-0.43	73.8	-2.0605	0.243	0.0206
514	SLU 64	0.92	-0.39	70.08	-1.9573	0.2108	0.0201
514	SLU 65	0.93	-0.42	70.11	-1.9579	0.2114	0.0205
514	SLU 66	0.94	-0.39	71.28	-1.991	0.2152	0.0206
514	SLU 67	0.94	-0.41	71.3	-1.9913	0.2155	0.0207
514	SLU 68	0.94	-0.43	70.84	-1.9785	0.2129	0.0207
514	SLU 69	0.95	-0.4	72.02	-2.0115	0.2167	0.0208

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
514	SLU 70	0.95	-0.42	72.03	-2.0119	0.217	0.021
514	SLU 71	0.95	-0.41	71.55	-1.9985	0.2138	0.0207
514	SLU 72	0.95	-0.43	71.56	-1.9988	0.2142	0.0209
514	SLU 73	0.97	-0.38	76.38	-2.1321	0.2373	0.0216
514	SLU 74	0.99	-0.35	77.56	-2.1651	0.2411	0.0217
514	SLU 75	0.99	-0.37	77.57	-2.1655	0.2414	0.0219
514	SLU 76	0.98	-0.39	77.12	-2.1526	0.2388	0.0219
514	SLU 77	1	-0.36	78.29	-2.1857	0.2426	0.022
514	SLU 78	1	-0.38	78.31	-2.186	0.2429	0.0222
514	SLU 79	0.99	-0.37	77.82	-2.1727	0.2397	0.0219
514	SLU 80	0.99	-0.39	77.84	-2.173	0.24	0.022
514	SLU 81	0.99	-0.33	79.05	-2.2061	0.2478	0.0218
514	SLU 82	0.99	-0.35	79.06	-2.2065	0.2481	0.022
514	SLU 83	1	-0.34	79.78	-2.2267	0.2493	0.0221
514	SLU 84	1	-0.36	79.8	-2.2271	0.2496	0.0223
514	SLE RA 1	0.7	-0.32	52.59	-1.469	0.1607	0.0151
514	SLE RA 2	0.7	-0.34	52.61	-1.4694	0.1611	0.0153
514	SLE RA 3	0.71	-0.32	53.39	-1.4915	0.1636	0.0154
514	SLE RA 4	0.71	-0.33	53.4	-1.4917	0.1638	0.0155
514	SLE RA 5	0.71	-0.34	53.1	-1.4832	0.1621	0.0155
514	SLE RA 6	0.72	-0.33	53.88	-1.5052	0.1646	0.0156
514	SLE RA 7	0.72	-0.34	53.89	-1.5054	0.1648	0.0157
514	SLE RA 8	0.71	-0.33	53.57	-1.4965	0.1627	0.0155
514	SLE RA 9	0.71	-0.34	53.58	-1.4967	0.1629	0.0156
514	SLE RA 10	0.73	-0.31	56.79	-1.5855	0.1784	0.0161
514	SLE RA 11	0.74	-0.29	57.58	-1.6076	0.1809	0.0162
514	SLE RA 12	0.74	-0.3	57.59	-1.6078	0.1811	0.0163
514	SLE RA 13	0.73	-0.32	57.28	-1.5993	0.1794	0.0163
514	SLE RA 14	0.75	-0.3	58.06	-1.6213	0.1819	0.0164
514	SLE RA 15	0.75	-0.31	58.07	-1.6215	0.1821	0.0165
514	SLE RA 16	0.74	-0.3	57.75	-1.6126	0.18	0.0163
514	SLE RA 17	0.74	-0.32	57.76	-1.6128	0.1802	0.0164
514	SLE RA 18	0.74	-0.28	58.57	-1.6349	0.1853	0.0163
514	SLE RA 19	0.74	-0.29	58.58	-1.6351	0.1856	0.0164
514	SLE RA 20	0.75	-0.29	59.06	-1.6486	0.1863	0.0164
514	SLE RA 21	0.75	-0.3	59.07	-1.6489	0.1866	0.0166
514	SLE FR 1	0.7	-0.32	52.59	-1.469	0.1607	0.0151
514	SLE FR 2	0.7	-0.32	52.6	-1.4691	0.1608	0.0152
514	SLE FR 3	0.7	-0.32	52.79	-1.4745	0.1611	0.0152
514	SLE FR 4	0.71	-0.31	54.39	-1.5189	0.1682	0.0155
514	SLE FR 5	0.71	-0.31	54.58	-1.5243	0.1685	0.0155
514	SLE FR 6	0.72	-0.3	55.58	-1.552	0.173	0.0157
514	SLE QP 1	0.7	-0.32	52.59	-1.469	0.1607	0.0151
514	SLE QP 2	0.71	-0.31	54.39	-1.5188	0.1681	0.0155
514	SLD 1	4.93	0.68	50.2	-1.405	0.2189	0.1379
514	SLD 2	4.97	1	50.13	-1.4046	0.2133	0.1453
514	SLD 3	4.74	-0.69	50.77	-1.4174	0.2417	0.1308
514	SLD 4	4.78	-0.37	50.7	-1.4169	0.2361	0.1382
514	SLD 5	2.26	2.01	52.28	-1.466	0.1498	0.0616
514	SLD 6	2.29	2.22	52.23	-1.4657	0.1461	0.0664
514	SLD 7	1.62	-2.55	54.18	-1.5072	0.2257	0.0381
514	SLD 8	1.64	-2.35	54.13	-1.5069	0.222	0.0429
514	SLD 9	-0.22	1.74	54.64	-1.5307	0.1141	-0.0119
514	SLD 10	-0.2	1.94	54.6	-1.5304	0.1105	-0.0071
514	SLD 11	-0.87	-2.83	56.54	-1.5719	0.1901	-0.0355
514	SLD 12	-0.84	-2.62	56.5	-1.5716	0.1864	-0.0307
514	SLD 13	-3.36	-0.24	58.07	-1.6207	0.1001	-0.1073
514	SLD 14	-3.32	0.08	58	-1.6202	0.0945	-0.0999
514	SLD 15	-3.55	-1.61	58.64	-1.633	0.1229	-0.1143
514	SLD 16	-3.51	-1.29	58.57	-1.6326	0.1173	-0.107
514	SLV 1	10.58	1.96	44.6	-1.2528	0.2871	0.302
514	SLV 2	10.68	2.69	44.45	-1.2518	0.274	0.3192
514	SLV 3	10.13	-1.16	45.9	-1.281	0.339	0.2855
514	SLV 4	10.22	-0.42	45.74	-1.28	0.3259	0.3027
514	SLV 5	4.34	4.97	49.51	-1.3964	0.1273	0.1235
514	SLV 6	4.4	5.44	49.41	-1.3958	0.1189	0.1345
514	SLV 7	2.83	-5.41	53.83	-1.4904	0.3003	0.0685
514	SLV 8	2.89	-4.94	53.74	-1.4897	0.2919	0.0796
514	SLV 9	-1.47	4.33	55.04	-1.5479	0.0442	-0.0486
514	SLV 10	-1.41	4.8	54.94	-1.5472	0.0359	-0.0376
514	SLV 11	-2.98	-6.05	59.36	-1.6418	0.2172	-0.1036
514	SLV 12	-2.92	-5.58	59.26	-1.6412	0.2089	-0.0925
514	SLV 13	-8.81	-0.19	63.03	-1.7577	0.0102	-0.2717
514	SLV 14	-8.71	0.55	62.87	-1.7566	-0.0028	-0.2545
514	SLV 15	-9.26	-3.3	64.32	-1.7858	0.0621	-0.2882
514	SLV 16	-9.17	-2.57	64.17	-1.7848	0.0491	-0.271
514	CRTFP Ux+	0	0	0	0	0	0
514	CRTFP Ux-	0	0	0	0	0	0
514	CRTFP Uy+	0	0	0	0	0	0
514	CRTFP Uy-	0	0	0	0	0	0
515	SLU 1	0.69	0.23	36.19	-0.9938	11.1999	-0.0634
515	SLU 2	0.69	0.21	36.2	-0.994	11.2026	-0.0556
515	SLU 3	0.71	0.24	37.06	-1.0177	11.4647	-0.064
515	SLU 4	0.71	0.22	37.07	-1.0178	11.4663	-0.0593
515	SLU 5	0.7	0.21	36.74	-1.0089	11.3672	-0.0539
515	SLU 6	0.72	0.23	37.6	-1.0326	11.6293	-0.0624
515	SLU 7	0.72	0.22	37.61	-1.0327	11.631	-0.0577
515	SLU 8	0.71	0.23	37.28	-1.0236	11.5291	-0.0602
515	SLU 9	0.71	0.21	37.28	-1.0237	11.5308	-0.0555
515	SLU 10	0.73	0.3	40.39	-1.1087	12.5053	-0.0853
515	SLU 11	0.75	0.32	41.25	-1.1324	12.7674	-0.0937
515	SLU 12	0.75	0.31	41.25	-1.1325	12.7691	-0.089
515	SLU 13	0.74	0.3	40.93	-1.1236	12.67	-0.0837
515	SLU 14	0.76	0.32	41.79	-1.1473	12.9321	-0.0921
515	SLU 15	0.76	0.31	41.79	-1.1474	12.9337	-0.0874
515	SLU 16	0.75	0.31	41.46	-1.1383	12.8319	-0.0899
515	SLU 17	0.75	0.3	41.47	-1.1384	12.8335	-0.0852

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
515	SLU 18	0.75	0.36	42.17	-1.1577	13.0609	-0.1059
515	SLU 19	0.75	0.35	42.18	-1.1578	13.0626	-0.1012
515	SLU 20	0.76	0.36	42.72	-1.1726	13.2256	-0.1043
515	SLU 21	0.76	0.34	42.72	-1.1727	13.2272	-0.0996
515	SLU 22	0.75	0.32	40.38	-1.1085	12.4971	-0.0916
515	SLU 23	0.75	0.3	40.39	-1.1087	12.4998	-0.0838
515	SLU 24	0.77	0.32	41.25	-1.1324	12.7619	-0.0922
515	SLU 25	0.77	0.31	41.26	-1.1325	12.7635	-0.0875
515	SLU 26	0.76	0.29	40.93	-1.1236	12.6644	-0.0822
515	SLU 27	0.78	0.32	41.79	-1.1473	12.9265	-0.0906
515	SLU 28	0.78	0.31	41.8	-1.1474	12.9281	-0.0859
515	SLU 29	0.77	0.31	41.47	-1.1383	12.8263	-0.0884
515	SLU 30	0.77	0.3	41.47	-1.1384	12.8279	-0.0837
515	SLU 31	0.79	0.38	44.58	-1.2234	13.8025	-0.1136
515	SLU 32	0.81	0.41	45.44	-1.2471	14.0646	-0.122
515	SLU 33	0.81	0.4	45.44	-1.2472	14.0662	-0.1173
515	SLU 34	0.8	0.38	45.12	-1.2383	13.9671	-0.1119
515	SLU 35	0.82	0.41	45.98	-1.262	14.2292	-0.1204
515	SLU 36	0.82	0.39	45.98	-1.2621	14.2309	-0.1157
515	SLU 37	0.81	0.4	45.65	-1.253	14.129	-0.1182
515	SLU 38	0.81	0.39	45.66	-1.2531	14.1307	-0.1135
515	SLU 39	0.81	0.45	46.36	-1.2724	14.3581	-0.1341
515	SLU 40	0.81	0.43	46.37	-1.2725	14.3597	-0.1294
515	SLU 41	0.82	0.44	46.91	-1.2873	14.5227	-0.1325
515	SLU 42	0.82	0.43	46.91	-1.2874	14.5244	-0.1278
515	SLU 43	0.87	0.27	45.62	-1.2526	14.1151	-0.0727
515	SLU 44	0.87	0.25	45.62	-1.2528	14.1178	-0.0649
515	SLU 45	0.89	0.28	46.48	-1.2765	14.3799	-0.0733
515	SLU 46	0.89	0.26	46.49	-1.2766	14.3815	-0.0686
515	SLU 47	0.89	0.25	46.16	-1.2677	14.2824	-0.0633
515	SLU 48	0.9	0.27	47.03	-1.2914	14.5445	-0.0717
515	SLU 49	0.9	0.26	47.03	-1.2915	14.5462	-0.067
515	SLU 50	0.9	0.27	46.7	-1.2824	14.4444	-0.0695
515	SLU 51	0.9	0.25	46.7	-1.2825	14.446	-0.0648
515	SLU 52	0.92	0.34	49.81	-1.3675	15.4205	-0.0946
515	SLU 53	0.93	0.37	50.67	-1.3912	15.6827	-0.103
515	SLU 54	0.93	0.35	50.67	-1.3913	15.6843	-0.0984
515	SLU 55	0.93	0.34	50.35	-1.3824	15.5852	-0.093
515	SLU 56	0.95	0.36	51.21	-1.4061	15.8473	-0.1014
515	SLU 57	0.95	0.35	51.22	-1.4062	15.8489	-0.0967
515	SLU 58	0.94	0.36	50.89	-1.3971	15.7471	-0.0992
515	SLU 59	0.94	0.34	50.89	-1.3972	15.7487	-0.0945
515	SLU 60	0.93	0.4	51.6	-1.4165	15.9762	-0.1152
515	SLU 61	0.93	0.39	51.6	-1.4166	15.9778	-0.1105
515	SLU 62	0.94	0.4	52.14	-1.4314	16.1408	-0.1136
515	SLU 63	0.94	0.38	52.14	-1.4315	16.1424	-0.1089
515	SLU 64	0.94	0.36	49.81	-1.3673	15.4123	-0.101
515	SLU 65	0.94	0.34	49.81	-1.3675	15.415	-0.0931
515	SLU 66	0.95	0.36	50.67	-1.3912	15.6771	-0.1015
515	SLU 67	0.95	0.35	50.68	-1.3913	15.6787	-0.0968
515	SLU 68	0.95	0.33	50.35	-1.3824	15.5796	-0.0915
515	SLU 69	0.97	0.36	51.22	-1.4061	15.8417	-0.0999
515	SLU 70	0.97	0.35	51.22	-1.4062	15.8433	-0.0952
515	SLU 71	0.96	0.35	50.89	-1.3971	15.7415	-0.0977
515	SLU 72	0.96	0.34	50.89	-1.3972	15.7432	-0.093
515	SLU 73	0.98	0.43	54	-1.4822	16.7177	-0.1229
515	SLU 74	0.99	0.45	54.86	-1.5059	16.9798	-0.1313
515	SLU 75	0.99	0.44	54.86	-1.506	16.9814	-0.1266
515	SLU 76	0.99	0.42	54.54	-1.4971	16.8823	-0.1213
515	SLU 77	1.01	0.45	55.4	-1.5208	17.1445	-0.1297
515	SLU 78	1.01	0.43	55.41	-1.5209	17.1461	-0.125
515	SLU 79	1	0.44	55.08	-1.5118	17.0443	-0.1275
515	SLU 80	1	0.43	55.08	-1.5119	17.0459	-0.1228
515	SLU 81	0.99	0.49	55.79	-1.5312	17.2733	-0.1435
515	SLU 82	0.99	0.47	55.79	-1.5313	17.2749	-0.1388
515	SLU 83	1.01	0.48	56.33	-1.5461	17.438	-0.1419
515	SLU 84	1.01	0.47	56.33	-1.5462	17.4396	-0.1372
515	SLE RA 1	0.71	0.26	37.39	-1.0266	11.5705	-0.0715
515	SLE RA 2	0.71	0.24	37.4	-1.0267	11.5723	-0.0662
515	SLE RA 3	0.72	0.26	37.97	-1.0425	11.747	-0.0718
515	SLE RA 4	0.72	0.25	37.97	-1.0426	11.7481	-0.0687
515	SLE RA 5	0.71	0.24	37.76	-1.0366	11.6821	-0.0652
515	SLE RA 6	0.73	0.26	38.33	-1.0524	11.8568	-0.0708
515	SLE RA 7	0.73	0.25	38.33	-1.0525	11.8579	-0.0676
515	SLE RA 8	0.72	0.25	38.11	-1.0464	11.79	-0.0693
515	SLE RA 9	0.72	0.24	38.12	-1.0465	11.7911	-0.0662
515	SLE RA 10	0.73	0.3	40.19	-1.1032	12.4408	-0.0861
515	SLE RA 11	0.75	0.32	40.76	-1.119	12.6155	-0.0917
515	SLE RA 12	0.75	0.31	40.76	-1.119	12.6166	-0.0885
515	SLE RA 13	0.74	0.3	40.55	-1.1131	12.5506	-0.085
515	SLE RA 14	0.75	0.32	41.12	-1.1289	12.7253	-0.0906
515	SLE RA 15	0.75	0.31	41.12	-1.129	12.7264	-0.0875
515	SLE RA 16	0.75	0.31	40.9	-1.1229	12.6585	-0.0891
515	SLE RA 17	0.75	0.3	40.91	-1.123	12.6596	-0.086
515	SLE RA 18	0.75	0.34	41.38	-1.1358	12.8112	-0.0998
515	SLE RA 19	0.75	0.33	41.38	-1.1359	12.8123	-0.0967
515	SLE RA 20	0.75	0.34	41.74	-1.1457	12.921	-0.0987
515	SLE RA 21	0.75	0.33	41.74	-1.1458	12.922	-0.0956
515	SLE FR 1	0.71	0.26	37.39	-1.0266	11.5705	-0.0715
515	SLE FR 2	0.71	0.26	37.39	-1.0266	11.5709	-0.0704
515	SLE FR 3	0.71	0.26	37.54	-1.0306	11.6144	-0.071
515	SLE FR 4	0.72	0.28	38.59	-1.0594	11.9431	-0.0789
515	SLE FR 5	0.72	0.28	38.73	-1.0633	11.9866	-0.0795
515	SLE FR 6	0.73	0.3	39.38	-1.0812	12.1909	-0.0856
515	SLE QP 1	0.71	0.26	37.39	-1.0266	11.5705	-0.0715
515	SLE QP 2	0.72	0.28	38.59	-1.0594	11.9427	-0.08
515	SLD 1	3.15	0.93	28.54	-0.783	8.9115	-0.1056

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
515	SLD 2	3.18	1.44	28.57	-0.7844	8.9067	-0.2831
515	SLD 3	3.03	-0.3	28.02	-0.7689	9.0602	0.3215
515	SLD 4	3.07	0.22	28.05	-0.7702	9.0554	0.144
515	SLD 5	1.62	2.25	36.35	-0.9977	10.8087	-0.704
515	SLD 6	1.65	2.58	36.37	-0.9986	10.8055	-0.82
515	SLD 7	1.22	-1.84	34.63	-0.9505	11.3043	0.7196
515	SLD 8	1.25	-1.51	34.65	-0.9514	11.3012	0.6035
515	SLD 9	0.19	2.07	42.52	-1.1673	12.5842	-0.7635
515	SLD 10	0.21	2.41	42.54	-1.1682	12.5811	-0.8795
515	SLD 11	-0.21	-2.01	40.81	-1.1201	13.0799	0.6601
515	SLD 12	-0.19	-1.68	40.82	-1.121	13.0767	0.5441
515	SLD 13	-1.63	0.35	49.12	-1.3485	14.83	-0.3039
515	SLD 14	-1.59	0.86	49.15	-1.3498	14.8252	-0.4814
515	SLD 15	-1.75	-0.88	48.61	-1.3343	14.9787	0.1232
515	SLD 16	-1.71	-0.36	48.63	-1.3357	14.9739	-0.0543
515	SLV 1	6.41	1.77	15.06	-0.4125	4.8475	-0.1282
515	SLV 2	6.49	2.96	15.13	-0.4156	4.8364	-0.5417
515	SLV 3	6.13	-1.03	13.86	-0.3793	5.1942	0.8464
515	SLV 4	6.21	0.16	13.92	-0.3825	5.183	0.4329
515	SLV 5	2.83	4.77	33.35	-0.915	9.2903	-1.5017
515	SLV 6	2.88	5.53	33.39	-0.917	9.2831	-1.7675
515	SLV 7	1.91	-4.56	29.33	-0.8046	10.4458	1.7469
515	SLV 8	1.96	-3.79	29.37	-0.8066	10.4386	1.4812
515	SLV 9	-0.52	4.36	47.8	-1.3121	13.4468	-1.6411
515	SLV 10	-0.47	5.12	47.84	-1.3141	13.4396	-1.9069
515	SLV 11	-1.45	-4.97	43.79	-1.2017	14.6023	1.6076
515	SLV 12	-1.39	-4.2	43.83	-1.2037	14.5951	1.3418
515	SLV 13	-4.78	0.41	63.25	-1.7362	18.7024	-0.5928
515	SLV 14	-4.69	1.6	63.31	-1.7394	18.6913	-1.0063
515	SLV 15	-5.05	-2.39	62.05	-1.7031	19.0491	0.3818
515	SLV 16	-4.97	-1.2	62.11	-1.7062	19.0379	-0.0317
515	CRTFP Ux+	0	0	0	0	0	0
515	CRTFP Ux-	0	0	0	0	0	0
515	CRTFP Uy+	0	0	0	0	0	0
515	CRTFP Uy-	0	0	0	0	0	0
519	SLU 1	0.18	-0.01	26.68	-0.7572	8.9019	0.0089
519	SLU 2	0.19	-0.04	26.69	-0.7574	8.9058	0.0175
519	SLU 3	0.19	0	27.32	-0.7752	9.1126	0.0059
519	SLU 4	0.19	-0.02	27.33	-0.7754	9.1149	0.0111
519	SLU 5	0.19	-0.04	27.08	-0.7684	9.0341	0.0171
519	SLU 6	0.19	0	27.7	-0.7862	9.241	0.0055
519	SLU 7	0.19	-0.02	27.71	-0.7864	9.2433	0.0107
519	SLU 8	0.19	-0.01	27.45	-0.7791	9.1586	0.0081
519	SLU 9	0.19	-0.02	27.46	-0.7793	9.1609	0.0133
519	SLU 10	0.21	0	30.18	-0.8566	10.0727	0.0046
519	SLU 11	0.22	0.04	30.81	-0.8744	10.2796	-0.007
519	SLU 12	0.22	0.02	30.82	-0.8746	10.2819	-0.0019
519	SLU 13	0.21	0	30.57	-0.8676	10.201	0.0042
519	SLU 14	0.22	0.04	31.2	-0.8854	10.4079	-0.0074
519	SLU 15	0.22	0.02	31.2	-0.8855	10.4102	-0.0022
519	SLU 16	0.22	0.03	30.95	-0.8783	10.3255	-0.0048
519	SLU 17	0.22	0.01	30.95	-0.8785	10.3278	0.0004
519	SLU 18	0.22	0.04	31.67	-0.8988	10.569	-0.0096
519	SLU 19	0.22	0.03	31.68	-0.899	10.5713	-0.0044
519	SLU 20	0.22	0.05	32.06	-0.9098	10.6973	-0.01
519	SLU 21	0.23	0.03	32.06	-0.91	10.6996	-0.0048
519	SLU 22	0.21	0.06	29.7	-0.8426	9.9028	-0.0155
519	SLU 23	0.21	0.03	29.72	-0.8429	9.9066	-0.0069
519	SLU 24	0.21	0.07	30.34	-0.8607	10.1135	-0.0185
519	SLU 25	0.21	0.05	30.35	-0.8609	10.1158	-0.0133
519	SLU 26	0.21	0.04	30.1	-0.8539	10.0349	-0.0073
519	SLU 27	0.21	0.07	30.73	-0.8717	10.2418	-0.0189
519	SLU 28	0.22	0.05	30.73	-0.8719	10.2441	-0.0137
519	SLU 29	0.21	0.06	30.48	-0.8646	10.1595	-0.0163
519	SLU 30	0.21	0.05	30.48	-0.8648	10.1617	-0.0111
519	SLU 31	0.23	0.07	33.21	-0.9421	11.0736	-0.0198
519	SLU 32	0.24	0.11	33.83	-0.9599	11.2805	-0.0314
519	SLU 33	0.24	0.09	33.84	-0.96	11.2828	-0.0262
519	SLU 34	0.24	0.08	33.59	-0.9531	11.2019	-0.0202
519	SLU 35	0.24	0.11	34.22	-0.9709	11.4088	-0.0318
519	SLU 36	0.24	0.09	34.23	-0.971	11.4111	-0.0266
519	SLU 37	0.24	0.1	33.97	-0.9638	11.3264	-0.0292
519	SLU 38	0.24	0.09	33.98	-0.9639	11.3287	-0.024
519	SLU 39	0.24	0.11	34.69	-0.9843	11.5699	-0.034
519	SLU 40	0.24	0.1	34.7	-0.9845	11.5722	-0.0288
519	SLU 41	0.25	0.12	35.08	-0.9953	11.6982	-0.0344
519	SLU 42	0.25	0.1	35.09	-0.9954	11.7005	-0.0292
519	SLU 43	0.23	-0.04	33.65	-0.955	11.2294	0.02
519	SLU 44	0.23	-0.06	33.66	-0.9553	11.2332	0.0286
519	SLU 45	0.24	-0.03	34.29	-0.9731	11.4401	0.0169
519	SLU 46	0.24	-0.05	34.29	-0.9732	11.4424	0.0221
519	SLU 47	0.24	-0.06	34.05	-0.9663	11.3615	0.0282
519	SLU 48	0.24	-0.03	34.67	-0.9841	11.5684	0.0165
519	SLU 49	0.24	-0.04	34.68	-0.9842	11.5707	0.0217
519	SLU 50	0.24	-0.04	34.42	-0.977	11.486	0.0192
519	SLU 51	0.24	-0.05	34.43	-0.9771	11.4883	0.0243
519	SLU 52	0.26	-0.03	37.15	-1.0544	12.4001	0.0156
519	SLU 53	0.26	0.01	37.78	-1.0722	12.607	0.004
519	SLU 54	0.26	-0.01	37.78	-1.0724	12.6093	0.0092
519	SLU 55	0.26	-0.02	37.54	-1.0654	12.5284	0.0152
519	SLU 56	0.27	0.01	38.16	-1.0832	12.7353	0.0036
519	SLU 57	0.27	-0.01	38.17	-1.0834	12.7376	0.0088
519	SLU 58	0.26	0	37.91	-1.0761	12.6529	0.0062
519	SLU 59	0.27	-0.01	37.92	-1.0763	12.6552	0.0114
519	SLU 60	0.27	0.02	38.64	-1.0966	12.8964	0.0015
519	SLU 61	0.27	0	38.64	-1.0968	12.8987	0.0066
519	SLU 62	0.27	0.02	39.02	-1.1076	13.0247	0.0011

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
519	SLU 63	0.27	0	39.03	-1.1078	13.027	0.0063
519	SLU 64	0.25	0.03	36.67	-1.0405	12.2302	-0.0044
519	SLU 65	0.26	0.01	36.68	-1.0408	12.2341	0.0042
519	SLU 66	0.26	0.04	37.31	-1.0585	12.4409	-0.0074
519	SLU 67	0.26	0.03	37.32	-1.0587	12.4432	-0.0023
519	SLU 68	0.26	0.01	37.07	-1.0517	12.3624	0.0038
519	SLU 69	0.26	0.04	37.7	-1.0695	12.5693	-0.0078
519	SLU 70	0.26	0.03	37.7	-1.0697	12.5716	-0.0027
519	SLU 71	0.26	0.03	37.45	-1.0624	12.4869	-0.0052
519	SLU 72	0.26	0.02	37.45	-1.0626	12.4892	-0.0001
519	SLU 73	0.28	0.05	40.18	-1.1399	13.401	-0.0088
519	SLU 74	0.29	0.08	40.8	-1.1577	13.6079	-0.0204
519	SLU 75	0.29	0.06	40.81	-1.1579	13.6102	-0.0152
519	SLU 76	0.28	0.05	40.56	-1.1509	13.5293	-0.0091
519	SLU 77	0.29	0.08	41.19	-1.1687	13.7362	-0.0208
519	SLU 78	0.29	0.07	41.19	-1.1689	13.7385	-0.0156
519	SLU 79	0.29	0.07	40.94	-1.1616	13.6538	-0.0182
519	SLU 80	0.29	0.06	40.94	-1.1618	13.6561	-0.013
519	SLU 81	0.29	0.09	41.66	-1.1821	13.8973	-0.0229
519	SLU 82	0.29	0.07	41.67	-1.1823	13.8996	-0.0177
519	SLU 83	0.29	0.09	42.05	-1.1931	14.0256	-0.0233
519	SLU 84	0.3	0.07	42.05	-1.1933	14.0279	-0.0181
519	SLE RA 1	0.19	0.01	27.54	-0.7816	9.1879	0.0019
519	SLE RA 2	0.19	-0.01	27.55	-0.7818	9.1904	0.0077
519	SLE RA 3	0.19	0.01	27.97	-0.7936	9.3284	-0.0001
519	SLE RA 4	0.19	0	27.97	-0.7937	9.3299	0.0034
519	SLE RA 5	0.19	-0.01	27.81	-0.7891	9.276	0.0074
519	SLE RA 6	0.2	0.02	28.23	-0.8009	9.4139	-0.0003
519	SLE RA 7	0.2	0.01	28.23	-0.8011	9.4154	0.0031
519	SLE RA 8	0.19	0.01	28.06	-0.7962	9.359	0.0014
519	SLE RA 9	0.2	0	28.07	-0.7963	9.3605	0.0049
519	SLE RA 10	0.21	0.02	29.88	-0.8479	9.9684	-0.0009
519	SLE RA 11	0.21	0.04	30.3	-0.8597	10.1063	-0.0087
519	SLE RA 12	0.21	0.03	30.3	-0.8598	10.1079	-0.0052
519	SLE RA 13	0.21	0.02	30.14	-0.8552	10.054	-0.0012
519	SLE RA 14	0.21	0.04	30.55	-0.8671	10.1919	-0.0089
519	SLE RA 15	0.21	0.03	30.56	-0.8672	10.1934	-0.0055
519	SLE RA 16	0.21	0.04	30.39	-0.8623	10.137	-0.0072
519	SLE RA 17	0.21	0.03	30.39	-0.8624	10.1385	-0.0038
519	SLE RA 18	0.22	0.05	30.87	-0.876	10.2993	-0.0104
519	SLE RA 19	0.22	0.04	30.87	-0.8761	10.3008	-0.0069
519	SLE RA 20	0.22	0.05	31.13	-0.8833	10.3848	-0.0106
519	SLE RA 21	0.22	0.04	31.13	-0.8834	10.3863	-0.0072
519	SLE FR 1	0.19	0.01	27.54	-0.7816	9.1879	0.0019
519	SLE FR 2	0.19	0.01	27.55	-0.7816	9.1884	0.0031
519	SLE FR 3	0.19	0.01	27.65	-0.7845	9.2221	0.0018
519	SLE FR 4	0.2	0.02	28.54	-0.8099	9.5218	-0.0006
519	SLE FR 5	0.2	0.02	28.65	-0.8128	9.5555	-0.0019
519	SLE FR 6	0.2	0.03	29.21	-0.8288	9.7436	-0.0042
519	SLE QP 1	0.19	0.01	27.54	-0.7816	9.1879	0.0019
519	SLE QP 2	0.2	0.02	28.54	-0.8099	9.5213	-0.0018
519	SLD 1	2.36	0.51	28.68	-0.814	9.5379	-0.0836
519	SLD 2	2.38	0.54	28.67	-0.8137	9.5312	-0.0924
519	SLD 3	2.26	-0.28	29.03	-0.8221	9.65	0.193
519	SLD 4	2.28	-0.25	29.02	-0.8218	9.6434	0.1842
519	SLD 5	0.99	1.36	28.06	-0.7989	9.3574	-0.4443
519	SLD 6	1.01	1.38	28.05	-0.7987	9.353	-0.45
519	SLD 7	0.66	-1.27	29.22	-0.8259	9.7312	0.4777
519	SLD 8	0.67	-1.25	29.21	-0.8257	9.7268	0.472
519	SLD 9	-0.28	1.29	27.88	-0.7941	9.3158	-0.4755
519	SLD 10	-0.26	1.31	27.87	-0.7939	9.3114	-0.4812
519	SLD 11	-0.61	-1.34	29.03	-0.8211	9.6896	0.4465
519	SLD 12	-0.6	-1.32	29.02	-0.8209	9.6852	0.4408
519	SLD 13	-1.88	0.29	28.07	-0.798	9.3993	-0.1877
519	SLD 14	-1.86	0.31	28.05	-0.7977	9.3926	-0.1965
519	SLD 15	-1.98	-0.5	28.42	-0.8062	9.5114	0.0889
519	SLD 16	-1.96	-0.48	28.4	-0.8058	9.5047	0.0801
519	SLV 1	5.25	1.15	28.89	-0.8197	9.5642	-0.1836
519	SLV 2	5.3	1.21	28.85	-0.819	9.5487	-0.204
519	SLV 3	5.02	-0.64	29.67	-0.8381	9.8183	0.4435
519	SLV 4	5.07	-0.58	29.64	-0.8373	9.8027	0.423
519	SLV 5	2.06	3.06	27.46	-0.7851	9.1516	-1.0038
519	SLV 6	2.09	3.1	27.44	-0.7846	9.1416	-1.0169
519	SLV 7	1.28	-2.91	30.08	-0.8464	9.9983	1.0863
519	SLV 8	1.31	-2.87	30.06	-0.8459	9.9883	1.0732
519	SLV 9	-0.92	2.9	27.03	-0.774	9.0543	-1.0767
519	SLV 10	-0.88	2.95	27	-0.7735	9.0443	-1.0898
519	SLV 11	-1.7	-3.07	29.65	-0.8352	9.901	1.0134
519	SLV 12	-1.66	-3.02	29.62	-0.8347	9.891	1.0003
519	SLV 13	-4.67	0.62	27.45	-0.7825	9.24	-0.4265
519	SLV 14	-4.62	0.68	27.41	-0.7817	9.2244	-0.447
519	SLV 15	-4.91	-1.17	28.23	-0.8008	9.494	0.2005
519	SLV 16	-4.86	-1.11	28.2	-0.8001	9.4784	0.1801
519	CRTFP Ux+	0	0	0	0	0	0
519	CRTFP Ux-	0	0	0	0	0	0
519	CRTFP Uy+	0	0	0	0	0	0
519	CRTFP Uy-	0	0	0	0	0	0
569	SLU 1	-0.34	-0.04	26.76	-1.4868	-5.6615	-0.0297
569	SLU 2	-0.34	-0.1	26.77	-1.4872	-5.6632	-0.0438
569	SLU 3	-0.35	-0.04	27.4	-1.5224	-5.7943	-0.0293
569	SLU 4	-0.35	-0.07	27.4	-1.5226	-5.7954	-0.0377
569	SLU 5	-0.35	-0.1	27.17	-1.5095	-5.7464	-0.0434
569	SLU 6	-0.36	-0.04	27.8	-1.5447	-5.8775	-0.0289
569	SLU 7	-0.36	-0.07	27.81	-1.5449	-5.8785	-0.0374
569	SLU 8	-0.36	-0.04	27.56	-1.5315	-5.8278	-0.0289
569	SLU 9	-0.36	-0.07	27.57	-1.5317	-5.8288	-0.0374
569	SLU 10	-0.35	-0.06	29.87	-1.6594	-6.3254	-0.0348

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
569	SLU 11	-0.36	0	30.5	-1.6946	-6.4566	-0.0202
569	SLU 12	-0.36	-0.04	30.51	-1.6948	-6.4576	-0.0287
569	SLU 13	-0.36	-0.06	30.27	-1.6817	-6.4086	-0.0344
569	SLU 14	-0.37	0	30.9	-1.7169	-6.5398	-0.0198
569	SLU 15	-0.37	-0.03	30.91	-1.7172	-6.5408	-0.0283
569	SLU 16	-0.37	0	30.67	-1.7037	-6.4901	-0.0199
569	SLU 17	-0.36	-0.03	30.67	-1.7039	-6.4911	-0.0283
569	SLU 18	-0.36	0.01	31.19	-1.7329	-6.6075	-0.0168
569	SLU 19	-0.35	-0.02	31.2	-1.7331	-6.6086	-0.0252
569	SLU 20	-0.36	0.01	31.59	-1.7552	-6.6907	-0.0164
569	SLU 21	-0.36	-0.02	31.6	-1.7554	-6.6917	-0.0248
569	SLU 22	-0.37	0	29.89	-1.6603	-6.3246	-0.0192
569	SLU 23	-0.37	-0.05	29.89	-1.6607	-6.3263	-0.0333
569	SLU 24	-0.38	0.01	30.53	-1.6959	-6.4574	-0.0188
569	SLU 25	-0.38	-0.03	30.53	-1.6961	-6.4585	-0.0273
569	SLU 26	-0.38	-0.05	30.3	-1.683	-6.4095	-0.033
569	SLU 27	-0.39	0.01	30.93	-1.7182	-6.5406	-0.0184
569	SLU 28	-0.39	-0.02	30.93	-1.7184	-6.5416	-0.0269
569	SLU 29	-0.38	0.01	30.69	-1.705	-6.4909	-0.0185
569	SLU 30	-0.38	-0.02	30.69	-1.7052	-6.492	-0.0269
569	SLU 31	-0.38	-0.02	33	-1.8329	-6.9886	-0.0243
569	SLU 32	-0.39	0.04	33.63	-1.8681	-7.1197	-0.0098
569	SLU 33	-0.39	0.01	33.63	-1.8683	-7.1207	-0.0182
569	SLU 34	-0.38	-0.01	33.4	-1.8552	-7.0717	-0.0239
569	SLU 35	-0.39	0.05	34.03	-1.8904	-7.2029	-0.0094
569	SLU 36	-0.39	0.01	34.04	-1.8907	-7.2039	-0.0179
569	SLU 37	-0.39	0.05	33.79	-1.8772	-7.1532	-0.0094
569	SLU 38	-0.39	0.01	33.8	-1.8774	-7.1542	-0.0179
569	SLU 39	-0.38	0.06	34.32	-1.9063	-7.2707	-0.0063
569	SLU 40	-0.38	0.02	34.32	-1.9066	-7.2717	-0.0148
569	SLU 41	-0.39	0.06	34.72	-1.9287	-7.3538	-0.0059
569	SLU 42	-0.39	0.03	34.73	-1.9289	-7.3549	-0.0144
569	SLU 43	-0.44	-0.07	33.71	-1.8734	-7.1325	-0.0422
569	SLU 44	-0.44	-0.13	33.72	-1.8737	-7.1343	-0.0563
569	SLU 45	-0.45	-0.07	34.36	-1.909	-7.2654	-0.0418
569	SLU 46	-0.45	-0.1	34.36	-1.9092	-7.2664	-0.0502
569	SLU 47	-0.44	-0.13	34.12	-1.8961	-7.2174	-0.0559
569	SLU 48	-0.45	-0.07	34.76	-1.9313	-7.3486	-0.0414
569	SLU 49	-0.45	-0.1	34.76	-1.9315	-7.3496	-0.0499
569	SLU 50	-0.45	-0.07	34.52	-1.918	-7.2989	-0.0414
569	SLU 51	-0.45	-0.1	34.52	-1.9183	-7.2999	-0.0499
569	SLU 52	-0.45	-0.09	36.82	-2.046	-7.7965	-0.0472
569	SLU 53	-0.46	-0.03	37.46	-2.0812	-7.9277	-0.0327
569	SLU 54	-0.45	-0.07	37.46	-2.0814	-7.9287	-0.0412
569	SLU 55	-0.45	-0.09	37.23	-2.0683	-7.8797	-0.0469
569	SLU 56	-0.46	-0.03	37.86	-2.1035	-8.0108	-0.0323
569	SLU 57	-0.46	-0.06	37.86	-2.1037	-8.0119	-0.0408
569	SLU 58	-0.46	-0.03	37.62	-2.0903	-7.9611	-0.0324
569	SLU 59	-0.46	-0.06	37.63	-2.0905	-7.9622	-0.0408
569	SLU 60	-0.45	-0.02	38.15	-2.1194	-8.0786	-0.0293
569	SLU 61	-0.45	-0.05	38.15	-2.1196	-8.0797	-0.0377
569	SLU 62	-0.46	-0.02	38.55	-2.1417	-8.1618	-0.0289
569	SLU 63	-0.46	-0.05	38.55	-2.142	-8.1628	-0.0373
569	SLU 64	-0.46	-0.03	36.84	-2.0469	-7.7957	-0.0317
569	SLU 65	-0.46	-0.08	36.85	-2.0472	-7.7974	-0.0458
569	SLU 66	-0.47	-0.02	37.48	-2.0825	-7.9285	-0.0313
569	SLU 67	-0.47	-0.06	37.49	-2.0827	-7.9296	-0.0398
569	SLU 68	-0.47	-0.08	37.25	-2.0696	-7.8806	-0.0455
569	SLU 69	-0.48	-0.02	37.88	-2.1048	-8.0117	-0.0309
569	SLU 70	-0.48	-0.05	37.89	-2.105	-8.0127	-0.0394
569	SLU 71	-0.48	-0.02	37.65	-2.0915	-7.962	-0.031
569	SLU 72	-0.48	-0.05	37.65	-2.0918	-7.963	-0.0394
569	SLU 73	-0.47	-0.05	39.95	-2.2195	-8.4596	-0.0368
569	SLU 74	-0.48	0.02	40.59	-2.2547	-8.5908	-0.0223
569	SLU 75	-0.48	-0.02	40.59	-2.2549	-8.5918	-0.0307
569	SLU 76	-0.48	-0.04	40.35	-2.2418	-8.5428	-0.0364
569	SLU 77	-0.49	0.02	40.99	-2.277	-8.6739	-0.0219
569	SLU 78	-0.49	-0.02	40.99	-2.2772	-8.675	-0.0303
569	SLU 79	-0.49	0.02	40.75	-2.2638	-8.6243	-0.0219
569	SLU 80	-0.48	-0.02	40.75	-2.264	-8.6253	-0.0304
569	SLU 81	-0.48	0.03	41.28	-2.2929	-8.7417	-0.0188
569	SLU 82	-0.47	-0.01	41.28	-2.2931	-8.7428	-0.0273
569	SLU 83	-0.48	0.03	41.68	-2.3152	-8.8249	-0.0184
569	SLU 84	-0.48	0	41.68	-2.3155	-8.8259	-0.0269
569	SLE RA 1	-0.35	-0.03	27.65	-1.5364	-5.8509	-0.0267
569	SLE RA 2	-0.35	-0.07	27.66	-1.5366	-5.8521	-0.0361
569	SLE RA 3	-0.36	-0.03	28.08	-1.5601	-5.9395	-0.0264
569	SLE RA 4	-0.36	-0.05	28.08	-1.5603	-5.9402	-0.0321
569	SLE RA 5	-0.36	-0.07	27.93	-1.5515	-5.9075	-0.0359
569	SLE RA 6	-0.36	-0.03	28.35	-1.575	-5.9949	-0.0262
569	SLE RA 7	-0.36	-0.05	28.35	-1.5751	-5.9956	-0.0318
569	SLE RA 8	-0.36	-0.03	28.19	-1.5662	-5.9618	-0.0262
569	SLE RA 9	-0.36	-0.05	28.19	-1.5663	-5.9625	-0.0318
569	SLE RA 10	-0.36	-0.04	29.73	-1.6514	-6.2936	-0.0301
569	SLE RA 11	-0.36	0	30.15	-1.6749	-6.381	-0.0204
569	SLE RA 12	-0.36	-0.03	30.15	-1.6751	-6.3817	-0.026
569	SLE RA 13	-0.36	-0.04	29.99	-1.6663	-6.349	-0.0298
569	SLE RA 14	-0.37	0	30.42	-1.6898	-6.4364	-0.0201
569	SLE RA 15	-0.37	-0.02	30.42	-1.69	-6.4371	-0.0258
569	SLE RA 16	-0.37	0	30.26	-1.681	-6.4033	-0.0202
569	SLE RA 17	-0.37	-0.02	30.26	-1.6811	-6.404	-0.0258
569	SLE RA 18	-0.36	0.01	30.61	-1.7004	-6.4816	-0.0181
569	SLE RA 19	-0.36	-0.02	30.61	-1.7006	-6.4823	-0.0237
569	SLE RA 20	-0.36	0.01	30.88	-1.7153	-6.5371	-0.0178
569	SLE RA 21	-0.36	-0.02	30.88	-1.7154	-6.5378	-0.0235
569	SLE FR 1	-0.35	-0.03	27.65	-1.5364	-5.8509	-0.0267
569	SLE FR 2	-0.35	-0.04	27.65	-1.5364	-5.8511	-0.0286

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
569	SLE FR 3	-0.35	-0.03	27.76	-1.5423	-5.8731	-0.0266
569	SLE FR 4	-0.35	-0.03	28.54	-1.5856	-6.0404	-0.026
569	SLE FR 5	-0.36	-0.02	28.65	-1.5916	-6.0623	-0.024
569	SLE FR 6	-0.36	-0.01	29.13	-1.6184	-6.1663	-0.0224
569	SLE QP 1	-0.35	-0.03	27.65	-1.5364	-5.8509	-0.0267
569	SLE QP 2	-0.35	-0.02	28.54	-1.5856	-6.0401	-0.0241
569	SLD 1	1.48	0.38	36.3	-2.0174	-7.5859	0.2157
569	SLD 2	1.49	0.01	36.33	-2.0184	-7.5934	0.1251
569	SLD 3	1.58	-0.64	36.72	-2.0405	-7.6765	-0.0384
569	SLD 4	1.59	-1.01	36.74	-2.0416	-7.6841	-0.129
569	SLD 5	0.05	1.71	30.23	-1.6799	-6.365	0.4492
569	SLD 6	0.06	1.47	30.25	-1.6805	-6.3699	0.39
569	SLD 7	0.37	-1.69	31.62	-1.757	-6.6672	-0.3977
569	SLD 8	0.38	-1.93	31.63	-1.7577	-6.6722	-0.4569
569	SLD 9	-1.08	1.89	25.44	-1.4135	-5.4081	0.4087
569	SLD 10	-1.08	1.65	25.46	-1.4142	-5.413	0.3495
569	SLD 11	-0.77	-1.51	26.83	-1.4907	-5.7103	-0.4382
569	SLD 12	-0.76	-1.75	26.84	-1.4913	-5.7153	-0.4974
569	SLD 13	-2.3	0.97	20.34	-1.1296	-4.3962	0.0807
569	SLD 14	-2.28	0.6	20.36	-1.1307	-4.4037	-0.0099
569	SLD 15	-2.2	-0.05	20.75	-1.1528	-4.4868	-0.1734
569	SLD 16	-2.19	-0.42	20.78	-1.1538	-4.4944	-0.264
569	SLV 1	3.94	0.87	46.71	-2.5964	-9.6583	0.5265
569	SLV 2	3.97	0.01	46.77	-2.5988	-9.6759	0.3155
569	SLV 3	4.16	-1.44	47.68	-2.6505	-9.8703	-0.0484
569	SLV 4	4.19	-2.3	47.74	-2.6529	-9.8879	-0.2594
569	SLV 5	0.59	3.9	32.51	-1.8063	-6.801	1.049
569	SLV 6	0.61	3.35	32.54	-1.8079	-6.8123	0.9134
569	SLV 7	1.33	-3.81	35.75	-1.9868	-7.5077	-0.8671
569	SLV 8	1.35	-4.36	35.78	-1.9883	-7.519	-1.0027
569	SLV 9	-2.06	4.32	21.3	-1.1829	-4.5613	0.9544
569	SLV 10	-2.04	3.77	21.33	-1.1844	-4.5726	0.8188
569	SLV 11	-1.32	-3.39	24.54	-1.3633	-5.2679	-0.9617
569	SLV 12	-1.3	-3.94	24.57	-1.3649	-5.2792	-1.0973
569	SLV 13	-4.9	2.26	9.34	-0.5183	-2.1924	0.2111
569	SLV 14	-4.87	1.4	9.4	-0.5207	-2.21	0.0001
569	SLV 15	-4.67	-0.05	10.31	-0.5724	-2.4044	-0.3637
569	SLV 16	-4.65	-0.91	10.37	-0.5748	-2.422	-0.5747
569	CRTFP Ux+	0	0	0	0	0	0
569	CRTFP Ux-	0	0	0	0	0	0
569	CRTFP Uy+	0	0	0	0	0	0
569	CRTFP Uy-	0	0	0	0	0	0
579	SLU 1	-0.72	-0.09	53.62	-0.0342	-1.4833	-0.0007
579	SLU 2	-0.72	-0.2	53.63	-0.0338	-1.4836	-0.0027
579	SLU 3	-0.74	-0.08	54.9	-0.0343	-1.5187	-0.0005
579	SLU 4	-0.74	-0.15	54.91	-0.0341	-1.5189	-0.0017
579	SLU 5	-0.74	-0.19	54.44	-0.0337	-1.5059	-0.0026
579	SLU 6	-0.75	-0.07	55.71	-0.0342	-1.541	-0.0004
579	SLU 7	-0.75	-0.14	55.72	-0.0339	-1.5412	-0.0016
579	SLU 8	-0.75	-0.07	55.23	-0.034	-1.5278	-0.0005
579	SLU 9	-0.75	-0.14	55.24	-0.0337	-1.528	-0.0017
579	SLU 10	-0.74	-0.12	59.88	-0.036	-1.6573	-0.0013
579	SLU 11	-0.76	0	61.15	-0.0365	-1.6924	0.001
579	SLU 12	-0.76	-0.07	61.15	-0.0362	-1.6926	-0.0003
579	SLU 13	-0.75	-0.12	60.68	-0.0359	-1.6795	-0.0011
579	SLU 14	-0.77	0	61.95	-0.0364	-1.7146	0.0011
579	SLU 15	-0.77	-0.07	61.96	-0.0361	-1.7148	-0.0001
579	SLU 16	-0.76	0	61.47	-0.0361	-1.7014	0.001
579	SLU 17	-0.77	-0.07	61.48	-0.0359	-1.7016	-0.0002
579	SLU 18	-0.74	0.02	62.54	-0.0373	-1.7313	0.0014
579	SLU 19	-0.75	-0.05	62.55	-0.0371	-1.7316	0.0002
579	SLU 20	-0.76	0.03	63.34	-0.0372	-1.7536	0.0015
579	SLU 21	-0.76	-0.04	63.35	-0.037	-1.7538	0.0003
579	SLU 22	-0.77	0.01	59.91	-0.0314	-1.6579	0.0013
579	SLU 23	-0.78	-0.1	59.93	-0.031	-1.6583	-0.0007
579	SLU 24	-0.79	0.02	61.19	-0.0315	-1.6934	0.0015
579	SLU 25	-0.79	-0.05	61.2	-0.0313	-1.6936	0.0003
579	SLU 26	-0.79	-0.1	60.73	-0.0309	-1.6805	-0.0006
579	SLU 27	-0.81	0.02	62	-0.0314	-1.7156	0.0016
579	SLU 28	-0.81	-0.05	62.01	-0.0312	-1.7158	0.0004
579	SLU 29	-0.8	0.02	61.52	-0.0312	-1.7024	0.0016
579	SLU 30	-0.8	-0.05	61.53	-0.0309	-1.7026	0.0004
579	SLU 31	-0.79	-0.03	66.17	-0.0332	-1.8319	0.0008
579	SLU 32	-0.81	0.09	67.44	-0.0337	-1.867	0.003
579	SLU 33	-0.81	0.02	67.45	-0.0334	-1.8672	0.0018
579	SLU 34	-0.81	-0.02	66.97	-0.0331	-1.8542	0.0009
579	SLU 35	-0.82	0.09	68.24	-0.0336	-1.8893	0.0031
579	SLU 36	-0.82	0.03	68.25	-0.0333	-1.8895	0.0019
579	SLU 37	-0.82	0.09	67.77	-0.0334	-1.8761	0.003
579	SLU 38	-0.82	0.03	67.77	-0.0331	-1.8763	0.0018
579	SLU 39	-0.8	0.11	68.83	-0.0345	-1.906	0.0034
579	SLU 40	-0.8	0.05	68.84	-0.0343	-1.9062	0.0022
579	SLU 41	-0.81	0.12	69.64	-0.0344	-1.9282	0.0035
579	SLU 42	-0.81	0.05	69.64	-0.0342	-1.9284	0.0023
579	SLU 43	-0.92	-0.14	67.55	-0.0455	-1.8684	-0.0016
579	SLU 44	-0.92	-0.25	67.56	-0.0451	-1.8687	-0.0036
579	SLU 45	-0.94	-0.14	68.83	-0.0455	-1.9038	-0.0014
579	SLU 46	-0.94	-0.2	68.84	-0.0453	-1.904	-0.0026
579	SLU 47	-0.93	-0.25	68.37	-0.0449	-1.891	-0.0035
579	SLU 48	-0.95	-0.13	69.64	-0.0454	-1.9261	-0.0013
579	SLU 49	-0.95	-0.2	69.65	-0.0452	-1.9263	-0.0025
579	SLU 50	-0.95	-0.13	69.16	-0.0452	-1.9129	-0.0014
579	SLU 51	-0.95	-0.2	69.17	-0.045	-1.9131	-0.0026
579	SLU 52	-0.94	-0.18	73.81	-0.0472	-2.0424	-0.0022
579	SLU 53	-0.95	-0.06	75.07	-0.0477	-2.0775	0
579	SLU 54	-0.96	-0.13	75.08	-0.0475	-2.0777	-0.0012
579	SLU 55	-0.95	-0.17	74.61	-0.0471	-2.0646	-0.002

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
579	SLU 56	-0.97	-0.06	75.88	-0.0476	-2.0997	0.0002
579	SLU 57	-0.97	-0.12	75.89	-0.0473	-2.0999	-0.001
579	SLU 58	-0.96	-0.06	75.4	-0.0474	-2.0865	0.0001
579	SLU 59	-0.96	-0.12	75.41	-0.0471	-2.0867	-0.0011
579	SLU 60	-0.94	-0.04	76.47	-0.0486	-2.1164	0.0005
579	SLU 61	-0.94	-0.1	76.48	-0.0483	-2.1167	-0.0007
579	SLU 62	-0.96	-0.03	77.27	-0.0484	-2.1387	0.0006
579	SLU 63	-0.96	-0.1	77.28	-0.0482	-2.1389	-0.0006
579	SLU 64	-0.97	-0.05	73.84	-0.0427	-2.043	0.0004
579	SLU 65	-0.97	-0.16	73.85	-0.0423	-2.0434	-0.0016
579	SLU 66	-0.99	-0.04	75.12	-0.0427	-2.0785	0.0006
579	SLU 67	-0.99	-0.11	75.13	-0.0425	-2.0787	-0.0006
579	SLU 68	-0.99	-0.16	74.66	-0.0421	-2.0656	-0.0015
579	SLU 69	-1	-0.04	75.93	-0.0426	-2.1007	0.0007
579	SLU 70	-1.01	-0.1	75.94	-0.0424	-2.1009	-0.0005
579	SLU 71	-1	-0.04	75.45	-0.0424	-2.0875	0.0007
579	SLU 72	-1	-0.1	75.46	-0.0422	-2.0877	-0.0005
579	SLU 73	-0.99	-0.09	80.1	-0.0444	-2.217	-0.0001
579	SLU 74	-1.01	0.03	81.37	-0.0449	-2.2521	0.0021
579	SLU 75	-1.01	-0.04	81.38	-0.0447	-2.2523	0.0009
579	SLU 76	-1	-0.08	80.9	-0.0443	-2.2393	0
579	SLU 77	-1.02	0.04	82.17	-0.0448	-2.2744	0.0022
579	SLU 78	-1.02	-0.03	82.18	-0.0445	-2.2746	0.001
579	SLU 79	-1.02	0.04	81.69	-0.0446	-2.2612	0.0021
579	SLU 80	-1.02	-0.03	81.7	-0.0443	-2.2614	0.0009
579	SLU 81	-1	0.06	82.76	-0.0458	-2.2911	0.0025
579	SLU 82	-1	-0.01	82.77	-0.0455	-2.2913	0.0013
579	SLU 83	-1.01	0.06	83.56	-0.0456	-2.3133	0.0026
579	SLU 84	-1.01	-0.01	83.57	-0.0454	-2.3135	0.0014
579	SLE RA 1	-0.74	-0.06	55.42	-0.0334	-1.5332	-0.0001
579	SLE RA 2	-0.74	-0.13	55.43	-0.0332	-1.5334	-0.0015
579	SLE RA 3	-0.75	-0.05	56.27	-0.0335	-1.5568	0
579	SLE RA 4	-0.75	-0.1	56.28	-0.0333	-1.557	-0.0008
579	SLE RA 5	-0.75	-0.13	55.96	-0.0331	-1.5482	-0.0014
579	SLE RA 6	-0.76	-0.05	56.81	-0.0334	-1.5716	0.0001
579	SLE RA 7	-0.76	-0.09	56.82	-0.0332	-1.5718	-0.0007
579	SLE RA 8	-0.75	-0.05	56.49	-0.0333	-1.5628	0
579	SLE RA 9	-0.76	-0.1	56.5	-0.0331	-1.563	-0.0008
579	SLE RA 10	-0.75	-0.08	59.59	-0.0346	-1.6492	-0.0005
579	SLE RA 11	-0.76	0	60.43	-0.0349	-1.6726	0.001
579	SLE RA 12	-0.76	-0.05	60.44	-0.0348	-1.6727	0.0002
579	SLE RA 13	-0.76	-0.08	60.13	-0.0345	-1.664	-0.0004
579	SLE RA 14	-0.77	0	60.97	-0.0348	-1.6874	0.0011
579	SLE RA 15	-0.77	-0.05	60.98	-0.0347	-1.6875	0.0003
579	SLE RA 16	-0.77	0	60.65	-0.0347	-1.6786	0.001
579	SLE RA 17	-0.77	-0.05	60.66	-0.0346	-1.6787	0.0002
579	SLE RA 18	-0.75	0.01	61.36	-0.0355	-1.6985	0.0013
579	SLE RA 19	-0.75	-0.03	61.37	-0.0353	-1.6987	0.0005
579	SLE RA 20	-0.76	0.02	61.9	-0.0354	-1.7134	0.0014
579	SLE RA 21	-0.76	-0.03	61.91	-0.0353	-1.7135	0.0005
579	SLE FR 1	-0.74	-0.06	55.42	-0.0334	-1.5332	-0.0001
579	SLE FR 2	-0.74	-0.07	55.42	-0.0334	-1.5332	-0.0004
579	SLE FR 3	-0.74	-0.06	55.63	-0.0334	-1.5391	-0.0001
579	SLE FR 4	-0.74	-0.05	57.2	-0.034	-1.5828	0
579	SLE FR 5	-0.74	-0.04	57.42	-0.034	-1.5887	0.0003
579	SLE FR 6	-0.74	-0.02	58.39	-0.0345	-1.6159	0.0006
579	SLE QP 1	-0.74	-0.06	55.42	-0.0334	-1.5332	-0.0001
579	SLE QP 2	-0.74	-0.04	57.2	-0.0341	-1.5828	0.0003
579	SLD 1	3.14	0.74	72.39	-0.0844	-1.9854	0.0138
579	SLD 2	3.13	0.02	72.45	-0.0756	-1.9868	0.0022
579	SLD 3	2.95	-1.27	73.2	-0.1054	-2.0073	-0.0251
579	SLD 4	2.94	-1.98	73.26	-0.0966	-2.0087	-0.0367
579	SLD 5	0.71	3.37	60.51	-0.0188	-1.6701	0.0655
579	SLD 6	0.71	2.9	60.55	-0.0131	-1.671	0.0579
579	SLD 7	0.08	-3.32	63.22	-0.0889	-1.7431	-0.0643
579	SLD 8	0.08	-3.79	63.26	-0.0831	-1.7441	-0.0719
579	SLD 9	-1.56	3.72	51.14	0.015	-1.4215	0.0725
579	SLD 10	-1.56	3.25	51.18	0.0208	-1.4225	0.0649
579	SLD 11	-2.19	-2.97	53.85	-0.055	-1.4945	-0.0573
579	SLD 12	-2.19	-3.44	53.89	-0.0493	-1.4955	-0.0649
579	SLD 13	-4.43	1.91	41.14	0.0285	-1.1568	0.0373
579	SLD 14	-4.43	1.19	41.2	0.0373	-1.1583	0.0257
579	SLD 15	-4.62	-0.1	41.95	0.0075	-1.1787	-0.0016
579	SLD 16	-4.62	-0.82	42.01	0.0163	-1.1802	-0.0132
579	SLV 1	8.33	1.7	92.76	-0.1523	-2.5252	0.0303
579	SLV 2	8.32	0.03	92.9	-0.1318	-2.5286	0.0033
579	SLV 3	7.88	-2.84	94.66	-0.2006	-2.5764	-0.0578
579	SLV 4	7.88	-4.51	94.8	-0.1801	-2.5798	-0.0847
579	SLV 5	2.65	7.66	64.96	0.0002	-1.7872	0.1475
579	SLV 6	2.65	6.58	65.05	0.0134	-1.7894	0.1302
579	SLV 7	1.18	-7.48	71.3	-0.1608	-1.958	-0.1461
579	SLV 8	1.17	-8.55	71.39	-0.1476	-1.9602	-0.1634
579	SLV 9	-2.65	8.48	43.01	0.0795	-1.2054	0.164
579	SLV 10	-2.66	7.4	43.1	0.0927	-1.2076	0.1467
579	SLV 11	-4.13	-6.66	49.35	-0.0815	-1.3762	-0.1296
579	SLV 12	-4.13	-7.73	49.44	-0.0683	-1.3783	-0.1469
579	SLV 13	-9.36	4.43	19.6	0.112	-0.5858	0.0853
579	SLV 14	-9.37	2.76	19.74	0.1325	-0.5891	0.0584
579	SLV 15	-9.8	-0.11	21.5	0.0637	-0.637	-0.0027
579	SLV 16	-9.81	-1.78	21.64	0.0842	-0.6404	-0.0297
579	CRTFP Ux+	0	0	0	0	0	0
579	CRTFP Ux-	0	0	0	0	0	0
579	CRTFP Uy+	0	0	0	0	0	0
579	CRTFP Uy-	0	0	0	0	0	0
580	SLU 1	-0.85	-0.1	63.02	-0.0429	0.0155	-0.0017
580	SLU 2	-0.85	-0.23	63.04	-0.0425	0.0155	-0.0002
580	SLU 3	-0.88	-0.09	64.53	-0.043	0.0159	-0.0018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
580	SLU 4	-0.88	-0.17	64.54	-0.0428	0.016	-0.0009
580	SLU 5	-0.87	-0.22	63.98	-0.0424	0.0158	-0.0004
580	SLU 6	-0.89	-0.09	65.47	-0.0429	0.0162	-0.0019
580	SLU 7	-0.89	-0.16	65.48	-0.0426	0.0163	-0.001
580	SLU 8	-0.89	-0.09	64.91	-0.0426	0.0161	-0.0019
580	SLU 9	-0.89	-0.16	64.92	-0.0424	0.0161	-0.001
580	SLU 10	-0.87	-0.14	70.43	-0.0452	0.0157	-0.0015
580	SLU 11	-0.9	-0.01	71.92	-0.0457	0.0162	-0.003
580	SLU 12	-0.9	-0.09	71.93	-0.0455	0.0162	-0.0022
580	SLU 13	-0.89	-0.14	71.37	-0.045	0.0161	-0.0016
580	SLU 14	-0.91	0	72.86	-0.0456	0.0165	-0.0032
580	SLU 15	-0.91	-0.08	72.87	-0.0453	0.0165	-0.0023
580	SLU 16	-0.91	-0.01	72.3	-0.0453	0.0163	-0.0032
580	SLU 17	-0.91	-0.08	72.31	-0.0451	0.0163	-0.0023
580	SLU 18	-0.88	0.02	73.58	-0.0468	0.0158	-0.0035
580	SLU 19	-0.88	-0.06	73.59	-0.0465	0.0158	-0.0026
580	SLU 20	-0.9	0.02	74.52	-0.0466	0.0161	-0.0036
580	SLU 21	-0.9	-0.05	74.53	-0.0464	0.0161	-0.0027
580	SLU 22	-0.92	0	70.45	-0.0395	0.0163	-0.0029
580	SLU 23	-0.92	-0.12	70.47	-0.0391	0.0163	-0.0014
580	SLU 24	-0.94	0.01	71.96	-0.0396	0.0167	-0.003
580	SLU 25	-0.94	-0.06	71.97	-0.0393	0.0167	-0.0021
580	SLU 26	-0.93	-0.11	71.41	-0.0389	0.0166	-0.0015
580	SLU 27	-0.95	0.02	72.9	-0.0394	0.017	-0.0031
580	SLU 28	-0.96	-0.06	72.91	-0.0392	0.017	-0.0022
580	SLU 29	-0.95	0.02	72.34	-0.0392	0.0169	-0.0031
580	SLU 30	-0.95	-0.06	72.35	-0.0389	0.0169	-0.0022
580	SLU 31	-0.94	-0.04	77.86	-0.0418	0.0165	-0.0027
580	SLU 32	-0.96	0.1	79.35	-0.0423	0.0169	-0.0042
580	SLU 33	-0.96	0.02	79.36	-0.042	0.017	-0.0034
580	SLU 34	-0.95	-0.03	78.8	-0.0416	0.0168	-0.0028
580	SLU 35	-0.97	0.1	80.29	-0.0421	0.0172	-0.0043
580	SLU 36	-0.97	0.03	80.3	-0.0419	0.0173	-0.0035
580	SLU 37	-0.97	0.1	79.73	-0.0419	0.0171	-0.0043
580	SLU 38	-0.97	0.03	79.74	-0.0416	0.0171	-0.0035
580	SLU 39	-0.94	0.12	81.01	-0.0433	0.0166	-0.0047
580	SLU 40	-0.95	0.05	81.02	-0.0431	0.0166	-0.0038
580	SLU 41	-0.96	0.13	81.95	-0.0432	0.0169	-0.0048
580	SLU 42	-0.96	0.05	81.96	-0.0429	0.0169	-0.0039
580	SLU 43	-1.09	-0.17	79.38	-0.057	0.0199	-0.0018
580	SLU 44	-1.09	-0.29	79.4	-0.0566	0.0199	-0.0003
580	SLU 45	-1.11	-0.16	80.89	-0.0571	0.0203	-0.0019
580	SLU 46	-1.11	-0.24	80.9	-0.0568	0.0203	-0.001
580	SLU 47	-1.11	-0.29	80.34	-0.0564	0.0202	-0.0004
580	SLU 48	-1.13	-0.15	81.84	-0.0569	0.0206	-0.002
580	SLU 49	-1.13	-0.23	81.84	-0.0567	0.0207	-0.0011
580	SLU 50	-1.12	-0.16	81.27	-0.0567	0.0205	-0.002
580	SLU 51	-1.12	-0.23	81.28	-0.0564	0.0205	-0.0011
580	SLU 52	-1.11	-0.21	86.79	-0.0593	0.0201	-0.0016
580	SLU 53	-1.13	-0.08	88.28	-0.0598	0.0205	-0.0031
580	SLU 54	-1.13	-0.15	88.29	-0.0595	0.0206	-0.0023
580	SLU 55	-1.12	-0.2	87.73	-0.0591	0.0204	-0.0017
580	SLU 56	-1.15	-0.07	89.22	-0.0596	0.0208	-0.0033
580	SLU 57	-1.15	-0.15	89.23	-0.0594	0.0209	-0.0024
580	SLU 58	-1.14	-0.07	88.66	-0.0594	0.0207	-0.0033
580	SLU 59	-1.14	-0.15	88.67	-0.0591	0.0207	-0.0024
580	SLU 60	-1.12	-0.05	89.94	-0.0608	0.0202	-0.0036
580	SLU 61	-1.12	-0.13	89.95	-0.0606	0.0202	-0.0027
580	SLU 62	-1.13	-0.04	90.88	-0.0607	0.0205	-0.0037
580	SLU 63	-1.13	-0.12	90.89	-0.0604	0.0205	-0.0028
580	SLU 64	-1.15	-0.06	86.81	-0.0536	0.0206	-0.003
580	SLU 65	-1.15	-0.19	86.83	-0.0531	0.0207	-0.0015
580	SLU 66	-1.17	-0.05	88.32	-0.0537	0.0211	-0.0031
580	SLU 67	-1.17	-0.13	88.33	-0.0534	0.0211	-0.0022
580	SLU 68	-1.17	-0.18	87.77	-0.053	0.021	-0.0016
580	SLU 69	-1.19	-0.05	89.26	-0.0535	0.0214	-0.0032
580	SLU 70	-1.19	-0.12	89.27	-0.0532	0.0214	-0.0023
580	SLU 71	-1.18	-0.05	88.7	-0.0532	0.0212	-0.0032
580	SLU 72	-1.18	-0.12	88.71	-0.053	0.0213	-0.0023
580	SLU 73	-1.17	-0.11	94.22	-0.0558	0.0209	-0.0028
580	SLU 74	-1.19	0.03	95.71	-0.0563	0.0213	-0.0043
580	SLU 75	-1.19	-0.05	95.72	-0.0561	0.0213	-0.0035
580	SLU 76	-1.19	-0.1	95.16	-0.0557	0.0212	-0.0029
580	SLU 77	-1.21	0.04	96.65	-0.0562	0.0216	-0.0044
580	SLU 78	-1.21	-0.04	96.66	-0.0559	0.0216	-0.0036
580	SLU 79	-1.2	0.03	96.09	-0.0559	0.0215	-0.0044
580	SLU 80	-1.2	-0.04	96.1	-0.0557	0.0215	-0.0036
580	SLU 81	-1.18	0.06	97.37	-0.0574	0.0209	-0.0048
580	SLU 82	-1.18	-0.02	97.38	-0.0571	0.021	-0.0039
580	SLU 83	-1.19	0.06	98.31	-0.0572	0.0212	-0.0049
580	SLU 84	-1.2	-0.01	98.32	-0.057	0.0213	-0.004
580	SLE RA 1	-0.87	-0.07	65.15	-0.042	0.0157	-0.002
580	SLE RA 2	-0.87	-0.16	65.16	-0.0417	0.0157	-0.0011
580	SLE RA 3	-0.89	-0.07	66.15	-0.042	0.016	-0.0021
580	SLE RA 4	-0.89	-0.12	66.16	-0.0418	0.016	-0.0015
580	SLE RA 5	-0.88	-0.15	65.79	-0.0416	0.0159	-0.0011
580	SLE RA 6	-0.9	-0.06	66.78	-0.0419	0.0162	-0.0022
580	SLE RA 7	-0.9	-0.11	66.79	-0.0417	0.0162	-0.0016
580	SLE RA 8	-0.89	-0.06	66.41	-0.0417	0.0161	-0.0022
580	SLE RA 9	-0.89	-0.11	66.41	-0.0416	0.0161	-0.0016
580	SLE RA 10	-0.89	-0.1	70.08	-0.0435	0.0159	-0.0019
580	SLE RA 11	-0.9	-0.01	71.08	-0.0438	0.0161	-0.0029
580	SLE RA 12	-0.9	-0.06	71.08	-0.0436	0.0162	-0.0024
580	SLE RA 13	-0.9	-0.1	70.71	-0.0434	0.0161	-0.002
580	SLE RA 14	-0.91	-0.01	71.71	-0.0437	0.0164	-0.003
580	SLE RA 15	-0.91	-0.06	71.71	-0.0435	0.0164	-0.0024
580	SLE RA 16	-0.91	-0.01	71.33	-0.0435	0.0163	-0.003

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
580	SLE RA 17	-0.91	-0.06	71.34	-0.0434	0.0163	-0.0024
580	SLE RA 18	-0.89	0.01	72.18	-0.0445	0.0159	-0.0032
580	SLE RA 19	-0.89	-0.04	72.19	-0.0443	0.0159	-0.0026
580	SLE RA 20	-0.9	0.01	72.81	-0.0444	0.0161	-0.0033
580	SLE RA 21	-0.9	-0.04	72.82	-0.0442	0.0161	-0.0027
580	SLE FR 1	-0.87	-0.07	65.15	-0.042	0.0157	-0.002
580	SLE FR 2	-0.87	-0.09	65.15	-0.0419	0.0157	-0.0018
580	SLE FR 3	-0.88	-0.07	65.4	-0.0419	0.0158	-0.002
580	SLE FR 4	-0.88	-0.06	67.26	-0.0427	0.0158	-0.0022
580	SLE FR 5	-0.88	-0.05	67.51	-0.0427	0.0158	-0.0024
580	SLE FR 6	-0.88	-0.03	68.66	-0.0432	0.0158	-0.0026
580	SLE QP 1	-0.87	-0.07	65.15	-0.042	0.0157	-0.002
580	SLE QP 2	-0.88	-0.05	67.26	-0.0427	0.0158	-0.0024
580	SLD 1	3.73	0.82	84.19	-0.1035	0.0488	-0.0134
580	SLD 2	3.73	0.02	84.25	-0.0932	0.049	-0.0028
580	SLD 3	3.5	-1.46	85.11	-0.1299	0.0508	0.0093
580	SLD 4	3.5	-2.26	85.17	-0.1196	0.0511	0.02
580	SLD 5	0.85	3.81	70.92	-0.0227	0.0225	-0.0421
580	SLD 6	0.85	3.29	70.96	-0.016	0.0227	-0.0352
580	SLD 7	0.1	-3.78	74.01	-0.1107	0.0294	0.0338
580	SLD 8	0.09	-4.31	74.05	-0.104	0.0296	0.0408
580	SLD 9	-1.85	4.21	60.47	0.0186	0.002	-0.0455
580	SLD 10	-1.85	3.69	60.51	0.0253	0.0022	-0.0386
580	SLD 11	-2.6	-3.38	63.55	-0.0694	0.0089	0.0304
580	SLD 12	-2.6	-3.91	63.59	-0.0627	0.009	0.0374
580	SLD 13	-5.25	2.16	49.34	0.0341	-0.0196	-0.0247
580	SLD 14	-5.26	1.36	49.4	0.0444	-0.0193	-0.0141
580	SLD 15	-5.48	-0.12	50.27	0.0077	-0.0175	-0.0019
580	SLD 16	-5.48	-0.92	50.33	0.018	-0.0172	0.0087
580	SLV 1	9.9	1.9	106.89	-0.1854	0.0931	-0.0274
580	SLV 2	9.89	0.03	107.03	-0.1615	0.0937	-0.0026
580	SLV 3	9.37	-3.26	109.05	-0.2461	0.0979	0.0243
580	SLV 4	9.36	-5.12	109.2	-0.2221	0.0985	0.049
580	SLV 5	3.15	8.68	75.84	0.0024	0.0316	-0.0924
580	SLV 6	3.15	7.48	75.93	0.0177	0.032	-0.0765
580	SLV 7	1.4	-8.51	83.05	-0.1998	0.0475	0.0797
580	SLV 8	1.4	-9.71	83.15	-0.1844	0.048	0.0956
580	SLV 9	-3.15	9.62	51.37	0.099	-0.0164	-0.1003
580	SLV 10	-3.16	8.42	51.46	0.1144	-0.016	-0.0844
580	SLV 11	-4.9	-7.57	58.58	-0.1032	-0.0005	0.0717
580	SLV 12	-4.91	-8.77	58.67	-0.0878	-0.0001	0.0876
580	SLV 13	-11.12	5.03	25.32	0.1367	-0.067	-0.0537
580	SLV 14	-11.13	3.16	25.46	0.1606	-0.0663	-0.029
580	SLV 15	-11.64	-0.13	27.48	0.076	-0.0622	-0.0021
580	SLV 16	-11.65	-1.99	27.62	0.1	-0.0616	0.0226
580	CRTFP Ux+	0	0	0	0	0	0
580	CRTFP Ux-	0	0	0	0	0	0
580	CRTFP Uy+	0	0	0	0	0	0
580	CRTFP Uy-	0	0	0	0	0	0
581	SLU 1	-0.85	-0.12	62.54	-0.0459	0.013	-0.0052
581	SLU 2	-0.85	-0.24	62.56	-0.0455	0.0131	-0.0037
581	SLU 3	-0.87	-0.11	64.04	-0.046	0.0134	-0.0054
581	SLU 4	-0.87	-0.18	64.04	-0.0457	0.0134	-0.0045
581	SLU 5	-0.87	-0.23	63.49	-0.0453	0.0133	-0.0039
581	SLU 6	-0.89	-0.11	64.97	-0.0458	0.0137	-0.0056
581	SLU 7	-0.89	-0.18	64.98	-0.0456	0.0137	-0.0047
581	SLU 8	-0.88	-0.11	64.41	-0.0455	0.0135	-0.0055
581	SLU 9	-0.88	-0.18	64.42	-0.0453	0.0136	-0.0046
581	SLU 10	-0.87	-0.16	69.94	-0.0483	0.013	-0.0054
581	SLU 11	-0.89	-0.04	71.42	-0.0488	0.0134	-0.0071
581	SLU 12	-0.89	-0.11	71.43	-0.0486	0.0134	-0.0062
581	SLU 13	-0.88	-0.16	70.88	-0.0482	0.0133	-0.0056
581	SLU 14	-0.9	-0.03	72.36	-0.0486	0.0136	-0.0072
581	SLU 15	-0.91	-0.1	72.37	-0.0484	0.0137	-0.0064
581	SLU 16	-0.9	-0.03	71.8	-0.0484	0.0135	-0.0072
581	SLU 17	-0.9	-0.1	71.81	-0.0481	0.0135	-0.0063
581	SLU 18	-0.88	-0.01	73.1	-0.0499	0.013	-0.0076
581	SLU 19	-0.88	-0.08	73.1	-0.0497	0.013	-0.0067
581	SLU 20	-0.89	-0.01	74.03	-0.0498	0.0132	-0.0078
581	SLU 21	-0.89	-0.08	74.04	-0.0495	0.0133	-0.0069
581	SLU 22	-0.91	-0.02	69.95	-0.0423	0.0135	-0.0067
581	SLU 23	-0.91	-0.14	69.97	-0.0419	0.0136	-0.0053
581	SLU 24	-0.93	-0.01	71.44	-0.0424	0.0139	-0.0069
581	SLU 25	-0.93	-0.08	71.45	-0.0421	0.0139	-0.0061
581	SLU 26	-0.93	-0.13	70.9	-0.0417	0.0138	-0.0055
581	SLU 27	-0.95	-0.01	72.38	-0.0422	0.0142	-0.0071
581	SLU 28	-0.95	-0.08	72.39	-0.042	0.0142	-0.0062
581	SLU 29	-0.94	-0.01	71.82	-0.0419	0.0141	-0.0071
581	SLU 30	-0.94	-0.08	71.83	-0.0417	0.0141	-0.0062
581	SLU 31	-0.93	-0.06	77.35	-0.0447	0.0135	-0.007
581	SLU 32	-0.95	0.06	78.83	-0.0452	0.0139	-0.0086
581	SLU 33	-0.95	-0.01	78.84	-0.045	0.0139	-0.0078
581	SLU 34	-0.95	-0.06	78.29	-0.0446	0.0138	-0.0071
581	SLU 35	-0.97	0.07	79.76	-0.045	0.0141	-0.0088
581	SLU 36	-0.97	0	79.77	-0.0448	0.0142	-0.0079
581	SLU 37	-0.96	0.07	79.21	-0.0448	0.014	-0.0088
581	SLU 38	-0.96	0	79.22	-0.0445	0.014	-0.0079
581	SLU 39	-0.94	0.09	80.5	-0.0463	0.0135	-0.0092
581	SLU 40	-0.94	0.02	80.51	-0.0461	0.0135	-0.0083
581	SLU 41	-0.95	0.09	81.44	-0.0462	0.0137	-0.0093
581	SLU 42	-0.96	0.02	81.45	-0.0459	0.0138	-0.0085
581	SLU 43	-1.08	-0.19	78.77	-0.0608	0.0167	-0.0062
581	SLU 44	-1.08	-0.31	78.78	-0.0605	0.0168	-0.0047
581	SLU 45	-1.1	-0.18	80.26	-0.0609	0.0171	-0.0064
581	SLU 46	-1.1	-0.25	80.27	-0.0607	0.0172	-0.0055
581	SLU 47	-1.1	-0.3	79.72	-0.0603	0.017	-0.0049
581	SLU 48	-1.12	-0.18	81.19	-0.0608	0.0174	-0.0066

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
581	SLU 49	-1.12	-0.25	81.2	-0.0606	0.0174	-0.0057
581	SLU 50	-1.11	-0.18	80.64	-0.0605	0.0173	-0.0065
581	SLU 51	-1.11	-0.25	80.65	-0.0603	0.0173	-0.0057
581	SLU 52	-1.1	-0.23	86.17	-0.0633	0.0168	-0.0064
581	SLU 53	-1.12	-0.11	87.65	-0.0638	0.0171	-0.0081
581	SLU 54	-1.12	-0.18	87.65	-0.0636	0.0171	-0.0072
581	SLU 55	-1.12	-0.23	87.1	-0.0632	0.017	-0.0066
581	SLU 56	-1.14	-0.1	88.58	-0.0636	0.0174	-0.0083
581	SLU 57	-1.14	-0.17	88.59	-0.0634	0.0174	-0.0074
581	SLU 58	-1.13	-0.1	88.02	-0.0634	0.0172	-0.0082
581	SLU 59	-1.13	-0.17	88.03	-0.0631	0.0173	-0.0074
581	SLU 60	-1.11	-0.08	89.32	-0.0649	0.0167	-0.0086
581	SLU 61	-1.11	-0.15	89.33	-0.0647	0.0167	-0.0077
581	SLU 62	-1.12	-0.08	90.25	-0.0647	0.017	-0.0088
581	SLU 63	-1.13	-0.15	90.26	-0.0645	0.017	-0.0079
581	SLU 64	-1.14	-0.09	86.17	-0.0572	0.0173	-0.0078
581	SLU 65	-1.14	-0.21	86.19	-0.0569	0.0173	-0.0063
581	SLU 66	-1.17	-0.08	87.67	-0.0573	0.0176	-0.008
581	SLU 67	-1.17	-0.15	87.68	-0.0571	0.0177	-0.0071
581	SLU 68	-1.16	-0.2	87.12	-0.0567	0.0176	-0.0065
581	SLU 69	-1.18	-0.08	88.6	-0.0572	0.0179	-0.0081
581	SLU 70	-1.18	-0.15	88.61	-0.057	0.0179	-0.0073
581	SLU 71	-1.18	-0.08	88.04	-0.0569	0.0178	-0.0081
581	SLU 72	-1.18	-0.15	88.05	-0.0567	0.0178	-0.0072
581	SLU 73	-1.16	-0.13	93.57	-0.0597	0.0173	-0.008
581	SLU 74	-1.18	-0.01	95.05	-0.0602	0.0176	-0.0097
581	SLU 75	-1.19	-0.08	95.06	-0.06	0.0176	-0.0088
581	SLU 76	-1.18	-0.13	94.51	-0.0596	0.0175	-0.0082
581	SLU 77	-1.2	0	95.99	-0.06	0.0179	-0.0098
581	SLU 78	-1.2	-0.07	96	-0.0598	0.0179	-0.009
581	SLU 79	-1.19	0	95.43	-0.0598	0.0178	-0.0098
581	SLU 80	-1.2	-0.07	95.44	-0.0595	0.0178	-0.0089
581	SLU 81	-1.17	0.02	96.73	-0.0613	0.0172	-0.0102
581	SLU 82	-1.17	-0.05	96.74	-0.0611	0.0172	-0.0093
581	SLU 83	-1.19	0.02	97.66	-0.0611	0.0175	-0.0104
581	SLU 84	-1.19	-0.05	97.67	-0.0609	0.0175	-0.0095
581	SLE RA 1	-0.87	-0.09	64.66	-0.0448	0.0132	-0.0056
581	SLE RA 2	-0.87	-0.17	64.67	-0.0446	0.0132	-0.0047
581	SLE RA 3	-0.88	-0.09	65.66	-0.0449	0.0134	-0.0058
581	SLE RA 4	-0.88	-0.13	65.66	-0.0447	0.0134	-0.0052
581	SLE RA 5	-0.88	-0.17	65.29	-0.0445	0.0134	-0.0048
581	SLE RA 6	-0.89	-0.08	66.28	-0.0448	0.0136	-0.0059
581	SLE RA 7	-0.89	-0.13	66.28	-0.0446	0.0136	-0.0053
581	SLE RA 8	-0.89	-0.08	65.91	-0.0446	0.0135	-0.0059
581	SLE RA 9	-0.89	-0.13	65.91	-0.0445	0.0135	-0.0053
581	SLE RA 10	-0.88	-0.12	69.59	-0.0465	0.0132	-0.0058
581	SLE RA 11	-0.89	-0.04	70.58	-0.0468	0.0134	-0.0069
581	SLE RA 12	-0.89	-0.08	70.58	-0.0466	0.0134	-0.0063
581	SLE RA 13	-0.89	-0.12	70.22	-0.0464	0.0133	-0.0059
581	SLE RA 14	-0.9	-0.03	71.2	-0.0467	0.0136	-0.007
581	SLE RA 15	-0.9	-0.08	71.21	-0.0465	0.0136	-0.0064
581	SLE RA 16	-0.9	-0.03	70.83	-0.0465	0.0135	-0.007
581	SLE RA 17	-0.9	-0.08	70.84	-0.0464	0.0135	-0.0064
581	SLE RA 18	-0.88	-0.02	71.7	-0.0475	0.0131	-0.0072
581	SLE RA 19	-0.88	-0.07	71.7	-0.0474	0.0131	-0.0067
581	SLE RA 20	-0.89	-0.02	72.32	-0.0474	0.0133	-0.0074
581	SLE RA 21	-0.9	-0.06	72.32	-0.0473	0.0133	-0.0068
581	SLE FR 1	-0.87	-0.09	64.66	-0.0448	0.0132	-0.0056
581	SLE FR 2	-0.87	-0.11	64.66	-0.0448	0.0132	-0.0054
581	SLE FR 3	-0.87	-0.09	64.91	-0.0448	0.0132	-0.0057
581	SLE FR 4	-0.87	-0.09	66.77	-0.0456	0.0132	-0.0059
581	SLE FR 5	-0.88	-0.07	67.02	-0.0456	0.0132	-0.0062
581	SLE FR 6	-0.88	-0.06	68.18	-0.0462	0.0131	-0.0064
581	SLE QP 1	-0.87	-0.09	64.66	-0.0448	0.0132	-0.0056
581	SLE QP 2	-0.87	-0.07	66.77	-0.0456	0.0132	-0.0061
581	SLD 1	3.74	0.74	82.58	-0.108	0.0451	-0.0176
581	SLD 2	3.74	-0.01	82.63	-0.0978	0.0453	-0.0071
581	SLD 3	3.52	-1.43	83.47	-0.1362	0.047	0.0056
581	SLD 4	3.51	-2.18	83.52	-0.126	0.0472	0.0161
581	SLD 5	0.86	3.59	70.16	-0.0233	0.0199	-0.0466
581	SLD 6	0.85	3.1	70.19	-0.0167	0.02	-0.0397
581	SLD 7	0.1	-3.63	73.12	-0.1174	0.0261	0.0307
581	SLD 8	0.1	-4.12	73.15	-0.1108	0.0262	0.0376
581	SLD 9	-1.84	3.98	60.39	0.0195	0.0001	-0.0498
581	SLD 10	-1.85	3.49	60.42	0.0261	0.0002	-0.0429
581	SLD 11	-2.6	-3.24	63.35	-0.0746	0.0063	0.0275
581	SLD 12	-2.6	-3.73	63.39	-0.0679	0.0065	0.0344
581	SLD 13	-5.26	2.04	50.02	0.0348	-0.0209	-0.0284
581	SLD 14	-5.26	1.29	50.07	0.0449	-0.0207	-0.0178
581	SLD 15	-5.48	-0.13	50.91	0.0066	-0.019	-0.0052
581	SLD 16	-5.49	-0.88	50.96	0.0167	-0.0188	0.0054
581	SLV 1	9.92	1.73	103.77	-0.1921	0.088	-0.0321
581	SLV 2	9.92	-0.01	103.89	-0.1685	0.0885	-0.0075
581	SLV 3	9.4	-3.17	105.85	-0.2569	0.0924	0.0205
581	SLV 4	9.39	-4.91	105.97	-0.2333	0.0928	0.045
581	SLV 5	3.16	8.2	74.7	0.0047	0.0289	-0.0978
581	SLV 6	3.16	7.08	74.78	0.0199	0.0292	-0.082
581	SLV 7	1.41	-8.13	81.62	-0.2114	0.0434	0.0773
581	SLV 8	1.41	-9.25	81.7	-0.1962	0.0437	0.0931
581	SLV 9	-3.15	9.11	51.84	0.1049	-0.0174	-0.1053
581	SLV 10	-3.15	7.99	51.92	0.1201	-0.0171	-0.0896
581	SLV 11	-4.9	-7.22	58.76	-0.1111	-0.0029	0.0698
581	SLV 12	-4.91	-8.34	58.84	-0.0959	-0.0026	0.0856
581	SLV 13	-11.13	4.77	27.57	0.142	-0.0665	-0.0572
581	SLV 14	-11.14	3.03	27.69	0.1656	-0.0661	-0.0327
581	SLV 15	-11.66	-0.13	29.65	0.0772	-0.0622	-0.0047
581	SLV 16	-11.66	-1.87	29.77	0.1008	-0.0617	0.0199

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
581	CRTFP Ux+	0	0	0	0	0	0
581	CRTFP Ux-	0	0	0	0	0	0
581	CRTFP Uy+	0	0	0	0	0	0
581	CRTFP Uy-	0	0	0	0	0	0
582	SLU 1	-0.84	-0.15	62.1	-0.049	0.0132	-0.0081
582	SLU 2	-0.84	-0.26	62.11	-0.0486	0.0132	-0.0066
582	SLU 3	-0.86	-0.15	63.58	-0.0491	0.0135	-0.0084
582	SLU 4	-0.86	-0.21	63.59	-0.0489	0.0136	-0.0075
582	SLU 5	-0.86	-0.26	63.04	-0.0485	0.0135	-0.0069
582	SLU 6	-0.88	-0.14	64.5	-0.0489	0.0138	-0.0086
582	SLU 7	-0.88	-0.21	64.51	-0.0487	0.0138	-0.0077
582	SLU 8	-0.87	-0.14	63.95	-0.0486	0.0137	-0.0085
582	SLU 9	-0.87	-0.21	63.96	-0.0484	0.0137	-0.0077
582	SLU 10	-0.86	-0.2	69.5	-0.0516	0.0133	-0.0087
582	SLU 11	-0.88	-0.08	70.96	-0.0521	0.0136	-0.0104
582	SLU 12	-0.88	-0.15	70.97	-0.0519	0.0136	-0.0095
582	SLU 13	-0.88	-0.19	70.42	-0.0515	0.0135	-0.0089
582	SLU 14	-0.9	-0.08	71.89	-0.0519	0.0139	-0.0106
582	SLU 15	-0.9	-0.14	71.9	-0.0517	0.0139	-0.0097
582	SLU 16	-0.89	-0.08	71.34	-0.0516	0.0138	-0.0105
582	SLU 17	-0.89	-0.14	71.34	-0.0514	0.0138	-0.0097
582	SLU 18	-0.87	-0.06	72.65	-0.0533	0.0133	-0.011
582	SLU 19	-0.87	-0.13	72.66	-0.0531	0.0133	-0.0101
582	SLU 20	-0.88	-0.05	73.58	-0.0531	0.0135	-0.0112
582	SLU 21	-0.88	-0.12	73.58	-0.0529	0.0135	-0.0103
582	SLU 22	-0.9	-0.06	69.49	-0.0452	0.0138	-0.0099
582	SLU 23	-0.9	-0.17	69.5	-0.0449	0.0138	-0.0085
582	SLU 24	-0.92	-0.06	70.97	-0.0453	0.0141	-0.0102
582	SLU 25	-0.92	-0.12	70.97	-0.0451	0.0141	-0.0093
582	SLU 26	-0.92	-0.17	70.43	-0.0447	0.014	-0.0087
582	SLU 27	-0.94	-0.05	71.89	-0.0452	0.0144	-0.0104
582	SLU 28	-0.94	-0.12	71.9	-0.045	0.0144	-0.0095
582	SLU 29	-0.93	-0.05	71.34	-0.0449	0.0143	-0.0103
582	SLU 30	-0.93	-0.12	71.35	-0.0447	0.0143	-0.0095
582	SLU 31	-0.92	-0.11	76.89	-0.0479	0.0139	-0.0105
582	SLU 32	-0.94	0.01	78.35	-0.0483	0.0142	-0.0122
582	SLU 33	-0.94	-0.06	78.36	-0.0482	0.0142	-0.0113
582	SLU 34	-0.94	-0.1	77.81	-0.0477	0.0141	-0.0107
582	SLU 35	-0.96	0.01	79.28	-0.0482	0.0145	-0.0124
582	SLU 36	-0.96	-0.05	79.29	-0.048	0.0145	-0.0115
582	SLU 37	-0.95	0.01	78.73	-0.0479	0.0143	-0.0124
582	SLU 38	-0.95	-0.05	78.73	-0.0477	0.0144	-0.0115
582	SLU 39	-0.93	0.03	80.04	-0.0495	0.0139	-0.0128
582	SLU 40	-0.93	-0.03	80.05	-0.0493	0.0139	-0.0119
582	SLU 41	-0.94	0.04	80.97	-0.0494	0.0141	-0.013
582	SLU 42	-0.95	-0.03	80.97	-0.0492	0.0141	-0.0121
582	SLU 43	-1.07	-0.23	78.2	-0.0649	0.0169	-0.0099
582	SLU 44	-1.07	-0.34	78.21	-0.0646	0.0169	-0.0085
582	SLU 45	-1.09	-0.22	79.67	-0.065	0.0173	-0.0102
582	SLU 46	-1.09	-0.29	79.68	-0.0648	0.0173	-0.0093
582	SLU 47	-1.09	-0.34	79.13	-0.0644	0.0172	-0.0087
582	SLU 48	-1.11	-0.22	80.6	-0.0649	0.0175	-0.0104
582	SLU 49	-1.11	-0.29	80.61	-0.0647	0.0176	-0.0095
582	SLU 50	-1.1	-0.22	80.05	-0.0646	0.0174	-0.0103
582	SLU 51	-1.1	-0.29	80.06	-0.0644	0.0174	-0.0095
582	SLU 52	-1.09	-0.28	85.59	-0.0676	0.017	-0.0105
582	SLU 53	-1.11	-0.16	87.06	-0.0681	0.0174	-0.0122
582	SLU 54	-1.11	-0.22	87.07	-0.0679	0.0174	-0.0113
582	SLU 55	-1.11	-0.27	86.52	-0.0674	0.0173	-0.0107
582	SLU 56	-1.13	-0.15	87.99	-0.0679	0.0176	-0.0124
582	SLU 57	-1.13	-0.22	87.99	-0.0677	0.0176	-0.0115
582	SLU 58	-1.12	-0.15	87.43	-0.0676	0.0175	-0.0123
582	SLU 59	-1.12	-0.22	87.44	-0.0674	0.0175	-0.0115
582	SLU 60	-1.1	-0.14	88.75	-0.0692	0.017	-0.0128
582	SLU 61	-1.1	-0.2	88.75	-0.069	0.017	-0.0119
582	SLU 62	-1.11	-0.13	89.67	-0.0691	0.0173	-0.013
582	SLU 63	-1.11	-0.2	89.68	-0.0689	0.0173	-0.0121
582	SLU 64	-1.13	-0.14	85.58	-0.0612	0.0175	-0.0117
582	SLU 65	-1.13	-0.25	85.6	-0.0609	0.0175	-0.0103
582	SLU 66	-1.15	-0.13	87.06	-0.0613	0.0179	-0.012
582	SLU 67	-1.15	-0.2	87.07	-0.0611	0.0179	-0.0111
582	SLU 68	-1.15	-0.25	86.52	-0.0607	0.0178	-0.0105
582	SLU 69	-1.17	-0.13	87.99	-0.0611	0.0181	-0.0122
582	SLU 70	-1.17	-0.2	88	-0.0609	0.0182	-0.0113
582	SLU 71	-1.16	-0.13	87.44	-0.0608	0.018	-0.0121
582	SLU 72	-1.16	-0.2	87.44	-0.0606	0.018	-0.0113
582	SLU 73	-1.15	-0.18	92.98	-0.0639	0.0176	-0.0123
582	SLU 74	-1.17	-0.07	94.45	-0.0643	0.0179	-0.014
582	SLU 75	-1.17	-0.13	94.46	-0.0641	0.018	-0.0131
582	SLU 76	-1.17	-0.18	93.91	-0.0637	0.0179	-0.0125
582	SLU 77	-1.19	-0.06	95.38	-0.0641	0.0182	-0.0142
582	SLU 78	-1.19	-0.13	95.38	-0.064	0.0182	-0.0133
582	SLU 79	-1.18	-0.06	94.82	-0.0639	0.0181	-0.0142
582	SLU 80	-1.18	-0.13	94.83	-0.0637	0.0181	-0.0133
582	SLU 81	-1.16	-0.05	96.14	-0.0655	0.0176	-0.0146
582	SLU 82	-1.16	-0.11	96.14	-0.0653	0.0176	-0.0137
582	SLU 83	-1.17	-0.04	97.06	-0.0653	0.0179	-0.0148
582	SLU 84	-1.18	-0.11	97.07	-0.0651	0.0179	-0.0139
582	SLE RA 1	-0.86	-0.13	64.21	-0.0479	0.0133	-0.0086
582	SLE RA 2	-0.86	-0.2	64.22	-0.0477	0.0134	-0.0077
582	SLE RA 3	-0.87	-0.12	65.2	-0.048	0.0136	-0.0088
582	SLE RA 4	-0.87	-0.17	65.2	-0.0478	0.0136	-0.0082
582	SLE RA 5	-0.87	-0.2	64.84	-0.0476	0.0135	-0.0078
582	SLE RA 6	-0.88	-0.12	65.81	-0.0478	0.0138	-0.0089
582	SLE RA 7	-0.88	-0.16	65.82	-0.0477	0.0138	-0.0084
582	SLE RA 8	-0.88	-0.12	65.44	-0.0477	0.0137	-0.0089
582	SLE RA 9	-0.88	-0.17	65.45	-0.0475	0.0137	-0.0083

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
582	SLE RA 10	-0.87	-0.16	69.14	-0.0497	0.0134	-0.009
582	SLE RA 11	-0.88	-0.08	70.12	-0.05	0.0136	-0.0101
582	SLE RA 12	-0.88	-0.12	70.13	-0.0498	0.0136	-0.0096
582	SLE RA 13	-0.88	-0.15	69.76	-0.0496	0.0136	-0.0091
582	SLE RA 14	-0.89	-0.08	70.74	-0.0499	0.0138	-0.0103
582	SLE RA 15	-0.9	-0.12	70.74	-0.0497	0.0138	-0.0097
582	SLE RA 16	-0.89	-0.08	70.37	-0.0497	0.0137	-0.0102
582	SLE RA 17	-0.89	-0.12	70.37	-0.0495	0.0137	-0.0097
582	SLE RA 18	-0.88	-0.06	71.24	-0.0508	0.0134	-0.0105
582	SLE RA 19	-0.88	-0.11	71.25	-0.0506	0.0134	-0.01
582	SLE RA 20	-0.89	-0.06	71.86	-0.0506	0.0136	-0.0107
582	SLE RA 21	-0.89	-0.11	71.87	-0.0505	0.0136	-0.0101
582	SLE FR 1	-0.86	-0.13	64.21	-0.0479	0.0133	-0.0086
582	SLE FR 2	-0.86	-0.14	64.21	-0.0478	0.0133	-0.0084
582	SLE FR 3	-0.86	-0.13	64.46	-0.0478	0.0134	-0.0087
582	SLE FR 4	-0.86	-0.12	66.32	-0.0487	0.0134	-0.009
582	SLE FR 5	-0.87	-0.11	66.57	-0.0487	0.0134	-0.0092
582	SLE FR 6	-0.87	-0.1	67.73	-0.0493	0.0134	-0.0096
582	SLE QP 1	-0.86	-0.13	64.21	-0.0479	0.0133	-0.0086
582	SLE QP 2	-0.86	-0.11	66.32	-0.0487	0.0133	-0.0092
582	SLD 1	3.76	0.63	81.88	-0.1129	0.045	-0.0203
582	SLD 2	3.76	-0.07	81.93	-0.1028	0.0451	-0.0101
582	SLD 3	3.53	-1.42	81.03	-0.143	0.0467	0.0024
582	SLD 4	3.53	-2.12	81.07	-0.1329	0.0468	0.0125
582	SLD 5	0.87	3.35	72.28	-0.0241	0.0202	-0.0486
582	SLD 6	0.87	2.89	72.31	-0.0176	0.0203	-0.042
582	SLD 7	0.11	-3.49	69.43	-0.1244	0.026	0.0268
582	SLD 8	0.11	-3.95	69.46	-0.1179	0.0261	0.0334
582	SLD 9	-1.84	3.73	63.18	0.0204	0.0006	-0.0518
582	SLD 10	-1.84	3.27	63.21	0.0269	0.0007	-0.0452
582	SLD 11	-2.59	-3.11	60.33	-0.0799	0.0064	0.0236
582	SLD 12	-2.59	-3.57	60.36	-0.0734	0.0065	0.0302
582	SLD 13	-5.26	1.9	51.57	0.0354	-0.0201	-0.0309
582	SLD 14	-5.26	1.2	51.61	0.0455	-0.02	-0.0207
582	SLD 15	-5.48	-0.15	50.71	0.0054	-0.0184	-0.0083
582	SLD 16	-5.48	-0.85	50.76	0.0154	-0.0183	0.0019
582	SLV 1	9.95	1.54	102.74	-0.1994	0.0874	-0.0342
582	SLV 2	9.94	-0.09	102.85	-0.1761	0.0877	-0.0105
582	SLV 3	9.42	-3.11	100.74	-0.2685	0.0915	0.017
582	SLV 4	9.42	-4.73	100.85	-0.2452	0.0918	0.0408
582	SLV 5	3.18	7.7	80.26	0.0068	0.0294	-0.0985
582	SLV 6	3.18	6.66	80.33	0.0219	0.0296	-0.0832
582	SLV 7	1.43	-7.77	73.6	-0.2235	0.0429	0.0723
582	SLV 8	1.42	-8.81	73.67	-0.2085	0.0431	0.0876
582	SLV 9	-3.15	8.6	58.97	0.111	-0.0164	-0.1059
582	SLV 10	-3.15	7.55	59.04	0.126	-0.0162	-0.0907
582	SLV 11	-4.9	-6.88	52.31	-0.1194	-0.0029	0.0648
582	SLV 12	-4.9	-7.92	52.38	-0.1043	-0.0027	0.0801
582	SLV 13	-11.14	4.51	31.79	0.1477	-0.0651	-0.0591
582	SLV 14	-11.15	2.89	31.9	0.1711	-0.0648	-0.0354
582	SLV 15	-11.67	-0.13	29.79	0.0786	-0.061	-0.0079
582	SLV 16	-11.67	-1.75	29.9	0.102	-0.0607	0.0158
582	CRTFP Ux+	0	0	0	0	0	0
582	CRTFP Ux-	0	0	0	0	0	0
582	CRTFP Uy+	0	0	0	0	0	0
582	CRTFP Uy-	0	0	0	0	0	0
583	SLU 1	-0.83	-0.2	61.63	-0.0523	0.0144	-0.0104
583	SLU 2	-0.83	-0.3	61.64	-0.052	0.0144	-0.009
583	SLU 3	-0.85	-0.2	63.09	-0.0524	0.0147	-0.0107
583	SLU 4	-0.85	-0.26	63.1	-0.0523	0.0148	-0.0099
583	SLU 5	-0.84	-0.3	62.56	-0.0518	0.0146	-0.0093
583	SLU 6	-0.86	-0.19	64.01	-0.0523	0.015	-0.011
583	SLU 7	-0.86	-0.25	64.02	-0.0521	0.015	-0.0101
583	SLU 8	-0.86	-0.19	63.46	-0.052	0.0149	-0.0109
583	SLU 9	-0.86	-0.26	63.47	-0.0518	0.0149	-0.0101
583	SLU 10	-0.85	-0.25	69.02	-0.0552	0.0147	-0.0112
583	SLU 11	-0.87	-0.14	70.47	-0.0557	0.0151	-0.0129
583	SLU 12	-0.87	-0.2	70.48	-0.0555	0.0151	-0.0121
583	SLU 13	-0.86	-0.24	69.94	-0.0551	0.015	-0.0115
583	SLU 14	-0.88	-0.14	71.39	-0.0555	0.0153	-0.0132
583	SLU 15	-0.88	-0.2	71.4	-0.0553	0.0154	-0.0124
583	SLU 16	-0.88	-0.14	70.84	-0.0552	0.0152	-0.0131
583	SLU 17	-0.88	-0.2	70.85	-0.055	0.0152	-0.0123
583	SLU 18	-0.85	-0.12	72.17	-0.0569	0.0148	-0.0136
583	SLU 19	-0.85	-0.18	72.18	-0.0567	0.0148	-0.0127
583	SLU 20	-0.87	-0.12	73.09	-0.0567	0.0151	-0.0138
583	SLU 21	-0.87	-0.18	73.09	-0.0566	0.0151	-0.013
583	SLU 22	-0.89	-0.12	68.99	-0.0484	0.0152	-0.0124
583	SLU 23	-0.89	-0.22	69	-0.0482	0.0152	-0.011
583	SLU 24	-0.91	-0.11	70.46	-0.0486	0.0156	-0.0127
583	SLU 25	-0.91	-0.18	70.47	-0.0484	0.0156	-0.0119
583	SLU 26	-0.91	-0.22	69.92	-0.048	0.0155	-0.0112
583	SLU 27	-0.93	-0.11	71.38	-0.0484	0.0158	-0.0129
583	SLU 28	-0.93	-0.17	71.38	-0.0482	0.0159	-0.0121
583	SLU 29	-0.92	-0.11	70.83	-0.0481	0.0157	-0.0129
583	SLU 30	-0.92	-0.17	70.83	-0.0479	0.0157	-0.012
583	SLU 31	-0.91	-0.17	76.38	-0.0514	0.0155	-0.0132
583	SLU 32	-0.93	-0.06	77.84	-0.0518	0.0159	-0.0149
583	SLU 33	-0.93	-0.12	77.85	-0.0516	0.0159	-0.0141
583	SLU 34	-0.92	-0.16	77.3	-0.0512	0.0158	-0.0135
583	SLU 35	-0.94	-0.05	78.76	-0.0516	0.0162	-0.0151
583	SLU 36	-0.95	-0.12	78.76	-0.0515	0.0162	-0.0143
583	SLU 37	-0.94	-0.06	78.21	-0.0513	0.016	-0.0151
583	SLU 38	-0.94	-0.12	78.21	-0.0512	0.0161	-0.0143
583	SLU 39	-0.92	-0.04	79.54	-0.053	0.0156	-0.0155
583	SLU 40	-0.92	-0.1	79.54	-0.0529	0.0157	-0.0147
583	SLU 41	-0.93	-0.04	80.45	-0.0529	0.0159	-0.0158

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
583	SLU 42	-0.93	-0.1	80.46	-0.0527	0.0159	-0.015
583	SLU 43	-1.05	-0.29	77.59	-0.0693	0.0184	-0.0129
583	SLU 44	-1.06	-0.39	77.6	-0.069	0.0184	-0.0115
583	SLU 45	-1.07	-0.28	79.06	-0.0694	0.0188	-0.0132
583	SLU 46	-1.08	-0.35	79.06	-0.0693	0.0188	-0.0123
583	SLU 47	-1.07	-0.39	78.52	-0.0689	0.0187	-0.0117
583	SLU 48	-1.09	-0.28	79.98	-0.0693	0.019	-0.0134
583	SLU 49	-1.09	-0.34	79.98	-0.0691	0.0191	-0.0126
583	SLU 50	-1.08	-0.28	79.43	-0.069	0.0189	-0.0134
583	SLU 51	-1.09	-0.34	79.43	-0.0688	0.0189	-0.0125
583	SLU 52	-1.07	-0.34	84.98	-0.0723	0.0187	-0.0137
583	SLU 53	-1.09	-0.23	86.44	-0.0727	0.0191	-0.0154
583	SLU 54	-1.09	-0.29	86.44	-0.0725	0.0191	-0.0146
583	SLU 55	-1.09	-0.33	85.9	-0.0721	0.019	-0.0139
583	SLU 56	-1.11	-0.22	87.35	-0.0725	0.0194	-0.0156
583	SLU 57	-1.11	-0.29	87.36	-0.0723	0.0194	-0.0148
583	SLU 58	-1.1	-0.22	86.81	-0.0722	0.0192	-0.0156
583	SLU 59	-1.1	-0.29	86.81	-0.072	0.0193	-0.0147
583	SLU 60	-1.08	-0.21	88.13	-0.0739	0.0189	-0.016
583	SLU 61	-1.08	-0.27	88.14	-0.0737	0.0189	-0.0152
583	SLU 62	-1.1	-0.2	89.05	-0.0737	0.0191	-0.0163
583	SLU 63	-1.1	-0.27	89.06	-0.0736	0.0191	-0.0154
583	SLU 64	-1.12	-0.21	84.96	-0.0655	0.0192	-0.0148
583	SLU 65	-1.12	-0.31	84.97	-0.0652	0.0192	-0.0134
583	SLU 66	-1.14	-0.2	86.42	-0.0656	0.0196	-0.0151
583	SLU 67	-1.14	-0.26	86.43	-0.0654	0.0196	-0.0143
583	SLU 68	-1.13	-0.31	85.89	-0.065	0.0195	-0.0137
583	SLU 69	-1.15	-0.2	87.34	-0.0654	0.0199	-0.0154
583	SLU 70	-1.15	-0.26	87.35	-0.0652	0.0199	-0.0146
583	SLU 71	-1.15	-0.2	86.79	-0.0651	0.0197	-0.0153
583	SLU 72	-1.15	-0.26	86.8	-0.0649	0.0197	-0.0145
583	SLU 73	-1.14	-0.26	92.35	-0.0684	0.0196	-0.0157
583	SLU 74	-1.16	-0.15	93.8	-0.0688	0.0199	-0.0174
583	SLU 75	-1.16	-0.21	93.81	-0.0686	0.0199	-0.0165
583	SLU 76	-1.15	-0.25	93.26	-0.0682	0.0198	-0.0159
583	SLU 77	-1.17	-0.14	94.72	-0.0686	0.0202	-0.0176
583	SLU 78	-1.17	-0.2	94.73	-0.0685	0.0202	-0.0168
583	SLU 79	-1.17	-0.14	94.17	-0.0683	0.0201	-0.0175
583	SLU 80	-1.17	-0.21	94.18	-0.0682	0.0201	-0.0167
583	SLU 81	-1.14	-0.13	95.5	-0.0701	0.0197	-0.018
583	SLU 82	-1.14	-0.19	95.51	-0.0699	0.0197	-0.0172
583	SLU 83	-1.16	-0.12	96.42	-0.0699	0.0199	-0.0182
583	SLU 84	-1.16	-0.19	96.42	-0.0697	0.02	-0.0174
583	SLE RA 1	-0.84	-0.18	63.73	-0.0512	0.0146	-0.011
583	SLE RA 2	-0.85	-0.25	63.74	-0.051	0.0146	-0.0101
583	SLE RA 3	-0.86	-0.17	64.71	-0.0513	0.0148	-0.0112
583	SLE RA 4	-0.86	-0.22	64.71	-0.0512	0.0149	-0.0106
583	SLE RA 5	-0.86	-0.24	64.35	-0.0509	0.0148	-0.0102
583	SLE RA 6	-0.87	-0.17	65.32	-0.0512	0.015	-0.0113
583	SLE RA 7	-0.87	-0.21	65.33	-0.0511	0.015	-0.0108
583	SLE RA 8	-0.87	-0.17	64.96	-0.051	0.0149	-0.0113
583	SLE RA 9	-0.87	-0.21	64.96	-0.0509	0.015	-0.0108
583	SLE RA 10	-0.86	-0.21	68.66	-0.0532	0.0148	-0.0115
583	SLE RA 11	-0.87	-0.14	69.63	-0.0534	0.0151	-0.0127
583	SLE RA 12	-0.87	-0.18	69.63	-0.0533	0.0151	-0.0121
583	SLE RA 13	-0.87	-0.21	69.27	-0.053	0.015	-0.0117
583	SLE RA 14	-0.88	-0.13	70.24	-0.0533	0.0153	-0.0128
583	SLE RA 15	-0.88	-0.18	70.25	-0.0532	0.0153	-0.0123
583	SLE RA 16	-0.88	-0.13	69.88	-0.0531	0.0152	-0.0128
583	SLE RA 17	-0.88	-0.18	69.88	-0.053	0.0152	-0.0122
583	SLE RA 18	-0.86	-0.12	70.76	-0.0543	0.0149	-0.0131
583	SLE RA 19	-0.86	-0.17	70.77	-0.0542	0.0149	-0.0125
583	SLE RA 20	-0.87	-0.12	71.37	-0.0542	0.0151	-0.0132
583	SLE RA 21	-0.87	-0.16	71.38	-0.054	0.0151	-0.0127
583	SLE FR 1	-0.84	-0.18	63.73	-0.0512	0.0146	-0.011
583	SLE FR 2	-0.84	-0.19	63.73	-0.0512	0.0146	-0.0108
583	SLE FR 3	-0.85	-0.18	63.98	-0.0511	0.0147	-0.011
583	SLE FR 4	-0.85	-0.17	65.84	-0.0521	0.0147	-0.0114
583	SLE FR 5	-0.85	-0.16	66.09	-0.0521	0.0148	-0.0117
583	SLE FR 6	-0.85	-0.15	67.25	-0.0527	0.0147	-0.012
583	SLE QP 1	-0.84	-0.18	63.73	-0.0512	0.0146	-0.011
583	SLE QP 2	-0.85	-0.16	65.84	-0.0521	0.0147	-0.0116
583	SLD 1	3.78	0.51	80.28	-0.1182	0.0462	-0.0324
583	SLD 2	3.78	-0.14	80.32	-0.1083	0.0463	-0.0228
583	SLD 3	3.55	-1.44	79.46	-0.1503	0.0479	-0.0112
583	SLD 4	3.55	-2.09	79.5	-0.1403	0.048	-0.0015
583	SLD 5	0.88	3.1	71.41	-0.0251	0.0216	-0.0518
583	SLD 6	0.88	2.68	71.44	-0.0186	0.0217	-0.0455
583	SLD 7	0.13	-3.38	68.67	-0.1319	0.0271	0.0191
583	SLD 8	0.13	-3.8	68.7	-0.1254	0.0272	0.0253
583	SLD 9	-1.83	3.48	62.98	0.0212	0.0022	-0.0486
583	SLD 10	-1.83	3.06	63.01	0.0277	0.0022	-0.0423
583	SLD 11	-2.58	-3	60.24	-0.0856	0.0077	0.0223
583	SLD 12	-2.58	-3.42	60.27	-0.0791	0.0077	0.0286
583	SLD 13	-5.25	1.76	52.18	0.0361	-0.0186	-0.0217
583	SLD 14	-5.25	1.12	52.23	0.046	-0.0185	-0.012
583	SLD 15	-5.48	-0.18	51.36	0.0041	-0.017	-0.0004
583	SLD 16	-5.48	-0.83	51.41	0.014	-0.0169	0.0092
583	SLV 1	9.98	1.32	99.63	-0.2075	0.0886	-0.0595
583	SLV 2	9.97	-0.19	99.73	-0.1843	0.0888	-0.0371
583	SLV 3	9.45	-3.08	97.71	-0.281	0.0924	-0.0113
583	SLV 4	9.45	-4.59	97.81	-0.2579	0.0926	0.0111
583	SLV 5	3.2	7.21	78.87	0.0088	0.031	-0.1028
583	SLV 6	3.19	6.24	78.93	0.0237	0.0311	-0.0884
583	SLV 7	1.45	-7.45	72.47	-0.2363	0.0438	0.0577
583	SLV 8	1.44	-8.42	72.54	-0.2214	0.0439	0.0721
583	SLV 9	-3.14	8.1	59.14	0.1172	-0.0146	-0.0953

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
583	SLV 10	-3.15	7.12	59.21	0.132	-0.0144	-0.0809
583	SLV 11	-4.89	-6.56	52.75	-0.1279	-0.0018	0.0652
583	SLV 12	-4.9	-7.53	52.81	-0.1131	-0.0016	0.0796
583	SLV 13	-11.15	4.27	33.88	0.1537	-0.0633	-0.0343
583	SLV 14	-11.15	2.75	33.98	0.1768	-0.0631	-0.0119
583	SLV 15	-11.67	-0.13	31.96	0.0801	-0.0594	0.0138
583	SLV 16	-11.68	-1.64	32.06	0.1032	-0.0592	0.0363
583	CRTFP Ux+	0	0	0	0	0	0
583	CRTFP Ux-	0	0	0	0	0	0
583	CRTFP Uy+	0	0	0	0	0	0
583	CRTFP Uy-	0	0	0	0	0	0
584	SLU 1	-0.81	-0.26	61.11	-0.0559	0.0159	-0.0122
584	SLU 2	-0.81	-0.35	61.12	-0.0557	0.0159	-0.0109
584	SLU 3	-0.83	-0.25	62.56	-0.0561	0.0163	-0.0125
584	SLU 4	-0.83	-0.31	62.57	-0.056	0.0163	-0.0117
584	SLU 5	-0.83	-0.35	62.03	-0.0556	0.0162	-0.0111
584	SLU 6	-0.85	-0.25	63.47	-0.0559	0.0166	-0.0128
584	SLU 7	-0.85	-0.31	63.48	-0.0558	0.0166	-0.012
584	SLU 8	-0.84	-0.25	62.93	-0.0556	0.0165	-0.0127
584	SLU 9	-0.84	-0.31	62.93	-0.0555	0.0165	-0.0119
584	SLU 10	-0.83	-0.31	68.48	-0.0592	0.0166	-0.0132
584	SLU 11	-0.85	-0.21	69.93	-0.0596	0.017	-0.0148
584	SLU 12	-0.85	-0.27	69.93	-0.0594	0.017	-0.014
584	SLU 13	-0.85	-0.31	69.39	-0.059	0.0169	-0.0134
584	SLU 14	-0.87	-0.21	70.83	-0.0594	0.0172	-0.0151
584	SLU 15	-0.87	-0.27	70.84	-0.0593	0.0173	-0.0143
584	SLU 16	-0.86	-0.21	70.29	-0.0591	0.0171	-0.015
584	SLU 17	-0.86	-0.27	70.29	-0.0589	0.0171	-0.0142
584	SLU 18	-0.84	-0.19	71.63	-0.0609	0.0168	-0.0155
584	SLU 19	-0.84	-0.25	71.63	-0.0608	0.0168	-0.0147
584	SLU 20	-0.85	-0.19	72.54	-0.0607	0.0171	-0.0157
584	SLU 21	-0.85	-0.25	72.54	-0.0606	0.0171	-0.0149
584	SLU 22	-0.87	-0.18	68.44	-0.052	0.017	-0.0142
584	SLU 23	-0.87	-0.28	68.45	-0.0518	0.017	-0.0129
584	SLU 24	-0.89	-0.18	69.89	-0.0522	0.0174	-0.0145
584	SLU 25	-0.89	-0.24	69.9	-0.052	0.0174	-0.0137
584	SLU 26	-0.89	-0.28	69.36	-0.0516	0.0173	-0.0131
584	SLU 27	-0.91	-0.18	70.8	-0.052	0.0177	-0.0148
584	SLU 28	-0.91	-0.24	70.81	-0.0519	0.0177	-0.014
584	SLU 29	-0.9	-0.18	70.26	-0.0517	0.0176	-0.0147
584	SLU 30	-0.9	-0.24	70.26	-0.0515	0.0176	-0.0139
584	SLU 31	-0.89	-0.24	75.82	-0.0552	0.0177	-0.0152
584	SLU 32	-0.91	-0.14	77.26	-0.0556	0.0181	-0.0168
584	SLU 33	-0.91	-0.2	77.26	-0.0555	0.0181	-0.016
584	SLU 34	-0.91	-0.24	76.72	-0.0551	0.018	-0.0155
584	SLU 35	-0.93	-0.14	78.16	-0.0555	0.0184	-0.0171
584	SLU 36	-0.93	-0.19	78.17	-0.0553	0.0184	-0.0163
584	SLU 37	-0.92	-0.14	77.62	-0.0551	0.0182	-0.017
584	SLU 38	-0.92	-0.19	77.63	-0.055	0.0182	-0.0162
584	SLU 39	-0.9	-0.12	78.96	-0.0569	0.0179	-0.0175
584	SLU 40	-0.9	-0.18	78.97	-0.0568	0.0179	-0.0167
584	SLU 41	-0.91	-0.12	79.87	-0.0568	0.0182	-0.0177
584	SLU 42	-0.91	-0.18	79.87	-0.0566	0.0182	-0.017
584	SLU 43	-1.03	-0.36	76.93	-0.0741	0.0203	-0.0151
584	SLU 44	-1.04	-0.46	76.94	-0.0739	0.0203	-0.0138
584	SLU 45	-1.05	-0.35	78.38	-0.0742	0.0207	-0.0154
584	SLU 46	-1.06	-0.41	78.39	-0.0741	0.0207	-0.0147
584	SLU 47	-1.05	-0.45	77.85	-0.0737	0.0206	-0.0141
584	SLU 48	-1.07	-0.35	79.29	-0.0741	0.021	-0.0157
584	SLU 49	-1.07	-0.41	79.3	-0.0739	0.021	-0.0149
584	SLU 50	-1.06	-0.35	78.75	-0.0737	0.0208	-0.0156
584	SLU 51	-1.07	-0.41	78.75	-0.0736	0.0209	-0.0149
584	SLU 52	-1.05	-0.41	84.3	-0.0773	0.021	-0.0161
584	SLU 53	-1.07	-0.31	85.74	-0.0777	0.0214	-0.0178
584	SLU 54	-1.07	-0.37	85.75	-0.0776	0.0214	-0.017
584	SLU 55	-1.07	-0.41	85.21	-0.0771	0.0212	-0.0164
584	SLU 56	-1.09	-0.31	86.65	-0.0775	0.0216	-0.018
584	SLU 57	-1.09	-0.37	86.66	-0.0774	0.0216	-0.0173
584	SLU 58	-1.08	-0.31	86.11	-0.0772	0.0215	-0.018
584	SLU 59	-1.08	-0.37	86.11	-0.0771	0.0215	-0.0172
584	SLU 60	-1.06	-0.29	87.45	-0.079	0.0212	-0.0184
584	SLU 61	-1.06	-0.35	87.45	-0.0789	0.0212	-0.0176
584	SLU 62	-1.08	-0.29	88.36	-0.0789	0.0215	-0.0187
584	SLU 63	-1.08	-0.35	88.36	-0.0787	0.0215	-0.0179
584	SLU 64	-1.1	-0.29	84.26	-0.0701	0.0214	-0.0171
584	SLU 65	-1.1	-0.38	84.27	-0.0699	0.0214	-0.0158
584	SLU 66	-1.12	-0.28	85.71	-0.0703	0.0218	-0.0175
584	SLU 67	-1.12	-0.34	85.72	-0.0702	0.0218	-0.0167
584	SLU 68	-1.11	-0.38	85.18	-0.0697	0.0217	-0.0161
584	SLU 69	-1.13	-0.28	86.62	-0.0701	0.0221	-0.0177
584	SLU 70	-1.13	-0.34	86.63	-0.07	0.0221	-0.017
584	SLU 71	-1.13	-0.28	86.08	-0.0698	0.0219	-0.0177
584	SLU 72	-1.13	-0.34	86.08	-0.0697	0.022	-0.0169
584	SLU 73	-1.12	-0.34	91.63	-0.0734	0.0221	-0.0181
584	SLU 74	-1.13	-0.24	93.08	-0.0738	0.0225	-0.0198
584	SLU 75	-1.14	-0.3	93.08	-0.0736	0.0225	-0.019
584	SLU 76	-1.13	-0.34	92.54	-0.0732	0.0223	-0.0184
584	SLU 77	-1.15	-0.24	93.98	-0.0736	0.0227	-0.02
584	SLU 78	-1.15	-0.3	93.99	-0.0735	0.0228	-0.0193
584	SLU 79	-1.14	-0.24	93.44	-0.0733	0.0226	-0.02
584	SLU 80	-1.14	-0.3	93.45	-0.0731	0.0226	-0.0192
584	SLU 81	-1.12	-0.22	94.78	-0.0751	0.0223	-0.0204
584	SLU 82	-1.12	-0.28	94.79	-0.0749	0.0223	-0.0196
584	SLU 83	-1.14	-0.22	95.69	-0.0749	0.0226	-0.0207
584	SLU 84	-1.14	-0.28	95.69	-0.0748	0.0226	-0.0199
584	SLE RA 1	-0.83	-0.24	63.21	-0.0548	0.0162	-0.0127
584	SLE RA 2	-0.83	-0.3	63.21	-0.0547	0.0162	-0.0119

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
584	SLE RA 3	-0.84	-0.23	64.17	-0.0549	0.0165	-0.013
584	SLE RA 4	-0.84	-0.27	64.18	-0.0548	0.0165	-0.0124
584	SLE RA 5	-0.84	-0.3	63.82	-0.0546	0.0164	-0.0121
584	SLE RA 6	-0.85	-0.23	64.78	-0.0548	0.0167	-0.0131
584	SLE RA 7	-0.85	-0.27	64.78	-0.0547	0.0167	-0.0126
584	SLE RA 8	-0.85	-0.23	64.42	-0.0546	0.0166	-0.0131
584	SLE RA 9	-0.85	-0.27	64.42	-0.0545	0.0166	-0.0126
584	SLE RA 10	-0.84	-0.27	68.12	-0.057	0.0167	-0.0134
584	SLE RA 11	-0.86	-0.2	69.08	-0.0572	0.0169	-0.0145
584	SLE RA 12	-0.86	-0.24	69.09	-0.0571	0.0169	-0.014
584	SLE RA 13	-0.85	-0.27	68.73	-0.0569	0.0168	-0.0136
584	SLE RA 14	-0.87	-0.2	69.69	-0.0571	0.0171	-0.0147
584	SLE RA 15	-0.87	-0.24	69.69	-0.057	0.0171	-0.0142
584	SLE RA 16	-0.86	-0.2	69.32	-0.0569	0.017	-0.0146
584	SLE RA 17	-0.86	-0.24	69.33	-0.0568	0.017	-0.0141
584	SLE RA 18	-0.85	-0.19	70.22	-0.0581	0.0168	-0.0149
584	SLE RA 19	-0.85	-0.23	70.22	-0.058	0.0168	-0.0144
584	SLE RA 20	-0.86	-0.19	70.82	-0.058	0.017	-0.0151
584	SLE RA 21	-0.86	-0.23	70.83	-0.0579	0.017	-0.0146
584	SLE FR 1	-0.83	-0.24	63.21	-0.0548	0.0162	-0.0127
584	SLE FR 2	-0.83	-0.25	63.21	-0.0548	0.0162	-0.0126
584	SLE FR 3	-0.83	-0.24	63.45	-0.0548	0.0163	-0.0128
584	SLE FR 4	-0.83	-0.24	65.31	-0.0558	0.0164	-0.0132
584	SLE FR 5	-0.84	-0.22	65.55	-0.0558	0.0165	-0.0135
584	SLE FR 6	-0.84	-0.21	66.71	-0.0565	0.0165	-0.0138
584	SLE QP 1	-0.83	-0.24	63.21	-0.0548	0.0162	-0.0127
584	SLE QP 2	-0.83	-0.22	65.31	-0.0558	0.0164	-0.0134
584	SLD 1	3.8	0.37	78.62	-0.1241	0.0479	-0.0329
584	SLD 2	3.8	-0.23	78.66	-0.1142	0.048	-0.0239
584	SLD 3	3.58	-1.47	77.83	-0.1581	0.0495	-0.0136
584	SLD 4	3.58	-2.07	77.87	-0.1483	0.0496	-0.0047
584	SLD 5	0.9	2.86	70.49	-0.0264	0.0234	-0.05
584	SLD 6	0.9	2.47	70.51	-0.02	0.0235	-0.0442
584	SLD 7	0.15	-3.29	67.87	-0.1399	0.0287	0.0142
584	SLD 8	0.15	-3.68	67.89	-0.1334	0.0288	0.02
584	SLD 9	-1.82	3.24	62.72	0.0218	0.004	-0.0468
584	SLD 10	-1.82	2.84	62.75	0.0283	0.004	-0.041
584	SLD 11	-2.57	-2.91	60.11	-0.0916	0.0093	0.0174
584	SLD 12	-2.57	-3.31	60.13	-0.0852	0.0094	0.0233
584	SLD 13	-5.25	1.63	52.74	0.0367	-0.0168	-0.0221
584	SLD 14	-5.25	1.03	52.78	0.0465	-0.0167	-0.0132
584	SLD 15	-5.47	-0.22	51.96	0.0026	-0.0152	-0.0028
584	SLD 16	-5.47	-0.82	52	0.0125	-0.0151	0.0061
584	SLV 1	10.01	1.1	96.46	-0.2163	0.0902	-0.0582
584	SLV 2	10.01	-0.31	96.55	-0.1934	0.0903	-0.0374
584	SLV 3	9.49	-3.08	94.62	-0.2944	0.0939	-0.0145
584	SLV 4	9.49	-4.48	94.72	-0.2715	0.0941	0.0063
584	SLV 5	3.22	6.74	77.42	0.0106	0.0329	-0.0966
584	SLV 6	3.21	5.84	77.48	0.0253	0.033	-0.0833
584	SLV 7	1.47	-7.17	71.31	-0.2498	0.0453	0.049
584	SLV 8	1.47	-8.07	71.37	-0.2351	0.0454	0.0623
584	SLV 9	-3.13	7.62	59.25	0.1235	-0.0126	-0.0891
584	SLV 10	-3.14	6.72	59.31	0.1382	-0.0125	-0.0757
584	SLV 11	-4.88	-6.29	53.14	-0.1369	-0.0002	0.0565
584	SLV 12	-4.88	-7.19	53.2	-0.1222	-0.0001	0.0699
584	SLV 13	-11.15	4.03	35.9	0.1599	-0.0613	-0.033
584	SLV 14	-11.16	2.63	35.99	0.1828	-0.0612	-0.0122
584	SLV 15	-11.68	-0.14	34.06	0.0818	-0.0576	0.0106
584	SLV 16	-11.68	-1.54	34.16	0.1047	-0.0574	0.0314
584	CRTFP Ux+	0	0	0	0	0	0
584	CRTFP Ux-	0	0	0	0	0	0
584	CRTFP Uy+	0	0	0	0	0	0
584	CRTFP Uy-	0	0	0	0	0	0
585	SLU 1	-0.79	-0.32	60.54	-0.0599	0.0176	-0.0133
585	SLU 2	-0.79	-0.41	60.55	-0.0597	0.0176	-0.0122
585	SLU 3	-0.81	-0.32	61.97	-0.0601	0.0181	-0.0137
585	SLU 4	-0.81	-0.37	61.98	-0.06	0.0181	-0.013
585	SLU 5	-0.81	-0.41	61.44	-0.0596	0.0179	-0.0124
585	SLU 6	-0.83	-0.32	62.87	-0.06	0.0184	-0.0139
585	SLU 7	-0.83	-0.37	62.88	-0.0599	0.0184	-0.0133
585	SLU 8	-0.82	-0.32	62.33	-0.0596	0.0182	-0.0139
585	SLU 9	-0.82	-0.37	62.34	-0.0595	0.0182	-0.0132
585	SLU 10	-0.81	-0.38	67.88	-0.0635	0.0187	-0.0145
585	SLU 11	-0.83	-0.29	69.31	-0.0639	0.0191	-0.016
585	SLU 12	-0.83	-0.34	69.31	-0.0637	0.0191	-0.0153
585	SLU 13	-0.83	-0.38	68.78	-0.0633	0.0189	-0.0147
585	SLU 14	-0.85	-0.28	70.21	-0.0637	0.0194	-0.0163
585	SLU 15	-0.85	-0.34	70.21	-0.0636	0.0194	-0.0156
585	SLU 16	-0.84	-0.28	69.67	-0.0633	0.0192	-0.0162
585	SLU 17	-0.84	-0.34	69.67	-0.0632	0.0192	-0.0155
585	SLU 18	-0.82	-0.27	71.01	-0.0653	0.0191	-0.0166
585	SLU 19	-0.82	-0.33	71.02	-0.0652	0.0191	-0.0159
585	SLU 20	-0.83	-0.27	71.91	-0.0651	0.0194	-0.0169
585	SLU 21	-0.83	-0.33	71.92	-0.065	0.0194	-0.0162
585	SLU 22	-0.85	-0.26	67.83	-0.0559	0.019	-0.0153
585	SLU 23	-0.85	-0.35	67.84	-0.0557	0.0191	-0.0141
585	SLU 24	-0.87	-0.26	69.26	-0.0561	0.0195	-0.0156
585	SLU 25	-0.87	-0.31	69.27	-0.056	0.0195	-0.0149
585	SLU 26	-0.87	-0.35	68.73	-0.0556	0.0194	-0.0144
585	SLU 27	-0.89	-0.26	70.16	-0.056	0.0198	-0.0159
585	SLU 28	-0.89	-0.31	70.17	-0.0559	0.0198	-0.0152
585	SLU 29	-0.88	-0.26	69.62	-0.0556	0.0196	-0.0158
585	SLU 30	-0.88	-0.31	69.63	-0.0555	0.0196	-0.0151
585	SLU 31	-0.87	-0.32	75.17	-0.0595	0.0201	-0.0164
585	SLU 32	-0.89	-0.22	76.6	-0.0599	0.0205	-0.0179
585	SLU 33	-0.89	-0.28	76.6	-0.0597	0.0205	-0.0172
585	SLU 34	-0.89	-0.32	76.07	-0.0593	0.0204	-0.0167

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
585	SLU 35	-0.91	-0.22	77.49	-0.0597	0.0208	-0.0182
585	SLU 36	-0.91	-0.28	77.5	-0.0596	0.0208	-0.0175
585	SLU 37	-0.9	-0.22	76.96	-0.0593	0.0206	-0.0181
585	SLU 38	-0.9	-0.28	76.96	-0.0592	0.0207	-0.0174
585	SLU 39	-0.88	-0.21	78.3	-0.0613	0.0205	-0.0186
585	SLU 40	-0.88	-0.27	78.31	-0.0612	0.0205	-0.0179
585	SLU 41	-0.89	-0.21	79.2	-0.0611	0.0208	-0.0189
585	SLU 42	-0.89	-0.27	79.21	-0.061	0.0208	-0.0182
585	SLU 43	-1.01	-0.44	76.2	-0.0793	0.0224	-0.0166
585	SLU 44	-1.01	-0.53	76.21	-0.0791	0.0224	-0.0155
585	SLU 45	-1.03	-0.44	77.64	-0.0795	0.0228	-0.017
585	SLU 46	-1.03	-0.49	77.64	-0.0794	0.0229	-0.0163
585	SLU 47	-1.03	-0.53	77.11	-0.0789	0.0227	-0.0158
585	SLU 48	-1.05	-0.43	78.53	-0.0793	0.0231	-0.0173
585	SLU 49	-1.05	-0.49	78.54	-0.0792	0.0232	-0.0166
585	SLU 50	-1.04	-0.43	78	-0.079	0.023	-0.0172
585	SLU 51	-1.04	-0.49	78	-0.0789	0.023	-0.0165
585	SLU 52	-1.03	-0.5	83.54	-0.0828	0.0234	-0.0178
585	SLU 53	-1.05	-0.4	84.97	-0.0832	0.0239	-0.0193
585	SLU 54	-1.05	-0.46	84.98	-0.0831	0.0239	-0.0186
585	SLU 55	-1.04	-0.49	84.44	-0.0827	0.0237	-0.0181
585	SLU 56	-1.06	-0.4	85.87	-0.083	0.0242	-0.0196
585	SLU 57	-1.06	-0.46	85.87	-0.0829	0.0242	-0.0189
585	SLU 58	-1.06	-0.4	85.33	-0.0827	0.024	-0.0195
585	SLU 59	-1.06	-0.46	85.33	-0.0826	0.024	-0.0188
585	SLU 60	-1.04	-0.39	86.68	-0.0846	0.0239	-0.0199
585	SLU 61	-1.04	-0.45	86.68	-0.0845	0.0239	-0.0192
585	SLU 62	-1.05	-0.39	87.57	-0.0845	0.0241	-0.0202
585	SLU 63	-1.05	-0.44	87.58	-0.0843	0.0242	-0.0195
585	SLU 64	-1.07	-0.38	83.49	-0.0753	0.0238	-0.0186
585	SLU 65	-1.07	-0.47	83.5	-0.0751	0.0239	-0.0175
585	SLU 66	-1.09	-0.37	84.92	-0.0755	0.0243	-0.019
585	SLU 67	-1.09	-0.43	84.93	-0.0754	0.0243	-0.0183
585	SLU 68	-1.09	-0.47	84.4	-0.0749	0.0242	-0.0177
585	SLU 69	-1.11	-0.37	85.82	-0.0753	0.0246	-0.0192
585	SLU 70	-1.11	-0.43	85.83	-0.0752	0.0246	-0.0185
585	SLU 71	-1.1	-0.37	85.28	-0.075	0.0244	-0.0192
585	SLU 72	-1.1	-0.43	85.29	-0.0749	0.0244	-0.0185
585	SLU 73	-1.09	-0.43	90.83	-0.0788	0.0249	-0.0198
585	SLU 74	-1.11	-0.34	92.26	-0.0792	0.0253	-0.0213
585	SLU 75	-1.11	-0.4	92.26	-0.0791	0.0253	-0.0206
585	SLU 76	-1.1	-0.43	91.73	-0.0787	0.0252	-0.02
585	SLU 77	-1.12	-0.34	93.16	-0.079	0.0256	-0.0215
585	SLU 78	-1.12	-0.4	93.16	-0.0789	0.0256	-0.0208
585	SLU 79	-1.12	-0.34	92.62	-0.0787	0.0254	-0.0215
585	SLU 80	-1.12	-0.4	92.62	-0.0786	0.0255	-0.0208
585	SLU 81	-1.1	-0.33	93.96	-0.0806	0.0253	-0.0219
585	SLU 82	-1.1	-0.38	93.97	-0.0805	0.0253	-0.0212
585	SLU 83	-1.11	-0.33	94.86	-0.0805	0.0256	-0.0222
585	SLU 84	-1.11	-0.38	94.87	-0.0803	0.0256	-0.0215
585	SLE RA 1	-0.81	-0.3	62.62	-0.0588	0.018	-0.0139
585	SLE RA 2	-0.81	-0.36	62.63	-0.0587	0.018	-0.0131
585	SLE RA 3	-0.82	-0.3	63.58	-0.0589	0.0183	-0.0141
585	SLE RA 4	-0.82	-0.34	63.58	-0.0588	0.0183	-0.0137
585	SLE RA 5	-0.82	-0.36	63.22	-0.0586	0.0182	-0.0133
585	SLE RA 6	-0.83	-0.3	64.18	-0.0588	0.0185	-0.0143
585	SLE RA 7	-0.83	-0.34	64.18	-0.0587	0.0185	-0.0138
585	SLE RA 8	-0.83	-0.3	63.82	-0.0586	0.0184	-0.0143
585	SLE RA 9	-0.83	-0.34	63.82	-0.0585	0.0184	-0.0138
585	SLE RA 10	-0.82	-0.34	67.52	-0.0612	0.0187	-0.0146
585	SLE RA 11	-0.84	-0.28	68.47	-0.0614	0.019	-0.0157
585	SLE RA 12	-0.84	-0.32	68.47	-0.0613	0.019	-0.0152
585	SLE RA 13	-0.83	-0.34	68.11	-0.061	0.0189	-0.0148
585	SLE RA 14	-0.85	-0.28	69.07	-0.0613	0.0192	-0.0158
585	SLE RA 15	-0.85	-0.32	69.07	-0.0612	0.0192	-0.0154
585	SLE RA 16	-0.84	-0.28	68.71	-0.0611	0.0191	-0.0158
585	SLE RA 17	-0.84	-0.32	68.71	-0.061	0.0191	-0.0153
585	SLE RA 18	-0.83	-0.27	69.6	-0.0623	0.019	-0.0161
585	SLE RA 19	-0.83	-0.31	69.61	-0.0623	0.019	-0.0156
585	SLE RA 20	-0.84	-0.27	70.2	-0.0622	0.0192	-0.0163
585	SLE RA 21	-0.84	-0.31	70.21	-0.0622	0.0192	-0.0158
585	SLE FR 1	-0.81	-0.3	62.62	-0.0588	0.018	-0.0139
585	SLE FR 2	-0.81	-0.31	62.62	-0.0588	0.018	-0.0137
585	SLE FR 3	-0.81	-0.3	62.86	-0.0587	0.0181	-0.014
585	SLE FR 4	-0.82	-0.31	64.72	-0.0598	0.0183	-0.0144
585	SLE FR 5	-0.82	-0.29	64.95	-0.0598	0.0184	-0.0146
585	SLE FR 6	-0.82	-0.29	66.11	-0.0606	0.0185	-0.015
585	SLE QP 1	-0.81	-0.3	62.62	-0.0588	0.018	-0.0139
585	SLE QP 2	-0.82	-0.29	64.72	-0.0598	0.0183	-0.0145
585	SLD 1	3.83	0.23	76.9	-0.1304	0.0497	-0.0323
585	SLD 2	3.83	-0.33	76.94	-0.1207	0.0498	-0.0241
585	SLD 3	3.6	-1.52	76.16	-0.1666	0.0513	-0.0154
585	SLD 4	3.6	-2.08	76.19	-0.1568	0.0514	-0.0073
585	SLD 5	0.92	2.63	69.5	-0.028	0.0253	-0.0469
585	SLD 6	0.92	2.26	69.52	-0.0216	0.0253	-0.0416
585	SLD 7	0.17	-3.23	67.01	-0.1484	0.0306	0.0093
585	SLD 8	0.17	-3.59	67.03	-0.142	0.0306	0.0147
585	SLD 9	-1.8	3.01	62.4	0.0223	0.006	-0.0438
585	SLD 10	-1.8	2.64	62.42	0.0287	0.006	-0.0384
585	SLD 11	-2.55	-2.85	59.91	-0.0981	0.0113	0.0125
585	SLD 12	-2.55	-3.21	59.93	-0.0917	0.0113	0.0178
585	SLD 13	-5.23	1.5	53.24	0.0371	-0.0147	-0.0218
585	SLD 14	-5.24	0.94	53.28	0.0469	-0.0147	-0.0137
585	SLD 15	-5.46	-0.26	52.49	0.001	-0.0131	-0.005
585	SLD 16	-5.46	-0.82	52.53	0.0108	-0.0131	0.0032
585	SLV 1	10.05	0.87	93.23	-0.2259	0.0919	-0.0554
585	SLV 2	10.05	-0.44	93.32	-0.2032	0.092	-0.0364

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
585	SLV 3	9.53	-3.1	91.49	-0.3087	0.0956	-0.0171
585	SLV 4	9.52	-4.41	91.58	-0.286	0.0957	0.0018
585	SLV 5	3.24	6.31	75.9	0.0121	0.0347	-0.088
585	SLV 6	3.24	5.47	75.96	0.0267	0.0348	-0.0758
585	SLV 7	1.49	-6.94	70.09	-0.2641	0.0471	0.0394
585	SLV 8	1.49	-7.78	70.15	-0.2495	0.0472	0.0516
585	SLV 9	-3.12	7.19	59.28	0.1298	-0.0105	-0.0807
585	SLV 10	-3.12	6.35	59.34	0.1444	-0.0105	-0.0685
585	SLV 11	-4.87	-6.05	53.47	-0.1464	0.0018	0.0468
585	SLV 12	-4.87	-6.89	53.53	-0.1318	0.0019	0.0589
585	SLV 13	-11.15	3.82	37.85	0.1663	-0.0591	-0.0309
585	SLV 14	-11.16	2.52	37.94	0.189	-0.059	-0.0119
585	SLV 15	-11.68	-0.15	36.11	0.0835	-0.0553	0.0073
585	SLV 16	-11.68	-1.46	36.2	0.1062	-0.0553	0.0263
585	CRTFP Ux+	0	0	0	0	0	0
585	CRTFP Ux-	0	0	0	0	0	0
585	CRTFP Uy+	0	0	0	0	0	0
585	CRTFP Uy-	0	0	0	0	0	0
586	SLU 1	-0.77	-0.39	59.9	-0.0643	0.0196	-0.0139
586	SLU 2	-0.77	-0.47	59.91	-0.0641	0.0197	-0.0129
586	SLU 3	-0.79	-0.39	61.32	-0.0645	0.0201	-0.0143
586	SLU 4	-0.79	-0.44	61.33	-0.0644	0.0201	-0.0137
586	SLU 5	-0.79	-0.47	60.8	-0.064	0.02	-0.0132
586	SLU 6	-0.81	-0.39	62.21	-0.0644	0.0204	-0.0146
586	SLU 7	-0.81	-0.44	62.21	-0.0643	0.0204	-0.0139
586	SLU 8	-0.8	-0.39	61.67	-0.064	0.0203	-0.0145
586	SLU 9	-0.8	-0.44	61.68	-0.0639	0.0203	-0.0139
586	SLU 10	-0.79	-0.45	67.2	-0.0682	0.0211	-0.0151
586	SLU 11	-0.81	-0.37	68.61	-0.0686	0.0215	-0.0165
586	SLU 12	-0.81	-0.42	68.62	-0.0685	0.0216	-0.0159
586	SLU 13	-0.8	-0.45	68.09	-0.068	0.0214	-0.0154
586	SLU 14	-0.82	-0.37	69.5	-0.0684	0.0219	-0.0168
586	SLU 15	-0.82	-0.42	69.51	-0.0683	0.0219	-0.0162
586	SLU 16	-0.82	-0.37	68.97	-0.068	0.0217	-0.0167
586	SLU 17	-0.82	-0.42	68.97	-0.0679	0.0217	-0.0161
586	SLU 18	-0.8	-0.36	70.32	-0.07	0.0217	-0.0171
586	SLU 19	-0.8	-0.41	70.32	-0.07	0.0217	-0.0165
586	SLU 20	-0.81	-0.36	71.2	-0.0699	0.022	-0.0174
586	SLU 21	-0.81	-0.41	71.21	-0.0698	0.022	-0.0168
586	SLU 22	-0.83	-0.34	67.13	-0.0602	0.0214	-0.0158
586	SLU 23	-0.83	-0.42	67.14	-0.0601	0.0215	-0.0148
586	SLU 24	-0.85	-0.34	68.55	-0.0605	0.0219	-0.0161
586	SLU 25	-0.85	-0.39	68.56	-0.0604	0.0219	-0.0155
586	SLU 26	-0.85	-0.42	68.03	-0.06	0.0218	-0.015
586	SLU 27	-0.86	-0.34	69.44	-0.0603	0.0222	-0.0164
586	SLU 28	-0.86	-0.39	69.45	-0.0603	0.0223	-0.0158
586	SLU 29	-0.86	-0.34	68.91	-0.06	0.0221	-0.0163
586	SLU 30	-0.86	-0.39	68.91	-0.0599	0.0221	-0.0157
586	SLU 31	-0.85	-0.4	74.43	-0.0642	0.0229	-0.017
586	SLU 32	-0.87	-0.31	75.85	-0.0645	0.0234	-0.0183
586	SLU 33	-0.87	-0.37	75.85	-0.0645	0.0234	-0.0177
586	SLU 34	-0.86	-0.4	75.32	-0.064	0.0232	-0.0172
586	SLU 35	-0.88	-0.31	76.73	-0.0644	0.0237	-0.0186
586	SLU 36	-0.88	-0.37	76.74	-0.0643	0.0237	-0.018
586	SLU 37	-0.88	-0.31	76.2	-0.064	0.0235	-0.0185
586	SLU 38	-0.88	-0.37	76.2	-0.0639	0.0235	-0.0179
586	SLU 39	-0.85	-0.3	77.55	-0.066	0.0235	-0.0189
586	SLU 40	-0.85	-0.36	77.56	-0.0659	0.0235	-0.0183
586	SLU 41	-0.87	-0.31	78.44	-0.0659	0.0238	-0.0192
586	SLU 42	-0.87	-0.36	78.44	-0.0658	0.0238	-0.0186
586	SLU 43	-0.98	-0.52	75.39	-0.0849	0.0249	-0.0175
586	SLU 44	-0.98	-0.61	75.4	-0.0848	0.0249	-0.0165
586	SLU 45	-1	-0.52	76.81	-0.0852	0.0254	-0.0178
586	SLU 46	-1	-0.57	76.82	-0.0851	0.0254	-0.0172
586	SLU 47	-1	-0.61	76.29	-0.0846	0.0252	-0.0167
586	SLU 48	-1.02	-0.52	77.7	-0.085	0.0257	-0.0181
586	SLU 49	-1.02	-0.57	77.7	-0.0849	0.0257	-0.0175
586	SLU 50	-1.01	-0.52	77.16	-0.0846	0.0255	-0.018
586	SLU 51	-1.01	-0.57	77.17	-0.0846	0.0255	-0.0174
586	SLU 52	-1	-0.59	82.69	-0.0888	0.0264	-0.0187
586	SLU 53	-1.02	-0.5	84.1	-0.0892	0.0268	-0.02
586	SLU 54	-1.02	-0.55	84.11	-0.0891	0.0268	-0.0194
586	SLU 55	-1.01	-0.59	83.58	-0.0887	0.0267	-0.019
586	SLU 56	-1.03	-0.5	84.99	-0.0891	0.0271	-0.0203
586	SLU 57	-1.03	-0.55	85	-0.089	0.0271	-0.0197
586	SLU 58	-1.03	-0.5	84.46	-0.0887	0.027	-0.0203
586	SLU 59	-1.03	-0.55	84.46	-0.0886	0.027	-0.0196
586	SLU 60	-1.01	-0.49	85.81	-0.0907	0.027	-0.0206
586	SLU 61	-1.01	-0.54	85.81	-0.0906	0.027	-0.02
586	SLU 62	-1.02	-0.49	86.69	-0.0906	0.0273	-0.0209
586	SLU 63	-1.02	-0.54	86.7	-0.0905	0.0273	-0.0203
586	SLU 64	-1.04	-0.47	82.62	-0.0809	0.0267	-0.0193
586	SLU 65	-1.04	-0.56	82.63	-0.0808	0.0267	-0.0183
586	SLU 66	-1.06	-0.47	84.04	-0.0811	0.0272	-0.0197
586	SLU 67	-1.06	-0.52	84.05	-0.0811	0.0272	-0.0191
586	SLU 68	-1.06	-0.56	83.52	-0.0806	0.027	-0.0186
586	SLU 69	-1.08	-0.47	84.93	-0.081	0.0275	-0.0199
586	SLU 70	-1.08	-0.52	84.94	-0.0809	0.0275	-0.0193
586	SLU 71	-1.07	-0.47	84.4	-0.0806	0.0273	-0.0199
586	SLU 72	-1.07	-0.52	84.4	-0.0805	0.0274	-0.0193
586	SLU 73	-1.06	-0.53	89.92	-0.0848	0.0282	-0.0205
586	SLU 74	-1.08	-0.45	91.34	-0.0852	0.0286	-0.0219
586	SLU 75	-1.08	-0.5	91.34	-0.0851	0.0286	-0.0213
586	SLU 76	-1.07	-0.54	90.81	-0.0847	0.0285	-0.0208
586	SLU 77	-1.09	-0.45	92.22	-0.085	0.0289	-0.0222
586	SLU 78	-1.09	-0.5	92.23	-0.085	0.029	-0.0215
586	SLU 79	-1.09	-0.45	91.69	-0.0847	0.0288	-0.0221

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
586	SLU 80	-1.09	-0.5	91.69	-0.0846	0.0288	-0.0215
586	SLU 81	-1.07	-0.44	93.04	-0.0867	0.0288	-0.0225
586	SLU 82	-1.07	-0.49	93.05	-0.0866	0.0288	-0.0219
586	SLU 83	-1.08	-0.44	93.93	-0.0865	0.0291	-0.0228
586	SLU 84	-1.08	-0.49	93.93	-0.0865	0.0291	-0.0221
586	SLE RA 1	-0.79	-0.37	61.97	-0.0631	0.0201	-0.0145
586	SLE RA 2	-0.79	-0.43	61.97	-0.063	0.0202	-0.0138
586	SLE RA 3	-0.8	-0.37	62.91	-0.0633	0.0205	-0.0147
586	SLE RA 4	-0.8	-0.41	62.92	-0.0632	0.0205	-0.0143
586	SLE RA 5	-0.8	-0.43	62.56	-0.0629	0.0204	-0.014
586	SLE RA 6	-0.81	-0.37	63.51	-0.0632	0.0207	-0.0149
586	SLE RA 7	-0.81	-0.41	63.51	-0.0631	0.0207	-0.0145
586	SLE RA 8	-0.81	-0.37	63.15	-0.0629	0.0206	-0.0148
586	SLE RA 9	-0.81	-0.41	63.15	-0.0629	0.0206	-0.0144
586	SLE RA 10	-0.8	-0.42	66.83	-0.0657	0.0211	-0.0153
586	SLE RA 11	-0.81	-0.36	67.78	-0.066	0.0214	-0.0162
586	SLE RA 12	-0.81	-0.39	67.78	-0.0659	0.0214	-0.0158
586	SLE RA 13	-0.81	-0.42	67.43	-0.0656	0.0213	-0.0154
586	SLE RA 14	-0.82	-0.36	68.37	-0.0659	0.0216	-0.0163
586	SLE RA 15	-0.82	-0.39	68.37	-0.0658	0.0216	-0.0159
586	SLE RA 16	-0.82	-0.36	68.01	-0.0656	0.0215	-0.0163
586	SLE RA 17	-0.82	-0.39	68.01	-0.0656	0.0215	-0.0159
586	SLE RA 18	-0.8	-0.35	68.91	-0.067	0.0215	-0.0166
586	SLE RA 19	-0.8	-0.39	68.91	-0.0669	0.0215	-0.0162
586	SLE RA 20	-0.81	-0.35	69.5	-0.0669	0.0217	-0.0168
586	SLE RA 21	-0.81	-0.39	69.51	-0.0668	0.0217	-0.0163
586	SLE FR 1	-0.79	-0.37	61.97	-0.0631	0.0201	-0.0145
586	SLE FR 2	-0.79	-0.38	61.97	-0.0631	0.0202	-0.0143
586	SLE FR 3	-0.79	-0.37	62.2	-0.0631	0.0202	-0.0145
586	SLE FR 4	-0.79	-0.38	64.05	-0.0643	0.0206	-0.015
586	SLE FR 5	-0.8	-0.37	64.29	-0.0642	0.0206	-0.0152
586	SLE FR 6	-0.8	-0.36	65.44	-0.065	0.0208	-0.0155
586	SLE QP 1	-0.79	-0.37	61.97	-0.0631	0.0201	-0.0145
586	SLE QP 2	-0.79	-0.37	64.05	-0.0643	0.0206	-0.0151
586	SLD 1	3.86	0.1	75.12	-0.1374	0.0517	-0.0307
586	SLD 2	3.86	-0.42	75.15	-0.1277	0.0517	-0.0234
586	SLD 3	3.63	-1.58	74.41	-0.1756	0.0533	-0.0165
586	SLD 4	3.63	-2.11	74.45	-0.166	0.0533	-0.0092
586	SLD 5	0.94	2.42	68.43	-0.0299	0.0274	-0.0426
586	SLD 6	0.94	2.07	68.45	-0.0236	0.0274	-0.0378
586	SLD 7	0.2	-3.19	66.09	-0.1574	0.0328	0.0047
586	SLD 8	0.19	-3.53	66.11	-0.1511	0.0329	0.0095
586	SLD 9	-1.78	2.8	61.99	0.0226	0.0083	-0.0397
586	SLD 10	-1.78	2.46	62.01	0.0289	0.0083	-0.0349
586	SLD 11	-2.53	-2.81	59.65	-0.105	0.0137	0.0076
586	SLD 12	-2.53	-3.15	59.67	-0.0987	0.0137	0.0124
586	SLD 13	-5.22	1.37	53.65	0.0375	-0.0122	-0.021
586	SLD 14	-5.22	0.85	53.69	0.0471	-0.0122	-0.0137
586	SLD 15	-5.44	-0.31	52.95	-0.0008	-0.0106	-0.0068
586	SLD 16	-5.44	-0.83	52.98	0.0089	-0.0106	0.0005
586	SLV 1	10.09	0.65	89.95	-0.2362	0.0934	-0.0511
586	SLV 2	10.09	-0.56	90.03	-0.2137	0.0935	-0.034
586	SLV 3	9.57	-3.15	88.31	-0.324	0.0972	-0.0189
586	SLV 4	9.56	-4.37	88.39	-0.3015	0.0973	-0.0018
586	SLV 5	3.26	5.92	74.29	0.0134	0.0367	-0.0776
586	SLV 6	3.26	5.13	74.35	0.0278	0.0367	-0.0666
586	SLV 7	1.52	-6.76	68.82	-0.2791	0.0493	0.0297
586	SLV 8	1.52	-7.54	68.88	-0.2647	0.0493	0.0406
586	SLV 9	-3.11	6.81	59.22	0.1361	-0.0082	-0.0708
586	SLV 10	-3.11	6.03	59.28	0.1506	-0.0082	-0.0598
586	SLV 11	-4.85	-5.87	53.75	-0.1564	0.0044	0.0365
586	SLV 12	-4.85	-6.65	53.81	-0.1419	0.0045	0.0474
586	SLV 13	-11.15	3.63	39.71	0.1729	-0.0562	-0.0284
586	SLV 14	-11.15	2.42	39.79	0.1954	-0.0561	-0.0113
586	SLV 15	-11.67	-0.17	38.07	0.0852	-0.0524	0.0038
586	SLV 16	-11.67	-1.39	38.15	0.1077	-0.0523	0.0209
586	CRTFP Ux+	0	0	0	0	0	0
586	CRTFP Ux-	0	0	0	0	0	0
586	CRTFP Uy+	0	0	0	0	0	0
586	CRTFP Uy-	0	0	0	0	0	0
587	SLU 1	-0.75	-0.46	59.19	-0.069	0.0221	-0.014
587	SLU 2	-0.75	-0.54	59.19	-0.0689	0.0222	-0.0131
587	SLU 3	-0.76	-0.46	60.59	-0.0693	0.0227	-0.0143
587	SLU 4	-0.77	-0.51	60.59	-0.0692	0.0227	-0.0138
587	SLU 5	-0.76	-0.54	60.07	-0.0688	0.0225	-0.0134
587	SLU 6	-0.78	-0.46	61.47	-0.0691	0.023	-0.0146
587	SLU 7	-0.78	-0.51	61.47	-0.0691	0.023	-0.0141
587	SLU 8	-0.77	-0.46	60.94	-0.0687	0.0228	-0.0145
587	SLU 9	-0.77	-0.51	60.94	-0.0687	0.0228	-0.014
587	SLU 10	-0.76	-0.53	66.43	-0.0733	0.0241	-0.0151
587	SLU 11	-0.78	-0.45	67.82	-0.0737	0.0246	-0.0163
587	SLU 12	-0.78	-0.5	67.83	-0.0736	0.0246	-0.0158
587	SLU 13	-0.78	-0.53	67.3	-0.0732	0.0244	-0.0154
587	SLU 14	-0.79	-0.45	68.7	-0.0735	0.025	-0.0166
587	SLU 15	-0.79	-0.5	68.7	-0.0735	0.025	-0.0161
587	SLU 16	-0.79	-0.45	68.17	-0.0731	0.0248	-0.0166
587	SLU 17	-0.79	-0.5	68.18	-0.0731	0.0248	-0.016
587	SLU 18	-0.77	-0.44	69.52	-0.0752	0.0249	-0.0169
587	SLU 19	-0.77	-0.49	69.52	-0.0752	0.0249	-0.0164
587	SLU 20	-0.78	-0.44	70.4	-0.0751	0.0253	-0.0172
587	SLU 21	-0.78	-0.49	70.4	-0.0751	0.0253	-0.0166
587	SLU 22	-0.8	-0.41	66.35	-0.0649	0.0244	-0.0156
587	SLU 23	-0.8	-0.5	66.36	-0.0649	0.0244	-0.0148
587	SLU 24	-0.82	-0.42	67.75	-0.0653	0.0249	-0.016
587	SLU 25	-0.82	-0.47	67.76	-0.0652	0.025	-0.0154
587	SLU 26	-0.82	-0.5	67.23	-0.0647	0.0248	-0.015
587	SLU 27	-0.84	-0.42	68.63	-0.0651	0.0253	-0.0162

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
587	SLU 28	-0.84	-0.47	68.63	-0.0651	0.0253	-0.0157
587	SLU 29	-0.83	-0.42	68.1	-0.0647	0.0251	-0.0162
587	SLU 30	-0.83	-0.47	68.11	-0.0647	0.0251	-0.0156
587	SLU 31	-0.82	-0.48	73.59	-0.0693	0.0264	-0.0168
587	SLU 32	-0.84	-0.41	74.99	-0.0697	0.0269	-0.018
587	SLU 33	-0.84	-0.45	74.99	-0.0696	0.0269	-0.0175
587	SLU 34	-0.83	-0.49	74.47	-0.0692	0.0267	-0.0171
587	SLU 35	-0.85	-0.41	75.86	-0.0695	0.0272	-0.0183
587	SLU 36	-0.85	-0.46	75.87	-0.0695	0.0272	-0.0177
587	SLU 37	-0.85	-0.41	75.34	-0.0691	0.027	-0.0182
587	SLU 38	-0.85	-0.46	75.34	-0.0691	0.027	-0.0177
587	SLU 39	-0.83	-0.4	76.68	-0.0712	0.0272	-0.0185
587	SLU 40	-0.83	-0.45	76.69	-0.0712	0.0272	-0.018
587	SLU 41	-0.84	-0.4	77.56	-0.0711	0.0275	-0.0188
587	SLU 42	-0.84	-0.45	77.56	-0.0711	0.0275	-0.0183
587	SLU 43	-0.95	-0.61	74.48	-0.091	0.028	-0.0176
587	SLU 44	-0.95	-0.69	74.49	-0.0909	0.028	-0.0167
587	SLU 45	-0.97	-0.61	75.89	-0.0913	0.0285	-0.0179
587	SLU 46	-0.97	-0.66	75.89	-0.0913	0.0286	-0.0174
587	SLU 47	-0.97	-0.69	75.37	-0.0908	0.0284	-0.017
587	SLU 48	-0.98	-0.61	76.76	-0.0912	0.0289	-0.0182
587	SLU 49	-0.98	-0.66	76.77	-0.0911	0.0289	-0.0177
587	SLU 50	-0.98	-0.61	76.24	-0.0908	0.0287	-0.0181
587	SLU 51	-0.98	-0.66	76.24	-0.0907	0.0287	-0.0176
587	SLU 52	-0.97	-0.68	81.73	-0.0953	0.03	-0.0188
587	SLU 53	-0.98	-0.6	83.12	-0.0957	0.0305	-0.02
587	SLU 54	-0.99	-0.65	83.13	-0.0957	0.0305	-0.0195
587	SLU 55	-0.98	-0.68	82.6	-0.0952	0.0303	-0.019
587	SLU 56	-1	-0.6	84	-0.0956	0.0308	-0.0202
587	SLU 57	-1	-0.65	84	-0.0955	0.0308	-0.0197
587	SLU 58	-0.99	-0.6	83.47	-0.0952	0.0306	-0.0202
587	SLU 59	-0.99	-0.65	83.48	-0.0951	0.0306	-0.0197
587	SLU 60	-0.97	-0.59	84.82	-0.0973	0.0308	-0.0205
587	SLU 61	-0.97	-0.64	84.82	-0.0973	0.0308	-0.02
587	SLU 62	-0.99	-0.6	85.7	-0.0972	0.0311	-0.0208
587	SLU 63	-0.99	-0.64	85.7	-0.0971	0.0311	-0.0203
587	SLU 64	-1.01	-0.57	81.65	-0.087	0.0303	-0.0193
587	SLU 65	-1.01	-0.65	81.66	-0.0869	0.0303	-0.0184
587	SLU 66	-1.03	-0.57	83.05	-0.0873	0.0308	-0.0196
587	SLU 67	-1.03	-0.62	83.06	-0.0873	0.0308	-0.0191
587	SLU 68	-1.02	-0.65	82.53	-0.0868	0.0306	-0.0187
587	SLU 69	-1.04	-0.57	83.93	-0.0872	0.0312	-0.0199
587	SLU 70	-1.04	-0.62	83.93	-0.0871	0.0312	-0.0193
587	SLU 71	-1.04	-0.57	83.4	-0.0868	0.031	-0.0198
587	SLU 72	-1.04	-0.62	83.4	-0.0867	0.031	-0.0193
587	SLU 73	-1.02	-0.64	88.89	-0.0913	0.0322	-0.0204
587	SLU 74	-1.04	-0.56	90.29	-0.0917	0.0327	-0.0216
587	SLU 75	-1.04	-0.61	90.29	-0.0917	0.0328	-0.0211
587	SLU 76	-1.04	-0.64	89.77	-0.0912	0.0326	-0.0207
587	SLU 77	-1.06	-0.56	91.16	-0.0916	0.0331	-0.0219
587	SLU 78	-1.06	-0.61	91.17	-0.0915	0.0331	-0.0214
587	SLU 79	-1.05	-0.56	90.63	-0.0912	0.0329	-0.0218
587	SLU 80	-1.05	-0.61	90.64	-0.0911	0.0329	-0.0213
587	SLU 81	-1.03	-0.55	91.98	-0.0933	0.033	-0.0222
587	SLU 82	-1.03	-0.6	91.99	-0.0932	0.0331	-0.0217
587	SLU 83	-1.04	-0.55	92.86	-0.0932	0.0334	-0.0224
587	SLU 84	-1.04	-0.6	92.86	-0.0931	0.0334	-0.0219
587	SLE RA 1	-0.76	-0.44	61.23	-0.0678	0.0228	-0.0145
587	SLE RA 2	-0.76	-0.5	61.24	-0.0678	0.0228	-0.0139
587	SLE RA 3	-0.78	-0.45	62.17	-0.068	0.0231	-0.0147
587	SLE RA 4	-0.78	-0.48	62.17	-0.068	0.0232	-0.0143
587	SLE RA 5	-0.77	-0.5	61.82	-0.0677	0.023	-0.014
587	SLE RA 6	-0.78	-0.45	62.75	-0.0679	0.0234	-0.0148
587	SLE RA 7	-0.78	-0.48	62.75	-0.0679	0.0234	-0.0145
587	SLE RA 8	-0.78	-0.45	62.4	-0.0676	0.0233	-0.0148
587	SLE RA 9	-0.78	-0.48	62.4	-0.0676	0.0233	-0.0145
587	SLE RA 10	-0.77	-0.49	66.06	-0.0707	0.0241	-0.0152
587	SLE RA 11	-0.79	-0.44	66.99	-0.0709	0.0244	-0.016
587	SLE RA 12	-0.79	-0.47	66.99	-0.0709	0.0244	-0.0157
587	SLE RA 13	-0.78	-0.49	66.64	-0.0706	0.0243	-0.0154
587	SLE RA 14	-0.79	-0.44	67.57	-0.0709	0.0247	-0.0162
587	SLE RA 15	-0.79	-0.47	67.58	-0.0708	0.0247	-0.0159
587	SLE RA 16	-0.79	-0.44	67.22	-0.0706	0.0245	-0.0162
587	SLE RA 17	-0.79	-0.47	67.23	-0.0706	0.0245	-0.0158
587	SLE RA 18	-0.78	-0.43	68.12	-0.072	0.0246	-0.0164
587	SLE RA 19	-0.78	-0.47	68.12	-0.072	0.0246	-0.016
587	SLE RA 20	-0.79	-0.44	68.71	-0.0719	0.0249	-0.0166
587	SLE RA 21	-0.79	-0.47	68.71	-0.0719	0.0249	-0.0162
587	SLE FR 1	-0.76	-0.44	61.23	-0.0678	0.0228	-0.0145
587	SLE FR 2	-0.76	-0.46	61.23	-0.0678	0.0228	-0.0143
587	SLE FR 3	-0.77	-0.45	61.47	-0.0678	0.0229	-0.0145
587	SLE FR 4	-0.77	-0.45	63.3	-0.0691	0.0234	-0.0149
587	SLE FR 5	-0.77	-0.44	63.53	-0.069	0.0234	-0.0151
587	SLE FR 6	-0.77	-0.44	64.68	-0.0699	0.0237	-0.0154
587	SLE QP 1	-0.76	-0.44	61.23	-0.0678	0.0228	-0.0145
587	SLE QP 2	-0.77	-0.44	63.3	-0.0691	0.0233	-0.015
587	SLD 1	3.89	-0.03	73.26	-0.1449	0.0538	-0.0282
587	SLD 2	3.89	-0.52	73.3	-0.1353	0.0538	-0.0217
587	SLD 3	3.67	-1.65	72.6	-0.1854	0.0555	-0.0168
587	SLD 4	3.67	-2.14	72.64	-0.1758	0.0555	-0.0102
587	SLD 5	0.97	2.23	67.27	-0.0321	0.0299	-0.0374
587	SLD 6	0.97	1.91	67.3	-0.0258	0.0299	-0.0332
587	SLD 7	0.22	-3.18	65.09	-0.1671	0.0356	0.0006
587	SLD 8	0.22	-3.5	65.11	-0.1608	0.0356	0.0049
587	SLD 9	-1.76	2.61	61.48	0.0227	0.0111	-0.0349
587	SLD 10	-1.76	2.29	61.51	0.0289	0.0111	-0.0307
587	SLD 11	-2.5	-2.79	59.3	-0.1123	0.0168	0.0031

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
587	SLD 12	-2.5	-3.11	59.32	-0.106	0.0168	0.0074
587	SLD 13	-5.2	1.26	53.96	0.0376	-0.0088	-0.0198
587	SLD 14	-5.2	0.77	54	0.0472	-0.0088	-0.0133
587	SLD 15	-5.43	-0.36	53.3	-0.0029	-0.0071	-0.0084
587	SLD 16	-5.43	-0.85	53.34	0.0067	-0.0071	-0.0019
587	SLV 1	10.13	0.45	86.6	-0.2474	0.0947	-0.0454
587	SLV 2	10.13	-0.68	86.69	-0.2251	0.0947	-0.0302
587	SLV 3	9.61	-3.21	85.07	-0.3402	0.0987	-0.0195
587	SLV 4	9.61	-4.35	85.16	-0.3179	0.0987	-0.0043
587	SLV 5	3.29	5.58	72.59	0.0144	0.0388	-0.066
587	SLV 6	3.29	4.85	72.65	0.0287	0.0388	-0.0562
587	SLV 7	1.56	-6.64	67.5	-0.295	0.0519	0.0203
587	SLV 8	1.55	-7.37	67.56	-0.2806	0.0519	0.0301
587	SLV 9	-3.09	6.49	59.04	0.1425	-0.0052	-0.0601
587	SLV 10	-3.09	5.75	59.1	0.1569	-0.0052	-0.0503
587	SLV 11	-4.83	-5.73	53.95	-0.1669	0.0079	0.0262
587	SLV 12	-4.83	-6.47	54.01	-0.1525	0.0079	0.036
587	SLV 13	-11.14	3.47	41.44	0.1797	-0.052	-0.0258
587	SLV 14	-11.14	2.33	41.52	0.2021	-0.052	-0.0105
587	SLV 15	-11.66	-0.2	39.91	0.0869	-0.048	0.0001
587	SLV 16	-11.66	-1.34	40	0.1093	-0.048	0.0153
587	CRTFP Ux+	0	0	0	0	0	0
587	CRTFP Ux-	0	0	0	0	0	0
587	CRTFP Uy+	0	0	0	0	0	0
587	CRTFP Uy-	0	0	0	0	0	0
588	SLU 1	-0.72	-0.53	58.38	-0.074	0.0252	-0.0135
588	SLU 2	-0.72	-0.6	58.38	-0.074	0.0252	-0.0127
588	SLU 3	-0.74	-0.53	59.76	-0.0744	0.0258	-0.0138
588	SLU 4	-0.74	-0.58	59.76	-0.0743	0.0258	-0.0133
588	SLU 5	-0.73	-0.61	59.25	-0.0739	0.0256	-0.013
588	SLU 6	-0.75	-0.53	60.62	-0.0743	0.0261	-0.014
588	SLU 7	-0.75	-0.58	60.63	-0.0742	0.0261	-0.0136
588	SLU 8	-0.74	-0.53	60.1	-0.0738	0.0259	-0.014
588	SLU 9	-0.74	-0.58	60.11	-0.0738	0.0259	-0.0135
588	SLU 10	-0.73	-0.6	65.54	-0.0788	0.0277	-0.0145
588	SLU 11	-0.75	-0.53	66.92	-0.0791	0.0283	-0.0156
588	SLU 12	-0.75	-0.57	66.92	-0.0791	0.0283	-0.0151
588	SLU 13	-0.75	-0.61	66.4	-0.0787	0.0281	-0.0148
588	SLU 14	-0.76	-0.53	67.78	-0.0791	0.0287	-0.0158
588	SLU 15	-0.76	-0.58	67.79	-0.079	0.0287	-0.0154
588	SLU 16	-0.76	-0.53	67.26	-0.0786	0.0284	-0.0158
588	SLU 17	-0.76	-0.58	67.27	-0.0786	0.0284	-0.0153
588	SLU 18	-0.74	-0.52	68.6	-0.0808	0.0288	-0.016
588	SLU 19	-0.74	-0.57	68.61	-0.0808	0.0288	-0.0156
588	SLU 20	-0.75	-0.53	69.47	-0.0807	0.0291	-0.0163
588	SLU 21	-0.75	-0.57	69.47	-0.0807	0.0291	-0.0158
588	SLU 22	-0.77	-0.49	65.45	-0.07	0.028	-0.0149
588	SLU 23	-0.77	-0.57	65.46	-0.07	0.028	-0.0141
588	SLU 24	-0.79	-0.49	66.84	-0.0704	0.0286	-0.0152
588	SLU 25	-0.79	-0.54	66.84	-0.0704	0.0286	-0.0147
588	SLU 26	-0.79	-0.57	66.32	-0.0699	0.0284	-0.0144
588	SLU 27	-0.8	-0.5	67.7	-0.0703	0.029	-0.0154
588	SLU 28	-0.8	-0.54	67.7	-0.0703	0.029	-0.015
588	SLU 29	-0.8	-0.5	67.18	-0.0698	0.0288	-0.0154
588	SLU 30	-0.8	-0.54	67.18	-0.0698	0.0288	-0.0149
588	SLU 31	-0.79	-0.57	72.62	-0.0748	0.0305	-0.0159
588	SLU 32	-0.8	-0.49	73.99	-0.0752	0.0311	-0.017
588	SLU 33	-0.8	-0.54	74	-0.0752	0.0311	-0.0165
588	SLU 34	-0.8	-0.57	73.48	-0.0747	0.0309	-0.0162
588	SLU 35	-0.82	-0.5	74.86	-0.0751	0.0315	-0.0172
588	SLU 36	-0.82	-0.54	74.86	-0.0751	0.0315	-0.0168
588	SLU 37	-0.81	-0.49	74.34	-0.0746	0.0313	-0.0172
588	SLU 38	-0.81	-0.54	74.34	-0.0746	0.0313	-0.0167
588	SLU 39	-0.79	-0.49	75.68	-0.0769	0.0316	-0.0174
588	SLU 40	-0.79	-0.53	75.68	-0.0769	0.0316	-0.017
588	SLU 41	-0.81	-0.49	76.54	-0.0768	0.032	-0.0177
588	SLU 42	-0.81	-0.54	76.55	-0.0768	0.032	-0.0172
588	SLU 43	-0.91	-0.7	73.46	-0.0975	0.0318	-0.017
588	SLU 44	-0.92	-0.77	73.47	-0.0975	0.0318	-0.0163
588	SLU 45	-0.93	-0.7	74.85	-0.0979	0.0323	-0.0173
588	SLU 46	-0.93	-0.75	74.85	-0.0979	0.0324	-0.0169
588	SLU 47	-0.93	-0.78	74.33	-0.0974	0.0322	-0.0166
588	SLU 48	-0.95	-0.7	75.71	-0.0978	0.0327	-0.0176
588	SLU 49	-0.95	-0.75	75.71	-0.0978	0.0327	-0.0171
588	SLU 50	-0.94	-0.7	75.19	-0.0974	0.0325	-0.0175
588	SLU 51	-0.94	-0.75	75.19	-0.0973	0.0325	-0.0171
588	SLU 52	-0.93	-0.77	80.63	-0.1023	0.0343	-0.0181
588	SLU 53	-0.95	-0.7	82	-0.1027	0.0349	-0.0191
588	SLU 54	-0.95	-0.74	82.01	-0.1027	0.0349	-0.0187
588	SLU 55	-0.94	-0.78	81.49	-0.1022	0.0347	-0.0183
588	SLU 56	-0.96	-0.7	82.87	-0.1026	0.0352	-0.0194
588	SLU 57	-0.96	-0.75	82.87	-0.1026	0.0352	-0.0189
588	SLU 58	-0.95	-0.7	82.35	-0.1021	0.035	-0.0193
588	SLU 59	-0.95	-0.75	82.35	-0.1021	0.035	-0.0189
588	SLU 60	-0.93	-0.69	83.69	-0.1044	0.0353	-0.0196
588	SLU 61	-0.93	-0.74	83.69	-0.1044	0.0354	-0.0192
588	SLU 62	-0.95	-0.7	84.55	-0.1043	0.0357	-0.0198
588	SLU 63	-0.95	-0.74	84.56	-0.1043	0.0357	-0.0194
588	SLU 64	-0.97	-0.66	80.54	-0.0936	0.0346	-0.0184
588	SLU 65	-0.97	-0.74	80.54	-0.0936	0.0346	-0.0177
588	SLU 66	-0.99	-0.66	81.92	-0.094	0.0352	-0.0187
588	SLU 67	-0.99	-0.71	81.93	-0.0939	0.0352	-0.0183
588	SLU 68	-0.98	-0.74	81.41	-0.0935	0.035	-0.018
588	SLU 69	-1	-0.67	82.79	-0.0939	0.0355	-0.019
588	SLU 70	-1	-0.71	82.79	-0.0938	0.0356	-0.0185
588	SLU 71	-1	-0.67	82.27	-0.0934	0.0353	-0.0189
588	SLU 72	-1	-0.71	82.27	-0.0934	0.0353	-0.0185

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
588	SLU 73	-0.98	-0.74	87.7	-0.0983	0.0371	-0.0195
588	SLU 74	-1	-0.66	89.08	-0.0987	0.0377	-0.0205
588	SLU 75	-1	-0.71	89.09	-0.0987	0.0377	-0.0201
588	SLU 76	-1	-0.74	88.57	-0.0983	0.0375	-0.0197
588	SLU 77	-1.01	-0.67	89.94	-0.0987	0.0381	-0.0208
588	SLU 78	-1.01	-0.71	89.95	-0.0986	0.0381	-0.0203
588	SLU 79	-1.01	-0.66	89.42	-0.0982	0.0378	-0.0207
588	SLU 80	-1.01	-0.71	89.43	-0.0982	0.0379	-0.0203
588	SLU 81	-0.99	-0.66	90.76	-0.1004	0.0382	-0.021
588	SLU 82	-0.99	-0.7	90.77	-0.1004	0.0382	-0.0206
588	SLU 83	-1	-0.66	91.63	-0.1003	0.0385	-0.0212
588	SLU 84	-1	-0.71	91.63	-0.1003	0.0386	-0.0208
588	SLE RA 1	-0.73	-0.52	60.4	-0.0729	0.026	-0.0139
588	SLE RA 2	-0.73	-0.57	60.4	-0.0728	0.026	-0.0134
588	SLE RA 3	-0.75	-0.52	61.32	-0.0731	0.0264	-0.0141
588	SLE RA 4	-0.75	-0.55	61.32	-0.0731	0.0264	-0.0138
588	SLE RA 5	-0.74	-0.57	60.98	-0.0728	0.0262	-0.0136
588	SLE RA 6	-0.75	-0.52	61.9	-0.073	0.0266	-0.0142
588	SLE RA 7	-0.75	-0.55	61.9	-0.073	0.0266	-0.0139
588	SLE RA 8	-0.75	-0.52	61.55	-0.0727	0.0265	-0.0142
588	SLE RA 9	-0.75	-0.55	61.55	-0.0727	0.0265	-0.0139
588	SLE RA 10	-0.74	-0.57	65.17	-0.076	0.0277	-0.0146
588	SLE RA 11	-0.75	-0.52	66.09	-0.0763	0.028	-0.0153
588	SLE RA 12	-0.75	-0.55	66.1	-0.0763	0.0281	-0.015
588	SLE RA 13	-0.75	-0.57	65.75	-0.076	0.0279	-0.0147
588	SLE RA 14	-0.76	-0.52	66.67	-0.0762	0.0283	-0.0154
588	SLE RA 15	-0.76	-0.55	66.67	-0.0762	0.0283	-0.0151
588	SLE RA 16	-0.76	-0.52	66.32	-0.0759	0.0282	-0.0154
588	SLE RA 17	-0.76	-0.55	66.32	-0.0759	0.0282	-0.0151
588	SLE RA 18	-0.75	-0.51	67.21	-0.0774	0.0284	-0.0156
588	SLE RA 19	-0.75	-0.55	67.22	-0.0774	0.0284	-0.0153
588	SLE RA 20	-0.76	-0.52	67.79	-0.0774	0.0286	-0.0157
588	SLE RA 21	-0.76	-0.55	67.79	-0.0773	0.0286	-0.0155
588	SLE FR 1	-0.73	-0.52	60.4	-0.0729	0.026	-0.0139
588	SLE FR 2	-0.73	-0.53	60.4	-0.0729	0.026	-0.0138
588	SLE FR 3	-0.74	-0.52	60.63	-0.0728	0.0261	-0.0139
588	SLE FR 4	-0.74	-0.53	62.44	-0.0742	0.0267	-0.0143
588	SLE FR 5	-0.74	-0.52	62.67	-0.0742	0.0268	-0.0144
588	SLE FR 6	-0.74	-0.51	63.81	-0.0751	0.0272	-0.0147
588	SLE QP 1	-0.73	-0.52	60.4	-0.0729	0.026	-0.0139
588	SLE QP 2	-0.74	-0.52	62.44	-0.0742	0.0267	-0.0144
588	SLD 1	3.93	-0.15	71.32	-0.1529	0.0559	-0.0249
588	SLD 2	3.93	-0.61	71.36	-0.1434	0.0559	-0.0191
588	SLD 3	3.7	-1.72	70.72	-0.1957	0.0576	-0.0162
588	SLD 4	3.7	-2.18	70.76	-0.1861	0.0576	-0.0104
588	SLD 5	1	2.06	66.01	-0.0346	0.0328	-0.0318
588	SLD 6	1	1.76	66.04	-0.0284	0.0328	-0.028
588	SLD 7	0.26	-3.18	64.01	-0.1772	0.0386	-0.0028
588	SLD 8	0.26	-3.48	64.03	-0.171	0.0386	0.001
588	SLD 9	-1.73	2.45	60.85	0.0226	0.0148	-0.0298
588	SLD 10	-1.73	2.15	60.88	0.0288	0.0148	-0.026
588	SLD 11	-2.48	-2.79	58.85	-0.1201	0.0206	-0.0008
588	SLD 12	-2.48	-3.09	58.87	-0.1139	0.0206	0.003
588	SLD 13	-5.18	1.15	54.13	0.0377	-0.0042	-0.0184
588	SLD 14	-5.18	0.69	54.16	0.0472	-0.0042	-0.0125
588	SLD 15	-5.4	-0.42	53.52	-0.0051	-0.0025	-0.0097
588	SLD 16	-5.4	-0.88	53.56	0.0044	-0.0025	-0.0038
588	SLV 1	10.17	0.28	83.22	-0.2593	0.0951	-0.0388
588	SLV 2	10.17	-0.79	83.31	-0.2371	0.095	-0.0252
588	SLV 3	9.65	-3.28	81.82	-0.3574	0.0991	-0.019
588	SLV 4	9.65	-4.35	81.9	-0.3352	0.0991	-0.0054
588	SLV 5	3.33	5.31	70.79	0.0152	0.0411	-0.054
588	SLV 6	3.33	4.62	70.85	0.0294	0.041	-0.0453
588	SLV 7	1.59	-6.56	66.11	-0.3117	0.0546	0.0119
588	SLV 8	1.59	-7.25	66.17	-0.2974	0.0546	0.0206
588	SLV 9	-3.07	6.22	58.72	0.149	-0.0012	-0.0494
588	SLV 10	-3.07	5.53	58.77	0.1632	-0.0012	-0.0406
588	SLV 11	-4.8	-5.65	54.04	-0.1779	0.0124	0.0165
588	SLV 12	-4.8	-6.34	54.1	-0.1636	0.0123	0.0252
588	SLV 13	-11.13	3.32	42.98	0.1867	-0.0457	-0.0233
588	SLV 14	-11.13	2.25	43.07	0.2089	-0.0457	-0.0098
588	SLV 15	-11.65	-0.24	41.58	0.0887	-0.0416	-0.0036
588	SLV 16	-11.65	-1.31	41.67	0.1109	-0.0417	0.01
588	CRTFP Ux+	0	0	0	0	0	0
588	CRTFP Ux-	0	0	0	0	0	0
588	CRTFP Uy+	0	0	0	0	0	0
588	CRTFP Uy-	0	0	0	0	0	0
589	SLU 1	-0.69	-0.59	57.46	-0.0793	0.0283	-0.0124
589	SLU 2	-0.69	-0.66	57.46	-0.0794	0.0283	-0.0118
589	SLU 3	-0.7	-0.6	58.82	-0.0798	0.029	-0.0126
589	SLU 4	-0.7	-0.64	58.82	-0.0798	0.029	-0.0123
589	SLU 5	-0.7	-0.67	58.31	-0.0793	0.0288	-0.012
589	SLU 6	-0.71	-0.6	59.67	-0.0797	0.0294	-0.0129
589	SLU 7	-0.72	-0.64	59.68	-0.0797	0.0294	-0.0125
589	SLU 8	-0.71	-0.6	59.16	-0.0792	0.0292	-0.0128
589	SLU 9	-0.71	-0.64	59.16	-0.0792	0.0292	-0.0125
589	SLU 10	-0.7	-0.67	64.53	-0.0846	0.0315	-0.0133
589	SLU 11	-0.71	-0.6	65.88	-0.085	0.0321	-0.0141
589	SLU 12	-0.71	-0.65	65.89	-0.085	0.0321	-0.0138
589	SLU 13	-0.71	-0.68	65.38	-0.0845	0.0319	-0.0135
589	SLU 14	-0.73	-0.61	66.73	-0.0849	0.0325	-0.0143
589	SLU 15	-0.73	-0.65	66.74	-0.085	0.0325	-0.014
589	SLU 16	-0.72	-0.61	66.22	-0.0844	0.0323	-0.0143
589	SLU 17	-0.72	-0.65	66.22	-0.0844	0.0323	-0.014
589	SLU 18	-0.7	-0.6	67.55	-0.0868	0.0328	-0.0145
589	SLU 19	-0.7	-0.64	67.55	-0.0868	0.0328	-0.0141
589	SLU 20	-0.71	-0.6	68.4	-0.0867	0.0332	-0.0147

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
589	SLU 21	-0.72	-0.65	68.4	-0.0867	0.0332	-0.0144
589	SLU 22	-0.74	-0.56	64.43	-0.0755	0.0318	-0.0135
589	SLU 23	-0.74	-0.64	64.43	-0.0755	0.0318	-0.0129
589	SLU 24	-0.75	-0.57	65.79	-0.0759	0.0324	-0.0137
589	SLU 25	-0.76	-0.61	65.79	-0.0759	0.0324	-0.0134
589	SLU 26	-0.75	-0.64	65.28	-0.0754	0.0322	-0.0131
589	SLU 27	-0.77	-0.57	66.64	-0.0758	0.0328	-0.014
589	SLU 28	-0.77	-0.61	66.64	-0.0759	0.0328	-0.0136
589	SLU 29	-0.76	-0.57	66.13	-0.0753	0.0326	-0.0139
589	SLU 30	-0.76	-0.61	66.13	-0.0754	0.0326	-0.0136
589	SLU 31	-0.75	-0.64	71.5	-0.0807	0.0349	-0.0144
589	SLU 32	-0.77	-0.57	72.85	-0.0811	0.0355	-0.0152
589	SLU 33	-0.77	-0.62	72.86	-0.0811	0.0355	-0.0149
589	SLU 34	-0.76	-0.65	72.35	-0.0806	0.0353	-0.0146
589	SLU 35	-0.78	-0.58	73.7	-0.0811	0.036	-0.0154
589	SLU 36	-0.78	-0.62	73.71	-0.0811	0.036	-0.0151
589	SLU 37	-0.77	-0.58	73.19	-0.0806	0.0357	-0.0154
589	SLU 38	-0.78	-0.62	73.19	-0.0806	0.0357	-0.0151
589	SLU 39	-0.75	-0.57	74.52	-0.0829	0.0362	-0.0156
589	SLU 40	-0.76	-0.62	74.52	-0.0829	0.0362	-0.0152
589	SLU 41	-0.77	-0.57	75.37	-0.0829	0.0366	-0.0158
589	SLU 42	-0.77	-0.62	75.37	-0.0829	0.0366	-0.0155
589	SLU 43	-0.87	-0.78	72.3	-0.1045	0.0357	-0.0157
589	SLU 44	-0.87	-0.85	72.31	-0.1045	0.0357	-0.0151
589	SLU 45	-0.89	-0.78	73.67	-0.1049	0.0363	-0.016
589	SLU 46	-0.89	-0.83	73.67	-0.1049	0.0363	-0.0156
589	SLU 47	-0.89	-0.86	73.16	-0.1044	0.0361	-0.0154
589	SLU 48	-0.9	-0.79	74.52	-0.1048	0.0367	-0.0162
589	SLU 49	-0.9	-0.83	74.52	-0.1049	0.0367	-0.0158
589	SLU 50	-0.9	-0.79	74.01	-0.1043	0.0365	-0.0162
589	SLU 51	-0.9	-0.83	74.01	-0.1044	0.0365	-0.0158
589	SLU 52	-0.89	-0.86	79.37	-0.1097	0.0388	-0.0166
589	SLU 53	-0.9	-0.79	80.73	-0.1101	0.0394	-0.0174
589	SLU 54	-0.9	-0.83	80.73	-0.1101	0.0394	-0.0171
589	SLU 55	-0.9	-0.86	80.22	-0.1096	0.0392	-0.0168
589	SLU 56	-0.91	-0.79	81.58	-0.1101	0.0399	-0.0177
589	SLU 57	-0.91	-0.84	81.58	-0.1101	0.0399	-0.0173
589	SLU 58	-0.91	-0.79	81.07	-0.1096	0.0396	-0.0177
589	SLU 59	-0.91	-0.84	81.07	-0.1096	0.0396	-0.0173
589	SLU 60	-0.89	-0.79	82.39	-0.1119	0.0401	-0.0178
589	SLU 61	-0.89	-0.83	82.4	-0.1119	0.0401	-0.0175
589	SLU 62	-0.9	-0.79	83.24	-0.1119	0.0405	-0.0181
589	SLU 63	-0.9	-0.84	83.25	-0.1119	0.0405	-0.0177
589	SLU 64	-0.93	-0.75	79.27	-0.1006	0.0391	-0.0168
589	SLU 65	-0.93	-0.82	79.28	-0.1006	0.0391	-0.0162
589	SLU 66	-0.94	-0.75	80.64	-0.101	0.0397	-0.0171
589	SLU 67	-0.94	-0.8	80.64	-0.101	0.0397	-0.0167
589	SLU 68	-0.94	-0.83	80.13	-0.1005	0.0395	-0.0165
589	SLU 69	-0.96	-0.76	81.49	-0.101	0.0402	-0.0173
589	SLU 70	-0.96	-0.8	81.49	-0.101	0.0402	-0.0169
589	SLU 71	-0.95	-0.76	80.97	-0.1005	0.0399	-0.0173
589	SLU 72	-0.95	-0.8	80.98	-0.1005	0.0399	-0.0169
589	SLU 73	-0.94	-0.83	86.34	-0.1058	0.0422	-0.0177
589	SLU 74	-0.95	-0.76	87.7	-0.1063	0.0429	-0.0185
589	SLU 75	-0.95	-0.8	87.7	-0.1063	0.0429	-0.0182
589	SLU 76	-0.95	-0.83	87.19	-0.1058	0.0426	-0.0179
589	SLU 77	-0.97	-0.76	88.55	-0.1062	0.0433	-0.0188
589	SLU 78	-0.97	-0.81	88.55	-0.1062	0.0433	-0.0184
589	SLU 79	-0.96	-0.76	88.04	-0.1057	0.043	-0.0188
589	SLU 80	-0.96	-0.81	88.04	-0.1057	0.043	-0.0184
589	SLU 81	-0.94	-0.76	89.36	-0.108	0.0436	-0.0189
589	SLU 82	-0.94	-0.8	89.37	-0.1081	0.0436	-0.0186
589	SLU 83	-0.95	-0.76	90.21	-0.108	0.044	-0.0192
589	SLU 84	-0.96	-0.81	90.22	-0.108	0.044	-0.0188
589	SLE RA 1	-0.7	-0.58	59.45	-0.0782	0.0293	-0.0127
589	SLE RA 2	-0.7	-0.63	59.45	-0.0782	0.0293	-0.0123
589	SLE RA 3	-0.71	-0.59	60.36	-0.0785	0.0298	-0.0129
589	SLE RA 4	-0.71	-0.62	60.36	-0.0785	0.0298	-0.0126
589	SLE RA 5	-0.71	-0.63	60.02	-0.0782	0.0296	-0.0125
589	SLE RA 6	-0.72	-0.59	60.92	-0.0785	0.03	-0.013
589	SLE RA 7	-0.72	-0.62	60.93	-0.0785	0.03	-0.0128
589	SLE RA 8	-0.72	-0.59	60.58	-0.0781	0.0299	-0.013
589	SLE RA 9	-0.72	-0.62	60.58	-0.0782	0.0299	-0.0128
589	SLE RA 10	-0.71	-0.64	64.16	-0.0817	0.0314	-0.0133
589	SLE RA 11	-0.72	-0.59	65.07	-0.082	0.0318	-0.0138
589	SLE RA 12	-0.72	-0.62	65.07	-0.082	0.0318	-0.0136
589	SLE RA 13	-0.72	-0.64	64.73	-0.0817	0.0317	-0.0134
589	SLE RA 14	-0.73	-0.59	65.63	-0.082	0.0321	-0.014
589	SLE RA 15	-0.73	-0.62	65.63	-0.082	0.0321	-0.0138
589	SLE RA 16	-0.72	-0.59	65.29	-0.0816	0.032	-0.014
589	SLE RA 17	-0.73	-0.62	65.29	-0.0816	0.032	-0.0137
589	SLE RA 18	-0.71	-0.59	66.17	-0.0832	0.0323	-0.0141
589	SLE RA 19	-0.71	-0.62	66.18	-0.0832	0.0323	-0.0139
589	SLE RA 20	-0.72	-0.59	66.74	-0.0832	0.0326	-0.0143
589	SLE RA 21	-0.72	-0.62	66.74	-0.0832	0.0326	-0.014
589	SLE FR 1	-0.7	-0.58	59.45	-0.0782	0.0293	-0.0127
589	SLE FR 2	-0.7	-0.59	59.45	-0.0782	0.0293	-0.0126
589	SLE FR 3	-0.7	-0.58	59.68	-0.0782	0.0294	-0.0128
589	SLE FR 4	-0.7	-0.59	61.47	-0.0797	0.0302	-0.013
589	SLE FR 5	-0.71	-0.58	61.69	-0.0797	0.0303	-0.0132
589	SLE FR 6	-0.71	-0.59	62.81	-0.0807	0.0308	-0.0134
589	SLE QP 1	-0.7	-0.58	59.45	-0.0782	0.0293	-0.0127
589	SLE QP 2	-0.7	-0.58	61.47	-0.0797	0.0302	-0.0131
589	SLD 1	3.97	-0.25	69.33	-0.1614	0.0588	-0.0213
589	SLD 2	3.97	-0.68	69.37	-0.1519	0.0587	-0.0161
589	SLD 3	3.74	-1.79	68.78	-0.2066	0.057	-0.0151
589	SLD 4	3.74	-2.22	68.82	-0.1971	0.057	-0.0099

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
589	SLD 5	1.04	1.93	64.64	-0.0374	0.0415	-0.026
589	SLD 6	1.04	1.65	64.67	-0.0312	0.0415	-0.0226
589	SLD 7	0.29	-3.21	62.83	-0.188	0.0355	-0.0052
589	SLD 8	0.29	-3.49	62.85	-0.1818	0.0355	-0.0017
589	SLD 9	-1.7	2.32	60.08	0.0223	0.0249	-0.0245
589	SLD 10	-1.7	2.04	60.1	0.0285	0.0249	-0.0211
589	SLD 11	-2.44	-2.82	58.26	-0.1283	0.019	-0.0037
589	SLD 12	-2.44	-3.1	58.29	-0.1221	0.0189	-0.0003
589	SLD 13	-5.15	1.05	54.11	0.0376	0.0035	-0.0164
589	SLD 14	-5.15	0.62	54.15	0.0471	0.0034	-0.0111
589	SLD 15	-5.37	-0.49	53.57	-0.0075	0.0017	-0.0101
589	SLD 16	-5.37	-0.92	53.61	0.0019	0.0017	-0.0049
589	SLV 1	10.22	0.14	79.86	-0.2719	0.097	-0.0322
589	SLV 2	10.22	-0.86	79.95	-0.2499	0.097	-0.02
589	SLV 3	9.7	-3.35	78.59	-0.3754	0.0929	-0.0179
589	SLV 4	9.7	-4.35	78.68	-0.3534	0.0928	-0.0058
589	SLV 5	3.36	5.09	68.89	0.0158	0.0566	-0.0425
589	SLV 6	3.36	4.45	68.95	0.03	0.0565	-0.0347
589	SLV 7	1.63	-6.53	64.66	-0.3292	0.0427	0.005
589	SLV 8	1.63	-7.17	64.72	-0.315	0.0427	0.0128
589	SLV 9	-3.04	6.01	58.21	0.1556	0.0178	-0.039
589	SLV 10	-3.04	5.36	58.27	0.1697	0.0177	-0.0312
589	SLV 11	-4.77	-5.62	53.98	-0.1894	0.0039	0.0085
589	SLV 12	-4.77	-6.26	54.04	-0.1752	0.0038	0.0163
589	SLV 13	-11.11	3.18	44.26	0.1939	-0.0324	-0.0205
589	SLV 14	-11.11	2.18	44.35	0.216	-0.0325	-0.0083
589	SLV 15	-11.63	-0.3	42.99	0.0904	-0.0365	-0.0062
589	SLV 16	-11.63	-1.31	43.08	0.1125	-0.0366	0.0059
589	CRTFP Ux+	0	0	0	0	0	0
589	CRTFP Ux-	0	0	0	0	0	0
589	CRTFP Uy+	0	0	0	0	0	0
589	CRTFP Uy-	0	0	0	0	0	0
590	SLU 1	-0.65	-0.65	56.45	-0.085	0.0304	-0.0107
590	SLU 2	-0.65	-0.72	56.45	-0.085	0.0304	-0.0102
590	SLU 3	-0.66	-0.65	57.79	-0.0855	0.0311	-0.0109
590	SLU 4	-0.67	-0.7	57.79	-0.0855	0.0311	-0.0106
590	SLU 5	-0.66	-0.73	57.29	-0.085	0.0309	-0.0104
590	SLU 6	-0.68	-0.66	58.62	-0.0855	0.0316	-0.0111
590	SLU 7	-0.68	-0.7	58.63	-0.0855	0.0316	-0.0108
590	SLU 8	-0.67	-0.66	58.12	-0.0849	0.0313	-0.0111
590	SLU 9	-0.67	-0.7	58.12	-0.085	0.0313	-0.0108
590	SLU 10	-0.66	-0.73	63.4	-0.0907	0.034	-0.0113
590	SLU 11	-0.67	-0.67	64.73	-0.0912	0.0347	-0.012
590	SLU 12	-0.67	-0.71	64.74	-0.0912	0.0347	-0.0117
590	SLU 13	-0.67	-0.74	64.23	-0.0907	0.0344	-0.0115
590	SLU 14	-0.69	-0.67	65.57	-0.0911	0.0352	-0.0122
590	SLU 15	-0.69	-0.72	65.57	-0.0912	0.0351	-0.0119
590	SLU 16	-0.68	-0.67	65.06	-0.0906	0.0349	-0.0122
590	SLU 17	-0.68	-0.71	65.07	-0.0906	0.0349	-0.0119
590	SLU 18	-0.66	-0.67	66.37	-0.0931	0.0355	-0.0122
590	SLU 19	-0.66	-0.71	66.37	-0.0931	0.0355	-0.012
590	SLU 20	-0.67	-0.67	67.2	-0.0931	0.036	-0.0124
590	SLU 21	-0.67	-0.72	67.21	-0.0931	0.036	-0.0122
590	SLU 22	-0.7	-0.62	63.29	-0.0812	0.0343	-0.0114
590	SLU 23	-0.7	-0.7	63.3	-0.0813	0.0343	-0.011
590	SLU 24	-0.71	-0.63	64.63	-0.0817	0.035	-0.0116
590	SLU 25	-0.72	-0.67	64.63	-0.0818	0.035	-0.0114
590	SLU 26	-0.71	-0.7	64.13	-0.0812	0.0348	-0.0112
590	SLU 27	-0.73	-0.63	65.46	-0.0817	0.0355	-0.0119
590	SLU 28	-0.73	-0.68	65.47	-0.0817	0.0355	-0.0116
590	SLU 29	-0.72	-0.63	64.96	-0.0811	0.0352	-0.0119
590	SLU 30	-0.72	-0.68	64.96	-0.0812	0.0352	-0.0116
590	SLU 31	-0.71	-0.71	70.24	-0.0869	0.0379	-0.0121
590	SLU 32	-0.72	-0.64	71.58	-0.0874	0.0386	-0.0127
590	SLU 33	-0.72	-0.69	71.58	-0.0874	0.0386	-0.0125
590	SLU 34	-0.72	-0.71	71.08	-0.0869	0.0383	-0.0123
590	SLU 35	-0.74	-0.65	72.41	-0.0874	0.0391	-0.0129
590	SLU 36	-0.74	-0.69	72.42	-0.0874	0.039	-0.0127
590	SLU 37	-0.73	-0.65	71.91	-0.0868	0.0388	-0.0129
590	SLU 38	-0.73	-0.69	71.91	-0.0869	0.0388	-0.0127
590	SLU 39	-0.71	-0.64	73.21	-0.0893	0.0394	-0.013
590	SLU 40	-0.71	-0.69	73.22	-0.0893	0.0394	-0.0127
590	SLU 41	-0.72	-0.65	74.05	-0.0893	0.0399	-0.0132
590	SLU 42	-0.72	-0.69	74.05	-0.0893	0.0399	-0.0129
590	SLU 43	-0.83	-0.85	71.03	-0.1117	0.0382	-0.0136
590	SLU 44	-0.83	-0.92	71.04	-0.1118	0.0382	-0.0132
590	SLU 45	-0.84	-0.86	72.37	-0.1123	0.0389	-0.0138
590	SLU 46	-0.84	-0.9	72.38	-0.1123	0.0389	-0.0135
590	SLU 47	-0.84	-0.93	71.87	-0.1118	0.0387	-0.0134
590	SLU 48	-0.85	-0.86	73.21	-0.1122	0.0394	-0.014
590	SLU 49	-0.85	-0.91	73.21	-0.1123	0.0394	-0.0138
590	SLU 50	-0.85	-0.86	72.7	-0.1117	0.0391	-0.014
590	SLU 51	-0.85	-0.9	72.71	-0.1117	0.0391	-0.0138
590	SLU 52	-0.84	-0.94	77.99	-0.1175	0.0418	-0.0142
590	SLU 53	-0.85	-0.87	79.32	-0.118	0.0425	-0.0149
590	SLU 54	-0.85	-0.91	79.32	-0.118	0.0425	-0.0146
590	SLU 55	-0.85	-0.94	78.82	-0.1175	0.0422	-0.0145
590	SLU 56	-0.86	-0.88	80.15	-0.1179	0.0429	-0.0151
590	SLU 57	-0.86	-0.92	80.16	-0.118	0.0429	-0.0148
590	SLU 58	-0.86	-0.87	79.65	-0.1174	0.0427	-0.0151
590	SLU 59	-0.86	-0.92	79.65	-0.1174	0.0427	-0.0148
590	SLU 60	-0.84	-0.87	80.96	-0.1199	0.0433	-0.0152
590	SLU 61	-0.84	-0.91	80.96	-0.1199	0.0433	-0.0149
590	SLU 62	-0.85	-0.88	81.79	-0.1198	0.0438	-0.0154
590	SLU 63	-0.85	-0.92	81.8	-0.1199	0.0438	-0.0151
590	SLU 64	-0.88	-0.83	77.88	-0.108	0.0421	-0.0144
590	SLU 65	-0.88	-0.9	77.88	-0.108	0.0421	-0.0139

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
590	SLU 66	-0.89	-0.83	79.22	-0.1085	0.0428	-0.0146
590	SLU 67	-0.89	-0.88	79.22	-0.1085	0.0428	-0.0143
590	SLU 68	-0.89	-0.9	78.72	-0.108	0.0426	-0.0141
590	SLU 69	-0.9	-0.84	80.05	-0.1085	0.0433	-0.0148
590	SLU 70	-0.9	-0.88	80.06	-0.1085	0.0433	-0.0145
590	SLU 71	-0.9	-0.84	79.55	-0.1079	0.043	-0.0148
590	SLU 72	-0.9	-0.88	79.55	-0.108	0.043	-0.0145
590	SLU 73	-0.89	-0.91	84.83	-0.1137	0.0457	-0.015
590	SLU 74	-0.9	-0.85	86.16	-0.1142	0.0464	-0.0157
590	SLU 75	-0.9	-0.89	86.17	-0.1142	0.0464	-0.0154
590	SLU 76	-0.9	-0.92	85.66	-0.1137	0.0461	-0.0152
590	SLU 77	-0.91	-0.85	87	-0.1142	0.0468	-0.0159
590	SLU 78	-0.91	-0.89	87	-0.1142	0.0468	-0.0156
590	SLU 79	-0.91	-0.85	86.49	-0.1136	0.0466	-0.0159
590	SLU 80	-0.91	-0.89	86.5	-0.1136	0.0466	-0.0156
590	SLU 81	-0.89	-0.84	87.8	-0.1161	0.0472	-0.0159
590	SLU 82	-0.89	-0.89	87.8	-0.1161	0.0472	-0.0157
590	SLU 83	-0.9	-0.85	88.63	-0.1161	0.0477	-0.0161
590	SLU 84	-0.9	-0.89	88.64	-0.1161	0.0477	-0.0159
590	SLE RA 1	-0.66	-0.64	58.4	-0.0839	0.0316	-0.0109
590	SLE RA 2	-0.66	-0.69	58.41	-0.0839	0.0315	-0.0106
590	SLE RA 3	-0.67	-0.65	59.29	-0.0842	0.032	-0.011
590	SLE RA 4	-0.67	-0.67	59.3	-0.0843	0.032	-0.0108
590	SLE RA 5	-0.67	-0.69	58.96	-0.0839	0.0318	-0.0107
590	SLE RA 6	-0.68	-0.65	59.85	-0.0842	0.0323	-0.0112
590	SLE RA 7	-0.68	-0.68	59.85	-0.0842	0.0323	-0.011
590	SLE RA 8	-0.68	-0.65	59.51	-0.0839	0.0321	-0.0112
590	SLE RA 9	-0.68	-0.68	59.52	-0.0839	0.0321	-0.011
590	SLE RA 10	-0.67	-0.7	63.04	-0.0877	0.0339	-0.0113
590	SLE RA 11	-0.68	-0.65	63.93	-0.088	0.0344	-0.0118
590	SLE RA 12	-0.68	-0.68	63.93	-0.088	0.0344	-0.0116
590	SLE RA 13	-0.68	-0.7	63.59	-0.0877	0.0342	-0.0115
590	SLE RA 14	-0.69	-0.66	64.48	-0.088	0.0347	-0.0119
590	SLE RA 15	-0.69	-0.69	64.48	-0.088	0.0347	-0.0117
590	SLE RA 16	-0.68	-0.66	64.15	-0.0876	0.0345	-0.0119
590	SLE RA 17	-0.69	-0.69	64.15	-0.0877	0.0345	-0.0117
590	SLE RA 18	-0.67	-0.65	65.02	-0.0893	0.035	-0.0119
590	SLE RA 19	-0.67	-0.68	65.02	-0.0893	0.035	-0.0118
590	SLE RA 20	-0.68	-0.66	65.57	-0.0893	0.0353	-0.0121
590	SLE RA 21	-0.68	-0.69	65.58	-0.0893	0.0352	-0.0119
590	SLE FR 1	-0.66	-0.64	58.4	-0.0839	0.0316	-0.0109
590	SLE FR 2	-0.66	-0.65	58.4	-0.0839	0.0315	-0.0108
590	SLE FR 3	-0.67	-0.64	58.62	-0.0839	0.0317	-0.011
590	SLE FR 4	-0.67	-0.65	60.39	-0.0855	0.0326	-0.0111
590	SLE FR 5	-0.67	-0.65	60.61	-0.0855	0.0327	-0.0113
590	SLE FR 6	-0.67	-0.65	61.71	-0.0866	0.0333	-0.0114
590	SLE QP 1	-0.66	-0.64	58.4	-0.0839	0.0316	-0.0109
590	SLE QP 2	-0.67	-0.64	60.39	-0.0855	0.0326	-0.0112
590	SLD 1	4.01	-0.32	67.33	-0.1703	0.0571	-0.0085
590	SLD 2	4.01	-0.73	67.37	-0.1609	0.057	-0.0037
590	SLD 3	3.79	-1.85	66.85	-0.218	0.0552	-0.0128
590	SLD 4	3.79	-2.25	66.89	-0.2085	0.0551	-0.008
590	SLD 5	1.07	1.83	63.2	-0.0403	0.0428	-0.0047
590	SLD 6	1.07	1.57	63.22	-0.0342	0.0428	-0.0016
590	SLD 7	0.33	-3.24	61.58	-0.1992	0.0364	-0.0191
590	SLD 8	0.33	-3.51	61.61	-0.193	0.0364	-0.016
590	SLD 9	-1.66	2.22	59.16	0.022	0.0287	-0.0065
590	SLD 10	-1.66	1.95	59.19	0.0282	0.0287	-0.0033
590	SLD 11	-2.41	-2.85	57.55	-0.1369	0.0223	-0.0209
590	SLD 12	-2.41	-3.12	57.58	-0.1307	0.0223	-0.0177
590	SLD 13	-5.12	0.96	53.88	0.0375	0.01	-0.0144
590	SLD 14	-5.12	0.56	53.92	0.0469	0.01	-0.0096
590	SLD 15	-5.34	-0.56	53.4	-0.0102	0.0081	-0.0187
590	SLD 16	-5.34	-0.97	53.44	-0.0007	0.0081	-0.0139
590	SLV 1	10.27	0.04	76.64	-0.2851	0.0899	-0.0049
590	SLV 2	10.27	-0.9	76.73	-0.2632	0.0898	0.0063
590	SLV 3	9.75	-3.4	75.52	-0.3943	0.0855	-0.0148
590	SLV 4	9.75	-4.35	75.61	-0.3723	0.0853	-0.0037
590	SLV 5	3.4	4.95	66.95	0.0164	0.0566	0.0038
590	SLV 6	3.4	4.34	67.01	0.0305	0.0565	0.011
590	SLV 7	1.67	-6.53	63.2	-0.3474	0.0417	-0.0293
590	SLV 8	1.67	-7.14	63.26	-0.3333	0.0416	-0.0221
590	SLV 9	-3	5.85	57.51	0.1623	0.0235	-0.0003
590	SLV 10	-3	5.24	57.57	0.1764	0.0234	0.0068
590	SLV 11	-4.73	-5.63	53.76	-0.2015	0.0087	-0.0334
590	SLV 12	-4.73	-6.23	53.82	-0.1874	0.0086	-0.0263
590	SLV 13	-11.08	3.06	45.16	0.2013	-0.0202	-0.0188
590	SLV 14	-11.08	2.11	45.25	0.2233	-0.0203	-0.0076
590	SLV 15	-11.6	-0.39	44.04	0.0922	-0.0246	-0.0287
590	SLV 16	-11.6	-1.33	44.13	0.1141	-0.0248	-0.0175
590	CRTFP Ux+	0	0	0	0	0	0
590	CRTFP Ux-	0	0	0	0	0	0
590	CRTFP Uy+	0	0	0	0	0	0
590	CRTFP Uy-	0	0	0	0	0	0
591	SLU 1	-0.56	-0.64	51.2	-0.0837	0.7214	0.0011
591	SLU 2	-0.56	-0.71	51.21	-0.0839	0.7215	0.0023
591	SLU 3	-0.58	-0.65	52.41	-0.0843	0.7386	0.0011
591	SLU 4	-0.58	-0.69	52.42	-0.0844	0.7386	0.0018
591	SLU 5	-0.57	-0.71	51.96	-0.0839	0.7322	0.0022
591	SLU 6	-0.59	-0.65	53.17	-0.0843	0.7492	0.001
591	SLU 7	-0.59	-0.69	53.18	-0.0844	0.7493	0.0017
591	SLU 8	-0.58	-0.65	52.71	-0.0838	0.7428	0.001
591	SLU 9	-0.58	-0.69	52.72	-0.0838	0.7428	0.0017
591	SLU 10	-0.57	-0.72	57.51	-0.0895	0.8103	0.002
591	SLU 11	-0.58	-0.66	58.72	-0.09	0.8274	0.0007
591	SLU 12	-0.58	-0.7	58.72	-0.0901	0.8274	0.0014
591	SLU 13	-0.58	-0.73	58.27	-0.0895	0.821	0.0019

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
591	SLU 14	-0.59	-0.67	59.48	-0.09	0.838	0.0006
591	SLU 15	-0.59	-0.71	59.48	-0.0901	0.8381	0.0014
591	SLU 16	-0.59	-0.67	59.02	-0.0894	0.8316	0.0006
591	SLU 17	-0.59	-0.71	59.02	-0.0895	0.8316	0.0013
591	SLU 18	-0.57	-0.66	60.2	-0.0919	0.8483	0.0006
591	SLU 19	-0.57	-0.7	60.21	-0.0919	0.8483	0.0013
591	SLU 20	-0.58	-0.67	60.96	-0.0919	0.859	0.0005
591	SLU 21	-0.58	-0.71	60.97	-0.0919	0.859	0.0012
591	SLU 22	-0.6	-0.62	57.4	-0.0804	0.8091	0.0005
591	SLU 23	-0.61	-0.69	57.4	-0.0805	0.8092	0.0017
591	SLU 24	-0.62	-0.63	58.61	-0.0809	0.8262	0.0004
591	SLU 25	-0.62	-0.67	58.62	-0.081	0.8262	0.0012
591	SLU 26	-0.62	-0.69	58.16	-0.0805	0.8198	0.0016
591	SLU 27	-0.63	-0.63	59.37	-0.0809	0.8369	0.0004
591	SLU 28	-0.63	-0.67	59.37	-0.081	0.8369	0.0011
591	SLU 29	-0.63	-0.63	58.91	-0.0804	0.8305	0.0003
591	SLU 30	-0.63	-0.67	58.92	-0.0804	0.8305	0.001
591	SLU 31	-0.61	-0.7	63.71	-0.0861	0.898	0.0013
591	SLU 32	-0.62	-0.64	64.92	-0.0866	0.915	0.0001
591	SLU 33	-0.62	-0.68	64.92	-0.0867	0.915	0.0008
591	SLU 34	-0.62	-0.71	64.46	-0.0861	0.9086	0.0012
591	SLU 35	-0.63	-0.65	65.67	-0.0866	0.9257	0
591	SLU 36	-0.63	-0.69	65.68	-0.0867	0.9257	0.0007
591	SLU 37	-0.63	-0.65	65.21	-0.0861	0.9193	-0.0001
591	SLU 38	-0.63	-0.69	65.22	-0.0861	0.9193	0.0007
591	SLU 39	-0.61	-0.64	66.4	-0.0885	0.936	-0.0001
591	SLU 40	-0.61	-0.68	66.4	-0.0885	0.936	0.0007
591	SLU 41	-0.62	-0.65	67.16	-0.0885	0.9466	-0.0001
591	SLU 42	-0.62	-0.69	67.16	-0.0885	0.9467	0.0006
591	SLU 43	-0.72	-0.84	64.43	-0.11	0.9078	0.0017
591	SLU 44	-0.72	-0.91	64.44	-0.1101	0.9079	0.0029
591	SLU 45	-0.73	-0.85	65.65	-0.1106	0.9249	0.0016
591	SLU 46	-0.73	-0.89	65.65	-0.1107	0.925	0.0023
591	SLU 47	-0.73	-0.91	65.2	-0.1102	0.9186	0.0028
591	SLU 48	-0.74	-0.85	66.41	-0.1106	0.9356	0.0015
591	SLU 49	-0.74	-0.89	66.41	-0.1107	0.9356	0.0023
591	SLU 50	-0.74	-0.85	65.95	-0.1101	0.9292	0.0015
591	SLU 51	-0.74	-0.89	65.95	-0.1101	0.9292	0.0022
591	SLU 52	-0.72	-0.92	70.74	-0.1158	0.9967	0.0025
591	SLU 53	-0.73	-0.86	71.95	-0.1163	1.0137	0.0012
591	SLU 54	-0.74	-0.9	71.96	-0.1163	1.0138	0.002
591	SLU 55	-0.73	-0.93	71.5	-0.1158	1.0074	0.0024
591	SLU 56	-0.75	-0.87	72.71	-0.1163	1.0244	0.0012
591	SLU 57	-0.75	-0.91	72.71	-0.1164	1.0244	0.0019
591	SLU 58	-0.74	-0.87	72.25	-0.1157	1.018	0.0011
591	SLU 59	-0.74	-0.91	72.26	-0.1158	1.018	0.0019
591	SLU 60	-0.72	-0.86	73.44	-0.1181	1.0347	0.0011
591	SLU 61	-0.72	-0.9	73.44	-0.1182	1.0347	0.0019
591	SLU 62	-0.73	-0.87	74.19	-0.1182	1.0453	0.0011
591	SLU 63	-0.73	-0.91	74.2	-0.1182	1.0454	0.0018
591	SLU 64	-0.76	-0.82	70.63	-0.1066	0.9955	0.001
591	SLU 65	-0.76	-0.88	70.64	-0.1068	0.9955	0.0022
591	SLU 66	-0.77	-0.83	71.85	-0.1072	1.0126	0.001
591	SLU 67	-0.77	-0.87	71.85	-0.1073	1.0126	0.0017
591	SLU 68	-0.77	-0.89	71.4	-0.1068	1.0062	0.0022
591	SLU 69	-0.78	-0.83	72.6	-0.1072	1.0233	0.0009
591	SLU 70	-0.78	-0.87	72.61	-0.1073	1.0233	0.0016
591	SLU 71	-0.78	-0.83	72.15	-0.1067	1.0168	0.0009
591	SLU 72	-0.78	-0.87	72.15	-0.1067	1.0169	0.0016
591	SLU 73	-0.77	-0.9	76.94	-0.1124	1.0843	0.0019
591	SLU 74	-0.78	-0.84	78.15	-0.1129	1.1014	0.0006
591	SLU 75	-0.78	-0.88	78.15	-0.1129	1.1014	0.0013
591	SLU 76	-0.78	-0.91	77.7	-0.1124	1.095	0.0018
591	SLU 77	-0.79	-0.85	78.91	-0.1129	1.1121	0.0005
591	SLU 78	-0.79	-0.89	78.91	-0.113	1.1121	0.0013
591	SLU 79	-0.78	-0.85	78.45	-0.1123	1.1056	0.0005
591	SLU 80	-0.79	-0.89	78.45	-0.1124	1.1057	0.0012
591	SLU 81	-0.77	-0.84	79.63	-0.1147	1.1223	0.0005
591	SLU 82	-0.77	-0.88	79.64	-0.1148	1.1224	0.0012
591	SLU 83	-0.78	-0.85	80.39	-0.1148	1.133	0.0004
591	SLU 84	-0.78	-0.89	80.4	-0.1148	1.133	0.0011
591	SLE RA 1	-0.57	-0.64	52.97	-0.0828	0.7465	0.0009
591	SLE RA 2	-0.58	-0.68	52.97	-0.0829	0.7465	0.0017
591	SLE RA 3	-0.58	-0.64	53.78	-0.0832	0.7579	0.0009
591	SLE RA 4	-0.58	-0.67	53.78	-0.0832	0.7579	0.0014
591	SLE RA 5	-0.58	-0.68	53.48	-0.0829	0.7536	0.0017
591	SLE RA 6	-0.59	-0.64	54.28	-0.0832	0.765	0.0008
591	SLE RA 7	-0.59	-0.67	54.29	-0.0832	0.765	0.0013
591	SLE RA 8	-0.59	-0.64	53.98	-0.0828	0.7607	0.0008
591	SLE RA 9	-0.59	-0.67	53.98	-0.0828	0.7607	0.0013
591	SLE RA 10	-0.58	-0.69	57.18	-0.0866	0.8057	0.0015
591	SLE RA 11	-0.59	-0.65	57.98	-0.0869	0.8171	0.0007
591	SLE RA 12	-0.59	-0.68	57.98	-0.087	0.8171	0.0011
591	SLE RA 13	-0.59	-0.69	57.68	-0.0866	0.8128	0.0014
591	SLE RA 14	-0.59	-0.65	58.49	-0.0869	0.8242	0.0006
591	SLE RA 15	-0.59	-0.68	58.49	-0.087	0.8242	0.0011
591	SLE RA 16	-0.59	-0.65	58.18	-0.0866	0.8199	0.0006
591	SLE RA 17	-0.59	-0.68	58.18	-0.0866	0.8199	0.0011
591	SLE RA 18	-0.58	-0.65	58.97	-0.0882	0.8311	0.0006
591	SLE RA 19	-0.58	-0.68	58.97	-0.0882	0.8311	0.0011
591	SLE RA 20	-0.59	-0.65	59.48	-0.0882	0.8382	0.0005
591	SLE RA 21	-0.59	-0.68	59.48	-0.0882	0.8382	0.001
591	SLE FR 1	-0.57	-0.64	52.97	-0.0828	0.7465	0.0009
591	SLE FR 2	-0.57	-0.64	52.97	-0.0828	0.7465	0.0011
591	SLE FR 3	-0.58	-0.64	53.17	-0.0828	0.7493	0.0009
591	SLE FR 4	-0.58	-0.65	54.77	-0.0844	0.7719	0.001
591	SLE FR 5	-0.58	-0.64	54.97	-0.0844	0.7747	0.0008

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
591	SLE FR 6	-0.58	-0.64	55.97	-0.0855	0.7888	0.0007
591	SLE QP 1	-0.57	-0.64	52.97	-0.0828	0.7465	0.0009
591	SLE QP 2	-0.58	-0.64	54.77	-0.0844	0.7719	0.0008
591	SLD 1	3.74	-0.34	60.53	-0.1657	0.8649	-0.0015
591	SLD 2	3.74	-0.7	60.57	-0.157	0.8654	0.0075
591	SLD 3	3.54	-1.74	60.14	-0.2121	0.8581	0.0187
591	SLD 4	3.54	-2.1	60.18	-0.2034	0.8586	0.0277
591	SLD 5	1.03	1.63	57.08	-0.04	0.8101	-0.0321
591	SLD 6	1.03	1.4	57.11	-0.0343	0.8104	-0.0262
591	SLD 7	0.35	-3.03	55.78	-0.1946	0.7873	0.0352
591	SLD 8	0.35	-3.26	55.81	-0.1889	0.7876	0.0411
591	SLD 9	-1.5	1.98	53.73	0.0201	0.7561	-0.0394
591	SLD 10	-1.5	1.75	53.76	0.0258	0.7564	-0.0336
591	SLD 11	-2.18	-2.68	52.43	-0.1345	0.7333	0.0278
591	SLD 12	-2.18	-2.91	52.46	-0.1288	0.7337	0.0337
591	SLD 13	-4.69	0.82	49.36	0.0346	0.6852	-0.026
591	SLD 14	-4.69	0.46	49.4	0.0433	0.6856	-0.0171
591	SLD 15	-4.9	-0.58	48.97	-0.0118	0.6783	-0.0058
591	SLD 16	-4.89	-0.94	49.01	-0.0031	0.6788	0.0031
591	SLV 1	9.53	0	68.24	-0.276	0.9896	-0.0037
591	SLV 2	9.53	-0.83	68.33	-0.2557	0.9907	0.0171
591	SLV 3	9.05	-3.16	67.33	-0.3821	0.9737	0.0419
591	SLV 4	9.05	-3.99	67.42	-0.3619	0.9748	0.0628
591	SLV 5	3.18	4.49	60.17	0.0156	0.8611	-0.0734
591	SLV 6	3.18	3.95	60.23	0.0286	0.8618	-0.06
591	SLV 7	1.59	-6.05	57.14	-0.3381	0.8081	0.0788
591	SLV 8	1.59	-6.58	57.2	-0.3251	0.8088	0.0923
591	SLV 9	-2.74	5.3	52.34	0.1563	0.7349	-0.0906
591	SLV 10	-2.74	4.77	52.4	0.1693	0.7356	-0.0772
591	SLV 11	-4.33	-5.23	49.31	-0.1974	0.6819	0.0616
591	SLV 12	-4.33	-5.77	49.37	-0.1844	0.6826	0.075
591	SLV 13	-10.2	2.71	42.12	0.1931	0.5689	-0.0612
591	SLV 14	-10.2	1.88	42.21	0.2133	0.57	-0.0403
591	SLV 15	-10.68	-0.45	41.21	0.0869	0.553	-0.0155
591	SLV 16	-10.68	-1.28	41.3	0.1072	0.5541	0.0054
591	CRTFP Ux+	0	0	0	0	0	0
591	CRTFP Ux-	0	0	0	0	0	0
591	CRTFP Uy+	0	0	0	0	0	0
591	CRTFP Uy-	0	0	0	0	0	0
596	SLU 1	-1.19	-2.25	145.86	-8.6282	-9.9057	-0.2039
596	SLU 2	-1.19	-2.43	145.91	-8.6327	-9.9108	-0.2151
596	SLU 3	-1.22	-2.28	149.34	-8.8345	-10.1438	-0.2066
596	SLU 4	-1.22	-2.39	149.38	-8.8372	-10.1469	-0.2133
596	SLU 5	-1.21	-2.46	148.07	-8.7615	-10.0574	-0.2182
596	SLU 6	-1.24	-2.3	151.5	-8.9633	-10.2904	-0.2096
596	SLU 7	-1.24	-2.41	151.54	-8.966	-10.2935	-0.2163
596	SLU 8	-1.23	-2.3	150.18	-8.8858	-10.1989	-0.21
596	SLU 9	-1.24	-2.41	150.21	-8.8884	-10.202	-0.2167
596	SLU 10	-1.17	-2.49	163.91	-9.6609	-11.1414	-0.2155
596	SLU 11	-1.19	-2.34	167.34	-9.8627	-11.3743	-0.207
596	SLU 12	-1.19	-2.45	167.37	-9.8654	-11.3774	-0.2137
596	SLU 13	-1.19	-2.52	166.07	-9.7897	-11.288	-0.2185
596	SLU 14	-1.21	-2.36	169.5	-9.9915	-11.521	-0.21
596	SLU 15	-1.21	-2.47	169.53	-9.9942	-11.5241	-0.2167
596	SLU 16	-1.21	-2.37	168.18	-9.914	-11.4294	-0.2104
596	SLU 17	-1.21	-2.47	168.21	-9.9167	-11.4325	-0.2171
596	SLU 18	-1.15	-2.34	171.57	-10.0971	-11.6636	-0.2045
596	SLU 19	-1.15	-2.45	171.6	-10.0998	-11.6667	-0.2112
596	SLU 20	-1.17	-2.37	173.73	-10.2259	-11.8102	-0.2075
596	SLU 21	-1.18	-2.47	173.76	-10.2286	-11.8133	-0.2142
596	SLU 22	-1.27	-2.19	163.32	-9.6063	-11.0768	-0.2006
596	SLU 23	-1.27	-2.37	163.38	-9.6108	-11.082	-0.2117
596	SLU 24	-1.3	-2.22	166.81	-9.8126	-11.315	-0.2032
596	SLU 25	-1.3	-2.32	166.84	-9.8153	-11.3181	-0.2099
596	SLU 26	-1.3	-2.4	165.54	-9.7396	-11.2286	-0.2148
596	SLU 27	-1.32	-2.24	168.97	-9.9414	-11.4616	-0.2063
596	SLU 28	-1.32	-2.35	169	-9.9441	-11.4647	-0.213
596	SLU 29	-1.32	-2.24	167.64	-9.8639	-11.3701	-0.2066
596	SLU 30	-1.32	-2.35	167.68	-9.8666	-11.3732	-0.2133
596	SLU 31	-1.25	-2.43	181.38	-10.6391	-12.3125	-0.2121
596	SLU 32	-1.27	-2.28	184.81	-10.8409	-12.5455	-0.2036
596	SLU 33	-1.27	-2.39	184.84	-10.8436	-12.5486	-0.2103
596	SLU 34	-1.27	-2.46	183.54	-10.7678	-12.4591	-0.2152
596	SLU 35	-1.29	-2.3	186.97	-10.9696	-12.6921	-0.2066
596	SLU 36	-1.3	-2.41	187	-10.9723	-12.6952	-0.2133
596	SLU 37	-1.29	-2.3	185.64	-10.8921	-12.6006	-0.207
596	SLU 38	-1.29	-2.41	185.68	-10.8948	-12.6037	-0.2137
596	SLU 39	-1.23	-2.28	189.04	-11.0753	-12.8347	-0.2011
596	SLU 40	-1.23	-2.39	189.07	-11.0779	-12.8378	-0.2078
596	SLU 41	-1.25	-2.31	191.2	-11.204	-12.9813	-0.2041
596	SLU 42	-1.26	-2.41	191.23	-11.2067	-12.9844	-0.2108
596	SLU 43	-1.52	-2.95	183.62	-10.8813	-12.4759	-0.2663
596	SLU 44	-1.52	-3.13	183.68	-10.8858	-12.481	-0.2775
596	SLU 45	-1.55	-2.97	187.11	-11.0876	-12.714	-0.269
596	SLU 46	-1.55	-3.08	187.14	-11.0903	-12.7171	-0.2757
596	SLU 47	-1.54	-3.16	185.84	-11.0146	-12.6276	-0.2805
596	SLU 48	-1.57	-3	189.27	-11.2164	-12.8606	-0.272
596	SLU 49	-1.57	-3.11	189.3	-11.2191	-12.8637	-0.2787
596	SLU 50	-1.56	-3	187.94	-11.1389	-12.7691	-0.2724
596	SLU 51	-1.56	-3.11	187.98	-11.1415	-12.7722	-0.2791
596	SLU 52	-1.49	-3.19	201.68	-11.914	-13.7115	-0.2779
596	SLU 53	-1.52	-3.04	205.11	-12.1158	-13.9445	-0.2693
596	SLU 54	-1.52	-3.14	205.14	-12.1185	-13.9476	-0.276
596	SLU 55	-1.52	-3.22	203.84	-12.0428	-13.8581	-0.2809
596	SLU 56	-1.54	-3.06	207.27	-12.2446	-14.0911	-0.2724
596	SLU 57	-1.54	-3.17	207.3	-12.2473	-14.0942	-0.2791
596	SLU 58	-1.54	-3.06	205.94	-12.1671	-13.9996	-0.2728

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
596	SLU 59	-1.54	-3.17	205.98	-12.1698	-14.0027	-0.2795
596	SLU 60	-1.48	-3.04	209.34	-12.3502	-14.2337	-0.2668
596	SLU 61	-1.48	-3.15	209.37	-12.3529	-14.2368	-0.2735
596	SLU 62	-1.5	-3.06	211.5	-12.479	-14.3804	-0.2699
596	SLU 63	-1.5	-3.17	211.53	-12.4817	-14.3834	-0.2766
596	SLU 64	-1.6	-2.89	201.09	-11.8594	-13.647	-0.2629
596	SLU 65	-1.6	-3.07	201.15	-11.8639	-13.6521	-0.2741
596	SLU 66	-1.63	-2.91	204.58	-12.0657	-13.8851	-0.2656
596	SLU 67	-1.63	-3.02	204.61	-12.0684	-13.8882	-0.2723
596	SLU 68	-1.62	-3.09	203.31	-11.9927	-13.7988	-0.2771
596	SLU 69	-1.65	-2.94	206.74	-12.1945	-14.0318	-0.2686
596	SLU 70	-1.65	-3.05	206.77	-12.1972	-14.0348	-0.2753
596	SLU 71	-1.64	-2.94	205.41	-12.117	-13.9402	-0.269
596	SLU 72	-1.65	-3.05	205.44	-12.1197	-13.9433	-0.2757
596	SLU 73	-1.57	-3.13	219.14	-12.8922	-14.8827	-0.2745
596	SLU 74	-1.6	-2.97	222.58	-13.094	-15.1157	-0.2659
596	SLU 75	-1.6	-3.08	222.61	-13.0967	-15.1187	-0.2726
596	SLU 76	-1.6	-3.16	221.3	-13.0209	-15.0293	-0.2775
596	SLU 77	-1.62	-3	224.74	-13.2227	-15.2623	-0.269
596	SLU 78	-1.62	-3.11	224.77	-13.2254	-15.2654	-0.2757
596	SLU 79	-1.62	-3	223.41	-13.1452	-15.1708	-0.2694
596	SLU 80	-1.62	-3.11	223.44	-13.1479	-15.1739	-0.2761
596	SLU 81	-1.56	-2.98	226.8	-13.3284	-15.4049	-0.2635
596	SLU 82	-1.56	-3.08	226.84	-13.331	-15.408	-0.2702
596	SLU 83	-1.58	-3	228.96	-13.4571	-15.5515	-0.2665
596	SLU 84	-1.59	-3.11	229	-13.4598	-15.5546	-0.2732
596	SLE RA 1	-1.21	-2.24	150.85	-8.9077	-10.2403	-0.203
596	SLE RA 2	-1.21	-2.36	150.88	-8.9107	-10.2437	-0.2104
596	SLE RA 3	-1.23	-2.25	153.17	-9.0452	-10.3991	-0.2047
596	SLE RA 4	-1.23	-2.32	153.19	-9.047	-10.4011	-0.2092
596	SLE RA 5	-1.23	-2.37	152.32	-8.9965	-10.3415	-0.2125
596	SLE RA 6	-1.25	-2.27	154.61	-9.131	-10.4968	-0.2068
596	SLE RA 7	-1.25	-2.34	154.63	-9.1328	-10.4989	-0.2112
596	SLE RA 8	-1.24	-2.27	153.73	-9.0794	-10.4358	-0.207
596	SLE RA 9	-1.24	-2.34	153.75	-9.0812	-10.4379	-0.2115
596	SLE RA 10	-1.2	-2.4	162.88	-9.5962	-11.0641	-0.2107
596	SLE RA 11	-1.21	-2.29	165.17	-9.7307	-11.2194	-0.205
596	SLE RA 12	-1.21	-2.36	165.19	-9.7325	-11.2215	-0.2095
596	SLE RA 13	-1.21	-2.41	164.32	-9.682	-11.1618	-0.2127
596	SLE RA 14	-1.23	-2.31	166.61	-9.8165	-11.3172	-0.207
596	SLE RA 15	-1.23	-2.38	166.63	-9.8183	-11.3192	-0.2115
596	SLE RA 16	-1.22	-2.31	165.73	-9.7649	-11.2561	-0.2073
596	SLE RA 17	-1.23	-2.38	165.75	-9.7667	-11.2582	-0.2118
596	SLE RA 18	-1.19	-2.29	167.99	-9.8869	-11.4122	-0.2033
596	SLE RA 19	-1.19	-2.37	168.01	-9.8887	-11.4143	-0.2078
596	SLE RA 20	-1.2	-2.31	169.43	-9.9728	-11.51	-0.2054
596	SLE RA 21	-1.2	-2.38	169.45	-9.9746	-11.512	-0.2098
596	SLE FR 1	-1.21	-2.24	150.85	-8.9077	-10.2403	-0.203
596	SLE FR 2	-1.21	-2.26	150.85	-8.9083	-10.241	-0.2045
596	SLE FR 3	-1.22	-2.24	151.42	-8.942	-10.2794	-0.2038
596	SLE FR 4	-1.2	-2.28	156	-9.202	-10.5926	-0.2046
596	SLE FR 5	-1.21	-2.26	156.57	-9.2358	-10.631	-0.2039
596	SLE FR 6	-1.2	-2.26	159.42	-9.3973	-10.8263	-0.2032
596	SLE QP 1	-1.21	-2.24	150.85	-8.9077	-10.2403	-0.203
596	SLE QP 2	-1.2	-2.25	155.99	-9.2014	-10.5919	-0.2031
596	SLD 1	11.58	-1.16	168.38	-9.9062	-11.1766	0.6312
596	SLD 2	11.59	-2.02	168.55	-9.9058	-11.1904	0.5936
596	SLD 3	10.97	-5.34	169.49	-10.0413	-11.3068	0.3456
596	SLD 4	10.99	-6.2	169.66	-10.0409	-11.3206	0.308
596	SLD 5	3.54	4.56	157.99	-9.2081	-10.5674	0.487
596	SLD 6	3.55	4	158.11	-9.2078	-10.5764	0.4624
596	SLD 7	1.53	-9.36	161.69	-9.6584	-11.0014	-0.465
596	SLD 8	1.54	-9.93	161.81	-9.6581	-11.0104	-0.4895
596	SLD 9	-3.95	5.42	150.17	-8.7448	-10.1734	0.0834
596	SLD 10	-3.94	4.86	150.29	-8.7445	-10.1823	0.0588
596	SLD 11	-5.96	-8.51	153.87	-9.1951	-10.6074	-0.8686
596	SLD 12	-5.95	-9.07	153.99	-9.1948	-10.6163	-0.8931
596	SLD 13	-13.4	1.69	142.32	-8.362	-9.8632	-0.7142
596	SLD 14	-13.38	0.83	142.49	-8.3616	-9.8769	-0.7518
596	SLD 15	-14	-2.48	143.43	-8.4971	-9.9934	-0.9998
596	SLD 16	-13.98	-3.34	143.6	-8.4967	-10.0071	-1.0374
596	SLV 1	28.69	0.13	184.99	-10.8535	-11.9635	1.7373
596	SLV 2	28.73	-1.87	185.4	-10.8526	-11.9955	1.6497
596	SLV 3	27.28	-9.32	187.56	-11.1621	-12.2609	1.0912
596	SLV 4	27.33	-11.32	187.97	-11.1612	-12.2929	1.0036
596	SLV 5	9.89	13.14	160.72	-9.2292	-10.5468	1.374
596	SLV 6	9.92	11.86	160.98	-9.2286	-10.5674	1.3177
596	SLV 7	5.2	-18.37	169.29	-10.2579	-11.5381	-0.7798
596	SLV 8	5.23	-19.65	169.55	-10.2573	-11.5587	-0.8361
596	SLV 9	-7.64	15.15	142.43	-8.1456	-9.6251	0.4299
596	SLV 10	-7.61	13.86	142.69	-8.145	-9.6456	0.3736
596	SLV 11	-12.33	-16.36	150.99	-9.1743	-10.6164	-1.7239
596	SLV 12	-12.3	-17.65	151.26	-9.1737	-10.6369	-1.7802
596	SLV 13	-29.74	6.81	124.01	-7.2417	-8.8909	-1.4098
596	SLV 14	-29.69	4.81	124.42	-7.2408	-8.9229	-1.4973
596	SLV 15	-31.14	-2.64	126.58	-7.5503	-9.1883	-2.0559
596	SLV 16	-31.1	-4.64	126.99	-7.5494	-9.2203	-2.1435
596	CRTFP Ux+	0	0	0	0	0	0
596	CRTFP Ux-	0	0	0	0	0	0
596	CRTFP Uy+	0	0	0	0	0	0
596	CRTFP Uy-	0	0	0	0	0	0
598	SLU 1	-0.19	-0.34	22.88	5.5494	-0.9381	0.0345
598	SLU 2	-0.19	-0.37	22.89	5.551	-0.9384	0.0336
598	SLU 3	-0.2	-0.35	23.43	5.6818	-0.9605	0.0355
598	SLU 4	-0.2	-0.36	23.43	5.6827	-0.9607	0.035
598	SLU 5	-0.2	-0.38	23.23	5.6326	-0.9522	0.0343
598	SLU 6	-0.2	-0.35	23.77	5.7634	-0.9744	0.0362

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
598	SLU 7	-0.2	-0.37	23.77	5.7644	-0.9746	0.0357
598	SLU 8	-0.2	-0.35	23.56	5.7126	-0.9658	0.036
598	SLU 9	-0.2	-0.37	23.56	5.7136	-0.9659	0.0354
598	SLU 10	-0.19	-0.38	25.74	6.2462	-1.0556	0.0324
598	SLU 11	-0.19	-0.36	26.28	6.377	-1.0777	0.0343
598	SLU 12	-0.19	-0.37	26.28	6.378	-1.0779	0.0338
598	SLU 13	-0.19	-0.39	26.08	6.3278	-1.0694	0.0332
598	SLU 14	-0.2	-0.36	26.62	6.4586	-1.0916	0.0351
598	SLU 15	-0.2	-0.38	26.62	6.4596	-1.0918	0.0345
598	SLU 16	-0.2	-0.36	26.41	6.4078	-1.083	0.0348
598	SLU 17	-0.2	-0.38	26.41	6.4088	-1.0831	0.0342
598	SLU 18	-0.19	-0.36	26.95	6.5426	-1.1055	0.0328
598	SLU 19	-0.19	-0.37	26.96	6.5435	-1.1057	0.0323
598	SLU 20	-0.19	-0.36	27.29	6.6242	-1.1193	0.0335
598	SLU 21	-0.19	-0.38	27.3	6.6251	-1.1195	0.033
598	SLU 22	-0.21	-0.33	25.65	6.2264	-1.0515	0.0386
598	SLU 23	-0.21	-0.36	25.65	6.228	-1.0518	0.0377
598	SLU 24	-0.21	-0.34	26.19	6.3588	-1.074	0.0396
598	SLU 25	-0.21	-0.35	26.2	6.3598	-1.0741	0.0391
598	SLU 26	-0.21	-0.36	25.99	6.3096	-1.0657	0.0384
598	SLU 27	-0.21	-0.34	26.53	6.4404	-1.0878	0.0403
598	SLU 28	-0.22	-0.36	26.54	6.4414	-1.088	0.0398
598	SLU 29	-0.21	-0.34	26.32	6.3896	-1.0792	0.0401
598	SLU 30	-0.21	-0.36	26.33	6.3906	-1.0794	0.0395
598	SLU 31	-0.2	-0.37	28.51	6.9232	-1.169	0.0365
598	SLU 32	-0.21	-0.35	29.04	7.054	-1.1911	0.0384
598	SLU 33	-0.21	-0.36	29.05	7.055	-1.1913	0.0379
598	SLU 34	-0.21	-0.37	28.84	7.0049	-1.1829	0.0372
598	SLU 35	-0.21	-0.35	29.38	7.1357	-1.205	0.0391
598	SLU 36	-0.21	-0.37	29.39	7.1366	-1.2052	0.0386
598	SLU 37	-0.21	-0.35	29.17	7.0849	-1.1964	0.0389
598	SLU 38	-0.21	-0.37	29.18	7.0858	-1.1966	0.0383
598	SLU 39	-0.2	-0.35	29.72	7.2196	-1.2189	0.0369
598	SLU 40	-0.2	-0.36	29.72	7.2206	-1.2191	0.0364
598	SLU 41	-0.21	-0.35	30.06	7.3012	-1.2328	0.0376
598	SLU 42	-0.21	-0.37	30.06	7.3022	-1.233	0.0371
598	SLU 43	-0.25	-0.45	28.8	6.982	-1.1806	0.0435
598	SLU 44	-0.25	-0.48	28.81	6.9837	-1.1809	0.0426
598	SLU 45	-0.25	-0.46	29.34	7.1145	-1.2031	0.0445
598	SLU 46	-0.25	-0.47	29.35	7.1154	-1.2033	0.0439
598	SLU 47	-0.25	-0.48	29.14	7.0653	-1.1948	0.0433
598	SLU 48	-0.25	-0.46	29.68	7.1961	-1.2169	0.0452
598	SLU 49	-0.25	-0.48	29.69	7.197	-1.2171	0.0447
598	SLU 50	-0.25	-0.46	29.47	7.1453	-1.2083	0.0449
598	SLU 51	-0.25	-0.48	29.48	7.1462	-1.2085	0.0444
598	SLU 52	-0.24	-0.49	31.66	7.6789	-1.2981	0.0414
598	SLU 53	-0.25	-0.46	32.2	7.8097	-1.3203	0.0433
598	SLU 54	-0.25	-0.48	32.2	7.8107	-1.3205	0.0428
598	SLU 55	-0.25	-0.49	31.99	7.7605	-1.312	0.0421
598	SLU 56	-0.25	-0.47	32.53	7.8913	-1.3341	0.044
598	SLU 57	-0.25	-0.48	32.54	7.8923	-1.3343	0.0435
598	SLU 58	-0.25	-0.47	32.32	7.8405	-1.3255	0.0437
598	SLU 59	-0.25	-0.49	32.33	7.8415	-1.3257	0.0432
598	SLU 60	-0.24	-0.46	32.87	7.9752	-1.348	0.0418
598	SLU 61	-0.24	-0.48	32.88	7.9762	-1.3482	0.0413
598	SLU 62	-0.24	-0.47	33.21	8.0569	-1.3619	0.0425
598	SLU 63	-0.24	-0.48	33.21	8.0578	-1.3621	0.042
598	SLU 64	-0.26	-0.44	31.56	7.6591	-1.294	0.0476
598	SLU 65	-0.26	-0.47	31.57	7.6607	-1.2944	0.0467
598	SLU 66	-0.26	-0.44	32.11	7.7915	-1.3165	0.0486
598	SLU 67	-0.26	-0.46	32.11	7.7925	-1.3167	0.048
598	SLU 68	-0.26	-0.47	31.91	7.7423	-1.3082	0.0474
598	SLU 69	-0.27	-0.45	32.45	7.8731	-1.3303	0.0493
598	SLU 70	-0.27	-0.46	32.45	7.8741	-1.3305	0.0488
598	SLU 71	-0.27	-0.45	32.24	7.8223	-1.3217	0.049
598	SLU 72	-0.27	-0.47	32.24	7.8233	-1.3219	0.0485
598	SLU 73	-0.26	-0.48	34.42	8.3559	-1.4116	0.0455
598	SLU 74	-0.26	-0.45	34.96	8.4867	-1.4337	0.0474
598	SLU 75	-0.26	-0.47	34.97	8.4877	-1.4339	0.0468
598	SLU 76	-0.26	-0.48	34.76	8.4375	-1.4254	0.0462
598	SLU 77	-0.26	-0.46	35.3	8.5683	-1.4475	0.0481
598	SLU 78	-0.26	-0.47	35.3	8.5693	-1.4477	0.0476
598	SLU 79	-0.26	-0.46	35.09	8.5175	-1.4389	0.0478
598	SLU 80	-0.26	-0.47	35.09	8.5185	-1.4391	0.0473
598	SLU 81	-0.25	-0.45	35.64	8.6523	-1.4615	0.0459
598	SLU 82	-0.26	-0.47	35.64	8.6532	-1.4617	0.0453
598	SLU 83	-0.26	-0.46	35.97	8.7339	-1.4753	0.0466
598	SLU 84	-0.26	-0.47	35.98	8.7349	-1.4755	0.0461
598	SLE RA 1	-0.2	-0.34	23.67	5.7428	-0.9705	0.0357
598	SLE RA 2	-0.2	-0.36	23.68	5.7439	-0.9707	0.0351
598	SLE RA 3	-0.2	-0.34	24.04	5.8311	-0.9855	0.0364
598	SLE RA 4	-0.2	-0.35	24.04	5.8317	-0.9856	0.036
598	SLE RA 5	-0.2	-0.36	23.9	5.7983	-0.9799	0.0356
598	SLE RA 6	-0.2	-0.35	24.26	5.8855	-0.9947	0.0368
598	SLE RA 7	-0.2	-0.36	24.26	5.8861	-0.9948	0.0365
598	SLE RA 8	-0.2	-0.35	24.12	5.8516	-0.9889	0.0367
598	SLE RA 9	-0.2	-0.36	24.12	5.8523	-0.9891	0.0363
598	SLE RA 10	-0.19	-0.37	25.58	6.2074	-1.0488	0.0343
598	SLE RA 11	-0.2	-0.35	25.94	6.2946	-1.0636	0.0356
598	SLE RA 12	-0.2	-0.36	25.94	6.2952	-1.0637	0.0352
598	SLE RA 13	-0.2	-0.37	25.8	6.2618	-1.0581	0.0348
598	SLE RA 14	-0.2	-0.35	26.16	6.349	-1.0728	0.036
598	SLE RA 15	-0.2	-0.36	26.17	6.3496	-1.0729	0.0357
598	SLE RA 16	-0.2	-0.35	26.02	6.3151	-1.0671	0.0359
598	SLE RA 17	-0.2	-0.36	26.03	6.3158	-1.0672	0.0355
598	SLE RA 18	-0.19	-0.35	26.39	6.4049	-1.0821	0.0346
598	SLE RA 19	-0.19	-0.36	26.39	6.4056	-1.0822	0.0342

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
598	SLE RA 20	-0.2	-0.35	26.61	6.4593	-1.0913	0.035
598	SLE RA 21	-0.2	-0.36	26.62	6.46	-1.0915	0.0347
598	SLE FR 1	-0.2	-0.34	23.67	5.7428	-0.9705	0.0357
598	SLE FR 2	-0.2	-0.35	23.67	5.743	-0.9705	0.0356
598	SLE FR 3	-0.2	-0.34	23.76	5.7646	-0.9742	0.0359
598	SLE FR 4	-0.2	-0.35	24.49	5.9417	-1.004	0.0352
598	SLE FR 5	-0.2	-0.34	24.58	5.9632	-1.0077	0.0356
598	SLE FR 6	-0.19	-0.35	25.03	6.0739	-1.0263	0.0351
598	SLE QP 1	-0.2	-0.34	23.67	5.7428	-0.9705	0.0357
598	SLE QP 2	-0.2	-0.34	24.49	5.9414	-1.004	0.0354
598	SLD 1	1.8	-0.16	26.31	6.3503	-1.0755	-0.4388
598	SLD 2	1.79	-0.29	26.34	6.3591	-1.0767	-0.4427
598	SLD 3	1.7	-0.82	26.47	6.3796	-1.0822	-0.474
598	SLD 4	1.7	-0.95	26.5	6.3884	-1.0834	-0.478
598	SLD 5	0.55	0.73	24.78	6.0181	-1.015	-0.0528
598	SLD 6	0.54	0.65	24.8	6.0239	-1.0158	-0.0553
598	SLD 7	0.23	-1.46	25.32	6.1158	-1.0374	-0.1702
598	SLD 8	0.23	-1.54	25.34	6.1215	-1.0382	-0.1727
598	SLD 9	-0.62	0.86	23.63	5.7614	-0.9697	0.2435
598	SLD 10	-0.62	0.77	23.65	5.7671	-0.9705	0.2409
598	SLD 11	-0.94	-1.33	24.17	5.859	-0.9921	0.1261
598	SLD 12	-0.94	-1.42	24.19	5.8648	-0.993	0.1235
598	SLD 13	-2.09	0.26	22.47	5.4945	-0.9245	0.5487
598	SLD 14	-2.1	0.13	22.5	5.5032	-0.9258	0.5448
598	SLD 15	-2.19	-0.4	22.63	5.5237	-0.9312	0.5135
598	SLD 16	-2.19	-0.53	22.66	5.5325	-0.9325	0.5095
598	SLV 1	4.47	0.06	28.75	6.8987	-1.1713	-1.0748
598	SLV 2	4.46	-0.24	28.83	6.9192	-1.1743	-1.0839
598	SLV 3	4.25	-1.43	29.13	6.9671	-1.1869	-1.1558
598	SLV 4	4.24	-1.73	29.2	6.9875	-1.1899	-1.1649
598	SLV 5	1.54	2.08	25.18	6.1214	-1.0301	-0.1733
598	SLV 6	1.53	1.89	25.23	6.1346	-1.032	-0.1792
598	SLV 7	0.81	-2.87	26.44	6.3493	-1.082	-0.4432
598	SLV 8	0.8	-3.06	26.49	6.3625	-1.0839	-0.4491
598	SLV 9	-1.19	2.38	22.48	5.5204	-0.9241	0.5198
598	SLV 10	-1.2	2.18	22.53	5.5336	-0.926	0.5139
598	SLV 11	-1.92	-2.58	23.74	5.7483	-0.976	0.2499
598	SLV 12	-1.93	-2.77	23.79	5.7615	-0.9779	0.244
598	SLV 13	-4.63	1.04	19.77	4.8953	-0.8181	1.2356
598	SLV 14	-4.64	0.74	19.84	4.9158	-0.821	1.2265
598	SLV 15	-4.85	-0.45	20.14	4.9637	-0.8336	1.1546
598	SLV 16	-4.86	-0.74	20.22	4.9842	-0.8366	1.1455
598	CRTFP Ux+	0	0	0	0	0	0
598	CRTFP Ux-	0	0	0	0	0	0
600	SLU 1	-0.41	-0.78	57.54	0.1012	-0.2052	0.0225
600	SLU 2	-0.41	-0.85	57.56	0.0996	-0.2052	0.0226
600	SLU 3	-0.42	-0.78	58.92	0.103	-0.2102	0.0232
600	SLU 4	-0.42	-0.82	58.93	0.102	-0.2102	0.0232
600	SLU 5	-0.42	-0.85	58.41	0.0998	-0.2082	0.0229
600	SLU 6	-0.43	-0.79	59.77	0.1031	-0.2132	0.0235
600	SLU 7	-0.43	-0.83	59.78	0.1022	-0.2132	0.0235
600	SLU 8	-0.42	-0.79	59.24	0.1015	-0.2112	0.0231
600	SLU 9	-0.43	-0.84	59.25	0.1006	-0.2112	0.0231
600	SLU 10	-0.39	-0.86	64.73	0.1372	-0.2322	0.0245
600	SLU 11	-0.4	-0.8	66.09	0.1405	-0.2372	0.0251
600	SLU 12	-0.4	-0.84	66.1	0.1396	-0.2372	0.0252
600	SLU 13	-0.4	-0.87	65.58	0.1373	-0.2352	0.0248
600	SLU 14	-0.41	-0.81	66.94	0.1407	-0.2402	0.0254
600	SLU 15	-0.41	-0.85	66.95	0.1397	-0.2402	0.0255
600	SLU 16	-0.41	-0.81	66.41	0.1391	-0.2382	0.0251
600	SLU 17	-0.41	-0.85	66.42	0.1381	-0.2382	0.0251
600	SLU 18	-0.39	-0.8	67.78	0.1548	-0.2437	0.0253
600	SLU 19	-0.39	-0.84	67.8	0.1539	-0.2437	0.0253
600	SLU 20	-0.39	-0.81	68.63	0.155	-0.2467	0.0256
600	SLU 21	-0.4	-0.85	68.65	0.1541	-0.2467	0.0256
600	SLU 22	-0.44	-0.74	64.45	0.1468	-0.2302	0.0256
600	SLU 23	-0.44	-0.81	64.47	0.1452	-0.2302	0.0257
600	SLU 24	-0.44	-0.74	65.83	0.1486	-0.2352	0.0263
600	SLU 25	-0.45	-0.78	65.84	0.1476	-0.2352	0.0263
600	SLU 26	-0.44	-0.81	65.32	0.1454	-0.2333	0.026
600	SLU 27	-0.45	-0.75	66.68	0.1487	-0.2382	0.0266
600	SLU 28	-0.45	-0.79	66.69	0.1478	-0.2382	0.0266
600	SLU 29	-0.45	-0.76	66.15	0.1471	-0.2363	0.0262
600	SLU 30	-0.45	-0.8	66.17	0.1462	-0.2363	0.0263
600	SLU 31	-0.42	-0.82	71.64	0.1828	-0.2572	0.0277
600	SLU 32	-0.43	-0.76	73	0.1861	-0.2622	0.0282
600	SLU 33	-0.43	-0.8	73.01	0.1852	-0.2622	0.0283
600	SLU 34	-0.43	-0.83	72.49	0.1829	-0.2602	0.028
600	SLU 35	-0.44	-0.77	73.85	0.1863	-0.2652	0.0285
600	SLU 36	-0.44	-0.81	73.86	0.1854	-0.2652	0.0286
600	SLU 37	-0.44	-0.77	73.32	0.1847	-0.2632	0.0282
600	SLU 38	-0.44	-0.81	73.34	0.1837	-0.2632	0.0282
600	SLU 39	-0.41	-0.76	74.7	0.2004	-0.2688	0.0284
600	SLU 40	-0.41	-0.8	74.71	0.1995	-0.2688	0.0285
600	SLU 41	-0.42	-0.77	75.55	0.2006	-0.2718	0.0287
600	SLU 42	-0.42	-0.81	75.56	0.1997	-0.2718	0.0288
600	SLU 43	-0.52	-1.02	72.43	0.1159	-0.2582	0.0282
600	SLU 44	-0.52	-1.09	72.45	0.1143	-0.2582	0.0283
600	SLU 45	-0.53	-1.03	73.81	0.1177	-0.2632	0.0288
600	SLU 46	-0.53	-1.07	73.82	0.1167	-0.2632	0.0289
600	SLU 47	-0.53	-1.1	73.3	0.1145	-0.2612	0.0286
600	SLU 48	-0.54	-1.04	74.66	0.1178	-0.2662	0.0291
600	SLU 49	-0.54	-1.08	74.67	0.1169	-0.2662	0.0292
600	SLU 50	-0.54	-1.04	74.13	0.1162	-0.2642	0.0288
600	SLU 51	-0.54	-1.08	74.14	0.1153	-0.2642	0.0288
600	SLU 52	-0.51	-1.11	79.62	0.1519	-0.2851	0.0302
600	SLU 53	-0.52	-1.04	80.98	0.1552	-0.2901	0.0308

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
600	SLU 54	-0.52	-1.08	80.99	0.1543	-0.2901	0.0308
600	SLU 55	-0.52	-1.11	80.47	0.152	-0.2882	0.0305
600	SLU 56	-0.52	-1.05	81.83	0.1554	-0.2931	0.0311
600	SLU 57	-0.52	-1.09	81.84	0.1545	-0.2932	0.0311
600	SLU 58	-0.52	-1.06	81.3	0.1538	-0.2912	0.0307
600	SLU 59	-0.52	-1.1	81.31	0.1528	-0.2912	0.0308
600	SLU 60	-0.5	-1.04	82.67	0.1695	-0.2967	0.031
600	SLU 61	-0.5	-1.08	82.69	0.1686	-0.2967	0.031
600	SLU 62	-0.51	-1.05	83.52	0.1697	-0.2997	0.0313
600	SLU 63	-0.51	-1.09	83.54	0.1688	-0.2997	0.0313
600	SLU 64	-0.55	-0.98	79.34	0.1615	-0.2832	0.0313
600	SLU 65	-0.55	-1.05	79.36	0.1599	-0.2832	0.0314
600	SLU 66	-0.56	-0.99	80.72	0.1633	-0.2882	0.032
600	SLU 67	-0.56	-1.03	80.73	0.1623	-0.2882	0.032
600	SLU 68	-0.56	-1.06	80.21	0.1601	-0.2862	0.0317
600	SLU 69	-0.57	-1	81.57	0.1634	-0.2912	0.0323
600	SLU 70	-0.57	-1.04	81.59	0.1625	-0.2912	0.0323
600	SLU 71	-0.56	-1	81.04	0.1618	-0.2892	0.0319
600	SLU 72	-0.57	-1.04	81.06	0.1609	-0.2892	0.032
600	SLU 73	-0.53	-1.07	86.54	0.1975	-0.3102	0.0334
600	SLU 74	-0.54	-1	87.89	0.2008	-0.3152	0.0339
600	SLU 75	-0.54	-1.05	87.91	0.1999	-0.3152	0.034
600	SLU 76	-0.54	-1.08	87.39	0.1977	-0.3132	0.0336
600	SLU 77	-0.55	-1.01	88.74	0.201	-0.3182	0.0342
600	SLU 78	-0.55	-1.05	88.76	0.2001	-0.3182	0.0343
600	SLU 79	-0.55	-1.02	88.22	0.1994	-0.3162	0.0339
600	SLU 80	-0.55	-1.06	88.23	0.1984	-0.3162	0.0339
600	SLU 81	-0.53	-1	89.59	0.2151	-0.3217	0.0341
600	SLU 82	-0.53	-1.04	89.6	0.2142	-0.3217	0.0342
600	SLU 83	-0.53	-1.01	90.44	0.2153	-0.3248	0.0344
600	SLU 84	-0.54	-1.05	90.45	0.2144	-0.3248	0.0345
600	SLE RA 1	-0.42	-0.77	59.51	0.1142	-0.2123	0.0234
600	SLE RA 2	-0.42	-0.81	59.53	0.1132	-0.2124	0.0235
600	SLE RA 3	-0.42	-0.77	60.43	0.1154	-0.2157	0.0238
600	SLE RA 4	-0.42	-0.8	60.44	0.1148	-0.2157	0.0239
600	SLE RA 5	-0.42	-0.82	60.09	0.1133	-0.2144	0.0237
600	SLE RA 6	-0.43	-0.78	61	0.1155	-0.2177	0.024
600	SLE RA 7	-0.43	-0.8	61.01	0.1149	-0.2177	0.0241
600	SLE RA 8	-0.43	-0.78	60.65	0.1144	-0.2164	0.0238
600	SLE RA 9	-0.43	-0.8	60.66	0.1138	-0.2164	0.0238
600	SLE RA 10	-0.41	-0.82	64.31	0.1382	-0.2303	0.0248
600	SLE RA 11	-0.41	-0.78	65.21	0.1404	-0.2337	0.0251
600	SLE RA 12	-0.41	-0.81	65.22	0.1398	-0.2337	0.0252
600	SLE RA 13	-0.41	-0.83	64.88	0.1383	-0.2323	0.025
600	SLE RA 14	-0.42	-0.79	65.78	0.1405	-0.2357	0.0253
600	SLE RA 15	-0.42	-0.81	65.79	0.1399	-0.2357	0.0254
600	SLE RA 16	-0.42	-0.79	65.43	0.1395	-0.2343	0.0251
600	SLE RA 17	-0.42	-0.81	65.44	0.1388	-0.2343	0.0251
600	SLE RA 18	-0.4	-0.78	66.34	0.15	-0.238	0.0253
600	SLE RA 19	-0.4	-0.81	66.35	0.1493	-0.238	0.0253
600	SLE RA 20	-0.41	-0.78	66.91	0.1501	-0.24	0.0255
600	SLE RA 21	-0.41	-0.81	66.92	0.1495	-0.24	0.0255
600	SLE FR 1	-0.42	-0.77	59.51	0.1142	-0.2123	0.0234
600	SLE FR 2	-0.42	-0.77	59.52	0.114	-0.2123	0.0234
600	SLE FR 3	-0.42	-0.77	59.74	0.1142	-0.2132	0.0235
600	SLE FR 4	-0.41	-0.78	61.57	0.1247	-0.2201	0.024
600	SLE FR 5	-0.41	-0.77	61.79	0.125	-0.2209	0.024
600	SLE FR 6	-0.41	-0.77	62.93	0.1321	-0.2252	0.0243
600	SLE QP 1	-0.42	-0.77	59.51	0.1142	-0.2123	0.0234
600	SLE QP 2	-0.41	-0.77	61.56	0.1249	-0.2201	0.024
600	SLD 1	4.61	-0.27	65.69	0.1845	-0.2159	0.0155
600	SLD 2	4.61	-0.57	65.76	0.1868	-0.216	0.0184
600	SLD 3	4.37	-1.91	66.15	0.1351	-0.2176	0.01
600	SLD 4	4.37	-2.21	66.22	0.1374	-0.2176	0.0129
600	SLD 5	1.45	1.92	62.09	0.2173	-0.2163	0.0292
600	SLD 6	1.45	1.72	62.14	0.2188	-0.2163	0.0312
600	SLD 7	0.66	-3.54	63.62	0.0527	-0.2219	0.0109
600	SLD 8	0.67	-3.74	63.67	0.0542	-0.2219	0.0129
600	SLD 9	-1.49	2.2	59.46	0.1957	-0.2182	0.0351
600	SLD 10	-1.49	2	59.5	0.1972	-0.2182	0.037
600	SLD 11	-2.28	-3.26	60.99	0.0311	-0.2238	0.0168
600	SLD 12	-2.28	-3.45	61.03	0.0326	-0.2238	0.0187
600	SLD 13	-5.2	0.67	56.9	0.1124	-0.2225	0.035
600	SLD 14	-5.19	0.37	56.97	0.1148	-0.2225	0.038
600	SLD 15	-5.43	-0.97	57.36	0.063	-0.2241	0.0295
600	SLD 16	-5.43	-1.27	57.43	0.0654	-0.2242	0.0325
600	SLV 1	11.33	0.34	71.24	0.2674	-0.2104	0.0039
600	SLV 2	11.34	-0.36	71.4	0.2728	-0.2104	0.0108
600	SLV 3	10.78	-3.36	72.3	0.1554	-0.2143	-0.0087
600	SLV 4	10.78	-4.06	72.46	0.1609	-0.2143	-0.0018
600	SLV 5	3.94	5.3	62.83	0.3365	-0.2113	0.0359
600	SLV 6	3.95	4.85	62.94	0.34	-0.2113	0.0403
600	SLV 7	2.11	-7.04	66.36	-0.0366	-0.2242	-0.0061
600	SLV 8	2.11	-7.49	66.47	-0.0331	-0.2242	-0.0017
600	SLV 9	-2.94	5.95	56.66	0.2829	-0.2159	0.0496
600	SLV 10	-2.93	5.5	56.76	0.2865	-0.2159	0.054
600	SLV 11	-4.77	-6.39	60.19	-0.0901	-0.2288	0.0076
600	SLV 12	-4.77	-6.84	60.29	-0.0866	-0.2289	0.0121
600	SLV 13	-11.61	2.52	50.67	0.0889	-0.2258	0.0497
600	SLV 14	-11.6	1.82	50.83	0.0944	-0.2259	0.0566
600	SLV 15	-12.16	-1.18	51.72	-0.023	-0.2297	0.0371
600	SLV 16	-12.15	-1.88	51.89	-0.0175	-0.2297	0.044
600	CRTFP Ux+	0	0	0	0	0	0
600	CRTFP Ux-	0	0	0	0	0	0
600	CRTFP Uy+	0	0	0	0	0	0
600	CRTFP Uy-	0	0	0	0	0	0
601	SLU 1	-0.36	-0.63	58.97	-0.1708	-0.0118	0.0358

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
601	SLU 2	-0.37	-0.69	58.99	-0.1727	-0.0117	0.0361
601	SLU 3	-0.37	-0.63	60.39	-0.1758	-0.0122	0.0368
601	SLU 4	-0.37	-0.67	60.4	-0.177	-0.0121	0.0369
601	SLU 5	-0.37	-0.7	59.86	-0.1768	-0.0118	0.0366
601	SLU 6	-0.38	-0.64	61.26	-0.1799	-0.0123	0.0373
601	SLU 7	-0.38	-0.68	61.27	-0.1811	-0.0123	0.0374
601	SLU 8	-0.38	-0.64	60.71	-0.179	-0.0121	0.0368
601	SLU 9	-0.38	-0.68	60.72	-0.1802	-0.012	0.037
601	SLU 10	-0.35	-0.69	66.39	-0.1689	-0.015	0.0392
601	SLU 11	-0.35	-0.63	67.79	-0.172	-0.0155	0.0399
601	SLU 12	-0.35	-0.67	67.8	-0.1731	-0.0154	0.0401
601	SLU 13	-0.35	-0.7	67.26	-0.173	-0.0151	0.0397
601	SLU 14	-0.36	-0.64	68.66	-0.1761	-0.0156	0.0404
601	SLU 15	-0.36	-0.68	68.67	-0.1772	-0.0155	0.0405
601	SLU 16	-0.36	-0.64	68.12	-0.1751	-0.0154	0.0399
601	SLU 17	-0.36	-0.68	68.13	-0.1763	-0.0153	0.0401
601	SLU 18	-0.34	-0.63	69.55	-0.1653	-0.0165	0.0403
601	SLU 19	-0.34	-0.67	69.56	-0.1665	-0.0164	0.0404
601	SLU 20	-0.34	-0.63	70.42	-0.1694	-0.0166	0.0407
601	SLU 21	-0.34	-0.67	70.43	-0.1706	-0.0166	0.0409
601	SLU 22	-0.39	-0.57	66.08	-0.157	-0.014	0.04
601	SLU 23	-0.39	-0.63	66.1	-0.159	-0.0139	0.0403
601	SLU 24	-0.39	-0.57	67.5	-0.162	-0.0144	0.041
601	SLU 25	-0.39	-0.61	67.51	-0.1632	-0.0143	0.0412
601	SLU 26	-0.39	-0.64	66.97	-0.1631	-0.0141	0.0408
601	SLU 27	-0.4	-0.58	68.37	-0.1661	-0.0146	0.0415
601	SLU 28	-0.4	-0.62	68.38	-0.1673	-0.0145	0.0416
601	SLU 29	-0.4	-0.58	67.82	-0.1652	-0.0143	0.041
601	SLU 30	-0.4	-0.62	67.83	-0.1664	-0.0143	0.0412
601	SLU 31	-0.37	-0.63	73.5	-0.1551	-0.0172	0.0434
601	SLU 32	-0.37	-0.57	74.9	-0.1582	-0.0177	0.0441
601	SLU 33	-0.37	-0.61	74.91	-0.1593	-0.0176	0.0443
601	SLU 34	-0.37	-0.64	74.37	-0.1592	-0.0173	0.0439
601	SLU 35	-0.38	-0.58	75.77	-0.1623	-0.0178	0.0446
601	SLU 36	-0.38	-0.62	75.78	-0.1634	-0.0178	0.0448
601	SLU 37	-0.38	-0.58	75.22	-0.1613	-0.0176	0.0441
601	SLU 38	-0.38	-0.62	75.24	-0.1625	-0.0175	0.0443
601	SLU 39	-0.36	-0.57	76.66	-0.1515	-0.0187	0.0445
601	SLU 40	-0.36	-0.61	76.67	-0.1527	-0.0186	0.0446
601	SLU 41	-0.36	-0.57	77.53	-0.1556	-0.0189	0.0449
601	SLU 42	-0.37	-0.61	77.54	-0.1568	-0.0188	0.0451
601	SLU 43	-0.47	-0.84	74.23	-0.2268	-0.0146	0.0451
601	SLU 44	-0.47	-0.9	74.25	-0.2287	-0.0145	0.0454
601	SLU 45	-0.47	-0.84	75.64	-0.2318	-0.015	0.0461
601	SLU 46	-0.47	-0.88	75.65	-0.2329	-0.0149	0.0462
601	SLU 47	-0.47	-0.91	75.12	-0.2328	-0.0146	0.0459
601	SLU 48	-0.48	-0.84	76.51	-0.2359	-0.0151	0.0466
601	SLU 49	-0.48	-0.89	76.53	-0.237	-0.015	0.0467
601	SLU 50	-0.48	-0.85	75.97	-0.235	-0.0149	0.0461
601	SLU 51	-0.48	-0.89	75.98	-0.2361	-0.0148	0.0463
601	SLU 52	-0.45	-0.9	81.65	-0.2249	-0.0177	0.0485
601	SLU 53	-0.45	-0.84	83.05	-0.2279	-0.0182	0.0492
601	SLU 54	-0.45	-0.88	83.06	-0.2291	-0.0182	0.0494
601	SLU 55	-0.45	-0.91	82.52	-0.229	-0.0179	0.049
601	SLU 56	-0.46	-0.84	83.92	-0.232	-0.0184	0.0497
601	SLU 57	-0.46	-0.88	83.93	-0.2332	-0.0183	0.0498
601	SLU 58	-0.46	-0.85	83.37	-0.2311	-0.0182	0.0492
601	SLU 59	-0.46	-0.89	83.38	-0.2323	-0.0181	0.0494
601	SLU 60	-0.44	-0.83	84.8	-0.2213	-0.0193	0.0496
601	SLU 61	-0.44	-0.88	84.81	-0.2224	-0.0192	0.0497
601	SLU 62	-0.44	-0.84	85.67	-0.2254	-0.0194	0.05
601	SLU 63	-0.44	-0.88	85.69	-0.2265	-0.0193	0.0502
601	SLU 64	-0.49	-0.78	81.33	-0.213	-0.0168	0.0493
601	SLU 65	-0.49	-0.84	81.35	-0.2149	-0.0167	0.0496
601	SLU 66	-0.5	-0.78	82.75	-0.218	-0.0172	0.0503
601	SLU 67	-0.5	-0.82	82.76	-0.2191	-0.0171	0.0505
601	SLU 68	-0.5	-0.85	82.22	-0.219	-0.0168	0.0501
601	SLU 69	-0.5	-0.78	83.62	-0.2221	-0.0173	0.0508
601	SLU 70	-0.5	-0.83	83.63	-0.2232	-0.0173	0.0509
601	SLU 71	-0.5	-0.79	83.08	-0.2212	-0.0171	0.0503
601	SLU 72	-0.5	-0.83	83.09	-0.2223	-0.0171	0.0505
601	SLU 73	-0.47	-0.84	88.76	-0.2111	-0.02	0.0527
601	SLU 74	-0.48	-0.78	90.15	-0.2141	-0.0205	0.0534
601	SLU 75	-0.48	-0.82	90.16	-0.2153	-0.0204	0.0536
601	SLU 76	-0.48	-0.85	89.63	-0.2152	-0.0201	0.0532
601	SLU 77	-0.48	-0.78	91.02	-0.2182	-0.0206	0.0539
601	SLU 78	-0.48	-0.83	91.04	-0.2194	-0.0205	0.0541
601	SLU 79	-0.48	-0.79	90.48	-0.2173	-0.0204	0.0534
601	SLU 80	-0.48	-0.83	90.49	-0.2185	-0.0203	0.0536
601	SLU 81	-0.46	-0.78	91.91	-0.2075	-0.0215	0.0538
601	SLU 82	-0.46	-0.82	91.92	-0.2086	-0.0214	0.0539
601	SLU 83	-0.47	-0.78	92.78	-0.2116	-0.0216	0.0543
601	SLU 84	-0.47	-0.82	92.79	-0.2127	-0.0216	0.0544
601	SLE RA 1	-0.37	-0.61	61	-0.1668	-0.0124	0.037
601	SLE RA 2	-0.37	-0.65	61.02	-0.1682	-0.0124	0.0372
601	SLE RA 3	-0.38	-0.61	61.95	-0.1702	-0.0127	0.0377
601	SLE RA 4	-0.38	-0.64	61.95	-0.171	-0.0126	0.0378
601	SLE RA 5	-0.38	-0.66	61.6	-0.1709	-0.0125	0.0375
601	SLE RA 6	-0.38	-0.62	62.53	-0.1729	-0.0128	0.038
601	SLE RA 7	-0.38	-0.64	62.53	-0.1737	-0.0128	0.0381
601	SLE RA 8	-0.38	-0.62	62.16	-0.1723	-0.0127	0.0377
601	SLE RA 9	-0.38	-0.65	62.17	-0.1731	-0.0126	0.0378
601	SLE RA 10	-0.36	-0.65	65.95	-0.1656	-0.0145	0.0393
601	SLE RA 11	-0.36	-0.61	66.88	-0.1676	-0.0149	0.0397
601	SLE RA 12	-0.36	-0.64	66.89	-0.1684	-0.0148	0.0398
601	SLE RA 13	-0.36	-0.66	66.53	-0.1683	-0.0146	0.0396
601	SLE RA 14	-0.37	-0.62	67.46	-0.1704	-0.015	0.0401

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
601	SLE RA 15	-0.37	-0.64	67.47	-0.1711	-0.0149	0.0402
601	SLE RA 16	-0.37	-0.62	67.1	-0.1698	-0.0148	0.0397
601	SLE RA 17	-0.37	-0.65	67.11	-0.1705	-0.0148	0.0399
601	SLE RA 18	-0.35	-0.61	68.05	-0.1632	-0.0156	0.04
601	SLE RA 19	-0.35	-0.64	68.06	-0.164	-0.0155	0.0401
601	SLE RA 20	-0.36	-0.61	68.63	-0.1659	-0.0157	0.0403
601	SLE RA 21	-0.36	-0.64	68.64	-0.1667	-0.0156	0.0404
601	SLE FR 1	-0.37	-0.61	61	-0.1668	-0.0124	0.037
601	SLE FR 2	-0.37	-0.62	61.01	-0.1671	-0.0124	0.0371
601	SLE FR 3	-0.37	-0.61	61.24	-0.1679	-0.0125	0.0371
601	SLE FR 4	-0.36	-0.62	63.12	-0.166	-0.0134	0.0379
601	SLE FR 5	-0.37	-0.61	63.35	-0.1668	-0.0134	0.038
601	SLE FR 6	-0.36	-0.61	64.53	-0.165	-0.014	0.0385
601	SLE QP 1	-0.37	-0.61	61	-0.1668	-0.0124	0.037
601	SLE QP 2	-0.36	-0.61	63.12	-0.1658	-0.0134	0.0379
601	SLD 1	4.76	-0.03	66.68	-0.0983	0.0093	0.0566
601	SLD 2	4.76	-0.32	66.74	-0.0975	0.0097	0.06
601	SLD 3	4.51	-1.69	67.11	-0.1524	0.0113	0.0534
601	SLD 4	4.52	-1.98	67.17	-0.1515	0.0117	0.0569
601	SLD 5	1.54	2.13	63.52	-0.0637	-0.0096	0.0476
601	SLD 6	1.54	1.94	63.56	-0.0631	-0.0094	0.0499
601	SLD 7	0.73	-3.4	64.97	-0.2439	-0.003	0.0372
601	SLD 8	0.74	-3.59	65.01	-0.2433	-0.0028	0.0395
601	SLD 9	-1.46	2.37	61.23	-0.0882	-0.024	0.0363
601	SLD 10	-1.46	2.18	61.27	-0.0876	-0.0238	0.0386
601	SLD 11	-2.27	-3.16	62.68	-0.2684	-0.0173	0.0259
601	SLD 12	-2.27	-3.35	62.72	-0.2678	-0.0171	0.0282
601	SLD 13	-5.25	0.76	59.06	-0.18	-0.0384	0.0189
601	SLD 14	-5.24	0.47	59.12	-0.1791	-0.0381	0.0224
601	SLD 15	-5.49	-0.9	59.5	-0.234	-0.0364	0.0158
601	SLD 16	-5.48	-1.19	59.56	-0.2332	-0.0361	0.0192
601	SLV 1	11.61	0.67	71.45	-0.0039	0.0399	0.0816
601	SLV 2	11.62	0.01	71.6	-0.0019	0.0407	0.0897
601	SLV 3	11.05	-3.08	72.46	-0.1265	0.0445	0.0743
601	SLV 4	11.06	-3.75	72.6	-0.1244	0.0452	0.0824
601	SLV 5	4.08	5.59	64.07	0.0683	-0.0045	0.0607
601	SLV 6	4.09	5.16	64.16	0.0696	-0.004	0.0659
601	SLV 7	2.21	-6.93	67.42	-0.3402	0.0108	0.0364
601	SLV 8	2.21	-7.36	67.51	-0.3389	0.0113	0.0416
601	SLV 9	-2.94	6.14	58.73	0.0074	-0.038	0.0342
601	SLV 10	-2.94	5.71	58.82	0.0087	-0.0375	0.0394
601	SLV 11	-4.81	-6.38	62.07	-0.4011	-0.0228	0.0099
601	SLV 12	-4.81	-6.8	62.17	-0.3998	-0.0223	0.0151
601	SLV 13	-11.79	2.53	53.64	-0.2071	-0.072	-0.0066
601	SLV 14	-11.78	1.86	53.78	-0.205	-0.0712	0.0015
601	SLV 15	-12.35	-1.23	54.64	-0.3296	-0.0674	-0.0139
601	SLV 16	-12.34	-1.89	54.79	-0.3276	-0.0666	-0.0058
601	CRTFP Ux+	0	0	0	0	0	0
601	CRTFP Ux-	0	0	0	0	0	0
601	CRTFP Uy+	0	0	0	0	0	0
601	CRTFP Uy-	0	0	0	0	0	0
602	SLU 1	-0.31	-0.41	59.29	-0.211	-0.0077	0.0422
602	SLU 2	-0.32	-0.48	59.3	-0.2132	-0.0075	0.0424
602	SLU 3	-0.32	-0.41	60.71	-0.2173	-0.008	0.0433
602	SLU 4	-0.32	-0.45	60.72	-0.2186	-0.0079	0.0435
602	SLU 5	-0.32	-0.48	60.17	-0.2181	-0.0076	0.043
602	SLU 6	-0.33	-0.41	61.59	-0.2222	-0.0081	0.0439
602	SLU 7	-0.33	-0.45	61.6	-0.2235	-0.008	0.0441
602	SLU 8	-0.33	-0.42	61.04	-0.2208	-0.0079	0.0434
602	SLU 9	-0.33	-0.46	61.04	-0.2221	-0.0078	0.0435
602	SLU 10	-0.29	-0.46	66.8	-0.2154	-0.0103	0.0461
602	SLU 11	-0.3	-0.39	68.21	-0.2195	-0.0107	0.0469
602	SLU 12	-0.3	-0.43	68.22	-0.2208	-0.0106	0.0471
602	SLU 13	-0.3	-0.47	67.67	-0.2203	-0.0103	0.0467
602	SLU 14	-0.3	-0.4	69.09	-0.2244	-0.0108	0.0475
602	SLU 15	-0.3	-0.44	69.09	-0.2257	-0.0107	0.0477
602	SLU 16	-0.3	-0.4	68.54	-0.223	-0.0106	0.047
602	SLU 17	-0.3	-0.44	68.54	-0.2243	-0.0105	0.0471
602	SLU 18	-0.28	-0.39	70	-0.2141	-0.0116	0.0474
602	SLU 19	-0.28	-0.43	70.01	-0.2154	-0.0115	0.0475
602	SLU 20	-0.29	-0.39	70.87	-0.219	-0.0117	0.048
602	SLU 21	-0.29	-0.43	70.88	-0.2203	-0.0116	0.0481
602	SLU 22	-0.33	-0.33	66.46	-0.2023	-0.0094	0.0471
602	SLU 23	-0.33	-0.4	66.47	-0.2045	-0.0092	0.0473
602	SLU 24	-0.34	-0.33	67.88	-0.2086	-0.0097	0.0482
602	SLU 25	-0.34	-0.37	67.89	-0.2099	-0.0096	0.0484
602	SLU 26	-0.34	-0.4	67.35	-0.2094	-0.0093	0.0479
602	SLU 27	-0.35	-0.33	68.76	-0.2135	-0.0098	0.0488
602	SLU 28	-0.35	-0.37	68.77	-0.2148	-0.0097	0.049
602	SLU 29	-0.34	-0.34	68.21	-0.2121	-0.0096	0.0483
602	SLU 30	-0.35	-0.38	68.21	-0.2134	-0.0095	0.0484
602	SLU 31	-0.31	-0.38	73.97	-0.2066	-0.012	0.051
602	SLU 32	-0.32	-0.31	75.38	-0.2107	-0.0124	0.0518
602	SLU 33	-0.32	-0.35	75.39	-0.2121	-0.0123	0.052
602	SLU 34	-0.32	-0.38	74.84	-0.2115	-0.0121	0.0516
602	SLU 35	-0.32	-0.31	76.26	-0.2156	-0.0125	0.0524
602	SLU 36	-0.32	-0.35	76.27	-0.217	-0.0124	0.0526
602	SLU 37	-0.32	-0.32	75.71	-0.2143	-0.0123	0.0519
602	SLU 38	-0.32	-0.36	75.71	-0.2156	-0.0122	0.0521
602	SLU 39	-0.3	-0.3	77.17	-0.2054	-0.0133	0.0523
602	SLU 40	-0.3	-0.34	77.18	-0.2067	-0.0132	0.0524
602	SLU 41	-0.3	-0.31	78.04	-0.2103	-0.0134	0.0529
602	SLU 42	-0.31	-0.35	78.05	-0.2116	-0.0133	0.053
602	SLU 43	-0.4	-0.57	74.61	-0.2773	-0.0094	0.0531
602	SLU 44	-0.4	-0.63	74.63	-0.2795	-0.0093	0.0534
602	SLU 45	-0.41	-0.56	76.04	-0.2836	-0.0097	0.0543
602	SLU 46	-0.41	-0.6	76.05	-0.2849	-0.0096	0.0544

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
602	SLU 47	-0.41	-0.64	75.5	-0.2844	-0.0094	0.054
602	SLU 48	-0.42	-0.57	76.92	-0.2885	-0.0098	0.0549
602	SLU 49	-0.42	-0.61	76.92	-0.2898	-0.0097	0.055
602	SLU 50	-0.42	-0.57	76.36	-0.2871	-0.0096	0.0543
602	SLU 51	-0.42	-0.61	76.37	-0.2884	-0.0095	0.0545
602	SLU 52	-0.38	-0.61	82.13	-0.2816	-0.012	0.057
602	SLU 53	-0.39	-0.54	83.54	-0.2857	-0.0124	0.0579
602	SLU 54	-0.39	-0.58	83.55	-0.2871	-0.0123	0.0581
602	SLU 55	-0.39	-0.62	83	-0.2866	-0.0121	0.0576
602	SLU 56	-0.39	-0.55	84.41	-0.2907	-0.0125	0.0585
602	SLU 57	-0.39	-0.59	84.42	-0.292	-0.0124	0.0587
602	SLU 58	-0.39	-0.56	83.86	-0.2893	-0.0123	0.058
602	SLU 59	-0.39	-0.6	83.87	-0.2906	-0.0122	0.0581
602	SLU 60	-0.37	-0.54	85.33	-0.2804	-0.0133	0.0583
602	SLU 61	-0.37	-0.58	85.34	-0.2817	-0.0132	0.0585
602	SLU 62	-0.38	-0.54	86.2	-0.2853	-0.0134	0.0589
602	SLU 63	-0.38	-0.58	86.21	-0.2866	-0.0133	0.0591
602	SLU 64	-0.42	-0.48	81.78	-0.2685	-0.0111	0.058
602	SLU 65	-0.42	-0.55	81.8	-0.2707	-0.011	0.0583
602	SLU 66	-0.43	-0.48	83.21	-0.2748	-0.0114	0.0592
602	SLU 67	-0.43	-0.52	83.22	-0.2762	-0.0113	0.0593
602	SLU 68	-0.43	-0.55	82.67	-0.2757	-0.0111	0.0589
602	SLU 69	-0.43	-0.48	84.09	-0.2798	-0.0115	0.0598
602	SLU 70	-0.43	-0.52	84.09	-0.2811	-0.0114	0.0599
602	SLU 71	-0.43	-0.49	83.53	-0.2784	-0.0113	0.0592
602	SLU 72	-0.43	-0.53	83.54	-0.2797	-0.0112	0.0594
602	SLU 73	-0.4	-0.53	89.3	-0.2729	-0.0137	0.0619
602	SLU 74	-0.4	-0.46	90.71	-0.277	-0.0141	0.0628
602	SLU 75	-0.4	-0.5	90.72	-0.2783	-0.014	0.063
602	SLU 76	-0.4	-0.53	90.17	-0.2778	-0.0138	0.0625
602	SLU 77	-0.41	-0.46	91.58	-0.2819	-0.0142	0.0634
602	SLU 78	-0.41	-0.5	91.59	-0.2833	-0.0141	0.0636
602	SLU 79	-0.41	-0.47	91.03	-0.2805	-0.014	0.0629
602	SLU 80	-0.41	-0.51	91.04	-0.2819	-0.0139	0.063
602	SLU 81	-0.39	-0.46	92.5	-0.2716	-0.015	0.0632
602	SLU 82	-0.39	-0.5	92.51	-0.273	-0.0149	0.0634
602	SLU 83	-0.39	-0.46	93.37	-0.2766	-0.0151	0.0638
602	SLU 84	-0.39	-0.5	93.38	-0.2779	-0.015	0.064
602	SLE RA 1	-0.32	-0.39	61.34	-0.2085	-0.0082	0.0436
602	SLE RA 2	-0.32	-0.43	61.34	-0.21	-0.0081	0.0437
602	SLE RA 3	-0.32	-0.39	62.29	-0.2127	-0.0084	0.0443
602	SLE RA 4	-0.32	-0.41	62.29	-0.2136	-0.0083	0.0444
602	SLE RA 5	-0.32	-0.44	61.93	-0.2132	-0.0081	0.0441
602	SLE RA 6	-0.33	-0.39	62.87	-0.216	-0.0084	0.0447
602	SLE RA 7	-0.33	-0.42	62.87	-0.2169	-0.0084	0.0448
602	SLE RA 8	-0.33	-0.39	62.5	-0.215	-0.0083	0.0444
602	SLE RA 9	-0.33	-0.42	62.51	-0.2159	-0.0082	0.0445
602	SLE RA 10	-0.3	-0.42	66.34	-0.2114	-0.0099	0.0462
602	SLE RA 11	-0.31	-0.37	67.29	-0.2141	-0.0102	0.0467
602	SLE RA 12	-0.31	-0.4	67.29	-0.215	-0.0101	0.0469
602	SLE RA 13	-0.31	-0.42	66.93	-0.2147	-0.0099	0.0466
602	SLE RA 14	-0.31	-0.38	67.87	-0.2174	-0.0102	0.0471
602	SLE RA 15	-0.31	-0.4	67.87	-0.2183	-0.0102	0.0473
602	SLE RA 16	-0.31	-0.38	67.5	-0.2165	-0.0101	0.0468
602	SLE RA 17	-0.31	-0.41	67.51	-0.2174	-0.0101	0.0469
602	SLE RA 18	-0.3	-0.37	68.48	-0.2105	-0.0108	0.047
602	SLE RA 19	-0.3	-0.4	68.48	-0.2114	-0.0107	0.0471
602	SLE RA 20	-0.3	-0.37	69.06	-0.2138	-0.0108	0.0474
602	SLE RA 21	-0.3	-0.4	69.07	-0.2147	-0.0108	0.0475
602	SLE FR 1	-0.32	-0.39	61.34	-0.2085	-0.0082	0.0436
602	SLE FR 2	-0.32	-0.4	61.34	-0.2088	-0.0082	0.0436
602	SLE FR 3	-0.32	-0.39	61.57	-0.2098	-0.0082	0.0437
602	SLE FR 4	-0.31	-0.39	63.48	-0.2094	-0.0089	0.0446
602	SLE FR 5	-0.31	-0.39	63.71	-0.2104	-0.009	0.0448
602	SLE FR 6	-0.31	-0.38	64.91	-0.2095	-0.0095	0.0453
602	SLE QP 1	-0.32	-0.39	61.34	-0.2085	-0.0082	0.0436
602	SLE QP 2	-0.31	-0.38	63.48	-0.2091	-0.0089	0.0446
602	SLD 1	4.81	0.27	66.27	-0.1366	0.0166	0.0655
602	SLD 2	4.82	0	66.32	-0.1368	0.017	0.0685
602	SLD 3	4.57	-1.39	66.64	-0.1932	0.0192	0.0625
602	SLD 4	4.58	-1.66	66.69	-0.1933	0.0196	0.0655
602	SLD 5	1.59	2.37	63.74	-0.1016	-0.0053	0.0548
602	SLD 6	1.59	2.19	63.77	-0.1017	-0.005	0.0568
602	SLD 7	0.79	-3.15	64.99	-0.2901	0.0034	0.045
602	SLD 8	0.79	-3.32	65.02	-0.2902	0.0036	0.047
602	SLD 9	-1.42	2.56	61.94	-0.128	-0.0215	0.0423
602	SLD 10	-1.41	2.38	61.97	-0.1281	-0.0213	0.0442
602	SLD 11	-2.22	-2.96	63.19	-0.3165	-0.0129	0.0324
602	SLD 12	-2.22	-3.14	63.22	-0.3166	-0.0126	0.0344
602	SLD 13	-5.2	0.89	60.26	-0.2249	-0.0375	0.0237
602	SLD 14	-5.2	0.62	60.31	-0.225	-0.0371	0.0267
602	SLD 15	-5.44	-0.76	60.64	-0.2814	-0.0349	0.0207
602	SLD 16	-5.44	-1.03	60.69	-0.2816	-0.0345	0.0237
602	SLV 1	11.68	1.07	70	-0.0341	0.051	0.0935
602	SLV 2	11.69	0.44	70.12	-0.0344	0.052	0.1005
602	SLV 3	11.12	-2.67	70.87	-0.1623	0.057	0.0866
602	SLV 4	11.13	-3.3	70.99	-0.1626	0.0579	0.0936
602	SLV 5	4.14	5.84	64.1	0.0379	-0.0001	0.0685
602	SLV 6	4.14	5.43	64.17	0.0377	0.0005	0.073
602	SLV 7	2.26	-6.64	66.99	-0.3894	0.0196	0.0456
602	SLV 8	2.27	-7.04	67.07	-0.3897	0.0202	0.0501
602	SLV 9	-2.9	6.28	59.89	-0.0285	-0.0381	0.0391
602	SLV 10	-2.89	5.87	59.96	-0.0288	-0.0375	0.0436
602	SLV 11	-4.77	-6.2	62.78	-0.4559	-0.0184	0.0162
602	SLV 12	-4.76	-6.61	62.86	-0.4561	-0.0178	0.0207
602	SLV 13	-11.75	2.53	55.96	-0.2556	-0.0758	-0.0044
602	SLV 14	-11.75	1.9	56.08	-0.2559	-0.0748	0.0026

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
602	SLV 15	-12.32	-1.21	56.83	-0.3838	-0.0698	-0.0112
602	SLV 16	-12.31	-1.84	56.95	-0.3841	-0.0689	-0.0042
602	CRTFP Ux+	0	0	0	0	0	0
602	CRTFP Ux-	0	0	0	0	0	0
602	CRTFP Uy+	0	0	0	0	0	0
602	CRTFP Uy-	0	0	0	0	0	0
603	SLU 1	-0.27	-0.18	59.44	-0.2517	-0.0017	0.0427
603	SLU 2	-0.27	-0.25	59.45	-0.2542	-0.0015	0.0429
603	SLU 3	-0.27	-0.17	60.87	-0.2594	-0.0018	0.0439
603	SLU 4	-0.27	-0.21	60.88	-0.2608	-0.0017	0.044
603	SLU 5	-0.27	-0.25	60.32	-0.2599	-0.0015	0.0435
603	SLU 6	-0.28	-0.17	61.75	-0.2651	-0.0018	0.0445
603	SLU 7	-0.28	-0.21	61.75	-0.2666	-0.0017	0.0446
603	SLU 8	-0.28	-0.18	61.19	-0.2632	-0.0017	0.0439
603	SLU 9	-0.28	-0.22	61.2	-0.2647	-0.0016	0.0441
603	SLU 10	-0.24	-0.21	67.02	-0.2624	-0.0033	0.0466
603	SLU 11	-0.25	-0.13	68.44	-0.2676	-0.0036	0.0475
603	SLU 12	-0.25	-0.17	68.45	-0.2691	-0.0035	0.0477
603	SLU 13	-0.25	-0.21	67.89	-0.2682	-0.0034	0.0472
603	SLU 14	-0.25	-0.13	69.32	-0.2733	-0.0036	0.0482
603	SLU 15	-0.25	-0.17	69.32	-0.2748	-0.0035	0.0483
603	SLU 16	-0.25	-0.14	68.76	-0.2715	-0.0035	0.0476
603	SLU 17	-0.25	-0.18	68.77	-0.2729	-0.0034	0.0477
603	SLU 18	-0.23	-0.13	70.25	-0.2635	-0.0043	0.0479
603	SLU 19	-0.23	-0.17	70.26	-0.265	-0.0042	0.0481
603	SLU 20	-0.23	-0.13	71.13	-0.2692	-0.0043	0.0486
603	SLU 21	-0.24	-0.17	71.14	-0.2707	-0.0042	0.0487
603	SLU 22	-0.28	-0.07	66.65	-0.2481	-0.0025	0.0477
603	SLU 23	-0.28	-0.14	66.66	-0.2506	-0.0024	0.0479
603	SLU 24	-0.29	-0.06	68.08	-0.2557	-0.0026	0.0489
603	SLU 25	-0.29	-0.1	68.09	-0.2572	-0.0025	0.049
603	SLU 26	-0.29	-0.14	67.53	-0.2563	-0.0024	0.0486
603	SLU 27	-0.29	-0.06	68.96	-0.2615	-0.0026	0.0495
603	SLU 28	-0.29	-0.1	68.96	-0.263	-0.0025	0.0496
603	SLU 29	-0.29	-0.07	68.4	-0.2596	-0.0025	0.049
603	SLU 30	-0.29	-0.11	68.41	-0.2611	-0.0024	0.0491
603	SLU 31	-0.26	-0.1	74.23	-0.2588	-0.0042	0.0516
603	SLU 32	-0.26	-0.02	75.65	-0.264	-0.0044	0.0526
603	SLU 33	-0.26	-0.06	75.66	-0.2654	-0.0043	0.0527
603	SLU 34	-0.26	-0.1	75.11	-0.2645	-0.0042	0.0522
603	SLU 35	-0.27	-0.02	76.53	-0.2697	-0.0044	0.0532
603	SLU 36	-0.27	-0.06	76.53	-0.2712	-0.0043	0.0533
603	SLU 37	-0.27	-0.03	75.97	-0.2678	-0.0043	0.0526
603	SLU 38	-0.27	-0.07	75.98	-0.2693	-0.0042	0.0528
603	SLU 39	-0.24	-0.02	77.47	-0.2599	-0.0051	0.053
603	SLU 40	-0.24	-0.06	77.47	-0.2613	-0.005	0.0531
603	SLU 41	-0.25	-0.02	78.34	-0.2656	-0.0051	0.0536
603	SLU 42	-0.25	-0.06	78.35	-0.2671	-0.005	0.0537
603	SLU 43	-0.34	-0.28	74.8	-0.3285	-0.0019	0.0538
603	SLU 44	-0.35	-0.34	74.81	-0.331	-0.0018	0.054
603	SLU 45	-0.35	-0.27	76.23	-0.3361	-0.002	0.055
603	SLU 46	-0.35	-0.3	76.23	-0.3376	-0.0019	0.0551
603	SLU 47	-0.35	-0.34	75.68	-0.3367	-0.0018	0.0546
603	SLU 48	-0.35	-0.27	77.11	-0.3419	-0.002	0.0556
603	SLU 49	-0.36	-0.31	77.11	-0.3434	-0.0019	0.0557
603	SLU 50	-0.35	-0.28	76.55	-0.34	-0.0019	0.055
603	SLU 51	-0.35	-0.32	76.56	-0.3415	-0.0018	0.0552
603	SLU 52	-0.32	-0.3	82.38	-0.3392	-0.0036	0.0577
603	SLU 53	-0.32	-0.23	83.8	-0.3444	-0.0038	0.0586
603	SLU 54	-0.32	-0.27	83.81	-0.3458	-0.0037	0.0588
603	SLU 55	-0.32	-0.3	83.25	-0.3449	-0.0036	0.0583
603	SLU 56	-0.33	-0.23	84.68	-0.3501	-0.0038	0.0593
603	SLU 57	-0.33	-0.27	84.68	-0.3516	-0.0037	0.0594
603	SLU 58	-0.33	-0.24	84.12	-0.3482	-0.0037	0.0587
603	SLU 59	-0.33	-0.28	84.13	-0.3497	-0.0036	0.0588
603	SLU 60	-0.31	-0.22	85.61	-0.3403	-0.0045	0.059
603	SLU 61	-0.31	-0.26	85.62	-0.3417	-0.0044	0.0592
603	SLU 62	-0.31	-0.22	86.49	-0.346	-0.0045	0.0596
603	SLU 63	-0.31	-0.26	86.49	-0.3475	-0.0044	0.0598
603	SLU 64	-0.36	-0.16	82.01	-0.3249	-0.0027	0.0588
603	SLU 65	-0.36	-0.23	82.02	-0.3273	-0.0026	0.059
603	SLU 66	-0.36	-0.15	83.44	-0.3325	-0.0028	0.06
603	SLU 67	-0.36	-0.19	83.45	-0.334	-0.0028	0.0601
603	SLU 68	-0.36	-0.23	82.89	-0.3331	-0.0026	0.0597
603	SLU 69	-0.37	-0.15	84.32	-0.3383	-0.0028	0.0606
603	SLU 70	-0.37	-0.19	84.32	-0.3397	-0.0028	0.0607
603	SLU 71	-0.37	-0.16	83.76	-0.3364	-0.0027	0.0601
603	SLU 72	-0.37	-0.2	83.77	-0.3379	-0.0027	0.0602
603	SLU 73	-0.33	-0.19	89.59	-0.3356	-0.0044	0.0627
603	SLU 74	-0.34	-0.12	91.01	-0.3407	-0.0047	0.0637
603	SLU 75	-0.34	-0.15	91.02	-0.3422	-0.0046	0.0638
603	SLU 76	-0.34	-0.19	90.46	-0.3413	-0.0044	0.0633
603	SLU 77	-0.34	-0.12	91.89	-0.3465	-0.0047	0.0643
603	SLU 78	-0.34	-0.16	91.89	-0.348	-0.0046	0.0644
603	SLU 79	-0.34	-0.13	91.33	-0.3446	-0.0046	0.0637
603	SLU 80	-0.34	-0.17	91.34	-0.3461	-0.0045	0.0638
603	SLU 81	-0.32	-0.11	92.82	-0.3366	-0.0053	0.0641
603	SLU 82	-0.32	-0.15	92.83	-0.3381	-0.0052	0.0642
603	SLU 83	-0.32	-0.11	93.7	-0.3424	-0.0053	0.0647
603	SLU 84	-0.33	-0.15	93.71	-0.3439	-0.0052	0.0648
603	SLE RA 1	-0.27	-0.15	61.5	-0.2507	-0.0019	0.0441
603	SLE RA 2	-0.27	-0.19	61.5	-0.2523	-0.0018	0.0443
603	SLE RA 3	-0.28	-0.14	62.45	-0.2558	-0.002	0.0449
603	SLE RA 4	-0.28	-0.17	62.46	-0.2568	-0.0019	0.045
603	SLE RA 5	-0.28	-0.19	62.09	-0.2562	-0.0018	0.0447
603	SLE RA 6	-0.28	-0.14	63.04	-0.2596	-0.002	0.0453
603	SLE RA 7	-0.28	-0.17	63.04	-0.2606	-0.0019	0.0454

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
603	SLE RA 8	-0.28	-0.15	62.67	-0.2584	-0.0019	0.045
603	SLE RA 9	-0.28	-0.18	62.67	-0.2594	-0.0019	0.0451
603	SLE RA 10	-0.25	-0.17	66.55	-0.2578	-0.003	0.0467
603	SLE RA 11	-0.26	-0.12	67.5	-0.2613	-0.0032	0.0474
603	SLE RA 12	-0.26	-0.14	67.5	-0.2623	-0.0031	0.0475
603	SLE RA 13	-0.26	-0.17	67.14	-0.2617	-0.003	0.0471
603	SLE RA 14	-0.26	-0.12	68.09	-0.2651	-0.0032	0.0478
603	SLE RA 15	-0.26	-0.14	68.09	-0.2661	-0.0031	0.0479
603	SLE RA 16	-0.26	-0.13	67.71	-0.2639	-0.0031	0.0474
603	SLE RA 17	-0.26	-0.15	67.72	-0.2648	-0.0031	0.0475
603	SLE RA 18	-0.25	-0.11	68.71	-0.2585	-0.0036	0.0476
603	SLE RA 19	-0.25	-0.14	68.71	-0.2595	-0.0036	0.0477
603	SLE RA 20	-0.25	-0.11	69.29	-0.2624	-0.0036	0.048
603	SLE RA 21	-0.25	-0.14	69.3	-0.2634	-0.0036	0.0481
603	SLE FR 1	-0.27	-0.15	61.5	-0.2507	-0.0019	0.0441
603	SLE FR 2	-0.27	-0.16	61.5	-0.251	-0.0019	0.0442
603	SLE FR 3	-0.27	-0.15	61.73	-0.2522	-0.0019	0.0443
603	SLE FR 4	-0.26	-0.15	63.66	-0.2534	-0.0024	0.0452
603	SLE FR 5	-0.27	-0.14	63.9	-0.2546	-0.0024	0.0454
603	SLE FR 6	-0.26	-0.13	65.1	-0.2546	-0.0028	0.0459
603	SLE QP 1	-0.27	-0.15	61.5	-0.2507	-0.0019	0.0441
603	SLE QP 2	-0.26	-0.14	63.66	-0.2531	-0.0024	0.0452
603	SLD 1	4.87	0.57	65.62	-0.1714	0.0242	0.0667
603	SLD 2	4.87	0.32	65.66	-0.1725	0.0246	0.0695
603	SLD 3	4.62	-1.08	65.93	-0.2306	0.027	0.0638
603	SLD 4	4.63	-1.34	65.96	-0.2318	0.0274	0.0666
603	SLD 5	1.64	2.63	63.78	-0.1385	0.0013	0.0556
603	SLD 6	1.64	2.46	63.8	-0.1393	0.0016	0.0574
603	SLD 7	0.84	-2.88	64.8	-0.3359	0.0105	0.0459
603	SLD 8	0.84	-3.05	64.82	-0.3367	0.0107	0.0477
603	SLD 9	-1.37	2.77	62.5	-0.1694	-0.0156	0.0427
603	SLD 10	-1.36	2.61	62.52	-0.1702	-0.0153	0.0445
603	SLD 11	-2.17	-2.74	63.52	-0.3668	-0.0065	0.033
603	SLD 12	-2.17	-2.91	63.55	-0.3676	-0.0062	0.0348
603	SLD 13	-5.16	1.06	61.36	-0.2743	-0.0323	0.0238
603	SLD 14	-5.15	0.8	61.4	-0.2755	-0.0319	0.0265
603	SLD 15	-5.4	-0.6	61.67	-0.3336	-0.0295	0.0209
603	SLD 16	-5.39	-0.85	61.7	-0.3348	-0.0291	0.0236
603	SLV 1	11.74	1.46	68.24	-0.0557	0.0601	0.0956
603	SLV 2	11.75	0.87	68.33	-0.0585	0.061	0.102
603	SLV 3	11.18	-2.28	68.95	-0.19	0.0663	0.0889
603	SLV 4	11.19	-2.87	69.04	-0.1928	0.0673	0.0952
603	SLV 5	4.19	6.12	63.94	0.0103	0.0066	0.0695
603	SLV 6	4.19	5.73	64	0.0085	0.0072	0.0736
603	SLV 7	2.31	-6.35	66.32	-0.4374	0.0276	0.0469
603	SLV 8	2.32	-6.73	66.37	-0.4391	0.0282	0.051
603	SLV 9	-2.85	6.46	60.95	-0.067	-0.033	0.0394
603	SLV 10	-2.84	6.07	61.01	-0.0688	-0.0324	0.0435
603	SLV 11	-4.72	-6.01	63.33	-0.5146	-0.0121	0.0168
603	SLV 12	-4.71	-6.39	63.38	-0.5164	-0.0115	0.0209
603	SLV 13	-11.71	2.59	58.28	-0.3133	-0.0722	-0.0048
603	SLV 14	-11.7	2	58.37	-0.3161	-0.0712	0.0015
603	SLV 15	-12.28	-1.15	58.99	-0.4476	-0.0659	-0.0116
603	SLV 16	-12.27	-1.74	59.08	-0.4504	-0.0649	-0.0052
603	CRTFP Ux+	0	0	0	0	0	0
603	CRTFP Ux-	0	0	0	0	0	0
603	CRTFP Uy+	0	0	0	0	0	0
603	CRTFP Uy-	0	0	0	0	0	0
604	SLU 1	-0.22	0.04	59.38	-0.2932	0.0053	0.0374
604	SLU 2	-0.22	-0.03	59.39	-0.2959	0.0055	0.0376
604	SLU 3	-0.23	0.05	60.81	-0.3021	0.0054	0.0385
604	SLU 4	-0.23	0.01	60.82	-0.3038	0.0055	0.0386
604	SLU 5	-0.23	-0.02	60.26	-0.3025	0.0056	0.0381
604	SLU 6	-0.23	0.05	61.69	-0.3087	0.0055	0.039
604	SLU 7	-0.23	0.02	61.69	-0.3104	0.0056	0.0391
604	SLU 8	-0.23	0.04	61.13	-0.3064	0.0055	0.0385
604	SLU 9	-0.23	0	61.13	-0.308	0.0056	0.0386
604	SLU 10	-0.19	0.03	67	-0.3102	0.0047	0.0408
604	SLU 11	-0.2	0.11	68.43	-0.3165	0.0047	0.0417
604	SLU 12	-0.2	0.07	68.43	-0.3181	0.0048	0.0418
604	SLU 13	-0.2	0.03	67.87	-0.3168	0.0048	0.0413
604	SLU 14	-0.2	0.11	69.3	-0.3231	0.0048	0.0422
604	SLU 15	-0.2	0.07	69.3	-0.3247	0.0049	0.0423
604	SLU 16	-0.2	0.1	68.74	-0.3207	0.0048	0.0417
604	SLU 17	-0.2	0.06	68.75	-0.3223	0.0049	0.0418
604	SLU 18	-0.18	0.12	70.26	-0.3137	0.0043	0.042
604	SLU 19	-0.18	0.08	70.26	-0.3153	0.0044	0.0421
604	SLU 20	-0.19	0.12	71.13	-0.3203	0.0044	0.0425
604	SLU 21	-0.19	0.08	71.13	-0.3219	0.0045	0.0426
604	SLU 22	-0.23	0.17	66.6	-0.2947	0.0056	0.042
604	SLU 23	-0.23	0.11	66.61	-0.2974	0.0058	0.0421
604	SLU 24	-0.24	0.19	68.03	-0.3037	0.0057	0.043
604	SLU 25	-0.24	0.15	68.04	-0.3053	0.0058	0.0431
604	SLU 26	-0.24	0.11	67.48	-0.304	0.0059	0.0427
604	SLU 27	-0.24	0.19	68.91	-0.3103	0.0058	0.0436
604	SLU 28	-0.24	0.15	68.91	-0.3119	0.0059	0.0437
604	SLU 29	-0.24	0.18	68.35	-0.3079	0.0058	0.043
604	SLU 30	-0.24	0.14	68.35	-0.3095	0.0059	0.0431
604	SLU 31	-0.2	0.17	74.22	-0.3118	0.0051	0.0453
604	SLU 32	-0.21	0.25	75.65	-0.318	0.005	0.0462
604	SLU 33	-0.21	0.21	75.65	-0.3196	0.0051	0.0463
604	SLU 34	-0.21	0.17	75.09	-0.3183	0.0052	0.0459
604	SLU 35	-0.21	0.25	76.52	-0.3246	0.0051	0.0468
604	SLU 36	-0.21	0.21	76.52	-0.3262	0.0052	0.0469
604	SLU 37	-0.21	0.24	75.96	-0.3222	0.0051	0.0462
604	SLU 38	-0.21	0.2	75.97	-0.3239	0.0052	0.0463
604	SLU 39	-0.19	0.26	77.47	-0.3152	0.0046	0.0465

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
604	SLU 40	-0.19	0.22	77.48	-0.3168	0.0047	0.0466
604	SLU 41	-0.2	0.26	78.35	-0.3218	0.0047	0.0471
604	SLU 42	-0.2	0.22	78.35	-0.3234	0.0048	0.0472
604	SLU 43	-0.29	0	74.72	-0.3806	0.0068	0.0471
604	SLU 44	-0.29	-0.06	74.73	-0.3833	0.0069	0.0473
604	SLU 45	-0.29	0.02	76.15	-0.3896	0.0069	0.0482
604	SLU 46	-0.29	-0.02	76.16	-0.3912	0.007	0.0483
604	SLU 47	-0.29	-0.06	75.6	-0.3899	0.007	0.0478
604	SLU 48	-0.3	0.02	77.03	-0.3962	0.007	0.0487
604	SLU 49	-0.3	-0.02	77.03	-0.3978	0.0071	0.0488
604	SLU 50	-0.3	0.01	76.47	-0.3938	0.007	0.0482
604	SLU 51	-0.3	-0.03	76.47	-0.3954	0.0071	0.0483
604	SLU 52	-0.26	-0.01	82.34	-0.3977	0.0062	0.0505
604	SLU 53	-0.26	0.07	83.77	-0.4039	0.0062	0.0514
604	SLU 54	-0.26	0.04	83.77	-0.4055	0.0063	0.0515
604	SLU 55	-0.26	0	83.21	-0.4042	0.0063	0.051
604	SLU 56	-0.27	0.08	84.64	-0.4105	0.0063	0.0519
604	SLU 57	-0.27	0.04	84.64	-0.4121	0.0064	0.052
604	SLU 58	-0.27	0.06	84.08	-0.4081	0.0063	0.0514
604	SLU 59	-0.27	0.02	84.09	-0.4098	0.0064	0.0515
604	SLU 60	-0.24	0.08	85.59	-0.4011	0.0058	0.0517
604	SLU 61	-0.25	0.04	85.6	-0.4027	0.0059	0.0518
604	SLU 62	-0.25	0.09	86.47	-0.4077	0.0059	0.0522
604	SLU 63	-0.25	0.05	86.47	-0.4093	0.006	0.0523
604	SLU 64	-0.3	0.14	81.94	-0.3821	0.0071	0.0516
604	SLU 65	-0.3	0.07	81.94	-0.3848	0.0073	0.0518
604	SLU 66	-0.3	0.15	83.37	-0.3911	0.0072	0.0527
604	SLU 67	-0.3	0.11	83.38	-0.3927	0.0073	0.0528
604	SLU 68	-0.3	0.08	82.82	-0.3914	0.0074	0.0523
604	SLU 69	-0.31	0.16	84.25	-0.3977	0.0073	0.0532
604	SLU 70	-0.31	0.12	84.25	-0.3993	0.0074	0.0533
604	SLU 71	-0.31	0.14	83.69	-0.3953	0.0073	0.0527
604	SLU 72	-0.31	0.1	83.69	-0.3969	0.0074	0.0528
604	SLU 73	-0.27	0.13	89.56	-0.3992	0.0065	0.055
604	SLU 74	-0.27	0.21	90.98	-0.4054	0.0065	0.0559
604	SLU 75	-0.27	0.17	90.99	-0.4071	0.0066	0.056
604	SLU 76	-0.27	0.13	90.43	-0.4058	0.0066	0.0555
604	SLU 77	-0.28	0.21	91.86	-0.412	0.0066	0.0564
604	SLU 78	-0.28	0.17	91.86	-0.4137	0.0067	0.0565
604	SLU 79	-0.28	0.2	91.3	-0.4097	0.0066	0.0559
604	SLU 80	-0.28	0.16	91.3	-0.4113	0.0067	0.056
604	SLU 81	-0.25	0.22	92.81	-0.4026	0.0061	0.0562
604	SLU 82	-0.26	0.18	92.82	-0.4042	0.0062	0.0563
604	SLU 83	-0.26	0.22	93.69	-0.4092	0.0062	0.0567
604	SLU 84	-0.26	0.18	93.69	-0.4108	0.0063	0.0568
604	SLE RA 1	-0.23	0.08	61.44	-0.2936	0.0054	0.0387
604	SLE RA 2	-0.23	0.03	61.45	-0.2954	0.0055	0.0388
604	SLE RA 3	-0.23	0.09	62.4	-0.2996	0.0055	0.0394
604	SLE RA 4	-0.23	0.06	62.4	-0.3007	0.0055	0.0395
604	SLE RA 5	-0.23	0.03	62.03	-0.2998	0.0056	0.0392
604	SLE RA 6	-0.23	0.09	62.98	-0.304	0.0055	0.0398
604	SLE RA 7	-0.23	0.06	62.98	-0.3051	0.0056	0.0399
604	SLE RA 8	-0.23	0.08	62.61	-0.3024	0.0056	0.0395
604	SLE RA 9	-0.23	0.05	62.61	-0.3035	0.0056	0.0395
604	SLE RA 10	-0.21	0.07	66.52	-0.305	0.005	0.041
604	SLE RA 11	-0.21	0.12	67.47	-0.3091	0.005	0.0416
604	SLE RA 12	-0.21	0.1	67.48	-0.3102	0.005	0.0416
604	SLE RA 13	-0.21	0.07	67.1	-0.3094	0.0051	0.0413
604	SLE RA 14	-0.21	0.13	68.06	-0.3135	0.0051	0.0419
604	SLE RA 15	-0.21	0.1	68.06	-0.3146	0.0051	0.042
604	SLE RA 16	-0.21	0.12	67.69	-0.312	0.0051	0.0416
604	SLE RA 17	-0.21	0.09	67.69	-0.313	0.0051	0.0416
604	SLE RA 18	-0.2	0.13	68.69	-0.3073	0.0047	0.0418
604	SLE RA 19	-0.2	0.1	68.7	-0.3084	0.0048	0.0418
604	SLE RA 20	-0.2	0.13	69.28	-0.3117	0.0048	0.0421
604	SLE RA 21	-0.2	0.11	69.28	-0.3127	0.0049	0.0422
604	SLE FR 1	-0.23	0.08	61.44	-0.2936	0.0054	0.0387
604	SLE FR 2	-0.23	0.07	61.44	-0.294	0.0054	0.0388
604	SLE FR 3	-0.23	0.08	61.68	-0.2954	0.0054	0.0389
604	SLE FR 4	-0.22	0.08	63.62	-0.2981	0.0052	0.0397
604	SLE FR 5	-0.22	0.09	63.85	-0.2995	0.0052	0.0398
604	SLE FR 6	-0.21	0.1	65.07	-0.3004	0.0051	0.0403
604	SLE QP 1	-0.23	0.08	61.44	-0.2936	0.0054	0.0387
604	SLE QP 2	-0.22	0.09	63.62	-0.2977	0.0052	0.0396
604	SLD 1	4.91	0.83	64.75	-0.2041	0.0312	0.0605
604	SLD 2	4.92	0.59	64.77	-0.2063	0.0316	0.0632
604	SLD 3	4.67	-0.83	64.99	-0.2662	0.0337	0.0572
604	SLD 4	4.68	-1.07	65.02	-0.2684	0.0341	0.0599
604	SLD 5	1.68	2.87	63.58	-0.175	0.0091	0.0503
604	SLD 6	1.69	2.71	63.6	-0.1765	0.0094	0.0521
604	SLD 7	0.88	-2.66	64.4	-0.3821	0.0175	0.0395
604	SLD 8	0.89	-2.81	64.41	-0.3835	0.0177	0.0413
604	SLD 9	-1.32	3	62.83	-0.2119	-0.0073	0.038
604	SLD 10	-1.32	2.84	62.84	-0.2133	-0.0071	0.0398
604	SLD 11	-2.12	-2.53	63.64	-0.419	0.001	0.0272
604	SLD 12	-2.12	-2.68	63.65	-0.4204	0.0013	0.0289
604	SLD 13	-5.11	1.26	62.22	-0.327	-0.0236	0.0194
604	SLD 14	-5.11	1.01	62.25	-0.3292	-0.0232	0.0221
604	SLD 15	-5.35	-0.4	62.46	-0.3891	-0.0211	0.0161
604	SLD 16	-5.35	-0.64	62.49	-0.3914	-0.0207	0.0188
604	SLV 1	11.78	1.75	66.26	-0.072	0.066	0.0884
604	SLV 2	11.79	1.19	66.32	-0.0772	0.0669	0.0946
604	SLV 3	11.22	-2	66.83	-0.2129	0.0718	0.0808
604	SLV 4	11.23	-2.56	66.89	-0.2181	0.0727	0.0871
604	SLV 5	4.23	6.37	63.54	-0.0155	0.0146	0.0647
604	SLV 6	4.24	6.01	63.58	-0.0188	0.0152	0.0687
604	SLV 7	2.36	-6.13	65.43	-0.485	0.0337	0.0395

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
604	SLV 8	2.37	-6.49	65.47	-0.4883	0.0343	0.0435
604	SLV 9	-2.8	6.67	61.77	-0.1071	-0.0239	0.0358
604	SLV 10	-2.8	6.31	61.81	-0.1104	-0.0233	0.0398
604	SLV 11	-4.67	-5.83	63.66	-0.5766	-0.0047	0.0106
604	SLV 12	-4.66	-6.19	63.7	-0.5799	-0.0041	0.0146
604	SLV 13	-11.67	2.75	60.35	-0.3774	-0.0622	-0.0078
604	SLV 14	-11.66	2.19	60.41	-0.3825	-0.0613	-0.0015
604	SLV 15	-12.23	-1	60.92	-0.5182	-0.0565	-0.0154
604	SLV 16	-12.22	-1.56	60.98	-0.5234	-0.0556	-0.0091
604	CRTFP Ux+	0	0	0	0	0	0
604	CRTFP Ux-	0	0	0	0	0	0
604	CRTFP Uy+	0	0	0	0	0	0
604	CRTFP Uy-	0	0	0	0	0	0
605	SLU 1	-0.18	0.21	59.1	-0.3353	0.0123	0.0263
605	SLU 2	-0.18	0.15	59.1	-0.3383	0.0123	0.0264
605	SLU 3	-0.18	0.23	60.53	-0.3456	0.0125	0.0271
605	SLU 4	-0.18	0.2	60.53	-0.3474	0.0126	0.0272
605	SLU 5	-0.18	0.15	59.97	-0.3457	0.0126	0.0268
605	SLU 6	-0.19	0.24	61.4	-0.3531	0.0127	0.0275
605	SLU 7	-0.19	0.2	61.4	-0.3549	0.0128	0.0275
605	SLU 8	-0.19	0.22	60.84	-0.3502	0.0127	0.0271
605	SLU 9	-0.19	0.19	60.84	-0.352	0.0127	0.0271
605	SLU 10	-0.15	0.22	66.72	-0.3588	0.0127	0.0286
605	SLU 11	-0.15	0.31	68.14	-0.3662	0.0129	0.0293
605	SLU 12	-0.15	0.27	68.15	-0.3679	0.013	0.0294
605	SLU 13	-0.15	0.23	67.59	-0.3663	0.0129	0.029
605	SLU 14	-0.15	0.31	69.02	-0.3736	0.0131	0.0297
605	SLU 15	-0.15	0.27	69.02	-0.3754	0.0132	0.0298
605	SLU 16	-0.15	0.3	68.46	-0.3707	0.0131	0.0293
605	SLU 17	-0.15	0.26	68.46	-0.3725	0.0131	0.0293
605	SLU 18	-0.13	0.32	69.98	-0.3646	0.0128	0.0295
605	SLU 19	-0.13	0.28	69.98	-0.3664	0.0129	0.0295
605	SLU 20	-0.14	0.32	70.85	-0.3721	0.013	0.0299
605	SLU 21	-0.14	0.28	70.85	-0.3739	0.0131	0.0299
605	SLU 22	-0.18	0.37	66.29	-0.3421	0.0138	0.0297
605	SLU 23	-0.19	0.31	66.29	-0.345	0.0139	0.0298
605	SLU 24	-0.19	0.39	67.72	-0.3524	0.0141	0.0305
605	SLU 25	-0.19	0.35	67.72	-0.3542	0.0142	0.0306
605	SLU 26	-0.19	0.31	67.16	-0.3525	0.0141	0.0302
605	SLU 27	-0.19	0.4	68.59	-0.3598	0.0143	0.0309
605	SLU 28	-0.19	0.36	68.59	-0.3616	0.0144	0.0309
605	SLU 29	-0.19	0.38	68.03	-0.357	0.0143	0.0305
605	SLU 30	-0.19	0.34	68.03	-0.3587	0.0143	0.0305
605	SLU 31	-0.15	0.38	73.91	-0.3655	0.0143	0.032
605	SLU 32	-0.16	0.47	75.33	-0.3729	0.0145	0.0327
605	SLU 33	-0.16	0.43	75.33	-0.3747	0.0146	0.0328
605	SLU 34	-0.16	0.39	74.78	-0.373	0.0145	0.0324
605	SLU 35	-0.16	0.47	76.2	-0.3803	0.0147	0.0331
605	SLU 36	-0.16	0.43	76.2	-0.3821	0.0148	0.0332
605	SLU 37	-0.16	0.45	75.65	-0.3775	0.0147	0.0327
605	SLU 38	-0.16	0.42	75.65	-0.3793	0.0147	0.0327
605	SLU 39	-0.14	0.48	77.17	-0.3714	0.0144	0.0329
605	SLU 40	-0.14	0.44	77.17	-0.3731	0.0145	0.0329
605	SLU 41	-0.14	0.48	78.04	-0.3788	0.0146	0.0332
605	SLU 42	-0.14	0.44	78.04	-0.3806	0.0147	0.0333
605	SLU 43	-0.23	0.22	74.37	-0.4336	0.0154	0.033
605	SLU 44	-0.23	0.16	74.37	-0.4366	0.0155	0.0332
605	SLU 45	-0.23	0.24	75.79	-0.4439	0.0157	0.0338
605	SLU 46	-0.23	0.21	75.79	-0.4457	0.0157	0.0339
605	SLU 47	-0.24	0.16	75.24	-0.444	0.0157	0.0335
605	SLU 48	-0.24	0.25	76.66	-0.4514	0.0159	0.0342
605	SLU 49	-0.24	0.21	76.66	-0.4532	0.0159	0.0343
605	SLU 50	-0.24	0.23	76.11	-0.4485	0.0158	0.0338
605	SLU 51	-0.24	0.19	76.11	-0.4503	0.0159	0.0339
605	SLU 52	-0.2	0.23	81.98	-0.4571	0.0159	0.0354
605	SLU 53	-0.2	0.32	83.41	-0.4645	0.0161	0.0361
605	SLU 54	-0.2	0.28	83.41	-0.4662	0.0161	0.0361
605	SLU 55	-0.2	0.24	82.85	-0.4646	0.0161	0.0357
605	SLU 56	-0.21	0.32	84.28	-0.4719	0.0163	0.0364
605	SLU 57	-0.21	0.28	84.28	-0.4737	0.0163	0.0365
605	SLU 58	-0.21	0.31	83.72	-0.469	0.0162	0.036
605	SLU 59	-0.21	0.27	83.72	-0.4708	0.0163	0.0361
605	SLU 60	-0.19	0.33	85.25	-0.4629	0.016	0.0362
605	SLU 61	-0.19	0.29	85.25	-0.4647	0.016	0.0363
605	SLU 62	-0.19	0.33	86.12	-0.4704	0.0162	0.0366
605	SLU 63	-0.19	0.29	86.12	-0.4722	0.0162	0.0366
605	SLU 64	-0.24	0.38	81.56	-0.4404	0.017	0.0364
605	SLU 65	-0.24	0.32	81.56	-0.4433	0.0171	0.0365
605	SLU 66	-0.24	0.4	82.98	-0.4507	0.0173	0.0372
605	SLU 67	-0.24	0.36	82.98	-0.4524	0.0173	0.0373
605	SLU 68	-0.24	0.32	82.43	-0.4508	0.0173	0.0369
605	SLU 69	-0.24	0.41	83.85	-0.4581	0.0175	0.0376
605	SLU 70	-0.24	0.37	83.85	-0.4599	0.0175	0.0377
605	SLU 71	-0.24	0.39	83.3	-0.4553	0.0174	0.0372
605	SLU 72	-0.24	0.35	83.3	-0.457	0.0174	0.0373
605	SLU 73	-0.21	0.39	89.17	-0.4638	0.0175	0.0388
605	SLU 74	-0.21	0.47	90.6	-0.4712	0.0176	0.0394
605	SLU 75	-0.21	0.44	90.6	-0.473	0.0177	0.0395
605	SLU 76	-0.21	0.4	90.04	-0.4713	0.0177	0.0391
605	SLU 77	-0.21	0.48	91.47	-0.4786	0.0179	0.0398
605	SLU 78	-0.21	0.44	91.47	-0.4804	0.0179	0.0399
605	SLU 79	-0.21	0.46	90.91	-0.4758	0.0178	0.0394
605	SLU 80	-0.21	0.43	90.91	-0.4775	0.0178	0.0395
605	SLU 81	-0.19	0.48	92.44	-0.4697	0.0175	0.0396
605	SLU 82	-0.19	0.45	92.44	-0.4714	0.0176	0.0397
605	SLU 83	-0.19	0.49	93.31	-0.4771	0.0177	0.04
605	SLU 84	-0.2	0.45	93.31	-0.4789	0.0178	0.04

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
605	SLE RA 1	-0.18	0.26	61.16	-0.3373	0.0127	0.0273
605	SLE RA 2	-0.18	0.22	61.16	-0.3392	0.0128	0.0274
605	SLE RA 3	-0.18	0.27	62.11	-0.3441	0.0129	0.0278
605	SLE RA 4	-0.18	0.25	62.11	-0.3453	0.0129	0.0279
605	SLE RA 5	-0.18	0.22	61.74	-0.3442	0.0129	0.0276
605	SLE RA 6	-0.19	0.28	62.69	-0.3491	0.013	0.0281
605	SLE RA 7	-0.19	0.25	62.69	-0.3503	0.0131	0.0281
605	SLE RA 8	-0.19	0.27	62.32	-0.3472	0.013	0.0278
605	SLE RA 9	-0.19	0.24	62.32	-0.3484	0.013	0.0278
605	SLE RA 10	-0.16	0.26	66.23	-0.3529	0.013	0.0288
605	SLE RA 11	-0.16	0.32	67.18	-0.3578	0.0132	0.0293
605	SLE RA 12	-0.16	0.3	67.18	-0.359	0.0132	0.0293
605	SLE RA 13	-0.16	0.27	66.81	-0.3579	0.0132	0.0291
605	SLE RA 14	-0.16	0.32	67.76	-0.3628	0.0133	0.0295
605	SLE RA 15	-0.16	0.3	67.76	-0.364	0.0133	0.0296
605	SLE RA 16	-0.16	0.31	67.39	-0.3609	0.0133	0.0293
605	SLE RA 17	-0.16	0.29	67.39	-0.362	0.0133	0.0293
605	SLE RA 18	-0.15	0.33	68.41	-0.3568	0.0131	0.0294
605	SLE RA 19	-0.15	0.3	68.41	-0.358	0.0131	0.0294
605	SLE RA 20	-0.15	0.33	68.99	-0.3618	0.0132	0.0296
605	SLE RA 21	-0.15	0.31	68.99	-0.3629	0.0133	0.0297
605	SLE FR 1	-0.18	0.26	61.16	-0.3373	0.0127	0.0273
605	SLE FR 2	-0.18	0.25	61.16	-0.3376	0.0127	0.0273
605	SLE FR 3	-0.18	0.26	61.39	-0.3392	0.0128	0.0274
605	SLE FR 4	-0.17	0.27	63.33	-0.3435	0.0128	0.0279
605	SLE FR 5	-0.17	0.28	63.56	-0.3451	0.0129	0.028
605	SLE FR 6	-0.17	0.29	64.78	-0.347	0.0129	0.0283
605	SLE QP 1	-0.18	0.26	61.16	-0.3373	0.0127	0.0273
605	SLE QP 2	-0.17	0.28	63.33	-0.3431	0.0128	0.0279
605	SLD 1	4.95	1.46	63.75	-0.2359	0.0359	0.0466
605	SLD 2	4.96	1.24	63.76	-0.2391	0.0362	0.0495
605	SLD 3	4.71	-0.2	63.94	-0.3011	0.0377	0.0427
605	SLD 4	4.72	-0.43	63.96	-0.3043	0.0381	0.0455
605	SLD 5	1.73	3.2	63.16	-0.2114	0.0168	0.039
605	SLD 6	1.73	3.05	63.17	-0.2136	0.017	0.0409
605	SLD 7	0.93	-2.35	63.81	-0.4288	0.0231	0.0258
605	SLD 8	0.93	-2.5	63.82	-0.431	0.0233	0.0277
605	SLD 9	-1.28	3.06	62.85	-0.2553	0.0023	0.0281
605	SLD 10	-1.27	2.91	62.86	-0.2574	0.0025	0.03
605	SLD 11	-2.07	-2.5	63.5	-0.4727	0.0086	0.0149
605	SLD 12	-2.07	-2.65	63.5	-0.4748	0.0088	0.0168
605	SLD 13	-5.06	0.99	62.71	-0.3819	-0.0125	0.0103
605	SLD 14	-5.06	0.76	62.72	-0.3852	-0.0121	0.0132
605	SLD 15	-5.3	-0.68	62.9	-0.4471	-0.0106	0.0063
605	SLD 16	-5.3	-0.91	62.91	-0.4504	-0.0102	0.0092
605	SLV 1	11.82	2.98	64.31	-0.0853	0.0667	0.0716
605	SLV 2	11.83	2.45	64.34	-0.0929	0.0676	0.0784
605	SLV 3	11.26	-0.79	64.76	-0.2332	0.0711	0.0625
605	SLV 4	11.27	-1.32	64.79	-0.2408	0.0719	0.0692
605	SLV 5	4.27	6.9	62.93	-0.0402	0.0222	0.0538
605	SLV 6	4.28	6.56	62.95	-0.045	0.0227	0.0581
605	SLV 7	2.41	-5.67	64.45	-0.5331	0.0368	0.0232
605	SLV 8	2.42	-6.01	64.47	-0.538	0.0373	0.0275
605	SLV 9	-2.76	6.57	62.2	-0.1482	-0.0117	0.0283
605	SLV 10	-2.75	6.23	62.22	-0.1531	-0.0112	0.0326
605	SLV 11	-4.62	-6.01	63.71	-0.6412	0.0029	-0.0023
605	SLV 12	-4.61	-6.35	63.73	-0.6461	0.0034	0.002
605	SLV 13	-11.61	1.88	61.87	-0.4454	-0.0463	-0.0134
605	SLV 14	-11.6	1.35	61.9	-0.453	-0.0455	-0.0066
605	SLV 15	-12.17	-1.9	62.32	-0.5933	-0.0419	-0.0225
605	SLV 16	-12.16	-2.43	62.36	-0.6009	-0.0411	-0.0158
605	CRTFP Ux+	0	0	0	0	0	0
605	CRTFP Ux-	0	0	0	0	0	0
605	CRTFP Uy+	0	0	0	0	0	0
605	CRTFP Uy-	0	0	0	0	0	0
606	SLU 1	-0.14	0.33	60.22	0.0454	-0.3043	0.0119
606	SLU 2	-0.14	0.26	60.22	0.0421	-0.3043	0.0116
606	SLU 3	-0.14	0.35	61.67	0.0439	-0.3117	0.0124
606	SLU 4	-0.14	0.31	61.67	0.042	-0.3116	0.0123
606	SLU 5	-0.14	0.27	61.1	0.04	-0.3087	0.0118
606	SLU 6	-0.14	0.36	62.56	0.0418	-0.3161	0.0126
606	SLU 7	-0.14	0.32	62.56	0.0398	-0.3161	0.0124
606	SLU 8	-0.14	0.34	61.99	0.0412	-0.3132	0.0122
606	SLU 9	-0.14	0.3	61.99	0.0392	-0.3131	0.0121
606	SLU 10	-0.1	0.34	68.01	0.0708	-0.3449	0.0126
606	SLU 11	-0.1	0.43	69.47	0.0726	-0.3523	0.0133
606	SLU 12	-0.11	0.4	69.47	0.0707	-0.3523	0.0132
606	SLU 13	-0.11	0.35	68.9	0.0687	-0.3493	0.0127
606	SLU 14	-0.11	0.44	70.35	0.0705	-0.3567	0.0135
606	SLU 15	-0.11	0.4	70.35	0.0685	-0.3567	0.0134
606	SLU 16	-0.11	0.42	69.78	0.0699	-0.3538	0.0132
606	SLU 17	-0.11	0.38	69.78	0.0679	-0.3538	0.013
606	SLU 18	-0.09	0.44	71.35	0.0864	-0.3624	0.0132
606	SLU 19	-0.09	0.41	71.35	0.0845	-0.3623	0.0131
606	SLU 20	-0.09	0.45	72.24	0.0843	-0.3668	0.0134
606	SLU 21	-0.09	0.41	72.24	0.0823	-0.3668	0.0132
606	SLU 22	-0.14	0.5	67.53	0.0859	-0.3408	0.0145
606	SLU 23	-0.14	0.44	67.53	0.0826	-0.3407	0.0142
606	SLU 24	-0.14	0.53	68.98	0.0844	-0.3481	0.015
606	SLU 25	-0.14	0.49	68.98	0.0824	-0.3481	0.0149
606	SLU 26	-0.14	0.45	68.41	0.0805	-0.3452	0.0144
606	SLU 27	-0.14	0.54	69.87	0.0823	-0.3526	0.0152
606	SLU 28	-0.15	0.5	69.87	0.0803	-0.3525	0.015
606	SLU 29	-0.15	0.52	69.3	0.0816	-0.3496	0.0148
606	SLU 30	-0.15	0.48	69.3	0.0797	-0.3496	0.0147
606	SLU 31	-0.11	0.52	75.32	0.1113	-0.3814	0.0152
606	SLU 32	-0.11	0.61	76.78	0.1131	-0.3888	0.016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
606	SLU 33	-0.11	0.57	76.78	0.1111	-0.3887	0.0158
606	SLU 34	-0.11	0.53	76.21	0.1092	-0.3858	0.0153
606	SLU 35	-0.11	0.62	77.67	0.111	-0.3932	0.0161
606	SLU 36	-0.11	0.58	77.67	0.109	-0.3931	0.016
606	SLU 37	-0.11	0.6	77.1	0.1103	-0.3903	0.0158
606	SLU 38	-0.11	0.56	77.1	0.1084	-0.3902	0.0156
606	SLU 39	-0.09	0.62	78.67	0.1269	-0.3988	0.0158
606	SLU 40	-0.09	0.58	78.67	0.1249	-0.3988	0.0157
606	SLU 41	-0.09	0.63	79.55	0.1248	-0.4033	0.016
606	SLU 42	-0.09	0.59	79.55	0.1228	-0.4032	0.0158
606	SLU 43	-0.18	0.36	75.77	0.0452	-0.3831	0.0146
606	SLU 44	-0.18	0.3	75.77	0.0419	-0.3831	0.0143
606	SLU 45	-0.18	0.39	77.23	0.0437	-0.3905	0.0151
606	SLU 46	-0.18	0.35	77.23	0.0417	-0.3904	0.0149
606	SLU 47	-0.18	0.3	76.66	0.0397	-0.3875	0.0145
606	SLU 48	-0.18	0.39	78.11	0.0415	-0.3949	0.0153
606	SLU 49	-0.18	0.36	78.11	0.0396	-0.3948	0.0151
606	SLU 50	-0.18	0.38	77.55	0.0409	-0.392	0.0149
606	SLU 51	-0.18	0.34	77.54	0.0389	-0.3919	0.0147
606	SLU 52	-0.14	0.38	83.57	0.0706	-0.4237	0.0152
606	SLU 53	-0.15	0.47	85.02	0.0724	-0.4311	0.016
606	SLU 54	-0.15	0.43	85.02	0.0704	-0.431	0.0159
606	SLU 55	-0.15	0.39	84.45	0.0684	-0.4281	0.0154
606	SLU 56	-0.15	0.48	85.91	0.0702	-0.4355	0.0162
606	SLU 57	-0.15	0.44	85.91	0.0683	-0.4355	0.016
606	SLU 58	-0.15	0.46	85.34	0.0696	-0.4326	0.0158
606	SLU 59	-0.15	0.42	85.34	0.0676	-0.4326	0.0157
606	SLU 60	-0.13	0.48	86.91	0.0862	-0.4412	0.0159
606	SLU 61	-0.13	0.44	86.91	0.0842	-0.4411	0.0157
606	SLU 62	-0.13	0.49	87.8	0.084	-0.4456	0.0161
606	SLU 63	-0.13	0.45	87.8	0.0821	-0.4455	0.0159
606	SLU 64	-0.18	0.54	83.09	0.0857	-0.4196	0.0172
606	SLU 65	-0.18	0.48	83.09	0.0824	-0.4195	0.0169
606	SLU 66	-0.18	0.57	84.54	0.0842	-0.4269	0.0177
606	SLU 67	-0.18	0.53	84.54	0.0822	-0.4269	0.0175
606	SLU 68	-0.18	0.48	83.97	0.0802	-0.424	0.0171
606	SLU 69	-0.19	0.57	85.43	0.082	-0.4314	0.0179
606	SLU 70	-0.19	0.53	85.43	0.0801	-0.4313	0.0177
606	SLU 71	-0.19	0.55	84.86	0.0814	-0.4284	0.0175
606	SLU 72	-0.19	0.52	84.86	0.0794	-0.4284	0.0173
606	SLU 73	-0.15	0.56	90.88	0.1111	-0.4602	0.0178
606	SLU 74	-0.15	0.65	92.34	0.1129	-0.4675	0.0186
606	SLU 75	-0.15	0.61	92.34	0.1109	-0.4675	0.0185
606	SLU 76	-0.15	0.57	91.77	0.1089	-0.4646	0.018
606	SLU 77	-0.15	0.66	93.22	0.1107	-0.472	0.0188
606	SLU 78	-0.15	0.62	93.22	0.1087	-0.4719	0.0186
606	SLU 79	-0.15	0.64	92.66	0.1101	-0.4691	0.0184
606	SLU 80	-0.15	0.6	92.65	0.1081	-0.469	0.0183
606	SLU 81	-0.13	0.66	94.23	0.1267	-0.4776	0.0185
606	SLU 82	-0.13	0.62	94.22	0.1247	-0.4776	0.0183
606	SLU 83	-0.13	0.67	95.11	0.1245	-0.482	0.0187
606	SLU 84	-0.13	0.63	95.11	0.1225	-0.482	0.0185
606	SLE RA 1	-0.14	0.38	62.31	0.057	-0.3148	0.0126
606	SLE RA 2	-0.14	0.33	62.31	0.0548	-0.3147	0.0125
606	SLE RA 3	-0.14	0.39	63.28	0.056	-0.3196	0.013
606	SLE RA 4	-0.14	0.37	63.28	0.0547	-0.3196	0.0129
606	SLE RA 5	-0.14	0.34	62.9	0.0534	-0.3177	0.0126
606	SLE RA 6	-0.14	0.4	63.87	0.0546	-0.3226	0.0131
606	SLE RA 7	-0.14	0.37	63.87	0.0533	-0.3226	0.013
606	SLE RA 8	-0.14	0.39	63.49	0.0542	-0.3206	0.0129
606	SLE RA 9	-0.14	0.36	63.49	0.0528	-0.3206	0.0128
606	SLE RA 10	-0.12	0.39	67.5	0.0739	-0.3418	0.0131
606	SLE RA 11	-0.12	0.45	68.47	0.0751	-0.3467	0.0136
606	SLE RA 12	-0.12	0.42	68.47	0.0738	-0.3467	0.0135
606	SLE RA 13	-0.12	0.39	68.09	0.0725	-0.3447	0.0132
606	SLE RA 14	-0.12	0.45	69.06	0.0737	-0.3497	0.0137
606	SLE RA 15	-0.12	0.43	69.06	0.0724	-0.3496	0.0136
606	SLE RA 16	-0.12	0.44	68.68	0.0733	-0.3477	0.0135
606	SLE RA 17	-0.12	0.42	68.68	0.072	-0.3477	0.0134
606	SLE RA 18	-0.11	0.46	69.73	0.0843	-0.3534	0.0135
606	SLE RA 19	-0.11	0.43	69.73	0.083	-0.3534	0.0134
606	SLE RA 20	-0.11	0.46	70.32	0.0829	-0.3564	0.0136
606	SLE RA 21	-0.11	0.43	70.32	0.0816	-0.3564	0.0135
606	SLE FR 1	-0.14	0.38	62.31	0.057	-0.3148	0.0126
606	SLE FR 2	-0.14	0.37	62.31	0.0566	-0.3147	0.0126
606	SLE FR 3	-0.14	0.38	62.54	0.0564	-0.3159	0.0127
606	SLE FR 4	-0.13	0.39	64.53	0.0648	-0.3264	0.0129
606	SLE FR 5	-0.13	0.4	64.77	0.0646	-0.3275	0.0129
606	SLE FR 6	-0.12	0.42	66.02	0.0707	-0.3341	0.0131
606	SLE QP 1	-0.14	0.38	62.31	0.057	-0.3148	0.0126
606	SLE QP 2	-0.13	0.4	64.53	0.0652	-0.3264	0.0129
606	SLD 1	5.13	1.67	64.01	0.1873	-0.3056	-0.0006
606	SLD 2	5.13	1.45	64.01	0.1828	-0.3053	0.0017
606	SLD 3	4.88	-0.06	64.18	0.1183	-0.3068	-0.014
606	SLD 4	4.89	-0.28	64.18	0.1137	-0.3065	-0.0118
606	SLD 5	1.82	3.44	64.12	0.2074	-0.3184	0.0289
606	SLD 6	1.82	3.3	64.12	0.2044	-0.3181	0.0304
606	SLD 7	1	-2.32	64.68	-0.0228	-0.3224	-0.016
606	SLD 8	1	-2.47	64.68	-0.0258	-0.3221	-0.0145
606	SLD 9	-1.26	3.27	64.39	0.1562	-0.3306	0.0403
606	SLD 10	-1.26	3.12	64.39	0.1532	-0.3303	0.0418
606	SLD 11	-2.08	-2.5	64.95	-0.074	-0.3346	-0.0046
606	SLD 12	-2.08	-2.64	64.95	-0.0769	-0.3343	-0.0031
606	SLD 13	-5.14	1.08	64.89	0.0167	-0.3463	0.0376
606	SLD 14	-5.14	0.86	64.89	0.0122	-0.3459	0.0398
606	SLD 15	-5.39	-0.65	65.06	-0.0523	-0.3475	0.0241
606	SLD 16	-5.38	-0.87	65.06	-0.0569	-0.3471	0.0264

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
606	SLV 1	12.16	3.3	63.3	0.3582	-0.2778	-0.0191
606	SLV 2	12.18	2.79	63.3	0.3476	-0.277	-0.0138
606	SLV 3	11.59	-0.62	63.69	0.2016	-0.2806	-0.0497
606	SLV 4	11.61	-1.12	63.7	0.191	-0.2798	-0.0444
606	SLV 5	4.43	7.29	63.57	0.3923	-0.3077	0.0488
606	SLV 6	4.43	6.97	63.57	0.3855	-0.3072	0.0522
606	SLV 7	2.52	-5.76	64.88	-0.1295	-0.317	-0.0532
606	SLV 8	2.53	-6.08	64.88	-0.1363	-0.3165	-0.0498
606	SLV 9	-2.78	6.88	64.19	0.2667	-0.3362	0.0756
606	SLV 10	-2.77	6.56	64.19	0.2599	-0.3357	0.079
606	SLV 11	-4.69	-6.17	65.5	-0.2551	-0.3456	-0.0264
606	SLV 12	-4.68	-6.49	65.5	-0.2619	-0.345	-0.023
606	SLV 13	-11.86	1.93	65.37	-0.0606	-0.3729	0.0702
606	SLV 14	-11.85	1.42	65.38	-0.0712	-0.3721	0.0755
606	SLV 15	-12.44	-1.99	65.76	-0.2172	-0.3757	0.0396
606	SLV 16	-12.42	-2.5	65.77	-0.2278	-0.3749	0.0449
606	CRTFP Ux+	0	0	0	0	0	0
606	CRTFP Ux-	0	0	0	0	0	0
606	CRTFP Uy+	0	0	0	0	0	0
606	CRTFP Uy-	0	0	0	0	0	0
607	SLU 1	-0.07	0.16	29.44	-7.2471	0.004	-0.0179
607	SLU 2	-0.07	0.12	29.44	-7.2488	0.0039	-0.018
607	SLU 3	-0.07	0.17	30.15	-7.4232	0.004	-0.0181
607	SLU 4	-0.07	0.15	30.15	-7.4242	0.004	-0.0182
607	SLU 5	-0.07	0.13	29.88	-7.3565	0.004	-0.0183
607	SLU 6	-0.07	0.17	30.59	-7.531	0.0041	-0.0185
607	SLU 7	-0.07	0.15	30.59	-7.532	0.0041	-0.0185
607	SLU 8	-0.07	0.16	30.31	-7.4626	0.0041	-0.0186
607	SLU 9	-0.07	0.14	30.31	-7.4636	0.004	-0.0187
607	SLU 10	-0.05	0.16	33.25	-8.1789	0.004	-0.0141
607	SLU 11	-0.05	0.21	33.96	-8.3534	0.0041	-0.0142
607	SLU 12	-0.05	0.19	33.96	-8.3543	0.0041	-0.0143
607	SLU 13	-0.05	0.17	33.68	-8.2866	0.004	-0.0145
607	SLU 14	-0.05	0.21	34.4	-8.4611	0.0042	-0.0146
607	SLU 15	-0.05	0.19	34.4	-8.4621	0.0041	-0.0146
607	SLU 16	-0.05	0.2	34.12	-8.3927	0.0041	-0.0147
607	SLU 17	-0.06	0.18	34.12	-8.3937	0.0041	-0.0148
607	SLU 18	-0.05	0.21	34.88	-8.5759	0.0041	-0.0124
607	SLU 19	-0.05	0.19	34.88	-8.5769	0.004	-0.0124
607	SLU 20	-0.05	0.21	35.31	-8.6836	0.0041	-0.0127
607	SLU 21	-0.05	0.2	35.32	-8.6846	0.0041	-0.0128
607	SLU 22	-0.07	0.24	32.97	-8.1035	0.0051	-0.0181
607	SLU 23	-0.07	0.21	32.97	-8.1052	0.005	-0.0182
607	SLU 24	-0.07	0.26	33.69	-8.2797	0.0051	-0.0183
607	SLU 25	-0.07	0.24	33.69	-8.2806	0.0051	-0.0184
607	SLU 26	-0.07	0.21	33.41	-8.2129	0.0051	-0.0185
607	SLU 27	-0.07	0.26	34.12	-8.3874	0.0052	-0.0187
607	SLU 28	-0.07	0.24	34.12	-8.3884	0.0051	-0.0187
607	SLU 29	-0.07	0.25	33.84	-8.319	0.0052	-0.0188
607	SLU 30	-0.07	0.23	33.84	-8.32	0.0051	-0.0189
607	SLU 31	-0.05	0.25	36.78	-9.0353	0.0051	-0.0143
607	SLU 32	-0.05	0.29	37.49	-9.2098	0.0052	-0.0144
607	SLU 33	-0.05	0.28	37.5	-9.2108	0.0052	-0.0145
607	SLU 34	-0.05	0.25	37.22	-9.143	0.0051	-0.0147
607	SLU 35	-0.05	0.3	37.93	-9.3175	0.0052	-0.0148
607	SLU 36	-0.06	0.28	37.93	-9.3185	0.0052	-0.0148
607	SLU 37	-0.06	0.29	37.65	-9.2492	0.0052	-0.0149
607	SLU 38	-0.06	0.27	37.65	-9.2501	0.0052	-0.015
607	SLU 39	-0.05	0.3	38.41	-9.4323	0.0052	-0.0125
607	SLU 40	-0.05	0.28	38.41	-9.4333	0.0051	-0.0126
607	SLU 41	-0.05	0.3	38.85	-9.54	0.0052	-0.0129
607	SLU 42	-0.05	0.28	38.85	-9.541	0.0052	-0.013
607	SLU 43	-0.09	0.17	37.06	-9.1276	0.0048	-0.0232
607	SLU 44	-0.09	0.14	37.06	-9.1293	0.0048	-0.0233
607	SLU 45	-0.09	0.18	37.77	-9.3037	0.0049	-0.0234
607	SLU 46	-0.09	0.16	37.77	-9.3047	0.0048	-0.0235
607	SLU 47	-0.09	0.14	37.5	-9.237	0.0048	-0.0237
607	SLU 48	-0.09	0.19	38.21	-9.4115	0.0049	-0.0238
607	SLU 49	-0.09	0.17	38.21	-9.4125	0.0049	-0.0238
607	SLU 50	-0.09	0.18	37.93	-9.3431	0.0049	-0.0239
607	SLU 51	-0.09	0.16	37.93	-9.3441	0.0049	-0.024
607	SLU 52	-0.07	0.18	40.87	-10.0594	0.0048	-0.0194
607	SLU 53	-0.07	0.22	41.58	-10.2339	0.0049	-0.0195
607	SLU 54	-0.07	0.2	41.58	-10.2348	0.0049	-0.0196
607	SLU 55	-0.07	0.18	41.3	-10.1671	0.0049	-0.0198
607	SLU 56	-0.07	0.23	42.02	-10.3416	0.005	-0.0199
607	SLU 57	-0.07	0.21	42.02	-10.3426	0.0049	-0.02
607	SLU 58	-0.08	0.22	41.74	-10.2733	0.005	-0.0201
607	SLU 59	-0.08	0.2	41.74	-10.2742	0.0049	-0.0201
607	SLU 60	-0.07	0.23	42.5	-10.4564	0.0049	-0.0177
607	SLU 61	-0.07	0.21	42.5	-10.4574	0.0049	-0.0177
607	SLU 62	-0.07	0.23	42.93	-10.5641	0.0049	-0.018
607	SLU 63	-0.07	0.21	42.94	-10.5651	0.0049	-0.0181
607	SLU 64	-0.09	0.26	40.59	-9.9841	0.0059	-0.0234
607	SLU 65	-0.09	0.23	40.59	-9.9857	0.0058	-0.0235
607	SLU 66	-0.09	0.27	41.31	-10.1602	0.006	-0.0236
607	SLU 67	-0.09	0.25	41.31	-10.1611	0.0059	-0.0237
607	SLU 68	-0.09	0.23	41.03	-10.0934	0.0059	-0.0238
607	SLU 69	-0.09	0.27	41.74	-10.2679	0.006	-0.024
607	SLU 70	-0.09	0.26	41.74	-10.2689	0.006	-0.024
607	SLU 71	-0.09	0.27	41.46	-10.1996	0.006	-0.0241
607	SLU 72	-0.09	0.25	41.46	-10.2005	0.006	-0.0242
607	SLU 73	-0.07	0.27	44.4	-10.9158	0.0059	-0.0196
607	SLU 74	-0.07	0.31	45.11	-11.0903	0.006	-0.0197
607	SLU 75	-0.07	0.29	45.12	-11.0913	0.006	-0.0198
607	SLU 76	-0.07	0.27	44.84	-11.0236	0.0059	-0.02
607	SLU 77	-0.08	0.31	45.55	-11.198	0.0061	-0.0201

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
607	SLU 78	-0.08	0.3	45.55	-11.199	0.006	-0.0201
607	SLU 79	-0.08	0.31	45.27	-11.1297	0.006	-0.0202
607	SLU 80	-0.08	0.29	45.27	-11.1307	0.006	-0.0203
607	SLU 81	-0.07	0.32	46.03	-11.3128	0.006	-0.0179
607	SLU 82	-0.07	0.3	46.03	-11.3138	0.0059	-0.0179
607	SLU 83	-0.07	0.32	46.47	-11.4205	0.006	-0.0182
607	SLU 84	-0.07	0.3	46.47	-11.4215	0.006	-0.0183
607	SLE RA 1	-0.07	0.18	30.45	-7.4918	0.0043	-0.018
607	SLE RA 2	-0.07	0.16	30.45	-7.4929	0.0043	-0.018
607	SLE RA 3	-0.07	0.19	30.92	-7.6092	0.0043	-0.0181
607	SLE RA 4	-0.07	0.18	30.92	-7.6099	0.0043	-0.0181
607	SLE RA 5	-0.07	0.16	30.74	-7.5647	0.0043	-0.0183
607	SLE RA 6	-0.07	0.19	31.21	-7.6811	0.0044	-0.0183
607	SLE RA 7	-0.07	0.18	31.21	-7.6817	0.0043	-0.0184
607	SLE RA 8	-0.07	0.18	31.03	-7.6355	0.0044	-0.0184
607	SLE RA 9	-0.07	0.17	31.03	-7.6361	0.0043	-0.0185
607	SLE RA 10	-0.06	0.19	32.99	-8.113	0.0043	-0.0154
607	SLE RA 11	-0.06	0.21	33.46	-8.2293	0.0044	-0.0155
607	SLE RA 12	-0.06	0.2	33.46	-8.23	0.0044	-0.0155
607	SLE RA 13	-0.06	0.19	33.28	-8.1848	0.0043	-0.0157
607	SLE RA 14	-0.06	0.22	33.75	-8.3011	0.0044	-0.0158
607	SLE RA 15	-0.06	0.2	33.75	-8.3018	0.0044	-0.0158
607	SLE RA 16	-0.06	0.21	33.57	-8.2556	0.0044	-0.0159
607	SLE RA 17	-0.06	0.2	33.57	-8.2562	0.0044	-0.0159
607	SLE RA 18	-0.05	0.22	34.07	-8.3776	0.0044	-0.0143
607	SLE RA 19	-0.05	0.21	34.08	-8.3783	0.0043	-0.0143
607	SLE RA 20	-0.05	0.22	34.37	-8.4495	0.0044	-0.0145
607	SLE RA 21	-0.05	0.21	34.37	-8.4501	0.0044	-0.0145
607	SLE FR 1	-0.07	0.18	30.45	-7.4918	0.0043	-0.018
607	SLE FR 2	-0.07	0.18	30.45	-7.492	0.0043	-0.018
607	SLE FR 3	-0.07	0.18	30.56	-7.5206	0.0043	-0.0181
607	SLE FR 4	-0.06	0.19	31.54	-7.7578	0.0043	-0.0169
607	SLE FR 5	-0.06	0.19	31.65	-7.7863	0.0043	-0.0169
607	SLE FR 6	-0.06	0.2	32.26	-7.9347	0.0043	-0.0161
607	SLE QP 1	-0.07	0.18	30.45	-7.4918	0.0043	-0.018
607	SLE QP 2	-0.06	0.19	31.54	-7.7576	0.0043	-0.0168
607	SLD 1	2.5	0.83	30.97	-7.6067	0.0125	0.6249
607	SLD 2	2.51	0.73	30.97	-7.6088	0.0125	0.6278
607	SLD 3	2.38	-0.02	31.1	-7.6561	0.0111	0.5948
607	SLD 4	2.39	-0.12	31.1	-7.6582	0.0112	0.5977
607	SLD 5	0.89	1.69	31.17	-7.637	0.0088	0.2207
607	SLD 6	0.89	1.63	31.17	-7.6384	0.0088	0.2226
607	SLD 7	0.49	-1.15	31.6	-7.8017	0.0043	0.1206
607	SLD 8	0.49	-1.21	31.6	-7.8031	0.0043	0.1225
607	SLD 9	-0.62	1.59	31.47	-7.7121	0.0043	-0.1562
607	SLD 10	-0.61	1.53	31.47	-7.7134	0.0043	-0.1543
607	SLD 11	-1.02	-1.25	31.9	-7.8768	-0.0002	-0.2563
607	SLD 12	-1.01	-1.31	31.9	-7.8781	-0.0002	-0.2544
607	SLD 13	-2.52	0.5	31.97	-7.857	-0.0025	-0.6314
607	SLD 14	-2.51	0.41	31.97	-7.8591	-0.0025	-0.6285
607	SLD 15	-2.64	-0.35	32.1	-7.9064	-0.0039	-0.6615
607	SLD 16	-2.63	-0.45	32.1	-7.9085	-0.0039	-0.6586
607	SLV 1	5.94	1.65	30.21	-7.4023	0.0234	1.4845
607	SLV 2	5.96	1.42	30.22	-7.4071	0.0235	1.4912
607	SLV 3	5.66	-0.28	30.51	-7.515	0.0204	1.4145
607	SLV 4	5.68	-0.51	30.51	-7.5199	0.0204	1.4213
607	SLV 5	2.16	3.59	30.69	-7.4791	0.0146	0.5385
607	SLV 6	2.17	3.45	30.7	-7.4823	0.0147	0.5428
607	SLV 7	1.22	-2.84	31.67	-7.855	0.0045	0.3053
607	SLV 8	1.24	-2.98	31.68	-7.8581	0.0045	0.3096
607	SLV 9	-1.37	3.36	31.4	-7.657	0.0041	-0.3433
607	SLV 10	-1.35	3.22	31.4	-7.6602	0.0041	-0.339
607	SLV 11	-2.3	-3.07	32.38	-8.0329	-0.006	-0.5765
607	SLV 12	-2.28	-3.21	32.38	-8.036	-0.006	-0.5722
607	SLV 13	-5.81	0.89	32.56	-7.9953	-0.0118	-1.455
607	SLV 14	-5.78	0.66	32.57	-8.0001	-0.0117	-1.4482
607	SLV 15	-6.09	-1.04	32.85	-8.108	-0.0148	-1.5249
607	SLV 16	-6.06	-1.26	32.86	-8.1129	-0.0148	-1.5182
607	CRTFP Ux+	0	0	0	0	0	0
607	CRTFP Ux-	0	0	0	0	0	0
609	SLU 1	-0.17	0.75	188.49	24.0726	-0.9681	-0.1488
609	SLU 2	-0.17	0.54	188.49	24.0628	-0.9748	-0.1491
609	SLU 3	-0.17	0.82	193.03	24.6423	-0.9926	-0.1518
609	SLU 4	-0.17	0.7	193.04	24.6364	-0.9966	-0.1519
609	SLU 5	-0.17	0.56	191.25	24.4057	-0.9903	-0.1514
609	SLU 6	-0.17	0.84	195.79	24.9852	-1.0081	-0.154
609	SLU 7	-0.17	0.72	195.79	24.9793	-1.0121	-0.1542
609	SLU 8	-0.18	0.78	194.01	24.7584	-0.9991	-0.1533
609	SLU 9	-0.18	0.66	194.01	24.7525	-1.0031	-0.1535
609	SLU 10	-0.04	0.77	213.1	27.2422	-1.1031	-0.1831
609	SLU 11	-0.04	1.06	217.64	27.8217	-1.1209	-0.1858
609	SLU 12	-0.04	0.93	217.64	27.8159	-1.1249	-0.1859
609	SLU 13	-0.05	0.79	215.86	27.5852	-1.1186	-0.1854
609	SLU 14	-0.04	1.07	220.4	28.1647	-1.1363	-0.188
609	SLU 15	-0.05	0.95	220.4	28.1588	-1.1404	-0.1882
609	SLU 16	-0.05	1.01	218.61	27.9379	-1.1273	-0.1873
609	SLU 17	-0.05	0.89	218.61	27.932	-1.1314	-0.1875
609	SLU 18	0.02	1.08	223.64	28.6147	-1.1513	-0.1974
609	SLU 19	0.01	0.95	223.64	28.6088	-1.1554	-0.1976
609	SLU 20	0.01	1.09	226.4	28.9576	-1.1668	-0.1997
609	SLU 21	0.01	0.97	226.4	28.9517	-1.1709	-0.1998
609	SLU 22	-0.15	1.31	211.18	27.0567	-1.0006	-0.1632
609	SLU 23	-0.15	1.1	211.18	27.0469	-1.0073	-0.1634
609	SLU 24	-0.15	1.38	215.72	27.6264	-1.0251	-0.1661
609	SLU 25	-0.15	1.26	215.72	27.6205	-1.0292	-0.1663
609	SLU 26	-0.16	1.12	213.94	27.3898	-1.0228	-0.1657
609	SLU 27	-0.16	1.4	218.48	27.9693	-1.0406	-0.1684

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
609	SLU 28	-0.16	1.28	218.48	27.9634	-1.0446	-0.1685
609	SLU 29	-0.16	1.34	216.69	27.7425	-1.0316	-0.1677
609	SLU 30	-0.16	1.22	216.69	27.7366	-1.0356	-0.1678
609	SLU 31	-0.03	1.33	235.78	30.2263	-1.1356	-0.1974
609	SLU 32	-0.02	1.61	240.32	30.8058	-1.1534	-0.2001
609	SLU 33	-0.03	1.49	240.32	30.8	-1.1574	-0.2003
609	SLU 34	-0.03	1.35	238.54	30.5692	-1.1511	-0.1997
609	SLU 35	-0.03	1.63	243.08	31.1488	-1.1689	-0.2024
609	SLU 36	-0.03	1.51	243.08	31.1429	-1.1729	-0.2025
609	SLU 37	-0.03	1.57	241.3	30.922	-1.1599	-0.2017
609	SLU 38	-0.03	1.45	241.3	30.9161	-1.1639	-0.2018
609	SLU 39	0.03	1.64	246.32	31.5988	-1.1839	-0.2117
609	SLU 40	0.03	1.51	246.32	31.5929	-1.1879	-0.2119
609	SLU 41	0.03	1.65	249.08	31.9417	-1.1993	-0.214
609	SLU 42	0.03	1.53	249.08	31.9358	-1.2034	-0.2142
609	SLU 43	-0.22	0.78	237.26	30.2712	-1.2474	-0.1886
609	SLU 44	-0.23	0.57	237.27	30.2614	-1.2541	-0.1888
609	SLU 45	-0.22	0.86	241.81	30.8409	-1.2719	-0.1915
609	SLU 46	-0.23	0.73	241.81	30.835	-1.2759	-0.1917
609	SLU 47	-0.23	0.59	240.02	30.6043	-1.2696	-0.1911
609	SLU 48	-0.23	0.87	244.56	31.1838	-1.2874	-0.1937
609	SLU 49	-0.23	0.75	244.56	31.178	-1.2914	-0.1939
609	SLU 50	-0.23	0.81	242.78	30.9571	-1.2784	-0.1931
609	SLU 51	-0.23	0.69	242.78	30.9512	-1.2824	-0.1932
609	SLU 52	-0.1	0.81	261.87	33.4409	-1.3824	-0.2228
609	SLU 53	-0.1	1.09	266.41	34.0204	-1.4001	-0.2255
609	SLU 54	-0.1	0.97	266.41	34.0145	-1.4042	-0.2257
609	SLU 55	-0.1	0.82	264.63	33.7838	-1.3979	-0.2251
609	SLU 56	-0.1	1.11	269.17	34.3633	-1.4156	-0.2277
609	SLU 57	-0.1	0.98	269.17	34.3574	-1.4197	-0.2279
609	SLU 58	-0.1	1.04	267.38	34.1365	-1.4066	-0.2271
609	SLU 59	-0.1	0.92	267.38	34.1306	-1.4107	-0.2272
609	SLU 60	-0.04	1.11	272.41	34.8133	-1.4306	-0.2371
609	SLU 61	-0.04	0.99	272.41	34.8074	-1.4347	-0.2373
609	SLU 62	-0.04	1.13	275.17	35.1562	-1.4461	-0.2394
609	SLU 63	-0.05	1	275.17	35.1504	-1.4501	-0.2395
609	SLU 64	-0.21	1.34	259.95	33.2553	-1.2799	-0.2029
609	SLU 65	-0.21	1.13	259.95	33.2455	-1.2866	-0.2032
609	SLU 66	-0.21	1.42	264.49	33.825	-1.3044	-0.2058
609	SLU 67	-0.21	1.29	264.49	33.8191	-1.3084	-0.206
609	SLU 68	-0.21	1.15	262.71	33.5884	-1.3021	-0.2054
609	SLU 69	-0.21	1.43	267.25	34.1679	-1.3199	-0.2081
609	SLU 70	-0.21	1.31	267.25	34.1621	-1.3239	-0.2083
609	SLU 71	-0.21	1.37	265.46	33.9411	-1.3109	-0.2074
609	SLU 72	-0.22	1.25	265.47	33.9353	-1.3149	-0.2076
609	SLU 73	-0.08	1.36	284.55	36.425	-1.4149	-0.2372
609	SLU 74	-0.08	1.65	289.09	37.0045	-1.4327	-0.2398
609	SLU 75	-0.08	1.52	289.09	36.9986	-1.4367	-0.24
609	SLU 76	-0.09	1.38	287.31	36.7679	-1.4304	-0.2394
609	SLU 77	-0.08	1.66	291.85	37.3474	-1.4482	-0.2421
609	SLU 78	-0.08	1.54	291.85	37.3415	-1.4522	-0.2423
609	SLU 79	-0.09	1.6	290.07	37.1206	-1.4391	-0.2414
609	SLU 80	-0.09	1.48	290.07	37.1147	-1.4432	-0.2416
609	SLU 81	-0.02	1.67	295.09	37.7974	-1.4631	-0.2515
609	SLU 82	-0.03	1.55	295.1	37.7915	-1.4672	-0.2516
609	SLU 83	-0.03	1.69	297.85	38.1403	-1.4786	-0.2537
609	SLU 84	-0.03	1.56	297.85	38.1344	-1.4827	-0.2539
609	SLE RA 1	-0.16	0.91	194.97	24.9252	-0.9774	-0.1529
609	SLE RA 2	-0.17	0.77	194.98	24.9186	-0.9819	-0.1531
609	SLE RA 3	-0.16	0.96	198	25.305	-0.9937	-0.1549
609	SLE RA 4	-0.16	0.88	198	25.301	-0.9964	-0.155
609	SLE RA 5	-0.17	0.78	196.81	25.1472	-0.9922	-0.1546
609	SLE RA 6	-0.17	0.97	199.84	25.5336	-1.0041	-0.1564
609	SLE RA 7	-0.17	0.89	199.84	25.5297	-1.0067	-0.1565
609	SLE RA 8	-0.17	0.93	198.65	25.3824	-0.998	-0.1559
609	SLE RA 9	-0.17	0.85	198.65	25.3785	-1.0007	-0.156
609	SLE RA 10	-0.08	0.92	211.38	27.0383	-1.0674	-0.1758
609	SLE RA 11	-0.08	1.11	214.4	27.4246	-1.0792	-0.1775
609	SLE RA 12	-0.08	1.03	214.4	27.4207	-1.0819	-0.1777
609	SLE RA 13	-0.08	0.94	213.22	27.2669	-1.0777	-0.1773
609	SLE RA 14	-0.08	1.12	216.24	27.6532	-1.0896	-0.179
609	SLE RA 15	-0.08	1.04	216.24	27.6493	-1.0922	-0.1792
609	SLE RA 16	-0.08	1.08	215.05	27.502	-1.0836	-0.1786
609	SLE RA 17	-0.08	1	215.05	27.4981	-1.0862	-0.1787
609	SLE RA 18	-0.04	1.13	218.41	27.9532	-1.0996	-0.1853
609	SLE RA 19	-0.04	1.04	218.41	27.9493	-1.1022	-0.1854
609	SLE RA 20	-0.04	1.14	220.24	28.1818	-1.1099	-0.1868
609	SLE RA 21	-0.04	1.06	220.25	28.1779	-1.1126	-0.1869
609	SLE FR 1	-0.16	0.91	194.97	24.9252	-0.9774	-0.1529
609	SLE FR 2	-0.16	0.88	194.97	24.9239	-0.9783	-0.153
609	SLE FR 3	-0.16	0.91	195.71	25.0166	-0.9815	-0.1535
609	SLE FR 4	-0.13	0.95	202	25.8323	-1.0149	-0.1627
609	SLE FR 5	-0.13	0.98	202.74	25.925	-1.0182	-0.1632
609	SLE FR 6	-0.1	1.02	206.69	26.4392	-1.0385	-0.1691
609	SLE QP 1	-0.16	0.91	194.97	24.9252	-0.9774	-0.1529
609	SLE QP 2	-0.13	0.97	202	25.8336	-1.014	-0.1626
609	SLD 1	16.57	5.25	199.36	26.1788	-0.7488	-2.2622
609	SLD 2	16.57	4.69	199.29	26.1491	-0.7443	-2.2294
609	SLD 3	15.79	-0.44	199.97	26.0494	-0.9183	-2.3915
609	SLD 4	15.78	-1	199.9	26.0198	-0.9137	-2.3586
609	SLD 5	6.07	10.98	200.31	26.1386	-0.6783	-0.6023
609	SLD 6	6.07	10.61	200.26	26.1192	-0.6753	-0.5808
609	SLD 7	3.46	-7.98	202.32	25.7074	-1.2431	-1.0332
609	SLD 8	3.46	-8.34	202.28	25.688	-1.2402	-1.0117
609	SLD 9	-3.71	10.29	201.73	25.9792	-0.7879	0.6864
609	SLD 10	-3.72	9.92	201.69	25.9598	-0.7849	0.7079
609	SLD 11	-6.32	-8.67	203.74	25.548	-1.3528	0.2555

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
609	SLD 12	-6.32	-9.03	203.7	25.5286	-1.3498	0.277
609	SLD 13	-16.04	2.94	204.11	25.6474	-1.1144	2.0333
609	SLD 14	-16.04	2.39	204.04	25.6177	-1.1098	2.0662
609	SLD 15	-16.82	-2.74	204.71	25.518	-1.2838	1.9041
609	SLD 16	-16.82	-3.3	204.64	25.4884	-1.2793	1.937
609	SLV 1	38.93	10.74	195.84	26.6663	-0.3971	-5.076
609	SLV 2	38.92	9.45	195.68	26.5972	-0.3865	-4.9994
609	SLV 3	37.11	-2.13	197.23	26.3727	-0.78	-5.376
609	SLV 4	37.1	-3.42	197.07	26.3036	-0.7694	-5.2994
609	SLV 5	14.35	23.65	198.08	26.5404	-0.2501	-1.1948
609	SLV 6	14.35	22.81	197.98	26.496	-0.2432	-1.1456
609	SLV 7	8.28	-19.26	202.7	25.562	-1.5264	-2.1947
609	SLV 8	8.28	-20.09	202.6	25.5176	-1.5196	-2.1455
609	SLV 9	-8.53	22.03	201.41	26.1496	-0.5085	1.8202
609	SLV 10	-8.54	21.2	201.31	26.1052	-0.5017	1.8695
609	SLV 11	-14.6	-20.87	206.03	25.1711	-1.7849	0.8203
609	SLV 12	-14.6	-21.7	205.93	25.1267	-1.778	0.8695
609	SLV 13	-37.36	5.37	206.94	25.3635	-1.2587	4.9741
609	SLV 14	-37.36	4.07	206.78	25.2944	-1.248	5.0507
609	SLV 15	-39.18	-7.5	208.33	25.07	-1.6416	4.6741
609	SLV 16	-39.18	-8.8	208.17	25.0009	-1.6309	4.7507
609	CRTFP Ux+	0	0	0	0	0	0
609	CRTFP Ux-	0	0	0	0	0	0
609	CRTFP Uy+	0	0	0	0	0	0
609	CRTFP Uy-	0	0	0	0	0	0
612	SLU 1	-0.13	-0.54	165.23	-24.3356	0.1098	-0.1044
612	SLU 2	-0.13	-0.71	165.28	-24.3458	0.1058	-0.1033
612	SLU 3	-0.13	-0.49	169.23	-24.9293	0.1119	-0.1062
612	SLU 4	-0.13	-0.6	169.26	-24.9354	0.1094	-0.1055
612	SLU 5	-0.13	-0.72	167.72	-24.7093	0.1069	-0.1046
612	SLU 6	-0.13	-0.49	171.66	-25.2929	0.113	-0.1076
612	SLU 7	-0.13	-0.6	171.69	-25.299	0.1106	-0.1069
612	SLU 8	-0.13	-0.54	170.1	-25.0627	0.1121	-0.1072
612	SLU 9	-0.13	-0.65	170.13	-25.0687	0.1097	-0.1065
612	SLU 10	-0.02	-0.63	186.93	-27.5168	0.1072	-0.0969
612	SLU 11	-0.02	-0.41	190.88	-28.1004	0.1133	-0.0999
612	SLU 12	-0.02	-0.51	190.91	-28.1065	0.1108	-0.0992
612	SLU 13	-0.03	-0.63	189.36	-27.8803	0.1083	-0.0983
612	SLU 14	-0.03	-0.41	193.31	-28.4639	0.1144	-0.1013
612	SLU 15	-0.03	-0.51	193.34	-28.47	0.112	-0.1006
612	SLU 16	-0.03	-0.45	191.74	-28.2337	0.1135	-0.1009
612	SLU 17	-0.03	-0.56	191.78	-28.2398	0.1111	-0.1002
612	SLU 18	0.02	-0.41	196.16	-28.8657	0.1118	-0.0954
612	SLU 19	0.02	-0.52	196.19	-28.8718	0.1094	-0.0947
612	SLU 20	0.02	-0.41	198.59	-29.2292	0.113	-0.0968
612	SLU 21	0.02	-0.52	198.62	-29.2353	0.1105	-0.0961
612	SLU 22	-0.11	-0.15	184.57	-27.1103	0.1568	-0.111
612	SLU 23	-0.11	-0.33	184.62	-27.1204	0.1528	-0.1098
612	SLU 24	-0.11	-0.1	188.57	-27.704	0.1589	-0.1128
612	SLU 25	-0.11	-0.21	188.6	-27.7101	0.1564	-0.1121
612	SLU 26	-0.12	-0.33	187.05	-27.4839	0.1539	-0.1112
612	SLU 27	-0.11	-0.11	191	-28.0675	0.16	-0.1142
612	SLU 28	-0.11	-0.21	191.03	-28.0736	0.1576	-0.1134
612	SLU 29	-0.12	-0.15	189.43	-27.8373	0.1591	-0.1138
612	SLU 30	-0.12	-0.26	189.46	-27.8434	0.1567	-0.1131
612	SLU 31	-0.01	-0.24	206.27	-30.2915	0.1542	-0.1035
612	SLU 32	-0.01	-0.02	210.21	-30.8751	0.1603	-0.1065
612	SLU 33	-0.01	-0.13	210.24	-30.8812	0.1578	-0.1057
612	SLU 34	-0.01	-0.24	208.7	-30.655	0.1553	-0.1049
612	SLU 35	-0.01	-0.02	212.65	-31.2386	0.1614	-0.1078
612	SLU 36	-0.01	-0.13	212.68	-31.2447	0.159	-0.1071
612	SLU 37	-0.01	-0.06	211.08	-31.0084	0.1605	-0.1075
612	SLU 38	-0.02	-0.17	211.11	-31.0145	0.1581	-0.1067
612	SLU 39	0.03	-0.03	215.49	-31.6404	0.1588	-0.102
612	SLU 40	0.03	-0.13	215.53	-31.6464	0.1564	-0.1013
612	SLU 41	0.03	-0.03	217.93	-32.0039	0.16	-0.1034
612	SLU 42	0.03	-0.13	217.96	-32.01	0.1575	-0.1027
612	SLU 43	-0.17	-0.83	208.17	-30.685	0.1267	-0.1335
612	SLU 44	-0.17	-1.01	208.23	-30.6951	0.1226	-0.1323
612	SLU 45	-0.17	-0.79	212.17	-31.2787	0.1287	-0.1353
612	SLU 46	-0.17	-0.89	212.2	-31.2848	0.1263	-0.1346
612	SLU 47	-0.17	-1.01	210.66	-31.0586	0.1238	-0.1337
612	SLU 48	-0.17	-0.79	214.6	-31.6422	0.1299	-0.1367
612	SLU 49	-0.17	-0.89	214.63	-31.6483	0.1274	-0.136
612	SLU 50	-0.17	-0.83	213.04	-31.412	0.129	-0.1363
612	SLU 51	-0.17	-0.94	213.07	-31.4181	0.1265	-0.1356
612	SLU 52	-0.07	-0.92	229.87	-33.8662	0.124	-0.126
612	SLU 53	-0.07	-0.7	233.82	-34.4498	0.1301	-0.129
612	SLU 54	-0.07	-0.81	233.85	-34.4559	0.1277	-0.1283
612	SLU 55	-0.07	-0.92	232.31	-34.2297	0.1251	-0.1274
612	SLU 56	-0.07	-0.7	236.25	-34.8133	0.1312	-0.1304
612	SLU 57	-0.07	-0.81	236.28	-34.8194	0.1288	-0.1297
612	SLU 58	-0.07	-0.75	234.69	-34.5831	0.1303	-0.13
612	SLU 59	-0.07	-0.85	234.72	-34.5892	0.1279	-0.1293
612	SLU 60	-0.02	-0.71	239.1	-35.2151	0.1287	-0.1245
612	SLU 61	-0.02	-0.81	239.13	-35.2212	0.1262	-0.1238
612	SLU 62	-0.03	-0.71	241.53	-35.5786	0.1298	-0.1259
612	SLU 63	-0.03	-0.82	241.56	-35.5847	0.1274	-0.1252
612	SLU 64	-0.16	-0.44	227.51	-33.4596	0.1737	-0.1401
612	SLU 65	-0.16	-0.62	227.56	-33.4698	0.1696	-0.1389
612	SLU 66	-0.15	-0.4	231.51	-34.0534	0.1757	-0.1419
612	SLU 67	-0.15	-0.5	231.54	-34.0595	0.1733	-0.1411
612	SLU 68	-0.16	-0.62	229.99	-33.8333	0.1708	-0.1403
612	SLU 69	-0.16	-0.4	233.94	-34.4169	0.1769	-0.1433
612	SLU 70	-0.16	-0.51	233.97	-34.423	0.1744	-0.1425
612	SLU 71	-0.16	-0.44	232.37	-34.1867	0.176	-0.1429
612	SLU 72	-0.16	-0.55	232.4	-34.1928	0.1735	-0.1421

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
612	SLU 73	-0.05	-0.53	249.21	-36.6409	0.171	-0.1326
612	SLU 74	-0.05	-0.31	253.15	-37.2244	0.1771	-0.1356
612	SLU 75	-0.05	-0.42	253.19	-37.2305	0.1747	-0.1348
612	SLU 76	-0.06	-0.54	251.64	-37.0044	0.1721	-0.134
612	SLU 77	-0.05	-0.31	255.59	-37.588	0.1783	-0.1369
612	SLU 78	-0.06	-0.42	255.62	-37.5941	0.1758	-0.1362
612	SLU 79	-0.06	-0.36	254.02	-37.3578	0.1774	-0.1366
612	SLU 80	-0.06	-0.47	254.05	-37.3638	0.1749	-0.1358
612	SLU 81	-0.01	-0.32	258.43	-37.9897	0.1757	-0.1311
612	SLU 82	-0.01	-0.43	258.47	-37.9958	0.1732	-0.1304
612	SLU 83	-0.01	-0.32	260.87	-38.3533	0.1768	-0.1325
612	SLU 84	-0.01	-0.43	260.9	-38.3593	0.1744	-0.1317
612	SLE RA 1	-0.12	-0.42	170.76	-25.1284	0.1233	-0.1063
612	SLE RA 2	-0.12	-0.54	170.79	-25.1351	0.1206	-0.1055
612	SLE RA 3	-0.12	-0.4	173.42	-25.5242	0.1246	-0.1075
612	SLE RA 4	-0.12	-0.47	173.44	-25.5283	0.123	-0.107
612	SLE RA 5	-0.12	-0.54	172.41	-25.3775	0.1213	-0.1065
612	SLE RA 6	-0.12	-0.4	175.04	-25.7665	0.1254	-0.1084
612	SLE RA 7	-0.12	-0.47	175.06	-25.7706	0.1238	-0.108
612	SLE RA 8	-0.13	-0.43	174	-25.6131	0.1248	-0.1082
612	SLE RA 9	-0.13	-0.5	174.02	-25.6171	0.1232	-0.1077
612	SLE RA 10	-0.05	-0.49	185.22	-27.2492	0.1215	-0.1013
612	SLE RA 11	-0.05	-0.34	187.85	-27.6382	0.1256	-0.1033
612	SLE RA 12	-0.05	-0.41	187.88	-27.6423	0.1239	-0.1028
612	SLE RA 13	-0.06	-0.49	186.84	-27.4915	0.1222	-0.1022
612	SLE RA 14	-0.06	-0.34	189.48	-27.8806	0.1263	-0.1042
612	SLE RA 15	-0.06	-0.41	189.5	-27.8846	0.1247	-0.1037
612	SLE RA 16	-0.06	-0.37	188.43	-27.7271	0.1257	-0.104
612	SLE RA 17	-0.06	-0.44	188.45	-27.7312	0.1241	-0.1035
612	SLE RA 18	-0.03	-0.34	191.37	-28.1484	0.1246	-0.1003
612	SLE RA 19	-0.03	-0.41	191.4	-28.1525	0.123	-0.0998
612	SLE RA 20	-0.03	-0.34	193	-28.3908	0.1254	-0.1012
612	SLE RA 21	-0.03	-0.42	193.02	-28.3948	0.1237	-0.1008
612	SLE FR 1	-0.12	-0.42	170.76	-25.1284	0.1233	-0.1063
612	SLE FR 2	-0.12	-0.45	170.76	-25.1297	0.1227	-0.1062
612	SLE FR 3	-0.12	-0.42	171.41	-25.2253	0.1236	-0.1067
612	SLE FR 4	-0.09	-0.42	176.95	-26.0357	0.1231	-0.1044
612	SLE FR 5	-0.09	-0.4	177.59	-26.1313	0.124	-0.1049
612	SLE FR 6	-0.07	-0.38	181.07	-26.6384	0.1239	-0.1033
612	SLE QP 1	-0.12	-0.42	170.76	-25.1284	0.1233	-0.1063
612	SLE QP 2	-0.09	-0.4	176.94	-26.0344	0.1237	-0.1045
612	SLD 1	14.25	3.23	174.14	-25.4195	0.1147	1.8941
612	SLD 2	14.32	2.91	174.07	-25.4246	0.1164	1.9306
612	SLD 3	13.58	-1.88	175.79	-25.6933	0.0181	1.7999
612	SLD 4	13.65	-2.2	175.72	-25.6984	0.0198	1.8363
612	SLD 5	5.21	8.49	173.61	-25.4338	0.2672	0.6316
612	SLD 6	5.25	8.28	173.56	-25.4371	0.2684	0.6554
612	SLD 7	2.98	-8.53	179.11	-26.3464	-0.0549	0.3174
612	SLD 8	3.03	-8.74	179.06	-26.3497	-0.0538	0.3412
612	SLD 9	-3.21	7.94	174.82	-25.719	0.3011	-0.5502
612	SLD 10	-3.17	7.73	174.77	-25.7224	0.3022	-0.5264
612	SLD 11	-5.44	-9.08	180.32	-26.6317	-0.021	-0.8644
612	SLD 12	-5.4	-9.29	180.27	-26.635	-0.0199	-0.8406
612	SLD 13	-13.83	1.4	178.17	-26.3704	0.2275	-2.0453
612	SLD 14	-13.77	1.08	178.09	-26.3755	0.2292	-2.0089
612	SLD 15	-14.5	-3.71	179.82	-26.6442	0.1309	-2.1396
612	SLD 16	-14.44	-4.03	179.74	-26.6493	0.1326	-2.1032
612	SLV 1	33.46	7.88	170.43	-24.5934	0.0988	4.5717
612	SLV 2	33.62	7.14	170.26	-24.6053	0.1028	4.6565
612	SLV 3	31.9	-3.68	174.17	-25.2125	-0.1197	4.3519
612	SLV 4	32.06	-4.42	174	-25.2244	-0.1157	4.4367
612	SLV 5	12.31	19.75	169.35	-24.6611	0.4469	1.6171
612	SLV 6	12.41	19.27	169.24	-24.6687	0.4495	1.6716
612	SLV 7	7.12	-18.79	181.8	-26.7248	-0.2814	0.8846
612	SLV 8	7.22	-19.27	181.69	-26.7324	-0.2789	0.9391
612	SLV 9	-7.4	18.47	172.19	-25.3363	0.5262	-1.1481
612	SLV 10	-7.3	17.99	172.08	-25.344	0.5288	-1.0936
612	SLV 11	-12.6	-20.07	184.64	-27.4001	-0.2022	-1.8806
612	SLV 12	-12.5	-20.55	184.53	-27.4077	-0.1996	-1.8261
612	SLV 13	-32.25	3.62	179.89	-26.8443	0.363	-4.6458
612	SLV 14	-32.09	2.88	179.72	-26.8562	0.367	-4.561
612	SLV 15	-33.8	-7.94	183.62	-27.4635	0.1445	-4.8655
612	SLV 16	-33.65	-8.68	183.45	-27.4754	0.1485	-4.7807
612	CRTFP Ux+	0	0	0	0	0	0
612	CRTFP Ux-	0	0	0	0	0	0
612	CRTFP Uy+	0	0	0	0	0	0
612	CRTFP Uy-	0	0	0	0	0	0
614	SLU 1	0.13	-0.33	55.89	12.3308	-8.1787	-0.0855
614	SLU 2	0.13	-0.39	55.92	12.3394	-8.184	-0.094
614	SLU 3	0.13	-0.32	57.24	12.6226	-8.3757	-0.0846
614	SLU 4	0.13	-0.36	57.25	12.6278	-8.3789	-0.0897
614	SLU 5	0.13	-0.39	56.74	12.5162	-8.3036	-0.0946
614	SLU 6	0.13	-0.32	58.05	12.7994	-8.4952	-0.0853
614	SLU 7	0.13	-0.36	58.07	12.8046	-8.4984	-0.0904
614	SLU 8	0.13	-0.34	57.52	12.6843	-8.4178	-0.0868
614	SLU 9	0.13	-0.37	57.54	12.6895	-8.421	-0.0919
614	SLU 10	0.17	-0.38	63.28	13.9509	-9.262	-0.103
614	SLU 11	0.18	-0.3	64.6	14.234	-9.4537	-0.0937
614	SLU 12	0.18	-0.34	64.62	14.2393	-9.4569	-0.0988
614	SLU 13	0.17	-0.38	64.1	14.1277	-9.3816	-0.1037
614	SLU 14	0.18	-0.31	65.41	14.4108	-9.5732	-0.0944
614	SLU 15	0.18	-0.34	65.43	14.416	-9.5764	-0.0995
614	SLU 16	0.18	-0.32	64.88	14.2957	-9.4958	-0.0959
614	SLU 17	0.18	-0.36	64.9	14.301	-9.499	-0.101
614	SLU 18	0.19	-0.31	66.4	14.6328	-9.7187	-0.0984
614	SLU 19	0.19	-0.35	66.42	14.638	-9.7219	-0.1035
614	SLU 20	0.19	-0.31	67.22	14.8096	-9.8382	-0.0991

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
614	SLU 21	0.19	-0.35	67.24	14.8148	-9.8414	-0.1042
614	SLU 22	0.15	-0.21	62.39	13.7414	-9.1235	-0.0727
614	SLU 23	0.15	-0.27	62.42	13.75	-9.1288	-0.0812
614	SLU 24	0.15	-0.2	63.74	14.0332	-9.3205	-0.0718
614	SLU 25	0.15	-0.23	63.76	14.0384	-9.3237	-0.0769
614	SLU 26	0.15	-0.27	63.24	13.9268	-9.2484	-0.0819
614	SLU 27	0.15	-0.2	64.56	14.21	-9.44	-0.0725
614	SLU 28	0.15	-0.24	64.57	14.2152	-9.4432	-0.0776
614	SLU 29	0.15	-0.21	64.03	14.0949	-9.3626	-0.074
614	SLU 30	0.15	-0.25	64.04	14.1001	-9.3658	-0.0791
614	SLU 31	0.19	-0.26	69.78	15.3615	-10.2068	-0.0902
614	SLU 32	0.2	-0.18	71.1	15.6446	-10.3985	-0.0809
614	SLU 33	0.2	-0.22	71.12	15.6499	-10.4017	-0.086
614	SLU 34	0.19	-0.26	70.6	15.5383	-10.3264	-0.0909
614	SLU 35	0.2	-0.19	71.92	15.8214	-10.518	-0.0816
614	SLU 36	0.2	-0.22	71.93	15.8266	-10.5212	-0.0867
614	SLU 37	0.2	-0.2	71.39	15.7063	-10.4406	-0.0831
614	SLU 38	0.19	-0.24	71.4	15.7115	-10.4438	-0.0882
614	SLU 39	0.21	-0.19	72.91	16.0434	-10.6635	-0.0856
614	SLU 40	0.21	-0.23	72.92	16.0486	-10.6667	-0.0907
614	SLU 41	0.21	-0.19	73.72	16.2202	-10.783	-0.0863
614	SLU 42	0.21	-0.23	73.74	16.2254	-10.7862	-0.0914
614	SLU 43	0.16	-0.47	70.43	15.5464	-10.3083	-0.1155
614	SLU 44	0.16	-0.53	70.46	15.555	-10.3137	-0.124
614	SLU 45	0.17	-0.46	71.77	15.8382	-10.5054	-0.1146
614	SLU 46	0.16	-0.5	71.79	15.8434	-10.5086	-0.1197
614	SLU 47	0.16	-0.54	71.27	15.7318	-10.4332	-0.1247
614	SLU 48	0.17	-0.46	72.59	16.015	-10.6249	-0.1153
614	SLU 49	0.17	-0.5	72.61	16.0202	-10.6281	-0.1204
614	SLU 50	0.16	-0.48	72.06	15.8999	-10.5475	-0.1169
614	SLU 51	0.16	-0.51	72.08	15.9051	-10.5507	-0.122
614	SLU 52	0.2	-0.52	77.82	17.1665	-11.3917	-0.1331
614	SLU 53	0.21	-0.45	79.13	17.4496	-11.5834	-0.1237
614	SLU 54	0.21	-0.48	79.15	17.4548	-11.5866	-0.1288
614	SLU 55	0.21	-0.52	78.63	17.3432	-11.5112	-0.1338
614	SLU 56	0.21	-0.45	79.95	17.6264	-11.7029	-0.1244
614	SLU 57	0.21	-0.48	79.97	17.6316	-11.7061	-0.1295
614	SLU 58	0.21	-0.46	79.42	17.5113	-11.6255	-0.1259
614	SLU 59	0.21	-0.5	79.44	17.5165	-11.6287	-0.131
614	SLU 60	0.22	-0.45	80.94	17.8484	-11.8483	-0.1285
614	SLU 61	0.22	-0.49	80.96	17.8536	-11.8515	-0.1336
614	SLU 62	0.22	-0.45	81.76	18.0252	-11.9679	-0.1291
614	SLU 63	0.22	-0.49	81.78	18.0304	-11.9711	-0.1342
614	SLU 64	0.18	-0.35	76.93	16.957	-11.2531	-0.1027
614	SLU 65	0.18	-0.41	76.96	16.9656	-11.2585	-0.1112
614	SLU 66	0.18	-0.34	78.28	17.2488	-11.4501	-0.1018
614	SLU 67	0.18	-0.38	78.29	17.254	-11.4533	-0.1069
614	SLU 68	0.18	-0.41	77.78	17.1424	-11.378	-0.1119
614	SLU 69	0.19	-0.34	79.09	17.4256	-11.5697	-0.1025
614	SLU 70	0.19	-0.38	79.11	17.4308	-11.5729	-0.1076
614	SLU 71	0.18	-0.36	78.56	17.3105	-11.4923	-0.1041
614	SLU 72	0.18	-0.39	78.58	17.3157	-11.4955	-0.1092
614	SLU 73	0.22	-0.4	84.32	18.5771	-12.3365	-0.1203
614	SLU 74	0.23	-0.32	85.64	18.8602	-12.5281	-0.1109
614	SLU 75	0.23	-0.36	85.65	18.8654	-12.5313	-0.116
614	SLU 76	0.22	-0.4	85.14	18.7538	-12.456	-0.121
614	SLU 77	0.23	-0.33	86.45	19.037	-12.6477	-0.1116
614	SLU 78	0.23	-0.36	86.47	19.0422	-12.6509	-0.1167
614	SLU 79	0.23	-0.34	85.92	18.9219	-12.5703	-0.1131
614	SLU 80	0.23	-0.38	85.94	18.9271	-12.5735	-0.1182
614	SLU 81	0.24	-0.33	87.44	19.259	-12.7931	-0.1157
614	SLU 82	0.24	-0.37	87.46	19.2642	-12.7963	-0.1208
614	SLU 83	0.24	-0.33	88.26	19.4358	-12.9127	-0.1164
614	SLU 84	0.24	-0.37	88.28	19.441	-12.9159	-0.1215
614	SLE RA 1	0.13	-0.3	57.75	12.7338	-8.4486	-0.0818
614	SLE RA 2	0.13	-0.34	57.77	12.7396	-8.4522	-0.0875
614	SLE RA 3	0.14	-0.29	58.64	12.9284	-8.58	-0.0812
614	SLE RA 4	0.14	-0.31	58.66	12.9318	-8.5821	-0.0846
614	SLE RA 5	0.14	-0.34	58.31	12.8574	-8.5319	-0.0879
614	SLE RA 6	0.14	-0.29	59.19	13.0462	-8.6597	-0.0817
614	SLE RA 7	0.14	-0.31	59.2	13.0497	-8.6618	-0.0851
614	SLE RA 8	0.14	-0.3	58.84	12.9695	-8.608	-0.0827
614	SLE RA 9	0.14	-0.32	58.85	12.973	-8.6102	-0.0861
614	SLE RA 10	0.16	-0.33	62.67	13.8139	-9.1708	-0.0935
614	SLE RA 11	0.17	-0.28	63.55	14.0026	-9.2986	-0.0873
614	SLE RA 12	0.17	-0.3	63.56	14.0061	-9.3007	-0.0907
614	SLE RA 13	0.16	-0.33	63.22	13.9317	-9.2505	-0.094
614	SLE RA 14	0.17	-0.28	64.1	14.1205	-9.3783	-0.0877
614	SLE RA 15	0.17	-0.3	64.11	14.124	-9.3805	-0.0911
614	SLE RA 16	0.17	-0.29	63.74	14.0438	-9.3267	-0.0888
614	SLE RA 17	0.17	-0.31	63.76	14.0473	-9.3288	-0.0922
614	SLE RA 18	0.18	-0.28	64.76	14.2685	-9.4753	-0.0905
614	SLE RA 19	0.18	-0.31	64.77	14.272	-9.4774	-0.0939
614	SLE RA 20	0.18	-0.28	65.3	14.3863	-9.555	-0.0909
614	SLE RA 21	0.18	-0.31	65.31	14.3898	-9.5571	-0.0943
614	SLE FR 1	0.13	-0.3	57.75	12.7338	-8.4486	-0.0818
614	SLE FR 2	0.13	-0.31	57.75	12.735	-8.4493	-0.0829
614	SLE FR 3	0.14	-0.3	57.96	12.7809	-8.4805	-0.082
614	SLE FR 4	0.15	-0.3	59.85	13.1954	-8.7573	-0.0855
614	SLE FR 5	0.15	-0.29	60.07	13.2413	-8.7885	-0.0846
614	SLE FR 6	0.16	-0.29	61.25	13.5011	-8.9619	-0.0861
614	SLE QP 1	0.13	-0.3	57.75	12.7338	-8.4486	-0.0818
614	SLE QP 2	0.15	-0.29	59.85	13.1942	-8.7566	-0.0844
614	SLD 1	5.05	0.93	59.09	13.6165	-8.6509	-1.1116
614	SLD 2	5.04	0.87	59.04	13.5979	-8.643	-1.1159
614	SLD 3	4.82	-0.83	59.98	13.8729	-8.8029	-1.3779
614	SLD 4	4.81	-0.89	59.93	13.8543	-8.795	-1.3822

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
614	SLD 5	1.97	2.76	58.27	12.9353	-8.4957	0.012
614	SLD 6	1.96	2.72	58.24	12.9232	-8.4906	0.0092
614	SLD 7	1.2	-3.12	61.26	13.7899	-9.0025	-0.8756
614	SLD 8	1.2	-3.16	61.22	13.7778	-8.9973	-0.8784
614	SLD 9	-0.9	2.57	58.47	12.6106	-8.5159	0.7095
614	SLD 10	-0.91	2.53	58.44	12.5985	-8.5108	0.7067
614	SLD 11	-1.67	-3.31	61.46	13.4652	-9.0226	-0.178
614	SLD 12	-1.67	-3.35	61.43	13.4531	-9.0175	-0.1809
614	SLD 13	-4.52	0.31	59.76	12.5341	-8.7182	1.2134
614	SLD 14	-4.53	0.25	59.71	12.5155	-8.7103	1.2091
614	SLD 15	-4.75	-1.46	60.66	12.7905	-8.8702	0.9471
614	SLD 16	-4.75	-1.52	60.61	12.7719	-8.8623	0.9428
614	SLV 1	11.62	2.5	58.1	14.1928	-8.5144	-2.4971
614	SLV 2	11.6	2.36	57.98	14.1495	-8.496	-2.5071
614	SLV 3	11.08	-1.49	60.13	14.7739	-8.8585	-3.1017
614	SLV 4	11.06	-1.63	60.01	14.7306	-8.8401	-3.1117
614	SLV 5	4.4	6.63	56.27	12.62	-8.1652	0.1105
614	SLV 6	4.39	6.54	56.2	12.5921	-8.1534	0.1041
614	SLV 7	2.62	-6.69	63.02	14.5568	-9.3122	-1.9049
614	SLV 8	2.61	-6.78	62.95	14.5289	-9.3004	-1.9113
614	SLV 9	-2.31	6.19	56.75	11.8595	-8.2129	1.7425
614	SLV 10	-2.32	6.1	56.67	11.8316	-8.201	1.7361
614	SLV 11	-4.1	-7.13	63.5	13.7963	-9.3598	-0.2729
614	SLV 12	-4.11	-7.22	63.43	13.7684	-9.348	-0.2794
614	SLV 13	-10.77	1.05	59.69	11.6579	-8.6731	2.9429
614	SLV 14	-10.79	0.9	59.57	11.6145	-8.6548	2.9329
614	SLV 15	-11.31	-2.95	61.71	12.2389	-9.0172	2.3382
614	SLV 16	-11.32	-3.09	61.6	12.1956	-8.9988	2.3283
614	CRTFP Ux+	0	0	0	0	0	0
614	CRTFP Ux-	0	0	0	0	0	0
614	CRTFP Uy+	0	0	0	0	0	0
614	CRTFP Uy-	0	0	0	0	0	0
616	SLU 1	0.2	-0.31	55.66	11.9418	12.3754	0.0254
616	SLU 2	0.2	-0.37	55.7	11.9507	12.3841	0.0388
616	SLU 3	0.2	-0.3	57	12.2287	12.6729	0.0209
616	SLU 4	0.2	-0.33	57.02	12.234	12.6781	0.0289
616	SLU 5	0.2	-0.37	56.51	12.1249	12.5647	0.0382
616	SLU 6	0.21	-0.3	57.81	12.4029	12.8536	0.0203
616	SLU 7	0.21	-0.33	57.84	12.4082	12.8588	0.0283
616	SLU 8	0.2	-0.31	57.29	12.2902	12.7367	0.0244
616	SLU 9	0.2	-0.35	57.31	12.2955	12.7419	0.0324
616	SLU 10	0.24	-0.35	63.04	13.4986	14.015	0.025
616	SLU 11	0.25	-0.27	64.33	13.7766	14.3038	0.0071
616	SLU 12	0.25	-0.31	64.36	13.7819	14.309	0.0151
616	SLU 13	0.24	-0.35	63.85	13.6728	14.1956	0.0245
616	SLU 14	0.25	-0.27	65.14	13.9508	14.4844	0.0066
616	SLU 15	0.25	-0.31	65.17	13.9561	14.4897	0.0146
616	SLU 16	0.25	-0.29	64.62	13.8382	14.3676	0.0107
616	SLU 17	0.25	-0.32	64.64	13.8435	14.3728	0.0187
616	SLU 18	0.26	-0.28	66.14	14.1532	14.7052	0.0058
616	SLU 19	0.26	-0.31	66.16	14.1585	14.7104	0.0138
616	SLU 20	0.26	-0.28	66.95	14.3274	14.8859	0.0053
616	SLU 21	0.26	-0.31	66.97	14.3327	14.8911	0.0133
616	SLU 22	0.23	-0.18	62.05	13.3178	13.7993	-0.0091
616	SLU 23	0.22	-0.24	62.09	13.3267	13.808	0.0043
616	SLU 24	0.23	-0.17	63.39	13.6047	14.0969	-0.0136
616	SLU 25	0.23	-0.2	63.41	13.61	14.1021	-0.0056
616	SLU 26	0.23	-0.24	62.9	13.5009	13.9887	0.0037
616	SLU 27	0.23	-0.17	64.2	13.7789	14.2775	-0.0142
616	SLU 28	0.23	-0.2	64.22	13.7842	14.2827	-0.0062
616	SLU 29	0.23	-0.18	63.67	13.6662	14.1606	-0.0101
616	SLU 30	0.23	-0.22	63.7	13.6715	14.1658	-0.0021
616	SLU 31	0.27	-0.22	69.42	14.8747	15.4389	-0.0095
616	SLU 32	0.27	-0.14	70.72	15.1526	15.7277	-0.0274
616	SLU 33	0.27	-0.18	70.74	15.158	15.733	-0.0194
616	SLU 34	0.27	-0.22	70.24	15.0488	15.6196	-0.01
616	SLU 35	0.28	-0.14	71.53	15.3268	15.9084	-0.0279
616	SLU 36	0.27	-0.18	71.56	15.3322	15.9136	-0.0199
616	SLU 37	0.27	-0.16	71.01	15.2142	15.7915	-0.0238
616	SLU 38	0.27	-0.2	71.03	15.2195	15.7967	-0.0158
616	SLU 39	0.28	-0.15	72.53	15.5292	16.1292	-0.0287
616	SLU 40	0.28	-0.19	72.55	15.5345	16.1344	-0.0207
616	SLU 41	0.29	-0.15	73.34	15.7034	16.3098	-0.0292
616	SLU 42	0.29	-0.19	73.36	15.7087	16.315	-0.0212
616	SLU 43	0.25	-0.45	70.17	15.0526	15.5998	0.0449
616	SLU 44	0.25	-0.51	70.21	15.0615	15.6085	0.0582
616	SLU 45	0.26	-0.43	71.51	15.3395	15.8973	0.0403
616	SLU 46	0.25	-0.47	71.53	15.3448	15.9025	0.0483
616	SLU 47	0.25	-0.51	71.02	15.2357	15.7891	0.0577
616	SLU 48	0.26	-0.43	72.32	15.5136	16.078	0.0398
616	SLU 49	0.26	-0.47	72.34	15.519	16.0832	0.0478
616	SLU 50	0.26	-0.45	71.79	15.401	15.9611	0.0438
616	SLU 51	0.25	-0.48	71.82	15.4063	15.9663	0.0518
616	SLU 52	0.29	-0.48	77.54	16.6094	17.2394	0.0445
616	SLU 53	0.3	-0.41	78.84	16.8874	17.5282	0.0266
616	SLU 54	0.3	-0.45	78.86	16.8927	17.5334	0.0346
616	SLU 55	0.29	-0.48	78.35	16.7836	17.42	0.044
616	SLU 56	0.3	-0.41	79.65	17.0616	17.7089	0.0261
616	SLU 57	0.3	-0.45	79.68	17.0669	17.7141	0.0341
616	SLU 58	0.3	-0.43	79.13	16.949	17.592	0.0301
616	SLU 59	0.3	-0.46	79.15	16.9543	17.5972	0.0381
616	SLU 60	0.31	-0.42	80.64	17.264	17.9296	0.0253
616	SLU 61	0.31	-0.45	80.67	17.2693	17.9348	0.0333
616	SLU 62	0.31	-0.42	81.46	17.4382	18.1103	0.0248
616	SLU 63	0.31	-0.45	81.48	17.4435	18.1155	0.0328
616	SLU 64	0.28	-0.32	76.56	16.4286	17.0237	0.0104
616	SLU 65	0.27	-0.38	76.6	16.4375	17.0324	0.0237

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
616	SLU 66	0.28	-0.3	77.9	16.7155	17.3213	0.0058
616	SLU 67	0.28	-0.34	77.92	16.7208	17.3265	0.0138
616	SLU 68	0.28	-0.38	77.41	16.6117	17.2131	0.0232
616	SLU 69	0.28	-0.3	78.71	16.8897	17.5019	0.0053
616	SLU 70	0.28	-0.34	78.73	16.895	17.5071	0.0133
616	SLU 71	0.28	-0.32	78.18	16.777	17.385	0.0094
616	SLU 72	0.28	-0.35	78.21	16.7823	17.3902	0.0174
616	SLU 73	0.32	-0.35	83.93	17.9854	18.6633	0.01
616	SLU 74	0.32	-0.28	85.23	18.2634	18.9521	-0.0079
616	SLU 75	0.32	-0.32	85.25	18.2687	18.9574	0.0001
616	SLU 76	0.32	-0.36	84.74	18.1596	18.844	0.0095
616	SLU 77	0.33	-0.28	86.04	18.4376	19.1328	-0.0084
616	SLU 78	0.33	-0.32	86.06	18.4429	19.138	-0.0004
616	SLU 79	0.32	-0.3	85.52	18.325	19.0159	-0.0044
616	SLU 80	0.32	-0.33	85.54	18.3303	19.0211	0.0036
616	SLU 81	0.33	-0.29	87.03	18.64	19.3536	-0.0092
616	SLU 82	0.33	-0.32	87.06	18.6453	19.3588	-0.0012
616	SLU 83	0.34	-0.29	87.85	18.8142	19.5342	-0.0097
616	SLU 84	0.34	-0.32	87.87	18.8195	19.5394	-0.0017
616	SLE RA 1	0.21	-0.27	57.49	12.335	12.7822	0.0156
616	SLE RA 2	0.21	-0.31	57.51	12.3409	12.788	0.0245
616	SLE RA 3	0.21	-0.26	58.38	12.5262	12.9806	0.0125
616	SLE RA 4	0.21	-0.29	58.4	12.5298	12.9841	0.0179
616	SLE RA 5	0.21	-0.31	58.06	12.457	12.9084	0.0241
616	SLE RA 6	0.21	-0.26	58.92	12.6423	13.101	0.0122
616	SLE RA 7	0.21	-0.29	58.94	12.6459	13.1045	0.0175
616	SLE RA 8	0.21	-0.27	58.57	12.5672	13.0231	0.0149
616	SLE RA 9	0.21	-0.3	58.59	12.5708	13.0266	0.0202
616	SLE RA 10	0.23	-0.3	62.4	13.3729	13.8753	0.0153
616	SLE RA 11	0.24	-0.25	63.27	13.5582	14.0678	0.0034
616	SLE RA 12	0.24	-0.27	63.28	13.5617	14.0713	0.0087
616	SLE RA 13	0.24	-0.3	62.94	13.489	13.9957	0.015
616	SLE RA 14	0.24	-0.25	63.81	13.6743	14.1883	0.003
616	SLE RA 15	0.24	-0.27	63.82	13.6779	14.1917	0.0084
616	SLE RA 16	0.24	-0.26	63.46	13.5992	14.1103	0.0057
616	SLE RA 17	0.24	-0.28	63.47	13.6028	14.1138	0.0111
616	SLE RA 18	0.25	-0.25	64.47	13.8092	14.3354	0.0025
616	SLE RA 19	0.24	-0.28	64.49	13.8128	14.3389	0.0078
616	SLE RA 20	0.25	-0.25	65.01	13.9254	14.4559	0.0022
616	SLE RA 21	0.25	-0.28	65.03	13.9289	14.4594	0.0075
616	SLE FR 1	0.21	-0.27	57.49	12.335	12.7822	0.0156
616	SLE FR 2	0.21	-0.28	57.49	12.3362	12.7834	0.0173
616	SLE FR 3	0.21	-0.27	57.7	12.3814	12.8304	0.0154
616	SLE FR 4	0.22	-0.27	59.59	12.7784	13.2493	0.0134
616	SLE FR 5	0.22	-0.27	59.8	12.8237	13.2963	0.0115
616	SLE FR 6	0.23	-0.26	60.98	13.0721	13.5588	0.009
616	SLE QP 1	0.21	-0.27	57.49	12.335	12.7822	0.0156
616	SLE QP 2	0.22	-0.27	59.58	12.7773	13.2482	0.0116
616	SLD 1	5.08	0.95	59.28	13.0291	13.087	-1.432
616	SLD 2	5.08	0.93	59.22	13.0147	13.0743	-1.4246
616	SLD 3	4.85	-0.82	60.42	13.2848	13.3322	-1.0324
616	SLD 4	4.85	-0.84	60.36	13.2704	13.3195	-1.0249
616	SLD 5	2.02	2.79	57.77	12.4676	12.8301	-1.0289
616	SLD 6	2.02	2.78	57.73	12.4582	12.8218	-1.024
616	SLD 7	1.26	-3.12	61.57	13.3198	13.6476	0.3033
616	SLD 8	1.26	-3.13	61.53	13.3104	13.6393	0.3081
616	SLD 9	-0.83	2.6	57.63	12.2441	12.8571	-0.2848
616	SLD 10	-0.83	2.58	57.59	12.2347	12.8488	-0.28
616	SLD 11	-1.58	-3.31	61.43	13.0963	13.6745	1.0473
616	SLD 12	-1.59	-3.32	61.39	13.0869	13.6662	1.0522
616	SLD 13	-4.41	0.31	58.81	12.2841	13.1768	1.0482
616	SLD 14	-4.42	0.29	58.75	12.2697	13.1641	1.0557
616	SLD 15	-4.64	-1.47	59.95	12.5398	13.4221	1.4479
616	SLD 16	-4.65	-1.48	59.89	12.5254	13.4094	1.4553
616	SLV 1	11.6	2.51	58.92	13.3766	12.8795	-3.3512
616	SLV 2	11.58	2.47	58.78	13.3431	12.85	-3.3338
616	SLV 3	11.07	-1.5	61.5	13.9553	13.4347	-2.4458
616	SLV 4	11.05	-1.54	61.36	13.9217	13.4051	-2.4285
616	SLV 5	4.44	6.66	55.49	12.0852	12.3007	-2.3733
616	SLV 6	4.43	6.64	55.4	12.0636	12.2817	-2.3621
616	SLV 7	2.67	-6.72	64.1	14.014	14.1512	0.6445
616	SLV 8	2.66	-6.75	64.01	13.9925	14.1322	0.6557
616	SLV 9	-2.23	6.21	55.16	11.562	12.3642	-0.6324
616	SLV 10	-2.23	6.19	55.07	11.5405	12.3452	-0.6213
616	SLV 11	-3.99	-7.17	63.76	13.4909	14.2147	2.3854
616	SLV 12	-4	-7.2	63.67	13.4693	14.1957	2.3966
616	SLV 13	-10.62	1.01	57.81	11.6328	13.0912	2.4518
616	SLV 14	-10.63	0.97	57.67	11.5993	13.0617	2.4691
616	SLV 15	-11.15	-3.01	60.39	12.2114	13.6464	3.3571
616	SLV 16	-11.16	-3.04	60.25	12.1779	13.6168	3.3745
616	CRTFP Ux+	0	0	0	0	0	0
616	CRTFP Ux-	0	0	0	0	0	0
616	CRTFP Uy+	0	0	0	0	0	0
616	CRTFP Uy-	0	0	0	0	0	0
617	SLU 1	0.18	-0.14	40.07	8.7131	-7.7065	-0.0673
617	SLU 2	0.18	-0.18	40.1	8.72	-7.7123	-0.075
617	SLU 3	0.19	-0.12	41.03	8.9215	-7.8908	-0.0662
617	SLU 4	0.19	-0.15	41.05	8.9257	-7.8943	-0.0708
617	SLU 5	0.18	-0.18	40.68	8.8468	-7.8244	-0.0755
617	SLU 6	0.19	-0.12	41.61	9.0483	-8.0029	-0.0667
617	SLU 7	0.19	-0.15	41.63	9.0525	-8.0064	-0.0713
617	SLU 8	0.19	-0.13	41.24	8.9666	-7.9306	-0.0684
617	SLU 9	0.19	-0.16	41.25	8.9708	-7.9341	-0.0729
617	SLU 10	0.21	-0.14	45.36	9.8459	-8.7237	-0.0745
617	SLU 11	0.22	-0.09	46.29	10.0474	-8.9022	-0.0658
617	SLU 12	0.22	-0.11	46.31	10.0516	-8.9057	-0.0703
617	SLU 13	0.21	-0.14	45.95	9.9727	-8.8358	-0.075

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
617	SLU 14	0.22	-0.09	46.87	10.1742	-9.0142	-0.0663
617	SLU 15	0.22	-0.11	46.89	10.1784	-9.0178	-0.0709
617	SLU 16	0.22	-0.1	46.5	10.0925	-8.9419	-0.0679
617	SLU 17	0.22	-0.12	46.52	10.0967	-8.9455	-0.0725
617	SLU 18	0.22	-0.09	47.59	10.3215	-9.1513	-0.0667
617	SLU 19	0.22	-0.11	47.61	10.3257	-9.1548	-0.0713
617	SLU 20	0.23	-0.08	48.17	10.4483	-9.2633	-0.0672
617	SLU 21	0.23	-0.11	48.19	10.4524	-9.2669	-0.0718
617	SLU 22	0.21	-0.03	44.65	9.7121	-8.5864	-0.0531
617	SLU 23	0.2	-0.07	44.68	9.719	-8.5923	-0.0607
617	SLU 24	0.21	-0.02	45.61	9.9205	-8.7708	-0.052
617	SLU 25	0.21	-0.05	45.62	9.9247	-8.7743	-0.0565
617	SLU 26	0.21	-0.07	45.26	9.8458	-8.7044	-0.0612
617	SLU 27	0.21	-0.02	46.19	10.0473	-8.8828	-0.0525
617	SLU 28	0.21	-0.04	46.21	10.0515	-8.8863	-0.057
617	SLU 29	0.21	-0.03	45.81	9.9656	-8.8105	-0.0541
617	SLU 30	0.21	-0.06	45.83	9.9698	-8.8141	-0.0587
617	SLU 31	0.23	-0.04	49.94	10.8449	-9.6037	-0.0602
617	SLU 32	0.24	0.01	50.87	11.0464	-9.7821	-0.0515
617	SLU 33	0.24	-0.01	50.89	11.0506	-9.7857	-0.0561
617	SLU 34	0.24	-0.04	50.52	10.9717	-9.7157	-0.0608
617	SLU 35	0.24	0.02	51.45	11.1732	-9.8942	-0.052
617	SLU 36	0.24	-0.01	51.47	11.1774	-9.8977	-0.0566
617	SLU 37	0.24	0	51.08	11.0915	-9.8219	-0.0536
617	SLU 38	0.24	-0.02	51.09	11.0957	-9.8254	-0.0582
617	SLU 39	0.25	0.02	52.17	11.3205	-10.0312	-0.0524
617	SLU 40	0.25	-0.01	52.18	11.3246	-10.0348	-0.057
617	SLU 41	0.25	0.02	52.75	11.4472	-10.1433	-0.0529
617	SLU 42	0.25	-0.01	52.77	11.4514	-10.1468	-0.0575
617	SLU 43	0.23	-0.21	50.52	10.9845	-9.7167	-0.0924
617	SLU 44	0.23	-0.25	50.55	10.9914	-9.7226	-0.1001
617	SLU 45	0.23	-0.2	51.48	11.193	-9.901	-0.0913
617	SLU 46	0.23	-0.22	51.5	11.1971	-9.9046	-0.0959
617	SLU 47	0.23	-0.25	51.13	11.1182	-9.8346	-0.1006
617	SLU 48	0.24	-0.2	52.06	11.3197	-10.0131	-0.0918
617	SLU 49	0.24	-0.22	52.08	11.3239	-10.0166	-0.0964
617	SLU 50	0.24	-0.21	51.69	11.238	-9.9408	-0.0935
617	SLU 51	0.23	-0.23	51.71	11.2422	-9.9443	-0.098
617	SLU 52	0.26	-0.22	55.82	12.1173	-10.734	-0.0996
617	SLU 53	0.26	-0.16	56.74	12.3188	-10.9124	-0.0909
617	SLU 54	0.26	-0.19	56.76	12.323	-10.9159	-0.0954
617	SLU 55	0.26	-0.22	56.4	12.2441	-10.846	-0.1001
617	SLU 56	0.27	-0.16	57.33	12.4456	-11.0245	-0.0914
617	SLU 57	0.27	-0.19	57.34	12.4498	-11.028	-0.0959
617	SLU 58	0.26	-0.17	56.95	12.3639	-10.9522	-0.093
617	SLU 59	0.26	-0.2	56.97	12.3681	-10.9557	-0.0976
617	SLU 60	0.27	-0.16	58.04	12.5929	-11.1615	-0.0918
617	SLU 61	0.27	-0.19	58.06	12.5971	-11.165	-0.0964
617	SLU 62	0.27	-0.16	58.62	12.7197	-11.2736	-0.0923
617	SLU 63	0.27	-0.18	58.64	12.7238	-11.2771	-0.0969
617	SLU 64	0.25	-0.11	55.1	11.9835	-10.5967	-0.0782
617	SLU 65	0.25	-0.15	55.13	11.9904	-10.6025	-0.0858
617	SLU 66	0.26	-0.1	56.06	12.1919	-10.781	-0.0771
617	SLU 67	0.26	-0.12	56.08	12.1961	-10.7845	-0.0816
617	SLU 68	0.25	-0.15	55.71	12.1172	-10.7146	-0.0863
617	SLU 69	0.26	-0.1	56.64	12.3187	-10.8931	-0.0776
617	SLU 70	0.26	-0.12	56.66	12.3229	-10.8966	-0.0821
617	SLU 71	0.26	-0.11	56.26	12.237	-10.8208	-0.0792
617	SLU 72	0.26	-0.13	56.28	12.2412	-10.8243	-0.0838
617	SLU 73	0.28	-0.11	60.39	13.1163	-11.6139	-0.0853
617	SLU 74	0.29	-0.06	61.32	13.3178	-11.7924	-0.0766
617	SLU 75	0.29	-0.09	61.34	13.322	-11.7959	-0.0812
617	SLU 76	0.28	-0.11	60.98	13.2431	-11.726	-0.0858
617	SLU 77	0.29	-0.06	61.9	13.4446	-11.9044	-0.0771
617	SLU 78	0.29	-0.09	61.92	13.4488	-11.908	-0.0817
617	SLU 79	0.29	-0.07	61.53	13.3629	-11.8321	-0.0787
617	SLU 80	0.29	-0.1	61.55	13.3671	-11.8357	-0.0833
617	SLU 81	0.29	-0.06	62.62	13.5919	-12.0415	-0.0775
617	SLU 82	0.29	-0.08	62.64	13.5961	-12.045	-0.0821
617	SLU 83	0.3	-0.06	63.2	13.7187	-12.1535	-0.078
617	SLU 84	0.3	-0.08	63.22	13.7228	-12.1571	-0.0826
617	SLE RA 1	0.19	-0.11	41.38	8.9985	-7.9579	-0.0633
617	SLE RA 2	0.19	-0.13	41.4	9.0031	-7.9618	-0.0684
617	SLE RA 3	0.19	-0.1	42.02	9.1375	-8.0808	-0.0625
617	SLE RA 4	0.19	-0.11	42.03	9.1403	-8.0831	-0.0656
617	SLE RA 5	0.19	-0.13	41.79	9.0877	-8.0365	-0.0687
617	SLE RA 6	0.19	-0.1	42.41	9.222	-8.1555	-0.0629
617	SLE RA 7	0.19	-0.11	42.42	9.2248	-8.1578	-0.0659
617	SLE RA 8	0.19	-0.1	42.15	9.1675	-8.1073	-0.0639
617	SLE RA 9	0.19	-0.12	42.17	9.1703	-8.1096	-0.067
617	SLE RA 10	0.21	-0.11	44.91	9.7537	-8.636	-0.068
617	SLE RA 11	0.21	-0.07	45.53	9.8881	-8.755	-0.0622
617	SLE RA 12	0.21	-0.09	45.54	9.8908	-8.7574	-0.0653
617	SLE RA 13	0.21	-0.11	45.3	9.8382	-8.7107	-0.0684
617	SLE RA 14	0.21	-0.07	45.91	9.9726	-8.8297	-0.0626
617	SLE RA 15	0.21	-0.09	45.93	9.9754	-8.8321	-0.0656
617	SLE RA 16	0.21	-0.08	45.66	9.9181	-8.7815	-0.0636
617	SLE RA 17	0.21	-0.1	45.68	9.9209	-8.7839	-0.0667
617	SLE RA 18	0.22	-0.07	46.39	10.0708	-8.9211	-0.0628
617	SLE RA 19	0.22	-0.09	46.4	10.0736	-8.9234	-0.0659
617	SLE RA 20	0.22	-0.07	46.78	10.1553	-8.9958	-0.0632
617	SLE RA 21	0.22	-0.09	46.79	10.1581	-8.9981	-0.0662
617	SLE FR 1	0.19	-0.11	41.38	8.9985	-7.9579	-0.0633
617	SLE FR 2	0.19	-0.11	41.38	8.9994	-7.9587	-0.0643
617	SLE FR 3	0.19	-0.11	41.53	9.0323	-7.9878	-0.0634
617	SLE FR 4	0.2	-0.1	42.89	9.3211	-8.2476	-0.0642
617	SLE FR 5	0.2	-0.1	43.04	9.354	-8.2767	-0.0633

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
617	SLE FR 6	0.2	-0.09	43.88	9.5346	-8.4395	-0.0631
617	SLE QP 1	0.19	-0.11	41.38	8.9985	-7.9579	-0.0633
617	SLE QP 2	0.2	-0.1	42.88	9.3202	-8.2468	-0.0631
617	SLD 1	3.68	0.75	42.8	9.6429	-8.2392	-0.767
617	SLD 2	3.68	0.76	42.75	9.6313	-8.2306	-0.7627
617	SLD 3	3.52	-0.52	43.65	9.8426	-8.403	-1.0116
617	SLD 4	3.51	-0.51	43.61	9.831	-8.3944	-1.0073
617	SLD 5	1.49	2.08	41.57	9.1162	-7.9976	0.096
617	SLD 6	1.49	2.09	41.54	9.1085	-7.9919	0.0988
617	SLD 7	0.95	-2.15	44.42	9.7819	-8.5437	-0.7195
617	SLD 8	0.94	-2.14	44.39	9.7743	-8.5381	-0.7167
617	SLD 9	-0.55	1.95	41.37	8.8661	-7.9556	0.5904
617	SLD 10	-0.55	1.96	41.34	8.8585	-7.95	0.5932
617	SLD 11	-1.09	-2.28	44.23	9.5318	-8.5017	-0.2251
617	SLD 12	-1.1	-2.27	44.2	9.5242	-8.4961	-0.2223
617	SLD 13	-3.12	0.32	42.16	8.8094	-8.0993	0.881
617	SLD 14	-3.12	0.33	42.11	8.7977	-8.0907	0.8853
617	SLD 15	-3.28	-0.95	43.01	9.0091	-8.2631	0.6364
617	SLD 16	-3.29	-0.94	42.97	8.9974	-8.2545	0.6407
617	SLV 1	8.34	1.83	42.71	10.0832	-8.2349	-1.7184
617	SLV 2	8.34	1.86	42.61	10.056	-8.2148	-1.7084
617	SLV 3	7.97	-1.05	44.65	10.5355	-8.606	-2.2737
617	SLV 4	7.96	-1.02	44.55	10.5083	-8.5859	-2.2637
617	SLV 5	3.22	4.83	39.91	8.8677	-7.6839	0.2808
617	SLV 6	3.21	4.85	39.84	8.8503	-7.6711	0.2872
617	SLV 7	1.95	-4.75	46.37	10.3754	-8.9208	-1.5703
617	SLV 8	1.95	-4.73	46.3	10.358	-8.9079	-1.5638
617	SLV 9	-1.55	4.53	39.46	8.2824	-7.5858	1.4376
617	SLV 10	-1.56	4.55	39.39	8.2649	-7.5729	1.444
617	SLV 11	-2.82	-5.05	45.92	9.7901	-8.8226	-0.4135
617	SLV 12	-2.82	-5.03	45.85	9.7727	-8.8097	-0.4071
617	SLV 13	-7.56	0.82	41.22	8.132	-7.9078	2.1374
617	SLV 14	-7.57	0.85	41.11	8.1049	-7.8877	2.1474
617	SLV 15	-7.94	-2.05	43.15	8.5844	-8.2788	1.5821
617	SLV 16	-7.95	-2.02	43.05	8.5572	-8.2588	1.5921
617	CRTFP Ux+	0	0	0	0	0	0
617	CRTFP Ux-	0	0	0	0	0	0
617	CRTFP Uy+	0	0	0	0	0	0
617	CRTFP Uy-	0	0	0	0	0	0
619	SLU 1	0.49	-0.02	79.45	11.6111	10.967	-0.0526
619	SLU 2	0.49	-0.09	79.5	11.6209	10.9753	-0.0414
619	SLU 3	0.5	0.01	81.34	11.887	11.2295	-0.0582
619	SLU 4	0.5	-0.03	81.37	11.8929	11.2345	-0.0515
619	SLU 5	0.5	-0.09	80.65	11.7885	11.135	-0.043
619	SLU 6	0.51	0.02	82.49	12.0546	11.3892	-0.0598
619	SLU 7	0.51	-0.03	82.52	12.0605	11.3942	-0.0531
619	SLU 8	0.51	-0.01	81.75	11.9463	11.2864	-0.0557
619	SLU 9	0.5	-0.05	81.78	11.9522	11.2914	-0.049
619	SLU 10	0.55	0.03	89.87	13.1282	12.4158	-0.0639
619	SLU 11	0.56	0.13	91.71	13.3943	12.67	-0.0807
619	SLU 12	0.56	0.09	91.74	13.4002	12.675	-0.074
619	SLU 13	0.56	0.03	91.02	13.2958	12.5755	-0.0655
619	SLU 14	0.57	0.14	92.86	13.5619	12.8297	-0.0823
619	SLU 15	0.57	0.09	92.89	13.5678	12.8347	-0.0756
619	SLU 16	0.57	0.11	92.12	13.4536	12.7269	-0.0782
619	SLU 17	0.57	0.07	92.15	13.4595	12.7319	-0.0715
619	SLU 18	0.58	0.16	94.26	13.7644	13.0249	-0.0847
619	SLU 19	0.58	0.11	94.29	13.7703	13.0299	-0.078
619	SLU 20	0.58	0.16	95.41	13.932	13.1846	-0.0863
619	SLU 21	0.58	0.11	95.44	13.9379	13.1896	-0.0796
619	SLU 22	0.55	0.21	88.51	12.9483	12.2158	-0.0906
619	SLU 23	0.55	0.13	88.57	12.9581	12.224	-0.0795
619	SLU 24	0.56	0.24	90.41	13.2242	12.4782	-0.0963
619	SLU 25	0.56	0.19	90.44	13.23	12.4832	-0.0896
619	SLU 26	0.56	0.14	89.72	13.1257	12.3837	-0.081
619	SLU 27	0.57	0.24	91.56	13.3918	12.6379	-0.0979
619	SLU 28	0.57	0.19	91.59	13.3976	12.6429	-0.0911
619	SLU 29	0.56	0.22	90.81	13.2835	12.5351	-0.0938
619	SLU 30	0.56	0.17	90.85	13.2894	12.5401	-0.0871
619	SLU 31	0.61	0.25	98.94	14.4654	13.6646	-0.102
619	SLU 32	0.62	0.36	100.78	14.7315	13.9187	-0.1188
619	SLU 33	0.62	0.31	100.81	14.7373	13.9237	-0.1121
619	SLU 34	0.62	0.26	100.09	14.633	13.8242	-0.1035
619	SLU 35	0.63	0.36	101.93	14.8991	14.0784	-0.1204
619	SLU 36	0.63	0.32	101.96	14.9049	14.0834	-0.1136
619	SLU 37	0.63	0.34	101.18	14.7908	13.9756	-0.1163
619	SLU 38	0.62	0.29	101.22	14.7967	13.9806	-0.1096
619	SLU 39	0.64	0.38	103.33	15.1016	14.2736	-0.1228
619	SLU 40	0.63	0.33	103.36	15.1075	14.2786	-0.1161
619	SLU 41	0.64	0.38	104.48	15.2692	14.4333	-0.1244
619	SLU 42	0.64	0.34	104.51	15.2751	14.4383	-0.1177
619	SLU 43	0.62	-0.1	100.17	14.636	13.829	-0.0553
619	SLU 44	0.61	-0.18	100.22	14.6458	13.8373	-0.0441
619	SLU 45	0.63	-0.07	102.06	14.9119	14.0915	-0.0609
619	SLU 46	0.63	-0.12	102.09	14.9178	14.0965	-0.0542
619	SLU 47	0.62	-0.17	101.37	14.8134	13.997	-0.0457
619	SLU 48	0.64	-0.07	103.21	15.0795	14.2512	-0.0625
619	SLU 49	0.64	-0.11	103.24	15.0854	14.2561	-0.0558
619	SLU 50	0.63	-0.09	102.47	14.9712	14.1484	-0.0584
619	SLU 51	0.63	-0.14	102.5	14.9771	14.1533	-0.0517
619	SLU 52	0.68	-0.05	110.59	16.1531	15.2778	-0.0666
619	SLU 53	0.69	0.05	112.43	16.4192	15.532	-0.0834
619	SLU 54	0.69	0	112.46	16.4251	15.537	-0.0767
619	SLU 55	0.68	-0.05	111.74	16.3207	15.4375	-0.0682
619	SLU 56	0.7	0.06	113.58	16.5868	15.6917	-0.085
619	SLU 57	0.7	0.01	113.61	16.5927	15.6967	-0.0783
619	SLU 58	0.69	0.03	112.84	16.4785	15.5889	-0.0809

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
619	SLU 59	0.69	-0.01	112.87	16.4844	15.5939	-0.0742
619	SLU 60	0.7	0.07	114.99	16.7893	15.8869	-0.0874
619	SLU 61	0.7	0.03	115.02	16.7952	15.8919	-0.0807
619	SLU 62	0.71	0.08	116.14	16.9569	16.0466	-0.089
619	SLU 63	0.71	0.03	116.17	16.9628	16.0515	-0.0823
619	SLU 64	0.67	0.12	109.24	15.9732	15.0777	-0.0934
619	SLU 65	0.67	0.05	109.29	15.983	15.086	-0.0822
619	SLU 66	0.69	0.15	111.13	16.249	15.3402	-0.099
619	SLU 67	0.69	0.11	111.16	16.2549	15.3452	-0.0923
619	SLU 68	0.68	0.05	110.44	16.1506	15.2457	-0.0837
619	SLU 69	0.7	0.16	112.28	16.4166	15.4999	-0.1006
619	SLU 70	0.7	0.11	112.31	16.4225	15.5049	-0.0939
619	SLU 71	0.69	0.13	111.54	16.3084	15.3971	-0.0965
619	SLU 72	0.69	0.09	111.57	16.3143	15.4021	-0.0898
619	SLU 73	0.73	0.17	119.66	17.4903	16.5265	-0.1047
619	SLU 74	0.75	0.27	121.5	17.7563	16.7807	-0.1215
619	SLU 75	0.75	0.23	121.53	17.7622	16.7857	-0.1148
619	SLU 76	0.74	0.17	120.81	17.6579	16.6862	-0.1062
619	SLU 77	0.76	0.28	122.65	17.9239	16.9404	-0.1231
619	SLU 78	0.76	0.23	122.68	17.9298	16.9454	-0.1164
619	SLU 79	0.75	0.26	121.91	17.8157	16.8376	-0.119
619	SLU 80	0.75	0.21	121.94	17.8216	16.8426	-0.1123
619	SLU 81	0.76	0.3	124.05	18.1265	17.1356	-0.1255
619	SLU 82	0.76	0.25	124.08	18.1323	17.1406	-0.1188
619	SLU 83	0.77	0.3	125.2	18.2941	17.2953	-0.1271
619	SLU 84	0.77	0.26	125.23	18.2999	17.3003	-0.1204
619	SLE RA 1	0.51	0.05	82.04	11.9932	11.3238	-0.0634
619	SLE RA 2	0.51	0	82.07	11.9997	11.3293	-0.056
619	SLE RA 3	0.52	0.07	83.3	12.1771	11.4988	-0.0672
619	SLE RA 4	0.51	0.04	83.32	12.181	11.5021	-0.0627
619	SLE RA 5	0.51	0	82.84	12.1114	11.4358	-0.057
619	SLE RA 6	0.52	0.07	84.07	12.2888	11.6052	-0.0683
619	SLE RA 7	0.52	0.04	84.09	12.2927	11.6086	-0.0638
619	SLE RA 8	0.52	0.05	83.57	12.2166	11.5367	-0.0656
619	SLE RA 9	0.52	0.02	83.59	12.2206	11.54	-0.0611
619	SLE RA 10	0.55	0.08	88.98	13.0046	12.2897	-0.071
619	SLE RA 11	0.56	0.15	90.21	13.182	12.4591	-0.0822
619	SLE RA 12	0.56	0.12	90.23	13.1859	12.4625	-0.0777
619	SLE RA 13	0.55	0.08	89.75	13.1163	12.3961	-0.072
619	SLE RA 14	0.56	0.15	90.98	13.2937	12.5656	-0.0833
619	SLE RA 15	0.56	0.12	91	13.2976	12.5689	-0.0788
619	SLE RA 16	0.56	0.13	90.48	13.2215	12.4971	-0.0806
619	SLE RA 17	0.56	0.1	90.5	13.2254	12.5004	-0.0761
619	SLE RA 18	0.56	0.16	91.91	13.4287	12.6957	-0.0849
619	SLE RA 19	0.56	0.13	91.93	13.4326	12.6991	-0.0804
619	SLE RA 20	0.57	0.17	92.68	13.5404	12.8022	-0.0859
619	SLE RA 21	0.57	0.13	92.7	13.5444	12.8055	-0.0815
619	SLE FR 1	0.51	0.05	82.04	11.9932	11.3238	-0.0634
619	SLE FR 2	0.51	0.04	82.04	11.9945	11.3249	-0.0619
619	SLE FR 3	0.51	0.05	82.34	12.0379	11.3664	-0.0639
619	SLE FR 4	0.52	0.07	85.01	12.4251	11.7365	-0.0684
619	SLE FR 5	0.53	0.08	85.31	12.4685	11.778	-0.0703
619	SLE FR 6	0.53	0.1	86.98	12.7109	12.0098	-0.0742
619	SLE QP 1	0.51	0.05	82.04	11.9932	11.3238	-0.0634
619	SLE QP 2	0.52	0.08	85	12.4238	11.7354	-0.0699
619	SLD 1	7.32	1.62	85.27	12.5091	11.7629	-1.3195
619	SLD 2	7.32	1.71	85.19	12.4928	11.7507	-1.3251
619	SLD 3	7	-0.83	86.72	12.7894	11.9929	-0.9688
619	SLD 4	7.01	-0.75	86.64	12.7731	11.9806	-0.9745
619	SLD 5	3.04	4.25	82.89	12.0272	11.3971	-0.9755
619	SLD 6	3.05	4.31	82.84	12.0165	11.3891	-0.9792
619	SLD 7	1.98	-3.93	87.74	12.9615	12.1635	0.1932
619	SLD 8	1.99	-3.87	87.68	12.9509	12.1555	0.1895
619	SLD 9	-0.94	4.04	82.31	11.8968	11.3153	-0.3293
619	SLD 10	-0.94	4.09	82.26	11.8861	11.3073	-0.333
619	SLD 11	-2	-4.14	87.16	12.8311	12.0817	0.8395
619	SLD 12	-2	-4.09	87.11	12.8205	12.0737	0.8358
619	SLD 13	-5.96	0.91	83.35	12.0745	11.4902	0.8348
619	SLD 14	-5.95	0.99	83.28	12.0582	11.4779	0.8291
619	SLD 15	-6.28	-1.55	84.81	12.3548	11.7201	1.1854
619	SLD 16	-6.27	-1.46	84.73	12.3385	11.7078	1.1797
619	SLV 1	16.42	3.6	85.68	12.6338	11.8082	-2.9807
619	SLV 2	16.43	3.8	85.5	12.5959	11.7797	-2.9939
619	SLV 3	15.68	-1.97	88.97	13.2689	12.3289	-2.1861
619	SLV 4	15.69	-1.77	88.79	13.2309	12.3004	-2.1993
619	SLV 5	6.41	9.54	80.24	11.5302	10.9724	-2.146
619	SLV 6	6.42	9.67	80.12	11.5058	10.9541	-2.1544
619	SLV 7	3.95	-9	91.22	13.647	12.7081	0.5026
619	SLV 8	3.96	-8.88	91.1	13.6226	12.6898	0.4941
619	SLV 9	-2.91	9.04	78.9	11.225	10.781	-0.6339
619	SLV 10	-2.9	9.17	78.78	11.2006	10.7627	-0.6424
619	SLV 11	-5.37	-9.5	89.87	13.3419	12.5167	2.0147
619	SLV 12	-5.36	-9.38	89.76	13.3175	12.4984	2.0062
619	SLV 13	-14.65	1.93	81.21	11.6167	11.1704	2.0596
619	SLV 14	-14.63	2.13	81.03	11.5788	11.1419	2.0464
619	SLV 15	-15.39	-3.63	84.5	12.2518	11.6911	2.8541
619	SLV 16	-15.37	-3.43	84.32	12.2138	11.6626	2.841
619	CRTFP Ux+	0	0	0	0	0	0
619	CRTFP Ux-	0	0	0	0	0	0
619	CRTFP Uy+	0	0	0	0	0	0
619	CRTFP Uy-	0	0	0	0	0	0
621	SLU 1	0.2	0.18	28.9	6.8027	0.8437	-0.048
621	SLU 2	0.2	0.15	28.92	6.806	0.8443	-0.047
621	SLU 3	0.21	0.19	29.59	6.9614	0.8638	-0.0497
621	SLU 4	0.21	0.17	29.59	6.9634	0.8642	-0.0491
621	SLU 5	0.21	0.15	29.33	6.9017	0.8565	-0.0479
621	SLU 6	0.21	0.19	30	7.0571	0.8761	-0.0505

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
621	SLU 7	0.21	0.18	30.01	7.0591	0.8764	-0.05
621	SLU 8	0.21	0.18	29.73	6.9941	0.8682	-0.0497
621	SLU 9	0.21	0.17	29.74	6.9961	0.8685	-0.0492
621	SLU 10	0.22	0.22	32.66	7.6854	0.9543	-0.0535
621	SLU 11	0.23	0.26	33.33	7.8408	0.9738	-0.0562
621	SLU 12	0.23	0.24	33.33	7.8428	0.9741	-0.0556
621	SLU 13	0.23	0.22	33.07	7.7812	0.9665	-0.0544
621	SLU 14	0.23	0.26	33.74	7.9365	0.986	-0.057
621	SLU 15	0.23	0.25	33.75	7.9385	0.9864	-0.0564
621	SLU 16	0.23	0.25	33.47	7.8736	0.9782	-0.0562
621	SLU 17	0.23	0.23	33.48	7.8755	0.9785	-0.0556
621	SLU 18	0.23	0.27	34.25	8.059	1.0008	-0.0573
621	SLU 19	0.23	0.26	34.25	8.061	1.0012	-0.0567
621	SLU 20	0.24	0.27	34.66	8.1547	1.0131	-0.0581
621	SLU 21	0.24	0.26	34.67	8.1567	1.0134	-0.0575
621	SLU 22	0.23	0.28	32.21	7.5886	0.9402	-0.0561
621	SLU 23	0.23	0.25	32.23	7.5919	0.9408	-0.0551
621	SLU 24	0.23	0.29	32.9	7.7473	0.9603	-0.0578
621	SLU 25	0.23	0.27	32.91	7.7493	0.9607	-0.0572
621	SLU 26	0.23	0.25	32.64	7.6876	0.953	-0.056
621	SLU 27	0.24	0.29	33.31	7.843	0.9726	-0.0586
621	SLU 28	0.23	0.28	33.32	7.845	0.9729	-0.0581
621	SLU 29	0.23	0.28	33.04	7.78	0.9647	-0.0578
621	SLU 30	0.23	0.27	33.05	7.782	0.965	-0.0572
621	SLU 31	0.25	0.32	35.97	8.4713	1.0508	-0.0616
621	SLU 32	0.25	0.36	36.64	8.6267	1.0703	-0.0642
621	SLU 33	0.25	0.34	36.65	8.6287	1.0706	-0.0637
621	SLU 34	0.25	0.32	36.38	8.5671	1.063	-0.0625
621	SLU 35	0.26	0.36	37.05	8.7224	1.0825	-0.0651
621	SLU 36	0.26	0.35	37.06	8.7244	1.0829	-0.0645
621	SLU 37	0.25	0.35	36.78	8.6595	1.0746	-0.0643
621	SLU 38	0.25	0.34	36.79	8.6614	1.075	-0.0637
621	SLU 39	0.26	0.37	37.56	8.8449	1.0973	-0.0654
621	SLU 40	0.26	0.36	37.57	8.8469	1.0977	-0.0648
621	SLU 41	0.26	0.38	37.97	8.9406	1.1095	-0.0662
621	SLU 42	0.26	0.36	37.98	8.9426	1.1099	-0.0656
621	SLU 43	0.26	0.19	36.44	8.574	1.0638	-0.0596
621	SLU 44	0.25	0.17	36.45	8.5774	1.0643	-0.0587
621	SLU 45	0.26	0.21	37.12	8.7327	1.0839	-0.0613
621	SLU 46	0.26	0.19	37.13	8.7347	1.0842	-0.0607
621	SLU 47	0.26	0.17	36.87	8.6731	1.0765	-0.0595
621	SLU 48	0.26	0.21	37.54	8.8285	1.0961	-0.0622
621	SLU 49	0.26	0.2	37.54	8.8304	1.0964	-0.0616
621	SLU 50	0.26	0.2	37.27	8.7655	1.0882	-0.0614
621	SLU 51	0.26	0.19	37.28	8.7675	1.0886	-0.0608
621	SLU 52	0.28	0.23	40.19	9.4568	1.1743	-0.0652
621	SLU 53	0.28	0.27	40.86	9.6122	1.1938	-0.0678
621	SLU 54	0.28	0.26	40.87	9.6142	1.1942	-0.0672
621	SLU 55	0.28	0.24	40.61	9.5525	1.1865	-0.066
621	SLU 56	0.29	0.28	41.27	9.7079	1.2061	-0.0686
621	SLU 57	0.29	0.26	41.28	9.7099	1.2064	-0.0681
621	SLU 58	0.28	0.27	41.01	9.6449	1.1982	-0.0678
621	SLU 59	0.28	0.25	41.02	9.6469	1.1985	-0.0673
621	SLU 60	0.29	0.29	41.78	9.8304	1.2209	-0.0689
621	SLU 61	0.29	0.27	41.79	9.8324	1.2212	-0.0683
621	SLU 62	0.29	0.29	42.2	9.9261	1.2331	-0.0697
621	SLU 63	0.29	0.28	42.2	9.9281	1.2334	-0.0692
621	SLU 64	0.28	0.29	39.75	9.36	1.1602	-0.0677
621	SLU 65	0.28	0.27	39.77	9.3633	1.1608	-0.0668
621	SLU 66	0.28	0.31	40.43	9.5186	1.1804	-0.0694
621	SLU 67	0.28	0.29	40.44	9.5206	1.1807	-0.0688
621	SLU 68	0.28	0.27	40.18	9.459	1.173	-0.0676
621	SLU 69	0.29	0.31	40.85	9.6144	1.1926	-0.0703
621	SLU 70	0.29	0.3	40.86	9.6163	1.1929	-0.0697
621	SLU 71	0.29	0.3	40.58	9.5514	1.1847	-0.0695
621	SLU 72	0.29	0.29	40.59	9.5534	1.185	-0.0689
621	SLU 73	0.3	0.33	43.5	10.2427	1.2708	-0.0732
621	SLU 74	0.31	0.38	44.17	10.3981	1.2903	-0.0759
621	SLU 75	0.31	0.36	44.18	10.4001	1.2907	-0.0753
621	SLU 76	0.3	0.34	43.92	10.3384	1.283	-0.0741
621	SLU 77	0.31	0.38	44.59	10.4938	1.3026	-0.0767
621	SLU 78	0.31	0.36	44.6	10.4958	1.3029	-0.0762
621	SLU 79	0.31	0.37	44.32	10.4308	1.2947	-0.0759
621	SLU 80	0.31	0.35	44.33	10.4328	1.295	-0.0753
621	SLU 81	0.31	0.39	45.09	10.6163	1.3174	-0.077
621	SLU 82	0.31	0.37	45.1	10.6183	1.3177	-0.0764
621	SLU 83	0.31	0.39	45.51	10.712	1.3296	-0.0778
621	SLU 84	0.31	0.38	45.52	10.714	1.3299	-0.0773
621	SLE RA 1	0.21	0.2	29.85	7.0272	0.8713	-0.0503
621	SLE RA 2	0.21	0.19	29.86	7.0294	0.8717	-0.0497
621	SLE RA 3	0.21	0.21	30.3	7.133	0.8847	-0.0514
621	SLE RA 4	0.21	0.2	30.31	7.1344	0.8849	-0.0511
621	SLE RA 5	0.21	0.19	30.14	7.0933	0.8798	-0.0503
621	SLE RA 6	0.22	0.22	30.58	7.1968	0.8929	-0.052
621	SLE RA 7	0.22	0.21	30.59	7.1982	0.8931	-0.0516
621	SLE RA 8	0.21	0.21	30.4	7.1549	0.8876	-0.0515
621	SLE RA 9	0.21	0.2	30.41	7.1562	0.8878	-0.0511
621	SLE RA 10	0.22	0.23	32.35	7.6157	0.945	-0.054
621	SLE RA 11	0.23	0.26	32.8	7.7193	0.958	-0.0558
621	SLE RA 12	0.23	0.25	32.8	7.7206	0.9582	-0.0554
621	SLE RA 13	0.23	0.23	32.63	7.6795	0.9531	-0.0546
621	SLE RA 14	0.23	0.26	33.07	7.7831	0.9662	-0.0563
621	SLE RA 15	0.23	0.25	33.08	7.7845	0.9664	-0.0559
621	SLE RA 16	0.23	0.25	32.89	7.7411	0.9609	-0.0558
621	SLE RA 17	0.23	0.24	32.9	7.7425	0.9611	-0.0554
621	SLE RA 18	0.23	0.27	33.41	7.8648	0.976	-0.0565
621	SLE RA 19	0.23	0.26	33.42	7.8661	0.9763	-0.0561

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
621	SLE RA 20	0.23	0.27	33.69	7.9286	0.9842	-0.0571
621	SLE RA 21	0.23	0.26	33.69	7.9299	0.9844	-0.0567
621	SLE FR 1	0.21	0.2	29.85	7.0272	0.8713	-0.0503
621	SLE FR 2	0.21	0.2	29.85	7.0277	0.8714	-0.0502
621	SLE FR 3	0.21	0.2	29.96	7.0528	0.8746	-0.0506
621	SLE FR 4	0.22	0.22	30.92	7.2789	0.9028	-0.052
621	SLE FR 5	0.22	0.22	31.03	7.304	0.906	-0.0524
621	SLE FR 6	0.22	0.24	31.63	7.446	0.9237	-0.0534
621	SLE QP 1	0.21	0.2	29.85	7.0272	0.8713	-0.0503
621	SLE QP 2	0.22	0.22	30.92	7.2785	0.9027	-0.0522
621	SLD 1	2.73	0.76	30.93	7.2879	0.9079	-0.6881
621	SLD 2	2.73	0.81	30.91	7.281	0.9071	-0.6888
621	SLD 3	2.61	-0.13	31.38	7.3933	0.9241	-0.6468
621	SLD 4	2.61	-0.07	31.36	7.3864	0.9232	-0.6474
621	SLD 5	1.15	1.71	30.24	7.1227	0.88	-0.3056
621	SLD 6	1.15	1.75	30.23	7.1182	0.8794	-0.306
621	SLD 7	0.76	-1.23	31.74	7.474	0.9337	-0.1677
621	SLD 8	0.75	-1.2	31.73	7.4695	0.9331	-0.1681
621	SLD 9	-0.32	1.64	30.11	7.0875	0.8723	0.0637
621	SLD 10	-0.33	1.68	30.09	7.083	0.8717	0.0633
621	SLD 11	-0.72	-1.3	31.61	7.4388	0.926	0.2017
621	SLD 12	-0.72	-1.27	31.59	7.4343	0.9254	0.2013
621	SLD 13	-2.18	0.52	30.48	7.1706	0.8822	0.543
621	SLD 14	-2.18	0.57	30.46	7.1637	0.8814	0.5424
621	SLD 15	-2.3	-0.36	30.93	7.276	0.8983	0.5844
621	SLD 16	-2.3	-0.31	30.9	7.2691	0.8975	0.5838
621	SLV 1	6.1	1.44	30.97	7.3051	0.9155	-1.5392
621	SLV 2	6.09	1.56	30.91	7.289	0.9135	-1.5407
621	SLV 3	5.82	-0.57	31.98	7.544	0.952	-1.4443
621	SLV 4	5.82	-0.44	31.93	7.5279	0.95	-1.4458
621	SLV 5	2.4	3.61	29.4	6.9269	0.8516	-0.642
621	SLV 6	2.39	3.69	29.36	6.9165	0.8503	-0.6429
621	SLV 7	1.48	-3.08	32.79	7.7233	0.9732	-0.3256
621	SLV 8	1.48	-3	32.76	7.7129	0.9719	-0.3266
621	SLV 9	-1.05	3.44	29.08	6.8441	0.8335	0.2222
621	SLV 10	-1.05	3.52	29.04	6.8337	0.8322	0.2212
621	SLV 11	-1.96	-3.24	32.48	7.6405	0.9552	0.5386
621	SLV 12	-1.97	-3.16	32.44	7.6301	0.9539	0.5376
621	SLV 13	-5.39	0.89	29.91	7.0291	0.8554	1.3414
621	SLV 14	-5.39	1.01	29.85	7.013	0.8534	1.3399
621	SLV 15	-5.66	-1.12	30.93	7.268	0.8919	1.4363
621	SLV 16	-5.67	-0.99	30.87	7.2519	0.8899	1.4348
621	CRTFP Ux+	0	0	0	0	0	0
621	CRTFP Ux-	0	0	0	0	0	0
621	CRTFP Uy+	0	0	0	0	0	0
621	CRTFP Uy-	0	0	0	0	0	0
622	SLU 1	0.22	0.38	26.59	6.2166	-1.7377	-0.0242
622	SLU 2	0.22	0.36	26.6	6.2181	-1.7382	-0.0255
622	SLU 3	0.23	0.4	27.21	6.36	-1.7782	-0.0244
622	SLU 4	0.23	0.39	27.22	6.3609	-1.7785	-0.0252
622	SLU 5	0.23	0.37	26.98	6.3046	-1.7627	-0.0259
622	SLU 6	0.23	0.41	27.59	6.4465	-1.8026	-0.0248
622	SLU 7	0.23	0.39	27.6	6.4474	-1.8029	-0.0256
622	SLU 8	0.23	0.4	27.34	6.3896	-1.7866	-0.0251
622	SLU 9	0.23	0.38	27.35	6.3905	-1.7869	-0.0258
622	SLU 10	0.24	0.44	30.02	7.0174	-1.9609	-0.0248
622	SLU 11	0.25	0.48	30.63	7.1593	-2.0008	-0.0237
622	SLU 12	0.25	0.47	30.64	7.1603	-2.0012	-0.0245
622	SLU 13	0.25	0.45	30.4	7.1039	-1.9853	-0.0253
622	SLU 14	0.25	0.49	31.01	7.2458	-2.0253	-0.0242
622	SLU 15	0.25	0.48	31.01	7.2468	-2.0256	-0.0249
622	SLU 16	0.25	0.48	30.76	7.1889	-2.0092	-0.0244
622	SLU 17	0.25	0.47	30.77	7.1898	-2.0095	-0.0252
622	SLU 18	0.25	0.5	31.47	7.3585	-2.0558	-0.0233
622	SLU 19	0.25	0.49	31.48	7.3594	-2.0561	-0.024
622	SLU 20	0.26	0.51	31.85	7.445	-2.0802	-0.0237
622	SLU 21	0.26	0.49	31.86	7.4459	-2.0805	-0.0245
622	SLU 22	0.25	0.5	29.64	6.9373	-1.9373	-0.0225
622	SLU 23	0.25	0.47	29.65	6.9388	-1.9379	-0.0238
622	SLU 24	0.25	0.52	30.27	7.0807	-1.9778	-0.0227
622	SLU 25	0.25	0.5	30.27	7.0816	-1.9781	-0.0235
622	SLU 26	0.25	0.48	30.03	7.0253	-1.9623	-0.0242
622	SLU 27	0.26	0.52	30.64	7.1672	-2.0022	-0.0231
622	SLU 28	0.26	0.51	30.65	7.1681	-2.0026	-0.0239
622	SLU 29	0.25	0.51	30.4	7.1103	-1.9862	-0.0234
622	SLU 30	0.25	0.5	30.4	7.1112	-1.9865	-0.0241
622	SLU 31	0.27	0.56	33.07	7.7381	-2.1605	-0.0231
622	SLU 32	0.27	0.6	33.68	7.88	-2.2004	-0.022
622	SLU 33	0.27	0.59	33.69	7.881	-2.2008	-0.0228
622	SLU 34	0.27	0.56	33.45	7.8246	-2.185	-0.0235
622	SLU 35	0.28	0.61	34.06	7.9665	-2.2249	-0.0224
622	SLU 36	0.28	0.59	34.07	7.9675	-2.2252	-0.0232
622	SLU 37	0.28	0.59	33.81	7.9096	-2.2088	-0.0227
622	SLU 38	0.28	0.58	33.82	7.9105	-2.2092	-0.0235
622	SLU 39	0.28	0.62	34.53	8.0792	-2.2554	-0.0216
622	SLU 40	0.28	0.6	34.53	8.0801	-2.2557	-0.0223
622	SLU 41	0.28	0.62	34.9	8.1657	-2.2798	-0.022
622	SLU 42	0.28	0.61	34.91	8.1666	-2.2802	-0.0227
622	SLU 43	0.28	0.46	33.52	7.8345	-2.1906	-0.0321
622	SLU 44	0.28	0.44	33.53	7.836	-2.1911	-0.0334
622	SLU 45	0.29	0.48	34.15	7.9779	-2.231	-0.0323
622	SLU 46	0.29	0.46	34.15	7.9788	-2.2314	-0.033
622	SLU 47	0.28	0.44	33.91	7.9225	-2.2155	-0.0338
622	SLU 48	0.29	0.48	34.52	8.0644	-2.2555	-0.0327
622	SLU 49	0.29	0.47	34.53	8.0653	-2.2558	-0.0335
622	SLU 50	0.29	0.47	34.28	8.0075	-2.2394	-0.0329
622	SLU 51	0.29	0.46	34.28	8.0084	-2.2398	-0.0337

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
622	SLU 52	0.3	0.52	36.95	8.6353	-2.4138	-0.0327
622	SLU 53	0.31	0.56	37.56	8.7772	-2.4537	-0.0316
622	SLU 54	0.31	0.55	37.57	8.7781	-2.454	-0.0324
622	SLU 55	0.3	0.53	37.33	8.7218	-2.4382	-0.0331
622	SLU 56	0.31	0.57	37.94	8.8637	-2.4781	-0.032
622	SLU 57	0.31	0.55	37.95	8.8646	-2.4785	-0.0328
622	SLU 58	0.31	0.55	37.69	8.8068	-2.4621	-0.0323
622	SLU 59	0.31	0.54	37.7	8.8077	-2.4624	-0.033
622	SLU 60	0.31	0.58	38.41	8.9764	-2.5086	-0.0311
622	SLU 61	0.31	0.56	38.41	8.9773	-2.509	-0.0319
622	SLU 62	0.31	0.58	38.78	9.0629	-2.5331	-0.0316
622	SLU 63	0.31	0.57	38.79	9.0638	-2.5334	-0.0323
622	SLU 64	0.31	0.57	36.57	8.5552	-2.3902	-0.0304
622	SLU 65	0.3	0.55	36.59	8.5567	-2.3907	-0.0317
622	SLU 66	0.31	0.59	37.2	8.6986	-2.4307	-0.0306
622	SLU 67	0.31	0.58	37.2	8.6995	-2.431	-0.0313
622	SLU 68	0.31	0.56	36.96	8.6432	-2.4152	-0.0321
622	SLU 69	0.31	0.6	37.57	8.7851	-2.4551	-0.031
622	SLU 70	0.31	0.58	37.58	8.786	-2.4554	-0.0317
622	SLU 71	0.31	0.59	37.33	8.7282	-2.439	-0.0312
622	SLU 72	0.31	0.57	37.33	8.7291	-2.4394	-0.032
622	SLU 73	0.33	0.63	40	9.356	-2.6134	-0.031
622	SLU 74	0.33	0.67	40.61	9.4979	-2.6533	-0.0299
622	SLU 75	0.33	0.66	40.62	9.4988	-2.6536	-0.0307
622	SLU 76	0.33	0.64	40.38	9.4425	-2.6378	-0.0314
622	SLU 77	0.34	0.68	40.99	9.5844	-2.6777	-0.0303
622	SLU 78	0.34	0.67	41	9.5853	-2.6781	-0.0311
622	SLU 79	0.33	0.67	40.74	9.5275	-2.6617	-0.0306
622	SLU 80	0.33	0.66	40.75	9.5284	-2.662	-0.0313
622	SLU 81	0.34	0.69	41.46	9.6971	-2.7082	-0.0294
622	SLU 82	0.34	0.68	41.46	9.698	-2.7086	-0.0302
622	SLU 83	0.34	0.7	41.83	9.7836	-2.7327	-0.0298
622	SLU 84	0.34	0.68	41.84	9.7845	-2.733	-0.0306
622	SLE RA 1	0.23	0.42	27.46	6.4225	-1.7947	-0.0238
622	SLE RA 2	0.23	0.4	27.47	6.4235	-1.7951	-0.0246
622	SLE RA 3	0.23	0.43	27.88	6.5181	-1.8217	-0.0239
622	SLE RA 4	0.23	0.42	27.88	6.5187	-1.8219	-0.0244
622	SLE RA 5	0.23	0.4	27.72	6.4812	-1.8114	-0.0249
622	SLE RA 6	0.24	0.43	28.13	6.5758	-1.838	-0.0242
622	SLE RA 7	0.24	0.42	28.13	6.5764	-1.8382	-0.0247
622	SLE RA 8	0.23	0.42	27.97	6.5378	-1.8273	-0.0243
622	SLE RA 9	0.23	0.42	27.97	6.5384	-1.8275	-0.0248
622	SLE RA 10	0.24	0.46	29.75	6.9564	-1.9435	-0.0242
622	SLE RA 11	0.25	0.48	30.16	7.051	-1.9701	-0.0234
622	SLE RA 12	0.25	0.47	30.16	7.0516	-1.9704	-0.0239
622	SLE RA 13	0.25	0.46	30	7.0141	-1.9598	-0.0244
622	SLE RA 14	0.25	0.49	30.41	7.1087	-1.9864	-0.0237
622	SLE RA 15	0.25	0.48	30.41	7.1093	-1.9867	-0.0242
622	SLE RA 16	0.25	0.48	30.24	7.0707	-1.9757	-0.0239
622	SLE RA 17	0.25	0.47	30.25	7.0713	-1.976	-0.0244
622	SLE RA 18	0.25	0.49	30.72	7.1838	-2.0068	-0.0231
622	SLE RA 19	0.25	0.49	30.72	7.1844	-2.007	-0.0236
622	SLE RA 20	0.25	0.5	30.97	7.2414	-2.0231	-0.0234
622	SLE RA 21	0.25	0.49	30.97	7.242	-2.0233	-0.0239
622	SLE FR 1	0.23	0.42	27.46	6.4225	-1.7947	-0.0238
622	SLE FR 2	0.23	0.41	27.47	6.4227	-1.7948	-0.0239
622	SLE FR 3	0.23	0.42	27.56	6.4456	-1.8012	-0.0239
622	SLE FR 4	0.24	0.44	28.44	6.6511	-1.8584	-0.0237
622	SLE FR 5	0.24	0.44	28.54	6.674	-1.8649	-0.0237
622	SLE FR 6	0.24	0.45	29.09	6.8031	-1.9008	-0.0234
622	SLE QP 1	0.23	0.42	27.46	6.4225	-1.7947	-0.0238
622	SLE QP 2	0.24	0.44	28.44	6.6509	-1.8583	-0.0236
622	SLD 1	2.58	0.91	28.18	6.5903	-1.8379	-0.5704
622	SLD 2	2.58	0.97	28.16	6.5871	-1.8368	-0.5655
622	SLD 3	2.47	0.11	28.51	6.6512	-1.8566	-0.6269
622	SLD 4	2.47	0.17	28.49	6.648	-1.8554	-0.6219
622	SLD 5	1.11	1.78	27.87	6.541	-1.8241	-0.1028
622	SLD 6	1.1	1.83	27.86	6.5388	-1.8234	-0.0996
622	SLD 7	0.74	-0.89	28.96	6.7439	-1.8863	-0.2911
622	SLD 8	0.74	-0.84	28.95	6.7418	-1.8856	-0.2879
622	SLD 9	-0.27	1.72	27.93	6.56	-1.8311	0.2408
622	SLD 10	-0.27	1.76	27.92	6.5579	-1.8304	0.244
622	SLD 11	-0.63	-0.95	29.02	6.7629	-1.8933	0.0525
622	SLD 12	-0.64	-0.91	29.01	6.7608	-1.8926	0.0557
622	SLD 13	-2	0.7	28.39	6.6538	-1.8612	0.5748
622	SLD 14	-2	0.77	28.37	6.6506	-1.8601	0.5798
622	SLD 15	-2.11	-0.1	28.72	6.7147	-1.8799	0.5183
622	SLD 16	-2.11	-0.03	28.7	6.7114	-1.8787	0.5233
622	SLV 1	5.72	1.52	27.84	6.5095	-1.8111	-1.3044
622	SLV 2	5.72	1.66	27.8	6.5019	-1.8085	-1.293
622	SLV 3	5.47	-0.3	28.58	6.6477	-1.8535	-1.4337
622	SLV 4	5.46	-0.15	28.54	6.6401	-1.8508	-1.4222
622	SLV 5	2.27	3.49	27.15	6.4001	-1.7804	-0.2137
622	SLV 6	2.27	3.59	27.12	6.3953	-1.7787	-0.2063
622	SLV 7	1.42	-2.56	29.61	6.8608	-1.9216	-0.6447
622	SLV 8	1.41	-2.47	29.58	6.856	-1.9198	-0.6373
622	SLV 9	-0.94	3.35	27.3	6.4458	-1.7968	0.5902
622	SLV 10	-0.95	3.44	27.27	6.441	-1.7951	0.5975
622	SLV 11	-1.8	-2.71	29.76	6.9065	-1.938	0.1592
622	SLV 12	-1.8	-2.61	29.73	6.9016	-1.9363	0.1666
622	SLV 13	-4.99	1.03	28.35	6.6616	-1.8659	1.3751
622	SLV 14	-5	1.18	28.3	6.6541	-1.8632	1.3866
622	SLV 15	-5.25	-0.79	29.08	6.7998	-1.9082	1.2458
622	SLV 16	-5.25	-0.64	29.04	6.7923	-1.9055	1.2573
622	CRTFP Ux+	0	0	0	0	0	0
622	CRTFP Ux-	0	0	0	0	0	0
622	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
622	CRTFP Uy-	0	0	0	0	0	0
624	SLU 1	1.14	2.27	103.87	36.8797	36.4638	-1.1976
624	SLU 2	1.13	2.19	103.88	36.8795	36.4698	-1.1673
624	SLU 3	1.17	2.36	106.27	37.7255	37.3068	-1.2401
624	SLU 4	1.17	2.31	106.27	37.7254	37.3105	-1.2219
624	SLU 5	1.15	2.23	105.33	37.3909	36.9797	-1.1862
624	SLU 6	1.19	2.39	107.71	38.237	37.8167	-1.2591
624	SLU 7	1.19	2.35	107.71	38.2368	37.8204	-1.2409
624	SLU 8	1.18	2.34	106.76	37.9026	37.4836	-1.2355
624	SLU 9	1.18	2.29	106.76	37.9025	37.4872	-1.2173
624	SLU 10	1.24	2.58	117.15	41.5991	41.1412	-1.3463
624	SLU 11	1.28	2.74	119.53	42.4452	41.9782	-1.4192
624	SLU 12	1.28	2.7	119.54	42.445	41.9818	-1.401
624	SLU 13	1.26	2.61	118.59	42.1106	41.6511	-1.3653
624	SLU 14	1.3	2.78	120.97	42.9566	42.4881	-1.4382
624	SLU 15	1.3	2.73	120.98	42.9565	42.4917	-1.42
624	SLU 16	1.29	2.72	120.02	42.6223	42.1549	-1.4146
624	SLU 17	1.29	2.67	120.03	42.6222	42.1586	-1.3964
624	SLU 18	1.29	2.82	122.82	43.622	43.1371	-1.4534
624	SLU 19	1.29	2.77	122.83	43.6219	43.1408	-1.4352
624	SLU 20	1.31	2.85	124.26	44.1335	43.647	-1.4724
624	SLU 21	1.31	2.81	124.27	44.1334	43.6507	-1.4542
624	SLU 22	1.27	2.78	115.92	41.1801	40.6773	-1.429
624	SLU 23	1.27	2.7	115.93	41.1799	40.6834	-1.3987
624	SLU 24	1.3	2.87	118.32	42.0259	41.5203	-1.4716
624	SLU 25	1.3	2.82	118.32	42.0258	41.524	-1.4534
624	SLU 26	1.29	2.74	117.38	41.6914	41.1933	-1.4176
624	SLU 27	1.32	2.9	119.76	42.5374	42.0302	-1.4905
624	SLU 28	1.32	2.86	119.76	42.5373	42.0339	-1.4723
624	SLU 29	1.31	2.85	118.81	42.2031	41.6971	-1.4669
624	SLU 30	1.31	2.8	118.81	42.2029	41.7007	-1.4487
624	SLU 31	1.38	3.09	129.2	45.8996	45.3547	-1.5777
624	SLU 32	1.41	3.25	131.58	46.7456	46.1917	-1.6506
624	SLU 33	1.41	3.21	131.59	46.7455	46.1953	-1.6324
624	SLU 34	1.4	3.12	130.64	46.411	45.8646	-1.5967
624	SLU 35	1.43	3.29	133.02	47.2571	46.7016	-1.6696
624	SLU 36	1.43	3.24	133.03	47.257	46.7052	-1.6514
624	SLU 37	1.42	3.23	132.07	46.9227	46.3684	-1.646
624	SLU 38	1.42	3.18	132.08	46.9226	46.3721	-1.6278
624	SLU 39	1.43	3.33	134.87	47.9225	47.3507	-1.6848
624	SLU 40	1.43	3.28	134.88	47.9224	47.3543	-1.6666
624	SLU 41	1.45	3.36	136.31	48.434	47.8606	-1.7038
624	SLU 42	1.45	3.32	136.32	48.4338	47.8642	-1.6856
624	SLU 43	1.43	2.78	130.9	46.4691	45.9583	-1.4775
624	SLU 44	1.43	2.7	130.91	46.4689	45.9643	-1.4472
624	SLU 45	1.46	2.87	133.3	47.315	46.8013	-1.5201
624	SLU 46	1.46	2.82	133.3	47.3148	46.8049	-1.5019
624	SLU 47	1.45	2.73	132.36	46.9804	46.4742	-1.4661
624	SLU 48	1.48	2.9	134.74	47.8264	47.3112	-1.539
624	SLU 49	1.48	2.85	134.74	47.8263	47.3148	-1.5208
624	SLU 50	1.47	2.84	133.79	47.4921	46.978	-1.5154
624	SLU 51	1.47	2.8	133.79	47.492	46.9817	-1.4972
624	SLU 52	1.54	3.08	144.18	51.1886	50.6357	-1.6263
624	SLU 53	1.57	3.25	146.56	52.0346	51.4727	-1.6992
624	SLU 54	1.57	3.2	146.57	52.0345	51.4763	-1.681
624	SLU 55	1.56	3.12	145.62	51.7001	51.1456	-1.6452
624	SLU 56	1.59	3.28	148	52.5461	51.9825	-1.7181
624	SLU 57	1.59	3.24	148.01	52.546	51.9862	-1.6999
624	SLU 58	1.58	3.23	147.05	52.2118	51.6494	-1.6945
624	SLU 59	1.58	3.18	147.06	52.2116	51.653	-1.6763
624	SLU 60	1.59	3.33	149.85	53.2115	52.6316	-1.7334
624	SLU 61	1.59	3.28	149.86	53.2114	52.6353	-1.7151
624	SLU 62	1.61	3.36	151.29	53.723	53.1415	-1.7523
624	SLU 63	1.61	3.31	151.3	53.7229	53.1452	-1.7341
624	SLU 64	1.57	3.29	142.95	50.7696	50.1718	-1.709
624	SLU 65	1.56	3.21	142.97	50.7694	50.1779	-1.6786
624	SLU 66	1.6	3.38	145.35	51.6154	51.0148	-1.7515
624	SLU 67	1.6	3.33	145.35	51.6153	51.0185	-1.7333
624	SLU 68	1.58	3.24	144.41	51.2808	50.6878	-1.6976
624	SLU 69	1.62	3.41	146.79	52.1269	51.5247	-1.7705
624	SLU 70	1.62	3.36	146.79	52.1268	51.5284	-1.7522
624	SLU 71	1.61	3.35	145.84	51.7925	51.1916	-1.7469
624	SLU 72	1.6	3.31	145.84	51.7924	51.1952	-1.7286
624	SLU 73	1.67	3.6	156.23	55.489	54.8492	-1.8577
624	SLU 74	1.71	3.76	158.61	56.3351	55.6862	-1.9306
624	SLU 75	1.71	3.71	158.62	56.3349	55.6898	-1.9124
624	SLU 76	1.69	3.63	157.67	56.0005	55.3591	-1.8766
624	SLU 77	1.73	3.79	160.05	56.8465	56.1961	-1.9495
624	SLU 78	1.73	3.75	160.06	56.8464	56.1997	-1.9313
624	SLU 79	1.72	3.74	159.1	56.5122	55.8629	-1.9259
624	SLU 80	1.71	3.69	159.11	56.5121	55.8666	-1.9077
624	SLU 81	1.72	3.84	161.9	57.512	56.8452	-1.9648
624	SLU 82	1.72	3.79	161.91	57.5118	56.8488	-1.9466
624	SLU 83	1.74	3.87	163.34	58.0234	57.355	-1.9837
624	SLU 84	1.74	3.82	163.35	58.0233	57.3587	-1.9655
624	SLE RA 1	1.18	2.42	107.32	38.1084	37.6676	-1.2637
624	SLE RA 2	1.17	2.37	107.32	38.1082	37.6717	-1.2435
624	SLE RA 3	1.2	2.48	108.91	38.6722	38.2297	-1.2921
624	SLE RA 4	1.2	2.45	108.92	38.6722	38.2321	-1.2799
624	SLE RA 5	1.19	2.39	108.28	38.4492	38.0116	-1.2561
624	SLE RA 6	1.21	2.5	109.87	39.0132	38.5696	-1.3047
624	SLE RA 7	1.21	2.47	109.88	39.0132	38.572	-1.2926
624	SLE RA 8	1.2	2.46	109.24	38.7903	38.3475	-1.289
624	SLE RA 9	1.2	2.43	109.24	38.7903	38.3499	-1.2768
624	SLE RA 10	1.25	2.62	116.17	41.2547	40.7859	-1.3629
624	SLE RA 11	1.27	2.73	117.75	41.8187	41.3439	-1.4115
624	SLE RA 12	1.27	2.7	117.76	41.8186	41.3463	-1.3993

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
624	SLE RA 13	1.26	2.64	117.13	41.5957	41.1259	-1.3755
624	SLE RA 14	1.28	2.75	118.71	42.1597	41.6838	-1.4241
624	SLE RA 15	1.28	2.72	118.72	42.1596	41.6863	-1.412
624	SLE RA 16	1.28	2.72	118.08	41.9368	41.4617	-1.4084
624	SLE RA 17	1.27	2.69	118.09	41.9367	41.4642	-1.3962
624	SLE RA 18	1.28	2.78	119.95	42.6033	42.1165	-1.4343
624	SLE RA 19	1.28	2.75	119.95	42.6032	42.119	-1.4221
624	SLE RA 20	1.29	2.81	120.91	42.9443	42.4565	-1.4469
624	SLE RA 21	1.29	2.77	120.91	42.9442	42.4589	-1.4348
624	SLE FR 1	1.18	2.42	107.32	38.1084	37.6676	-1.2637
624	SLE FR 2	1.18	2.41	107.32	38.1083	37.6684	-1.2597
624	SLE FR 3	1.18	2.43	107.7	38.2448	37.8036	-1.2688
624	SLE FR 4	1.21	2.52	111.11	39.4568	39.0031	-1.3108
624	SLE FR 5	1.21	2.54	111.49	39.5932	39.1383	-1.3199
624	SLE FR 6	1.23	2.6	113.63	40.3558	39.8921	-1.349
624	SLE QP 1	1.18	2.42	107.32	38.1084	37.6676	-1.2637
624	SLE QP 2	1.21	2.53	111.11	39.4568	39.0023	-1.3149
624	SLD 1	10.67	3.49	108.23	38.2997	38.3678	-5.1876
624	SLD 2	10.64	3.83	108.2	38.3029	38.3578	-5.2835
624	SLD 3	10.22	0.38	108.85	38.4515	38.6411	-4.0486
624	SLD 4	10.2	0.71	108.82	38.4547	38.6311	-4.1445
624	SLD 5	4.72	7.48	109.31	38.8789	38.3993	-4.1872
624	SLD 6	4.71	7.7	109.29	38.881	38.3928	-4.2499
624	SLD 7	3.24	-2.9	111.37	39.3849	39.3101	-0.3905
624	SLD 8	3.22	-2.68	111.35	39.387	39.3036	-0.4533
624	SLD 9	-0.81	7.74	110.86	39.5267	38.701	-2.1765
624	SLD 10	-0.83	7.96	110.84	39.5287	38.6945	-2.2392
624	SLD 11	-2.29	-2.65	112.92	40.0327	39.6118	1.6201
624	SLD 12	-2.31	-2.43	112.9	40.0348	39.6053	1.5574
624	SLD 13	-7.78	4.34	113.39	40.459	39.3735	1.5148
624	SLD 14	-7.81	4.68	113.37	40.4622	39.3635	1.4188
624	SLD 15	-8.23	1.23	114.01	40.6108	39.6468	2.6538
624	SLD 16	-8.25	1.57	113.98	40.614	39.6368	2.5578
624	SLV 1	23.33	4.67	104.39	36.7517	37.525	-10.3342
624	SLV 2	23.28	5.45	104.32	36.7591	37.5018	-10.5577
624	SLV 3	22.3	-2.4	105.8	37.1004	38.1457	-7.751
624	SLV 4	22.24	-1.62	105.73	37.1079	38.1225	-7.9746
624	SLV 5	9.43	13.76	106.96	38.115	37.6218	-7.9001
624	SLV 6	9.39	14.26	106.92	38.1198	37.6069	-8.0438
624	SLV 7	5.97	-9.81	111.67	39.2776	39.6906	0.7103
624	SLV 8	5.94	-9.3	111.63	39.2824	39.6757	0.5667
624	SLV 9	-3.52	14.36	110.59	39.6313	38.3289	-3.1964
624	SLV 10	-3.56	14.86	110.54	39.6361	38.314	-3.3401
624	SLV 11	-6.98	-9.2	115.3	40.7939	40.3977	5.414
624	SLV 12	-7.01	-8.7	115.25	40.7986	40.3828	5.2703
624	SLV 13	-19.83	6.67	116.48	41.8058	39.8821	5.3448
624	SLV 14	-19.88	7.46	116.41	41.8132	39.8589	5.1213
624	SLV 15	-20.87	-0.4	117.89	42.1546	40.5028	7.9279
624	SLV 16	-20.92	0.39	117.83	42.162	40.4796	7.7044
624	CRTFP Ux+	0	0	0	0	0	0
624	CRTFP Ux-	0	0	0	0	0	0
624	CRTFP Uy+	0	0	0	0	0	0
624	CRTFP Uy-	0	0	0	0	0	0
625	SLU 1	0.43	0.82	40.77	1.6039	-2.3379	0.0018
625	SLU 2	0.43	0.79	40.78	1.6001	-2.3386	0.0004
625	SLU 3	0.44	0.85	41.71	1.638	-2.392	0.0021
625	SLU 4	0.44	0.83	41.72	1.6358	-2.3925	0.0013
625	SLU 5	0.43	0.8	41.34	1.6228	-2.3708	0.0001
625	SLU 6	0.44	0.86	42.27	1.6607	-2.4242	0.0018
625	SLU 7	0.44	0.84	42.28	1.6585	-2.4246	0.001
625	SLU 8	0.44	0.84	41.89	1.6493	-2.4022	0.0012
625	SLU 9	0.44	0.82	41.9	1.647	-2.4026	0.0004
625	SLU 10	0.46	0.92	45.94	1.8173	-2.6339	0.0029
625	SLU 11	0.47	0.98	46.88	1.8552	-2.6874	0.0047
625	SLU 12	0.47	0.96	46.88	1.8529	-2.6878	0.0038
625	SLU 13	0.47	0.93	46.5	1.84	-2.6661	0.0027
625	SLU 14	0.48	0.99	47.44	1.8779	-2.7195	0.0044
625	SLU 15	0.48	0.97	47.44	1.8756	-2.7199	0.0035
625	SLU 16	0.47	0.97	47.06	1.8664	-2.6975	0.0037
625	SLU 17	0.47	0.95	47.06	1.8642	-2.6979	0.0029
625	SLU 18	0.47	1	48.15	1.9141	-2.7598	0.0054
625	SLU 19	0.47	0.99	48.15	1.9118	-2.7602	0.0046
625	SLU 20	0.48	1.01	48.71	1.9368	-2.792	0.0051
625	SLU 21	0.48	1	48.71	1.9345	-2.7924	0.0043
625	SLU 22	0.47	1	45.49	1.8142	-2.6076	0.0062
625	SLU 23	0.47	0.97	45.5	1.8104	-2.6083	0.0049
625	SLU 24	0.48	1.03	46.43	1.8483	-2.6617	0.0066
625	SLU 25	0.48	1.01	46.43	1.8461	-2.6621	0.0058
625	SLU 26	0.48	0.98	46.06	1.8331	-2.6404	0.0046
625	SLU 27	0.49	1.03	46.99	1.871	-2.6938	0.0063
625	SLU 28	0.49	1.02	46.99	1.8688	-2.6943	0.0055
625	SLU 29	0.48	1.01	46.61	1.8596	-2.6719	0.0057
625	SLU 30	0.48	1	46.61	1.8573	-2.6723	0.0048
625	SLU 31	0.5	1.1	50.66	2.0276	-2.9036	0.0074
625	SLU 32	0.51	1.16	51.59	2.0655	-2.957	0.0092
625	SLU 33	0.51	1.14	51.6	2.0632	-2.9574	0.0083
625	SLU 34	0.51	1.11	51.22	2.0503	-2.9357	0.0071
625	SLU 35	0.52	1.16	52.15	2.0882	-2.9892	0.0089
625	SLU 36	0.52	1.15	52.16	2.0859	-2.9896	0.008
625	SLU 37	0.52	1.14	51.77	2.0767	-2.9672	0.0082
625	SLU 38	0.52	1.13	51.78	2.0745	-2.9676	0.0074
625	SLU 39	0.52	1.18	52.86	2.1244	-3.0295	0.0099
625	SLU 40	0.52	1.16	52.87	2.1221	-3.0299	0.0091
625	SLU 41	0.52	1.19	53.43	2.1471	-3.0616	0.0096
625	SLU 42	0.52	1.17	53.43	2.1448	-3.062	0.0088
625	SLU 43	0.54	1	51.39	2.0129	-2.9469	0.0007
625	SLU 44	0.54	0.97	51.39	2.0092	-2.9476	-0.0006

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
625	SLU 45	0.55	1.03	52.33	2.0471	-3.001	0.0011
625	SLU 46	0.55	1.01	52.33	2.0448	-3.0014	0.0003
625	SLU 47	0.55	0.98	51.96	2.0319	-2.9797	-0.0009
625	SLU 48	0.56	1.04	52.89	2.0698	-3.0331	0.0008
625	SLU 49	0.56	1.02	52.89	2.0675	-3.0335	0
625	SLU 50	0.55	1.02	52.51	2.0583	-3.0111	0.0002
625	SLU 51	0.55	1	52.51	2.0561	-3.0116	-0.0007
625	SLU 52	0.57	1.1	56.56	2.2263	-3.2429	0.0019
625	SLU 53	0.58	1.16	57.49	2.2642	-3.2963	0.0036
625	SLU 54	0.58	1.14	57.5	2.262	-3.2967	0.0028
625	SLU 55	0.58	1.11	57.12	2.249	-3.275	0.0016
625	SLU 56	0.59	1.17	58.05	2.2869	-3.3284	0.0034
625	SLU 57	0.59	1.15	58.06	2.2847	-3.3288	0.0025
625	SLU 58	0.59	1.15	57.67	2.2755	-3.3065	0.0027
625	SLU 59	0.59	1.13	57.68	2.2732	-3.3069	0.0019
625	SLU 60	0.59	1.19	58.76	2.3231	-3.3688	0.0044
625	SLU 61	0.59	1.17	58.77	2.3209	-3.3692	0.0036
625	SLU 62	0.59	1.2	59.32	2.3458	-3.4009	0.0041
625	SLU 63	0.59	1.18	59.33	2.3436	-3.4013	0.0033
625	SLU 64	0.58	1.18	56.1	2.2232	-3.2165	0.0052
625	SLU 65	0.58	1.15	56.11	2.2195	-3.2172	0.0039
625	SLU 66	0.59	1.21	57.04	2.2574	-3.2706	0.0056
625	SLU 67	0.59	1.19	57.05	2.2551	-3.271	0.0048
625	SLU 68	0.59	1.16	56.67	2.2422	-3.2493	0.0036
625	SLU 69	0.6	1.22	57.6	2.2801	-3.3028	0.0053
625	SLU 70	0.6	1.2	57.61	2.2778	-3.3032	0.0045
625	SLU 71	0.6	1.2	57.22	2.2686	-3.2808	0.0047
625	SLU 72	0.6	1.18	57.23	2.2664	-3.2812	0.0038
625	SLU 73	0.62	1.28	61.27	2.4366	-3.5125	0.0064
625	SLU 74	0.63	1.34	62.21	2.4745	-3.566	0.0081
625	SLU 75	0.63	1.32	62.21	2.4723	-3.5664	0.0073
625	SLU 76	0.62	1.29	61.84	2.4593	-3.5447	0.0061
625	SLU 77	0.63	1.35	62.77	2.4972	-3.5981	0.0079
625	SLU 78	0.63	1.33	62.77	2.495	-3.5985	0.007
625	SLU 79	0.63	1.33	62.39	2.4858	-3.5761	0.0072
625	SLU 80	0.63	1.31	62.39	2.4835	-3.5765	0.0064
625	SLU 81	0.63	1.37	63.48	2.5334	-3.6384	0.0089
625	SLU 82	0.63	1.35	63.48	2.5312	-3.6388	0.0081
625	SLU 83	0.64	1.37	64.04	2.5561	-3.6706	0.0086
625	SLU 84	0.64	1.36	64.04	2.5539	-3.671	0.0078
625	SLE RA 1	0.44	0.87	42.12	1.664	-2.415	0.003
625	SLE RA 2	0.44	0.85	42.12	1.6615	-2.4154	0.0021
625	SLE RA 3	0.45	0.89	42.75	1.6867	-2.4511	0.0033
625	SLE RA 4	0.45	0.88	42.75	1.6852	-2.4513	0.0027
625	SLE RA 5	0.44	0.86	42.5	1.6766	-2.4369	0.0019
625	SLE RA 6	0.45	0.89	43.12	1.7019	-2.4725	0.0031
625	SLE RA 7	0.45	0.88	43.12	1.7004	-2.4728	0.0025
625	SLE RA 8	0.45	0.88	42.87	1.6942	-2.4578	0.0027
625	SLE RA 9	0.45	0.87	42.87	1.6927	-2.4581	0.0021
625	SLE RA 10	0.46	0.94	45.57	1.8062	-2.6123	0.0038
625	SLE RA 11	0.47	0.97	46.19	1.8315	-2.6479	0.005
625	SLE RA 12	0.47	0.96	46.19	1.83	-2.6482	0.0044
625	SLE RA 13	0.47	0.94	45.94	1.8214	-2.6337	0.0036
625	SLE RA 14	0.47	0.98	46.56	1.8466	-2.6694	0.0048
625	SLE RA 15	0.47	0.97	46.57	1.8451	-2.6696	0.0042
625	SLE RA 16	0.47	0.97	46.31	1.839	-2.6547	0.0044
625	SLE RA 17	0.47	0.96	46.31	1.8375	-2.655	0.0038
625	SLE RA 18	0.47	0.99	47.04	1.8708	-2.6962	0.0055
625	SLE RA 19	0.47	0.98	47.04	1.8693	-2.6965	0.0049
625	SLE RA 20	0.48	1	47.41	1.8859	-2.7177	0.0053
625	SLE RA 21	0.48	0.99	47.41	1.8844	-2.7179	0.0047
625	SLE FR 1	0.44	0.87	42.12	1.664	-2.415	0.003
625	SLE FR 2	0.44	0.86	42.12	1.6635	-2.4151	0.0029
625	SLE FR 3	0.44	0.87	42.27	1.67	-2.4236	0.003
625	SLE FR 4	0.45	0.9	43.6	1.7255	-2.4995	0.0036
625	SLE FR 5	0.45	0.91	43.74	1.732	-2.5079	0.0037
625	SLE FR 6	0.45	0.93	44.58	1.7674	-2.5556	0.0043
625	SLE QP 1	0.44	0.87	42.12	1.664	-2.415	0.003
625	SLE QP 2	0.45	0.91	43.59	1.726	-2.4994	0.0038
625	SLD 1	4	1.56	42.17	1.4944	-2.4161	-0.193
625	SLD 2	4	1.71	42.13	1.5075	-2.4131	-0.1827
625	SLD 3	3.83	0.42	42.49	1.419	-2.4382	-0.2549
625	SLD 4	3.84	0.57	42.45	1.4321	-2.4352	-0.2445
625	SLD 5	1.76	2.81	42.68	1.7686	-2.4414	0.0367
625	SLD 6	1.77	2.9	42.66	1.7771	-2.4394	0.0435
625	SLD 7	1.21	-1	43.76	1.5172	-2.5151	-0.1695
625	SLD 8	1.22	-0.9	43.73	1.5258	-2.5131	-0.1627
625	SLD 9	-0.32	2.71	43.46	1.9262	-2.4856	0.1703
625	SLD 10	-0.32	2.81	43.43	1.9348	-2.4837	0.177
625	SLD 11	-0.87	-1.09	44.53	1.6748	-2.5593	-0.036
625	SLD 12	-0.87	-1	44.5	1.6834	-2.5573	-0.0292
625	SLD 13	-2.94	1.24	44.74	2.0199	-2.5636	0.2521
625	SLD 14	-2.94	1.39	44.7	2.033	-2.5605	0.2624
625	SLD 15	-3.11	0.1	45.06	1.9445	-2.5857	0.1902
625	SLD 16	-3.1	0.25	45.02	1.9576	-2.5826	0.2005
625	SLV 1	8.75	2.41	40.26	1.1815	-2.305	-0.4585
625	SLV 2	8.76	2.75	40.17	1.212	-2.298	-0.4345
625	SLV 3	8.37	-0.18	41	1.0102	-2.3556	-0.5993
625	SLV 4	8.38	0.17	40.91	1.0407	-2.3486	-0.5753
625	SLV 5	3.52	5.22	41.49	1.8172	-2.3656	0.0744
625	SLV 6	3.53	5.45	41.43	1.8368	-2.3611	0.0899
625	SLV 7	2.24	-3.41	43.95	1.2462	-2.5341	-0.3948
625	SLV 8	2.25	-3.18	43.89	1.2658	-2.5296	-0.3793
625	SLV 9	-1.35	5	43.3	2.1862	-2.4691	0.3869
625	SLV 10	-1.34	5.22	43.24	2.2058	-2.4646	0.4023
625	SLV 11	-2.63	-3.64	45.76	1.6152	-2.6376	-0.0824
625	SLV 12	-2.62	-3.41	45.7	1.6347	-2.6331	-0.0669

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
625	SLV 13	-7.48	1.65	46.28	2.4113	-2.6502	0.5828
625	SLV 14	-7.47	1.99	46.19	2.4418	-2.6431	0.6069
625	SLV 15	-7.87	-0.94	47.02	2.24	-2.7007	0.442
625	SLV 16	-7.86	-0.6	46.93	2.2705	-2.6937	0.4661
625	CRTFP Ux+	0	0	0	0	0	0
625	CRTFP Ux-	0	0	0	0	0	0
625	CRTFP Uy+	0	0	0	0	0	0
625	CRTFP Uy-	0	0	0	0	0	0
626	SLU 1	0.52	0.87	49.68	-1.3326	-0.619	-0.0187
626	SLU 2	0.52	0.84	49.69	-1.3379	-0.6192	-0.019
626	SLU 3	0.53	0.9	50.83	-1.3668	-0.6334	-0.0193
626	SLU 4	0.53	0.88	50.84	-1.37	-0.6335	-0.0194
626	SLU 5	0.53	0.85	50.38	-1.3554	-0.6278	-0.0194
626	SLU 6	0.54	0.91	51.51	-1.3844	-0.642	-0.0198
626	SLU 7	0.54	0.89	51.52	-1.3875	-0.6421	-0.0199
626	SLU 8	0.54	0.89	51.05	-1.3677	-0.6362	-0.0197
626	SLU 9	0.54	0.87	51.06	-1.3709	-0.6363	-0.0198
626	SLU 10	0.56	0.98	55.98	-1.4895	-0.6976	-0.0208
626	SLU 11	0.57	1.04	57.12	-1.5184	-0.7119	-0.0212
626	SLU 12	0.57	1.02	57.12	-1.5216	-0.7119	-0.0213
626	SLU 13	0.57	0.99	56.66	-1.507	-0.7062	-0.0213
626	SLU 14	0.58	1.05	57.8	-1.536	-0.7205	-0.0217
626	SLU 15	0.58	1.03	57.81	-1.5391	-0.7206	-0.0218
626	SLU 16	0.57	1.03	57.34	-1.5193	-0.7147	-0.0216
626	SLU 17	0.57	1.01	57.34	-1.5225	-0.7148	-0.0217
626	SLU 18	0.57	1.07	58.66	-1.5492	-0.7311	-0.0214
626	SLU 19	0.57	1.05	58.67	-1.5523	-0.7312	-0.0215
626	SLU 20	0.58	1.08	59.35	-1.5667	-0.7397	-0.0219
626	SLU 21	0.58	1.06	59.35	-1.5699	-0.7398	-0.022
626	SLU 22	0.57	1.07	55.44	-1.456	-0.6916	-0.0202
626	SLU 23	0.57	1.03	55.45	-1.4612	-0.6917	-0.0205
626	SLU 24	0.59	1.1	56.59	-1.4902	-0.706	-0.0208
626	SLU 25	0.59	1.08	56.6	-1.4933	-0.7061	-0.0209
626	SLU 26	0.58	1.04	56.14	-1.4788	-0.7003	-0.0209
626	SLU 27	0.59	1.11	57.27	-1.5077	-0.7146	-0.0213
626	SLU 28	0.59	1.09	57.28	-1.5109	-0.7147	-0.0214
626	SLU 29	0.59	1.09	56.81	-1.4911	-0.7088	-0.0212
626	SLU 30	0.59	1.07	56.82	-1.4942	-0.7089	-0.0213
626	SLU 31	0.61	1.18	61.74	-1.6128	-0.7701	-0.0223
626	SLU 32	0.62	1.24	62.88	-1.6417	-0.7844	-0.0227
626	SLU 33	0.62	1.22	62.88	-1.6449	-0.7845	-0.0228
626	SLU 34	0.62	1.18	62.42	-1.6303	-0.7788	-0.0228
626	SLU 35	0.63	1.25	63.56	-1.6593	-0.793	-0.0232
626	SLU 36	0.63	1.23	63.57	-1.6625	-0.7931	-0.0233
626	SLU 37	0.63	1.23	63.1	-1.6426	-0.7872	-0.0231
626	SLU 38	0.63	1.21	63.1	-1.6458	-0.7873	-0.0232
626	SLU 39	0.63	1.27	64.42	-1.6725	-0.8036	-0.0229
626	SLU 40	0.63	1.25	64.43	-1.6756	-0.8037	-0.023
626	SLU 41	0.63	1.28	65.11	-1.6901	-0.8122	-0.0234
626	SLU 42	0.63	1.26	65.11	-1.6932	-0.8123	-0.0235
626	SLU 43	0.66	1.06	62.61	-1.6901	-0.7798	-0.0238
626	SLU 44	0.66	1.03	62.62	-1.6954	-0.78	-0.0241
626	SLU 45	0.67	1.09	63.76	-1.7243	-0.7942	-0.0244
626	SLU 46	0.67	1.07	63.77	-1.7275	-0.7943	-0.0245
626	SLU 47	0.67	1.04	63.31	-1.7129	-0.7886	-0.0245
626	SLU 48	0.68	1.1	64.44	-1.7419	-0.8029	-0.0249
626	SLU 49	0.68	1.08	64.45	-1.745	-0.803	-0.025
626	SLU 50	0.67	1.08	63.98	-1.7252	-0.7971	-0.0248
626	SLU 51	0.67	1.06	63.99	-1.7284	-0.7972	-0.0249
626	SLU 52	0.7	1.17	68.91	-1.8469	-0.8584	-0.0259
626	SLU 53	0.71	1.23	70.05	-1.8759	-0.8727	-0.0263
626	SLU 54	0.71	1.22	70.05	-1.8791	-0.8728	-0.0264
626	SLU 55	0.7	1.18	69.59	-1.8645	-0.867	-0.0264
626	SLU 56	0.72	1.24	70.73	-1.8935	-0.8813	-0.0268
626	SLU 57	0.72	1.22	70.74	-1.8966	-0.8814	-0.0269
626	SLU 58	0.71	1.22	70.27	-1.8768	-0.8755	-0.0267
626	SLU 59	0.71	1.2	70.27	-1.88	-0.8756	-0.0268
626	SLU 60	0.71	1.26	71.59	-1.9067	-0.8919	-0.0265
626	SLU 61	0.71	1.24	71.6	-1.9098	-0.892	-0.0266
626	SLU 62	0.72	1.27	72.27	-1.9242	-0.9005	-0.027
626	SLU 63	0.72	1.25	72.28	-1.9274	-0.9006	-0.0271
626	SLU 64	0.71	1.26	68.37	-1.8134	-0.8524	-0.0253
626	SLU 65	0.71	1.23	68.38	-1.8187	-0.8525	-0.0256
626	SLU 66	0.72	1.29	69.52	-1.8477	-0.8668	-0.0259
626	SLU 67	0.72	1.27	69.53	-1.8508	-0.8669	-0.026
626	SLU 68	0.72	1.24	69.07	-1.8363	-0.8612	-0.026
626	SLU 69	0.73	1.3	70.2	-1.8652	-0.8754	-0.0264
626	SLU 70	0.73	1.28	70.21	-1.8684	-0.8755	-0.0265
626	SLU 71	0.73	1.28	69.74	-1.8486	-0.8696	-0.0263
626	SLU 72	0.73	1.26	69.75	-1.8517	-0.8697	-0.0264
626	SLU 73	0.75	1.37	74.67	-1.9703	-0.931	-0.0274
626	SLU 74	0.76	1.43	75.81	-1.9992	-0.9452	-0.0278
626	SLU 75	0.76	1.41	75.81	-2.0024	-0.9453	-0.0279
626	SLU 76	0.76	1.38	75.35	-1.9878	-0.9396	-0.0279
626	SLU 77	0.77	1.44	76.49	-2.0168	-0.9538	-0.0283
626	SLU 78	0.77	1.42	76.5	-2.02	-0.9539	-0.0284
626	SLU 79	0.76	1.42	76.03	-2.0001	-0.9481	-0.0282
626	SLU 80	0.76	1.4	76.03	-2.0033	-0.9482	-0.0283
626	SLU 81	0.76	1.46	77.35	-2.03	-0.9644	-0.028
626	SLU 82	0.76	1.44	77.36	-2.0331	-0.9645	-0.0281
626	SLU 83	0.77	1.47	78.04	-2.0475	-0.9731	-0.0285
626	SLU 84	0.77	1.45	78.04	-2.0507	-0.9731	-0.0286
626	SLE RA 1	0.53	0.93	51.33	-1.3679	-0.6397	-0.0191
626	SLE RA 2	0.53	0.9	51.33	-1.3714	-0.6398	-0.0193
626	SLE RA 3	0.54	0.95	52.09	-1.3907	-0.6493	-0.0195
626	SLE RA 4	0.54	0.93	52.1	-1.3928	-0.6494	-0.0196
626	SLE RA 5	0.54	0.91	51.79	-1.3831	-0.6456	-0.0196

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
626	SLE RA 6	0.55	0.95	52.55	-1.4024	-0.6551	-0.0199
626	SLE RA 7	0.55	0.94	52.55	-1.4045	-0.6552	-0.02
626	SLE RA 8	0.55	0.94	52.24	-1.3913	-0.6512	-0.0198
626	SLE RA 9	0.55	0.92	52.24	-1.3934	-0.6513	-0.0199
626	SLE RA 10	0.56	1	55.52	-1.4724	-0.6921	-0.0206
626	SLE RA 11	0.57	1.04	56.28	-1.4917	-0.7016	-0.0208
626	SLE RA 12	0.57	1.03	56.29	-1.4938	-0.7017	-0.0209
626	SLE RA 13	0.57	1	55.98	-1.4841	-0.6979	-0.0209
626	SLE RA 14	0.57	1.05	56.74	-1.5034	-0.7074	-0.0211
626	SLE RA 15	0.57	1.03	56.74	-1.5055	-0.7074	-0.0212
626	SLE RA 16	0.57	1.03	56.43	-1.4923	-0.7035	-0.021
626	SLE RA 17	0.57	1.02	56.43	-1.4944	-0.7036	-0.0211
626	SLE RA 18	0.57	1.06	57.31	-1.5122	-0.7144	-0.0209
626	SLE RA 19	0.57	1.05	57.32	-1.5143	-0.7145	-0.021
626	SLE RA 20	0.58	1.07	57.77	-1.5239	-0.7202	-0.0213
626	SLE RA 21	0.58	1.05	57.77	-1.526	-0.7202	-0.0214
626	SLE FR 1	0.53	0.93	51.33	-1.3679	-0.6397	-0.0191
626	SLE FR 2	0.53	0.92	51.33	-1.3686	-0.6398	-0.0192
626	SLE FR 3	0.54	0.93	51.51	-1.3725	-0.642	-0.0193
626	SLE FR 4	0.55	0.96	53.12	-1.4119	-0.6622	-0.0197
626	SLE FR 5	0.55	0.97	53.3	-1.4158	-0.6644	-0.0198
626	SLE FR 6	0.55	0.99	54.32	-1.44	-0.6771	-0.02
626	SLE QP 1	0.53	0.93	51.33	-1.3679	-0.6397	-0.0191
626	SLE QP 2	0.55	0.97	53.12	-1.4112	-0.6622	-0.0197
626	SLD 1	4.82	1.75	50.95	-1.5935	-0.619	-0.0046
626	SLD 2	4.83	1.94	50.9	-1.5744	-0.6182	0.0005
626	SLD 3	4.62	0.39	51.37	-1.709	-0.6244	-0.0191
626	SLD 4	4.63	0.58	51.32	-1.6899	-0.6236	-0.014
626	SLD 5	2.13	3.23	51.84	-1.294	-0.6411	0.0058
626	SLD 6	2.13	3.35	51.8	-1.2815	-0.6407	0.0091
626	SLD 7	1.47	-1.3	53.25	-1.6791	-0.6591	-0.0423
626	SLD 8	1.47	-1.18	53.21	-1.6666	-0.6586	-0.039
626	SLD 9	-0.38	3.11	53.03	-1.1557	-0.6657	-0.0004
626	SLD 10	-0.38	3.23	53	-1.1432	-0.6652	0.0029
626	SLD 11	-1.04	-1.42	54.44	-1.5408	-0.6837	-0.0485
626	SLD 12	-1.03	-1.3	54.4	-1.5283	-0.6832	-0.0452
626	SLD 13	-3.54	1.35	54.93	-1.1324	-0.7007	-0.0254
626	SLD 14	-3.53	1.54	54.87	-1.1133	-0.6999	-0.0203
626	SLD 15	-3.74	-0.01	55.35	-1.248	-0.7061	-0.0398
626	SLD 16	-3.73	0.18	55.29	-1.2288	-0.7053	-0.0347
626	SLV 1	10.54	2.76	48.05	-1.8419	-0.5612	0.0152
626	SLV 2	10.56	3.21	47.92	-1.7973	-0.5594	0.027
626	SLV 3	10.08	-0.33	49.02	-2.1043	-0.5736	-0.0177
626	SLV 4	10.1	0.12	48.89	-2.0597	-0.5718	-0.0059
626	SLV 5	4.24	6.11	50.16	-1.15	-0.6133	0.0387
626	SLV 6	4.25	6.4	50.07	-1.1214	-0.6122	0.0463
626	SLV 7	2.7	-4.18	53.38	-2.0247	-0.6547	-0.071
626	SLV 8	2.72	-3.89	53.3	-1.9961	-0.6536	-0.0634
626	SLV 9	-1.62	5.82	52.95	-0.8263	-0.6707	0.0241
626	SLV 10	-1.61	6.11	52.86	-0.7976	-0.6696	0.0317
626	SLV 11	-3.16	-4.46	56.17	-1.7009	-0.7121	-0.0856
626	SLV 12	-3.15	-4.18	56.09	-1.6723	-0.711	-0.078
626	SLV 13	-9.01	1.81	57.36	-0.7626	-0.7525	-0.0335
626	SLV 14	-8.99	2.26	57.23	-0.7181	-0.7507	-0.0217
626	SLV 15	-9.47	-1.28	58.32	-1.025	-0.7649	-0.0664
626	SLV 16	-9.45	-0.83	58.19	-0.9805	-0.7631	-0.0546
626	CRTFP Ux+	0	0	0	0	0	0
626	CRTFP Ux-	0	0	0	0	0	0
626	CRTFP Uy+	0	0	0	0	0	0
626	CRTFP Uy-	0	0	0	0	0	0
627	SLU 1	0.59	0.75	53.47	-1.4296	-0.0018	-0.0405
627	SLU 2	0.59	0.72	53.48	-1.4352	-0.0018	-0.0403
627	SLU 3	0.6	0.78	54.71	-1.4663	-0.0019	-0.0417
627	SLU 4	0.6	0.76	54.72	-1.4697	-0.002	-0.0416
627	SLU 5	0.6	0.72	54.22	-1.4541	-0.002	-0.0411
627	SLU 6	0.61	0.79	55.45	-1.4853	-0.0021	-0.0424
627	SLU 7	0.61	0.77	55.46	-1.4886	-0.0021	-0.0424
627	SLU 8	0.61	0.77	54.95	-1.4674	-0.0021	-0.042
627	SLU 9	0.61	0.74	54.96	-1.4708	-0.0021	-0.0419
627	SLU 10	0.63	0.85	60.25	-1.5979	-0.002	-0.0446
627	SLU 11	0.65	0.91	61.48	-1.629	-0.0022	-0.0459
627	SLU 12	0.65	0.89	61.48	-1.6324	-0.0022	-0.0459
627	SLU 13	0.64	0.86	60.99	-1.6168	-0.0022	-0.0453
627	SLU 14	0.65	0.92	62.22	-1.6479	-0.0024	-0.0467
627	SLU 15	0.65	0.9	62.23	-1.6513	-0.0024	-0.0466
627	SLU 16	0.65	0.9	61.72	-1.6301	-0.0024	-0.0462
627	SLU 17	0.65	0.88	61.73	-1.6335	-0.0024	-0.0461
627	SLU 18	0.65	0.94	63.14	-1.662	-0.0021	-0.0465
627	SLU 19	0.65	0.92	63.14	-1.6654	-0.0021	-0.0465
627	SLU 20	0.66	0.95	63.88	-1.6809	-0.0023	-0.0473
627	SLU 21	0.66	0.93	63.89	-1.6843	-0.0023	-0.0472
627	SLU 22	0.65	0.94	59.7	-1.5624	-0.0028	-0.0453
627	SLU 23	0.65	0.91	59.71	-1.568	-0.0028	-0.0452
627	SLU 24	0.66	0.97	60.94	-1.5991	-0.003	-0.0466
627	SLU 25	0.66	0.95	60.94	-1.6025	-0.003	-0.0465
627	SLU 26	0.66	0.91	60.45	-1.5869	-0.003	-0.046
627	SLU 27	0.67	0.98	61.68	-1.618	-0.0031	-0.0473
627	SLU 28	0.67	0.96	61.69	-1.6214	-0.0032	-0.0472
627	SLU 29	0.67	0.95	61.18	-1.6002	-0.0031	-0.0468
627	SLU 30	0.67	0.93	61.19	-1.6036	-0.0032	-0.0468
627	SLU 31	0.69	1.04	66.48	-1.7307	-0.0031	-0.0495
627	SLU 32	0.7	1.1	67.71	-1.7618	-0.0032	-0.0508
627	SLU 33	0.7	1.08	67.71	-1.7651	-0.0032	-0.0507
627	SLU 34	0.7	1.05	67.22	-1.7496	-0.0032	-0.0502
627	SLU 35	0.71	1.11	68.45	-1.7807	-0.0034	-0.0516
627	SLU 36	0.71	1.09	68.45	-1.7841	-0.0034	-0.0515
627	SLU 37	0.71	1.09	67.95	-1.7629	-0.0034	-0.0511

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
627	SLU 38	0.71	1.07	67.96	-1.7662	-0.0034	-0.051
627	SLU 39	0.71	1.13	69.37	-1.7948	-0.0031	-0.0514
627	SLU 40	0.71	1.11	69.37	-1.7981	-0.0032	-0.0513
627	SLU 41	0.72	1.14	70.11	-1.8137	-0.0033	-0.0521
627	SLU 42	0.72	1.12	70.11	-1.817	-0.0033	-0.0521
627	SLU 43	0.75	0.91	67.37	-1.813	-0.0019	-0.0509
627	SLU 44	0.75	0.88	67.38	-1.8186	-0.002	-0.0508
627	SLU 45	0.76	0.94	68.61	-1.8497	-0.0021	-0.0522
627	SLU 46	0.76	0.92	68.62	-1.8531	-0.0021	-0.0521
627	SLU 47	0.76	0.89	68.13	-1.8375	-0.0022	-0.0516
627	SLU 48	0.77	0.95	69.35	-1.8686	-0.0023	-0.0529
627	SLU 49	0.77	0.93	69.36	-1.872	-0.0023	-0.0529
627	SLU 50	0.76	0.93	68.85	-1.8508	-0.0023	-0.0524
627	SLU 51	0.76	0.91	68.86	-1.8542	-0.0023	-0.0524
627	SLU 52	0.79	1.01	74.15	-1.9812	-0.0022	-0.0551
627	SLU 53	0.8	1.07	75.38	-2.0124	-0.0024	-0.0564
627	SLU 54	0.8	1.05	75.39	-2.0157	-0.0024	-0.0564
627	SLU 55	0.8	1.02	74.89	-2.0002	-0.0024	-0.0558
627	SLU 56	0.81	1.08	76.12	-2.0313	-0.0025	-0.0572
627	SLU 57	0.81	1.06	76.13	-2.0347	-0.0026	-0.0571
627	SLU 58	0.81	1.06	75.62	-2.0135	-0.0025	-0.0567
627	SLU 59	0.81	1.04	75.63	-2.0168	-0.0026	-0.0566
627	SLU 60	0.8	1.1	77.04	-2.0453	-0.0023	-0.057
627	SLU 61	0.8	1.08	77.05	-2.0487	-0.0023	-0.0569
627	SLU 62	0.81	1.11	77.78	-2.0643	-0.0025	-0.0577
627	SLU 63	0.81	1.09	77.79	-2.0676	-0.0025	-0.0577
627	SLU 64	0.8	1.1	73.6	-1.9457	-0.003	-0.0558
627	SLU 65	0.8	1.07	73.61	-1.9513	-0.003	-0.0557
627	SLU 66	0.82	1.13	74.84	-1.9825	-0.0031	-0.057
627	SLU 67	0.82	1.11	74.85	-1.9858	-0.0032	-0.057
627	SLU 68	0.81	1.08	74.35	-1.9703	-0.0032	-0.0564
627	SLU 69	0.83	1.14	75.58	-2.0014	-0.0033	-0.0578
627	SLU 70	0.83	1.12	75.59	-2.0048	-0.0033	-0.0577
627	SLU 71	0.82	1.12	75.08	-1.9836	-0.0033	-0.0573
627	SLU 72	0.82	1.1	75.09	-1.9869	-0.0033	-0.0572
627	SLU 73	0.85	1.2	80.38	-2.114	-0.0032	-0.0599
627	SLU 74	0.86	1.26	81.61	-2.1451	-0.0034	-0.0613
627	SLU 75	0.86	1.24	81.62	-2.1485	-0.0034	-0.0612
627	SLU 76	0.85	1.21	81.12	-2.1329	-0.0034	-0.0607
627	SLU 77	0.87	1.27	82.35	-2.1641	-0.0036	-0.062
627	SLU 78	0.87	1.25	82.36	-2.1674	-0.0036	-0.062
627	SLU 79	0.86	1.25	81.85	-2.1462	-0.0036	-0.0615
627	SLU 80	0.86	1.23	81.86	-2.1496	-0.0036	-0.0615
627	SLU 81	0.86	1.29	83.27	-2.1781	-0.0033	-0.0619
627	SLU 82	0.86	1.27	83.28	-2.1815	-0.0033	-0.0618
627	SLU 83	0.87	1.3	84.01	-2.197	-0.0035	-0.0626
627	SLU 84	0.87	1.28	84.02	-2.2004	-0.0035	-0.0625
627	SLE RA 1	0.61	0.81	55.25	-1.4675	-0.0021	-0.0418
627	SLE RA 2	0.61	0.78	55.26	-1.4713	-0.0021	-0.0418
627	SLE RA 3	0.62	0.83	56.07	-1.492	-0.0022	-0.0427
627	SLE RA 4	0.62	0.81	56.08	-1.4943	-0.0022	-0.0426
627	SLE RA 5	0.61	0.79	55.75	-1.4839	-0.0022	-0.0423
627	SLE RA 6	0.62	0.83	56.57	-1.5046	-0.0023	-0.0432
627	SLE RA 7	0.62	0.82	56.57	-1.5069	-0.0023	-0.0431
627	SLE RA 8	0.62	0.82	56.23	-1.4928	-0.0023	-0.0428
627	SLE RA 9	0.62	0.8	56.24	-1.495	-0.0023	-0.0428
627	SLE RA 10	0.63	0.87	59.77	-1.5797	-0.0022	-0.0446
627	SLE RA 11	0.64	0.91	60.59	-1.6005	-0.0023	-0.0455
627	SLE RA 12	0.64	0.9	60.59	-1.6027	-0.0024	-0.0455
627	SLE RA 13	0.64	0.88	60.26	-1.5923	-0.0024	-0.0451
627	SLE RA 14	0.65	0.92	61.08	-1.6131	-0.0025	-0.046
627	SLE RA 15	0.65	0.9	61.09	-1.6153	-0.0025	-0.046
627	SLE RA 16	0.65	0.9	60.75	-1.6012	-0.0025	-0.0457
627	SLE RA 17	0.65	0.89	60.75	-1.6034	-0.0025	-0.0456
627	SLE RA 18	0.64	0.93	61.69	-1.6225	-0.0023	-0.0459
627	SLE RA 19	0.64	0.92	61.7	-1.6247	-0.0023	-0.0459
627	SLE RA 20	0.65	0.94	62.19	-1.6351	-0.0024	-0.0464
627	SLE RA 21	0.65	0.92	62.19	-1.6373	-0.0024	-0.0463
627	SLE FR 1	0.61	0.81	55.25	-1.4675	-0.0021	-0.0418
627	SLE FR 2	0.61	0.8	55.25	-1.4683	-0.0021	-0.0418
627	SLE FR 3	0.61	0.81	55.44	-1.4726	-0.0021	-0.042
627	SLE FR 4	0.62	0.84	57.18	-1.5148	-0.0021	-0.043
627	SLE FR 5	0.62	0.85	57.38	-1.5191	-0.0022	-0.0433
627	SLE FR 6	0.63	0.87	58.47	-1.545	-0.0022	-0.0439
627	SLE QP 1	0.61	0.81	55.25	-1.4675	-0.0021	-0.0418
627	SLE QP 2	0.62	0.84	57.18	-1.514	-0.0021	-0.0431
627	SLD 1	5.2	1.7	54.17	-1.7059	0.0189	-0.0345
627	SLD 2	5.21	1.92	54.11	-1.6854	0.019	-0.0316
627	SLD 3	4.99	0.25	54.64	-1.8299	0.0178	-0.0309
627	SLD 4	5	0.47	54.57	-1.8093	0.0179	-0.0281
627	SLD 5	2.31	3.26	55.58	-1.3873	0.0057	-0.0463
627	SLD 6	2.32	3.4	55.54	-1.3739	0.0058	-0.0445
627	SLD 7	1.61	-1.57	57.13	-1.8003	0.0022	-0.0346
627	SLD 8	1.61	-1.43	57.09	-1.7869	0.0023	-0.0327
627	SLD 9	-0.38	3.11	57.27	-1.2411	-0.0066	-0.0534
627	SLD 10	-0.37	3.26	57.23	-1.2277	-0.0065	-0.0516
627	SLD 11	-1.08	-1.71	58.82	-1.6542	-0.0101	-0.0416
627	SLD 12	-1.08	-1.57	58.78	-1.6407	-0.01	-0.0398
627	SLD 13	-3.76	1.22	59.79	-1.2187	-0.0222	-0.058
627	SLD 14	-3.75	1.44	59.72	-1.1982	-0.0221	-0.0552
627	SLD 15	-3.98	-0.23	60.25	-1.3426	-0.0232	-0.0545
627	SLD 16	-3.97	-0.01	60.19	-1.3221	-0.0231	-0.0516
627	SLV 1	11.34	2.79	50.15	-1.9675	0.047	-0.0227
627	SLV 2	11.36	3.3	50	-1.9196	0.0473	-0.0162
627	SLV 3	10.85	-0.5	51.22	-2.2489	0.0446	-0.0146
627	SLV 4	10.87	0.01	51.07	-2.2011	0.0449	-0.0081
627	SLV 5	4.58	6.33	53.48	-1.2314	0.0163	-0.0504

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
627	SLV 6	4.59	6.66	53.38	-1.2006	0.0165	-0.0461
627	SLV 7	2.93	-4.63	57.04	-2.1696	0.0081	-0.0234
627	SLV 8	2.95	-4.31	56.94	-2.1388	0.0083	-0.0192
627	SLV 9	-1.71	5.99	57.42	-0.8892	-0.0126	-0.067
627	SLV 10	-1.7	6.32	57.32	-0.8585	-0.0124	-0.0627
627	SLV 11	-3.36	-4.97	60.98	-1.8274	-0.0207	-0.04
627	SLV 12	-3.35	-4.64	60.88	-1.7967	-0.0205	-0.0358
627	SLV 13	-9.63	1.68	63.29	-0.827	-0.0491	-0.0781
627	SLV 14	-9.61	2.19	63.14	-0.7791	-0.0489	-0.0715
627	SLV 15	-10.13	-1.61	64.36	-1.1084	-0.0516	-0.07
627	SLV 16	-10.11	-1.1	64.21	-1.0606	-0.0513	-0.0634
627	CRTFP Ux+	0	0	0	0	0	0
627	CRTFP Ux-	0	0	0	0	0	0
627	CRTFP Uy+	0	0	0	0	0	0
627	CRTFP Uy-	0	0	0	0	0	0
628	SLU 1	0.62	0.53	53.46	-1.4329	0.0022	-0.0447
628	SLU 2	0.62	0.5	53.48	-1.4385	0.0021	-0.0446
628	SLU 3	0.64	0.56	54.71	-1.4698	0.0021	-0.046
628	SLU 4	0.64	0.54	54.72	-1.4732	0.0021	-0.0459
628	SLU 5	0.63	0.5	54.22	-1.4576	0.002	-0.0454
628	SLU 6	0.65	0.56	55.45	-1.4889	0.002	-0.0467
628	SLU 7	0.65	0.54	55.46	-1.4922	0.0019	-0.0467
628	SLU 8	0.64	0.54	54.96	-1.471	0.0019	-0.0462
628	SLU 9	0.64	0.52	54.96	-1.4744	0.0019	-0.0462
628	SLU 10	0.66	0.61	60.24	-1.6017	0.0027	-0.0488
628	SLU 11	0.68	0.67	61.47	-1.6329	0.0027	-0.0502
628	SLU 12	0.68	0.65	61.48	-1.6363	0.0026	-0.0502
628	SLU 13	0.67	0.61	60.99	-1.6207	0.0026	-0.0496
628	SLU 14	0.69	0.67	62.22	-1.652	0.0025	-0.051
628	SLU 15	0.69	0.65	62.23	-1.6553	0.0025	-0.0509
628	SLU 16	0.68	0.65	61.72	-1.6342	0.0025	-0.0504
628	SLU 17	0.68	0.63	61.73	-1.6375	0.0025	-0.0504
628	SLU 18	0.68	0.69	63.13	-1.666	0.003	-0.0507
628	SLU 19	0.68	0.67	63.13	-1.6693	0.003	-0.0507
628	SLU 20	0.69	0.69	63.87	-1.685	0.0029	-0.0515
628	SLU 21	0.69	0.67	63.88	-1.6884	0.0028	-0.0514
628	SLU 22	0.68	0.7	59.72	-1.5665	0.0018	-0.0497
628	SLU 23	0.68	0.67	59.73	-1.5721	0.0018	-0.0496
628	SLU 24	0.7	0.72	60.96	-1.6034	0.0017	-0.051
628	SLU 25	0.7	0.7	60.97	-1.6067	0.0017	-0.051
628	SLU 26	0.69	0.67	60.48	-1.5912	0.0016	-0.0504
628	SLU 27	0.71	0.72	61.71	-1.6224	0.0016	-0.0518
628	SLU 28	0.71	0.7	61.72	-1.6258	0.0016	-0.0517
628	SLU 29	0.7	0.7	61.21	-1.6046	0.0015	-0.0512
628	SLU 30	0.7	0.68	61.22	-1.608	0.0015	-0.0512
628	SLU 31	0.73	0.78	66.49	-1.7352	0.0023	-0.0539
628	SLU 32	0.74	0.83	67.73	-1.7665	0.0023	-0.0552
628	SLU 33	0.74	0.81	67.73	-1.7698	0.0022	-0.0552
628	SLU 34	0.74	0.78	67.24	-1.7543	0.0022	-0.0546
628	SLU 35	0.75	0.83	68.47	-1.7855	0.0021	-0.056
628	SLU 36	0.75	0.81	68.48	-1.7889	0.0021	-0.056
628	SLU 37	0.75	0.81	67.97	-1.7677	0.0021	-0.0555
628	SLU 38	0.75	0.79	67.98	-1.7711	0.0021	-0.0554
628	SLU 39	0.74	0.86	69.38	-1.7995	0.0026	-0.0557
628	SLU 40	0.74	0.84	69.39	-1.8029	0.0026	-0.0557
628	SLU 41	0.75	0.86	70.13	-1.8186	0.0025	-0.0565
628	SLU 42	0.75	0.84	70.13	-1.8219	0.0024	-0.0565
628	SLU 43	0.79	0.64	67.36	-1.817	0.003	-0.0563
628	SLU 44	0.79	0.6	67.37	-1.8226	0.0029	-0.0563
628	SLU 45	0.8	0.66	68.6	-1.8539	0.0029	-0.0576
628	SLU 46	0.8	0.64	68.61	-1.8573	0.0029	-0.0576
628	SLU 47	0.8	0.61	68.12	-1.8417	0.0028	-0.057
628	SLU 48	0.81	0.66	69.35	-1.873	0.0028	-0.0584
628	SLU 49	0.81	0.64	69.36	-1.8763	0.0027	-0.0584
628	SLU 50	0.81	0.64	68.85	-1.8551	0.0027	-0.0579
628	SLU 51	0.81	0.62	68.86	-1.8585	0.0027	-0.0579
628	SLU 52	0.83	0.71	74.14	-1.9857	0.0035	-0.0605
628	SLU 53	0.85	0.77	75.37	-2.017	0.0035	-0.0619
628	SLU 54	0.85	0.75	75.38	-2.0204	0.0034	-0.0618
628	SLU 55	0.84	0.72	74.88	-2.0048	0.0033	-0.0613
628	SLU 56	0.86	0.77	76.11	-2.0361	0.0033	-0.0627
628	SLU 57	0.86	0.75	76.12	-2.0394	0.0033	-0.0626
628	SLU 58	0.85	0.75	75.61	-2.0182	0.0033	-0.0621
628	SLU 59	0.85	0.73	75.62	-2.0216	0.0032	-0.0621
628	SLU 60	0.85	0.8	77.02	-2.0501	0.0038	-0.0624
628	SLU 61	0.85	0.77	77.03	-2.0534	0.0037	-0.0623
628	SLU 62	0.86	0.8	77.77	-2.0691	0.0036	-0.0632
628	SLU 63	0.86	0.78	77.78	-2.0725	0.0036	-0.0631
628	SLU 64	0.85	0.8	73.61	-1.9506	0.0026	-0.0614
628	SLU 65	0.85	0.77	73.63	-1.9562	0.0025	-0.0613
628	SLU 66	0.86	0.83	74.86	-1.9875	0.0025	-0.0627
628	SLU 67	0.87	0.8	74.87	-1.9908	0.0025	-0.0626
628	SLU 68	0.86	0.77	74.37	-1.9752	0.0024	-0.0621
628	SLU 69	0.87	0.83	75.6	-2.0065	0.0024	-0.0634
628	SLU 70	0.88	0.81	75.61	-2.0099	0.0023	-0.0634
628	SLU 71	0.87	0.81	75.1	-1.9887	0.0023	-0.0629
628	SLU 72	0.87	0.79	75.11	-1.9921	0.0023	-0.0629
628	SLU 73	0.89	0.88	80.39	-2.1193	0.0031	-0.0655
628	SLU 74	0.91	0.93	81.62	-2.1506	0.0031	-0.0669
628	SLU 75	0.91	0.91	81.63	-2.1539	0.003	-0.0669
628	SLU 76	0.9	0.88	81.14	-2.1384	0.003	-0.0663
628	SLU 77	0.92	0.94	82.37	-2.1696	0.0029	-0.0677
628	SLU 78	0.92	0.92	82.38	-2.173	0.0029	-0.0676
628	SLU 79	0.91	0.92	81.87	-2.1518	0.0029	-0.0671
628	SLU 80	0.91	0.9	81.88	-2.1552	0.0029	-0.0671
628	SLU 81	0.91	0.96	83.27	-2.1836	0.0034	-0.0674
628	SLU 82	0.91	0.94	83.28	-2.187	0.0034	-0.0674

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
628	SLU 83	0.92	0.96	84.02	-2.2027	0.0033	-0.0682
628	SLU 84	0.92	0.94	84.03	-2.206	0.0032	-0.0682
628	SLE RA 1	0.64	0.58	55.25	-1.4711	0.0021	-0.0461
628	SLE RA 2	0.64	0.56	55.26	-1.4748	0.002	-0.0461
628	SLE RA 3	0.65	0.6	56.08	-1.4957	0.002	-0.047
628	SLE RA 4	0.65	0.58	56.09	-1.4979	0.002	-0.0469
628	SLE RA 5	0.65	0.56	55.76	-1.4875	0.002	-0.0466
628	SLE RA 6	0.66	0.6	56.58	-1.5084	0.0019	-0.0475
628	SLE RA 7	0.66	0.58	56.58	-1.5106	0.0019	-0.0475
628	SLE RA 8	0.65	0.58	56.24	-1.4965	0.0019	-0.0471
628	SLE RA 9	0.65	0.57	56.25	-1.4987	0.0019	-0.0471
628	SLE RA 10	0.67	0.63	59.77	-1.5836	0.0024	-0.0489
628	SLE RA 11	0.68	0.67	60.59	-1.6044	0.0024	-0.0498
628	SLE RA 12	0.68	0.66	60.59	-1.6067	0.0024	-0.0498
628	SLE RA 13	0.67	0.63	60.27	-1.5963	0.0023	-0.0494
628	SLE RA 14	0.68	0.67	61.09	-1.6171	0.0023	-0.0503
628	SLE RA 15	0.69	0.66	61.09	-1.6194	0.0023	-0.0503
628	SLE RA 16	0.68	0.66	60.75	-1.6052	0.0023	-0.05
628	SLE RA 17	0.68	0.64	60.76	-1.6075	0.0023	-0.0499
628	SLE RA 18	0.68	0.69	61.69	-1.6265	0.0026	-0.0501
628	SLE RA 19	0.68	0.67	61.7	-1.6287	0.0026	-0.0501
628	SLE RA 20	0.69	0.69	62.19	-1.6392	0.0025	-0.0506
628	SLE RA 21	0.69	0.67	62.19	-1.6414	0.0025	-0.0506
628	SLE FR 1	0.64	0.58	55.25	-1.4711	0.0021	-0.0461
628	SLE FR 2	0.64	0.58	55.25	-1.4719	0.0021	-0.0461
628	SLE FR 3	0.64	0.58	55.45	-1.4762	0.002	-0.0463
628	SLE FR 4	0.65	0.61	57.18	-1.5185	0.0022	-0.0473
628	SLE FR 5	0.65	0.61	57.38	-1.5228	0.0022	-0.0475
628	SLE FR 6	0.66	0.63	58.47	-1.5488	0.0023	-0.0481
628	SLE QP 1	0.64	0.58	55.25	-1.4711	0.0021	-0.0461
628	SLE QP 2	0.65	0.61	57.18	-1.5177	0.0022	-0.0473
628	SLD 1	5.23	1.49	53.5	-1.7061	0.0208	-0.038
628	SLD 2	5.23	1.72	53.44	-1.6855	0.0209	-0.0351
628	SLD 3	5.01	0.05	53.99	-1.8304	0.0195	-0.035
628	SLD 4	5.02	0.28	53.93	-1.8098	0.0197	-0.0321
628	SLD 5	2.34	3.02	55.35	-1.3894	0.0097	-0.0497
628	SLD 6	2.35	3.17	55.3	-1.376	0.0098	-0.0478
628	SLD 7	1.64	-1.78	56.98	-1.8036	0.0055	-0.0395
628	SLD 8	1.64	-1.63	56.93	-1.7901	0.0056	-0.0376
628	SLD 9	-0.34	2.85	57.43	-1.2453	-0.0011	-0.057
628	SLD 10	-0.34	3.01	57.38	-1.2318	-0.001	-0.0551
628	SLD 11	-1.05	-1.94	59.06	-1.6595	-0.0053	-0.0468
628	SLD 12	-1.04	-1.79	59.01	-1.646	-0.0052	-0.045
628	SLD 13	-3.72	0.94	60.44	-1.2257	-0.0152	-0.0625
628	SLD 14	-3.71	1.18	60.37	-1.205	-0.0151	-0.0597
628	SLD 15	-3.93	-0.5	60.93	-1.3499	-0.0165	-0.0595
628	SLD 16	-3.92	-0.26	60.86	-1.3293	-0.0163	-0.0566
628	SLV 1	11.35	2.61	48.58	-1.963	0.0457	-0.0253
628	SLV 2	11.37	3.16	48.43	-1.915	0.046	-0.0186
628	SLV 3	10.86	-0.66	49.71	-2.2452	0.0428	-0.0183
628	SLV 4	10.88	-0.11	49.55	-2.1972	0.0431	-0.0116
628	SLV 5	4.61	6.08	52.93	-1.2315	0.0196	-0.0526
628	SLV 6	4.62	6.43	52.83	-1.2006	0.0198	-0.0482
628	SLV 7	2.96	-4.82	56.67	-2.1722	0.0099	-0.0291
628	SLV 8	2.98	-4.47	56.57	-2.1413	0.0102	-0.0247
628	SLV 9	-1.67	5.7	57.8	-0.8941	-0.0057	-0.0699
628	SLV 10	-1.66	6.05	57.7	-0.8632	-0.0055	-0.0655
628	SLV 11	-3.32	-5.2	61.54	-1.8348	-0.0154	-0.0464
628	SLV 12	-3.3	-4.85	61.44	-1.8039	-0.0151	-0.042
628	SLV 13	-9.58	1.34	64.81	-0.8383	-0.0386	-0.083
628	SLV 14	-9.56	1.88	64.66	-0.7903	-0.0383	-0.0763
628	SLV 15	-10.07	-1.93	65.94	-1.1205	-0.0415	-0.076
628	SLV 16	-10.05	-1.39	65.78	-1.0725	-0.0412	-0.0693
628	CRTFP Ux+	0	0	0	0	0	0
628	CRTFP Ux-	0	0	0	0	0	0
628	CRTFP Uy+	0	0	0	0	0	0
628	CRTFP Uy-	0	0	0	0	0	0
629	SLU 1	0.66	0.31	53.31	-1.438	0.0065	-0.0446
629	SLU 2	0.66	0.27	53.33	-1.4436	0.0064	-0.0446
629	SLU 3	0.68	0.32	54.56	-1.475	0.0065	-0.0459
629	SLU 4	0.68	0.3	54.57	-1.4784	0.0065	-0.0459
629	SLU 5	0.67	0.27	54.08	-1.4628	0.0063	-0.0453
629	SLU 6	0.69	0.32	55.31	-1.4942	0.0064	-0.0466
629	SLU 7	0.69	0.3	55.32	-1.4976	0.0064	-0.0466
629	SLU 8	0.68	0.3	54.81	-1.4764	0.0063	-0.0461
629	SLU 9	0.68	0.28	54.82	-1.4797	0.0063	-0.0461
629	SLU 10	0.7	0.36	60.06	-1.6073	0.0079	-0.0485
629	SLU 11	0.72	0.41	61.29	-1.6388	0.008	-0.0498
629	SLU 12	0.72	0.39	61.3	-1.6421	0.0079	-0.0498
629	SLU 13	0.71	0.36	60.81	-1.6265	0.0078	-0.0493
629	SLU 14	0.73	0.41	62.04	-1.658	0.0079	-0.0506
629	SLU 15	0.73	0.39	62.05	-1.6613	0.0079	-0.0506
629	SLU 16	0.72	0.39	61.54	-1.6401	0.0078	-0.05
629	SLU 17	0.72	0.37	61.55	-1.6435	0.0078	-0.05
629	SLU 18	0.72	0.43	62.93	-1.6719	0.0086	-0.0502
629	SLU 19	0.72	0.41	62.94	-1.6753	0.0085	-0.0502
629	SLU 20	0.73	0.43	63.68	-1.6911	0.0085	-0.051
629	SLU 21	0.73	0.41	63.69	-1.6945	0.0085	-0.051
629	SLU 22	0.72	0.45	59.57	-1.5725	0.0067	-0.0494
629	SLU 23	0.72	0.41	59.59	-1.5781	0.0067	-0.0494
629	SLU 24	0.74	0.46	60.81	-1.6096	0.0068	-0.0507
629	SLU 25	0.74	0.44	60.83	-1.6129	0.0067	-0.0507
629	SLU 26	0.73	0.41	60.34	-1.5973	0.0066	-0.0501
629	SLU 27	0.75	0.46	61.56	-1.6288	0.0067	-0.0514
629	SLU 28	0.75	0.44	61.58	-1.6321	0.0067	-0.0514
629	SLU 29	0.74	0.44	61.07	-1.6109	0.0066	-0.0509
629	SLU 30	0.74	0.42	61.08	-1.6143	0.0065	-0.0509

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
629	SLU 31	0.77	0.5	66.31	-1.7419	0.0081	-0.0533
629	SLU 32	0.78	0.55	67.54	-1.7733	0.0082	-0.0546
629	SLU 33	0.78	0.53	67.55	-1.7767	0.0082	-0.0546
629	SLU 34	0.78	0.5	67.07	-1.7611	0.0081	-0.0541
629	SLU 35	0.79	0.55	68.29	-1.7925	0.0082	-0.0554
629	SLU 36	0.79	0.53	68.3	-1.7959	0.0081	-0.0554
629	SLU 37	0.79	0.53	67.8	-1.7747	0.0081	-0.0548
629	SLU 38	0.79	0.51	67.81	-1.778	0.008	-0.0548
629	SLU 39	0.78	0.57	69.18	-1.8064	0.0088	-0.055
629	SLU 40	0.78	0.55	69.19	-1.8098	0.0088	-0.055
629	SLU 41	0.79	0.57	69.93	-1.8256	0.0088	-0.0558
629	SLU 42	0.79	0.55	69.94	-1.829	0.0087	-0.0558
629	SLU 43	0.83	0.35	67.16	-1.8232	0.0083	-0.0563
629	SLU 44	0.83	0.32	67.18	-1.8288	0.0083	-0.0563
629	SLU 45	0.85	0.37	68.41	-1.8603	0.0084	-0.0576
629	SLU 46	0.85	0.35	68.42	-1.8636	0.0083	-0.0576
629	SLU 47	0.84	0.32	67.93	-1.848	0.0082	-0.0571
629	SLU 48	0.86	0.36	69.16	-1.8795	0.0083	-0.0584
629	SLU 49	0.86	0.34	69.17	-1.8828	0.0083	-0.0583
629	SLU 50	0.86	0.35	68.66	-1.8617	0.0082	-0.0578
629	SLU 51	0.86	0.33	68.67	-1.865	0.0082	-0.0578
629	SLU 52	0.88	0.41	73.91	-1.9926	0.0097	-0.0602
629	SLU 53	0.89	0.45	75.14	-2.024	0.0098	-0.0615
629	SLU 54	0.89	0.43	75.15	-2.0274	0.0098	-0.0615
629	SLU 55	0.89	0.4	74.66	-2.0118	0.0097	-0.061
629	SLU 56	0.9	0.45	75.89	-2.0432	0.0098	-0.0623
629	SLU 57	0.9	0.43	75.9	-2.0466	0.0097	-0.0623
629	SLU 58	0.9	0.44	75.39	-2.0254	0.0097	-0.0618
629	SLU 59	0.9	0.42	75.4	-2.0288	0.0096	-0.0618
629	SLU 60	0.9	0.48	76.78	-2.0572	0.0104	-0.062
629	SLU 61	0.9	0.46	76.79	-2.0605	0.0104	-0.0619
629	SLU 62	0.91	0.48	77.53	-2.0764	0.0104	-0.0627
629	SLU 63	0.91	0.46	77.54	-2.0797	0.0103	-0.0627
629	SLU 64	0.9	0.49	73.42	-1.9578	0.0086	-0.0611
629	SLU 65	0.9	0.46	73.44	-1.9634	0.0085	-0.0611
629	SLU 66	0.91	0.51	74.66	-1.9948	0.0086	-0.0624
629	SLU 67	0.91	0.49	74.67	-1.9982	0.0086	-0.0624
629	SLU 68	0.91	0.45	74.19	-1.9826	0.0084	-0.0619
629	SLU 69	0.93	0.5	75.41	-2.014	0.0085	-0.0632
629	SLU 70	0.93	0.48	75.42	-2.0174	0.0085	-0.0632
629	SLU 71	0.92	0.49	74.92	-1.9962	0.0084	-0.0626
629	SLU 72	0.92	0.47	74.93	-1.9995	0.0084	-0.0626
629	SLU 73	0.94	0.55	80.16	-2.1271	0.01	-0.0651
629	SLU 74	0.96	0.59	81.39	-2.1586	0.0101	-0.0664
629	SLU 75	0.96	0.57	81.4	-2.1619	0.01	-0.0663
629	SLU 76	0.95	0.54	80.91	-2.1463	0.0099	-0.0658
629	SLU 77	0.97	0.59	82.14	-2.1778	0.01	-0.0671
629	SLU 78	0.97	0.57	82.15	-2.1811	0.01	-0.0671
629	SLU 79	0.96	0.58	81.65	-2.1599	0.0099	-0.0666
629	SLU 80	0.96	0.56	81.66	-2.1633	0.0099	-0.0666
629	SLU 81	0.96	0.62	83.03	-2.1917	0.0107	-0.0668
629	SLU 82	0.96	0.6	83.04	-2.1951	0.0106	-0.0668
629	SLU 83	0.97	0.62	83.78	-2.2109	0.0106	-0.0675
629	SLU 84	0.97	0.6	83.79	-2.2143	0.0106	-0.0675
629	SLE RA 1	0.68	0.35	55.1	-1.4764	0.0065	-0.046
629	SLE RA 2	0.68	0.32	55.11	-1.4801	0.0065	-0.046
629	SLE RA 3	0.69	0.36	55.93	-1.5011	0.0066	-0.0468
629	SLE RA 4	0.69	0.34	55.94	-1.5033	0.0065	-0.0468
629	SLE RA 5	0.68	0.32	55.61	-1.4929	0.0065	-0.0465
629	SLE RA 6	0.69	0.36	56.43	-1.5139	0.0065	-0.0473
629	SLE RA 7	0.69	0.34	56.44	-1.5161	0.0065	-0.0473
629	SLE RA 8	0.69	0.34	56.1	-1.502	0.0064	-0.047
629	SLE RA 9	0.69	0.33	56.11	-1.5043	0.0064	-0.047
629	SLE RA 10	0.71	0.38	59.6	-1.5893	0.0075	-0.0486
629	SLE RA 11	0.72	0.42	60.42	-1.6103	0.0075	-0.0495
629	SLE RA 12	0.72	0.4	60.42	-1.6125	0.0075	-0.0494
629	SLE RA 13	0.71	0.38	60.1	-1.6021	0.0074	-0.0491
629	SLE RA 14	0.72	0.41	60.92	-1.6231	0.0075	-0.05
629	SLE RA 15	0.72	0.4	60.92	-1.6253	0.0075	-0.0499
629	SLE RA 16	0.72	0.4	60.59	-1.6112	0.0074	-0.0496
629	SLE RA 17	0.72	0.39	60.59	-1.6134	0.0074	-0.0496
629	SLE RA 18	0.72	0.43	61.51	-1.6324	0.0079	-0.0497
629	SLE RA 19	0.72	0.42	61.52	-1.6346	0.0079	-0.0497
629	SLE RA 20	0.72	0.43	62.01	-1.6452	0.0079	-0.0502
629	SLE RA 21	0.72	0.42	62.02	-1.6474	0.0079	-0.0502
629	SLE FR 1	0.68	0.35	55.1	-1.4764	0.0065	-0.046
629	SLE FR 2	0.68	0.34	55.1	-1.4772	0.0065	-0.046
629	SLE FR 3	0.68	0.35	55.3	-1.4815	0.0065	-0.0462
629	SLE FR 4	0.69	0.37	57.03	-1.524	0.0069	-0.0471
629	SLE FR 5	0.69	0.37	57.22	-1.5283	0.0069	-0.0473
629	SLE FR 6	0.7	0.39	58.31	-1.5544	0.0072	-0.0479
629	SLE QP 1	0.68	0.35	55.1	-1.4764	0.0065	-0.046
629	SLE QP 2	0.69	0.37	57.02	-1.5232	0.007	-0.0471
629	SLD 1	5.25	1.28	52.81	-1.7082	0.02	-0.0355
629	SLD 2	5.26	1.53	52.74	-1.6875	0.0202	-0.0324
629	SLD 3	5.04	-0.16	53.33	-1.833	0.0186	-0.0384
629	SLD 4	5.05	0.09	53.26	-1.8123	0.0187	-0.0353
629	SLD 5	2.38	2.78	54.99	-1.3931	0.013	-0.0399
629	SLD 6	2.38	2.94	54.94	-1.3796	0.0131	-0.0378
629	SLD 7	1.67	-2.01	56.71	-1.8091	0.0082	-0.0493
629	SLD 8	1.68	-1.85	56.66	-1.7956	0.0083	-0.0473
629	SLD 9	-0.3	2.59	57.38	-1.2508	0.0056	-0.0469
629	SLD 10	-0.3	2.75	57.34	-1.2373	0.0057	-0.0449
629	SLD 11	-1	-2.2	59.1	-1.6669	0.0008	-0.0564
629	SLD 12	-1	-2.04	59.06	-1.6533	0.0009	-0.0543
629	SLD 13	-3.67	0.65	60.79	-1.2341	-0.0048	-0.0589
629	SLD 14	-3.66	0.9	60.72	-1.2134	-0.0046	-0.0558

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
629	SLD 15	-3.88	-0.78	61.31	-1.3589	-0.0063	-0.0618
629	SLD 16	-3.87	-0.54	61.23	-1.3382	-0.0061	-0.0587
629	SLV 1	11.36	2.45	47.18	-1.9605	0.0375	-0.0199
629	SLV 2	11.38	3.03	47.01	-1.9123	0.0379	-0.0126
629	SLV 3	10.87	-0.81	48.36	-2.244	0.0342	-0.0265
629	SLV 4	10.89	-0.24	48.19	-2.1958	0.0345	-0.0193
629	SLV 5	4.63	5.84	52.31	-1.2328	0.0211	-0.0301
629	SLV 6	4.65	6.22	52.2	-1.2018	0.0213	-0.0255
629	SLV 7	2.99	-5.03	56.25	-2.1776	0.01	-0.0522
629	SLV 8	3.01	-4.66	56.14	-2.1466	0.0103	-0.0475
629	SLV 9	-1.63	5.4	57.91	-0.8998	0.0036	-0.0467
629	SLV 10	-1.62	5.77	57.8	-0.8688	0.0039	-0.042
629	SLV 11	-3.27	-5.47	61.85	-1.8446	-0.0074	-0.0687
629	SLV 12	-3.25	-5.1	61.74	-1.8136	-0.0071	-0.0641
629	SLV 13	-9.51	0.98	65.85	-0.8507	-0.0206	-0.0749
629	SLV 14	-9.49	1.56	65.68	-0.8024	-0.0202	-0.0677
629	SLV 15	-10.01	-2.28	67.04	-1.1341	-0.0239	-0.0816
629	SLV 16	-9.98	-1.71	66.87	-1.0859	-0.0236	-0.0743
629	CRTFP Ux+	0	0	0	0	0	0
629	CRTFP Ux-	0	0	0	0	0	0
629	CRTFP Uy+	0	0	0	0	0	0
629	CRTFP Uy-	0	0	0	0	0	0
630	SLU 1	1.22	0.04	89.99	-1.7722	-11.2559	-0.0857
630	SLU 2	1.22	-0.02	90.02	-1.7806	-11.2602	-0.0928
630	SLU 3	1.25	0.05	92.1	-1.8195	-11.5199	-0.0866
630	SLU 4	1.25	0.02	92.12	-1.8245	-11.5225	-0.0909
630	SLU 5	1.24	-0.03	91.3	-1.8045	-11.4206	-0.0956
630	SLU 6	1.27	0.04	93.38	-1.8434	-11.6803	-0.0894
630	SLU 7	1.27	0.01	93.4	-1.8485	-11.6829	-0.0937
630	SLU 8	1.26	0.02	92.55	-1.8201	-11.5766	-0.0912
630	SLU 9	1.26	-0.02	92.57	-1.8251	-11.5793	-0.0955
630	SLU 10	1.3	0.09	101.32	-1.9789	-12.6677	-0.086
630	SLU 11	1.33	0.16	103.39	-2.0178	-12.9274	-0.0798
630	SLU 12	1.33	0.13	103.41	-2.0228	-12.93	-0.0841
630	SLU 13	1.32	0.08	102.59	-2.0028	-12.8281	-0.0888
630	SLU 14	1.35	0.15	104.67	-2.0417	-13.0878	-0.0826
630	SLU 15	1.35	0.12	104.69	-2.0468	-13.0904	-0.0868
630	SLU 16	1.34	0.13	103.84	-2.0184	-12.9841	-0.0844
630	SLU 17	1.34	0.09	103.86	-2.0234	-12.9868	-0.0887
630	SLU 18	1.33	0.2	106.12	-2.0555	-13.2666	-0.0759
630	SLU 19	1.33	0.16	106.14	-2.0605	-13.2692	-0.0802
630	SLU 20	1.35	0.19	107.4	-2.0794	-13.427	-0.0787
630	SLU 21	1.35	0.15	107.42	-2.0845	-13.4296	-0.083
630	SLU 22	1.34	0.22	100.59	-1.9316	-12.5843	-0.0715
630	SLU 23	1.34	0.17	100.62	-1.94	-12.5887	-0.0786
630	SLU 24	1.37	0.24	102.7	-1.9789	-12.8484	-0.0724
630	SLU 25	1.37	0.2	102.72	-1.9839	-12.851	-0.0767
630	SLU 26	1.36	0.16	101.9	-1.9639	-12.7491	-0.0814
630	SLU 27	1.39	0.23	103.98	-2.0028	-13.0088	-0.0752
630	SLU 28	1.39	0.19	104	-2.0079	-13.0114	-0.0795
630	SLU 29	1.38	0.2	103.14	-1.9795	-12.9051	-0.077
630	SLU 30	1.38	0.17	103.16	-1.9845	-12.9077	-0.0813
630	SLU 31	1.42	0.28	111.91	-2.1383	-13.9962	-0.0718
630	SLU 32	1.45	0.35	113.99	-2.1772	-14.2559	-0.0656
630	SLU 33	1.45	0.31	114.01	-2.1822	-14.2585	-0.0698
630	SLU 34	1.44	0.27	113.19	-2.1622	-14.1566	-0.0745
630	SLU 35	1.47	0.34	115.27	-2.2011	-14.4163	-0.0683
630	SLU 36	1.47	0.3	115.29	-2.2062	-14.4189	-0.0726
630	SLU 37	1.45	0.32	114.44	-2.1778	-14.3126	-0.0702
630	SLU 38	1.46	0.28	114.45	-2.1828	-14.3152	-0.0745
630	SLU 39	1.45	0.38	116.72	-2.2149	-14.595	-0.0617
630	SLU 40	1.45	0.35	116.74	-2.2199	-14.5977	-0.066
630	SLU 41	1.47	0.37	118	-2.2388	-14.7554	-0.0645
630	SLU 42	1.47	0.34	118.02	-2.2439	-14.7581	-0.0688
630	SLU 43	1.54	-0.02	113.36	-2.2492	-14.1771	-0.1163
630	SLU 44	1.54	-0.07	113.39	-2.2576	-14.1815	-0.1234
630	SLU 45	1.58	0	115.47	-2.2965	-14.4412	-0.1172
630	SLU 46	1.58	-0.04	115.49	-2.3015	-14.4438	-0.1215
630	SLU 47	1.57	-0.08	114.67	-2.2815	-14.3419	-0.1262
630	SLU 48	1.6	-0.01	116.74	-2.3204	-14.6016	-0.12
630	SLU 49	1.6	-0.05	116.76	-2.3255	-14.6042	-0.1243
630	SLU 50	1.58	-0.04	115.91	-2.2971	-14.4979	-0.1218
630	SLU 51	1.58	-0.07	115.93	-2.3021	-14.5005	-0.1261
630	SLU 52	1.62	0.04	124.68	-2.4559	-15.589	-0.1166
630	SLU 53	1.65	0.11	126.76	-2.4948	-15.8487	-0.1104
630	SLU 54	1.66	0.07	126.78	-2.4998	-15.8513	-0.1146
630	SLU 55	1.64	0.03	125.96	-2.4798	-15.7494	-0.1193
630	SLU 56	1.67	0.1	128.03	-2.5187	-16.0091	-0.1131
630	SLU 57	1.68	0.06	128.05	-2.5238	-16.0117	-0.1174
630	SLU 58	1.66	0.07	127.2	-2.4954	-15.9054	-0.115
630	SLU 59	1.66	0.04	127.22	-2.5004	-15.908	-0.1193
630	SLU 60	1.66	0.14	129.49	-2.5325	-16.1878	-0.1065
630	SLU 61	1.66	0.11	129.51	-2.5375	-16.1905	-0.1108
630	SLU 62	1.68	0.13	130.76	-2.5564	-16.3482	-0.1093
630	SLU 63	1.68	0.1	130.78	-2.5615	-16.3509	-0.1136
630	SLU 64	1.66	0.17	123.95	-2.4086	-15.5056	-0.1021
630	SLU 65	1.66	0.11	123.99	-2.417	-15.51	-0.1092
630	SLU 66	1.69	0.18	126.06	-2.4559	-15.7696	-0.103
630	SLU 67	1.69	0.15	126.08	-2.461	-15.7723	-0.1073
630	SLU 68	1.68	0.1	125.26	-2.441	-15.6704	-0.112
630	SLU 69	1.71	0.17	127.34	-2.4799	-15.93	-0.1058
630	SLU 70	1.71	0.14	127.36	-2.4849	-15.9326	-0.11
630	SLU 71	1.7	0.15	126.51	-2.4565	-15.8264	-0.1076
630	SLU 72	1.7	0.12	126.53	-2.4615	-15.829	-0.1119
630	SLU 73	1.74	0.23	135.28	-2.6153	-16.9175	-0.1024
630	SLU 74	1.77	0.3	137.35	-2.6542	-17.1771	-0.0962
630	SLU 75	1.77	0.26	137.37	-2.6592	-17.1798	-0.1004

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
630	SLU 76	1.76	0.22	136.56	-2.6392	-17.0779	-0.1051
630	SLU 77	1.79	0.29	138.63	-2.6781	-17.3375	-0.0989
630	SLU 78	1.79	0.25	138.65	-2.6832	-17.3402	-0.1032
630	SLU 79	1.78	0.26	137.8	-2.6548	-17.2339	-0.1008
630	SLU 80	1.78	0.23	137.82	-2.6598	-17.2365	-0.1051
630	SLU 81	1.77	0.33	140.08	-2.6919	-17.5163	-0.0923
630	SLU 82	1.77	0.3	140.1	-2.6969	-17.5189	-0.0966
630	SLU 83	1.79	0.32	141.36	-2.7158	-17.6767	-0.0951
630	SLU 84	1.79	0.29	141.38	-2.7209	-17.6793	-0.0993
630	SLE RA 1	1.25	0.09	93.02	-1.8177	-11.6354	-0.0816
630	SLE RA 2	1.25	0.05	93.04	-1.8233	-11.6383	-0.0864
630	SLE RA 3	1.27	0.1	94.43	-1.8493	-11.8114	-0.0823
630	SLE RA 4	1.27	0.08	94.44	-1.8526	-11.8132	-0.0851
630	SLE RA 5	1.27	0.05	93.89	-1.8393	-11.7452	-0.0882
630	SLE RA 6	1.29	0.09	95.28	-1.8652	-11.9184	-0.0841
630	SLE RA 7	1.29	0.07	95.29	-1.8686	-11.9201	-0.087
630	SLE RA 8	1.28	0.08	94.72	-1.8497	-11.8493	-0.0853
630	SLE RA 9	1.28	0.05	94.74	-1.853	-11.851	-0.0882
630	SLE RA 10	1.31	0.13	100.57	-1.9555	-12.5767	-0.0818
630	SLE RA 11	1.33	0.17	101.95	-1.9815	-12.7498	-0.0777
630	SLE RA 12	1.33	0.15	101.97	-1.9848	-12.7515	-0.0805
630	SLE RA 13	1.32	0.12	101.42	-1.9715	-12.6836	-0.0837
630	SLE RA 14	1.34	0.17	102.81	-1.9974	-12.8567	-0.0795
630	SLE RA 15	1.34	0.14	102.82	-2.0008	-12.8584	-0.0824
630	SLE RA 16	1.33	0.15	102.25	-1.9819	-12.7876	-0.0808
630	SLE RA 17	1.33	0.13	102.26	-1.9852	-12.7894	-0.0836
630	SLE RA 18	1.33	0.2	103.77	-2.0066	-12.9759	-0.0751
630	SLE RA 19	1.33	0.17	103.79	-2.01	-12.9776	-0.078
630	SLE RA 20	1.34	0.19	104.62	-2.0226	-13.0828	-0.077
630	SLE RA 21	1.34	0.17	104.64	-2.0259	-13.0846	-0.0798
630	SLE FR 1	1.25	0.09	93.02	-1.8177	-11.6354	-0.0816
630	SLE FR 2	1.25	0.08	93.02	-1.8189	-11.636	-0.0826
630	SLE FR 3	1.26	0.09	93.36	-1.8241	-11.6782	-0.0824
630	SLE FR 4	1.27	0.11	96.25	-1.8755	-12.0381	-0.0806
630	SLE FR 5	1.28	0.12	96.59	-1.8808	-12.0803	-0.0804
630	SLE FR 6	1.29	0.14	98.4	-1.9122	-12.3057	-0.0784
630	SLE QP 1	1.25	0.09	93.02	-1.8177	-11.6354	-0.0816
630	SLE QP 2	1.27	0.12	96.25	-1.8744	-12.0376	-0.0797
630	SLD 1	9	1.75	88.51	-2.2472	-11.0469	0.101
630	SLD 2	9.02	2.21	88.37	-2.2154	-11.0295	0.1665
630	SLD 3	8.65	-0.7	89.43	-2.4433	-11.1635	-0.2078
630	SLD 4	8.66	-0.24	89.3	-2.4115	-11.1461	-0.1424
630	SLD 5	4.13	4.24	92.55	-1.6944	-11.5665	0.4314
630	SLD 6	4.14	4.54	92.46	-1.6736	-11.5552	0.4742
630	SLD 7	2.94	-3.91	95.63	-2.3482	-11.9553	-0.5981
630	SLD 8	2.95	-3.61	95.54	-2.3274	-11.9439	-0.5554
630	SLD 9	-0.4	3.86	96.95	-1.4214	-12.1312	0.396
630	SLD 10	-0.39	4.16	96.87	-1.4007	-12.1198	0.4388
630	SLD 11	-1.59	-4.29	100.03	-2.0752	-12.5199	-0.6336
630	SLD 12	-1.58	-3.99	99.94	-2.0544	-12.5086	-0.5908
630	SLD 13	-6.11	0.48	103.2	-1.3373	-12.929	-0.017
630	SLD 14	-6.1	0.94	103.06	-1.3055	-12.9116	0.0484
630	SLD 15	-6.47	-1.96	104.12	-1.5334	-13.0456	-0.3259
630	SLD 16	-6.45	-1.51	103.98	-1.5016	-13.0283	-0.2604
630	SLV 1	19.35	3.85	78.16	-2.7535	-9.7216	0.3333
630	SLV 2	19.39	4.92	77.84	-2.6794	-9.6811	0.4858
630	SLV 3	18.52	-1.71	80.27	-3.1989	-9.9879	-0.3688
630	SLV 4	18.56	-0.64	79.95	-3.1248	-9.9474	-0.2163
630	SLV 5	7.95	9.49	87.67	-1.4753	-10.9458	1.083
630	SLV 6	7.98	10.17	87.47	-1.4277	-10.9198	1.181
630	SLV 7	5.18	-9.04	94.71	-2.96	-11.8335	-1.2574
630	SLV 8	5.21	-8.35	94.5	-2.9124	-11.8075	-1.1594
630	SLV 9	-2.66	8.6	97.99	-0.8364	-12.2676	1.0001
630	SLV 10	-2.63	9.28	97.79	-0.7888	-12.2416	1.0981
630	SLV 11	-5.43	-9.93	105.02	-2.3211	-13.1553	-1.3403
630	SLV 12	-5.4	-9.24	104.82	-2.2735	-13.1293	-1.2423
630	SLV 13	-16.01	0.88	112.54	-0.624	-14.1277	0.057
630	SLV 14	-15.97	1.95	112.23	-0.5499	-14.0872	0.2094
630	SLV 15	-16.84	-4.68	114.65	-1.0694	-14.394	-0.6452
630	SLV 16	-16.8	-3.61	114.33	-0.9953	-14.3536	-0.4927
630	CRTFP Ux+	0	0	0	0	0	0
630	CRTFP Ux-	0	0	0	0	0	0
630	CRTFP Uy+	0	0	0	0	0	0
630	CRTFP Uy-	0	0	0	0	0	0
631	SLU 1	1.18	-0.18	68.33	14.8986	-2.5656	-0.304
631	SLU 2	1.18	-0.22	68.35	14.898	-2.5667	-0.3054
631	SLU 3	1.21	-0.17	69.93	15.24	-2.625	-0.3117
631	SLU 4	1.21	-0.2	69.94	15.2396	-2.6256	-0.3125
631	SLU 5	1.2	-0.23	69.33	15.1094	-2.6036	-0.3107
631	SLU 6	1.23	-0.18	70.91	15.4514	-2.6619	-0.317
631	SLU 7	1.23	-0.21	70.92	15.451	-2.6625	-0.3178
631	SLU 8	1.22	-0.2	70.29	15.3214	-2.6394	-0.3146
631	SLU 9	1.22	-0.22	70.3	15.321	-2.64	-0.3154
631	SLU 10	1.26	-0.14	76.84	16.737	-2.8737	-0.3206
631	SLU 11	1.29	-0.09	78.41	17.079	-2.932	-0.327
631	SLU 12	1.29	-0.12	78.42	17.0787	-2.9326	-0.3278
631	SLU 13	1.28	-0.15	77.81	16.9484	-2.9106	-0.3259
631	SLU 14	1.31	-0.1	79.39	17.2904	-2.9689	-0.3323
631	SLU 15	1.31	-0.13	79.4	17.2901	-2.9695	-0.3331
631	SLU 16	1.3	-0.12	78.77	17.1604	-2.9464	-0.3298
631	SLU 17	1.3	-0.14	78.78	17.1601	-2.947	-0.3307
631	SLU 18	1.29	-0.06	80.45	17.5258	-3.0042	-0.3258
631	SLU 19	1.29	-0.09	80.46	17.5254	-3.0048	-0.3266
631	SLU 20	1.31	-0.07	81.43	17.7372	-3.0411	-0.3311
631	SLU 21	1.31	-0.1	81.44	17.7368	-3.0417	-0.3319
631	SLU 22	1.29	-0.05	76.47	16.6635	-2.8728	-0.3276
631	SLU 23	1.3	-0.09	76.49	16.6629	-2.8739	-0.329

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
631	SLU 24	1.33	-0.04	78.07	17.0049	-2.9321	-0.3354
631	SLU 25	1.33	-0.07	78.08	17.0045	-2.9328	-0.3362
631	SLU 26	1.31	-0.1	77.47	16.8743	-2.9108	-0.3343
631	SLU 27	1.35	-0.06	79.04	17.2163	-2.969	-0.3407
631	SLU 28	1.35	-0.08	79.06	17.2159	-2.9697	-0.3415
631	SLU 29	1.33	-0.07	78.43	17.0863	-2.9466	-0.3382
631	SLU 30	1.33	-0.1	78.44	17.0859	-2.9472	-0.3391
631	SLU 31	1.37	-0.01	84.98	18.5019	-3.1809	-0.3443
631	SLU 32	1.4	0.04	86.55	18.8439	-3.2392	-0.3506
631	SLU 33	1.4	0.01	86.56	18.8436	-3.2398	-0.3515
631	SLU 34	1.39	-0.02	85.95	18.7133	-3.2178	-0.3496
631	SLU 35	1.42	0.03	87.53	19.0553	-3.2761	-0.3559
631	SLU 36	1.42	0	87.54	19.055	-3.2767	-0.3568
631	SLU 37	1.41	0.01	86.91	18.9253	-3.2536	-0.3535
631	SLU 38	1.41	-0.02	86.92	18.925	-3.2542	-0.3543
631	SLU 39	1.4	0.07	88.59	19.2907	-3.3113	-0.3494
631	SLU 40	1.41	0.04	88.6	19.2904	-3.312	-0.3503
631	SLU 41	1.42	0.05	89.57	19.5021	-3.3482	-0.3548
631	SLU 42	1.42	0.03	89.58	19.5017	-3.3489	-0.3556
631	SLU 43	1.5	-0.27	86.04	18.7631	-3.2299	-0.387
631	SLU 44	1.5	-0.32	86.06	18.7625	-3.231	-0.3884
631	SLU 45	1.53	-0.27	87.64	19.1045	-3.2893	-0.3948
631	SLU 46	1.53	-0.3	87.65	19.1041	-3.29	-0.3956
631	SLU 47	1.52	-0.33	87.04	18.9739	-3.2679	-0.3937
631	SLU 48	1.55	-0.28	88.61	19.3158	-3.3262	-0.4001
631	SLU 49	1.55	-0.31	88.63	19.3155	-3.3269	-0.4009
631	SLU 50	1.54	-0.3	88	19.1858	-3.3037	-0.3976
631	SLU 51	1.54	-0.32	88.01	19.1855	-3.3044	-0.3985
631	SLU 52	1.57	-0.24	94.55	20.6015	-3.538	-0.4037
631	SLU 53	1.61	-0.19	96.12	20.9435	-3.5963	-0.41
631	SLU 54	1.61	-0.22	96.13	20.9431	-3.597	-0.4109
631	SLU 55	1.59	-0.25	95.52	20.8129	-3.5749	-0.409
631	SLU 56	1.63	-0.2	97.1	21.1549	-3.6332	-0.4153
631	SLU 57	1.63	-0.23	97.11	21.1545	-3.6339	-0.4162
631	SLU 58	1.61	-0.22	96.48	21.0249	-3.6107	-0.4129
631	SLU 59	1.61	-0.24	96.49	21.0245	-3.6114	-0.4137
631	SLU 60	1.61	-0.16	98.16	21.3903	-3.6685	-0.4088
631	SLU 61	1.61	-0.19	98.17	21.3899	-3.6692	-0.4097
631	SLU 62	1.63	-0.17	99.14	21.6017	-3.7054	-0.4141
631	SLU 63	1.63	-0.2	99.15	21.6013	-3.7061	-0.415
631	SLU 64	1.61	-0.15	94.18	20.528	-3.5371	-0.4107
631	SLU 65	1.61	-0.19	94.2	20.5274	-3.5382	-0.4121
631	SLU 66	1.64	-0.14	95.78	20.8694	-3.5965	-0.4184
631	SLU 67	1.64	-0.17	95.79	20.869	-3.5972	-0.4193
631	SLU 68	1.63	-0.2	95.18	20.7388	-3.5751	-0.4174
631	SLU 69	1.66	-0.15	96.75	21.0808	-3.6334	-0.4237
631	SLU 70	1.66	-0.18	96.77	21.0804	-3.6341	-0.4246
631	SLU 71	1.65	-0.17	96.14	20.9508	-3.6109	-0.4213
631	SLU 72	1.65	-0.19	96.15	20.9504	-3.6116	-0.4221
631	SLU 73	1.69	-0.11	102.69	22.3664	-3.8452	-0.4274
631	SLU 74	1.72	-0.06	104.26	22.7084	-3.9035	-0.4337
631	SLU 75	1.72	-0.09	104.27	22.708	-3.9042	-0.4345
631	SLU 76	1.71	-0.12	103.66	22.5778	-3.8821	-0.4327
631	SLU 77	1.74	-0.07	105.24	22.9198	-3.9404	-0.439
631	SLU 78	1.74	-0.1	105.25	22.9194	-3.9411	-0.4398
631	SLU 79	1.73	-0.09	104.62	22.7898	-3.9179	-0.4366
631	SLU 80	1.73	-0.11	104.63	22.7894	-3.9186	-0.4374
631	SLU 81	1.72	-0.03	106.3	23.1552	-3.9757	-0.4325
631	SLU 82	1.72	-0.06	106.31	23.1548	-3.9764	-0.4334
631	SLU 83	1.74	-0.04	107.28	23.3666	-4.0126	-0.4378
631	SLU 84	1.74	-0.07	107.29	23.3662	-4.0133	-0.4387
631	SLE RA 1	1.21	-0.14	70.66	15.4029	-2.6533	-0.3107
631	SLE RA 2	1.21	-0.17	70.67	15.4025	-2.6541	-0.3117
631	SLE RA 3	1.23	-0.14	71.72	15.6305	-2.6929	-0.3159
631	SLE RA 4	1.23	-0.15	71.73	15.6302	-2.6934	-0.3164
631	SLE RA 5	1.23	-0.18	71.33	15.5434	-2.6787	-0.3152
631	SLE RA 6	1.25	-0.14	72.37	15.7714	-2.7175	-0.3194
631	SLE RA 7	1.25	-0.16	72.38	15.7711	-2.718	-0.32
631	SLE RA 8	1.24	-0.15	71.96	15.6847	-2.7025	-0.3178
631	SLE RA 9	1.24	-0.17	71.97	15.6845	-2.703	-0.3183
631	SLE RA 10	1.27	-0.12	76.33	16.6285	-2.8588	-0.3218
631	SLE RA 11	1.29	-0.08	77.38	16.8565	-2.8976	-0.3261
631	SLE RA 12	1.29	-0.1	77.38	16.8562	-2.8981	-0.3266
631	SLE RA 13	1.28	-0.12	76.98	16.7694	-2.8834	-0.3254
631	SLE RA 14	1.3	-0.09	78.03	16.9974	-2.9222	-0.3296
631	SLE RA 15	1.3	-0.11	78.04	16.9972	-2.9227	-0.3301
631	SLE RA 16	1.29	-0.1	77.62	16.9107	-2.9072	-0.328
631	SLE RA 17	1.29	-0.12	77.63	16.9105	-2.9077	-0.3285
631	SLE RA 18	1.29	-0.06	78.74	17.1543	-2.9457	-0.3253
631	SLE RA 19	1.29	-0.08	78.75	17.1541	-2.9462	-0.3258
631	SLE RA 20	1.3	-0.07	79.39	17.2953	-2.9703	-0.3288
631	SLE RA 21	1.3	-0.09	79.4	17.295	-2.9708	-0.3294
631	SLE FR 1	1.21	-0.14	70.66	15.4029	-2.6533	-0.3107
631	SLE FR 2	1.21	-0.15	70.66	15.4028	-2.6535	-0.3109
631	SLE FR 3	1.22	-0.14	70.92	15.4592	-2.6632	-0.3121
631	SLE FR 4	1.24	-0.12	73.09	15.9282	-2.7412	-0.3153
631	SLE FR 5	1.24	-0.12	73.34	15.9847	-2.7509	-0.3165
631	SLE FR 6	1.25	-0.1	74.7	16.2786	-2.7995	-0.318
631	SLE QP 1	1.21	-0.14	70.66	15.4029	-2.6533	-0.3107
631	SLE QP 2	1.24	-0.12	73.08	15.9283	-2.7411	-0.3151
631	SLD 1	7.31	1.17	67.06	13.9772	-2.5853	-1.7438
631	SLD 2	7.3	1.6	66.99	13.9924	-2.5818	-1.7208
631	SLD 3	7.03	-0.74	67.57	13.8369	-2.5984	-1.8402
631	SLD 4	7.02	-0.32	67.49	13.8522	-2.5949	-1.8172
631	SLD 5	3.49	3.11	70.53	15.5531	-2.6751	-0.6016
631	SLD 6	3.48	3.38	70.48	15.563	-2.6728	-0.5865
631	SLD 7	2.55	-3.29	72.2	15.0854	-2.7187	-0.9229

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
631	SLD 8	2.54	-3.01	72.15	15.0954	-2.7164	-0.9079
631	SLD 9	-0.07	2.78	74.01	16.7612	-2.7657	0.2777
631	SLD 10	-0.08	3.06	73.96	16.7712	-2.7634	0.2928
631	SLD 11	-1.01	-3.62	75.69	16.2936	-2.8093	-0.0437
631	SLD 12	-1.01	-3.34	75.64	16.3035	-2.807	-0.0286
631	SLD 13	-4.55	0.09	78.68	18.0045	-2.8872	1.187
631	SLD 14	-4.55	0.51	78.6	18.0197	-2.8837	1.2101
631	SLD 15	-4.83	-1.83	79.18	17.8642	-2.9003	1.0906
631	SLD 16	-4.84	-1.41	79.1	17.8794	-2.8968	1.1137
631	SLV 1	15.44	2.85	59	11.3583	-2.3764	-3.6587
631	SLV 2	15.42	3.83	58.82	11.3937	-2.3683	-3.605
631	SLV 3	14.78	-1.52	60.15	11.0343	-2.4066	-3.8817
631	SLV 4	14.77	-0.53	59.97	11.0697	-2.3985	-3.828
631	SLV 5	6.49	7.22	67.14	15.0427	-2.5872	-0.9892
631	SLV 6	6.48	7.85	67.03	15.0654	-2.582	-0.9547
631	SLV 7	4.31	-7.32	70.98	13.9626	-2.6879	-1.7325
631	SLV 8	4.3	-6.69	70.87	13.9854	-2.6827	-1.698
631	SLV 9	-1.83	6.46	75.3	17.8712	-2.7994	1.0678
631	SLV 10	-1.84	7.09	75.18	17.894	-2.7942	1.1023
631	SLV 11	-4.01	-8.09	79.14	16.7912	-2.9001	0.3245
631	SLV 12	-4.02	-7.45	79.02	16.814	-2.8949	0.359
631	SLV 13	-12.3	0.3	86.19	20.7869	-3.0836	3.1979
631	SLV 14	-12.31	1.28	86.01	20.8223	-3.0755	3.2515
631	SLV 15	-12.95	-4.06	87.34	20.4629	-3.1138	2.9749
631	SLV 16	-12.97	-3.08	87.16	20.4983	-3.1057	3.0285
631	CRTFP Ux+	0	0	0	0	0	0
631	CRTFP Ux-	0	0	0	0	0	0
631	CRTFP Uy+	0	0	0	0	0	0
631	CRTFP Uy-	0	0	0	0	0	0
635	SLU 1	1.46	-0.6	107.77	-22.2678	30.6405	0.4656
635	SLU 2	1.46	-0.66	107.83	-22.2785	30.6579	0.485
635	SLU 3	1.5	-0.6	110.31	-22.7931	31.3635	0.474
635	SLU 4	1.5	-0.64	110.34	-22.7996	31.374	0.4855
635	SLU 5	1.48	-0.68	109.37	-22.5987	31.0946	0.4962
635	SLU 6	1.52	-0.62	111.85	-23.1133	31.8002	0.4852
635	SLU 7	1.52	-0.66	111.89	-23.1198	31.8106	0.4967
635	SLU 8	1.51	-0.64	110.86	-22.9082	31.5137	0.4881
635	SLU 9	1.51	-0.68	110.9	-22.9146	31.5242	0.4996
635	SLU 10	1.55	-0.57	121.19	-25.0242	34.4735	0.4805
635	SLU 11	1.59	-0.5	123.67	-25.5388	35.1791	0.4695
635	SLU 12	1.59	-0.54	123.7	-25.5452	35.1896	0.481
635	SLU 13	1.58	-0.59	122.73	-25.3444	34.9102	0.4917
635	SLU 14	1.61	-0.53	125.21	-25.859	35.6158	0.4807
635	SLU 15	1.61	-0.56	125.24	-25.8655	35.6263	0.4922
635	SLU 16	1.6	-0.55	124.22	-25.6539	35.3293	0.4836
635	SLU 17	1.6	-0.58	124.25	-25.6603	35.3398	0.4951
635	SLU 18	1.59	-0.46	126.85	-26.1901	36.0914	0.4592
635	SLU 19	1.59	-0.5	126.89	-26.1966	36.1018	0.4708
635	SLU 20	1.61	-0.48	128.4	-26.5104	36.528	0.4704
635	SLU 21	1.61	-0.52	128.43	-26.5168	36.5385	0.482
635	SLU 22	1.6	-0.44	120.52	-24.8862	34.2281	0.4491
635	SLU 23	1.6	-0.5	120.57	-24.8969	34.2455	0.4684
635	SLU 24	1.63	-0.44	123.05	-25.4115	34.9512	0.4574
635	SLU 25	1.63	-0.48	123.09	-25.418	34.9616	0.469
635	SLU 26	1.62	-0.52	122.12	-25.2171	34.6822	0.4796
635	SLU 27	1.66	-0.46	124.6	-25.7318	35.3878	0.4686
635	SLU 28	1.66	-0.5	124.63	-25.7382	35.3983	0.4802
635	SLU 29	1.64	-0.48	123.61	-25.5266	35.1013	0.4715
635	SLU 30	1.64	-0.52	123.64	-25.5331	35.1118	0.4831
635	SLU 31	1.69	-0.41	133.93	-27.6426	38.0612	0.4639
635	SLU 32	1.72	-0.34	136.41	-28.1572	38.7668	0.4529
635	SLU 33	1.72	-0.38	136.44	-28.1637	38.7772	0.4645
635	SLU 34	1.71	-0.43	135.47	-27.9628	38.4978	0.4751
635	SLU 35	1.75	-0.36	137.95	-28.4774	39.2034	0.4641
635	SLU 36	1.75	-0.4	137.99	-28.4839	39.2139	0.4757
635	SLU 37	1.74	-0.38	136.96	-28.2723	38.917	0.467
635	SLU 38	1.74	-0.42	137	-28.2787	38.9274	0.4786
635	SLU 39	1.73	-0.3	139.6	-28.8086	39.679	0.4427
635	SLU 40	1.73	-0.34	139.63	-28.815	39.6895	0.4543
635	SLU 41	1.75	-0.32	141.14	-29.1288	40.1156	0.4539
635	SLU 42	1.75	-0.36	141.18	-29.1352	40.1261	0.4655
635	SLU 43	1.85	-0.83	135.74	-28.0504	38.6026	0.611
635	SLU 44	1.85	-0.9	135.79	-28.0611	38.62	0.6303
635	SLU 45	1.89	-0.83	138.27	-28.5757	39.3256	0.6193
635	SLU 46	1.89	-0.87	138.31	-28.5822	39.3361	0.6309
635	SLU 47	1.88	-0.92	137.34	-28.3813	39.0566	0.6415
635	SLU 48	1.91	-0.85	139.82	-28.8959	39.7623	0.6305
635	SLU 49	1.91	-0.89	139.85	-28.9024	39.7727	0.6421
635	SLU 50	1.9	-0.87	138.83	-28.6908	39.4758	0.6334
635	SLU 51	1.9	-0.91	138.86	-28.6972	39.4863	0.645
635	SLU 52	1.94	-0.8	149.15	-30.8068	42.4356	0.6258
635	SLU 53	1.98	-0.74	151.63	-31.3214	43.1412	0.6148
635	SLU 54	1.98	-0.78	151.66	-31.3278	43.1517	0.6264
635	SLU 55	1.97	-0.82	150.69	-31.127	42.8723	0.637
635	SLU 56	2	-0.76	153.17	-31.6416	43.5779	0.626
635	SLU 57	2	-0.8	153.21	-31.648	43.5884	0.6376
635	SLU 58	1.99	-0.78	152.18	-31.4364	43.2914	0.6289
635	SLU 59	1.99	-0.82	152.22	-31.4429	43.3019	0.6405
635	SLU 60	1.98	-0.7	154.82	-31.9727	44.0534	0.6046
635	SLU 61	1.98	-0.74	154.85	-31.9792	44.0639	0.6162
635	SLU 62	2	-0.72	156.36	-32.2929	44.4901	0.6158
635	SLU 63	2.01	-0.76	156.4	-32.2994	44.5006	0.6274
635	SLU 64	1.99	-0.67	148.48	-30.6688	42.1902	0.5945
635	SLU 65	1.99	-0.73	148.54	-30.6795	42.2076	0.6138
635	SLU 66	2.02	-0.67	151.02	-31.1941	42.9132	0.6028
635	SLU 67	2.02	-0.71	151.05	-31.2006	42.9237	0.6144
635	SLU 68	2.01	-0.76	150.08	-30.9997	42.6443	0.625

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
635	SLU 69	2.05	-0.69	152.56	-31.5143	43.3499	0.614
635	SLU 70	2.05	-0.73	152.6	-31.5208	43.3604	0.6256
635	SLU 71	2.04	-0.71	151.57	-31.3092	43.0634	0.6169
635	SLU 72	2.04	-0.75	151.6	-31.3156	43.0739	0.6285
635	SLU 73	2.08	-0.64	161.89	-33.4252	46.0233	0.6093
635	SLU 74	2.12	-0.58	164.37	-33.9398	46.7289	0.5983
635	SLU 75	2.12	-0.62	164.41	-33.9462	46.7393	0.6099
635	SLU 76	2.1	-0.66	163.44	-33.7454	46.4599	0.6205
635	SLU 77	2.14	-0.6	165.92	-34.26	47.1655	0.6095
635	SLU 78	2.14	-0.64	165.95	-34.2665	47.176	0.6211
635	SLU 79	2.13	-0.62	164.93	-34.0549	46.8791	0.6124
635	SLU 80	2.13	-0.66	164.96	-34.0613	46.8895	0.624
635	SLU 81	2.12	-0.53	167.56	-34.5912	47.6411	0.588
635	SLU 82	2.12	-0.57	167.6	-34.5976	47.6515	0.5996
635	SLU 83	2.14	-0.56	169.11	-34.9114	48.0777	0.5993
635	SLU 84	2.14	-0.6	169.14	-34.9178	48.0882	0.6108
635	SLE RA 1	1.5	-0.55	111.42	-23.0159	31.6655	0.4609
635	SLE RA 2	1.5	-0.59	111.45	-23.0231	31.6771	0.4738
635	SLE RA 3	1.52	-0.55	113.11	-23.3661	32.1475	0.4665
635	SLE RA 4	1.52	-0.58	113.13	-23.3704	32.1545	0.4742
635	SLE RA 5	1.52	-0.61	112.48	-23.2365	31.9682	0.4813
635	SLE RA 6	1.54	-0.57	114.14	-23.5796	32.4386	0.4739
635	SLE RA 7	1.54	-0.59	114.16	-23.5839	32.4456	0.4817
635	SLE RA 8	1.53	-0.58	113.47	-23.4428	32.2477	0.4759
635	SLE RA 9	1.53	-0.61	113.5	-23.4471	32.2547	0.4836
635	SLE RA 10	1.56	-0.53	120.36	-24.8535	34.2209	0.4708
635	SLE RA 11	1.58	-0.49	122.01	-25.1966	34.6913	0.4635
635	SLE RA 12	1.58	-0.51	122.03	-25.2009	34.6983	0.4712
635	SLE RA 13	1.58	-0.55	121.39	-25.067	34.512	0.4783
635	SLE RA 14	1.6	-0.5	123.04	-25.41	34.9824	0.4709
635	SLE RA 15	1.6	-0.53	123.06	-25.4143	34.9894	0.4787
635	SLE RA 16	1.59	-0.52	122.38	-25.2733	34.7914	0.4729
635	SLE RA 17	1.59	-0.54	122.4	-25.2776	34.7984	0.4806
635	SLE RA 18	1.58	-0.46	124.14	-25.6308	35.2994	0.4566
635	SLE RA 19	1.59	-0.49	124.16	-25.6351	35.3064	0.4644
635	SLE RA 20	1.6	-0.48	125.16	-25.8443	35.5905	0.4641
635	SLE RA 21	1.6	-0.5	125.19	-25.8486	35.5975	0.4718
635	SLE FR 1	1.5	-0.55	111.42	-23.0159	31.6655	0.4609
635	SLE FR 2	1.5	-0.56	111.42	-23.0173	31.6678	0.4635
635	SLE FR 3	1.5	-0.56	111.83	-23.1013	31.7819	0.4639
635	SLE FR 4	1.52	-0.53	115.24	-23.8018	32.758	0.4622
635	SLE FR 5	1.53	-0.53	115.64	-23.8858	32.8721	0.4626
635	SLE FR 6	1.54	-0.51	117.78	-24.3233	33.4825	0.4588
635	SLE QP 1	1.5	-0.55	111.42	-23.0159	31.6655	0.4609
635	SLE QP 2	1.52	-0.52	115.23	-23.8004	32.7557	0.4596
635	SLD 1	10.45	1.51	106.21	-22.0003	30.33	1.7167
635	SLD 2	10.49	2.17	106	-21.9737	30.257	1.5672
635	SLD 3	10.04	-1.37	107.59	-22.2495	30.774	2.5265
635	SLD 4	10.08	-0.71	107.38	-22.2229	30.7011	2.377
635	SLD 5	4.82	4.34	110.46	-22.8872	31.3674	-0.365
635	SLD 6	4.85	4.78	110.32	-22.8698	31.3197	-0.4627
635	SLD 7	3.45	-5.27	115.08	-23.7176	32.8476	2.3343
635	SLD 8	3.48	-4.84	114.94	-23.7003	32.7999	2.2366
635	SLD 9	-0.43	3.79	115.52	-23.9005	32.7115	-1.3173
635	SLD 10	-0.4	4.22	115.38	-23.8831	32.6638	-1.415
635	SLD 11	-1.8	-5.82	120.14	-24.7309	34.1917	1.3819
635	SLD 12	-1.77	-5.39	120	-24.7135	34.144	1.2842
635	SLD 13	-7.03	-0.33	123.08	-25.3778	34.8103	-1.4577
635	SLD 14	-6.99	0.33	122.87	-25.3513	34.7373	-1.6072
635	SLD 15	-7.44	-3.22	124.46	-25.627	35.2543	-0.648
635	SLD 16	-7.4	-2.56	124.26	-25.6004	35.1814	-0.7975
635	SLV 1	22.4	4.15	94.15	-19.5943	27.0906	3.4257
635	SLV 2	22.5	5.69	93.66	-19.5323	26.9207	3.0774
635	SLV 3	21.44	-2.41	97.3	-20.1614	28.1006	5.267
635	SLV 4	21.55	-0.87	96.82	-20.0994	27.9307	4.9188
635	SLV 5	9.22	10.56	104.2	-21.689	29.5534	-1.3836
635	SLV 6	9.29	11.55	103.89	-21.6492	29.4442	-1.6074
635	SLV 7	6.03	-11.3	114.72	-23.5794	32.9201	4.7542
635	SLV 8	6.1	-10.31	114.41	-23.5396	32.8109	4.5304
635	SLV 9	-3.05	9.26	116.05	-24.0612	32.7005	-3.6111
635	SLV 10	-2.98	10.25	115.74	-24.0213	32.5912	-3.8349
635	SLV 11	-6.24	-12.6	126.57	-25.9515	36.0671	2.5266
635	SLV 12	-6.17	-11.61	126.26	-25.9117	35.9579	2.3028
635	SLV 13	-18.5	-0.18	133.65	-27.5013	37.5807	-3.9995
635	SLV 14	-18.39	1.37	133.16	-27.4394	37.4107	-4.3477
635	SLV 15	-19.46	-6.73	136.8	-28.0684	38.5907	-2.1582
635	SLV 16	-19.35	-5.19	136.32	-28.0065	38.4207	-2.5064
635	CRTFP Ux+	0	0	0	0	0	0
635	CRTFP Ux-	0	0	0	0	0	0
635	CRTFP Uy+	0	0	0	0	0	0
635	CRTFP Uy-	0	0	0	0	0	0
636	SLU 1	2.31	-0.23	135.28	-2.0308	27.7249	0.084
636	SLU 2	2.31	-0.3	135.32	-2.0363	27.7355	0.1006
636	SLU 3	2.37	-0.22	138.43	-2.0848	28.3716	0.0823
636	SLU 4	2.37	-0.26	138.46	-2.0881	28.378	0.0923
636	SLU 5	2.35	-0.32	137.26	-2.068	28.133	0.1048
636	SLU 6	2.41	-0.24	140.37	-2.1164	28.7692	0.0865
636	SLU 7	2.41	-0.28	140.4	-2.1198	28.7755	0.0965
636	SLU 8	2.39	-0.26	139.16	-2.094	28.52	0.0924
636	SLU 9	2.39	-0.31	139.18	-2.0974	28.5263	0.1024
636	SLU 10	2.46	-0.11	151.96	-2.3024	31.1487	0.0659
636	SLU 11	2.52	-0.03	155.07	-2.3508	31.7848	0.0476
636	SLU 12	2.52	-0.07	155.1	-2.3542	31.7912	0.0576
636	SLU 13	2.5	-0.13	153.9	-2.334	31.5462	0.0701
636	SLU 14	2.56	-0.05	157.01	-2.3824	32.1824	0.0518
636	SLU 15	2.56	-0.09	157.04	-2.3858	32.1887	0.0618
636	SLU 16	2.53	-0.07	155.8	-2.36	31.9332	0.0577

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
636	SLU 17	2.53	-0.12	155.82	-2.3634	31.9395	0.0676
636	SLU 18	2.52	0.04	159.05	-2.4108	32.6009	0.0344
636	SLU 19	2.52	0	159.08	-2.4141	32.6072	0.0443
636	SLU 20	2.56	0.03	160.99	-2.4424	32.9984	0.0386
636	SLU 21	2.56	-0.02	161.02	-2.4458	33.0048	0.0485
636	SLU 22	2.52	0.03	151.45	-2.2712	31.0304	0.0328
636	SLU 23	2.52	-0.05	151.49	-2.2768	31.041	0.0494
636	SLU 24	2.58	0.04	154.6	-2.3252	31.6772	0.0312
636	SLU 25	2.59	-0.01	154.62	-2.3286	31.6836	0.0411
636	SLU 26	2.56	-0.07	153.43	-2.3084	31.4386	0.0536
636	SLU 27	2.62	0.02	156.54	-2.3568	32.0747	0.0354
636	SLU 28	2.62	-0.03	156.57	-2.3602	32.0811	0.0453
636	SLU 29	2.6	-0.01	155.33	-2.3344	31.8255	0.0413
636	SLU 30	2.6	-0.05	155.35	-2.3378	31.8319	0.0512
636	SLU 31	2.67	0.14	168.13	-2.5428	34.4542	0.0147
636	SLU 32	2.73	0.23	171.24	-2.5912	35.0904	-0.0036
636	SLU 33	2.73	0.18	171.26	-2.5946	35.0968	0.0064
636	SLU 34	2.71	0.12	170.07	-2.5744	34.8518	0.0189
636	SLU 35	2.77	0.21	173.18	-2.6228	35.4879	0.0006
636	SLU 36	2.77	0.16	173.21	-2.6262	35.4943	0.0106
636	SLU 37	2.75	0.18	171.97	-2.6004	35.2387	0.0065
636	SLU 38	2.75	0.14	171.99	-2.6038	35.2451	0.0165
636	SLU 39	2.74	0.3	175.22	-2.6512	35.9064	-0.0168
636	SLU 40	2.74	0.25	175.24	-2.6545	35.9128	-0.0068
636	SLU 41	2.78	0.28	177.16	-2.6828	36.304	-0.0126
636	SLU 42	2.78	0.24	177.18	-2.6862	36.3104	-0.0026
636	SLU 43	2.93	-0.38	170.32	-2.5576	34.909	0.1267
636	SLU 44	2.93	-0.46	170.36	-2.5631	34.9196	0.1433
636	SLU 45	2.99	-0.37	173.47	-2.6116	35.5557	0.1251
636	SLU 46	2.99	-0.42	173.5	-2.6149	35.5621	0.135
636	SLU 47	2.97	-0.48	172.3	-2.5948	35.3171	0.1475
636	SLU 48	3.03	-0.39	175.41	-2.6432	35.9533	0.1293
636	SLU 49	3.03	-0.44	175.44	-2.6466	35.9597	0.1392
636	SLU 50	3	-0.42	174.2	-2.6208	35.7041	0.1352
636	SLU 51	3	-0.46	174.22	-2.6242	35.7104	0.1451
636	SLU 52	3.07	-0.27	187	-2.8292	38.3328	0.1086
636	SLU 53	3.13	-0.18	190.11	-2.8776	38.9689	0.0903
636	SLU 54	3.14	-0.23	190.14	-2.881	38.9753	0.1003
636	SLU 55	3.11	-0.29	188.94	-2.8608	38.7303	0.1128
636	SLU 56	3.17	-0.2	192.05	-2.9092	39.3665	0.0945
636	SLU 57	3.17	-0.25	192.08	-2.9126	39.3729	0.1045
636	SLU 58	3.15	-0.23	190.84	-2.8868	39.1173	0.1004
636	SLU 59	3.15	-0.27	190.86	-2.8902	39.1237	0.1104
636	SLU 60	3.14	-0.11	194.09	-2.9376	39.785	0.0771
636	SLU 61	3.14	-0.16	194.12	-2.9409	39.7913	0.0871
636	SLU 62	3.18	-0.13	196.03	-2.9692	40.1825	0.0813
636	SLU 63	3.18	-0.18	196.06	-2.9726	40.1889	0.0913
636	SLU 64	3.14	-0.13	186.49	-2.798	38.2145	0.0756
636	SLU 65	3.14	-0.2	186.53	-2.8036	38.2252	0.0922
636	SLU 66	3.2	-0.12	189.64	-2.852	38.8613	0.0739
636	SLU 67	3.2	-0.16	189.66	-2.8554	38.8677	0.0839
636	SLU 68	3.18	-0.22	188.47	-2.8352	38.6227	0.0964
636	SLU 69	3.24	-0.14	191.58	-2.8836	39.2589	0.0781
636	SLU 70	3.24	-0.18	191.6	-2.887	39.2652	0.0881
636	SLU 71	3.22	-0.16	190.37	-2.8612	39.0096	0.084
636	SLU 72	3.22	-0.21	190.39	-2.8646	39.016	0.094
636	SLU 73	3.29	-0.01	203.17	-3.0696	41.6384	0.0574
636	SLU 74	3.35	0.07	206.28	-3.118	42.2745	0.0392
636	SLU 75	3.35	0.03	206.3	-3.1214	42.2809	0.0491
636	SLU 76	3.33	-0.03	205.11	-3.1012	42.0359	0.0617
636	SLU 77	3.39	0.05	208.22	-3.1496	42.6721	0.0434
636	SLU 78	3.39	0.01	208.25	-3.153	42.6784	0.0533
636	SLU 79	3.37	0.03	207.01	-3.1272	42.4229	0.0493
636	SLU 80	3.37	-0.02	207.03	-3.1306	42.4292	0.0592
636	SLU 81	3.35	0.14	210.26	-3.178	43.0905	0.026
636	SLU 82	3.35	0.1	210.28	-3.1813	43.0969	0.0359
636	SLU 83	3.39	0.13	212.2	-3.2096	43.4881	0.0302
636	SLU 84	3.39	0.08	212.22	-3.213	43.4945	0.0401
636	SLE RA 1	2.37	-0.15	139.9	-2.0994	28.6693	0.0694
636	SLE RA 2	2.37	-0.2	139.93	-2.1032	28.6764	0.0804
636	SLE RA 3	2.41	-0.15	142	-2.1355	29.1005	0.0683
636	SLE RA 4	2.41	-0.18	142.02	-2.1377	29.1047	0.0749
636	SLE RA 5	2.4	-0.22	141.22	-2.1243	28.9414	0.0833
636	SLE RA 6	2.44	-0.16	143.29	-2.1566	29.3655	0.0711
636	SLE RA 7	2.44	-0.19	143.31	-2.1588	29.3698	0.0777
636	SLE RA 8	2.42	-0.18	142.48	-2.1416	29.1994	0.075
636	SLE RA 9	2.42	-0.21	142.5	-2.1439	29.2036	0.0816
636	SLE RA 10	2.47	-0.08	151.02	-2.2805	30.9519	0.0573
636	SLE RA 11	2.51	-0.02	153.09	-2.3128	31.3759	0.0451
636	SLE RA 12	2.51	-0.05	153.11	-2.315	31.3802	0.0517
636	SLE RA 13	2.49	-0.09	152.31	-2.3016	31.2169	0.0601
636	SLE RA 14	2.53	-0.03	154.39	-2.3339	31.641	0.0479
636	SLE RA 15	2.54	-0.06	154.4	-2.3361	31.6452	0.0546
636	SLE RA 16	2.52	-0.05	153.58	-2.319	31.4748	0.0518
636	SLE RA 17	2.52	-0.08	153.6	-2.3212	31.4791	0.0585
636	SLE RA 18	2.51	0.03	155.74	-2.3528	31.92	0.0363
636	SLE RA 19	2.51	0	155.76	-2.355	31.9242	0.0429
636	SLE RA 20	2.54	0.01	157.04	-2.3739	32.185	0.0391
636	SLE RA 21	2.54	-0.02	157.06	-2.3761	32.1893	0.0457
636	SLE FR 1	2.37	-0.15	139.9	-2.0994	28.6693	0.0694
636	SLE FR 2	2.37	-0.16	139.9	-2.1002	28.6707	0.0716
636	SLE FR 3	2.38	-0.16	140.41	-2.1079	28.7753	0.0705
636	SLE FR 4	2.41	-0.11	144.66	-2.1762	29.6459	0.0617
636	SLE FR 5	2.42	-0.1	145.17	-2.1839	29.7505	0.0606
636	SLE FR 6	2.44	-0.06	147.82	-2.2261	30.2946	0.0528
636	SLE QP 1	2.37	-0.15	139.9	-2.0994	28.6693	0.0694
636	SLE QP 2	2.41	-0.1	144.65	-2.1754	29.6445	0.0595

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
636	SLD 1	13.72	2.18	132.79	-1.8864	27.428	-0.3812
636	SLD 2	13.75	3.17	132.64	-1.8808	27.3949	-0.5616
636	SLD 3	13.2	-1.43	133.82	-2.0734	27.6361	0.3765
636	SLD 4	13.22	-0.44	133.67	-2.0678	27.603	0.1961
636	SLD 5	6.59	5.89	139.54	-1.8061	28.6697	-1.1901
636	SLD 6	6.61	6.53	139.45	-1.8024	28.648	-1.3079
636	SLD 7	4.85	-6.15	143	-2.4295	29.3636	1.3357
636	SLD 8	4.87	-5.51	142.91	-2.4258	29.3419	1.2178
636	SLD 9	-0.05	5.31	146.4	-1.9251	29.9471	-1.0989
636	SLD 10	-0.03	5.95	146.3	-1.9214	29.9254	-1.2168
636	SLD 11	-1.78	-6.73	149.86	-2.5485	30.641	1.4269
636	SLD 12	-1.77	-6.09	149.76	-2.5448	30.6193	1.309
636	SLD 13	-8.4	0.24	155.63	-2.2831	31.686	-0.0772
636	SLD 14	-8.37	1.23	155.48	-2.2775	31.6529	-0.2576
636	SLD 15	-8.92	-3.37	156.67	-2.4701	31.8941	0.6805
636	SLD 16	-8.9	-2.38	156.52	-2.4645	31.861	0.5001
636	SLV 1	28.86	5.14	116.9	-1.5051	24.4603	-0.9483
636	SLV 2	28.93	7.43	116.55	-1.492	24.3833	-1.3684
636	SLV 3	27.65	-3.08	119.28	-1.9301	24.9368	0.7751
636	SLV 4	27.71	-0.79	118.93	-1.917	24.8598	0.355
636	SLV 5	12.18	13.54	132.77	-1.3319	27.3797	-2.7846
636	SLV 6	12.22	15.01	132.55	-1.3235	27.3302	-3.0546
636	SLV 7	8.13	-13.85	140.72	-2.7488	28.9681	2.9598
636	SLV 8	8.17	-12.38	140.49	-2.7403	28.9186	2.6898
636	SLV 9	-3.35	12.18	148.81	-1.6105	30.3704	-2.5709
636	SLV 10	-3.31	13.65	148.59	-1.6021	30.3209	-2.8409
636	SLV 11	-7.39	-15.21	156.76	-3.0274	31.9588	3.1735
636	SLV 12	-7.35	-13.74	156.53	-3.019	31.9093	2.9035
636	SLV 13	-22.89	0.59	170.37	-2.4339	34.4292	-0.2361
636	SLV 14	-22.83	2.88	170.02	-2.4208	34.3522	-0.6562
636	SLV 15	-24.1	-7.63	172.75	-2.8589	34.9057	1.4873
636	SLV 16	-24.04	-5.34	172.41	-2.8458	34.8287	1.0672
636	CRTFP Ux+	0	0	0	0	0	0
636	CRTFP Ux-	0	0	0	0	0	0
636	CRTFP Uy+	0	0	0	0	0	0
636	CRTFP Uy-	0	0	0	0	0	0
639	SLU 1	0.84	-0.04	48.56	-2.6245	-1.281	0.0454
639	SLU 2	0.85	-0.07	48.57	-2.6277	-1.2811	0.0448
639	SLU 3	0.87	-0.04	49.69	-2.6886	-1.3106	0.0466
639	SLU 4	0.87	-0.05	49.7	-2.6905	-1.3107	0.0463
639	SLU 5	0.86	-0.07	49.27	-2.6664	-1.2994	0.0454
639	SLU 6	0.88	-0.04	50.39	-2.7274	-1.3289	0.0472
639	SLU 7	0.88	-0.06	50.39	-2.7292	-1.329	0.0469
639	SLU 8	0.87	-0.05	49.95	-2.702	-1.3176	0.0466
639	SLU 9	0.87	-0.07	49.96	-2.7039	-1.3177	0.0463
639	SLU 10	0.9	0.01	54.54	-2.9586	-1.4379	0.0502
639	SLU 11	0.92	0.04	55.65	-3.0196	-1.4674	0.052
639	SLU 12	0.92	0.02	55.66	-3.0215	-1.4674	0.0516
639	SLU 13	0.91	0	55.23	-2.9973	-1.4562	0.0508
639	SLU 14	0.94	0.03	56.35	-3.0583	-1.4857	0.0526
639	SLU 15	0.94	0.01	56.36	-3.0602	-1.4857	0.0522
639	SLU 16	0.93	0.02	55.92	-3.033	-1.4744	0.052
639	SLU 17	0.93	0.01	55.92	-3.0348	-1.4744	0.0516
639	SLU 18	0.92	0.06	57.08	-3.0974	-1.5049	0.0531
639	SLU 19	0.92	0.05	57.09	-3.0992	-1.505	0.0527
639	SLU 20	0.94	0.06	57.78	-3.1361	-1.5233	0.0537
639	SLU 21	0.94	0.04	57.78	-3.1379	-1.5233	0.0533
639	SLU 22	0.92	0.05	54.38	-2.9367	-1.4349	0.052
639	SLU 23	0.92	0.02	54.39	-2.9398	-1.435	0.0514
639	SLU 24	0.95	0.05	55.51	-3.0007	-1.4644	0.0532
639	SLU 25	0.95	0.04	55.52	-3.0026	-1.4645	0.0528
639	SLU 26	0.94	0.02	55.09	-2.9785	-1.4533	0.052
639	SLU 27	0.96	0.05	56.21	-3.0395	-1.4828	0.0538
639	SLU 28	0.96	0.03	56.21	-3.0413	-1.4828	0.0534
639	SLU 29	0.95	0.04	55.78	-3.0141	-1.4715	0.0532
639	SLU 30	0.95	0.02	55.78	-3.016	-1.4715	0.0528
639	SLU 31	0.98	0.1	60.36	-3.2707	-1.5917	0.0567
639	SLU 32	1	0.13	61.48	-3.3317	-1.6212	0.0585
639	SLU 33	1	0.11	61.48	-3.3336	-1.6213	0.0582
639	SLU 34	0.99	0.09	61.05	-3.3094	-1.61	0.0573
639	SLU 35	1.01	0.12	62.17	-3.3704	-1.6395	0.0591
639	SLU 36	1.01	0.11	62.18	-3.3723	-1.6396	0.0588
639	SLU 37	1.01	0.11	61.74	-3.3451	-1.6282	0.0585
639	SLU 38	1.01	0.1	61.75	-3.3469	-1.6283	0.0582
639	SLU 39	1	0.16	62.9	-3.4095	-1.6588	0.0596
639	SLU 40	1	0.14	62.91	-3.4113	-1.6588	0.0593
639	SLU 41	1.02	0.15	63.6	-3.4482	-1.6771	0.0602
639	SLU 42	1.02	0.13	63.6	-3.45	-1.6772	0.0599
639	SLU 43	1.07	-0.08	61.13	-3.3049	-1.6126	0.0568
639	SLU 44	1.07	-0.11	61.15	-3.308	-1.6127	0.0562
639	SLU 45	1.09	-0.08	62.26	-3.369	-1.6422	0.058
639	SLU 46	1.09	-0.1	62.27	-3.3709	-1.6422	0.0577
639	SLU 47	1.09	-0.12	61.84	-3.3467	-1.631	0.0568
639	SLU 48	1.11	-0.09	62.96	-3.4077	-1.6605	0.0586
639	SLU 49	1.11	-0.1	62.97	-3.4096	-1.6605	0.0583
639	SLU 50	1.1	-0.1	62.53	-3.3823	-1.6492	0.058
639	SLU 51	1.1	-0.11	62.53	-3.3842	-1.6493	0.0576
639	SLU 52	1.13	-0.04	67.11	-3.639	-1.7694	0.0616
639	SLU 53	1.15	-0.01	68.23	-3.7	-1.7989	0.0634
639	SLU 54	1.15	-0.02	68.23	-3.7018	-1.799	0.063
639	SLU 55	1.14	-0.04	67.81	-3.6777	-1.7877	0.0622
639	SLU 56	1.16	-0.01	68.92	-3.7387	-1.8172	0.064
639	SLU 57	1.16	-0.03	68.93	-3.7405	-1.8173	0.0636
639	SLU 58	1.15	-0.02	68.49	-3.7133	-1.8059	0.0634
639	SLU 59	1.15	-0.04	68.5	-3.7152	-1.806	0.063
639	SLU 60	1.15	0.02	69.65	-3.7777	-1.8365	0.0645
639	SLU 61	1.15	0.01	69.66	-3.7796	-1.8366	0.0641

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
639	SLU 62	1.16	0.01	70.35	-3.8164	-1.8548	0.0651
639	SLU 63	1.16	0	70.36	-3.8183	-1.8549	0.0647
639	SLU 64	1.15	0.01	66.96	-3.617	-1.7664	0.0634
639	SLU 65	1.15	-0.02	66.97	-3.6201	-1.7665	0.0628
639	SLU 66	1.17	0.01	68.08	-3.6811	-1.796	0.0646
639	SLU 67	1.17	0	68.09	-3.683	-1.7961	0.0642
639	SLU 68	1.16	-0.02	67.66	-3.6588	-1.7848	0.0634
639	SLU 69	1.19	0	68.78	-3.7198	-1.8143	0.0652
639	SLU 70	1.19	-0.01	68.79	-3.7217	-1.8144	0.0648
639	SLU 71	1.18	0	68.35	-3.6945	-1.803	0.0645
639	SLU 72	1.18	-0.02	68.35	-3.6963	-1.8031	0.0642
639	SLU 73	1.2	0.05	72.93	-3.9511	-1.9233	0.0681
639	SLU 74	1.23	0.08	74.05	-4.0121	-1.9528	0.0699
639	SLU 75	1.23	0.07	74.05	-4.0139	-1.9528	0.0696
639	SLU 76	1.22	0.05	73.63	-3.9898	-1.9416	0.0687
639	SLU 77	1.24	0.08	74.74	-4.0508	-1.9711	0.0705
639	SLU 78	1.24	0.06	74.75	-4.0526	-1.9711	0.0702
639	SLU 79	1.23	0.07	74.31	-4.0254	-1.9598	0.0699
639	SLU 80	1.23	0.05	74.32	-4.0273	-1.9598	0.0695
639	SLU 81	1.23	0.11	75.48	-4.0898	-1.9903	0.071
639	SLU 82	1.23	0.1	75.48	-4.0917	-1.9904	0.0707
639	SLU 83	1.24	0.11	76.17	-4.1285	-2.0087	0.0716
639	SLU 84	1.24	0.09	76.18	-4.1304	-2.0087	0.0713
639	SLE RA 1	0.87	-0.01	50.22	-2.7137	-1.325	0.0473
639	SLE RA 2	0.87	-0.03	50.23	-2.7158	-1.325	0.0469
639	SLE RA 3	0.88	-0.01	50.98	-2.7564	-1.3447	0.0481
639	SLE RA 4	0.88	-0.02	50.98	-2.7577	-1.3447	0.0479
639	SLE RA 5	0.88	-0.04	50.7	-2.7416	-1.3372	0.0473
639	SLE RA 6	0.89	-0.02	51.44	-2.7823	-1.3569	0.0485
639	SLE RA 7	0.89	-0.03	51.45	-2.7835	-1.3569	0.0483
639	SLE RA 8	0.89	-0.02	51.15	-2.7654	-1.3494	0.0481
639	SLE RA 9	0.89	-0.03	51.16	-2.7666	-1.3494	0.0479
639	SLE RA 10	0.9	0.02	54.21	-2.9364	-1.4295	0.0505
639	SLE RA 11	0.92	0.04	54.95	-2.9771	-1.4492	0.0517
639	SLE RA 12	0.92	0.03	54.96	-2.9783	-1.4492	0.0514
639	SLE RA 13	0.91	0.01	54.67	-2.9622	-1.4417	0.0509
639	SLE RA 14	0.93	0.03	55.42	-3.0029	-1.4614	0.0521
639	SLE RA 15	0.93	0.02	55.42	-3.0041	-1.4614	0.0518
639	SLE RA 16	0.92	0.03	55.13	-2.986	-1.4539	0.0517
639	SLE RA 17	0.92	0.02	55.13	-2.9872	-1.4539	0.0514
639	SLE RA 18	0.92	0.06	55.9	-3.0289	-1.4743	0.0524
639	SLE RA 19	0.92	0.04	55.91	-3.0302	-1.4743	0.0522
639	SLE RA 20	0.93	0.05	56.37	-3.0547	-1.4865	0.0528
639	SLE RA 21	0.93	0.04	56.37	-3.056	-1.4865	0.0526
639	SLE FR 1	0.87	-0.01	50.22	-2.7137	-1.325	0.0473
639	SLE FR 2	0.87	-0.02	50.23	-2.7141	-1.325	0.0472
639	SLE FR 3	0.87	-0.02	50.41	-2.7241	-1.3299	0.0475
639	SLE FR 4	0.88	0	51.93	-2.8087	-1.3698	0.0488
639	SLE FR 5	0.89	0	52.11	-2.8186	-1.3746	0.049
639	SLE FR 6	0.89	0.02	53.06	-2.8713	-1.3996	0.0499
639	SLE QP 1	0.87	-0.01	50.22	-2.7137	-1.325	0.0473
639	SLE QP 2	0.88	0.01	51.93	-2.8083	-1.3698	0.0488
639	SLD 1	4.8	0.76	47.15	-2.4728	-1.2351	0.2503
639	SLD 2	4.81	1.15	47.11	-2.4701	-1.234	0.2653
639	SLD 3	4.62	-0.5	47.51	-2.565	-1.243	0.2137
639	SLD 4	4.63	-0.12	47.46	-2.5624	-1.2419	0.2287
639	SLD 5	2.33	2.08	49.97	-2.5682	-1.3175	0.1621
639	SLD 6	2.34	2.33	49.94	-2.5665	-1.3168	0.1719
639	SLD 7	1.73	-2.13	51.15	-2.8756	-1.3439	0.0402
639	SLD 8	1.74	-1.88	51.12	-2.8739	-1.3432	0.05
639	SLD 9	0.03	1.89	52.74	-2.7427	-1.3963	0.0477
639	SLD 10	0.04	2.14	52.71	-2.741	-1.3956	0.0575
639	SLD 11	-0.57	-2.32	53.92	-3.05	-1.4227	-0.0742
639	SLD 12	-0.56	-2.07	53.89	-3.0483	-1.422	-0.0644
639	SLD 13	-2.87	0.13	56.4	-3.0542	-1.4976	-0.1311
639	SLD 14	-2.86	0.51	56.35	-3.0516	-1.4965	-0.116
639	SLD 15	-3.05	-1.13	56.75	-3.1464	-1.5055	-0.1676
639	SLD 16	-3.04	-0.75	56.71	-3.1438	-1.5044	-0.1526
639	SLV 1	10.05	1.74	40.75	-2.0263	-1.0545	0.5193
639	SLV 2	10.08	2.64	40.64	-2.0202	-1.0519	0.5543
639	SLV 3	9.63	-1.14	41.57	-2.236	-1.073	0.4358
639	SLV 4	9.66	-0.24	41.46	-2.2299	-1.0704	0.4708
639	SLV 5	4.27	4.74	47.35	-2.2567	-1.2475	0.3106
639	SLV 6	4.28	5.32	47.28	-2.2528	-1.2459	0.3331
639	SLV 7	2.86	-4.86	50.08	-2.9557	-1.3093	0.0323
639	SLV 8	2.88	-4.28	50.01	-2.9518	-1.3076	0.0548
639	SLV 9	-1.12	4.3	53.84	-2.6648	-1.4319	0.0429
639	SLV 10	-1.1	4.87	53.77	-2.6609	-1.4302	0.0654
639	SLV 11	-2.52	-5.3	56.58	-3.3638	-1.4936	-0.2354
639	SLV 12	-2.5	-4.73	56.51	-3.3599	-1.492	-0.2129
639	SLV 13	-7.89	0.26	62.39	-3.3867	-1.6691	-0.3731
639	SLV 14	-7.86	1.15	62.29	-3.3805	-1.6665	-0.3381
639	SLV 15	-8.31	-2.62	63.21	-3.5963	-1.6876	-0.4566
639	SLV 16	-8.28	-1.73	63.11	-3.5902	-1.685	-0.4216
639	CRTFP Ux+	0	0	0	0	0	0
639	CRTFP Ux-	0	0	0	0	0	0
639	CRTFP Uy+	0	0	0	0	0	0
639	CRTFP Uy-	0	0	0	0	0	0
640	SLU 1	1.06	-0.01	59.48	-0.284	-0.0359	0.0079
640	SLU 2	1.06	-0.04	59.49	-0.2869	-0.0359	0.0079
640	SLU 3	1.09	-0.01	60.86	-0.2942	-0.0368	0.008
640	SLU 4	1.09	-0.03	60.87	-0.2959	-0.0367	0.008
640	SLU 5	1.08	-0.05	60.34	-0.2923	-0.0364	0.008
640	SLU 6	1.1	-0.02	61.71	-0.2995	-0.0373	0.008
640	SLU 7	1.1	-0.03	61.72	-0.3013	-0.0373	0.008
640	SLU 8	1.09	-0.03	61.18	-0.2947	-0.037	0.008
640	SLU 9	1.09	-0.05	61.19	-0.2965	-0.037	0.008

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
640	SLU 10	1.13	0.05	66.78	-0.3315	-0.04	0.009
640	SLU 11	1.15	0.08	68.15	-0.3388	-0.0408	0.0091
640	SLU 12	1.15	0.07	68.16	-0.3405	-0.0408	0.0091
640	SLU 13	1.14	0.04	67.63	-0.3369	-0.0405	0.0091
640	SLU 14	1.17	0.08	69	-0.3441	-0.0414	0.0091
640	SLU 15	1.17	0.06	69.01	-0.3459	-0.0414	0.0091
640	SLU 16	1.16	0.07	68.48	-0.3393	-0.0411	0.0091
640	SLU 17	1.16	0.05	68.48	-0.3411	-0.041	0.0091
640	SLU 18	1.15	0.12	69.9	-0.3477	-0.0417	0.0095
640	SLU 19	1.15	0.1	69.9	-0.3495	-0.0417	0.0095
640	SLU 20	1.17	0.11	70.75	-0.3531	-0.0423	0.0095
640	SLU 21	1.17	0.09	70.76	-0.3548	-0.0422	0.0095
640	SLU 22	1.16	0.1	66.61	-0.3151	-0.0403	0.0084
640	SLU 23	1.16	0.07	66.62	-0.3181	-0.0402	0.0084
640	SLU 24	1.18	0.1	67.99	-0.3253	-0.0411	0.0084
640	SLU 25	1.18	0.08	68	-0.327	-0.0411	0.0084
640	SLU 26	1.17	0.06	67.48	-0.3234	-0.0408	0.0084
640	SLU 27	1.2	0.1	68.85	-0.3306	-0.0417	0.0085
640	SLU 28	1.2	0.08	68.85	-0.3324	-0.0416	0.0085
640	SLU 29	1.19	0.08	68.32	-0.3259	-0.0414	0.0085
640	SLU 30	1.19	0.07	68.32	-0.3276	-0.0413	0.0085
640	SLU 31	1.22	0.16	73.92	-0.3626	-0.0443	0.0095
640	SLU 32	1.25	0.2	75.29	-0.3699	-0.0452	0.0095
640	SLU 33	1.25	0.18	75.29	-0.3716	-0.0452	0.0095
640	SLU 34	1.24	0.15	74.77	-0.368	-0.0449	0.0095
640	SLU 35	1.27	0.19	76.14	-0.3752	-0.0457	0.0096
640	SLU 36	1.27	0.17	76.15	-0.377	-0.0457	0.0096
640	SLU 37	1.26	0.18	75.61	-0.3704	-0.0454	0.0096
640	SLU 38	1.26	0.16	75.62	-0.3722	-0.0454	0.0096
640	SLU 39	1.25	0.23	77.03	-0.3788	-0.0461	0.01
640	SLU 40	1.25	0.21	77.04	-0.3806	-0.0461	0.01
640	SLU 41	1.27	0.22	77.88	-0.3842	-0.0466	0.01
640	SLU 42	1.27	0.21	77.89	-0.3859	-0.0466	0.01
640	SLU 43	1.34	-0.06	74.88	-0.3586	-0.0452	0.0101
640	SLU 44	1.34	-0.09	74.89	-0.3615	-0.0452	0.0101
640	SLU 45	1.37	-0.05	76.26	-0.3687	-0.046	0.0102
640	SLU 46	1.37	-0.07	76.26	-0.3705	-0.046	0.0102
640	SLU 47	1.36	-0.09	75.74	-0.3669	-0.0457	0.0102
640	SLU 48	1.39	-0.06	77.11	-0.3741	-0.0466	0.0102
640	SLU 49	1.39	-0.08	77.12	-0.3758	-0.0466	0.0102
640	SLU 50	1.38	-0.07	76.58	-0.3693	-0.0463	0.0102
640	SLU 51	1.38	-0.09	76.59	-0.371	-0.0463	0.0102
640	SLU 52	1.41	0.01	82.18	-0.4061	-0.0492	0.0112
640	SLU 53	1.44	0.04	83.55	-0.4133	-0.0501	0.0113
640	SLU 54	1.44	0.02	83.56	-0.4151	-0.0501	0.0113
640	SLU 55	1.43	0	83.03	-0.4114	-0.0498	0.0113
640	SLU 56	1.46	0.03	84.4	-0.4187	-0.0506	0.0113
640	SLU 57	1.46	0.02	84.41	-0.4204	-0.0506	0.0113
640	SLU 58	1.45	0.02	83.87	-0.4139	-0.0503	0.0113
640	SLU 59	1.45	0.01	83.88	-0.4156	-0.0503	0.0113
640	SLU 60	1.44	0.08	85.29	-0.4223	-0.051	0.0117
640	SLU 61	1.44	0.06	85.3	-0.424	-0.051	0.0117
640	SLU 62	1.46	0.07	86.15	-0.4276	-0.0515	0.0118
640	SLU 63	1.46	0.05	86.15	-0.4294	-0.0515	0.0118
640	SLU 64	1.44	0.06	82.01	-0.3897	-0.0495	0.0106
640	SLU 65	1.44	0.03	82.02	-0.3926	-0.0495	0.0106
640	SLU 66	1.47	0.06	83.39	-0.3998	-0.0504	0.0106
640	SLU 67	1.47	0.04	83.4	-0.4016	-0.0504	0.0106
640	SLU 68	1.46	0.02	82.87	-0.398	-0.0501	0.0107
640	SLU 69	1.49	0.05	84.24	-0.4052	-0.0509	0.0107
640	SLU 70	1.49	0.04	84.25	-0.4069	-0.0509	0.0107
640	SLU 71	1.48	0.04	83.72	-0.4004	-0.0506	0.0107
640	SLU 72	1.48	0.02	83.72	-0.4021	-0.0506	0.0107
640	SLU 73	1.51	0.12	89.31	-0.4372	-0.0536	0.0117
640	SLU 74	1.54	0.15	90.68	-0.4444	-0.0545	0.0117
640	SLU 75	1.54	0.14	90.69	-0.4462	-0.0544	0.0117
640	SLU 76	1.53	0.11	90.17	-0.4425	-0.0541	0.0118
640	SLU 77	1.55	0.15	91.54	-0.4498	-0.055	0.0118
640	SLU 78	1.55	0.13	91.54	-0.4515	-0.055	0.0118
640	SLU 79	1.54	0.14	91.01	-0.445	-0.0547	0.0118
640	SLU 80	1.54	0.12	91.01	-0.4467	-0.0547	0.0118
640	SLU 81	1.54	0.19	92.43	-0.4534	-0.0554	0.0122
640	SLU 82	1.54	0.17	92.43	-0.4551	-0.0553	0.0122
640	SLU 83	1.55	0.18	93.28	-0.4587	-0.0559	0.0122
640	SLU 84	1.55	0.16	93.29	-0.4605	-0.0559	0.0122
640	SLE RA 1	1.09	0.02	61.52	-0.2929	-0.0372	0.0081
640	SLE RA 2	1.09	0	61.52	-0.2949	-0.0371	0.0081
640	SLE RA 3	1.1	0.02	62.44	-0.2997	-0.0377	0.0081
640	SLE RA 4	1.1	0.01	62.44	-0.3009	-0.0377	0.0081
640	SLE RA 5	1.1	-0.01	62.09	-0.2984	-0.0375	0.0081
640	SLE RA 6	1.12	0.02	63.01	-0.3033	-0.0381	0.0081
640	SLE RA 7	1.12	0	63.01	-0.3044	-0.0381	0.0081
640	SLE RA 8	1.11	0.01	62.65	-0.3001	-0.0379	0.0081
640	SLE RA 9	1.11	0	62.66	-0.3012	-0.0379	0.0081
640	SLE RA 10	1.13	0.06	66.39	-0.3246	-0.0398	0.0088
640	SLE RA 11	1.15	0.08	67.3	-0.3294	-0.0404	0.0088
640	SLE RA 12	1.15	0.07	67.3	-0.3306	-0.0404	0.0088
640	SLE RA 13	1.14	0.06	66.95	-0.3282	-0.0402	0.0088
640	SLE RA 14	1.16	0.08	67.87	-0.333	-0.0408	0.0088
640	SLE RA 15	1.16	0.07	67.87	-0.3341	-0.0408	0.0088
640	SLE RA 16	1.16	0.07	67.52	-0.3298	-0.0406	0.0089
640	SLE RA 17	1.16	0.06	67.52	-0.331	-0.0406	0.0089
640	SLE RA 18	1.15	0.11	68.46	-0.3354	-0.041	0.0091
640	SLE RA 19	1.15	0.1	68.47	-0.3365	-0.041	0.0091
640	SLE RA 20	1.16	0.1	69.03	-0.339	-0.0414	0.0091
640	SLE RA 21	1.16	0.09	69.03	-0.3401	-0.0414	0.0091
640	SLE FR 1	1.09	0.02	61.52	-0.2929	-0.0372	0.0081

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
640	SLE FR 2	1.09	0.01	61.52	-0.2933	-0.0371	0.0081
640	SLE FR 3	1.09	0.02	61.74	-0.2943	-0.0373	0.0081
640	SLE FR 4	1.11	0.04	63.6	-0.306	-0.0383	0.0084
640	SLE FR 5	1.11	0.04	63.83	-0.3071	-0.0385	0.0084
640	SLE FR 6	1.12	0.06	64.99	-0.3141	-0.0391	0.0086
640	SLE QP 1	1.09	0.02	61.52	-0.2929	-0.0372	0.0081
640	SLE QP 2	1.11	0.05	63.6	-0.3057	-0.0383	0.0084
640	SLD 1	5.83	0.94	57.12	-0.1715	-0.0097	0.0007
640	SLD 2	5.84	1.43	57.07	-0.1723	-0.0098	0.0066
640	SLD 3	5.61	-0.6	57.55	-0.2605	-0.008	-0.0048
640	SLD 4	5.62	-0.11	57.49	-0.2614	-0.0081	0.0011
640	SLD 5	2.85	2.56	61.02	-0.1301	-0.0322	0.0133
640	SLD 6	2.86	2.88	60.98	-0.1307	-0.0323	0.0172
640	SLD 7	2.12	-2.57	62.44	-0.4271	-0.0267	-0.0049
640	SLD 8	2.13	-2.25	62.41	-0.4276	-0.0267	-0.0011
640	SLD 9	0.08	2.34	64.79	-0.1837	-0.0499	0.0178
640	SLD 10	0.09	2.66	64.76	-0.1843	-0.05	0.0217
640	SLD 11	-0.65	-2.79	66.22	-0.4806	-0.0443	-0.0005
640	SLD 12	-0.64	-2.47	66.18	-0.4812	-0.0444	0.0034
640	SLD 13	-3.41	0.2	69.71	-0.3499	-0.0685	0.0156
640	SLD 14	-3.4	0.69	69.65	-0.3508	-0.0686	0.0215
640	SLD 15	-3.63	-1.34	70.13	-0.439	-0.0669	0.0101
640	SLD 16	-3.61	-0.85	70.08	-0.4399	-0.067	0.0161
640	SLV 1	12.15	2.09	48.44	0.0057	0.0287	-0.0097
640	SLV 2	12.17	3.23	48.31	0.0037	0.0285	0.0041
640	SLV 3	11.64	-1.42	49.43	-0.1967	0.0326	-0.0224
640	SLV 4	11.67	-0.28	49.31	-0.1987	0.0324	-0.0086
640	SLV 5	5.18	5.78	57.56	0.0951	-0.024	0.0199
640	SLV 6	5.2	6.51	57.49	0.0938	-0.0242	0.0288
640	SLV 7	3.49	-5.91	60.88	-0.5796	-0.0111	-0.0225
640	SLV 8	3.51	-5.17	60.8	-0.5809	-0.0112	-0.0136
640	SLV 9	-1.3	5.27	66.4	-0.0304	-0.0654	0.0304
640	SLV 10	-1.28	6	66.32	-0.0317	-0.0655	0.0393
640	SLV 11	-2.99	-6.42	69.72	-0.7051	-0.0524	-0.012
640	SLV 12	-2.97	-5.69	69.64	-0.7064	-0.0526	-0.0032
640	SLV 13	-9.46	0.37	77.89	-0.4126	-0.109	0.0253
640	SLV 14	-9.43	1.51	77.77	-0.4146	-0.1093	0.0391
640	SLV 15	-9.96	-3.14	78.89	-0.615	-0.1052	0.0126
640	SLV 16	-9.94	-2	78.76	-0.617	-0.1054	0.0264
640	CRTFP Ux+	0	0	0	0	0	0
640	CRTFP Ux-	0	0	0	0	0	0
640	CRTFP Uy+	0	0	0	0	0	0
640	CRTFP Uy-	0	0	0	0	0	0
641	SLU 1	1.1	0.03	60.62	-0.2628	-0.0347	0.0087
641	SLU 2	1.1	0	60.63	-0.2655	-0.0347	0.0086
641	SLU 3	1.13	0.03	62.03	-0.2722	-0.0356	0.0087
641	SLU 4	1.13	0.02	62.03	-0.2739	-0.0356	0.0087
641	SLU 5	1.12	-0.01	61.5	-0.2705	-0.0353	0.0087
641	SLU 6	1.15	0.03	62.9	-0.2772	-0.0361	0.0088
641	SLU 7	1.15	0.01	62.9	-0.2789	-0.0361	0.0087
641	SLU 8	1.14	0.02	62.36	-0.2728	-0.0358	0.0088
641	SLU 9	1.14	0	62.37	-0.2744	-0.0358	0.0087
641	SLU 10	1.17	0.1	68.05	-0.3067	-0.0384	0.0098
641	SLU 11	1.2	0.13	69.45	-0.3134	-0.0393	0.0099
641	SLU 12	1.2	0.11	69.45	-0.3151	-0.0393	0.0099
641	SLU 13	1.19	0.09	68.92	-0.3117	-0.039	0.0099
641	SLU 14	1.22	0.13	70.32	-0.3184	-0.0398	0.01
641	SLU 15	1.22	0.11	70.32	-0.3201	-0.0398	0.0099
641	SLU 16	1.21	0.12	69.78	-0.314	-0.0395	0.01
641	SLU 17	1.21	0.1	69.78	-0.3156	-0.0395	0.0099
641	SLU 18	1.2	0.17	71.22	-0.3216	-0.04	0.0104
641	SLU 19	1.2	0.15	71.22	-0.3232	-0.04	0.0104
641	SLU 20	1.22	0.16	72.09	-0.3266	-0.0405	0.0104
641	SLU 21	1.22	0.15	72.09	-0.3283	-0.0405	0.0104
641	SLU 22	1.2	0.14	67.89	-0.2912	-0.0387	0.0092
641	SLU 23	1.2	0.11	67.9	-0.294	-0.0387	0.0092
641	SLU 24	1.23	0.15	69.3	-0.3007	-0.0396	0.0093
641	SLU 25	1.23	0.13	69.3	-0.3023	-0.0396	0.0092
641	SLU 26	1.22	0.11	68.77	-0.299	-0.0393	0.0092
641	SLU 27	1.25	0.14	70.17	-0.3057	-0.0401	0.0093
641	SLU 28	1.25	0.12	70.17	-0.3073	-0.0401	0.0093
641	SLU 29	1.24	0.13	69.63	-0.3013	-0.0398	0.0093
641	SLU 30	1.24	0.11	69.63	-0.3029	-0.0398	0.0093
641	SLU 31	1.27	0.21	75.32	-0.3351	-0.0424	0.0104
641	SLU 32	1.3	0.25	76.71	-0.3419	-0.0433	0.0105
641	SLU 33	1.3	0.23	76.72	-0.3435	-0.0433	0.0104
641	SLU 34	1.29	0.21	76.19	-0.3401	-0.0429	0.0104
641	SLU 35	1.32	0.24	77.59	-0.3469	-0.0438	0.0105
641	SLU 36	1.32	0.22	77.59	-0.3485	-0.0438	0.0105
641	SLU 37	1.31	0.23	77.05	-0.3424	-0.0435	0.0105
641	SLU 38	1.31	0.21	77.05	-0.3441	-0.0435	0.0105
641	SLU 39	1.3	0.29	78.49	-0.3501	-0.044	0.011
641	SLU 40	1.3	0.27	78.49	-0.3517	-0.044	0.0109
641	SLU 41	1.32	0.28	79.36	-0.3551	-0.0445	0.011
641	SLU 42	1.32	0.26	79.36	-0.3567	-0.0445	0.011
641	SLU 43	1.4	0	76.31	-0.3319	-0.0438	0.0111
641	SLU 44	1.4	-0.03	76.32	-0.3346	-0.0438	0.011
641	SLU 45	1.43	0	77.72	-0.3413	-0.0446	0.0111
641	SLU 46	1.43	-0.02	77.73	-0.3429	-0.0446	0.0111
641	SLU 47	1.42	-0.04	77.19	-0.3396	-0.0443	0.0111
641	SLU 48	1.45	0	78.59	-0.3463	-0.0452	0.0112
641	SLU 49	1.45	-0.02	78.6	-0.348	-0.0452	0.0111
641	SLU 50	1.44	-0.01	78.05	-0.3419	-0.0449	0.0112
641	SLU 51	1.44	-0.03	78.06	-0.3435	-0.0449	0.0111
641	SLU 52	1.47	0.07	83.74	-0.3758	-0.0475	0.0122
641	SLU 53	1.5	0.1	85.14	-0.3825	-0.0483	0.0123
641	SLU 54	1.5	0.08	85.14	-0.3841	-0.0483	0.0123

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
641	SLU 55	1.49	0.06	84.61	-0.3808	-0.048	0.0123
641	SLU 56	1.52	0.1	86.01	-0.3875	-0.0489	0.0124
641	SLU 57	1.52	0.08	86.01	-0.3891	-0.0489	0.0123
641	SLU 58	1.51	0.08	85.47	-0.3831	-0.0486	0.0124
641	SLU 59	1.51	0.07	85.48	-0.3847	-0.0486	0.0123
641	SLU 60	1.5	0.14	86.91	-0.3907	-0.049	0.0128
641	SLU 61	1.5	0.12	86.91	-0.3923	-0.049	0.0128
641	SLU 62	1.52	0.13	87.78	-0.3957	-0.0496	0.0129
641	SLU 63	1.52	0.12	87.79	-0.3973	-0.0496	0.0128
641	SLU 64	1.5	0.11	83.58	-0.3603	-0.0477	0.0117
641	SLU 65	1.5	0.08	83.59	-0.363	-0.0477	0.0116
641	SLU 66	1.53	0.12	84.99	-0.3698	-0.0486	0.0117
641	SLU 67	1.53	0.1	85	-0.3714	-0.0486	0.0116
641	SLU 68	1.52	0.08	84.46	-0.368	-0.0483	0.0116
641	SLU 69	1.55	0.11	85.86	-0.3748	-0.0492	0.0117
641	SLU 70	1.55	0.09	85.87	-0.3764	-0.0492	0.0117
641	SLU 71	1.54	0.1	85.32	-0.3703	-0.0488	0.0117
641	SLU 72	1.54	0.08	85.33	-0.372	-0.0489	0.0117
641	SLU 73	1.57	0.18	91.01	-0.4042	-0.0514	0.0128
641	SLU 74	1.6	0.22	92.41	-0.411	-0.0523	0.0129
641	SLU 75	1.6	0.2	92.41	-0.4126	-0.0523	0.0129
641	SLU 76	1.59	0.18	91.88	-0.4092	-0.052	0.0128
641	SLU 77	1.62	0.21	93.28	-0.416	-0.0529	0.0129
641	SLU 78	1.62	0.19	93.28	-0.4176	-0.0529	0.0129
641	SLU 79	1.61	0.2	92.74	-0.4115	-0.0525	0.013
641	SLU 80	1.61	0.18	92.75	-0.4131	-0.0525	0.0129
641	SLU 81	1.6	0.25	94.18	-0.4192	-0.053	0.0134
641	SLU 82	1.6	0.24	94.18	-0.4208	-0.053	0.0133
641	SLU 83	1.62	0.25	95.05	-0.4242	-0.0536	0.0134
641	SLU 84	1.62	0.23	95.05	-0.4258	-0.0536	0.0134
641	SLE RA 1	1.13	0.06	62.7	-0.2709	-0.0358	0.0088
641	SLE RA 2	1.13	0.04	62.7	-0.2727	-0.0359	0.0088
641	SLE RA 3	1.15	0.07	63.63	-0.2772	-0.0364	0.0089
641	SLE RA 4	1.15	0.05	63.64	-0.2783	-0.0364	0.0088
641	SLE RA 5	1.14	0.04	63.28	-0.2761	-0.0362	0.0088
641	SLE RA 6	1.16	0.06	64.21	-0.2806	-0.0368	0.0089
641	SLE RA 7	1.16	0.05	64.22	-0.2816	-0.0368	0.0089
641	SLE RA 8	1.16	0.05	63.86	-0.2776	-0.0366	0.0089
641	SLE RA 9	1.16	0.04	63.86	-0.2787	-0.0366	0.0089
641	SLE RA 10	1.18	0.11	67.65	-0.3002	-0.0383	0.0096
641	SLE RA 11	1.2	0.13	68.58	-0.3047	-0.0389	0.0097
641	SLE RA 12	1.2	0.12	68.58	-0.3058	-0.0389	0.0096
641	SLE RA 13	1.19	0.1	68.23	-0.3035	-0.0387	0.0096
641	SLE RA 14	1.21	0.13	69.16	-0.308	-0.0393	0.0097
641	SLE RA 15	1.21	0.11	69.16	-0.3091	-0.0393	0.0097
641	SLE RA 16	1.2	0.12	68.8	-0.305	-0.0391	0.0097
641	SLE RA 17	1.2	0.11	68.81	-0.3061	-0.0391	0.0097
641	SLE RA 18	1.2	0.16	69.76	-0.3101	-0.0394	0.01
641	SLE RA 19	1.2	0.14	69.76	-0.3112	-0.0394	0.01
641	SLE RA 20	1.21	0.15	70.34	-0.3135	-0.0397	0.01
641	SLE RA 21	1.21	0.14	70.34	-0.3146	-0.0397	0.01
641	SLE FR 1	1.13	0.06	62.7	-0.2709	-0.0358	0.0088
641	SLE FR 2	1.13	0.06	62.7	-0.2713	-0.0359	0.0088
641	SLE FR 3	1.14	0.06	62.93	-0.2722	-0.036	0.0089
641	SLE FR 4	1.15	0.09	64.82	-0.283	-0.0369	0.0092
641	SLE FR 5	1.16	0.09	65.05	-0.284	-0.0371	0.0092
641	SLE FR 6	1.16	0.11	66.23	-0.2905	-0.0376	0.0094
641	SLE QP 1	1.13	0.06	62.7	-0.2709	-0.0358	0.0088
641	SLE QP 2	1.15	0.09	64.81	-0.2827	-0.0369	0.0092
641	SLD 1	5.86	0.97	57.26	-0.1572	-0.002	0.0015
641	SLD 2	5.87	1.49	57.21	-0.1594	-0.0021	0.008
641	SLD 3	5.64	-0.6	57.73	-0.2382	-0.0003	-0.0059
641	SLD 4	5.65	-0.08	57.68	-0.2404	-0.0004	0.0006
641	SLD 5	2.89	2.64	61.85	-0.1218	-0.0291	0.017
641	SLD 6	2.9	2.98	61.82	-0.1232	-0.0291	0.0212
641	SLD 7	2.17	-2.59	63.4	-0.3918	-0.0233	-0.0077
641	SLD 8	2.17	-2.25	63.37	-0.3933	-0.0233	-0.0035
641	SLD 9	0.13	2.43	66.26	-0.1721	-0.0505	0.0218
641	SLD 10	0.13	2.77	66.23	-0.1735	-0.0506	0.0261
641	SLD 11	-0.6	-2.8	67.81	-0.4422	-0.0447	-0.0028
641	SLD 12	-0.59	-2.46	67.78	-0.4436	-0.0447	0.0014
641	SLD 13	-3.35	0.26	71.95	-0.325	-0.0734	0.0178
641	SLD 14	-3.34	0.78	71.9	-0.3272	-0.0735	0.0242
641	SLD 15	-3.57	-1.31	72.42	-0.406	-0.0717	0.0104
641	SLD 16	-3.56	-0.79	72.37	-0.4082	-0.0718	0.0168
641	SLV 1	12.17	2.1	47.14	0.0086	0.0447	-0.0088
641	SLV 2	12.19	3.31	47.03	0.0035	0.0445	0.0063
641	SLV 3	11.66	-1.47	48.22	-0.1755	0.0488	-0.0259
641	SLV 4	11.69	-0.26	48.11	-0.1807	0.0486	-0.0108
641	SLV 5	5.22	5.9	57.89	0.0849	-0.0185	0.0271
641	SLV 6	5.23	6.68	57.82	0.0816	-0.0187	0.0368
641	SLV 7	3.53	-6	61.5	-0.5289	-0.005	-0.0298
641	SLV 8	3.55	-5.22	61.42	-0.5322	-0.0051	-0.0202
641	SLV 9	-1.25	5.4	68.21	-0.0331	-0.0687	0.0385
641	SLV 10	-1.23	6.18	68.13	-0.0364	-0.0688	0.0482
641	SLV 11	-2.93	-6.5	71.81	-0.6469	-0.0551	-0.0184
641	SLV 12	-2.92	-5.72	71.74	-0.6502	-0.0553	-0.0087
641	SLV 13	-9.39	0.44	81.52	-0.3847	-0.1224	0.0292
641	SLV 14	-9.36	1.65	81.41	-0.3898	-0.1226	0.0443
641	SLV 15	-9.89	-3.13	82.6	-0.5688	-0.1183	0.0121
641	SLV 16	-9.87	-1.92	82.49	-0.574	-0.1186	0.0272
641	CRTFP Ux+	0	0	0	0	0	0
641	CRTFP Ux-	0	0	0	0	0	0
641	CRTFP Uy+	0	0	0	0	0	0
641	CRTFP Uy-	0	0	0	0	0	0
642	SLU 1	1.14	0.08	61.69	-0.2421	-0.0322	0.0094
642	SLU 2	1.14	0.04	61.7	-0.2447	-0.0322	0.0092

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
642	SLU 3	1.17	0.08	63.13	-0.2509	-0.033	0.0094
642	SLU 4	1.17	0.06	63.14	-0.2524	-0.033	0.0093
642	SLU 5	1.16	0.04	62.59	-0.2493	-0.0327	0.0093
642	SLU 6	1.19	0.07	64.02	-0.2556	-0.0336	0.0094
642	SLU 7	1.19	0.06	64.02	-0.2571	-0.0336	0.0094
642	SLU 8	1.18	0.06	63.47	-0.2515	-0.0333	0.0094
642	SLU 9	1.18	0.04	63.48	-0.253	-0.0333	0.0094
642	SLU 10	1.21	0.15	69.23	-0.2825	-0.0353	0.0106
642	SLU 11	1.24	0.19	70.66	-0.2888	-0.0361	0.0107
642	SLU 12	1.24	0.17	70.66	-0.2903	-0.0361	0.0107
642	SLU 13	1.23	0.14	70.12	-0.2872	-0.0358	0.0106
642	SLU 14	1.26	0.18	71.55	-0.2935	-0.0367	0.0108
642	SLU 15	1.26	0.16	71.55	-0.295	-0.0367	0.0107
642	SLU 16	1.25	0.17	71	-0.2893	-0.0364	0.0108
642	SLU 17	1.25	0.15	71	-0.2909	-0.0364	0.0107
642	SLU 18	1.24	0.23	72.45	-0.2963	-0.0366	0.0113
642	SLU 19	1.24	0.21	72.45	-0.2978	-0.0366	0.0112
642	SLU 20	1.26	0.22	73.34	-0.3009	-0.0372	0.0113
642	SLU 21	1.26	0.2	73.34	-0.3024	-0.0372	0.0112
642	SLU 22	1.25	0.19	69.08	-0.268	-0.0356	0.0101
642	SLU 23	1.25	0.16	69.09	-0.2706	-0.0356	0.0099
642	SLU 24	1.28	0.2	70.52	-0.2768	-0.0365	0.0101
642	SLU 25	1.28	0.18	70.53	-0.2783	-0.0365	0.01
642	SLU 26	1.27	0.16	69.98	-0.2752	-0.0362	0.01
642	SLU 27	1.3	0.19	71.41	-0.2815	-0.037	0.0101
642	SLU 28	1.3	0.17	71.41	-0.283	-0.037	0.0101
642	SLU 29	1.29	0.18	70.86	-0.2774	-0.0367	0.0101
642	SLU 30	1.29	0.16	70.87	-0.2789	-0.0367	0.0101
642	SLU 31	1.32	0.27	76.62	-0.3084	-0.0388	0.0113
642	SLU 32	1.35	0.3	78.05	-0.3147	-0.0396	0.0114
642	SLU 33	1.35	0.29	78.05	-0.3162	-0.0396	0.0114
642	SLU 34	1.34	0.26	77.51	-0.3131	-0.0393	0.0113
642	SLU 35	1.37	0.3	78.94	-0.3194	-0.0401	0.0115
642	SLU 36	1.37	0.28	78.94	-0.3209	-0.0401	0.0114
642	SLU 37	1.36	0.29	78.39	-0.3152	-0.0398	0.0115
642	SLU 38	1.36	0.27	78.39	-0.3167	-0.0398	0.0114
642	SLU 39	1.35	0.34	79.84	-0.3221	-0.0401	0.012
642	SLU 40	1.35	0.33	79.84	-0.3237	-0.0401	0.0119
642	SLU 41	1.37	0.34	80.73	-0.3268	-0.0406	0.012
642	SLU 42	1.37	0.32	80.73	-0.3283	-0.0406	0.0119
642	SLU 43	1.45	0.06	77.67	-0.3059	-0.0406	0.0119
642	SLU 44	1.45	0.03	77.68	-0.3084	-0.0407	0.0118
642	SLU 45	1.48	0.06	79.11	-0.3147	-0.0415	0.012
642	SLU 46	1.48	0.04	79.11	-0.3162	-0.0415	0.0119
642	SLU 47	1.47	0.02	78.57	-0.3131	-0.0412	0.0118
642	SLU 48	1.5	0.06	79.99	-0.3194	-0.042	0.012
642	SLU 49	1.5	0.04	80	-0.3209	-0.042	0.0119
642	SLU 50	1.49	0.05	79.45	-0.3152	-0.0417	0.012
642	SLU 51	1.49	0.03	79.45	-0.3168	-0.0417	0.0119
642	SLU 52	1.52	0.13	85.21	-0.3463	-0.0438	0.0131
642	SLU 53	1.55	0.17	86.63	-0.3526	-0.0446	0.0133
642	SLU 54	1.55	0.15	86.64	-0.3541	-0.0446	0.0132
642	SLU 55	1.54	0.13	86.1	-0.351	-0.0443	0.0132
642	SLU 56	1.57	0.16	87.52	-0.3572	-0.0451	0.0133
642	SLU 57	1.57	0.14	87.53	-0.3587	-0.0451	0.0133
642	SLU 58	1.56	0.15	86.97	-0.3531	-0.0448	0.0133
642	SLU 59	1.56	0.13	86.98	-0.3546	-0.0448	0.0133
642	SLU 60	1.55	0.21	88.42	-0.36	-0.0451	0.0138
642	SLU 61	1.55	0.19	88.43	-0.3615	-0.0451	0.0138
642	SLU 62	1.57	0.2	89.31	-0.3647	-0.0456	0.0139
642	SLU 63	1.57	0.18	89.32	-0.3662	-0.0456	0.0138
642	SLU 64	1.55	0.18	85.06	-0.3318	-0.0441	0.0126
642	SLU 65	1.55	0.14	85.07	-0.3343	-0.0441	0.0125
642	SLU 66	1.58	0.18	86.49	-0.3406	-0.0449	0.0127
642	SLU 67	1.58	0.16	86.5	-0.3421	-0.0449	0.0126
642	SLU 68	1.57	0.14	85.96	-0.339	-0.0447	0.0125
642	SLU 69	1.6	0.17	87.38	-0.3453	-0.0455	0.0127
642	SLU 70	1.6	0.16	87.39	-0.3468	-0.0455	0.0126
642	SLU 71	1.59	0.16	86.83	-0.3411	-0.0452	0.0127
642	SLU 72	1.59	0.14	86.84	-0.3426	-0.0452	0.0126
642	SLU 73	1.62	0.25	92.6	-0.3722	-0.0472	0.0138
642	SLU 74	1.65	0.29	94.02	-0.3785	-0.0481	0.014
642	SLU 75	1.65	0.27	94.03	-0.38	-0.0481	0.0139
642	SLU 76	1.64	0.24	93.48	-0.3769	-0.0478	0.0139
642	SLU 77	1.67	0.28	94.91	-0.3831	-0.0486	0.014
642	SLU 78	1.67	0.26	94.92	-0.3846	-0.0486	0.014
642	SLU 79	1.66	0.27	94.36	-0.379	-0.0483	0.014
642	SLU 80	1.66	0.25	94.37	-0.3805	-0.0483	0.014
642	SLU 81	1.65	0.33	95.81	-0.3859	-0.0485	0.0145
642	SLU 82	1.65	0.31	95.82	-0.3874	-0.0486	0.0145
642	SLU 83	1.67	0.32	96.7	-0.3906	-0.0491	0.0146
642	SLU 84	1.67	0.3	96.71	-0.3921	-0.0491	0.0145
642	SLE RA 1	1.17	0.11	63.81	-0.2495	-0.0332	0.0096
642	SLE RA 2	1.17	0.09	63.81	-0.2512	-0.0332	0.0095
642	SLE RA 3	1.19	0.11	64.76	-0.2554	-0.0337	0.0096
642	SLE RA 4	1.19	0.1	64.77	-0.2564	-0.0337	0.0095
642	SLE RA 5	1.18	0.08	64.4	-0.2543	-0.0335	0.0095
642	SLE RA 6	1.2	0.11	65.35	-0.2585	-0.0341	0.0096
642	SLE RA 7	1.2	0.1	65.36	-0.2595	-0.0341	0.0096
642	SLE RA 8	1.2	0.1	64.99	-0.2558	-0.0339	0.0096
642	SLE RA 9	1.2	0.09	64.99	-0.2568	-0.0339	0.0096
642	SLE RA 10	1.22	0.16	68.83	-0.2765	-0.0352	0.0104
642	SLE RA 11	1.24	0.18	69.78	-0.2807	-0.0358	0.0105
642	SLE RA 12	1.24	0.17	69.79	-0.2817	-0.0358	0.0104
642	SLE RA 13	1.23	0.15	69.42	-0.2796	-0.0356	0.0104
642	SLE RA 14	1.25	0.18	70.37	-0.2838	-0.0362	0.0105
642	SLE RA 15	1.25	0.17	70.38	-0.2848	-0.0362	0.0104

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
642	SLE RA 16	1.25	0.17	70.01	-0.281	-0.036	0.0105
642	SLE RA 17	1.25	0.16	70.01	-0.282	-0.036	0.0105
642	SLE RA 18	1.24	0.21	70.97	-0.2856	-0.0361	0.0108
642	SLE RA 19	1.24	0.2	70.98	-0.2866	-0.0361	0.0108
642	SLE RA 20	1.25	0.21	71.57	-0.2887	-0.0365	0.0109
642	SLE RA 21	1.25	0.19	71.57	-0.2897	-0.0365	0.0108
642	SLE FR 1	1.17	0.11	63.81	-0.2495	-0.0332	0.0096
642	SLE FR 2	1.17	0.11	63.81	-0.2499	-0.0332	0.0095
642	SLE FR 3	1.18	0.11	64.04	-0.2508	-0.0333	0.0096
642	SLE FR 4	1.19	0.14	65.96	-0.2607	-0.0341	0.0099
642	SLE FR 5	1.2	0.14	66.19	-0.2616	-0.0342	0.01
642	SLE FR 6	1.21	0.16	67.39	-0.2676	-0.0346	0.0102
642	SLE QP 1	1.17	0.11	63.81	-0.2495	-0.0332	0.0096
642	SLE QP 2	1.19	0.14	65.96	-0.2604	-0.0341	0.0099
642	SLD 1	5.89	1.01	57.18	-0.1433	0.0041	0.003
642	SLD 2	5.9	1.57	57.13	-0.1468	0.004	0.0102
642	SLD 3	5.67	-0.6	57.69	-0.2165	0.006	-0.0068
642	SLD 4	5.68	-0.04	57.64	-0.22	0.0059	0.0004
642	SLD 5	2.93	2.74	62.56	-0.1137	-0.0254	0.0215
642	SLD 6	2.93	3.11	62.53	-0.116	-0.0255	0.0262
642	SLD 7	2.21	-2.62	64.25	-0.3575	-0.0191	-0.0112
642	SLD 8	2.21	-2.26	64.22	-0.3598	-0.0192	-0.0065
642	SLD 9	0.17	2.53	67.69	-0.1609	-0.0489	0.0264
642	SLD 10	0.18	2.9	67.66	-0.1632	-0.049	0.0311
642	SLD 11	-0.55	-2.83	69.38	-0.4047	-0.0426	-0.0063
642	SLD 12	-0.54	-2.46	69.35	-0.4071	-0.0427	-0.0016
642	SLD 13	-3.3	0.32	74.27	-0.3007	-0.074	0.0195
642	SLD 14	-3.29	0.88	74.23	-0.3043	-0.0741	0.0267
642	SLD 15	-3.52	-1.29	74.78	-0.3739	-0.0721	0.0097
642	SLD 16	-3.51	-0.73	74.73	-0.3774	-0.0722	0.0169
642	SLV 1	12.18	2.14	45.42	0.0114	0.0553	-0.0065
642	SLV 2	12.21	3.43	45.31	0.0032	0.055	0.0103
642	SLV 3	11.68	-1.53	46.59	-0.1549	0.0597	-0.029
642	SLV 4	11.7	-0.23	46.49	-0.1631	0.0594	-0.0123
642	SLV 5	5.25	6.08	58.03	0.0748	-0.0139	0.0364
642	SLV 6	5.26	6.91	57.96	0.0695	-0.0141	0.0472
642	SLV 7	3.57	-6.14	61.95	-0.4795	0.0008	-0.0388
642	SLV 8	3.59	-5.31	61.88	-0.4848	0.0006	-0.0281
642	SLV 9	-1.2	5.59	70.03	-0.0359	-0.0687	0.048
642	SLV 10	-1.19	6.42	69.96	-0.0412	-0.0689	0.0587
642	SLV 11	-2.88	-6.63	73.96	-0.5902	-0.054	-0.0273
642	SLV 12	-2.86	-5.8	73.89	-0.5955	-0.0542	-0.0165
642	SLV 13	-9.32	0.51	85.43	-0.3576	-0.1275	0.0321
642	SLV 14	-9.29	1.81	85.32	-0.3658	-0.1278	0.0489
642	SLV 15	-9.82	-3.15	86.6	-0.5239	-0.1231	0.0096
642	SLV 16	-9.8	-1.86	86.5	-0.5321	-0.1234	0.0264
642	CRTFP Ux+	0	0	0	0	0	0
642	CRTFP Ux-	0	0	0	0	0	0
642	CRTFP Uy+	0	0	0	0	0	0
642	CRTFP Uy-	0	0	0	0	0	0
643	SLU 1	1.18	0.13	62.69	-0.2222	-0.0296	0.0099
643	SLU 2	1.18	0.09	62.7	-0.2245	-0.0296	0.0097
643	SLU 3	1.21	0.13	64.15	-0.2303	-0.0304	0.01
643	SLU 4	1.21	0.11	64.16	-0.2317	-0.0304	0.0098
643	SLU 5	1.2	0.09	63.6	-0.2288	-0.0301	0.0098
643	SLU 6	1.23	0.12	65.05	-0.2346	-0.0309	0.01
643	SLU 7	1.23	0.1	65.06	-0.236	-0.0309	0.0099
643	SLU 8	1.22	0.11	64.5	-0.2308	-0.0306	0.01
643	SLU 9	1.22	0.09	64.5	-0.2322	-0.0307	0.0099
643	SLU 10	1.25	0.21	70.32	-0.2591	-0.0321	0.0112
643	SLU 11	1.28	0.24	71.77	-0.265	-0.0329	0.0114
643	SLU 12	1.28	0.22	71.77	-0.2663	-0.0329	0.0113
643	SLU 13	1.27	0.2	71.22	-0.2635	-0.0327	0.0112
643	SLU 14	1.3	0.24	72.67	-0.2693	-0.0335	0.0115
643	SLU 15	1.3	0.22	72.68	-0.2707	-0.0335	0.0113
643	SLU 16	1.29	0.23	72.12	-0.2655	-0.0332	0.0115
643	SLU 17	1.29	0.21	72.12	-0.2669	-0.0332	0.0113
643	SLU 18	1.28	0.29	73.57	-0.2717	-0.0332	0.012
643	SLU 19	1.28	0.27	73.58	-0.2731	-0.0332	0.0119
643	SLU 20	1.3	0.28	74.48	-0.276	-0.0337	0.0121
643	SLU 21	1.3	0.26	74.48	-0.2774	-0.0337	0.0119
643	SLU 22	1.28	0.25	70.18	-0.2456	-0.0326	0.0108
643	SLU 23	1.28	0.22	70.19	-0.2479	-0.0326	0.0106
643	SLU 24	1.32	0.25	71.64	-0.2537	-0.0334	0.0108
643	SLU 25	1.32	0.23	71.65	-0.2551	-0.0334	0.0107
643	SLU 26	1.31	0.21	71.09	-0.2522	-0.0331	0.0106
643	SLU 27	1.34	0.25	72.55	-0.258	-0.0339	0.0109
643	SLU 28	1.34	0.23	72.55	-0.2594	-0.0339	0.0107
643	SLU 29	1.33	0.23	71.99	-0.2542	-0.0336	0.0108
643	SLU 30	1.33	0.22	72	-0.2556	-0.0336	0.0107
643	SLU 31	1.36	0.33	77.81	-0.2825	-0.0351	0.0121
643	SLU 32	1.39	0.36	79.26	-0.2883	-0.0359	0.0123
643	SLU 33	1.39	0.35	79.27	-0.2897	-0.0359	0.0122
643	SLU 34	1.38	0.32	78.71	-0.2869	-0.0356	0.0121
643	SLU 35	1.41	0.36	80.16	-0.2927	-0.0364	0.0123
643	SLU 36	1.41	0.34	80.17	-0.2941	-0.0364	0.0122
643	SLU 37	1.4	0.35	79.61	-0.2889	-0.0361	0.0123
643	SLU 38	1.4	0.33	79.61	-0.2903	-0.0361	0.0122
643	SLU 39	1.39	0.41	81.06	-0.2951	-0.0362	0.0129
643	SLU 40	1.39	0.39	81.07	-0.2965	-0.0362	0.0128
643	SLU 41	1.41	0.4	81.97	-0.2994	-0.0367	0.0129
643	SLU 42	1.41	0.38	81.97	-0.3008	-0.0367	0.0128
643	SLU 43	1.49	0.12	78.92	-0.2808	-0.0375	0.0126
643	SLU 44	1.49	0.09	78.93	-0.2831	-0.0375	0.0124
643	SLU 45	1.53	0.13	80.39	-0.2889	-0.0383	0.0126
643	SLU 46	1.53	0.11	80.39	-0.2903	-0.0383	0.0125
643	SLU 47	1.52	0.08	79.84	-0.2874	-0.038	0.0124

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
643	SLU 48	1.55	0.12	81.29	-0.2933	-0.0388	0.0127
643	SLU 49	1.55	0.1	81.3	-0.2947	-0.0388	0.0126
643	SLU 50	1.54	0.11	80.73	-0.2895	-0.0385	0.0127
643	SLU 51	1.54	0.09	80.74	-0.2908	-0.0385	0.0125
643	SLU 52	1.57	0.2	86.55	-0.3178	-0.04	0.0139
643	SLU 53	1.6	0.24	88.01	-0.3236	-0.0408	0.0141
643	SLU 54	1.6	0.22	88.01	-0.325	-0.0408	0.014
643	SLU 55	1.59	0.2	87.46	-0.3221	-0.0405	0.0139
643	SLU 56	1.62	0.23	88.91	-0.3279	-0.0413	0.0141
643	SLU 57	1.62	0.21	88.92	-0.3293	-0.0413	0.014
643	SLU 58	1.61	0.22	88.35	-0.3241	-0.041	0.0141
643	SLU 59	1.61	0.2	88.36	-0.3255	-0.0411	0.014
643	SLU 60	1.6	0.28	89.81	-0.3303	-0.0411	0.0147
643	SLU 61	1.6	0.26	89.81	-0.3317	-0.0411	0.0146
643	SLU 62	1.62	0.28	90.71	-0.3346	-0.0416	0.0147
643	SLU 63	1.62	0.26	90.72	-0.336	-0.0416	0.0146
643	SLU 64	1.6	0.24	86.42	-0.3042	-0.0404	0.0135
643	SLU 65	1.6	0.21	86.43	-0.3065	-0.0404	0.0133
643	SLU 66	1.63	0.25	87.88	-0.3123	-0.0412	0.0135
643	SLU 67	1.63	0.23	87.88	-0.3137	-0.0412	0.0134
643	SLU 68	1.62	0.2	87.33	-0.3108	-0.041	0.0133
643	SLU 69	1.65	0.24	88.78	-0.3167	-0.0418	0.0135
643	SLU 70	1.65	0.22	88.79	-0.318	-0.0418	0.0134
643	SLU 71	1.64	0.23	88.23	-0.3128	-0.0415	0.0135
643	SLU 72	1.64	0.21	88.23	-0.3142	-0.0415	0.0134
643	SLU 73	1.67	0.32	94.04	-0.3412	-0.043	0.0147
643	SLU 74	1.71	0.36	95.5	-0.347	-0.0438	0.015
643	SLU 75	1.71	0.34	95.5	-0.3484	-0.0438	0.0149
643	SLU 76	1.69	0.32	94.95	-0.3455	-0.0435	0.0148
643	SLU 77	1.73	0.35	96.4	-0.3513	-0.0443	0.015
643	SLU 78	1.73	0.34	96.41	-0.3527	-0.0443	0.0149
643	SLU 79	1.71	0.34	95.84	-0.3475	-0.044	0.015
643	SLU 80	1.72	0.32	95.85	-0.3489	-0.044	0.0149
643	SLU 81	1.7	0.4	97.3	-0.3537	-0.044	0.0156
643	SLU 82	1.71	0.39	97.31	-0.3551	-0.044	0.0155
643	SLU 83	1.73	0.4	98.2	-0.358	-0.0446	0.0156
643	SLU 84	1.73	0.38	98.21	-0.3594	-0.0446	0.0155
643	SLE RA 1	1.21	0.16	64.83	-0.2288	-0.0304	0.0102
643	SLE RA 2	1.21	0.14	64.83	-0.2304	-0.0305	0.01
643	SLE RA 3	1.23	0.16	65.8	-0.2343	-0.031	0.0102
643	SLE RA 4	1.23	0.15	65.81	-0.2352	-0.031	0.0101
643	SLE RA 5	1.22	0.13	65.44	-0.2333	-0.0308	0.0101
643	SLE RA 6	1.24	0.16	66.41	-0.2372	-0.0313	0.0102
643	SLE RA 7	1.24	0.15	66.41	-0.2381	-0.0313	0.0101
643	SLE RA 8	1.24	0.15	66.03	-0.2346	-0.0311	0.0102
643	SLE RA 9	1.24	0.14	66.04	-0.2356	-0.0311	0.0101
643	SLE RA 10	1.26	0.21	69.91	-0.2535	-0.0321	0.011
643	SLE RA 11	1.28	0.24	70.88	-0.2574	-0.0327	0.0112
643	SLE RA 12	1.28	0.23	70.89	-0.2583	-0.0327	0.0111
643	SLE RA 13	1.27	0.21	70.52	-0.2564	-0.0325	0.011
643	SLE RA 14	1.29	0.23	71.48	-0.2603	-0.033	0.0112
643	SLE RA 15	1.29	0.22	71.49	-0.2612	-0.033	0.0111
643	SLE RA 16	1.28	0.23	71.11	-0.2577	-0.0328	0.0112
643	SLE RA 17	1.28	0.21	71.12	-0.2587	-0.0328	0.0111
643	SLE RA 18	1.28	0.27	72.08	-0.2618	-0.0329	0.0116
643	SLE RA 19	1.28	0.25	72.09	-0.2628	-0.0329	0.0115
643	SLE RA 20	1.29	0.26	72.69	-0.2647	-0.0332	0.0116
643	SLE RA 21	1.29	0.25	72.69	-0.2657	-0.0332	0.0115
643	SLE FR 1	1.21	0.16	64.83	-0.2288	-0.0304	0.0102
643	SLE FR 2	1.21	0.16	64.83	-0.2292	-0.0304	0.0101
643	SLE FR 3	1.21	0.16	65.07	-0.23	-0.0306	0.0102
643	SLE FR 4	1.23	0.19	67.01	-0.2391	-0.0312	0.0106
643	SLE FR 5	1.23	0.19	67.25	-0.2399	-0.0313	0.0106
643	SLE FR 6	1.24	0.21	68.45	-0.2453	-0.0316	0.0109
643	SLE QP 1	1.21	0.16	64.83	-0.2288	-0.0304	0.0102
643	SLE QP 2	1.23	0.19	67	-0.2387	-0.0312	0.0106
643	SLD 1	5.91	1.08	56.92	-0.1299	0.0085	0.0049
643	SLD 2	5.92	1.67	56.88	-0.1347	0.0083	0.0129
643	SLD 3	5.7	-0.59	57.47	-0.1954	0.0106	-0.0075
643	SLD 4	5.71	0.01	57.43	-0.2002	0.0104	0.0005
643	SLD 5	2.96	2.88	63.16	-0.1059	-0.0224	0.0263
643	SLD 6	2.97	3.26	63.13	-0.1091	-0.0225	0.0316
643	SLD 7	2.24	-2.67	64.98	-0.3242	-0.0155	-0.0151
643	SLD 8	2.25	-2.28	64.96	-0.3274	-0.0156	-0.0099
643	SLD 9	0.21	2.67	69.05	-0.1501	-0.0468	0.031
643	SLD 10	0.22	3.06	69.03	-0.1533	-0.0469	0.0363
643	SLD 11	-0.51	-2.88	70.88	-0.3684	-0.0398	-0.0104
643	SLD 12	-0.5	-2.49	70.85	-0.3716	-0.04	-0.0051
643	SLD 13	-3.25	0.38	76.58	-0.2773	-0.0727	0.0207
643	SLD 14	-3.24	0.97	76.54	-0.2821	-0.0729	0.0287
643	SLD 15	-3.47	-1.29	77.12	-0.3428	-0.0707	0.0082
643	SLD 16	-3.46	-0.69	77.08	-0.3476	-0.0708	0.0163
643	SLV 1	12.19	2.21	43.41	0.0141	0.0617	-0.003
643	SLV 2	12.21	3.6	43.32	0.0028	0.0613	0.0157
643	SLV 3	11.69	-1.58	44.69	-0.1348	0.0666	-0.0315
643	SLV 4	11.71	-0.19	44.59	-0.1462	0.0662	-0.0128
643	SLV 5	5.27	6.31	58.01	0.0649	-0.0106	0.0465
643	SLV 6	5.29	7.21	57.94	0.0576	-0.0108	0.0586
643	SLV 7	3.6	-6.33	62.26	-0.4315	0.0056	-0.0485
643	SLV 8	3.62	-5.44	62.2	-0.4388	0.0053	-0.0365
643	SLV 9	-1.16	5.82	71.81	-0.0387	-0.0676	0.0576
643	SLV 10	-1.14	6.72	71.75	-0.046	-0.0679	0.0697
643	SLV 11	-2.83	-6.82	76.06	-0.5351	-0.0515	-0.0374
643	SLV 12	-2.81	-5.93	76	-0.5424	-0.0518	-0.0254
643	SLV 13	-9.25	0.58	89.41	-0.3313	-0.1285	0.034
643	SLV 14	-9.23	1.97	89.32	-0.3427	-0.1289	0.0527
643	SLV 15	-9.75	-3.21	90.69	-0.4803	-0.1237	0.0055

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
643	SLV 16	-9.73	-1.83	90.6	-0.4916	-0.124	0.0242
643	CRTFP Ux+	0	0	0	0	0	0
643	CRTFP Ux-	0	0	0	0	0	0
643	CRTFP Uy+	0	0	0	0	0	0
643	CRTFP Uy-	0	0	0	0	0	0
644	SLU 1	1.21	0.18	63.6	-0.2028	-0.0275	0.0103
644	SLU 2	1.21	0.14	63.61	-0.205	-0.0275	0.0101
644	SLU 3	1.24	0.18	65.09	-0.2104	-0.0283	0.0104
644	SLU 4	1.24	0.16	65.1	-0.2116	-0.0283	0.0102
644	SLU 5	1.23	0.14	64.54	-0.209	-0.028	0.0101
644	SLU 6	1.26	0.18	66.01	-0.2144	-0.0288	0.0104
644	SLU 7	1.26	0.16	66.02	-0.2156	-0.0288	0.0102
644	SLU 8	1.25	0.17	65.45	-0.2109	-0.0285	0.0104
644	SLU 9	1.25	0.15	65.45	-0.2121	-0.0285	0.0102
644	SLU 10	1.28	0.27	71.31	-0.2365	-0.0295	0.0117
644	SLU 11	1.32	0.3	72.78	-0.2419	-0.0303	0.012
644	SLU 12	1.32	0.28	72.79	-0.2432	-0.0303	0.0118
644	SLU 13	1.31	0.26	72.23	-0.2405	-0.03	0.0117
644	SLU 14	1.34	0.3	73.7	-0.2459	-0.0308	0.012
644	SLU 15	1.34	0.28	73.71	-0.2472	-0.0308	0.0118
644	SLU 16	1.33	0.29	73.14	-0.2424	-0.0305	0.012
644	SLU 17	1.33	0.27	73.14	-0.2437	-0.0305	0.0118
644	SLU 18	1.32	0.35	74.59	-0.2479	-0.0304	0.0126
644	SLU 19	1.32	0.33	74.6	-0.2491	-0.0304	0.0124
644	SLU 20	1.34	0.34	75.51	-0.2519	-0.0309	0.0126
644	SLU 21	1.34	0.32	75.52	-0.2532	-0.0309	0.0125
644	SLU 22	1.32	0.3	71.18	-0.2238	-0.03	0.0113
644	SLU 23	1.32	0.27	71.19	-0.2259	-0.03	0.0111
644	SLU 24	1.35	0.31	72.67	-0.2313	-0.0308	0.0114
644	SLU 25	1.35	0.29	72.68	-0.2326	-0.0308	0.0112
644	SLU 26	1.34	0.27	72.12	-0.23	-0.0305	0.0111
644	SLU 27	1.37	0.3	73.59	-0.2354	-0.0313	0.0114
644	SLU 28	1.37	0.28	73.6	-0.2366	-0.0313	0.0113
644	SLU 29	1.36	0.29	73.03	-0.2319	-0.031	0.0114
644	SLU 30	1.36	0.27	73.03	-0.2331	-0.031	0.0112
644	SLU 31	1.39	0.39	78.88	-0.2575	-0.032	0.0127
644	SLU 32	1.43	0.43	80.36	-0.2629	-0.0328	0.013
644	SLU 33	1.43	0.41	80.37	-0.2641	-0.0328	0.0128
644	SLU 34	1.41	0.39	79.81	-0.2615	-0.0325	0.0127
644	SLU 35	1.45	0.42	81.28	-0.2669	-0.0333	0.013
644	SLU 36	1.45	0.4	81.29	-0.2681	-0.0333	0.0129
644	SLU 37	1.44	0.41	80.72	-0.2634	-0.033	0.013
644	SLU 38	1.44	0.39	80.72	-0.2646	-0.033	0.0128
644	SLU 39	1.42	0.48	82.17	-0.2689	-0.0329	0.0136
644	SLU 40	1.43	0.46	82.18	-0.2701	-0.0329	0.0135
644	SLU 41	1.45	0.47	83.09	-0.2729	-0.0334	0.0136
644	SLU 42	1.45	0.45	83.1	-0.2741	-0.0334	0.0135
644	SLU 43	1.54	0.19	80.09	-0.2565	-0.0349	0.0131
644	SLU 44	1.54	0.15	80.1	-0.2586	-0.0349	0.0128
644	SLU 45	1.57	0.19	81.57	-0.264	-0.0356	0.0131
644	SLU 46	1.57	0.17	81.58	-0.2653	-0.0357	0.013
644	SLU 47	1.56	0.15	81.02	-0.2626	-0.0354	0.0128
644	SLU 48	1.59	0.19	82.5	-0.268	-0.0362	0.0131
644	SLU 49	1.59	0.17	82.5	-0.2693	-0.0362	0.013
644	SLU 50	1.58	0.18	81.93	-0.2645	-0.0359	0.0131
644	SLU 51	1.58	0.16	81.94	-0.2658	-0.0359	0.0129
644	SLU 52	1.61	0.28	87.79	-0.2902	-0.0369	0.0144
644	SLU 53	1.64	0.31	89.26	-0.2955	-0.0377	0.0147
644	SLU 54	1.64	0.29	89.27	-0.2968	-0.0377	0.0146
644	SLU 55	1.63	0.27	88.71	-0.2942	-0.0374	0.0144
644	SLU 56	1.66	0.31	90.19	-0.2996	-0.0382	0.0147
644	SLU 57	1.66	0.29	90.19	-0.3008	-0.0382	0.0146
644	SLU 58	1.65	0.3	89.62	-0.2961	-0.0379	0.0147
644	SLU 59	1.65	0.28	89.63	-0.2973	-0.0379	0.0145
644	SLU 60	1.64	0.36	91.07	-0.3015	-0.0377	0.0153
644	SLU 61	1.64	0.34	91.08	-0.3028	-0.0377	0.0152
644	SLU 62	1.66	0.35	91.99	-0.3056	-0.0383	0.0154
644	SLU 63	1.66	0.33	92	-0.3068	-0.0383	0.0152
644	SLU 64	1.65	0.31	87.66	-0.2775	-0.0374	0.0141
644	SLU 65	1.65	0.28	87.68	-0.2796	-0.0374	0.0138
644	SLU 66	1.68	0.32	89.15	-0.285	-0.0382	0.0141
644	SLU 67	1.68	0.3	89.16	-0.2863	-0.0382	0.014
644	SLU 68	1.67	0.28	88.6	-0.2836	-0.0379	0.0138
644	SLU 69	1.7	0.31	90.07	-0.289	-0.0387	0.0141
644	SLU 70	1.7	0.29	90.08	-0.2903	-0.0387	0.014
644	SLU 71	1.69	0.3	89.51	-0.2855	-0.0384	0.0141
644	SLU 72	1.69	0.28	89.52	-0.2868	-0.0384	0.014
644	SLU 73	1.72	0.4	95.37	-0.3111	-0.0394	0.0154
644	SLU 74	1.75	0.44	96.84	-0.3165	-0.0402	0.0157
644	SLU 75	1.75	0.42	96.85	-0.3178	-0.0402	0.0156
644	SLU 76	1.74	0.4	96.29	-0.3151	-0.0399	0.0154
644	SLU 77	1.77	0.43	97.77	-0.3205	-0.0407	0.0157
644	SLU 78	1.77	0.41	97.77	-0.3218	-0.0407	0.0156
644	SLU 79	1.76	0.42	97.2	-0.317	-0.0404	0.0157
644	SLU 80	1.76	0.4	97.21	-0.3183	-0.0404	0.0156
644	SLU 81	1.75	0.49	98.65	-0.3225	-0.0403	0.0164
644	SLU 82	1.75	0.47	98.66	-0.3238	-0.0403	0.0162
644	SLU 83	1.77	0.48	99.57	-0.3265	-0.0408	0.0164
644	SLU 84	1.77	0.46	99.58	-0.3278	-0.0408	0.0162
644	SLE RA 1	1.24	0.21	65.77	-0.2088	-0.0282	0.0106
644	SLE RA 2	1.24	0.19	65.78	-0.2103	-0.0282	0.0104
644	SLE RA 3	1.26	0.22	66.76	-0.2138	-0.0287	0.0106
644	SLE RA 4	1.26	0.2	66.77	-0.2147	-0.0287	0.0105
644	SLE RA 5	1.26	0.19	66.39	-0.2129	-0.0286	0.0105
644	SLE RA 6	1.28	0.21	67.38	-0.2165	-0.0291	0.0107
644	SLE RA 7	1.28	0.2	67.38	-0.2174	-0.0291	0.0105
644	SLE RA 8	1.27	0.21	67	-0.2142	-0.0289	0.0106

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
644	SLE RA 9	1.27	0.19	67	-0.215	-0.0289	0.0105
644	SLE RA 10	1.29	0.27	70.9	-0.2313	-0.0296	0.0115
644	SLE RA 11	1.31	0.3	71.89	-0.2349	-0.0301	0.0117
644	SLE RA 12	1.31	0.28	71.89	-0.2357	-0.0301	0.0116
644	SLE RA 13	1.31	0.27	71.52	-0.2339	-0.0299	0.0115
644	SLE RA 14	1.33	0.29	72.5	-0.2375	-0.0304	0.0117
644	SLE RA 15	1.33	0.28	72.51	-0.2384	-0.0304	0.0116
644	SLE RA 16	1.32	0.29	72.13	-0.2352	-0.0302	0.0117
644	SLE RA 17	1.32	0.27	72.13	-0.2361	-0.0302	0.0116
644	SLE RA 18	1.31	0.33	73.09	-0.2389	-0.0301	0.0121
644	SLE RA 19	1.31	0.32	73.1	-0.2397	-0.0301	0.012
644	SLE RA 20	1.33	0.33	73.71	-0.2415	-0.0305	0.0121
644	SLE RA 21	1.33	0.31	73.71	-0.2424	-0.0305	0.012
644	SLE FR 1	1.24	0.21	65.77	-0.2088	-0.0282	0.0106
644	SLE FR 2	1.24	0.21	65.77	-0.2091	-0.0282	0.0106
644	SLE FR 3	1.25	0.21	66.01	-0.2099	-0.0283	0.0106
644	SLE FR 4	1.26	0.24	67.97	-0.2181	-0.0288	0.011
644	SLE FR 5	1.27	0.25	68.21	-0.2189	-0.0289	0.0111
644	SLE FR 6	1.28	0.27	69.43	-0.2238	-0.0292	0.0114
644	SLE QP 1	1.24	0.21	65.77	-0.2088	-0.0282	0.0106
644	SLE QP 2	1.26	0.25	67.97	-0.2178	-0.0288	0.0111
644	SLD 1	5.93	1.16	56.55	-0.1169	0.0115	0.0069
644	SLD 2	5.94	1.79	56.51	-0.1231	0.0113	0.0159
644	SLD 3	5.72	-0.58	57.14	-0.1749	0.0138	-0.0081
644	SLD 4	5.73	0.06	57.1	-0.1811	0.0136	0.0009
644	SLD 5	2.99	3.04	63.65	-0.0985	-0.0202	0.031
644	SLD 6	2.99	3.45	63.63	-0.1025	-0.0203	0.0369
644	SLD 7	2.27	-2.74	65.62	-0.2918	-0.0125	-0.019
644	SLD 8	2.28	-2.32	65.6	-0.2959	-0.0126	-0.0132
644	SLD 9	0.25	2.82	70.34	-0.1398	-0.0449	0.0353
644	SLD 10	0.25	3.24	70.31	-0.1439	-0.0451	0.0412
644	SLD 11	-0.47	-2.96	72.3	-0.3332	-0.0373	-0.0147
644	SLD 12	-0.46	-2.54	72.28	-0.3372	-0.0374	-0.0089
644	SLD 13	-3.2	0.44	78.83	-0.2546	-0.0711	0.0213
644	SLD 14	-3.19	1.08	78.79	-0.2608	-0.0713	0.0302
644	SLD 15	-3.42	-1.3	79.42	-0.3126	-0.0688	0.0062
644	SLD 16	-3.41	-0.66	79.38	-0.3188	-0.069	0.0152
644	SLV 1	12.19	2.32	41.24	0.0167	0.0654	0.001
644	SLV 2	12.21	3.81	41.16	0.0023	0.065	0.0219
644	SLV 3	11.69	-1.63	42.62	-0.1152	0.0708	-0.0334
644	SLV 4	11.71	-0.14	42.54	-0.1297	0.0703	-0.0125
644	SLV 5	5.29	6.61	57.87	0.0552	-0.0086	0.0567
644	SLV 6	5.31	7.57	57.82	0.0459	-0.0089	0.0701
644	SLV 7	3.63	-6.57	62.47	-0.3847	0.0093	-0.058
644	SLV 8	3.65	-5.61	62.41	-0.394	0.009	-0.0446
644	SLV 9	-1.12	6.11	73.52	-0.0417	-0.0666	0.0668
644	SLV 10	-1.1	7.06	73.47	-0.051	-0.0669	0.0802
644	SLV 11	-2.78	-7.07	78.11	-0.4816	-0.0487	-0.0479
644	SLV 12	-2.77	-6.11	78.06	-0.4908	-0.049	-0.0345
644	SLV 13	-9.19	0.64	93.4	-0.306	-0.1279	0.0347
644	SLV 14	-9.16	2.13	93.31	-0.3205	-0.1284	0.0555
644	SLV 15	-9.69	-3.31	94.77	-0.438	-0.1225	0.0003
644	SLV 16	-9.66	-1.83	94.69	-0.4524	-0.123	0.0211
644	CRTFP Ux+	0	0	0	0	0	0
644	CRTFP Ux-	0	0	0	0	0	0
644	CRTFP Uy+	0	0	0	0	0	0
644	CRTFP Uy-	0	0	0	0	0	0
645	SLU 1	1.24	0.23	64.46	-0.1842	-0.026	0.0105
645	SLU 2	1.24	0.2	64.47	-0.1861	-0.026	0.0102
645	SLU 3	1.27	0.24	65.97	-0.1911	-0.0267	0.0105
645	SLU 4	1.27	0.22	65.98	-0.1923	-0.0268	0.0103
645	SLU 5	1.26	0.19	65.41	-0.1898	-0.0265	0.0102
645	SLU 6	1.3	0.23	66.91	-0.1948	-0.0273	0.0105
645	SLU 7	1.3	0.21	66.92	-0.196	-0.0273	0.0103
645	SLU 8	1.28	0.22	66.34	-0.1916	-0.027	0.0105
645	SLU 9	1.28	0.2	66.34	-0.1928	-0.027	0.0103
645	SLU 10	1.32	0.33	72.22	-0.2146	-0.0276	0.0119
645	SLU 11	1.35	0.37	73.72	-0.2196	-0.0283	0.0122
645	SLU 12	1.35	0.35	73.73	-0.2207	-0.0283	0.012
645	SLU 13	1.34	0.32	73.16	-0.2183	-0.0281	0.0119
645	SLU 14	1.37	0.36	74.66	-0.2233	-0.0288	0.0122
645	SLU 15	1.37	0.34	74.67	-0.2244	-0.0289	0.012
645	SLU 16	1.36	0.35	74.09	-0.2201	-0.0286	0.0122
645	SLU 17	1.36	0.33	74.09	-0.2212	-0.0286	0.012
645	SLU 18	1.35	0.42	75.53	-0.2249	-0.0283	0.0129
645	SLU 19	1.35	0.4	75.54	-0.226	-0.0283	0.0127
645	SLU 20	1.37	0.41	76.47	-0.2286	-0.0288	0.0129
645	SLU 21	1.37	0.39	76.48	-0.2297	-0.0288	0.0127
645	SLU 22	1.35	0.36	72.12	-0.2028	-0.0282	0.0116
645	SLU 23	1.35	0.33	72.13	-0.2048	-0.0282	0.0113
645	SLU 24	1.38	0.37	73.63	-0.2097	-0.0289	0.0117
645	SLU 25	1.38	0.35	73.64	-0.2109	-0.0289	0.0115
645	SLU 26	1.37	0.32	73.07	-0.2085	-0.0287	0.0114
645	SLU 27	1.41	0.36	74.57	-0.2134	-0.0294	0.0117
645	SLU 28	1.41	0.34	74.57	-0.2146	-0.0294	0.0115
645	SLU 29	1.39	0.35	73.99	-0.2103	-0.0292	0.0117
645	SLU 30	1.4	0.33	74	-0.2114	-0.0292	0.0115
645	SLU 31	1.43	0.46	79.88	-0.2332	-0.0298	0.013
645	SLU 32	1.46	0.5	81.38	-0.2382	-0.0305	0.0134
645	SLU 33	1.46	0.48	81.38	-0.2394	-0.0305	0.0132
645	SLU 34	1.45	0.45	80.81	-0.237	-0.0303	0.013
645	SLU 35	1.48	0.49	82.32	-0.2419	-0.031	0.0134
645	SLU 36	1.48	0.47	82.32	-0.2431	-0.031	0.0132
645	SLU 37	1.47	0.48	81.74	-0.2387	-0.0308	0.0133
645	SLU 38	1.47	0.46	81.75	-0.2399	-0.0308	0.0132
645	SLU 39	1.46	0.55	83.19	-0.2435	-0.0304	0.0141
645	SLU 40	1.46	0.53	83.19	-0.2447	-0.0304	0.0139

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
645	SLU 41	1.48	0.54	84.12	-0.2472	-0.0309	0.0141
645	SLU 42	1.48	0.52	84.13	-0.2484	-0.031	0.0139
645	SLU 43	1.57	0.26	81.18	-0.233	-0.033	0.0132
645	SLU 44	1.58	0.22	81.19	-0.235	-0.033	0.0129
645	SLU 45	1.61	0.26	82.69	-0.24	-0.0338	0.0133
645	SLU 46	1.61	0.24	82.69	-0.2411	-0.0338	0.0131
645	SLU 47	1.6	0.22	82.12	-0.2387	-0.0335	0.0129
645	SLU 48	1.63	0.26	83.63	-0.2437	-0.0343	0.0133
645	SLU 49	1.63	0.23	83.63	-0.2448	-0.0343	0.0131
645	SLU 50	1.62	0.24	83.05	-0.2405	-0.034	0.0132
645	SLU 51	1.62	0.22	83.06	-0.2416	-0.034	0.013
645	SLU 52	1.65	0.35	88.94	-0.2635	-0.0346	0.0146
645	SLU 53	1.68	0.39	90.44	-0.2684	-0.0354	0.015
645	SLU 54	1.68	0.37	90.44	-0.2696	-0.0354	0.0148
645	SLU 55	1.67	0.34	89.87	-0.2672	-0.0351	0.0146
645	SLU 56	1.71	0.38	91.37	-0.2721	-0.0359	0.015
645	SLU 57	1.71	0.36	91.38	-0.2733	-0.0359	0.0148
645	SLU 58	1.69	0.37	90.8	-0.2689	-0.0356	0.0149
645	SLU 59	1.69	0.35	90.81	-0.2701	-0.0356	0.0147
645	SLU 60	1.68	0.44	92.25	-0.2737	-0.0353	0.0156
645	SLU 61	1.68	0.42	92.25	-0.2749	-0.0353	0.0154
645	SLU 62	1.7	0.43	93.18	-0.2774	-0.0358	0.0156
645	SLU 63	1.7	0.41	93.19	-0.2786	-0.0358	0.0155
645	SLU 64	1.69	0.39	88.83	-0.2517	-0.0352	0.0144
645	SLU 65	1.69	0.35	88.84	-0.2536	-0.0352	0.0141
645	SLU 66	1.72	0.39	90.34	-0.2586	-0.036	0.0144
645	SLU 67	1.72	0.37	90.35	-0.2598	-0.036	0.0143
645	SLU 68	1.71	0.35	89.78	-0.2573	-0.0357	0.0141
645	SLU 69	1.74	0.39	91.28	-0.2623	-0.0365	0.0144
645	SLU 70	1.74	0.37	91.29	-0.2635	-0.0365	0.0143
645	SLU 71	1.73	0.38	90.71	-0.2591	-0.0362	0.0144
645	SLU 72	1.73	0.36	90.71	-0.2603	-0.0362	0.0142
645	SLU 73	1.76	0.48	96.59	-0.2821	-0.0368	0.0158
645	SLU 74	1.79	0.52	98.09	-0.2871	-0.0376	0.0161
645	SLU 75	1.79	0.5	98.1	-0.2882	-0.0376	0.0159
645	SLU 76	1.78	0.48	97.53	-0.2858	-0.0373	0.0158
645	SLU 77	1.82	0.52	99.03	-0.2908	-0.0381	0.0161
645	SLU 78	1.82	0.5	99.04	-0.2919	-0.0381	0.016
645	SLU 79	1.8	0.51	98.45	-0.2876	-0.0378	0.0161
645	SLU 80	1.8	0.48	98.46	-0.2888	-0.0378	0.0159
645	SLU 81	1.79	0.57	99.9	-0.2924	-0.0375	0.0168
645	SLU 82	1.79	0.55	99.91	-0.2935	-0.0375	0.0166
645	SLU 83	1.81	0.57	100.84	-0.2961	-0.038	0.0168
645	SLU 84	1.81	0.55	100.84	-0.2972	-0.038	0.0166
645	SLE RA 1	1.27	0.27	66.65	-0.1895	-0.0266	0.0108
645	SLE RA 2	1.27	0.25	66.66	-0.1908	-0.0266	0.0106
645	SLE RA 3	1.29	0.27	67.66	-0.1941	-0.0271	0.0108
645	SLE RA 4	1.29	0.26	67.66	-0.1949	-0.0271	0.0107
645	SLE RA 5	1.29	0.24	67.28	-0.1933	-0.0269	0.0106
645	SLE RA 6	1.31	0.27	68.28	-0.1966	-0.0275	0.0108
645	SLE RA 7	1.31	0.26	68.29	-0.1974	-0.0275	0.0107
645	SLE RA 8	1.3	0.26	67.9	-0.1945	-0.0273	0.0108
645	SLE RA 9	1.3	0.25	67.9	-0.1952	-0.0273	0.0107
645	SLE RA 10	1.32	0.33	71.82	-0.2098	-0.0277	0.0117
645	SLE RA 11	1.34	0.36	72.82	-0.2131	-0.0282	0.012
645	SLE RA 12	1.34	0.35	72.83	-0.2139	-0.0282	0.0118
645	SLE RA 13	1.34	0.33	72.45	-0.2123	-0.028	0.0117
645	SLE RA 14	1.36	0.36	73.45	-0.2156	-0.0285	0.012
645	SLE RA 15	1.36	0.34	73.45	-0.2163	-0.0285	0.0119
645	SLE RA 16	1.35	0.35	73.06	-0.2134	-0.0283	0.0119
645	SLE RA 17	1.35	0.33	73.07	-0.2142	-0.0283	0.0118
645	SLE RA 18	1.34	0.39	74.03	-0.2166	-0.0281	0.0124
645	SLE RA 19	1.34	0.38	74.03	-0.2174	-0.0281	0.0123
645	SLE RA 20	1.36	0.39	74.65	-0.2191	-0.0285	0.0124
645	SLE RA 21	1.36	0.37	74.66	-0.2199	-0.0285	0.0123
645	SLE FR 1	1.27	0.27	66.65	-0.1895	-0.0266	0.0108
645	SLE FR 2	1.27	0.27	66.65	-0.1898	-0.0266	0.0108
645	SLE FR 3	1.28	0.27	66.9	-0.1905	-0.0267	0.0108
645	SLE FR 4	1.29	0.3	68.86	-0.1979	-0.0271	0.0112
645	SLE FR 5	1.3	0.3	69.11	-0.1986	-0.0272	0.0113
645	SLE FR 6	1.31	0.33	70.34	-0.2031	-0.0274	0.0116
645	SLE QP 1	1.27	0.27	66.65	-0.1895	-0.0266	0.0108
645	SLE QP 2	1.29	0.31	68.86	-0.1976	-0.0271	0.0113
645	SLD 1	5.95	1.25	56.09	-0.1043	0.0134	0.0088
645	SLD 2	5.96	1.94	56.06	-0.1119	0.0132	0.0186
645	SLD 3	5.74	-0.57	56.72	-0.155	0.016	-0.0086
645	SLD 4	5.75	0.12	56.7	-0.1626	0.0158	0.0012
645	SLD 5	3.01	3.22	64.07	-0.0914	-0.0188	0.0352
645	SLD 6	3.02	3.67	64.05	-0.0963	-0.0189	0.0416
645	SLD 7	2.3	-2.83	66.19	-0.2604	-0.0103	-0.0228
645	SLD 8	2.31	-2.38	66.17	-0.2654	-0.0104	-0.0164
645	SLD 9	0.28	3	71.55	-0.1299	-0.0437	0.0389
645	SLD 10	0.29	3.45	71.53	-0.1348	-0.0439	0.0453
645	SLD 11	-0.43	-3.06	73.67	-0.299	-0.0352	-0.019
645	SLD 12	-0.43	-2.61	73.65	-0.3039	-0.0354	-0.0126
645	SLD 13	-3.16	0.49	81.03	-0.2327	-0.0699	0.0214
645	SLD 14	-3.15	1.18	81	-0.2403	-0.0701	0.0312
645	SLD 15	-3.37	-1.32	81.67	-0.2834	-0.0673	0.004
645	SLD 16	-3.36	-0.64	81.64	-0.291	-0.0675	0.0138
645	SLV 1	12.19	2.47	38.96	0.0193	0.0677	0.0049
645	SLV 2	12.21	4.07	38.89	0.0017	0.0672	0.0278
645	SLV 3	11.69	-1.68	40.45	-0.0961	0.0737	-0.0348
645	SLV 4	11.71	-0.08	40.38	-0.1137	0.0732	-0.012
645	SLV 5	5.31	6.96	57.65	0.0455	-0.0076	0.0658
645	SLV 6	5.33	7.99	57.61	0.0342	-0.0079	0.0805
645	SLV 7	3.65	-6.85	62.6	-0.3393	0.0123	-0.0668
645	SLV 8	3.67	-5.82	62.56	-0.3506	0.012	-0.0521

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
645	SLV 9	-1.08	6.43	75.17	-0.0447	-0.0661	0.0747
645	SLV 10	-1.07	7.46	75.12	-0.056	-0.0664	0.0894
645	SLV 11	-2.74	-7.38	80.12	-0.4295	-0.0462	-0.0579
645	SLV 12	-2.72	-6.35	80.07	-0.4408	-0.0465	-0.0432
645	SLV 13	-9.13	0.69	97.34	-0.2816	-0.1273	0.0345
645	SLV 14	-9.1	2.29	97.28	-0.2991	-0.1278	0.0574
645	SLV 15	-9.62	-3.45	98.83	-0.397	-0.1213	-0.0052
645	SLV 16	-9.6	-1.85	98.76	-0.4146	-0.1218	0.0176
645	CRTFP Ux+	0	0	0	0	0	0
645	CRTFP Ux-	0	0	0	0	0	0
645	CRTFP Uy+	0	0	0	0	0	0
645	CRTFP Uy-	0	0	0	0	0	0
646	SLU 1	1.27	0.29	65.28	-0.1661	-0.0254	0.0103
646	SLU 2	1.27	0.25	65.3	-0.1679	-0.0254	0.01
646	SLU 3	1.3	0.29	66.82	-0.1725	-0.0262	0.0104
646	SLU 4	1.3	0.27	66.83	-0.1735	-0.0262	0.0102
646	SLU 5	1.29	0.24	66.25	-0.1713	-0.0259	0.01
646	SLU 6	1.32	0.29	67.78	-0.1759	-0.0267	0.0104
646	SLU 7	1.32	0.26	67.78	-0.1769	-0.0267	0.0102
646	SLU 8	1.31	0.27	67.19	-0.173	-0.0264	0.0103
646	SLU 9	1.31	0.25	67.2	-0.174	-0.0264	0.0101
646	SLU 10	1.34	0.39	73.09	-0.1934	-0.0267	0.0117
646	SLU 11	1.38	0.43	74.62	-0.198	-0.0275	0.0121
646	SLU 12	1.38	0.41	74.62	-0.199	-0.0275	0.0119
646	SLU 13	1.37	0.38	74.05	-0.1968	-0.0272	0.0117
646	SLU 14	1.4	0.42	75.57	-0.2014	-0.028	0.0121
646	SLU 15	1.4	0.4	75.58	-0.2025	-0.028	0.0119
646	SLU 16	1.39	0.41	74.99	-0.1985	-0.0277	0.012
646	SLU 17	1.39	0.39	75	-0.1995	-0.0278	0.0118
646	SLU 18	1.38	0.48	76.42	-0.2026	-0.0273	0.0128
646	SLU 19	1.38	0.46	76.43	-0.2036	-0.0273	0.0126
646	SLU 20	1.4	0.48	77.38	-0.206	-0.0278	0.0128
646	SLU 21	1.4	0.46	77.38	-0.2071	-0.0278	0.0126
646	SLU 22	1.38	0.42	73.01	-0.1825	-0.0274	0.0116
646	SLU 23	1.38	0.39	73.02	-0.1843	-0.0274	0.0113
646	SLU 24	1.41	0.43	74.54	-0.1889	-0.0281	0.0117
646	SLU 25	1.41	0.41	74.55	-0.1899	-0.0281	0.0115
646	SLU 26	1.4	0.38	73.97	-0.1877	-0.0279	0.0113
646	SLU 27	1.44	0.42	75.5	-0.1923	-0.0286	0.0116
646	SLU 28	1.44	0.4	75.5	-0.1933	-0.0287	0.0114
646	SLU 29	1.42	0.41	74.91	-0.1894	-0.0284	0.0116
646	SLU 30	1.42	0.39	74.92	-0.1904	-0.0284	0.0114
646	SLU 31	1.46	0.53	80.81	-0.2098	-0.0287	0.013
646	SLU 32	1.49	0.57	82.34	-0.2144	-0.0295	0.0134
646	SLU 33	1.49	0.55	82.35	-0.2154	-0.0295	0.0132
646	SLU 34	1.48	0.52	81.77	-0.2132	-0.0292	0.013
646	SLU 35	1.51	0.56	83.29	-0.2178	-0.03	0.0134
646	SLU 36	1.51	0.54	83.3	-0.2188	-0.03	0.0132
646	SLU 37	1.5	0.55	82.71	-0.2149	-0.0297	0.0133
646	SLU 38	1.5	0.53	82.72	-0.2159	-0.0297	0.0131
646	SLU 39	1.49	0.62	84.14	-0.219	-0.0293	0.0141
646	SLU 40	1.49	0.6	84.15	-0.22	-0.0293	0.0139
646	SLU 41	1.51	0.62	85.1	-0.2224	-0.0298	0.0141
646	SLU 42	1.51	0.59	85.1	-0.2235	-0.0298	0.0139
646	SLU 43	1.61	0.32	82.22	-0.2104	-0.0324	0.013
646	SLU 44	1.61	0.29	82.23	-0.2121	-0.0324	0.0126
646	SLU 45	1.64	0.33	83.76	-0.2167	-0.0331	0.013
646	SLU 46	1.64	0.31	83.77	-0.2177	-0.0331	0.0128
646	SLU 47	1.63	0.28	83.19	-0.2155	-0.0329	0.0126
646	SLU 48	1.67	0.32	84.71	-0.2201	-0.0336	0.013
646	SLU 49	1.67	0.3	84.72	-0.2212	-0.0336	0.0128
646	SLU 50	1.65	0.31	84.13	-0.2172	-0.0334	0.013
646	SLU 51	1.65	0.29	84.14	-0.2183	-0.0334	0.0128
646	SLU 52	1.69	0.43	90.03	-0.2376	-0.0337	0.0144
646	SLU 53	1.72	0.47	91.56	-0.2422	-0.0344	0.0148
646	SLU 54	1.72	0.45	91.56	-0.2433	-0.0344	0.0146
646	SLU 55	1.71	0.42	90.98	-0.2411	-0.0342	0.0144
646	SLU 56	1.74	0.46	92.51	-0.2456	-0.035	0.0147
646	SLU 57	1.74	0.44	92.52	-0.2467	-0.035	0.0146
646	SLU 58	1.73	0.45	91.93	-0.2427	-0.0347	0.0147
646	SLU 59	1.73	0.43	91.93	-0.2438	-0.0347	0.0145
646	SLU 60	1.72	0.52	93.36	-0.2468	-0.0342	0.0154
646	SLU 61	1.72	0.5	93.37	-0.2479	-0.0342	0.0152
646	SLU 62	1.74	0.52	94.31	-0.2502	-0.0348	0.0154
646	SLU 63	1.74	0.49	94.32	-0.2513	-0.0348	0.0152
646	SLU 64	1.72	0.46	89.94	-0.2268	-0.0343	0.0143
646	SLU 65	1.72	0.43	89.96	-0.2285	-0.0343	0.0139
646	SLU 66	1.76	0.47	91.48	-0.2331	-0.0351	0.0143
646	SLU 67	1.76	0.45	91.49	-0.2341	-0.0351	0.0141
646	SLU 68	1.74	0.42	90.91	-0.2319	-0.0348	0.0139
646	SLU 69	1.78	0.46	92.44	-0.2365	-0.0356	0.0143
646	SLU 70	1.78	0.44	92.44	-0.2375	-0.0356	0.0141
646	SLU 71	1.77	0.45	91.85	-0.2336	-0.0353	0.0142
646	SLU 72	1.77	0.43	91.86	-0.2346	-0.0353	0.014
646	SLU 73	1.8	0.56	97.75	-0.254	-0.0356	0.0157
646	SLU 74	1.83	0.61	99.28	-0.2586	-0.0364	0.016
646	SLU 75	1.83	0.58	99.28	-0.2596	-0.0364	0.0158
646	SLU 76	1.82	0.56	98.71	-0.2574	-0.0362	0.0157
646	SLU 77	1.85	0.6	100.23	-0.262	-0.0369	0.016
646	SLU 78	1.85	0.58	100.24	-0.2631	-0.0369	0.0158
646	SLU 79	1.84	0.59	99.65	-0.2591	-0.0367	0.016
646	SLU 80	1.84	0.57	99.66	-0.2602	-0.0367	0.0158
646	SLU 81	1.83	0.66	101.08	-0.2632	-0.0362	0.0167
646	SLU 82	1.83	0.64	101.09	-0.2643	-0.0362	0.0165
646	SLU 83	1.85	0.65	102.03	-0.2666	-0.0367	0.0167
646	SLU 84	1.85	0.63	102.04	-0.2677	-0.0367	0.0165
646	SLE RA 1	1.3	0.33	67.49	-0.1708	-0.026	0.0107

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
646	SLE RA 2	1.3	0.3	67.5	-0.172	-0.026	0.0105
646	SLE RA 3	1.32	0.33	68.52	-0.175	-0.0265	0.0107
646	SLE RA 4	1.32	0.31	68.52	-0.1757	-0.0265	0.0106
646	SLE RA 5	1.31	0.3	68.13	-0.1743	-0.0263	0.0105
646	SLE RA 6	1.34	0.33	69.15	-0.1773	-0.0268	0.0107
646	SLE RA 7	1.34	0.31	69.16	-0.178	-0.0268	0.0106
646	SLE RA 8	1.33	0.32	68.76	-0.1754	-0.0266	0.0107
646	SLE RA 9	1.33	0.3	68.77	-0.1761	-0.0266	0.0105
646	SLE RA 10	1.35	0.39	72.7	-0.189	-0.0268	0.0116
646	SLE RA 11	1.37	0.42	73.71	-0.1921	-0.0274	0.0119
646	SLE RA 12	1.37	0.41	73.72	-0.1928	-0.0274	0.0117
646	SLE RA 13	1.37	0.39	73.33	-0.1913	-0.0272	0.0116
646	SLE RA 14	1.39	0.42	74.35	-0.1943	-0.0277	0.0119
646	SLE RA 15	1.39	0.4	74.35	-0.195	-0.0277	0.0117
646	SLE RA 16	1.38	0.41	73.96	-0.1924	-0.0275	0.0118
646	SLE RA 17	1.38	0.39	73.96	-0.1931	-0.0275	0.0117
646	SLE RA 18	1.37	0.46	74.91	-0.1951	-0.0272	0.0123
646	SLE RA 19	1.37	0.44	74.92	-0.1958	-0.0272	0.0122
646	SLE RA 20	1.39	0.45	75.55	-0.1974	-0.0276	0.0123
646	SLE RA 21	1.39	0.44	75.56	-0.1981	-0.0276	0.0122
646	SLE FR 1	1.3	0.33	67.49	-0.1708	-0.026	0.0107
646	SLE FR 2	1.3	0.32	67.49	-0.1711	-0.026	0.0106
646	SLE FR 3	1.31	0.32	67.75	-0.1717	-0.0261	0.0107
646	SLE FR 4	1.32	0.36	69.72	-0.1783	-0.0263	0.0111
646	SLE FR 5	1.33	0.36	69.97	-0.179	-0.0265	0.0112
646	SLE FR 6	1.34	0.39	71.2	-0.183	-0.0266	0.0115
646	SLE QP 1	1.3	0.33	67.49	-0.1708	-0.026	0.0107
646	SLE QP 2	1.32	0.36	69.72	-0.1781	-0.0263	0.0112
646	SLD 1	5.96	1.35	55.57	-0.0921	0.0144	0.0213
646	SLD 2	5.97	2.09	55.55	-0.101	0.0142	0.0319
646	SLD 3	5.75	-0.56	56.26	-0.1357	0.0172	0.002
646	SLD 4	5.76	0.18	56.24	-0.1446	0.017	0.0126
646	SLD 5	3.03	3.43	64.44	-0.0846	-0.0183	0.0416
646	SLD 6	3.04	3.91	64.42	-0.0904	-0.0185	0.0485
646	SLD 7	2.33	-2.94	66.73	-0.23	-0.009	-0.0227
646	SLD 8	2.33	-2.46	66.71	-0.2358	-0.0091	-0.0158
646	SLD 9	0.31	3.19	72.72	-0.1204	-0.0436	0.0382
646	SLD 10	0.32	3.67	72.71	-0.1263	-0.0437	0.0451
646	SLD 11	-0.4	-3.18	75.01	-0.2658	-0.0342	-0.0262
646	SLD 12	-0.39	-2.7	75	-0.2716	-0.0344	-0.0193
646	SLD 13	-3.12	0.55	83.2	-0.2116	-0.0697	0.0098
646	SLD 14	-3.11	1.29	83.18	-0.2205	-0.0699	0.0204
646	SLD 15	-3.33	-1.36	83.89	-0.2552	-0.0669	-0.0095
646	SLD 16	-3.32	-0.62	83.86	-0.2641	-0.0671	0.0011
646	SLV 1	12.18	2.63	36.61	0.0218	0.0691	0.0345
646	SLV 2	12.2	4.35	36.56	0.0011	0.0686	0.0592
646	SLV 3	11.68	-1.73	38.21	-0.0775	0.0757	-0.0097
646	SLV 4	11.71	-0.01	38.16	-0.0982	0.0752	0.015
646	SLV 5	5.33	7.36	57.36	0.036	-0.0076	0.0809
646	SLV 6	5.34	8.47	57.33	0.0227	-0.0079	0.0968
646	SLV 7	3.67	-7.17	62.71	-0.295	0.0143	-0.0663
646	SLV 8	3.69	-6.07	62.68	-0.3083	0.014	-0.0504
646	SLV 9	-1.05	6.8	76.76	-0.0479	-0.0667	0.0728
646	SLV 10	-1.03	7.9	76.73	-0.0612	-0.067	0.0886
646	SLV 11	-2.7	-7.74	82.11	-0.3789	-0.0448	-0.0744
646	SLV 12	-2.68	-6.63	82.08	-0.3923	-0.0451	-0.0586
646	SLV 13	-9.06	0.74	101.27	-0.258	-0.1279	0.0073
646	SLV 14	-9.04	2.46	101.22	-0.2788	-0.1284	0.032
646	SLV 15	-9.56	-3.62	102.88	-0.3573	-0.1213	-0.0368
646	SLV 16	-9.54	-1.9	102.83	-0.3781	-0.1218	-0.0121
646	CRTFP Ux+	0	0	0	0	0	0
646	CRTFP Ux-	0	0	0	0	0	0
646	CRTFP Uy+	0	0	0	0	0	0
646	CRTFP Uy-	0	0	0	0	0	0
647	SLU 1	1.29	0.34	66.12	-0.1487	-0.0266	0.0098
647	SLU 2	1.29	0.3	66.13	-0.1502	-0.0266	0.0095
647	SLU 3	1.33	0.34	67.68	-0.1544	-0.0274	0.0098
647	SLU 4	1.33	0.32	67.68	-0.1554	-0.0274	0.0096
647	SLU 5	1.31	0.29	67.1	-0.1534	-0.0271	0.0094
647	SLU 6	1.35	0.34	68.65	-0.1576	-0.0279	0.0098
647	SLU 7	1.35	0.32	68.66	-0.1585	-0.0279	0.0096
647	SLU 8	1.34	0.33	68.06	-0.1549	-0.0277	0.0097
647	SLU 9	1.34	0.3	68.06	-0.1559	-0.0277	0.0095
647	SLU 10	1.37	0.45	73.96	-0.1729	-0.0279	0.0111
647	SLU 11	1.4	0.49	75.51	-0.1771	-0.0287	0.0115
647	SLU 12	1.4	0.47	75.52	-0.178	-0.0287	0.0113
647	SLU 13	1.39	0.44	74.93	-0.176	-0.0284	0.0111
647	SLU 14	1.43	0.49	76.49	-0.1802	-0.0292	0.0115
647	SLU 15	1.43	0.46	76.49	-0.1811	-0.0292	0.0113
647	SLU 16	1.41	0.47	75.89	-0.1776	-0.0289	0.0114
647	SLU 17	1.41	0.45	75.9	-0.1785	-0.0289	0.0112
647	SLU 18	1.4	0.55	77.31	-0.181	-0.0284	0.0122
647	SLU 19	1.4	0.53	77.32	-0.1819	-0.0284	0.012
647	SLU 20	1.42	0.54	78.28	-0.1841	-0.029	0.0122
647	SLU 21	1.42	0.52	78.29	-0.1851	-0.029	0.012
647	SLU 22	1.41	0.48	73.9	-0.1629	-0.0286	0.0111
647	SLU 23	1.41	0.45	73.91	-0.1644	-0.0286	0.0108
647	SLU 24	1.44	0.49	75.46	-0.1686	-0.0294	0.0112
647	SLU 25	1.44	0.47	75.47	-0.1696	-0.0294	0.011
647	SLU 26	1.43	0.44	74.88	-0.1676	-0.0291	0.0108
647	SLU 27	1.46	0.48	76.43	-0.1718	-0.0299	0.0111
647	SLU 28	1.46	0.46	76.44	-0.1727	-0.0299	0.0109
647	SLU 29	1.45	0.47	75.84	-0.1691	-0.0296	0.0111
647	SLU 30	1.45	0.45	75.85	-0.1701	-0.0296	0.0109
647	SLU 31	1.48	0.59	81.75	-0.1871	-0.0298	0.0125
647	SLU 32	1.52	0.64	83.3	-0.1913	-0.0307	0.0129
647	SLU 33	1.52	0.61	83.31	-0.1922	-0.0307	0.0127

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
647	SLU 34	1.51	0.59	82.72	-0.1902	-0.0304	0.0125
647	SLU 35	1.54	0.63	84.27	-0.1944	-0.0312	0.0128
647	SLU 36	1.54	0.61	84.28	-0.1953	-0.0312	0.0126
647	SLU 37	1.53	0.62	83.68	-0.1918	-0.0309	0.0128
647	SLU 38	1.53	0.6	83.69	-0.1927	-0.0309	0.0126
647	SLU 39	1.52	0.69	85.09	-0.1952	-0.0304	0.0135
647	SLU 40	1.52	0.67	85.1	-0.1961	-0.0304	0.0133
647	SLU 41	1.54	0.69	86.07	-0.1983	-0.0309	0.0135
647	SLU 42	1.54	0.66	86.07	-0.1993	-0.0309	0.0133
647	SLU 43	1.64	0.39	83.28	-0.1884	-0.0339	0.0123
647	SLU 44	1.64	0.35	83.29	-0.19	-0.0339	0.0119
647	SLU 45	1.67	0.4	84.84	-0.1942	-0.0347	0.0123
647	SLU 46	1.67	0.37	84.85	-0.1951	-0.0347	0.0121
647	SLU 47	1.66	0.35	84.26	-0.1931	-0.0344	0.0119
647	SLU 48	1.7	0.39	85.81	-0.1973	-0.0352	0.0123
647	SLU 49	1.7	0.37	85.82	-0.1982	-0.0352	0.0121
647	SLU 50	1.69	0.38	85.22	-0.1947	-0.0349	0.0122
647	SLU 51	1.69	0.35	85.23	-0.1956	-0.0349	0.012
647	SLU 52	1.72	0.5	91.13	-0.2126	-0.0351	0.0136
647	SLU 53	1.75	0.54	92.68	-0.2168	-0.036	0.014
647	SLU 54	1.75	0.52	92.69	-0.2177	-0.036	0.0138
647	SLU 55	1.74	0.49	92.1	-0.2157	-0.0357	0.0136
647	SLU 56	1.77	0.54	93.65	-0.2199	-0.0365	0.014
647	SLU 57	1.78	0.51	93.66	-0.2209	-0.0365	0.0138
647	SLU 58	1.76	0.52	93.06	-0.2173	-0.0362	0.0139
647	SLU 59	1.76	0.5	93.07	-0.2182	-0.0362	0.0137
647	SLU 60	1.75	0.6	94.48	-0.2207	-0.0357	0.0147
647	SLU 61	1.75	0.58	94.48	-0.2217	-0.0357	0.0145
647	SLU 62	1.77	0.59	95.45	-0.2239	-0.0362	0.0147
647	SLU 63	1.77	0.57	95.45	-0.2248	-0.0362	0.0145
647	SLU 64	1.75	0.54	91.06	-0.2026	-0.0358	0.0136
647	SLU 65	1.75	0.5	91.08	-0.2042	-0.0358	0.0133
647	SLU 66	1.79	0.54	92.63	-0.2084	-0.0367	0.0136
647	SLU 67	1.79	0.52	92.63	-0.2093	-0.0367	0.0134
647	SLU 68	1.78	0.49	92.05	-0.2073	-0.0364	0.0132
647	SLU 69	1.81	0.54	93.6	-0.2115	-0.0372	0.0136
647	SLU 70	1.81	0.51	93.61	-0.2124	-0.0372	0.0134
647	SLU 71	1.8	0.52	93.01	-0.2089	-0.0369	0.0136
647	SLU 72	1.8	0.5	93.01	-0.2098	-0.0369	0.0134
647	SLU 73	1.83	0.64	98.91	-0.2268	-0.0371	0.015
647	SLU 74	1.87	0.69	100.46	-0.231	-0.038	0.0153
647	SLU 75	1.87	0.67	100.47	-0.2319	-0.038	0.0151
647	SLU 76	1.85	0.64	99.88	-0.2299	-0.0377	0.0149
647	SLU 77	1.89	0.68	101.44	-0.2341	-0.0385	0.0153
647	SLU 78	1.89	0.66	101.44	-0.2351	-0.0385	0.0151
647	SLU 79	1.88	0.67	100.84	-0.2315	-0.0382	0.0153
647	SLU 80	1.88	0.65	100.85	-0.2324	-0.0382	0.0151
647	SLU 81	1.86	0.75	102.26	-0.2349	-0.0377	0.016
647	SLU 82	1.86	0.72	102.27	-0.2359	-0.0377	0.0158
647	SLU 83	1.89	0.74	103.23	-0.2381	-0.0382	0.016
647	SLU 84	1.89	0.72	103.24	-0.239	-0.0382	0.0158
647	SLE RA 1	1.32	0.38	68.34	-0.1527	-0.0271	0.0102
647	SLE RA 2	1.32	0.35	68.35	-0.1538	-0.0271	0.0099
647	SLE RA 3	1.35	0.38	69.38	-0.1566	-0.0277	0.0102
647	SLE RA 4	1.35	0.37	69.39	-0.1572	-0.0277	0.0101
647	SLE RA 5	1.34	0.35	68.99	-0.1559	-0.0275	0.0099
647	SLE RA 6	1.36	0.38	70.03	-0.1587	-0.028	0.0102
647	SLE RA 7	1.36	0.36	70.03	-0.1593	-0.028	0.0101
647	SLE RA 8	1.35	0.37	69.63	-0.1569	-0.0279	0.0101
647	SLE RA 9	1.35	0.36	69.64	-0.1575	-0.0279	0.01
647	SLE RA 10	1.38	0.45	73.57	-0.1689	-0.028	0.0111
647	SLE RA 11	1.4	0.48	74.61	-0.1717	-0.0285	0.0113
647	SLE RA 12	1.4	0.47	74.61	-0.1723	-0.0285	0.0112
647	SLE RA 13	1.39	0.45	74.22	-0.1709	-0.0284	0.0111
647	SLE RA 14	1.41	0.48	75.25	-0.1737	-0.0289	0.0113
647	SLE RA 15	1.41	0.46	75.26	-0.1744	-0.0289	0.0112
647	SLE RA 16	1.41	0.47	74.86	-0.172	-0.0287	0.0113
647	SLE RA 17	1.41	0.45	74.86	-0.1726	-0.0287	0.0111
647	SLE RA 18	1.4	0.52	75.8	-0.1743	-0.0284	0.0118
647	SLE RA 19	1.4	0.5	75.81	-0.1749	-0.0284	0.0116
647	SLE RA 20	1.41	0.52	76.45	-0.1764	-0.0287	0.0118
647	SLE RA 21	1.41	0.5	76.45	-0.177	-0.0287	0.0116
647	SLE FR 1	1.32	0.38	68.34	-0.1527	-0.0271	0.0102
647	SLE FR 2	1.32	0.37	68.34	-0.1529	-0.0271	0.0101
647	SLE FR 3	1.33	0.38	68.6	-0.1536	-0.0273	0.0102
647	SLE FR 4	1.35	0.42	70.58	-0.1594	-0.0275	0.0106
647	SLE FR 5	1.35	0.42	70.84	-0.16	-0.0276	0.0106
647	SLE FR 6	1.36	0.45	72.07	-0.1635	-0.0278	0.011
647	SLE QP 1	1.32	0.38	68.34	-0.1527	-0.0271	0.0102
647	SLE QP 2	1.35	0.42	70.58	-0.1592	-0.0275	0.0107
647	SLD 1	5.97	1.46	55.04	-0.0803	0.0141	0.0217
647	SLD 2	5.98	2.26	55.02	-0.0905	0.0139	0.0329
647	SLD 3	5.76	-0.55	55.78	-0.117	0.0171	0.0011
647	SLD 4	5.77	0.24	55.77	-0.1272	0.0169	0.0123
647	SLD 5	3.05	3.65	64.79	-0.0781	-0.0196	0.0432
647	SLD 6	3.06	4.17	64.78	-0.0848	-0.0198	0.0505
647	SLD 7	2.35	-3.07	67.27	-0.2003	-0.0094	-0.0254
647	SLD 8	2.35	-2.55	67.26	-0.207	-0.0096	-0.0181
647	SLD 9	0.34	3.39	73.89	-0.1113	-0.0454	0.0394
647	SLD 10	0.35	3.91	73.88	-0.118	-0.0456	0.0467
647	SLD 11	-0.37	-3.33	76.38	-0.2336	-0.0352	-0.0292
647	SLD 12	-0.36	-2.81	76.37	-0.2403	-0.0354	-0.0219
647	SLD 13	-3.08	0.6	85.39	-0.1912	-0.0719	0.009
647	SLD 14	-3.07	1.4	85.37	-0.2014	-0.0722	0.0202
647	SLD 15	-3.29	-1.42	86.13	-0.2278	-0.0689	-0.0116
647	SLD 16	-3.28	-0.62	86.12	-0.2381	-0.0691	-0.0004
647	SLV 1	12.17	2.81	34.2	0.0245	0.0699	0.0361

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
647	SLV 2	12.19	4.66	34.16	0.0006	0.0693	0.0622
647	SLV 3	11.67	-1.79	35.94	-0.0591	0.077	-0.011
647	SLV 4	11.7	0.06	35.91	-0.083	0.0765	0.0151
647	SLV 5	5.34	7.79	57.03	0.0268	-0.009	0.0852
647	SLV 6	5.35	8.98	57	0.0114	-0.0094	0.102
647	SLV 7	3.69	-7.53	62.84	-0.2519	0.0148	-0.0717
647	SLV 8	3.71	-6.34	62.81	-0.2672	0.0145	-0.055
647	SLV 9	-1.01	7.18	78.34	-0.0511	-0.0695	0.0763
647	SLV 10	-1	8.38	78.32	-0.0665	-0.0698	0.093
647	SLV 11	-2.66	-8.14	84.15	-0.3298	-0.0456	-0.0807
647	SLV 12	-2.64	-6.95	84.13	-0.3452	-0.046	-0.0639
647	SLV 13	-9.01	0.78	105.25	-0.2353	-0.1315	0.0062
647	SLV 14	-8.98	2.63	105.22	-0.2592	-0.132	0.0323
647	SLV 15	-9.5	-3.82	106.99	-0.319	-0.1244	-0.0409
647	SLV 16	-9.47	-1.96	106.96	-0.3428	-0.1249	-0.0148
647	CRTFP Ux+	0	0	0	0	0	0
647	CRTFP Ux-	0	0	0	0	0	0
647	CRTFP Uy+	0	0	0	0	0	0
647	CRTFP Uy-	0	0	0	0	0	0
648	SLU 1	1.31	0.39	67.04	-0.1317	-0.0313	0.0088
648	SLU 2	1.31	0.35	67.05	-0.133	-0.0313	0.0085
648	SLU 3	1.35	0.39	68.63	-0.1369	-0.0323	0.0088
648	SLU 4	1.35	0.37	68.63	-0.1377	-0.0323	0.0086
648	SLU 5	1.33	0.34	68.04	-0.1359	-0.032	0.0084
648	SLU 6	1.37	0.39	69.62	-0.1398	-0.0329	0.0088
648	SLU 7	1.37	0.36	69.62	-0.1406	-0.0329	0.0086
648	SLU 8	1.36	0.37	69.02	-0.1374	-0.0326	0.0087
648	SLU 9	1.36	0.35	69.02	-0.1382	-0.0326	0.0085
648	SLU 10	1.39	0.5	74.93	-0.1529	-0.0331	0.0101
648	SLU 11	1.43	0.55	76.51	-0.1567	-0.034	0.0104
648	SLU 12	1.43	0.52	76.52	-0.1575	-0.034	0.0102
648	SLU 13	1.41	0.5	75.92	-0.1557	-0.0337	0.01
648	SLU 14	1.45	0.54	77.5	-0.1596	-0.0347	0.0104
648	SLU 15	1.45	0.52	77.51	-0.1604	-0.0347	0.0102
648	SLU 16	1.44	0.53	76.9	-0.1572	-0.0344	0.0103
648	SLU 17	1.44	0.51	76.91	-0.1581	-0.0344	0.0101
648	SLU 18	1.42	0.61	78.3	-0.16	-0.0338	0.011
648	SLU 19	1.42	0.59	78.31	-0.1608	-0.0338	0.0109
648	SLU 20	1.45	0.6	79.29	-0.1628	-0.0345	0.011
648	SLU 21	1.45	0.58	79.3	-0.1637	-0.0345	0.0108
648	SLU 22	1.43	0.54	74.89	-0.1437	-0.0338	0.0101
648	SLU 23	1.43	0.5	74.9	-0.1451	-0.0338	0.0098
648	SLU 24	1.46	0.55	76.48	-0.1489	-0.0348	0.0101
648	SLU 25	1.46	0.52	76.49	-0.1498	-0.0348	0.0099
648	SLU 26	1.45	0.49	75.89	-0.148	-0.0345	0.0097
648	SLU 27	1.49	0.54	77.47	-0.1518	-0.0354	0.0101
648	SLU 28	1.49	0.52	77.48	-0.1526	-0.0354	0.0099
648	SLU 29	1.47	0.53	76.87	-0.1495	-0.0351	0.01
648	SLU 30	1.47	0.5	76.88	-0.1503	-0.0351	0.0098
648	SLU 31	1.51	0.66	82.79	-0.1649	-0.0356	0.0114
648	SLU 32	1.54	0.7	84.36	-0.1688	-0.0365	0.0117
648	SLU 33	1.54	0.68	84.37	-0.1696	-0.0365	0.0115
648	SLU 34	1.53	0.65	83.78	-0.1678	-0.0362	0.0113
648	SLU 35	1.56	0.69	85.35	-0.1716	-0.0372	0.0117
648	SLU 36	1.56	0.67	85.36	-0.1725	-0.0372	0.0115
648	SLU 37	1.55	0.68	84.75	-0.1693	-0.0368	0.0116
648	SLU 38	1.55	0.66	84.76	-0.1701	-0.0368	0.0114
648	SLU 39	1.54	0.76	86.15	-0.172	-0.0363	0.0123
648	SLU 40	1.54	0.74	86.16	-0.1729	-0.0363	0.0122
648	SLU 41	1.56	0.76	87.14	-0.1749	-0.037	0.0123
648	SLU 42	1.56	0.73	87.15	-0.1757	-0.037	0.0121
648	SLU 43	1.67	0.45	84.45	-0.167	-0.0399	0.011
648	SLU 44	1.67	0.41	84.47	-0.1684	-0.0399	0.0107
648	SLU 45	1.7	0.46	86.04	-0.1722	-0.0409	0.011
648	SLU 46	1.7	0.43	86.05	-0.1731	-0.0409	0.0108
648	SLU 47	1.69	0.4	85.46	-0.1713	-0.0405	0.0106
648	SLU 48	1.72	0.45	87.03	-0.1751	-0.0415	0.011
648	SLU 49	1.72	0.43	87.04	-0.1759	-0.0415	0.0108
648	SLU 50	1.71	0.44	86.43	-0.1728	-0.0412	0.0109
648	SLU 51	1.71	0.41	86.44	-0.1736	-0.0412	0.0107
648	SLU 52	1.74	0.57	92.35	-0.1882	-0.0416	0.0122
648	SLU 53	1.78	0.61	93.93	-0.1921	-0.0426	0.0126
648	SLU 54	1.78	0.59	93.94	-0.1929	-0.0426	0.0124
648	SLU 55	1.77	0.56	93.34	-0.1911	-0.0423	0.0122
648	SLU 56	1.8	0.61	94.92	-0.1949	-0.0432	0.0126
648	SLU 57	1.8	0.58	94.93	-0.1958	-0.0432	0.0124
648	SLU 58	1.79	0.59	94.32	-0.1926	-0.0429	0.0125
648	SLU 59	1.79	0.57	94.32	-0.1934	-0.0429	0.0123
648	SLU 60	1.78	0.67	95.72	-0.1953	-0.0424	0.0132
648	SLU 61	1.78	0.65	95.72	-0.1962	-0.0424	0.013
648	SLU 62	1.8	0.67	96.71	-0.1982	-0.043	0.0132
648	SLU 63	1.8	0.64	96.71	-0.199	-0.043	0.013
648	SLU 64	1.78	0.6	92.31	-0.1791	-0.0424	0.0123
648	SLU 65	1.78	0.56	92.32	-0.1805	-0.0424	0.012
648	SLU 66	1.82	0.61	93.9	-0.1843	-0.0433	0.0123
648	SLU 67	1.82	0.59	93.91	-0.1851	-0.0433	0.0121
648	SLU 68	1.8	0.56	93.31	-0.1833	-0.043	0.0119
648	SLU 69	1.84	0.6	94.89	-0.1872	-0.044	0.0123
648	SLU 70	1.84	0.58	94.9	-0.188	-0.044	0.0121
648	SLU 71	1.83	0.59	94.29	-0.1848	-0.0437	0.0122
648	SLU 72	1.83	0.57	94.29	-0.1857	-0.0437	0.012
648	SLU 73	1.86	0.72	100.2	-0.2003	-0.0441	0.0135
648	SLU 74	1.89	0.77	101.78	-0.2041	-0.0451	0.0139
648	SLU 75	1.89	0.74	101.79	-0.205	-0.0451	0.0137
648	SLU 76	1.88	0.71	101.19	-0.2032	-0.0448	0.0135
648	SLU 77	1.92	0.76	102.77	-0.207	-0.0457	0.0139
648	SLU 78	1.92	0.73	102.78	-0.2078	-0.0457	0.0137

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
648	SLU 79	1.91	0.75	102.17	-0.2047	-0.0454	0.0138
648	SLU 80	1.91	0.72	102.18	-0.2055	-0.0454	0.0136
648	SLU 81	1.89	0.83	103.57	-0.2074	-0.0449	0.0145
648	SLU 82	1.89	0.8	103.58	-0.2082	-0.0449	0.0143
648	SLU 83	1.92	0.82	104.56	-0.2103	-0.0455	0.0145
648	SLU 84	1.92	0.8	104.57	-0.2111	-0.0455	0.0143
648	SLE RA 1	1.34	0.43	69.28	-0.1351	-0.0321	0.0092
648	SLE RA 2	1.34	0.4	69.29	-0.136	-0.0321	0.009
648	SLE RA 3	1.37	0.43	70.34	-0.1386	-0.0327	0.0092
648	SLE RA 4	1.37	0.42	70.34	-0.1391	-0.0327	0.0091
648	SLE RA 5	1.36	0.4	69.95	-0.1379	-0.0325	0.0089
648	SLE RA 6	1.38	0.43	71	-0.1405	-0.0331	0.0092
648	SLE RA 7	1.38	0.41	71	-0.1411	-0.0331	0.009
648	SLE RA 8	1.38	0.42	70.6	-0.1389	-0.0329	0.0091
648	SLE RA 9	1.38	0.41	70.6	-0.1395	-0.0329	0.009
648	SLE RA 10	1.4	0.51	74.54	-0.1492	-0.0332	0.01
648	SLE RA 11	1.42	0.54	75.6	-0.1518	-0.0339	0.0102
648	SLE RA 12	1.42	0.52	75.6	-0.1524	-0.0339	0.0101
648	SLE RA 13	1.41	0.5	75.2	-0.1512	-0.0336	0.01
648	SLE RA 14	1.44	0.53	76.26	-0.1537	-0.0343	0.0102
648	SLE RA 15	1.44	0.52	76.26	-0.1543	-0.0343	0.0101
648	SLE RA 16	1.43	0.53	75.86	-0.1522	-0.0341	0.0102
648	SLE RA 17	1.43	0.51	75.86	-0.1527	-0.0341	0.01
648	SLE RA 18	1.42	0.58	76.79	-0.154	-0.0337	0.0107
648	SLE RA 19	1.42	0.56	76.79	-0.1545	-0.0337	0.0105
648	SLE RA 20	1.43	0.57	77.45	-0.1559	-0.0341	0.0106
648	SLE RA 21	1.43	0.56	77.45	-0.1564	-0.0341	0.0105
648	SLE FR 1	1.34	0.43	69.28	-0.1351	-0.0321	0.0092
648	SLE FR 2	1.34	0.43	69.28	-0.1353	-0.0321	0.0091
648	SLE FR 3	1.35	0.43	69.54	-0.1359	-0.0322	0.0092
648	SLE FR 4	1.37	0.47	71.53	-0.141	-0.0326	0.0096
648	SLE FR 5	1.37	0.47	71.8	-0.1415	-0.0327	0.0096
648	SLE FR 6	1.38	0.5	73.03	-0.1445	-0.0329	0.0099
648	SLE QP 1	1.34	0.43	69.28	-0.1351	-0.0321	0.0092
648	SLE QP 2	1.37	0.47	71.53	-0.1408	-0.0326	0.0096
648	SLD 1	5.98	1.57	54.54	-0.0686	0.0109	0.0228
648	SLD 2	5.99	2.43	54.54	-0.0802	0.0107	0.0343
648	SLD 3	5.77	-0.55	55.36	-0.0986	0.0142	0.0018
648	SLD 4	5.78	0.31	55.35	-0.1102	0.014	0.0133
648	SLD 5	3.07	3.87	65.2	-0.0716	-0.0245	0.0434
648	SLD 6	3.08	4.43	65.2	-0.0792	-0.0246	0.0509
648	SLD 7	2.36	-3.2	67.92	-0.1715	-0.0135	-0.0267
648	SLD 8	2.37	-2.65	67.91	-0.1791	-0.0136	-0.0191
648	SLD 9	0.36	3.6	75.15	-0.1025	-0.0515	0.0383
648	SLD 10	0.37	4.15	75.15	-0.1101	-0.0516	0.0459
648	SLD 11	-0.34	-3.48	77.87	-0.2023	-0.0405	-0.0317
648	SLD 12	-0.33	-2.92	77.86	-0.2099	-0.0406	-0.0242
648	SLD 13	-3.04	0.64	87.71	-0.1714	-0.0791	0.0059
648	SLD 14	-3.03	1.5	87.71	-0.183	-0.0793	0.0175
648	SLD 15	-3.25	-1.48	88.53	-0.2013	-0.0758	-0.0151
648	SLD 16	-3.24	-0.62	88.52	-0.2129	-0.076	-0.0035
648	SLV 1	12.15	2.99	31.76	0.0273	0.0692	0.04
648	SLV 2	12.18	4.99	31.75	0.0002	0.0687	0.0669
648	SLV 3	11.66	-1.85	33.67	-0.041	0.0769	-0.0081
648	SLV 4	11.68	0.14	33.65	-0.0681	0.0764	0.0188
648	SLV 5	5.34	8.24	56.72	0.018	-0.0136	0.087
648	SLV 6	5.36	9.52	56.71	0.0006	-0.014	0.1043
648	SLV 7	3.7	-7.91	63.06	-0.2099	0.0121	-0.0732
648	SLV 8	3.72	-6.63	63.05	-0.2273	0.0117	-0.0559
648	SLV 9	-0.99	7.58	80.01	-0.0542	-0.0769	0.0751
648	SLV 10	-0.97	8.86	80	-0.0716	-0.0772	0.0924
648	SLV 11	-2.63	-8.57	86.36	-0.2821	-0.0511	-0.0851
648	SLV 12	-2.61	-7.29	86.35	-0.2995	-0.0515	-0.0678
648	SLV 13	-8.95	0.81	109.41	-0.2134	-0.1415	0.0004
648	SLV 14	-8.93	2.8	109.4	-0.2405	-0.1421	0.0273
648	SLV 15	-9.44	-4.04	111.32	-0.2818	-0.1338	-0.0477
648	SLV 16	-9.42	-2.04	111.3	-0.3089	-0.1343	-0.0208
648	CRTFP Ux+	0	0	0	0	0	0
648	CRTFP Ux-	0	0	0	0	0	0
648	CRTFP Uy+	0	0	0	0	0	0
648	CRTFP Uy-	0	0	0	0	0	0
649	SLU 1	1.33	0.43	68.21	-0.1151	-0.0432	0.0073
649	SLU 2	1.33	0.39	68.23	-0.1162	-0.0432	0.007
649	SLU 3	1.36	0.44	69.84	-0.1197	-0.0445	0.0073
649	SLU 4	1.36	0.41	69.85	-0.1205	-0.0445	0.0071
649	SLU 5	1.35	0.38	69.24	-0.1189	-0.0441	0.007
649	SLU 6	1.39	0.43	70.85	-0.1224	-0.0453	0.0073
649	SLU 7	1.39	0.4	70.86	-0.1231	-0.0453	0.0071
649	SLU 8	1.37	0.42	70.24	-0.1203	-0.0449	0.0072
649	SLU 9	1.37	0.39	70.25	-0.121	-0.0449	0.007
649	SLU 10	1.41	0.55	76.19	-0.1333	-0.0464	0.0083
649	SLU 11	1.44	0.6	77.8	-0.1368	-0.0476	0.0086
649	SLU 12	1.44	0.57	77.81	-0.1375	-0.0476	0.0085
649	SLU 13	1.43	0.54	77.2	-0.1359	-0.0472	0.0083
649	SLU 14	1.47	0.59	78.81	-0.1394	-0.0485	0.0086
649	SLU 15	1.47	0.57	78.82	-0.1401	-0.0485	0.0084
649	SLU 16	1.45	0.58	78.2	-0.1373	-0.048	0.0085
649	SLU 17	1.45	0.55	78.21	-0.138	-0.048	0.0084
649	SLU 18	1.44	0.66	79.59	-0.1394	-0.0477	0.0092
649	SLU 19	1.44	0.64	79.59	-0.1401	-0.0477	0.009
649	SLU 20	1.46	0.66	80.6	-0.142	-0.0486	0.0091
649	SLU 21	1.46	0.63	80.61	-0.1427	-0.0486	0.009
649	SLU 22	1.44	0.59	76.17	-0.125	-0.0471	0.0085
649	SLU 23	1.44	0.55	76.18	-0.1262	-0.0471	0.0082
649	SLU 24	1.48	0.59	77.79	-0.1297	-0.0484	0.0085
649	SLU 25	1.48	0.57	77.8	-0.1304	-0.0484	0.0083
649	SLU 26	1.47	0.54	77.19	-0.1288	-0.048	0.0081

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
649	SLU 27	1.5	0.59	78.81	-0.1323	-0.0492	0.0084
649	SLU 28	1.5	0.56	78.81	-0.133	-0.0492	0.0083
649	SLU 29	1.49	0.58	78.2	-0.1302	-0.0488	0.0084
649	SLU 30	1.49	0.55	78.2	-0.131	-0.0488	0.0082
649	SLU 31	1.52	0.71	84.14	-0.1433	-0.0503	0.0095
649	SLU 32	1.56	0.76	85.75	-0.1468	-0.0516	0.0098
649	SLU 33	1.56	0.73	85.76	-0.1475	-0.0516	0.0096
649	SLU 34	1.55	0.7	85.15	-0.1459	-0.0511	0.0095
649	SLU 35	1.58	0.75	86.77	-0.1494	-0.0524	0.0098
649	SLU 36	1.58	0.73	86.78	-0.1501	-0.0524	0.0096
649	SLU 37	1.57	0.74	86.16	-0.1473	-0.0519	0.0097
649	SLU 38	1.57	0.71	86.16	-0.148	-0.0519	0.0095
649	SLU 39	1.56	0.82	87.54	-0.1494	-0.0516	0.0104
649	SLU 40	1.56	0.8	87.55	-0.1501	-0.0516	0.0102
649	SLU 41	1.58	0.82	88.55	-0.152	-0.0525	0.0103
649	SLU 42	1.58	0.79	88.56	-0.1527	-0.0525	0.0101
649	SLU 43	1.69	0.5	85.95	-0.1462	-0.0549	0.0091
649	SLU 44	1.69	0.46	85.96	-0.1473	-0.0549	0.0088
649	SLU 45	1.72	0.51	87.58	-0.1508	-0.0561	0.0091
649	SLU 46	1.72	0.48	87.58	-0.1516	-0.0561	0.0089
649	SLU 47	1.71	0.46	86.98	-0.15	-0.0557	0.0088
649	SLU 48	1.75	0.5	88.59	-0.1534	-0.057	0.009
649	SLU 49	1.75	0.48	88.6	-0.1542	-0.057	0.0089
649	SLU 50	1.73	0.49	87.98	-0.1514	-0.0565	0.009
649	SLU 51	1.73	0.47	87.99	-0.1521	-0.0565	0.0088
649	SLU 52	1.76	0.63	93.92	-0.1644	-0.058	0.0101
649	SLU 53	1.8	0.67	95.54	-0.1679	-0.0593	0.0104
649	SLU 54	1.8	0.65	95.54	-0.1686	-0.0593	0.0103
649	SLU 55	1.79	0.62	94.94	-0.167	-0.0588	0.0101
649	SLU 56	1.82	0.67	96.55	-0.1705	-0.0601	0.0104
649	SLU 57	1.82	0.64	96.56	-0.1712	-0.0601	0.0102
649	SLU 58	1.81	0.65	95.94	-0.1684	-0.0597	0.0103
649	SLU 59	1.81	0.63	95.95	-0.1691	-0.0597	0.0101
649	SLU 60	1.8	0.74	97.32	-0.1705	-0.0594	0.011
649	SLU 61	1.8	0.71	97.33	-0.1712	-0.0594	0.0108
649	SLU 62	1.82	0.73	98.34	-0.1731	-0.0602	0.0109
649	SLU 63	1.82	0.71	98.34	-0.1738	-0.0602	0.0108
649	SLU 64	1.8	0.66	93.91	-0.1561	-0.0588	0.0102
649	SLU 65	1.8	0.62	93.92	-0.1573	-0.0588	0.01
649	SLU 66	1.84	0.67	95.53	-0.1608	-0.06	0.0103
649	SLU 67	1.84	0.64	95.54	-0.1615	-0.06	0.0101
649	SLU 68	1.83	0.61	94.93	-0.1599	-0.0596	0.0099
649	SLU 69	1.86	0.66	96.55	-0.1634	-0.0609	0.0102
649	SLU 70	1.86	0.64	96.55	-0.1641	-0.0609	0.01
649	SLU 71	1.85	0.65	95.93	-0.1613	-0.0604	0.0101
649	SLU 72	1.85	0.62	95.94	-0.1621	-0.0604	0.01
649	SLU 73	1.88	0.78	101.88	-0.1744	-0.0619	0.0113
649	SLU 74	1.92	0.83	103.49	-0.1779	-0.0632	0.0116
649	SLU 75	1.92	0.81	103.5	-0.1786	-0.0632	0.0114
649	SLU 76	1.9	0.78	102.89	-0.177	-0.0627	0.0113
649	SLU 77	1.94	0.83	104.51	-0.1805	-0.064	0.0115
649	SLU 78	1.94	0.8	104.51	-0.1812	-0.064	0.0114
649	SLU 79	1.93	0.81	103.89	-0.1784	-0.0636	0.0115
649	SLU 80	1.93	0.79	103.9	-0.1791	-0.0636	0.0113
649	SLU 81	1.91	0.9	105.28	-0.1805	-0.0633	0.0121
649	SLU 82	1.92	0.87	105.28	-0.1812	-0.0633	0.012
649	SLU 83	1.94	0.89	106.29	-0.1831	-0.0641	0.0121
649	SLU 84	1.94	0.86	106.3	-0.1838	-0.0641	0.0119
649	SLE RA 1	1.36	0.47	70.49	-0.1179	-0.0444	0.0076
649	SLE RA 2	1.36	0.45	70.49	-0.1187	-0.0444	0.0074
649	SLE RA 3	1.38	0.48	71.57	-0.121	-0.0452	0.0076
649	SLE RA 4	1.38	0.46	71.58	-0.1215	-0.0452	0.0075
649	SLE RA 5	1.38	0.44	71.17	-0.1204	-0.0449	0.0074
649	SLE RA 6	1.4	0.47	72.25	-0.1228	-0.0458	0.0076
649	SLE RA 7	1.4	0.46	72.25	-0.1232	-0.0458	0.0075
649	SLE RA 8	1.39	0.47	71.84	-0.1214	-0.0455	0.0076
649	SLE RA 9	1.39	0.45	71.84	-0.1219	-0.0455	0.0074
649	SLE RA 10	1.41	0.56	75.8	-0.1301	-0.0464	0.0083
649	SLE RA 11	1.44	0.59	76.88	-0.1324	-0.0473	0.0085
649	SLE RA 12	1.44	0.57	76.88	-0.1329	-0.0473	0.0084
649	SLE RA 13	1.43	0.55	76.48	-0.1318	-0.047	0.0083
649	SLE RA 14	1.45	0.58	77.55	-0.1341	-0.0478	0.0085
649	SLE RA 15	1.45	0.57	77.56	-0.1346	-0.0478	0.0084
649	SLE RA 16	1.44	0.58	77.14	-0.1328	-0.0476	0.0084
649	SLE RA 17	1.44	0.56	77.15	-0.1332	-0.0476	0.0083
649	SLE RA 18	1.44	0.63	78.07	-0.1341	-0.0473	0.0089
649	SLE RA 19	1.44	0.61	78.07	-0.1346	-0.0473	0.0088
649	SLE RA 20	1.45	0.63	78.74	-0.1359	-0.0479	0.0089
649	SLE RA 21	1.45	0.61	78.75	-0.1364	-0.0479	0.0087
649	SLE FR 1	1.36	0.47	70.49	-0.1179	-0.0444	0.0076
649	SLE FR 2	1.36	0.47	70.49	-0.1181	-0.0444	0.0076
649	SLE FR 3	1.37	0.47	70.76	-0.1186	-0.0446	0.0076
649	SLE FR 4	1.38	0.52	72.76	-0.1229	-0.0453	0.008
649	SLE FR 5	1.39	0.52	73.03	-0.1235	-0.0455	0.008
649	SLE FR 6	1.4	0.55	74.28	-0.126	-0.0458	0.0083
649	SLE QP 1	1.36	0.47	70.49	-0.1179	-0.0444	0.0076
649	SLE QP 2	1.38	0.52	72.76	-0.1228	-0.0453	0.008
649	SLD 1	5.98	1.68	55.12	-0.057	0.0021	0.0242
649	SLD 2	5.99	2.6	55.12	-0.07	0.0019	0.0357
649	SLD 3	5.77	-0.55	54.23	-0.0805	0.0057	0.0038
649	SLD 4	5.78	0.37	54.23	-0.0935	0.0055	0.0154
649	SLD 5	3.08	4.09	68.83	-0.0651	-0.0364	0.0417
649	SLD 6	3.09	4.69	68.83	-0.0736	-0.0366	0.0492
649	SLD 7	2.38	-3.35	65.84	-0.1434	-0.0245	-0.0262
649	SLD 8	2.38	-2.75	65.84	-0.1519	-0.0247	-0.0186
649	SLD 9	0.38	3.79	79.68	-0.0936	-0.0658	0.0346
649	SLD 10	0.39	4.39	79.68	-0.1021	-0.066	0.0422

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
649	SLD 11	-0.32	-3.65	76.69	-0.1719	-0.054	-0.0332
649	SLD 12	-0.31	-3.05	76.7	-0.1804	-0.0541	-0.0257
649	SLD 13	-3.01	0.68	91.3	-0.152	-0.096	0.0007
649	SLD 14	-3	1.59	91.3	-0.165	-0.0962	0.0122
649	SLD 15	-3.22	-1.56	90.4	-0.1755	-0.0924	-0.0197
649	SLD 16	-3.21	-0.64	90.4	-0.1885	-0.0926	-0.0082
649	SLV 1	12.13	3.18	31.46	0.0306	0.0657	0.0455
649	SLV 2	12.16	5.31	31.46	0.0003	0.0651	0.0723
649	SLV 3	11.64	-1.91	29.37	-0.0231	0.074	-0.0011
649	SLV 4	11.67	0.22	29.37	-0.0534	0.0735	0.0257
649	SLV 5	5.35	8.68	63.55	0.01	-0.0245	0.0853
649	SLV 6	5.36	10.05	63.55	-0.0095	-0.0249	0.1026
649	SLV 7	3.71	-8.3	56.57	-0.1692	0.0033	-0.07
649	SLV 8	3.73	-6.93	56.57	-0.1887	0.0029	-0.0527
649	SLV 9	-0.96	7.97	88.95	-0.0569	-0.0934	0.0688
649	SLV 10	-0.95	9.34	88.96	-0.0763	-0.0938	0.086
649	SLV 11	-2.6	-9.01	81.97	-0.236	-0.0656	-0.0866
649	SLV 12	-2.58	-7.64	81.98	-0.2555	-0.066	-0.0693
649	SLV 13	-8.9	0.82	116.15	-0.1921	-0.164	-0.0097
649	SLV 14	-8.88	2.95	116.15	-0.2224	-0.1645	0.0171
649	SLV 15	-9.39	-4.27	114.06	-0.2459	-0.1556	-0.0563
649	SLV 16	-9.37	-2.14	114.06	-0.2762	-0.1562	-0.0295
649	CRTFP Ux+	0	0	0	0	0	0
649	CRTFP Ux-	0	0	0	0	0	0
649	CRTFP Uy+	0	0	0	0	0	0
649	CRTFP Uy-	0	0	0	0	0	0
650	SLU 1	1.14	0.39	59.52	-0.0859	1.6207	-0.0066
650	SLU 2	1.14	0.36	59.53	-0.0868	1.621	-0.0057
650	SLU 3	1.17	0.4	60.94	-0.0896	1.6594	-0.0067
650	SLU 4	1.17	0.38	60.95	-0.0901	1.6595	-0.0062
650	SLU 5	1.16	0.35	60.42	-0.0889	1.6451	-0.0056
650	SLU 6	1.19	0.39	61.83	-0.0916	1.6834	-0.0066
650	SLU 7	1.19	0.37	61.84	-0.0921	1.6836	-0.0061
650	SLU 8	1.18	0.38	61.3	-0.09	1.6689	-0.0064
650	SLU 9	1.18	0.36	61.3	-0.0905	1.669	-0.0059
650	SLU 10	1.21	0.5	66.43	-0.0993	1.8099	-0.0089
650	SLU 11	1.24	0.54	67.84	-0.1021	1.8483	-0.01
650	SLU 12	1.24	0.52	67.85	-0.1026	1.8484	-0.0094
650	SLU 13	1.23	0.49	67.32	-0.1014	1.834	-0.0088
650	SLU 14	1.26	0.54	68.73	-0.1041	1.8723	-0.0099
650	SLU 15	1.26	0.51	68.74	-0.1046	1.8725	-0.0093
650	SLU 16	1.25	0.53	68.2	-0.1025	1.8578	-0.0096
650	SLU 17	1.25	0.5	68.2	-0.103	1.858	-0.0091
650	SLU 18	1.24	0.6	69.37	-0.1038	1.8906	-0.0112
650	SLU 19	1.24	0.58	69.38	-0.1043	1.8907	-0.0107
650	SLU 20	1.26	0.59	70.26	-0.1058	1.9147	-0.0111
650	SLU 21	1.26	0.57	70.27	-0.1064	1.9148	-0.0106
650	SLU 22	1.24	0.53	66.43	-0.0929	1.8096	-0.0097
650	SLU 23	1.24	0.5	66.44	-0.0938	1.8098	-0.0089
650	SLU 24	1.27	0.54	67.86	-0.0965	1.8482	-0.0099
650	SLU 25	1.27	0.52	67.86	-0.097	1.8484	-0.0094
650	SLU 26	1.26	0.49	67.33	-0.0958	1.8339	-0.0088
650	SLU 27	1.29	0.53	68.75	-0.0985	1.8723	-0.0098
650	SLU 28	1.29	0.51	68.75	-0.0991	1.8724	-0.0093
650	SLU 29	1.28	0.52	68.21	-0.097	1.8577	-0.0095
650	SLU 30	1.28	0.5	68.22	-0.0975	1.8579	-0.009
650	SLU 31	1.31	0.64	73.34	-0.1063	1.9987	-0.0121
650	SLU 32	1.34	0.68	74.76	-0.109	2.0371	-0.0131
650	SLU 33	1.34	0.66	74.76	-0.1095	2.0373	-0.0126
650	SLU 34	1.33	0.63	74.23	-0.1083	2.0228	-0.012
650	SLU 35	1.36	0.68	75.65	-0.111	2.0612	-0.013
650	SLU 36	1.36	0.65	75.65	-0.1116	2.0613	-0.0125
650	SLU 37	1.35	0.67	75.11	-0.1095	2.0466	-0.0127
650	SLU 38	1.35	0.64	75.12	-0.11	2.0468	-0.0122
650	SLU 39	1.34	0.74	76.29	-0.1107	2.0794	-0.0143
650	SLU 40	1.34	0.72	76.29	-0.1113	2.0796	-0.0138
650	SLU 41	1.36	0.73	77.18	-0.1128	2.1035	-0.0142
650	SLU 42	1.36	0.71	77.18	-0.1133	2.1037	-0.0137
650	SLU 43	1.45	0.46	75	-0.1093	2.0422	-0.0075
650	SLU 44	1.45	0.43	75.01	-0.1102	2.0425	-0.0066
650	SLU 45	1.48	0.47	76.43	-0.113	2.0808	-0.0076
650	SLU 46	1.48	0.45	76.44	-0.1135	2.081	-0.0071
650	SLU 47	1.47	0.42	75.9	-0.1123	2.0666	-0.0065
650	SLU 48	1.5	0.46	77.32	-0.115	2.1049	-0.0075
650	SLU 49	1.5	0.44	77.33	-0.1155	2.1051	-0.007
650	SLU 50	1.49	0.45	76.78	-0.1134	2.0904	-0.0073
650	SLU 51	1.49	0.43	76.79	-0.1139	2.0905	-0.0068
650	SLU 52	1.52	0.57	81.91	-0.1227	2.2314	-0.0098
650	SLU 53	1.55	0.61	83.33	-0.1255	2.2697	-0.0109
650	SLU 54	1.55	0.59	83.33	-0.126	2.2699	-0.0103
650	SLU 55	1.54	0.56	82.8	-0.1248	2.2555	-0.0097
650	SLU 56	1.57	0.61	84.22	-0.1275	2.2938	-0.0108
650	SLU 57	1.57	0.58	84.22	-0.128	2.294	-0.0102
650	SLU 58	1.56	0.6	83.68	-0.1259	2.2793	-0.0105
650	SLU 59	1.56	0.57	83.69	-0.1264	2.2794	-0.01
650	SLU 60	1.54	0.67	84.86	-0.1272	2.3121	-0.0121
650	SLU 61	1.54	0.65	84.87	-0.1277	2.3122	-0.0116
650	SLU 62	1.56	0.66	85.75	-0.1292	2.3361	-0.012
650	SLU 63	1.56	0.64	85.76	-0.1298	2.3363	-0.0115
650	SLU 64	1.55	0.6	81.92	-0.1163	2.231	-0.0106
650	SLU 65	1.55	0.57	81.93	-0.1172	2.2313	-0.0098
650	SLU 66	1.58	0.61	83.34	-0.1199	2.2697	-0.0108
650	SLU 67	1.58	0.59	83.35	-0.1204	2.2698	-0.0103
650	SLU 68	1.57	0.56	82.82	-0.1192	2.2554	-0.0097
650	SLU 69	1.6	0.6	84.23	-0.1219	2.2937	-0.0107
650	SLU 70	1.6	0.58	84.24	-0.1225	2.2939	-0.0102
650	SLU 71	1.59	0.59	83.7	-0.1204	2.2792	-0.0104

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
650	SLU 72	1.59	0.57	83.7	-0.1209	2.2794	-0.0099
650	SLU 73	1.62	0.71	88.83	-0.1297	2.4202	-0.013
650	SLU 74	1.65	0.75	90.24	-0.1324	2.4586	-0.014
650	SLU 75	1.65	0.73	90.25	-0.1329	2.4587	-0.0135
650	SLU 76	1.64	0.7	89.72	-0.1317	2.4443	-0.0129
650	SLU 77	1.67	0.75	91.13	-0.1344	2.4826	-0.0139
650	SLU 78	1.67	0.72	91.14	-0.135	2.4828	-0.0134
650	SLU 79	1.66	0.74	90.6	-0.1329	2.4681	-0.0136
650	SLU 80	1.66	0.71	90.6	-0.1334	2.4683	-0.0131
650	SLU 81	1.64	0.81	91.77	-0.1341	2.5009	-0.0152
650	SLU 82	1.64	0.79	91.78	-0.1347	2.501	-0.0147
650	SLU 83	1.66	0.8	92.66	-0.1362	2.525	-0.0151
650	SLU 84	1.66	0.78	92.67	-0.1367	2.5251	-0.0146
650	SLE RA 1	1.17	0.43	61.49	-0.0879	1.6747	-0.0075
650	SLE RA 2	1.17	0.41	61.5	-0.0885	1.6749	-0.0069
650	SLE RA 3	1.19	0.44	62.44	-0.0903	1.7004	-0.0076
650	SLE RA 4	1.19	0.42	62.45	-0.0907	1.7005	-0.0072
650	SLE RA 5	1.18	0.4	62.09	-0.0899	1.6909	-0.0068
650	SLE RA 6	1.2	0.43	63.04	-0.0917	1.7165	-0.0075
650	SLE RA 7	1.2	0.42	63.04	-0.092	1.7166	-0.0072
650	SLE RA 8	1.2	0.43	62.68	-0.0906	1.7068	-0.0073
650	SLE RA 9	1.2	0.41	62.68	-0.091	1.7069	-0.007
650	SLE RA 10	1.21	0.5	66.1	-0.0968	1.8008	-0.0091
650	SLE RA 11	1.23	0.53	67.04	-0.0987	1.8264	-0.0097
650	SLE RA 12	1.23	0.52	67.05	-0.099	1.8265	-0.0094
650	SLE RA 13	1.23	0.5	66.69	-0.0982	1.8168	-0.009
650	SLE RA 14	1.25	0.53	67.64	-0.1	1.8424	-0.0097
650	SLE RA 15	1.25	0.51	67.64	-0.1004	1.8425	-0.0093
650	SLE RA 16	1.24	0.52	67.28	-0.099	1.8327	-0.0095
650	SLE RA 17	1.24	0.51	67.28	-0.0993	1.8328	-0.0091
650	SLE RA 18	1.23	0.57	68.06	-0.0998	1.8546	-0.0105
650	SLE RA 19	1.23	0.56	68.07	-0.1002	1.8547	-0.0102
650	SLE RA 20	1.25	0.57	68.66	-0.1012	1.8706	-0.0105
650	SLE RA 21	1.25	0.55	68.66	-0.1015	1.8707	-0.0101
650	SLE FR 1	1.17	0.43	61.49	-0.0879	1.6747	-0.0075
650	SLE FR 2	1.17	0.43	61.5	-0.088	1.6747	-0.0074
650	SLE FR 3	1.17	0.43	61.73	-0.0885	1.6811	-0.0074
650	SLE FR 4	1.19	0.47	63.47	-0.0916	1.7287	-0.0083
650	SLE FR 5	1.19	0.47	63.7	-0.092	1.7351	-0.0084
650	SLE FR 6	1.2	0.5	64.78	-0.0939	1.7646	-0.009
650	SLE QP 1	1.17	0.43	61.49	-0.0879	1.6747	-0.0075
650	SLE QP 2	1.19	0.47	63.47	-0.0915	1.7286	-0.0084
650	SLD 1	5.09	1.52	47.13	-0.0552	1.3065	-0.0104
650	SLD 2	5.1	2.34	47.14	-0.0674	1.3066	-0.0244
650	SLD 3	4.92	-0.47	46.29	-0.0398	1.2851	0.0299
650	SLD 4	4.92	0.36	46.3	-0.052	1.2851	0.0159
650	SLD 5	2.63	3.65	59.84	-0.1019	1.6346	-0.0677
650	SLD 6	2.64	4.19	59.84	-0.1099	1.6346	-0.0768
650	SLD 7	2.03	-2.96	57.04	-0.0504	1.563	0.0667
650	SLD 8	2.04	-2.42	57.04	-0.0584	1.563	0.0575
650	SLD 9	0.34	3.37	69.89	-0.1246	1.8943	-0.0743
650	SLD 10	0.34	3.91	69.89	-0.1326	1.8943	-0.0835
650	SLD 11	-0.26	-3.24	67.09	-0.0731	1.8227	0.06
650	SLD 12	-0.25	-2.7	67.09	-0.0811	1.8227	0.0509
650	SLD 13	-2.55	0.59	80.63	-0.131	2.1722	-0.0327
650	SLD 14	-2.54	1.41	80.64	-0.1432	2.1722	-0.0467
650	SLD 15	-2.73	-1.4	79.79	-0.1156	2.1507	0.0077
650	SLD 16	-2.72	-0.57	79.8	-0.1278	2.1508	-0.0064
650	SLV 1	10.33	2.87	25.23	-0.0061	0.7404	-0.012
650	SLV 2	10.35	4.79	25.25	-0.0346	0.7405	-0.0447
650	SLV 3	9.91	-1.66	23.27	0.0294	0.6903	0.0799
650	SLV 4	9.93	0.27	23.28	0.0009	0.6903	0.0472
650	SLV 5	4.56	7.73	54.97	-0.1148	1.5083	-0.1433
650	SLV 6	4.57	8.97	54.98	-0.1331	1.5083	-0.1643
650	SLV 7	3.17	-7.36	48.43	0.0035	1.341	0.1631
650	SLV 8	3.18	-6.13	48.44	-0.0148	1.3411	0.1421
650	SLV 9	-0.81	7.07	78.49	-0.1682	2.1162	-0.1589
650	SLV 10	-0.79	8.31	78.5	-0.1865	2.1163	-0.1799
650	SLV 11	-2.2	-8.02	71.95	-0.0499	1.949	0.1475
650	SLV 12	-2.18	-6.78	71.96	-0.0682	1.949	0.1265
650	SLV 13	-7.56	0.68	103.65	-0.1839	2.767	-0.064
650	SLV 14	-7.53	2.61	103.66	-0.2124	2.767	-0.0967
650	SLV 15	-7.97	-3.85	101.68	-0.1484	2.7168	0.0279
650	SLV 16	-7.95	-1.92	101.7	-0.1769	2.7168	-0.0048
650	CRTFP Ux+	0	0	0	0	0	0
650	CRTFP Ux-	0	0	0	0	0	0
650	CRTFP Uy+	0	0	0	0	0	0
650	CRTFP Uy-	0	0	0	0	0	0
652	SLU 1	1.93	0.68	101.8	0.116	23.9765	-0.169
652	SLU 2	1.93	0.62	101.82	0.1153	23.9806	-0.1537
652	SLU 3	1.98	0.69	104.24	0.1174	24.5478	-0.1714
652	SLU 4	1.98	0.65	104.25	0.117	24.5503	-0.1622
652	SLU 5	1.96	0.61	103.34	0.1164	24.3368	-0.1514
652	SLU 6	2.01	0.68	105.77	0.1185	24.904	-0.1691
652	SLU 7	2.01	0.64	105.78	0.1181	24.9065	-0.1599
652	SLU 8	1.99	0.66	104.85	0.1181	24.6889	-0.1644
652	SLU 9	1.99	0.62	104.86	0.1177	24.6913	-0.1552
652	SLU 10	2.04	0.87	113.58	0.1267	26.7655	-0.2146
652	SLU 11	2.09	0.94	116.01	0.1288	27.3327	-0.2323
652	SLU 12	2.09	0.9	116.02	0.1284	27.3351	-0.2231
652	SLU 13	2.07	0.86	115.11	0.1278	27.1217	-0.2123
652	SLU 14	2.13	0.93	117.53	0.1299	27.6889	-0.23
652	SLU 15	2.13	0.89	117.54	0.1295	27.6913	-0.2208
652	SLU 16	2.11	0.91	116.61	0.1295	27.4738	-0.2253
652	SLU 17	2.11	0.87	116.62	0.1291	27.4762	-0.2161
652	SLU 18	2.09	1.03	118.61	0.1323	27.9549	-0.256
652	SLU 19	2.09	1	118.62	0.1319	27.9574	-0.2468

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
652	SLU 20	2.12	1.02	120.13	0.1334	28.3111	-0.2537
652	SLU 21	2.12	0.99	120.14	0.133	28.3135	-0.2445
652	SLU 22	2.09	0.92	113.6	0.1322	26.7625	-0.2281
652	SLU 23	2.09	0.86	113.62	0.1315	26.7666	-0.2128
652	SLU 24	2.15	0.93	116.05	0.1337	27.3338	-0.2305
652	SLU 25	2.15	0.89	116.06	0.1332	27.3362	-0.2213
652	SLU 26	2.13	0.85	115.15	0.1326	27.1228	-0.2105
652	SLU 27	2.18	0.92	117.57	0.1347	27.69	-0.2282
652	SLU 28	2.18	0.88	117.58	0.1343	27.6924	-0.219
652	SLU 29	2.16	0.9	116.65	0.1343	27.4749	-0.2235
652	SLU 30	2.16	0.86	116.66	0.1339	27.4773	-0.2143
652	SLU 31	2.21	1.11	125.39	0.1429	29.5514	-0.2737
652	SLU 32	2.26	1.18	127.81	0.1451	30.1187	-0.2914
652	SLU 33	2.26	1.14	127.82	0.1446	30.1211	-0.2822
652	SLU 34	2.24	1.1	126.91	0.144	29.9076	-0.2714
652	SLU 35	2.3	1.17	129.34	0.1461	30.4749	-0.2891
652	SLU 36	2.3	1.13	129.35	0.1457	30.4773	-0.2799
652	SLU 37	2.28	1.15	128.42	0.1458	30.2597	-0.2844
652	SLU 38	2.28	1.11	128.43	0.1453	30.2622	-0.2752
652	SLU 39	2.26	1.27	130.41	0.1485	30.7409	-0.3151
652	SLU 40	2.26	1.24	130.42	0.1481	30.7433	-0.3059
652	SLU 41	2.29	1.26	131.94	0.1496	31.0971	-0.3128
652	SLU 42	2.29	1.23	131.95	0.1492	31.0995	-0.3036
652	SLU 43	2.44	0.8	128.29	0.1452	30.2143	-0.1995
652	SLU 44	2.45	0.74	128.31	0.1445	30.2184	-0.1842
652	SLU 45	2.5	0.81	130.73	0.1467	30.7856	-0.2019
652	SLU 46	2.5	0.78	130.74	0.1463	30.788	-0.1927
652	SLU 47	2.48	0.73	129.83	0.1456	30.5745	-0.1819
652	SLU 48	2.53	0.8	132.26	0.1477	31.1418	-0.1995
652	SLU 49	2.53	0.77	132.27	0.1473	31.1442	-0.1904
652	SLU 50	2.51	0.78	131.34	0.1474	30.9267	-0.1948
652	SLU 51	2.51	0.75	131.35	0.147	30.9291	-0.1857
652	SLU 52	2.56	0.99	140.07	0.156	33.0032	-0.245
652	SLU 53	2.61	1.06	142.5	0.1581	33.5705	-0.2627
652	SLU 54	2.61	1.02	142.51	0.1577	33.5729	-0.2535
652	SLU 55	2.59	0.98	141.6	0.157	33.3594	-0.2427
652	SLU 56	2.65	1.05	144.02	0.1591	33.9267	-0.2604
652	SLU 57	2.65	1.01	144.03	0.1587	33.9291	-0.2512
652	SLU 58	2.63	1.03	143.11	0.1588	33.7115	-0.2557
652	SLU 59	2.63	0.99	143.12	0.1584	33.714	-0.2465
652	SLU 60	2.61	1.16	145.1	0.1615	34.1927	-0.2864
652	SLU 61	2.61	1.12	145.11	0.1611	34.1951	-0.2773
652	SLU 62	2.64	1.15	146.62	0.1626	34.5489	-0.2841
652	SLU 63	2.64	1.11	146.63	0.1622	34.5513	-0.2749
652	SLU 64	2.61	1.04	140.1	0.1615	33.0003	-0.2586
652	SLU 65	2.61	0.98	140.11	0.1608	33.0043	-0.2433
652	SLU 66	2.67	1.05	142.54	0.1629	33.5716	-0.261
652	SLU 67	2.67	1.02	142.55	0.1625	33.574	-0.2518
652	SLU 68	2.65	0.97	141.64	0.1618	33.3605	-0.241
652	SLU 69	2.7	1.04	144.06	0.164	33.9277	-0.2587
652	SLU 70	2.7	1.01	144.07	0.1635	33.9302	-0.2495
652	SLU 71	2.68	1.02	143.15	0.1636	33.7126	-0.254
652	SLU 72	2.68	0.99	143.16	0.1632	33.7151	-0.2448
652	SLU 73	2.73	1.23	151.88	0.1722	35.7892	-0.3042
652	SLU 74	2.78	1.3	154.3	0.1743	36.3564	-0.3218
652	SLU 75	2.78	1.26	154.31	0.1739	36.3589	-0.3127
652	SLU 76	2.76	1.22	153.4	0.1732	36.1454	-0.3018
652	SLU 77	2.82	1.29	155.83	0.1754	36.7126	-0.3195
652	SLU 78	2.82	1.25	155.84	0.1749	36.7151	-0.3103
652	SLU 79	2.8	1.27	154.91	0.175	36.4975	-0.3148
652	SLU 80	2.8	1.23	154.92	0.1746	36.4999	-0.3056
652	SLU 81	2.78	1.4	156.9	0.1778	36.9787	-0.3455
652	SLU 82	2.78	1.36	156.91	0.1773	36.9811	-0.3364
652	SLU 83	2.81	1.39	158.43	0.1788	37.3348	-0.3432
652	SLU 84	2.81	1.35	158.44	0.1784	37.3373	-0.3341
652	SLE RA 1	1.97	0.75	105.17	0.1206	24.7725	-0.1859
652	SLE RA 2	1.97	0.71	105.18	0.1202	24.7752	-0.1757
652	SLE RA 3	2.01	0.76	106.8	0.1216	25.1534	-0.1875
652	SLE RA 4	2.01	0.73	106.81	0.1213	25.155	-0.1814
652	SLE RA 5	2	0.7	106.2	0.1209	25.0127	-0.1742
652	SLE RA 6	2.03	0.75	107.82	0.1223	25.3908	-0.186
652	SLE RA 7	2.03	0.72	107.82	0.122	25.3925	-0.1798
652	SLE RA 8	2.02	0.74	107.21	0.1221	25.2474	-0.1828
652	SLE RA 9	2.02	0.71	107.21	0.1218	25.2491	-0.1767
652	SLE RA 10	2.05	0.87	113.03	0.1278	26.6318	-0.2163
652	SLE RA 11	2.08	0.92	114.64	0.1292	27.01	-0.2281
652	SLE RA 12	2.08	0.9	114.65	0.1289	27.0116	-0.222
652	SLE RA 13	2.07	0.87	114.04	0.1285	26.8693	-0.2148
652	SLE RA 14	2.11	0.91	115.66	0.1299	27.2474	-0.2265
652	SLE RA 15	2.11	0.89	115.67	0.1296	27.2491	-0.2204
652	SLE RA 16	2.1	0.9	115.05	0.1297	27.104	-0.2234
652	SLE RA 17	2.1	0.88	115.06	0.1294	27.1056	-0.2173
652	SLE RA 18	2.08	0.99	116.38	0.1315	27.4248	-0.2439
652	SLE RA 19	2.08	0.96	116.38	0.1312	27.4264	-0.2378
652	SLE RA 20	2.11	0.98	117.39	0.1322	27.6622	-0.2424
652	SLE RA 21	2.11	0.95	117.4	0.1319	27.6639	-0.2362
652	SLE FR 1	1.97	0.75	105.17	0.1206	24.7725	-0.1859
652	SLE FR 2	1.97	0.74	105.17	0.1205	24.7731	-0.1839
652	SLE FR 3	1.98	0.75	105.58	0.1209	24.8675	-0.1853
652	SLE FR 4	2.01	0.81	108.54	0.1238	25.5687	-0.2013
652	SLE FR 5	2.02	0.82	108.94	0.1242	25.6632	-0.2027
652	SLE FR 6	2.03	0.87	110.77	0.1261	26.0986	-0.2149
652	SLE QP 1	1.97	0.75	105.17	0.1206	24.7725	-0.1859
652	SLE QP 2	2.01	0.82	108.53	0.1239	25.5682	-0.2033
652	SLD 1	8.59	2.63	79.89	0.094	19.2218	-0.6416
652	SLD 2	8.61	4.06	79.9	0.0826	19.2227	-0.9861
652	SLD 3	8.29	-0.78	78.4	0.1064	18.8982	0.1881

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
652	SLD 4	8.31	0.65	78.42	0.095	18.8992	-0.1564
652	SLD 5	4.44	6.29	102.18	0.0982	24.1548	-1.5323
652	SLD 6	4.45	7.22	102.19	0.0908	24.1555	-1.7575
652	SLD 7	3.43	-5.09	97.24	0.1394	23.0763	1.2334
652	SLD 8	3.44	-4.15	97.25	0.1319	23.0769	1.0083
652	SLD 9	0.57	5.79	119.81	0.1159	28.0595	-1.4149
652	SLD 10	0.58	6.73	119.82	0.1084	28.0601	-1.6401
652	SLD 11	-0.44	-5.58	114.87	0.157	26.9809	1.3508
652	SLD 12	-0.43	-4.64	114.88	0.1496	26.9815	1.1257
652	SLD 13	-4.3	0.99	138.65	0.1528	32.2372	-0.2502
652	SLD 14	-4.28	2.42	138.66	0.1414	32.2382	-0.5947
652	SLD 15	-4.6	-2.42	137.16	0.1652	31.9136	0.5795
652	SLD 16	-4.58	-0.99	137.18	0.1538	31.9146	0.235
652	SLV 1	17.42	4.97	41.47	0.054	10.7105	-1.208
652	SLV 2	17.45	8.3	41.5	0.0274	10.7128	-2.0105
652	SLV 3	16.71	-2.82	38	0.0825	9.9541	0.6853
652	SLV 4	16.75	0.52	38.04	0.0559	9.9563	-0.1171
652	SLV 5	7.69	13.3	93.66	0.0642	22.2578	-3.2389
652	SLV 6	7.71	15.45	93.69	0.0472	22.2592	-3.7546
652	SLV 7	5.35	-12.66	82.11	0.1592	19.7363	3.0724
652	SLV 8	5.37	-10.51	82.13	0.1422	19.7378	2.5567
652	SLV 9	-1.36	12.15	134.93	0.1056	31.3986	-2.9633
652	SLV 10	-1.33	14.3	134.96	0.0886	31.4001	-3.479
652	SLV 11	-3.7	-13.81	123.38	0.2006	28.8772	3.348
652	SLV 12	-3.68	-11.66	123.4	0.1836	28.8786	2.8322
652	SLV 13	-12.74	1.13	179.03	0.1919	41.1801	-0.2895
652	SLV 14	-12.7	4.46	179.06	0.1653	41.1823	-1.092
652	SLV 15	-13.44	-6.66	175.56	0.2204	40.4236	1.6039
652	SLV 16	-13.41	-3.33	175.6	0.1938	40.4259	0.8014
652	CRTFP Ux+	0	0	0	0	0.0001	0
652	CRTFP Ux-	0	0	0	0	-0.0001	0
652	CRTFP Uy+	0	0	0	0	0	0
652	CRTFP Uy-	0	0	0	0	0	0
654	SLU 1	0.63	-0.03	36.7	-0.7125	1.0355	0.0136
654	SLU 2	0.63	-0.05	36.71	-0.7127	1.0369	0.0144
654	SLU 3	0.65	-0.03	37.55	-0.7291	1.0603	0.0138
654	SLU 4	0.65	-0.04	37.55	-0.7293	1.0612	0.0143
654	SLU 5	0.64	-0.06	37.23	-0.723	1.0519	0.0148
654	SLU 6	0.66	-0.04	38.07	-0.7393	1.0753	0.0141
654	SLU 7	0.66	-0.05	38.08	-0.7395	1.0761	0.0146
654	SLU 8	0.65	-0.04	37.75	-0.7329	1.0654	0.0143
654	SLU 9	0.65	-0.05	37.75	-0.7331	1.0663	0.0148
654	SLU 10	0.67	0	41.21	-0.8005	1.1658	0.0136
654	SLU 11	0.69	0.02	42.05	-0.8168	1.1891	0.013
654	SLU 12	0.69	0.01	42.05	-0.817	1.19	0.0134
654	SLU 13	0.68	0	41.73	-0.8107	1.1808	0.0139
654	SLU 14	0.7	0.02	42.57	-0.8271	1.2041	0.0133
654	SLU 15	0.7	0.01	42.58	-0.8272	1.205	0.0138
654	SLU 16	0.69	0.01	42.25	-0.8207	1.1943	0.0135
654	SLU 17	0.69	0	42.25	-0.8208	1.1952	0.0139
654	SLU 18	0.69	0.04	43.13	-0.8378	1.2195	0.0124
654	SLU 19	0.69	0.03	43.13	-0.838	1.2204	0.0129
654	SLU 20	0.7	0.04	43.65	-0.848	1.2345	0.0128
654	SLU 21	0.7	0.03	43.66	-0.8482	1.2354	0.0132
654	SLU 22	0.69	0.04	41.09	-0.7976	1.1564	0.0123
654	SLU 23	0.69	0.02	41.1	-0.7979	1.1578	0.0131
654	SLU 24	0.71	0.04	41.94	-0.8142	1.1812	0.0125
654	SLU 25	0.71	0.03	41.95	-0.8144	1.1821	0.013
654	SLU 26	0.7	0.01	41.62	-0.8081	1.1728	0.0134
654	SLU 27	0.72	0.04	42.47	-0.8245	1.1962	0.0128
654	SLU 28	0.72	0.02	42.47	-0.8246	1.1971	0.0133
654	SLU 29	0.71	0.03	42.14	-0.8181	1.1864	0.013
654	SLU 30	0.71	0.02	42.14	-0.8182	1.1872	0.0135
654	SLU 31	0.73	0.07	45.6	-0.8856	1.2867	0.0123
654	SLU 32	0.75	0.1	46.44	-0.902	1.31	0.0116
654	SLU 33	0.75	0.08	46.45	-0.9021	1.3109	0.0121
654	SLU 34	0.74	0.07	46.12	-0.8958	1.3017	0.0126
654	SLU 35	0.76	0.09	46.97	-0.9122	1.325	0.012
654	SLU 36	0.76	0.08	46.97	-0.9124	1.3259	0.0124
654	SLU 37	0.75	0.08	46.64	-0.9058	1.3152	0.0121
654	SLU 38	0.75	0.07	46.65	-0.906	1.3161	0.0126
654	SLU 39	0.75	0.12	47.52	-0.9229	1.3404	0.0111
654	SLU 40	0.75	0.1	47.52	-0.9231	1.3413	0.0116
654	SLU 41	0.76	0.11	48.04	-0.9332	1.3554	0.0115
654	SLU 42	0.76	0.1	48.05	-0.9333	1.3563	0.0119
654	SLU 43	0.8	-0.07	46.2	-0.897	1.3046	0.0182
654	SLU 44	0.8	-0.09	46.21	-0.8973	1.3061	0.019
654	SLU 45	0.82	-0.07	47.05	-0.9137	1.3294	0.0183
654	SLU 46	0.82	-0.08	47.06	-0.9138	1.3303	0.0188
654	SLU 47	0.81	-0.09	46.73	-0.9075	1.3211	0.0193
654	SLU 48	0.83	-0.07	47.58	-0.9239	1.3444	0.0187
654	SLU 49	0.83	-0.08	47.58	-0.924	1.3453	0.0191
654	SLU 50	0.82	-0.08	47.25	-0.9175	1.3346	0.0189
654	SLU 51	0.82	-0.09	47.26	-0.9176	1.3355	0.0193
654	SLU 52	0.84	-0.03	50.71	-0.985	1.4349	0.0181
654	SLU 53	0.85	-0.01	51.55	-1.0014	1.4583	0.0175
654	SLU 54	0.85	-0.02	51.56	-1.0015	1.4592	0.018
654	SLU 55	0.85	-0.04	51.23	-0.9952	1.4499	0.0185
654	SLU 56	0.87	-0.01	52.08	-1.0116	1.4733	0.0178
654	SLU 57	0.87	-0.03	52.08	-1.0118	1.4742	0.0183
654	SLU 58	0.86	-0.02	51.75	-1.0052	1.4634	0.018
654	SLU 59	0.86	-0.03	51.76	-1.0054	1.4643	0.0185
654	SLU 60	0.85	0.01	52.63	-1.0224	1.4887	0.017
654	SLU 61	0.85	0	52.64	-1.0225	1.4896	0.0175
654	SLU 62	0.87	0.01	53.16	-1.0326	1.5037	0.0173
654	SLU 63	0.87	-0.01	53.16	-1.0327	1.5046	0.0178
654	SLU 64	0.86	0	50.59	-0.9822	1.4255	0.0169

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
654	SLU 65	0.86	-0.02	50.6	-0.9824	1.427	0.0177
654	SLU 66	0.87	0.01	51.44	-0.9988	1.4504	0.017
654	SLU 67	0.87	-0.01	51.45	-0.9989	1.4512	0.0175
654	SLU 68	0.87	-0.02	51.13	-0.9926	1.442	0.018
654	SLU 69	0.89	0	51.97	-1.009	1.4654	0.0174
654	SLU 70	0.89	-0.01	51.97	-1.0092	1.4662	0.0178
654	SLU 71	0.88	-0.01	51.64	-1.0026	1.4555	0.0175
654	SLU 72	0.88	-0.02	51.65	-1.0028	1.4564	0.018
654	SLU 73	0.9	0.04	55.1	-1.0702	1.5559	0.0168
654	SLU 74	0.91	0.06	55.94	-1.0865	1.5792	0.0162
654	SLU 75	0.91	0.05	55.95	-1.0867	1.5801	0.0167
654	SLU 76	0.91	0.03	55.63	-1.0804	1.5708	0.0171
654	SLU 77	0.92	0.06	56.47	-1.0968	1.5942	0.0165
654	SLU 78	0.92	0.04	56.47	-1.0969	1.5951	0.017
654	SLU 79	0.92	0.05	56.14	-1.0904	1.5844	0.0167
654	SLU 80	0.92	0.04	56.15	-1.0905	1.5853	0.0172
654	SLU 81	0.91	0.08	57.02	-1.1075	1.6096	0.0157
654	SLU 82	0.91	0.07	57.03	-1.1076	1.6105	0.0161
654	SLU 83	0.92	0.08	57.55	-1.1177	1.6246	0.016
654	SLU 84	0.92	0.06	57.55	-1.1179	1.6255	0.0165
654	SLE RA 1	0.65	-0.01	37.95	-0.7368	1.07	0.0133
654	SLE RA 2	0.65	-0.03	37.96	-0.737	1.071	0.0138
654	SLE RA 3	0.66	-0.01	38.52	-0.7479	1.0865	0.0134
654	SLE RA 4	0.66	-0.02	38.52	-0.748	1.0871	0.0137
654	SLE RA 5	0.65	-0.03	38.31	-0.7438	1.081	0.014
654	SLE RA 6	0.67	-0.01	38.87	-0.7547	1.0965	0.0136
654	SLE RA 7	0.67	-0.02	38.87	-0.7548	1.0971	0.0139
654	SLE RA 8	0.66	-0.02	38.65	-0.7504	1.09	0.0137
654	SLE RA 9	0.66	-0.03	38.66	-0.7505	1.0906	0.014
654	SLE RA 10	0.67	0.01	40.96	-0.7955	1.1569	0.0132
654	SLE RA 11	0.68	0.03	41.52	-0.8064	1.1724	0.0128
654	SLE RA 12	0.68	0.02	41.52	-0.8065	1.173	0.0131
654	SLE RA 13	0.68	0.01	41.31	-0.8023	1.1669	0.0135
654	SLE RA 14	0.69	0.02	41.87	-0.8132	1.1824	0.013
654	SLE RA 15	0.69	0.01	41.87	-0.8133	1.183	0.0133
654	SLE RA 16	0.69	0.02	41.65	-0.8089	1.1759	0.0131
654	SLE RA 17	0.69	0.01	41.66	-0.809	1.1765	0.0135
654	SLE RA 18	0.68	0.04	42.24	-0.8203	1.1927	0.0125
654	SLE RA 19	0.68	0.03	42.24	-0.8205	1.1933	0.0128
654	SLE RA 20	0.69	0.04	42.59	-0.8272	1.2027	0.0127
654	SLE RA 21	0.69	0.03	42.59	-0.8273	1.2033	0.013
654	SLE FR 1	0.65	-0.01	37.95	-0.7368	1.07	0.0133
654	SLE FR 2	0.65	-0.02	37.95	-0.7368	1.0702	0.0134
654	SLE FR 3	0.65	-0.01	38.09	-0.7395	1.074	0.0133
654	SLE FR 4	0.66	0	39.24	-0.7619	1.107	0.0131
654	SLE FR 5	0.66	0	39.38	-0.7646	1.1108	0.0131
654	SLE FR 6	0.67	0.01	40.1	-0.7786	1.1313	0.0129
654	SLE QP 1	0.65	-0.01	37.95	-0.7368	1.07	0.0133
654	SLE QP 2	0.66	0	39.24	-0.7619	1.1068	0.013
654	SLD 1	3.73	0.6	36.02	-0.6995	1.0791	0.0508
654	SLD 2	3.72	0.88	35.99	-0.6987	1.0775	0.0449
654	SLD 3	3.58	-0.37	36.23	-0.7056	1.0988	0.0839
654	SLD 4	3.58	-0.1	36.2	-0.7048	1.0972	0.078
654	SLD 5	1.79	1.62	37.96	-0.7341	1.0689	-0.0248
654	SLD 6	1.79	1.8	37.94	-0.7335	1.0679	-0.0287
654	SLD 7	1.32	-1.64	38.66	-0.7544	1.1345	0.0856
654	SLD 8	1.32	-1.46	38.64	-0.7539	1.1335	0.0817
654	SLD 9	0	1.47	39.84	-0.7699	1.0801	-0.0556
654	SLD 10	-0.01	1.65	39.81	-0.7693	1.0791	-0.0595
654	SLD 11	-0.48	-1.79	40.54	-0.7902	1.1457	0.0547
654	SLD 12	-0.48	-1.61	40.52	-0.7897	1.1447	0.0508
654	SLD 13	-2.27	0.1	42.28	-0.8189	1.1164	-0.052
654	SLD 14	-2.27	0.38	42.24	-0.8181	1.1148	-0.0579
654	SLD 15	-2.41	-0.87	42.49	-0.825	1.1361	-0.0188
654	SLD 16	-2.41	-0.6	42.45	-0.8242	1.1345	-0.0248
654	SLV 1	7.84	1.38	31.71	-0.6161	1.0424	0.1025
654	SLV 2	7.83	2.02	31.63	-0.6143	1.0388	0.0886
654	SLV 3	7.51	-0.84	32.2	-0.6301	1.0871	0.1777
654	SLV 4	7.5	-0.21	32.12	-0.6282	1.0835	0.1639
654	SLV 5	3.31	3.68	36.25	-0.6973	1.0202	-0.0719
654	SLV 6	3.31	4.09	36.2	-0.6961	1.0179	-0.0808
654	SLV 7	2.21	-3.74	37.89	-0.7438	1.1694	0.179
654	SLV 8	2.21	-3.33	37.83	-0.7426	1.1671	0.1701
654	SLV 9	-0.89	3.33	40.64	-0.7811	1.0465	-0.144
654	SLV 10	-0.9	3.74	40.59	-0.7799	1.0442	-0.1529
654	SLV 11	-1.99	-4.09	42.28	-0.8276	1.1957	0.1069
654	SLV 12	-2	-3.68	42.22	-0.8264	1.1934	0.098
654	SLV 13	-6.18	0.21	46.36	-0.8955	1.1301	-0.1379
654	SLV 14	-6.19	0.85	46.27	-0.8937	1.1265	-0.1517
654	SLV 15	-6.51	-2.02	46.85	-0.9095	1.1748	-0.0626
654	SLV 16	-6.52	-1.38	46.76	-0.9076	1.1712	-0.0764
654	CRTFP Ux+	0	0	0	0	0	0
654	CRTFP Ux-	0	0	0	0	0	0
656	SLU 1	-1.5	-0.17	109.81	-5.5433	-20.6249	-0.0937
656	SLU 2	-1.51	-0.4	109.84	-5.5446	-20.6315	-0.1388
656	SLU 3	-1.54	-0.15	112.44	-5.6756	-21.1161	-0.0924
656	SLU 4	-1.54	-0.29	112.46	-5.6763	-21.1201	-0.1194
656	SLU 5	-1.53	-0.39	111.49	-5.6274	-20.9397	-0.1376
656	SLU 6	-1.57	-0.14	114.09	-5.7585	-21.4243	-0.0912
656	SLU 7	-1.57	-0.28	114.11	-5.7592	-21.4282	-0.1183
656	SLU 8	-1.56	-0.14	113.11	-5.709	-21.2411	-0.0913
656	SLU 9	-1.56	-0.29	113.13	-5.7098	-21.2451	-0.1184
656	SLU 10	-1.54	-0.25	122.57	-6.1857	-23.0369	-0.109
656	SLU 11	-1.57	0	125.17	-6.3167	-23.5215	-0.0626
656	SLU 12	-1.58	-0.14	125.19	-6.3175	-23.5255	-0.0896
656	SLU 13	-1.57	-0.24	124.23	-6.2685	-23.345	-0.1078
656	SLU 14	-1.6	0.01	126.83	-6.3996	-23.8296	-0.0614

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
656	SLU 15	-1.6	-0.13	126.85	-6.4003	-23.8336	-0.0884
656	SLU 16	-1.59	0.01	125.85	-6.3501	-23.6465	-0.0615
656	SLU 17	-1.59	-0.13	125.87	-6.3509	-23.6505	-0.0886
656	SLU 18	-1.55	0.05	128	-6.4592	-24.0611	-0.0511
656	SLU 19	-1.55	-0.09	128.02	-6.46	-24.0651	-0.0781
656	SLU 20	-1.58	0.07	129.65	-6.5421	-24.3693	-0.0499
656	SLU 21	-1.58	-0.07	129.67	-6.5428	-24.3733	-0.077
656	SLU 22	-1.61	0.03	122.67	-6.1847	-23.0473	-0.0598
656	SLU 23	-1.61	-0.21	122.7	-6.1859	-23.054	-0.1049
656	SLU 24	-1.65	0.04	125.3	-6.317	-23.5386	-0.0585
656	SLU 25	-1.65	-0.1	125.32	-6.3177	-23.5426	-0.0855
656	SLU 26	-1.64	-0.2	124.35	-6.2688	-23.3621	-0.1037
656	SLU 27	-1.67	0.05	126.95	-6.3998	-23.8467	-0.0573
656	SLU 28	-1.68	-0.09	126.97	-6.4006	-23.8507	-0.0843
656	SLU 29	-1.66	0.05	125.97	-6.3504	-23.6636	-0.0574
656	SLU 30	-1.67	-0.09	125.99	-6.3511	-23.6676	-0.0845
656	SLU 31	-1.65	-0.05	135.43	-6.8271	-25.4594	-0.075
656	SLU 32	-1.68	0.2	138.03	-6.9581	-25.944	-0.0286
656	SLU 33	-1.69	0.06	138.05	-6.9588	-25.9479	-0.0557
656	SLU 34	-1.68	-0.04	137.09	-6.9099	-25.7675	-0.0738
656	SLU 35	-1.71	0.21	139.69	-7.041	-26.2521	-0.0274
656	SLU 36	-1.71	0.07	139.71	-7.0417	-26.2561	-0.0545
656	SLU 37	-1.7	0.21	138.71	-6.9915	-26.069	-0.0276
656	SLU 38	-1.7	0.07	138.73	-6.9923	-26.073	-0.0546
656	SLU 39	-1.66	0.25	140.86	-7.1006	-26.4836	-0.0172
656	SLU 40	-1.66	0.11	140.88	-7.1013	-26.4876	-0.0442
656	SLU 41	-1.69	0.26	142.51	-7.1835	-26.7917	-0.016
656	SLU 42	-1.69	0.12	142.53	-7.1842	-26.7957	-0.043
656	SLU 43	-1.91	-0.29	138.34	-6.9864	-25.9818	-0.1334
656	SLU 44	-1.92	-0.52	138.37	-6.9877	-25.9884	-0.1785
656	SLU 45	-1.95	-0.27	140.97	-7.1187	-26.473	-0.1321
656	SLU 46	-1.95	-0.41	140.99	-7.1194	-26.477	-0.1592
656	SLU 47	-1.95	-0.51	140.02	-7.0705	-26.2966	-0.1773
656	SLU 48	-1.98	-0.26	142.62	-7.2016	-26.7812	-0.131
656	SLU 49	-1.98	-0.4	142.64	-7.2023	-26.7852	-0.158
656	SLU 50	-1.97	-0.26	141.65	-7.1521	-26.5981	-0.1311
656	SLU 51	-1.97	-0.4	141.66	-7.1529	-26.602	-0.1581
656	SLU 52	-1.95	-0.37	151.1	-7.6288	-28.3938	-0.1487
656	SLU 53	-1.99	-0.12	153.7	-7.7598	-28.8784	-0.1023
656	SLU 54	-1.99	-0.26	153.72	-7.7606	-28.8824	-0.1294
656	SLU 55	-1.98	-0.35	152.76	-7.7116	-28.7019	-0.1475
656	SLU 56	-2.01	-0.1	155.36	-7.8427	-29.1865	-0.1011
656	SLU 57	-2.02	-0.24	155.38	-7.8434	-29.1905	-0.1282
656	SLU 58	-2	-0.11	154.38	-7.7932	-29.0034	-0.1012
656	SLU 59	-2.01	-0.25	154.4	-7.794	-29.0074	-0.1283
656	SLU 60	-1.96	-0.06	156.53	-7.9023	-29.418	-0.0908
656	SLU 61	-1.97	-0.2	156.55	-7.9031	-29.422	-0.1179
656	SLU 62	-1.99	-0.05	158.18	-7.9852	-29.7262	-0.0896
656	SLU 63	-1.99	-0.19	158.2	-7.9859	-29.7302	-0.1167
656	SLU 64	-2.02	-0.09	151.2	-7.6278	-28.4042	-0.0995
656	SLU 65	-2.03	-0.33	151.23	-7.629	-28.4109	-0.1446
656	SLU 66	-2.06	-0.08	153.83	-7.7601	-28.8955	-0.0982
656	SLU 67	-2.06	-0.22	153.85	-7.7608	-28.8995	-0.1253
656	SLU 68	-2.06	-0.31	152.88	-7.7119	-28.719	-0.1434
656	SLU 69	-2.09	-0.06	155.49	-7.8429	-29.2036	-0.097
656	SLU 70	-2.09	-0.2	155.5	-7.8437	-29.2076	-0.1241
656	SLU 71	-2.08	-0.07	154.51	-7.7935	-29.0205	-0.0971
656	SLU 72	-2.08	-0.21	154.53	-7.7942	-29.0245	-0.1242
656	SLU 73	-2.06	-0.17	163.96	-8.2702	-30.8163	-0.1148
656	SLU 74	-2.09	0.08	166.57	-8.4012	-31.3009	-0.0684
656	SLU 75	-2.1	-0.06	166.59	-8.4019	-31.3049	-0.0954
656	SLU 76	-2.09	-0.16	165.62	-8.353	-31.1244	-0.1136
656	SLU 77	-2.12	0.09	168.22	-8.4841	-31.609	-0.0672
656	SLU 78	-2.13	-0.05	168.24	-8.4848	-31.613	-0.0942
656	SLU 79	-2.11	0.09	167.24	-8.4346	-31.4259	-0.0673
656	SLU 80	-2.11	-0.05	167.26	-8.4354	-31.4299	-0.0944
656	SLU 81	-2.07	0.13	169.39	-8.5437	-31.8405	-0.0569
656	SLU 82	-2.07	-0.01	169.41	-8.5444	-31.8445	-0.0839
656	SLU 83	-2.1	0.14	171.04	-8.6266	-32.1486	-0.0557
656	SLU 84	-2.1	0	171.06	-8.6273	-32.1526	-0.0828
656	SLE RA 1	-1.53	-0.11	113.48	-5.7266	-21.317	-0.084
656	SLE RA 2	-1.54	-0.27	113.5	-5.7274	-21.3214	-0.1141
656	SLE RA 3	-1.56	-0.1	115.24	-5.8148	-21.6445	-0.0831
656	SLE RA 4	-1.56	-0.2	115.25	-5.8153	-21.6472	-0.1012
656	SLE RA 5	-1.55	-0.26	114.6	-5.7826	-21.5269	-0.1133
656	SLE RA 6	-1.57	-0.1	116.34	-5.87	-21.8499	-0.0823
656	SLE RA 7	-1.58	-0.19	116.35	-5.8705	-21.8526	-0.1004
656	SLE RA 8	-1.57	-0.1	115.69	-5.8371	-21.7279	-0.0824
656	SLE RA 9	-1.57	-0.19	115.7	-5.8375	-21.7305	-0.1005
656	SLE RA 10	-1.56	-0.17	121.99	-6.1548	-22.925	-0.0942
656	SLE RA 11	-1.58	0	123.72	-6.2422	-23.2481	-0.0632
656	SLE RA 12	-1.58	-0.09	123.74	-6.2427	-23.2507	-0.0813
656	SLE RA 13	-1.58	-0.16	123.09	-6.21	-23.1304	-0.0934
656	SLE RA 14	-1.6	0.01	124.83	-6.2974	-23.4535	-0.0625
656	SLE RA 15	-1.6	-0.08	124.84	-6.2979	-23.4562	-0.0805
656	SLE RA 16	-1.59	0.01	124.17	-6.2645	-23.3314	-0.0625
656	SLE RA 17	-1.59	-0.09	124.19	-6.2649	-23.3341	-0.0806
656	SLE RA 18	-1.56	0.04	125.61	-6.3372	-23.6079	-0.0556
656	SLE RA 19	-1.57	-0.06	125.62	-6.3377	-23.6105	-0.0736
656	SLE RA 20	-1.58	0.04	126.71	-6.3924	-23.8133	-0.0548
656	SLE RA 21	-1.58	-0.05	126.72	-6.3929	-23.8159	-0.0728
656	SLE FR 1	-1.53	-0.11	113.48	-5.7266	-21.317	-0.084
656	SLE FR 2	-1.53	-0.14	113.48	-5.7268	-21.3179	-0.09
656	SLE FR 3	-1.54	-0.11	113.92	-5.7487	-21.3992	-0.0837
656	SLE FR 4	-1.54	-0.1	117.12	-5.9099	-22.0051	-0.0815
656	SLE FR 5	-1.55	-0.07	117.56	-5.9319	-22.0864	-0.0752
656	SLE FR 6	-1.55	-0.04	119.54	-6.0319	-22.4624	-0.0698

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
656	SLE QP 1	-1.53	-0.11	113.48	-5.7266	-21.317	-0.084
656	SLE QP 2	-1.54	-0.07	117.12	-5.9098	-22.0043	-0.0755
656	SLD 1	6.36	1.57	149.03	-7.6201	-27.749	0.7229
656	SLD 2	6.31	0.06	149.18	-7.6171	-27.7826	0.437
656	SLD 3	5.96	-2.63	150.71	-7.7225	-28.062	-0.0883
656	SLD 4	5.92	-4.14	150.86	-7.7194	-28.0956	-0.3743
656	SLD 5	1.44	7.05	124.12	-6.2682	-23.247	1.445
656	SLD 6	1.41	6.06	124.22	-6.2663	-23.269	1.2581
656	SLD 7	0.11	-6.93	129.72	-6.6093	-24.2903	-1.2592
656	SLD 8	0.08	-7.92	129.82	-6.6073	-24.3123	-1.4461
656	SLD 9	-3.17	7.78	104.42	-5.2122	-19.6962	1.2951
656	SLD 10	-3.19	6.79	104.52	-5.2102	-19.7182	1.1082
656	SLD 11	-4.49	-6.2	110.02	-5.5533	-20.7395	-1.4091
656	SLD 12	-4.52	-7.19	110.12	-5.5513	-20.7615	-1.596
656	SLD 13	-9	4	83.38	-4.1001	-15.9129	0.2233
656	SLD 14	-9.04	2.49	83.53	-4.0971	-15.9466	-0.0626
656	SLD 15	-9.4	-0.2	85.06	-4.2024	-16.2259	-0.5879
656	SLD 16	-9.44	-1.71	85.21	-4.1994	-16.2596	-0.8739
656	SLV 1	16.93	3.59	191.82	-9.9138	-35.4522	1.759
656	SLV 2	16.83	0.08	192.17	-9.9068	-35.5305	1.0929
656	SLV 3	16	-5.9	195.75	-10.1525	-36.1841	-0.0764
656	SLV 4	15.91	-9.41	196.1	-10.1455	-36.2624	-0.7425
656	SLV 5	5.42	16.03	133.51	-6.75	-24.9152	3.3726
656	SLV 6	5.36	13.77	133.73	-6.7455	-24.9655	2.9445
656	SLV 7	2.34	-15.61	146.61	-7.5459	-27.3548	-2.7452
656	SLV 8	2.27	-17.87	146.83	-7.5414	-27.4051	-3.1733
656	SLV 9	-5.35	17.73	87.41	-4.2781	-16.6034	3.0224
656	SLV 10	-5.42	15.47	87.63	-4.2736	-16.6537	2.5943
656	SLV 11	-8.44	-13.91	100.5	-5.074	-19.043	-3.0955
656	SLV 12	-8.5	-16.17	100.73	-5.0695	-19.0933	-3.5235
656	SLV 13	-18.99	9.28	38.14	-1.674	-7.7461	0.5915
656	SLV 14	-19.09	5.76	38.49	-1.667	-7.8245	-0.0746
656	SLV 15	-19.91	-0.21	42.07	-1.9128	-8.478	-1.2438
656	SLV 16	-20.01	-3.73	42.42	-1.9058	-8.5563	-1.9099
656	CRTFP Ux+	0	0	0	0	0.0001	0
656	CRTFP Ux-	0	0	0	0	-0.0001	0
656	CRTFP Uy+	0	0	0	0	0	0
656	CRTFP Uy-	0	0	0	0	0	0
671	SLU 1	-2.04	-2.75	201.58	-14.7489	-12.1664	-0.3503
671	SLU 2	-2.05	-3	201.63	-14.7532	-12.1735	-0.3644
671	SLU 3	-2.09	-2.78	206.39	-15.0956	-12.4583	-0.3558
671	SLU 4	-2.09	-2.93	206.42	-15.0981	-12.4625	-0.3643
671	SLU 5	-2.09	-3.03	204.62	-14.9676	-12.3535	-0.3696
671	SLU 6	-2.13	-2.8	209.38	-15.3099	-12.6383	-0.361
671	SLU 7	-2.13	-2.95	209.41	-15.3125	-12.6425	-0.3695
671	SLU 8	-2.12	-2.8	207.56	-15.1776	-12.5265	-0.3607
671	SLU 9	-2.12	-2.95	207.59	-15.1802	-12.5308	-0.3691
671	SLU 10	-2.05	-3.07	226.47	-16.5508	-13.6751	-0.3692
671	SLU 11	-2.1	-2.85	231.23	-16.8932	-13.9599	-0.3606
671	SLU 12	-2.1	-3	231.25	-16.8957	-13.9641	-0.3691
671	SLU 13	-2.09	-3.1	229.46	-16.7651	-13.8552	-0.3744
671	SLU 14	-2.13	-2.88	234.22	-17.1075	-14.14	-0.3658
671	SLU 15	-2.14	-3.03	234.25	-17.1101	-14.1442	-0.3743
671	SLU 16	-2.12	-2.87	232.4	-16.9752	-14.0282	-0.3655
671	SLU 17	-2.13	-3.03	232.43	-16.9778	-14.0324	-0.3739
671	SLU 18	-2.05	-2.85	237.07	-17.3169	-14.3116	-0.3572
671	SLU 19	-2.05	-3	237.09	-17.3195	-14.3159	-0.3657
671	SLU 20	-2.09	-2.88	240.06	-17.5313	-14.4917	-0.3624
671	SLU 21	-2.09	-3.03	240.08	-17.5338	-14.4959	-0.3708
671	SLU 22	-2.2	-2.67	225.96	-16.4766	-13.6189	-0.3552
671	SLU 23	-2.2	-2.92	226.01	-16.4809	-13.6259	-0.3693
671	SLU 24	-2.25	-2.7	230.77	-16.8233	-13.9107	-0.3607
671	SLU 25	-2.25	-2.85	230.8	-16.8258	-13.9149	-0.3692
671	SLU 26	-2.24	-2.95	229	-16.6952	-13.806	-0.3745
671	SLU 27	-2.28	-2.72	233.76	-17.0376	-14.0907	-0.3659
671	SLU 28	-2.29	-2.88	233.79	-17.0402	-14.095	-0.3744
671	SLU 29	-2.27	-2.72	231.94	-16.9053	-13.979	-0.3656
671	SLU 30	-2.28	-2.87	231.97	-16.9079	-13.9832	-0.374
671	SLU 31	-2.21	-3	250.85	-18.2785	-15.1276	-0.3741
671	SLU 32	-2.25	-2.77	255.61	-18.6208	-15.4123	-0.3655
671	SLU 33	-2.26	-2.92	255.63	-18.6234	-15.4166	-0.374
671	SLU 34	-2.25	-3.02	253.84	-18.4928	-15.3076	-0.3793
671	SLU 35	-2.29	-2.8	258.6	-18.8352	-15.5924	-0.3707
671	SLU 36	-2.29	-2.95	258.62	-18.8378	-15.5966	-0.3792
671	SLU 37	-2.28	-2.8	256.78	-18.7029	-15.4806	-0.3704
671	SLU 38	-2.28	-2.95	256.81	-18.7055	-15.4848	-0.3788
671	SLU 39	-2.2	-2.77	261.45	-19.0446	-15.7641	-0.3621
671	SLU 40	-2.21	-2.93	261.47	-19.0472	-15.7683	-0.3706
671	SLU 41	-2.24	-2.8	264.44	-19.2589	-15.9441	-0.3673
671	SLU 42	-2.25	-2.95	264.46	-19.2615	-15.9484	-0.3757
671	SLU 43	-2.6	-3.6	253.7	-18.5813	-15.3184	-0.4537
671	SLU 44	-2.61	-3.85	253.74	-18.5855	-15.3254	-0.4679
671	SLU 45	-2.65	-3.63	258.5	-18.9279	-15.6102	-0.4592
671	SLU 46	-2.65	-3.78	258.53	-18.9305	-15.6144	-0.4677
671	SLU 47	-2.64	-3.88	256.73	-18.7999	-15.5055	-0.473
671	SLU 48	-2.69	-3.65	261.5	-19.1422	-15.7903	-0.4644
671	SLU 49	-2.69	-3.8	261.52	-19.1448	-15.7945	-0.4729
671	SLU 50	-2.67	-3.65	259.68	-19.0099	-15.6785	-0.4641
671	SLU 51	-2.68	-3.8	259.71	-19.0125	-15.6827	-0.4725
671	SLU 52	-2.61	-3.92	278.58	-20.3831	-16.8271	-0.4727
671	SLU 53	-2.65	-3.7	283.34	-20.7255	-17.1118	-0.464
671	SLU 54	-2.66	-3.85	283.37	-20.7281	-17.1161	-0.4725
671	SLU 55	-2.65	-3.95	281.57	-20.5975	-17.0071	-0.4778
671	SLU 56	-2.69	-3.73	286.33	-20.9398	-17.2919	-0.4692
671	SLU 57	-2.7	-3.88	286.36	-20.9424	-17.2961	-0.4777
671	SLU 58	-2.68	-3.72	284.52	-20.8075	-17.1801	-0.4689
671	SLU 59	-2.68	-3.88	284.55	-20.8101	-17.1844	-0.4773

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
671	SLU 60	-2.61	-3.7	289.18	-21.1492	-17.4636	-0.4606
671	SLU 61	-2.61	-3.86	289.21	-21.1518	-17.4678	-0.4691
671	SLU 62	-2.64	-3.73	292.17	-21.3636	-17.6436	-0.4658
671	SLU 63	-2.65	-3.88	292.2	-21.3662	-17.6479	-0.4742
671	SLU 64	-2.75	-3.52	278.08	-20.3089	-16.7708	-0.4587
671	SLU 65	-2.76	-3.77	278.12	-20.3132	-16.7779	-0.4728
671	SLU 66	-2.8	-3.55	282.88	-20.6556	-17.0626	-0.4642
671	SLU 67	-2.81	-3.7	282.91	-20.6582	-17.0669	-0.4726
671	SLU 68	-2.8	-3.8	281.11	-20.5276	-16.9579	-0.4779
671	SLU 69	-2.84	-3.57	285.88	-20.8699	-17.2427	-0.4693
671	SLU 70	-2.85	-3.73	285.9	-20.8725	-17.2469	-0.4778
671	SLU 71	-2.83	-3.57	284.06	-20.7376	-17.1309	-0.469
671	SLU 72	-2.83	-3.72	284.09	-20.7402	-17.1352	-0.4775
671	SLU 73	-2.77	-3.85	302.96	-22.1108	-18.2795	-0.4776
671	SLU 74	-2.81	-3.62	307.72	-22.4532	-18.5643	-0.469
671	SLU 75	-2.81	-3.77	307.75	-22.4557	-18.5685	-0.4774
671	SLU 76	-2.81	-3.87	305.95	-22.3252	-18.4596	-0.4827
671	SLU 77	-2.85	-3.65	310.71	-22.6675	-18.7443	-0.4741
671	SLU 78	-2.85	-3.8	310.74	-22.6701	-18.7486	-0.4826
671	SLU 79	-2.84	-3.65	308.9	-22.5352	-18.6326	-0.4738
671	SLU 80	-2.84	-3.8	308.93	-22.5378	-18.6368	-0.4823
671	SLU 81	-2.76	-3.63	313.56	-22.8769	-18.916	-0.4655
671	SLU 82	-2.77	-3.78	313.59	-22.8795	-18.9202	-0.474
671	SLU 83	-2.8	-3.65	316.55	-23.0913	-19.0961	-0.4707
671	SLU 84	-2.8	-3.8	316.58	-23.0938	-19.1003	-0.4791
671	SLE RA 1	-2.08	-2.72	208.55	-15.2426	-12.5814	-0.3517
671	SLE RA 2	-2.09	-2.89	208.58	-15.2454	-12.5861	-0.3611
671	SLE RA 3	-2.12	-2.74	211.75	-15.4736	-12.776	-0.3554
671	SLE RA 4	-2.12	-2.84	211.77	-15.4754	-12.7788	-0.361
671	SLE RA 5	-2.11	-2.91	210.57	-15.3883	-12.7062	-0.3646
671	SLE RA 6	-2.14	-2.76	213.75	-15.6165	-12.896	-0.3588
671	SLE RA 7	-2.15	-2.86	213.76	-15.6183	-12.8988	-0.3645
671	SLE RA 8	-2.13	-2.76	212.54	-15.5283	-12.8215	-0.3586
671	SLE RA 9	-2.14	-2.86	212.55	-15.5301	-12.8243	-0.3643
671	SLE RA 10	-2.09	-2.94	225.14	-16.4438	-13.5872	-0.3643
671	SLE RA 11	-2.12	-2.79	228.31	-16.672	-13.7771	-0.3586
671	SLE RA 12	-2.12	-2.89	228.33	-16.6738	-13.7799	-0.3642
671	SLE RA 13	-2.12	-2.96	227.13	-16.5867	-13.7072	-0.3678
671	SLE RA 14	-2.15	-2.81	230.31	-16.8149	-13.8971	-0.362
671	SLE RA 15	-2.15	-2.91	230.32	-16.8166	-13.8999	-0.3677
671	SLE RA 16	-2.14	-2.81	229.1	-16.7267	-13.8226	-0.3618
671	SLE RA 17	-2.14	-2.91	229.11	-16.7284	-13.8254	-0.3675
671	SLE RA 18	-2.09	-2.8	232.2	-16.9545	-14.0115	-0.3563
671	SLE RA 19	-2.09	-2.9	232.22	-16.9563	-14.0144	-0.3619
671	SLE RA 20	-2.12	-2.81	234.2	-17.0974	-14.1316	-0.3597
671	SLE RA 21	-2.12	-2.91	234.22	-17.0991	-14.1344	-0.3654
671	SLE FR 1	-2.08	-2.72	208.55	-15.2426	-12.5814	-0.3517
671	SLE FR 2	-2.09	-2.76	208.55	-15.2431	-12.5824	-0.3536
671	SLE FR 3	-2.09	-2.73	209.35	-15.2997	-12.6294	-0.3531
671	SLE FR 4	-2.09	-2.78	215.65	-15.7567	-13.0114	-0.355
671	SLE FR 5	-2.1	-2.75	216.44	-15.8133	-13.0585	-0.3545
671	SLE FR 6	-2.09	-2.76	220.38	-16.0985	-13.2965	-0.354
671	SLE QP 1	-2.08	-2.72	208.55	-15.2426	-12.5814	-0.3517
671	SLE QP 2	-2.09	-2.75	215.64	-15.7562	-13.0105	-0.3531
671	SLD 1	15.24	-1.46	236.03	-17.426	-13.9327	1.0071
671	SLD 2	15.2	-2.79	236.25	-17.41	-13.9479	0.9575
671	SLD 3	14.42	-7.09	234.77	-17.6532	-14.0541	0.6422
671	SLD 4	14.38	-8.42	235	-17.6372	-14.0694	0.5925
671	SLD 5	4.37	6.4	223.62	-15.9154	-13.1002	0.6172
671	SLD 6	4.34	5.53	223.77	-15.905	-13.1102	0.5848
671	SLD 7	1.62	-12.34	219.44	-16.6726	-13.5051	-0.5993
671	SLD 8	1.6	-13.21	219.59	-16.6621	-13.515	-0.6317
671	SLD 9	-5.77	7.72	211.7	-14.8502	-12.5059	-0.0745
671	SLD 10	-5.79	6.85	211.85	-14.8397	-12.5158	-0.107
671	SLD 11	-8.52	-11.03	207.52	-15.6074	-12.9107	-1.291
671	SLD 12	-8.54	-11.9	207.67	-15.5969	-12.9207	-1.3234
671	SLD 13	-18.55	2.93	196.29	-13.8752	-11.9515	-1.2987
671	SLD 14	-18.59	1.59	196.52	-13.8591	-11.9668	-1.3484
671	SLD 15	-19.38	-2.7	195.04	-14.1023	-12.073	-1.6637
671	SLD 16	-19.41	-4.03	195.26	-14.0863	-12.0882	-1.7133
671	SLV 1	38.45	0.03	263.34	-19.6652	-15.172	2.8147
671	SLV 2	38.36	-3.07	263.86	-19.6279	-15.2075	2.6991
671	SLV 3	36.53	-12.69	260.41	-20.1897	-15.45	1.9888
671	SLV 4	36.44	-15.79	260.93	-20.1524	-15.4855	1.8732
671	SLV 5	13	17.91	234.31	-16.1397	-13.2312	1.8695
671	SLV 6	12.95	15.92	234.64	-16.1157	-13.254	1.7952
671	SLV 7	6.6	-24.49	224.54	-17.8882	-14.1579	-0.8832
671	SLV 8	6.54	-26.48	224.88	-17.8642	-14.1807	-0.9575
671	SLV 9	-10.72	20.99	206.41	-13.6481	-11.8402	0.2513
671	SLV 10	-10.77	19	206.75	-13.6241	-11.863	0.177
671	SLV 11	-17.12	-21.41	196.65	-15.3966	-12.7669	-2.5014
671	SLV 12	-17.17	-23.4	196.98	-15.3726	-12.7897	-2.5757
671	SLV 13	-40.61	10.3	170.36	-11.3599	-10.5354	-2.5794
671	SLV 14	-40.7	7.2	170.88	-11.3226	-10.5709	-2.695
671	SLV 15	-42.53	-2.42	167.43	-11.8844	-10.8134	-3.4053
671	SLV 16	-42.62	-5.52	167.95	-11.8471	-10.8489	-3.5209
671	CRTFP Ux+	0	0	0	0	0	0
671	CRTFP Ux-	0	0	0	0	0	0
671	CRTFP Uy+	0	0	0	0	0	0
671	CRTFP Uy-	0	0	0	0	0	0
716	SLU 1	0.7	0.27	37.39	1.0197	11.4077	-0.1121
716	SLU 2	0.7	0.24	37.39	1.0198	11.409	-0.1039
716	SLU 3	0.72	0.27	38.28	1.0439	11.6757	-0.1139
716	SLU 4	0.72	0.26	38.29	1.044	11.6765	-0.109
716	SLU 5	0.71	0.24	37.95	1.0349	11.5763	-0.103
716	SLU 6	0.73	0.27	38.84	1.0591	11.843	-0.1131
716	SLU 7	0.73	0.25	38.84	1.0591	11.8438	-0.1081

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
716	SLU 8	0.73	0.26	38.5	1.05	11.7423	-0.1104
716	SLU 9	0.73	0.25	38.51	1.05	11.7431	-0.1054
716	SLU 10	0.74	0.34	41.71	1.1372	12.7272	-0.1378
716	SLU 11	0.76	0.37	42.6	1.1614	12.9939	-0.1479
716	SLU 12	0.76	0.35	42.6	1.1614	12.9947	-0.1429
716	SLU 13	0.75	0.33	42.27	1.1524	12.8945	-0.137
716	SLU 14	0.77	0.36	43.16	1.1765	13.1612	-0.147
716	SLU 15	0.77	0.35	43.16	1.1766	13.162	-0.1421
716	SLU 16	0.77	0.35	42.82	1.1674	13.0604	-0.1443
716	SLU 17	0.77	0.34	42.83	1.1675	13.0612	-0.1394
716	SLU 18	0.76	0.4	43.56	1.1874	13.2908	-0.1606
716	SLU 19	0.76	0.39	43.56	1.1875	13.2916	-0.1557
716	SLU 20	0.77	0.4	44.12	1.2026	13.4581	-0.1597
716	SLU 21	0.77	0.38	44.12	1.2027	13.4589	-0.1548
716	SLU 22	0.76	0.36	41.73	1.1378	12.7272	-0.1456
716	SLU 23	0.76	0.34	41.73	1.138	12.7286	-0.1374
716	SLU 24	0.78	0.36	42.62	1.1621	12.9952	-0.1474
716	SLU 25	0.78	0.35	42.62	1.1622	12.996	-0.1425
716	SLU 26	0.77	0.33	42.29	1.1531	12.8958	-0.1365
716	SLU 27	0.79	0.36	43.18	1.1772	13.1625	-0.1466
716	SLU 28	0.79	0.34	43.18	1.1773	13.1633	-0.1416
716	SLU 29	0.79	0.35	42.84	1.1681	13.0618	-0.1439
716	SLU 30	0.79	0.34	42.85	1.1682	13.0626	-0.1389
716	SLU 31	0.8	0.43	46.05	1.2554	14.0467	-0.1713
716	SLU 32	0.82	0.46	46.94	1.2795	14.3134	-0.1814
716	SLU 33	0.82	0.44	46.94	1.2796	14.3142	-0.1765
716	SLU 34	0.81	0.43	46.61	1.2706	14.214	-0.1705
716	SLU 35	0.83	0.45	47.5	1.2947	14.4807	-0.1805
716	SLU 36	0.83	0.44	47.5	1.2948	14.4815	-0.1756
716	SLU 37	0.83	0.45	47.16	1.2856	14.38	-0.1778
716	SLU 38	0.83	0.43	47.17	1.2857	14.3808	-0.1729
716	SLU 39	0.82	0.49	47.9	1.3056	14.6103	-0.1941
716	SLU 40	0.82	0.48	47.9	1.3057	14.6111	-0.1892
716	SLU 41	0.83	0.49	48.46	1.3208	14.7776	-0.1932
716	SLU 42	0.83	0.48	48.46	1.3208	14.7784	-0.1883
716	SLU 43	0.89	0.32	47.12	1.285	14.3776	-0.1342
716	SLU 44	0.89	0.29	47.12	1.2852	14.3789	-0.126
716	SLU 45	0.91	0.32	48.01	1.3093	14.6456	-0.1361
716	SLU 46	0.91	0.31	48.01	1.3094	14.6464	-0.1311
716	SLU 47	0.9	0.29	47.68	1.3003	14.5462	-0.1252
716	SLU 48	0.92	0.32	48.57	1.3244	14.8129	-0.1352
716	SLU 49	0.92	0.3	48.57	1.3245	14.8137	-0.1303
716	SLU 50	0.92	0.31	48.23	1.3153	14.7122	-0.1325
716	SLU 51	0.92	0.3	48.24	1.3154	14.713	-0.1276
716	SLU 52	0.93	0.39	51.44	1.4026	15.6971	-0.16
716	SLU 53	0.95	0.41	52.33	1.4267	15.9638	-0.17
716	SLU 54	0.95	0.4	52.33	1.4268	15.9646	-0.1651
716	SLU 55	0.94	0.38	52	1.4178	15.8644	-0.1591
716	SLU 56	0.96	0.41	52.89	1.4419	16.1311	-0.1691
716	SLU 57	0.96	0.4	52.89	1.442	16.1319	-0.1642
716	SLU 58	0.96	0.4	52.55	1.4328	16.0303	-0.1664
716	SLU 59	0.96	0.39	52.56	1.4329	16.0311	-0.1615
716	SLU 60	0.95	0.45	53.29	1.4528	16.2607	-0.1827
716	SLU 61	0.95	0.44	53.29	1.4529	16.2615	-0.1778
716	SLU 62	0.96	0.45	53.85	1.468	16.428	-0.1819
716	SLU 63	0.96	0.43	53.85	1.468	16.4288	-0.1769
716	SLU 64	0.95	0.41	51.46	1.4032	15.6971	-0.1678
716	SLU 65	0.95	0.38	51.46	1.4033	15.6985	-0.1595
716	SLU 66	0.97	0.41	52.35	1.4275	15.9651	-0.1696
716	SLU 67	0.97	0.4	52.35	1.4275	15.9659	-0.1647
716	SLU 68	0.96	0.38	52.02	1.4185	15.8657	-0.1587
716	SLU 69	0.98	0.41	52.91	1.4426	16.1324	-0.1687
716	SLU 70	0.98	0.39	52.91	1.4427	16.1332	-0.1638
716	SLU 71	0.98	0.4	52.57	1.4335	16.0317	-0.166
716	SLU 72	0.98	0.39	52.58	1.4336	16.0325	-0.1611
716	SLU 73	0.99	0.48	55.78	1.5208	17.0166	-0.1935
716	SLU 74	1.01	0.51	56.67	1.5449	17.2833	-0.2035
716	SLU 75	1.01	0.49	56.67	1.545	17.2841	-0.1986
716	SLU 76	1	0.47	56.34	1.5359	17.1839	-0.1926
716	SLU 77	1.02	0.5	57.23	1.5601	17.4506	-0.2027
716	SLU 78	1.02	0.49	57.23	1.5601	17.4514	-0.1977
716	SLU 79	1.02	0.49	56.89	1.551	17.3499	-0.2
716	SLU 80	1.02	0.48	56.89	1.551	17.3507	-0.195
716	SLU 81	1.01	0.54	57.63	1.571	17.5802	-0.2163
716	SLU 82	1.01	0.53	57.63	1.5711	17.581	-0.2113
716	SLU 83	1.02	0.54	58.19	1.5862	17.7475	-0.2154
716	SLU 84	1.02	0.52	58.19	1.5862	17.7483	-0.2105
716	SLE RA 1	0.72	0.29	38.63	1.0534	11.7847	-0.1217
716	SLE RA 2	0.72	0.28	38.63	1.0535	11.7856	-0.1162
716	SLE RA 3	0.73	0.3	39.22	1.0696	11.9634	-0.1229
716	SLE RA 4	0.73	0.29	39.23	1.0696	11.9639	-0.1196
716	SLE RA 5	0.73	0.28	39	1.0636	11.8971	-0.1156
716	SLE RA 6	0.74	0.29	39.6	1.0797	12.0749	-0.1223
716	SLE RA 7	0.74	0.28	39.6	1.0797	12.0754	-0.119
716	SLE RA 8	0.73	0.29	39.37	1.0736	12.0077	-0.1205
716	SLE RA 9	0.73	0.28	39.37	1.0737	12.0083	-0.1172
716	SLE RA 10	0.74	0.34	41.51	1.1318	12.6644	-0.1388
716	SLE RA 11	0.76	0.36	42.1	1.1479	12.8422	-0.1455
716	SLE RA 12	0.76	0.35	42.11	1.1479	12.8427	-0.1422
716	SLE RA 13	0.75	0.34	41.88	1.1419	12.7759	-0.1383
716	SLE RA 14	0.77	0.36	42.48	1.158	12.9537	-0.1449
716	SLE RA 15	0.77	0.35	42.48	1.158	12.9542	-0.1417
716	SLE RA 16	0.76	0.35	42.25	1.1519	12.8865	-0.1431
716	SLE RA 17	0.76	0.34	42.25	1.152	12.8871	-0.1399
716	SLE RA 18	0.76	0.38	42.74	1.1653	13.0401	-0.154
716	SLE RA 19	0.76	0.37	42.74	1.1653	13.0407	-0.1507
716	SLE RA 20	0.76	0.38	43.11	1.1754	13.1516	-0.1534

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
716	SLE RA 21	0.76	0.37	43.12	1.1754	13.1522	-0.1501
716	SLE FR 1	0.72	0.29	38.63	1.0534	11.7847	-0.1217
716	SLE FR 2	0.72	0.29	38.63	1.0534	11.7849	-0.1206
716	SLE FR 3	0.72	0.29	38.78	1.0575	11.8293	-0.1214
716	SLE FR 4	0.73	0.32	39.86	1.087	12.1615	-0.1303
716	SLE FR 5	0.73	0.32	40.01	1.091	12.2059	-0.1311
716	SLE FR 6	0.74	0.34	40.69	1.1094	12.4124	-0.1378
716	SLE QP 1	0.72	0.29	38.63	1.0534	11.7847	-0.1217
716	SLE QP 2	0.73	0.32	39.86	1.087	12.1613	-0.1314
716	SLD 1	3.03	0.99	29.54	0.7921	9.2197	-0.3996
716	SLD 2	3.01	1.52	29.53	0.7909	9.2242	-0.5847
716	SLD 3	3.16	-0.29	29.01	0.8067	9.068	0.0447
716	SLD 4	3.13	0.25	28.99	0.8055	9.0725	-0.1405
716	SLD 5	1.24	2.36	37.58	0.9765	11.5082	-0.8529
716	SLD 6	1.22	2.71	37.57	0.9757	11.5111	-0.974
716	SLD 7	1.65	-1.89	35.8	1.0253	11.0024	0.628
716	SLD 8	1.63	-1.54	35.79	1.0246	11.0053	0.507
716	SLD 9	-0.17	2.18	43.94	1.1494	13.3173	-0.7697
716	SLD 10	-0.19	2.53	43.93	1.1486	13.3202	-0.8908
716	SLD 11	0.23	-2.07	42.16	1.1982	12.8115	0.7112
716	SLD 12	0.22	-1.72	42.14	1.1975	12.8145	0.5902
716	SLD 13	-1.67	0.39	50.74	1.3684	15.2502	-0.1223
716	SLD 14	-1.7	0.93	50.72	1.3672	15.2546	-0.3075
716	SLD 15	-1.55	-0.88	50.2	1.3831	15.0984	0.322
716	SLD 16	-1.58	-0.35	50.18	1.3819	15.1029	0.1368
716	SLV 1	6.12	1.86	15.71	0.3966	5.2746	-0.7478
716	SLV 2	6.06	3.1	15.66	0.3939	5.2851	-1.1791
716	SLV 3	6.41	-1.06	14.45	0.4308	4.9198	0.2661
716	SLV 4	6.34	0.19	14.41	0.4281	4.9303	-0.1653
716	SLV 5	1.93	4.99	34.52	0.8284	10.6316	-1.78
716	SLV 6	1.89	5.78	34.49	0.8267	10.6384	-2.0573
716	SLV 7	2.87	-4.72	30.35	0.9425	9.449	1.5994
716	SLV 8	2.83	-3.92	30.32	0.9408	9.4557	1.3222
716	SLV 9	-1.37	4.57	49.41	1.2332	14.8669	-1.585
716	SLV 10	-1.41	5.36	49.38	1.2314	14.8737	-1.8622
716	SLV 11	-0.43	-5.14	45.23	1.3473	13.6843	1.7945
716	SLV 12	-0.47	-4.35	45.2	1.3456	13.691	1.5173
716	SLV 13	-4.89	0.45	65.32	1.7458	19.3923	-0.0975
716	SLV 14	-4.95	1.7	65.27	1.7431	19.4028	-0.5288
716	SLV 15	-4.6	-2.46	64.07	1.7801	19.0375	0.9164
716	SLV 16	-4.67	-1.22	64.02	1.7774	19.048	0.485
716	CRTFP Ux+	0	0	0	0	0	0
716	CRTFP Ux-	0	0	0	0	0	0
716	CRTFP Uy+	0	0	0	0	0	0
716	CRTFP Uy-	0	0	0	0	0	0
719	SLU 1	1.3	-0.03	74.73	10.8677	-0.3723	-0.1944
719	SLU 2	1.3	-0.07	74.73	10.868	-0.3692	-0.194
719	SLU 3	1.34	-0.02	76.45	11.1175	-0.3793	-0.1998
719	SLU 4	1.34	-0.04	76.45	11.1177	-0.3774	-0.1995
719	SLU 5	1.32	-0.08	75.8	11.0229	-0.3741	-0.1975
719	SLU 6	1.36	-0.03	77.51	11.2723	-0.3842	-0.2033
719	SLU 7	1.36	-0.05	77.52	11.2725	-0.3823	-0.203
719	SLU 8	1.35	-0.04	76.86	11.1774	-0.3821	-0.2014
719	SLU 9	1.35	-0.07	76.86	11.1776	-0.3802	-0.2011
719	SLU 10	1.38	0.05	83.84	12.1903	-0.4105	-0.2052
719	SLU 11	1.42	0.1	85.56	12.4397	-0.4206	-0.211
719	SLU 12	1.42	0.08	85.56	12.4399	-0.4187	-0.2108
719	SLU 13	1.4	0.04	84.91	12.3451	-0.4154	-0.2087
719	SLU 14	1.44	0.09	86.63	12.5946	-0.4255	-0.2145
719	SLU 15	1.44	0.07	86.63	12.5948	-0.4236	-0.2143
719	SLU 16	1.43	0.08	85.97	12.4997	-0.4234	-0.2126
719	SLU 17	1.43	0.05	85.97	12.4999	-0.4215	-0.2124
719	SLU 18	1.42	0.14	87.74	12.7566	-0.4313	-0.2104
719	SLU 19	1.42	0.12	87.75	12.7568	-0.4294	-0.2102
719	SLU 20	1.44	0.13	88.81	12.9115	-0.4362	-0.2139
719	SLU 21	1.44	0.11	88.81	12.9117	-0.4343	-0.2137
719	SLU 22	1.42	0.13	83.67	12.1693	-0.4202	-0.2123
719	SLU 23	1.42	0.08	83.68	12.1697	-0.4171	-0.2118
719	SLU 24	1.46	0.13	85.4	12.4191	-0.4272	-0.2177
719	SLU 25	1.46	0.11	85.4	12.4193	-0.4254	-0.2174
719	SLU 26	1.45	0.08	84.75	12.3245	-0.422	-0.2153
719	SLU 27	1.48	0.13	86.46	12.574	-0.4321	-0.2212
719	SLU 28	1.48	0.1	86.47	12.5742	-0.4303	-0.2209
719	SLU 29	1.47	0.11	85.81	12.4791	-0.4301	-0.2192
719	SLU 30	1.47	0.08	85.81	12.4793	-0.4282	-0.219
719	SLU 31	1.5	0.2	92.79	13.4919	-0.4584	-0.223
719	SLU 32	1.54	0.25	94.51	13.7413	-0.4685	-0.2289
719	SLU 33	1.54	0.23	94.51	13.7415	-0.4667	-0.2286
719	SLU 34	1.53	0.19	93.86	13.6468	-0.4633	-0.2265
719	SLU 35	1.56	0.24	95.57	13.8962	-0.4734	-0.2324
719	SLU 36	1.56	0.22	95.58	13.8964	-0.4716	-0.2321
719	SLU 37	1.55	0.23	94.92	13.8013	-0.4714	-0.2305
719	SLU 38	1.55	0.2	94.92	13.8015	-0.4695	-0.2302
719	SLU 39	1.54	0.29	96.69	14.0583	-0.4792	-0.2283
719	SLU 40	1.54	0.27	96.7	14.0585	-0.4774	-0.228
719	SLU 41	1.56	0.29	97.76	14.2131	-0.4841	-0.2318
719	SLU 42	1.56	0.26	97.76	14.2133	-0.4823	-0.2315
719	SLU 43	1.65	-0.08	94.08	13.6817	-0.4675	-0.2466
719	SLU 44	1.65	-0.13	94.08	13.6821	-0.4644	-0.2462
719	SLU 45	1.69	-0.08	95.8	13.9315	-0.4745	-0.252
719	SLU 46	1.69	-0.1	95.8	13.9317	-0.4727	-0.2517
719	SLU 47	1.67	-0.13	95.15	13.8369	-0.4693	-0.2497
719	SLU 48	1.71	-0.08	96.86	14.0864	-0.4795	-0.2555
719	SLU 49	1.71	-0.11	96.87	14.0866	-0.4776	-0.2552
719	SLU 50	1.7	-0.1	96.21	13.9915	-0.4774	-0.2536
719	SLU 51	1.7	-0.13	96.21	13.9917	-0.4755	-0.2533
719	SLU 52	1.73	-0.01	103.19	15.0043	-0.5057	-0.2574

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
719	SLU 53	1.77	0.04	104.91	15.2537	-0.5158	-0.2632
719	SLU 54	1.77	0.02	104.91	15.2539	-0.514	-0.263
719	SLU 55	1.75	-0.02	104.26	15.1592	-0.5106	-0.2609
719	SLU 56	1.79	0.03	105.98	15.4086	-0.5208	-0.2667
719	SLU 57	1.79	0.01	105.98	15.4088	-0.5189	-0.2665
719	SLU 58	1.78	0.02	105.32	15.3137	-0.5187	-0.2648
719	SLU 59	1.78	-0.01	105.32	15.3139	-0.5168	-0.2646
719	SLU 60	1.77	0.08	107.09	15.5707	-0.5265	-0.2626
719	SLU 61	1.76	0.06	107.1	15.5709	-0.5247	-0.2624
719	SLU 62	1.79	0.08	108.16	15.7255	-0.5314	-0.2661
719	SLU 63	1.79	0.05	108.16	15.7257	-0.5296	-0.2659
719	SLU 64	1.77	0.07	103.02	14.9834	-0.5155	-0.2644
719	SLU 65	1.77	0.02	103.03	14.9837	-0.5124	-0.264
719	SLU 66	1.81	0.07	104.75	15.2331	-0.5225	-0.2699
719	SLU 67	1.81	0.05	104.75	15.2333	-0.5206	-0.2696
719	SLU 68	1.8	0.02	104.1	15.1386	-0.5173	-0.2675
719	SLU 69	1.83	0.07	105.81	15.388	-0.5274	-0.2734
719	SLU 70	1.83	0.04	105.82	15.3882	-0.5255	-0.2731
719	SLU 71	1.82	0.05	105.16	15.2931	-0.5253	-0.2714
719	SLU 72	1.82	0.02	105.16	15.2933	-0.5234	-0.2712
719	SLU 73	1.85	0.14	112.14	16.306	-0.5537	-0.2752
719	SLU 74	1.89	0.19	113.86	16.5554	-0.5638	-0.2811
719	SLU 75	1.89	0.17	113.86	16.5556	-0.5619	-0.2808
719	SLU 76	1.87	0.13	113.21	16.4608	-0.5586	-0.2787
719	SLU 77	1.91	0.18	114.92	16.7102	-0.5687	-0.2846
719	SLU 78	1.91	0.16	114.93	16.7104	-0.5668	-0.2843
719	SLU 79	1.9	0.17	114.27	16.6154	-0.5666	-0.2827
719	SLU 80	1.9	0.14	114.27	16.6155	-0.5647	-0.2824
719	SLU 81	1.89	0.23	116.04	16.8723	-0.5745	-0.2805
719	SLU 82	1.89	0.21	116.05	16.8725	-0.5726	-0.2802
719	SLU 83	1.91	0.23	117.11	17.0272	-0.5794	-0.284
719	SLU 84	1.91	0.2	117.11	17.0274	-0.5775	-0.2837
719	SLE RA 1	1.34	0.02	77.28	11.2396	-0.386	-0.1995
719	SLE RA 2	1.34	-0.01	77.29	11.2398	-0.3839	-0.1992
719	SLE RA 3	1.36	0.02	78.43	11.4061	-0.3907	-0.2031
719	SLE RA 4	1.36	0.01	78.43	11.4062	-0.3894	-0.2029
719	SLE RA 5	1.35	-0.02	78	11.3431	-0.3872	-0.2015
719	SLE RA 6	1.38	0.02	79.14	11.5093	-0.3939	-0.2054
719	SLE RA 7	1.38	0	79.14	11.5095	-0.3927	-0.2053
719	SLE RA 8	1.37	0.01	78.7	11.4461	-0.3925	-0.2042
719	SLE RA 9	1.37	-0.01	78.71	11.4462	-0.3913	-0.204
719	SLE RA 10	1.39	0.07	83.36	12.1213	-0.4114	-0.2067
719	SLE RA 11	1.41	0.1	84.51	12.2876	-0.4182	-0.2106
719	SLE RA 12	1.41	0.08	84.51	12.2877	-0.4169	-0.2104
719	SLE RA 13	1.41	0.06	84.07	12.2246	-0.4147	-0.209
719	SLE RA 14	1.43	0.1	85.22	12.3908	-0.4215	-0.2129
719	SLE RA 15	1.43	0.08	85.22	12.391	-0.4202	-0.2127
719	SLE RA 16	1.42	0.09	84.78	12.3276	-0.4201	-0.2117
719	SLE RA 17	1.42	0.07	84.78	12.3277	-0.4188	-0.2115
719	SLE RA 18	1.41	0.13	85.96	12.4989	-0.4253	-0.2102
719	SLE RA 19	1.41	0.11	85.96	12.499	-0.4241	-0.21
719	SLE RA 20	1.43	0.12	86.67	12.6021	-0.4286	-0.2125
719	SLE RA 21	1.43	0.11	86.67	12.6023	-0.4273	-0.2124
719	SLE FR 1	1.34	0.02	77.28	11.2396	-0.386	-0.1995
719	SLE FR 2	1.34	0.01	77.28	11.2396	-0.3856	-0.1994
719	SLE FR 3	1.34	0.02	77.57	11.2809	-0.3873	-0.2004
719	SLE FR 4	1.36	0.05	79.89	11.6174	-0.3974	-0.2027
719	SLE FR 5	1.37	0.05	80.17	11.6587	-0.3991	-0.2036
719	SLE FR 6	1.38	0.07	81.62	11.8692	-0.4056	-0.2048
719	SLE QP 1	1.34	0.02	77.28	11.2396	-0.386	-0.1995
719	SLE QP 2	1.36	0.05	79.89	11.6174	-0.3978	-0.2027
719	SLD 1	7.37	1.27	73.88	10.7597	-0.2362	-1.0802
719	SLD 2	7.32	1.83	73.82	10.7506	-0.2351	-1.0617
719	SLD 3	7.67	-0.73	73.49	10.6924	-0.2042	-1.126
719	SLD 4	7.61	-0.17	73.43	10.6833	-0.2031	-1.1074
719	SLD 5	2.72	3.36	78.69	11.4638	-0.3981	-0.3999
719	SLD 6	2.69	3.73	78.65	11.4578	-0.3974	-0.3877
719	SLD 7	3.71	-3.32	77.38	11.2394	-0.2913	-0.5523
719	SLD 8	3.68	-2.96	77.34	11.2335	-0.2906	-0.5402
719	SLD 9	-0.96	3.06	82.43	12.0013	-0.505	0.1348
719	SLD 10	-0.99	3.43	82.39	11.9953	-0.5043	0.1469
719	SLD 11	0.03	-3.62	81.12	11.777	-0.3982	-0.0177
719	SLD 12	0	-3.26	81.08	11.771	-0.3975	-0.0056
719	SLD 13	-4.89	0.27	86.35	12.5515	-0.5925	0.702
719	SLD 14	-4.95	0.84	86.28	12.5423	-0.5914	0.7206
719	SLD 15	-4.6	-1.73	85.95	12.4842	-0.5604	0.6563
719	SLD 16	-4.65	-1.17	85.89	12.475	-0.5594	0.6748
719	SLV 1	15.42	2.85	65.83	9.6079	-0.0193	-2.2558
719	SLV 2	15.3	4.16	65.68	9.5866	-0.0168	-2.2126
719	SLV 3	16.11	-1.72	64.92	9.4521	0.0542	-2.3624
719	SLV 4	15.99	-0.41	64.76	9.4308	0.0567	-2.3192
719	SLV 5	4.55	7.59	77.08	11.2545	-0.396	-0.6643
719	SLV 6	4.47	8.43	76.99	11.2408	-0.3944	-0.6366
719	SLV 7	6.86	-7.63	74.03	10.7351	-0.1513	-1.0197
719	SLV 8	6.78	-6.78	73.94	10.7215	-0.1497	-0.9919
719	SLV 9	-4.06	6.89	85.84	12.5133	-0.6459	0.5865
719	SLV 10	-4.14	7.73	85.74	12.4996	-0.6443	0.6143
719	SLV 11	-1.75	-8.33	82.79	11.994	-0.4012	0.2312
719	SLV 12	-1.83	-7.48	82.69	11.9803	-0.3995	0.2589
719	SLV 13	-13.27	0.51	95.01	13.804	-0.8522	1.9138
719	SLV 14	-13.39	1.82	94.86	13.7827	-0.8497	1.957
719	SLV 15	-12.58	-4.05	94.09	13.6482	-0.7788	1.8072
719	SLV 16	-12.7	-2.74	93.94	13.6269	-0.7763	1.8504
719	CRTFP Ux+	0	0	0	0	0	0
719	CRTFP Ux-	0	0	0	0	0	0
719	CRTFP Uy+	0	0	0	0	0	0
719	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
722	SLU 1	0.76	0.32	41.98	-0.0593	11.7819	-0.1099
722	SLU 2	0.76	0.29	41.99	-0.0593	11.7829	-0.1003
722	SLU 3	0.78	0.32	42.98	-0.0609	12.0548	-0.1114
722	SLU 4	0.78	0.31	42.98	-0.0609	12.0554	-0.1057
722	SLU 5	0.78	0.29	42.61	-0.0603	11.9534	-0.0989
722	SLU 6	0.8	0.32	43.6	-0.0619	12.2253	-0.11
722	SLU 7	0.8	0.3	43.61	-0.0619	12.2259	-0.1042
722	SLU 8	0.79	0.31	43.23	-0.0613	12.1229	-0.1071
722	SLU 9	0.79	0.3	43.23	-0.0613	12.1235	-0.1013
722	SLU 10	0.8	0.4	46.82	-0.0669	13.1306	-0.1387
722	SLU 11	0.82	0.43	47.81	-0.0685	13.4025	-0.1498
722	SLU 12	0.82	0.42	47.81	-0.0685	13.4031	-0.1441
722	SLU 13	0.82	0.4	47.44	-0.0679	13.3011	-0.1373
722	SLU 14	0.84	0.43	48.43	-0.0695	13.573	-0.1484
722	SLU 15	0.84	0.41	48.44	-0.0695	13.5736	-0.1427
722	SLU 16	0.83	0.42	48.06	-0.0689	13.4706	-0.1455
722	SLU 17	0.83	0.41	48.06	-0.0689	13.4712	-0.1397
722	SLU 18	0.82	0.48	48.88	-0.0702	13.7072	-0.1648
722	SLU 19	0.82	0.46	48.89	-0.0702	13.7078	-0.159
722	SLU 20	0.83	0.47	49.51	-0.0712	13.8777	-0.1634
722	SLU 21	0.84	0.46	49.51	-0.0712	13.8783	-0.1576
722	SLU 22	0.82	0.43	46.84	-0.0667	13.1323	-0.1471
722	SLU 23	0.83	0.4	46.85	-0.0667	13.1333	-0.1375
722	SLU 24	0.85	0.43	47.84	-0.0683	13.4052	-0.1486
722	SLU 25	0.85	0.41	47.84	-0.0683	13.4058	-0.1429
722	SLU 26	0.84	0.4	47.47	-0.0677	13.3038	-0.1361
722	SLU 27	0.86	0.43	48.46	-0.0692	13.5757	-0.1472
722	SLU 28	0.86	0.41	48.47	-0.0693	13.5763	-0.1415
722	SLU 29	0.85	0.42	48.09	-0.0686	13.4733	-0.1443
722	SLU 30	0.85	0.4	48.09	-0.0687	13.4739	-0.1385
722	SLU 31	0.87	0.51	51.68	-0.0743	14.4811	-0.1759
722	SLU 32	0.89	0.54	52.67	-0.0759	14.7529	-0.187
722	SLU 33	0.89	0.52	52.67	-0.0759	14.7535	-0.1813
722	SLU 34	0.88	0.51	52.3	-0.0753	14.6516	-0.1745
722	SLU 35	0.9	0.54	53.29	-0.0769	14.9234	-0.1856
722	SLU 36	0.9	0.52	53.3	-0.0769	14.924	-0.1799
722	SLU 37	0.9	0.53	52.92	-0.0763	14.821	-0.1827
722	SLU 38	0.9	0.51	52.92	-0.0763	14.8216	-0.1769
722	SLU 39	0.88	0.58	53.74	-0.0776	15.0576	-0.202
722	SLU 40	0.89	0.57	53.75	-0.0776	15.0582	-0.1962
722	SLU 41	0.9	0.58	54.37	-0.0786	15.2281	-0.2006
722	SLU 42	0.9	0.56	54.37	-0.0786	15.2287	-0.1948
722	SLU 43	0.97	0.38	52.91	-0.0745	14.8535	-0.1301
722	SLU 44	0.97	0.35	52.91	-0.0746	14.8545	-0.1205
722	SLU 45	0.99	0.38	53.91	-0.0761	15.1263	-0.1316
722	SLU 46	0.99	0.37	53.91	-0.0761	15.1269	-0.1259
722	SLU 47	0.98	0.35	53.54	-0.0755	15.025	-0.1191
722	SLU 48	1	0.38	54.53	-0.0771	15.2968	-0.1302
722	SLU 49	1	0.36	54.53	-0.0771	15.2974	-0.1245
722	SLU 50	0.99	0.37	54.16	-0.0765	15.1944	-0.1273
722	SLU 51	1	0.35	54.16	-0.0765	15.1951	-0.1215
722	SLU 52	1.01	0.46	57.75	-0.0822	16.2022	-0.1589
722	SLU 53	1.03	0.49	58.74	-0.0837	16.474	-0.17
722	SLU 54	1.03	0.48	58.74	-0.0838	16.4747	-0.1643
722	SLU 55	1.02	0.46	58.37	-0.0832	16.3727	-0.1575
722	SLU 56	1.04	0.49	59.36	-0.0847	16.6445	-0.1686
722	SLU 57	1.04	0.47	59.36	-0.0847	16.6452	-0.1629
722	SLU 58	1.04	0.48	58.99	-0.0841	16.5422	-0.1657
722	SLU 59	1.04	0.46	58.99	-0.0841	16.5428	-0.1599
722	SLU 60	1.03	0.54	59.81	-0.0854	16.7788	-0.185
722	SLU 61	1.03	0.52	59.81	-0.0854	16.7794	-0.1792
722	SLU 62	1.04	0.53	60.43	-0.0864	16.9493	-0.1836
722	SLU 63	1.04	0.52	60.44	-0.0864	16.9499	-0.1778
722	SLU 64	1.03	0.49	57.77	-0.0819	16.2039	-0.1673
722	SLU 65	1.03	0.46	57.78	-0.082	16.2049	-0.1577
722	SLU 66	1.05	0.49	58.77	-0.0835	16.4767	-0.1689
722	SLU 67	1.05	0.47	58.77	-0.0835	16.4774	-0.1631
722	SLU 68	1.05	0.45	58.4	-0.0829	16.3754	-0.1563
722	SLU 69	1.07	0.49	59.39	-0.0845	16.6472	-0.1675
722	SLU 70	1.07	0.47	59.39	-0.0845	16.6479	-0.1617
722	SLU 71	1.06	0.48	59.02	-0.0839	16.5449	-0.1645
722	SLU 72	1.06	0.46	59.02	-0.0839	16.5455	-0.1588
722	SLU 73	1.07	0.57	62.61	-0.0896	17.5526	-0.1961
722	SLU 74	1.09	0.6	63.6	-0.0911	17.8245	-0.2073
722	SLU 75	1.09	0.58	63.6	-0.0911	17.8251	-0.2015
722	SLU 76	1.09	0.56	63.23	-0.0906	17.7231	-0.1947
722	SLU 77	1.11	0.6	64.22	-0.0921	17.995	-0.2059
722	SLU 78	1.11	0.58	64.23	-0.0921	17.9956	-0.2001
722	SLU 79	1.1	0.59	63.85	-0.0915	17.8926	-0.2029
722	SLU 80	1.1	0.57	63.85	-0.0915	17.8932	-0.1972
722	SLU 81	1.09	0.64	64.67	-0.0928	18.1292	-0.2222
722	SLU 82	1.09	0.63	64.67	-0.0928	18.1298	-0.2164
722	SLU 83	1.1	0.64	65.29	-0.0938	18.2997	-0.2208
722	SLU 84	1.11	0.62	65.3	-0.0938	18.3003	-0.215
722	SLE RA 1	0.78	0.35	43.37	-0.0614	12.1677	-0.1205
722	SLE RA 2	0.78	0.33	43.37	-0.0614	12.1684	-0.1141
722	SLE RA 3	0.79	0.35	44.04	-0.0625	12.3496	-0.1216
722	SLE RA 4	0.79	0.34	44.04	-0.0625	12.35	-0.1177
722	SLE RA 5	0.79	0.33	43.79	-0.0621	12.2821	-0.1132
722	SLE RA 6	0.8	0.35	44.45	-0.0631	12.4633	-0.1206
722	SLE RA 7	0.8	0.34	44.45	-0.0631	12.4637	-0.1168
722	SLE RA 8	0.8	0.35	44.2	-0.0627	12.395	-0.1187
722	SLE RA 9	0.8	0.33	44.2	-0.0627	12.3955	-0.1148
722	SLE RA 10	0.81	0.41	46.59	-0.0665	13.0669	-0.1397
722	SLE RA 11	0.82	0.43	47.26	-0.0675	13.2481	-0.1472
722	SLE RA 12	0.82	0.42	47.26	-0.0675	13.2485	-0.1433
722	SLE RA 13	0.82	0.4	47.01	-0.0672	13.1806	-0.1388

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
722	SLE RA 14	0.83	0.42	47.67	-0.0682	13.3618	-0.1462
722	SLE RA 15	0.83	0.41	47.67	-0.0682	13.3622	-0.1424
722	SLE RA 16	0.83	0.42	47.42	-0.0678	13.2935	-0.1443
722	SLE RA 17	0.83	0.41	47.42	-0.0678	13.2939	-0.1404
722	SLE RA 18	0.82	0.46	47.97	-0.0687	13.4513	-0.1571
722	SLE RA 19	0.82	0.44	47.97	-0.0687	13.4517	-0.1533
722	SLE RA 20	0.83	0.45	48.39	-0.0693	13.5649	-0.1562
722	SLE RA 21	0.83	0.44	48.39	-0.0693	13.5653	-0.1523
722	SLE FR 1	0.78	0.35	43.37	-0.0614	12.1677	-0.1205
722	SLE FR 2	0.78	0.35	43.37	-0.0614	12.1679	-0.1193
722	SLE FR 3	0.78	0.35	43.54	-0.0617	12.2132	-0.1202
722	SLE FR 4	0.79	0.38	44.75	-0.0636	12.5529	-0.1302
722	SLE FR 5	0.79	0.38	44.92	-0.0638	12.5982	-0.1311
722	SLE FR 6	0.8	0.4	45.67	-0.065	12.8095	-0.1388
722	SLE QP 1	0.78	0.35	43.37	-0.0614	12.1677	-0.1205
722	SLE QP 2	0.79	0.38	44.75	-0.0636	12.5528	-0.1315
722	SLD 1	3.35	1.16	32.62	-0.0451	9.5337	-0.4013
722	SLD 2	3.29	1.78	32.57	-0.0462	9.5411	-0.6172
722	SLD 3	3.52	-0.32	33.22	-0.0435	9.3736	0.1162
722	SLD 4	3.45	0.3	33.17	-0.0447	9.381	-0.0997
722	SLD 5	1.32	2.76	40.21	-0.0602	11.8886	-0.9591
722	SLD 6	1.28	3.16	40.17	-0.0609	11.8934	-1.1002
722	SLD 7	1.87	-2.19	42.22	-0.055	11.3549	0.7658
722	SLD 8	1.83	-1.78	42.18	-0.0558	11.3597	0.6247
722	SLD 9	-0.25	2.55	47.32	-0.0714	13.7459	-0.8877
722	SLD 10	-0.29	2.95	47.29	-0.0721	13.7507	-1.0288
722	SLD 11	0.3	-2.4	49.33	-0.0662	13.2121	0.8372
722	SLD 12	0.26	-1.99	49.29	-0.067	13.2169	0.6961
722	SLD 13	-1.87	0.47	56.33	-0.0825	15.7246	-0.1633
722	SLD 14	-1.93	1.09	56.28	-0.0836	15.7319	-0.3792
722	SLD 15	-1.71	-1.01	56.93	-0.0809	15.5644	0.3541
722	SLD 16	-1.77	-0.4	56.88	-0.0821	15.5718	0.1383
722	SLV 1	6.78	2.16	16.36	-0.0202	5.4845	-0.7497
722	SLV 2	6.64	3.61	16.24	-0.0229	5.5017	-1.2526
722	SLV 3	7.16	-1.22	17.77	-0.0167	5.1104	0.4311
722	SLV 4	7.02	0.22	17.64	-0.0193	5.1276	-0.0717
722	SLV 5	2.04	5.8	34.12	-0.0555	10.9967	-2.0218
722	SLV 6	1.95	6.73	34.04	-0.0573	11.0077	-2.345
722	SLV 7	3.3	-5.48	38.81	-0.0436	9.7498	1.9144
722	SLV 8	3.21	-4.55	38.73	-0.0453	9.7608	1.5913
722	SLV 9	-1.63	5.32	50.77	-0.0818	15.3447	-1.8543
722	SLV 10	-1.72	6.24	50.69	-0.0835	15.3558	-2.1775
722	SLV 11	-0.37	-5.97	55.46	-0.0699	14.0978	2.082
722	SLV 12	-0.46	-5.04	55.38	-0.0716	14.1089	1.7588
722	SLV 13	-5.44	0.54	71.86	-0.1078	19.9779	-0.1913
722	SLV 14	-5.58	1.99	71.74	-0.1105	19.9951	-0.6942
722	SLV 15	-5.06	-2.84	73.27	-0.1042	19.6039	0.9895
722	SLV 16	-5.2	-1.4	73.14	-0.1069	19.621	0.4867
722	CRTFP Ux+	0	0	0	0	0	0
722	CRTFP Ux-	0	0	0	0	0	0
722	CRTFP Uy+	0	0	0	0	0	0
722	CRTFP Uy-	0	0	0	0	0	0
724	SLU 1	0.53	0.71	101.18	-16.1813	1.3823	0.0176
724	SLU 2	0.52	0.59	101.13	-16.1761	1.3801	0.0173
724	SLU 3	0.54	0.76	103.56	-16.5652	1.421	0.0183
724	SLU 4	0.54	0.69	103.53	-16.5621	1.4197	0.0181
724	SLU 5	0.53	0.6	102.56	-16.4078	1.4022	0.0175
724	SLU 6	0.55	0.77	104.99	-16.7969	1.4431	0.0185
724	SLU 7	0.55	0.7	104.96	-16.7938	1.4417	0.0183
724	SLU 8	0.55	0.73	104.04	-16.6447	1.4264	0.018
724	SLU 9	0.54	0.66	104.01	-16.6416	1.4251	0.0179
724	SLU 10	0.66	0.75	114.49	-18.3051	1.5948	0.0327
724	SLU 11	0.68	0.92	116.92	-18.6943	1.6357	0.0337
724	SLU 12	0.68	0.85	116.89	-18.6912	1.6343	0.0335
724	SLU 13	0.67	0.76	115.92	-18.5368	1.6168	0.0329
724	SLU 14	0.69	0.93	118.35	-18.926	1.6577	0.0339
724	SLU 15	0.69	0.86	118.32	-18.9229	1.6564	0.0337
724	SLU 16	0.69	0.89	117.4	-18.7737	1.6411	0.0334
724	SLU 17	0.68	0.82	117.37	-18.7706	1.6398	0.0332
724	SLU 18	0.73	0.94	120.26	-19.2228	1.689	0.0396
724	SLU 19	0.72	0.87	120.23	-19.2197	1.6877	0.0394
724	SLU 20	0.74	0.95	121.69	-19.4545	1.711	0.0398
724	SLU 21	0.73	0.88	121.66	-19.4514	1.7097	0.0396
724	SLU 22	0.61	1.05	113.67	-18.1643	1.6058	0.0225
724	SLU 23	0.61	0.93	113.62	-18.1591	1.6036	0.0222
724	SLU 24	0.63	1.1	116.05	-18.5483	1.6444	0.0232
724	SLU 25	0.62	1.03	116.02	-18.5452	1.6431	0.023
724	SLU 26	0.62	0.95	115.05	-18.3908	1.6256	0.0225
724	SLU 27	0.64	1.11	117.48	-18.78	1.6665	0.0234
724	SLU 28	0.63	1.04	117.45	-18.7769	1.6652	0.0232
724	SLU 29	0.63	1.08	116.53	-18.6277	1.6499	0.0229
724	SLU 30	0.63	1.01	116.5	-18.6246	1.6486	0.0228
724	SLU 31	0.74	1.09	126.98	-20.2882	1.8182	0.0376
724	SLU 32	0.77	1.26	129.4	-20.6773	1.8591	0.0386
724	SLU 33	0.76	1.19	129.37	-20.6742	1.8578	0.0384
724	SLU 34	0.75	1.11	128.41	-20.5199	1.8403	0.0378
724	SLU 35	0.78	1.27	130.83	-20.909	1.8812	0.0388
724	SLU 36	0.77	1.2	130.81	-20.9059	1.8798	0.0386
724	SLU 37	0.77	1.24	129.88	-20.7568	1.8645	0.0383
724	SLU 38	0.77	1.17	129.86	-20.7537	1.8632	0.0381
724	SLU 39	0.81	1.28	132.75	-21.2058	1.9124	0.0445
724	SLU 40	0.81	1.21	132.72	-21.2027	1.9111	0.0443
724	SLU 41	0.82	1.29	134.18	-21.4375	1.9345	0.0447
724	SLU 42	0.82	1.22	134.15	-21.4344	1.9332	0.0445
724	SLU 43	0.66	0.8	127.25	-20.3557	1.7204	0.0212
724	SLU 44	0.65	0.69	127.21	-20.3506	1.7182	0.0209
724	SLU 45	0.67	0.85	129.63	-20.7397	1.7591	0.0219

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
724	SLU 46	0.67	0.78	129.6	-20.7366	1.7578	0.0217
724	SLU 47	0.66	0.7	128.64	-20.5823	1.7403	0.0211
724	SLU 48	0.68	0.87	131.06	-20.9714	1.7811	0.0221
724	SLU 49	0.68	0.8	131.04	-20.9683	1.7798	0.0219
724	SLU 50	0.68	0.83	130.11	-20.8191	1.7645	0.0216
724	SLU 51	0.67	0.76	130.09	-20.816	1.7632	0.0215
724	SLU 52	0.79	0.84	140.56	-22.4796	1.9329	0.0363
724	SLU 53	0.81	1.01	142.99	-22.8688	1.9737	0.0373
724	SLU 54	0.81	0.94	142.96	-22.8657	1.9724	0.0371
724	SLU 55	0.8	0.86	141.99	-22.7113	1.9549	0.0365
724	SLU 56	0.82	1.02	144.42	-23.1005	1.9958	0.0375
724	SLU 57	0.82	0.95	144.39	-23.0974	1.9945	0.0373
724	SLU 58	0.82	0.99	143.47	-22.9482	1.9792	0.037
724	SLU 59	0.81	0.92	143.44	-22.9451	1.9779	0.0368
724	SLU 60	0.85	1.03	146.33	-23.3973	2.0271	0.0432
724	SLU 61	0.85	0.96	146.3	-23.3941	2.0257	0.043
724	SLU 62	0.86	1.04	147.76	-23.6289	2.0491	0.0434
724	SLU 63	0.86	0.97	147.74	-23.6258	2.0478	0.0432
724	SLU 64	0.74	1.15	139.74	-22.3388	1.9438	0.0261
724	SLU 65	0.74	1.03	139.69	-22.3336	1.9417	0.0258
724	SLU 66	0.76	1.2	142.12	-22.7228	1.9825	0.0268
724	SLU 67	0.75	1.13	142.09	-22.7197	1.9812	0.0266
724	SLU 68	0.75	1.04	141.12	-22.5653	1.9637	0.0261
724	SLU 69	0.77	1.21	143.55	-22.9545	2.0046	0.027
724	SLU 70	0.76	1.14	143.52	-22.9514	2.0033	0.0268
724	SLU 71	0.76	1.17	142.6	-22.8022	1.988	0.0265
724	SLU 72	0.76	1.1	142.57	-22.7991	1.9866	0.0264
724	SLU 73	0.87	1.19	153.05	-24.4627	2.1563	0.0412
724	SLU 74	0.9	1.35	155.48	-24.8518	2.1972	0.0422
724	SLU 75	0.89	1.28	155.45	-24.8487	2.1959	0.042
724	SLU 76	0.88	1.2	154.48	-24.6944	2.1784	0.0414
724	SLU 77	0.91	1.37	156.91	-25.0835	2.2192	0.0424
724	SLU 78	0.9	1.3	156.88	-25.0804	2.2179	0.0422
724	SLU 79	0.9	1.33	155.96	-24.9312	2.2026	0.0419
724	SLU 80	0.9	1.26	155.93	-24.9281	2.2013	0.0417
724	SLU 81	0.94	1.37	158.82	-25.3803	2.2505	0.0481
724	SLU 82	0.94	1.3	158.79	-25.3772	2.2492	0.0479
724	SLU 83	0.95	1.39	160.25	-25.612	2.2726	0.0483
724	SLU 84	0.95	1.32	160.22	-25.6089	2.2713	0.0481
724	SLE RA 1	0.55	0.81	104.75	-16.7479	1.4462	0.019
724	SLE RA 2	0.55	0.73	104.72	-16.7444	1.4447	0.0188
724	SLE RA 3	0.56	0.84	106.33	-17.0038	1.4719	0.0195
724	SLE RA 4	0.56	0.79	106.32	-17.0018	1.4711	0.0193
724	SLE RA 5	0.55	0.74	105.67	-16.8989	1.4594	0.019
724	SLE RA 6	0.57	0.85	107.29	-17.1583	1.4866	0.0196
724	SLE RA 7	0.57	0.8	107.27	-17.1562	1.4858	0.0195
724	SLE RA 8	0.57	0.82	106.66	-17.0568	1.4756	0.0193
724	SLE RA 9	0.56	0.78	106.64	-17.0547	1.4747	0.0192
724	SLE RA 10	0.64	0.83	113.62	-18.1638	1.5878	0.0291
724	SLE RA 11	0.65	0.94	115.24	-18.4232	1.6151	0.0297
724	SLE RA 12	0.65	0.9	115.22	-18.4211	1.6142	0.0296
724	SLE RA 13	0.65	0.84	114.57	-18.3182	1.6025	0.0292
724	SLE RA 14	0.66	0.95	116.19	-18.5777	1.6298	0.0298
724	SLE RA 15	0.66	0.91	116.17	-18.5756	1.6289	0.0297
724	SLE RA 16	0.66	0.93	115.56	-18.4762	1.6187	0.0295
724	SLE RA 17	0.66	0.88	115.54	-18.4741	1.6178	0.0294
724	SLE RA 18	0.68	0.96	117.47	-18.7755	1.6506	0.0337
724	SLE RA 19	0.68	0.91	117.45	-18.7735	1.6497	0.0336
724	SLE RA 20	0.69	0.97	118.42	-18.93	1.6653	0.0338
724	SLE RA 21	0.69	0.92	118.4	-18.9279	1.6644	0.0337
724	SLE FR 1	0.55	0.81	104.75	-16.7479	1.4462	0.019
724	SLE FR 2	0.55	0.79	104.74	-16.7472	1.4459	0.019
724	SLE FR 3	0.55	0.81	105.13	-16.8096	1.452	0.0191
724	SLE FR 4	0.59	0.84	108.56	-17.3555	1.5072	0.0234
724	SLE FR 5	0.59	0.85	108.94	-17.4179	1.5134	0.0235
724	SLE FR 6	0.62	0.88	111.11	-17.7617	1.5484	0.0263
724	SLE QP 1	0.55	0.81	104.75	-16.7479	1.4462	0.019
724	SLE QP 2	0.59	0.85	108.56	-17.3562	1.5075	0.0234
724	SLD 1	9.53	3.33	110.63	-17.5198	1.4115	1.4305
724	SLD 2	9.41	3	110.47	-17.5016	1.4123	1.4277
724	SLD 3	9.99	0.11	110.06	-17.4624	1.3688	1.5002
724	SLD 4	9.86	-0.22	109.91	-17.4441	1.3697	1.4973
724	SLD 5	2.6	6.54	110.07	-17.4955	1.5433	0.3405
724	SLD 6	2.52	6.32	109.97	-17.4836	1.5438	0.3386
724	SLD 7	4.13	-4.2	108.18	-17.3042	1.401	0.5725
724	SLD 8	4.05	-4.42	108.08	-17.2923	1.4015	0.5706
724	SLD 9	-2.86	6.12	109.05	-17.4201	1.6134	-0.5238
724	SLD 10	-2.94	5.9	108.95	-17.4081	1.614	-0.5257
724	SLD 11	-1.34	-4.62	107.15	-17.2287	1.4711	-0.2918
724	SLD 12	-1.42	-4.84	107.05	-17.2168	1.4717	-0.2937
724	SLD 13	-8.68	1.92	107.22	-17.2682	1.6453	-1.4504
724	SLD 14	-8.8	1.59	107.06	-17.2499	1.6461	-1.4533
724	SLD 15	-8.22	-1.3	106.65	-17.2108	1.6026	-1.3808
724	SLD 16	-8.35	-1.63	106.49	-17.1925	1.6035	-1.3837
724	SLV 1	21.5	6.53	113.52	-17.754	1.2806	3.316
724	SLV 2	21.22	5.75	113.15	-17.7116	1.2825	3.3092
724	SLV 3	22.57	-0.76	112.22	-17.6233	1.1838	3.4783
724	SLV 4	22.29	-1.54	111.86	-17.5808	1.1857	3.4715
724	SLV 5	5.29	13.75	112.07	-17.6811	1.5859	0.7662
724	SLV 6	5.11	13.25	111.84	-17.6538	1.5871	0.7618
724	SLV 7	8.86	-10.56	107.77	-17.2453	1.2633	1.3072
724	SLV 8	8.67	-11.06	107.53	-17.218	1.2645	1.3029
724	SLV 9	-7.49	12.76	109.6	-17.4943	1.7505	-1.256
724	SLV 10	-7.67	12.26	109.36	-17.467	1.7517	-1.2604
724	SLV 11	-3.92	-11.55	105.29	-17.0585	1.4279	-0.715
724	SLV 12	-4.11	-12.05	105.06	-17.0312	1.4291	-0.7193
724	SLV 13	-21.1	3.24	105.27	-17.1315	1.8292	-3.4247

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
724	SLV 14	-21.39	2.47	104.9	-17.089	1.8312	-3.4314
724	SLV 15	-20.03	-4.05	103.98	-17.0007	1.7325	-3.2624
724	SLV 16	-20.32	-4.83	103.61	-16.9583	1.7344	-3.2691
724	CRTFP Ux+	0	0	0	0	0	0
724	CRTFP Ux-	0	0	0	0	0	0
724	CRTFP Uy+	0	0	0	0	0	0
724	CRTFP Uy-	0	0	0	0	0	0
727	SLU 1	1.1	2.2	83.87	-11.2081	-2.4299	0.1838
727	SLU 2	1.1	2.13	83.83	-11.2054	-2.4273	0.1819
727	SLU 3	1.14	2.28	85.76	-11.463	-2.4856	0.1894
727	SLU 4	1.13	2.24	85.74	-11.4614	-2.484	0.1883
727	SLU 5	1.12	2.16	84.99	-11.3604	-2.4607	0.1849
727	SLU 6	1.16	2.31	86.91	-11.618	-2.519	0.1925
727	SLU 7	1.16	2.27	86.89	-11.6164	-2.5174	0.1913
727	SLU 8	1.15	2.26	86.18	-11.5181	-2.4968	0.1898
727	SLU 9	1.14	2.22	86.16	-11.5165	-2.4952	0.1887
727	SLU 10	1.24	2.49	94.63	-12.6444	-2.7445	0.2032
727	SLU 11	1.28	2.64	96.56	-12.902	-2.8027	0.2107
727	SLU 12	1.28	2.6	96.53	-12.9004	-2.8011	0.2096
727	SLU 13	1.26	2.52	95.78	-12.7994	-2.7779	0.2062
727	SLU 14	1.31	2.67	97.71	-13.057	-2.8362	0.2137
727	SLU 15	1.3	2.63	97.69	-13.0554	-2.8346	0.2126
727	SLU 16	1.3	2.62	96.98	-12.957	-2.814	0.2111
727	SLU 17	1.29	2.58	96.95	-12.9554	-2.8124	0.21
727	SLU 18	1.31	2.71	99.29	-13.2638	-2.8831	0.2142
727	SLU 19	1.31	2.67	99.27	-13.2622	-2.8815	0.2131
727	SLU 20	1.34	2.74	100.45	-13.4187	-2.9165	0.2172
727	SLU 21	1.33	2.7	100.43	-13.4171	-2.9149	0.2161
727	SLU 22	1.26	2.67	93.86	-12.5298	-2.7401	0.2106
727	SLU 23	1.25	2.6	93.82	-12.5272	-2.7374	0.2087
727	SLU 24	1.3	2.76	95.75	-12.7848	-2.7957	0.2162
727	SLU 25	1.29	2.71	95.73	-12.7832	-2.7941	0.2151
727	SLU 26	1.28	2.64	94.98	-12.6821	-2.7709	0.2117
727	SLU 27	1.32	2.79	96.9	-12.9398	-2.8291	0.2192
727	SLU 28	1.31	2.75	96.88	-12.9381	-2.8275	0.2181
727	SLU 29	1.31	2.74	96.17	-12.8398	-2.8069	0.2166
727	SLU 30	1.3	2.69	96.15	-12.8382	-2.8053	0.2155
727	SLU 31	1.4	2.96	104.62	-13.9661	-3.0546	0.23
727	SLU 32	1.44	3.11	106.55	-14.2237	-3.1129	0.2375
727	SLU 33	1.44	3.07	106.52	-14.2221	-3.1113	0.2364
727	SLU 34	1.42	2.99	105.77	-14.1211	-3.088	0.233
727	SLU 35	1.46	3.14	107.7	-14.3787	-3.1463	0.2405
727	SLU 36	1.46	3.1	107.68	-14.3771	-3.1447	0.2394
727	SLU 37	1.45	3.09	106.97	-14.2788	-3.1241	0.2379
727	SLU 38	1.45	3.05	106.94	-14.2772	-3.1225	0.2368
727	SLU 39	1.47	3.18	109.28	-14.5855	-3.1932	0.241
727	SLU 40	1.46	3.14	109.26	-14.5839	-3.1916	0.2398
727	SLU 41	1.49	3.22	110.44	-14.7405	-3.2266	0.244
727	SLU 42	1.49	3.17	110.42	-14.7389	-3.225	0.2429
727	SLU 43	1.38	2.7	105.6	-14.1174	-3.0526	0.2297
727	SLU 44	1.37	2.63	105.57	-14.1147	-3.0499	0.2279
727	SLU 45	1.42	2.78	107.49	-14.3723	-3.1082	0.2354
727	SLU 46	1.41	2.74	107.47	-14.3707	-3.1066	0.2343
727	SLU 47	1.4	2.66	106.72	-14.2697	-3.0834	0.2309
727	SLU 48	1.44	2.81	108.65	-14.5273	-3.1416	0.2384
727	SLU 49	1.43	2.77	108.63	-14.5257	-3.14	0.2373
727	SLU 50	1.43	2.76	107.91	-14.4273	-3.1194	0.2358
727	SLU 51	1.42	2.72	107.89	-14.4257	-3.1178	0.2347
727	SLU 52	1.52	2.99	116.36	-15.5536	-3.3671	0.2491
727	SLU 53	1.56	3.14	118.29	-15.8113	-3.4254	0.2567
727	SLU 54	1.56	3.1	118.27	-15.8096	-3.4238	0.2555
727	SLU 55	1.54	3.02	117.52	-15.7086	-3.4005	0.2522
727	SLU 56	1.58	3.17	119.45	-15.9662	-3.4588	0.2597
727	SLU 57	1.58	3.13	119.42	-15.9646	-3.4572	0.2586
727	SLU 58	1.57	3.12	118.71	-15.8663	-3.4366	0.2571
727	SLU 59	1.57	3.08	118.69	-15.8647	-3.435	0.256
727	SLU 60	1.59	3.21	121.03	-16.173	-3.5057	0.2601
727	SLU 61	1.58	3.17	121.01	-16.1714	-3.5041	0.259
727	SLU 62	1.61	3.24	122.18	-16.328	-3.5391	0.2632
727	SLU 63	1.61	3.2	122.16	-16.3264	-3.5375	0.262
727	SLU 64	1.54	3.17	115.59	-15.4391	-3.3627	0.2565
727	SLU 65	1.53	3.1	115.56	-15.4364	-3.3601	0.2546
727	SLU 66	1.57	3.25	117.48	-15.694	-3.4183	0.2622
727	SLU 67	1.57	3.21	117.46	-15.6924	-3.4168	0.261
727	SLU 68	1.55	3.13	116.71	-15.5914	-3.3935	0.2577
727	SLU 69	1.6	3.29	118.64	-15.849	-3.4518	0.2652
727	SLU 70	1.59	3.24	118.62	-15.8474	-3.4502	0.2641
727	SLU 71	1.59	3.23	117.9	-15.7491	-3.4296	0.2626
727	SLU 72	1.58	3.19	117.88	-15.7475	-3.428	0.2614
727	SLU 73	1.68	3.46	126.35	-16.8754	-3.6773	0.2759
727	SLU 74	1.72	3.61	128.28	-17.133	-3.7355	0.2834
727	SLU 75	1.71	3.57	128.26	-17.1314	-3.7339	0.2823
727	SLU 76	1.7	3.49	127.51	-17.0304	-3.7107	0.2789
727	SLU 77	1.74	3.64	129.44	-17.288	-3.7689	0.2865
727	SLU 78	1.74	3.6	129.41	-17.2864	-3.7674	0.2854
727	SLU 79	1.73	3.59	128.7	-17.188	-3.7468	0.2839
727	SLU 80	1.73	3.55	128.68	-17.1864	-3.7452	0.2827
727	SLU 81	1.75	3.68	131.02	-17.4948	-3.8158	0.2869
727	SLU 82	1.74	3.64	131	-17.4932	-3.8143	0.2858
727	SLU 83	1.77	3.71	132.17	-17.6498	-3.8493	0.2899
727	SLU 84	1.76	3.67	132.15	-17.6481	-3.8477	0.2888
727	SLE RA 1	1.15	2.34	86.72	-11.5857	-2.5186	0.1914
727	SLE RA 2	1.14	2.29	86.7	-11.584	-2.5168	0.1902
727	SLE RA 3	1.17	2.39	87.98	-11.7557	-2.5556	0.1952
727	SLE RA 4	1.17	2.36	87.97	-11.7546	-2.5546	0.1945
727	SLE RA 5	1.16	2.31	87.47	-11.6873	-2.5391	0.1922
727	SLE RA 6	1.19	2.41	88.75	-11.859	-2.5779	0.1972

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
727	SLE RA 7	1.18	2.38	88.74	-11.8579	-2.5769	0.1965
727	SLE RA 8	1.18	2.38	88.26	-11.7924	-2.5631	0.1955
727	SLE RA 9	1.18	2.35	88.25	-11.7913	-2.5621	0.1947
727	SLE RA 10	1.24	2.53	93.9	-12.5433	-2.7282	0.2044
727	SLE RA 11	1.27	2.63	95.18	-12.715	-2.7671	0.2094
727	SLE RA 12	1.27	2.6	95.17	-12.7139	-2.766	0.2086
727	SLE RA 13	1.26	2.55	94.67	-12.6466	-2.7505	0.2064
727	SLE RA 14	1.28	2.65	95.95	-12.8183	-2.7894	0.2114
727	SLE RA 15	1.28	2.62	95.94	-12.8173	-2.7883	0.2107
727	SLE RA 16	1.28	2.62	95.46	-12.7517	-2.7746	0.2097
727	SLE RA 17	1.27	2.59	95.45	-12.7506	-2.7735	0.2089
727	SLE RA 18	1.29	2.68	97.01	-12.9562	-2.8206	0.2117
727	SLE RA 19	1.28	2.65	96.99	-12.9551	-2.8196	0.2109
727	SLE RA 20	1.3	2.7	97.78	-13.0595	-2.8429	0.2137
727	SLE RA 21	1.3	2.67	97.76	-13.0584	-2.8418	0.213
727	SLE FR 1	1.15	2.34	86.72	-11.5857	-2.5186	0.1914
727	SLE FR 2	1.15	2.33	86.72	-11.5854	-2.5182	0.1912
727	SLE FR 3	1.16	2.34	87.03	-11.6271	-2.5275	0.1922
727	SLE FR 4	1.19	2.43	89.8	-11.9965	-2.6088	0.1973
727	SLE FR 5	1.2	2.45	90.12	-12.0382	-2.6181	0.1983
727	SLE FR 6	1.22	2.51	91.86	-12.271	-2.6696	0.2016
727	SLE QP 1	1.15	2.34	86.72	-11.5857	-2.5186	0.1914
727	SLE QP 2	1.19	2.44	89.81	-11.9969	-2.6092	0.1975
727	SLD 1	9.64	3.29	85.35	-11.5082	-2.0654	1.2874
727	SLD 2	9.53	3.59	85.47	-11.5174	-2.0735	1.2951
727	SLD 3	9.22	0.51	84.83	-11.4716	-2.0061	1.1987
727	SLD 4	9.11	0.82	84.95	-11.4808	-2.0142	1.2065
727	SLD 5	4.38	6.84	89.23	-11.9042	-2.5345	0.6575
727	SLD 6	4.31	7.04	89.31	-11.9103	-2.5398	0.6626
727	SLD 7	2.98	-2.4	87.51	-11.7821	-2.3369	0.3621
727	SLD 8	2.91	-2.2	87.59	-11.7881	-2.3422	0.3671
727	SLD 9	-0.53	7.07	92.03	-12.2057	-2.8761	0.0279
727	SLD 10	-0.6	7.28	92.11	-12.2117	-2.8814	0.033
727	SLD 11	-1.93	-2.17	90.3	-12.0835	-2.6785	-0.2676
727	SLD 12	-2	-1.97	90.38	-12.0895	-2.6838	-0.2625
727	SLD 13	-6.73	4.06	94.67	-12.513	-3.2041	-0.8115
727	SLD 14	-6.84	4.36	94.79	-12.5222	-3.2123	-0.8037
727	SLD 15	-7.15	1.28	94.15	-12.4763	-3.1449	-0.9001
727	SLD 16	-7.26	1.59	94.27	-12.4855	-3.153	-0.8924
727	SLV 1	20.95	4.32	79.35	-10.853	-1.3348	2.7449
727	SLV 2	20.7	5.04	79.63	-10.8745	-1.3537	2.7629
727	SLV 3	19.98	-1.97	78.17	-10.7678	-1.1992	2.5425
727	SLV 4	19.72	-1.26	78.45	-10.7893	-1.2182	2.5606
727	SLV 5	8.64	12.42	88.42	-11.7792	-2.4291	1.2655
727	SLV 6	8.48	12.88	88.6	-11.7931	-2.4413	1.2771
727	SLV 7	5.39	-8.55	84.47	-11.4953	-1.9774	0.591
727	SLV 8	5.23	-8.09	84.65	-11.5091	-1.9896	0.6026
727	SLV 9	-2.85	12.97	94.96	-12.4847	-3.2288	-0.2076
727	SLV 10	-3.01	13.43	95.15	-12.4985	-3.2409	-0.196
727	SLV 11	-6.09	-8.01	91.01	-12.2007	-2.777	-0.8821
727	SLV 12	-6.26	-7.54	91.2	-12.2145	-2.7892	-0.8705
727	SLV 13	-17.34	6.13	101.17	-13.2045	-4.0002	-2.1656
727	SLV 14	-17.59	6.85	101.45	-13.226	-4.0191	-2.1475
727	SLV 15	-18.31	-0.16	99.98	-13.1193	-3.8647	-2.3679
727	SLV 16	-18.57	0.56	100.26	-13.1408	-3.8836	-2.3499
727	CRTFP Ux+	0	0	0	0	0	0
727	CRTFP Ux-	0	0	0	0	0	0
727	CRTFP Uy+	0	0	0	0	0	0
727	CRTFP Uy-	0	0	0	0	0	0
730	SLU 1	0.7	0.32	40.04	-0.0678	10.0839	-0.1119
730	SLU 2	0.7	0.3	40.04	-0.0679	10.0846	-0.1022
730	SLU 3	0.72	0.33	40.99	-0.0696	10.3126	-0.1134
730	SLU 4	0.72	0.31	40.99	-0.0696	10.3131	-0.1076
730	SLU 5	0.72	0.29	40.63	-0.069	10.2277	-0.1008
730	SLU 6	0.74	0.33	41.58	-0.0707	10.4557	-0.112
730	SLU 7	0.74	0.31	41.58	-0.0708	10.4561	-0.1062
730	SLU 8	0.73	0.32	41.22	-0.0701	10.37	-0.1091
730	SLU 9	0.73	0.3	41.22	-0.0701	10.3704	-0.1033
730	SLU 10	0.74	0.41	44.62	-0.0766	11.219	-0.1408
730	SLU 11	0.76	0.44	45.57	-0.0783	11.447	-0.1521
730	SLU 12	0.76	0.42	45.57	-0.0783	11.4475	-0.1462
730	SLU 13	0.75	0.4	45.22	-0.0777	11.3621	-0.1394
730	SLU 14	0.77	0.44	46.16	-0.0794	11.5901	-0.1507
730	SLU 15	0.77	0.42	46.16	-0.0795	11.5905	-0.1449
730	SLU 16	0.77	0.43	45.8	-0.0788	11.5044	-0.1478
730	SLU 17	0.77	0.41	45.81	-0.0788	11.5048	-0.1419
730	SLU 18	0.76	0.48	46.58	-0.0803	11.7044	-0.1671
730	SLU 19	0.76	0.47	46.59	-0.0803	11.7049	-0.1613
730	SLU 20	0.77	0.48	47.17	-0.0814	11.8475	-0.1657
730	SLU 21	0.77	0.46	47.18	-0.0814	11.848	-0.1599
730	SLU 22	0.76	0.43	44.66	-0.0763	11.2216	-0.1493
730	SLU 23	0.76	0.4	44.66	-0.0764	11.2223	-0.1396
730	SLU 24	0.78	0.44	45.6	-0.0781	11.4503	-0.1508
730	SLU 25	0.78	0.42	45.61	-0.0781	11.4508	-0.145
730	SLU 26	0.78	0.4	45.25	-0.0775	11.3654	-0.1382
730	SLU 27	0.79	0.43	46.19	-0.0793	11.5934	-0.1494
730	SLU 28	0.79	0.42	46.2	-0.0793	11.5938	-0.1436
730	SLU 29	0.79	0.42	45.84	-0.0786	11.5077	-0.1465
730	SLU 30	0.79	0.41	45.84	-0.0786	11.5081	-0.1407
730	SLU 31	0.8	0.52	49.24	-0.0851	12.3567	-0.1782
730	SLU 32	0.82	0.55	50.18	-0.0868	12.5847	-0.1895
730	SLU 33	0.82	0.53	50.19	-0.0868	12.5852	-0.1837
730	SLU 34	0.81	0.51	49.83	-0.0862	12.4998	-0.1768
730	SLU 35	0.83	0.54	50.78	-0.088	12.7278	-0.1881
730	SLU 36	0.83	0.53	50.78	-0.088	12.7282	-0.1823
730	SLU 37	0.83	0.54	50.42	-0.0873	12.6421	-0.1852
730	SLU 38	0.83	0.52	50.42	-0.0873	12.6425	-0.1793

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
730	SLU 39	0.81	0.59	51.2	-0.0888	12.8421	-0.2045
730	SLU 40	0.82	0.57	51.2	-0.0888	12.8426	-0.1987
730	SLU 41	0.83	0.59	51.79	-0.0899	12.9852	-0.2031
730	SLU 42	0.83	0.57	51.8	-0.0899	12.9856	-0.1973
730	SLU 43	0.89	0.39	50.47	-0.0853	12.719	-0.1326
730	SLU 44	0.89	0.36	50.47	-0.0853	12.7197	-0.1229
730	SLU 45	0.91	0.39	51.41	-0.0871	12.9477	-0.1341
730	SLU 46	0.91	0.37	51.42	-0.0871	12.9482	-0.1283
730	SLU 47	0.91	0.35	51.06	-0.0864	12.8628	-0.1215
730	SLU 48	0.93	0.39	52.01	-0.0882	13.0908	-0.1328
730	SLU 49	0.93	0.37	52.01	-0.0882	13.0912	-0.1269
730	SLU 50	0.92	0.38	51.65	-0.0875	13.0051	-0.1298
730	SLU 51	0.92	0.36	51.65	-0.0875	13.0055	-0.124
730	SLU 52	0.93	0.47	55.05	-0.094	13.8541	-0.1615
730	SLU 53	0.95	0.5	56	-0.0958	14.0821	-0.1728
730	SLU 54	0.95	0.48	56	-0.0958	14.0826	-0.167
730	SLU 55	0.95	0.46	55.64	-0.0951	13.9972	-0.1602
730	SLU 56	0.96	0.5	56.59	-0.0969	14.2252	-0.1714
730	SLU 57	0.96	0.48	56.59	-0.0969	14.2256	-0.1656
730	SLU 58	0.96	0.49	56.23	-0.0962	14.1395	-0.1685
730	SLU 59	0.96	0.47	56.23	-0.0962	14.1399	-0.1627
730	SLU 60	0.95	0.54	57.01	-0.0977	14.3395	-0.1878
730	SLU 61	0.95	0.53	57.01	-0.0977	14.34	-0.182
730	SLU 62	0.96	0.54	57.6	-0.0988	14.4826	-0.1864
730	SLU 63	0.96	0.52	57.61	-0.0988	14.4831	-0.1806
730	SLU 64	0.95	0.49	55.09	-0.0938	13.8567	-0.17
730	SLU 65	0.95	0.47	55.09	-0.0938	13.8574	-0.1603
730	SLU 66	0.97	0.5	56.03	-0.0956	14.0854	-0.1716
730	SLU 67	0.97	0.48	56.03	-0.0956	14.0859	-0.1657
730	SLU 68	0.97	0.46	55.68	-0.0949	14.0005	-0.1589
730	SLU 69	0.98	0.49	56.62	-0.0967	14.2285	-0.1702
730	SLU 70	0.99	0.48	56.63	-0.0967	14.2289	-0.1643
730	SLU 71	0.98	0.49	56.27	-0.096	14.1428	-0.1673
730	SLU 72	0.98	0.47	56.27	-0.096	14.1432	-0.1614
730	SLU 73	0.99	0.58	59.67	-0.1025	14.9918	-0.199
730	SLU 74	1.01	0.61	60.61	-0.1043	15.2198	-0.2102
730	SLU 75	1.01	0.59	60.62	-0.1043	15.2203	-0.2044
730	SLU 76	1	0.57	60.26	-0.1036	15.1349	-0.1976
730	SLU 77	1.02	0.6	61.2	-0.1054	15.3629	-0.2088
730	SLU 78	1.02	0.59	61.21	-0.1054	15.3633	-0.203
730	SLU 79	1.02	0.6	60.85	-0.1047	15.2772	-0.2059
730	SLU 80	1.02	0.58	60.85	-0.1047	15.2776	-0.2001
730	SLU 81	1	0.65	61.63	-0.1062	15.4772	-0.2253
730	SLU 82	1.01	0.63	61.63	-0.1062	15.4777	-0.2194
730	SLU 83	1.02	0.65	62.22	-0.1073	15.6203	-0.2239
730	SLU 84	1.02	0.63	62.22	-0.1073	15.6207	-0.218
730	SLE RA 1	0.72	0.36	41.36	-0.0703	10.4089	-0.1226
730	SLE RA 2	0.72	0.34	41.36	-0.0703	10.4094	-0.1161
730	SLE RA 3	0.73	0.36	41.99	-0.0715	10.5614	-0.1236
730	SLE RA 4	0.73	0.35	41.99	-0.0715	10.5617	-0.1197
730	SLE RA 5	0.73	0.33	41.76	-0.071	10.5048	-0.1152
730	SLE RA 6	0.74	0.36	42.38	-0.0722	10.6568	-0.1227
730	SLE RA 7	0.74	0.34	42.39	-0.0722	10.6571	-0.1188
730	SLE RA 8	0.74	0.35	42.15	-0.0718	10.5997	-0.1207
730	SLE RA 9	0.74	0.34	42.15	-0.0718	10.6	-0.1168
730	SLE RA 10	0.74	0.41	44.42	-0.0761	11.1657	-0.1419
730	SLE RA 11	0.76	0.43	45.04	-0.0773	11.3177	-0.1494
730	SLE RA 12	0.76	0.42	45.05	-0.0773	11.318	-0.1455
730	SLE RA 13	0.75	0.41	44.81	-0.0768	11.2611	-0.1409
730	SLE RA 14	0.77	0.43	45.44	-0.078	11.4131	-0.1484
730	SLE RA 15	0.77	0.42	45.44	-0.078	11.4134	-0.1446
730	SLE RA 16	0.76	0.42	45.2	-0.0776	11.3559	-0.1465
730	SLE RA 17	0.76	0.41	45.2	-0.0776	11.3562	-0.1426
730	SLE RA 18	0.75	0.46	45.72	-0.0785	11.4893	-0.1594
730	SLE RA 19	0.76	0.45	45.72	-0.0786	11.4896	-0.1555
730	SLE RA 20	0.76	0.46	46.12	-0.0793	11.5847	-0.1585
730	SLE RA 21	0.76	0.45	46.12	-0.0793	11.585	-0.1546
730	SLE FR 1	0.72	0.36	41.36	-0.0703	10.4089	-0.1226
730	SLE FR 2	0.72	0.35	41.36	-0.0703	10.409	-0.1213
730	SLE FR 3	0.72	0.35	41.52	-0.0706	10.4471	-0.1222
730	SLE FR 4	0.73	0.38	42.67	-0.0727	10.7331	-0.1323
730	SLE FR 5	0.73	0.39	42.83	-0.073	10.7712	-0.1332
730	SLE FR 6	0.74	0.41	43.54	-0.0744	10.9491	-0.141
730	SLE QP 1	0.72	0.36	41.36	-0.0703	10.4089	-0.1226
730	SLE QP 2	0.73	0.39	42.67	-0.0727	10.733	-0.1336
730	SLD 1	3.13	1.16	31.18	-0.0516	8.1875	-0.403
730	SLD 2	3.04	1.78	31.09	-0.0529	8.1939	-0.6193
730	SLD 3	3.33	-0.32	31.76	-0.0495	8.0492	0.1152
730	SLD 4	3.23	0.3	31.67	-0.0508	8.0555	-0.1011
730	SLD 5	1.17	2.76	38.36	-0.0694	10.1781	-0.9622
730	SLD 6	1.11	3.17	38.3	-0.0702	10.1823	-1.1035
730	SLD 7	1.82	-2.19	40.29	-0.0623	9.7169	0.7653
730	SLD 8	1.76	-1.78	40.23	-0.0632	9.721	0.6239
730	SLD 9	-0.31	2.56	45.11	-0.0823	11.745	-0.8911
730	SLD 10	-0.37	2.96	45.05	-0.0831	11.7492	-1.0325
730	SLD 11	0.35	-2.39	47.03	-0.0753	11.2838	0.8363
730	SLD 12	0.29	-1.99	46.97	-0.0761	11.288	0.695
730	SLD 13	-1.78	0.48	53.67	-0.0947	13.4106	-0.1662
730	SLD 14	-1.87	1.1	53.58	-0.096	13.4169	-0.3824
730	SLD 15	-1.58	-1.01	54.24	-0.0926	13.2722	0.3521
730	SLD 16	-1.67	-0.39	54.15	-0.0938	13.2785	0.1358
730	SLV 1	6.35	2.17	15.78	-0.0233	4.7732	-0.751
730	SLV 2	6.13	3.61	15.57	-0.0263	4.7879	-1.2547
730	SLV 3	6.8	-1.22	17.13	-0.0184	4.4503	0.4317
730	SLV 4	6.59	0.22	16.92	-0.0214	4.465	-0.0721
730	SLV 5	1.76	5.81	32.59	-0.0648	9.4323	-2.0262
730	SLV 6	1.62	6.74	32.46	-0.0667	9.4418	-2.35

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
730	SLV 7	3.28	-5.49	37.09	-0.0486	8.356	1.916
730	SLV 8	3.14	-4.56	36.95	-0.0505	8.3654	1.5922
730	SLV 9	-1.68	5.33	48.38	-0.095	13.1007	-1.8595
730	SLV 10	-1.82	6.26	48.25	-0.0969	13.1101	-2.1832
730	SLV 11	-0.16	-5.97	52.88	-0.0788	12.0243	2.0827
730	SLV 12	-0.3	-5.04	52.74	-0.0807	12.0338	1.759
730	SLV 13	-5.13	0.55	68.41	-0.1241	17.0011	-0.1952
730	SLV 14	-5.35	2	68.21	-0.127	17.0158	-0.6989
730	SLV 15	-4.68	-2.84	69.76	-0.1192	16.6782	0.9875
730	SLV 16	-4.89	-1.39	69.55	-0.1222	16.6929	0.4838
730	CRTFP Ux+	0	0	0	0	0	0
730	CRTFP Ux-	0	0	0	0	0	0
730	CRTFP Uy+	0	0	0	0	0	0
730	CRTFP Uy-	0	0	0	0	0	0
731	SLU 1	-1.03	-0.03	63.57	-11.4957	-9.781	-0.1833
731	SLU 2	-1.04	-0.18	63.59	-11.499	-9.7911	-0.2211
731	SLU 3	-1.05	-0.02	65.09	-11.7714	-9.9998	-0.185
731	SLU 4	-1.06	-0.11	65.11	-11.7734	-10.0059	-0.2077
731	SLU 5	-1.06	-0.17	64.55	-11.6724	-9.9272	-0.222
731	SLU 6	-1.07	-0.01	66.05	-11.9447	-10.1359	-0.1859
731	SLU 7	-1.08	-0.1	66.06	-11.9467	-10.142	-0.2086
731	SLU 8	-1.06	-0.01	65.49	-11.8424	-10.0532	-0.1851
731	SLU 9	-1.07	-0.1	65.5	-11.8444	-10.0593	-0.2078
731	SLU 10	-1.08	-0.07	70.91	-12.8279	-10.9256	-0.2007
731	SLU 11	-1.09	0.08	72.41	-13.1003	-11.1343	-0.1646
731	SLU 12	-1.1	-0.01	72.43	-13.1022	-11.1404	-0.1873
731	SLU 13	-1.1	-0.06	71.87	-13.0013	-11.0617	-0.2016
731	SLU 14	-1.11	0.09	73.37	-13.2736	-11.2704	-0.1655
731	SLU 15	-1.12	0	73.38	-13.2756	-11.2765	-0.1882
731	SLU 16	-1.1	0.09	72.81	-13.1713	-11.1878	-0.1647
731	SLU 17	-1.11	0	72.82	-13.1733	-11.1938	-0.1874
731	SLU 18	-1.08	0.11	74.03	-13.3941	-11.4017	-0.1541
731	SLU 19	-1.09	0.03	74.04	-13.3961	-11.4078	-0.1768
731	SLU 20	-1.1	0.12	74.99	-13.5675	-11.5379	-0.1551
731	SLU 21	-1.11	0.04	75	-13.5694	-11.5439	-0.1777
731	SLU 22	-1.11	0.1	71	-12.8416	-10.9152	-0.1643
731	SLU 23	-1.12	-0.05	71.01	-12.8449	-10.9253	-0.202
731	SLU 24	-1.13	0.11	72.52	-13.1173	-11.134	-0.166
731	SLU 25	-1.14	0.02	72.53	-13.1192	-11.1401	-0.1886
731	SLU 26	-1.13	-0.04	71.97	-13.0182	-11.0614	-0.2029
731	SLU 27	-1.15	0.11	73.48	-13.2906	-11.2701	-0.1669
731	SLU 28	-1.16	0.03	73.49	-13.2926	-11.2762	-0.1896
731	SLU 29	-1.14	0.11	72.91	-13.1883	-11.1875	-0.1661
731	SLU 30	-1.15	0.03	72.92	-13.1903	-11.1935	-0.1888
731	SLU 31	-1.16	0.05	78.33	-14.1738	-12.0598	-0.1816
731	SLU 32	-1.17	0.21	79.84	-14.4461	-12.2685	-0.1456
731	SLU 33	-1.18	0.12	79.85	-14.4481	-12.2746	-0.1682
731	SLU 34	-1.17	0.06	79.29	-14.3471	-12.196	-0.1825
731	SLU 35	-1.19	0.22	80.8	-14.6195	-12.4046	-0.1465
731	SLU 36	-1.2	0.13	80.81	-14.6214	-12.4107	-0.1692
731	SLU 37	-1.18	0.22	80.23	-14.5171	-12.322	-0.1457
731	SLU 38	-1.19	0.13	80.24	-14.5191	-12.328	-0.1684
731	SLU 39	-1.16	0.24	81.45	-14.74	-12.536	-0.1351
731	SLU 40	-1.17	0.16	81.46	-14.742	-12.542	-0.1578
731	SLU 41	-1.18	0.25	82.41	-14.9133	-12.6721	-0.136
731	SLU 42	-1.19	0.16	82.42	-14.9153	-12.6781	-0.1587
731	SLU 43	-1.31	-0.09	80.1	-14.483	-12.3264	-0.2448
731	SLU 44	-1.32	-0.23	80.12	-14.4863	-12.3365	-0.2826
731	SLU 45	-1.34	-0.07	81.62	-14.7587	-12.5452	-0.2465
731	SLU 46	-1.34	-0.16	81.63	-14.7606	-12.5513	-0.2692
731	SLU 47	-1.34	-0.22	81.07	-14.6597	-12.4727	-0.2835
731	SLU 48	-1.35	-0.07	82.58	-14.932	-12.6813	-0.2474
731	SLU 49	-1.36	-0.15	82.59	-14.934	-12.6874	-0.2701
731	SLU 50	-1.35	-0.07	82.01	-14.8297	-12.5987	-0.2466
731	SLU 51	-1.35	-0.15	82.03	-14.8317	-12.6047	-0.2693
731	SLU 52	-1.36	-0.13	87.44	-15.8152	-13.471	-0.2622
731	SLU 53	-1.38	0.03	88.94	-16.0875	-13.6797	-0.2261
731	SLU 54	-1.38	-0.06	88.95	-16.0895	-13.6858	-0.2488
731	SLU 55	-1.38	-0.12	88.39	-15.9885	-13.6072	-0.2631
731	SLU 56	-1.39	0.04	89.9	-16.2609	-13.8159	-0.227
731	SLU 57	-1.4	-0.05	89.91	-16.2629	-13.8219	-0.2497
731	SLU 58	-1.38	0.03	89.33	-16.1586	-13.7332	-0.2262
731	SLU 59	-1.39	-0.05	89.35	-16.1605	-13.7393	-0.2489
731	SLU 60	-1.37	0.06	90.55	-16.3814	-13.9472	-0.2156
731	SLU 61	-1.37	-0.02	90.57	-16.3834	-13.9532	-0.2383
731	SLU 62	-1.38	0.07	91.51	-16.5547	-14.0833	-0.2166
731	SLU 63	-1.39	-0.02	91.52	-16.5567	-14.0894	-0.2392
731	SLU 64	-1.39	0.04	87.52	-15.8289	-13.4606	-0.2258
731	SLU 65	-1.4	-0.1	87.54	-15.8322	-13.4707	-0.2635
731	SLU 66	-1.41	0.05	89.04	-16.1045	-13.6794	-0.2275
731	SLU 67	-1.42	-0.03	89.06	-16.1065	-13.6855	-0.2501
731	SLU 68	-1.42	-0.09	88.5	-16.0055	-13.6069	-0.2645
731	SLU 69	-1.43	0.06	90	-16.2779	-13.8156	-0.2284
731	SLU 70	-1.44	-0.03	90.01	-16.2798	-13.8216	-0.2511
731	SLU 71	-1.42	0.06	89.44	-16.1755	-13.7329	-0.2276
731	SLU 72	-1.43	-0.03	89.45	-16.1775	-13.7389	-0.2503
731	SLU 73	-1.44	0	94.86	-17.1611	-14.6053	-0.2431
731	SLU 74	-1.45	0.16	96.36	-17.4334	-14.814	-0.2071
731	SLU 75	-1.46	0.07	96.38	-17.4354	-14.82	-0.2297
731	SLU 76	-1.46	0.01	95.82	-17.3344	-14.7414	-0.2441
731	SLU 77	-1.47	0.16	97.32	-17.6067	-14.9501	-0.208
731	SLU 78	-1.48	0.08	97.33	-17.6087	-14.9561	-0.2307
731	SLU 79	-1.46	0.16	96.76	-17.5044	-14.8674	-0.2072
731	SLU 80	-1.47	0.08	96.77	-17.5064	-14.8735	-0.2299
731	SLU 81	-1.44	0.19	97.98	-17.7273	-15.0814	-0.1966
731	SLU 82	-1.45	0.1	97.99	-17.7293	-15.0874	-0.2193
731	SLU 83	-1.46	0.2	98.94	-17.9006	-15.2175	-0.1975

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
731	SLU 84	-1.47	0.11	98.95	-17.9026	-15.2236	-0.2202
731	SLE RA 1	-1.05	0	65.69	-11.8803	-10.1051	-0.1778
731	SLE RA 2	-1.06	-0.09	65.71	-11.8825	-10.1118	-0.203
731	SLE RA 3	-1.07	0.01	66.71	-12.064	-10.2509	-0.179
731	SLE RA 4	-1.07	-0.05	66.72	-12.0654	-10.255	-0.1941
731	SLE RA 5	-1.07	-0.09	66.34	-11.998	-10.2025	-0.2036
731	SLE RA 6	-1.08	0.02	67.35	-12.1796	-10.3417	-0.1796
731	SLE RA 7	-1.08	-0.04	67.35	-12.1809	-10.3457	-0.1947
731	SLE RA 8	-1.07	0.02	66.97	-12.1114	-10.2866	-0.1791
731	SLE RA 9	-1.08	-0.04	66.98	-12.1127	-10.2906	-0.1942
731	SLE RA 10	-1.08	-0.02	70.58	-12.7684	-10.8681	-0.1894
731	SLE RA 11	-1.09	0.08	71.59	-12.95	-11.0073	-0.1654
731	SLE RA 12	-1.1	0.02	71.6	-12.9513	-11.0113	-0.1805
731	SLE RA 13	-1.1	-0.02	71.22	-12.8839	-10.9589	-0.19
731	SLE RA 14	-1.11	0.09	72.23	-13.0655	-11.098	-0.166
731	SLE RA 15	-1.11	0.03	72.23	-13.0668	-11.1021	-0.1811
731	SLE RA 16	-1.1	0.08	71.85	-12.9973	-11.0429	-0.1655
731	SLE RA 17	-1.1	0.03	71.86	-12.9986	-11.0469	-0.1806
731	SLE RA 18	-1.09	0.1	72.66	-13.1459	-11.1856	-0.1584
731	SLE RA 19	-1.09	0.04	72.67	-13.1472	-11.1896	-0.1735
731	SLE RA 20	-1.1	0.11	73.3	-13.2614	-11.2763	-0.159
731	SLE RA 21	-1.1	0.05	73.31	-13.2627	-11.2803	-0.1741
731	SLE FR 1	-1.05	0	65.69	-11.8803	-10.1051	-0.1778
731	SLE FR 2	-1.05	-0.01	65.7	-11.8807	-10.1064	-0.1829
731	SLE FR 3	-1.06	0.01	65.95	-11.9265	-10.1414	-0.1781
731	SLE FR 4	-1.06	0.01	67.79	-12.2604	-10.4306	-0.1771
731	SLE FR 5	-1.07	0.04	68.04	-12.3062	-10.4655	-0.1723
731	SLE FR 6	-1.07	0.05	69.18	-12.5131	-10.6453	-0.1681
731	SLE QP 1	-1.05	0	65.69	-11.8803	-10.1051	-0.1778
731	SLE QP 2	-1.06	0.03	67.78	-12.2599	-10.4292	-0.172
731	SLD 1	3.63	1.05	85.78	-15.535	-13.0688	0.9679
731	SLD 2	3.52	0.13	85.9	-15.5545	-13.1396	0.7208
731	SLD 3	3.36	-1.51	86.71	-15.7043	-13.327	0.2994
731	SLD 4	3.24	-2.43	86.83	-15.7237	-13.3978	0.0524
731	SLD 5	0.79	4.39	71.75	-12.9824	-10.817	1.2275
731	SLD 6	0.71	3.79	71.83	-12.9951	-10.8632	1.066
731	SLD 7	-0.14	-4.15	74.85	-13.5465	-11.6777	-1.0007
731	SLD 8	-0.21	-4.76	74.93	-13.5592	-11.7239	-1.1622
731	SLD 9	-1.91	4.82	60.64	-10.9607	-9.1345	0.8182
731	SLD 10	-1.99	4.22	60.72	-10.9734	-9.1807	0.6567
731	SLD 11	-2.84	-3.72	63.74	-11.5248	-9.9952	-1.41
731	SLD 12	-2.91	-4.32	63.81	-11.5375	-10.0415	-1.5715
731	SLD 13	-5.36	2.5	48.74	-8.7962	-7.4606	-0.3964
731	SLD 14	-5.48	1.58	48.86	-8.8156	-7.5314	-0.6435
731	SLD 15	-5.64	-0.06	49.67	-8.9654	-7.7188	-1.0649
731	SLD 16	-5.76	-0.98	49.79	-8.9849	-7.7896	-1.3119
731	SLV 1	9.92	2.31	109.92	-19.9267	-16.6151	2.4672
731	SLV 2	9.64	0.17	110.19	-19.9719	-16.7799	1.8917
731	SLV 3	9.28	-3.49	112.08	-20.3223	-17.209	0.9549
731	SLV 4	9	-5.63	112.36	-20.3675	-17.3738	0.3794
731	SLV 5	3.25	9.88	77.09	-13.9523	-11.3561	3.012
731	SLV 6	3.08	8.5	77.26	-13.9814	-11.462	2.6422
731	SLV 7	1.11	-9.45	84.32	-15.2708	-13.3356	-2.029
731	SLV 8	0.94	-10.83	84.49	-15.2999	-13.4415	-2.3988
731	SLV 9	-3.06	10.9	51.08	-9.22	-7.4169	2.0548
731	SLV 10	-3.24	9.52	51.25	-9.2491	-7.5229	1.685
731	SLV 11	-5.2	-8.44	58.3	-10.5385	-9.3964	-2.9862
731	SLV 12	-5.38	-9.81	58.48	-10.5676	-9.5023	-3.356
731	SLV 13	-11.13	5.7	23.21	-4.1524	-3.4846	-0.7235
731	SLV 14	-11.4	3.55	23.48	-4.1976	-3.6495	-1.2989
731	SLV 15	-11.77	-0.1	25.38	-4.5479	-4.0785	-2.2358
731	SLV 16	-12.04	-2.24	25.65	-4.5932	-4.2433	-2.8112
731	CRTFP Ux+	0	0	0	0	0	0
731	CRTFP Ux-	0	0	0	0	0	0
731	CRTFP Uy+	0	0	0	0	0	0
731	CRTFP Uy-	0	0	0	0	0	0
734	SLU 1	-1.15	-1.4	106.63	-15.0332	2.0642	-0.1109
734	SLU 2	-1.16	-1.53	106.65	-15.0355	2.0583	-0.1087
734	SLU 3	-1.18	-1.41	109.19	-15.3932	2.1112	-0.1141
734	SLU 4	-1.19	-1.49	109.2	-15.3946	2.1077	-0.1128
734	SLU 5	-1.18	-1.54	108.25	-15.2605	2.0902	-0.111
734	SLU 6	-1.2	-1.42	110.79	-15.6182	2.1432	-0.1165
734	SLU 7	-1.21	-1.5	110.81	-15.6196	2.1396	-0.1151
734	SLU 8	-1.19	-1.42	109.83	-15.4832	2.1281	-0.1156
734	SLU 9	-1.2	-1.5	109.85	-15.4846	2.1246	-0.1143
734	SLU 10	-1.18	-1.57	119.8	-16.8894	2.2931	-0.1072
734	SLU 11	-1.2	-1.45	122.34	-17.2471	2.346	-0.1126
734	SLU 12	-1.21	-1.53	122.36	-17.2485	2.3425	-0.1113
734	SLU 13	-1.2	-1.58	121.41	-17.1144	2.325	-0.1095
734	SLU 14	-1.22	-1.46	123.95	-17.4721	2.378	-0.115
734	SLU 15	-1.23	-1.54	123.96	-17.4735	2.3744	-0.1136
734	SLU 16	-1.21	-1.46	122.99	-17.3371	2.3629	-0.1141
734	SLU 17	-1.22	-1.54	123	-17.3385	2.3594	-0.1128
734	SLU 18	-1.18	-1.45	125.42	-17.6816	2.3997	-0.1088
734	SLU 19	-1.19	-1.53	125.43	-17.683	2.3961	-0.1074
734	SLU 20	-1.2	-1.46	127.02	-17.9066	2.4316	-0.1111
734	SLU 21	-1.21	-1.54	127.03	-17.908	2.428	-0.1098
734	SLU 22	-1.25	-1.35	119.67	-16.8658	2.3076	-0.123
734	SLU 23	-1.26	-1.49	119.69	-16.8682	2.3016	-0.1207
734	SLU 24	-1.28	-1.37	122.23	-17.2259	2.3546	-0.1262
734	SLU 25	-1.28	-1.45	122.24	-17.2273	2.351	-0.1248
734	SLU 26	-1.28	-1.5	121.29	-17.0932	2.3336	-0.1231
734	SLU 27	-1.3	-1.38	123.83	-17.4509	2.3865	-0.1285
734	SLU 28	-1.3	-1.46	123.85	-17.4523	2.383	-0.1272
734	SLU 29	-1.29	-1.38	122.87	-17.3159	2.3715	-0.1277
734	SLU 30	-1.29	-1.46	122.89	-17.3173	2.3679	-0.1263
734	SLU 31	-1.28	-1.52	132.84	-18.7221	2.5364	-0.1192

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
734	SLU 32	-1.3	-1.4	135.38	-19.0798	2.5894	-0.1247
734	SLU 33	-1.3	-1.48	135.4	-19.0812	2.5858	-0.1233
734	SLU 34	-1.3	-1.54	134.45	-18.9471	2.5684	-0.1216
734	SLU 35	-1.32	-1.42	136.99	-19.3048	2.6213	-0.127
734	SLU 36	-1.32	-1.5	137	-19.3062	2.6178	-0.1257
734	SLU 37	-1.31	-1.41	136.03	-19.1698	2.6063	-0.1262
734	SLU 38	-1.31	-1.5	136.04	-19.1712	2.6027	-0.1248
734	SLU 39	-1.27	-1.4	138.46	-19.5143	2.643	-0.1208
734	SLU 40	-1.28	-1.49	138.47	-19.5157	2.6394	-0.1195
734	SLU 41	-1.3	-1.42	140.06	-19.7393	2.6749	-0.1232
734	SLU 42	-1.3	-1.5	140.08	-19.7407	2.6714	-0.1218
734	SLU 43	-1.46	-1.83	134.14	-18.9148	2.6001	-0.1401
734	SLU 44	-1.47	-1.97	134.16	-18.9171	2.5941	-0.1378
734	SLU 45	-1.49	-1.84	136.7	-19.2748	2.6471	-0.1433
734	SLU 46	-1.5	-1.92	136.72	-19.2762	2.6435	-0.1419
734	SLU 47	-1.49	-1.98	135.77	-19.1421	2.6261	-0.1402
734	SLU 48	-1.51	-1.86	138.31	-19.4998	2.679	-0.1456
734	SLU 49	-1.52	-1.94	138.32	-19.5012	2.6755	-0.1443
734	SLU 50	-1.5	-1.86	137.35	-19.3648	2.664	-0.1448
734	SLU 51	-1.51	-1.94	137.36	-19.3662	2.6604	-0.1434
734	SLU 52	-1.49	-2	147.32	-20.771	2.8289	-0.1363
734	SLU 53	-1.51	-1.88	149.86	-21.1287	2.8819	-0.1418
734	SLU 54	-1.52	-1.96	149.87	-21.1301	2.8783	-0.1404
734	SLU 55	-1.51	-2.01	148.92	-20.996	2.8609	-0.1387
734	SLU 56	-1.53	-1.89	151.46	-21.3537	2.9138	-0.1441
734	SLU 57	-1.54	-1.97	151.48	-21.3551	2.9103	-0.1428
734	SLU 58	-1.52	-1.89	150.5	-21.2187	2.8988	-0.1433
734	SLU 59	-1.53	-1.97	150.52	-21.2201	2.8952	-0.1419
734	SLU 60	-1.49	-1.88	152.93	-21.5632	2.9355	-0.1379
734	SLU 61	-1.5	-1.96	152.95	-21.5646	2.9319	-0.1366
734	SLU 62	-1.51	-1.9	154.54	-21.7882	2.9674	-0.1403
734	SLU 63	-1.52	-1.98	154.55	-21.7896	2.9639	-0.1389
734	SLU 64	-1.56	-1.79	147.18	-20.7474	2.8434	-0.1522
734	SLU 65	-1.57	-1.92	147.21	-20.7498	2.8375	-0.1499
734	SLU 66	-1.59	-1.8	149.75	-21.1075	2.8904	-0.1554
734	SLU 67	-1.59	-1.88	149.76	-21.1089	2.8869	-0.154
734	SLU 68	-1.59	-1.93	148.81	-20.9748	2.8694	-0.1522
734	SLU 69	-1.61	-1.81	151.35	-21.3325	2.9224	-0.1577
734	SLU 70	-1.61	-1.89	151.36	-21.3339	2.9188	-0.1563
734	SLU 71	-1.6	-1.81	150.39	-21.1975	2.9073	-0.1568
734	SLU 72	-1.61	-1.89	150.4	-21.1989	2.9037	-0.1555
734	SLU 73	-1.59	-1.96	160.36	-22.6037	3.0723	-0.1484
734	SLU 74	-1.61	-1.84	162.9	-22.9614	3.1252	-0.1538
734	SLU 75	-1.61	-1.92	162.91	-22.9628	3.1217	-0.1525
734	SLU 76	-1.61	-1.97	161.96	-22.8287	3.1042	-0.1507
734	SLU 77	-1.63	-1.85	164.5	-23.1864	3.1572	-0.1562
734	SLU 78	-1.64	-1.93	164.52	-23.1878	3.1536	-0.1548
734	SLU 79	-1.62	-1.85	163.55	-23.0514	3.1421	-0.1553
734	SLU 80	-1.63	-1.93	163.56	-23.0528	3.1385	-0.154
734	SLU 81	-1.59	-1.84	165.97	-23.3959	3.1788	-0.15
734	SLU 82	-1.59	-1.92	165.99	-23.3973	3.1753	-0.1486
734	SLU 83	-1.61	-1.85	167.58	-23.6209	3.2108	-0.1523
734	SLU 84	-1.61	-1.93	167.59	-23.6223	3.2072	-0.151
734	SLE RA 1	-1.18	-1.38	110.35	-15.5568	2.1338	-0.1144
734	SLE RA 2	-1.19	-1.47	110.37	-15.5583	2.1298	-0.1129
734	SLE RA 3	-1.2	-1.39	112.06	-15.7968	2.1651	-0.1165
734	SLE RA 4	-1.2	-1.45	112.07	-15.7978	2.1627	-0.1156
734	SLE RA 5	-1.2	-1.48	111.44	-15.7083	2.1511	-0.1144
734	SLE RA 6	-1.21	-1.4	113.13	-15.9468	2.1864	-0.1181
734	SLE RA 7	-1.21	-1.46	113.14	-15.9478	2.184	-0.1172
734	SLE RA 8	-1.2	-1.4	112.49	-15.8568	2.1764	-0.1175
734	SLE RA 9	-1.21	-1.45	112.5	-15.8577	2.174	-0.1166
734	SLE RA 10	-1.2	-1.5	119.14	-16.7943	2.2863	-0.1119
734	SLE RA 11	-1.21	-1.42	120.83	-17.0328	2.3216	-0.1155
734	SLE RA 12	-1.21	-1.47	120.84	-17.0337	2.3193	-0.1146
734	SLE RA 13	-1.21	-1.51	120.21	-16.9443	2.3076	-0.1134
734	SLE RA 14	-1.22	-1.43	121.9	-17.1828	2.3429	-0.1171
734	SLE RA 15	-1.23	-1.48	121.91	-17.1837	2.3406	-0.1162
734	SLE RA 16	-1.22	-1.43	121.26	-17.0927	2.3329	-0.1165
734	SLE RA 17	-1.22	-1.48	121.27	-17.0937	2.3305	-0.1156
734	SLE RA 18	-1.2	-1.42	122.88	-17.3224	2.3574	-0.1129
734	SLE RA 19	-1.2	-1.47	122.89	-17.3233	2.355	-0.112
734	SLE RA 20	-1.21	-1.43	123.95	-17.4724	2.3787	-0.1145
734	SLE RA 21	-1.21	-1.48	123.96	-17.4733	2.3763	-0.1136
734	SLE FR 1	-1.18	-1.38	110.35	-15.5568	2.1338	-0.1144
734	SLE FR 2	-1.18	-1.4	110.35	-15.5571	2.133	-0.1141
734	SLE FR 3	-1.18	-1.39	110.78	-15.6168	2.1423	-0.115
734	SLE FR 4	-1.18	-1.41	114.11	-16.0868	2.2001	-0.1137
734	SLE FR 5	-1.19	-1.4	114.54	-16.1465	2.2094	-0.1146
734	SLE FR 6	-1.19	-1.4	116.62	-16.4396	2.2456	-0.1137
734	SLE QP 1	-1.18	-1.38	110.35	-15.5568	2.1338	-0.1144
734	SLE QP 2	-1.18	-1.39	114.11	-16.0865	2.2008	-0.114
734	SLD 1	7.36	-0.71	123.23	-17.4772	2.4661	1.1124
734	SLD 2	7.2	-1.43	123.5	-17.5061	2.4786	1.1246
734	SLD 3	7.8	-3.7	122.48	-17.3725	2.3603	1.2019
734	SLD 4	7.65	-4.42	122.76	-17.4013	2.3727	1.214
734	SLD 5	0.73	3.47	117.93	-16.6575	2.4387	0.1161
734	SLD 6	0.63	3	118.11	-16.6763	2.4469	0.124
734	SLD 7	2.22	-6.49	115.44	-16.3083	2.086	0.4144
734	SLD 8	2.11	-6.96	115.62	-16.3272	2.0941	0.4223
734	SLD 9	-4.48	4.17	112.6	-15.8458	2.3076	-0.6502
734	SLD 10	-4.58	3.71	112.78	-15.8646	2.3157	-0.6423
734	SLD 11	-2.99	-5.79	110.11	-15.4966	1.9548	-0.3519
734	SLD 12	-3.1	-6.26	110.29	-15.5155	1.963	-0.344
734	SLD 13	-10.01	1.63	105.46	-14.7716	2.029	-1.442
734	SLD 14	-10.17	0.91	105.74	-14.8004	2.0414	-1.4298
734	SLD 15	-9.57	-1.36	104.72	-14.6668	1.9231	-1.3525

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
734	SLD 16	-9.72	-2.08	104.99	-14.6957	1.9356	-1.3403
734	SLV 1	18.8	0.08	135.44	-19.3396	2.8172	2.7571
734	SLV 2	18.44	-1.58	136.08	-19.4068	2.8462	2.7854
734	SLV 3	19.84	-6.68	133.74	-19.0994	2.5774	2.9629
734	SLV 4	19.47	-8.34	134.38	-19.1665	2.6064	2.9912
734	SLV 5	3.3	9.59	122.98	-17.4152	2.7444	0.4303
734	SLV 6	3.07	8.52	123.39	-17.4584	2.7631	0.4485
734	SLV 7	6.76	-12.95	117.31	-16.6145	1.9452	1.1165
734	SLV 8	6.53	-14.02	117.72	-16.6577	1.9638	1.1347
734	SLV 9	-8.89	11.23	110.5	-15.5153	2.4379	-1.3626
734	SLV 10	-9.12	10.16	110.91	-15.5585	2.4565	-1.3444
734	SLV 11	-5.43	-11.31	104.83	-14.7145	1.6386	-0.6764
734	SLV 12	-5.67	-12.38	105.24	-14.7577	1.6572	-0.6582
734	SLV 13	-21.84	5.56	93.84	-13.0064	1.7953	-3.2191
734	SLV 14	-22.2	3.89	94.48	-13.0736	1.8243	-3.1909
734	SLV 15	-20.8	-1.21	92.14	-12.7662	1.5555	-3.0133
734	SLV 16	-21.16	-2.87	92.78	-12.8333	1.5845	-2.985
734	CRTFP Ux+	0	0	0	0	0	0
734	CRTFP Ux-	0	0	0	0	0	0
734	CRTFP Uy+	0	0	0	0	0	0
734	CRTFP Uy-	0	0	0	0	0	0
737	SLU 1	1.62	0.05	88.99	-8.6501	0.057	0.1445
737	SLU 2	1.61	0	88.98	-8.65	0.0652	0.1447
737	SLU 3	1.66	0.06	91.03	-8.8485	0.0614	0.1484
737	SLU 4	1.66	0.03	91.02	-8.8484	0.0663	0.1485
737	SLU 5	1.64	-0.01	90.25	-8.7731	0.0671	0.1471
737	SLU 6	1.69	0.05	92.29	-8.9716	0.0633	0.1509
737	SLU 7	1.69	0.02	92.29	-8.9716	0.0682	0.151
737	SLU 8	1.68	0.03	91.52	-8.8964	0.0608	0.1494
737	SLU 9	1.67	0	91.52	-8.8963	0.0657	0.1495
737	SLU 10	1.71	0.15	99.74	-9.7003	0.0838	0.1536
737	SLU 11	1.76	0.21	101.78	-9.8988	0.08	0.1573
737	SLU 12	1.76	0.18	101.78	-9.8987	0.0849	0.1574
737	SLU 13	1.74	0.14	101.01	-9.8234	0.0857	0.156
737	SLU 14	1.79	0.2	103.05	-10.022	0.0819	0.1598
737	SLU 15	1.79	0.17	103.04	-10.0219	0.0868	0.1599
737	SLU 16	1.77	0.18	102.28	-9.9467	0.0794	0.1584
737	SLU 17	1.77	0.15	102.28	-9.9466	0.0843	0.1584
737	SLU 18	1.75	0.26	104.36	-10.1506	0.0836	0.1573
737	SLU 19	1.75	0.23	104.36	-10.1505	0.0885	0.1573
737	SLU 20	1.78	0.25	105.63	-10.2737	0.0855	0.1597
737	SLU 21	1.78	0.22	105.62	-10.2736	0.0904	0.1598
737	SLU 22	1.77	0.23	99.66	-9.6862	0.0712	0.1584
737	SLU 23	1.76	0.18	99.65	-9.686	0.0794	0.1585
737	SLU 24	1.81	0.25	101.69	-9.8846	0.0756	0.1623
737	SLU 25	1.81	0.22	101.69	-9.8845	0.0805	0.1623
737	SLU 26	1.79	0.18	100.92	-9.8092	0.0813	0.161
737	SLU 27	1.84	0.24	102.96	-10.0077	0.0775	0.1647
737	SLU 28	1.84	0.21	102.95	-10.0076	0.0824	0.1648
737	SLU 29	1.82	0.22	102.19	-9.9325	0.075	0.1633
737	SLU 30	1.82	0.19	102.18	-9.9324	0.0799	0.1634
737	SLU 31	1.86	0.33	110.41	-10.7363	0.0979	0.1674
737	SLU 32	1.91	0.39	112.45	-10.9349	0.0942	0.1712
737	SLU 33	1.9	0.36	112.45	-10.9348	0.0991	0.1713
737	SLU 34	1.89	0.32	111.67	-10.8595	0.0998	0.1699
737	SLU 35	1.93	0.38	113.72	-11.058	0.0961	0.1736
737	SLU 36	1.93	0.36	113.71	-11.0579	0.101	0.1737
737	SLU 37	1.92	0.37	112.95	-10.9828	0.0936	0.1722
737	SLU 38	1.92	0.34	112.94	-10.9827	0.0985	0.1723
737	SLU 39	1.9	0.45	115.03	-11.1866	0.0978	0.1711
737	SLU 40	1.9	0.42	115.02	-11.1865	0.1026	0.1712
737	SLU 41	1.93	0.44	116.29	-11.3098	0.0997	0.1736
737	SLU 42	1.93	0.41	116.29	-11.3097	0.1045	0.1736
737	SLU 43	2.05	0	112.03	-10.8899	0.0693	0.1831
737	SLU 44	2.05	-0.05	112.02	-10.8898	0.0775	0.1833
737	SLU 45	2.1	0.01	114.07	-11.0883	0.0737	0.187
737	SLU 46	2.1	-0.02	114.06	-11.0882	0.0786	0.1871
737	SLU 47	2.08	-0.06	113.29	-11.0129	0.0794	0.1857
737	SLU 48	2.13	0	115.33	-11.2115	0.0756	0.1895
737	SLU 49	2.13	-0.03	115.33	-11.2114	0.0805	0.1896
737	SLU 50	2.11	-0.02	114.56	-11.1362	0.0731	0.1881
737	SLU 51	2.11	-0.05	114.56	-11.1361	0.078	0.1882
737	SLU 52	2.14	0.09	122.78	-11.9401	0.096	0.1922
737	SLU 53	2.19	0.16	124.83	-12.1386	0.0923	0.196
737	SLU 54	2.19	0.13	124.82	-12.1385	0.0972	0.196
737	SLU 55	2.17	0.09	124.05	-12.0632	0.0979	0.1947
737	SLU 56	2.22	0.15	126.09	-12.2618	0.0942	0.1984
737	SLU 57	2.22	0.12	126.09	-12.2617	0.0991	0.1985
737	SLU 58	2.21	0.13	125.32	-12.1865	0.0917	0.197
737	SLU 59	2.2	0.1	125.32	-12.1865	0.0966	0.1971
737	SLU 60	2.19	0.21	127.4	-12.3904	0.0959	0.1959
737	SLU 61	2.19	0.18	127.4	-12.3903	0.1007	0.196
737	SLU 62	2.22	0.2	128.67	-12.5135	0.0978	0.1983
737	SLU 63	2.22	0.17	128.66	-12.5134	0.1026	0.1984
737	SLU 64	2.2	0.18	122.7	-11.926	0.0835	0.197
737	SLU 65	2.2	0.13	122.69	-11.9258	0.0916	0.1971
737	SLU 66	2.25	0.2	124.73	-12.1244	0.0879	0.2009
737	SLU 67	2.24	0.17	124.73	-12.1243	0.0927	0.201
737	SLU 68	2.23	0.13	123.96	-12.049	0.0935	0.1996
737	SLU 69	2.27	0.19	126	-12.2475	0.0898	0.2033
737	SLU 70	2.27	0.16	125.99	-12.2474	0.0946	0.2034
737	SLU 71	2.26	0.17	125.23	-12.1723	0.0873	0.2019
737	SLU 72	2.26	0.14	125.22	-12.1722	0.0922	0.202
737	SLU 73	2.29	0.28	133.45	-12.9762	0.1102	0.206
737	SLU 74	2.34	0.34	135.49	-13.1747	0.1064	0.2098
737	SLU 75	2.34	0.31	135.49	-13.1746	0.1113	0.2099
737	SLU 76	2.32	0.27	134.72	-13.0993	0.1121	0.2085

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
737	SLU 77	2.37	0.33	136.76	-13.2978	0.1083	0.2122
737	SLU 78	2.37	0.3	136.75	-13.2977	0.1132	0.2123
737	SLU 79	2.35	0.32	135.99	-13.2226	0.1058	0.2108
737	SLU 80	2.35	0.29	135.98	-13.2225	0.1107	0.2109
737	SLU 81	2.34	0.4	138.07	-13.4264	0.11	0.2097
737	SLU 82	2.33	0.37	138.06	-13.4263	0.1149	0.2098
737	SLU 83	2.37	0.39	139.33	-13.5496	0.1119	0.2122
737	SLU 84	2.36	0.36	139.33	-13.5495	0.1168	0.2123
737	SLE RA 1	1.66	0.1	92.04	-8.9461	0.0611	0.1485
737	SLE RA 2	1.66	0.07	92.03	-8.946	0.0665	0.1486
737	SLE RA 3	1.69	0.11	93.4	-9.0784	0.064	0.1511
737	SLE RA 4	1.69	0.09	93.39	-9.0783	0.0673	0.1511
737	SLE RA 5	1.68	0.06	92.88	-9.0281	0.0678	0.1502
737	SLE RA 6	1.71	0.1	94.24	-9.1605	0.0653	0.1527
737	SLE RA 7	1.71	0.08	94.24	-9.1604	0.0685	0.1528
737	SLE RA 8	1.7	0.09	93.73	-9.1103	0.0636	0.1518
737	SLE RA 9	1.7	0.07	93.72	-9.1103	0.0669	0.1518
737	SLE RA 10	1.72	0.17	99.21	-9.6462	0.0789	0.1545
737	SLE RA 11	1.75	0.21	100.57	-9.7786	0.0764	0.157
737	SLE RA 12	1.75	0.19	100.56	-9.7785	0.0797	0.1571
737	SLE RA 13	1.74	0.16	100.05	-9.7283	0.0802	0.1562
737	SLE RA 14	1.77	0.2	101.41	-9.8607	0.0777	0.1587
737	SLE RA 15	1.77	0.18	101.41	-9.8606	0.0809	0.1587
737	SLE RA 16	1.76	0.19	100.9	-9.8105	0.076	0.1577
737	SLE RA 17	1.76	0.17	100.9	-9.8105	0.0793	0.1578
737	SLE RA 18	1.75	0.24	102.29	-9.9464	0.0788	0.157
737	SLE RA 19	1.75	0.22	102.28	-9.9464	0.0821	0.157
737	SLE RA 20	1.77	0.24	103.13	-10.0285	0.0801	0.1586
737	SLE RA 21	1.77	0.22	103.13	-10.0285	0.0833	0.1587
737	SLE FR 1	1.66	0.1	92.04	-8.9461	0.0611	0.1485
737	SLE FR 2	1.66	0.09	92.04	-8.9461	0.0622	0.1485
737	SLE FR 3	1.67	0.1	92.38	-8.979	0.0616	0.1491
737	SLE FR 4	1.69	0.14	95.11	-9.2462	0.0675	0.151
737	SLE FR 5	1.7	0.14	95.45	-9.2791	0.0669	0.1517
737	SLE FR 6	1.71	0.17	97.16	-9.4463	0.0699	0.1527
737	SLE QP 1	1.66	0.1	92.04	-8.9461	0.0611	0.1485
737	SLE QP 2	1.69	0.14	95.11	-9.2462	0.0664	0.151
737	SLD 1	8.84	1.57	88.49	-8.5755	0.1481	0.8768
737	SLD 2	8.68	2.24	88.4	-8.5689	0.1563	0.8779
737	SLD 3	9.21	-0.82	87.66	-8.5113	0.1883	0.8433
737	SLD 4	9.05	-0.15	87.57	-8.5047	0.1965	0.8444
737	SLD 5	3.29	4.08	94.42	-9.1436	0.0284	0.4194
737	SLD 6	3.19	4.51	94.36	-9.1393	0.0338	0.4201
737	SLD 7	4.54	-3.89	91.62	-8.9295	0.1625	0.3077
737	SLD 8	4.44	-3.45	91.56	-8.9252	0.1679	0.3084
737	SLD 9	-1.06	3.74	98.67	-9.5672	-0.0351	-0.0064
737	SLD 10	-1.16	4.17	98.61	-9.5629	-0.0297	-0.0056
737	SLD 11	0.19	-4.23	95.87	-9.3532	0.099	-0.1181
737	SLD 12	0.08	-3.79	95.81	-9.3489	0.1044	-0.1173
737	SLD 13	-5.68	0.43	102.66	-9.9877	-0.0637	-0.5424
737	SLD 14	-5.84	1.1	102.57	-9.9811	-0.0555	-0.5412
737	SLD 15	-5.3	-1.95	101.83	-9.9235	-0.0235	-0.5759
737	SLD 16	-5.46	-1.29	101.73	-9.9169	-0.0152	-0.5747
737	SLV 1	18.41	3.41	79.58	-7.674	0.2585	1.8488
737	SLV 2	18.04	4.97	79.37	-7.6587	0.2776	1.8515
737	SLV 3	19.29	-2.02	77.66	-7.5262	0.3505	1.7708
737	SLV 4	18.92	-0.46	77.45	-7.5108	0.3696	1.7735
737	SLV 5	5.45	9.1	93.4	-9.0014	-0.0187	0.7783
737	SLV 6	5.21	10.11	93.27	-8.9916	-0.0064	0.78
737	SLV 7	8.35	-9.02	87	-8.5086	0.2878	0.5181
737	SLV 8	8.12	-8.02	86.86	-8.4987	0.3001	0.5199
737	SLV 9	-4.74	8.3	103.36	-9.9937	-0.1673	-0.2178
737	SLV 10	-4.98	9.31	103.23	-9.9839	-0.155	-0.2161
737	SLV 11	-1.83	-9.82	96.96	-9.5009	0.1392	-0.4779
737	SLV 12	-2.07	-8.82	96.82	-9.491	0.1515	-0.4762
737	SLV 13	-15.54	0.75	112.78	-10.9816	-0.2368	-1.4714
737	SLV 14	-15.91	2.31	112.57	-10.9663	-0.2176	-1.4687
737	SLV 15	-14.67	-4.69	110.86	-10.8338	-0.1448	-1.5495
737	SLV 16	-15.04	-3.13	110.65	-10.8184	-0.1257	-1.5468
737	CRTFP Ux+	0	0	0	0	0	0
737	CRTFP Ux-	0	0	0	0	0	0
737	CRTFP Uy+	0	0	0	0	0	0
737	CRTFP Uy-	0	0	0	0	0	0
740	SLU 1	0.49	0.48	55.19	-0.0362	0.9973	-0.0187
740	SLU 2	0.48	0.42	55.15	-0.0363	0.9961	-0.0182
740	SLU 3	0.5	0.51	56.46	-0.0375	1.0253	-0.0192
740	SLU 4	0.5	0.47	56.44	-0.0376	1.0246	-0.019
740	SLU 5	0.49	0.42	55.91	-0.0373	1.0119	-0.0187
740	SLU 6	0.51	0.52	57.22	-0.0385	1.0412	-0.0197
740	SLU 7	0.51	0.48	57.2	-0.0385	1.0405	-0.0194
740	SLU 8	0.51	0.5	56.71	-0.0381	1.0291	-0.0196
740	SLU 9	0.5	0.46	56.69	-0.0381	1.0283	-0.0194
740	SLU 10	0.58	0.51	62.47	-0.0406	1.1535	-0.0197
740	SLU 11	0.6	0.61	63.79	-0.0418	1.1827	-0.0207
740	SLU 12	0.59	0.57	63.76	-0.0418	1.182	-0.0204
740	SLU 13	0.59	0.52	63.23	-0.0415	1.1694	-0.0202
740	SLU 14	0.61	0.62	64.55	-0.0427	1.1986	-0.0212
740	SLU 15	0.6	0.58	64.53	-0.0428	1.1979	-0.0209
740	SLU 16	0.6	0.6	64.03	-0.0423	1.1865	-0.0211
740	SLU 17	0.6	0.56	64.01	-0.0424	1.1858	-0.0209
740	SLU 18	0.62	0.62	65.65	-0.0423	1.2222	-0.0208
740	SLU 19	0.62	0.58	65.63	-0.0424	1.2214	-0.0205
740	SLU 20	0.63	0.63	66.41	-0.0432	1.2381	-0.0213
740	SLU 21	0.63	0.59	66.39	-0.0433	1.2373	-0.021
740	SLU 22	0.56	0.68	62.09	-0.0389	1.1549	-0.0214
740	SLU 23	0.55	0.62	62.05	-0.039	1.1536	-0.021
740	SLU 24	0.58	0.71	63.37	-0.0402	1.1829	-0.022

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
740	SLU 25	0.57	0.67	63.34	-0.0402	1.1821	-0.0217
740	SLU 26	0.56	0.62	62.81	-0.0399	1.1695	-0.0215
740	SLU 27	0.59	0.72	64.13	-0.0411	1.1988	-0.0225
740	SLU 28	0.58	0.68	64.1	-0.0412	1.198	-0.0222
740	SLU 29	0.58	0.7	63.61	-0.0407	1.1867	-0.0224
740	SLU 30	0.58	0.66	63.59	-0.0408	1.1859	-0.0221
740	SLU 31	0.65	0.71	69.38	-0.0432	1.3111	-0.0225
740	SLU 32	0.67	0.81	70.69	-0.0444	1.3403	-0.0235
740	SLU 33	0.67	0.77	70.67	-0.0445	1.3396	-0.0232
740	SLU 34	0.66	0.72	70.14	-0.0442	1.3269	-0.0229
740	SLU 35	0.68	0.82	71.45	-0.0453	1.3562	-0.0239
740	SLU 36	0.68	0.78	71.43	-0.0454	1.3555	-0.0237
740	SLU 37	0.68	0.8	70.94	-0.045	1.3441	-0.0239
740	SLU 38	0.67	0.76	70.91	-0.045	1.3433	-0.0236
740	SLU 39	0.7	0.82	72.55	-0.0449	1.3798	-0.0235
740	SLU 40	0.69	0.78	72.53	-0.045	1.379	-0.0233
740	SLU 41	0.71	0.83	73.31	-0.0459	1.3957	-0.024
740	SLU 42	0.7	0.79	73.29	-0.0459	1.3949	-0.0238
740	SLU 43	0.61	0.56	69.38	-0.0462	1.2425	-0.0233
740	SLU 44	0.6	0.49	69.34	-0.0463	1.2412	-0.0229
740	SLU 45	0.62	0.59	70.65	-0.0475	1.2705	-0.0239
740	SLU 46	0.62	0.55	70.63	-0.0476	1.2697	-0.0236
740	SLU 47	0.61	0.5	70.1	-0.0472	1.2571	-0.0234
740	SLU 48	0.63	0.59	71.41	-0.0484	1.2864	-0.0244
740	SLU 49	0.63	0.56	71.39	-0.0485	1.2856	-0.0241
740	SLU 50	0.63	0.57	70.9	-0.048	1.2743	-0.0243
740	SLU 51	0.62	0.53	70.88	-0.0481	1.2735	-0.024
740	SLU 52	0.7	0.59	76.66	-0.0506	1.3986	-0.0244
740	SLU 53	0.72	0.68	77.98	-0.0517	1.4279	-0.0254
740	SLU 54	0.71	0.64	77.95	-0.0518	1.4272	-0.0251
740	SLU 55	0.71	0.6	77.42	-0.0515	1.4145	-0.0248
740	SLU 56	0.73	0.69	78.74	-0.0527	1.4438	-0.0258
740	SLU 57	0.72	0.65	78.71	-0.0527	1.443	-0.0256
740	SLU 58	0.72	0.67	78.22	-0.0523	1.4317	-0.0258
740	SLU 59	0.72	0.63	78.2	-0.0524	1.4309	-0.0255
740	SLU 60	0.74	0.7	79.84	-0.0523	1.4674	-0.0254
740	SLU 61	0.74	0.66	79.82	-0.0523	1.4666	-0.0252
740	SLU 62	0.75	0.7	80.6	-0.0532	1.4833	-0.0259
740	SLU 63	0.75	0.66	80.58	-0.0533	1.4825	-0.0257
740	SLU 64	0.68	0.76	76.28	-0.0488	1.4001	-0.0261
740	SLU 65	0.67	0.69	76.24	-0.0489	1.3988	-0.0256
740	SLU 66	0.7	0.79	77.55	-0.0501	1.4281	-0.0266
740	SLU 67	0.69	0.75	77.53	-0.0502	1.4273	-0.0264
740	SLU 68	0.68	0.7	77	-0.0499	1.4147	-0.0261
740	SLU 69	0.71	0.8	78.32	-0.0511	1.444	-0.0271
740	SLU 70	0.7	0.76	78.29	-0.0511	1.4432	-0.0269
740	SLU 71	0.7	0.77	77.8	-0.0507	1.4319	-0.027
740	SLU 72	0.7	0.73	77.78	-0.0507	1.4311	-0.0268
740	SLU 73	0.77	0.79	83.57	-0.0532	1.5562	-0.0271
740	SLU 74	0.79	0.88	84.88	-0.0544	1.5855	-0.0281
740	SLU 75	0.79	0.85	84.86	-0.0545	1.5847	-0.0278
740	SLU 76	0.78	0.8	84.33	-0.0541	1.5721	-0.0276
740	SLU 77	0.8	0.89	85.64	-0.0553	1.6014	-0.0286
740	SLU 78	0.8	0.85	85.62	-0.0554	1.6006	-0.0283
740	SLU 79	0.8	0.87	85.12	-0.0549	1.5893	-0.0285
740	SLU 80	0.79	0.83	85.1	-0.055	1.5885	-0.0283
740	SLU 81	0.82	0.9	86.74	-0.0549	1.625	-0.0282
740	SLU 82	0.81	0.86	86.72	-0.055	1.6242	-0.0279
740	SLU 83	0.83	0.91	87.5	-0.0558	1.6409	-0.0287
740	SLU 84	0.82	0.87	87.48	-0.0559	1.6401	-0.0284
740	SLE RA 1	0.51	0.54	57.16	-0.037	1.0423	-0.0194
740	SLE RA 2	0.5	0.49	57.13	-0.0371	1.0415	-0.0192
740	SLE RA 3	0.52	0.56	58.01	-0.0379	1.061	-0.0198
740	SLE RA 4	0.51	0.53	57.99	-0.0379	1.0605	-0.0196
740	SLE RA 5	0.51	0.5	57.64	-0.0377	1.0521	-0.0195
740	SLE RA 6	0.52	0.56	58.52	-0.0385	1.0716	-0.0201
740	SLE RA 7	0.52	0.54	58.5	-0.0385	1.0711	-0.02
740	SLE RA 8	0.52	0.55	58.17	-0.0382	1.0635	-0.0201
740	SLE RA 9	0.52	0.52	58.16	-0.0383	1.063	-0.0199
740	SLE RA 10	0.57	0.56	62.02	-0.0399	1.1464	-0.0201
740	SLE RA 11	0.58	0.62	62.89	-0.0407	1.166	-0.0208
740	SLE RA 12	0.58	0.6	62.88	-0.0407	1.1655	-0.0206
740	SLE RA 13	0.57	0.57	62.52	-0.0405	1.157	-0.0205
740	SLE RA 14	0.59	0.63	63.4	-0.0413	1.1766	-0.0211
740	SLE RA 15	0.58	0.6	63.38	-0.0413	1.176	-0.021
740	SLE RA 16	0.59	0.61	63.06	-0.0411	1.1685	-0.0211
740	SLE RA 17	0.58	0.59	63.04	-0.0411	1.168	-0.0209
740	SLE RA 18	0.6	0.63	64.13	-0.041	1.1923	-0.0209
740	SLE RA 19	0.6	0.6	64.12	-0.0411	1.1918	-0.0207
740	SLE RA 20	0.61	0.64	64.64	-0.0416	1.2029	-0.0212
740	SLE RA 21	0.6	0.61	64.63	-0.0417	1.2024	-0.021
740	SLE FR 1	0.51	0.54	57.16	-0.037	1.0423	-0.0194
740	SLE FR 2	0.51	0.53	57.15	-0.037	1.0422	-0.0194
740	SLE FR 3	0.51	0.54	57.36	-0.0372	1.0466	-0.0196
740	SLE FR 4	0.53	0.56	59.25	-0.0382	1.0872	-0.0198
740	SLE FR 5	0.54	0.57	59.45	-0.0384	1.0916	-0.02
740	SLE FR 6	0.55	0.58	60.65	-0.039	1.1173	-0.0202
740	SLE QP 1	0.51	0.54	57.16	-0.037	1.0423	-0.0194
740	SLE QP 2	0.54	0.57	59.25	-0.0382	1.0873	-0.0199
740	SLD 1	5.58	1.99	61.62	-0.0141	1.0063	-0.0242
740	SLD 2	5.46	1.8	61.49	-0.0149	1.006	-0.0167
740	SLD 3	5.85	0.17	61.14	-0.0126	0.9846	-0.0295
740	SLD 4	5.73	-0.02	61	-0.0134	0.9843	-0.022
740	SLD 5	1.66	3.78	60.72	-0.0331	1.0959	-0.0144
740	SLD 6	1.58	3.66	60.63	-0.0336	1.0957	-0.0095
740	SLD 7	2.56	-2.28	59.11	-0.0281	1.0237	-0.0322
740	SLD 8	2.48	-2.4	59.02	-0.0286	1.0235	-0.0272

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
740	SLD 9	-1.41	3.53	59.48	-0.0478	1.1512	-0.0125
740	SLD 10	-1.49	3.41	59.4	-0.0483	1.151	-0.0076
740	SLD 11	-0.51	-2.53	57.87	-0.0428	1.0789	-0.0302
740	SLD 12	-0.59	-2.65	57.79	-0.0433	1.0787	-0.0253
740	SLD 13	-4.66	1.15	57.5	-0.063	1.1904	-0.0178
740	SLD 14	-4.78	0.96	57.37	-0.0638	1.1901	-0.0102
740	SLD 15	-4.39	-0.67	57.02	-0.0615	1.1687	-0.0231
740	SLD 16	-4.51	-0.85	56.89	-0.0623	1.1684	-0.0155
740	SLV 1	12.34	3.82	64.87	0.0187	0.8963	-0.0301
740	SLV 2	12.05	3.38	64.56	0.0169	0.8956	-0.0125
740	SLV 3	12.97	-0.29	63.77	0.0222	0.8469	-0.0424
740	SLV 4	12.68	-0.74	63.47	0.0204	0.8463	-0.0249
740	SLV 5	3.17	7.86	62.65	-0.0262	1.1049	-0.0073
740	SLV 6	2.98	7.57	62.45	-0.0273	1.1045	0.004
740	SLV 7	5.27	-5.86	59	-0.0144	0.9405	-0.0483
740	SLV 8	5.09	-6.14	58.8	-0.0156	0.9401	-0.0371
740	SLV 9	-4.02	7.27	59.7	-0.0608	1.2346	-0.0027
740	SLV 10	-4.2	6.99	59.5	-0.062	1.2341	0.0086
740	SLV 11	-1.91	-6.44	56.05	-0.0491	1.0702	-0.0438
740	SLV 12	-2.1	-6.72	55.85	-0.0503	1.0697	-0.0325
740	SLV 13	-11.61	1.87	55.03	-0.0968	1.3284	-0.0149
740	SLV 14	-11.9	1.43	54.73	-0.0986	1.3277	0.0027
740	SLV 15	-10.98	-2.25	53.94	-0.0933	1.2791	-0.0272
740	SLV 16	-11.27	-2.69	53.63	-0.0951	1.2784	-0.0097
740	CRTFP Ux+	0	0	0	0	0	0
740	CRTFP Ux-	0	0	0	0	0	0
743	SLU 1	0.73	1.45	49.19	-0.0401	-0.328	-0.005
743	SLU 2	0.72	1.4	49.15	-0.0403	-0.3267	-0.0045
743	SLU 3	0.75	1.5	50.28	-0.0414	-0.3364	-0.0051
743	SLU 4	0.75	1.47	50.26	-0.0415	-0.3357	-0.0049
743	SLU 5	0.74	1.42	49.82	-0.041	-0.3318	-0.0048
743	SLU 6	0.77	1.52	50.95	-0.0421	-0.3415	-0.0054
743	SLU 7	0.76	1.49	50.93	-0.0422	-0.3408	-0.0051
743	SLU 8	0.76	1.49	50.53	-0.0415	-0.3382	-0.0054
743	SLU 9	0.76	1.46	50.51	-0.0416	-0.3374	-0.0052
743	SLU 10	0.83	1.63	55.51	-0.0453	-0.3758	-0.0066
743	SLU 11	0.86	1.73	56.63	-0.0464	-0.3856	-0.0072
743	SLU 12	0.86	1.7	56.61	-0.0465	-0.3848	-0.007
743	SLU 13	0.85	1.65	56.18	-0.046	-0.3809	-0.0069
743	SLU 14	0.88	1.75	57.3	-0.0471	-0.3907	-0.0075
743	SLU 15	0.87	1.72	57.28	-0.0472	-0.3899	-0.0072
743	SLU 16	0.87	1.72	56.89	-0.0465	-0.3874	-0.0075
743	SLU 17	0.87	1.69	56.86	-0.0466	-0.3866	-0.0072
743	SLU 18	0.89	1.77	58.27	-0.0473	-0.3982	-0.008
743	SLU 19	0.88	1.75	58.24	-0.0474	-0.3974	-0.0077
743	SLU 20	0.9	1.79	58.94	-0.048	-0.4033	-0.0082
743	SLU 21	0.9	1.77	58.92	-0.0481	-0.4025	-0.0079
743	SLU 22	0.84	1.75	55.16	-0.0425	-0.3834	-0.0065
743	SLU 23	0.84	1.7	55.12	-0.0427	-0.3821	-0.0061
743	SLU 24	0.87	1.8	56.25	-0.0438	-0.3919	-0.0067
743	SLU 25	0.86	1.78	56.23	-0.0439	-0.3911	-0.0064
743	SLU 26	0.85	1.73	55.79	-0.0434	-0.3872	-0.0063
743	SLU 27	0.88	1.82	56.92	-0.0445	-0.397	-0.0069
743	SLU 28	0.88	1.8	56.9	-0.0446	-0.3962	-0.0067
743	SLU 29	0.88	1.79	56.5	-0.0439	-0.3936	-0.007
743	SLU 30	0.87	1.76	56.48	-0.044	-0.3929	-0.0067
743	SLU 31	0.95	1.93	61.48	-0.0477	-0.4313	-0.0082
743	SLU 32	0.98	2.03	62.6	-0.0488	-0.4411	-0.0088
743	SLU 33	0.97	2.01	62.58	-0.0489	-0.4403	-0.0085
743	SLU 34	0.96	1.96	62.15	-0.0484	-0.4364	-0.0084
743	SLU 35	0.99	2.05	63.27	-0.0495	-0.4462	-0.009
743	SLU 36	0.99	2.03	63.25	-0.0496	-0.4454	-0.0088
743	SLU 37	0.99	2.02	62.86	-0.0489	-0.4428	-0.0091
743	SLU 38	0.98	1.99	62.83	-0.049	-0.442	-0.0088
743	SLU 39	1	2.08	64.23	-0.0497	-0.4537	-0.0095
743	SLU 40	1	2.05	64.21	-0.0498	-0.4529	-0.0093
743	SLU 41	1.02	2.1	64.91	-0.0504	-0.4588	-0.0097
743	SLU 42	1.01	2.07	64.88	-0.0505	-0.458	-0.0095
743	SLU 43	0.91	1.78	61.9	-0.0514	-0.4073	-0.0059
743	SLU 44	0.9	1.73	61.86	-0.0515	-0.406	-0.0055
743	SLU 45	0.93	1.83	62.99	-0.0526	-0.4158	-0.0061
743	SLU 46	0.93	1.8	62.97	-0.0527	-0.415	-0.0058
743	SLU 47	0.92	1.75	62.53	-0.0522	-0.4111	-0.0057
743	SLU 48	0.95	1.85	63.66	-0.0533	-0.4209	-0.0063
743	SLU 49	0.95	1.82	63.64	-0.0534	-0.4201	-0.0061
743	SLU 50	0.94	1.82	63.24	-0.0527	-0.4175	-0.0064
743	SLU 51	0.94	1.79	63.22	-0.0528	-0.4168	-0.0061
743	SLU 52	1.01	1.96	68.22	-0.0565	-0.4552	-0.0076
743	SLU 53	1.04	2.06	69.34	-0.0576	-0.465	-0.0082
743	SLU 54	1.04	2.03	69.32	-0.0577	-0.4642	-0.0079
743	SLU 55	1.03	1.98	68.89	-0.0572	-0.4603	-0.0078
743	SLU 56	1.06	2.08	70.01	-0.0583	-0.4701	-0.0084
743	SLU 57	1.06	2.05	69.99	-0.0584	-0.4693	-0.0081
743	SLU 58	1.05	2.05	69.6	-0.0577	-0.4667	-0.0085
743	SLU 59	1.05	2.02	69.57	-0.0578	-0.4659	-0.0082
743	SLU 60	1.07	2.1	70.97	-0.0585	-0.4776	-0.0089
743	SLU 61	1.06	2.08	70.95	-0.0586	-0.4768	-0.0087
743	SLU 62	1.08	2.12	71.65	-0.0592	-0.4827	-0.0091
743	SLU 63	1.08	2.1	71.63	-0.0593	-0.4819	-0.0089
743	SLU 64	1.02	2.08	67.87	-0.0538	-0.4628	-0.0075
743	SLU 65	1.02	2.03	67.83	-0.0539	-0.4615	-0.007
743	SLU 66	1.05	2.13	68.96	-0.055	-0.4713	-0.0076
743	SLU 67	1.04	2.1	68.94	-0.0551	-0.4705	-0.0074
743	SLU 68	1.03	2.06	68.5	-0.0546	-0.4666	-0.0073
743	SLU 69	1.06	2.15	69.63	-0.0557	-0.4764	-0.0079
743	SLU 70	1.06	2.13	69.61	-0.0558	-0.4756	-0.0076
743	SLU 71	1.06	2.12	69.21	-0.0551	-0.473	-0.0079

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
743	SLU 72	1.05	2.09	69.19	-0.0552	-0.4722	-0.0077
743	SLU 73	1.13	2.26	74.19	-0.0589	-0.5107	-0.0091
743	SLU 74	1.16	2.36	75.31	-0.06	-0.5204	-0.0097
743	SLU 75	1.15	2.34	75.29	-0.0601	-0.5197	-0.0095
743	SLU 76	1.14	2.29	74.86	-0.0596	-0.5158	-0.0094
743	SLU 77	1.17	2.38	75.98	-0.0607	-0.5256	-0.01
743	SLU 78	1.17	2.36	75.96	-0.0608	-0.5248	-0.0097
743	SLU 79	1.17	2.35	75.56	-0.0601	-0.5222	-0.01
743	SLU 80	1.16	2.32	75.54	-0.0602	-0.5214	-0.0098
743	SLU 81	1.18	2.41	76.94	-0.0609	-0.533	-0.0105
743	SLU 82	1.18	2.38	76.92	-0.061	-0.5323	-0.0102
743	SLU 83	1.2	2.43	77.62	-0.0616	-0.5382	-0.0107
743	SLU 84	1.19	2.4	77.59	-0.0617	-0.5374	-0.0104
743	SLE RA 1	0.76	1.53	50.89	-0.0408	-0.3438	-0.0054
743	SLE RA 2	0.76	1.5	50.87	-0.0409	-0.3429	-0.0051
743	SLE RA 3	0.78	1.57	51.62	-0.0417	-0.3495	-0.0055
743	SLE RA 4	0.78	1.55	51.61	-0.0417	-0.3489	-0.0054
743	SLE RA 5	0.77	1.52	51.32	-0.0414	-0.3463	-0.0053
743	SLE RA 6	0.79	1.58	52.07	-0.0421	-0.3529	-0.0057
743	SLE RA 7	0.79	1.56	52.05	-0.0422	-0.3523	-0.0055
743	SLE RA 8	0.78	1.56	51.79	-0.0417	-0.3506	-0.0057
743	SLE RA 9	0.78	1.54	51.78	-0.0418	-0.3501	-0.0055
743	SLE RA 10	0.83	1.66	55.11	-0.0443	-0.3757	-0.0065
743	SLE RA 11	0.85	1.72	55.86	-0.045	-0.3822	-0.0069
743	SLE RA 12	0.85	1.7	55.84	-0.0451	-0.3817	-0.0067
743	SLE RA 13	0.84	1.67	55.55	-0.0447	-0.3791	-0.0067
743	SLE RA 14	0.86	1.73	56.3	-0.0454	-0.3856	-0.0071
743	SLE RA 15	0.86	1.72	56.29	-0.0455	-0.3851	-0.0069
743	SLE RA 16	0.86	1.71	56.03	-0.0451	-0.3834	-0.0071
743	SLE RA 17	0.85	1.7	56.01	-0.0451	-0.3829	-0.0069
743	SLE RA 18	0.87	1.75	56.94	-0.0456	-0.3906	-0.0074
743	SLE RA 19	0.86	1.73	56.93	-0.0456	-0.3901	-0.0072
743	SLE RA 20	0.88	1.76	57.39	-0.046	-0.394	-0.0076
743	SLE RA 21	0.88	1.75	57.38	-0.0461	-0.3935	-0.0074
743	SLE FR 1	0.76	1.53	50.89	-0.0408	-0.3438	-0.0054
743	SLE FR 2	0.76	1.53	50.89	-0.0409	-0.3436	-0.0053
743	SLE FR 3	0.77	1.54	51.07	-0.041	-0.3452	-0.0055
743	SLE FR 4	0.79	1.59	52.7	-0.0423	-0.3577	-0.0059
743	SLE FR 5	0.8	1.6	52.89	-0.0424	-0.3592	-0.0061
743	SLE FR 6	0.82	1.64	53.92	-0.0432	-0.3672	-0.0064
743	SLE QP 1	0.76	1.53	50.89	-0.0408	-0.3438	-0.0054
743	SLE QP 2	0.79	1.6	52.71	-0.0423	-0.3579	-0.006
743	SLD 1	6.07	2.12	49.15	-0.0608	-0.0393	-0.015
743	SLD 2	5.95	2.31	49.26	-0.0603	-0.0444	-0.0072
743	SLD 3	5.8	0.41	48.58	-0.0637	-0.008	-0.0202
743	SLD 4	5.68	0.6	48.7	-0.0632	-0.0132	-0.0124
743	SLD 5	2.81	4.32	52.47	-0.0435	-0.3088	-0.0022
743	SLD 6	2.74	4.44	52.55	-0.0432	-0.3122	0.0029
743	SLD 7	1.9	-1.39	50.6	-0.0532	-0.2046	-0.0196
743	SLD 8	1.82	-1.27	50.67	-0.0529	-0.2079	-0.0145
743	SLD 9	-0.23	4.46	54.75	-0.0316	-0.5078	0.0025
743	SLD 10	-0.31	4.59	54.82	-0.0313	-0.5112	0.0076
743	SLD 11	-1.15	-1.25	52.87	-0.0413	-0.4035	-0.015
743	SLD 12	-1.22	-1.12	52.94	-0.041	-0.4069	-0.0099
743	SLD 13	-4.09	2.6	56.72	-0.0213	-0.7026	0.0004
743	SLD 14	-4.21	2.79	56.84	-0.0208	-0.7077	0.0082
743	SLD 15	-4.36	0.89	56.16	-0.0242	-0.6713	-0.0048
743	SLD 16	-4.48	1.08	56.27	-0.0237	-0.6764	0.003
743	SLV 1	13.14	2.76	44.35	-0.0858	0.3887	-0.027
743	SLV 2	12.86	3.2	44.62	-0.0846	0.3767	-0.0089
743	SLV 3	12.5	-1.13	43.07	-0.0924	0.4603	-0.0393
743	SLV 4	12.22	-0.69	43.34	-0.0913	0.4484	-0.0211
743	SLV 5	5.51	7.76	52.1	-0.0454	-0.2405	0.0031
743	SLV 6	5.33	8.05	52.28	-0.0447	-0.2482	0.0148
743	SLV 7	3.39	-5.19	47.83	-0.0676	-0.0017	-0.0376
743	SLV 8	3.21	-4.91	48	-0.0669	-0.0094	-0.026
743	SLV 9	-1.62	8.1	57.42	-0.0176	-0.7064	0.014
743	SLV 10	-1.8	8.39	57.59	-0.0169	-0.714	0.0256
743	SLV 11	-3.74	-4.85	53.14	-0.0398	-0.4675	-0.0268
743	SLV 12	-3.92	-4.57	53.32	-0.0391	-0.4752	-0.0151
743	SLV 13	-10.64	3.89	62.08	0.0068	-1.1641	0.0091
743	SLV 14	-10.91	4.33	62.35	0.0079	-1.176	0.0273
743	SLV 15	-11.27	0	60.79	0.0001	-1.0925	-0.0031
743	SLV 16	-11.55	0.44	61.06	0.0013	-1.1044	0.015
743	CRTFP Ux+	0	0	0	0	0	0
743	CRTFP Ux-	0	0	0	0	0	0
745	SLU 1	-0.59	0.01	31.94	-0.0358	-3.1996	0.0023
745	SLU 2	-0.59	-0.07	31.95	-0.0358	-3.2041	-0.0169
745	SLU 3	-0.6	0.01	32.71	-0.0367	-3.2643	0.0039
745	SLU 4	-0.6	-0.03	32.71	-0.0367	-3.2671	-0.0077
745	SLU 5	-0.6	-0.07	32.44	-0.0363	-3.2441	-0.0157
745	SLU 6	-0.61	0.02	33.19	-0.0373	-3.3044	0.0051
745	SLU 7	-0.61	-0.03	33.2	-0.0373	-3.3071	-0.0065
745	SLU 8	-0.61	0.02	32.91	-0.0369	-3.2796	0.0048
745	SLU 9	-0.61	-0.03	32.91	-0.0369	-3.2823	-0.0068
745	SLU 10	-0.62	-0.01	35.6	-0.0406	-3.5607	-0.0024
745	SLU 11	-0.63	0.07	36.35	-0.0415	-3.621	0.0184
745	SLU 12	-0.64	0.02	36.36	-0.0415	-3.6237	0.0068
745	SLU 13	-0.63	-0.01	36.08	-0.0412	-3.6007	-0.0012
745	SLU 14	-0.64	0.07	36.83	-0.0421	-3.661	0.0196
745	SLU 15	-0.65	0.03	36.84	-0.0421	-3.6637	0.0081
745	SLU 16	-0.64	0.07	36.55	-0.0417	-3.6362	0.0193
745	SLU 17	-0.64	0.03	36.56	-0.0417	-3.6389	0.0078
745	SLU 18	-0.63	0.09	37.15	-0.0427	-3.709	0.0231
745	SLU 19	-0.64	0.04	37.16	-0.0427	-3.7118	0.0115
745	SLU 20	-0.64	0.09	37.63	-0.0432	-3.7491	0.0243
745	SLU 21	-0.64	0.05	37.64	-0.0432	-3.7518	0.0128

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
745	SLU 22	-0.64	0.08	35.65	-0.0405	-3.5535	0.02
745	SLU 23	-0.64	0	35.66	-0.0404	-3.558	0.0007
745	SLU 24	-0.65	0.08	36.42	-0.0414	-3.6183	0.0215
745	SLU 25	-0.65	0.04	36.42	-0.0413	-3.621	0.01
745	SLU 26	-0.65	0	36.14	-0.041	-3.598	0.002
745	SLU 27	-0.66	0.09	36.9	-0.0419	-3.6583	0.0227
745	SLU 28	-0.66	0.04	36.9	-0.0419	-3.661	0.0112
745	SLU 29	-0.65	0.09	36.61	-0.0416	-3.6335	0.0224
745	SLU 30	-0.66	0.04	36.62	-0.0416	-3.6362	0.0109
745	SLU 31	-0.67	0.06	39.31	-0.0452	-3.9146	0.0153
745	SLU 32	-0.68	0.14	40.06	-0.0462	-3.9749	0.036
745	SLU 33	-0.68	0.09	40.07	-0.0462	-3.9776	0.0245
745	SLU 34	-0.68	0.06	39.79	-0.0458	-3.9546	0.0165
745	SLU 35	-0.69	0.14	40.54	-0.0467	-4.0149	0.0373
745	SLU 36	-0.69	0.1	40.55	-0.0467	-4.0176	0.0257
745	SLU 37	-0.69	0.14	40.26	-0.0464	-3.9901	0.037
745	SLU 38	-0.69	0.1	40.26	-0.0464	-3.9929	0.0254
745	SLU 39	-0.68	0.16	40.86	-0.0473	-4.063	0.0407
745	SLU 40	-0.68	0.11	40.86	-0.0473	-4.0657	0.0292
745	SLU 41	-0.69	0.16	41.34	-0.0479	-4.103	0.042
745	SLU 42	-0.69	0.12	41.35	-0.0479	-4.1057	0.0304
745	SLU 43	-0.74	-0.02	40.26	-0.045	-4.0381	-0.003
745	SLU 44	-0.75	-0.09	40.27	-0.0449	-4.0426	-0.0223
745	SLU 45	-0.76	-0.01	41.02	-0.0459	-4.1029	-0.0015
745	SLU 46	-0.76	-0.06	41.03	-0.0459	-4.1056	-0.013
745	SLU 47	-0.76	-0.09	40.75	-0.0455	-4.0826	-0.0211
745	SLU 48	-0.77	-0.01	41.5	-0.0464	-4.1429	-0.0003
745	SLU 49	-0.77	-0.05	41.51	-0.0464	-4.1456	-0.0118
745	SLU 50	-0.76	-0.01	41.22	-0.0461	-4.1181	-0.0006
745	SLU 51	-0.77	-0.05	41.23	-0.0461	-4.1208	-0.0121
745	SLU 52	-0.78	-0.04	43.91	-0.0497	-4.3993	-0.0078
745	SLU 53	-0.79	0.05	44.67	-0.0507	-4.4595	0.013
745	SLU 54	-0.79	0	44.67	-0.0507	-4.4622	0.0015
745	SLU 55	-0.79	-0.03	44.39	-0.0503	-4.4393	-0.0065
745	SLU 56	-0.8	0.05	45.15	-0.0512	-4.4995	0.0143
745	SLU 57	-0.8	0.01	45.15	-0.0512	-4.5022	0.0027
745	SLU 58	-0.8	0.05	44.86	-0.0509	-4.4748	0.014
745	SLU 59	-0.8	0	44.87	-0.0509	-4.4775	0.0024
745	SLU 60	-0.79	0.06	45.46	-0.0518	-4.5476	0.0177
745	SLU 61	-0.79	0.02	45.47	-0.0518	-4.5503	0.0062
745	SLU 62	-0.8	0.07	45.94	-0.0524	-4.5876	0.0189
745	SLU 63	-0.8	0.02	45.95	-0.0524	-4.5903	0.0074
745	SLU 64	-0.79	0.05	43.96	-0.0496	-4.392	0.0146
745	SLU 65	-0.8	-0.02	43.97	-0.0496	-4.3965	-0.0046
745	SLU 66	-0.81	0.06	44.73	-0.0505	-4.4568	0.0162
745	SLU 67	-0.81	0.01	44.73	-0.0505	-4.4595	0.0046
745	SLU 68	-0.81	-0.02	44.46	-0.0501	-4.4365	-0.0034
745	SLU 69	-0.82	0.06	45.21	-0.0511	-4.4968	0.0174
745	SLU 70	-0.82	0.02	45.22	-0.0511	-4.4995	0.0058
745	SLU 71	-0.81	0.06	44.93	-0.0507	-4.472	0.0171
745	SLU 72	-0.82	0.02	44.93	-0.0507	-4.4748	0.0055
745	SLU 73	-0.83	0.03	47.62	-0.0544	-4.7532	0.0099
745	SLU 74	-0.84	0.12	48.37	-0.0553	-4.8134	0.0307
745	SLU 75	-0.84	0.07	48.38	-0.0553	-4.8161	0.0191
745	SLU 76	-0.84	0.04	48.1	-0.0549	-4.7932	0.0111
745	SLU 77	-0.85	0.12	48.85	-0.0559	-4.8534	0.0319
745	SLU 78	-0.85	0.07	48.86	-0.0559	-4.8561	0.0204
745	SLU 79	-0.85	0.12	48.57	-0.0555	-4.8287	0.0316
745	SLU 80	-0.85	0.07	48.58	-0.0555	-4.8314	0.0201
745	SLU 81	-0.84	0.13	49.17	-0.0565	-4.9015	0.0354
745	SLU 82	-0.84	0.09	49.18	-0.0565	-4.9042	0.0238
745	SLU 83	-0.85	0.14	49.65	-0.057	-4.9415	0.0366
745	SLU 84	-0.85	0.09	49.66	-0.057	-4.9442	0.0251
745	SLE RA 1	-0.6	0.03	33	-0.0371	-3.3007	0.0074
745	SLE RA 2	-0.6	-0.03	33.01	-0.0371	-3.3037	-0.0055
745	SLE RA 3	-0.61	0.03	33.51	-0.0377	-3.3439	0.0084
745	SLE RA 4	-0.61	0	33.52	-0.0377	-3.3457	0.0007
745	SLE RA 5	-0.61	-0.02	33.33	-0.0375	-3.3304	-0.0046
745	SLE RA 6	-0.62	0.03	33.83	-0.0381	-3.3705	0.0092
745	SLE RA 7	-0.62	0	33.84	-0.0381	-3.3724	0.0015
745	SLE RA 8	-0.61	0.03	33.65	-0.0379	-3.354	0.009
745	SLE RA 9	-0.61	0	33.65	-0.0379	-3.3559	0.0013
745	SLE RA 10	-0.62	0.01	35.44	-0.0403	-3.5415	0.0042
745	SLE RA 11	-0.63	0.07	35.94	-0.0409	-3.5816	0.0181
745	SLE RA 12	-0.63	0.04	35.95	-0.0409	-3.5834	0.0104
745	SLE RA 13	-0.63	0.02	35.76	-0.0407	-3.5681	0.005
745	SLE RA 14	-0.64	0.07	36.26	-0.0413	-3.6083	0.0189
745	SLE RA 15	-0.64	0.04	36.27	-0.0413	-3.6101	0.0112
745	SLE RA 16	-0.63	0.07	36.08	-0.0411	-3.5918	0.0187
745	SLE RA 17	-0.64	0.04	36.08	-0.0411	-3.5936	0.011
745	SLE RA 18	-0.63	0.08	36.47	-0.0417	-3.6403	0.0212
745	SLE RA 19	-0.63	0.05	36.48	-0.0417	-3.6421	0.0135
745	SLE RA 20	-0.64	0.08	36.8	-0.0421	-3.667	0.022
745	SLE RA 21	-0.64	0.05	36.8	-0.0421	-3.6688	0.0143
745	SLE FR 1	-0.6	0.03	33	-0.0371	-3.3007	0.0074
745	SLE FR 2	-0.6	0.02	33.01	-0.0371	-3.3013	0.0048
745	SLE FR 3	-0.6	0.03	33.13	-0.0373	-3.3114	0.0077
745	SLE FR 4	-0.61	0.03	34.05	-0.0385	-3.4032	0.009
745	SLE FR 5	-0.61	0.04	34.17	-0.0387	-3.4133	0.0118
745	SLE FR 6	-0.62	0.05	34.74	-0.0394	-3.4705	0.0143
745	SLE QP 1	-0.6	0.03	33	-0.0371	-3.3007	0.0074
745	SLE QP 2	-0.61	0.04	34.05	-0.0385	-3.4026	0.0115
745	SLD 1	1.81	0.59	42.96	-0.0524	-4.2096	0.1488
745	SLD 2	1.73	0.1	43.04	-0.0519	-4.2429	0.0273
745	SLD 3	1.67	-0.77	43.42	-0.0515	-4.3246	-0.1917
745	SLD 4	1.58	-1.26	43.5	-0.0509	-4.358	-0.3132
745	SLD 5	0.35	2.35	36	-0.0442	-3.4642	0.5906

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
745	SLD 6	0.29	2.04	36.05	-0.0439	-3.4861	0.5112
745	SLD 7	-0.13	-2.18	37.55	-0.0411	-3.8478	-0.5444
745	SLD 8	-0.18	-2.5	37.6	-0.0407	-3.8696	-0.6238
745	SLD 9	-1.04	2.58	30.49	-0.0363	-2.9355	0.6468
745	SLD 10	-1.09	2.26	30.55	-0.036	-2.9573	0.5674
745	SLD 11	-1.51	-1.95	32.04	-0.0332	-3.3191	-0.4881
745	SLD 12	-1.57	-2.27	32.09	-0.0328	-3.3409	-0.5676
745	SLD 13	-2.8	1.34	24.59	-0.0261	-2.4472	0.3362
745	SLD 14	-2.89	0.86	24.67	-0.0255	-2.4805	0.2147
745	SLD 15	-2.95	-0.02	25.06	-0.0251	-2.5622	-0.0043
745	SLD 16	-3.03	-0.5	25.13	-0.0246	-2.5956	-0.1258
745	SLV 1	5.06	1.26	54.91	-0.0711	-5.2956	0.3191
745	SLV 2	4.86	0.13	55.09	-0.0698	-5.3733	0.036
745	SLV 3	4.73	-1.81	55.99	-0.0689	-5.5588	-0.4513
745	SLV 4	4.52	-2.95	56.17	-0.0676	-5.6366	-0.7344
745	SLV 5	1.63	5.27	38.64	-0.0518	-3.5579	1.3207
745	SLV 6	1.5	4.54	38.75	-0.051	-3.6079	1.1388
745	SLV 7	0.52	-4.99	42.23	-0.0445	-4.4354	-1.2472
745	SLV 8	0.39	-5.72	42.35	-0.0437	-4.4853	-1.4292
745	SLV 9	-1.61	5.8	25.74	-0.0333	-2.3198	1.4522
745	SLV 10	-1.74	5.07	25.86	-0.0325	-2.3698	1.2703
745	SLV 11	-2.72	-4.45	29.34	-0.026	-3.1973	-1.1157
745	SLV 12	-2.85	-5.19	29.45	-0.0252	-3.2472	-1.2977
745	SLV 13	-5.74	3.03	11.92	-0.0094	-1.1686	0.7574
745	SLV 14	-5.95	1.9	12.1	-0.0082	-1.2463	0.4743
745	SLV 15	-6.07	-0.04	13	-0.0072	-1.4318	-0.013
745	SLV 16	-6.28	-1.18	13.18	-0.0059	-1.5096	-0.296
745	CRTFP Ux+	0	0	0	0	0	0
745	CRTFP Ux-	0	0	0	0	0	0
745	CRTFP Uy+	0	0	0	0	0	0
745	CRTFP Uy-	0	0	0	0	0	0
748	SLU 1	0.65	0.33	38	-0.0667	8.3986	-0.1131
748	SLU 2	0.66	0.3	38	-0.0667	8.3993	-0.1033
748	SLU 3	0.67	0.33	38.89	-0.0685	8.5838	-0.1146
748	SLU 4	0.68	0.31	38.89	-0.0685	8.5842	-0.1088
748	SLU 5	0.67	0.29	38.56	-0.0678	8.5152	-0.1019
748	SLU 6	0.69	0.33	39.44	-0.0696	8.6997	-0.1133
748	SLU 7	0.69	0.31	39.45	-0.0696	8.7001	-0.1074
748	SLU 8	0.68	0.32	39.11	-0.0689	8.6304	-0.1103
748	SLU 9	0.68	0.3	39.11	-0.0689	8.6308	-0.1045
748	SLU 10	0.69	0.41	42.32	-0.0753	9.3212	-0.1421
748	SLU 11	0.71	0.44	43.21	-0.077	9.5057	-0.1535
748	SLU 12	0.71	0.43	43.21	-0.077	9.5061	-0.1476
748	SLU 13	0.71	0.41	42.88	-0.0764	9.4371	-0.1408
748	SLU 14	0.72	0.44	43.76	-0.0781	9.6216	-0.1521
748	SLU 15	0.72	0.42	43.77	-0.0781	9.622	-0.1462
748	SLU 16	0.72	0.43	43.43	-0.0775	9.5523	-0.1492
748	SLU 17	0.72	0.41	43.43	-0.0775	9.5527	-0.1433
748	SLU 18	0.71	0.49	44.17	-0.0789	9.7156	-0.1686
748	SLU 19	0.71	0.47	44.17	-0.0789	9.716	-0.1627
748	SLU 20	0.72	0.48	44.72	-0.08	9.8315	-0.1672
748	SLU 21	0.72	0.46	44.73	-0.08	9.8319	-0.1613
748	SLU 22	0.71	0.43	42.36	-0.0751	9.3241	-0.1507
748	SLU 23	0.71	0.41	42.36	-0.0751	9.3247	-0.1409
748	SLU 24	0.73	0.44	43.25	-0.0769	9.5092	-0.1522
748	SLU 25	0.73	0.42	43.25	-0.0769	9.5096	-0.1463
748	SLU 26	0.73	0.4	42.92	-0.0762	9.4406	-0.1395
748	SLU 27	0.74	0.43	43.81	-0.078	9.6251	-0.1508
748	SLU 28	0.74	0.42	43.81	-0.078	9.6255	-0.1449
748	SLU 29	0.74	0.43	43.47	-0.0773	9.5558	-0.1479
748	SLU 30	0.74	0.41	43.47	-0.0773	9.5562	-0.142
748	SLU 31	0.75	0.52	46.68	-0.0836	10.2466	-0.1797
748	SLU 32	0.76	0.55	47.57	-0.0854	10.4312	-0.1911
748	SLU 33	0.77	0.53	47.57	-0.0854	10.4315	-0.1852
748	SLU 34	0.76	0.51	47.24	-0.0848	10.3625	-0.1783
748	SLU 35	0.78	0.55	48.13	-0.0865	10.547	-0.1897
748	SLU 36	0.78	0.53	48.13	-0.0865	10.5474	-0.1838
748	SLU 37	0.77	0.54	47.79	-0.0858	10.4777	-0.1867
748	SLU 38	0.77	0.52	47.79	-0.0859	10.4781	-0.1809
748	SLU 39	0.76	0.59	48.53	-0.0873	10.6411	-0.2062
748	SLU 40	0.76	0.58	48.53	-0.0873	10.6415	-0.2003
748	SLU 41	0.77	0.59	49.08	-0.0884	10.757	-0.2048
748	SLU 42	0.78	0.57	49.09	-0.0884	10.7574	-0.1989
748	SLU 43	0.83	0.39	47.9	-0.0839	10.6009	-0.1342
748	SLU 44	0.83	0.36	47.9	-0.0839	10.6016	-0.1244
748	SLU 45	0.85	0.39	48.79	-0.0856	10.7861	-0.1357
748	SLU 46	0.85	0.38	48.79	-0.0856	10.7865	-0.1298
748	SLU 47	0.85	0.36	48.46	-0.085	10.7174	-0.123
748	SLU 48	0.86	0.39	49.35	-0.0867	10.902	-0.1343
748	SLU 49	0.87	0.37	49.35	-0.0867	10.9024	-0.1284
748	SLU 50	0.86	0.38	49.01	-0.0861	10.8327	-0.1314
748	SLU 51	0.86	0.36	49.01	-0.0861	10.8331	-0.1255
748	SLU 52	0.87	0.47	52.22	-0.0924	11.5235	-0.1632
748	SLU 53	0.89	0.5	53.11	-0.0942	11.708	-0.1745
748	SLU 54	0.89	0.49	53.11	-0.0942	11.7084	-0.1687
748	SLU 55	0.88	0.47	52.78	-0.0935	11.6394	-0.1618
748	SLU 56	0.9	0.5	53.67	-0.0953	11.8239	-0.1732
748	SLU 57	0.9	0.48	53.67	-0.0953	11.8243	-0.1673
748	SLU 58	0.89	0.49	53.33	-0.0946	11.7546	-0.1702
748	SLU 59	0.9	0.47	53.33	-0.0946	11.755	-0.1644
748	SLU 60	0.88	0.55	54.07	-0.0961	11.9179	-0.1897
748	SLU 61	0.88	0.53	54.07	-0.0961	11.9183	-0.1838
748	SLU 62	0.9	0.54	54.63	-0.0972	12.0338	-0.1883
748	SLU 63	0.9	0.53	54.63	-0.0972	12.0342	-0.1824
748	SLU 64	0.89	0.5	52.26	-0.0922	11.5264	-0.1717
748	SLU 65	0.89	0.47	52.26	-0.0923	11.527	-0.1619
748	SLU 66	0.91	0.5	53.15	-0.094	11.7115	-0.1733

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
748	SLU 67	0.91	0.48	53.15	-0.094	11.7119	-0.1674
748	SLU 68	0.9	0.46	52.82	-0.0934	11.6429	-0.1605
748	SLU 69	0.92	0.5	53.71	-0.0951	11.8274	-0.1719
748	SLU 70	0.92	0.48	53.71	-0.0951	11.8278	-0.166
748	SLU 71	0.91	0.49	53.37	-0.0944	11.7581	-0.169
748	SLU 72	0.91	0.47	53.38	-0.0945	11.7585	-0.1631
748	SLU 73	0.93	0.58	56.58	-0.1008	12.4489	-0.2008
748	SLU 74	0.94	0.61	57.47	-0.1025	12.6335	-0.2121
748	SLU 75	0.94	0.59	57.47	-0.1025	12.6338	-0.2062
748	SLU 76	0.94	0.57	57.14	-0.1019	12.5648	-0.1994
748	SLU 77	0.95	0.61	58.03	-0.1036	12.7493	-0.2107
748	SLU 78	0.96	0.59	58.03	-0.1037	12.7497	-0.2048
748	SLU 79	0.95	0.6	57.69	-0.103	12.68	-0.2078
748	SLU 80	0.95	0.58	57.7	-0.103	12.6804	-0.2019
748	SLU 81	0.94	0.65	58.43	-0.1044	12.8434	-0.2272
748	SLU 82	0.94	0.64	58.43	-0.1044	12.8438	-0.2213
748	SLU 83	0.95	0.65	58.99	-0.1055	12.9593	-0.2258
748	SLU 84	0.95	0.63	58.99	-0.1055	12.9596	-0.2199
748	SLE RA 1	0.67	0.36	39.24	-0.0691	8.663	-0.1238
748	SLE RA 2	0.67	0.34	39.24	-0.0691	8.6635	-0.1173
748	SLE RA 3	0.68	0.36	39.84	-0.0703	8.7865	-0.1249
748	SLE RA 4	0.68	0.35	39.84	-0.0703	8.7867	-0.1209
748	SLE RA 5	0.68	0.34	39.62	-0.0699	8.7407	-0.1164
748	SLE RA 6	0.69	0.36	40.21	-0.071	8.8637	-0.1239
748	SLE RA 7	0.69	0.35	40.21	-0.071	8.864	-0.12
748	SLE RA 8	0.69	0.35	39.98	-0.0706	8.8176	-0.122
748	SLE RA 9	0.69	0.34	39.99	-0.0706	8.8178	-0.1181
748	SLE RA 10	0.7	0.41	42.12	-0.0748	9.2781	-0.1432
748	SLE RA 11	0.71	0.43	42.72	-0.076	9.4011	-0.1508
748	SLE RA 12	0.71	0.42	42.72	-0.076	9.4014	-0.1468
748	SLE RA 13	0.7	0.41	42.49	-0.0756	9.3553	-0.1423
748	SLE RA 14	0.72	0.43	43.09	-0.0767	9.4784	-0.1498
748	SLE RA 15	0.72	0.42	43.09	-0.0767	9.4786	-0.1459
748	SLE RA 16	0.71	0.43	42.86	-0.0763	9.4322	-0.1479
748	SLE RA 17	0.71	0.42	42.87	-0.0763	9.4324	-0.144
748	SLE RA 18	0.7	0.46	43.35	-0.0772	9.5411	-0.1608
748	SLE RA 19	0.71	0.45	43.36	-0.0772	9.5413	-0.1569
748	SLE RA 20	0.71	0.46	43.73	-0.078	9.6183	-0.1599
748	SLE RA 21	0.71	0.45	43.73	-0.078	9.6186	-0.156
748	SLE FR 1	0.67	0.36	39.24	-0.0691	8.663	-0.1238
748	SLE FR 2	0.67	0.35	39.24	-0.0691	8.6631	-0.1225
748	SLE FR 3	0.67	0.36	39.39	-0.0694	8.6939	-0.1235
748	SLE FR 4	0.68	0.39	40.48	-0.0716	8.9265	-0.1336
748	SLE FR 5	0.68	0.39	40.62	-0.0718	8.9573	-0.1346
748	SLE FR 6	0.69	0.41	41.3	-0.0732	9.102	-0.1423
748	SLE QP 1	0.67	0.36	39.24	-0.0691	8.663	-0.1238
748	SLE QP 2	0.68	0.39	40.48	-0.0715	8.9264	-0.1349
748	SLD 1	2.89	1.16	29.67	-0.0507	6.8591	-0.4041
748	SLD 2	2.77	1.79	29.54	-0.0521	6.8619	-0.6207
748	SLD 3	3.13	-0.32	30.23	-0.0482	6.745	0.1147
748	SLD 4	3.01	0.3	30.1	-0.0496	6.7478	-0.1019
748	SLD 5	1.01	2.77	36.41	-0.0688	8.4788	-0.9643
748	SLD 6	0.93	3.17	36.33	-0.0697	8.4807	-1.1058
748	SLD 7	1.8	-2.19	38.27	-0.0605	8.0984	0.7651
748	SLD 8	1.72	-1.78	38.18	-0.0615	8.1002	0.6236
748	SLD 9	-0.35	2.56	42.77	-0.0816	9.7527	-0.8934
748	SLD 10	-0.43	2.97	42.68	-0.0825	9.7545	-1.035
748	SLD 11	0.43	-2.4	44.62	-0.0734	9.3722	0.8359
748	SLD 12	0.35	-1.99	44.54	-0.0743	9.3741	0.6944
748	SLD 13	-1.65	0.48	50.85	-0.0935	11.1051	-0.168
748	SLD 14	-1.77	1.1	50.72	-0.0949	11.1079	-0.3846
748	SLD 15	-1.41	-1.01	51.41	-0.091	10.991	0.3508
748	SLD 16	-1.53	-0.39	51.28	-0.0924	10.9938	0.1342
748	SLV 1	5.86	2.17	15.18	-0.0226	4.086	-0.7517
748	SLV 2	5.58	3.61	14.88	-0.0259	4.0926	-1.2561
748	SLV 3	6.41	-1.23	16.48	-0.017	3.8198	0.4323
748	SLV 4	6.12	0.22	16.18	-0.0202	3.8264	-0.0721
748	SLV 5	1.46	5.82	30.97	-0.0649	7.8769	-2.0293
748	SLV 6	1.28	6.75	30.77	-0.067	7.8811	-2.3535
748	SLV 7	3.27	-5.49	35.3	-0.046	6.9896	1.9174
748	SLV 8	3.09	-4.56	35.11	-0.0481	6.9939	1.5932
748	SLV 9	-1.73	5.34	45.84	-0.095	10.859	-1.8631
748	SLV 10	-1.91	6.27	45.65	-0.0971	10.8632	-2.1873
748	SLV 11	0.08	-5.97	50.18	-0.0761	9.9718	2.0836
748	SLV 12	-0.1	-5.04	49.98	-0.0782	9.976	1.7594
748	SLV 13	-4.76	0.56	64.77	-0.1229	14.0265	-0.1977
748	SLV 14	-5.05	2.01	64.47	-0.1261	14.0331	-0.7022
748	SLV 15	-4.22	-2.84	66.07	-0.1172	13.7603	0.9863
748	SLV 16	-4.5	-1.39	65.77	-0.1205	13.7669	0.4818
748	CRTFP Ux+	0	0	0	0	0	0
748	CRTFP Ux-	0	0	0	0	0	0
748	CRTFP Uy+	0	0	0	0	0	0
748	CRTFP Uy-	0	0	0	0	0	0
750	SLU 1	1.15	0.07	60.56	0.0195	0.1647	-0.0102
750	SLU 2	1.15	0.04	60.55	0.0194	0.1715	-0.0098
750	SLU 3	1.18	0.08	61.94	0.0197	0.1709	-0.0105
750	SLU 4	1.18	0.06	61.93	0.0197	0.175	-0.0102
750	SLU 5	1.17	0.03	61.41	0.0196	0.1748	-0.01
750	SLU 6	1.2	0.08	62.8	0.02	0.1742	-0.0107
750	SLU 7	1.2	0.06	62.79	0.0199	0.1783	-0.0105
750	SLU 8	1.19	0.06	62.28	0.0199	0.1712	-0.0107
750	SLU 9	1.19	0.04	62.27	0.0199	0.1753	-0.0105
750	SLU 10	1.21	0.14	67.83	0.0208	0.2015	-0.0102
750	SLU 11	1.25	0.19	69.21	0.0212	0.2009	-0.0109
750	SLU 12	1.25	0.17	69.21	0.0211	0.205	-0.0107
750	SLU 13	1.23	0.14	68.69	0.021	0.2048	-0.0105
750	SLU 14	1.27	0.18	70.07	0.0214	0.2042	-0.0112

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
750	SLU 15	1.27	0.16	70.07	0.0214	0.2083	-0.011
750	SLU 16	1.26	0.17	69.56	0.0213	0.2012	-0.0112
750	SLU 17	1.26	0.15	69.55	0.0213	0.2053	-0.0109
750	SLU 18	1.25	0.22	70.96	0.0215	0.2075	-0.0108
750	SLU 19	1.24	0.2	70.95	0.0214	0.2116	-0.0106
750	SLU 20	1.27	0.22	71.82	0.0217	0.2107	-0.0111
750	SLU 21	1.26	0.2	71.81	0.0217	0.2149	-0.0109
750	SLU 22	1.25	0.2	67.83	0.0221	0.1924	-0.0106
750	SLU 23	1.25	0.17	67.82	0.0221	0.1992	-0.0102
750	SLU 24	1.29	0.21	69.21	0.0224	0.1986	-0.0109
750	SLU 25	1.28	0.19	69.2	0.0224	0.2028	-0.0106
750	SLU 26	1.27	0.16	68.68	0.0223	0.2025	-0.0105
750	SLU 27	1.31	0.21	70.07	0.0227	0.2019	-0.0111
750	SLU 28	1.3	0.19	70.06	0.0226	0.206	-0.0109
750	SLU 29	1.3	0.19	69.55	0.0226	0.1989	-0.0111
750	SLU 30	1.29	0.17	69.54	0.0226	0.203	-0.0109
750	SLU 31	1.31	0.27	75.1	0.0235	0.2292	-0.0107
750	SLU 32	1.35	0.32	76.48	0.0239	0.2286	-0.0113
750	SLU 33	1.35	0.3	76.48	0.0238	0.2327	-0.0111
750	SLU 34	1.34	0.27	75.96	0.0237	0.2325	-0.0109
750	SLU 35	1.37	0.31	77.34	0.0241	0.2319	-0.0116
750	SLU 36	1.37	0.29	77.34	0.024	0.236	-0.0114
750	SLU 37	1.36	0.3	76.83	0.024	0.2289	-0.0116
750	SLU 38	1.36	0.28	76.82	0.024	0.233	-0.0113
750	SLU 39	1.35	0.35	78.23	0.0242	0.2352	-0.0112
750	SLU 40	1.34	0.33	78.22	0.0241	0.2393	-0.011
750	SLU 41	1.37	0.35	79.09	0.0244	0.2384	-0.0115
750	SLU 42	1.37	0.33	79.08	0.0244	0.2426	-0.0113
750	SLU 43	1.46	0.05	76.24	0.0244	0.2046	-0.0131
750	SLU 44	1.46	0.02	76.23	0.0243	0.2114	-0.0127
750	SLU 45	1.49	0.06	77.61	0.0247	0.2108	-0.0134
750	SLU 46	1.49	0.04	77.61	0.0246	0.2149	-0.0131
750	SLU 47	1.48	0.01	77.09	0.0245	0.2147	-0.013
750	SLU 48	1.52	0.05	78.47	0.0249	0.2141	-0.0136
750	SLU 49	1.51	0.03	78.47	0.0249	0.2182	-0.0134
750	SLU 50	1.5	0.04	77.96	0.0248	0.2111	-0.0136
750	SLU 51	1.5	0.02	77.95	0.0248	0.2152	-0.0134
750	SLU 52	1.52	0.12	83.5	0.0257	0.2414	-0.0131
750	SLU 53	1.56	0.16	84.89	0.0261	0.2408	-0.0138
750	SLU 54	1.56	0.14	84.88	0.026	0.2449	-0.0136
750	SLU 55	1.54	0.12	84.36	0.0259	0.2447	-0.0134
750	SLU 56	1.58	0.16	85.75	0.0263	0.2441	-0.0141
750	SLU 57	1.58	0.14	85.74	0.0263	0.2482	-0.0139
750	SLU 58	1.57	0.14	85.23	0.0263	0.2411	-0.0141
750	SLU 59	1.57	0.12	85.23	0.0262	0.2452	-0.0138
750	SLU 60	1.56	0.2	86.63	0.0264	0.2474	-0.0137
750	SLU 61	1.55	0.18	86.63	0.0263	0.2515	-0.0135
750	SLU 62	1.58	0.19	87.49	0.0266	0.2506	-0.014
750	SLU 63	1.58	0.17	87.49	0.0266	0.2548	-0.0138
750	SLU 64	1.56	0.18	83.51	0.0271	0.2323	-0.0135
750	SLU 65	1.56	0.15	83.5	0.027	0.2391	-0.0131
750	SLU 66	1.6	0.19	84.88	0.0274	0.2385	-0.0138
750	SLU 67	1.59	0.17	84.88	0.0273	0.2427	-0.0136
750	SLU 68	1.58	0.14	84.35	0.0272	0.2424	-0.0134
750	SLU 69	1.62	0.18	85.74	0.0276	0.2418	-0.0141
750	SLU 70	1.61	0.16	85.73	0.0275	0.2459	-0.0138
750	SLU 71	1.61	0.17	85.22	0.0275	0.2388	-0.014
750	SLU 72	1.6	0.15	85.22	0.0275	0.2429	-0.0138
750	SLU 73	1.62	0.25	90.77	0.0284	0.2691	-0.0136
750	SLU 74	1.66	0.29	92.16	0.0288	0.2685	-0.0142
750	SLU 75	1.66	0.27	92.15	0.0287	0.2726	-0.014
750	SLU 76	1.65	0.25	91.63	0.0286	0.2724	-0.0138
750	SLU 77	1.68	0.29	93.02	0.029	0.2718	-0.0145
750	SLU 78	1.68	0.27	93.01	0.029	0.2759	-0.0143
750	SLU 79	1.67	0.27	92.5	0.0289	0.2688	-0.0145
750	SLU 80	1.67	0.25	92.49	0.0289	0.2729	-0.0142
750	SLU 81	1.66	0.33	93.9	0.0291	0.2751	-0.0141
750	SLU 82	1.66	0.31	93.9	0.029	0.2792	-0.0139
750	SLU 83	1.68	0.32	94.76	0.0293	0.2783	-0.0144
750	SLU 84	1.68	0.3	94.75	0.0293	0.2825	-0.0142
750	SLE RA 1	1.18	0.11	62.64	0.0202	0.1726	-0.0103
750	SLE RA 2	1.18	0.09	62.63	0.0202	0.1772	-0.01
750	SLE RA 3	1.2	0.12	63.56	0.0204	0.1768	-0.0105
750	SLE RA 4	1.2	0.1	63.55	0.0204	0.1795	-0.0103
750	SLE RA 5	1.19	0.08	63.2	0.0203	0.1793	-0.0102
750	SLE RA 6	1.22	0.11	64.13	0.0206	0.1789	-0.0107
750	SLE RA 7	1.21	0.1	64.12	0.0205	0.1817	-0.0105
750	SLE RA 8	1.21	0.1	63.78	0.0205	0.1769	-0.0106
750	SLE RA 9	1.21	0.09	63.78	0.0205	0.1797	-0.0105
750	SLE RA 10	1.22	0.16	67.48	0.0211	0.1971	-0.0103
750	SLE RA 11	1.25	0.19	68.41	0.0214	0.1967	-0.0108
750	SLE RA 12	1.24	0.17	68.4	0.0213	0.1995	-0.0106
750	SLE RA 13	1.24	0.15	68.05	0.0213	0.1993	-0.0105
750	SLE RA 14	1.26	0.18	68.98	0.0215	0.1989	-0.011
750	SLE RA 15	1.26	0.17	68.98	0.0215	0.2017	-0.0108
750	SLE RA 16	1.25	0.17	68.63	0.0215	0.1969	-0.0109
750	SLE RA 17	1.25	0.16	68.63	0.0214	0.1997	-0.0108
750	SLE RA 18	1.24	0.21	69.57	0.0216	0.2011	-0.0107
750	SLE RA 19	1.24	0.2	69.56	0.0215	0.2039	-0.0106
750	SLE RA 20	1.26	0.21	70.14	0.0217	0.2033	-0.0109
750	SLE RA 21	1.26	0.19	70.14	0.0217	0.206	-0.0107
750	SLE FR 1	1.18	0.11	62.64	0.0202	0.1726	-0.0103
750	SLE FR 2	1.18	0.11	62.64	0.0202	0.1735	-0.0102
750	SLE FR 3	1.19	0.11	62.87	0.0203	0.1734	-0.0104
750	SLE FR 4	1.2	0.14	64.72	0.0206	0.1821	-0.0104
750	SLE FR 5	1.21	0.14	64.95	0.0207	0.182	-0.0105
750	SLE FR 6	1.21	0.16	66.1	0.0209	0.1868	-0.0105

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
750	SLE QP 1	1.18	0.11	62.64	0.0202	0.1726	-0.0103
750	SLE QP 2	1.2	0.14	64.72	0.0206	0.1811	-0.0104
750	SLD 1	6.04	1.09	60.48	0.0242	0.2146	-0.0175
750	SLD 2	5.87	1.54	60.37	0.0223	0.2221	-0.0073
750	SLD 3	6.32	-0.52	59.79	0.026	0.2438	-0.0243
750	SLD 4	6.14	-0.07	59.68	0.0241	0.2514	-0.0141
750	SLD 5	2.27	2.79	64.51	0.0194	0.1455	-0.004
750	SLD 6	2.16	3.08	64.44	0.0181	0.1504	0.0027
750	SLD 7	3.18	-2.58	62.21	0.0252	0.2429	-0.0267
750	SLD 8	3.07	-2.29	62.14	0.024	0.2479	-0.02
750	SLD 9	-0.67	2.57	67.3	0.0173	0.1144	-0.0008
750	SLD 10	-0.78	2.86	67.23	0.016	0.1193	0.0059
750	SLD 11	0.24	-2.8	64.99	0.0231	0.2118	-0.0235
750	SLD 12	0.13	-2.51	64.92	0.0219	0.2168	-0.0168
750	SLD 13	-3.75	0.35	69.76	0.0172	0.1109	-0.0067
750	SLD 14	-3.92	0.8	69.65	0.0153	0.1184	0.0035
750	SLD 15	-3.47	-1.26	69.06	0.019	0.1402	-0.0136
750	SLD 16	-3.64	-0.81	68.96	0.017	0.1477	-0.0033
750	SLV 1	12.53	2.31	54.76	0.0291	0.2608	-0.027
750	SLV 2	12.13	3.36	54.51	0.0246	0.2783	-0.0031
750	SLV 3	13.17	-1.35	53.18	0.0332	0.3275	-0.0429
750	SLV 4	12.77	-0.3	52.93	0.0287	0.345	-0.0191
750	SLV 5	3.7	6.17	64.18	0.0178	0.1008	0.0047
750	SLV 6	3.44	6.85	64.01	0.0149	0.112	0.02
750	SLV 7	5.83	-6.05	58.9	0.0314	0.3233	-0.0484
750	SLV 8	5.57	-5.37	58.74	0.0285	0.3346	-0.0331
750	SLV 9	-3.17	5.65	70.7	0.0128	0.0277	0.0122
750	SLV 10	-3.43	6.33	70.54	0.0099	0.039	0.0275
750	SLV 11	-1.04	-6.56	65.42	0.0264	0.2502	-0.0408
750	SLV 12	-1.3	-5.89	65.26	0.0235	0.2615	-0.0255
750	SLV 13	-10.37	0.58	76.51	0.0125	0.0172	-0.0018
750	SLV 14	-10.77	1.63	76.25	0.008	0.0348	0.022
750	SLV 15	-9.73	-3.08	74.92	0.0166	0.084	-0.0177
750	SLV 16	-10.13	-2.03	74.67	0.0121	0.1015	0.0061
750	CRTFP Ux+	0	0	0	0	0	0
750	CRTFP Ux-	0	0	0	0	0	0
753	SLU 1	-0.8	-0.83	64.87	0.0046	-0.3198	0.0172
753	SLU 2	-0.81	-0.91	64.89	0.005	-0.3245	0.0178
753	SLU 3	-0.82	-0.83	66.43	0.0049	-0.3292	0.0177
753	SLU 4	-0.83	-0.88	66.45	0.0051	-0.332	0.018
753	SLU 5	-0.82	-0.92	65.87	0.0052	-0.3284	0.018
753	SLU 6	-0.83	-0.84	67.42	0.0051	-0.3332	0.0179
753	SLU 7	-0.84	-0.89	67.43	0.0053	-0.336	0.0183
753	SLU 8	-0.82	-0.84	66.84	0.0051	-0.3277	0.0177
753	SLU 9	-0.83	-0.89	66.85	0.0053	-0.3305	0.018
753	SLU 10	-0.84	-0.93	72.89	0.0055	-0.3795	0.0203
753	SLU 11	-0.85	-0.86	74.44	0.0054	-0.3842	0.0203
753	SLU 12	-0.85	-0.9	74.45	0.0056	-0.387	0.0206
753	SLU 13	-0.85	-0.94	73.88	0.0057	-0.3835	0.0206
753	SLU 14	-0.86	-0.86	75.42	0.0056	-0.3882	0.0205
753	SLU 15	-0.87	-0.91	75.43	0.0058	-0.391	0.0208
753	SLU 16	-0.85	-0.86	74.84	0.0056	-0.3827	0.0203
753	SLU 17	-0.86	-0.91	74.85	0.0058	-0.3856	0.0206
753	SLU 18	-0.84	-0.86	76.3	0.0054	-0.3984	0.0209
753	SLU 19	-0.84	-0.91	76.31	0.0055	-0.4012	0.0212
753	SLU 20	-0.85	-0.86	77.28	0.0056	-0.4024	0.0211
753	SLU 21	-0.86	-0.91	77.3	0.0058	-0.4052	0.0215
753	SLU 22	-0.87	-0.8	72.84	0.0062	-0.3673	0.019
753	SLU 23	-0.88	-0.88	72.87	0.0065	-0.372	0.0196
753	SLU 24	-0.89	-0.81	74.41	0.0065	-0.3767	0.0195
753	SLU 25	-0.9	-0.86	74.42	0.0067	-0.3795	0.0198
753	SLU 26	-0.89	-0.89	73.85	0.0068	-0.3759	0.0198
753	SLU 27	-0.9	-0.81	75.4	0.0067	-0.3807	0.0197
753	SLU 28	-0.91	-0.86	75.41	0.0069	-0.3835	0.0201
753	SLU 29	-0.89	-0.81	74.81	0.0067	-0.3752	0.0195
753	SLU 30	-0.9	-0.86	74.83	0.0069	-0.378	0.0198
753	SLU 31	-0.91	-0.9	80.87	0.007	-0.427	0.0222
753	SLU 32	-0.92	-0.83	82.41	0.007	-0.4317	0.0221
753	SLU 33	-0.92	-0.88	82.43	0.0072	-0.4345	0.0224
753	SLU 34	-0.92	-0.91	81.85	0.0073	-0.431	0.0224
753	SLU 35	-0.93	-0.84	83.4	0.0072	-0.4357	0.0223
753	SLU 36	-0.94	-0.89	83.41	0.0074	-0.4385	0.0227
753	SLU 37	-0.92	-0.84	82.82	0.0072	-0.4302	0.0221
753	SLU 38	-0.93	-0.88	82.83	0.0074	-0.4331	0.0224
753	SLU 39	-0.91	-0.83	84.28	0.0069	-0.4459	0.0227
753	SLU 40	-0.91	-0.88	84.29	0.0071	-0.4487	0.023
753	SLU 41	-0.92	-0.84	85.26	0.0072	-0.4499	0.0229
753	SLU 42	-0.93	-0.89	85.27	0.0074	-0.4527	0.0233
753	SLU 43	-1.01	-1.08	81.59	0.0055	-0.3994	0.0217
753	SLU 44	-1.02	-1.17	81.61	0.0058	-0.4041	0.0223
753	SLU 45	-1.03	-1.09	83.16	0.0057	-0.4088	0.0222
753	SLU 46	-1.04	-1.14	83.17	0.0059	-0.4116	0.0225
753	SLU 47	-1.04	-1.17	82.6	0.0061	-0.4081	0.0225
753	SLU 48	-1.05	-1.1	84.14	0.006	-0.4128	0.0224
753	SLU 49	-1.05	-1.15	84.16	0.0062	-0.4156	0.0228
753	SLU 50	-1.04	-1.1	83.56	0.006	-0.4073	0.0222
753	SLU 51	-1.05	-1.15	83.57	0.0062	-0.4102	0.0225
753	SLU 52	-1.05	-1.19	89.62	0.0063	-0.4591	0.0249
753	SLU 53	-1.06	-1.11	91.16	0.0063	-0.4639	0.0248
753	SLU 54	-1.07	-1.16	91.17	0.0064	-0.4667	0.0251
753	SLU 55	-1.07	-1.19	90.6	0.0066	-0.4631	0.0251
753	SLU 56	-1.08	-1.12	92.15	0.0065	-0.4678	0.025
753	SLU 57	-1.08	-1.17	92.16	0.0067	-0.4707	0.0254
753	SLU 58	-1.07	-1.12	91.56	0.0065	-0.4624	0.0248
753	SLU 59	-1.08	-1.17	91.58	0.0067	-0.4652	0.0251
753	SLU 60	-1.05	-1.11	93.02	0.0062	-0.478	0.0254
753	SLU 61	-1.06	-1.16	93.04	0.0064	-0.4808	0.0258

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
753	SLU 62	-1.07	-1.12	94.01	0.0065	-0.482	0.0257
753	SLU 63	-1.07	-1.17	94.02	0.0066	-0.4848	0.026
753	SLU 64	-1.08	-1.06	89.57	0.0071	-0.4469	0.0235
753	SLU 65	-1.09	-1.14	89.59	0.0074	-0.4516	0.0241
753	SLU 66	-1.1	-1.06	91.14	0.0073	-0.4563	0.024
753	SLU 67	-1.11	-1.11	91.15	0.0075	-0.4591	0.0244
753	SLU 68	-1.11	-1.15	90.58	0.0076	-0.4556	0.0244
753	SLU 69	-1.12	-1.07	92.12	0.0076	-0.4603	0.0243
753	SLU 70	-1.12	-1.12	92.13	0.0078	-0.4631	0.0246
753	SLU 71	-1.11	-1.07	91.54	0.0076	-0.4548	0.024
753	SLU 72	-1.12	-1.12	91.55	0.0077	-0.4577	0.0244
753	SLU 73	-1.12	-1.16	97.59	0.0079	-0.5066	0.0267
753	SLU 74	-1.13	-1.09	99.14	0.0078	-0.5114	0.0266
753	SLU 75	-1.14	-1.14	99.15	0.008	-0.5142	0.027
753	SLU 76	-1.14	-1.17	98.58	0.0081	-0.5106	0.0269
753	SLU 77	-1.15	-1.09	100.12	0.0081	-0.5153	0.0269
753	SLU 78	-1.15	-1.14	100.14	0.0083	-0.5182	0.0272
753	SLU 79	-1.14	-1.09	99.54	0.0081	-0.5099	0.0266
753	SLU 80	-1.15	-1.14	99.55	0.0082	-0.5127	0.0269
753	SLU 81	-1.12	-1.09	101	0.0078	-0.5255	0.0272
753	SLU 82	-1.13	-1.14	101.01	0.008	-0.5283	0.0276
753	SLU 83	-1.14	-1.09	101.99	0.008	-0.5295	0.0275
753	SLU 84	-1.14	-1.14	102	0.0082	-0.5323	0.0278
753	SLE RA 1	-0.82	-0.82	67.15	0.0051	-0.3333	0.0177
753	SLE RA 2	-0.83	-0.87	67.16	0.0053	-0.3365	0.0181
753	SLE RA 3	-0.83	-0.82	68.19	0.0053	-0.3396	0.018
753	SLE RA 4	-0.84	-0.86	68.2	0.0054	-0.3415	0.0183
753	SLE RA 5	-0.83	-0.88	67.82	0.0055	-0.3391	0.0182
753	SLE RA 6	-0.84	-0.83	68.85	0.0054	-0.3423	0.0182
753	SLE RA 7	-0.85	-0.86	68.86	0.0055	-0.3441	0.0184
753	SLE RA 8	-0.84	-0.83	68.46	0.0054	-0.3386	0.018
753	SLE RA 9	-0.84	-0.86	68.47	0.0055	-0.3405	0.0183
753	SLE RA 10	-0.84	-0.89	72.5	0.0056	-0.3732	0.0198
753	SLE RA 11	-0.85	-0.84	73.53	0.0056	-0.3763	0.0198
753	SLE RA 12	-0.85	-0.87	73.53	0.0057	-0.3782	0.02
753	SLE RA 13	-0.85	-0.89	73.15	0.0058	-0.3758	0.02
753	SLE RA 14	-0.86	-0.84	74.18	0.0058	-0.379	0.0199
753	SLE RA 15	-0.86	-0.88	74.19	0.0059	-0.3808	0.0201
753	SLE RA 16	-0.85	-0.84	73.79	0.0057	-0.3753	0.0198
753	SLE RA 17	-0.86	-0.88	73.8	0.0059	-0.3772	0.02
753	SLE RA 18	-0.84	-0.84	74.77	0.0056	-0.3857	0.0202
753	SLE RA 19	-0.85	-0.87	74.78	0.0057	-0.3876	0.0204
753	SLE RA 20	-0.85	-0.84	75.42	0.0057	-0.3884	0.0203
753	SLE RA 21	-0.86	-0.88	75.43	0.0059	-0.3903	0.0206
753	SLE FR 1	-0.82	-0.82	67.15	0.0051	-0.3333	0.0177
753	SLE FR 2	-0.82	-0.83	67.15	0.0051	-0.334	0.0178
753	SLE FR 3	-0.82	-0.82	67.41	0.0052	-0.3344	0.0178
753	SLE FR 4	-0.83	-0.84	69.44	0.0053	-0.3497	0.0185
753	SLE FR 5	-0.83	-0.83	69.7	0.0053	-0.3501	0.0185
753	SLE FR 6	-0.83	-0.83	70.96	0.0053	-0.3595	0.0189
753	SLE QP 1	-0.82	-0.82	67.15	0.0051	-0.3333	0.0177
753	SLE QP 2	-0.83	-0.83	69.43	0.0052	-0.349	0.0184
753	SLD 1	4.3	-0.4	74.17	-0.016	-0.3667	0.0244
753	SLD 2	4.14	-0.83	74.43	-0.0129	-0.3598	0.0341
753	SLD 3	4.58	-2.22	73.74	-0.012	-0.43	0.0185
753	SLD 4	4.42	-2.65	74.01	-0.0089	-0.4231	0.0283
753	SLD 5	0.31	2.13	71.45	-0.0077	-0.2596	0.0274
753	SLD 6	0.21	1.84	71.62	-0.0057	-0.2551	0.0337
753	SLD 7	1.25	-3.91	70.03	0.0055	-0.4705	0.0079
753	SLD 8	1.15	-4.2	70.21	0.0076	-0.466	0.0143
753	SLD 9	-2.8	2.55	68.66	0.0029	-0.2321	0.0226
753	SLD 10	-2.91	2.26	68.83	0.0049	-0.2276	0.029
753	SLD 11	-1.86	-3.49	67.24	0.0161	-0.443	0.0031
753	SLD 12	-1.96	-3.78	67.42	0.0182	-0.4385	0.0095
753	SLD 13	-6.07	1	64.86	0.0194	-0.275	0.0086
753	SLD 14	-6.23	0.57	65.12	0.0225	-0.2681	0.0184
753	SLD 15	-5.79	-0.82	64.43	0.0233	-0.3383	0.0028
753	SLD 16	-5.95	-1.25	64.7	0.0265	-0.3314	0.0125
753	SLV 1	11.16	0.09	80.51	-0.0443	-0.3934	0.0324
753	SLV 2	10.78	-0.92	81.14	-0.037	-0.3773	0.0551
753	SLV 3	11.82	-4.01	79.54	-0.0352	-0.5367	0.0187
753	SLV 4	11.44	-5.01	80.17	-0.0279	-0.5206	0.0414
753	SLV 5	1.83	5.84	74.12	-0.0246	-0.1477	0.0394
753	SLV 6	1.59	5.19	74.52	-0.0199	-0.1374	0.054
753	SLV 7	4.03	-7.83	70.89	0.0055	-0.6255	-0.006
753	SLV 8	3.79	-8.47	71.29	0.0102	-0.6151	0.0086
753	SLV 9	-5.44	6.82	67.58	0.0002	-0.083	0.0283
753	SLV 10	-5.68	6.18	67.98	0.0049	-0.0726	0.0429
753	SLV 11	-3.24	-6.84	64.34	0.0303	-0.5607	-0.0171
753	SLV 12	-3.48	-7.49	64.75	0.035	-0.5504	-0.0025
753	SLV 13	-13.09	3.36	58.7	0.0384	-0.1775	-0.0045
753	SLV 14	-13.47	2.36	59.32	0.0457	-0.1614	0.0182
753	SLV 15	-12.43	-0.74	57.73	0.0474	-0.3208	-0.0182
753	SLV 16	-12.81	-1.74	58.35	0.0547	-0.3047	0.0045
753	CRTFP Ux+	0	0	0	0	0	0
753	CRTFP Ux-	0	0	0	0	0	0
753	CRTFP Uy+	0	0	0	0	0	0
753	CRTFP Uy-	0	0	0	0	0	0
756	SLU 1	0.57	0.54	54.36	-0.018	1.0473	-0.0087
756	SLU 2	0.56	0.47	54.32	-0.0179	1.046	-0.0082
756	SLU 3	0.58	0.57	55.61	-0.0188	1.0767	-0.009
756	SLU 4	0.58	0.53	55.58	-0.0187	1.076	-0.0087
756	SLU 5	0.57	0.48	55.06	-0.0185	1.0627	-0.0085
756	SLU 6	0.6	0.58	56.34	-0.0193	1.0934	-0.0093
756	SLU 7	0.59	0.54	56.32	-0.0192	1.0926	-0.009
756	SLU 8	0.59	0.56	55.84	-0.0192	1.0806	-0.0093
756	SLU 9	0.59	0.52	55.82	-0.0191	1.0799	-0.009

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
756	SLU 10	0.66	0.57	61.55	-0.0203	1.212	-0.0084
756	SLU 11	0.69	0.67	62.83	-0.0211	1.2427	-0.0092
756	SLU 12	0.68	0.63	62.81	-0.021	1.242	-0.0089
756	SLU 13	0.67	0.58	62.29	-0.0208	1.2287	-0.0087
756	SLU 14	0.7	0.68	63.57	-0.0216	1.2594	-0.0095
756	SLU 15	0.69	0.64	63.55	-0.0216	1.2587	-0.0092
756	SLU 16	0.69	0.66	63.06	-0.0215	1.2467	-0.0095
756	SLU 17	0.69	0.62	63.04	-0.0214	1.2459	-0.0092
756	SLU 18	0.71	0.68	64.68	-0.0214	1.2844	-0.0089
756	SLU 19	0.71	0.64	64.66	-0.0213	1.2837	-0.0087
756	SLU 20	0.72	0.69	65.42	-0.0219	1.3011	-0.0093
756	SLU 21	0.72	0.65	65.4	-0.0219	1.3004	-0.009
756	SLU 22	0.65	0.74	61.21	-0.0189	1.2118	-0.0102
756	SLU 23	0.65	0.68	61.17	-0.0188	1.2105	-0.0097
756	SLU 24	0.67	0.77	62.45	-0.0196	1.2412	-0.0105
756	SLU 25	0.67	0.73	62.43	-0.0195	1.2404	-0.0103
756	SLU 26	0.66	0.69	61.91	-0.0193	1.2272	-0.0101
756	SLU 27	0.68	0.78	63.19	-0.0202	1.2579	-0.0109
756	SLU 28	0.68	0.74	63.17	-0.0201	1.2571	-0.0106
756	SLU 29	0.68	0.76	62.69	-0.02	1.2451	-0.0109
756	SLU 30	0.67	0.72	62.66	-0.02	1.2444	-0.0106
756	SLU 31	0.75	0.78	68.4	-0.0211	1.3765	-0.0099
756	SLU 32	0.77	0.88	69.68	-0.0219	1.4072	-0.0107
756	SLU 33	0.77	0.84	69.66	-0.0219	1.4065	-0.0104
756	SLU 34	0.76	0.79	69.13	-0.0217	1.3932	-0.0102
756	SLU 35	0.79	0.89	70.42	-0.0225	1.4239	-0.011
756	SLU 36	0.78	0.85	70.39	-0.0224	1.4231	-0.0107
756	SLU 37	0.78	0.86	69.91	-0.0223	1.4111	-0.011
756	SLU 38	0.78	0.82	69.89	-0.0223	1.4104	-0.0107
756	SLU 39	0.8	0.89	71.53	-0.0222	1.4489	-0.0105
756	SLU 40	0.79	0.85	71.51	-0.0222	1.4482	-0.0102
756	SLU 41	0.81	0.9	72.27	-0.0228	1.4656	-0.0108
756	SLU 42	0.81	0.86	72.24	-0.0227	1.4649	-0.0105
756	SLU 43	0.71	0.63	68.32	-0.0232	1.3051	-0.0108
756	SLU 44	0.7	0.56	68.28	-0.0231	1.3038	-0.0103
756	SLU 45	0.72	0.66	69.57	-0.0239	1.3345	-0.0111
756	SLU 46	0.72	0.62	69.54	-0.0238	1.3337	-0.0108
756	SLU 47	0.71	0.57	69.02	-0.0236	1.3205	-0.0106
756	SLU 48	0.74	0.67	70.3	-0.0244	1.3512	-0.0114
756	SLU 49	0.73	0.63	70.28	-0.0244	1.3504	-0.0111
756	SLU 50	0.73	0.65	69.8	-0.0243	1.3384	-0.0114
756	SLU 51	0.73	0.61	69.78	-0.0242	1.3377	-0.0111
756	SLU 52	0.8	0.66	75.51	-0.0254	1.4698	-0.0105
756	SLU 53	0.83	0.76	76.79	-0.0262	1.5005	-0.0113
756	SLU 54	0.82	0.72	76.77	-0.0261	1.4998	-0.011
756	SLU 55	0.81	0.67	76.25	-0.0259	1.4865	-0.0108
756	SLU 56	0.84	0.77	77.53	-0.0268	1.5172	-0.0116
756	SLU 57	0.83	0.73	77.51	-0.0267	1.5164	-0.0113
756	SLU 58	0.83	0.75	77.02	-0.0266	1.5044	-0.0116
756	SLU 59	0.83	0.71	77	-0.0265	1.5037	-0.0113
756	SLU 60	0.85	0.77	78.64	-0.0265	1.5422	-0.011
756	SLU 61	0.85	0.73	78.62	-0.0264	1.5415	-0.0107
756	SLU 62	0.86	0.78	79.38	-0.027	1.5589	-0.0114
756	SLU 63	0.86	0.74	79.36	-0.027	1.5582	-0.0111
756	SLU 64	0.8	0.83	75.17	-0.024	1.4695	-0.0123
756	SLU 65	0.79	0.77	75.13	-0.0239	1.4683	-0.0118
756	SLU 66	0.81	0.86	76.41	-0.0247	1.499	-0.0126
756	SLU 67	0.81	0.82	76.39	-0.0247	1.4982	-0.0123
756	SLU 68	0.8	0.78	75.87	-0.0245	1.485	-0.0121
756	SLU 69	0.82	0.87	77.15	-0.0253	1.5157	-0.0129
756	SLU 70	0.82	0.83	77.13	-0.0252	1.5149	-0.0127
756	SLU 71	0.82	0.85	76.65	-0.0251	1.5029	-0.0129
756	SLU 72	0.82	0.81	76.62	-0.0251	1.5022	-0.0127
756	SLU 73	0.89	0.87	82.36	-0.0262	1.6343	-0.012
756	SLU 74	0.91	0.97	83.64	-0.0271	1.665	-0.0128
756	SLU 75	0.91	0.93	83.62	-0.027	1.6642	-0.0125
756	SLU 76	0.9	0.88	83.09	-0.0268	1.651	-0.0123
756	SLU 77	0.93	0.98	84.38	-0.0276	1.6817	-0.0131
756	SLU 78	0.92	0.94	84.35	-0.0276	1.6809	-0.0128
756	SLU 79	0.92	0.95	83.87	-0.0275	1.6689	-0.0131
756	SLU 80	0.92	0.91	83.85	-0.0274	1.6682	-0.0128
756	SLU 81	0.94	0.98	85.49	-0.0273	1.7067	-0.0126
756	SLU 82	0.93	0.94	85.47	-0.0273	1.706	-0.0123
756	SLU 83	0.95	0.99	86.23	-0.0279	1.7234	-0.0129
756	SLU 84	0.95	0.95	86.2	-0.0278	1.7226	-0.0126
756	SLE RA 1	0.59	0.6	56.32	-0.0183	1.0943	-0.0091
756	SLE RA 2	0.59	0.55	56.29	-0.0182	1.0934	-0.0088
756	SLE RA 3	0.6	0.62	57.15	-0.0188	1.1139	-0.0093
756	SLE RA 4	0.6	0.59	57.13	-0.0187	1.1134	-0.0092
756	SLE RA 5	0.59	0.56	56.79	-0.0186	1.1046	-0.009
756	SLE RA 6	0.61	0.62	57.64	-0.0191	1.125	-0.0096
756	SLE RA 7	0.61	0.6	57.63	-0.0191	1.1245	-0.0094
756	SLE RA 8	0.61	0.61	57.3	-0.019	1.1165	-0.0096
756	SLE RA 9	0.61	0.58	57.29	-0.019	1.116	-0.0094
756	SLE RA 10	0.65	0.62	61.11	-0.0198	1.2041	-0.0089
756	SLE RA 11	0.67	0.68	61.96	-0.0203	1.2246	-0.0095
756	SLE RA 12	0.67	0.66	61.95	-0.0203	1.2241	-0.0093
756	SLE RA 13	0.66	0.63	61.6	-0.0201	1.2152	-0.0091
756	SLE RA 14	0.68	0.69	62.46	-0.0207	1.2357	-0.0097
756	SLE RA 15	0.68	0.66	62.44	-0.0206	1.2352	-0.0095
756	SLE RA 16	0.68	0.68	62.12	-0.0206	1.2272	-0.0097
756	SLE RA 17	0.67	0.65	62.1	-0.0205	1.2267	-0.0095
756	SLE RA 18	0.69	0.69	63.2	-0.0205	1.2524	-0.0093
756	SLE RA 19	0.68	0.67	63.18	-0.0205	1.2519	-0.0091
756	SLE RA 20	0.7	0.7	63.69	-0.0209	1.2635	-0.0095
756	SLE RA 21	0.69	0.67	63.67	-0.0208	1.263	-0.0093
756	SLE FR 1	0.59	0.6	56.32	-0.0183	1.0943	-0.0091

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
756	SLE FR 2	0.59	0.59	56.31	-0.0183	1.0941	-0.0091
756	SLE FR 3	0.6	0.6	56.51	-0.0184	1.0987	-0.0092
756	SLE FR 4	0.62	0.62	58.38	-0.0189	1.1415	-0.0091
756	SLE FR 5	0.62	0.63	58.58	-0.0191	1.1462	-0.0093
756	SLE FR 6	0.64	0.64	59.76	-0.0194	1.1733	-0.0092
756	SLE QP 1	0.59	0.6	56.32	-0.0183	1.0943	-0.0091
756	SLE QP 2	0.62	0.62	58.38	-0.0189	1.1417	-0.0092
756	SLD 1	5.7	2.06	61.38	-0.0013	1.0531	-0.0167
756	SLD 2	5.53	1.87	61.23	-0.0018	1.0526	-0.0088
756	SLD 3	5.98	0.24	60.93	0.002	1.0327	-0.0229
756	SLD 4	5.82	0.05	60.78	0.0015	1.0322	-0.0149
756	SLD 5	1.74	3.84	60	-0.0185	1.1461	-0.0035
756	SLD 6	1.63	3.72	59.9	-0.0188	1.1458	0.0017
756	SLD 7	2.69	-2.21	58.48	-0.0076	1.0782	-0.024
756	SLD 8	2.58	-2.33	58.39	-0.0079	1.0778	-0.0188
756	SLD 9	-1.34	3.58	58.38	-0.03	1.2056	0.0005
756	SLD 10	-1.45	3.46	58.28	-0.0303	1.2052	0.0057
756	SLD 11	-0.39	-2.47	56.86	-0.0191	1.1376	-0.02
756	SLD 12	-0.5	-2.59	56.77	-0.0194	1.1373	-0.0148
756	SLD 13	-4.57	1.2	55.98	-0.0394	1.2512	-0.0034
756	SLD 14	-4.74	1.01	55.83	-0.0399	1.2507	0.0045
756	SLD 15	-4.29	-0.62	55.53	-0.0361	1.2309	-0.0096
756	SLD 16	-4.45	-0.81	55.38	-0.0366	1.2303	-0.0016
756	SLV 1	12.5	3.91	65.49	0.0226	0.9331	-0.027
756	SLV 2	12.11	3.46	65.14	0.0215	0.9318	-0.0084
756	SLV 3	13.16	-0.2	64.46	0.03	0.8866	-0.0411
756	SLV 4	12.78	-0.65	64.11	0.029	0.8853	-0.0226
756	SLV 5	3.24	7.92	62.14	-0.0176	1.1498	0.0038
756	SLV 6	3	7.63	61.91	-0.0183	1.149	0.0157
756	SLV 7	5.46	-5.78	58.7	0.0072	0.9949	-0.0434
756	SLV 8	5.21	-6.06	58.48	0.0065	0.9941	-0.0315
756	SLV 9	-3.97	7.31	58.28	-0.0444	1.2893	0.0131
756	SLV 10	-4.21	7.03	58.06	-0.0451	1.2885	0.0251
756	SLV 11	-1.76	-6.38	54.85	-0.0196	1.1345	-0.0341
756	SLV 12	-2	-6.67	54.63	-0.0203	1.1336	-0.0221
756	SLV 13	-11.54	1.89	52.65	-0.0669	1.3981	0.0042
756	SLV 14	-11.92	1.45	52.3	-0.0679	1.3968	0.0228
756	SLV 15	-10.87	-2.21	51.62	-0.0594	1.3516	-0.0099
756	SLV 16	-11.26	-2.66	51.27	-0.0605	1.3503	0.0086
756	CRTFP Ux+	0	0	0	0	0	0
756	CRTFP Ux-	0	0	0	0	0	0
759	SLU 1	0.69	1.37	44.07	-0.8258	-0.3285	0.0119
759	SLU 2	0.68	1.33	44.03	-0.8251	-0.3274	0.0121
759	SLU 3	0.71	1.42	45.04	-0.844	-0.3372	0.0123
759	SLU 4	0.7	1.4	45.02	-0.8436	-0.3366	0.0124
759	SLU 5	0.69	1.35	44.63	-0.8364	-0.3327	0.0123
759	SLU 6	0.72	1.44	45.64	-0.8553	-0.3426	0.0125
759	SLU 7	0.72	1.42	45.62	-0.8549	-0.3419	0.0126
759	SLU 8	0.72	1.41	45.27	-0.8483	-0.3392	0.0123
759	SLU 9	0.71	1.39	45.25	-0.8479	-0.3385	0.0124
759	SLU 10	0.78	1.55	49.73	-0.9319	-0.3774	0.0134
759	SLU 11	0.82	1.64	50.73	-0.9508	-0.3872	0.0136
759	SLU 12	0.81	1.61	50.71	-0.9504	-0.3865	0.0137
759	SLU 13	0.8	1.57	50.33	-0.9431	-0.3827	0.0136
759	SLU 14	0.83	1.66	51.33	-0.9621	-0.3926	0.0138
759	SLU 15	0.82	1.63	51.31	-0.9617	-0.3919	0.0139
759	SLU 16	0.83	1.63	50.96	-0.9551	-0.3892	0.0136
759	SLU 17	0.82	1.6	50.94	-0.9547	-0.3885	0.0137
759	SLU 18	0.84	1.68	52.2	-0.9783	-0.3999	0.0138
759	SLU 19	0.83	1.65	52.18	-0.9779	-0.3992	0.0139
759	SLU 20	0.86	1.7	52.8	-0.9896	-0.4052	0.014
759	SLU 21	0.85	1.67	52.78	-0.9892	-0.4046	0.0141
759	SLU 22	0.79	1.65	49.47	-0.9256	-0.3829	0.0136
759	SLU 23	0.78	1.61	49.44	-0.9249	-0.3818	0.0138
759	SLU 24	0.82	1.7	50.44	-0.9439	-0.3916	0.014
759	SLU 25	0.81	1.68	50.42	-0.9435	-0.3909	0.0141
759	SLU 26	0.8	1.63	50.04	-0.9362	-0.3871	0.0139
759	SLU 27	0.83	1.72	51.04	-0.9552	-0.3969	0.0142
759	SLU 28	0.83	1.7	51.02	-0.9548	-0.3963	0.0143
759	SLU 29	0.83	1.69	50.67	-0.9482	-0.3936	0.014
759	SLU 30	0.82	1.67	50.65	-0.9478	-0.3929	0.0141
759	SLU 31	0.89	1.83	55.13	-1.0317	-0.4318	0.015
759	SLU 32	0.92	1.92	56.13	-1.0507	-0.4416	0.0153
759	SLU 33	0.92	1.89	56.11	-1.0503	-0.4409	0.0154
759	SLU 34	0.91	1.85	55.73	-1.043	-0.4371	0.0152
759	SLU 35	0.94	1.94	56.73	-1.062	-0.4469	0.0154
759	SLU 36	0.93	1.91	56.71	-1.0616	-0.4463	0.0156
759	SLU 37	0.93	1.91	56.36	-1.055	-0.4435	0.0152
759	SLU 38	0.93	1.88	56.34	-1.0546	-0.4429	0.0153
759	SLU 39	0.95	1.96	57.6	-1.0782	-0.4543	0.0154
759	SLU 40	0.94	1.94	57.58	-1.0778	-0.4536	0.0155
759	SLU 41	0.96	1.98	58.2	-1.0895	-0.4596	0.0156
759	SLU 42	0.96	1.96	58.18	-1.0891	-0.459	0.0157
759	SLU 43	0.85	1.68	55.43	-1.0392	-0.4084	0.015
759	SLU 44	0.84	1.65	55.4	-1.0386	-0.4073	0.0151
759	SLU 45	0.88	1.73	56.41	-1.0575	-0.4171	0.0154
759	SLU 46	0.87	1.71	56.38	-1.0571	-0.4165	0.0155
759	SLU 47	0.86	1.67	56	-1.0498	-0.4126	0.0153
759	SLU 48	0.89	1.75	57	-1.0688	-0.4225	0.0155
759	SLU 49	0.89	1.73	56.98	-1.0684	-0.4218	0.0156
759	SLU 50	0.89	1.72	56.63	-1.0618	-0.4191	0.0153
759	SLU 51	0.88	1.7	56.61	-1.0614	-0.4184	0.0154
759	SLU 52	0.95	1.86	61.09	-1.1453	-0.4573	0.0164
759	SLU 53	0.98	1.95	62.1	-1.1643	-0.4671	0.0166
759	SLU 54	0.98	1.93	62.08	-1.1639	-0.4664	0.0167
759	SLU 55	0.97	1.88	61.69	-1.1566	-0.4626	0.0166
759	SLU 56	1	1.97	62.7	-1.1756	-0.4725	0.0168

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
759	SLU 57	0.99	1.95	62.68	-1.1752	-0.4718	0.0169
759	SLU 58	0.99	1.94	62.33	-1.1686	-0.4691	0.0166
759	SLU 59	0.99	1.92	62.31	-1.1682	-0.4684	0.0167
759	SLU 60	1.01	1.99	63.57	-1.1918	-0.4798	0.0168
759	SLU 61	1	1.97	63.55	-1.1914	-0.4791	0.0169
759	SLU 62	1.02	2.01	64.17	-1.2031	-0.4851	0.017
759	SLU 63	1.02	1.99	64.15	-1.2027	-0.4845	0.0171
759	SLU 64	0.96	1.97	60.84	-1.1391	-0.4628	0.0166
759	SLU 65	0.95	1.93	60.8	-1.1384	-0.4617	0.0168
759	SLU 66	0.98	2.02	61.81	-1.1574	-0.4715	0.017
759	SLU 67	0.98	1.99	61.79	-1.157	-0.4708	0.0171
759	SLU 68	0.97	1.95	61.4	-1.1497	-0.467	0.017
759	SLU 69	1	2.04	62.41	-1.1687	-0.4768	0.0172
759	SLU 70	0.99	2.01	62.39	-1.1683	-0.4762	0.0173
759	SLU 71	0.99	2.01	62.04	-1.1617	-0.4735	0.017
759	SLU 72	0.99	1.98	62.02	-1.1613	-0.4728	0.0171
759	SLU 73	1.06	2.14	66.5	-1.2452	-0.5117	0.0181
759	SLU 74	1.09	2.23	67.5	-1.2642	-0.5215	0.0183
759	SLU 75	1.09	2.21	67.48	-1.2638	-0.5208	0.0184
759	SLU 76	1.08	2.16	67.1	-1.2565	-0.517	0.0183
759	SLU 77	1.11	2.25	68.1	-1.2755	-0.5268	0.0185
759	SLU 78	1.1	2.23	68.08	-1.2751	-0.5262	0.0186
759	SLU 79	1.1	2.22	67.73	-1.2685	-0.5234	0.0183
759	SLU 80	1.1	2.2	67.71	-1.2681	-0.5228	0.0184
759	SLU 81	1.12	2.27	68.97	-1.2917	-0.5342	0.0184
759	SLU 82	1.11	2.25	68.95	-1.2913	-0.5335	0.0185
759	SLU 83	1.13	2.29	69.57	-1.3029	-0.5395	0.0186
759	SLU 84	1.13	2.27	69.55	-1.3025	-0.5389	0.0187
759	SLE RA 1	0.72	1.45	45.61	-0.8543	-0.344	0.0124
759	SLE RA 2	0.71	1.42	45.59	-0.8538	-0.3433	0.0125
759	SLE RA 3	0.73	1.48	46.26	-0.8665	-0.3498	0.0127
759	SLE RA 4	0.73	1.47	46.24	-0.8662	-0.3494	0.0127
759	SLE RA 5	0.72	1.44	45.99	-0.8614	-0.3469	0.0127
759	SLE RA 6	0.74	1.5	46.66	-0.874	-0.3534	0.0128
759	SLE RA 7	0.74	1.48	46.64	-0.8737	-0.353	0.0129
759	SLE RA 8	0.74	1.48	46.41	-0.8693	-0.3511	0.0127
759	SLE RA 9	0.73	1.46	46.4	-0.8691	-0.3507	0.0127
759	SLE RA 10	0.78	1.57	49.38	-0.925	-0.3766	0.0134
759	SLE RA 11	0.8	1.63	50.05	-0.9377	-0.3832	0.0135
759	SLE RA 12	0.8	1.61	50.04	-0.9374	-0.3827	0.0136
759	SLE RA 13	0.79	1.58	49.78	-0.9325	-0.3802	0.0135
759	SLE RA 14	0.81	1.64	50.45	-0.9452	-0.3867	0.0137
759	SLE RA 15	0.81	1.62	50.44	-0.9449	-0.3863	0.0137
759	SLE RA 16	0.81	1.62	50.21	-0.9405	-0.3845	0.0135
759	SLE RA 17	0.81	1.6	50.19	-0.9403	-0.384	0.0136
759	SLE RA 18	0.82	1.66	51.03	-0.956	-0.3916	0.0136
759	SLE RA 19	0.82	1.64	51.02	-0.9557	-0.3912	0.0137
759	SLE RA 20	0.83	1.67	51.43	-0.9635	-0.3952	0.0138
759	SLE RA 21	0.83	1.65	51.42	-0.9632	-0.3948	0.0138
759	SLE FR 1	0.72	1.45	45.61	-0.8543	-0.344	0.0124
759	SLE FR 2	0.72	1.45	45.61	-0.8542	-0.3439	0.0124
759	SLE FR 3	0.72	1.46	45.77	-0.8573	-0.3454	0.0125
759	SLE FR 4	0.75	1.51	47.23	-0.8847	-0.3582	0.0128
759	SLE FR 5	0.75	1.52	47.4	-0.8878	-0.3597	0.0128
759	SLE FR 6	0.77	1.55	48.32	-0.9051	-0.3678	0.013
759	SLE QP 1	0.72	1.45	45.61	-0.8543	-0.344	0.0124
759	SLE QP 2	0.75	1.51	47.24	-0.8848	-0.3583	0.0128
759	SLD 1	5.35	1.98	43.58	-0.8269	-0.0636	0.0902
759	SLD 2	5.2	2.16	43.69	-0.829	-0.0685	0.0948
759	SLD 3	5.61	0.43	43.06	-0.8156	-0.0372	0.085
759	SLD 4	5.46	0.6	43.17	-0.8178	-0.0421	0.0895
759	SLD 5	1.76	3.98	46.91	-0.8841	-0.309	0.0432
759	SLD 6	1.66	4.09	46.98	-0.8855	-0.3122	0.0462
759	SLD 7	2.63	-1.2	45.18	-0.8466	-0.2211	0.0257
759	SLD 8	2.53	-1.09	45.25	-0.848	-0.2243	0.0286
759	SLD 9	-1.04	4.11	49.23	-0.9216	-0.4923	-0.0031
759	SLD 10	-1.13	4.23	49.3	-0.923	-0.4955	-0.0001
759	SLD 11	-0.17	-1.07	47.5	-0.8841	-0.4044	-0.0206
759	SLD 12	-0.26	-0.96	47.57	-0.8855	-0.4076	-0.0176
759	SLD 13	-3.97	2.42	51.3	-0.9518	-0.6745	-0.064
759	SLD 14	-4.11	2.6	51.41	-0.954	-0.6794	-0.0594
759	SLD 15	-3.71	0.87	50.79	-0.9405	-0.6481	-0.0692
759	SLD 16	-3.85	1.04	50.89	-0.9427	-0.653	-0.0647
759	SLV 1	11.51	2.56	38.67	-0.7489	0.3323	0.1939
759	SLV 2	11.17	2.96	38.92	-0.7539	0.3209	0.2046
759	SLV 3	12.12	-0.97	37.48	-0.7233	0.3928	0.1818
759	SLV 4	11.78	-0.57	37.74	-0.7283	0.3814	0.1924
759	SLV 5	3.12	7.11	46.42	-0.882	-0.2409	0.0838
759	SLV 6	2.9	7.37	46.58	-0.8852	-0.2482	0.0906
759	SLV 7	5.14	-4.65	42.47	-0.7967	-0.0393	0.0432
759	SLV 8	4.92	-4.4	42.63	-0.7999	-0.0466	0.05
759	SLV 9	-3.42	7.42	51.84	-0.9697	-0.67	-0.0245
759	SLV 10	-3.64	7.68	52	-0.9729	-0.6773	-0.0176
759	SLV 11	-1.4	-4.34	47.89	-0.8844	-0.4684	-0.0651
759	SLV 12	-1.62	-4.09	48.06	-0.8876	-0.4757	-0.0582
759	SLV 13	-10.28	3.59	56.74	-1.0413	-1.098	-0.1669
759	SLV 14	-10.62	3.99	56.99	-1.0463	-1.1094	-0.1562
759	SLV 15	-9.68	0.06	55.56	-1.0157	-1.0375	-0.179
759	SLV 16	-10.02	0.47	55.81	-1.0207	-1.0489	-0.1684
759	CRTFP Ux+	0	0	0	0	0	0
759	CRTFP Ux-	0	0	0	0	0	0
761	SLU 1	-0.61	0.02	30.98	-0.0266	-2.6667	0.0054
761	SLU 2	-0.62	-0.06	30.99	-0.0266	-2.6693	-0.0139
761	SLU 3	-0.63	0.02	31.72	-0.0273	-2.7184	0.007
761	SLU 4	-0.63	-0.02	31.72	-0.0273	-2.72	-0.0046
761	SLU 5	-0.63	-0.05	31.46	-0.027	-2.7014	-0.0126
761	SLU 6	-0.64	0.03	32.18	-0.0277	-2.7505	0.0083

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
761	SLU 7	-0.64	-0.02	32.19	-0.0277	-2.752	-0.0033
761	SLU 8	-0.63	0.03	31.91	-0.0274	-2.7309	0.008
761	SLU 9	-0.64	-0.02	31.92	-0.0274	-2.7324	-0.0036
761	SLU 10	-0.66	0	34.51	-0.0301	-2.9507	0.001
761	SLU 11	-0.67	0.08	35.23	-0.0308	-2.9997	0.0219
761	SLU 12	-0.67	0.04	35.24	-0.0308	-3.0013	0.0103
761	SLU 13	-0.67	0	34.97	-0.0305	-2.9827	0.0022
761	SLU 14	-0.68	0.09	35.7	-0.0312	-3.0318	0.0232
761	SLU 15	-0.68	0.04	35.71	-0.0312	-3.0334	0.0116
761	SLU 16	-0.68	0.09	35.43	-0.031	-3.0122	0.0229
761	SLU 17	-0.68	0.04	35.43	-0.031	-3.0138	0.0112
761	SLU 18	-0.67	0.1	36	-0.0317	-3.0687	0.0267
761	SLU 19	-0.68	0.06	36.01	-0.0316	-3.0702	0.0151
761	SLU 20	-0.68	0.11	36.47	-0.0321	-3.1007	0.028
761	SLU 21	-0.69	0.06	36.47	-0.0321	-3.1023	0.0164
761	SLU 22	-0.67	0.09	34.56	-0.03	-2.947	0.0234
761	SLU 23	-0.67	0.01	34.57	-0.03	-2.9496	0.0041
761	SLU 24	-0.68	0.1	35.3	-0.0307	-2.9987	0.025
761	SLU 25	-0.69	0.05	35.31	-0.0307	-3.0003	0.0134
761	SLU 26	-0.68	0.02	35.04	-0.0304	-2.9817	0.0054
761	SLU 27	-0.69	0.1	35.77	-0.0311	-3.0308	0.0263
761	SLU 28	-0.7	0.05	35.77	-0.0311	-3.0323	0.0147
761	SLU 29	-0.69	0.1	35.49	-0.0308	-3.0112	0.026
761	SLU 30	-0.69	0.05	35.5	-0.0308	-3.0127	0.0144
761	SLU 31	-0.71	0.07	38.09	-0.0335	-3.231	0.019
761	SLU 32	-0.73	0.15	38.82	-0.0342	-3.28	0.0399
761	SLU 33	-0.73	0.11	38.82	-0.0342	-3.2816	0.0283
761	SLU 34	-0.72	0.08	38.55	-0.0339	-3.263	0.0202
761	SLU 35	-0.74	0.16	39.28	-0.0347	-3.3121	0.0412
761	SLU 36	-0.74	0.11	39.29	-0.0346	-3.3137	0.0296
761	SLU 37	-0.73	0.16	39.01	-0.0344	-3.2925	0.0409
761	SLU 38	-0.73	0.11	39.02	-0.0344	-3.2941	0.0293
761	SLU 39	-0.73	0.17	39.58	-0.0351	-3.349	0.0447
761	SLU 40	-0.73	0.13	39.59	-0.035	-3.3505	0.0331
761	SLU 41	-0.74	0.18	40.05	-0.0355	-3.381	0.046
761	SLU 42	-0.74	0.13	40.06	-0.0355	-3.3826	0.0344
761	SLU 43	-0.78	0	39.04	-0.0334	-3.3706	0.0009
761	SLU 44	-0.78	-0.08	39.06	-0.0334	-3.3733	-0.0185
761	SLU 45	-0.79	0.01	39.78	-0.0341	-3.4223	0.0025
761	SLU 46	-0.8	-0.04	39.79	-0.0341	-3.4239	-0.0091
761	SLU 47	-0.79	-0.07	39.52	-0.0338	-3.4053	-0.0172
761	SLU 48	-0.8	0.01	40.25	-0.0345	-3.4544	0.0038
761	SLU 49	-0.81	-0.04	40.26	-0.0345	-3.4559	-0.0079
761	SLU 50	-0.8	0.01	39.98	-0.0342	-3.4348	0.0034
761	SLU 51	-0.8	-0.04	39.98	-0.0342	-3.4363	-0.0082
761	SLU 52	-0.83	-0.02	42.57	-0.0369	-3.6546	-0.0036
761	SLU 53	-0.84	0.06	43.3	-0.0376	-3.7037	0.0174
761	SLU 54	-0.84	0.02	43.31	-0.0376	-3.7052	0.0058
761	SLU 55	-0.83	-0.01	43.04	-0.0373	-3.6867	-0.0023
761	SLU 56	-0.85	0.07	43.76	-0.0381	-3.7357	0.0186
761	SLU 57	-0.85	0.02	43.77	-0.038	-3.7373	0.007
761	SLU 58	-0.84	0.07	43.49	-0.0378	-3.7161	0.0183
761	SLU 59	-0.84	0.02	43.5	-0.0378	-3.7177	0.0067
761	SLU 60	-0.84	0.08	44.07	-0.0385	-3.7726	0.0221
761	SLU 61	-0.84	0.04	44.07	-0.0384	-3.7741	0.0105
761	SLU 62	-0.85	0.09	44.53	-0.0389	-3.8046	0.0234
761	SLU 63	-0.85	0.04	44.54	-0.0389	-3.8062	0.0118
761	SLU 64	-0.83	0.07	42.63	-0.0368	-3.6509	0.0189
761	SLU 65	-0.84	-0.01	42.64	-0.0368	-3.6536	-0.0005
761	SLU 66	-0.85	0.08	43.37	-0.0375	-3.7026	0.0205
761	SLU 67	-0.85	0.03	43.37	-0.0375	-3.7042	0.0089
761	SLU 68	-0.85	0	43.1	-0.0372	-3.6856	0.0008
761	SLU 69	-0.86	0.08	43.83	-0.0379	-3.7347	0.0218
761	SLU 70	-0.86	0.04	43.84	-0.0379	-3.7362	0.0102
761	SLU 71	-0.85	0.08	43.56	-0.0376	-3.7151	0.0214
761	SLU 72	-0.86	0.03	43.57	-0.0376	-3.7166	0.0098
761	SLU 73	-0.88	0.05	46.15	-0.0403	-3.9349	0.0144
761	SLU 74	-0.89	0.14	46.88	-0.041	-3.984	0.0354
761	SLU 75	-0.89	0.09	46.89	-0.041	-3.9855	0.0238
761	SLU 76	-0.89	0.06	46.62	-0.0407	-3.967	0.0157
761	SLU 77	-0.9	0.14	47.35	-0.0415	-4.016	0.0366
761	SLU 78	-0.9	0.09	47.35	-0.0414	-4.0176	0.025
761	SLU 79	-0.9	0.14	47.07	-0.0412	-3.9964	0.0363
761	SLU 80	-0.9	0.09	47.08	-0.0412	-3.998	0.0247
761	SLU 81	-0.89	0.15	47.65	-0.0419	-4.0529	0.0401
761	SLU 82	-0.9	0.11	47.66	-0.0419	-4.0544	0.0285
761	SLU 83	-0.9	0.16	48.12	-0.0423	-4.0849	0.0414
761	SLU 84	-0.91	0.11	48.12	-0.0423	-4.0865	0.0298
761	SLE RA 1	-0.63	0.04	32	-0.0276	-2.7468	0.0106
761	SLE RA 2	-0.63	-0.01	32.01	-0.0275	-2.7486	-0.0023
761	SLE RA 3	-0.64	0.04	32.5	-0.028	-2.7813	0.0116
761	SLE RA 4	-0.64	0.01	32.5	-0.028	-2.7823	0.0039
761	SLE RA 5	-0.64	-0.01	32.32	-0.0278	-2.7699	-0.0015
761	SLE RA 6	-0.65	0.05	32.81	-0.0283	-2.8026	0.0125
761	SLE RA 7	-0.65	0.02	32.81	-0.0283	-2.8037	0.0047
761	SLE RA 8	-0.64	0.05	32.62	-0.0281	-2.7896	0.0123
761	SLE RA 9	-0.64	0.01	32.63	-0.0281	-2.7906	0.0045
761	SLE RA 10	-0.66	0.03	34.35	-0.0299	-2.9361	0.0076
761	SLE RA 11	-0.67	0.08	34.84	-0.0304	-2.9688	0.0216
761	SLE RA 12	-0.67	0.05	34.84	-0.0304	-2.9699	0.0138
761	SLE RA 13	-0.67	0.03	34.66	-0.0302	-2.9575	0.0084
761	SLE RA 14	-0.67	0.08	35.15	-0.0307	-2.9902	0.0224
761	SLE RA 15	-0.68	0.05	35.15	-0.0307	-2.9912	0.0147
761	SLE RA 16	-0.67	0.08	34.97	-0.0305	-2.9771	0.0222
761	SLE RA 17	-0.67	0.05	34.97	-0.0305	-2.9782	0.0145
761	SLE RA 18	-0.67	0.09	35.35	-0.0309	-3.0148	0.0247
761	SLE RA 19	-0.67	0.06	35.36	-0.0309	-3.0158	0.017

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
761	SLE RA 20	-0.68	0.1	35.66	-0.0312	-3.0361	0.0256
761	SLE RA 21	-0.68	0.07	35.67	-0.0312	-3.0372	0.0179
761	SLE FR 1	-0.63	0.04	32	-0.0276	-2.7468	0.0106
761	SLE FR 2	-0.63	0.03	32	-0.0276	-2.7472	0.008
761	SLE FR 3	-0.63	0.04	32.13	-0.0277	-2.7554	0.0109
761	SLE FR 4	-0.64	0.04	33.01	-0.0286	-2.8275	0.0122
761	SLE FR 5	-0.64	0.06	33.13	-0.0287	-2.8357	0.0152
761	SLE FR 6	-0.65	0.07	33.68	-0.0293	-2.8808	0.0177
761	SLE QP 1	-0.63	0.04	32	-0.0276	-2.7468	0.0106
761	SLE QP 2	-0.64	0.06	33.01	-0.0286	-2.8272	0.0148
761	SLD 1	1.63	0.6	41.57	-0.0393	-3.476	0.1523
761	SLD 2	1.52	0.12	41.67	-0.0385	-3.4971	0.0306
761	SLD 3	1.77	-0.76	42.01	-0.0384	-3.546	-0.1886
761	SLD 4	1.66	-1.25	42.11	-0.0376	-3.5672	-0.3102
761	SLD 5	-0.16	2.37	34.89	-0.0333	-2.9119	0.5945
761	SLD 6	-0.23	2.05	34.95	-0.0328	-2.9257	0.515
761	SLD 7	0.32	-2.17	36.36	-0.0303	-3.1453	-0.5417
761	SLD 8	0.25	-2.49	36.43	-0.0298	-3.1591	-0.6212
761	SLD 9	-1.53	2.6	29.59	-0.0274	-2.4953	0.6508
761	SLD 10	-1.6	2.28	29.65	-0.0268	-2.5091	0.5713
761	SLD 11	-1.06	-1.94	31.06	-0.0244	-2.7287	-0.4854
761	SLD 12	-1.13	-2.26	31.13	-0.0238	-2.7425	-0.5649
761	SLD 13	-2.95	1.36	23.9	-0.0195	-2.0872	0.3399
761	SLD 14	-3.05	0.87	24	-0.0187	-2.1084	0.2182
761	SLD 15	-2.81	0	24.35	-0.0186	-2.1573	-0.001
761	SLD 16	-2.91	-0.49	24.44	-0.0178	-2.1784	-0.1226
761	SLV 1	4.67	1.28	53.05	-0.0537	-4.3481	0.3227
761	SLV 2	4.42	0.15	53.28	-0.0519	-4.3973	0.0394
761	SLV 3	5	-1.8	54.09	-0.0517	-4.5089	-0.4486
761	SLV 4	4.75	-2.93	54.31	-0.0498	-4.5581	-0.7319
761	SLV 5	0.49	5.29	37.42	-0.0396	-3.0312	1.3254
761	SLV 6	0.33	4.56	37.56	-0.0384	-3.0628	1.1433
761	SLV 7	1.59	-4.98	40.86	-0.0327	-3.5671	-1.2453
761	SLV 8	1.44	-5.71	41	-0.0315	-3.5988	-1.4274
761	SLV 9	-2.72	5.82	25.01	-0.0257	-2.0556	1.457
761	SLV 10	-2.88	5.09	25.16	-0.0245	-2.0873	1.275
761	SLV 11	-1.62	-4.45	28.45	-0.0188	-2.5916	-1.1137
761	SLV 12	-1.77	-5.18	28.6	-0.0176	-2.6232	-1.2958
761	SLV 13	-6.04	3.04	11.7	-0.0073	-1.0963	0.7615
761	SLV 14	-6.28	1.91	11.93	-0.0055	-1.1455	0.4782
761	SLV 15	-5.71	-0.04	12.73	-0.0053	-1.2571	-0.0097
761	SLV 16	-5.95	-1.17	12.96	-0.0034	-1.3063	-0.293
761	CRTFP Ux+	0	0	0	0	0	0
761	CRTFP Ux-	0	0	0	0	0	0
761	CRTFP Uy+	0	0	0	0	0	0
761	CRTFP Uy-	0	0	0	0	0	0
764	SLU 1	0.63	0.33	36.07	-0.0605	6.852	-0.1139
764	SLU 2	0.63	0.3	36.07	-0.0606	6.8526	-0.104
764	SLU 3	0.65	0.33	36.91	-0.0621	6.9973	-0.1154
764	SLU 4	0.65	0.31	36.91	-0.0621	6.9977	-0.1095
764	SLU 5	0.64	0.29	36.6	-0.0616	6.9436	-0.1026
764	SLU 6	0.66	0.33	37.44	-0.0631	7.0883	-0.1141
764	SLU 7	0.66	0.31	37.44	-0.0632	7.0886	-0.1081
764	SLU 8	0.65	0.32	37.12	-0.0625	7.034	-0.1111
764	SLU 9	0.66	0.3	37.12	-0.0626	7.0343	-0.1052
764	SLU 10	0.67	0.41	40.15	-0.0683	7.579	-0.143
764	SLU 11	0.68	0.44	40.98	-0.0698	7.7237	-0.1544
764	SLU 12	0.68	0.43	40.99	-0.0699	7.724	-0.1485
764	SLU 13	0.68	0.41	40.67	-0.0693	7.6699	-0.1416
764	SLU 14	0.69	0.44	41.51	-0.0708	7.8146	-0.153
764	SLU 15	0.7	0.42	41.51	-0.0709	7.815	-0.1471
764	SLU 16	0.69	0.43	41.19	-0.0702	7.7603	-0.1501
764	SLU 17	0.69	0.41	41.19	-0.0703	7.7607	-0.1442
764	SLU 18	0.68	0.49	41.89	-0.0715	7.8897	-0.1696
764	SLU 19	0.68	0.47	41.89	-0.0716	7.89	-0.1637
764	SLU 20	0.69	0.48	42.41	-0.0725	7.9806	-0.1682
764	SLU 21	0.69	0.46	42.41	-0.0726	7.981	-0.1623
764	SLU 22	0.68	0.43	40.19	-0.0681	7.582	-0.1516
764	SLU 23	0.68	0.41	40.19	-0.0681	7.5826	-0.1417
764	SLU 24	0.7	0.44	41.03	-0.0697	7.7273	-0.1531
764	SLU 25	0.7	0.42	41.03	-0.0697	7.7277	-0.1472
764	SLU 26	0.7	0.4	40.72	-0.0691	7.6736	-0.1403
764	SLU 27	0.71	0.44	41.56	-0.0707	7.8183	-0.1517
764	SLU 28	0.71	0.42	41.56	-0.0707	7.8186	-0.1458
764	SLU 29	0.71	0.43	41.24	-0.0701	7.764	-0.1488
764	SLU 30	0.71	0.41	41.24	-0.0701	7.7643	-0.1429
764	SLU 31	0.72	0.52	44.27	-0.0758	8.309	-0.1807
764	SLU 32	0.74	0.55	45.1	-0.0774	8.4537	-0.1921
764	SLU 33	0.74	0.53	45.11	-0.0774	8.454	-0.1861
764	SLU 34	0.73	0.51	44.79	-0.0768	8.3999	-0.1793
764	SLU 35	0.75	0.55	45.63	-0.0784	8.5446	-0.1907
764	SLU 36	0.75	0.53	45.63	-0.0784	8.545	-0.1848
764	SLU 37	0.74	0.54	45.31	-0.0778	8.4903	-0.1878
764	SLU 38	0.74	0.52	45.31	-0.0778	8.4907	-0.1818
764	SLU 39	0.73	0.59	46.01	-0.0791	8.6197	-0.2073
764	SLU 40	0.73	0.58	46.01	-0.0791	8.62	-0.2013
764	SLU 41	0.74	0.59	46.53	-0.0801	8.7106	-0.2059
764	SLU 42	0.75	0.57	46.53	-0.0801	8.711	-0.1999
764	SLU 43	0.8	0.39	45.48	-0.0761	8.6573	-0.1352
764	SLU 44	0.8	0.36	45.48	-0.0761	8.6579	-0.1253
764	SLU 45	0.82	0.39	46.32	-0.0777	8.8026	-0.1367
764	SLU 46	0.82	0.38	46.32	-0.0777	8.803	-0.1308
764	SLU 47	0.81	0.36	46.01	-0.0771	8.7489	-0.1239
764	SLU 48	0.83	0.39	46.84	-0.0787	8.8936	-0.1353
764	SLU 49	0.83	0.37	46.85	-0.0787	8.894	-0.1294
764	SLU 50	0.82	0.38	46.53	-0.0781	8.8393	-0.1324
764	SLU 51	0.83	0.36	46.53	-0.0781	8.8396	-0.1265

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
764	SLU 52	0.84	0.47	49.55	-0.0838	9.3843	-0.1643
764	SLU 53	0.85	0.5	50.39	-0.0854	9.529	-0.1757
764	SLU 54	0.85	0.49	50.39	-0.0854	9.5293	-0.1697
764	SLU 55	0.85	0.47	50.08	-0.0848	9.4753	-0.1629
764	SLU 56	0.86	0.5	50.92	-0.0864	9.6199	-0.1743
764	SLU 57	0.87	0.48	50.92	-0.0864	9.6203	-0.1684
764	SLU 58	0.86	0.49	50.6	-0.0858	9.5656	-0.1714
764	SLU 59	0.86	0.47	50.6	-0.0858	9.566	-0.1654
764	SLU 60	0.85	0.55	51.3	-0.0871	9.695	-0.1909
764	SLU 61	0.85	0.53	51.3	-0.0871	9.6953	-0.1849
764	SLU 62	0.86	0.54	51.82	-0.0881	9.7859	-0.1895
764	SLU 63	0.86	0.53	51.82	-0.0881	9.7863	-0.1835
764	SLU 64	0.85	0.5	49.6	-0.0836	9.3873	-0.1728
764	SLU 65	0.85	0.47	49.6	-0.0837	9.3879	-0.1629
764	SLU 66	0.87	0.5	50.44	-0.0853	9.5326	-0.1744
764	SLU 67	0.87	0.48	50.44	-0.0853	9.533	-0.1684
764	SLU 68	0.87	0.46	50.13	-0.0847	9.4789	-0.1615
764	SLU 69	0.88	0.5	50.96	-0.0863	9.6236	-0.173
764	SLU 70	0.88	0.48	50.97	-0.0863	9.624	-0.167
764	SLU 71	0.88	0.49	50.65	-0.0857	9.5693	-0.1701
764	SLU 72	0.88	0.47	50.65	-0.0857	9.5696	-0.1641
764	SLU 73	0.89	0.58	53.67	-0.0914	10.1143	-0.2019
764	SLU 74	0.9	0.61	54.51	-0.093	10.259	-0.2133
764	SLU 75	0.91	0.59	54.51	-0.093	10.2593	-0.2074
764	SLU 76	0.9	0.57	54.2	-0.0924	10.2053	-0.2005
764	SLU 77	0.92	0.61	55.04	-0.094	10.3499	-0.212
764	SLU 78	0.92	0.59	55.04	-0.094	10.3503	-0.206
764	SLU 79	0.91	0.6	54.72	-0.0934	10.2956	-0.209
764	SLU 80	0.91	0.58	54.72	-0.0934	10.296	-0.2031
764	SLU 81	0.9	0.65	55.42	-0.0947	10.425	-0.2285
764	SLU 82	0.9	0.64	55.42	-0.0947	10.4253	-0.2226
764	SLU 83	0.91	0.65	55.94	-0.0957	10.5159	-0.2271
764	SLU 84	0.92	0.63	55.94	-0.0957	10.5163	-0.2212
764	SLE RA 1	0.64	0.36	37.25	-0.0627	7.0606	-0.1247
764	SLE RA 2	0.65	0.34	37.25	-0.0627	7.061	-0.1181
764	SLE RA 3	0.65	0.36	37.81	-0.0638	7.1574	-0.1257
764	SLE RA 4	0.66	0.35	37.81	-0.0638	7.1577	-0.1217
764	SLE RA 5	0.65	0.34	37.6	-0.0634	7.1216	-0.1171
764	SLE RA 6	0.66	0.36	38.16	-0.0644	7.2181	-0.1248
764	SLE RA 7	0.67	0.35	38.16	-0.0644	7.2183	-0.1208
764	SLE RA 8	0.66	0.35	37.95	-0.064	7.1819	-0.1228
764	SLE RA 9	0.66	0.34	37.95	-0.064	7.1821	-0.1189
764	SLE RA 10	0.67	0.41	39.96	-0.0678	7.5452	-0.1441
764	SLE RA 11	0.68	0.43	40.52	-0.0689	7.6417	-0.1517
764	SLE RA 12	0.68	0.42	40.52	-0.0689	7.6419	-0.1477
764	SLE RA 13	0.68	0.41	40.31	-0.0685	7.6059	-0.1431
764	SLE RA 14	0.69	0.43	40.87	-0.0696	7.7023	-0.1508
764	SLE RA 15	0.69	0.42	40.87	-0.0696	7.7026	-0.1468
764	SLE RA 16	0.68	0.43	40.66	-0.0692	7.6661	-0.1488
764	SLE RA 17	0.69	0.42	40.66	-0.0692	7.6664	-0.1449
764	SLE RA 18	0.68	0.46	41.13	-0.07	7.7523	-0.1618
764	SLE RA 19	0.68	0.45	41.13	-0.07	7.7526	-0.1578
764	SLE RA 20	0.69	0.46	41.48	-0.0707	7.813	-0.1609
764	SLE RA 21	0.69	0.45	41.48	-0.0707	7.8132	-0.1569
764	SLE FR 1	0.64	0.36	37.25	-0.0627	7.0606	-0.1247
764	SLE FR 2	0.64	0.35	37.25	-0.0627	7.0607	-0.1233
764	SLE FR 3	0.65	0.36	37.39	-0.0629	7.0848	-0.1243
764	SLE FR 4	0.65	0.39	38.41	-0.0649	7.2682	-0.1345
764	SLE FR 5	0.66	0.39	38.55	-0.0652	7.2924	-0.1354
764	SLE FR 6	0.66	0.41	39.19	-0.0664	7.4065	-0.1432
764	SLE QP 1	0.64	0.36	37.25	-0.0627	7.0606	-0.1247
764	SLE QP 2	0.65	0.39	38.41	-0.0649	7.2681	-0.1358
764	SLD 1	2.67	1.16	28.25	-0.0458	5.647	-0.4048
764	SLD 2	2.52	1.79	28.08	-0.0472	5.6444	-0.6216
764	SLD 3	2.95	-0.32	28.8	-0.0431	5.5562	0.1144
764	SLD 4	2.79	0.3	28.63	-0.0445	5.5536	-0.1023
764	SLD 5	0.86	2.77	34.56	-0.063	6.92	-0.9656
764	SLD 6	0.76	3.18	34.45	-0.0639	6.9183	-1.1073
764	SLD 7	1.79	-2.19	36.39	-0.054	6.6173	0.7651
764	SLD 8	1.69	-1.78	36.28	-0.0549	6.6156	0.6234
764	SLD 9	-0.39	2.56	40.54	-0.0748	7.9207	-0.895
764	SLD 10	-0.48	2.97	40.43	-0.0758	7.919	-1.0367
764	SLD 11	0.54	-2.4	42.37	-0.0658	7.618	0.8357
764	SLD 12	0.44	-1.99	42.26	-0.0668	7.6163	0.694
764	SLD 13	-1.49	0.48	48.19	-0.0852	8.9826	-0.1693
764	SLD 14	-1.64	1.1	48.02	-0.0867	8.9801	-0.386
764	SLD 15	-1.21	-1.01	48.74	-0.0825	8.8918	0.3499
764	SLD 16	-1.36	-0.39	48.57	-0.084	8.8892	0.1332
764	SLV 1	5.37	2.17	14.63	-0.02	3.4724	-0.7521
764	SLV 2	5.02	3.61	14.23	-0.0235	3.4664	-1.257
764	SLV 3	6.01	-1.23	15.91	-0.0139	3.2608	0.4328
764	SLV 4	5.66	0.22	15.51	-0.0173	3.2548	-0.0721
764	SLV 5	1.16	5.82	29.41	-0.0602	6.4514	-2.0313
764	SLV 6	0.93	6.76	29.15	-0.0624	6.4475	-2.3558
764	SLV 7	3.29	-5.5	33.67	-0.0396	5.746	1.9184
764	SLV 8	3.06	-4.56	33.41	-0.0418	5.7421	1.5939
764	SLV 9	-1.76	5.34	43.41	-0.0879	8.7941	-1.8655
764	SLV 10	-1.99	6.27	43.15	-0.0901	8.7902	-2.19
764	SLV 11	0.37	-5.98	47.67	-0.0674	8.0887	2.0842
764	SLV 12	0.15	-5.05	47.41	-0.0696	8.0848	1.7597
764	SLV 13	-4.35	0.56	61.31	-0.1125	11.2815	-0.1995
764	SLV 14	-4.7	2.01	60.91	-0.1159	11.2754	-0.7044
764	SLV 15	-3.71	-2.84	62.59	-0.1063	11.0698	0.9854
764	SLV 16	-4.06	-1.39	62.19	-0.1097	11.0638	0.4805
764	CRTFP Ux+	0	0	0	0	0	0
764	CRTFP Ux-	0	0	0	0	0	0
764	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
764	CRTFP Uy-	0	0	0	0	0	0
766	SLU 1	1.21	0.1	61.18	0.0209	0.23	-0.0115
766	SLU 2	1.2	0.07	61.16	0.0209	0.2374	-0.011
766	SLU 3	1.25	0.11	62.56	0.0213	0.2379	-0.0118
766	SLU 4	1.24	0.09	62.55	0.0213	0.2424	-0.0115
766	SLU 5	1.23	0.06	62.03	0.0211	0.2417	-0.0113
766	SLU 6	1.27	0.11	63.43	0.0215	0.2422	-0.0121
766	SLU 7	1.26	0.08	63.42	0.0215	0.2467	-0.0118
766	SLU 8	1.26	0.09	62.91	0.0214	0.2385	-0.012
766	SLU 9	1.25	0.07	62.9	0.0214	0.243	-0.0118
766	SLU 10	1.27	0.17	68.49	0.0228	0.2763	-0.0116
766	SLU 11	1.31	0.22	69.89	0.0232	0.2767	-0.0124
766	SLU 12	1.31	0.2	69.88	0.0232	0.2812	-0.0121
766	SLU 13	1.3	0.17	69.36	0.0231	0.2806	-0.0119
766	SLU 14	1.34	0.21	70.76	0.0235	0.281	-0.0127
766	SLU 15	1.33	0.19	70.75	0.0235	0.2855	-0.0124
766	SLU 16	1.33	0.2	70.24	0.0233	0.2774	-0.0127
766	SLU 17	1.32	0.18	70.23	0.0233	0.2819	-0.0124
766	SLU 18	1.31	0.25	71.65	0.0237	0.2855	-0.0123
766	SLU 19	1.31	0.23	71.64	0.0237	0.2899	-0.0121
766	SLU 20	1.33	0.25	72.51	0.0239	0.2897	-0.0126
766	SLU 21	1.33	0.23	72.5	0.0239	0.2942	-0.0124
766	SLU 22	1.32	0.23	68.53	0.0238	0.267	-0.012
766	SLU 23	1.31	0.2	68.52	0.0238	0.2745	-0.0115
766	SLU 24	1.35	0.24	69.92	0.0242	0.2749	-0.0123
766	SLU 25	1.34	0.22	69.91	0.0242	0.2794	-0.012
766	SLU 26	1.33	0.19	69.38	0.0241	0.2787	-0.0118
766	SLU 27	1.37	0.24	70.78	0.0244	0.2792	-0.0126
766	SLU 28	1.37	0.22	70.78	0.0244	0.2837	-0.0123
766	SLU 29	1.36	0.22	70.26	0.0243	0.2756	-0.0125
766	SLU 30	1.36	0.2	70.26	0.0243	0.28	-0.0123
766	SLU 31	1.38	0.31	75.85	0.0258	0.3133	-0.0121
766	SLU 32	1.42	0.35	77.25	0.0261	0.3138	-0.0129
766	SLU 33	1.41	0.33	77.24	0.0261	0.3183	-0.0126
766	SLU 34	1.4	0.3	76.71	0.026	0.3176	-0.0124
766	SLU 35	1.44	0.34	78.11	0.0264	0.3181	-0.0132
766	SLU 36	1.44	0.32	78.1	0.0264	0.3225	-0.0129
766	SLU 37	1.43	0.33	77.59	0.0263	0.3144	-0.0132
766	SLU 38	1.43	0.31	77.59	0.0263	0.3189	-0.0129
766	SLU 39	1.41	0.39	79	0.0266	0.3225	-0.0128
766	SLU 40	1.41	0.37	78.99	0.0266	0.327	-0.0126
766	SLU 41	1.44	0.38	79.87	0.0269	0.3268	-0.0131
766	SLU 42	1.43	0.36	79.86	0.0269	0.3312	-0.0129
766	SLU 43	1.54	0.08	77.01	0.0261	0.2863	-0.0147
766	SLU 44	1.53	0.05	76.99	0.0261	0.2937	-0.0143
766	SLU 45	1.57	0.09	78.39	0.0265	0.2942	-0.015
766	SLU 46	1.57	0.07	78.39	0.0265	0.2987	-0.0148
766	SLU 47	1.55	0.05	77.86	0.0264	0.298	-0.0146
766	SLU 48	1.6	0.09	79.26	0.0268	0.2985	-0.0153
766	SLU 49	1.59	0.07	79.25	0.0268	0.303	-0.0151
766	SLU 50	1.58	0.08	78.74	0.0266	0.2948	-0.0153
766	SLU 51	1.58	0.06	78.73	0.0266	0.2993	-0.015
766	SLU 52	1.6	0.16	84.32	0.0281	0.3326	-0.0149
766	SLU 53	1.64	0.2	85.72	0.0285	0.333	-0.0157
766	SLU 54	1.64	0.18	85.71	0.0285	0.3375	-0.0154
766	SLU 55	1.62	0.15	85.19	0.0283	0.3369	-0.0152
766	SLU 56	1.66	0.2	86.59	0.0287	0.3373	-0.016
766	SLU 57	1.66	0.18	86.58	0.0287	0.3418	-0.0157
766	SLU 58	1.65	0.18	86.07	0.0286	0.3337	-0.0159
766	SLU 59	1.65	0.16	86.06	0.0286	0.3382	-0.0157
766	SLU 60	1.64	0.24	87.48	0.0289	0.3418	-0.0156
766	SLU 61	1.63	0.22	87.47	0.0289	0.3462	-0.0153
766	SLU 62	1.66	0.23	88.34	0.0292	0.346	-0.0159
766	SLU 63	1.66	0.21	88.34	0.0292	0.3505	-0.0156
766	SLU 64	1.64	0.22	84.36	0.0291	0.3233	-0.0152
766	SLU 65	1.64	0.18	84.35	0.0291	0.3308	-0.0148
766	SLU 66	1.68	0.23	85.75	0.0294	0.3312	-0.0155
766	SLU 67	1.67	0.21	85.74	0.0294	0.3357	-0.0153
766	SLU 68	1.66	0.18	85.22	0.0293	0.335	-0.0151
766	SLU 69	1.7	0.22	86.61	0.0297	0.3355	-0.0158
766	SLU 70	1.7	0.2	86.61	0.0297	0.34	-0.0156
766	SLU 71	1.69	0.21	86.09	0.0296	0.3319	-0.0158
766	SLU 72	1.68	0.19	86.09	0.0296	0.3363	-0.0155
766	SLU 73	1.7	0.29	91.68	0.031	0.3696	-0.0154
766	SLU 74	1.75	0.33	93.08	0.0314	0.3701	-0.0162
766	SLU 75	1.74	0.31	93.07	0.0314	0.3746	-0.0159
766	SLU 76	1.73	0.29	92.54	0.0313	0.3739	-0.0157
766	SLU 77	1.77	0.33	93.94	0.0317	0.3744	-0.0165
766	SLU 78	1.76	0.31	93.94	0.0317	0.3788	-0.0162
766	SLU 79	1.76	0.32	93.42	0.0315	0.3707	-0.0164
766	SLU 80	1.75	0.3	93.42	0.0315	0.3752	-0.0161
766	SLU 81	1.74	0.37	94.83	0.0319	0.3788	-0.0161
766	SLU 82	1.74	0.35	94.82	0.0319	0.3833	-0.0158
766	SLU 83	1.76	0.37	95.7	0.0321	0.3831	-0.0164
766	SLU 84	1.76	0.35	95.69	0.0321	0.3875	-0.0161
766	SLE RA 1	1.24	0.14	63.28	0.0217	0.2406	-0.0116
766	SLE RA 2	1.24	0.12	63.27	0.0217	0.2455	-0.0113
766	SLE RA 3	1.26	0.14	64.2	0.022	0.2458	-0.0118
766	SLE RA 4	1.26	0.13	64.2	0.022	0.2488	-0.0116
766	SLE RA 5	1.25	0.11	63.85	0.0219	0.2484	-0.0115
766	SLE RA 6	1.28	0.14	64.78	0.0221	0.2487	-0.012
766	SLE RA 7	1.28	0.13	64.77	0.0221	0.2517	-0.0118
766	SLE RA 8	1.27	0.13	64.43	0.0221	0.2463	-0.012
766	SLE RA 9	1.27	0.12	64.43	0.0221	0.2493	-0.0118
766	SLE RA 10	1.28	0.19	68.15	0.023	0.2714	-0.0117
766	SLE RA 11	1.31	0.22	69.09	0.0233	0.2717	-0.0122
766	SLE RA 12	1.31	0.2	69.08	0.0233	0.2747	-0.012

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
766	SLE RA 13	1.3	0.18	68.73	0.0232	0.2743	-0.0119
766	SLE RA 14	1.32	0.21	69.66	0.0234	0.2746	-0.0124
766	SLE RA 15	1.32	0.2	69.66	0.0234	0.2776	-0.0122
766	SLE RA 16	1.32	0.2	69.32	0.0234	0.2722	-0.0124
766	SLE RA 17	1.31	0.19	69.31	0.0234	0.2751	-0.0122
766	SLE RA 18	1.31	0.24	70.26	0.0236	0.2775	-0.0122
766	SLE RA 19	1.3	0.23	70.25	0.0236	0.2805	-0.012
766	SLE RA 20	1.32	0.24	70.83	0.0237	0.2804	-0.0124
766	SLE RA 21	1.32	0.22	70.83	0.0237	0.2834	-0.0122
766	SLE FR 1	1.24	0.14	63.28	0.0217	0.2406	-0.0116
766	SLE FR 2	1.24	0.13	63.28	0.0217	0.2416	-0.0115
766	SLE FR 3	1.25	0.14	63.51	0.0218	0.2417	-0.0117
766	SLE FR 4	1.26	0.16	65.37	0.0223	0.2527	-0.0117
766	SLE FR 5	1.27	0.17	65.6	0.0223	0.2528	-0.0119
766	SLE FR 6	1.27	0.19	66.77	0.0226	0.2591	-0.0119
766	SLE QP 1	1.24	0.14	63.28	0.0217	0.2406	-0.0116
766	SLE QP 2	1.26	0.17	65.37	0.0223	0.2517	-0.0118
766	SLD 1	6.16	1.11	61.2	0.0229	0.2749	-0.0239
766	SLD 2	5.93	1.56	61.02	0.0201	0.2833	-0.0132
766	SLD 3	6.45	-0.5	60.56	0.0279	0.3047	-0.031
766	SLD 4	6.22	-0.05	60.38	0.0251	0.3131	-0.0202
766	SLD 5	2.32	2.81	65.12	0.0154	0.212	-0.0066
766	SLD 6	2.17	3.1	65	0.0135	0.2175	0.0005
766	SLD 7	3.31	-2.55	62.99	0.032	0.3112	-0.0302
766	SLD 8	3.16	-2.26	62.87	0.0302	0.3167	-0.0232
766	SLD 9	-0.64	2.6	67.87	0.0143	0.1866	-0.0004
766	SLD 10	-0.79	2.89	67.75	0.0125	0.1921	0.0067
766	SLD 11	0.35	-2.77	65.74	0.031	0.2858	-0.024
766	SLD 12	0.2	-2.47	65.62	0.0292	0.2913	-0.017
766	SLD 13	-3.7	0.39	70.36	0.0195	0.1902	-0.0033
766	SLD 14	-3.93	0.84	70.18	0.0166	0.1987	0.0075
766	SLD 15	-3.41	-1.22	69.72	0.0244	0.22	-0.0104
766	SLD 16	-3.63	-0.77	69.54	0.0216	0.2284	0.0004
766	SLV 1	12.71	2.32	55.59	0.0239	0.3079	-0.0402
766	SLV 2	12.18	3.36	55.16	0.0174	0.3275	-0.0151
766	SLV 3	13.4	-1.35	54.12	0.0353	0.3759	-0.0568
766	SLV 4	12.87	-0.3	53.7	0.0287	0.3955	-0.0317
766	SLV 5	3.74	6.19	64.73	0.0067	0.162	0.0005
766	SLV 6	3.39	6.86	64.46	0.0025	0.1747	0.0167
766	SLV 7	6.05	-6.02	59.84	0.0445	0.3887	-0.0547
766	SLV 8	5.7	-5.35	59.57	0.0403	0.4013	-0.0386
766	SLV 9	-3.18	5.68	71.17	0.0043	0.102	0.015
766	SLV 10	-3.52	6.36	70.9	0	0.1146	0.0312
766	SLV 11	-0.87	-6.52	66.28	0.0421	0.3286	-0.0402
766	SLV 12	-1.22	-5.85	66.01	0.0379	0.3413	-0.0241
766	SLV 13	-10.35	0.63	77.04	0.0158	0.1078	0.0081
766	SLV 14	-10.88	1.68	76.62	0.0093	0.1274	0.0332
766	SLV 15	-9.66	-3.03	75.58	0.0272	0.1758	-0.0085
766	SLV 16	-10.19	-1.98	75.16	0.0206	0.1954	0.0167
766	CRTFP Ux+	0	0	0	0	0	0
766	CRTFP Ux-	0	0	0	0	0	0
769	SLU 1	-0.91	-0.82	64.89	-0.0032	-0.372	0.0213
769	SLU 2	-0.92	-0.9	64.92	-0.0028	-0.377	0.0219
769	SLU 3	-0.93	-0.83	66.46	-0.0032	-0.3828	0.0219
769	SLU 4	-0.94	-0.88	66.48	-0.003	-0.3858	0.0222
769	SLU 5	-0.94	-0.91	65.91	-0.0027	-0.3817	0.0222
769	SLU 6	-0.95	-0.83	67.45	-0.0032	-0.3876	0.0222
769	SLU 7	-0.96	-0.88	67.47	-0.0029	-0.3905	0.0225
769	SLU 8	-0.94	-0.83	66.87	-0.0031	-0.3815	0.0219
769	SLU 9	-0.95	-0.88	66.89	-0.0029	-0.3845	0.0223
769	SLU 10	-0.97	-0.92	72.93	-0.0034	-0.4394	0.025
769	SLU 11	-0.98	-0.85	74.46	-0.0038	-0.4452	0.025
769	SLU 12	-0.99	-0.9	74.48	-0.0036	-0.4482	0.0253
769	SLU 13	-0.98	-0.93	73.91	-0.0033	-0.4441	0.0253
769	SLU 14	-0.99	-0.86	75.45	-0.0038	-0.45	0.0253
769	SLU 15	-1	-0.91	75.47	-0.0035	-0.4529	0.0256
769	SLU 16	-0.98	-0.86	74.87	-0.0037	-0.4439	0.025
769	SLU 17	-0.99	-0.9	74.89	-0.0035	-0.4469	0.0254
769	SLU 18	-0.97	-0.85	76.32	-0.004	-0.4612	0.0258
769	SLU 19	-0.98	-0.9	76.34	-0.0038	-0.4641	0.0261
769	SLU 20	-0.99	-0.86	77.31	-0.004	-0.4659	0.0261
769	SLU 21	-1	-0.91	77.33	-0.0038	-0.4689	0.0264
769	SLU 22	-0.99	-0.79	72.9	-0.0029	-0.4271	0.0235
769	SLU 23	-1	-0.87	72.93	-0.0025	-0.432	0.0241
769	SLU 24	-1.01	-0.8	74.47	-0.0029	-0.4379	0.0241
769	SLU 25	-1.02	-0.85	74.49	-0.0027	-0.4408	0.0244
769	SLU 26	-1.02	-0.88	73.92	-0.0025	-0.4368	0.0244
769	SLU 27	-1.03	-0.81	75.46	-0.0029	-0.4426	0.0244
769	SLU 28	-1.04	-0.86	75.47	-0.0027	-0.4456	0.0247
769	SLU 29	-1.02	-0.81	74.87	-0.0028	-0.4366	0.0241
769	SLU 30	-1.03	-0.86	74.89	-0.0026	-0.4395	0.0244
769	SLU 31	-1.05	-0.9	80.93	-0.0031	-0.4944	0.0272
769	SLU 32	-1.06	-0.82	82.47	-0.0035	-0.5003	0.0272
769	SLU 33	-1.07	-0.87	82.49	-0.0033	-0.5032	0.0275
769	SLU 34	-1.06	-0.9	81.92	-0.003	-0.4992	0.0275
769	SLU 35	-1.07	-0.83	83.46	-0.0035	-0.505	0.0275
769	SLU 36	-1.08	-0.88	83.48	-0.0032	-0.508	0.0278
769	SLU 37	-1.06	-0.83	82.88	-0.0034	-0.499	0.0272
769	SLU 38	-1.07	-0.88	82.9	-0.0032	-0.502	0.0276
769	SLU 39	-1.05	-0.82	84.33	-0.0037	-0.5163	0.028
769	SLU 40	-1.06	-0.87	84.35	-0.0035	-0.5192	0.0283
769	SLU 41	-1.07	-0.83	85.32	-0.0037	-0.521	0.0283
769	SLU 42	-1.08	-0.88	85.34	-0.0035	-0.524	0.0286
769	SLU 43	-1.15	-1.07	81.62	-0.0042	-0.4648	0.027
769	SLU 44	-1.17	-1.16	81.65	-0.0038	-0.4697	0.0275
769	SLU 45	-1.18	-1.08	83.19	-0.0043	-0.4755	0.0275
769	SLU 46	-1.19	-1.13	83.2	-0.004	-0.4785	0.0279

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
769	SLU 47	-1.18	-1.16	82.64	-0.0038	-0.4744	0.0278
769	SLU 48	-1.19	-1.09	84.17	-0.0042	-0.4803	0.0278
769	SLU 49	-1.2	-1.14	84.19	-0.004	-0.4832	0.0282
769	SLU 50	-1.18	-1.09	83.59	-0.0042	-0.4742	0.0276
769	SLU 51	-1.19	-1.14	83.61	-0.0039	-0.4772	0.0279
769	SLU 52	-1.21	-1.18	89.65	-0.0044	-0.5321	0.0306
769	SLU 53	-1.22	-1.1	91.19	-0.0049	-0.5379	0.0307
769	SLU 54	-1.23	-1.15	91.21	-0.0046	-0.5409	0.031
769	SLU 55	-1.23	-1.19	90.64	-0.0044	-0.5368	0.0309
769	SLU 56	-1.24	-1.11	92.18	-0.0048	-0.5427	0.0309
769	SLU 57	-1.25	-1.16	92.2	-0.0046	-0.5456	0.0313
769	SLU 58	-1.23	-1.11	91.59	-0.0048	-0.5366	0.0307
769	SLU 59	-1.24	-1.16	91.61	-0.0045	-0.5396	0.031
769	SLU 60	-1.22	-1.11	93.05	-0.0051	-0.5539	0.0314
769	SLU 61	-1.22	-1.15	93.07	-0.0048	-0.5569	0.0318
769	SLU 62	-1.23	-1.11	94.04	-0.005	-0.5587	0.0317
769	SLU 63	-1.24	-1.16	94.05	-0.0048	-0.5616	0.0321
769	SLU 64	-1.23	-1.05	89.62	-0.0039	-0.5198	0.0292
769	SLU 65	-1.25	-1.13	89.65	-0.0035	-0.5248	0.0297
769	SLU 66	-1.26	-1.06	91.19	-0.004	-0.5306	0.0297
769	SLU 67	-1.27	-1.1	91.21	-0.0037	-0.5336	0.0301
769	SLU 68	-1.26	-1.14	90.64	-0.0035	-0.5295	0.03
769	SLU 69	-1.27	-1.06	92.18	-0.004	-0.5354	0.03
769	SLU 70	-1.28	-1.11	92.2	-0.0037	-0.5383	0.0304
769	SLU 71	-1.26	-1.06	91.6	-0.0039	-0.5293	0.0297
769	SLU 72	-1.27	-1.11	91.62	-0.0036	-0.5323	0.0301
769	SLU 73	-1.29	-1.15	97.65	-0.0041	-0.5872	0.0328
769	SLU 74	-1.3	-1.08	99.19	-0.0046	-0.593	0.0328
769	SLU 75	-1.31	-1.13	99.21	-0.0043	-0.596	0.0332
769	SLU 76	-1.31	-1.16	98.64	-0.0041	-0.5919	0.0331
769	SLU 77	-1.32	-1.08	100.18	-0.0045	-0.5978	0.0331
769	SLU 78	-1.33	-1.13	100.2	-0.0043	-0.6007	0.0335
769	SLU 79	-1.31	-1.08	99.6	-0.0045	-0.5917	0.0329
769	SLU 80	-1.32	-1.13	99.62	-0.0042	-0.5947	0.0332
769	SLU 81	-1.3	-1.08	101.05	-0.0048	-0.609	0.0336
769	SLU 82	-1.31	-1.13	101.07	-0.0045	-0.6119	0.0339
769	SLU 83	-1.31	-1.09	102.04	-0.0048	-0.6137	0.0339
769	SLU 84	-1.32	-1.14	102.06	-0.0045	-0.6167	0.0342
769	SLE RA 1	-0.93	-0.81	67.18	-0.0031	-0.3878	0.0219
769	SLE RA 2	-0.94	-0.87	67.2	-0.0028	-0.3911	0.0223
769	SLE RA 3	-0.95	-0.82	68.23	-0.0031	-0.395	0.0223
769	SLE RA 4	-0.95	-0.85	68.24	-0.003	-0.3969	0.0226
769	SLE RA 5	-0.95	-0.87	67.86	-0.0028	-0.3942	0.0225
769	SLE RA 6	-0.96	-0.82	68.89	-0.0031	-0.3981	0.0225
769	SLE RA 7	-0.96	-0.85	68.9	-0.0029	-0.4001	0.0227
769	SLE RA 8	-0.95	-0.82	68.5	-0.0031	-0.3941	0.0223
769	SLE RA 9	-0.96	-0.85	68.51	-0.0029	-0.3961	0.0226
769	SLE RA 10	-0.97	-0.88	72.54	-0.0032	-0.4327	0.0244
769	SLE RA 11	-0.98	-0.83	73.56	-0.0035	-0.4366	0.0244
769	SLE RA 12	-0.98	-0.86	73.57	-0.0034	-0.4385	0.0246
769	SLE RA 13	-0.98	-0.89	73.19	-0.0032	-0.4358	0.0246
769	SLE RA 14	-0.99	-0.84	74.22	-0.0035	-0.4397	0.0246
769	SLE RA 15	-0.99	-0.87	74.23	-0.0033	-0.4417	0.0248
769	SLE RA 16	-0.98	-0.84	73.83	-0.0035	-0.4357	0.0244
769	SLE RA 17	-0.99	-0.87	73.84	-0.0033	-0.4377	0.0246
769	SLE RA 18	-0.97	-0.83	74.8	-0.0037	-0.4472	0.0249
769	SLE RA 19	-0.98	-0.87	74.81	-0.0035	-0.4492	0.0251
769	SLE RA 20	-0.98	-0.84	75.46	-0.0036	-0.4504	0.0251
769	SLE RA 21	-0.99	-0.87	75.47	-0.0035	-0.4523	0.0253
769	SLE FR 1	-0.93	-0.81	67.18	-0.0031	-0.3878	0.0219
769	SLE FR 2	-0.93	-0.82	67.18	-0.003	-0.3884	0.022
769	SLE FR 3	-0.94	-0.81	67.44	-0.0031	-0.389	0.022
769	SLE FR 4	-0.95	-0.83	69.47	-0.0032	-0.4063	0.0229
769	SLE FR 5	-0.95	-0.82	69.73	-0.0033	-0.4069	0.0229
769	SLE FR 6	-0.95	-0.82	70.99	-0.0034	-0.4175	0.0234
769	SLE QP 1	-0.93	-0.81	67.18	-0.0031	-0.3878	0.0219
769	SLE QP 2	-0.94	-0.82	69.47	-0.0033	-0.4056	0.0228
769	SLD 1	4.18	-0.39	73.64	-0.0228	-0.4333	0.0249
769	SLD 2	3.96	-0.82	74.01	-0.0193	-0.4258	0.0355
769	SLD 3	4.48	-2.2	73.34	-0.0153	-0.4968	0.0185
769	SLD 4	4.26	-2.63	73.7	-0.0118	-0.4893	0.0291
769	SLD 5	0.18	2.13	71.11	-0.0212	-0.3189	0.0313
769	SLD 6	0.03	1.85	71.35	-0.0189	-0.314	0.0382
769	SLD 7	1.18	-3.9	70.11	0.0039	-0.5306	0.01
769	SLD 8	1.03	-4.18	70.34	0.0062	-0.5257	0.0169
769	SLD 9	-2.92	2.55	68.59	-0.0127	-0.2855	0.0288
769	SLD 10	-3.06	2.27	68.83	-0.0104	-0.2806	0.0357
769	SLD 11	-1.92	-3.49	67.58	0.0123	-0.4972	0.0075
769	SLD 12	-2.06	-3.77	67.82	0.0146	-0.4923	0.0144
769	SLD 13	-6.15	1	65.23	0.0053	-0.3219	0.0166
769	SLD 14	-6.37	0.57	65.59	0.0088	-0.3144	0.0272
769	SLD 15	-5.85	-0.81	64.92	0.0128	-0.3854	0.0102
769	SLD 16	-6.06	-1.24	65.29	0.0163	-0.3779	0.0208
769	SLV 1	11.04	0.1	79.25	-0.0487	-0.4734	0.0277
769	SLV 2	10.53	-0.9	80.1	-0.0405	-0.4559	0.0524
769	SLV 3	11.74	-3.99	78.55	-0.0317	-0.6173	0.0128
769	SLV 4	11.23	-4.99	79.4	-0.0235	-0.5998	0.0375
769	SLV 5	1.68	5.84	73.31	-0.0441	-0.2107	0.0426
769	SLV 6	1.35	5.19	73.86	-0.0389	-0.1994	0.0585
769	SLV 7	4.01	-7.81	70.99	0.0126	-0.6904	-0.007
769	SLV 8	3.68	-8.45	71.53	0.0179	-0.6791	0.0089
769	SLV 9	-5.57	6.81	67.4	-0.0244	-0.1321	0.0368
769	SLV 10	-5.9	6.17	67.94	-0.0192	-0.1208	0.0527
769	SLV 11	-3.24	-6.83	65.07	0.0323	-0.6118	-0.0128
769	SLV 12	-3.56	-7.47	65.62	0.0376	-0.6005	0.003
769	SLV 13	-13.12	3.35	59.53	0.017	-0.2114	0.0082
769	SLV 14	-13.63	2.36	60.38	0.0251	-0.1939	0.0329

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
769	SLV 15	-12.42	-0.74	58.83	0.034	-0.3553	-0.0067
769	SLV 16	-12.93	-1.74	59.68	0.0422	-0.3378	0.018
769	CRTFP Ux+	0	0	0	0	0	0
769	CRTFP Ux-	0	0	0	0	0	0
769	CRTFP Uy+	0	0	0	0	0	0
769	CRTFP Uy-	0	0	0	0	0	0
785	SLU 1	1.43	1.45	127.54	-0.0376	-20.3525	0.2739
785	SLU 2	1.4	1.3	127.47	-0.0333	-20.3416	0.2488
785	SLU 3	1.47	1.53	130.43	-0.0397	-20.8039	0.2879
785	SLU 4	1.45	1.44	130.39	-0.0371	-20.7974	0.2728
785	SLU 5	1.43	1.32	129.17	-0.0364	-20.6095	0.2529
785	SLU 6	1.51	1.56	132.14	-0.0428	-21.0717	0.2921
785	SLU 7	1.49	1.47	132.09	-0.0402	-21.0652	0.277
785	SLU 8	1.5	1.5	130.95	-0.0439	-20.8881	0.2822
785	SLU 9	1.48	1.41	130.91	-0.0413	-20.8816	0.2671
785	SLU 10	1.64	1.57	144.32	-0.0395	-22.983	0.3008
785	SLU 11	1.71	1.8	147.29	-0.0459	-23.4453	0.34
785	SLU 12	1.69	1.71	147.24	-0.0433	-23.4388	0.3249
785	SLU 13	1.67	1.59	146.03	-0.0426	-23.2508	0.305
785	SLU 14	1.74	1.83	148.99	-0.049	-23.7131	0.3441
785	SLU 15	1.73	1.73	148.95	-0.0464	-23.7066	0.329
785	SLU 16	1.74	1.77	147.81	-0.0501	-23.5294	0.3343
785	SLU 17	1.72	1.68	147.77	-0.0475	-23.523	0.3192
785	SLU 18	1.77	1.84	151.62	-0.0465	-24.1258	0.3483
785	SLU 19	1.75	1.74	151.58	-0.0439	-24.1193	0.3332
785	SLU 20	1.8	1.86	153.33	-0.0497	-24.3936	0.3525
785	SLU 21	1.79	1.77	153.28	-0.047	-24.3872	0.3374
785	SLU 22	1.65	1.96	143.61	-0.0222	-22.8629	0.3638
785	SLU 23	1.62	1.81	143.53	-0.0178	-22.8521	0.3386
785	SLU 24	1.7	2.04	146.5	-0.0242	-23.3143	0.3777
785	SLU 25	1.68	1.95	146.45	-0.0216	-23.3078	0.3626
785	SLU 26	1.66	1.83	145.24	-0.0209	-23.1199	0.3427
785	SLU 27	1.73	2.07	148.2	-0.0274	-23.5821	0.3819
785	SLU 28	1.71	1.97	148.16	-0.0247	-23.5757	0.3668
785	SLU 29	1.72	2.01	147.02	-0.0284	-23.3985	0.3721
785	SLU 30	1.7	1.92	146.98	-0.0258	-23.392	0.357
785	SLU 31	1.86	2.08	160.39	-0.024	-25.4935	0.3907
785	SLU 32	1.93	2.31	163.35	-0.0305	-25.9557	0.4298
785	SLU 33	1.92	2.22	163.31	-0.0278	-25.9492	0.4147
785	SLU 34	1.9	2.1	162.1	-0.0272	-25.7613	0.3948
785	SLU 35	1.97	2.34	165.06	-0.0336	-26.2235	0.434
785	SLU 36	1.95	2.24	165.02	-0.031	-26.217	0.4189
785	SLU 37	1.96	2.28	163.88	-0.0347	-26.0399	0.4242
785	SLU 38	1.94	2.19	163.83	-0.032	-26.0334	0.4091
785	SLU 39	1.99	2.35	167.69	-0.0311	-26.6363	0.4382
785	SLU 40	1.98	2.25	167.64	-0.0285	-26.6298	0.4231
785	SLU 41	2.03	2.37	169.39	-0.0342	-26.9041	0.4423
785	SLU 42	2.01	2.28	169.35	-0.0316	-26.8976	0.4272
785	SLU 43	1.78	1.72	160.29	-0.0542	-25.5975	0.3253
785	SLU 44	1.75	1.56	160.22	-0.0498	-25.5867	0.3001
785	SLU 45	1.82	1.8	163.18	-0.0563	-26.0489	0.3393
785	SLU 46	1.81	1.7	163.14	-0.0537	-26.0424	0.3242
785	SLU 47	1.79	1.59	161.93	-0.053	-25.8545	0.3043
785	SLU 48	1.86	1.82	164.89	-0.0594	-26.3167	0.3434
785	SLU 49	1.84	1.73	164.85	-0.0568	-26.3102	0.3283
785	SLU 50	1.85	1.77	163.71	-0.0605	-26.1331	0.3336
785	SLU 51	1.83	1.67	163.66	-0.0579	-26.1266	0.3185
785	SLU 52	1.99	1.83	177.08	-0.0561	-28.228	0.3522
785	SLU 53	2.06	2.06	180.04	-0.0625	-28.6903	0.3914
785	SLU 54	2.04	1.97	180	-0.0599	-28.6838	0.3763
785	SLU 55	2.02	1.85	178.78	-0.0592	-28.4958	0.3564
785	SLU 56	2.1	2.09	181.75	-0.0656	-28.9581	0.3955
785	SLU 57	2.08	2	181.7	-0.063	-28.9516	0.3804
785	SLU 58	2.09	2.03	180.56	-0.0667	-28.7745	0.3857
785	SLU 59	2.07	1.94	180.52	-0.0641	-28.768	0.3706
785	SLU 60	2.12	2.1	184.37	-0.0631	-29.3708	0.3997
785	SLU 61	2.1	2.01	184.33	-0.0605	-29.3644	0.3846
785	SLU 62	2.16	2.12	186.08	-0.0663	-29.6387	0.4039
785	SLU 63	2.14	2.03	186.04	-0.0636	-29.6322	0.3888
785	SLU 64	2	2.23	176.36	-0.0388	-28.1079	0.4151
785	SLU 65	1.98	2.07	176.29	-0.0344	-28.0971	0.39
785	SLU 66	2.05	2.3	179.25	-0.0408	-28.5593	0.4291
785	SLU 67	2.03	2.21	179.21	-0.0382	-28.5529	0.414
785	SLU 68	2.01	2.1	177.99	-0.0375	-28.3649	0.3941
785	SLU 69	2.08	2.33	180.96	-0.0439	-28.8272	0.4333
785	SLU 70	2.06	2.24	180.91	-0.0413	-28.8207	0.4182
785	SLU 71	2.07	2.27	179.77	-0.045	-28.6435	0.4235
785	SLU 72	2.05	2.18	179.73	-0.0424	-28.637	0.4084
785	SLU 73	2.21	2.34	193.14	-0.0406	-30.7385	0.442
785	SLU 74	2.29	2.57	196.11	-0.0471	-31.2007	0.4812
785	SLU 75	2.27	2.48	196.06	-0.0444	-31.1942	0.4661
785	SLU 76	2.25	2.36	194.85	-0.0438	-31.0063	0.4462
785	SLU 77	2.32	2.6	197.81	-0.0502	-31.4685	0.4853
785	SLU 78	2.3	2.5	197.77	-0.0476	-31.462	0.4702
785	SLU 79	2.31	2.54	196.63	-0.0513	-31.2849	0.4755
785	SLU 80	2.29	2.45	196.59	-0.0486	-31.2784	0.4604
785	SLU 81	2.35	2.61	200.44	-0.0477	-31.8813	0.4895
785	SLU 82	2.33	2.52	200.4	-0.0451	-31.8748	0.4744
785	SLU 83	2.38	2.63	202.15	-0.0508	-32.1491	0.4937
785	SLU 84	2.36	2.54	202.1	-0.0482	-32.1426	0.4786
785	SLE RA 1	1.49	1.6	132.13	-0.0332	-21.0697	0.2996
785	SLE RA 2	1.47	1.5	132.08	-0.0303	-21.0625	0.2828
785	SLE RA 3	1.52	1.65	134.06	-0.0346	-21.3707	0.3089
785	SLE RA 4	1.51	1.59	134.03	-0.0328	-21.3664	0.2988
785	SLE RA 5	1.5	1.51	133.22	-0.0324	-21.2411	0.2856
785	SLE RA 6	1.54	1.67	135.19	-0.0367	-21.5492	0.3117
785	SLE RA 7	1.53	1.61	135.17	-0.0349	-21.5449	0.3016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
785	SLE RA 8	1.54	1.63	134.41	-0.0374	-21.4268	0.3051
785	SLE RA 9	1.53	1.57	134.38	-0.0356	-21.4225	0.2951
785	SLE RA 10	1.63	1.68	143.32	-0.0345	-22.8234	0.3175
785	SLE RA 11	1.68	1.83	145.29	-0.0387	-23.1316	0.3436
785	SLE RA 12	1.67	1.77	145.27	-0.037	-23.1273	0.3336
785	SLE RA 13	1.66	1.69	144.46	-0.0365	-23.002	0.3203
785	SLE RA 14	1.7	1.85	146.43	-0.0408	-23.3101	0.3464
785	SLE RA 15	1.69	1.79	146.4	-0.0391	-23.3058	0.3363
785	SLE RA 16	1.7	1.81	145.64	-0.0415	-23.1877	0.3399
785	SLE RA 17	1.69	1.75	145.61	-0.0398	-23.1834	0.3298
785	SLE RA 18	1.72	1.86	148.18	-0.0392	-23.5853	0.3492
785	SLE RA 19	1.71	1.79	148.16	-0.0374	-23.581	0.3391
785	SLE RA 20	1.74	1.87	149.32	-0.0412	-23.7639	0.352
785	SLE RA 21	1.73	1.81	149.29	-0.0395	-23.7595	0.3419
785	SLE FR 1	1.49	1.6	132.13	-0.0332	-21.0697	0.2996
785	SLE FR 2	1.49	1.58	132.12	-0.0326	-21.0683	0.2962
785	SLE FR 3	1.5	1.61	132.58	-0.034	-21.1411	0.3007
785	SLE FR 4	1.56	1.66	136.94	-0.0344	-21.823	0.3111
785	SLE FR 5	1.57	1.68	137.4	-0.0358	-21.8958	0.3156
785	SLE FR 6	1.61	1.73	140.16	-0.0362	-22.3275	0.3244
785	SLE QP 1	1.49	1.6	132.13	-0.0332	-21.0697	0.2996
785	SLE QP 2	1.56	1.68	136.95	-0.035	-21.8244	0.3145
785	SLD 1	13.95	5.08	145.45	0.0724	-23.4448	0.8717
785	SLD 2	13.45	4.66	145.07	0.0683	-23.3798	0.8241
785	SLD 3	14.68	0.74	144.67	0.1651	-23.3258	0.1379
785	SLD 4	14.17	0.32	144.29	0.1609	-23.2609	0.0903
785	SLD 5	4.26	9.35	140.75	-0.1425	-22.5024	1.603
785	SLD 6	3.93	9.07	140.5	-0.1452	-22.4599	1.5719
785	SLD 7	6.69	-5.11	138.14	0.1662	-22.1059	-0.843
785	SLD 8	6.36	-5.38	137.89	0.1635	-22.0635	-0.8742
785	SLD 9	-3.24	8.73	136	-0.2335	-21.5853	1.5031
785	SLD 10	-3.57	8.46	135.75	-0.2362	-21.5429	1.472
785	SLD 11	-0.81	-5.72	133.39	0.0752	-21.1889	-0.9429
785	SLD 12	-1.14	-5.99	133.14	0.0725	-21.1464	-0.9741
785	SLD 13	-11.05	3.03	129.61	-0.2309	-20.3879	0.5387
785	SLD 14	-11.55	2.61	129.22	-0.2351	-20.323	0.4911
785	SLD 15	-10.32	-1.3	128.82	-0.1383	-20.269	-0.1951
785	SLD 16	-10.83	-1.72	128.44	-0.1424	-20.204	-0.2427
785	SLV 1	30.54	9.46	157.05	0.22	-25.6435	1.5897
785	SLV 2	29.37	8.48	156.16	0.2103	-25.4923	1.4789
785	SLV 3	32.24	-0.36	155.27	0.43	-25.3708	-0.0718
785	SLV 4	31.07	-1.33	154.37	0.4204	-25.2196	-0.1827
785	SLV 5	7.88	19.07	145.84	-0.2754	-23.4096	3.2361
785	SLV 6	7.13	18.44	145.27	-0.2816	-23.3125	3.1648
785	SLV 7	13.54	-13.65	139.88	0.4248	-22.5006	-2.3024
785	SLV 8	12.79	-14.28	139.31	0.4185	-22.4035	-2.3737
785	SLV 9	-9.67	17.63	134.58	-0.4885	-21.2453	3.0026
785	SLV 10	-10.42	17.01	134.01	-0.4947	-21.1482	2.9314
785	SLV 11	-4.01	-15.08	128.62	0.2116	-20.3363	-2.5359
785	SLV 12	-4.76	-15.71	128.05	0.2054	-20.2392	-2.6071
785	SLV 13	-27.95	4.69	119.52	-0.4904	-18.4292	0.8116
785	SLV 14	-29.12	3.71	118.63	-0.5	-18.278	0.7008
785	SLV 15	-26.25	-5.13	117.73	-0.2803	-18.1565	-0.8499
785	SLV 16	-27.42	-6.11	116.84	-0.29	-18.0053	-0.9608
785	CRTFP Ux+	0	0	0	0	0	0
785	CRTFP Ux-	0	0	0	0	0	0
785	CRTFP Uy+	0	0	0	0	0	0
785	CRTFP Uy-	0	0	0	0	0	0
788	SLU 1	1.11	1.21	82.02	0.2752	12.8403	-0.1557
788	SLU 2	1.09	1.1	81.98	0.2797	12.8332	-0.1391
788	SLU 3	1.14	1.27	83.81	0.2812	13.125	-0.1642
788	SLU 4	1.13	1.2	83.78	0.2839	13.1207	-0.1542
788	SLU 5	1.11	1.12	83.04	0.2818	13.0021	-0.1416
788	SLU 6	1.17	1.29	84.88	0.2833	13.2939	-0.1667
788	SLU 7	1.15	1.22	84.85	0.286	13.2896	-0.1568
788	SLU 8	1.16	1.24	84.15	0.2794	13.1781	-0.1608
788	SLU 9	1.15	1.18	84.13	0.2821	13.1738	-0.1508
788	SLU 10	1.27	1.33	92.46	0.3129	14.4978	-0.1684
788	SLU 11	1.32	1.49	94.3	0.3144	14.7896	-0.1935
788	SLU 12	1.31	1.43	94.27	0.3171	14.7853	-0.1835
788	SLU 13	1.3	1.35	93.53	0.315	14.6667	-0.1709
788	SLU 14	1.35	1.51	95.37	0.3165	14.9585	-0.196
788	SLU 15	1.34	1.45	95.34	0.3192	14.9542	-0.1861
788	SLU 16	1.34	1.47	94.64	0.3126	14.8427	-0.1901
788	SLU 17	1.33	1.41	94.62	0.3153	14.8384	-0.1801
788	SLU 18	1.37	1.53	97.01	0.3226	15.2184	-0.1976
788	SLU 19	1.36	1.46	96.98	0.3253	15.2141	-0.1876
788	SLU 20	1.4	1.55	98.07	0.3247	15.3872	-0.2001
788	SLU 21	1.38	1.48	98.04	0.3274	15.3829	-0.1901
788	SLU 22	1.28	1.59	92	0.3342	14.4247	-0.2107
788	SLU 23	1.26	1.48	91.96	0.3387	14.4175	-0.1941
788	SLU 24	1.32	1.64	93.8	0.3402	14.7093	-0.2192
788	SLU 25	1.3	1.58	93.77	0.3429	14.705	-0.2092
788	SLU 26	1.29	1.5	93.03	0.3408	14.5864	-0.1966
788	SLU 27	1.34	1.66	94.86	0.3423	14.8782	-0.2217
788	SLU 28	1.33	1.6	94.83	0.345	14.8739	-0.2118
788	SLU 29	1.33	1.62	94.14	0.3383	14.7624	-0.2158
788	SLU 30	1.32	1.56	94.11	0.3411	14.7581	-0.2058
788	SLU 31	1.44	1.71	102.45	0.3719	16.0821	-0.2234
788	SLU 32	1.5	1.87	104.28	0.3734	16.3739	-0.2485
788	SLU 33	1.49	1.81	104.26	0.3761	16.3696	-0.2385
788	SLU 34	1.47	1.72	103.51	0.374	16.251	-0.2259
788	SLU 35	1.53	1.89	105.35	0.3755	16.5428	-0.251
788	SLU 36	1.51	1.82	105.32	0.3782	16.5385	-0.2411
788	SLU 37	1.52	1.85	104.63	0.3716	16.427	-0.2451
788	SLU 38	1.51	1.78	104.6	0.3743	16.4227	-0.2351
788	SLU 39	1.54	1.9	106.99	0.3816	16.8027	-0.2526

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
788	SLU 40	1.53	1.84	106.96	0.3843	16.7984	-0.2426
788	SLU 41	1.57	1.92	108.06	0.3837	16.9716	-0.2551
788	SLU 42	1.56	1.86	108.03	0.3864	16.9673	-0.2451
788	SLU 43	1.38	1.44	103.21	0.3375	16.1493	-0.1835
788	SLU 44	1.36	1.34	103.16	0.342	16.1421	-0.1669
788	SLU 45	1.41	1.5	105	0.3435	16.4339	-0.192
788	SLU 46	1.4	1.44	104.97	0.3462	16.4296	-0.1821
788	SLU 47	1.39	1.36	104.23	0.3441	16.311	-0.1695
788	SLU 48	1.44	1.52	106.06	0.3456	16.6028	-0.1946
788	SLU 49	1.43	1.46	106.03	0.3483	16.5985	-0.1846
788	SLU 50	1.43	1.48	105.34	0.3417	16.487	-0.1886
788	SLU 51	1.42	1.41	105.31	0.3444	16.4827	-0.1787
788	SLU 52	1.54	1.56	113.65	0.3752	17.8067	-0.1962
788	SLU 53	1.6	1.72	115.49	0.3767	18.0985	-0.2213
788	SLU 54	1.58	1.66	115.46	0.3794	18.0942	-0.2114
788	SLU 55	1.57	1.58	114.71	0.3773	17.9756	-0.1988
788	SLU 56	1.62	1.74	116.55	0.3788	18.2674	-0.2239
788	SLU 57	1.61	1.68	116.52	0.3815	18.2631	-0.2139
788	SLU 58	1.62	1.7	115.83	0.3749	18.1516	-0.2179
788	SLU 59	1.6	1.64	115.8	0.3776	18.1473	-0.208
788	SLU 60	1.64	1.76	118.19	0.3849	18.5273	-0.2254
788	SLU 61	1.63	1.7	118.16	0.3876	18.523	-0.2154
788	SLU 62	1.67	1.78	119.26	0.387	18.6962	-0.2279
788	SLU 63	1.66	1.72	119.23	0.3897	18.6919	-0.218
788	SLU 64	1.55	1.82	113.19	0.3965	17.7336	-0.2385
788	SLU 65	1.53	1.71	113.14	0.401	17.7264	-0.2219
788	SLU 66	1.59	1.88	114.98	0.4025	18.0182	-0.247
788	SLU 67	1.58	1.82	114.95	0.4052	18.0139	-0.2371
788	SLU 68	1.56	1.73	114.21	0.4031	17.8953	-0.2245
788	SLU 69	1.61	1.9	116.05	0.4046	18.1871	-0.2496
788	SLU 70	1.6	1.83	116.02	0.4073	18.1828	-0.2396
788	SLU 71	1.61	1.85	115.32	0.4007	18.0713	-0.2436
788	SLU 72	1.59	1.79	115.29	0.4034	18.0671	-0.2337
788	SLU 73	1.72	1.94	123.63	0.4342	19.391	-0.2512
788	SLU 74	1.77	2.1	125.47	0.4357	19.6828	-0.2763
788	SLU 75	1.76	2.04	125.44	0.4384	19.6785	-0.2664
788	SLU 76	1.74	1.96	124.7	0.4363	19.5599	-0.2538
788	SLU 77	1.8	2.12	126.53	0.4378	19.8517	-0.2789
788	SLU 78	1.78	2.06	126.51	0.4405	19.8474	-0.2689
788	SLU 79	1.79	2.08	125.81	0.4339	19.736	-0.2729
788	SLU 80	1.78	2.02	125.78	0.4366	19.7317	-0.263
788	SLU 81	1.82	2.14	128.17	0.4439	20.1116	-0.2804
788	SLU 82	1.8	2.08	128.14	0.4466	20.1073	-0.2704
788	SLU 83	1.84	2.16	129.24	0.446	20.2805	-0.2829
788	SLU 84	1.83	2.09	129.21	0.4487	20.2762	-0.273
788	SLE RA 1	1.16	1.32	84.87	0.292	13.293	-0.1714
788	SLE RA 2	1.14	1.25	84.84	0.295	13.2882	-0.1603
788	SLE RA 3	1.18	1.35	86.07	0.296	13.4828	-0.1771
788	SLE RA 4	1.17	1.31	86.05	0.2978	13.4799	-0.1704
788	SLE RA 5	1.16	1.26	85.55	0.2964	13.4008	-0.162
788	SLE RA 6	1.2	1.37	86.78	0.2974	13.5954	-0.1788
788	SLE RA 7	1.19	1.33	86.76	0.2992	13.5925	-0.1721
788	SLE RA 8	1.19	1.34	86.3	0.2948	13.5182	-0.1748
788	SLE RA 9	1.18	1.3	86.28	0.2966	13.5153	-0.1682
788	SLE RA 10	1.27	1.4	91.84	0.3172	14.398	-0.1799
788	SLE RA 11	1.3	1.5	93.06	0.3182	14.5925	-0.1966
788	SLE RA 12	1.29	1.46	93.04	0.32	14.5896	-0.19
788	SLE RA 13	1.28	1.41	92.55	0.3186	14.5106	-0.1816
788	SLE RA 14	1.32	1.52	93.77	0.3196	14.7051	-0.1983
788	SLE RA 15	1.31	1.48	93.75	0.3214	14.7022	-0.1917
788	SLE RA 16	1.31	1.49	93.29	0.317	14.6279	-0.1943
788	SLE RA 17	1.31	1.45	93.27	0.3188	14.6251	-0.1877
788	SLE RA 18	1.33	1.53	94.86	0.3236	14.8783	-0.1993
788	SLE RA 19	1.32	1.49	94.84	0.3255	14.8755	-0.1927
788	SLE RA 20	1.35	1.54	95.57	0.325	14.9909	-0.201
788	SLE RA 21	1.34	1.5	95.56	0.3269	14.9881	-0.1944
788	SLE FR 1	1.16	1.32	84.87	0.292	13.293	-0.1714
788	SLE FR 2	1.15	1.3	84.87	0.2926	13.292	-0.1692
788	SLE FR 3	1.16	1.32	85.16	0.2926	13.338	-0.1721
788	SLE FR 4	1.21	1.37	87.86	0.3021	13.7676	-0.1776
788	SLE FR 5	1.22	1.38	88.16	0.3021	13.8136	-0.1805
788	SLE FR 6	1.25	1.42	89.87	0.3078	14.0857	-0.1854
788	SLE QP 1	1.16	1.32	84.87	0.292	13.293	-0.1714
788	SLE QP 2	1.21	1.38	87.87	0.3015	13.7686	-0.1798
788	SLD 1	10.29	3.61	95.34	0.3035	14.8225	-0.5431
788	SLD 2	9.93	3.42	95.08	0.2951	14.7821	-0.5007
788	SLD 3	10.83	0.59	94.82	0.4056	14.7436	-0.0737
788	SLD 4	10.46	0.4	94.56	0.3972	14.7032	-0.0313
788	SLD 5	3.19	6.66	90.95	0.1487	14.2116	-1.0082
788	SLD 6	2.95	6.53	90.78	0.1432	14.1852	-0.9805
788	SLD 7	4.97	-3.4	89.21	0.4891	13.9486	0.5564
788	SLD 8	4.73	-3.52	89.04	0.4837	13.9222	0.5842
788	SLD 9	-2.31	6.28	86.7	0.1194	13.615	-0.9437
788	SLD 10	-2.55	6.16	86.53	0.1139	13.5886	-0.916
788	SLD 11	-0.53	-3.77	84.96	0.4598	13.352	0.6209
788	SLD 12	-0.77	-3.9	84.79	0.4544	13.3256	0.6486
788	SLD 13	-8.04	2.36	81.18	0.2058	12.834	-0.3283
788	SLD 14	-8.41	2.17	80.92	0.1974	12.7936	-0.2858
788	SLD 15	-7.51	-0.66	80.66	0.3079	12.7551	0.1411
788	SLD 16	-7.87	-0.85	80.4	0.2996	12.7147	0.1836
788	SLV 1	22.46	6.48	105.44	0.3099	16.2515	-1.0115
788	SLV 2	21.61	6.04	104.84	0.2903	16.1573	-0.9127
788	SLV 3	23.71	-0.35	104.24	0.5417	16.0707	0.0511
788	SLV 4	22.85	-0.79	103.65	0.5222	15.9766	0.1499
788	SLV 5	5.84	13.34	95.06	-0.0443	14.8037	-2.0579
788	SLV 6	5.29	13.06	94.68	-0.0569	14.7432	-1.9944
788	SLV 7	10	-9.43	91.07	0.7286	14.2012	1.4842

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
788	SLV 8	9.45	-9.71	90.68	0.716	14.1407	1.5477
788	SLV 9	-7.03	12.47	85.06	-0.113	13.3965	-1.9073
788	SLV 10	-7.58	12.18	84.67	-0.1256	13.336	-1.8437
788	SLV 11	-2.87	-10.3	81.06	0.6599	12.794	1.6348
788	SLV 12	-3.42	-10.59	80.68	0.6473	12.7335	1.6983
788	SLV 13	-20.43	3.55	72.1	0.0808	11.5606	-0.5095
788	SLV 14	-21.29	3.11	71.5	0.0613	11.4665	-0.4106
788	SLV 15	-19.19	-3.28	70.9	0.3127	11.3799	0.5531
788	SLV 16	-20.04	-3.72	70.3	0.2931	11.2858	0.652
788	CRTFP Ux+	0	0	0	0	0	0
788	CRTFP Ux-	0	0	0	0	0	0
788	CRTFP Uy+	0	0	0	0	0	0
788	CRTFP Uy-	0	0	0	0	0	0
789	SLU 1	0.68	0.8	44.04	0.1851	0.0727	0.0138
789	SLU 2	0.67	0.74	44.02	0.1879	0.0727	0.0143
789	SLU 3	0.7	0.83	44.97	0.1894	0.0749	0.0141
789	SLU 4	0.69	0.8	44.96	0.191	0.0749	0.0144
789	SLU 5	0.68	0.75	44.58	0.1896	0.0739	0.0145
789	SLU 6	0.71	0.84	45.53	0.1911	0.0761	0.0143
789	SLU 7	0.71	0.81	45.52	0.1928	0.0761	0.0146
789	SLU 8	0.71	0.82	45.16	0.1886	0.0751	0.0142
789	SLU 9	0.7	0.78	45.15	0.1902	0.0751	0.0145
789	SLU 10	0.78	0.88	49.49	0.21	0.085	0.0162
789	SLU 11	0.81	0.98	50.45	0.2115	0.0872	0.0161
789	SLU 12	0.8	0.94	50.44	0.2132	0.0872	0.0163
789	SLU 13	0.79	0.89	50.05	0.2118	0.0862	0.0164
789	SLU 14	0.83	0.99	51.01	0.2132	0.0884	0.0162
789	SLU 15	0.82	0.95	51	0.2149	0.0884	0.0165
789	SLU 16	0.82	0.96	50.64	0.2107	0.0874	0.0161
789	SLU 17	0.81	0.93	50.62	0.2124	0.0874	0.0164
789	SLU 18	0.84	1	51.87	0.2167	0.0903	0.0166
789	SLU 19	0.83	0.97	51.85	0.2184	0.0903	0.0169
789	SLU 20	0.85	1.01	52.43	0.2184	0.0915	0.0168
789	SLU 21	0.85	0.98	52.41	0.2201	0.0915	0.0171
789	SLU 22	0.78	1.02	49.26	0.224	0.0844	0.0149
789	SLU 23	0.77	0.97	49.23	0.2268	0.0843	0.0153
789	SLU 24	0.81	1.06	50.19	0.2282	0.0865	0.0152
789	SLU 25	0.8	1.02	50.18	0.2299	0.0865	0.0154
789	SLU 26	0.79	0.98	49.79	0.2285	0.0855	0.0155
789	SLU 27	0.82	1.07	50.75	0.23	0.0877	0.0153
789	SLU 28	0.81	1.04	50.74	0.2316	0.0877	0.0156
789	SLU 29	0.82	1.05	50.38	0.2274	0.0867	0.0152
789	SLU 30	0.81	1.01	50.36	0.2291	0.0867	0.0155
789	SLU 31	0.88	1.11	54.71	0.2489	0.0967	0.0173
789	SLU 32	0.92	1.2	55.67	0.2504	0.0988	0.0171
789	SLU 33	0.91	1.17	55.65	0.252	0.0988	0.0174
789	SLU 34	0.9	1.12	55.27	0.2506	0.0978	0.0175
789	SLU 35	0.93	1.21	56.23	0.2521	0.1	0.0173
789	SLU 36	0.92	1.18	56.21	0.2538	0.1	0.0176
789	SLU 37	0.93	1.19	55.86	0.2496	0.099	0.0172
789	SLU 38	0.92	1.16	55.84	0.2512	0.099	0.0175
789	SLU 39	0.94	1.23	57.08	0.2556	0.1019	0.0177
789	SLU 40	0.94	1.19	57.07	0.2573	0.1019	0.0179
789	SLU 41	0.96	1.24	57.64	0.2573	0.1031	0.0179
789	SLU 42	0.95	1.21	57.63	0.259	0.1031	0.0181
789	SLU 43	0.84	0.96	55.46	0.2273	0.0906	0.0176
789	SLU 44	0.83	0.9	55.44	0.2301	0.0906	0.0181
789	SLU 45	0.86	0.99	56.4	0.2316	0.0927	0.0179
789	SLU 46	0.86	0.96	56.38	0.2332	0.0927	0.0182
789	SLU 47	0.85	0.91	56	0.2318	0.0917	0.0183
789	SLU 48	0.88	1	56.96	0.2333	0.0939	0.0181
789	SLU 49	0.87	0.97	56.94	0.235	0.0939	0.0183
789	SLU 50	0.88	0.98	56.59	0.2308	0.0929	0.018
789	SLU 51	0.87	0.95	56.57	0.2324	0.0929	0.0183
789	SLU 52	0.94	1.04	60.92	0.2522	0.1029	0.02
789	SLU 53	0.98	1.14	61.88	0.2537	0.105	0.0199
789	SLU 54	0.97	1.1	61.86	0.2554	0.105	0.0201
789	SLU 55	0.96	1.06	61.48	0.254	0.104	0.0202
789	SLU 56	0.99	1.15	62.44	0.2554	0.1062	0.02
789	SLU 57	0.98	1.11	62.42	0.2571	0.1062	0.0203
789	SLU 58	0.99	1.12	62.06	0.2529	0.1052	0.0199
789	SLU 59	0.98	1.09	62.05	0.2546	0.1052	0.0202
789	SLU 60	1	1.16	63.29	0.2589	0.1082	0.0204
789	SLU 61	1	1.13	63.28	0.2606	0.1082	0.0207
789	SLU 62	1.02	1.17	63.85	0.2606	0.1093	0.0206
789	SLU 63	1.01	1.14	63.84	0.2623	0.1093	0.0209
789	SLU 64	0.95	1.18	60.68	0.2662	0.1022	0.0187
789	SLU 65	0.94	1.13	60.66	0.269	0.1022	0.0191
789	SLU 66	0.97	1.22	61.61	0.2704	0.1043	0.019
789	SLU 67	0.96	1.19	61.6	0.2721	0.1043	0.0192
789	SLU 68	0.95	1.14	61.22	0.2707	0.1033	0.0193
789	SLU 69	0.99	1.23	62.17	0.2722	0.1055	0.0191
789	SLU 70	0.98	1.2	62.16	0.2738	0.1055	0.0194
789	SLU 71	0.98	1.21	61.8	0.2696	0.1045	0.019
789	SLU 72	0.98	1.17	61.79	0.2713	0.1045	0.0193
789	SLU 73	1.05	1.27	66.13	0.2911	0.1145	0.0211
789	SLU 74	1.08	1.36	67.09	0.2926	0.1167	0.0209
789	SLU 75	1.08	1.33	67.08	0.2942	0.1167	0.0212
789	SLU 76	1.07	1.28	66.69	0.2928	0.1157	0.0212
789	SLU 77	1.1	1.38	67.65	0.2943	0.1178	0.0211
789	SLU 78	1.09	1.34	67.64	0.296	0.1178	0.0213
789	SLU 79	1.09	1.35	67.28	0.2918	0.1169	0.021
789	SLU 80	1.09	1.32	67.27	0.2934	0.1168	0.0212
789	SLU 81	1.11	1.39	68.51	0.2978	0.1198	0.0215
789	SLU 82	1.1	1.35	68.49	0.2995	0.1198	0.0217
789	SLU 83	1.13	1.4	69.07	0.2995	0.121	0.0216
789	SLU 84	1.12	1.37	69.05	0.3012	0.1209	0.0219

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
789	SLE RA 1	0.71	0.86	45.53	0.1962	0.0761	0.0141
789	SLE RA 2	0.7	0.82	45.51	0.1981	0.076	0.0144
789	SLE RA 3	0.72	0.88	46.15	0.199	0.0775	0.0143
789	SLE RA 4	0.72	0.86	46.14	0.2002	0.0775	0.0145
789	SLE RA 5	0.71	0.83	45.89	0.1992	0.0768	0.0146
789	SLE RA 6	0.73	0.89	46.53	0.2002	0.0783	0.0144
789	SLE RA 7	0.73	0.87	46.52	0.2013	0.0783	0.0146
789	SLE RA 8	0.73	0.88	46.28	0.1985	0.0776	0.0144
789	SLE RA 9	0.72	0.85	46.27	0.1996	0.0776	0.0146
789	SLE RA 10	0.77	0.92	49.17	0.2128	0.0843	0.0157
789	SLE RA 11	0.8	0.98	49.81	0.2138	0.0857	0.0156
789	SLE RA 12	0.79	0.96	49.8	0.2149	0.0857	0.0158
789	SLE RA 13	0.78	0.93	49.54	0.214	0.085	0.0159
789	SLE RA 14	0.81	0.99	50.18	0.215	0.0865	0.0157
789	SLE RA 15	0.8	0.97	50.17	0.2161	0.0865	0.0159
789	SLE RA 16	0.8	0.97	49.93	0.2133	0.0858	0.0157
789	SLE RA 17	0.8	0.95	49.92	0.2144	0.0858	0.0159
789	SLE RA 18	0.81	1	50.75	0.2173	0.0878	0.016
789	SLE RA 19	0.81	0.97	50.74	0.2184	0.0878	0.0162
789	SLE RA 20	0.83	1.01	51.12	0.2184	0.0886	0.0161
789	SLE RA 21	0.82	0.98	51.11	0.2196	0.0886	0.0163
789	SLE FR 1	0.71	0.86	45.53	0.1962	0.0761	0.0141
789	SLE FR 2	0.71	0.85	45.53	0.1966	0.0761	0.0142
789	SLE FR 3	0.71	0.86	45.68	0.1967	0.0764	0.0142
789	SLE FR 4	0.74	0.89	47.09	0.2029	0.0796	0.0148
789	SLE FR 5	0.74	0.9	47.25	0.203	0.0799	0.0147
789	SLE FR 6	0.76	0.93	48.14	0.2067	0.0819	0.0151
789	SLE QP 1	0.71	0.86	45.53	0.1962	0.0761	0.0141
789	SLE QP 2	0.74	0.9	47.1	0.2025	0.0796	0.0147
789	SLD 1	6.06	2.12	51.67	0.1871	0.0854	0.0028
789	SLD 2	5.84	2.05	51.54	0.1813	0.0848	0.0078
789	SLD 3	6.37	0.41	51.37	0.2513	0.0859	0.0108
789	SLD 4	6.15	0.34	51.24	0.2455	0.0853	0.0158
789	SLD 5	1.9	3.86	48.95	0.1016	0.0807	-0.0019
789	SLD 6	1.76	3.81	48.86	0.0978	0.0802	0.0014
789	SLD 7	2.94	-1.81	47.94	0.3155	0.0824	0.0248
789	SLD 8	2.8	-1.86	47.86	0.3117	0.0819	0.0281
789	SLD 9	-1.32	3.66	46.33	0.0934	0.0772	0.0013
789	SLD 10	-1.46	3.62	46.25	0.0896	0.0768	0.0046
789	SLD 11	-0.28	-2.01	45.33	0.3072	0.0789	0.028
789	SLD 12	-0.42	-2.06	45.25	0.3034	0.0785	0.0313
789	SLD 13	-4.67	1.46	42.95	0.1596	0.0739	0.0136
789	SLD 14	-4.89	1.39	42.83	0.1538	0.0732	0.0186
789	SLD 15	-4.36	-0.24	42.65	0.2238	0.0744	0.0216
789	SLD 16	-4.57	-0.31	42.52	0.2179	0.0737	0.0266
789	SLV 1	13.18	3.68	57.84	0.169	0.0939	-0.0128
789	SLV 2	12.68	3.52	57.53	0.1554	0.0923	-0.0012
789	SLV 3	13.91	-0.18	57.14	0.3147	0.0951	0.0053
789	SLV 4	13.41	-0.34	56.84	0.3011	0.0935	0.017
789	SLV 5	3.45	7.61	51.42	-0.0262	0.0823	-0.0231
789	SLV 6	3.13	7.5	51.23	-0.0349	0.0813	-0.0156
789	SLV 7	5.88	-5.24	49.11	0.4594	0.0863	0.0375
789	SLV 8	5.56	-5.34	48.92	0.4507	0.0853	0.045
789	SLV 9	-4.08	7.15	45.27	-0.0457	0.0739	-0.0156
789	SLV 10	-4.4	7.04	45.08	-0.0544	0.0729	-0.0081
789	SLV 11	-1.65	-5.7	42.97	0.4399	0.0778	0.045
789	SLV 12	-1.97	-5.8	42.77	0.4312	0.0768	0.0525
789	SLV 13	-11.93	2.14	37.35	0.1039	0.0657	0.0124
789	SLV 14	-12.43	1.98	37.05	0.0904	0.0641	0.0241
789	SLV 15	-11.2	-1.71	36.66	0.2496	0.0669	0.0306
789	SLV 16	-11.7	-1.88	36.36	0.2361	0.0653	0.0422
789	CRTFP Ux+	0	0	0	0	0	0
789	CRTFP Ux-	0	0	0	0	0	0
789	CRTFP Uy+	0	0	0	0	0	0
789	CRTFP Uy-	0	0	0	0	0	0
790	SLU 1	0.7	0.88	42.48	0.1895	0.0357	0.016
790	SLU 2	0.69	0.82	42.45	0.1923	0.0357	0.0164
790	SLU 3	0.72	0.92	43.36	0.194	0.0368	0.0164
790	SLU 4	0.72	0.88	43.35	0.1956	0.0368	0.0166
790	SLU 5	0.71	0.84	42.99	0.1942	0.0363	0.0166
790	SLU 6	0.74	0.93	43.9	0.1958	0.0373	0.0166
790	SLU 7	0.73	0.9	43.88	0.1975	0.0373	0.0168
790	SLU 8	0.74	0.9	43.55	0.1933	0.0368	0.0165
790	SLU 9	0.73	0.87	43.53	0.1949	0.0368	0.0167
790	SLU 10	0.81	0.98	47.66	0.2149	0.0419	0.0185
790	SLU 11	0.84	1.07	48.57	0.2166	0.0429	0.0185
790	SLU 12	0.83	1.04	48.56	0.2182	0.0429	0.0187
790	SLU 13	0.82	0.99	48.2	0.2168	0.0424	0.0187
790	SLU 14	0.86	1.08	49.11	0.2184	0.0435	0.0187
790	SLU 15	0.85	1.05	49.09	0.2201	0.0435	0.0189
790	SLU 16	0.85	1.06	48.76	0.2159	0.043	0.0186
790	SLU 17	0.84	1.03	48.74	0.2175	0.043	0.0188
790	SLU 18	0.87	1.1	49.92	0.2218	0.0445	0.019
790	SLU 19	0.86	1.07	49.91	0.2235	0.0445	0.0193
790	SLU 20	0.88	1.11	50.46	0.2237	0.045	0.0193
790	SLU 21	0.88	1.08	50.44	0.2253	0.045	0.0195
790	SLU 22	0.81	1.11	47.44	0.229	0.0414	0.0174
790	SLU 23	0.8	1.06	47.42	0.2318	0.0414	0.0178
790	SLU 24	0.84	1.15	48.33	0.2335	0.0425	0.0178
790	SLU 25	0.83	1.12	48.31	0.2351	0.0425	0.018
790	SLU 26	0.82	1.07	47.95	0.2337	0.042	0.018
790	SLU 27	0.85	1.16	48.86	0.2353	0.0431	0.018
790	SLU 28	0.84	1.13	48.85	0.237	0.0431	0.0182
790	SLU 29	0.85	1.14	48.51	0.2328	0.0426	0.0179
790	SLU 30	0.84	1.1	48.5	0.2345	0.0426	0.0181
790	SLU 31	0.92	1.21	52.63	0.2544	0.0476	0.0199
790	SLU 32	0.95	1.3	53.54	0.2561	0.0487	0.0199

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
790	SLU 33	0.94	1.27	53.53	0.2577	0.0487	0.0201
790	SLU 34	0.93	1.22	53.16	0.2563	0.0481	0.0201
790	SLU 35	0.97	1.32	54.08	0.2579	0.0492	0.0201
790	SLU 36	0.96	1.28	54.06	0.2596	0.0492	0.0203
790	SLU 37	0.96	1.29	53.73	0.2554	0.0487	0.02
790	SLU 38	0.96	1.26	53.71	0.257	0.0487	0.0202
790	SLU 39	0.98	1.33	54.89	0.2613	0.0502	0.0204
790	SLU 40	0.97	1.3	54.87	0.263	0.0502	0.0207
790	SLU 41	1	1.35	55.42	0.2632	0.0508	0.0207
790	SLU 42	0.99	1.31	55.41	0.2649	0.0508	0.0209
790	SLU 43	0.88	1.06	53.52	0.2328	0.0445	0.0203
790	SLU 44	0.86	1.01	53.49	0.2356	0.0444	0.0207
790	SLU 45	0.9	1.1	54.4	0.2373	0.0455	0.0207
790	SLU 46	0.89	1.07	54.39	0.2389	0.0455	0.0209
790	SLU 47	0.88	1.02	54.03	0.2375	0.045	0.0209
790	SLU 48	0.91	1.11	54.94	0.2391	0.0461	0.0209
790	SLU 49	0.91	1.08	54.92	0.2408	0.0461	0.0211
790	SLU 50	0.91	1.09	54.59	0.2366	0.0456	0.0208
790	SLU 51	0.9	1.05	54.57	0.2382	0.0456	0.021
790	SLU 52	0.98	1.16	58.7	0.2582	0.0506	0.0228
790	SLU 53	1.01	1.25	59.61	0.2599	0.0517	0.0228
790	SLU 54	1.01	1.22	59.6	0.2615	0.0517	0.023
790	SLU 55	1	1.18	59.24	0.2601	0.0511	0.0231
790	SLU 56	1.03	1.27	60.15	0.2617	0.0522	0.023
790	SLU 57	1.02	1.23	60.13	0.2634	0.0522	0.0233
790	SLU 58	1.02	1.24	59.8	0.2592	0.0517	0.0229
790	SLU 59	1.02	1.21	59.78	0.2608	0.0517	0.0231
790	SLU 60	1.04	1.28	60.96	0.2651	0.0532	0.0234
790	SLU 61	1.03	1.25	60.95	0.2668	0.0532	0.0236
790	SLU 62	1.06	1.3	61.5	0.267	0.0538	0.0236
790	SLU 63	1.05	1.26	61.48	0.2686	0.0538	0.0238
790	SLU 64	0.99	1.29	58.48	0.2723	0.0502	0.0217
790	SLU 65	0.97	1.24	58.46	0.2751	0.0502	0.0221
790	SLU 66	1.01	1.33	59.37	0.2768	0.0513	0.0221
790	SLU 67	1	1.3	59.35	0.2785	0.0513	0.0223
790	SLU 68	0.99	1.25	58.99	0.277	0.0507	0.0223
790	SLU 69	1.02	1.35	59.9	0.2787	0.0518	0.0223
790	SLU 70	1.02	1.31	59.89	0.2803	0.0518	0.0225
790	SLU 71	1.02	1.32	59.55	0.2761	0.0513	0.0222
790	SLU 72	1.01	1.29	59.54	0.2778	0.0513	0.0224
790	SLU 73	1.09	1.4	63.67	0.2977	0.0563	0.0242
790	SLU 74	1.12	1.49	64.58	0.2994	0.0574	0.0242
790	SLU 75	1.12	1.46	64.57	0.301	0.0574	0.0244
790	SLU 76	1.11	1.41	64.2	0.2996	0.0569	0.0245
790	SLU 77	1.14	1.5	65.12	0.3012	0.058	0.0244
790	SLU 78	1.13	1.47	65.1	0.3029	0.058	0.0247
790	SLU 79	1.14	1.48	64.77	0.2987	0.0574	0.0243
790	SLU 80	1.13	1.44	64.75	0.3004	0.0574	0.0245
790	SLU 81	1.15	1.52	65.93	0.3046	0.059	0.0248
790	SLU 82	1.14	1.48	65.91	0.3063	0.059	0.025
790	SLU 83	1.17	1.53	66.46	0.3065	0.0595	0.025
790	SLU 84	1.16	1.5	66.45	0.3082	0.0595	0.0252
790	SLE RA 1	0.74	0.94	43.9	0.2008	0.0373	0.0164
790	SLE RA 2	0.73	0.91	43.88	0.2027	0.0373	0.0167
790	SLE RA 3	0.75	0.97	44.49	0.2038	0.0381	0.0166
790	SLE RA 4	0.74	0.95	44.48	0.2049	0.0381	0.0168
790	SLE RA 5	0.74	0.92	44.24	0.2039	0.0377	0.0168
790	SLE RA 6	0.76	0.98	44.84	0.205	0.0384	0.0168
790	SLE RA 7	0.75	0.96	44.83	0.2061	0.0384	0.017
790	SLE RA 8	0.76	0.96	44.61	0.2033	0.0381	0.0167
790	SLE RA 9	0.75	0.94	44.6	0.2044	0.0381	0.0169
790	SLE RA 10	0.8	1.01	47.35	0.2177	0.0414	0.0181
790	SLE RA 11	0.83	1.07	47.96	0.2188	0.0422	0.0181
790	SLE RA 12	0.82	1.05	47.95	0.2199	0.0422	0.0182
790	SLE RA 13	0.81	1.02	47.71	0.219	0.0418	0.0182
790	SLE RA 14	0.84	1.08	48.32	0.2201	0.0425	0.0182
790	SLE RA 15	0.83	1.06	48.31	0.2212	0.0425	0.0184
790	SLE RA 16	0.83	1.07	48.08	0.2184	0.0422	0.0181
790	SLE RA 17	0.83	1.04	48.07	0.2195	0.0422	0.0183
790	SLE RA 18	0.85	1.09	48.86	0.2223	0.0432	0.0184
790	SLE RA 19	0.84	1.07	48.85	0.2234	0.0432	0.0186
790	SLE RA 20	0.86	1.1	49.22	0.2236	0.0436	0.0186
790	SLE RA 21	0.85	1.08	49.21	0.2247	0.0436	0.0187
790	SLE FR 1	0.74	0.94	43.9	0.2008	0.0373	0.0164
790	SLE FR 2	0.73	0.94	43.89	0.2012	0.0373	0.0165
790	SLE FR 3	0.74	0.95	44.04	0.2013	0.0375	0.0165
790	SLE FR 4	0.77	0.98	45.38	0.2076	0.0391	0.0171
790	SLE FR 5	0.77	0.99	45.53	0.2078	0.0393	0.0171
790	SLE FR 6	0.79	1.02	46.38	0.2116	0.0403	0.0174
790	SLE QP 1	0.74	0.94	43.9	0.2008	0.0373	0.0164
790	SLE QP 2	0.77	0.99	45.38	0.2073	0.0391	0.017
790	SLD 1	6.09	2.15	49.6	0.1631	0.0582	0.0068
790	SLD 2	5.87	2.11	49.49	0.1571	0.0574	0.0112
790	SLD 3	6.4	0.49	49.31	0.2273	0.0591	0.0133
790	SLD 4	6.19	0.44	49.2	0.2212	0.0582	0.0178
790	SLD 5	1.93	3.87	47.11	0.0978	0.0437	0.0032
790	SLD 6	1.79	3.84	47.04	0.0939	0.0431	0.0061
790	SLD 7	2.97	-1.68	46.14	0.3116	0.0466	0.0251
790	SLD 8	2.83	-1.71	46.07	0.3077	0.046	0.028
790	SLD 9	-1.29	3.69	44.7	0.1069	0.0322	0.006
790	SLD 10	-1.43	3.66	44.63	0.1029	0.0317	0.0089
790	SLD 11	-0.25	-1.87	43.73	0.3206	0.0351	0.028
790	SLD 12	-0.39	-1.89	43.66	0.3167	0.0345	0.0309
790	SLD 13	-4.65	1.54	41.57	0.1933	0.02	0.0162
790	SLD 14	-4.86	1.49	41.46	0.1873	0.0191	0.0207
790	SLD 15	-4.34	-0.13	41.28	0.2574	0.0209	0.0228
790	SLD 16	-4.55	-0.17	41.17	0.2514	0.02	0.0273

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
790	SLV 1	13.21	3.65	55.27	0.1058	0.084	-0.0068
790	SLV 2	12.71	3.54	55.02	0.0918	0.082	0.0036
790	SLV 3	13.94	-0.13	54.61	0.2514	0.086	0.0082
790	SLV 4	13.44	-0.23	54.36	0.2374	0.084	0.0186
790	SLV 5	3.48	7.53	49.4	-0.0417	0.0498	-0.0146
790	SLV 6	3.16	7.46	49.24	-0.0506	0.0486	-0.0079
790	SLV 7	5.91	-5.05	47.19	0.4438	0.0566	0.0353
790	SLV 8	5.59	-5.12	47.03	0.4348	0.0553	0.042
790	SLV 9	-4.05	7.1	43.74	-0.0203	0.0229	-0.0079
790	SLV 10	-4.38	7.03	43.58	-0.0293	0.0216	-0.0012
790	SLV 11	-1.62	-5.48	41.53	0.4652	0.0296	0.0419
790	SLV 12	-1.94	-5.55	41.37	0.4562	0.0284	0.0486
790	SLV 13	-11.91	2.21	36.41	0.1771	-0.0058	0.0154
790	SLV 14	-12.41	2.1	36.16	0.1631	-0.0078	0.0258
790	SLV 15	-11.18	-1.57	35.75	0.3227	-0.0038	0.0304
790	SLV 16	-11.68	-1.67	35.5	0.3087	-0.0058	0.0408
790	CRTFP Ux+	0	0	0	0	0	0
790	CRTFP Ux-	0	0	0	0	0	0
790	CRTFP Uy+	0	0	0	0	0	0
790	CRTFP Uy-	0	0	0	0	0	0
791	SLU 1	0.73	0.97	41.9	0.1943	0.0049	0.0178
791	SLU 2	0.72	0.92	41.88	0.1971	0.0049	0.0181
791	SLU 3	0.75	1.01	42.77	0.1989	0.0051	0.0182
791	SLU 4	0.74	0.98	42.75	0.2006	0.0051	0.0184
791	SLU 5	0.73	0.93	42.4	0.1991	0.0049	0.0184
791	SLU 6	0.77	1.03	43.3	0.2009	0.0051	0.0185
791	SLU 7	0.76	0.99	43.28	0.2026	0.0051	0.0187
791	SLU 8	0.76	1	42.96	0.1983	0.0049	0.0183
791	SLU 9	0.75	0.97	42.94	0.2	0.0049	0.0185
791	SLU 10	0.84	1.09	46.99	0.2202	0.0058	0.0204
791	SLU 11	0.87	1.18	47.88	0.222	0.006	0.0205
791	SLU 12	0.86	1.15	47.87	0.2237	0.006	0.0207
791	SLU 13	0.85	1.1	47.51	0.2222	0.0058	0.0207
791	SLU 14	0.89	1.19	48.41	0.224	0.006	0.0208
791	SLU 15	0.88	1.16	48.39	0.2257	0.006	0.021
791	SLU 16	0.88	1.17	48.07	0.2214	0.0059	0.0206
791	SLU 17	0.87	1.14	48.05	0.2231	0.0059	0.0208
791	SLU 18	0.9	1.21	49.2	0.2273	0.0062	0.0211
791	SLU 19	0.89	1.18	49.19	0.229	0.0062	0.0212
791	SLU 20	0.92	1.22	49.73	0.2293	0.0062	0.0213
791	SLU 21	0.91	1.19	49.72	0.231	0.0062	0.0215
791	SLU 22	0.84	1.21	46.78	0.2345	0.0057	0.0196
791	SLU 23	0.83	1.16	46.75	0.2373	0.0057	0.0199
791	SLU 24	0.87	1.25	47.64	0.2392	0.0059	0.02
791	SLU 25	0.86	1.22	47.63	0.2408	0.0059	0.0202
791	SLU 26	0.85	1.18	47.28	0.2393	0.0057	0.0201
791	SLU 27	0.88	1.27	48.17	0.2412	0.0059	0.0203
791	SLU 28	0.88	1.24	48.15	0.2428	0.0059	0.0204
791	SLU 29	0.88	1.24	47.83	0.2386	0.0057	0.0201
791	SLU 30	0.87	1.21	47.81	0.2403	0.0057	0.0203
791	SLU 31	0.95	1.33	51.86	0.2604	0.0066	0.0222
791	SLU 32	0.99	1.42	52.75	0.2623	0.0068	0.0223
791	SLU 33	0.98	1.39	52.74	0.2639	0.0068	0.0225
791	SLU 34	0.97	1.34	52.39	0.2624	0.0066	0.0224
791	SLU 35	1	1.44	53.28	0.2643	0.0068	0.0225
791	SLU 36	1	1.4	53.27	0.2659	0.0068	0.0227
791	SLU 37	1	1.41	52.94	0.2617	0.0067	0.0224
791	SLU 38	0.99	1.38	52.93	0.2633	0.0067	0.0226
791	SLU 39	1.02	1.45	54.08	0.2675	0.007	0.0228
791	SLU 40	1.01	1.42	54.06	0.2692	0.007	0.023
791	SLU 41	1.03	1.47	54.6	0.2696	0.007	0.0231
791	SLU 42	1.02	1.44	54.59	0.2712	0.007	0.0233
791	SLU 43	0.91	1.18	52.8	0.2388	0.0061	0.0225
791	SLU 44	0.9	1.13	52.78	0.2416	0.0061	0.0229
791	SLU 45	0.93	1.22	53.67	0.2434	0.0062	0.023
791	SLU 46	0.92	1.19	53.65	0.2451	0.0063	0.0231
791	SLU 47	0.91	1.14	53.3	0.2436	0.0061	0.0231
791	SLU 48	0.95	1.23	54.2	0.2454	0.0063	0.0232
791	SLU 49	0.94	1.2	54.18	0.2471	0.0063	0.0234
791	SLU 50	0.94	1.21	53.86	0.2428	0.0061	0.0231
791	SLU 51	0.93	1.18	53.84	0.2445	0.0061	0.0233
791	SLU 52	1.01	1.29	57.89	0.2647	0.007	0.0251
791	SLU 53	1.05	1.39	58.78	0.2665	0.0072	0.0252
791	SLU 54	1.04	1.36	58.76	0.2682	0.0072	0.0254
791	SLU 55	1.03	1.31	58.41	0.2667	0.007	0.0254
791	SLU 56	1.07	1.4	59.31	0.2685	0.0072	0.0255
791	SLU 57	1.06	1.37	59.29	0.2702	0.0072	0.0257
791	SLU 58	1.06	1.38	58.97	0.2659	0.0071	0.0254
791	SLU 59	1.05	1.34	58.95	0.2676	0.0071	0.0255
791	SLU 60	1.08	1.42	60.1	0.2718	0.0074	0.0258
791	SLU 61	1.07	1.39	60.09	0.2734	0.0074	0.026
791	SLU 62	1.1	1.43	60.63	0.2738	0.0074	0.0261
791	SLU 63	1.09	1.4	60.61	0.2755	0.0074	0.0262
791	SLU 64	1.02	1.42	57.67	0.279	0.0069	0.0243
791	SLU 65	1.01	1.37	57.65	0.2818	0.0069	0.0246
791	SLU 66	1.05	1.46	58.54	0.2837	0.007	0.0247
791	SLU 67	1.04	1.43	58.53	0.2853	0.0071	0.0249
791	SLU 68	1.03	1.38	58.18	0.2838	0.0069	0.0249
791	SLU 69	1.06	1.48	59.07	0.2857	0.0071	0.025
791	SLU 70	1.05	1.45	59.05	0.2873	0.0071	0.0252
791	SLU 71	1.06	1.45	58.73	0.2831	0.0069	0.0248
791	SLU 72	1.05	1.42	58.71	0.2847	0.0069	0.025
791	SLU 73	1.13	1.54	62.76	0.3049	0.0078	0.0269
791	SLU 74	1.17	1.63	63.65	0.3067	0.008	0.027
791	SLU 75	1.16	1.6	63.64	0.3084	0.008	0.0272
791	SLU 76	1.15	1.55	63.29	0.3069	0.0078	0.0272
791	SLU 77	1.18	1.64	64.18	0.3088	0.008	0.0273

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
791	SLU 78	1.17	1.61	64.17	0.3104	0.008	0.0275
791	SLU 79	1.18	1.62	63.84	0.3062	0.0079	0.0271
791	SLU 80	1.17	1.59	63.82	0.3078	0.0079	0.0273
791	SLU 81	1.19	1.66	64.98	0.312	0.0082	0.0276
791	SLU 82	1.19	1.63	64.96	0.3137	0.0082	0.0277
791	SLU 83	1.21	1.68	65.5	0.314	0.0082	0.0278
791	SLU 84	1.2	1.64	65.49	0.3157	0.0082	0.028
791	SLE RA 1	0.76	1.04	43.29	0.2058	0.0051	0.0183
791	SLE RA 2	0.75	1.01	43.28	0.2076	0.0051	0.0185
791	SLE RA 3	0.78	1.07	43.87	0.2089	0.0052	0.0186
791	SLE RA 4	0.77	1.05	43.86	0.21	0.0052	0.0187
791	SLE RA 5	0.76	1.02	43.63	0.209	0.0051	0.0187
791	SLE RA 6	0.79	1.08	44.22	0.2102	0.0052	0.0188
791	SLE RA 7	0.78	1.06	44.21	0.2113	0.0052	0.0189
791	SLE RA 8	0.78	1.06	44	0.2085	0.0051	0.0187
791	SLE RA 9	0.78	1.04	43.99	0.2096	0.0051	0.0188
791	SLE RA 10	0.83	1.12	46.68	0.223	0.0057	0.02
791	SLE RA 11	0.86	1.18	47.28	0.2243	0.0059	0.0201
791	SLE RA 12	0.85	1.16	47.27	0.2254	0.0059	0.0202
791	SLE RA 13	0.84	1.13	47.04	0.2244	0.0057	0.0202
791	SLE RA 14	0.87	1.19	47.63	0.2256	0.0059	0.0203
791	SLE RA 15	0.86	1.17	47.62	0.2267	0.0059	0.0204
791	SLE RA 16	0.86	1.17	47.4	0.2239	0.0058	0.0202
791	SLE RA 17	0.86	1.15	47.39	0.225	0.0058	0.0203
791	SLE RA 18	0.88	1.2	48.16	0.2278	0.006	0.0205
791	SLE RA 19	0.87	1.18	48.15	0.2289	0.006	0.0206
791	SLE RA 20	0.89	1.21	48.51	0.2291	0.006	0.0207
791	SLE RA 21	0.88	1.19	48.5	0.2302	0.006	0.0208
791	SLE FR 1	0.76	1.04	43.29	0.2058	0.0051	0.0183
791	SLE FR 2	0.76	1.03	43.29	0.2062	0.0051	0.0184
791	SLE FR 3	0.77	1.04	43.43	0.2063	0.0051	0.0184
791	SLE FR 4	0.79	1.08	44.75	0.2128	0.0054	0.019
791	SLE FR 5	0.8	1.09	44.89	0.2129	0.0054	0.019
791	SLE FR 6	0.82	1.12	45.73	0.2168	0.0056	0.0194
791	SLE QP 1	0.76	1.04	43.29	0.2058	0.0051	0.0183
791	SLE QP 2	0.8	1.09	44.75	0.2124	0.0054	0.019
791	SLD 1	6.12	2.21	48.23	0.1627	0.0352	0.01
791	SLD 2	5.9	2.19	48.15	0.1565	0.0342	0.0141
791	SLD 3	6.43	0.57	47.96	0.2269	0.0366	0.0149
791	SLD 4	6.22	0.55	47.88	0.2207	0.0357	0.0191
791	SLD 5	1.96	3.92	46.22	0.1012	0.0123	0.0081
791	SLD 6	1.82	3.9	46.17	0.0971	0.0117	0.0108
791	SLD 7	3	-1.55	45.32	0.3153	0.0171	0.0245
791	SLD 8	2.86	-1.57	45.26	0.3112	0.0165	0.0272
791	SLD 9	-1.27	3.74	44.24	0.1136	-0.0057	0.0107
791	SLD 10	-1.41	3.73	44.19	0.1095	-0.0064	0.0135
791	SLD 11	-0.22	-1.73	43.34	0.3277	-0.0009	0.0271
791	SLD 12	-0.36	-1.74	43.28	0.3236	-0.0015	0.0298
791	SLD 13	-4.62	1.63	41.63	0.2041	-0.0249	0.0189
791	SLD 14	-4.84	1.61	41.55	0.1979	-0.0259	0.023
791	SLD 15	-4.31	-0.01	41.36	0.2683	-0.0235	0.0238
791	SLD 16	-4.52	-0.03	41.28	0.2621	-0.0244	0.0279
791	SLV 1	13.24	3.66	52.92	0.098	0.0752	-0.002
791	SLV 2	12.75	3.61	52.73	0.0835	0.073	0.0078
791	SLV 3	13.97	-0.06	52.3	0.2438	0.0786	0.0093
791	SLV 4	13.48	-0.11	52.11	0.2294	0.0764	0.019
791	SLV 5	3.51	7.51	48.18	-0.0406	0.0215	-0.006
791	SLV 6	3.19	7.47	48.06	-0.0499	0.0201	0.0002
791	SLV 7	5.94	-4.89	46.1	0.4455	0.0329	0.0314
791	SLV 8	5.62	-4.92	45.98	0.4362	0.0314	0.0377
791	SLV 9	-4.03	7.1	43.53	-0.0114	-0.0207	0.0002
791	SLV 10	-4.35	7.07	43.4	-0.0207	-0.0221	0.0065
791	SLV 11	-1.6	-5.3	41.45	0.4747	-0.0094	0.0377
791	SLV 12	-1.92	-5.33	41.33	0.4654	-0.0108	0.0439
791	SLV 13	-11.88	2.29	37.4	0.1954	-0.0656	0.0189
791	SLV 14	-12.38	2.24	37.21	0.1809	-0.0678	0.0286
791	SLV 15	-11.15	-1.43	36.78	0.3413	-0.0622	0.0301
791	SLV 16	-11.65	-1.48	36.59	0.3268	-0.0644	0.0399
791	CRTFP Ux+	0	0	0	0	0	0
791	CRTFP Ux-	0	0	0	0	0	0
791	CRTFP Uy+	0	0	0	0	0	0
791	CRTFP Uy-	0	0	0	0	0	0
792	SLU 1	0.75	1.07	42.12	0.1994	-0.0189	0.0191
792	SLU 2	0.74	1.02	42.09	0.2022	-0.0189	0.0193
792	SLU 3	0.78	1.12	42.99	0.2043	-0.0195	0.0196
792	SLU 4	0.77	1.09	42.98	0.2059	-0.0195	0.0197
792	SLU 5	0.76	1.04	42.63	0.2044	-0.0193	0.0196
792	SLU 6	0.79	1.13	43.52	0.2064	-0.0198	0.0198
792	SLU 7	0.78	1.1	43.51	0.2081	-0.0198	0.02
792	SLU 8	0.79	1.11	43.18	0.2038	-0.0197	0.0197
792	SLU 9	0.78	1.08	43.17	0.2055	-0.0197	0.0198
792	SLU 10	0.86	1.2	47.24	0.2258	-0.022	0.0217
792	SLU 11	0.9	1.3	48.14	0.2279	-0.0226	0.022
792	SLU 12	0.89	1.27	48.12	0.2296	-0.0226	0.0221
792	SLU 13	0.88	1.22	47.77	0.228	-0.0224	0.022
792	SLU 14	0.92	1.31	48.67	0.2301	-0.023	0.0223
792	SLU 15	0.91	1.28	48.65	0.2317	-0.023	0.0224
792	SLU 16	0.91	1.29	48.33	0.2274	-0.0228	0.0221
792	SLU 17	0.9	1.26	48.31	0.2291	-0.0228	0.0222
792	SLU 18	0.93	1.33	49.47	0.2332	-0.0234	0.0225
792	SLU 19	0.92	1.3	49.45	0.2349	-0.0234	0.0227
792	SLU 20	0.95	1.35	50	0.2354	-0.0238	0.0228
792	SLU 21	0.94	1.32	49.99	0.2371	-0.0238	0.0229
792	SLU 22	0.87	1.33	47.03	0.2405	-0.022	0.0212
792	SLU 23	0.86	1.28	47	0.2433	-0.022	0.0214
792	SLU 24	0.9	1.37	47.9	0.2453	-0.0225	0.0216
792	SLU 25	0.89	1.34	47.88	0.247	-0.0225	0.0218

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
792	SLU 26	0.88	1.29	47.53	0.2454	-0.0223	0.0217
792	SLU 27	0.91	1.39	48.43	0.2475	-0.0229	0.0219
792	SLU 28	0.9	1.35	48.42	0.2491	-0.0229	0.0221
792	SLU 29	0.91	1.36	48.09	0.2448	-0.0227	0.0218
792	SLU 30	0.9	1.33	48.08	0.2465	-0.0227	0.0219
792	SLU 31	0.98	1.46	52.15	0.2669	-0.0251	0.0238
792	SLU 32	1.02	1.55	53.04	0.2689	-0.0256	0.0241
792	SLU 33	1.01	1.52	53.03	0.2706	-0.0256	0.0242
792	SLU 34	1	1.47	52.68	0.2691	-0.0255	0.0241
792	SLU 35	1.04	1.57	53.58	0.2711	-0.026	0.0243
792	SLU 36	1.03	1.53	53.56	0.2728	-0.026	0.0245
792	SLU 37	1.03	1.54	53.24	0.2685	-0.0259	0.0242
792	SLU 38	1.02	1.51	53.22	0.2701	-0.0259	0.0243
792	SLU 39	1.05	1.58	54.38	0.2743	-0.0264	0.0246
792	SLU 40	1.04	1.55	54.36	0.2759	-0.0264	0.0247
792	SLU 41	1.07	1.6	54.91	0.2764	-0.0268	0.0249
792	SLU 42	1.06	1.57	54.89	0.2781	-0.0268	0.025
792	SLU 43	0.94	1.31	53.07	0.2452	-0.0236	0.0241
792	SLU 44	0.92	1.26	53.05	0.248	-0.0236	0.0243
792	SLU 45	0.96	1.35	53.94	0.25	-0.0241	0.0246
792	SLU 46	0.95	1.32	53.93	0.2517	-0.0241	0.0247
792	SLU 47	0.94	1.27	53.58	0.2501	-0.024	0.0246
792	SLU 48	0.98	1.37	54.48	0.2522	-0.0245	0.0249
792	SLU 49	0.97	1.34	54.46	0.2539	-0.0245	0.025
792	SLU 50	0.97	1.34	54.14	0.2496	-0.0244	0.0247
792	SLU 51	0.96	1.31	54.12	0.2512	-0.0243	0.0248
792	SLU 52	1.05	1.44	58.19	0.2716	-0.0267	0.0267
792	SLU 53	1.08	1.53	59.09	0.2737	-0.0272	0.027
792	SLU 54	1.08	1.5	59.07	0.2753	-0.0272	0.0271
792	SLU 55	1.07	1.45	58.72	0.2738	-0.0271	0.027
792	SLU 56	1.1	1.55	59.62	0.2758	-0.0276	0.0273
792	SLU 57	1.09	1.52	59.61	0.2775	-0.0276	0.0274
792	SLU 58	1.1	1.52	59.28	0.2732	-0.0275	0.0271
792	SLU 59	1.09	1.49	59.27	0.2749	-0.0275	0.0272
792	SLU 60	1.11	1.57	60.42	0.279	-0.028	0.0275
792	SLU 61	1.11	1.54	60.41	0.2806	-0.028	0.0277
792	SLU 62	1.13	1.58	60.95	0.2812	-0.0284	0.0278
792	SLU 63	1.12	1.55	60.94	0.2828	-0.0284	0.028
792	SLU 64	1.06	1.56	57.98	0.2862	-0.0266	0.0262
792	SLU 65	1.04	1.51	57.95	0.289	-0.0266	0.0264
792	SLU 66	1.08	1.61	58.85	0.2911	-0.0271	0.0266
792	SLU 67	1.07	1.57	58.84	0.2927	-0.0271	0.0268
792	SLU 68	1.06	1.53	58.49	0.2912	-0.027	0.0267
792	SLU 69	1.1	1.62	59.39	0.2932	-0.0275	0.0269
792	SLU 70	1.09	1.59	59.37	0.2949	-0.0275	0.0271
792	SLU 71	1.09	1.59	59.04	0.2906	-0.0274	0.0268
792	SLU 72	1.08	1.56	59.03	0.2923	-0.0274	0.0269
792	SLU 73	1.17	1.69	63.1	0.3127	-0.0297	0.0288
792	SLU 74	1.2	1.79	64	0.3147	-0.0302	0.0291
792	SLU 75	1.2	1.75	63.98	0.3164	-0.0302	0.0292
792	SLU 76	1.18	1.71	63.63	0.3148	-0.0301	0.0291
792	SLU 77	1.22	1.8	64.53	0.3169	-0.0306	0.0293
792	SLU 78	1.21	1.77	64.51	0.3185	-0.0306	0.0295
792	SLU 79	1.22	1.77	64.19	0.3142	-0.0305	0.0292
792	SLU 80	1.21	1.74	64.17	0.3159	-0.0305	0.0293
792	SLU 81	1.23	1.82	65.33	0.32	-0.0311	0.0296
792	SLU 82	1.23	1.79	65.31	0.3217	-0.0311	0.0298
792	SLU 83	1.25	1.84	65.86	0.3222	-0.0315	0.0299
792	SLU 84	1.24	1.81	65.85	0.3239	-0.0314	0.03
792	SLE RA 1	0.79	1.15	43.52	0.2112	-0.0198	0.0197
792	SLE RA 2	0.78	1.11	43.5	0.213	-0.0198	0.0198
792	SLE RA 3	0.8	1.17	44.1	0.2144	-0.0202	0.02
792	SLE RA 4	0.8	1.15	44.09	0.2155	-0.0201	0.0201
792	SLE RA 5	0.79	1.12	43.86	0.2145	-0.0201	0.02
792	SLE RA 6	0.81	1.19	44.46	0.2158	-0.0204	0.0202
792	SLE RA 7	0.81	1.16	44.45	0.2169	-0.0204	0.0203
792	SLE RA 8	0.81	1.17	44.23	0.2141	-0.0203	0.0201
792	SLE RA 9	0.8	1.15	44.22	0.2152	-0.0203	0.0202
792	SLE RA 10	0.86	1.23	46.93	0.2288	-0.0219	0.0214
792	SLE RA 11	0.88	1.29	47.53	0.2301	-0.0222	0.0216
792	SLE RA 12	0.88	1.27	47.52	0.2312	-0.0222	0.0217
792	SLE RA 13	0.87	1.24	47.29	0.2302	-0.0221	0.0216
792	SLE RA 14	0.9	1.31	47.89	0.2316	-0.0225	0.0218
792	SLE RA 15	0.89	1.29	47.88	0.2327	-0.0225	0.0219
792	SLE RA 16	0.89	1.29	47.66	0.2298	-0.0224	0.0217
792	SLE RA 17	0.89	1.27	47.65	0.2309	-0.0224	0.0218
792	SLE RA 18	0.9	1.32	48.42	0.2337	-0.0228	0.022
792	SLE RA 19	0.9	1.3	48.41	0.2348	-0.0228	0.0221
792	SLE RA 20	0.92	1.33	48.78	0.2351	-0.023	0.0222
792	SLE RA 21	0.91	1.31	48.77	0.2362	-0.023	0.0223
792	SLE FR 1	0.79	1.15	43.52	0.2112	-0.0198	0.0197
792	SLE FR 2	0.79	1.14	43.52	0.2115	-0.0198	0.0197
792	SLE FR 3	0.79	1.15	43.66	0.2118	-0.0199	0.0197
792	SLE FR 4	0.82	1.19	44.99	0.2183	-0.0207	0.0204
792	SLE FR 5	0.83	1.2	45.13	0.2185	-0.0208	0.0204
792	SLE FR 6	0.85	1.23	45.97	0.2224	-0.0213	0.0208
792	SLE QP 1	0.79	1.15	43.52	0.2112	-0.0198	0.0197
792	SLE QP 2	0.82	1.2	44.99	0.2179	-0.0207	0.0204
792	SLD 1	6.14	2.29	47.48	0.1608	0.016	0.0157
792	SLD 2	5.93	2.29	47.43	0.1544	0.015	0.0198
792	SLD 3	6.46	0.66	47.22	0.2253	0.0179	0.012
792	SLD 4	6.24	0.66	47.17	0.2188	0.0169	0.0161
792	SLD 5	1.98	4	46.14	0.1042	-0.0123	0.0238
792	SLD 6	1.84	4	46.1	0.1	-0.013	0.0265
792	SLD 7	3.03	-1.43	45.28	0.319	-0.0061	0.0115
792	SLD 8	2.89	-1.43	45.25	0.3148	-0.0068	0.0142
792	SLD 9	-1.24	3.83	44.73	0.1211	-0.0346	0.0265

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
792	SLD 10	-1.38	3.83	44.7	0.1169	-0.0353	0.0292
792	SLD 11	-0.2	-1.6	43.88	0.3359	-0.0284	0.0142
792	SLD 12	-0.34	-1.6	43.85	0.3316	-0.0291	0.0169
792	SLD 13	-4.6	1.73	42.81	0.217	-0.0583	0.0246
792	SLD 14	-4.81	1.73	42.76	0.2106	-0.0593	0.0287
792	SLD 15	-4.28	0.1	42.55	0.2815	-0.0564	0.0209
792	SLD 16	-4.5	0.1	42.5	0.275	-0.0574	0.025
792	SLV 1	13.27	3.69	50.85	0.0862	0.0653	0.0094
792	SLV 2	12.77	3.7	50.72	0.0712	0.063	0.0191
792	SLV 3	14	0	50.26	0.2325	0.0697	0.0008
792	SLV 4	13.5	0.01	50.14	0.2175	0.0673	0.0105
792	SLV 5	3.54	7.54	47.65	-0.0409	-0.0011	0.0284
792	SLV 6	3.22	7.55	47.58	-0.0505	-0.0026	0.0347
792	SLV 7	5.97	-4.76	45.71	0.4468	0.0134	-0.0002
792	SLV 8	5.65	-4.76	45.63	0.4371	0.0119	0.006
792	SLV 9	-4	7.15	44.35	-0.0013	-0.0533	0.0347
792	SLV 10	-4.32	7.16	44.27	-0.0109	-0.0548	0.0409
792	SLV 11	-1.57	-5.15	42.41	0.4864	-0.0388	0.0061
792	SLV 12	-1.89	-5.15	42.33	0.4768	-0.0403	0.0123
792	SLV 13	-11.86	2.39	39.84	0.2183	-0.1087	0.0302
792	SLV 14	-12.36	2.39	39.72	0.2033	-0.1111	0.0399
792	SLV 15	-11.13	-1.3	39.26	0.3646	-0.1043	0.0216
792	SLV 16	-11.63	-1.3	39.14	0.3496	-0.1067	0.0313
792	CRTFP Ux+	0	0	0	0	0	0
792	CRTFP Ux-	0	0	0	0	0	0
792	CRTFP Uy+	0	0	0	0	0	0
792	CRTFP Uy-	0	0	0	0	0	0
793	SLU 1	0.77	1.18	42.94	0.205	-0.0367	0.0196
793	SLU 2	0.76	1.13	42.91	0.2077	-0.0367	0.0198
793	SLU 3	0.8	1.23	43.83	0.21	-0.0377	0.0202
793	SLU 4	0.79	1.2	43.82	0.2116	-0.0377	0.0203
793	SLU 5	0.78	1.15	43.46	0.2101	-0.0374	0.0201
793	SLU 6	0.81	1.24	44.38	0.2123	-0.0384	0.0205
793	SLU 7	0.81	1.21	44.37	0.214	-0.0384	0.0206
793	SLU 8	0.81	1.22	44.03	0.2097	-0.0381	0.0202
793	SLU 9	0.8	1.19	44.02	0.2113	-0.0381	0.0204
793	SLU 10	0.89	1.33	48.19	0.232	-0.0428	0.0223
793	SLU 11	0.92	1.42	49.11	0.2342	-0.0439	0.0226
793	SLU 12	0.91	1.39	49.1	0.2359	-0.0439	0.0228
793	SLU 13	0.9	1.34	48.74	0.2343	-0.0435	0.0226
793	SLU 14	0.94	1.44	49.66	0.2366	-0.0446	0.0229
793	SLU 15	0.93	1.41	49.65	0.2382	-0.0446	0.0231
793	SLU 16	0.93	1.41	49.31	0.2339	-0.0442	0.0227
793	SLU 17	0.93	1.38	49.3	0.2355	-0.0442	0.0228
793	SLU 18	0.95	1.46	50.48	0.2396	-0.0455	0.0232
793	SLU 19	0.94	1.43	50.47	0.2412	-0.0454	0.0233
793	SLU 20	0.97	1.48	51.03	0.2419	-0.0461	0.0235
793	SLU 21	0.96	1.45	51.01	0.2436	-0.0461	0.0236
793	SLU 22	0.9	1.45	47.98	0.2469	-0.0426	0.022
793	SLU 23	0.88	1.4	47.95	0.2497	-0.0426	0.0222
793	SLU 24	0.92	1.49	48.87	0.2519	-0.0436	0.0225
793	SLU 25	0.91	1.46	48.86	0.2536	-0.0436	0.0226
793	SLU 26	0.9	1.41	48.5	0.252	-0.0433	0.0225
793	SLU 27	0.94	1.51	49.42	0.2543	-0.0443	0.0228
793	SLU 28	0.93	1.48	49.4	0.2559	-0.0443	0.0229
793	SLU 29	0.93	1.48	49.07	0.2516	-0.044	0.0226
793	SLU 30	0.92	1.45	49.06	0.2532	-0.044	0.0227
793	SLU 31	1.01	1.59	53.23	0.2739	-0.0487	0.0247
793	SLU 32	1.04	1.69	54.15	0.2761	-0.0498	0.025
793	SLU 33	1.04	1.66	54.14	0.2778	-0.0498	0.0251
793	SLU 34	1.03	1.61	53.78	0.2762	-0.0494	0.025
793	SLU 35	1.06	1.7	54.7	0.2785	-0.0505	0.0253
793	SLU 36	1.05	1.67	54.69	0.2801	-0.0505	0.0254
793	SLU 37	1.06	1.68	54.35	0.2758	-0.0501	0.0251
793	SLU 38	1.05	1.65	54.34	0.2775	-0.0501	0.0252
793	SLU 39	1.08	1.72	55.52	0.2815	-0.0513	0.0255
793	SLU 40	1.07	1.69	55.5	0.2832	-0.0513	0.0256
793	SLU 41	1.09	1.74	56.07	0.2839	-0.052	0.0258
793	SLU 42	1.09	1.71	56.05	0.2855	-0.052	0.0259
793	SLU 43	0.96	1.45	54.09	0.2521	-0.0457	0.0247
793	SLU 44	0.95	1.4	54.06	0.2549	-0.0457	0.0249
793	SLU 45	0.99	1.49	54.99	0.2571	-0.0467	0.0253
793	SLU 46	0.98	1.46	54.97	0.2588	-0.0467	0.0254
793	SLU 47	0.97	1.41	54.61	0.2572	-0.0464	0.0252
793	SLU 48	1	1.51	55.53	0.2594	-0.0474	0.0256
793	SLU 49	0.99	1.48	55.52	0.2611	-0.0474	0.0257
793	SLU 50	1	1.48	55.19	0.2568	-0.0471	0.0253
793	SLU 51	0.99	1.45	55.17	0.2584	-0.0471	0.0255
793	SLU 52	1.07	1.59	59.34	0.2791	-0.0518	0.0274
793	SLU 53	1.11	1.68	60.27	0.2813	-0.0529	0.0277
793	SLU 54	1.1	1.65	60.25	0.283	-0.0528	0.0278
793	SLU 55	1.09	1.61	59.89	0.2814	-0.0525	0.0277
793	SLU 56	1.13	1.7	60.82	0.2837	-0.0536	0.028
793	SLU 57	1.12	1.67	60.8	0.2853	-0.0535	0.0282
793	SLU 58	1.12	1.67	60.47	0.281	-0.0532	0.0278
793	SLU 59	1.12	1.64	60.45	0.2827	-0.0532	0.0279
793	SLU 60	1.14	1.72	61.63	0.2867	-0.0544	0.0283
793	SLU 61	1.13	1.69	61.62	0.2884	-0.0544	0.0284
793	SLU 62	1.16	1.74	62.18	0.289	-0.0551	0.0286
793	SLU 63	1.15	1.71	62.17	0.2907	-0.0551	0.0287
793	SLU 64	1.08	1.71	59.13	0.294	-0.0516	0.0271
793	SLU 65	1.07	1.66	59.1	0.2968	-0.0515	0.0273
793	SLU 66	1.11	1.76	60.03	0.299	-0.0526	0.0276
793	SLU 67	1.1	1.73	60.01	0.3007	-0.0526	0.0277
793	SLU 68	1.09	1.68	59.65	0.2991	-0.0522	0.0276
793	SLU 69	1.13	1.77	60.57	0.3014	-0.0533	0.0279
793	SLU 70	1.12	1.74	60.56	0.303	-0.0533	0.028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
793	SLU 71	1.12	1.75	60.23	0.2987	-0.053	0.0277
793	SLU 72	1.11	1.72	60.21	0.3004	-0.053	0.0278
793	SLU 73	1.2	1.85	64.38	0.321	-0.0577	0.0297
793	SLU 74	1.23	1.95	65.31	0.3233	-0.0587	0.0301
793	SLU 75	1.23	1.92	65.29	0.3249	-0.0587	0.0302
793	SLU 76	1.22	1.87	64.93	0.3234	-0.0584	0.0301
793	SLU 77	1.25	1.97	65.85	0.3256	-0.0594	0.0304
793	SLU 78	1.24	1.94	65.84	0.3273	-0.0594	0.0305
793	SLU 79	1.25	1.94	65.51	0.3229	-0.0591	0.0302
793	SLU 80	1.24	1.91	65.49	0.3246	-0.0591	0.0303
793	SLU 81	1.27	1.99	66.67	0.3286	-0.0603	0.0306
793	SLU 82	1.26	1.96	66.66	0.3303	-0.0603	0.0307
793	SLU 83	1.28	2	67.22	0.331	-0.061	0.0309
793	SLU 84	1.27	1.98	67.21	0.3326	-0.061	0.031
793	SLE RA 1	0.81	1.26	44.38	0.217	-0.0384	0.0203
793	SLE RA 2	0.8	1.22	44.36	0.2188	-0.0384	0.0204
793	SLE RA 3	0.82	1.29	44.97	0.2203	-0.0391	0.0207
793	SLE RA 4	0.82	1.27	44.96	0.2214	-0.0391	0.0207
793	SLE RA 5	0.81	1.24	44.72	0.2204	-0.0388	0.0206
793	SLE RA 6	0.83	1.3	45.34	0.2219	-0.0395	0.0209
793	SLE RA 7	0.83	1.28	45.33	0.223	-0.0395	0.0209
793	SLE RA 8	0.83	1.28	45.11	0.2201	-0.0393	0.0207
793	SLE RA 9	0.83	1.26	45.1	0.2212	-0.0393	0.0208
793	SLE RA 10	0.88	1.35	47.88	0.2349	-0.0424	0.0221
793	SLE RA 11	0.91	1.42	48.49	0.2364	-0.0432	0.0223
793	SLE RA 12	0.9	1.4	48.48	0.2376	-0.0432	0.0224
793	SLE RA 13	0.89	1.37	48.25	0.2365	-0.0429	0.0223
793	SLE RA 14	0.92	1.43	48.86	0.238	-0.0436	0.0225
793	SLE RA 15	0.91	1.41	48.85	0.2391	-0.0436	0.0226
793	SLE RA 16	0.92	1.41	48.63	0.2362	-0.0434	0.0224
793	SLE RA 17	0.91	1.39	48.62	0.2373	-0.0434	0.0224
793	SLE RA 18	0.93	1.44	49.41	0.24	-0.0442	0.0227
793	SLE RA 19	0.92	1.42	49.4	0.2411	-0.0442	0.0227
793	SLE RA 20	0.94	1.45	49.77	0.2416	-0.0447	0.0229
793	SLE RA 21	0.93	1.43	49.76	0.2427	-0.0447	0.023
793	SLE FR 1	0.81	1.26	44.38	0.217	-0.0384	0.0203
793	SLE FR 2	0.81	1.25	44.37	0.2173	-0.0384	0.0203
793	SLE FR 3	0.81	1.26	44.52	0.2176	-0.0386	0.0204
793	SLE FR 4	0.84	1.31	45.88	0.2242	-0.0401	0.021
793	SLE FR 5	0.85	1.32	46.03	0.2245	-0.0403	0.0211
793	SLE FR 6	0.87	1.35	46.89	0.2285	-0.0413	0.0215
793	SLE QP 1	0.81	1.26	44.38	0.217	-0.0384	0.0203
793	SLE QP 2	0.84	1.31	45.89	0.2239	-0.0401	0.021
793	SLD 1	6.17	2.38	47.27	0.1586	0.0004	0.016
793	SLD 2	5.95	2.41	47.24	0.1519	-0.0006	0.0204
793	SLD 3	6.48	0.75	47.02	0.2233	0.0025	0.0122
793	SLD 4	6.26	0.78	46.99	0.2167	0.0015	0.0165
793	SLD 5	2	4.1	46.68	0.1072	-0.031	0.0246
793	SLD 6	1.86	4.12	46.67	0.1029	-0.0316	0.0275
793	SLD 7	3.05	-1.33	45.85	0.3231	-0.0239	0.0117
793	SLD 8	2.91	-1.32	45.83	0.3188	-0.0246	0.0146
793	SLD 9	-1.22	3.94	45.94	0.129	-0.0556	0.0274
793	SLD 10	-1.36	3.96	45.92	0.1246	-0.0563	0.0303
793	SLD 11	-0.18	-1.49	45.1	0.3449	-0.0486	0.0146
793	SLD 12	-0.32	-1.48	45.09	0.3405	-0.0493	0.0174
793	SLD 13	-4.58	1.85	44.78	0.2311	-0.0818	0.0255
793	SLD 14	-4.79	1.87	44.76	0.2244	-0.0828	0.0299
793	SLD 15	-4.26	0.22	44.53	0.2959	-0.0796	0.0216
793	SLD 16	-4.48	0.24	44.5	0.2892	-0.0807	0.026
793	SLV 1	13.3	3.76	49.16	0.0729	0.0549	0.0093
793	SLV 2	12.8	3.82	49.11	0.0574	0.0524	0.0195
793	SLV 3	14.03	0.06	48.59	0.22	0.0598	0.0003
793	SLV 4	13.53	0.12	48.54	0.2044	0.0574	0.0105
793	SLV 5	3.56	7.64	47.74	-0.0417	-0.0187	0.0294
793	SLV 6	3.24	7.68	47.71	-0.0517	-0.0202	0.036
793	SLV 7	5.99	-4.68	45.84	0.4484	-0.0023	-0.0007
793	SLV 8	5.67	-4.64	45.81	0.4384	-0.0038	0.0059
793	SLV 9	-3.98	7.27	45.96	0.0094	-0.0764	0.0361
793	SLV 10	-4.3	7.3	45.93	-0.0006	-0.078	0.0427
793	SLV 11	-1.55	-5.05	44.06	0.4995	-0.06	0.006
793	SLV 12	-1.87	-5.02	44.03	0.4895	-0.0616	0.0126
793	SLV 13	-11.84	2.51	43.23	0.2433	-0.1376	0.0316
793	SLV 14	-12.34	2.56	43.18	0.2278	-0.14	0.0418
793	SLV 15	-11.11	-1.19	42.66	0.3903	-0.1327	0.0226
793	SLV 16	-11.61	-1.13	42.61	0.3748	-0.1351	0.0328
793	CRTFP Ux+	0	0	0	0	0	0
793	CRTFP Ux-	0	0	0	0	0	0
793	CRTFP Uy+	0	0	0	0	0	0
793	CRTFP Uy-	0	0	0	0	0	0
794	SLU 1	0.79	1.29	44.19	0.2109	-0.0493	0.0193
794	SLU 2	0.77	1.24	44.17	0.2137	-0.0493	0.0195
794	SLU 3	0.81	1.34	45.13	0.2161	-0.0507	0.0199
794	SLU 4	0.8	1.31	45.11	0.2178	-0.0507	0.02
794	SLU 5	0.79	1.26	44.74	0.2162	-0.0502	0.0198
794	SLU 6	0.83	1.36	45.7	0.2186	-0.0516	0.0202
794	SLU 7	0.82	1.33	45.68	0.2203	-0.0516	0.0203
794	SLU 8	0.82	1.33	45.34	0.2159	-0.0511	0.0199
794	SLU 9	0.81	1.3	45.32	0.2176	-0.0511	0.02
794	SLU 10	0.9	1.45	49.66	0.2385	-0.0575	0.022
794	SLU 11	0.94	1.55	50.62	0.241	-0.0589	0.0223
794	SLU 12	0.93	1.52	50.6	0.2427	-0.0589	0.0224
794	SLU 13	0.92	1.47	50.23	0.241	-0.0584	0.0223
794	SLU 14	0.96	1.57	51.19	0.2435	-0.0599	0.0226
794	SLU 15	0.95	1.54	51.17	0.2452	-0.0599	0.0227
794	SLU 16	0.95	1.54	50.83	0.2408	-0.0594	0.0224
794	SLU 17	0.94	1.51	50.81	0.2424	-0.0593	0.0225
794	SLU 18	0.97	1.59	52.04	0.2464	-0.0611	0.0228

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
794	SLU 19	0.96	1.56	52.02	0.2481	-0.061	0.023
794	SLU 20	0.99	1.61	52.61	0.2489	-0.062	0.0231
794	SLU 21	0.98	1.58	52.59	0.2506	-0.062	0.0232
794	SLU 22	0.91	1.57	49.43	0.2538	-0.0572	0.0218
794	SLU 23	0.9	1.52	49.41	0.2566	-0.0572	0.022
794	SLU 24	0.94	1.62	50.37	0.259	-0.0586	0.0224
794	SLU 25	0.93	1.59	50.35	0.2607	-0.0586	0.0225
794	SLU 26	0.92	1.54	49.98	0.2591	-0.0581	0.0223
794	SLU 27	0.95	1.64	50.94	0.2615	-0.0595	0.0227
794	SLU 28	0.95	1.61	50.92	0.2632	-0.0595	0.0228
794	SLU 29	0.95	1.61	50.58	0.2588	-0.059	0.0224
794	SLU 30	0.94	1.58	50.56	0.2605	-0.059	0.0225
794	SLU 31	1.03	1.73	54.9	0.2814	-0.0654	0.0244
794	SLU 32	1.06	1.83	55.86	0.2839	-0.0669	0.0248
794	SLU 33	1.06	1.8	55.84	0.2855	-0.0668	0.0249
794	SLU 34	1.04	1.75	55.47	0.2839	-0.0663	0.0247
794	SLU 35	1.08	1.84	56.43	0.2864	-0.0678	0.0251
794	SLU 36	1.07	1.82	56.41	0.288	-0.0678	0.0252
794	SLU 37	1.08	1.82	56.07	0.2837	-0.0673	0.0249
794	SLU 38	1.07	1.79	56.05	0.2853	-0.0673	0.025
794	SLU 39	1.09	1.87	57.28	0.2893	-0.069	0.0253
794	SLU 40	1.09	1.84	57.26	0.291	-0.069	0.0254
794	SLU 41	1.11	1.89	57.85	0.2918	-0.0699	0.0256
794	SLU 42	1.1	1.86	57.84	0.2935	-0.0699	0.0257
794	SLU 43	0.98	1.58	55.65	0.2595	-0.0613	0.0243
794	SLU 44	0.97	1.53	55.63	0.2622	-0.0613	0.0245
794	SLU 45	1	1.63	56.59	0.2647	-0.0628	0.0248
794	SLU 46	0.99	1.6	56.57	0.2664	-0.0628	0.0249
794	SLU 47	0.98	1.55	56.2	0.2647	-0.0622	0.0247
794	SLU 48	1.02	1.65	57.16	0.2672	-0.0637	0.0251
794	SLU 49	1.01	1.62	57.14	0.2689	-0.0637	0.0252
794	SLU 50	1.02	1.62	56.8	0.2645	-0.0632	0.0249
794	SLU 51	1.01	1.59	56.78	0.2661	-0.0632	0.025
794	SLU 52	1.09	1.74	61.12	0.2871	-0.0696	0.0269
794	SLU 53	1.13	1.84	62.08	0.2896	-0.071	0.0273
794	SLU 54	1.12	1.81	62.06	0.2912	-0.071	0.0274
794	SLU 55	1.11	1.76	61.69	0.2896	-0.0705	0.0272
794	SLU 56	1.15	1.86	62.65	0.2921	-0.0719	0.0276
794	SLU 57	1.14	1.83	62.63	0.2937	-0.0719	0.0277
794	SLU 58	1.14	1.83	62.29	0.2893	-0.0714	0.0273
794	SLU 59	1.14	1.8	62.27	0.291	-0.0714	0.0274
794	SLU 60	1.16	1.88	63.5	0.295	-0.0731	0.0278
794	SLU 61	1.15	1.85	63.48	0.2967	-0.0731	0.0279
794	SLU 62	1.18	1.9	64.07	0.2975	-0.074	0.0281
794	SLU 63	1.17	1.87	64.06	0.2992	-0.074	0.0282
794	SLU 64	1.1	1.86	60.9	0.3024	-0.0693	0.0268
794	SLU 65	1.09	1.81	60.87	0.3051	-0.0692	0.0269
794	SLU 66	1.13	1.91	61.83	0.3076	-0.0707	0.0273
794	SLU 67	1.12	1.88	61.81	0.3092	-0.0707	0.0274
794	SLU 68	1.11	1.83	61.44	0.3076	-0.0701	0.0272
794	SLU 69	1.15	1.93	62.4	0.3101	-0.0716	0.0276
794	SLU 70	1.14	1.9	62.38	0.3117	-0.0716	0.0277
794	SLU 71	1.14	1.9	62.04	0.3074	-0.0711	0.0274
794	SLU 72	1.13	1.87	62.02	0.309	-0.0711	0.0275
794	SLU 73	1.22	2.02	66.36	0.33	-0.0775	0.0294
794	SLU 74	1.26	2.12	67.32	0.3324	-0.0789	0.0298
794	SLU 75	1.25	2.09	67.3	0.3341	-0.0789	0.0299
794	SLU 76	1.24	2.04	66.93	0.3325	-0.0784	0.0297
794	SLU 77	1.27	2.14	67.89	0.3349	-0.0798	0.0301
794	SLU 78	1.27	2.11	67.88	0.3366	-0.0798	0.0302
794	SLU 79	1.27	2.11	67.53	0.3322	-0.0793	0.0298
794	SLU 80	1.26	2.08	67.52	0.3339	-0.0793	0.0299
794	SLU 81	1.29	2.16	68.74	0.3379	-0.081	0.0303
794	SLU 82	1.28	2.13	68.73	0.3395	-0.081	0.0304
794	SLU 83	1.31	2.18	69.31	0.3404	-0.082	0.0306
794	SLU 84	1.3	2.15	69.3	0.342	-0.0819	0.0307
794	SLE RA 1	0.82	1.37	45.69	0.2232	-0.0515	0.02
794	SLE RA 2	0.81	1.34	45.67	0.225	-0.0515	0.0202
794	SLE RA 3	0.84	1.4	46.31	0.2266	-0.0525	0.0204
794	SLE RA 4	0.83	1.38	46.3	0.2277	-0.0525	0.0205
794	SLE RA 5	0.83	1.35	46.05	0.2267	-0.0521	0.0204
794	SLE RA 6	0.85	1.42	46.69	0.2283	-0.0531	0.0206
794	SLE RA 7	0.84	1.4	46.68	0.2294	-0.0531	0.0207
794	SLE RA 8	0.85	1.4	46.45	0.2265	-0.0528	0.0204
794	SLE RA 9	0.84	1.38	46.44	0.2276	-0.0527	0.0205
794	SLE RA 10	0.9	1.48	49.33	0.2416	-0.057	0.0218
794	SLE RA 11	0.92	1.54	49.97	0.2432	-0.058	0.022
794	SLE RA 12	0.92	1.52	49.96	0.2443	-0.058	0.0221
794	SLE RA 13	0.91	1.49	49.72	0.2432	-0.0576	0.022
794	SLE RA 14	0.94	1.55	50.36	0.2449	-0.0586	0.0222
794	SLE RA 15	0.93	1.53	50.34	0.246	-0.0586	0.0223
794	SLE RA 16	0.93	1.53	50.12	0.2431	-0.0583	0.0221
794	SLE RA 17	0.93	1.51	50.1	0.2442	-0.0582	0.0221
794	SLE RA 18	0.94	1.57	50.92	0.2468	-0.0594	0.0224
794	SLE RA 19	0.94	1.55	50.91	0.2479	-0.0594	0.0225
794	SLE RA 20	0.96	1.58	51.3	0.2485	-0.06	0.0226
794	SLE RA 21	0.95	1.56	51.29	0.2496	-0.06	0.0227
794	SLE FR 1	0.82	1.37	45.69	0.2232	-0.0515	0.02
794	SLE FR 2	0.82	1.36	45.69	0.2235	-0.0515	0.0201
794	SLE FR 3	0.83	1.38	45.84	0.2238	-0.0518	0.0201
794	SLE FR 4	0.86	1.42	47.26	0.2306	-0.0539	0.0208
794	SLE FR 5	0.86	1.43	47.41	0.2309	-0.0541	0.0208
794	SLE FR 6	0.88	1.47	48.31	0.235	-0.0555	0.0212
794	SLE QP 1	0.82	1.37	45.69	0.2232	-0.0515	0.02
794	SLE QP 2	0.86	1.43	47.26	0.2303	-0.0539	0.0207
794	SLD 1	6.18	2.48	46.88	0.1563	-0.0118	0.0153
794	SLD 2	5.97	2.53	46.89	0.1494	-0.0128	0.0202

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
794	SLD 3	6.49	0.84	46.62	0.2215	-0.0095	0.0102
794	SLD 4	6.28	0.89	46.63	0.2146	-0.0106	0.0151
794	SLD 5	2.02	4.23	47.54	0.1104	-0.0445	0.026
794	SLD 6	1.88	4.26	47.55	0.1058	-0.0452	0.0292
794	SLD 7	3.06	-1.25	46.67	0.3278	-0.037	0.009
794	SLD 8	2.92	-1.22	46.67	0.3233	-0.0377	0.0122
794	SLD 9	-1.21	4.08	47.85	0.1372	-0.0701	0.0293
794	SLD 10	-1.35	4.11	47.85	0.1327	-0.0708	0.0325
794	SLD 11	-0.16	-1.4	46.97	0.3547	-0.0626	0.0123
794	SLD 12	-0.3	-1.37	46.98	0.3502	-0.0633	0.0155
794	SLD 13	-4.56	1.97	47.9	0.2459	-0.0972	0.0264
794	SLD 14	-4.78	2.02	47.9	0.239	-0.0982	0.0313
794	SLD 15	-4.25	0.33	47.63	0.3111	-0.095	0.0213
794	SLD 16	-4.46	0.37	47.64	0.3042	-0.096	0.0262
794	SLV 1	13.31	3.84	46.27	0.0591	0.0447	0.008
794	SLV 2	12.81	3.95	46.29	0.043	0.0423	0.0193
794	SLV 3	14.04	0.11	45.68	0.2072	0.0499	-0.0039
794	SLV 4	13.54	0.22	45.7	0.1911	0.0475	0.0075
794	SLV 5	3.57	7.79	47.86	-0.0428	-0.0318	0.0329
794	SLV 6	3.25	7.86	47.87	-0.0532	-0.0334	0.0402
794	SLV 7	6.01	-4.64	45.88	0.4506	-0.0144	-0.0065
794	SLV 8	5.69	-4.57	45.89	0.4403	-0.0159	0.0008
794	SLV 9	-3.97	7.43	48.63	0.0203	-0.0918	0.0407
794	SLV 10	-4.29	7.5	48.64	0.0099	-0.0934	0.048
794	SLV 11	-1.53	-5	46.65	0.5137	-0.0744	0.0013
794	SLV 12	-1.85	-4.93	46.66	0.5034	-0.0759	0.0086
794	SLV 13	-11.82	2.63	48.82	0.2695	-0.1553	0.034
794	SLV 14	-12.32	2.75	48.84	0.2534	-0.1577	0.0454
794	SLV 15	-11.09	-1.09	48.23	0.4175	-0.1501	0.0222
794	SLV 16	-11.59	-0.98	48.25	0.4014	-0.1525	0.0335
794	CRTFP Ux+	0	0	0	0	0	0
794	CRTFP Ux-	0	0	0	0	0	0
794	CRTFP Uy+	0	0	0	0	0	0
794	CRTFP Uy-	0	0	0	0	0	0
795	SLU 1	0.79	1.4	45.74	0.2172	-0.0568	0.018
795	SLU 2	0.78	1.35	45.72	0.22	-0.0568	0.0181
795	SLU 3	0.82	1.45	46.72	0.2227	-0.0585	0.0185
795	SLU 4	0.81	1.42	46.7	0.2244	-0.0584	0.0186
795	SLU 5	0.8	1.37	46.32	0.2227	-0.0578	0.0184
795	SLU 6	0.83	1.47	47.32	0.2254	-0.0595	0.0187
795	SLU 7	0.83	1.44	47.31	0.227	-0.0595	0.0188
795	SLU 8	0.83	1.44	46.95	0.2226	-0.0589	0.0185
795	SLU 9	0.82	1.41	46.93	0.2243	-0.0589	0.0186
795	SLU 10	0.91	1.57	51.47	0.2456	-0.0662	0.0204
795	SLU 11	0.95	1.67	52.47	0.2482	-0.0679	0.0208
795	SLU 12	0.94	1.64	52.45	0.2499	-0.0679	0.0209
795	SLU 13	0.93	1.59	52.07	0.2482	-0.0673	0.0207
795	SLU 14	0.96	1.69	53.07	0.2509	-0.069	0.0211
795	SLU 15	0.96	1.66	53.06	0.2526	-0.0689	0.0212
795	SLU 16	0.96	1.66	52.7	0.2481	-0.0684	0.0208
795	SLU 17	0.95	1.63	52.68	0.2498	-0.0683	0.0209
795	SLU 18	0.98	1.71	53.96	0.2538	-0.0703	0.0213
795	SLU 19	0.97	1.68	53.94	0.2554	-0.0703	0.0214
795	SLU 20	0.99	1.73	54.56	0.2564	-0.0714	0.0215
795	SLU 21	0.99	1.7	54.54	0.2581	-0.0713	0.0216
795	SLU 22	0.92	1.69	51.23	0.2612	-0.0659	0.0204
795	SLU 23	0.91	1.64	51.21	0.264	-0.0659	0.0206
795	SLU 24	0.94	1.74	52.21	0.2666	-0.0676	0.0209
795	SLU 25	0.93	1.71	52.19	0.2683	-0.0675	0.021
795	SLU 26	0.92	1.66	51.81	0.2666	-0.0669	0.0209
795	SLU 27	0.96	1.76	52.81	0.2693	-0.0686	0.0212
795	SLU 28	0.95	1.73	52.79	0.271	-0.0686	0.0213
795	SLU 29	0.96	1.73	52.44	0.2665	-0.068	0.0209
795	SLU 30	0.95	1.7	52.42	0.2682	-0.068	0.021
795	SLU 31	1.03	1.86	56.96	0.2895	-0.0753	0.0229
795	SLU 32	1.07	1.96	57.96	0.2922	-0.077	0.0233
795	SLU 33	1.06	1.93	57.94	0.2938	-0.077	0.0234
795	SLU 34	1.05	1.88	57.56	0.2922	-0.0764	0.0232
795	SLU 35	1.09	1.98	58.56	0.2948	-0.0781	0.0235
795	SLU 36	1.08	1.95	58.55	0.2965	-0.078	0.0236
795	SLU 37	1.08	1.95	58.19	0.2921	-0.0775	0.0233
795	SLU 38	1.08	1.92	58.17	0.2937	-0.0774	0.0234
795	SLU 39	1.1	2	59.45	0.2977	-0.0794	0.0237
795	SLU 40	1.09	1.97	59.43	0.2994	-0.0794	0.0238
795	SLU 41	1.12	2.02	60.05	0.3004	-0.0805	0.024
795	SLU 42	1.11	2	60.03	0.302	-0.0805	0.0241
795	SLU 43	0.99	1.71	57.58	0.2674	-0.0707	0.0225
795	SLU 44	0.97	1.67	57.56	0.2701	-0.0707	0.0227
795	SLU 45	1.01	1.77	58.56	0.2728	-0.0724	0.023
795	SLU 46	1	1.74	58.55	0.2745	-0.0724	0.0231
795	SLU 47	0.99	1.69	58.16	0.2728	-0.0717	0.0229
795	SLU 48	1.03	1.79	59.16	0.2755	-0.0734	0.0233
795	SLU 49	1.02	1.76	59.15	0.2771	-0.0734	0.0234
795	SLU 50	1.02	1.76	58.79	0.2727	-0.0728	0.023
795	SLU 51	1.02	1.73	58.77	0.2744	-0.0728	0.0231
795	SLU 52	1.1	1.89	63.31	0.2957	-0.0802	0.025
795	SLU 53	1.14	1.99	64.31	0.2984	-0.0818	0.0253
795	SLU 54	1.13	1.96	64.3	0.3	-0.0818	0.0254
795	SLU 55	1.12	1.91	63.91	0.2984	-0.0812	0.0252
795	SLU 56	1.16	2.01	64.91	0.301	-0.0829	0.0256
795	SLU 57	1.15	1.98	64.9	0.3027	-0.0829	0.0257
795	SLU 58	1.15	1.98	64.54	0.2983	-0.0823	0.0253
795	SLU 59	1.14	1.95	64.52	0.2999	-0.0823	0.0254
795	SLU 60	1.17	2.03	65.8	0.3039	-0.0842	0.0258
795	SLU 61	1.16	2	65.78	0.3055	-0.0842	0.0259
795	SLU 62	1.19	2.05	66.4	0.3065	-0.0853	0.0261
795	SLU 63	1.18	2.02	66.38	0.3082	-0.0853	0.0262

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
795	SLU 64	1.11	2.01	63.07	0.3113	-0.0798	0.025
795	SLU 65	1.1	1.96	63.05	0.3141	-0.0798	0.0251
795	SLU 66	1.14	2.06	64.05	0.3167	-0.0815	0.0255
795	SLU 67	1.13	2.03	64.03	0.3184	-0.0815	0.0256
795	SLU 68	1.12	1.98	63.65	0.3167	-0.0808	0.0254
795	SLU 69	1.16	2.08	64.65	0.3194	-0.0825	0.0257
795	SLU 70	1.15	2.05	64.64	0.3211	-0.0825	0.0258
795	SLU 71	1.15	2.05	64.28	0.3166	-0.0819	0.0255
795	SLU 72	1.14	2.02	64.26	0.3183	-0.0819	0.0256
795	SLU 73	1.23	2.18	68.8	0.3396	-0.0893	0.0274
795	SLU 74	1.27	2.28	69.8	0.3423	-0.0909	0.0278
795	SLU 75	1.26	2.25	69.79	0.344	-0.0909	0.0279
795	SLU 76	1.25	2.2	69.4	0.3423	-0.0903	0.0277
795	SLU 77	1.28	2.3	70.4	0.345	-0.092	0.0281
795	SLU 78	1.28	2.27	70.39	0.3466	-0.092	0.0282
795	SLU 79	1.28	2.27	70.03	0.3422	-0.0914	0.0278
795	SLU 80	1.27	2.24	70.01	0.3439	-0.0914	0.0279
795	SLU 81	1.3	2.32	71.29	0.3478	-0.0933	0.0283
795	SLU 82	1.29	2.29	71.27	0.3495	-0.0933	0.0284
795	SLU 83	1.32	2.34	71.89	0.3505	-0.0944	0.0285
795	SLU 84	1.31	2.31	71.87	0.3521	-0.0944	0.0286
795	SLE RA 1	0.83	1.48	47.31	0.2298	-0.0594	0.0187
795	SLE RA 2	0.82	1.45	47.29	0.2316	-0.0594	0.0188
795	SLE RA 3	0.84	1.51	47.96	0.2334	-0.0605	0.019
795	SLE RA 4	0.84	1.49	47.95	0.2345	-0.0605	0.0191
795	SLE RA 5	0.83	1.46	47.69	0.2334	-0.0601	0.0189
795	SLE RA 6	0.86	1.53	48.36	0.2352	-0.0612	0.0192
795	SLE RA 7	0.85	1.51	48.35	0.2363	-0.0612	0.0192
795	SLE RA 8	0.85	1.51	48.11	0.2334	-0.0608	0.019
795	SLE RA 9	0.85	1.49	48.1	0.2345	-0.0608	0.0191
795	SLE RA 10	0.91	1.59	51.13	0.2487	-0.0657	0.0203
795	SLE RA 11	0.93	1.66	51.8	0.2505	-0.0668	0.0206
795	SLE RA 12	0.93	1.64	51.79	0.2516	-0.0668	0.0206
795	SLE RA 13	0.92	1.61	51.53	0.2505	-0.0664	0.0205
795	SLE RA 14	0.94	1.67	52.2	0.2522	-0.0675	0.0207
795	SLE RA 15	0.94	1.66	52.19	0.2534	-0.0675	0.0208
795	SLE RA 16	0.94	1.65	51.95	0.2504	-0.0671	0.0206
795	SLE RA 17	0.93	1.63	51.94	0.2515	-0.0671	0.0206
795	SLE RA 18	0.95	1.69	52.79	0.2541	-0.0684	0.0209
795	SLE RA 19	0.95	1.67	52.78	0.2552	-0.0684	0.0209
795	SLE RA 20	0.96	1.7	53.19	0.2559	-0.0691	0.021
795	SLE RA 21	0.96	1.68	53.18	0.257	-0.0691	0.0211
795	SLE FR 1	0.83	1.48	47.31	0.2298	-0.0594	0.0187
795	SLE FR 2	0.83	1.47	47.31	0.2302	-0.0594	0.0187
795	SLE FR 3	0.83	1.48	47.47	0.2305	-0.0597	0.0187
795	SLE FR 4	0.86	1.54	48.95	0.2375	-0.0621	0.0193
795	SLE FR 5	0.87	1.55	49.12	0.2378	-0.0624	0.0194
795	SLE FR 6	0.89	1.58	50.05	0.242	-0.0639	0.0198
795	SLE QP 1	0.83	1.48	47.31	0.2298	-0.0594	0.0187
795	SLE QP 2	0.87	1.54	48.96	0.2371	-0.0621	0.0193
795	SLD 1	6.19	2.58	47.67	0.1542	-0.0203	0.0127
795	SLD 2	5.97	2.66	47.71	0.147	-0.0213	0.0183
795	SLD 3	6.5	0.92	47.38	0.22	-0.0179	0.0063
795	SLD 4	6.29	0.99	47.42	0.2128	-0.0189	0.0119
795	SLD 5	2.02	4.37	49.01	0.1137	-0.0529	0.0261
795	SLD 6	1.88	4.42	49.03	0.109	-0.0536	0.0297
795	SLD 7	3.07	-1.19	48.03	0.3331	-0.0452	0.0047
795	SLD 8	2.93	-1.14	48.06	0.3284	-0.0458	0.0084
795	SLD 9	-1.2	4.23	49.85	0.1458	-0.0784	0.0303
795	SLD 10	-1.34	4.28	49.88	0.1411	-0.0791	0.0339
795	SLD 11	-0.15	-1.34	48.88	0.3652	-0.0707	0.0089
795	SLD 12	-0.29	-1.29	48.9	0.3605	-0.0713	0.0126
795	SLD 13	-4.55	2.09	50.5	0.2614	-0.1053	0.0267
795	SLD 14	-4.77	2.17	50.53	0.2542	-0.1063	0.0323
795	SLD 15	-4.24	0.42	50.2	0.3272	-0.103	0.0203
795	SLD 16	-4.46	0.5	50.24	0.32	-0.104	0.0259
795	SLV 1	13.32	3.92	45.92	0.0451	0.0359	0.0037
795	SLV 2	12.82	4.1	46.01	0.0284	0.0336	0.0168
795	SLV 3	14.05	0.14	45.25	0.1944	0.0413	-0.0111
795	SLV 4	13.55	0.32	45.34	0.1777	0.039	0.002
795	SLV 5	3.58	7.97	49.04	-0.0441	-0.0405	0.0349
795	SLV 6	3.26	8.08	49.09	-0.0548	-0.042	0.0433
795	SLV 7	6.01	-4.65	46.82	0.4536	-0.0225	-0.0145
795	SLV 8	5.69	-4.54	46.88	0.4429	-0.024	-0.0061
795	SLV 9	-3.96	7.62	51.03	0.0313	-0.1002	0.0447
795	SLV 10	-4.28	7.74	51.09	0.0206	-0.1017	0.0531
795	SLV 11	-1.53	-5	48.82	0.529	-0.0822	-0.0046
795	SLV 12	-1.85	-4.88	48.87	0.5183	-0.0837	0.0038
795	SLV 13	-11.82	2.77	52.57	0.2965	-0.1632	0.0366
795	SLV 14	-12.32	2.95	52.66	0.2798	-0.1655	0.0497
795	SLV 15	-11.08	-1.02	51.91	0.4458	-0.1578	0.0218
795	SLV 16	-11.58	-0.84	51.99	0.4291	-0.1601	0.0349
795	CRTFP Ux+	0	0	0	0	0	0
795	CRTFP Ux-	0	0	0	0	0	0
795	CRTFP Uy+	0	0	0	0	0	0
795	CRTFP Uy-	0	0	0	0	0	0
796	SLU 1	0.79	1.49	47.43	0.224	-0.0581	0.0153
796	SLU 2	0.78	1.44	47.4	0.2268	-0.058	0.0155
796	SLU 3	0.81	1.54	48.45	0.2297	-0.0598	0.0157
796	SLU 4	0.81	1.52	48.43	0.2314	-0.0597	0.0159
796	SLU 5	0.8	1.46	48.03	0.2297	-0.0591	0.0157
796	SLU 6	0.83	1.57	49.08	0.2325	-0.0608	0.0159
796	SLU 7	0.82	1.54	49.07	0.2342	-0.0608	0.0161
796	SLU 8	0.83	1.53	48.69	0.2297	-0.0602	0.0157
796	SLU 9	0.82	1.51	48.67	0.2314	-0.0602	0.0158
796	SLU 10	0.91	1.68	53.43	0.2531	-0.0676	0.0175
796	SLU 11	0.94	1.78	54.48	0.256	-0.0693	0.0178

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
796	SLU 12	0.93	1.75	54.46	0.2577	-0.0693	0.0179
796	SLU 13	0.92	1.7	54.06	0.256	-0.0687	0.0177
796	SLU 14	0.96	1.8	55.11	0.2588	-0.0704	0.018
796	SLU 15	0.95	1.77	55.09	0.2605	-0.0704	0.0181
796	SLU 16	0.96	1.77	54.72	0.256	-0.0698	0.0177
796	SLU 17	0.95	1.74	54.7	0.2577	-0.0697	0.0178
796	SLU 18	0.97	1.82	56.04	0.2616	-0.0718	0.0182
796	SLU 19	0.97	1.79	56.02	0.2633	-0.0717	0.0183
796	SLU 20	0.99	1.84	56.67	0.2644	-0.0728	0.0184
796	SLU 21	0.98	1.82	56.65	0.2661	-0.0728	0.0185
796	SLU 22	0.92	1.8	53.18	0.2691	-0.0674	0.0175
796	SLU 23	0.9	1.75	53.16	0.2719	-0.0673	0.0177
796	SLU 24	0.94	1.85	54.21	0.2748	-0.0691	0.018
796	SLU 25	0.93	1.82	54.19	0.2764	-0.069	0.0181
796	SLU 26	0.92	1.77	53.79	0.2747	-0.0684	0.0179
796	SLU 27	0.96	1.87	54.84	0.2776	-0.0701	0.0182
796	SLU 28	0.95	1.84	54.82	0.2793	-0.0701	0.0183
796	SLU 29	0.95	1.84	54.45	0.2748	-0.0695	0.0179
796	SLU 30	0.95	1.81	54.43	0.2765	-0.0695	0.018
796	SLU 31	1.03	1.98	59.18	0.2982	-0.0769	0.0197
796	SLU 32	1.07	2.08	60.24	0.3011	-0.0786	0.02
796	SLU 33	1.06	2.05	60.22	0.3027	-0.0786	0.0201
796	SLU 34	1.05	2	59.82	0.301	-0.078	0.02
796	SLU 35	1.09	2.1	60.87	0.3039	-0.0797	0.0202
796	SLU 36	1.08	2.08	60.85	0.3056	-0.0797	0.0203
796	SLU 37	1.08	2.07	60.48	0.3011	-0.0791	0.0199
796	SLU 38	1.07	2.04	60.46	0.3027	-0.079	0.0201
796	SLU 39	1.1	2.13	61.8	0.3066	-0.0811	0.0204
796	SLU 40	1.09	2.1	61.78	0.3083	-0.081	0.0205
796	SLU 41	1.12	2.15	62.43	0.3095	-0.0821	0.0206
796	SLU 42	1.11	2.12	62.41	0.3112	-0.0821	0.0207
796	SLU 43	0.98	1.83	59.68	0.2758	-0.0723	0.0191
796	SLU 44	0.97	1.78	59.65	0.2786	-0.0723	0.0193
796	SLU 45	1.01	1.89	60.7	0.2815	-0.074	0.0196
796	SLU 46	1	1.86	60.69	0.2831	-0.074	0.0197
796	SLU 47	0.99	1.81	60.28	0.2814	-0.0733	0.0195
796	SLU 48	1.03	1.91	61.34	0.2843	-0.075	0.0198
796	SLU 49	1.02	1.88	61.32	0.286	-0.075	0.0199
796	SLU 50	1.02	1.88	60.94	0.2815	-0.0744	0.0195
796	SLU 51	1.01	1.85	60.92	0.2832	-0.0744	0.0196
796	SLU 52	1.1	2.02	65.68	0.3049	-0.0818	0.0213
796	SLU 53	1.14	2.12	66.73	0.3077	-0.0836	0.0216
796	SLU 54	1.13	2.09	66.72	0.3094	-0.0835	0.0217
796	SLU 55	1.12	2.04	66.31	0.3077	-0.0829	0.0215
796	SLU 56	1.16	2.14	67.36	0.3106	-0.0846	0.0218
796	SLU 57	1.15	2.11	67.35	0.3123	-0.0846	0.0219
796	SLU 58	1.15	2.11	66.97	0.3078	-0.084	0.0215
796	SLU 59	1.14	2.08	66.95	0.3094	-0.084	0.0217
796	SLU 60	1.17	2.16	68.29	0.3133	-0.086	0.022
796	SLU 61	1.16	2.14	68.27	0.315	-0.086	0.0221
796	SLU 62	1.19	2.19	68.92	0.3162	-0.087	0.0222
796	SLU 63	1.18	2.16	68.91	0.3179	-0.087	0.0223
796	SLU 64	1.11	2.14	65.44	0.3208	-0.0816	0.0213
796	SLU 65	1.1	2.09	65.41	0.3236	-0.0816	0.0215
796	SLU 66	1.13	2.19	66.46	0.3265	-0.0833	0.0218
796	SLU 67	1.13	2.16	66.45	0.3282	-0.0833	0.0219
796	SLU 68	1.12	2.11	66.04	0.3265	-0.0826	0.0217
796	SLU 69	1.15	2.21	67.09	0.3294	-0.0844	0.022
796	SLU 70	1.15	2.19	67.08	0.331	-0.0843	0.0221
796	SLU 71	1.15	2.18	66.7	0.3265	-0.0837	0.0217
796	SLU 72	1.14	2.15	66.68	0.3282	-0.0837	0.0219
796	SLU 73	1.23	2.32	71.44	0.3499	-0.0911	0.0236
796	SLU 74	1.26	2.42	72.49	0.3528	-0.0929	0.0238
796	SLU 75	1.25	2.4	72.47	0.3545	-0.0928	0.0239
796	SLU 76	1.24	2.35	72.07	0.3528	-0.0922	0.0238
796	SLU 77	1.28	2.45	73.12	0.3557	-0.0939	0.024
796	SLU 78	1.27	2.42	73.11	0.3573	-0.0939	0.0242
796	SLU 79	1.28	2.41	72.73	0.3528	-0.0933	0.0238
796	SLU 80	1.27	2.39	72.71	0.3545	-0.0933	0.0239
796	SLU 81	1.29	2.47	74.05	0.3584	-0.0953	0.0242
796	SLU 82	1.29	2.44	74.03	0.3601	-0.0953	0.0243
796	SLU 83	1.31	2.49	74.68	0.3613	-0.0963	0.0244
796	SLU 84	1.3	2.46	74.66	0.3629	-0.0963	0.0246
796	SLE RA 1	0.83	1.58	49.07	0.2369	-0.0607	0.0159
796	SLE RA 2	0.82	1.55	49.05	0.2388	-0.0607	0.0161
796	SLE RA 3	0.84	1.61	49.75	0.2407	-0.0619	0.0162
796	SLE RA 4	0.84	1.59	49.74	0.2418	-0.0618	0.0163
796	SLE RA 5	0.83	1.56	49.47	0.2407	-0.0614	0.0162
796	SLE RA 6	0.86	1.63	50.18	0.2426	-0.0626	0.0164
796	SLE RA 7	0.85	1.61	50.16	0.2437	-0.0625	0.0164
796	SLE RA 8	0.85	1.61	49.91	0.2407	-0.0621	0.0162
796	SLE RA 9	0.85	1.59	49.9	0.2418	-0.0621	0.0163
796	SLE RA 10	0.9	1.7	53.07	0.2563	-0.0671	0.0174
796	SLE RA 11	0.93	1.77	53.77	0.2582	-0.0682	0.0176
796	SLE RA 12	0.92	1.75	53.76	0.2593	-0.0682	0.0177
796	SLE RA 13	0.92	1.72	53.49	0.2582	-0.0678	0.0175
796	SLE RA 14	0.94	1.78	54.2	0.2601	-0.0689	0.0177
796	SLE RA 15	0.93	1.76	54.18	0.2612	-0.0689	0.0178
796	SLE RA 16	0.94	1.76	53.93	0.2582	-0.0685	0.0175
796	SLE RA 17	0.93	1.74	53.92	0.2593	-0.0685	0.0176
796	SLE RA 18	0.95	1.8	54.81	0.2619	-0.0699	0.0178
796	SLE RA 19	0.94	1.78	54.8	0.2631	-0.0698	0.0179
796	SLE RA 20	0.96	1.81	55.23	0.2638	-0.0706	0.018
796	SLE RA 21	0.96	1.79	55.22	0.265	-0.0705	0.0181
796	SLE FR 1	0.83	1.58	49.07	0.2369	-0.0607	0.0159
796	SLE FR 2	0.83	1.57	49.07	0.2373	-0.0607	0.0159
796	SLE FR 3	0.83	1.58	49.24	0.2377	-0.061	0.016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
796	SLE FR 4	0.86	1.64	50.79	0.2448	-0.0635	0.0165
796	SLE FR 5	0.87	1.65	50.96	0.2452	-0.0638	0.0165
796	SLE FR 6	0.89	1.69	51.94	0.2494	-0.0653	0.0169
796	SLE QP 1	0.83	1.58	49.07	0.2369	-0.0607	0.0159
796	SLE QP 2	0.86	1.64	50.79	0.2444	-0.0635	0.0165
796	SLD 1	6.18	2.68	48.35	0.1523	-0.0236	0.0076
796	SLD 2	5.97	2.79	48.42	0.1449	-0.0245	0.0142
796	SLD 3	6.5	0.98	48.01	0.2188	-0.0212	0.0003
796	SLD 4	6.28	1.09	48.08	0.2114	-0.0221	0.007
796	SLD 5	2.02	4.51	50.56	0.1172	-0.055	0.0236
796	SLD 6	1.88	4.59	50.61	0.1124	-0.0556	0.028
796	SLD 7	3.07	-1.16	49.43	0.3389	-0.047	-0.0005
796	SLD 8	2.93	-1.08	49.48	0.3341	-0.0476	0.0038
796	SLD 9	-1.2	4.37	52.11	0.1547	-0.0793	0.0292
796	SLD 10	-1.34	4.44	52.15	0.1499	-0.0799	0.0335
796	SLD 11	-0.15	-1.3	50.98	0.3765	-0.0714	0.005
796	SLD 12	-0.29	-1.23	51.02	0.3716	-0.072	0.0093
796	SLD 13	-4.56	2.2	53.51	0.2774	-0.1048	0.026
796	SLD 14	-4.77	2.31	53.57	0.27	-0.1057	0.0326
796	SLD 15	-4.24	0.5	53.17	0.3439	-0.1024	0.0188
796	SLD 16	-4.46	0.61	53.24	0.3365	-0.1033	0.0254
796	SLV 1	13.31	4	45.06	0.0309	0.0299	-0.0044
796	SLV 2	12.81	4.26	45.21	0.0136	0.0277	0.0109
796	SLV 3	14.04	0.14	44.29	0.1818	0.0354	-0.0212
796	SLV 4	13.54	0.4	44.44	0.1644	0.0333	-0.0058
796	SLV 5	3.57	8.16	50.22	-0.0455	-0.0435	0.0329
796	SLV 6	3.25	8.32	50.32	-0.0566	-0.0449	0.0428
796	SLV 7	6.01	-4.7	47.64	0.4574	-0.025	-0.0228
796	SLV 8	5.69	-4.54	47.74	0.4463	-0.0264	-0.0129
796	SLV 9	-3.96	7.82	53.85	0.0425	-0.1005	0.0459
796	SLV 10	-4.28	7.99	53.94	0.0314	-0.1019	0.0558
796	SLV 11	-1.53	-5.04	51.27	0.5455	-0.0821	-0.0099
796	SLV 12	-1.85	-4.87	51.36	0.5343	-0.0834	0
796	SLV 13	-11.81	2.89	57.15	0.3244	-0.1602	0.0388
796	SLV 14	-12.31	3.14	57.3	0.3071	-0.1624	0.0542
796	SLV 15	-11.08	-0.97	56.37	0.4753	-0.1547	0.022
796	SLV 16	-11.58	-0.72	56.52	0.4579	-0.1568	0.0374
796	CRTFP Ux+	0	0	0	0	0	0
796	CRTFP Ux-	0	0	0	0	0	0
796	CRTFP Uy+	0	0	0	0	0	0
796	CRTFP Uy-	0	0	0	0	0	0
797	SLU 1	0.71	1.42	44.62	0.2112	0.7915	-0.0165
797	SLU 2	0.7	1.38	44.59	0.2138	0.7911	-0.0155
797	SLU 3	0.73	1.48	45.6	0.2166	0.8086	-0.0172
797	SLU 4	0.73	1.45	45.58	0.2182	0.8083	-0.0165
797	SLU 5	0.72	1.4	45.19	0.2166	0.8016	-0.0158
797	SLU 6	0.75	1.5	46.2	0.2194	0.8191	-0.0174
797	SLU 7	0.74	1.47	46.18	0.2209	0.8188	-0.0168
797	SLU 8	0.75	1.47	45.82	0.2168	0.8125	-0.0171
797	SLU 9	0.74	1.44	45.81	0.2183	0.8122	-0.0165
797	SLU 10	0.81	1.6	50.32	0.2386	0.8913	-0.0182
797	SLU 11	0.85	1.7	51.32	0.2414	0.9088	-0.0199
797	SLU 12	0.84	1.67	51.3	0.2429	0.9085	-0.0193
797	SLU 13	0.83	1.62	50.92	0.2413	0.9018	-0.0185
797	SLU 14	0.87	1.72	51.92	0.2441	0.9193	-0.0202
797	SLU 15	0.86	1.69	51.9	0.2457	0.919	-0.0196
797	SLU 16	0.86	1.69	51.55	0.2415	0.9128	-0.0198
797	SLU 17	0.85	1.66	51.53	0.243	0.9125	-0.0192
797	SLU 18	0.88	1.74	52.8	0.2466	0.9347	-0.0204
797	SLU 19	0.87	1.72	52.78	0.2481	0.9345	-0.0198
797	SLU 20	0.89	1.76	53.4	0.2493	0.9452	-0.0207
797	SLU 21	0.89	1.74	53.38	0.2509	0.945	-0.0201
797	SLU 22	0.83	1.71	50.09	0.2535	0.8871	-0.0203
797	SLU 23	0.81	1.67	50.07	0.2561	0.8867	-0.0193
797	SLU 24	0.85	1.76	51.07	0.2589	0.9042	-0.021
797	SLU 25	0.84	1.74	51.05	0.2605	0.9039	-0.0203
797	SLU 26	0.83	1.69	50.67	0.2589	0.8972	-0.0196
797	SLU 27	0.86	1.79	51.67	0.2617	0.9147	-0.0212
797	SLU 28	0.86	1.76	51.65	0.2632	0.9144	-0.0206
797	SLU 29	0.86	1.75	51.3	0.2591	0.9081	-0.0209
797	SLU 30	0.85	1.73	51.28	0.2606	0.9079	-0.0203
797	SLU 31	0.93	1.89	55.79	0.2808	0.9869	-0.022
797	SLU 32	0.96	1.99	56.79	0.2837	1.0044	-0.0237
797	SLU 33	0.95	1.96	56.78	0.2852	1.0042	-0.0231
797	SLU 34	0.94	1.91	56.39	0.2836	0.9974	-0.0223
797	SLU 35	0.98	2.01	57.39	0.2864	1.0149	-0.024
797	SLU 36	0.97	1.98	57.38	0.288	1.0146	-0.0234
797	SLU 37	0.97	1.98	57.02	0.2838	1.0084	-0.0236
797	SLU 38	0.97	1.95	57	0.2853	1.0081	-0.023
797	SLU 39	0.99	2.03	58.27	0.2889	1.0304	-0.0243
797	SLU 40	0.98	2	58.25	0.2904	1.0301	-0.0236
797	SLU 41	1.01	2.05	58.87	0.2916	1.0408	-0.0245
797	SLU 42	1	2.02	58.85	0.2932	1.0406	-0.0239
797	SLU 43	0.89	1.75	56.13	0.2601	0.9962	-0.0202
797	SLU 44	0.87	1.71	56.1	0.2627	0.9958	-0.0191
797	SLU 45	0.91	1.8	57.11	0.2655	1.0133	-0.0208
797	SLU 46	0.9	1.78	57.09	0.2671	1.013	-0.0202
797	SLU 47	0.89	1.73	56.7	0.2654	1.0063	-0.0194
797	SLU 48	0.93	1.82	57.71	0.2683	1.0237	-0.0211
797	SLU 49	0.92	1.8	57.69	0.2698	1.0235	-0.0205
797	SLU 50	0.92	1.79	57.33	0.2656	1.0172	-0.0207
797	SLU 51	0.91	1.77	57.32	0.2672	1.0169	-0.0201
797	SLU 52	0.99	1.93	61.83	0.2874	1.096	-0.0219
797	SLU 53	1.02	2.02	62.83	0.2903	1.1135	-0.0236
797	SLU 54	1.02	2	62.81	0.2918	1.1132	-0.0229
797	SLU 55	1.01	1.95	62.43	0.2902	1.1065	-0.0222
797	SLU 56	1.04	2.05	63.43	0.293	1.124	-0.0238

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
797	SLU 57	1.03	2.02	63.41	0.2946	1.1237	-0.0232
797	SLU 58	1.03	2.02	63.06	0.2904	1.1174	-0.0235
797	SLU 59	1.03	1.99	63.04	0.2919	1.1172	-0.0229
797	SLU 60	1.05	2.07	64.31	0.2955	1.1394	-0.0241
797	SLU 61	1.04	2.04	64.29	0.297	1.1392	-0.0235
797	SLU 62	1.07	2.09	64.91	0.2982	1.1499	-0.0244
797	SLU 63	1.06	2.06	64.89	0.2998	1.1496	-0.0238
797	SLU 64	1	2.04	61.6	0.3024	1.0918	-0.024
797	SLU 65	0.99	2	61.58	0.305	1.0914	-0.0229
797	SLU 66	1.02	2.09	62.58	0.3078	1.1089	-0.0246
797	SLU 67	1.01	2.07	62.56	0.3093	1.1086	-0.024
797	SLU 68	1	2.02	62.18	0.3077	1.1019	-0.0232
797	SLU 69	1.04	2.11	63.18	0.3106	1.1194	-0.0249
797	SLU 70	1.03	2.09	63.16	0.3121	1.1191	-0.0243
797	SLU 71	1.03	2.08	62.81	0.3079	1.1128	-0.0245
797	SLU 72	1.03	2.06	62.79	0.3095	1.1125	-0.0239
797	SLU 73	1.1	2.22	67.3	0.3297	1.1916	-0.0257
797	SLU 74	1.14	2.31	68.3	0.3325	1.2091	-0.0274
797	SLU 75	1.13	2.29	68.29	0.3341	1.2088	-0.0267
797	SLU 76	1.12	2.24	67.9	0.3325	1.2021	-0.026
797	SLU 77	1.15	2.33	68.9	0.3353	1.2196	-0.0276
797	SLU 78	1.15	2.31	68.89	0.3369	1.2193	-0.027
797	SLU 79	1.15	2.3	68.53	0.3327	1.2131	-0.0273
797	SLU 80	1.14	2.28	68.51	0.3342	1.2128	-0.0267
797	SLU 81	1.16	2.36	69.78	0.3377	1.235	-0.0279
797	SLU 82	1.16	2.33	69.76	0.3393	1.2348	-0.0273
797	SLU 83	1.18	2.38	70.38	0.3405	1.2455	-0.0282
797	SLU 84	1.17	2.35	70.36	0.3421	1.2453	-0.0276
797	SLE RA 1	0.74	1.51	46.18	0.2233	0.8189	-0.0176
797	SLE RA 2	0.74	1.48	46.17	0.225	0.8185	-0.0169
797	SLE RA 3	0.76	1.54	46.83	0.2269	0.8302	-0.018
797	SLE RA 4	0.75	1.52	46.82	0.228	0.83	-0.0176
797	SLE RA 5	0.75	1.49	46.57	0.2269	0.8255	-0.0171
797	SLE RA 6	0.77	1.55	47.24	0.2288	0.8372	-0.0182
797	SLE RA 7	0.77	1.54	47.22	0.2298	0.837	-0.0178
797	SLE RA 8	0.77	1.53	46.99	0.227	0.8328	-0.018
797	SLE RA 9	0.76	1.52	46.97	0.228	0.8327	-0.0176
797	SLE RA 10	0.81	1.63	49.98	0.2415	0.8854	-0.0188
797	SLE RA 11	0.84	1.69	50.65	0.2434	0.897	-0.0199
797	SLE RA 12	0.83	1.67	50.64	0.2444	0.8969	-0.0195
797	SLE RA 13	0.82	1.64	50.38	0.2434	0.8924	-0.0189
797	SLE RA 14	0.85	1.7	51.05	0.2453	0.904	-0.0201
797	SLE RA 15	0.84	1.69	51.04	0.2463	0.9039	-0.0196
797	SLE RA 16	0.84	1.68	50.8	0.2435	0.8997	-0.0198
797	SLE RA 17	0.84	1.67	50.79	0.2445	0.8995	-0.0194
797	SLE RA 18	0.85	1.72	51.64	0.2469	0.9143	-0.0202
797	SLE RA 19	0.85	1.7	51.62	0.2479	0.9141	-0.0198
797	SLE RA 20	0.86	1.73	52.04	0.2487	0.9213	-0.0204
797	SLE RA 21	0.86	1.71	52.02	0.2498	0.9211	-0.02
797	SLE FR 1	0.74	1.51	46.18	0.2233	0.8189	-0.0176
797	SLE FR 2	0.74	1.5	46.18	0.2237	0.8188	-0.0175
797	SLE FR 3	0.75	1.51	46.34	0.2241	0.8217	-0.0177
797	SLE FR 4	0.78	1.56	47.82	0.2307	0.8474	-0.0183
797	SLE FR 5	0.78	1.58	47.98	0.2311	0.8503	-0.0185
797	SLE FR 6	0.8	1.61	48.91	0.2351	0.8666	-0.0189
797	SLE QP 1	0.74	1.51	46.18	0.2233	0.8189	-0.0176
797	SLE QP 2	0.78	1.57	47.82	0.2304	0.8475	-0.0184
797	SLD 1	5.62	2.51	44.64	0.138	0.8152	-0.0441
797	SLD 2	5.43	2.64	44.72	0.131	0.8162	-0.0398
797	SLD 3	5.91	0.93	44.28	0.1996	0.8102	-0.0193
797	SLD 4	5.71	1.06	44.36	0.1926	0.8111	-0.015
797	SLD 5	1.83	4.22	47.4	0.1105	0.8453	-0.0645
797	SLD 6	1.7	4.31	47.45	0.1059	0.846	-0.0617
797	SLD 7	2.79	-1.04	46.19	0.3158	0.8284	0.0182
797	SLD 8	2.66	-0.96	46.25	0.3112	0.829	0.021
797	SLD 9	-1.1	4.09	49.39	0.1496	0.866	-0.0578
797	SLD 10	-1.23	4.18	49.45	0.1449	0.8666	-0.055
797	SLD 11	-0.15	-1.17	48.19	0.3549	0.849	0.0249
797	SLD 12	-0.28	-1.08	48.24	0.3503	0.8496	0.0277
797	SLD 13	-4.16	2.08	51.28	0.2682	0.8839	-0.0218
797	SLD 14	-4.35	2.21	51.36	0.2612	0.8848	-0.0175
797	SLD 15	-3.87	0.5	50.92	0.3298	0.8788	0.003
797	SLD 16	-4.07	0.63	51	0.3228	0.8798	0.0073
797	SLV 1	12.12	3.71	40.36	0.0161	0.7717	-0.0776
797	SLV 2	11.66	4.02	40.55	-0.0003	0.7738	-0.0675
797	SLV 3	12.78	0.13	39.54	0.1558	0.7601	-0.0214
797	SLV 4	12.33	0.44	39.73	0.1393	0.7623	-0.0113
797	SLV 5	3.25	7.59	46.8	-0.0429	0.8419	-0.123
797	SLV 6	2.95	7.79	46.93	-0.0535	0.8433	-0.1165
797	SLV 7	5.47	-4.35	44.05	0.4227	0.8033	0.0641
797	SLV 8	5.17	-4.15	44.17	0.4121	0.8047	0.0706
797	SLV 9	-3.62	7.29	51.47	0.0487	0.8902	-0.1074
797	SLV 10	-3.91	7.49	51.59	0.0381	0.8916	-0.1009
797	SLV 11	-1.4	-4.66	48.71	0.5143	0.8517	0.0797
797	SLV 12	-1.69	-4.45	48.84	0.5037	0.8531	0.0862
797	SLV 13	-10.77	2.7	55.91	0.3214	0.9327	-0.0255
797	SLV 14	-11.23	3.01	56.1	0.305	0.9349	-0.0154
797	SLV 15	-10.11	-0.88	55.09	0.4611	0.9212	0.0307
797	SLV 16	-10.56	-0.57	55.27	0.4447	0.9233	0.0408
797	CRTFP Ux+	0	0	0	0	0	0
797	CRTFP Ux-	0	0	0	0	0	0
797	CRTFP Uy+	0	0	0	0	0	0
797	CRTFP Uy-	0	0	0	0	0	0
799	SLU 1	1.32	2.76	86.07	-0.0663	3.1926	-0.1025
799	SLU 2	1.29	2.69	86.02	-0.0641	3.1916	-0.0986
799	SLU 3	1.36	2.86	87.97	-0.0671	3.2605	-0.1062
799	SLU 4	1.34	2.82	87.93	-0.0658	3.2599	-0.1039

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
799	SLU 5	1.32	2.73	87.18	-0.065	3.2334	-0.1002
799	SLU 6	1.39	2.9	89.13	-0.0681	3.3023	-0.1078
799	SLU 7	1.37	2.86	89.1	-0.0667	3.3017	-0.1054
799	SLU 8	1.38	2.84	88.41	-0.0682	3.2763	-0.1056
799	SLU 9	1.36	2.8	88.37	-0.0669	3.2757	-0.1033
799	SLU 10	1.51	3.11	97.12	-0.0747	3.5919	-0.1145
799	SLU 11	1.57	3.29	99.07	-0.0777	3.6608	-0.1221
799	SLU 12	1.55	3.24	99.03	-0.0764	3.6602	-0.1198
799	SLU 13	1.54	3.15	98.29	-0.0756	3.6338	-0.1161
799	SLU 14	1.6	3.33	100.23	-0.0787	3.7026	-0.1237
799	SLU 15	1.59	3.28	100.2	-0.0774	3.702	-0.1214
799	SLU 16	1.59	3.27	99.51	-0.0788	3.6766	-0.1215
799	SLU 17	1.58	3.22	99.47	-0.0775	3.676	-0.1192
799	SLU 18	1.62	3.37	101.93	-0.0815	3.7645	-0.1252
799	SLU 19	1.6	3.33	101.9	-0.0801	3.7639	-0.1229
799	SLU 20	1.65	3.41	103.1	-0.0824	3.8063	-0.1268
799	SLU 21	1.64	3.37	103.07	-0.0811	3.8057	-0.1245
799	SLU 22	1.53	3.32	96.71	-0.0614	3.5684	-0.1236
799	SLU 23	1.5	3.24	96.65	-0.0592	3.5674	-0.1197
799	SLU 24	1.57	3.42	98.6	-0.0622	3.6363	-0.1273
799	SLU 25	1.55	3.37	98.57	-0.0609	3.6357	-0.125
799	SLU 26	1.53	3.28	97.82	-0.0601	3.6092	-0.1213
799	SLU 27	1.6	3.46	99.77	-0.0632	3.6781	-0.1289
799	SLU 28	1.58	3.41	99.74	-0.0619	3.6775	-0.1265
799	SLU 29	1.59	3.4	99.05	-0.0633	3.6521	-0.1267
799	SLU 30	1.57	3.35	99.01	-0.062	3.6515	-0.1244
799	SLU 31	1.71	3.67	107.76	-0.0698	3.9677	-0.1356
799	SLU 32	1.78	3.85	109.71	-0.0729	4.0366	-0.1432
799	SLU 33	1.76	3.8	109.67	-0.0715	4.036	-0.1409
799	SLU 34	1.75	3.71	108.92	-0.0708	4.0096	-0.1372
799	SLU 35	1.81	3.89	110.87	-0.0738	4.0784	-0.1448
799	SLU 36	1.8	3.84	110.84	-0.0725	4.0778	-0.1425
799	SLU 37	1.8	3.83	110.15	-0.0739	4.0524	-0.1426
799	SLU 38	1.79	3.78	110.11	-0.0726	4.0518	-0.1403
799	SLU 39	1.83	3.93	112.57	-0.0766	4.1403	-0.1463
799	SLU 40	1.81	3.89	112.54	-0.0753	4.1397	-0.144
799	SLU 41	1.86	3.97	113.74	-0.0775	4.1821	-0.1479
799	SLU 42	1.85	3.93	113.7	-0.0762	4.1815	-0.1456
799	SLU 43	1.64	3.4	108.25	-0.0878	4.0215	-0.126
799	SLU 44	1.62	3.32	108.19	-0.0856	4.0205	-0.1221
799	SLU 45	1.68	3.5	110.14	-0.0887	4.0894	-0.1297
799	SLU 46	1.67	3.45	110.11	-0.0873	4.0888	-0.1274
799	SLU 47	1.65	3.36	109.36	-0.0866	4.0624	-0.1237
799	SLU 48	1.71	3.54	111.31	-0.0896	4.1312	-0.1313
799	SLU 49	1.7	3.49	111.27	-0.0883	4.1306	-0.1289
799	SLU 50	1.7	3.48	110.58	-0.0897	4.1052	-0.1291
799	SLU 51	1.69	3.43	110.55	-0.0884	4.1046	-0.1268
799	SLU 52	1.83	3.75	119.29	-0.0963	4.4209	-0.138
799	SLU 53	1.89	3.93	121.24	-0.0993	4.4897	-0.1456
799	SLU 54	1.88	3.88	121.21	-0.098	4.4891	-0.1433
799	SLU 55	1.86	3.79	120.46	-0.0972	4.4627	-0.1396
799	SLU 56	1.92	3.97	122.41	-0.1002	4.5315	-0.1472
799	SLU 57	1.91	3.92	122.38	-0.0989	4.531	-0.1449
799	SLU 58	1.91	3.91	121.68	-0.1004	4.5055	-0.145
799	SLU 59	1.9	3.86	121.65	-0.099	4.5049	-0.1427
799	SLU 60	1.94	4.01	124.11	-0.103	4.5934	-0.1487
799	SLU 61	1.93	3.97	124.07	-0.1017	4.5928	-0.1464
799	SLU 62	1.97	4.05	125.27	-0.104	4.6352	-0.1503
799	SLU 63	1.96	4.01	125.24	-0.1026	4.6346	-0.148
799	SLU 64	1.85	3.96	118.88	-0.083	4.3973	-0.1471
799	SLU 65	1.83	3.88	118.83	-0.0808	4.3963	-0.1432
799	SLU 66	1.89	4.06	120.78	-0.0838	4.4652	-0.1508
799	SLU 67	1.88	4.01	120.74	-0.0825	4.4646	-0.1485
799	SLU 68	1.86	3.92	120	-0.0817	4.4382	-0.1448
799	SLU 69	1.92	4.1	121.95	-0.0847	4.507	-0.1524
799	SLU 70	1.91	4.05	121.91	-0.0834	4.5064	-0.15
799	SLU 71	1.91	4.04	121.22	-0.0849	4.481	-0.1502
799	SLU 72	1.9	3.99	121.19	-0.0835	4.4804	-0.1479
799	SLU 73	2.04	4.31	129.93	-0.0914	4.7967	-0.1591
799	SLU 74	2.1	4.48	131.88	-0.0944	4.8655	-0.1667
799	SLU 75	2.09	4.44	131.85	-0.0931	4.8649	-0.1644
799	SLU 76	2.07	4.35	131.1	-0.0923	4.8385	-0.1607
799	SLU 77	2.13	4.52	133.05	-0.0954	4.9073	-0.1683
799	SLU 78	2.12	4.48	133.01	-0.094	4.9068	-0.166
799	SLU 79	2.12	4.46	132.32	-0.0955	4.8813	-0.1661
799	SLU 80	2.11	4.42	132.29	-0.0942	4.8807	-0.1638
799	SLU 81	2.15	4.57	134.75	-0.0982	4.9692	-0.1698
799	SLU 82	2.14	4.52	134.71	-0.0968	4.9686	-0.1675
799	SLU 83	2.18	4.61	135.91	-0.0991	5.011	-0.1714
799	SLU 84	2.17	4.56	135.88	-0.0978	5.0104	-0.1691
799	SLE RA 1	1.38	2.92	89.11	-0.0649	3.3	-0.1085
799	SLE RA 2	1.36	2.87	89.07	-0.0634	3.2993	-0.1059
799	SLE RA 3	1.4	2.99	90.37	-0.0654	3.3452	-0.111
799	SLE RA 4	1.39	2.96	90.35	-0.0646	3.3448	-0.1094
799	SLE RA 5	1.38	2.9	89.85	-0.0641	3.3272	-0.107
799	SLE RA 6	1.42	3.01	91.15	-0.0661	3.3731	-0.112
799	SLE RA 7	1.42	2.98	91.13	-0.0652	3.3727	-0.1105
799	SLE RA 8	1.42	2.97	90.67	-0.0662	3.3557	-0.1106
799	SLE RA 9	1.41	2.94	90.65	-0.0653	3.3554	-0.109
799	SLE RA 10	1.5	3.16	96.48	-0.0705	3.5662	-0.1165
799	SLE RA 11	1.54	3.27	97.78	-0.0725	3.6121	-0.1216
799	SLE RA 12	1.54	3.24	97.75	-0.0716	3.6117	-0.12
799	SLE RA 13	1.52	3.18	97.25	-0.0711	3.5941	-0.1176
799	SLE RA 14	1.57	3.3	98.55	-0.0732	3.64	-0.1226
799	SLE RA 15	1.56	3.27	98.53	-0.0723	3.6396	-0.1211
799	SLE RA 16	1.56	3.26	98.07	-0.0732	3.6226	-0.1212
799	SLE RA 17	1.55	3.23	98.05	-0.0724	3.6222	-0.1197

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
799	SLE RA 18	1.58	3.33	99.69	-0.075	3.6812	-0.1236
799	SLE RA 19	1.57	3.3	99.66	-0.0741	3.6808	-0.1221
799	SLE RA 20	1.6	3.36	100.46	-0.0757	3.7091	-0.1247
799	SLE RA 21	1.59	3.33	100.44	-0.0748	3.7087	-0.1232
799	SLE FR 1	1.38	2.92	89.11	-0.0649	3.3	-0.1085
799	SLE FR 2	1.37	2.91	89.1	-0.0646	3.2998	-0.108
799	SLE FR 3	1.39	2.93	89.42	-0.0652	3.3111	-0.1089
799	SLE FR 4	1.43	3.03	92.28	-0.0676	3.4142	-0.1125
799	SLE FR 5	1.45	3.05	92.6	-0.0682	3.4255	-0.1135
799	SLE FR 6	1.48	3.12	94.4	-0.07	3.4906	-0.1161
799	SLE QP 1	1.38	2.92	89.11	-0.0649	3.3	-0.1085
799	SLE QP 2	1.44	3.04	92.28	-0.0679	3.4143	-0.113
799	SLD 1	10.55	3.96	84.73	-0.1257	3.5018	-0.1592
799	SLD 2	10.18	4.29	84.92	-0.132	3.5028	-0.1582
799	SLD 3	11.09	0.94	83.94	-0.0743	3.5099	-0.0383
799	SLD 4	10.72	1.27	84.12	-0.0805	3.5108	-0.0373
799	SLD 5	3.42	7.84	91.19	-0.1622	3.4282	-0.3104
799	SLD 6	3.18	8.06	91.31	-0.1663	3.4288	-0.3098
799	SLD 7	5.21	-2.23	88.55	0.0093	3.455	0.0926
799	SLD 8	4.97	-2.01	88.67	0.0052	3.4557	0.0932
799	SLD 9	-2.1	8.1	95.9	-0.1411	3.373	-0.3193
799	SLD 10	-2.34	8.31	96.02	-0.1452	3.3736	-0.3186
799	SLD 11	-0.31	-1.97	93.26	0.0304	3.3998	0.0837
799	SLD 12	-0.55	-1.76	93.38	0.0263	3.4005	0.0844
799	SLD 13	-7.85	4.82	100.44	-0.0553	3.3178	-0.1888
799	SLD 14	-8.22	5.14	100.63	-0.0616	3.3188	-0.1878
799	SLD 15	-7.31	1.79	99.65	-0.0039	3.3259	-0.0679
799	SLD 16	-7.68	2.12	99.83	-0.0101	3.3269	-0.0669
799	SLV 1	22.77	5.09	74.6	-0.2019	3.623	-0.2164
799	SLV 2	21.91	5.85	75.02	-0.2165	3.6253	-0.2141
799	SLV 3	24.02	-1.77	72.78	-0.0852	3.6418	0.0576
799	SLV 4	23.16	-1.01	73.21	-0.0998	3.644	0.0599
799	SLV 5	6.08	13.92	89.66	-0.2826	3.4482	-0.56
799	SLV 6	5.53	14.41	89.93	-0.2919	3.4496	-0.5585
799	SLV 7	10.26	-8.93	83.61	0.1063	3.5106	0.3533
799	SLV 8	9.71	-8.44	83.88	0.097	3.512	0.3548
799	SLV 9	-6.83	14.53	100.69	-0.2328	3.3166	-0.5809
799	SLV 10	-7.39	15.02	100.96	-0.2422	3.3181	-0.5794
799	SLV 11	-2.66	-8.33	94.64	0.1561	3.3791	0.3325
799	SLV 12	-3.21	-7.84	94.91	0.1467	3.3805	0.3339
799	SLV 13	-20.29	7.09	111.36	-0.0361	3.1846	-0.286
799	SLV 14	-21.15	7.86	111.78	-0.0507	3.1869	-0.2837
799	SLV 15	-19.03	0.24	109.54	0.0806	3.2034	-0.012
799	SLV 16	-19.89	1	109.97	0.066	3.2056	-0.0097
799	CRTFP Ux+	0	0	0	0	0	0
799	CRTFP Ux-	0	0	0	0	0	0
799	CRTFP Uy+	0	0	0	0	0	0
799	CRTFP Uy-	0	0	0	0	0	0
801	SLU 1	-0.64	0.03	30.36	-0.0137	-2.3412	0.0078
801	SLU 2	-0.65	-0.05	30.37	-0.0136	-2.3424	-0.0116
801	SLU 3	-0.66	0.03	31.08	-0.014	-2.3849	0.0095
801	SLU 4	-0.66	-0.01	31.08	-0.014	-2.3856	-0.0021
801	SLU 5	-0.66	-0.04	30.82	-0.0139	-2.3697	-0.0103
801	SLU 6	-0.67	0.04	31.53	-0.0143	-2.4121	0.0108
801	SLU 7	-0.67	-0.01	31.54	-0.0142	-2.4128	-0.0008
801	SLU 8	-0.66	0.04	31.27	-0.0141	-2.3957	0.0105
801	SLU 9	-0.66	-0.01	31.27	-0.0141	-2.3964	-0.0012
801	SLU 10	-0.7	0.01	33.8	-0.0155	-2.5759	0.0036
801	SLU 11	-0.71	0.09	34.51	-0.0159	-2.6184	0.0247
801	SLU 12	-0.71	0.05	34.52	-0.0158	-2.6191	0.013
801	SLU 13	-0.71	0.02	34.25	-0.0157	-2.6032	0.0049
801	SLU 14	-0.72	0.1	34.97	-0.0161	-2.6456	0.026
801	SLU 15	-0.72	0.05	34.97	-0.0161	-2.6463	0.0143
801	SLU 16	-0.71	0.1	34.7	-0.0159	-2.6292	0.0256
801	SLU 17	-0.71	0.05	34.71	-0.0159	-2.6299	0.014
801	SLU 18	-0.71	0.11	35.26	-0.0163	-2.6748	0.0295
801	SLU 19	-0.71	0.07	35.27	-0.0162	-2.6755	0.0178
801	SLU 20	-0.72	0.12	35.71	-0.0165	-2.702	0.0308
801	SLU 21	-0.72	0.07	35.72	-0.0165	-2.7028	0.0192
801	SLU 22	-0.7	0.1	33.86	-0.0153	-2.5752	0.0261
801	SLU 23	-0.71	0.02	33.87	-0.0153	-2.5765	0.0067
801	SLU 24	-0.72	0.11	34.58	-0.0157	-2.6189	0.0278
801	SLU 25	-0.72	0.06	34.59	-0.0157	-2.6196	0.0161
801	SLU 26	-0.72	0.03	34.33	-0.0155	-2.6037	0.008
801	SLU 27	-0.73	0.11	35.04	-0.0159	-2.6461	0.0291
801	SLU 28	-0.73	0.07	35.04	-0.0159	-2.6469	0.0174
801	SLU 29	-0.72	0.11	34.77	-0.0158	-2.6297	0.0287
801	SLU 30	-0.72	0.06	34.78	-0.0158	-2.6304	0.0171
801	SLU 31	-0.76	0.08	37.3	-0.0171	-2.8099	0.0219
801	SLU 32	-0.77	0.17	38.01	-0.0175	-2.8524	0.0429
801	SLU 33	-0.77	0.12	38.02	-0.0175	-2.8531	0.0313
801	SLU 34	-0.77	0.09	37.76	-0.0174	-2.8372	0.0232
801	SLU 35	-0.78	0.17	38.47	-0.0178	-2.8796	0.0442
801	SLU 36	-0.78	0.13	38.48	-0.0177	-2.8803	0.0326
801	SLU 37	-0.77	0.17	38.2	-0.0176	-2.8632	0.0439
801	SLU 38	-0.77	0.12	38.21	-0.0176	-2.8639	0.0323
801	SLU 39	-0.77	0.19	38.76	-0.018	-2.9088	0.0478
801	SLU 40	-0.77	0.14	38.77	-0.0179	-2.9095	0.0361
801	SLU 41	-0.78	0.19	39.22	-0.0182	-2.936	0.0491
801	SLU 42	-0.78	0.14	39.22	-0.0182	-2.9368	0.0374
801	SLU 43	-0.81	0.01	38.26	-0.0172	-2.9634	0.0039
801	SLU 44	-0.82	-0.07	38.27	-0.0172	-2.9646	-0.0155
801	SLU 45	-0.83	0.02	38.98	-0.0176	-3.007	0.0056
801	SLU 46	-0.83	-0.03	38.99	-0.0175	-3.0077	-0.0061
801	SLU 47	-0.83	-0.06	38.73	-0.0174	-2.9918	-0.0142
801	SLU 48	-0.84	0.02	39.44	-0.0178	-3.0342	0.0069
801	SLU 49	-0.84	-0.02	39.45	-0.0178	-3.035	-0.0048

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
801	SLU 50	-0.83	0.02	39.17	-0.0176	-3.0178	0.0066
801	SLU 51	-0.84	-0.02	39.18	-0.0176	-3.0186	-0.0051
801	SLU 52	-0.87	-0.01	41.7	-0.019	-3.1981	-0.0003
801	SLU 53	-0.88	0.08	42.42	-0.0194	-3.2405	0.0207
801	SLU 54	-0.88	0.03	42.42	-0.0194	-3.2412	0.0091
801	SLU 55	-0.88	0	42.16	-0.0192	-3.2253	0.001
801	SLU 56	-0.89	0.08	42.87	-0.0196	-3.2677	0.022
801	SLU 57	-0.89	0.04	42.88	-0.0196	-3.2685	0.0104
801	SLU 58	-0.88	0.08	42.6	-0.0195	-3.2513	0.0217
801	SLU 59	-0.89	0.03	42.61	-0.0194	-3.2521	0.0101
801	SLU 60	-0.88	0.1	43.16	-0.0198	-3.2969	0.0256
801	SLU 61	-0.89	0.05	43.17	-0.0198	-3.2976	0.0139
801	SLU 62	-0.89	0.1	43.62	-0.02	-3.3242	0.0269
801	SLU 63	-0.9	0.06	43.63	-0.02	-3.3249	0.0152
801	SLU 64	-0.87	0.08	41.76	-0.0189	-3.1974	0.0222
801	SLU 65	-0.88	0.01	41.78	-0.0188	-3.1986	0.0028
801	SLU 66	-0.89	0.09	42.49	-0.0192	-3.241	0.0239
801	SLU 67	-0.89	0.04	42.49	-0.0192	-3.2418	0.0122
801	SLU 68	-0.89	0.01	42.23	-0.0191	-3.2258	0.0041
801	SLU 69	-0.9	0.1	42.94	-0.0195	-3.2683	0.0252
801	SLU 70	-0.9	0.05	42.95	-0.0194	-3.269	0.0135
801	SLU 71	-0.89	0.09	42.68	-0.0193	-3.2518	0.0248
801	SLU 72	-0.9	0.05	42.68	-0.0193	-3.2526	0.0132
801	SLU 73	-0.93	0.07	45.21	-0.0207	-3.4321	0.018
801	SLU 74	-0.94	0.15	45.92	-0.0211	-3.4745	0.039
801	SLU 75	-0.94	0.1	45.93	-0.021	-3.4752	0.0274
801	SLU 76	-0.94	0.07	45.66	-0.0209	-3.4593	0.0193
801	SLU 77	-0.95	0.16	46.37	-0.0213	-3.5017	0.0403
801	SLU 78	-0.95	0.11	46.38	-0.0213	-3.5025	0.0287
801	SLU 79	-0.94	0.15	46.11	-0.0211	-3.4853	0.04
801	SLU 80	-0.95	0.11	46.12	-0.0211	-3.4861	0.0283
801	SLU 81	-0.94	0.17	46.67	-0.0215	-3.5309	0.0439
801	SLU 82	-0.95	0.12	46.67	-0.0215	-3.5317	0.0322
801	SLU 83	-0.95	0.17	47.12	-0.0217	-3.5582	0.0452
801	SLU 84	-0.96	0.13	47.13	-0.0217	-3.5589	0.0335
801	SLE RA 1	-0.66	0.05	31.36	-0.0141	-2.4081	0.0131
801	SLE RA 2	-0.66	0	31.36	-0.0141	-2.4089	0.0001
801	SLE RA 3	-0.67	0.05	31.84	-0.0144	-2.4372	0.0142
801	SLE RA 4	-0.67	0.02	31.84	-0.0144	-2.4377	0.0064
801	SLE RA 5	-0.67	0	31.67	-0.0143	-2.4271	0.001
801	SLE RA 6	-0.68	0.06	32.14	-0.0145	-2.4553	0.015
801	SLE RA 7	-0.68	0.03	32.15	-0.0145	-2.4558	0.0073
801	SLE RA 8	-0.67	0.06	31.96	-0.0144	-2.4444	0.0148
801	SLE RA 9	-0.67	0.02	31.97	-0.0144	-2.4449	0.0071
801	SLE RA 10	-0.69	0.04	33.65	-0.0153	-2.5646	0.0102
801	SLE RA 11	-0.7	0.09	34.13	-0.0156	-2.5928	0.0243
801	SLE RA 12	-0.7	0.06	34.13	-0.0156	-2.5933	0.0165
801	SLE RA 13	-0.7	0.04	33.96	-0.0155	-2.5827	0.0111
801	SLE RA 14	-0.71	0.1	34.43	-0.0158	-2.611	0.0251
801	SLE RA 15	-0.71	0.07	34.43	-0.0157	-2.6115	0.0174
801	SLE RA 16	-0.71	0.1	34.25	-0.0157	-2.6001	0.0249
801	SLE RA 17	-0.71	0.06	34.26	-0.0156	-2.6006	0.0172
801	SLE RA 18	-0.71	0.11	34.63	-0.0159	-2.6305	0.0275
801	SLE RA 19	-0.71	0.07	34.63	-0.0159	-2.6309	0.0197
801	SLE RA 20	-0.71	0.11	34.93	-0.016	-2.6486	0.0284
801	SLE RA 21	-0.71	0.08	34.93	-0.016	-2.6491	0.0206
801	SLE FR 1	-0.66	0.05	31.36	-0.0141	-2.4081	0.0131
801	SLE FR 2	-0.66	0.04	31.36	-0.0141	-2.4082	0.0105
801	SLE FR 3	-0.66	0.05	31.48	-0.0142	-2.4153	0.0134
801	SLE FR 4	-0.67	0.06	32.34	-0.0147	-2.475	0.0148
801	SLE FR 5	-0.68	0.07	32.46	-0.0147	-2.4821	0.0178
801	SLE FR 6	-0.68	0.08	32.99	-0.015	-2.5193	0.0203
801	SLE QP 1	-0.66	0.05	31.36	-0.0141	-2.4081	0.0131
801	SLE QP 2	-0.67	0.07	32.34	-0.0147	-2.4748	0.0174
801	SLD 1	1.61	0.62	40.66	-0.0215	-3.0207	0.1546
801	SLD 2	1.49	0.13	40.78	-0.0205	-3.036	0.033
801	SLD 3	1.76	-0.74	41.08	-0.0202	-3.0668	-0.1863
801	SLD 4	1.63	-1.23	41.21	-0.0191	-3.0821	-0.3079
801	SLD 5	-0.19	2.38	34.16	-0.0189	-2.566	0.5971
801	SLD 6	-0.27	2.06	34.25	-0.0183	-2.576	0.5176
801	SLD 7	0.3	-2.16	35.59	-0.0145	-2.7196	-0.5393
801	SLD 8	0.22	-2.48	35.67	-0.0138	-2.7296	-0.6188
801	SLD 9	-1.57	2.61	29.01	-0.0156	-2.22	0.6536
801	SLD 10	-1.65	2.29	29.09	-0.0149	-2.23	0.5741
801	SLD 11	-1.08	-1.93	30.43	-0.0111	-2.3736	-0.4828
801	SLD 12	-1.16	-2.25	30.51	-0.0104	-2.3836	-0.5623
801	SLD 13	-2.98	1.37	23.46	-0.0102	-1.8675	0.3427
801	SLD 14	-3.11	0.88	23.59	-0.0092	-1.8828	0.2211
801	SLD 15	-2.83	0	23.89	-0.0089	-1.9136	0.0018
801	SLD 16	-2.96	-0.49	24.02	-0.0078	-1.9288	-0.1198
801	SLV 1	4.67	1.3	51.82	-0.0307	-3.7538	0.3247
801	SLV 2	4.38	0.16	52.11	-0.0282	-3.7894	0.0414
801	SLV 3	5.02	-1.78	52.81	-0.0276	-3.8601	-0.4466
801	SLV 4	4.73	-2.92	53.1	-0.0252	-3.8956	-0.7299
801	SLV 5	0.46	5.31	36.62	-0.0245	-2.6913	1.328
801	SLV 6	0.28	4.57	36.81	-0.023	-2.7141	1.1459
801	SLV 7	1.6	-4.97	39.94	-0.0143	-3.0454	-1.2431
801	SLV 8	1.42	-5.7	40.13	-0.0128	-3.0683	-1.4252
801	SLV 9	-2.76	5.83	24.55	-0.0166	-1.8813	1.46
801	SLV 10	-2.95	5.1	24.73	-0.015	-1.9042	1.2779
801	SLV 11	-1.62	-4.44	27.87	-0.0064	-2.2355	-1.1111
801	SLV 12	-1.81	-5.17	28.05	-0.0048	-2.2583	-1.2932
801	SLV 13	-6.07	3.05	11.57	-0.0042	-1.054	0.7647
801	SLV 14	-6.36	1.91	11.86	-0.0017	-1.0895	0.4814
801	SLV 15	-5.73	-0.03	12.57	-0.0011	-1.1602	-0.0066
801	SLV 16	-6.02	-1.17	12.86	0.0013	-1.1958	-0.2899
801	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
801	CRTFP Ux-	0	0	0	0	0	0
801	CRTFP Uy+	0	0	0	0	0	0
801	CRTFP Uy-	0	0	0	0	0	0
804	SLU 1	0.62	0.33	34.36	-0.0524	5.5051	-0.1144
804	SLU 2	0.63	0.3	34.37	-0.0525	5.5057	-0.1044
804	SLU 3	0.64	0.33	35.16	-0.0538	5.6157	-0.1159
804	SLU 4	0.65	0.31	35.16	-0.0538	5.6161	-0.1099
804	SLU 5	0.64	0.29	34.86	-0.0533	5.575	-0.103
804	SLU 6	0.66	0.33	35.66	-0.0547	5.685	-0.1145
804	SLU 7	0.66	0.31	35.66	-0.0547	5.6854	-0.1085
804	SLU 8	0.65	0.32	35.36	-0.0542	5.6437	-0.1116
804	SLU 9	0.65	0.3	35.36	-0.0542	5.6441	-0.1056
804	SLU 10	0.67	0.41	38.22	-0.0591	6.0613	-0.1435
804	SLU 11	0.68	0.44	39.02	-0.0605	6.1713	-0.155
804	SLU 12	0.68	0.42	39.02	-0.0605	6.1717	-0.149
804	SLU 13	0.68	0.4	38.72	-0.06	6.1306	-0.1421
804	SLU 14	0.69	0.44	39.51	-0.0613	6.2406	-0.1536
804	SLU 15	0.7	0.42	39.51	-0.0614	6.241	-0.1476
804	SLU 16	0.69	0.43	39.21	-0.0608	6.1993	-0.1507
804	SLU 17	0.69	0.41	39.22	-0.0608	6.1997	-0.1447
804	SLU 18	0.68	0.49	39.87	-0.0619	6.2988	-0.1702
804	SLU 19	0.68	0.47	39.87	-0.0619	6.2992	-0.1642
804	SLU 20	0.69	0.48	40.37	-0.0628	6.3681	-0.1688
804	SLU 21	0.69	0.46	40.37	-0.0628	6.3685	-0.1628
804	SLU 22	0.68	0.43	38.27	-0.0589	6.0645	-0.1521
804	SLU 23	0.68	0.4	38.27	-0.059	6.0651	-0.1421
804	SLU 24	0.7	0.44	39.07	-0.0603	6.1751	-0.1536
804	SLU 25	0.7	0.42	39.07	-0.0604	6.1755	-0.1476
804	SLU 26	0.7	0.4	38.77	-0.0599	6.1344	-0.1407
804	SLU 27	0.71	0.43	39.56	-0.0612	6.2444	-0.1522
804	SLU 28	0.71	0.42	39.56	-0.0612	6.2448	-0.1462
804	SLU 29	0.7	0.43	39.26	-0.0607	6.2031	-0.1493
804	SLU 30	0.71	0.41	39.27	-0.0607	6.2035	-0.1433
804	SLU 31	0.72	0.52	42.13	-0.0656	6.6207	-0.1812
804	SLU 32	0.74	0.55	42.92	-0.067	6.7307	-0.1927
804	SLU 33	0.74	0.53	42.92	-0.067	6.7311	-0.1867
804	SLU 34	0.74	0.51	42.63	-0.0665	6.69	-0.1798
804	SLU 35	0.75	0.55	43.42	-0.0679	6.8	-0.1913
804	SLU 36	0.75	0.53	43.42	-0.0679	6.8004	-0.1853
804	SLU 37	0.74	0.54	43.12	-0.0673	6.7587	-0.1884
804	SLU 38	0.75	0.52	43.12	-0.0674	6.7591	-0.1824
804	SLU 39	0.73	0.59	43.78	-0.0684	6.8582	-0.208
804	SLU 40	0.74	0.58	43.78	-0.0684	6.8586	-0.202
804	SLU 41	0.75	0.59	44.28	-0.0693	6.9275	-0.2066
804	SLU 42	0.75	0.57	44.28	-0.0693	6.9279	-0.2006
804	SLU 43	0.79	0.39	43.33	-0.0659	6.9648	-0.1357
804	SLU 44	0.8	0.36	43.34	-0.0659	6.9655	-0.1258
804	SLU 45	0.81	0.39	44.13	-0.0673	7.0755	-0.1373
804	SLU 46	0.81	0.37	44.13	-0.0673	7.0758	-0.1313
804	SLU 47	0.81	0.35	43.83	-0.0668	7.0348	-0.1244
804	SLU 48	0.82	0.39	44.63	-0.0682	7.1448	-0.1359
804	SLU 49	0.83	0.37	44.63	-0.0682	7.1451	-0.1299
804	SLU 50	0.82	0.38	44.33	-0.0676	7.1034	-0.133
804	SLU 51	0.82	0.36	44.33	-0.0677	7.1038	-0.127
804	SLU 52	0.84	0.47	47.19	-0.0726	7.5211	-0.1649
804	SLU 53	0.85	0.5	47.99	-0.0739	7.6311	-0.1764
804	SLU 54	0.85	0.49	47.99	-0.074	7.6314	-0.1704
804	SLU 55	0.85	0.47	47.69	-0.0735	7.5904	-0.1635
804	SLU 56	0.86	0.5	48.48	-0.0748	7.7004	-0.175
804	SLU 57	0.87	0.48	48.48	-0.0748	7.7007	-0.169
804	SLU 58	0.86	0.49	48.18	-0.0743	7.659	-0.1721
804	SLU 59	0.86	0.47	48.18	-0.0743	7.6594	-0.1661
804	SLU 60	0.85	0.55	48.84	-0.0754	7.7585	-0.1916
804	SLU 61	0.85	0.53	48.84	-0.0754	7.7589	-0.1856
804	SLU 62	0.86	0.54	49.34	-0.0763	7.8279	-0.1902
804	SLU 63	0.86	0.52	49.34	-0.0763	7.8282	-0.1842
804	SLU 64	0.85	0.49	47.24	-0.0724	7.5243	-0.1735
804	SLU 65	0.85	0.47	47.24	-0.0725	7.5249	-0.1635
804	SLU 66	0.87	0.5	48.04	-0.0738	7.6349	-0.175
804	SLU 67	0.87	0.48	48.04	-0.0738	7.6352	-0.169
804	SLU 68	0.87	0.46	47.74	-0.0733	7.5942	-0.1621
804	SLU 69	0.88	0.49	48.53	-0.0747	7.7042	-0.1736
804	SLU 70	0.88	0.48	48.53	-0.0747	7.7045	-0.1676
804	SLU 71	0.87	0.49	48.23	-0.0742	7.6629	-0.1707
804	SLU 72	0.88	0.47	48.24	-0.0742	7.6632	-0.1647
804	SLU 73	0.89	0.58	51.1	-0.0791	8.0805	-0.2026
804	SLU 74	0.9	0.61	51.89	-0.0805	8.1905	-0.2141
804	SLU 75	0.91	0.59	51.89	-0.0805	8.1908	-0.2081
804	SLU 76	0.9	0.57	51.6	-0.08	8.1498	-0.2012
804	SLU 77	0.92	0.61	52.39	-0.0813	8.2598	-0.2127
804	SLU 78	0.92	0.59	52.39	-0.0814	8.2601	-0.2067
804	SLU 79	0.91	0.6	52.09	-0.0808	8.2184	-0.2098
804	SLU 80	0.91	0.58	52.09	-0.0808	8.2188	-0.2038
804	SLU 81	0.9	0.65	52.75	-0.0819	8.318	-0.2293
804	SLU 82	0.9	0.64	52.75	-0.0819	8.3183	-0.2233
804	SLU 83	0.91	0.65	53.25	-0.0828	8.3873	-0.2279
804	SLU 84	0.92	0.63	53.25	-0.0828	8.3876	-0.2219
804	SLE RA 1	0.64	0.36	35.48	-0.0543	5.6649	-0.1252
804	SLE RA 2	0.64	0.34	35.48	-0.0543	5.6654	-0.1185
804	SLE RA 3	0.65	0.36	36.01	-0.0552	5.7387	-0.1262
804	SLE RA 4	0.65	0.35	36.01	-0.0552	5.7389	-0.1222
804	SLE RA 5	0.65	0.33	35.81	-0.0549	5.7116	-0.1176
804	SLE RA 6	0.66	0.36	36.34	-0.0558	5.7849	-0.1252
804	SLE RA 7	0.66	0.35	36.34	-0.0558	5.7851	-0.1212
804	SLE RA 8	0.66	0.35	36.14	-0.0554	5.7573	-0.1233
804	SLE RA 9	0.66	0.34	36.14	-0.0555	5.7576	-0.1193
804	SLE RA 10	0.67	0.41	38.05	-0.0587	6.0358	-0.1446

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
804	SLE RA 11	0.68	0.43	38.58	-0.0596	6.1091	-0.1522
804	SLE RA 12	0.68	0.42	38.58	-0.0597	6.1093	-0.1482
804	SLE RA 13	0.68	0.41	38.38	-0.0593	6.082	-0.1436
804	SLE RA 14	0.69	0.43	38.91	-0.0602	6.1553	-0.1513
804	SLE RA 15	0.69	0.42	38.91	-0.0602	6.1555	-0.1473
804	SLE RA 16	0.68	0.43	38.71	-0.0599	6.1277	-0.1494
804	SLE RA 17	0.68	0.41	38.71	-0.0599	6.128	-0.1454
804	SLE RA 18	0.67	0.46	39.15	-0.0606	6.1941	-0.1624
804	SLE RA 19	0.68	0.45	39.15	-0.0606	6.1943	-0.1584
804	SLE RA 20	0.68	0.46	39.48	-0.0612	6.2403	-0.1615
804	SLE RA 21	0.69	0.45	39.49	-0.0612	6.2405	-0.1575
804	SLE FR 1	0.64	0.36	35.48	-0.0543	5.6649	-0.1252
804	SLE FR 2	0.64	0.35	35.48	-0.0543	5.665	-0.1238
804	SLE FR 3	0.64	0.36	35.61	-0.0545	5.6834	-0.1248
804	SLE FR 4	0.65	0.38	36.58	-0.0562	5.8238	-0.135
804	SLE FR 5	0.65	0.39	36.72	-0.0564	5.8422	-0.136
804	SLE FR 6	0.66	0.41	37.32	-0.0574	5.9295	-0.1438
804	SLE QP 1	0.64	0.36	35.48	-0.0543	5.6649	-0.1252
804	SLE QP 2	0.65	0.39	36.58	-0.0562	5.8237	-0.1363
804	SLD 1	2.46	1.16	27	-0.0394	4.5994	-0.4051
804	SLD 2	2.28	1.79	26.78	-0.0409	4.5898	-0.622
804	SLD 3	2.78	-0.33	27.56	-0.0365	4.5272	0.1143
804	SLD 4	2.6	0.3	27.34	-0.0381	4.5177	-0.1026
804	SLD 5	0.74	2.77	32.9	-0.0552	5.5675	-0.9664
804	SLD 6	0.62	3.18	32.76	-0.0562	5.5612	-1.1082
804	SLD 7	1.81	-2.19	34.76	-0.0457	5.3271	0.7651
804	SLD 8	1.69	-1.79	34.62	-0.0467	5.3208	0.6233
804	SLD 9	-0.39	2.56	38.55	-0.0656	6.3266	-0.8959
804	SLD 10	-0.51	2.97	38.4	-0.0666	6.3203	-1.0377
804	SLD 11	0.68	-2.4	40.41	-0.0561	6.0862	0.8356
804	SLD 12	0.56	-1.99	40.26	-0.0572	6.0799	0.6938
804	SLD 13	-1.3	0.48	45.82	-0.0743	7.1297	-0.1701
804	SLD 14	-1.48	1.1	45.61	-0.0758	7.1201	-0.387
804	SLD 15	-0.98	-1.01	46.38	-0.0714	7.0576	0.3494
804	SLD 16	-1.16	-0.39	46.16	-0.073	7.048	0.1325
804	SLV 1	4.89	2.16	14.16	-0.0167	2.9571	-0.7522
804	SLV 2	4.47	3.61	13.65	-0.0204	2.9347	-1.2575
804	SLV 3	5.63	-1.23	15.45	-0.0103	2.7893	0.4333
804	SLV 4	5.21	0.22	14.95	-0.0139	2.7669	-0.072
804	SLV 5	0.87	5.83	27.98	-0.0536	5.222	-2.0325
804	SLV 6	0.6	6.76	27.66	-0.0559	5.2076	-2.3572
804	SLV 7	3.34	-5.5	32.29	-0.0319	4.6627	1.9191
804	SLV 8	3.07	-4.57	31.96	-0.0343	4.6484	1.5944
804	SLV 9	-1.77	5.34	41.2	-0.0781	6.999	-1.867
804	SLV 10	-2.04	6.28	40.87	-0.0804	6.9846	-2.1917
804	SLV 11	0.7	-5.98	45.51	-0.0564	6.4397	2.0846
804	SLV 12	0.43	-5.05	45.18	-0.0588	6.4254	1.7598
804	SLV 13	-3.91	0.56	58.22	-0.0985	8.8804	-0.2007
804	SLV 14	-4.33	2.01	57.71	-0.1021	8.8581	-0.7059
804	SLV 15	-3.17	-2.84	59.51	-0.092	8.7126	0.9848
804	SLV 16	-3.59	-1.39	59	-0.0956	8.6903	0.4796
804	CRTFP Ux+	0	0	0	0	0	0
804	CRTFP Ux-	0	0	0	0	0	0
804	CRTFP Uy+	0	0	0	0	0	0
804	CRTFP Uy-	0	0	0	0	0	0
806	SLU 1	1.28	0.12	61.81	0.021	0.2957	-0.0117
806	SLU 2	1.27	0.09	61.8	0.0211	0.3038	-0.0112
806	SLU 3	1.31	0.13	63.21	0.0215	0.3054	-0.012
806	SLU 4	1.31	0.11	63.2	0.0215	0.3102	-0.0117
806	SLU 5	1.29	0.09	62.67	0.0213	0.3091	-0.0115
806	SLU 6	1.34	0.13	64.08	0.0217	0.3107	-0.0123
806	SLU 7	1.33	0.11	64.07	0.0217	0.3155	-0.012
806	SLU 8	1.32	0.11	63.56	0.0215	0.3063	-0.0123
806	SLU 9	1.32	0.09	63.55	0.0216	0.3112	-0.012
806	SLU 10	1.34	0.2	69.19	0.0233	0.3516	-0.0119
806	SLU 11	1.38	0.24	70.6	0.0237	0.3531	-0.0127
806	SLU 12	1.38	0.22	70.59	0.0237	0.358	-0.0124
806	SLU 13	1.36	0.19	70.06	0.0236	0.3569	-0.0122
806	SLU 14	1.41	0.24	71.47	0.024	0.3584	-0.013
806	SLU 15	1.4	0.22	71.47	0.024	0.3633	-0.0127
806	SLU 16	1.4	0.22	70.95	0.0238	0.3541	-0.013
806	SLU 17	1.39	0.2	70.94	0.0238	0.359	-0.0127
806	SLU 18	1.38	0.28	72.37	0.0243	0.364	-0.0127
806	SLU 19	1.37	0.26	72.36	0.0243	0.3688	-0.0124
806	SLU 20	1.4	0.28	73.24	0.0245	0.3693	-0.013
806	SLU 21	1.4	0.25	73.24	0.0246	0.3741	-0.0127
806	SLU 22	1.38	0.26	69.25	0.024	0.3422	-0.0123
806	SLU 23	1.37	0.22	69.24	0.0241	0.3502	-0.0117
806	SLU 24	1.42	0.27	70.65	0.0245	0.3518	-0.0126
806	SLU 25	1.41	0.25	70.64	0.0245	0.3566	-0.0122
806	SLU 26	1.4	0.22	70.11	0.0243	0.3555	-0.012
806	SLU 27	1.44	0.26	71.52	0.0247	0.3571	-0.0129
806	SLU 28	1.44	0.24	71.52	0.0247	0.3619	-0.0125
806	SLU 29	1.43	0.25	71	0.0245	0.3528	-0.0129
806	SLU 30	1.43	0.23	70.99	0.0246	0.3576	-0.0125
806	SLU 31	1.45	0.33	76.63	0.0263	0.398	-0.0124
806	SLU 32	1.49	0.38	78.04	0.0267	0.3995	-0.0133
806	SLU 33	1.48	0.36	78.04	0.0267	0.4044	-0.013
806	SLU 34	1.47	0.33	77.51	0.0266	0.4033	-0.0127
806	SLU 35	1.52	0.37	78.92	0.027	0.4048	-0.0136
806	SLU 36	1.51	0.35	78.91	0.027	0.4097	-0.0133
806	SLU 37	1.5	0.36	78.39	0.0268	0.4005	-0.0136
806	SLU 38	1.5	0.34	78.39	0.0268	0.4054	-0.0132
806	SLU 39	1.49	0.41	79.81	0.0273	0.4104	-0.0133
806	SLU 40	1.48	0.39	79.81	0.0273	0.4152	-0.013
806	SLU 41	1.51	0.41	80.69	0.0275	0.4157	-0.0136
806	SLU 42	1.5	0.39	80.68	0.0276	0.4205	-0.0133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
806	SLU 43	1.62	0.11	77.8	0.0263	0.3686	-0.0151
806	SLU 44	1.61	0.08	77.79	0.0264	0.3766	-0.0145
806	SLU 45	1.66	0.12	79.2	0.0267	0.3782	-0.0154
806	SLU 46	1.65	0.1	79.19	0.0268	0.383	-0.015
806	SLU 47	1.64	0.08	78.66	0.0266	0.3819	-0.0148
806	SLU 48	1.68	0.12	80.07	0.027	0.3835	-0.0157
806	SLU 49	1.68	0.1	80.06	0.027	0.3883	-0.0153
806	SLU 50	1.67	0.11	79.55	0.0268	0.3792	-0.0157
806	SLU 51	1.66	0.09	79.54	0.0268	0.384	-0.0153
806	SLU 52	1.68	0.19	85.18	0.0286	0.4244	-0.0152
806	SLU 53	1.73	0.23	86.59	0.029	0.4259	-0.0161
806	SLU 54	1.72	0.21	86.58	0.029	0.4308	-0.0158
806	SLU 55	1.71	0.19	86.05	0.0289	0.4297	-0.0155
806	SLU 56	1.75	0.23	87.46	0.0293	0.4312	-0.0164
806	SLU 57	1.75	0.21	87.46	0.0293	0.4361	-0.0161
806	SLU 58	1.74	0.21	86.94	0.0291	0.4269	-0.0164
806	SLU 59	1.74	0.19	86.93	0.0291	0.4318	-0.016
806	SLU 60	1.73	0.27	88.36	0.0296	0.4368	-0.0161
806	SLU 61	1.72	0.25	88.35	0.0296	0.4416	-0.0157
806	SLU 62	1.75	0.27	89.23	0.0298	0.4421	-0.0164
806	SLU 63	1.74	0.25	89.23	0.0298	0.4469	-0.016
806	SLU 64	1.73	0.25	85.24	0.0293	0.415	-0.0156
806	SLU 65	1.72	0.22	85.23	0.0294	0.423	-0.0151
806	SLU 66	1.76	0.26	86.64	0.0297	0.4246	-0.0159
806	SLU 67	1.76	0.24	86.63	0.0298	0.4294	-0.0156
806	SLU 68	1.74	0.21	86.1	0.0296	0.4283	-0.0154
806	SLU 69	1.79	0.25	87.51	0.03	0.4299	-0.0162
806	SLU 70	1.78	0.23	87.51	0.03	0.4347	-0.0159
806	SLU 71	1.78	0.24	86.99	0.0298	0.4256	-0.0162
806	SLU 72	1.77	0.22	86.98	0.0298	0.4304	-0.0159
806	SLU 73	1.79	0.32	92.62	0.0316	0.4708	-0.0158
806	SLU 74	1.84	0.37	94.03	0.032	0.4723	-0.0166
806	SLU 75	1.83	0.35	94.03	0.032	0.4772	-0.0163
806	SLU 76	1.82	0.32	93.5	0.0319	0.4761	-0.0161
806	SLU 77	1.86	0.36	94.91	0.0323	0.4776	-0.0169
806	SLU 78	1.86	0.34	94.9	0.0323	0.4825	-0.0166
806	SLU 79	1.85	0.35	94.38	0.0321	0.4733	-0.0169
806	SLU 80	1.84	0.33	94.38	0.0321	0.4782	-0.0166
806	SLU 81	1.83	0.41	95.8	0.0326	0.4832	-0.0166
806	SLU 82	1.83	0.38	95.8	0.0326	0.488	-0.0163
806	SLU 83	1.86	0.4	96.68	0.0328	0.4885	-0.0169
806	SLU 84	1.85	0.38	96.67	0.0328	0.4933	-0.0166
806	SLE RA 1	1.31	0.16	63.93	0.0219	0.309	-0.0119
806	SLE RA 2	1.3	0.14	63.93	0.0219	0.3144	-0.0115
806	SLE RA 3	1.33	0.17	64.87	0.0222	0.3154	-0.0121
806	SLE RA 4	1.33	0.16	64.86	0.0222	0.3186	-0.0119
806	SLE RA 5	1.32	0.14	64.51	0.0221	0.3179	-0.0117
806	SLE RA 6	1.35	0.17	65.45	0.0223	0.3189	-0.0123
806	SLE RA 7	1.34	0.15	65.44	0.0224	0.3222	-0.0121
806	SLE RA 8	1.34	0.16	65.1	0.0222	0.3161	-0.0123
806	SLE RA 9	1.33	0.14	65.1	0.0222	0.3193	-0.0121
806	SLE RA 10	1.35	0.21	68.86	0.0234	0.3462	-0.012
806	SLE RA 11	1.38	0.24	69.79	0.0237	0.3473	-0.0126
806	SLE RA 12	1.37	0.23	69.79	0.0237	0.3505	-0.0123
806	SLE RA 13	1.36	0.21	69.44	0.0236	0.3498	-0.0122
806	SLE RA 14	1.39	0.24	70.38	0.0238	0.3508	-0.0128
806	SLE RA 15	1.39	0.23	70.37	0.0239	0.354	-0.0125
806	SLE RA 16	1.39	0.23	70.03	0.0237	0.3479	-0.0128
806	SLE RA 17	1.38	0.22	70.02	0.0238	0.3511	-0.0125
806	SLE RA 18	1.38	0.27	70.97	0.024	0.3545	-0.0126
806	SLE RA 19	1.37	0.25	70.97	0.0241	0.3577	-0.0123
806	SLE RA 20	1.39	0.26	71.56	0.0242	0.358	-0.0128
806	SLE RA 21	1.39	0.25	71.55	0.0242	0.3613	-0.0125
806	SLE FR 1	1.31	0.16	63.93	0.0219	0.309	-0.0119
806	SLE FR 2	1.3	0.16	63.93	0.0219	0.3101	-0.0118
806	SLE FR 3	1.31	0.16	64.17	0.022	0.3104	-0.012
806	SLE FR 4	1.33	0.19	66.04	0.0225	0.3237	-0.012
806	SLE FR 5	1.33	0.19	66.28	0.0226	0.3241	-0.0122
806	SLE FR 6	1.34	0.21	67.45	0.023	0.3318	-0.0122
806	SLE QP 1	1.31	0.16	63.93	0.0219	0.309	-0.0119
806	SLE QP 2	1.33	0.19	66.05	0.0225	0.3227	-0.0121
806	SLD 1	6.3	1.12	61.87	0.0186	0.3392	-0.0306
806	SLD 2	6.02	1.57	61.59	0.0153	0.3486	-0.0194
806	SLD 3	6.63	-0.49	61.37	0.0269	0.3696	-0.0378
806	SLD 4	6.34	-0.04	61.09	0.0235	0.379	-0.0267
806	SLD 5	2.38	2.83	65.6	0.0095	0.2799	-0.0086
806	SLD 6	2.19	3.12	65.42	0.0073	0.286	-0.0013
806	SLD 7	3.46	-2.53	63.93	0.0369	0.3812	-0.0327
806	SLD 8	3.27	-2.23	63.75	0.0347	0.3873	-0.0255
806	SLD 9	-0.62	2.62	68.34	0.0103	0.258	0.0013
806	SLD 10	-0.81	2.91	68.16	0.0081	0.2641	0.0086
806	SLD 11	0.46	-2.74	66.67	0.0378	0.3593	-0.0228
806	SLD 12	0.28	-2.44	66.49	0.0356	0.3655	-0.0156
806	SLD 13	-3.69	0.42	71	0.0216	0.2663	0.0025
806	SLD 14	-3.98	0.87	70.72	0.0182	0.2757	0.0136
806	SLD 15	-3.36	-1.18	70.5	0.0298	0.2967	-0.0048
806	SLD 16	-3.65	-0.73	70.22	0.0264	0.3061	0.0064
806	SLV 1	12.97	2.32	56.24	0.0136	0.364	-0.0553
806	SLV 2	12.3	3.36	55.6	0.0058	0.3858	-0.0293
806	SLV 3	13.73	-1.34	55.09	0.0323	0.4334	-0.0722
806	SLV 4	13.06	-0.29	54.45	0.0245	0.4552	-0.0463
806	SLV 5	3.79	6.2	64.97	-0.0071	0.226	-0.0038
806	SLV 6	3.35	6.87	64.56	-0.0122	0.24	0.0128
806	SLV 7	6.31	-5.99	61.11	0.0552	0.4574	-0.0602
806	SLV 8	5.88	-5.32	60.7	0.0501	0.4715	-0.0435
806	SLV 9	-3.23	5.71	71.39	-0.0051	0.1738	0.0194
806	SLV 10	-3.66	6.38	70.98	-0.0101	0.1879	0.036

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
806	SLV 11	-0.7	-6.48	67.53	0.0573	0.4053	-0.037
806	SLV 12	-1.13	-5.81	67.12	0.0522	0.4193	-0.0203
806	SLV 13	-10.41	0.68	77.65	0.0206	0.1901	0.0221
806	SLV 14	-11.08	1.73	77.01	0.0127	0.2119	0.048
806	SLV 15	-9.65	-2.98	76.49	0.0393	0.2595	0.0052
806	SLV 16	-10.32	-1.93	75.85	0.0314	0.2813	0.0311
806	CRTFP Ux+	0	0	0	0	0	0
806	CRTFP Ux-	0	0	0	0	0	0
809	SLU 1	-1.04	-0.82	64.7	-0.01	-0.4252	0.0233
809	SLU 2	-1.05	-0.9	64.74	-0.0096	-0.4304	0.0239
809	SLU 3	-1.06	-0.83	66.26	-0.0103	-0.4373	0.0239
809	SLU 4	-1.07	-0.87	66.29	-0.0101	-0.4404	0.0243
809	SLU 5	-1.07	-0.91	65.73	-0.0098	-0.4359	0.0242
809	SLU 6	-1.08	-0.83	67.25	-0.0105	-0.4429	0.0242
809	SLU 7	-1.09	-0.88	67.27	-0.0103	-0.446	0.0246
809	SLU 8	-1.07	-0.83	66.67	-0.0104	-0.4362	0.024
809	SLU 9	-1.08	-0.88	66.69	-0.0101	-0.4393	0.0243
809	SLU 10	-1.12	-0.92	72.71	-0.0112	-0.5003	0.0273
809	SLU 11	-1.13	-0.85	74.23	-0.0119	-0.5072	0.0274
809	SLU 12	-1.14	-0.9	74.26	-0.0117	-0.5103	0.0277
809	SLU 13	-1.13	-0.93	73.7	-0.0114	-0.5058	0.0276
809	SLU 14	-1.14	-0.85	75.22	-0.0121	-0.5128	0.0277
809	SLU 15	-1.15	-0.9	75.24	-0.0119	-0.5159	0.028
809	SLU 16	-1.13	-0.85	74.64	-0.012	-0.5061	0.0274
809	SLU 17	-1.14	-0.9	74.66	-0.0117	-0.5092	0.0277
809	SLU 18	-1.13	-0.85	76.08	-0.0123	-0.5251	0.0283
809	SLU 19	-1.14	-0.9	76.11	-0.012	-0.5282	0.0286
809	SLU 20	-1.14	-0.86	77.07	-0.0125	-0.5306	0.0286
809	SLU 21	-1.15	-0.91	77.09	-0.0122	-0.5337	0.0289
809	SLU 22	-1.13	-0.79	72.69	-0.0109	-0.488	0.0258
809	SLU 23	-1.15	-0.87	72.74	-0.0105	-0.4931	0.0263
809	SLU 24	-1.16	-0.8	74.26	-0.0112	-0.5001	0.0264
809	SLU 25	-1.17	-0.85	74.28	-0.0109	-0.5032	0.0267
809	SLU 26	-1.17	-0.88	73.72	-0.0107	-0.4986	0.0266
809	SLU 27	-1.17	-0.81	75.24	-0.0113	-0.5056	0.0267
809	SLU 28	-1.19	-0.86	75.27	-0.0111	-0.5087	0.027
809	SLU 29	-1.16	-0.81	74.66	-0.0112	-0.499	0.0264
809	SLU 30	-1.18	-0.85	74.69	-0.011	-0.5021	0.0267
809	SLU 31	-1.21	-0.9	80.71	-0.0121	-0.563	0.0298
809	SLU 32	-1.22	-0.82	82.23	-0.0128	-0.57	0.0298
809	SLU 33	-1.23	-0.87	82.25	-0.0125	-0.5731	0.0301
809	SLU 34	-1.23	-0.9	81.69	-0.0123	-0.5685	0.0301
809	SLU 35	-1.24	-0.83	83.21	-0.0129	-0.5755	0.0301
809	SLU 36	-1.25	-0.88	83.24	-0.0127	-0.5786	0.0305
809	SLU 37	-1.23	-0.83	82.63	-0.0128	-0.5689	0.0298
809	SLU 38	-1.24	-0.88	82.66	-0.0126	-0.572	0.0302
809	SLU 39	-1.22	-0.82	84.08	-0.0131	-0.5878	0.0307
809	SLU 40	-1.23	-0.87	84.1	-0.0129	-0.5909	0.031
809	SLU 41	-1.24	-0.83	85.06	-0.0133	-0.5933	0.031
809	SLU 42	-1.25	-0.88	85.09	-0.0131	-0.5964	0.0313
809	SLU 43	-1.31	-1.07	81.36	-0.0127	-0.5312	0.0295
809	SLU 44	-1.33	-1.15	81.41	-0.0123	-0.5364	0.03
809	SLU 45	-1.34	-1.08	82.93	-0.013	-0.5434	0.0301
809	SLU 46	-1.35	-1.13	82.95	-0.0128	-0.5465	0.0304
809	SLU 47	-1.35	-1.16	82.39	-0.0125	-0.5419	0.0303
809	SLU 48	-1.36	-1.09	83.91	-0.0132	-0.5489	0.0304
809	SLU 49	-1.37	-1.14	83.94	-0.0129	-0.552	0.0307
809	SLU 50	-1.35	-1.09	83.34	-0.013	-0.5423	0.0301
809	SLU 51	-1.36	-1.13	83.36	-0.0128	-0.5454	0.0304
809	SLU 52	-1.4	-1.17	89.38	-0.0139	-0.6063	0.0335
809	SLU 53	-1.4	-1.1	90.9	-0.0146	-0.6133	0.0336
809	SLU 54	-1.42	-1.15	90.92	-0.0144	-0.6164	0.0339
809	SLU 55	-1.41	-1.18	90.36	-0.0141	-0.6118	0.0338
809	SLU 56	-1.42	-1.11	91.88	-0.0148	-0.6188	0.0339
809	SLU 57	-1.43	-1.16	91.91	-0.0145	-0.6219	0.0342
809	SLU 58	-1.41	-1.11	91.31	-0.0146	-0.6122	0.0336
809	SLU 59	-1.42	-1.16	91.33	-0.0144	-0.6153	0.0339
809	SLU 60	-1.4	-1.1	92.75	-0.015	-0.6311	0.0345
809	SLU 61	-1.42	-1.15	92.78	-0.0147	-0.6342	0.0348
809	SLU 62	-1.42	-1.11	93.74	-0.0151	-0.6366	0.0348
809	SLU 63	-1.43	-1.16	93.76	-0.0149	-0.6397	0.0351
809	SLU 64	-1.41	-1.05	89.36	-0.0136	-0.594	0.0319
809	SLU 65	-1.43	-1.13	89.4	-0.0132	-0.5992	0.0325
809	SLU 66	-1.44	-1.05	90.92	-0.0139	-0.6061	0.0325
809	SLU 67	-1.45	-1.1	90.95	-0.0136	-0.6092	0.0328
809	SLU 68	-1.44	-1.13	90.39	-0.0134	-0.6047	0.0328
809	SLU 69	-1.45	-1.06	91.91	-0.014	-0.6117	0.0328
809	SLU 70	-1.46	-1.11	91.94	-0.0138	-0.6148	0.0332
809	SLU 71	-1.44	-1.06	91.33	-0.0139	-0.605	0.0325
809	SLU 72	-1.45	-1.11	91.36	-0.0137	-0.6081	0.0329
809	SLU 73	-1.49	-1.15	97.37	-0.0148	-0.6691	0.0359
809	SLU 74	-1.5	-1.08	98.89	-0.0155	-0.676	0.036
809	SLU 75	-1.51	-1.12	98.92	-0.0152	-0.6791	0.0363
809	SLU 76	-1.51	-1.16	98.36	-0.015	-0.6746	0.0362
809	SLU 77	-1.52	-1.08	99.88	-0.0156	-0.6816	0.0363
809	SLU 78	-1.53	-1.13	99.91	-0.0154	-0.6847	0.0366
809	SLU 79	-1.51	-1.08	99.3	-0.0155	-0.6749	0.036
809	SLU 80	-1.52	-1.13	99.33	-0.0153	-0.678	0.0363
809	SLU 81	-1.5	-1.08	100.75	-0.0158	-0.6939	0.0369
809	SLU 82	-1.51	-1.13	100.77	-0.0156	-0.697	0.0372
809	SLU 83	-1.52	-1.08	101.73	-0.016	-0.6994	0.0372
809	SLU 84	-1.53	-1.13	101.76	-0.0158	-0.7025	0.0375
809	SLE RA 1	-1.06	-0.81	66.98	-0.0102	-0.4431	0.024
809	SLE RA 2	-1.08	-0.86	67.01	-0.01	-0.4466	0.0244
809	SLE RA 3	-1.08	-0.82	68.02	-0.0104	-0.4512	0.0244
809	SLE RA 4	-1.09	-0.85	68.04	-0.0103	-0.4533	0.0246
809	SLE RA 5	-1.09	-0.87	67.67	-0.0101	-0.4502	0.0246

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
809	SLE RA 6	-1.09	-0.82	68.68	-0.0106	-0.4549	0.0246
809	SLE RA 7	-1.1	-0.85	68.7	-0.0104	-0.457	0.0248
809	SLE RA 8	-1.09	-0.82	68.3	-0.0105	-0.4505	0.0244
809	SLE RA 9	-1.09	-0.85	68.31	-0.0103	-0.4525	0.0247
809	SLE RA 10	-1.12	-0.88	72.32	-0.0111	-0.4932	0.0267
809	SLE RA 11	-1.12	-0.83	73.34	-0.0115	-0.4978	0.0267
809	SLE RA 12	-1.13	-0.86	73.35	-0.0114	-0.4999	0.027
809	SLE RA 13	-1.13	-0.88	72.98	-0.0112	-0.4968	0.0269
809	SLE RA 14	-1.13	-0.83	73.99	-0.0116	-0.5015	0.0269
809	SLE RA 15	-1.14	-0.87	74.01	-0.0115	-0.5036	0.0272
809	SLE RA 16	-1.13	-0.83	73.61	-0.0115	-0.4971	0.0268
809	SLE RA 17	-1.14	-0.87	73.63	-0.0114	-0.4991	0.027
809	SLE RA 18	-1.12	-0.83	74.57	-0.0118	-0.5097	0.0273
809	SLE RA 19	-1.13	-0.86	74.59	-0.0116	-0.5118	0.0275
809	SLE RA 20	-1.13	-0.84	75.23	-0.0119	-0.5134	0.0275
809	SLE RA 21	-1.14	-0.87	75.25	-0.0117	-0.5154	0.0277
809	SLE FR 1	-1.06	-0.81	66.98	-0.0102	-0.4431	0.024
809	SLE FR 2	-1.07	-0.82	66.99	-0.0102	-0.4438	0.0241
809	SLE FR 3	-1.07	-0.81	67.24	-0.0103	-0.4446	0.0241
809	SLE FR 4	-1.08	-0.83	69.26	-0.0106	-0.4638	0.0251
809	SLE FR 5	-1.09	-0.82	69.52	-0.0107	-0.4646	0.0251
809	SLE FR 6	-1.09	-0.82	70.78	-0.011	-0.4764	0.0257
809	SLE QP 1	-1.06	-0.81	66.98	-0.0102	-0.4431	0.024
809	SLE QP 2	-1.08	-0.82	69.26	-0.0107	-0.4631	0.025
809	SLD 1	4.08	-0.39	72.79	-0.0257	-0.5019	0.0134
809	SLD 2	3.8	-0.82	73.25	-0.0224	-0.4938	0.0247
809	SLD 3	4.4	-2.2	73.03	-0.0164	-0.5658	0.0066
809	SLD 4	4.12	-2.62	73.5	-0.0131	-0.5577	0.0178
809	SLD 5	0.03	2.13	69.87	-0.0299	-0.3792	0.0299
809	SLD 6	-0.16	1.85	70.17	-0.0277	-0.3739	0.0373
809	SLD 7	1.1	-3.89	70.67	0.0011	-0.5923	0.0071
809	SLD 8	0.92	-4.17	70.98	0.0033	-0.587	0.0145
809	SLD 9	-3.08	2.54	67.54	-0.0247	-0.3392	0.0356
809	SLD 10	-3.27	2.26	67.84	-0.0225	-0.3339	0.0429
809	SLD 11	-2.01	-3.48	68.34	0.0063	-0.5523	0.0128
809	SLD 12	-2.19	-3.76	68.65	0.0085	-0.547	0.0201
809	SLD 13	-6.29	0.99	65.02	-0.0083	-0.3685	0.0322
809	SLD 14	-6.57	0.56	65.48	-0.0049	-0.3604	0.0434
809	SLD 15	-5.96	-0.82	65.26	0.001	-0.4324	0.0254
809	SLD 16	-6.24	-1.24	65.72	0.0044	-0.4243	0.0366
809	SLV 1	11	0.11	77.55	-0.0455	-0.5569	-0.002
809	SLV 2	10.34	-0.89	78.62	-0.0378	-0.5381	0.0241
809	SLV 3	11.75	-3.98	78.11	-0.0245	-0.7017	-0.018
809	SLV 4	11.1	-4.97	79.18	-0.0167	-0.6829	0.0082
809	SLV 5	1.51	5.83	70.71	-0.0544	-0.2748	0.0366
809	SLV 6	1.09	5.19	71.4	-0.0494	-0.2627	0.0534
809	SLV 7	4.02	-7.79	72.58	0.0158	-0.7576	-0.0165
809	SLV 8	3.6	-8.43	73.27	0.0208	-0.7455	0.0003
809	SLV 9	-5.77	6.8	65.25	-0.0421	-0.1807	0.0497
809	SLV 10	-6.18	6.16	65.94	-0.0371	-0.1686	0.0666
809	SLV 11	-3.25	-6.82	67.11	0.028	-0.6635	-0.0034
809	SLV 12	-3.67	-7.46	67.81	0.033	-0.6514	0.0135
809	SLV 13	-13.26	3.34	59.33	-0.0047	-0.2433	0.0418
809	SLV 14	-13.91	2.34	60.41	0.0031	-0.2245	0.068
809	SLV 15	-12.51	-0.75	59.89	0.0164	-0.3881	0.0259
809	SLV 16	-13.16	-1.74	60.97	0.0242	-0.3693	0.0521
809	CRTFP Ux+	0	0	0	0	0	0
809	CRTFP Ux-	0	0	0	0	0	0
809	CRTFP Uy+	0	0	0	0	0	0
809	CRTFP Uy-	0	0	0	0	0	0
824	SLU 1	0.5	0.61	52.66	0.0316	0.9812	0.0159
824	SLU 2	0.49	0.55	52.64	0.0319	0.98	0.0163
824	SLU 3	0.52	0.65	53.87	0.0324	1.0088	0.0163
824	SLU 4	0.51	0.61	53.85	0.0326	1.008	0.0165
824	SLU 5	0.5	0.56	53.35	0.0323	0.9956	0.0165
824	SLU 6	0.53	0.66	54.57	0.0327	1.0243	0.0164
824	SLU 7	0.52	0.62	54.56	0.0329	1.0236	0.0166
824	SLU 8	0.53	0.63	54.07	0.0323	1.0124	0.0162
824	SLU 9	0.52	0.6	54.06	0.0325	1.0116	0.0164
824	SLU 10	0.57	0.66	59.64	0.0361	1.1358	0.0195
824	SLU 11	0.6	0.75	60.86	0.0365	1.1646	0.0194
824	SLU 12	0.59	0.72	60.85	0.0367	1.1638	0.0197
824	SLU 13	0.58	0.67	60.34	0.0364	1.1514	0.0196
824	SLU 14	0.61	0.76	61.57	0.0369	1.1801	0.0196
824	SLU 15	0.6	0.73	61.55	0.0371	1.1794	0.0198
824	SLU 16	0.61	0.74	61.07	0.0364	1.1682	0.0193
824	SLU 17	0.6	0.7	61.06	0.0366	1.1674	0.0196
824	SLU 18	0.62	0.77	62.66	0.0375	1.2038	0.0204
824	SLU 19	0.61	0.73	62.65	0.0377	1.2031	0.0207
824	SLU 20	0.63	0.78	63.36	0.0378	1.2194	0.0206
824	SLU 21	0.62	0.74	63.35	0.0381	1.2186	0.0208
824	SLU 22	0.58	0.82	59.37	0.0367	1.1342	0.0181
824	SLU 23	0.57	0.76	59.35	0.037	1.1329	0.0185
824	SLU 24	0.6	0.85	60.57	0.0374	1.1617	0.0184
824	SLU 25	0.59	0.81	60.56	0.0377	1.161	0.0187
824	SLU 26	0.58	0.77	60.06	0.0374	1.1485	0.0186
824	SLU 27	0.61	0.86	61.28	0.0378	1.1773	0.0186
824	SLU 28	0.6	0.82	61.27	0.038	1.1766	0.0188
824	SLU 29	0.61	0.84	60.78	0.0373	1.1653	0.0183
824	SLU 30	0.6	0.8	60.77	0.0376	1.1646	0.0186
824	SLU 31	0.65	0.86	66.35	0.0412	1.2887	0.0217
824	SLU 32	0.68	0.96	67.57	0.0416	1.3175	0.0216
824	SLU 33	0.67	0.92	67.56	0.0418	1.3168	0.0218
824	SLU 34	0.66	0.87	67.05	0.0415	1.3043	0.0218
824	SLU 35	0.69	0.97	68.27	0.0419	1.3331	0.0217
824	SLU 36	0.68	0.93	68.26	0.0421	1.3324	0.022
824	SLU 37	0.69	0.95	67.78	0.0415	1.3211	0.0215

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
824	SLU 38	0.68	0.91	67.77	0.0417	1.3204	0.0217
824	SLU 39	0.7	0.97	69.37	0.0426	1.3568	0.0226
824	SLU 40	0.69	0.93	69.35	0.0428	1.356	0.0228
824	SLU 41	0.71	0.98	70.07	0.0429	1.3723	0.0227
824	SLU 42	0.7	0.95	70.06	0.0431	1.3716	0.023
824	SLU 43	0.63	0.73	66.16	0.0393	1.2231	0.0199
824	SLU 44	0.61	0.66	66.14	0.0397	1.2219	0.0204
824	SLU 45	0.64	0.76	67.37	0.0401	1.2507	0.0203
824	SLU 46	0.63	0.72	67.35	0.0403	1.2499	0.0206
824	SLU 47	0.63	0.67	66.85	0.04	1.2375	0.0205
824	SLU 48	0.65	0.77	68.07	0.0404	1.2663	0.0204
824	SLU 49	0.65	0.73	68.06	0.0407	1.2655	0.0207
824	SLU 50	0.65	0.75	67.57	0.04	1.2543	0.0202
824	SLU 51	0.64	0.71	67.56	0.0402	1.2535	0.0205
824	SLU 52	0.69	0.77	73.14	0.0438	1.3777	0.0235
824	SLU 53	0.72	0.87	74.36	0.0442	1.4065	0.0235
824	SLU 54	0.71	0.83	74.35	0.0445	1.4058	0.0237
824	SLU 55	0.71	0.78	73.84	0.0442	1.3933	0.0237
824	SLU 56	0.74	0.88	75.07	0.0446	1.4221	0.0236
824	SLU 57	0.73	0.84	75.05	0.0448	1.4213	0.0239
824	SLU 58	0.73	0.85	74.57	0.0441	1.4101	0.0234
824	SLU 59	0.72	0.82	74.56	0.0444	1.4094	0.0236
824	SLU 60	0.74	0.88	76.16	0.0452	1.4457	0.0245
824	SLU 61	0.73	0.84	76.15	0.0454	1.445	0.0247
824	SLU 62	0.75	0.89	76.86	0.0456	1.4613	0.0246
824	SLU 63	0.75	0.85	76.85	0.0458	1.4606	0.0249
824	SLU 64	0.71	0.93	72.87	0.0444	1.3761	0.0221
824	SLU 65	0.69	0.87	72.85	0.0447	1.3749	0.0225
824	SLU 66	0.72	0.96	74.07	0.0452	1.4036	0.0225
824	SLU 67	0.71	0.93	74.06	0.0454	1.4029	0.0227
824	SLU 68	0.71	0.88	73.56	0.0451	1.3904	0.0226
824	SLU 69	0.74	0.97	74.78	0.0455	1.4192	0.0226
824	SLU 70	0.73	0.94	74.77	0.0457	1.4185	0.0228
824	SLU 71	0.73	0.95	74.28	0.0451	1.4072	0.0224
824	SLU 72	0.72	0.92	74.27	0.0453	1.4065	0.0226
824	SLU 73	0.77	0.98	79.85	0.0489	1.5307	0.0257
824	SLU 74	0.8	1.07	81.07	0.0493	1.5594	0.0256
824	SLU 75	0.79	1.03	81.06	0.0495	1.5587	0.0259
824	SLU 76	0.79	0.99	80.55	0.0492	1.5462	0.0258
824	SLU 77	0.82	1.08	81.77	0.0497	1.575	0.0258
824	SLU 78	0.81	1.04	81.76	0.0499	1.5743	0.026
824	SLU 79	0.81	1.06	81.28	0.0492	1.563	0.0255
824	SLU 80	0.81	1.02	81.27	0.0494	1.5623	0.0258
824	SLU 81	0.82	1.09	82.87	0.0503	1.5987	0.0266
824	SLU 82	0.81	1.05	82.85	0.0505	1.5979	0.0269
824	SLU 83	0.84	1.1	83.57	0.0507	1.6142	0.0268
824	SLU 84	0.83	1.06	83.56	0.0509	1.6135	0.027
824	SLE RA 1	0.53	0.67	54.58	0.033	1.0249	0.0165
824	SLE RA 2	0.52	0.63	54.57	0.0333	1.0241	0.0168
824	SLE RA 3	0.54	0.69	55.38	0.0336	1.0433	0.0168
824	SLE RA 4	0.53	0.67	55.37	0.0337	1.0428	0.0169
824	SLE RA 5	0.53	0.64	55.04	0.0335	1.0345	0.0169
824	SLE RA 6	0.54	0.7	55.85	0.0338	1.0537	0.0168
824	SLE RA 7	0.54	0.68	55.84	0.0339	1.0532	0.017
824	SLE RA 8	0.54	0.69	55.52	0.0335	1.0457	0.0167
824	SLE RA 9	0.54	0.66	55.51	0.0336	1.0452	0.0169
824	SLE RA 10	0.57	0.7	59.23	0.036	1.128	0.0189
824	SLE RA 11	0.59	0.76	60.05	0.0363	1.1471	0.0189
824	SLE RA 12	0.58	0.74	60.04	0.0365	1.1467	0.019
824	SLE RA 13	0.58	0.71	59.7	0.0363	1.1383	0.019
824	SLE RA 14	0.6	0.77	60.52	0.0365	1.1575	0.019
824	SLE RA 15	0.59	0.75	60.51	0.0367	1.157	0.0191
824	SLE RA 16	0.6	0.76	60.18	0.0363	1.1496	0.0188
824	SLE RA 17	0.59	0.73	60.18	0.0364	1.1491	0.019
824	SLE RA 18	0.6	0.77	61.24	0.037	1.1733	0.0195
824	SLE RA 19	0.6	0.75	61.24	0.0371	1.1728	0.0197
824	SLE RA 20	0.61	0.78	61.71	0.0372	1.1837	0.0196
824	SLE RA 21	0.61	0.76	61.71	0.0373	1.1832	0.0198
824	SLE FR 1	0.53	0.67	54.58	0.033	1.0249	0.0165
824	SLE FR 2	0.52	0.66	54.58	0.0331	1.0247	0.0166
824	SLE FR 3	0.53	0.67	54.77	0.0331	1.0291	0.0166
824	SLE FR 4	0.55	0.69	56.58	0.0343	1.0693	0.0175
824	SLE FR 5	0.55	0.7	56.77	0.0343	1.0736	0.0175
824	SLE FR 6	0.56	0.72	57.91	0.035	1.0991	0.018
824	SLE QP 1	0.53	0.67	54.58	0.033	1.0249	0.0165
824	SLE QP 2	0.55	0.7	56.58	0.0342	1.0694	0.0174
824	SLD 1	5.55	2.1	59.86	0.0389	0.9972	-0.0009
824	SLD 2	5.31	1.91	59.7	0.0388	0.9965	0.0082
824	SLD 3	5.87	0.36	60.05	0.0454	0.9798	-0.0071
824	SLD 4	5.62	0.17	59.89	0.0452	0.9791	0.002
824	SLD 5	1.62	3.79	57.3	0.0258	1.0742	0.0198
824	SLD 6	1.46	3.67	57.2	0.0257	1.0737	0.0257
824	SLD 7	2.66	-2	57.94	0.0474	1.0163	-0.001
824	SLD 8	2.5	-2.12	57.84	0.0473	1.0159	0.005
824	SLD 9	-1.4	3.53	55.32	0.0211	1.1229	0.0299
824	SLD 10	-1.56	3.41	55.22	0.021	1.1225	0.0358
824	SLD 11	-0.36	-2.26	55.96	0.0427	1.0651	0.0092
824	SLD 12	-0.52	-2.38	55.86	0.0426	1.0647	0.0151
824	SLD 13	-4.52	1.23	53.27	0.0232	1.1597	0.0329
824	SLD 14	-4.77	1.05	53.11	0.0231	1.159	0.0419
824	SLD 15	-4.21	-0.51	53.46	0.0297	1.1424	0.0267
824	SLD 16	-4.46	-0.69	53.3	0.0296	1.1417	0.0357
824	SLV 1	12.26	3.9	64.35	0.0453	0.8989	-0.0254
824	SLV 2	11.69	3.47	63.98	0.0451	0.8974	-0.0043
824	SLV 3	12.99	-0.04	64.79	0.06	0.8593	-0.0398
824	SLV 4	12.42	-0.47	64.42	0.0597	0.8577	-0.0187
824	SLV 5	3.06	7.7	58.3	0.0153	1.0786	0.0228

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
824	SLV 6	2.7	7.42	58.06	0.0152	1.0776	0.0364
824	SLV 7	5.48	-5.41	59.78	0.0643	0.9466	-0.0252
824	SLV 8	5.11	-5.69	59.54	0.0641	0.9456	-0.0117
824	SLV 9	-4.01	7.09	53.62	0.0043	1.1933	0.0465
824	SLV 10	-4.38	6.82	53.38	0.0042	1.1923	0.0601
824	SLV 11	-1.6	-6.02	55.1	0.0533	1.0612	-0.0015
824	SLV 12	-1.96	-6.3	54.86	0.0531	1.0602	0.012
824	SLV 13	-11.32	1.87	48.74	0.0087	1.2811	0.0536
824	SLV 14	-11.89	1.44	48.37	0.0084	1.2795	0.0747
824	SLV 15	-10.59	-2.06	49.19	0.0234	1.2415	0.0392
824	SLV 16	-11.16	-2.49	48.81	0.0231	1.2399	0.0603
824	CRTFP Ux+	0	0	0	0	0	0
824	CRTFP Ux-	0	0	0	0	0	0
827	SLU 1	0.61	1.4	43.05	0.8275	-0.3203	-0.0035
827	SLU 2	0.59	1.37	43.03	0.8273	-0.3193	-0.0028
827	SLU 3	0.63	1.45	44	0.8459	-0.3289	-0.0036
827	SLU 4	0.62	1.43	43.98	0.8459	-0.3283	-0.0032
827	SLU 5	0.61	1.39	43.61	0.8386	-0.3246	-0.003
827	SLU 6	0.64	1.47	44.58	0.8572	-0.3342	-0.0038
827	SLU 7	0.63	1.45	44.57	0.8572	-0.3336	-0.0034
827	SLU 8	0.64	1.44	44.22	0.8501	-0.331	-0.0039
827	SLU 9	0.63	1.42	44.2	0.85	-0.3304	-0.0035
827	SLU 10	0.69	1.58	48.57	0.9339	-0.3681	-0.0028
827	SLU 11	0.72	1.67	49.55	0.9524	-0.3778	-0.0035
827	SLU 12	0.71	1.65	49.53	0.9524	-0.3772	-0.0031
827	SLU 13	0.71	1.6	49.16	0.9451	-0.3735	-0.003
827	SLU 14	0.74	1.69	50.13	0.9637	-0.3831	-0.0037
827	SLU 15	0.73	1.67	50.12	0.9637	-0.3825	-0.0033
827	SLU 16	0.73	1.66	49.76	0.9566	-0.3798	-0.0039
827	SLU 17	0.73	1.64	49.75	0.9565	-0.3792	-0.0035
827	SLU 18	0.75	1.71	50.97	0.9796	-0.3901	-0.0034
827	SLU 19	0.74	1.69	50.96	0.9796	-0.3895	-0.003
827	SLU 20	0.76	1.73	51.56	0.9909	-0.3954	-0.0036
827	SLU 21	0.75	1.71	51.55	0.9908	-0.3948	-0.0032
827	SLU 22	0.7	1.68	48.41	0.9315	-0.3724	-0.0036
827	SLU 23	0.69	1.65	48.39	0.9313	-0.3714	-0.0029
827	SLU 24	0.72	1.73	49.36	0.9499	-0.381	-0.0036
827	SLU 25	0.71	1.71	49.35	0.9498	-0.3804	-0.0032
827	SLU 26	0.7	1.67	48.97	0.9426	-0.3767	-0.0031
827	SLU 27	0.74	1.75	49.94	0.9612	-0.3864	-0.0038
827	SLU 28	0.73	1.73	49.93	0.9611	-0.3858	-0.0034
827	SLU 29	0.73	1.72	49.58	0.9541	-0.3831	-0.004
827	SLU 30	0.72	1.7	49.57	0.954	-0.3825	-0.0036
827	SLU 31	0.79	1.86	53.94	1.0378	-0.4202	-0.0029
827	SLU 32	0.82	1.95	54.91	1.0564	-0.4299	-0.0036
827	SLU 33	0.81	1.93	54.9	1.0563	-0.4293	-0.0032
827	SLU 34	0.8	1.88	54.52	1.0491	-0.4256	-0.0031
827	SLU 35	0.83	1.97	55.49	1.0677	-0.4352	-0.0038
827	SLU 36	0.82	1.95	55.48	1.0676	-0.4346	-0.0034
827	SLU 37	0.83	1.94	55.13	1.0606	-0.4319	-0.0039
827	SLU 38	0.82	1.92	55.11	1.0605	-0.4313	-0.0035
827	SLU 39	0.84	1.99	56.33	1.0836	-0.4422	-0.0035
827	SLU 40	0.83	1.97	56.32	1.0835	-0.4416	-0.0031
827	SLU 41	0.86	2.01	56.92	1.0949	-0.4475	-0.0037
827	SLU 42	0.85	1.99	56.91	1.0948	-0.4469	-0.0033
827	SLU 43	0.76	1.73	54.12	1.0401	-0.3985	-0.0045
827	SLU 44	0.74	1.69	54.1	1.0399	-0.3975	-0.0038
827	SLU 45	0.78	1.78	55.07	1.0585	-0.4071	-0.0046
827	SLU 46	0.77	1.76	55.06	1.0585	-0.4065	-0.0042
827	SLU 47	0.76	1.71	54.69	1.0512	-0.4028	-0.0041
827	SLU 48	0.79	1.8	55.66	1.0698	-0.4125	-0.0048
827	SLU 49	0.78	1.78	55.64	1.0697	-0.4118	-0.0044
827	SLU 50	0.79	1.77	55.29	1.0627	-0.4092	-0.0049
827	SLU 51	0.78	1.75	55.28	1.0626	-0.4086	-0.0045
827	SLU 52	0.84	1.91	59.65	1.1464	-0.4463	-0.0038
827	SLU 53	0.87	1.99	60.62	1.165	-0.456	-0.0045
827	SLU 54	0.86	1.97	60.61	1.165	-0.4554	-0.0041
827	SLU 55	0.86	1.93	60.23	1.1577	-0.4517	-0.004
827	SLU 56	0.89	2.01	61.21	1.1763	-0.4613	-0.0047
827	SLU 57	0.88	1.99	61.19	1.1763	-0.4607	-0.0044
827	SLU 58	0.88	1.98	60.84	1.1692	-0.458	-0.0049
827	SLU 59	0.88	1.96	60.83	1.1691	-0.4574	-0.0045
827	SLU 60	0.89	2.04	62.05	1.1922	-0.4683	-0.0044
827	SLU 61	0.89	2.01	62.04	1.1922	-0.4677	-0.0041
827	SLU 62	0.91	2.06	62.63	1.2035	-0.4736	-0.0047
827	SLU 63	0.9	2.03	62.62	1.2034	-0.473	-0.0043
827	SLU 64	0.85	2.01	59.48	1.1441	-0.4506	-0.0046
827	SLU 65	0.84	1.97	59.46	1.1439	-0.4496	-0.0039
827	SLU 66	0.87	2.06	60.43	1.1625	-0.4592	-0.0046
827	SLU 67	0.86	2.04	60.42	1.1624	-0.4586	-0.0043
827	SLU 68	0.85	1.99	60.05	1.1552	-0.4549	-0.0041
827	SLU 69	0.89	2.08	61.02	1.1738	-0.4646	-0.0049
827	SLU 70	0.88	2.06	61.01	1.1737	-0.464	-0.0045
827	SLU 71	0.88	2.05	60.65	1.1667	-0.4613	-0.005
827	SLU 72	0.87	2.03	60.64	1.1666	-0.4607	-0.0046
827	SLU 73	0.94	2.19	65.01	1.2504	-0.4984	-0.0039
827	SLU 74	0.97	2.27	65.98	1.269	-0.5081	-0.0046
827	SLU 75	0.96	2.25	65.97	1.2689	-0.5075	-0.0042
827	SLU 76	0.95	2.21	65.6	1.2617	-0.5038	-0.0041
827	SLU 77	0.98	2.29	66.57	1.2803	-0.5134	-0.0048
827	SLU 78	0.97	2.27	66.56	1.2802	-0.5128	-0.0044
827	SLU 79	0.98	2.26	66.2	1.2732	-0.5102	-0.005
827	SLU 80	0.97	2.24	66.19	1.2731	-0.5095	-0.0046
827	SLU 81	0.99	2.31	67.41	1.2962	-0.5204	-0.0045
827	SLU 82	0.98	2.29	67.4	1.2961	-0.5198	-0.0041
827	SLU 83	1.01	2.34	67.99	1.3075	-0.5257	-0.0047
827	SLU 84	1	2.31	67.98	1.3074	-0.5251	-0.0043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
827	SLE RA 1	0.64	1.48	44.58	0.8572	-0.3352	-0.0035
827	SLE RA 2	0.63	1.46	44.56	0.8571	-0.3345	-0.0031
827	SLE RA 3	0.65	1.52	45.21	0.8695	-0.3409	-0.0036
827	SLE RA 4	0.64	1.5	45.2	0.8694	-0.3405	-0.0033
827	SLE RA 5	0.64	1.47	44.95	0.8646	-0.3381	-0.0032
827	SLE RA 6	0.66	1.53	45.6	0.877	-0.3445	-0.0037
827	SLE RA 7	0.65	1.52	45.59	0.877	-0.3441	-0.0034
827	SLE RA 8	0.66	1.51	45.36	0.8723	-0.3423	-0.0038
827	SLE RA 9	0.65	1.5	45.35	0.8722	-0.3419	-0.0035
827	SLE RA 10	0.69	1.6	48.26	0.9281	-0.3671	-0.003
827	SLE RA 11	0.71	1.66	48.91	0.9405	-0.3735	-0.0035
827	SLE RA 12	0.71	1.65	48.9	0.9404	-0.3731	-0.0033
827	SLE RA 13	0.7	1.62	48.65	0.9356	-0.3706	-0.0032
827	SLE RA 14	0.72	1.67	49.3	0.948	-0.377	-0.0037
827	SLE RA 15	0.72	1.66	49.29	0.948	-0.3766	-0.0034
827	SLE RA 16	0.72	1.65	49.06	0.9433	-0.3749	-0.0038
827	SLE RA 17	0.71	1.64	49.05	0.9432	-0.3745	-0.0035
827	SLE RA 18	0.73	1.69	49.86	0.9586	-0.3817	-0.0035
827	SLE RA 19	0.72	1.67	49.85	0.9586	-0.3813	-0.0032
827	SLE RA 20	0.74	1.7	50.25	0.9662	-0.3853	-0.0036
827	SLE RA 21	0.73	1.69	50.24	0.9661	-0.3849	-0.0033
827	SLE FR 1	0.64	1.48	44.58	0.8572	-0.3352	-0.0035
827	SLE FR 2	0.63	1.48	44.58	0.8572	-0.335	-0.0034
827	SLE FR 3	0.64	1.49	44.73	0.8602	-0.3366	-0.0036
827	SLE FR 4	0.66	1.54	46.16	0.8876	-0.349	-0.0034
827	SLE FR 5	0.67	1.55	46.32	0.8906	-0.3505	-0.0035
827	SLE FR 6	0.68	1.59	47.22	0.9079	-0.3584	-0.0035
827	SLE QP 1	0.64	1.48	44.58	0.8572	-0.3352	-0.0035
827	SLE QP 2	0.66	1.54	46.16	0.8876	-0.3491	-0.0035
827	SLD 1	5.22	1.99	42.2	0.8073	-0.0697	-0.1065
827	SLD 2	5	2.16	42.27	0.808	-0.0742	-0.0943
827	SLD 3	5.5	0.51	41.93	0.8113	-0.0466	-0.1165
827	SLD 4	5.28	0.67	42	0.812	-0.0511	-0.1042
827	SLD 5	1.64	3.9	45.36	0.8573	-0.2994	-0.0215
827	SLD 6	1.5	4.01	45.4	0.8577	-0.3024	-0.0135
827	SLD 7	2.58	-1.05	44.49	0.8708	-0.2226	-0.0546
827	SLD 8	2.44	-0.94	44.53	0.8712	-0.2256	-0.0466
827	SLD 9	-1.11	4.03	47.8	0.904	-0.4727	0.0397
827	SLD 10	-1.26	4.13	47.84	0.9045	-0.4756	0.0477
827	SLD 11	-0.17	-0.92	46.92	0.9176	-0.3958	0.0065
827	SLD 12	-0.32	-0.81	46.97	0.918	-0.3988	0.0145
827	SLD 13	-3.95	2.41	50.32	0.9632	-0.6471	0.0972
827	SLD 14	-4.18	2.58	50.39	0.9639	-0.6516	0.1095
827	SLD 15	-3.67	0.93	50.06	0.9673	-0.624	0.0873
827	SLD 16	-3.9	1.1	50.13	0.968	-0.6286	0.0995
827	SLV 1	11.33	2.54	36.88	0.6997	0.3056	-0.2445
827	SLV 2	10.81	2.92	37.04	0.7012	0.2951	-0.216
827	SLV 3	11.99	-0.83	36.27	0.7091	0.3586	-0.2678
827	SLV 4	11.47	-0.45	36.44	0.7107	0.3481	-0.2392
827	SLV 5	2.95	6.88	44.27	0.8167	-0.2312	-0.0454
827	SLV 6	2.62	7.13	44.37	0.8177	-0.238	-0.0271
827	SLV 7	5.15	-4.34	42.25	0.8481	-0.0546	-0.1229
827	SLV 8	4.81	-4.09	42.35	0.8491	-0.0614	-0.1046
827	SLV 9	-3.49	7.18	49.97	0.9262	-0.6368	0.0976
827	SLV 10	-3.82	7.43	50.08	0.9272	-0.6436	0.1159
827	SLV 11	-1.29	-4.04	47.95	0.9576	-0.4602	0.0201
827	SLV 12	-1.63	-3.79	48.06	0.9586	-0.467	0.0384
827	SLV 13	-10.14	3.53	55.89	1.0646	-1.0463	0.2322
827	SLV 14	-10.66	3.92	56.05	1.0662	-1.0568	0.2608
827	SLV 15	-9.48	0.17	55.29	1.074	-0.9933	0.209
827	SLV 16	-10	0.55	55.45	1.0756	-1.0039	0.2375
827	CRTFP Ux+	0	0	0	0	0	0
827	CRTFP Ux-	0	0	0	0	0	0
829	SLU 1	-0.67	0.04	30.18	0.0026	-2.2893	0.0095
829	SLU 2	-0.67	-0.04	30.19	0.0026	-2.2895	-0.0099
829	SLU 3	-0.68	0.04	30.9	0.0026	-2.3317	0.0112
829	SLU 4	-0.69	0	30.9	0.0026	-2.3318	-0.0005
829	SLU 5	-0.68	-0.04	30.64	0.0026	-2.3161	-0.0086
829	SLU 6	-0.69	0.05	31.35	0.0027	-2.3583	0.0126
829	SLU 7	-0.7	0	31.36	0.0027	-2.3585	0.0009
829	SLU 8	-0.69	0.05	31.08	0.0027	-2.3425	0.0122
829	SLU 9	-0.69	0	31.09	0.0027	-2.3427	0.0005
829	SLU 10	-0.73	0.02	33.6	0.0029	-2.5109	0.0054
829	SLU 11	-0.74	0.1	34.3	0.003	-2.5531	0.0265
829	SLU 12	-0.74	0.06	34.31	0.003	-2.5533	0.0149
829	SLU 13	-0.74	0.02	34.05	0.003	-2.5376	0.0067
829	SLU 14	-0.75	0.11	34.76	0.003	-2.5798	0.0279
829	SLU 15	-0.75	0.06	34.76	0.003	-2.5799	0.0162
829	SLU 16	-0.74	0.11	34.49	0.003	-2.564	0.0275
829	SLU 17	-0.75	0.06	34.5	0.003	-2.5641	0.0158
829	SLU 18	-0.75	0.12	35.05	0.003	-2.6056	0.0314
829	SLU 19	-0.75	0.08	35.06	0.0031	-2.6057	0.0198
829	SLU 20	-0.76	0.13	35.5	0.0031	-2.6322	0.0328
829	SLU 21	-0.76	0.08	35.51	0.0031	-2.6324	0.0211
829	SLU 22	-0.73	0.11	33.66	0.0031	-2.5129	0.028
829	SLU 23	-0.74	0.03	33.68	0.0031	-2.5132	0.0085
829	SLU 24	-0.75	0.12	34.38	0.0031	-2.5554	0.0297
829	SLU 25	-0.75	0.07	34.39	0.0031	-2.5555	0.018
829	SLU 26	-0.75	0.04	34.13	0.0031	-2.5398	0.0099
829	SLU 27	-0.76	0.12	34.83	0.0031	-2.582	0.031
829	SLU 28	-0.76	0.07	34.84	0.0031	-2.5822	0.0193
829	SLU 29	-0.75	0.12	34.57	0.0031	-2.5662	0.0307
829	SLU 30	-0.75	0.07	34.58	0.0031	-2.5664	0.019
829	SLU 31	-0.79	0.09	37.08	0.0034	-2.7346	0.0239
829	SLU 32	-0.8	0.18	37.79	0.0034	-2.7768	0.045
829	SLU 33	-0.81	0.13	37.8	0.0034	-2.777	0.0333
829	SLU 34	-0.8	0.1	37.54	0.0034	-2.7612	0.0252

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
829	SLU 35	-0.81	0.18	38.24	0.0034	-2.8035	0.0463
829	SLU 36	-0.82	0.13	38.25	0.0035	-2.8036	0.0347
829	SLU 37	-0.81	0.18	37.98	0.0034	-2.7876	0.046
829	SLU 38	-0.81	0.13	37.98	0.0034	-2.7878	0.0343
829	SLU 39	-0.81	0.2	38.53	0.0035	-2.8293	0.0499
829	SLU 40	-0.81	0.15	38.54	0.0035	-2.8294	0.0382
829	SLU 41	-0.82	0.2	38.98	0.0035	-2.8559	0.0512
829	SLU 42	-0.82	0.15	38.99	0.0036	-2.8561	0.0395
829	SLU 43	-0.84	0.02	38.04	0.0032	-2.8993	0.0061
829	SLU 44	-0.85	-0.06	38.05	0.0032	-2.8996	-0.0134
829	SLU 45	-0.86	0.03	38.76	0.0033	-2.9418	0.0078
829	SLU 46	-0.86	-0.02	38.76	0.0033	-2.9419	-0.0039
829	SLU 47	-0.86	-0.05	38.5	0.0033	-2.9262	-0.0121
829	SLU 48	-0.87	0.03	39.21	0.0033	-2.9684	0.0091
829	SLU 49	-0.87	-0.01	39.22	0.0033	-2.9686	-0.0026
829	SLU 50	-0.86	0.03	38.94	0.0033	-2.9526	0.0087
829	SLU 51	-0.87	-0.02	38.95	0.0033	-2.9528	-0.0029
829	SLU 52	-0.9	0	41.46	0.0036	-3.121	0.0019
829	SLU 53	-0.92	0.09	42.16	0.0036	-3.1632	0.0231
829	SLU 54	-0.92	0.04	42.17	0.0036	-3.1634	0.0114
829	SLU 55	-0.91	0.01	41.91	0.0036	-3.1477	0.0033
829	SLU 56	-0.93	0.09	42.62	0.0036	-3.1899	0.0244
829	SLU 57	-0.93	0.05	42.62	0.0036	-3.19	0.0127
829	SLU 58	-0.92	0.09	42.35	0.0036	-3.1741	0.0241
829	SLU 59	-0.92	0.05	42.36	0.0036	-3.1742	0.0124
829	SLU 60	-0.92	0.11	42.91	0.0037	-3.2157	0.028
829	SLU 61	-0.93	0.06	42.91	0.0037	-3.2158	0.0163
829	SLU 62	-0.93	0.11	43.36	0.0037	-3.2423	0.0293
829	SLU 63	-0.94	0.07	43.37	0.0037	-3.2425	0.0176
829	SLU 64	-0.91	0.09	41.52	0.0037	-3.123	0.0245
829	SLU 65	-0.91	0.02	41.53	0.0037	-3.1233	0.0051
829	SLU 66	-0.92	0.1	42.24	0.0037	-3.1655	0.0262
829	SLU 67	-0.93	0.05	42.25	0.0037	-3.1656	0.0145
829	SLU 68	-0.92	0.02	41.99	0.0037	-3.1499	0.0064
829	SLU 69	-0.93	0.11	42.69	0.0037	-3.1921	0.0275
829	SLU 70	-0.94	0.06	42.7	0.0038	-3.1923	0.0159
829	SLU 71	-0.93	0.1	42.43	0.0037	-3.1763	0.0272
829	SLU 72	-0.93	0.06	42.43	0.0038	-3.1765	0.0155
829	SLU 73	-0.97	0.08	44.94	0.004	-3.3447	0.0204
829	SLU 74	-0.98	0.16	45.65	0.004	-3.3869	0.0415
829	SLU 75	-0.98	0.11	45.66	0.004	-3.387	0.0299
829	SLU 76	-0.98	0.08	45.4	0.004	-3.3713	0.0217
829	SLU 77	-0.99	0.17	46.1	0.0041	-3.4135	0.0429
829	SLU 78	-0.99	0.12	46.11	0.0041	-3.4137	0.0312
829	SLU 79	-0.98	0.17	45.84	0.0041	-3.3977	0.0425
829	SLU 80	-0.99	0.12	45.84	0.0041	-3.3979	0.0308
829	SLU 81	-0.99	0.18	46.39	0.0041	-3.4394	0.0464
829	SLU 82	-0.99	0.13	46.4	0.0041	-3.4395	0.0347
829	SLU 83	-1	0.19	46.84	0.0042	-3.466	0.0478
829	SLU 84	-1	0.14	46.85	0.0042	-3.4661	0.0361
829	SLE RA 1	-0.68	0.06	31.17	0.0027	-2.3532	0.0148
829	SLE RA 2	-0.69	0	31.18	0.0027	-2.3533	0.0018
829	SLE RA 3	-0.7	0.06	31.65	0.0028	-2.3815	0.0159
829	SLE RA 4	-0.7	0.03	31.66	0.0028	-2.3816	0.0082
829	SLE RA 5	-0.69	0.01	31.48	0.0028	-2.3711	0.0027
829	SLE RA 6	-0.7	0.06	31.95	0.0028	-2.3992	0.0168
829	SLE RA 7	-0.7	0.03	31.96	0.0028	-2.3993	0.009
829	SLE RA 8	-0.7	0.06	31.78	0.0028	-2.3887	0.0166
829	SLE RA 9	-0.7	0.03	31.78	0.0028	-2.3888	0.0088
829	SLE RA 10	-0.72	0.04	33.45	0.003	-2.5009	0.0121
829	SLE RA 11	-0.73	0.1	33.92	0.003	-2.5291	0.0261
829	SLE RA 12	-0.73	0.07	33.93	0.003	-2.5292	0.0184
829	SLE RA 13	-0.73	0.05	33.76	0.003	-2.5187	0.0129
829	SLE RA 14	-0.74	0.1	34.23	0.003	-2.5468	0.027
829	SLE RA 15	-0.74	0.07	34.23	0.003	-2.5469	0.0193
829	SLE RA 16	-0.74	0.1	34.05	0.003	-2.5363	0.0268
829	SLE RA 17	-0.74	0.07	34.06	0.003	-2.5364	0.019
829	SLE RA 18	-0.74	0.11	34.42	0.003	-2.5641	0.0294
829	SLE RA 19	-0.74	0.08	34.43	0.003	-2.5641	0.0216
829	SLE RA 20	-0.74	0.12	34.72	0.0031	-2.5818	0.0303
829	SLE RA 21	-0.75	0.09	34.73	0.0031	-2.5819	0.0225
829	SLE FR 1	-0.68	0.06	31.17	0.0027	-2.3532	0.0148
829	SLE FR 2	-0.68	0.05	31.18	0.0027	-2.3532	0.0122
829	SLE FR 3	-0.69	0.06	31.3	0.0027	-2.3603	0.0152
829	SLE FR 4	-0.7	0.06	32.15	0.0028	-2.4165	0.0166
829	SLE FR 5	-0.7	0.08	32.27	0.0028	-2.4235	0.0195
829	SLE FR 6	-0.71	0.09	32.8	0.0029	-2.4586	0.0221
829	SLE QP 1	-0.68	0.06	31.17	0.0027	-2.3532	0.0148
829	SLE QP 2	-0.7	0.07	32.15	0.0028	-2.4164	0.0192
829	SLD 1	1.63	0.63	40.36	0.0004	-2.9339	0.156
829	SLD 2	1.48	0.14	40.52	0.0016	-2.9494	0.0344
829	SLD 3	1.79	-0.73	40.78	0.0022	-2.9722	-0.1846
829	SLD 4	1.64	-1.22	40.94	0.0035	-2.9877	-0.3062
829	SLD 5	-0.21	2.39	33.95	-0.001	-2.5107	0.5984
829	SLD 6	-0.31	2.07	34.05	-0.0001	-2.5209	0.5189
829	SLD 7	0.31	-2.15	35.34	0.0052	-2.6386	-0.5371
829	SLD 8	0.21	-2.47	35.45	0.0061	-2.6487	-0.6166
829	SLD 9	-1.61	2.62	28.85	-0.0004	-2.1841	0.6549
829	SLD 10	-1.71	2.3	28.95	0.0004	-2.1943	0.5755
829	SLD 11	-1.09	-1.92	30.24	0.0058	-2.312	-0.4805
829	SLD 12	-1.19	-2.24	30.35	0.0066	-2.3221	-0.56
829	SLD 13	-3.04	1.37	23.36	0.0021	-1.8451	0.3446
829	SLD 14	-3.19	0.88	23.52	0.0034	-1.8606	0.223
829	SLD 15	-2.88	0.01	23.77	0.004	-1.8835	0.0039
829	SLD 16	-3.03	-0.48	23.94	0.0053	-1.899	-0.1177
829	SLV 1	4.76	1.31	51.37	-0.0029	-3.6283	0.3257
829	SLV 2	4.41	0.17	51.75	0.0001	-3.6645	0.0424

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
829	SLV 3	5.12	-1.77	52.35	0.0013	-3.7169	-0.445
829	SLV 4	4.78	-2.91	52.73	0.0043	-3.7531	-0.7283
829	SLV 5	0.44	5.31	36.37	-0.0058	-2.6394	1.3286
829	SLV 6	0.22	4.58	36.61	-0.0039	-2.6627	1.1465
829	SLV 7	1.66	-4.96	39.63	0.0083	-2.9347	-1.2404
829	SLV 8	1.44	-5.69	39.87	0.0102	-2.958	-1.4225
829	SLV 9	-2.84	5.84	24.43	-0.0046	-1.8749	1.4608
829	SLV 10	-3.06	5.1	24.67	-0.0026	-1.8981	1.2788
829	SLV 11	-1.62	-4.43	27.69	0.0096	-2.1702	-1.1082
829	SLV 12	-1.84	-5.17	27.93	0.0115	-2.1934	-1.2902
829	SLV 13	-6.18	3.06	11.57	0.0013	-1.0798	0.7666
829	SLV 14	-6.52	1.91	11.95	0.0043	-1.116	0.4834
829	SLV 15	-5.81	-0.03	12.55	0.0056	-1.1684	-0.0041
829	SLV 16	-6.16	-1.17	12.93	0.0086	-1.2046	-0.2873
829	CRTFP Ux+	0	0	0	0	0	0
829	CRTFP Ux-	0	0	0	0	0	0
829	CRTFP Uy+	0	0	0	0	0	0
829	CRTFP Uy-	0	0	0	0	0	0
832	SLU 1	0.64	0.32	32.9	-0.0447	4.364	-0.1146
832	SLU 2	0.65	0.3	32.9	-0.0448	4.3646	-0.1046
832	SLU 3	0.66	0.33	33.66	-0.0459	4.4452	-0.1161
832	SLU 4	0.67	0.31	33.66	-0.046	4.4456	-0.1101
832	SLU 5	0.67	0.29	33.37	-0.0455	4.4156	-0.1032
832	SLU 6	0.68	0.32	34.13	-0.0467	4.4962	-0.1147
832	SLU 7	0.68	0.31	34.13	-0.0467	4.4966	-0.1087
832	SLU 8	0.67	0.32	33.85	-0.0462	4.4658	-0.1118
832	SLU 9	0.68	0.3	33.85	-0.0463	4.4662	-0.1058
832	SLU 10	0.7	0.41	36.57	-0.0504	4.7751	-0.1438
832	SLU 11	0.71	0.44	37.33	-0.0515	4.8557	-0.1553
832	SLU 12	0.71	0.42	37.33	-0.0516	4.8561	-0.1493
832	SLU 13	0.71	0.4	37.05	-0.0512	4.8261	-0.1424
832	SLU 14	0.72	0.44	37.8	-0.0523	4.9067	-0.1539
832	SLU 15	0.73	0.42	37.8	-0.0524	4.9071	-0.1479
832	SLU 16	0.71	0.43	37.52	-0.0519	4.8763	-0.151
832	SLU 17	0.72	0.41	37.52	-0.0519	4.8767	-0.145
832	SLU 18	0.7	0.48	38.15	-0.0527	4.9504	-0.1706
832	SLU 19	0.71	0.47	38.15	-0.0528	4.9508	-0.1646
832	SLU 20	0.72	0.48	38.62	-0.0535	5.0013	-0.1692
832	SLU 21	0.72	0.46	38.62	-0.0535	5.0017	-0.1632
832	SLU 22	0.7	0.43	36.63	-0.0502	4.7785	-0.1524
832	SLU 23	0.71	0.4	36.63	-0.0503	4.7792	-0.1424
832	SLU 24	0.72	0.44	37.38	-0.0514	4.8598	-0.1539
832	SLU 25	0.73	0.42	37.38	-0.0515	4.8602	-0.1479
832	SLU 26	0.73	0.4	37.1	-0.0511	4.8302	-0.141
832	SLU 27	0.74	0.43	37.86	-0.0522	4.9108	-0.1525
832	SLU 28	0.74	0.41	37.86	-0.0522	4.9112	-0.1465
832	SLU 29	0.73	0.42	37.57	-0.0517	4.8804	-0.1496
832	SLU 30	0.74	0.41	37.57	-0.0518	4.8808	-0.1436
832	SLU 31	0.75	0.51	40.3	-0.0559	5.1897	-0.1815
832	SLU 32	0.76	0.55	41.06	-0.0571	5.2703	-0.1931
832	SLU 33	0.77	0.53	41.06	-0.0571	5.2707	-0.1871
832	SLU 34	0.77	0.51	40.77	-0.0567	5.2406	-0.1801
832	SLU 35	0.78	0.54	41.53	-0.0578	5.3212	-0.1917
832	SLU 36	0.78	0.53	41.53	-0.0579	5.3217	-0.1857
832	SLU 37	0.77	0.54	41.24	-0.0574	5.2909	-0.1888
832	SLU 38	0.78	0.52	41.24	-0.0574	5.2913	-0.1828
832	SLU 39	0.76	0.59	41.87	-0.0583	5.3649	-0.2084
832	SLU 40	0.77	0.57	41.87	-0.0583	5.3654	-0.2024
832	SLU 41	0.78	0.59	42.35	-0.059	5.4159	-0.207
832	SLU 42	0.78	0.57	42.34	-0.0591	5.4163	-0.201
832	SLU 43	0.82	0.38	41.5	-0.0562	5.531	-0.1361
832	SLU 44	0.83	0.36	41.49	-0.0563	5.5317	-0.126
832	SLU 45	0.84	0.39	42.25	-0.0574	5.6123	-0.1376
832	SLU 46	0.84	0.37	42.25	-0.0575	5.6127	-0.1315
832	SLU 47	0.84	0.35	41.97	-0.0571	5.5826	-0.1246
832	SLU 48	0.85	0.39	42.72	-0.0582	5.6632	-0.1362
832	SLU 49	0.86	0.37	42.72	-0.0582	5.6636	-0.1301
832	SLU 50	0.84	0.38	42.44	-0.0578	5.6329	-0.1333
832	SLU 51	0.85	0.36	42.44	-0.0578	5.6333	-0.1272
832	SLU 52	0.87	0.47	45.17	-0.0619	5.9422	-0.1652
832	SLU 53	0.88	0.5	45.92	-0.0631	6.0228	-0.1768
832	SLU 54	0.89	0.48	45.92	-0.0631	6.0232	-0.1707
832	SLU 55	0.88	0.46	45.64	-0.0627	5.9931	-0.1638
832	SLU 56	0.89	0.5	46.4	-0.0638	6.0737	-0.1754
832	SLU 57	0.9	0.48	46.39	-0.0639	6.0741	-0.1693
832	SLU 58	0.89	0.49	46.11	-0.0634	6.0434	-0.1725
832	SLU 59	0.89	0.47	46.11	-0.0634	6.0438	-0.1664
832	SLU 60	0.88	0.54	46.74	-0.0643	6.1174	-0.1921
832	SLU 61	0.88	0.53	46.74	-0.0643	6.1178	-0.186
832	SLU 62	0.89	0.54	47.21	-0.065	6.1683	-0.1907
832	SLU 63	0.9	0.52	47.21	-0.0651	6.1688	-0.1846
832	SLU 64	0.87	0.49	45.22	-0.0617	5.9456	-0.1739
832	SLU 65	0.88	0.46	45.22	-0.0618	5.9463	-0.1638
832	SLU 66	0.9	0.5	45.98	-0.063	6.0269	-0.1754
832	SLU 67	0.9	0.48	45.98	-0.063	6.0273	-0.1693
832	SLU 68	0.9	0.46	45.69	-0.0626	5.9972	-0.1624
832	SLU 69	0.91	0.49	46.45	-0.0637	6.0778	-0.174
832	SLU 70	0.91	0.48	46.45	-0.0638	6.0782	-0.1679
832	SLU 71	0.9	0.48	46.16	-0.0633	6.0475	-0.1711
832	SLU 72	0.91	0.47	46.16	-0.0633	6.0479	-0.165
832	SLU 73	0.93	0.57	48.89	-0.0674	6.3567	-0.203
832	SLU 74	0.94	0.61	49.65	-0.0686	6.4373	-0.2145
832	SLU 75	0.94	0.59	49.65	-0.0686	6.4378	-0.2085
832	SLU 76	0.94	0.57	49.36	-0.0682	6.4077	-0.2016
832	SLU 77	0.95	0.6	50.12	-0.0693	6.4883	-0.2131
832	SLU 78	0.96	0.59	50.12	-0.0694	6.4887	-0.2071
832	SLU 79	0.95	0.6	49.84	-0.0689	6.458	-0.2102

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
832	SLU 80	0.95	0.58	49.84	-0.0689	6.4584	-0.2042
832	SLU 81	0.94	0.65	50.47	-0.0698	6.532	-0.2298
832	SLU 82	0.94	0.63	50.47	-0.0698	6.5324	-0.2238
832	SLU 83	0.95	0.65	50.94	-0.0705	6.5829	-0.2284
832	SLU 84	0.96	0.63	50.94	-0.0706	6.5833	-0.2224
832	SLE RA 1	0.66	0.36	33.97	-0.0463	4.4824	-0.1254
832	SLE RA 2	0.67	0.34	33.97	-0.0463	4.4829	-0.1187
832	SLE RA 3	0.67	0.36	34.47	-0.0471	4.5366	-0.1264
832	SLE RA 4	0.68	0.35	34.47	-0.0471	4.5369	-0.1224
832	SLE RA 5	0.68	0.33	34.28	-0.0468	4.5168	-0.1178
832	SLE RA 6	0.68	0.36	34.79	-0.0476	4.5706	-0.1255
832	SLE RA 7	0.69	0.34	34.79	-0.0476	4.5708	-0.1215
832	SLE RA 8	0.68	0.35	34.6	-0.0473	4.5503	-0.1236
832	SLE RA 9	0.68	0.34	34.6	-0.0473	4.5506	-0.1195
832	SLE RA 10	0.69	0.41	36.41	-0.0501	4.7565	-0.1449
832	SLE RA 11	0.7	0.43	36.92	-0.0508	4.8103	-0.1526
832	SLE RA 12	0.71	0.42	36.92	-0.0509	4.8105	-0.1485
832	SLE RA 13	0.7	0.41	36.73	-0.0506	4.7905	-0.1439
832	SLE RA 14	0.71	0.43	37.23	-0.0513	4.8442	-0.1516
832	SLE RA 15	0.72	0.42	37.23	-0.0514	4.8445	-0.1476
832	SLE RA 16	0.71	0.42	37.04	-0.051	4.824	-0.1497
832	SLE RA 17	0.71	0.41	37.04	-0.0511	4.8243	-0.1457
832	SLE RA 18	0.7	0.46	37.46	-0.0516	4.8733	-0.1628
832	SLE RA 19	0.7	0.45	37.46	-0.0517	4.8736	-0.1587
832	SLE RA 20	0.71	0.46	37.78	-0.0521	4.9073	-0.1618
832	SLE RA 21	0.71	0.45	37.78	-0.0522	4.9076	-0.1578
832	SLE FR 1	0.66	0.36	33.97	-0.0463	4.4824	-0.1254
832	SLE FR 2	0.66	0.35	33.97	-0.0463	4.4825	-0.1241
832	SLE FR 3	0.66	0.35	34.09	-0.0465	4.496	-0.1251
832	SLE FR 4	0.67	0.38	35.02	-0.0479	4.5998	-0.1353
832	SLE FR 5	0.68	0.39	35.14	-0.0481	4.6133	-0.1363
832	SLE FR 6	0.68	0.41	35.72	-0.049	4.6779	-0.1441
832	SLE QP 1	0.66	0.36	33.97	-0.0463	4.4824	-0.1254
832	SLE QP 2	0.67	0.39	35.02	-0.0479	4.5997	-0.1366
832	SLD 1	2.28	1.16	25.94	-0.0333	3.6593	-0.4053
832	SLD 2	2.07	1.78	25.67	-0.0349	3.6414	-0.6222
832	SLD 3	2.65	-0.33	26.52	-0.0304	3.7217	0.1143
832	SLD 4	2.44	0.29	26.26	-0.032	3.7037	-0.1027
832	SLD 5	0.63	2.77	31.46	-0.0477	4.2263	-0.9668
832	SLD 6	0.49	3.17	31.28	-0.0488	4.2145	-1.1087
832	SLD 7	1.86	-2.2	33.4	-0.0379	4.434	0.765
832	SLD 8	1.72	-1.79	33.22	-0.0389	4.4222	0.6232
832	SLD 9	-0.38	2.56	36.81	-0.0568	4.7771	-0.8964
832	SLD 10	-0.52	2.97	36.63	-0.0579	4.7654	-1.0382
832	SLD 11	0.85	-2.4	38.75	-0.047	4.9849	0.8354
832	SLD 12	0.71	-1.99	38.58	-0.0481	4.9731	0.6936
832	SLD 13	-1.09	0.48	43.78	-0.0638	5.4957	-0.1706
832	SLD 14	-1.3	1.1	43.51	-0.0654	5.4777	-0.3875
832	SLD 15	-0.72	-1.01	44.36	-0.0608	5.558	0.349
832	SLD 16	-0.93	-0.39	44.09	-0.0625	5.54	0.132
832	SLV 1	4.44	2.16	13.77	-0.0137	2.3995	-0.7521
832	SLV 2	3.94	3.61	13.16	-0.0175	2.3576	-1.2575
832	SLV 3	5.28	-1.24	15.12	-0.007	2.5436	0.4336
832	SLV 4	4.79	0.21	14.5	-0.0107	2.5018	-0.0718
832	SLV 5	0.6	5.82	26.71	-0.0472	3.7281	-2.033
832	SLV 6	0.29	6.76	26.31	-0.0496	3.7012	-2.3578
832	SLV 7	3.42	-5.5	31.19	-0.0248	4.2087	1.9193
832	SLV 8	3.11	-4.57	30.8	-0.0272	4.1818	1.5945
832	SLV 9	-1.76	5.34	39.24	-0.0686	5.0175	-1.8678
832	SLV 10	-2.08	6.28	38.84	-0.071	4.9907	-2.1926
832	SLV 11	1.06	-5.98	43.72	-0.0462	5.4982	2.0845
832	SLV 12	0.74	-5.05	43.32	-0.0486	5.4713	1.7597
832	SLV 13	-3.45	0.56	55.53	-0.085	6.6976	-0.2014
832	SLV 14	-3.94	2.01	54.91	-0.0888	6.6557	-0.7068
832	SLV 15	-2.6	-2.84	56.88	-0.0783	6.8417	0.9843
832	SLV 16	-3.09	-1.39	56.26	-0.0821	6.7999	0.4789
832	CRTFP Ux+	0	0	0	0	0	0
832	CRTFP Ux-	0	0	0	0	0	0
832	CRTFP Uy+	0	0	0	0	0	0
832	CRTFP Uy-	0	0	0	0	0	0
834	SLU 1	1.34	0.14	62.46	0.0228	0.3621	-0.0108
834	SLU 2	1.33	0.11	62.45	0.0228	0.3708	-0.0102
834	SLU 3	1.38	0.15	63.88	0.0233	0.3734	-0.0111
834	SLU 4	1.37	0.13	63.87	0.0233	0.3786	-0.0107
834	SLU 5	1.35	0.11	63.33	0.0231	0.3771	-0.0105
834	SLU 6	1.4	0.15	64.76	0.0236	0.3797	-0.0114
834	SLU 7	1.39	0.13	64.75	0.0236	0.3849	-0.011
834	SLU 8	1.39	0.13	64.23	0.0233	0.3747	-0.0114
834	SLU 9	1.38	0.11	64.22	0.0234	0.3799	-0.011
834	SLU 10	1.4	0.22	69.92	0.0255	0.4275	-0.0109
834	SLU 11	1.45	0.26	71.34	0.026	0.4302	-0.0118
834	SLU 12	1.44	0.24	71.34	0.026	0.4354	-0.0114
834	SLU 13	1.43	0.22	70.8	0.0258	0.4339	-0.0112
834	SLU 14	1.48	0.26	72.22	0.0263	0.4365	-0.0121
834	SLU 15	1.47	0.24	72.22	0.0263	0.4417	-0.0117
834	SLU 16	1.47	0.25	71.69	0.0261	0.4315	-0.0121
834	SLU 17	1.46	0.23	71.69	0.0261	0.4367	-0.0117
834	SLU 18	1.45	0.3	73.13	0.0267	0.4432	-0.0118
834	SLU 19	1.44	0.28	73.12	0.0267	0.4484	-0.0114
834	SLU 20	1.47	0.3	74.01	0.027	0.4495	-0.0121
834	SLU 21	1.47	0.28	74.01	0.027	0.4547	-0.0117
834	SLU 22	1.45	0.28	70	0.026	0.4179	-0.0113
834	SLU 23	1.44	0.25	69.99	0.0261	0.4266	-0.0107
834	SLU 24	1.49	0.29	71.41	0.0265	0.4292	-0.0116
834	SLU 25	1.48	0.27	71.41	0.0266	0.4345	-0.0112
834	SLU 26	1.46	0.24	70.87	0.0264	0.433	-0.011
834	SLU 27	1.51	0.29	72.3	0.0268	0.4356	-0.0119

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
834	SLU 28	1.5	0.27	72.29	0.0268	0.4408	-0.0115
834	SLU 29	1.5	0.27	71.77	0.0266	0.4306	-0.0119
834	SLU 30	1.49	0.25	71.76	0.0266	0.4358	-0.0115
834	SLU 31	1.51	0.36	77.46	0.0288	0.4834	-0.0114
834	SLU 32	1.56	0.4	78.88	0.0293	0.486	-0.0123
834	SLU 33	1.55	0.38	78.87	0.0293	0.4912	-0.0119
834	SLU 34	1.54	0.35	78.34	0.0291	0.4897	-0.0117
834	SLU 35	1.59	0.4	79.76	0.0296	0.4924	-0.0126
834	SLU 36	1.58	0.38	79.76	0.0296	0.4976	-0.0122
834	SLU 37	1.58	0.38	79.23	0.0293	0.4874	-0.0126
834	SLU 38	1.57	0.36	79.23	0.0293	0.4926	-0.0122
834	SLU 39	1.56	0.44	80.67	0.0299	0.4991	-0.0123
834	SLU 40	1.55	0.42	80.66	0.03	0.5043	-0.012
834	SLU 41	1.58	0.43	81.55	0.0302	0.5054	-0.0126
834	SLU 42	1.58	0.41	81.54	0.0302	0.5106	-0.0122
834	SLU 43	1.7	0.14	78.62	0.0285	0.4515	-0.0139
834	SLU 44	1.69	0.1	78.61	0.0285	0.4602	-0.0132
834	SLU 45	1.74	0.15	80.03	0.029	0.4628	-0.0141
834	SLU 46	1.73	0.13	80.02	0.029	0.4681	-0.0138
834	SLU 47	1.72	0.1	79.49	0.0288	0.4665	-0.0135
834	SLU 48	1.77	0.15	80.91	0.0293	0.4692	-0.0144
834	SLU 49	1.76	0.13	80.91	0.0293	0.4744	-0.014
834	SLU 50	1.75	0.13	80.38	0.029	0.4642	-0.0144
834	SLU 51	1.75	0.11	80.38	0.0291	0.4694	-0.0141
834	SLU 52	1.77	0.22	86.07	0.0313	0.517	-0.014
834	SLU 53	1.82	0.26	87.5	0.0317	0.5196	-0.0148
834	SLU 54	1.81	0.24	87.49	0.0317	0.5248	-0.0145
834	SLU 55	1.79	0.21	86.96	0.0315	0.5233	-0.0142
834	SLU 56	1.84	0.26	88.38	0.032	0.526	-0.0151
834	SLU 57	1.83	0.24	88.37	0.032	0.5312	-0.0148
834	SLU 58	1.83	0.24	87.85	0.0318	0.521	-0.0151
834	SLU 59	1.82	0.22	87.84	0.0318	0.5262	-0.0148
834	SLU 60	1.81	0.3	89.28	0.0324	0.5326	-0.0149
834	SLU 61	1.8	0.28	89.28	0.0324	0.5379	-0.0145
834	SLU 62	1.84	0.29	90.17	0.0327	0.539	-0.0152
834	SLU 63	1.83	0.27	90.16	0.0327	0.5442	-0.0148
834	SLU 64	1.81	0.28	86.15	0.0318	0.5074	-0.0144
834	SLU 65	1.8	0.24	86.15	0.0318	0.5161	-0.0138
834	SLU 66	1.85	0.29	87.57	0.0323	0.5187	-0.0147
834	SLU 67	1.84	0.27	87.56	0.0323	0.5239	-0.0143
834	SLU 68	1.83	0.24	87.03	0.0321	0.5224	-0.014
834	SLU 69	1.88	0.28	88.45	0.0325	0.525	-0.0149
834	SLU 70	1.87	0.26	88.44	0.0326	0.5303	-0.0146
834	SLU 71	1.86	0.27	87.92	0.0323	0.5201	-0.015
834	SLU 72	1.86	0.25	87.91	0.0323	0.5253	-0.0146
834	SLU 73	1.88	0.35	93.61	0.0345	0.5729	-0.0145
834	SLU 74	1.93	0.4	95.03	0.035	0.5755	-0.0154
834	SLU 75	1.92	0.38	95.03	0.035	0.5807	-0.015
834	SLU 76	1.9	0.35	94.49	0.0348	0.5792	-0.0148
834	SLU 77	1.95	0.39	95.92	0.0353	0.5818	-0.0157
834	SLU 78	1.94	0.37	95.91	0.0353	0.587	-0.0153
834	SLU 79	1.94	0.38	95.39	0.035	0.5768	-0.0157
834	SLU 80	1.93	0.36	95.38	0.0351	0.5821	-0.0153
834	SLU 81	1.92	0.43	96.82	0.0357	0.5885	-0.0154
834	SLU 82	1.91	0.41	96.82	0.0357	0.5937	-0.015
834	SLU 83	1.95	0.43	97.7	0.0359	0.5948	-0.0157
834	SLU 84	1.94	0.41	97.7	0.036	0.6001	-0.0153
834	SLE RA 1	1.37	0.18	64.62	0.0237	0.378	-0.011
834	SLE RA 2	1.36	0.16	64.61	0.0237	0.3838	-0.0105
834	SLE RA 3	1.39	0.19	65.56	0.024	0.3856	-0.0111
834	SLE RA 4	1.39	0.18	65.55	0.0241	0.389	-0.0109
834	SLE RA 5	1.38	0.16	65.2	0.0239	0.388	-0.0107
834	SLE RA 6	1.41	0.19	66.15	0.0242	0.3898	-0.0113
834	SLE RA 7	1.41	0.17	66.14	0.0242	0.3933	-0.0111
834	SLE RA 8	1.4	0.18	65.79	0.0241	0.3865	-0.0113
834	SLE RA 9	1.4	0.16	65.79	0.0241	0.3899	-0.0111
834	SLE RA 10	1.41	0.23	69.59	0.0256	0.4217	-0.011
834	SLE RA 11	1.45	0.26	70.54	0.0259	0.4234	-0.0116
834	SLE RA 12	1.44	0.25	70.53	0.0259	0.4269	-0.0114
834	SLE RA 13	1.43	0.23	70.18	0.0257	0.4259	-0.0112
834	SLE RA 14	1.46	0.26	71.12	0.0261	0.4276	-0.0118
834	SLE RA 15	1.46	0.25	71.12	0.0261	0.4311	-0.0115
834	SLE RA 16	1.46	0.25	70.77	0.0259	0.4243	-0.0118
834	SLE RA 17	1.45	0.24	70.77	0.0259	0.4278	-0.0116
834	SLE RA 18	1.44	0.29	71.73	0.0263	0.4321	-0.0116
834	SLE RA 19	1.44	0.27	71.72	0.0263	0.4356	-0.0114
834	SLE RA 20	1.46	0.29	72.32	0.0265	0.4363	-0.0118
834	SLE RA 21	1.46	0.27	72.31	0.0265	0.4398	-0.0116
834	SLE FR 1	1.37	0.18	64.62	0.0237	0.378	-0.011
834	SLE FR 2	1.37	0.18	64.61	0.0237	0.3792	-0.0109
834	SLE FR 3	1.38	0.18	64.85	0.0238	0.3797	-0.011
834	SLE FR 4	1.39	0.21	66.75	0.0245	0.3954	-0.0111
834	SLE FR 5	1.4	0.21	66.99	0.0246	0.3959	-0.0112
834	SLE FR 6	1.41	0.23	68.17	0.025	0.4051	-0.0113
834	SLE QP 1	1.37	0.18	64.62	0.0237	0.378	-0.011
834	SLE QP 2	1.39	0.21	66.75	0.0245	0.3942	-0.0112
834	SLD 1	6.49	1.13	62.12	0.0167	0.3373	-0.0362
834	SLD 2	6.14	1.58	61.74	0.0131	0.3476	-0.0249
834	SLD 3	6.85	-0.47	62.5	0.0268	0.3684	-0.0434
834	SLD 4	6.5	-0.02	62.12	0.0233	0.3787	-0.0322
834	SLD 5	2.44	2.84	64.84	0.0074	0.3281	-0.0097
834	SLD 6	2.21	3.14	64.59	0.005	0.3349	-0.0024
834	SLD 7	3.63	-2.51	66.13	0.0412	0.4319	-0.0338
834	SLD 8	3.4	-2.21	65.88	0.0389	0.4386	-0.0264
834	SLD 9	-0.62	2.64	67.62	0.0101	0.3499	0.0041
834	SLD 10	-0.85	2.93	67.37	0.0077	0.3566	0.0114
834	SLD 11	0.57	-2.71	68.91	0.0439	0.4536	-0.02

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
834	SLD 12	0.34	-2.42	68.66	0.0416	0.4604	-0.0126
834	SLD 13	-3.71	0.45	71.38	0.0257	0.4098	0.0098
834	SLD 14	-4.06	0.9	71	0.0221	0.4201	0.0211
834	SLD 15	-3.36	-1.15	71.76	0.0359	0.4409	0.0026
834	SLD 16	-3.71	-0.7	71.38	0.0323	0.4512	0.0138
834	SLV 1	13.32	2.31	55.88	0.0065	0.2596	-0.0697
834	SLV 2	12.5	3.36	55	-0.0018	0.2837	-0.0435
834	SLV 3	14.15	-1.34	56.79	0.0296	0.3307	-0.0865
834	SLV 4	13.34	-0.29	55.91	0.0213	0.3547	-0.0604
834	SLV 5	3.85	6.2	62.26	-0.0144	0.242	-0.0076
834	SLV 6	3.32	6.88	61.7	-0.0198	0.2574	0.0092
834	SLV 7	6.62	-5.97	65.29	0.0624	0.4789	-0.0639
834	SLV 8	6.1	-5.3	64.72	0.0571	0.4943	-0.047
834	SLV 9	-3.31	5.73	68.78	-0.0081	0.2942	0.0247
834	SLV 10	-3.84	6.4	68.21	-0.0134	0.3096	0.0415
834	SLV 11	-0.54	-6.45	71.8	0.0688	0.5311	-0.0315
834	SLV 12	-1.06	-5.78	71.23	0.0634	0.5465	-0.0147
834	SLV 13	-10.55	0.72	77.59	0.0277	0.4338	0.038
834	SLV 14	-11.36	1.77	76.71	0.0194	0.4578	0.0642
834	SLV 15	-9.72	-2.93	78.5	0.0508	0.5048	0.0212
834	SLV 16	-10.53	-1.89	77.62	0.0425	0.5289	0.0473
834	CRTFP Ux+	0	0	0	0	0	0
834	CRTFP Ux-	0	0	0	0	0	0
837	SLU 1	-1.17	-0.82	64.4	-0.0091	-0.4793	0.0231
837	SLU 2	-1.19	-0.9	64.45	-0.0089	-0.4847	0.0235
837	SLU 3	-1.2	-0.82	65.96	-0.0095	-0.4929	0.0236
837	SLU 4	-1.21	-0.87	65.99	-0.0094	-0.4961	0.0239
837	SLU 5	-1.21	-0.91	65.43	-0.0092	-0.491	0.0238
837	SLU 6	-1.22	-0.83	66.94	-0.0098	-0.4992	0.0239
837	SLU 7	-1.23	-0.88	66.97	-0.0097	-0.5024	0.0242
837	SLU 8	-1.21	-0.83	66.36	-0.0097	-0.4919	0.0236
837	SLU 9	-1.22	-0.88	66.39	-0.0096	-0.4952	0.0239
837	SLU 10	-1.27	-0.92	72.38	-0.0105	-0.5623	0.0271
837	SLU 11	-1.28	-0.85	73.88	-0.0111	-0.5704	0.0272
837	SLU 12	-1.3	-0.9	73.91	-0.011	-0.5737	0.0275
837	SLU 13	-1.29	-0.93	73.35	-0.0108	-0.5686	0.0274
837	SLU 14	-1.3	-0.86	74.86	-0.0114	-0.5767	0.0275
837	SLU 15	-1.31	-0.9	74.89	-0.0113	-0.58	0.0278
837	SLU 16	-1.29	-0.86	74.28	-0.0113	-0.5695	0.0272
837	SLU 17	-1.3	-0.9	74.31	-0.0112	-0.5728	0.0275
837	SLU 18	-1.29	-0.85	75.72	-0.0114	-0.5901	0.0282
837	SLU 19	-1.3	-0.9	75.75	-0.0113	-0.5934	0.0285
837	SLU 20	-1.31	-0.86	76.7	-0.0117	-0.5964	0.0285
837	SLU 21	-1.32	-0.91	76.73	-0.0116	-0.5997	0.0288
837	SLU 22	-1.28	-0.79	72.37	-0.0101	-0.5499	0.0256
837	SLU 23	-1.3	-0.87	72.42	-0.01	-0.5553	0.026
837	SLU 24	-1.31	-0.8	73.92	-0.0105	-0.5635	0.0261
837	SLU 25	-1.32	-0.85	73.95	-0.0104	-0.5667	0.0264
837	SLU 26	-1.32	-0.88	73.4	-0.0103	-0.5617	0.0263
837	SLU 27	-1.33	-0.81	74.9	-0.0108	-0.5698	0.0264
837	SLU 28	-1.34	-0.86	74.93	-0.0107	-0.573	0.0267
837	SLU 29	-1.32	-0.81	74.33	-0.0108	-0.5626	0.0261
837	SLU 30	-1.33	-0.86	74.36	-0.0106	-0.5658	0.0264
837	SLU 31	-1.38	-0.9	80.34	-0.0116	-0.6329	0.0297
837	SLU 32	-1.39	-0.82	81.84	-0.0122	-0.6411	0.0298
837	SLU 33	-1.4	-0.87	81.87	-0.0121	-0.6443	0.03
837	SLU 34	-1.4	-0.9	81.32	-0.0119	-0.6392	0.0299
837	SLU 35	-1.41	-0.83	82.82	-0.0125	-0.6474	0.03
837	SLU 36	-1.42	-0.88	82.85	-0.0124	-0.6506	0.0303
837	SLU 37	-1.4	-0.83	82.25	-0.0124	-0.6401	0.0297
837	SLU 38	-1.41	-0.88	82.28	-0.0123	-0.6434	0.03
837	SLU 39	-1.4	-0.83	83.68	-0.0125	-0.6607	0.0307
837	SLU 40	-1.41	-0.87	83.71	-0.0124	-0.664	0.031
837	SLU 41	-1.42	-0.83	84.66	-0.0128	-0.6671	0.031
837	SLU 42	-1.43	-0.88	84.69	-0.0127	-0.6703	0.0313
837	SLU 43	-1.48	-1.07	80.99	-0.0115	-0.5989	0.0291
837	SLU 44	-1.5	-1.15	81.04	-0.0113	-0.6043	0.0296
837	SLU 45	-1.51	-1.08	82.55	-0.0118	-0.6125	0.0297
837	SLU 46	-1.53	-1.13	82.58	-0.0117	-0.6157	0.0299
837	SLU 47	-1.52	-1.16	82.02	-0.0116	-0.6106	0.0298
837	SLU 48	-1.53	-1.09	83.53	-0.0121	-0.6188	0.03
837	SLU 49	-1.55	-1.13	83.56	-0.012	-0.622	0.0302
837	SLU 50	-1.52	-1.09	82.95	-0.0121	-0.6115	0.0297
837	SLU 51	-1.53	-1.13	82.98	-0.0119	-0.6148	0.0299
837	SLU 52	-1.59	-1.18	88.97	-0.0129	-0.6819	0.0332
837	SLU 53	-1.6	-1.1	90.47	-0.0135	-0.69	0.0333
837	SLU 54	-1.61	-1.15	90.5	-0.0134	-0.6933	0.0336
837	SLU 55	-1.61	-1.18	89.94	-0.0132	-0.6882	0.0335
837	SLU 56	-1.62	-1.11	91.45	-0.0138	-0.6963	0.0336
837	SLU 57	-1.63	-1.16	91.48	-0.0137	-0.6996	0.0338
837	SLU 58	-1.6	-1.11	90.87	-0.0137	-0.6891	0.0333
837	SLU 59	-1.62	-1.16	90.9	-0.0136	-0.6923	0.0336
837	SLU 60	-1.6	-1.1	92.31	-0.0138	-0.7097	0.0343
837	SLU 61	-1.61	-1.15	92.34	-0.0137	-0.713	0.0345
837	SLU 62	-1.62	-1.11	93.29	-0.0141	-0.716	0.0346
837	SLU 63	-1.63	-1.16	93.32	-0.014	-0.7193	0.0348
837	SLU 64	-1.59	-1.05	88.96	-0.0125	-0.6695	0.0316
837	SLU 65	-1.61	-1.13	89.01	-0.0123	-0.6749	0.0321
837	SLU 66	-1.62	-1.05	90.51	-0.0129	-0.6831	0.0322
837	SLU 67	-1.63	-1.1	90.54	-0.0128	-0.6863	0.0325
837	SLU 68	-1.63	-1.13	89.99	-0.0126	-0.6812	0.0324
837	SLU 69	-1.64	-1.06	91.49	-0.0132	-0.6894	0.0325
837	SLU 70	-1.65	-1.11	91.52	-0.0131	-0.6926	0.0327
837	SLU 71	-1.63	-1.06	90.92	-0.0131	-0.6822	0.0322
837	SLU 72	-1.64	-1.11	90.95	-0.013	-0.6854	0.0325
837	SLU 73	-1.7	-1.15	96.93	-0.014	-0.7525	0.0357
837	SLU 74	-1.71	-1.08	98.43	-0.0145	-0.7606	0.0358

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
837	SLU 75	-1.72	-1.13	98.46	-0.0144	-0.7639	0.0361
837	SLU 76	-1.71	-1.16	97.91	-0.0143	-0.7588	0.036
837	SLU 77	-1.72	-1.08	99.41	-0.0148	-0.767	0.0361
837	SLU 78	-1.74	-1.13	99.44	-0.0147	-0.7702	0.0364
837	SLU 79	-1.71	-1.08	98.84	-0.0148	-0.7597	0.0358
837	SLU 80	-1.72	-1.13	98.87	-0.0147	-0.763	0.0361
837	SLU 81	-1.71	-1.08	100.27	-0.0149	-0.7803	0.0368
837	SLU 82	-1.72	-1.13	100.3	-0.0148	-0.7836	0.0371
837	SLU 83	-1.73	-1.09	101.25	-0.0152	-0.7866	0.0371
837	SLU 84	-1.74	-1.14	101.28	-0.0151	-0.7899	0.0373
837	SLE RA 1	-1.2	-0.81	66.68	-0.0094	-0.4995	0.0238
837	SLE RA 2	-1.21	-0.86	66.71	-0.0093	-0.5031	0.0241
837	SLE RA 3	-1.22	-0.82	67.72	-0.0096	-0.5085	0.0242
837	SLE RA 4	-1.23	-0.85	67.74	-0.0096	-0.5107	0.0243
837	SLE RA 5	-1.23	-0.87	67.37	-0.0095	-0.5073	0.0243
837	SLE RA 6	-1.23	-0.82	68.37	-0.0099	-0.5127	0.0243
837	SLE RA 7	-1.24	-0.85	68.39	-0.0098	-0.5149	0.0245
837	SLE RA 8	-1.23	-0.82	67.98	-0.0098	-0.5079	0.0241
837	SLE RA 9	-1.23	-0.85	68	-0.0097	-0.5101	0.0243
837	SLE RA 10	-1.27	-0.88	71.99	-0.0104	-0.5548	0.0265
837	SLE RA 11	-1.28	-0.83	73	-0.0107	-0.5602	0.0266
837	SLE RA 12	-1.28	-0.86	73.02	-0.0107	-0.5624	0.0267
837	SLE RA 13	-1.28	-0.88	72.65	-0.0106	-0.559	0.0267
837	SLE RA 14	-1.29	-0.84	73.65	-0.0109	-0.5645	0.0268
837	SLE RA 15	-1.3	-0.87	73.67	-0.0109	-0.5666	0.0269
837	SLE RA 16	-1.28	-0.84	73.26	-0.0109	-0.5596	0.0266
837	SLE RA 17	-1.29	-0.87	73.28	-0.0108	-0.5618	0.0267
837	SLE RA 18	-1.28	-0.83	74.22	-0.011	-0.5734	0.0272
837	SLE RA 19	-1.29	-0.86	74.24	-0.0109	-0.5755	0.0274
837	SLE RA 20	-1.29	-0.84	74.88	-0.0112	-0.5776	0.0274
837	SLE RA 21	-1.3	-0.87	74.9	-0.0111	-0.5797	0.0276
837	SLE FR 1	-1.2	-0.81	66.68	-0.0094	-0.4995	0.0238
837	SLE FR 2	-1.2	-0.82	66.69	-0.0094	-0.5002	0.0238
837	SLE FR 3	-1.21	-0.81	66.94	-0.0095	-0.5012	0.0238
837	SLE FR 4	-1.23	-0.83	68.95	-0.0098	-0.5224	0.0249
837	SLE FR 5	-1.23	-0.82	69.2	-0.0099	-0.5233	0.0249
837	SLE FR 6	-1.24	-0.82	70.45	-0.0102	-0.5364	0.0255
837	SLE QP 1	-1.2	-0.81	66.68	-0.0094	-0.4995	0.0238
837	SLE QP 2	-1.22	-0.82	68.94	-0.0099	-0.5217	0.0248
837	SLD 1	4.03	-0.39	72.24	-0.0133	-0.5724	0.0048
837	SLD 2	3.68	-0.81	72.78	-0.0107	-0.5637	0.0164
837	SLD 3	4.38	-2.19	72.63	-0.0044	-0.6368	-0.0023
837	SLD 4	4.04	-2.62	73.18	-0.0019	-0.6282	0.0092
837	SLD 5	-0.12	2.12	69.23	-0.0248	-0.4406	0.0276
837	SLD 6	-0.35	1.84	69.59	-0.0231	-0.435	0.0352
837	SLD 7	1.05	-3.89	70.55	0.0048	-0.6555	0.0037
837	SLD 8	0.83	-4.16	70.91	0.0064	-0.6499	0.0113
837	SLD 9	-3.28	2.53	66.97	-0.0261	-0.3935	0.0383
837	SLD 10	-3.5	2.25	67.33	-0.0245	-0.3878	0.0459
837	SLD 11	-2.1	-3.48	68.29	0.0034	-0.6084	0.0144
837	SLD 12	-2.33	-3.75	68.65	0.005	-0.6027	0.022
837	SLD 13	-6.48	0.98	64.7	-0.0178	-0.4152	0.0404
837	SLD 14	-6.83	0.56	65.25	-0.0153	-0.4065	0.052
837	SLD 15	-6.13	-0.82	65.1	-0.009	-0.4796	0.0332
837	SLD 16	-6.48	-1.25	65.65	-0.0065	-0.471	0.0448
837	SLV 1	11.06	0.12	76.68	-0.0175	-0.6434	-0.0219
837	SLV 2	10.26	-0.88	77.95	-0.0116	-0.6232	0.005
837	SLV 3	11.88	-3.96	77.58	0.0026	-0.7895	-0.0386
837	SLV 4	11.08	-4.95	78.86	0.0085	-0.7693	-0.0117
837	SLV 5	1.35	5.82	69.67	-0.0436	-0.3402	0.0315
837	SLV 6	0.84	5.18	70.49	-0.0398	-0.3272	0.0488
837	SLV 7	4.09	-7.77	72.69	0.0233	-0.827	-0.0242
837	SLV 8	3.58	-8.41	73.51	0.0271	-0.814	-0.0069
837	SLV 9	-6.02	6.78	64.37	-0.0469	-0.2293	0.0565
837	SLV 10	-6.54	6.14	65.19	-0.0431	-0.2163	0.0738
837	SLV 11	-3.29	-6.81	67.4	0.0201	-0.7162	0.0008
837	SLV 12	-3.8	-7.45	68.22	0.0239	-0.7032	0.0181
837	SLV 13	-13.53	3.32	59.03	-0.0282	-0.2741	0.0613
837	SLV 14	-14.33	2.33	60.3	-0.0224	-0.2538	0.0883
837	SLV 15	-12.71	-0.76	59.93	-0.0082	-0.4201	0.0446
837	SLV 16	-13.51	-1.75	61.21	-0.0023	-0.3999	0.0715
837	CRTFP Ux+	0	0	0	0	0	0
837	CRTFP Ux-	0	0	0	0	0	0
837	CRTFP Uy+	0	0	0	0	0	0
837	CRTFP Uy-	0	0	0	0	0	0
840	SLU 1	0.39	0.66	53.82	0.0412	0.9077	0.025
840	SLU 2	0.38	0.59	53.81	0.0416	0.9064	0.0253
840	SLU 3	0.4	0.69	55.05	0.0423	0.9331	0.0256
840	SLU 4	0.39	0.65	55.05	0.0426	0.9324	0.0258
840	SLU 5	0.39	0.6	54.53	0.0422	0.9208	0.0256
840	SLU 6	0.42	0.7	55.77	0.0428	0.9475	0.0258
840	SLU 7	0.41	0.66	55.76	0.0431	0.9467	0.0261
840	SLU 8	0.41	0.68	55.26	0.0422	0.9364	0.0255
840	SLU 9	0.41	0.64	55.25	0.0425	0.9357	0.0257
840	SLU 10	0.44	0.7	60.96	0.0468	1.0502	0.0298
840	SLU 11	0.46	0.8	62.2	0.0475	1.0769	0.0301
840	SLU 12	0.45	0.76	62.19	0.0477	1.0762	0.0303
840	SLU 13	0.45	0.72	61.67	0.0473	1.0646	0.0301
840	SLU 14	0.48	0.81	62.91	0.048	1.0913	0.0303
840	SLU 15	0.47	0.77	62.91	0.0483	1.0905	0.0306
840	SLU 16	0.47	0.79	62.4	0.0474	1.0802	0.03
840	SLU 17	0.47	0.75	62.4	0.0477	1.0794	0.0302
840	SLU 18	0.48	0.81	64.03	0.0486	1.1131	0.0314
840	SLU 19	0.47	0.78	64.02	0.0489	1.1123	0.0316
840	SLU 20	0.49	0.83	64.75	0.0491	1.1275	0.0316
840	SLU 21	0.48	0.79	64.74	0.0494	1.1267	0.0319
840	SLU 22	0.46	0.87	60.71	0.0473	1.0489	0.0286

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
840	SLU 23	0.44	0.8	60.7	0.0477	1.0476	0.029
840	SLU 24	0.47	0.9	61.94	0.0484	1.0743	0.0292
840	SLU 25	0.46	0.86	61.93	0.0486	1.0735	0.0294
840	SLU 26	0.45	0.81	61.41	0.0483	1.062	0.0293
840	SLU 27	0.48	0.91	62.65	0.0489	1.0887	0.0295
840	SLU 28	0.47	0.87	62.65	0.0492	1.0879	0.0297
840	SLU 29	0.48	0.89	62.14	0.0483	1.0776	0.0291
840	SLU 30	0.47	0.85	62.14	0.0486	1.0768	0.0294
840	SLU 31	0.5	0.91	67.84	0.0529	1.1914	0.0335
840	SLU 32	0.53	1.01	69.08	0.0536	1.2181	0.0337
840	SLU 33	0.52	0.97	69.08	0.0538	1.2173	0.0339
840	SLU 34	0.51	0.93	68.56	0.0534	1.2057	0.0337
840	SLU 35	0.54	1.02	69.8	0.0541	1.2325	0.034
840	SLU 36	0.53	0.98	69.79	0.0543	1.2317	0.0342
840	SLU 37	0.54	1	69.29	0.0535	1.2214	0.0336
840	SLU 38	0.53	0.96	69.28	0.0538	1.2206	0.0339
840	SLU 39	0.54	1.02	70.91	0.0547	1.2543	0.035
840	SLU 40	0.53	0.99	70.91	0.055	1.2535	0.0352
840	SLU 41	0.55	1.04	71.63	0.0552	1.2686	0.0353
840	SLU 42	0.54	1	71.62	0.0555	1.2679	0.0355
840	SLU 43	0.49	0.78	67.61	0.0515	1.1316	0.0312
840	SLU 44	0.47	0.72	67.6	0.0519	1.1303	0.0316
840	SLU 45	0.5	0.81	68.84	0.0526	1.157	0.0318
840	SLU 46	0.49	0.78	68.83	0.0528	1.1563	0.032
840	SLU 47	0.48	0.73	68.32	0.0524	1.1447	0.0319
840	SLU 48	0.51	0.82	69.55	0.0531	1.1714	0.0321
840	SLU 49	0.5	0.79	69.55	0.0533	1.1706	0.0323
840	SLU 50	0.51	0.8	69.04	0.0525	1.1603	0.0317
840	SLU 51	0.5	0.77	69.04	0.0528	1.1596	0.032
840	SLU 52	0.53	0.83	74.74	0.0571	1.2741	0.0361
840	SLU 53	0.56	0.92	75.98	0.0578	1.3008	0.0363
840	SLU 54	0.55	0.89	75.98	0.058	1.3001	0.0365
840	SLU 55	0.54	0.84	75.46	0.0576	1.2885	0.0363
840	SLU 56	0.57	0.94	76.7	0.0583	1.3152	0.0366
840	SLU 57	0.56	0.9	76.69	0.0585	1.3144	0.0368
840	SLU 58	0.57	0.91	76.19	0.0577	1.3041	0.0362
840	SLU 59	0.56	0.88	76.18	0.058	1.3033	0.0365
840	SLU 60	0.57	0.94	77.81	0.0589	1.337	0.0376
840	SLU 61	0.56	0.9	77.81	0.0592	1.3362	0.0378
840	SLU 62	0.58	0.95	78.53	0.0594	1.3514	0.0379
840	SLU 63	0.57	0.91	78.53	0.0597	1.3506	0.0381
840	SLU 64	0.55	0.99	74.49	0.0576	1.2728	0.0348
840	SLU 65	0.53	0.93	74.48	0.058	1.2715	0.0352
840	SLU 66	0.56	1.02	75.72	0.0587	1.2982	0.0354
840	SLU 67	0.55	0.99	75.72	0.0589	1.2974	0.0357
840	SLU 68	0.55	0.94	75.2	0.0585	1.2859	0.0355
840	SLU 69	0.58	1.03	76.44	0.0592	1.3126	0.0357
840	SLU 70	0.57	1	76.43	0.0594	1.3118	0.036
840	SLU 71	0.57	1.01	75.93	0.0586	1.3015	0.0354
840	SLU 72	0.57	0.98	75.92	0.0589	1.3007	0.0356
840	SLU 73	0.6	1.04	81.63	0.0632	1.4153	0.0397
840	SLU 74	0.62	1.13	82.87	0.0638	1.442	0.0399
840	SLU 75	0.61	1.1	82.86	0.0641	1.4412	0.0402
840	SLU 76	0.61	1.05	82.35	0.0637	1.4296	0.04
840	SLU 77	0.64	1.15	83.58	0.0644	1.4564	0.0402
840	SLU 78	0.63	1.11	83.58	0.0646	1.4556	0.0404
840	SLU 79	0.63	1.12	83.07	0.0638	1.4453	0.0399
840	SLU 80	0.63	1.09	83.07	0.0641	1.4445	0.0401
840	SLU 81	0.64	1.15	84.7	0.065	1.4782	0.0412
840	SLU 82	0.63	1.11	84.69	0.0653	1.4774	0.0415
840	SLU 83	0.65	1.16	85.42	0.0655	1.4925	0.0415
840	SLU 84	0.64	1.12	85.41	0.0658	1.4918	0.0417
840	SLE RA 1	0.41	0.72	55.79	0.043	0.948	0.026
840	SLE RA 2	0.4	0.67	55.78	0.0432	0.9472	0.0262
840	SLE RA 3	0.42	0.74	56.61	0.0437	0.965	0.0264
840	SLE RA 4	0.41	0.71	56.6	0.0438	0.9645	0.0266
840	SLE RA 5	0.41	0.68	56.26	0.0436	0.9568	0.0264
840	SLE RA 6	0.43	0.75	57.09	0.044	0.9746	0.0266
840	SLE RA 7	0.42	0.72	57.08	0.0442	0.9741	0.0267
840	SLE RA 8	0.43	0.73	56.74	0.0436	0.9672	0.0264
840	SLE RA 9	0.42	0.71	56.74	0.0438	0.9667	0.0265
840	SLE RA 10	0.44	0.75	60.54	0.0467	1.043	0.0292
840	SLE RA 11	0.46	0.81	61.37	0.0471	1.0608	0.0294
840	SLE RA 12	0.45	0.79	61.37	0.0473	1.0603	0.0295
840	SLE RA 13	0.45	0.76	61.02	0.047	1.0526	0.0294
840	SLE RA 14	0.47	0.82	61.85	0.0475	1.0704	0.0296
840	SLE RA 15	0.46	0.79	61.85	0.0476	1.0699	0.0297
840	SLE RA 16	0.47	0.8	61.51	0.0471	1.063	0.0294
840	SLE RA 17	0.46	0.78	61.5	0.0473	1.0625	0.0295
840	SLE RA 18	0.47	0.82	62.59	0.0479	1.085	0.0303
840	SLE RA 19	0.46	0.8	62.59	0.0481	1.0845	0.0304
840	SLE RA 20	0.47	0.83	63.07	0.0482	1.0945	0.0304
840	SLE RA 21	0.47	0.8	63.07	0.0484	1.094	0.0306
840	SLE FR 1	0.41	0.72	55.79	0.043	0.948	0.026
840	SLE FR 2	0.41	0.71	55.79	0.043	0.9479	0.026
840	SLE FR 3	0.41	0.72	55.98	0.0431	0.9519	0.0261
840	SLE FR 4	0.42	0.74	57.83	0.0445	0.9889	0.0273
840	SLE FR 5	0.43	0.75	58.02	0.0446	0.9929	0.0273
840	SLE FR 6	0.44	0.77	59.19	0.0454	1.0165	0.0281
840	SLE QP 1	0.41	0.72	55.79	0.043	0.948	0.026
840	SLE QP 2	0.43	0.75	57.83	0.0444	0.9891	0.0273
840	SLD 1	5.55	2.15	61.31	0.0484	0.9359	0.0026
840	SLD 2	5.25	1.97	61.15	0.0483	0.9353	0.0126
840	SLD 3	5.89	0.41	61.52	0.0556	0.9196	-0.0038
840	SLD 4	5.59	0.23	61.35	0.0555	0.919	0.0062
840	SLD 5	1.51	3.84	58.59	0.0346	0.998	0.0278
840	SLD 6	1.31	3.72	58.49	0.0346	0.9976	0.0343

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
840	SLD 7	2.63	-1.96	59.27	0.0588	0.9436	0.0065
840	SLD 8	2.43	-2.08	59.17	0.0587	0.9432	0.013
840	SLD 9	-1.58	3.57	56.49	0.0301	1.035	0.0415
840	SLD 10	-1.77	3.45	56.38	0.0301	1.0346	0.0481
840	SLD 11	-0.46	-2.22	57.17	0.0543	0.9806	0.0202
840	SLD 12	-0.65	-2.34	57.07	0.0542	0.9802	0.0268
840	SLD 13	-4.74	1.27	54.3	0.0333	1.0592	0.0483
840	SLD 14	-5.03	1.08	54.14	0.0333	1.0587	0.0583
840	SLD 15	-4.4	-0.47	54.51	0.0406	1.0429	0.0419
840	SLD 16	-4.7	-0.66	54.35	0.0405	1.0423	0.052
840	SLV 1	12.41	3.96	66.06	0.0539	0.8629	-0.0305
840	SLV 2	11.72	3.53	65.68	0.0538	0.8616	-0.0071
840	SLV 3	13.2	0.03	66.54	0.0704	0.8257	-0.0453
840	SLV 4	12.51	-0.4	66.16	0.0702	0.8244	-0.022
840	SLV 5	2.95	7.75	59.65	0.0224	1.0079	0.0285
840	SLV 6	2.51	7.48	59.4	0.0223	1.0071	0.0435
840	SLV 7	5.56	-5.36	61.22	0.0772	0.8838	-0.0211
840	SLV 8	5.12	-5.64	60.98	0.0771	0.883	-0.0061
840	SLV 9	-4.27	7.13	54.68	0.0118	1.0952	0.0606
840	SLV 10	-4.71	6.85	54.43	0.0117	1.0944	0.0756
840	SLV 11	-1.66	-5.98	56.26	0.0666	0.9711	0.011
840	SLV 12	-2.1	-6.26	56.01	0.0665	0.9703	0.026
840	SLV 13	-11.65	1.89	49.5	0.0187	1.1538	0.0766
840	SLV 14	-12.34	1.47	49.12	0.0185	1.1525	0.0999
840	SLV 15	-10.87	-2.04	49.97	0.0351	1.1166	0.0617
840	SLV 16	-11.56	-2.47	49.6	0.0349	1.1153	0.085
840	CRTFP Ux+	0	0	0	0	0	0
840	CRTFP Ux-	0	0	0	0	0	0
843	SLU 1	0.62	1.6	48.86	0.0487	-0.3315	0.0113
843	SLU 2	0.6	1.56	48.85	0.0491	-0.3304	0.0118
843	SLU 3	0.64	1.66	49.95	0.0501	-0.3404	0.0116
843	SLU 4	0.63	1.63	49.94	0.0504	-0.3397	0.012
843	SLU 5	0.62	1.58	49.51	0.0499	-0.3359	0.0119
843	SLU 6	0.65	1.68	50.61	0.0509	-0.346	0.0118
843	SLU 7	0.64	1.66	50.61	0.0512	-0.3453	0.0121
843	SLU 8	0.65	1.65	50.19	0.0503	-0.3426	0.0115
843	SLU 9	0.64	1.62	50.18	0.0505	-0.3419	0.0118
843	SLU 10	0.69	1.8	55.14	0.0551	-0.3804	0.0149
843	SLU 11	0.73	1.9	56.24	0.0561	-0.3905	0.0147
843	SLU 12	0.72	1.88	56.23	0.0563	-0.3898	0.0151
843	SLU 13	0.71	1.83	55.8	0.0559	-0.386	0.015
843	SLU 14	0.75	1.93	56.9	0.0569	-0.396	0.0149
843	SLU 15	0.74	1.9	56.9	0.0571	-0.3953	0.0152
843	SLU 16	0.74	1.89	56.48	0.0562	-0.3927	0.0146
843	SLU 17	0.73	1.87	56.47	0.0565	-0.392	0.0149
843	SLU 18	0.75	1.95	57.84	0.0572	-0.403	0.0157
843	SLU 19	0.74	1.93	57.84	0.0575	-0.4023	0.016
843	SLU 20	0.77	1.97	58.51	0.058	-0.4085	0.0158
843	SLU 21	0.76	1.95	58.5	0.0583	-0.4079	0.0161
843	SLU 22	0.71	1.92	54.98	0.0558	-0.385	0.0139
843	SLU 23	0.69	1.88	54.97	0.0563	-0.3839	0.0145
843	SLU 24	0.73	1.97	56.07	0.0573	-0.3939	0.0143
843	SLU 25	0.72	1.95	56.06	0.0575	-0.3932	0.0146
843	SLU 26	0.71	1.9	55.63	0.057	-0.3894	0.0146
843	SLU 27	0.75	2	56.73	0.058	-0.3995	0.0144
843	SLU 28	0.74	1.97	56.73	0.0583	-0.3988	0.0148
843	SLU 29	0.74	1.96	56.31	0.0574	-0.3961	0.0142
843	SLU 30	0.73	1.94	56.31	0.0576	-0.3954	0.0145
843	SLU 31	0.79	2.12	61.26	0.0622	-0.4339	0.0176
843	SLU 32	0.82	2.22	62.36	0.0632	-0.444	0.0174
843	SLU 33	0.81	2.19	62.35	0.0635	-0.4433	0.0177
843	SLU 34	0.8	2.14	61.92	0.063	-0.4395	0.0177
843	SLU 35	0.84	2.24	63.02	0.064	-0.4495	0.0175
843	SLU 36	0.83	2.22	63.02	0.0642	-0.4488	0.0179
843	SLU 37	0.84	2.21	62.6	0.0634	-0.4462	0.0173
843	SLU 38	0.83	2.18	62.6	0.0636	-0.4455	0.0176
843	SLU 39	0.84	2.26	63.96	0.0644	-0.4565	0.0184
843	SLU 40	0.83	2.24	63.96	0.0646	-0.4558	0.0187
843	SLU 41	0.86	2.29	64.63	0.0651	-0.462	0.0185
843	SLU 42	0.85	2.26	64.62	0.0654	-0.4614	0.0188
843	SLU 43	0.77	1.97	61.42	0.0609	-0.4126	0.0137
843	SLU 44	0.76	1.93	61.41	0.0613	-0.4115	0.0143
843	SLU 45	0.79	2.03	62.51	0.0623	-0.4215	0.0141
843	SLU 46	0.78	2.01	62.5	0.0625	-0.4208	0.0144
843	SLU 47	0.77	1.96	62.07	0.0621	-0.417	0.0144
843	SLU 48	0.81	2.05	63.17	0.0631	-0.4271	0.0142
843	SLU 49	0.8	2.03	63.17	0.0633	-0.4264	0.0145
843	SLU 50	0.8	2.02	62.75	0.0624	-0.4237	0.0139
843	SLU 51	0.79	2	62.74	0.0627	-0.423	0.0143
843	SLU 52	0.85	2.18	67.7	0.0673	-0.4615	0.0174
843	SLU 53	0.88	2.28	68.8	0.0683	-0.4716	0.0172
843	SLU 54	0.87	2.25	68.79	0.0685	-0.4709	0.0175
843	SLU 55	0.86	2.2	68.36	0.068	-0.4671	0.0175
843	SLU 56	0.9	2.3	69.46	0.069	-0.4771	0.0173
843	SLU 57	0.89	2.27	69.46	0.0693	-0.4764	0.0176
843	SLU 58	0.9	2.26	69.04	0.0684	-0.4738	0.0171
843	SLU 59	0.89	2.24	69.03	0.0686	-0.4731	0.0174
843	SLU 60	0.91	2.32	70.4	0.0694	-0.4841	0.0181
843	SLU 61	0.89	2.3	70.4	0.0697	-0.4834	0.0185
843	SLU 62	0.92	2.35	71.07	0.0702	-0.4897	0.0183
843	SLU 63	0.91	2.32	71.06	0.0704	-0.489	0.0186
843	SLU 64	0.87	2.29	67.54	0.068	-0.4661	0.0164
843	SLU 65	0.85	2.25	67.53	0.0684	-0.465	0.0169
843	SLU 66	0.88	2.35	68.63	0.0694	-0.475	0.0168
843	SLU 67	0.87	2.32	68.62	0.0697	-0.4743	0.0171
843	SLU 68	0.86	2.27	68.19	0.0692	-0.4705	0.0171
843	SLU 69	0.9	2.37	69.29	0.0702	-0.4806	0.0169

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
843	SLU 70	0.89	2.34	69.29	0.0705	-0.4799	0.0172
843	SLU 71	0.9	2.34	68.87	0.0696	-0.4772	0.0166
843	SLU 72	0.89	2.31	68.86	0.0698	-0.4765	0.0169
843	SLU 73	0.94	2.49	73.82	0.0744	-0.515	0.02
843	SLU 74	0.98	2.59	74.92	0.0754	-0.5251	0.0199
843	SLU 75	0.97	2.56	74.91	0.0756	-0.5244	0.0202
843	SLU 76	0.96	2.52	74.48	0.0752	-0.5206	0.0202
843	SLU 77	0.99	2.61	75.58	0.0762	-0.5306	0.02
843	SLU 78	0.98	2.59	75.58	0.0764	-0.5299	0.0203
843	SLU 79	0.99	2.58	75.16	0.0755	-0.5273	0.0197
843	SLU 80	0.98	2.55	75.15	0.0758	-0.5266	0.0201
843	SLU 81	1	2.64	76.52	0.0765	-0.5376	0.0208
843	SLU 82	0.99	2.61	76.52	0.0768	-0.5369	0.0211
843	SLU 83	1.01	2.66	77.19	0.0773	-0.5432	0.0209
843	SLU 84	1	2.64	77.18	0.0776	-0.5425	0.0213
843	SLE RA 1	0.65	1.69	50.61	0.0508	-0.3468	0.012
843	SLE RA 2	0.63	1.66	50.6	0.051	-0.346	0.0124
843	SLE RA 3	0.66	1.73	51.33	0.0517	-0.3527	0.0123
843	SLE RA 4	0.65	1.71	51.33	0.0519	-0.3523	0.0125
843	SLE RA 5	0.64	1.68	51.04	0.0515	-0.3497	0.0125
843	SLE RA 6	0.67	1.74	51.78	0.0522	-0.3564	0.0123
843	SLE RA 7	0.66	1.73	51.77	0.0524	-0.356	0.0126
843	SLE RA 8	0.67	1.72	51.5	0.0518	-0.3542	0.0122
843	SLE RA 9	0.66	1.71	51.49	0.052	-0.3537	0.0124
843	SLE RA 10	0.7	1.83	54.79	0.055	-0.3794	0.0145
843	SLE RA 11	0.72	1.89	55.53	0.0557	-0.3861	0.0143
843	SLE RA 12	0.71	1.88	55.52	0.0558	-0.3856	0.0146
843	SLE RA 13	0.71	1.84	55.24	0.0555	-0.3831	0.0145
843	SLE RA 14	0.73	1.91	55.97	0.0562	-0.3898	0.0144
843	SLE RA 15	0.72	1.89	55.97	0.0564	-0.3893	0.0146
843	SLE RA 16	0.73	1.89	55.69	0.0558	-0.3876	0.0142
843	SLE RA 17	0.72	1.87	55.68	0.0559	-0.3871	0.0145
843	SLE RA 18	0.73	1.92	56.6	0.0564	-0.3944	0.015
843	SLE RA 19	0.73	1.91	56.59	0.0566	-0.394	0.0152
843	SLE RA 20	0.74	1.94	57.04	0.0569	-0.3981	0.0151
843	SLE RA 21	0.74	1.92	57.04	0.0571	-0.3977	0.0153
843	SLE FR 1	0.65	1.69	50.61	0.0508	-0.3468	0.012
843	SLE FR 2	0.64	1.69	50.61	0.0508	-0.3466	0.0121
843	SLE FR 3	0.65	1.7	50.79	0.051	-0.3483	0.0121
843	SLE FR 4	0.67	1.76	52.4	0.0525	-0.3609	0.013
843	SLE FR 5	0.68	1.77	52.58	0.0527	-0.3626	0.0129
843	SLE FR 6	0.69	1.81	53.6	0.0536	-0.3706	0.0135
843	SLE QP 1	0.65	1.69	50.61	0.0508	-0.3468	0.012
843	SLE QP 2	0.67	1.76	52.4	0.0525	-0.3611	0.0129
843	SLD 1	5.83	2.26	47.71	0.046	-0.0621	-0.0135
843	SLD 2	5.54	2.44	47.76	0.045	-0.0666	-0.0034
843	SLD 3	6.17	0.62	47.93	0.0538	-0.0382	-0.0202
843	SLD 4	5.87	0.8	47.98	0.0528	-0.0427	-0.01
843	SLD 5	1.76	4.36	50.66	0.0389	-0.3068	0.0133
843	SLD 6	1.57	4.48	50.69	0.0383	-0.3097	0.0199
843	SLD 7	2.88	-1.1	51.38	0.0648	-0.2272	-0.0089
843	SLD 8	2.69	-0.98	51.42	0.0641	-0.2302	-0.0023
843	SLD 9	-1.35	4.5	53.39	0.0408	-0.492	0.0281
843	SLD 10	-1.54	4.62	53.42	0.0401	-0.4949	0.0347
843	SLD 11	-0.23	-0.96	54.12	0.0667	-0.4124	0.0059
843	SLD 12	-0.42	-0.84	54.15	0.066	-0.4154	0.0125
843	SLD 13	-4.53	2.72	56.83	0.0522	-0.6794	0.0358
843	SLD 14	-4.83	2.91	56.88	0.0511	-0.6839	0.046
843	SLD 15	-4.19	1.08	57.05	0.0599	-0.6555	0.0292
843	SLD 16	-4.49	1.27	57.1	0.0589	-0.6601	0.0394
843	SLV 1	12.75	2.86	41.43	0.0374	0.3394	-0.0489
843	SLV 2	12.06	3.28	41.54	0.035	0.3288	-0.0252
843	SLV 3	13.53	-0.87	41.94	0.055	0.3944	-0.0645
843	SLV 4	12.84	-0.44	42.05	0.0526	0.3838	-0.0408
843	SLV 5	3.22	7.66	48.32	0.0216	-0.2325	0.0139
843	SLV 6	2.78	7.93	48.39	0.0201	-0.2393	0.0291
843	SLV 7	5.84	-4.74	50.02	0.0803	-0.0493	-0.038
843	SLV 8	5.39	-4.47	50.09	0.0788	-0.0561	-0.0227
843	SLV 9	-4.05	7.99	54.72	0.0261	-0.6661	0.0485
843	SLV 10	-4.49	8.26	54.79	0.0246	-0.6729	0.0638
843	SLV 11	-1.44	-4.41	56.41	0.0848	-0.4829	-0.0033
843	SLV 12	-1.88	-4.14	56.49	0.0833	-0.4897	0.0119
843	SLV 13	-11.5	3.96	62.76	0.0523	-1.1059	0.0666
843	SLV 14	-12.19	4.39	62.87	0.0499	-1.1165	0.0903
843	SLV 15	-10.71	0.24	63.27	0.07	-1.051	0.051
843	SLV 16	-11.4	0.67	63.38	0.0676	-1.0616	0.0747
843	CRTFP Ux+	0	0	0	0	0	0
843	CRTFP Ux-	0	0	0	0	0	0
845	SLU 1	-0.68	0.04	30.55	0.0224	-2.5833	0.0104
845	SLU 2	-0.69	-0.04	30.57	0.0224	-2.5829	-0.009
845	SLU 3	-0.7	0.05	31.28	0.0229	-2.6333	0.0121
845	SLU 4	-0.71	0	31.29	0.0229	-2.633	0.0004
845	SLU 5	-0.7	-0.03	31.03	0.0227	-2.6144	-0.0077
845	SLU 6	-0.71	0.05	31.74	0.0233	-2.6648	0.0135
845	SLU 7	-0.72	0	31.75	0.0233	-2.6645	0.0018
845	SLU 8	-0.71	0.05	31.47	0.0231	-2.6463	0.0131
845	SLU 9	-0.71	0	31.48	0.0231	-2.6461	0.0014
845	SLU 10	-0.75	0.02	34.02	0.0253	-2.8368	0.0063
845	SLU 11	-0.76	0.11	34.74	0.0258	-2.8872	0.0275
845	SLU 12	-0.77	0.06	34.74	0.0258	-2.8869	0.0158
845	SLU 13	-0.76	0.03	34.48	0.0256	-2.8683	0.0077
845	SLU 14	-0.77	0.11	35.2	0.0261	-2.9187	0.0288
845	SLU 15	-0.78	0.07	35.2	0.0261	-2.9184	0.0172
845	SLU 16	-0.77	0.11	34.93	0.0259	-2.9002	0.0285
845	SLU 17	-0.77	0.06	34.93	0.0259	-2.8999	0.0168
845	SLU 18	-0.77	0.13	35.49	0.0265	-2.946	0.0324
845	SLU 19	-0.77	0.08	35.5	0.0265	-2.9457	0.0207

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
845	SLU 20	-0.78	0.13	35.95	0.0268	-2.9775	0.0338
845	SLU 21	-0.79	0.09	35.96	0.0268	-2.9772	0.0221
845	SLU 22	-0.75	0.11	34.09	0.0254	-2.8417	0.029
845	SLU 23	-0.76	0.04	34.1	0.0254	-2.8412	0.0095
845	SLU 24	-0.77	0.12	34.82	0.026	-2.8916	0.0307
845	SLU 25	-0.77	0.07	34.83	0.026	-2.8914	0.019
845	SLU 26	-0.77	0.04	34.56	0.0258	-2.8727	0.0108
845	SLU 27	-0.78	0.13	35.28	0.0263	-2.9231	0.032
845	SLU 28	-0.78	0.08	35.28	0.0263	-2.9229	0.0203
845	SLU 29	-0.77	0.12	35.01	0.0261	-2.9047	0.0317
845	SLU 30	-0.78	0.08	35.02	0.0261	-2.9044	0.02
845	SLU 31	-0.82	0.1	37.56	0.0283	-3.0951	0.0249
845	SLU 32	-0.83	0.18	38.27	0.0289	-3.1455	0.046
845	SLU 33	-0.83	0.13	38.28	0.0289	-3.1453	0.0344
845	SLU 34	-0.83	0.1	38.02	0.0287	-3.1266	0.0262
845	SLU 35	-0.84	0.19	38.73	0.0292	-3.177	0.0474
845	SLU 36	-0.84	0.14	38.74	0.0292	-3.1768	0.0357
845	SLU 37	-0.83	0.19	38.47	0.029	-3.1585	0.047
845	SLU 38	-0.84	0.14	38.47	0.029	-3.1583	0.0354
845	SLU 39	-0.84	0.2	39.03	0.0296	-3.2043	0.051
845	SLU 40	-0.84	0.15	39.04	0.0296	-3.2041	0.0393
845	SLU 41	-0.85	0.21	39.49	0.0299	-3.2358	0.0523
845	SLU 42	-0.85	0.16	39.5	0.0299	-3.2356	0.0406
845	SLU 43	-0.87	0.03	38.51	0.0281	-3.2697	0.0072
845	SLU 44	-0.87	-0.05	38.52	0.0281	-3.2693	-0.0123
845	SLU 45	-0.88	0.03	39.23	0.0286	-3.3197	0.0089
845	SLU 46	-0.89	-0.01	39.24	0.0286	-3.3194	-0.0028
845	SLU 47	-0.88	-0.05	38.98	0.0284	-3.3008	-0.0109
845	SLU 48	-0.89	0.04	39.69	0.0289	-3.3512	0.0102
845	SLU 49	-0.9	-0.01	39.7	0.0289	-3.3509	-0.0014
845	SLU 50	-0.89	0.04	39.42	0.0287	-3.3327	0.0099
845	SLU 51	-0.89	-0.01	39.43	0.0287	-3.3325	-0.0018
845	SLU 52	-0.93	0.01	41.98	0.0309	-3.5232	0.0031
845	SLU 53	-0.94	0.09	42.69	0.0315	-3.5736	0.0243
845	SLU 54	-0.95	0.05	42.7	0.0315	-3.5733	0.0126
845	SLU 55	-0.94	0.01	42.44	0.0313	-3.5547	0.0045
845	SLU 56	-0.95	0.1	43.15	0.0318	-3.6051	0.0256
845	SLU 57	-0.96	0.05	43.16	0.0318	-3.6048	0.0139
845	SLU 58	-0.95	0.1	42.88	0.0316	-3.5866	0.0253
845	SLU 59	-0.95	0.05	42.89	0.0316	-3.5864	0.0136
845	SLU 60	-0.95	0.11	43.45	0.0322	-3.6324	0.0292
845	SLU 61	-0.96	0.07	43.45	0.0322	-3.6321	0.0175
845	SLU 62	-0.96	0.12	43.9	0.0325	-3.6639	0.0305
845	SLU 63	-0.97	0.07	43.91	0.0325	-3.6637	0.0188
845	SLU 64	-0.93	0.1	42.05	0.0311	-3.5281	0.0258
845	SLU 65	-0.94	0.02	42.06	0.0311	-3.5276	0.0063
845	SLU 66	-0.95	0.11	42.77	0.0316	-3.578	0.0274
845	SLU 67	-0.95	0.06	42.78	0.0316	-3.5778	0.0158
845	SLU 68	-0.95	0.03	42.52	0.0315	-3.5591	0.0076
845	SLU 69	-0.96	0.11	43.23	0.032	-3.6095	0.0288
845	SLU 70	-0.96	0.07	43.24	0.032	-3.6093	0.0171
845	SLU 71	-0.95	0.11	42.96	0.0318	-3.5911	0.0284
845	SLU 72	-0.96	0.06	42.97	0.0318	-3.5908	0.0167
845	SLU 73	-1	0.08	45.51	0.034	-3.7815	0.0217
845	SLU 74	-1.01	0.17	46.23	0.0345	-3.8319	0.0428
845	SLU 75	-1.01	0.12	46.24	0.0345	-3.8317	0.0311
845	SLU 76	-1.01	0.09	45.97	0.0343	-3.813	0.023
845	SLU 77	-1.02	0.17	46.69	0.0349	-3.8634	0.0442
845	SLU 78	-1.03	0.13	46.69	0.0349	-3.8632	0.0325
845	SLU 79	-1.01	0.17	46.42	0.0347	-3.845	0.0438
845	SLU 80	-1.02	0.13	46.43	0.0347	-3.8447	0.0321
845	SLU 81	-1.02	0.19	46.98	0.0352	-3.8908	0.0477
845	SLU 82	-1.02	0.14	46.99	0.0352	-3.8905	0.036
845	SLU 83	-1.03	0.19	47.44	0.0356	-3.9223	0.0491
845	SLU 84	-1.03	0.15	47.45	0.0356	-3.922	0.0374
845	SLE RA 1	-0.7	0.06	31.57	0.0233	-2.6571	0.0157
845	SLE RA 2	-0.71	0.01	31.57	0.0233	-2.6568	0.0027
845	SLE RA 3	-0.71	0.07	32.05	0.0236	-2.6904	0.0169
845	SLE RA 4	-0.72	0.03	32.05	0.0236	-2.6903	0.0091
845	SLE RA 5	-0.71	0.01	31.88	0.0235	-2.6778	0.0036
845	SLE RA 6	-0.72	0.07	32.35	0.0238	-2.7114	0.0178
845	SLE RA 7	-0.72	0.04	32.36	0.0238	-2.7113	0.01
845	SLE RA 8	-0.72	0.07	32.18	0.0237	-2.6991	0.0175
845	SLE RA 9	-0.72	0.04	32.18	0.0237	-2.699	0.0097
845	SLE RA 10	-0.75	0.05	33.88	0.0252	-2.8261	0.013
845	SLE RA 11	-0.76	0.11	34.35	0.0255	-2.8597	0.0271
845	SLE RA 12	-0.76	0.07	34.36	0.0255	-2.8595	0.0193
845	SLE RA 13	-0.76	0.05	34.18	0.0254	-2.8471	0.0139
845	SLE RA 14	-0.76	0.11	34.66	0.0258	-2.8807	0.028
845	SLE RA 15	-0.76	0.08	34.66	0.0258	-2.8805	0.0202
845	SLE RA 16	-0.76	0.11	34.48	0.0256	-2.8684	0.0278
845	SLE RA 17	-0.76	0.08	34.49	0.0256	-2.8682	0.02
845	SLE RA 18	-0.76	0.12	34.86	0.026	-2.8989	0.0304
845	SLE RA 19	-0.76	0.09	34.86	0.026	-2.8987	0.0226
845	SLE RA 20	-0.77	0.12	35.16	0.0262	-2.9199	0.0313
845	SLE RA 21	-0.77	0.09	35.17	0.0262	-2.9197	0.0235
845	SLE FR 1	-0.7	0.06	31.57	0.0233	-2.6571	0.0157
845	SLE FR 2	-0.7	0.05	31.57	0.0233	-2.6571	0.0131
845	SLE FR 3	-0.71	0.06	31.69	0.0233	-2.6655	0.0161
845	SLE FR 4	-0.72	0.07	32.55	0.0241	-2.7296	0.0175
845	SLE FR 5	-0.72	0.08	32.68	0.0242	-2.7381	0.0205
845	SLE FR 6	-0.73	0.09	33.21	0.0246	-2.778	0.0231
845	SLE QP 1	-0.7	0.06	31.57	0.0233	-2.6571	0.0157
845	SLE QP 2	-0.72	0.08	32.55	0.0241	-2.7297	0.0201
845	SLD 1	1.68	0.63	40.81	0.0276	-3.3125	0.1566
845	SLD 2	1.51	0.14	41.02	0.0291	-3.3341	0.0352
845	SLD 3	1.85	-0.73	41.24	0.03	-3.3525	-0.1834

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
845	SLD 4	1.68	-1.22	41.44	0.0315	-3.3741	-0.3049
845	SLD 5	-0.23	2.4	34.35	0.0213	-2.8401	0.5983
845	SLD 6	-0.34	2.08	34.48	0.0223	-2.8543	0.5189
845	SLD 7	0.34	-2.14	35.77	0.0291	-2.9732	-0.5352
845	SLD 8	0.22	-2.46	35.91	0.0302	-2.9874	-0.6146
845	SLD 9	-1.67	2.62	29.2	0.018	-2.4719	0.6548
845	SLD 10	-1.78	2.3	29.33	0.019	-2.4861	0.5754
845	SLD 11	-1.1	-1.92	30.63	0.0259	-2.6051	-0.4786
845	SLD 12	-1.22	-2.24	30.76	0.0269	-2.6192	-0.558
845	SLD 13	-3.12	1.37	23.66	0.0167	-2.0852	0.3451
845	SLD 14	-3.29	0.88	23.87	0.0182	-2.1068	0.2237
845	SLD 15	-2.95	0.01	24.09	0.019	-2.1252	0.0051
845	SLD 16	-3.12	-0.48	24.3	0.0206	-2.1468	-0.1164
845	SLV 1	4.9	1.32	51.88	0.0324	-4.0946	0.3258
845	SLV 2	4.5	0.18	52.36	0.036	-4.1449	0.0429
845	SLV 3	5.3	-1.76	52.88	0.0378	-4.1871	-0.4435
845	SLV 4	4.89	-2.9	53.36	0.0413	-4.2374	-0.7264
845	SLV 5	0.44	5.32	36.75	0.0178	-2.9901	1.3271
845	SLV 6	0.18	4.58	37.06	0.0201	-3.0225	1.1453
845	SLV 7	1.75	-4.95	40.09	0.0357	-3.2986	-1.2373
845	SLV 8	1.49	-5.68	40.39	0.038	-3.331	-1.4191
845	SLV 9	-2.93	5.84	24.71	0.0102	-2.1283	1.4594
845	SLV 10	-3.2	5.1	25.02	0.0125	-2.1607	1.2775
845	SLV 11	-1.62	-4.43	28.05	0.028	-2.4368	-1.105
845	SLV 12	-1.88	-5.16	28.35	0.0303	-2.4692	-1.2869
845	SLV 13	-6.33	3.05	11.75	0.0068	-1.2219	0.7667
845	SLV 14	-6.74	1.91	12.22	0.0104	-1.2722	0.4837
845	SLV 15	-5.94	-0.02	12.75	0.0122	-1.3144	-0.0026
845	SLV 16	-6.34	-1.17	13.22	0.0158	-1.3647	-0.2856
845	CRTFP Ux+	0	0	0	0	0	0
845	CRTFP Ux-	0	0	0	0	0	0
845	CRTFP Uy+	0	0	0	0	0	0
845	CRTFP Uy-	0	0	0	0	0	0
848	SLU 1	0.69	0.32	31.65	-0.0388	3.4022	-0.1148
848	SLU 2	0.7	0.29	31.64	-0.0389	3.403	-0.1046
848	SLU 3	0.71	0.33	32.37	-0.0399	3.4588	-0.1162
848	SLU 4	0.72	0.31	32.37	-0.04	3.4593	-0.1102
848	SLU 5	0.71	0.29	32.09	-0.0396	3.4385	-0.1032
848	SLU 6	0.72	0.32	32.82	-0.0406	3.4943	-0.1148
848	SLU 7	0.73	0.31	32.82	-0.0406	3.4947	-0.1088
848	SLU 8	0.72	0.31	32.55	-0.0402	3.4731	-0.1119
848	SLU 9	0.72	0.3	32.55	-0.0402	3.4736	-0.1059
848	SLU 10	0.75	0.41	35.16	-0.0438	3.6908	-0.1439
848	SLU 11	0.76	0.44	35.88	-0.0447	3.7465	-0.1555
848	SLU 12	0.77	0.42	35.88	-0.0448	3.747	-0.1494
848	SLU 13	0.76	0.4	35.61	-0.0444	3.7262	-0.1425
848	SLU 14	0.77	0.43	36.33	-0.0454	3.782	-0.1541
848	SLU 15	0.78	0.42	36.33	-0.0455	3.7825	-0.148
848	SLU 16	0.77	0.43	36.06	-0.045	3.7609	-0.1512
848	SLU 17	0.77	0.41	36.06	-0.0451	3.7614	-0.1451
848	SLU 18	0.76	0.48	36.67	-0.0457	3.8133	-0.1708
848	SLU 19	0.76	0.46	36.67	-0.0458	3.8137	-0.1648
848	SLU 20	0.77	0.48	37.12	-0.0464	3.8487	-0.1694
848	SLU 21	0.78	0.46	37.12	-0.0465	3.8492	-0.1634
848	SLU 22	0.75	0.43	35.22	-0.0436	3.6945	-0.1526
848	SLU 23	0.76	0.4	35.22	-0.0437	3.6953	-0.1424
848	SLU 24	0.77	0.43	35.94	-0.0446	3.7511	-0.1541
848	SLU 25	0.78	0.42	35.94	-0.0447	3.7516	-0.148
848	SLU 26	0.78	0.4	35.67	-0.0443	3.7308	-0.141
848	SLU 27	0.79	0.43	36.39	-0.0453	3.7866	-0.1526
848	SLU 28	0.8	0.41	36.39	-0.0454	3.7871	-0.1466
848	SLU 29	0.78	0.42	36.12	-0.0449	3.7655	-0.1498
848	SLU 30	0.79	0.4	36.12	-0.045	3.766	-0.1437
848	SLU 31	0.81	0.51	38.73	-0.0485	3.9831	-0.1817
848	SLU 32	0.82	0.55	39.46	-0.0495	4.0388	-0.1933
848	SLU 33	0.83	0.53	39.45	-0.0495	4.0393	-0.1872
848	SLU 34	0.83	0.51	39.18	-0.0492	4.0185	-0.1803
848	SLU 35	0.84	0.54	39.91	-0.0501	4.0743	-0.1919
848	SLU 36	0.85	0.52	39.9	-0.0502	4.0748	-0.1858
848	SLU 37	0.83	0.53	39.63	-0.0497	4.0532	-0.189
848	SLU 38	0.84	0.52	39.63	-0.0498	4.0537	-0.1829
848	SLU 39	0.82	0.59	40.24	-0.0505	4.1056	-0.2087
848	SLU 40	0.83	0.57	40.24	-0.0505	4.1061	-0.2026
848	SLU 41	0.84	0.59	40.69	-0.0511	4.141	-0.2072
848	SLU 42	0.84	0.57	40.69	-0.0512	4.1415	-0.2012
848	SLU 43	0.87	0.38	39.92	-0.0489	4.3226	-0.1362
848	SLU 44	0.88	0.35	39.91	-0.0489	4.3235	-0.1261
848	SLU 45	0.89	0.39	40.64	-0.0499	4.3792	-0.1377
848	SLU 46	0.9	0.37	40.64	-0.05	4.3797	-0.1316
848	SLU 47	0.9	0.35	40.36	-0.0496	4.3589	-0.1247
848	SLU 48	0.91	0.38	41.09	-0.0506	4.4147	-0.1363
848	SLU 49	0.92	0.37	41.09	-0.0507	4.4152	-0.1302
848	SLU 50	0.9	0.37	40.82	-0.0502	4.3936	-0.1334
848	SLU 51	0.91	0.36	40.81	-0.0503	4.3941	-0.1273
848	SLU 52	0.93	0.47	43.43	-0.0538	4.6112	-0.1654
848	SLU 53	0.94	0.5	44.15	-0.0548	4.667	-0.177
848	SLU 54	0.95	0.48	44.15	-0.0548	4.6674	-0.1709
848	SLU 55	0.95	0.46	43.88	-0.0545	4.6467	-0.1639
848	SLU 56	0.96	0.49	44.6	-0.0554	4.7024	-0.1755
848	SLU 57	0.96	0.48	44.6	-0.0555	4.7029	-0.1695
848	SLU 58	0.95	0.49	44.33	-0.055	4.6813	-0.1727
848	SLU 59	0.96	0.47	44.33	-0.0551	4.6818	-0.1666
848	SLU 60	0.94	0.54	44.94	-0.0558	4.7337	-0.1923
848	SLU 61	0.95	0.52	44.94	-0.0558	4.7342	-0.1862
848	SLU 62	0.96	0.54	45.39	-0.0564	4.7692	-0.1909
848	SLU 63	0.96	0.52	45.39	-0.0565	4.7697	-0.1848
848	SLU 64	0.93	0.49	43.49	-0.0536	4.615	-0.174

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
848	SLU 65	0.95	0.46	43.49	-0.0537	4.6158	-0.1639
848	SLU 66	0.96	0.49	44.21	-0.0547	4.6715	-0.1755
848	SLU 67	0.96	0.48	44.21	-0.0547	4.672	-0.1694
848	SLU 68	0.96	0.46	43.94	-0.0544	4.6512	-0.1625
848	SLU 69	0.97	0.49	44.66	-0.0553	4.707	-0.1741
848	SLU 70	0.98	0.47	44.66	-0.0554	4.7075	-0.168
848	SLU 71	0.97	0.48	44.39	-0.0549	4.6859	-0.1712
848	SLU 72	0.97	0.46	44.39	-0.055	4.6864	-0.1652
848	SLU 73	1	0.57	47	-0.0585	4.9035	-0.2032
848	SLU 74	1.01	0.61	47.72	-0.0595	4.9593	-0.2148
848	SLU 75	1.01	0.59	47.72	-0.0596	4.9598	-0.2087
848	SLU 76	1.01	0.57	47.45	-0.0592	4.939	-0.2018
848	SLU 77	1.02	0.6	48.17	-0.0602	4.9947	-0.2134
848	SLU 78	1.03	0.58	48.17	-0.0602	4.9952	-0.2073
848	SLU 79	1.01	0.59	47.9	-0.0598	4.9736	-0.2105
848	SLU 80	1.02	0.58	47.9	-0.0598	4.9741	-0.2044
848	SLU 81	1	0.65	48.51	-0.0605	5.026	-0.2301
848	SLU 82	1.01	0.63	48.51	-0.0606	5.0265	-0.224
848	SLU 83	1.02	0.65	48.96	-0.0612	5.0615	-0.2287
848	SLU 84	1.03	0.63	48.96	-0.0612	5.062	-0.2226
848	SLE RA 1	0.7	0.35	32.67	-0.0402	3.4857	-0.1256
848	SLE RA 2	0.71	0.33	32.67	-0.0402	3.4863	-0.1188
848	SLE RA 3	0.72	0.36	33.15	-0.0409	3.5234	-0.1266
848	SLE RA 4	0.73	0.34	33.15	-0.0409	3.5238	-0.1225
848	SLE RA 5	0.72	0.33	32.97	-0.0407	3.5099	-0.1179
848	SLE RA 6	0.73	0.35	33.45	-0.0413	3.5471	-0.1256
848	SLE RA 7	0.74	0.34	33.45	-0.0414	3.5474	-0.1216
848	SLE RA 8	0.73	0.35	33.27	-0.0411	3.533	-0.1237
848	SLE RA 9	0.73	0.34	33.27	-0.0411	3.5333	-0.1196
848	SLE RA 10	0.75	0.41	35.01	-0.0435	3.6781	-0.145
848	SLE RA 11	0.75	0.43	35.49	-0.0441	3.7153	-0.1527
848	SLE RA 12	0.76	0.42	35.49	-0.0442	3.7156	-0.1487
848	SLE RA 13	0.76	0.41	35.31	-0.0439	3.7017	-0.144
848	SLE RA 14	0.76	0.43	35.79	-0.0446	3.7389	-0.1518
848	SLE RA 15	0.77	0.42	35.79	-0.0446	3.7392	-0.1477
848	SLE RA 16	0.76	0.42	35.61	-0.0443	3.7248	-0.1499
848	SLE RA 17	0.76	0.41	35.61	-0.0443	3.7252	-0.1458
848	SLE RA 18	0.75	0.46	36.01	-0.0448	3.7598	-0.163
848	SLE RA 19	0.76	0.45	36.01	-0.0448	3.7601	-0.1589
848	SLE RA 20	0.76	0.46	36.31	-0.0452	3.7834	-0.162
848	SLE RA 21	0.77	0.45	36.31	-0.0453	3.7837	-0.158
848	SLE FR 1	0.7	0.35	32.67	-0.0402	3.4857	-0.1256
848	SLE FR 2	0.71	0.35	32.67	-0.0402	3.4858	-0.1242
848	SLE FR 3	0.71	0.35	32.79	-0.0404	3.4952	-0.1252
848	SLE FR 4	0.72	0.38	33.67	-0.0416	3.568	-0.1354
848	SLE FR 5	0.72	0.38	33.79	-0.0417	3.5774	-0.1364
848	SLE FR 6	0.73	0.41	34.34	-0.0425	3.6227	-0.1443
848	SLE QP 1	0.7	0.35	32.67	-0.0402	3.4857	-0.1256
848	SLE QP 2	0.72	0.39	33.67	-0.0416	3.5679	-0.1368
848	SLD 1	2.13	1.16	25.03	-0.0287	2.9288	-0.4052
848	SLD 2	1.89	1.78	24.71	-0.0304	2.9013	-0.6222
848	SLD 3	2.54	-0.33	25.65	-0.0257	2.9929	0.1143
848	SLD 4	2.3	0.29	25.34	-0.0274	2.9654	-0.1027
848	SLD 5	0.55	2.77	30.19	-0.042	3.2838	-0.9669
848	SLD 6	0.4	3.17	29.98	-0.0431	3.2658	-1.1087
848	SLD 7	1.94	-2.2	32.27	-0.0319	3.4976	0.7648
848	SLD 8	1.78	-1.79	32.06	-0.033	3.4796	0.623
848	SLD 9	-0.34	2.56	35.28	-0.0501	3.6563	-0.8966
848	SLD 10	-0.5	2.97	35.08	-0.0512	3.6383	-1.0384
848	SLD 11	1.04	-2.4	37.36	-0.04	3.8701	0.8352
848	SLD 12	0.88	-1.99	37.15	-0.0411	3.8521	0.6933
848	SLD 13	-0.86	0.48	42.01	-0.0558	4.1705	-0.1709
848	SLD 14	-1.11	1.1	41.69	-0.0574	4.1429	-0.3879
848	SLD 15	-0.45	-1.01	42.63	-0.0527	4.2346	0.3487
848	SLD 16	-0.69	-0.39	42.31	-0.0544	4.2071	0.1317
848	SLV 1	4.02	2.16	13.46	-0.0114	2.0737	-0.7519
848	SLV 2	3.46	3.61	12.72	-0.0153	2.0096	-1.2573
848	SLV 3	4.98	-1.24	14.89	-0.0045	2.221	0.4338
848	SLV 4	4.42	0.21	14.15	-0.0084	2.1569	-0.0716
848	SLV 5	0.36	5.82	25.56	-0.0423	2.9072	-2.033
848	SLV 6	0	6.75	25.09	-0.0448	2.866	-2.3578
848	SLV 7	3.54	-5.5	30.34	-0.0193	3.3983	1.9192
848	SLV 8	3.18	-4.57	29.86	-0.0218	3.3571	1.5944
848	SLV 9	-1.74	5.34	37.48	-0.0613	3.7788	-1.868
848	SLV 10	-2.1	6.28	37.01	-0.0638	3.7376	-2.1928
848	SLV 11	1.44	-5.98	42.26	-0.0383	4.2699	2.0842
848	SLV 12	1.08	-5.05	41.78	-0.0408	4.2287	1.7594
848	SLV 13	-2.98	0.56	53.19	-0.0747	4.9789	-0.2019
848	SLV 14	-3.54	2.01	52.46	-0.0786	4.9148	-0.7073
848	SLV 15	-2.02	-2.84	54.62	-0.0678	5.1263	0.9837
848	SLV 16	-2.59	-1.39	53.89	-0.0717	5.0622	0.4783
848	CRTFP Ux+	0	0	0	0	0	0
848	CRTFP Ux-	0	0	0	0	0	0
848	CRTFP Uy+	0	0	0	0	0	0
848	CRTFP Uy-	0	0	0	0	0	0
850	SLU 1	1.39	0.16	63.23	0.0285	0.429	-0.0085
850	SLU 2	1.38	0.13	63.22	0.0285	0.4384	-0.0078
850	SLU 3	1.43	0.17	64.66	0.0292	0.4421	-0.0087
850	SLU 4	1.42	0.15	64.65	0.0292	0.4477	-0.0082
850	SLU 5	1.4	0.12	64.11	0.0289	0.4457	-0.008
850	SLU 6	1.46	0.17	65.55	0.0296	0.4494	-0.0089
850	SLU 7	1.45	0.15	65.54	0.0296	0.455	-0.0085
850	SLU 8	1.45	0.15	65.01	0.0293	0.4438	-0.009
850	SLU 9	1.44	0.13	65	0.0293	0.4494	-0.0085
850	SLU 10	1.46	0.24	70.78	0.0322	0.5043	-0.0084
850	SLU 11	1.51	0.28	72.22	0.0329	0.508	-0.0093
850	SLU 12	1.5	0.26	72.21	0.0329	0.5136	-0.0089

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
850	SLU 13	1.48	0.23	71.67	0.0326	0.5116	-0.0086
850	SLU 14	1.54	0.28	73.11	0.0332	0.5153	-0.0095
850	SLU 15	1.53	0.26	73.11	0.0333	0.5209	-0.0091
850	SLU 16	1.53	0.26	72.57	0.0329	0.5097	-0.0096
850	SLU 17	1.52	0.24	72.57	0.0329	0.5153	-0.0092
850	SLU 18	1.51	0.32	74.03	0.0338	0.5232	-0.0094
850	SLU 19	1.5	0.3	74.02	0.0338	0.5288	-0.0089
850	SLU 20	1.54	0.32	74.92	0.0341	0.5306	-0.0096
850	SLU 21	1.53	0.3	74.92	0.0341	0.5362	-0.0092
850	SLU 22	1.51	0.3	70.87	0.0326	0.4945	-0.0089
850	SLU 23	1.49	0.26	70.86	0.0326	0.5038	-0.0082
850	SLU 24	1.54	0.31	72.3	0.0333	0.5075	-0.0091
850	SLU 25	1.53	0.29	72.3	0.0333	0.5131	-0.0087
850	SLU 26	1.52	0.26	71.76	0.033	0.5112	-0.0084
850	SLU 27	1.57	0.3	73.2	0.0336	0.5149	-0.0093
850	SLU 28	1.56	0.28	73.19	0.0336	0.5205	-0.0089
850	SLU 29	1.56	0.29	72.66	0.0333	0.5092	-0.0094
850	SLU 30	1.55	0.27	72.65	0.0333	0.5148	-0.009
850	SLU 31	1.57	0.38	78.43	0.0363	0.5697	-0.0088
850	SLU 32	1.62	0.42	79.87	0.0369	0.5734	-0.0097
850	SLU 33	1.61	0.4	79.86	0.037	0.579	-0.0093
850	SLU 34	1.6	0.37	79.32	0.0366	0.5771	-0.0091
850	SLU 35	1.65	0.42	80.76	0.0373	0.5808	-0.01
850	SLU 36	1.64	0.4	80.75	0.0373	0.5864	-0.0095
850	SLU 37	1.64	0.4	80.22	0.037	0.5751	-0.01
850	SLU 38	1.63	0.38	80.21	0.037	0.5807	-0.0096
850	SLU 39	1.62	0.46	81.68	0.0378	0.5886	-0.0098
850	SLU 40	1.61	0.44	81.67	0.0378	0.5942	-0.0094
850	SLU 41	1.65	0.46	82.57	0.0382	0.596	-0.01
850	SLU 42	1.64	0.44	82.56	0.0382	0.6016	-0.0096
850	SLU 43	1.77	0.16	79.57	0.0357	0.5353	-0.0109
850	SLU 44	1.76	0.13	79.56	0.0357	0.5446	-0.0102
850	SLU 45	1.81	0.17	81	0.0364	0.5483	-0.0111
850	SLU 46	1.8	0.15	81	0.0364	0.5539	-0.0106
850	SLU 47	1.78	0.12	80.46	0.0361	0.552	-0.0104
850	SLU 48	1.84	0.17	81.89	0.0368	0.5557	-0.0113
850	SLU 49	1.83	0.15	81.89	0.0368	0.5613	-0.0109
850	SLU 50	1.83	0.15	81.36	0.0364	0.5501	-0.0114
850	SLU 51	1.82	0.13	81.35	0.0364	0.5557	-0.0109
850	SLU 52	1.84	0.24	87.13	0.0394	0.6105	-0.0108
850	SLU 53	1.89	0.28	88.57	0.0401	0.6142	-0.0117
850	SLU 54	1.88	0.26	88.56	0.0401	0.6198	-0.0113
850	SLU 55	1.86	0.24	88.02	0.0397	0.6179	-0.011
850	SLU 56	1.92	0.28	89.46	0.0404	0.6216	-0.0119
850	SLU 57	1.91	0.26	89.45	0.0404	0.6272	-0.0115
850	SLU 58	1.91	0.27	88.92	0.0401	0.616	-0.012
850	SLU 59	1.9	0.24	88.91	0.0401	0.6216	-0.0116
850	SLU 60	1.89	0.32	90.38	0.041	0.6295	-0.0118
850	SLU 61	1.88	0.3	90.37	0.041	0.6351	-0.0113
850	SLU 62	1.91	0.32	91.27	0.0413	0.6368	-0.012
850	SLU 63	1.9	0.3	91.26	0.0413	0.6424	-0.0116
850	SLU 64	1.88	0.3	87.22	0.0398	0.6007	-0.0113
850	SLU 65	1.87	0.26	87.21	0.0398	0.6101	-0.0106
850	SLU 66	1.92	0.31	88.65	0.0405	0.6138	-0.0115
850	SLU 67	1.91	0.29	88.64	0.0405	0.6194	-0.0111
850	SLU 68	1.9	0.26	88.1	0.0401	0.6174	-0.0108
850	SLU 69	1.95	0.31	89.54	0.0408	0.6211	-0.0117
850	SLU 70	1.94	0.28	89.54	0.0408	0.6267	-0.0113
850	SLU 71	1.94	0.29	89	0.0405	0.6155	-0.0118
850	SLU 72	1.93	0.27	89	0.0405	0.6211	-0.0114
850	SLU 73	1.95	0.38	94.77	0.0434	0.676	-0.0112
850	SLU 74	2	0.42	96.21	0.0441	0.6797	-0.0121
850	SLU 75	1.99	0.4	96.21	0.0441	0.6853	-0.0117
850	SLU 76	1.98	0.37	95.66	0.0438	0.6833	-0.0115
850	SLU 77	2.03	0.42	97.1	0.0445	0.6871	-0.0124
850	SLU 78	2.02	0.4	97.1	0.0445	0.6927	-0.0119
850	SLU 79	2.02	0.4	96.57	0.0442	0.6814	-0.0124
850	SLU 80	2.01	0.38	96.56	0.0442	0.687	-0.012
850	SLU 81	2	0.46	98.02	0.045	0.6949	-0.0122
850	SLU 82	1.99	0.44	98.02	0.045	0.7005	-0.0118
850	SLU 83	2.03	0.46	98.92	0.0454	0.7023	-0.0124
850	SLU 84	2.02	0.44	98.91	0.0454	0.7079	-0.012
850	SLE RA 1	1.43	0.2	65.41	0.0297	0.4477	-0.0086
850	SLE RA 2	1.41	0.18	65.41	0.0297	0.4539	-0.0081
850	SLE RA 3	1.45	0.21	66.36	0.0302	0.4564	-0.0087
850	SLE RA 4	1.44	0.19	66.36	0.0302	0.4601	-0.0084
850	SLE RA 5	1.43	0.17	66	0.0299	0.4589	-0.0083
850	SLE RA 6	1.47	0.2	66.96	0.0304	0.4613	-0.0089
850	SLE RA 7	1.46	0.19	66.96	0.0304	0.4651	-0.0086
850	SLE RA 8	1.46	0.19	66.6	0.0302	0.4576	-0.0089
850	SLE RA 9	1.46	0.18	66.6	0.0302	0.4613	-0.0086
850	SLE RA 10	1.47	0.25	70.45	0.0321	0.4979	-0.0085
850	SLE RA 11	1.5	0.28	71.41	0.0326	0.5004	-0.0091
850	SLE RA 12	1.5	0.27	71.4	0.0326	0.5041	-0.0089
850	SLE RA 13	1.49	0.25	71.04	0.0324	0.5028	-0.0087
850	SLE RA 14	1.52	0.28	72	0.0328	0.5053	-0.0093
850	SLE RA 15	1.52	0.27	72	0.0328	0.509	-0.009
850	SLE RA 16	1.52	0.27	71.64	0.0326	0.5015	-0.0093
850	SLE RA 17	1.51	0.26	71.64	0.0326	0.5052	-0.0091
850	SLE RA 18	1.5	0.31	72.61	0.0332	0.5105	-0.0092
850	SLE RA 19	1.5	0.29	72.61	0.0332	0.5142	-0.0089
850	SLE RA 20	1.52	0.3	73.21	0.0334	0.5154	-0.0094
850	SLE RA 21	1.51	0.29	73.2	0.0334	0.5191	-0.0091
850	SLE FR 1	1.43	0.2	65.41	0.0297	0.4477	-0.0086
850	SLE FR 2	1.42	0.19	65.41	0.0297	0.449	-0.0085
850	SLE FR 3	1.43	0.2	65.65	0.0298	0.4497	-0.0087
850	SLE FR 4	1.45	0.23	67.57	0.0308	0.4678	-0.0087

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
850	SLE FR 5	1.46	0.23	67.81	0.0308	0.4685	-0.0088
850	SLE FR 6	1.46	0.25	69.01	0.0314	0.4791	-0.0089
850	SLE QP 1	1.43	0.2	65.41	0.0297	0.4477	-0.0086
850	SLE QP 2	1.45	0.23	67.57	0.0308	0.4666	-0.0088
850	SLD 1	6.7	1.14	62.75	0.0166	0.4029	-0.0398
850	SLD 2	6.29	1.59	62.26	0.0132	0.4141	-0.0287
850	SLD 3	7.09	-0.46	63.21	0.0276	0.4348	-0.0468
850	SLD 4	6.68	-0.01	62.73	0.0242	0.4461	-0.0358
850	SLD 5	2.5	2.85	65.5	0.0105	0.397	-0.0093
850	SLD 6	2.24	3.15	65.19	0.0082	0.4044	-0.0021
850	SLD 7	3.8	-2.49	67.06	0.047	0.5035	-0.0328
850	SLD 8	3.54	-2.19	66.74	0.0448	0.5108	-0.0256
850	SLD 9	-0.64	2.66	68.4	0.0167	0.4223	0.008
850	SLD 10	-0.91	2.95	68.09	0.0145	0.4296	0.0153
850	SLD 11	0.66	-2.69	69.96	0.0533	0.5287	-0.0154
850	SLD 12	0.39	-2.39	69.64	0.051	0.5361	-0.0082
850	SLD 13	-3.78	0.48	72.42	0.0373	0.487	0.0182
850	SLD 14	-4.19	0.92	71.93	0.0339	0.4983	0.0292
850	SLD 15	-3.39	-1.13	72.88	0.0483	0.519	0.0112
850	SLD 16	-3.8	-0.68	72.4	0.0449	0.5302	0.0222
850	SLV 1	13.73	2.31	56.27	-0.002	0.3161	-0.0813
850	SLV 2	12.78	3.35	55.14	-0.0099	0.3424	-0.0556
850	SLV 3	14.64	-1.34	57.35	0.0229	0.389	-0.0977
850	SLV 4	13.69	-0.29	56.22	0.015	0.4153	-0.072
850	SLV 5	3.92	6.21	62.74	-0.0155	0.3063	-0.01
850	SLV 6	3.3	6.88	62.01	-0.0205	0.3232	0.0065
850	SLV 7	6.95	-5.95	66.33	0.0675	0.5494	-0.0648
850	SLV 8	6.34	-5.28	65.61	0.0624	0.5662	-0.0483
850	SLV 9	-3.44	5.74	69.54	-0.0009	0.3669	0.0307
850	SLV 10	-4.05	6.41	68.81	-0.006	0.3837	0.0473
850	SLV 11	-0.41	-6.42	73.13	0.082	0.6099	-0.0241
850	SLV 12	-1.02	-5.75	72.4	0.077	0.6268	-0.0076
850	SLV 13	-10.79	0.76	78.93	0.0465	0.5178	0.0545
850	SLV 14	-11.74	1.8	77.8	0.0386	0.5441	0.0802
850	SLV 15	-9.88	-2.89	80.01	0.0714	0.5908	0.038
850	SLV 16	-10.83	-1.85	78.87	0.0635	0.617	0.0637
850	CRTFP Ux+	0	0	0	0	0	0
850	CRTFP Ux-	0	0	0	0	0	0
850	CRTFP Uy+	0	0	0	0	0	0
850	CRTFP Uy-	0	0	0	0	0	0
853	SLU 1	-1.29	-0.82	64.33	0.0068	-0.5346	0.0203
853	SLU 2	-1.32	-0.9	64.39	0.0067	-0.5402	0.0206
853	SLU 3	-1.33	-0.83	65.88	0.0067	-0.5496	0.0207
853	SLU 4	-1.34	-0.87	65.91	0.0066	-0.5529	0.021
853	SLU 5	-1.34	-0.91	65.36	0.0065	-0.5473	0.0208
853	SLU 6	-1.35	-0.83	66.85	0.0065	-0.5567	0.0209
853	SLU 7	-1.36	-0.88	66.88	0.0064	-0.5601	0.0212
853	SLU 8	-1.33	-0.83	66.28	0.0063	-0.5488	0.0207
853	SLU 9	-1.35	-0.88	66.31	0.0063	-0.5522	0.0209
853	SLU 10	-1.42	-0.92	72.28	0.0069	-0.6256	0.0242
853	SLU 11	-1.43	-0.85	73.78	0.0069	-0.6349	0.0243
853	SLU 12	-1.45	-0.9	73.81	0.0069	-0.6383	0.0245
853	SLU 13	-1.44	-0.93	73.25	0.0067	-0.6327	0.0244
853	SLU 14	-1.45	-0.86	74.75	0.0067	-0.6421	0.0245
853	SLU 15	-1.47	-0.91	74.78	0.0067	-0.6455	0.0247
853	SLU 16	-1.44	-0.86	74.17	0.0066	-0.6342	0.0242
853	SLU 17	-1.45	-0.91	74.2	0.0065	-0.6376	0.0244
853	SLU 18	-1.44	-0.85	75.62	0.0071	-0.6566	0.0254
853	SLU 19	-1.46	-0.9	75.65	0.0071	-0.66	0.0256
853	SLU 20	-1.46	-0.86	76.59	0.0069	-0.6637	0.0256
853	SLU 21	-1.48	-0.91	76.62	0.0069	-0.6671	0.0258
853	SLU 22	-1.42	-0.79	72.29	0.0075	-0.6132	0.0227
853	SLU 23	-1.44	-0.87	72.34	0.0074	-0.6188	0.0231
853	SLU 24	-1.45	-0.8	73.84	0.0074	-0.6282	0.0232
853	SLU 25	-1.47	-0.85	73.87	0.0073	-0.6316	0.0234
853	SLU 26	-1.46	-0.88	73.31	0.0072	-0.626	0.0233
853	SLU 27	-1.47	-0.81	74.81	0.0072	-0.6353	0.0234
853	SLU 28	-1.49	-0.86	74.84	0.0071	-0.6387	0.0236
853	SLU 29	-1.46	-0.81	74.23	0.007	-0.6274	0.0231
853	SLU 30	-1.47	-0.86	74.26	0.007	-0.6308	0.0233
853	SLU 31	-1.54	-0.9	80.24	0.0077	-0.7042	0.0266
853	SLU 32	-1.55	-0.83	81.73	0.0077	-0.7136	0.0268
853	SLU 33	-1.57	-0.87	81.77	0.0076	-0.717	0.027
853	SLU 34	-1.56	-0.91	81.21	0.0074	-0.7114	0.0268
853	SLU 35	-1.57	-0.83	82.7	0.0074	-0.7207	0.027
853	SLU 36	-1.59	-0.88	82.74	0.0074	-0.7241	0.0272
853	SLU 37	-1.56	-0.83	82.13	0.0073	-0.7128	0.0267
853	SLU 38	-1.58	-0.88	82.16	0.0072	-0.7162	0.0269
853	SLU 39	-1.57	-0.83	83.57	0.0079	-0.7352	0.0278
853	SLU 40	-1.58	-0.88	83.6	0.0078	-0.7386	0.028
853	SLU 41	-1.59	-0.84	84.54	0.0076	-0.7423	0.028
853	SLU 42	-1.6	-0.88	84.57	0.0076	-0.7457	0.0282
853	SLU 43	-1.64	-1.07	80.91	0.0086	-0.668	0.0255
853	SLU 44	-1.66	-1.15	80.96	0.0085	-0.6736	0.0259
853	SLU 45	-1.67	-1.08	82.45	0.0085	-0.683	0.026
853	SLU 46	-1.69	-1.13	82.49	0.0084	-0.6864	0.0262
853	SLU 47	-1.68	-1.16	81.93	0.0082	-0.6808	0.0261
853	SLU 48	-1.69	-1.09	83.42	0.0082	-0.6901	0.0262
853	SLU 49	-1.71	-1.13	83.46	0.0082	-0.6935	0.0264
853	SLU 50	-1.68	-1.09	82.85	0.0081	-0.6822	0.0259
853	SLU 51	-1.7	-1.13	82.88	0.008	-0.6856	0.0261
853	SLU 52	-1.77	-1.18	88.86	0.0087	-0.759	0.0294
853	SLU 53	-1.78	-1.1	90.35	0.0087	-0.7684	0.0295
853	SLU 54	-1.79	-1.15	90.38	0.0087	-0.7718	0.0298
853	SLU 55	-1.79	-1.18	89.83	0.0085	-0.7662	0.0296
853	SLU 56	-1.8	-1.11	91.32	0.0085	-0.7755	0.0298
853	SLU 57	-1.81	-1.16	91.35	0.0084	-0.7789	0.03

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
853	SLU 58	-1.78	-1.11	90.75	0.0084	-0.7676	0.0295
853	SLU 59	-1.8	-1.16	90.78	0.0083	-0.771	0.0297
853	SLU 60	-1.79	-1.11	92.19	0.0089	-0.79	0.0306
853	SLU 61	-1.8	-1.15	92.22	0.0089	-0.7934	0.0308
853	SLU 62	-1.81	-1.11	93.16	0.0087	-0.7971	0.0308
853	SLU 63	-1.82	-1.16	93.19	0.0087	-0.8005	0.031
853	SLU 64	-1.76	-1.05	88.86	0.0093	-0.7466	0.028
853	SLU 65	-1.79	-1.13	88.92	0.0092	-0.7523	0.0283
853	SLU 66	-1.8	-1.06	90.41	0.0092	-0.7616	0.0284
853	SLU 67	-1.81	-1.1	90.44	0.0091	-0.765	0.0286
853	SLU 68	-1.81	-1.14	89.89	0.009	-0.7594	0.0285
853	SLU 69	-1.82	-1.06	91.38	0.009	-0.7687	0.0286
853	SLU 70	-1.83	-1.11	91.41	0.0089	-0.7721	0.0288
853	SLU 71	-1.8	-1.06	90.8	0.0088	-0.7608	0.0284
853	SLU 72	-1.82	-1.11	90.84	0.0088	-0.7642	0.0286
853	SLU 73	-1.89	-1.15	96.81	0.0095	-0.8377	0.0319
853	SLU 74	-1.9	-1.08	98.31	0.0094	-0.847	0.032
853	SLU 75	-1.91	-1.13	98.34	0.0094	-0.8504	0.0322
853	SLU 76	-1.91	-1.16	97.78	0.0092	-0.8448	0.0321
853	SLU 77	-1.92	-1.09	99.28	0.0092	-0.8541	0.0322
853	SLU 78	-1.94	-1.14	99.31	0.0092	-0.8575	0.0324
853	SLU 79	-1.91	-1.09	98.7	0.0091	-0.8462	0.0319
853	SLU 80	-1.92	-1.14	98.73	0.009	-0.8496	0.0321
853	SLU 81	-1.91	-1.08	100.14	0.0097	-0.8686	0.033
853	SLU 82	-1.93	-1.13	100.18	0.0096	-0.872	0.0333
853	SLU 83	-1.93	-1.09	101.11	0.0094	-0.8757	0.0333
853	SLU 84	-1.95	-1.14	101.15	0.0094	-0.8791	0.0335
853	SLE RA 1	-1.33	-0.81	66.61	0.007	-0.557	0.021
853	SLE RA 2	-1.35	-0.86	66.64	0.0069	-0.5608	0.0212
853	SLE RA 3	-1.35	-0.82	67.64	0.0069	-0.567	0.0213
853	SLE RA 4	-1.36	-0.85	67.66	0.0069	-0.5693	0.0214
853	SLE RA 5	-1.36	-0.87	67.29	0.0068	-0.5655	0.0213
853	SLE RA 6	-1.37	-0.82	68.29	0.0068	-0.5718	0.0214
853	SLE RA 7	-1.38	-0.85	68.31	0.0067	-0.574	0.0216
853	SLE RA 8	-1.36	-0.82	67.9	0.0067	-0.5665	0.0212
853	SLE RA 9	-1.37	-0.85	67.92	0.0066	-0.5688	0.0214
853	SLE RA 10	-1.41	-0.88	71.91	0.0071	-0.6177	0.0236
853	SLE RA 11	-1.42	-0.83	72.9	0.0071	-0.624	0.0237
853	SLE RA 12	-1.43	-0.86	72.92	0.0071	-0.6262	0.0238
853	SLE RA 13	-1.43	-0.89	72.55	0.0069	-0.6225	0.0237
853	SLE RA 14	-1.43	-0.84	73.55	0.0069	-0.6287	0.0238
853	SLE RA 15	-1.44	-0.87	73.57	0.0069	-0.631	0.0239
853	SLE RA 16	-1.43	-0.84	73.17	0.0068	-0.6235	0.0236
853	SLE RA 17	-1.44	-0.87	73.19	0.0068	-0.6257	0.0238
853	SLE RA 18	-1.43	-0.83	74.13	0.0072	-0.6384	0.0244
853	SLE RA 19	-1.44	-0.87	74.15	0.0072	-0.6406	0.0245
853	SLE RA 20	-1.44	-0.84	74.78	0.0071	-0.6431	0.0245
853	SLE RA 21	-1.45	-0.87	74.8	0.007	-0.6454	0.0246
853	SLE FR 1	-1.33	-0.81	66.61	0.007	-0.557	0.021
853	SLE FR 2	-1.33	-0.82	66.61	0.007	-0.5578	0.021
853	SLE FR 3	-1.33	-0.81	66.87	0.0069	-0.5589	0.021
853	SLE FR 4	-1.36	-0.83	68.87	0.007	-0.5822	0.022
853	SLE FR 5	-1.36	-0.82	69.12	0.007	-0.5833	0.022
853	SLE FR 6	-1.38	-0.82	70.37	0.0071	-0.5977	0.0227
853	SLE QP 1	-1.33	-0.81	66.61	0.007	-0.557	0.021
853	SLE QP 2	-1.36	-0.82	68.86	0.0071	-0.5814	0.022
853	SLD 1	4.03	-0.39	72.26	0.0198	-0.6448	-0.0064
853	SLD 2	3.62	-0.81	72.86	0.0207	-0.6355	0.0052
853	SLD 3	4.42	-2.18	72.85	0.0264	-0.7099	-0.0137
853	SLD 4	4.01	-2.61	73.45	0.0273	-0.7006	-0.0022
853	SLD 5	-0.25	2.11	68.88	0.0007	-0.5033	0.0226
853	SLD 6	-0.52	1.83	69.27	0.0013	-0.4972	0.0301
853	SLD 7	1.03	-3.88	70.85	0.0227	-0.7204	-0.0019
853	SLD 8	0.76	-4.16	71.25	0.0233	-0.7144	0.0056
853	SLD 9	-3.48	2.52	66.48	-0.0092	-0.4485	0.0383
853	SLD 10	-3.75	2.24	66.87	-0.0086	-0.4424	0.0459
853	SLD 11	-2.2	-3.47	68.46	0.0128	-0.6657	0.0138
853	SLD 12	-2.46	-3.75	68.85	0.0134	-0.6596	0.0214
853	SLD 13	-6.73	0.97	64.28	-0.0132	-0.4623	0.0461
853	SLD 14	-7.13	0.55	64.87	-0.0123	-0.4529	0.0577
853	SLD 15	-6.34	-0.82	64.87	-0.0066	-0.5274	0.0388
853	SLD 16	-6.75	-1.25	65.47	-0.0057	-0.5181	0.0503
853	SLV 1	11.25	0.12	76.85	0.037	-0.7328	-0.0444
853	SLV 2	10.3	-0.87	78.24	0.0393	-0.7111	-0.0174
853	SLV 3	12.15	-3.94	78.2	0.0521	-0.8804	-0.0615
853	SLV 4	11.2	-4.93	79.59	0.0543	-0.8587	-0.0346
853	SLV 5	1.22	5.8	68.97	-0.0072	-0.4067	0.0235
853	SLV 6	0.61	5.16	69.87	-0.0058	-0.3927	0.0408
853	SLV 7	4.22	-7.75	73.47	0.043	-0.8987	-0.0337
853	SLV 8	3.61	-8.39	74.37	0.0445	-0.8848	-0.0164
853	SLV 9	-6.32	6.75	63.36	-0.0304	-0.2781	0.0604
853	SLV 10	-6.94	6.12	64.25	-0.0289	-0.2642	0.0777
853	SLV 11	-3.33	-6.8	67.86	0.0199	-0.7701	0.0032
853	SLV 12	-3.94	-7.43	68.76	0.0213	-0.7562	0.0205
853	SLV 13	-13.91	3.3	58.14	-0.0402	-0.3042	0.0785
853	SLV 14	-14.86	2.31	59.53	-0.038	-0.2825	0.1055
853	SLV 15	-13.02	-0.77	59.49	-0.0251	-0.4518	0.0614
853	SLV 16	-13.97	-1.76	60.88	-0.0229	-0.4301	0.0883
853	CRTFP Ux+	0	0	0	0	0	0
853	CRTFP Ux-	0	0	0	0	0	0
853	CRTFP Uy+	0	0	0	0	0	0
853	CRTFP Uy-	0	0	0	0	0	0
856	SLU 1	0.24	0.69	55.17	0.0448	0.8353	0.0317
856	SLU 2	0.22	0.63	55.18	0.0453	0.8339	0.0321
856	SLU 3	0.25	0.73	56.44	0.046	0.8586	0.0326
856	SLU 4	0.24	0.69	56.44	0.0463	0.8578	0.0328
856	SLU 5	0.23	0.64	55.91	0.0459	0.8471	0.0325

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
856	SLU 6	0.26	0.74	57.17	0.0466	0.8718	0.0329
856	SLU 7	0.25	0.7	57.17	0.0469	0.871	0.0332
856	SLU 8	0.26	0.72	56.64	0.0459	0.8616	0.0325
856	SLU 9	0.25	0.68	56.64	0.0462	0.8608	0.0327
856	SLU 10	0.25	0.75	62.49	0.0506	0.9659	0.0375
856	SLU 11	0.28	0.84	63.75	0.0513	0.9906	0.038
856	SLU 12	0.27	0.81	63.75	0.0516	0.9898	0.0382
856	SLU 13	0.26	0.76	63.22	0.0512	0.979	0.0379
856	SLU 14	0.29	0.85	64.48	0.0519	1.0037	0.0384
856	SLU 15	0.28	0.82	64.48	0.0522	1.0029	0.0386
856	SLU 16	0.29	0.83	63.95	0.0513	0.9935	0.0379
856	SLU 17	0.28	0.79	63.95	0.0516	0.9927	0.0382
856	SLU 18	0.29	0.86	65.61	0.0524	1.0237	0.0395
856	SLU 19	0.28	0.82	65.62	0.0527	1.023	0.0397
856	SLU 20	0.3	0.87	66.35	0.053	1.0369	0.0399
856	SLU 21	0.29	0.83	66.35	0.0533	1.0361	0.0401
856	SLU 22	0.28	0.91	62.25	0.0511	0.9648	0.0365
856	SLU 23	0.26	0.84	62.26	0.0516	0.9635	0.0368
856	SLU 24	0.29	0.94	63.52	0.0523	0.9882	0.0373
856	SLU 25	0.28	0.9	63.52	0.0526	0.9874	0.0375
856	SLU 26	0.27	0.86	62.99	0.0522	0.9767	0.0372
856	SLU 27	0.3	0.95	64.25	0.0528	1.0014	0.0377
856	SLU 28	0.29	0.92	64.25	0.0532	1.0006	0.0379
856	SLU 29	0.3	0.93	63.72	0.0522	0.9912	0.0372
856	SLU 30	0.29	0.89	63.72	0.0525	0.9904	0.0375
856	SLU 31	0.3	0.96	69.57	0.0569	1.0954	0.0423
856	SLU 32	0.32	1.06	70.83	0.0576	1.1201	0.0427
856	SLU 33	0.31	1.02	70.83	0.0579	1.1193	0.0429
856	SLU 34	0.31	0.97	70.3	0.0575	1.1086	0.0426
856	SLU 35	0.33	1.07	71.56	0.0582	1.1333	0.0431
856	SLU 36	0.32	1.03	71.56	0.0585	1.1325	0.0433
856	SLU 37	0.33	1.04	71.03	0.0576	1.1231	0.0427
856	SLU 38	0.32	1.01	71.03	0.0579	1.1223	0.0429
856	SLU 39	0.33	1.07	72.69	0.0587	1.1533	0.0442
856	SLU 40	0.32	1.03	72.7	0.059	1.1525	0.0444
856	SLU 41	0.34	1.08	73.43	0.0593	1.1665	0.0446
856	SLU 42	0.33	1.05	73.43	0.0596	1.1657	0.0448
856	SLU 43	0.29	0.83	69.29	0.0561	1.0414	0.0396
856	SLU 44	0.28	0.77	69.3	0.0566	1.0401	0.04
856	SLU 45	0.3	0.86	70.56	0.0573	1.0648	0.0405
856	SLU 46	0.29	0.83	70.56	0.0576	1.064	0.0407
856	SLU 47	0.29	0.78	70.04	0.0571	1.0533	0.0404
856	SLU 48	0.31	0.87	71.3	0.0578	1.078	0.0408
856	SLU 49	0.3	0.84	71.3	0.0581	1.0772	0.0411
856	SLU 50	0.32	0.85	70.76	0.0572	1.0678	0.0404
856	SLU 51	0.3	0.81	70.77	0.0575	1.067	0.0406
856	SLU 52	0.31	0.88	76.61	0.0619	1.172	0.0454
856	SLU 53	0.34	0.98	77.87	0.0626	1.1967	0.0459
856	SLU 54	0.33	0.94	77.87	0.0629	1.1959	0.0461
856	SLU 55	0.32	0.89	77.35	0.0625	1.1852	0.0458
856	SLU 56	0.35	0.99	78.61	0.0632	1.2099	0.0463
856	SLU 57	0.34	0.95	78.61	0.0635	1.2091	0.0465
856	SLU 58	0.35	0.97	78.07	0.0626	1.1997	0.0458
856	SLU 59	0.34	0.93	78.08	0.0629	1.1989	0.0461
856	SLU 60	0.34	0.99	79.74	0.0637	1.2299	0.0474
856	SLU 61	0.33	0.95	79.74	0.064	1.2291	0.0476
856	SLU 62	0.35	1	80.47	0.0643	1.2431	0.0478
856	SLU 63	0.34	0.97	80.48	0.0646	1.2423	0.048
856	SLU 64	0.34	1.04	76.37	0.0623	1.171	0.0444
856	SLU 65	0.32	0.98	76.38	0.0629	1.1697	0.0447
856	SLU 66	0.35	1.08	77.64	0.0635	1.1944	0.0452
856	SLU 67	0.34	1.04	77.64	0.0639	1.1936	0.0454
856	SLU 68	0.33	0.99	77.11	0.0634	1.1828	0.0451
856	SLU 69	0.36	1.09	78.37	0.0641	1.2075	0.0456
856	SLU 70	0.35	1.05	78.38	0.0644	1.2067	0.0458
856	SLU 71	0.36	1.07	77.84	0.0635	1.1973	0.0451
856	SLU 72	0.35	1.03	77.85	0.0638	1.1965	0.0454
856	SLU 73	0.35	1.09	83.69	0.0682	1.3016	0.0502
856	SLU 74	0.38	1.19	84.95	0.0689	1.3263	0.0506
856	SLU 75	0.37	1.15	84.95	0.0692	1.3255	0.0508
856	SLU 76	0.36	1.11	84.42	0.0688	1.3148	0.0505
856	SLU 77	0.39	1.2	85.68	0.0695	1.3395	0.051
856	SLU 78	0.38	1.17	85.69	0.0698	1.3387	0.0512
856	SLU 79	0.39	1.18	85.15	0.0688	1.3293	0.0506
856	SLU 80	0.38	1.14	85.16	0.0691	1.3285	0.0508
856	SLU 81	0.38	1.21	86.82	0.07	1.3595	0.0521
856	SLU 82	0.37	1.17	86.82	0.0703	1.3587	0.0523
856	SLU 83	0.39	1.22	87.55	0.0705	1.3726	0.0525
856	SLU 84	0.38	1.18	87.55	0.0709	1.3718	0.0527
856	SLE RA 1	0.25	0.75	57.19	0.0466	0.8723	0.0331
856	SLE RA 2	0.24	0.71	57.2	0.0469	0.8714	0.0333
856	SLE RA 3	0.26	0.78	58.04	0.0474	0.8879	0.0336
856	SLE RA 4	0.25	0.75	58.04	0.0476	0.8873	0.0338
856	SLE RA 5	0.24	0.72	57.69	0.0473	0.8802	0.0336
856	SLE RA 6	0.26	0.79	58.53	0.0478	0.8966	0.0339
856	SLE RA 7	0.26	0.76	58.53	0.048	0.8961	0.034
856	SLE RA 8	0.26	0.77	58.17	0.0473	0.8898	0.0336
856	SLE RA 9	0.26	0.75	58.18	0.0476	0.8893	0.0338
856	SLE RA 10	0.26	0.79	62.07	0.0505	0.9594	0.0369
856	SLE RA 11	0.28	0.85	62.91	0.0509	0.9758	0.0372
856	SLE RA 12	0.27	0.83	62.91	0.0511	0.9753	0.0374
856	SLE RA 13	0.27	0.8	62.56	0.0509	0.9681	0.0372
856	SLE RA 14	0.28	0.86	63.4	0.0513	0.9846	0.0375
856	SLE RA 15	0.28	0.84	63.4	0.0515	0.9841	0.0377
856	SLE RA 16	0.29	0.85	63.05	0.0509	0.9778	0.0372
856	SLE RA 17	0.28	0.82	63.05	0.0511	0.9773	0.0374
856	SLE RA 18	0.28	0.86	64.15	0.0517	0.9979	0.0383

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
856	SLE RA 19	0.27	0.84	64.16	0.0519	0.9974	0.0384
856	SLE RA 20	0.29	0.87	64.64	0.052	1.0067	0.0385
856	SLE RA 21	0.28	0.85	64.65	0.0522	1.0062	0.0387
856	SLE FR 1	0.25	0.75	57.19	0.0466	0.8723	0.0331
856	SLE FR 2	0.25	0.75	57.19	0.0466	0.8721	0.0331
856	SLE FR 3	0.25	0.76	57.39	0.0467	0.8758	0.0332
856	SLE FR 4	0.26	0.78	59.28	0.0482	0.9098	0.0347
856	SLE FR 5	0.26	0.79	59.48	0.0483	0.9135	0.0347
856	SLE FR 6	0.27	0.81	60.67	0.0491	0.9351	0.0357
856	SLE QP 1	0.25	0.75	57.19	0.0466	0.8723	0.0331
856	SLE QP 2	0.26	0.79	59.28	0.0481	0.91	0.0346
856	SLD 1	5.53	2.2	62.88	0.0528	0.873	0.0049
856	SLD 2	5.18	2.01	62.72	0.0527	0.8725	0.0155
856	SLD 3	5.89	0.46	63.27	0.0605	0.8576	-0.0019
856	SLD 4	5.54	0.28	63.1	0.0604	0.8572	0.0088
856	SLD 5	1.35	3.88	59.8	0.0379	0.9223	0.0341
856	SLD 6	1.12	3.76	59.69	0.0379	0.922	0.041
856	SLD 7	2.56	-1.91	61.1	0.0634	0.871	0.0116
856	SLD 8	2.34	-2.03	60.99	0.0634	0.8708	0.0185
856	SLD 9	-1.82	3.61	57.57	0.0328	0.9492	0.0507
856	SLD 10	-2.05	3.49	57.47	0.0328	0.9489	0.0577
856	SLD 11	-0.6	-2.18	58.87	0.0583	0.898	0.0283
856	SLD 12	-0.83	-2.3	58.76	0.0583	0.8977	0.0352
856	SLD 13	-5.02	1.3	55.46	0.0358	0.9628	0.0605
856	SLD 14	-5.37	1.11	55.29	0.0357	0.9624	0.0711
856	SLD 15	-4.66	-0.44	55.85	0.0435	0.9474	0.0538
856	SLD 16	-5.01	-0.62	55.68	0.0434	0.947	0.0644
856	SLV 1	12.59	4.02	67.78	0.0595	0.8213	-0.0349
856	SLV 2	11.77	3.59	67.4	0.0594	0.8203	-0.0102
856	SLV 3	13.44	0.09	68.67	0.0769	0.7863	-0.0507
856	SLV 4	12.62	-0.34	68.29	0.0768	0.7853	-0.0259
856	SLV 5	2.81	7.79	60.55	0.0252	0.9367	0.0334
856	SLV 6	2.29	7.52	60.31	0.0251	0.9361	0.0493
856	SLV 7	5.64	-5.31	63.51	0.0831	0.8199	-0.0191
856	SLV 8	5.12	-5.59	63.26	0.0831	0.8193	-0.0032
856	SLV 9	-4.6	7.16	55.3	0.0131	1.0007	0.0724
856	SLV 10	-5.12	6.89	55.05	0.0131	1.0001	0.0884
856	SLV 11	-1.77	-5.94	58.26	0.0711	0.8839	0.0199
856	SLV 12	-2.29	-6.22	58.01	0.071	0.8833	0.0359
856	SLV 13	-12.1	1.92	50.28	0.0194	1.0347	0.0952
856	SLV 14	-12.92	1.49	49.89	0.0193	1.0337	0.12
856	SLV 15	-11.25	-2.02	51.16	0.0368	0.9996	0.0794
856	SLV 16	-12.07	-2.44	50.78	0.0367	0.9986	0.1042
856	CRTFP Ux+	0	0	0	0	0	0
856	CRTFP Ux-	0	0	0	0	0	0
859	SLU 1	0.55	1.65	50.51	0.0568	-0.3093	0.0124
859	SLU 2	0.53	1.61	50.52	0.0573	-0.3082	0.013
859	SLU 3	0.57	1.71	51.65	0.0584	-0.3176	0.0128
859	SLU 4	0.56	1.68	51.65	0.0587	-0.3169	0.0131
859	SLU 5	0.55	1.63	51.21	0.0582	-0.3134	0.0131
859	SLU 6	0.59	1.73	52.34	0.0593	-0.3228	0.0129
859	SLU 7	0.57	1.71	52.34	0.0596	-0.3222	0.0133
859	SLU 8	0.59	1.7	51.9	0.0586	-0.3198	0.0126
859	SLU 9	0.57	1.67	51.9	0.0589	-0.3191	0.013
859	SLU 10	0.61	1.86	57.01	0.0641	-0.3543	0.0168
859	SLU 11	0.65	1.95	58.14	0.0653	-0.3637	0.0166
859	SLU 12	0.63	1.93	58.14	0.0656	-0.3631	0.017
859	SLU 13	0.62	1.88	57.7	0.065	-0.3595	0.0169
859	SLU 14	0.66	1.98	58.83	0.0662	-0.369	0.0167
859	SLU 15	0.65	1.96	58.84	0.0665	-0.3683	0.0171
859	SLU 16	0.66	1.94	58.39	0.0654	-0.3659	0.0165
859	SLU 17	0.65	1.92	58.39	0.0657	-0.3652	0.0168
859	SLU 18	0.66	2	59.79	0.0665	-0.3752	0.0178
859	SLU 19	0.65	1.98	59.79	0.0668	-0.3745	0.0182
859	SLU 20	0.68	2.03	60.48	0.0674	-0.3804	0.0179
859	SLU 21	0.66	2	60.48	0.0677	-0.3797	0.0183
859	SLU 22	0.63	1.97	56.87	0.0647	-0.3587	0.0155
859	SLU 23	0.61	1.93	56.87	0.0652	-0.3576	0.0161
859	SLU 24	0.65	2.03	58.01	0.0664	-0.367	0.0159
859	SLU 25	0.64	2	58.01	0.0667	-0.3663	0.0163
859	SLU 26	0.63	1.95	57.57	0.0661	-0.3628	0.0163
859	SLU 27	0.66	2.05	58.7	0.0673	-0.3722	0.0161
859	SLU 28	0.65	2.03	58.7	0.0676	-0.3716	0.0164
859	SLU 29	0.66	2.02	58.26	0.0665	-0.3692	0.0158
859	SLU 30	0.65	1.99	58.26	0.0668	-0.3685	0.0162
859	SLU 31	0.69	2.18	63.36	0.0721	-0.4037	0.0199
859	SLU 32	0.72	2.27	64.5	0.0732	-0.4131	0.0197
859	SLU 33	0.71	2.25	64.5	0.0735	-0.4125	0.0201
859	SLU 34	0.7	2.2	64.06	0.073	-0.4089	0.0201
859	SLU 35	0.74	2.3	65.19	0.0741	-0.4184	0.0199
859	SLU 36	0.73	2.27	65.19	0.0744	-0.4177	0.0202
859	SLU 37	0.74	2.26	64.75	0.0734	-0.4153	0.0196
859	SLU 38	0.72	2.24	64.75	0.0737	-0.4146	0.02
859	SLU 39	0.74	2.32	66.14	0.0745	-0.4246	0.021
859	SLU 40	0.73	2.3	66.15	0.0748	-0.4239	0.0213
859	SLU 41	0.75	2.35	66.84	0.0754	-0.4298	0.0211
859	SLU 42	0.74	2.32	66.84	0.0757	-0.4292	0.0215
859	SLU 43	0.69	2.03	63.49	0.0711	-0.3852	0.015
859	SLU 44	0.67	1.99	63.49	0.0716	-0.3841	0.0156
859	SLU 45	0.71	2.09	64.62	0.0727	-0.3935	0.0154
859	SLU 46	0.7	2.07	64.63	0.073	-0.3928	0.0158
859	SLU 47	0.69	2.02	64.18	0.0725	-0.3893	0.0158
859	SLU 48	0.73	2.12	65.32	0.0736	-0.3987	0.0156
859	SLU 49	0.71	2.09	65.32	0.0739	-0.398	0.0159
859	SLU 50	0.73	2.08	64.87	0.0729	-0.3956	0.0153
859	SLU 51	0.71	2.06	64.88	0.0732	-0.3949	0.0156
859	SLU 52	0.75	2.24	69.98	0.0784	-0.4302	0.0194

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
859	SLU 53	0.78	2.34	71.12	0.0796	-0.4396	0.0192
859	SLU 54	0.77	2.32	71.12	0.0799	-0.4389	0.0196
859	SLU 55	0.76	2.27	70.68	0.0793	-0.4354	0.0196
859	SLU 56	0.8	2.36	71.81	0.0805	-0.4448	0.0194
859	SLU 57	0.79	2.34	71.81	0.0808	-0.4441	0.0197
859	SLU 58	0.8	2.33	71.37	0.0797	-0.4417	0.0191
859	SLU 59	0.79	2.31	71.37	0.08	-0.4411	0.0194
859	SLU 60	0.8	2.39	72.76	0.0808	-0.4511	0.0204
859	SLU 61	0.79	2.36	72.76	0.0811	-0.4504	0.0208
859	SLU 62	0.82	2.41	73.45	0.0817	-0.4563	0.0206
859	SLU 63	0.8	2.39	73.46	0.082	-0.4556	0.0209
859	SLU 64	0.77	2.35	69.85	0.079	-0.4346	0.0182
859	SLU 65	0.75	2.31	69.85	0.0795	-0.4335	0.0188
859	SLU 66	0.79	2.41	70.98	0.0807	-0.4429	0.0186
859	SLU 67	0.78	2.39	70.98	0.081	-0.4422	0.0189
859	SLU 68	0.77	2.34	70.54	0.0804	-0.4387	0.0189
859	SLU 69	0.8	2.43	71.67	0.0816	-0.4481	0.0187
859	SLU 70	0.79	2.41	71.68	0.0819	-0.4474	0.0191
859	SLU 71	0.8	2.4	71.23	0.0808	-0.445	0.0184
859	SLU 72	0.79	2.38	71.23	0.0811	-0.4443	0.0188
859	SLU 73	0.83	2.56	76.34	0.0864	-0.4796	0.0226
859	SLU 74	0.86	2.66	77.47	0.0875	-0.489	0.0224
859	SLU 75	0.85	2.63	77.47	0.0878	-0.4883	0.0227
859	SLU 76	0.84	2.58	77.03	0.0873	-0.4848	0.0227
859	SLU 77	0.88	2.68	78.17	0.0884	-0.4942	0.0225
859	SLU 78	0.87	2.66	78.17	0.0887	-0.4935	0.0229
859	SLU 79	0.88	2.65	77.72	0.0877	-0.4911	0.0222
859	SLU 80	0.86	2.63	77.72	0.088	-0.4905	0.0226
859	SLU 81	0.88	2.71	79.12	0.0888	-0.5005	0.0236
859	SLU 82	0.87	2.68	79.12	0.0891	-0.4998	0.024
859	SLU 83	0.89	2.73	79.81	0.0897	-0.5057	0.0237
859	SLU 84	0.88	2.71	79.81	0.09	-0.505	0.0241
859	SLE RA 1	0.58	1.74	52.33	0.059	-0.3234	0.0133
859	SLE RA 2	0.56	1.71	52.33	0.0594	-0.3227	0.0137
859	SLE RA 3	0.59	1.78	53.09	0.0601	-0.329	0.0135
859	SLE RA 4	0.58	1.76	53.09	0.0603	-0.3285	0.0138
859	SLE RA 5	0.57	1.73	52.79	0.06	-0.3262	0.0138
859	SLE RA 6	0.6	1.79	53.55	0.0607	-0.3324	0.0136
859	SLE RA 7	0.59	1.78	53.55	0.0609	-0.332	0.0139
859	SLE RA 8	0.6	1.77	53.25	0.0602	-0.3304	0.0135
859	SLE RA 9	0.59	1.76	53.26	0.0604	-0.3299	0.0137
859	SLE RA 10	0.61	1.88	56.66	0.0639	-0.3534	0.0162
859	SLE RA 11	0.64	1.94	57.42	0.0647	-0.3597	0.0161
859	SLE RA 12	0.63	1.93	57.42	0.0649	-0.3593	0.0163
859	SLE RA 13	0.62	1.89	57.12	0.0645	-0.3569	0.0163
859	SLE RA 14	0.65	1.96	57.88	0.0653	-0.3632	0.0162
859	SLE RA 15	0.64	1.94	57.88	0.0655	-0.3627	0.0164
859	SLE RA 16	0.65	1.94	57.58	0.0648	-0.3611	0.016
859	SLE RA 17	0.64	1.92	57.58	0.065	-0.3607	0.0162
859	SLE RA 18	0.65	1.98	58.51	0.0656	-0.3674	0.0169
859	SLE RA 19	0.64	1.96	58.51	0.0658	-0.3669	0.0171
859	SLE RA 20	0.66	1.99	58.97	0.0662	-0.3708	0.017
859	SLE RA 21	0.65	1.98	58.98	0.0664	-0.3704	0.0172
859	SLE FR 1	0.58	1.74	52.33	0.059	-0.3234	0.0133
859	SLE FR 2	0.57	1.73	52.33	0.0591	-0.3233	0.0134
859	SLE FR 3	0.58	1.75	52.52	0.0593	-0.3248	0.0133
859	SLE FR 4	0.6	1.8	54.19	0.0611	-0.3365	0.0144
859	SLE FR 5	0.6	1.82	54.37	0.0612	-0.338	0.0144
859	SLE FR 6	0.61	1.86	55.42	0.0623	-0.3454	0.0151
859	SLE QP 1	0.58	1.74	52.33	0.059	-0.3234	0.0133
859	SLE QP 2	0.6	1.81	54.18	0.061	-0.3366	0.0144
859	SLD 1	5.92	2.3	49.42	0.0541	-0.0466	-0.0173
859	SLD 2	5.56	2.48	49.43	0.0529	-0.0506	-0.0064
859	SLD 3	6.28	0.66	49.77	0.0625	-0.0242	-0.0242
859	SLD 4	5.93	0.85	49.78	0.0614	-0.0283	-0.0133
859	SLD 5	1.7	4.41	52.22	0.0463	-0.2828	0.0134
859	SLD 6	1.47	4.53	52.23	0.0456	-0.2854	0.0205
859	SLD 7	2.92	-1.05	53.39	0.0744	-0.2083	-0.0096
859	SLD 8	2.69	-0.93	53.4	0.0737	-0.211	-0.0025
859	SLD 9	-1.49	4.55	54.97	0.0483	-0.4623	0.0312
859	SLD 10	-1.72	4.67	54.98	0.0475	-0.4649	0.0383
859	SLD 11	-0.28	-0.91	56.14	0.0764	-0.3878	0.0082
859	SLD 12	-0.51	-0.79	56.15	0.0756	-0.3905	0.0153
859	SLD 13	-4.73	2.77	58.59	0.0606	-0.6449	0.0421
859	SLD 14	-5.09	2.96	58.6	0.0595	-0.649	0.0529
859	SLD 15	-4.37	1.14	58.94	0.0691	-0.6226	0.0352
859	SLD 16	-4.72	1.32	58.95	0.0679	-0.6267	0.046
859	SLV 1	13.04	2.9	43.04	0.0447	0.3429	-0.0597
859	SLV 2	12.22	3.32	43.07	0.042	0.3334	-0.0344
859	SLV 3	13.89	-0.82	43.84	0.0638	0.3943	-0.0758
859	SLV 4	13.07	-0.39	43.87	0.0611	0.3848	-0.0505
859	SLV 5	3.18	7.71	49.62	0.0276	-0.2092	0.0122
859	SLV 6	2.65	7.98	49.64	0.0259	-0.2153	0.0285
859	SLV 7	6.02	-4.69	52.29	0.0913	-0.0376	-0.0415
859	SLV 8	5.49	-4.42	52.31	0.0896	-0.0438	-0.0252
859	SLV 9	-4.3	8.04	56.06	0.0324	-0.6295	0.0539
859	SLV 10	-4.82	8.31	56.08	0.0307	-0.6356	0.0702
859	SLV 11	-1.46	-4.36	58.73	0.0961	-0.4579	0.0002
859	SLV 12	-1.98	-4.09	58.75	0.0944	-0.464	0.0165
859	SLV 13	-11.88	4.01	64.5	0.0609	-1.0581	0.0792
859	SLV 14	-12.7	4.44	64.53	0.0582	-1.0676	0.1045
859	SLV 15	-11.02	0.3	65.3	0.08	-1.0066	0.0631
859	SLV 16	-11.84	0.72	65.33	0.0773	-1.0161	0.0884
859	CRTFP Ux+	0	0	0	0	0	0
859	CRTFP Ux-	0	0	0	0	0	0
861	SLU 1	-0.69	0.04	31.6	0.0462	-3.3037	0.0105
861	SLU 2	-0.7	-0.04	31.61	0.0462	-3.3028	-0.009

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
861	SLU 3	-0.71	0.05	32.35	0.0473	-3.372	0.0122
861	SLU 4	-0.72	0	32.36	0.0473	-3.3715	0.0005
861	SLU 5	-0.71	-0.03	32.08	0.0469	-3.346	-0.0076
861	SLU 6	-0.72	0.05	32.82	0.048	-3.4152	0.0135
861	SLU 7	-0.73	0.01	32.83	0.048	-3.4147	0.0018
861	SLU 8	-0.71	0.05	32.55	0.0476	-3.39	0.0132
861	SLU 9	-0.72	0.01	32.55	0.0476	-3.3895	0.0015
861	SLU 10	-0.76	0.02	35.2	0.0521	-3.6433	0.0064
861	SLU 11	-0.77	0.11	35.94	0.0533	-3.7125	0.0275
861	SLU 12	-0.78	0.06	35.95	0.0532	-3.712	0.0158
861	SLU 13	-0.78	0.03	35.68	0.0528	-3.6865	0.0077
861	SLU 14	-0.78	0.12	36.41	0.054	-3.7557	0.0288
861	SLU 15	-0.79	0.07	36.42	0.054	-3.7552	0.0172
861	SLU 16	-0.78	0.11	36.14	0.0536	-3.7305	0.0285
861	SLU 17	-0.78	0.07	36.14	0.0535	-3.73	0.0168
861	SLU 18	-0.78	0.13	36.73	0.0547	-3.79	0.0324
861	SLU 19	-0.79	0.08	36.73	0.0547	-3.7895	0.0207
861	SLU 20	-0.79	0.13	37.2	0.0554	-3.8332	0.0337
861	SLU 21	-0.8	0.09	37.21	0.0554	-3.8327	0.0221
861	SLU 22	-0.76	0.12	35.28	0.0523	-3.6517	0.029
861	SLU 23	-0.77	0.04	35.29	0.0523	-3.6509	0.0095
861	SLU 24	-0.78	0.12	36.03	0.0535	-3.7201	0.0307
861	SLU 25	-0.78	0.08	36.03	0.0535	-3.7196	0.019
861	SLU 26	-0.78	0.04	35.76	0.053	-3.694	0.0109
861	SLU 27	-0.79	0.13	36.5	0.0542	-3.7632	0.032
861	SLU 28	-0.79	0.08	36.51	0.0542	-3.7627	0.0203
861	SLU 29	-0.78	0.13	36.22	0.0538	-3.7381	0.0317
861	SLU 30	-0.79	0.08	36.23	0.0538	-3.7376	0.02
861	SLU 31	-0.83	0.1	38.88	0.0583	-3.9913	0.0249
861	SLU 32	-0.84	0.18	39.62	0.0594	-4.0605	0.046
861	SLU 33	-0.85	0.14	39.62	0.0594	-4.06	0.0343
861	SLU 34	-0.84	0.1	39.35	0.059	-4.0345	0.0262
861	SLU 35	-0.85	0.19	40.09	0.0601	-4.1037	0.0474
861	SLU 36	-0.86	0.14	40.1	0.0601	-4.1032	0.0357
861	SLU 37	-0.84	0.19	39.81	0.0597	-4.0785	0.047
861	SLU 38	-0.85	0.14	39.82	0.0597	-4.078	0.0353
861	SLU 39	-0.85	0.2	40.41	0.0608	-4.1381	0.0509
861	SLU 40	-0.85	0.16	40.41	0.0608	-4.1376	0.0392
861	SLU 41	-0.86	0.21	40.88	0.0615	-4.1813	0.0523
861	SLU 42	-0.86	0.16	40.89	0.0615	-4.1808	0.0406
861	SLU 43	-0.88	0.03	39.82	0.0579	-4.1754	0.0073
861	SLU 44	-0.89	-0.05	39.83	0.0579	-4.1746	-0.0122
861	SLU 45	-0.9	0.04	40.57	0.0591	-4.2438	0.009
861	SLU 46	-0.9	-0.01	40.58	0.0591	-4.2433	-0.0027
861	SLU 47	-0.9	-0.04	40.3	0.0586	-4.2178	-0.0108
861	SLU 48	-0.91	0.04	41.04	0.0598	-4.287	0.0103
861	SLU 49	-0.91	-0.01	41.05	0.0598	-4.2865	-0.0014
861	SLU 50	-0.9	0.04	40.77	0.0594	-4.2618	0.01
861	SLU 51	-0.91	-0.01	40.77	0.0594	-4.2613	-0.0017
861	SLU 52	-0.95	0.01	43.42	0.0639	-4.5151	0.0032
861	SLU 53	-0.96	0.1	44.16	0.065	-4.5843	0.0243
861	SLU 54	-0.96	0.05	44.17	0.065	-4.5838	0.0126
861	SLU 55	-0.96	0.02	43.89	0.0646	-4.5583	0.0045
861	SLU 56	-0.97	0.1	44.63	0.0657	-4.6275	0.0257
861	SLU 57	-0.97	0.06	44.64	0.0657	-4.627	0.014
861	SLU 58	-0.96	0.1	44.36	0.0653	-4.6023	0.0253
861	SLU 59	-0.97	0.05	44.36	0.0653	-4.6018	0.0136
861	SLU 60	-0.97	0.12	44.95	0.0664	-4.6618	0.0292
861	SLU 61	-0.97	0.07	44.95	0.0664	-4.6613	0.0175
861	SLU 62	-0.98	0.12	45.42	0.0671	-4.705	0.0306
861	SLU 63	-0.98	0.07	45.43	0.0671	-4.7045	0.0189
861	SLU 64	-0.94	0.1	43.49	0.0641	-4.5235	0.0258
861	SLU 65	-0.95	0.02	43.51	0.0641	-4.5226	0.0063
861	SLU 66	-0.96	0.11	44.25	0.0652	-4.5918	0.0275
861	SLU 67	-0.97	0.06	44.25	0.0652	-4.5913	0.0158
861	SLU 68	-0.97	0.03	43.98	0.0648	-4.5658	0.0077
861	SLU 69	-0.97	0.12	44.72	0.0659	-4.635	0.0288
861	SLU 70	-0.98	0.07	44.73	0.0659	-4.6345	0.0171
861	SLU 71	-0.97	0.11	44.44	0.0655	-4.6098	0.0285
861	SLU 72	-0.97	0.07	44.45	0.0655	-4.6093	0.0168
861	SLU 73	-1.02	0.09	47.1	0.07	-4.8631	0.0217
861	SLU 74	-1.02	0.17	47.84	0.0712	-4.9323	0.0428
861	SLU 75	-1.03	0.12	47.84	0.0711	-4.9318	0.0311
861	SLU 76	-1.03	0.09	47.57	0.0707	-4.9063	0.023
861	SLU 77	-1.03	0.18	48.31	0.0719	-4.9755	0.0442
861	SLU 78	-1.04	0.13	48.32	0.0719	-4.975	0.0325
861	SLU 79	-1.03	0.18	48.03	0.0715	-4.9503	0.0438
861	SLU 80	-1.03	0.13	48.04	0.0714	-4.9498	0.0321
861	SLU 81	-1.03	0.19	48.62	0.0726	-5.0099	0.0477
861	SLU 82	-1.04	0.14	48.63	0.0726	-5.0094	0.036
861	SLU 83	-1.04	0.2	49.1	0.0733	-5.053	0.0491
861	SLU 84	-1.05	0.15	49.11	0.0733	-5.0525	0.0374
861	SLE RA 1	-0.71	0.06	32.65	0.0479	-3.4031	0.0158
861	SLE RA 2	-0.72	0.01	32.66	0.0479	-3.4026	0.0028
861	SLE RA 3	-0.72	0.07	33.15	0.0487	-3.4487	0.0169
861	SLE RA 4	-0.73	0.04	33.15	0.0487	-3.4484	0.0091
861	SLE RA 5	-0.73	0.01	32.97	0.0484	-3.4313	0.0037
861	SLE RA 6	-0.73	0.07	33.47	0.0492	-3.4775	0.0178
861	SLE RA 7	-0.73	0.04	33.47	0.0492	-3.4771	0.01
861	SLE RA 8	-0.73	0.07	33.28	0.0489	-3.4607	0.0176
861	SLE RA 9	-0.73	0.04	33.29	0.0489	-3.4603	0.0098
861	SLE RA 10	-0.76	0.05	35.05	0.0519	-3.6295	0.013
861	SLE RA 11	-0.77	0.11	35.54	0.0527	-3.6757	0.0271
861	SLE RA 12	-0.77	0.08	35.55	0.0527	-3.6753	0.0193
861	SLE RA 13	-0.77	0.06	35.37	0.0524	-3.6583	0.0139
861	SLE RA 14	-0.77	0.11	35.86	0.0531	-3.7044	0.028
861	SLE RA 15	-0.78	0.08	35.86	0.0531	-3.7041	0.0202

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
861	SLE RA 16	-0.77	0.11	35.68	0.0529	-3.6877	0.0278
861	SLE RA 17	-0.77	0.08	35.68	0.0529	-3.6873	0.02
861	SLE RA 18	-0.77	0.12	36.07	0.0536	-3.7274	0.0304
861	SLE RA 19	-0.78	0.09	36.07	0.0536	-3.727	0.0226
861	SLE RA 20	-0.78	0.12	36.38	0.0541	-3.7561	0.0313
861	SLE RA 21	-0.78	0.09	36.39	0.0541	-3.7558	0.0235
861	SLE FR 1	-0.71	0.06	32.65	0.0479	-3.4031	0.0158
861	SLE FR 2	-0.71	0.05	32.65	0.0479	-3.403	0.0132
861	SLE FR 3	-0.72	0.06	32.78	0.0481	-3.4146	0.0161
861	SLE FR 4	-0.73	0.07	33.68	0.0496	-3.5003	0.0176
861	SLE FR 5	-0.73	0.08	33.8	0.0498	-3.5119	0.0205
861	SLE FR 6	-0.74	0.09	34.36	0.0508	-3.5652	0.0231
861	SLE QP 1	-0.71	0.06	32.65	0.0479	-3.4031	0.0158
861	SLE QP 2	-0.73	0.08	33.68	0.0496	-3.5004	0.0202
861	SLD 1	1.76	0.64	42.16	0.0596	-4.2625	0.1566
861	SLD 2	1.56	0.15	42.41	0.0614	-4.296	0.0352
861	SLD 3	1.95	-0.72	42.62	0.0624	-4.3131	-0.1825
861	SLD 4	1.74	-1.21	42.87	0.0642	-4.3466	-0.3039
861	SLD 5	-0.23	2.4	35.48	0.048	-3.6464	0.5968
861	SLD 6	-0.36	2.08	35.64	0.0492	-3.6683	0.5175
861	SLD 7	0.39	-2.13	37.01	0.0574	-3.815	-0.5335
861	SLD 8	0.26	-2.45	37.18	0.0586	-3.8369	-0.6128
861	SLD 9	-1.72	2.62	30.17	0.0406	-3.1639	0.6531
861	SLD 10	-1.85	2.3	30.34	0.0418	-3.1858	0.5738
861	SLD 11	-1.1	-1.91	31.71	0.0501	-3.3325	-0.4772
861	SLD 12	-1.23	-2.23	31.87	0.0513	-3.3544	-0.5565
861	SLD 13	-3.2	1.37	24.48	0.035	-2.6542	0.3442
861	SLD 14	-3.41	0.88	24.73	0.0369	-2.6876	0.2229
861	SLD 15	-3.02	0.01	24.94	0.0379	-2.7048	0.0051
861	SLD 16	-3.22	-0.48	25.19	0.0397	-2.7382	-0.1162
861	SLV 1	5.1	1.33	53.53	0.073	-5.2849	0.3257
861	SLV 2	4.62	0.19	54.13	0.0772	-5.3628	0.0431
861	SLV 3	5.53	-1.75	54.6	0.0794	-5.4025	-0.4415
861	SLV 4	5.05	-2.89	55.2	0.0837	-5.4804	-0.7241
861	SLV 5	0.45	5.31	37.9	0.0461	-3.8441	1.3239
861	SLV 6	0.14	4.58	38.29	0.0488	-3.8941	1.1422
861	SLV 7	1.88	-4.94	41.48	0.0677	-4.236	-1.2335
861	SLV 8	1.58	-5.67	41.86	0.0704	-4.2861	-1.4151
861	SLV 9	-3.04	5.83	25.49	0.0289	-2.7147	1.4555
861	SLV 10	-3.34	5.1	25.87	0.0316	-2.7648	1.2738
861	SLV 11	-1.6	-4.42	29.06	0.0504	-3.1067	-1.1019
861	SLV 12	-1.91	-5.15	29.45	0.0532	-3.1567	-1.2835
861	SLV 13	-6.51	3.05	12.15	0.0156	-1.5204	0.7645
861	SLV 14	-6.99	1.91	12.75	0.0198	-1.5983	0.4819
861	SLV 15	-6.08	-0.03	13.22	0.022	-1.638	-0.0027
861	SLV 16	-6.56	-1.17	13.82	0.0263	-1.7159	-0.2854
861	CRTFP Ux+	0	0	0	0	0	0
861	CRTFP Ux-	0	0	0	0	0	0
861	CRTFP Uy+	0	0	0	0	0	0
861	CRTFP Uy-	0	0	0	0	0	0
864	SLU 1	0.75	0.32	30.53	-0.0359	2.5644	-0.115
864	SLU 2	0.76	0.29	30.52	-0.036	2.5656	-0.1048
864	SLU 3	0.77	0.33	31.22	-0.0369	2.5995	-0.1164
864	SLU 4	0.78	0.31	31.21	-0.0369	2.6002	-0.1103
864	SLU 5	0.78	0.29	30.95	-0.0366	2.5876	-0.1034
864	SLU 6	0.79	0.32	31.65	-0.0375	2.6215	-0.115
864	SLU 7	0.8	0.3	31.64	-0.0376	2.6222	-0.1089
864	SLU 8	0.78	0.31	31.39	-0.0371	2.6085	-0.1121
864	SLU 9	0.79	0.3	31.38	-0.0372	2.6091	-0.106
864	SLU 10	0.82	0.4	33.9	-0.0404	2.7459	-0.1441
864	SLU 11	0.83	0.44	34.59	-0.0413	2.7798	-0.1558
864	SLU 12	0.84	0.42	34.59	-0.0414	2.7805	-0.1496
864	SLU 13	0.84	0.4	34.33	-0.0411	2.7679	-0.1427
864	SLU 14	0.85	0.43	35.02	-0.0419	2.8018	-0.1543
864	SLU 15	0.86	0.42	35.02	-0.042	2.8025	-0.1482
864	SLU 16	0.84	0.43	34.76	-0.0416	2.7888	-0.1515
864	SLU 17	0.85	0.41	34.76	-0.0416	2.7894	-0.1454
864	SLU 18	0.83	0.48	35.35	-0.0422	2.822	-0.1711
864	SLU 19	0.84	0.46	35.34	-0.0423	2.8227	-0.165
864	SLU 20	0.85	0.48	35.78	-0.0428	2.844	-0.1697
864	SLU 21	0.86	0.46	35.78	-0.0429	2.8447	-0.1636
864	SLU 22	0.82	0.43	33.96	-0.0402	2.75	-0.1528
864	SLU 23	0.84	0.4	33.96	-0.0403	2.7511	-0.1426
864	SLU 24	0.85	0.43	34.65	-0.0412	2.7851	-0.1543
864	SLU 25	0.86	0.42	34.65	-0.0413	2.7858	-0.1482
864	SLU 26	0.85	0.4	34.39	-0.041	2.7731	-0.1412
864	SLU 27	0.86	0.43	35.08	-0.0418	2.8071	-0.1529
864	SLU 28	0.87	0.41	35.08	-0.0419	2.8078	-0.1468
864	SLU 29	0.85	0.42	34.82	-0.0415	2.794	-0.15
864	SLU 30	0.86	0.4	34.82	-0.0415	2.7947	-0.1439
864	SLU 31	0.89	0.51	37.33	-0.0448	2.9315	-0.182
864	SLU 32	0.9	0.54	38.03	-0.0456	2.9654	-0.1936
864	SLU 33	0.91	0.53	38.02	-0.0457	2.9661	-0.1875
864	SLU 34	0.91	0.51	37.76	-0.0454	2.9535	-0.1805
864	SLU 35	0.92	0.54	38.46	-0.0463	2.9874	-0.1922
864	SLU 36	0.93	0.52	38.46	-0.0463	2.9881	-0.1861
864	SLU 37	0.91	0.53	38.2	-0.0459	2.9743	-0.1893
864	SLU 38	0.92	0.51	38.2	-0.046	2.975	-0.1832
864	SLU 39	0.9	0.59	38.78	-0.0465	3.0076	-0.209
864	SLU 40	0.91	0.57	38.78	-0.0466	3.0083	-0.2029
864	SLU 41	0.92	0.58	39.22	-0.0472	3.0296	-0.2076
864	SLU 42	0.93	0.57	39.21	-0.0472	3.0303	-0.2015
864	SLU 43	0.95	0.38	38.51	-0.0452	3.2702	-0.1365
864	SLU 44	0.96	0.35	38.5	-0.0453	3.2713	-0.1263
864	SLU 45	0.97	0.39	39.2	-0.0462	3.3052	-0.1379
864	SLU 46	0.98	0.37	39.19	-0.0462	3.3059	-0.1318
864	SLU 47	0.98	0.35	38.93	-0.0459	3.2933	-0.1249

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
864	SLU 48	0.99	0.38	39.63	-0.0468	3.3272	-0.1365
864	SLU 49	1	0.36	39.62	-0.0469	3.3279	-0.1304
864	SLU 50	0.98	0.37	39.37	-0.0464	3.3142	-0.1336
864	SLU 51	0.99	0.36	39.36	-0.0465	3.3148	-0.1275
864	SLU 52	1.02	0.46	41.88	-0.0497	3.4516	-0.1656
864	SLU 53	1.03	0.5	42.57	-0.0506	3.4855	-0.1773
864	SLU 54	1.04	0.48	42.57	-0.0507	3.4862	-0.1711
864	SLU 55	1.04	0.46	42.31	-0.0503	3.4736	-0.1642
864	SLU 56	1.05	0.49	43	-0.0512	3.5075	-0.1758
864	SLU 57	1.06	0.48	43	-0.0513	3.5082	-0.1697
864	SLU 58	1.04	0.49	42.74	-0.0508	3.4945	-0.173
864	SLU 59	1.05	0.47	42.74	-0.0509	3.4952	-0.1669
864	SLU 60	1.03	0.54	43.33	-0.0515	3.5277	-0.1927
864	SLU 61	1.04	0.52	43.32	-0.0516	3.5284	-0.1865
864	SLU 62	1.05	0.54	43.76	-0.0521	3.5498	-0.1912
864	SLU 63	1.06	0.52	43.76	-0.0522	3.5504	-0.1851
864	SLU 64	1.02	0.49	41.94	-0.0495	3.4557	-0.1743
864	SLU 65	1.04	0.46	41.94	-0.0496	3.4569	-0.1641
864	SLU 66	1.04	0.49	42.63	-0.0505	3.4908	-0.1758
864	SLU 67	1.05	0.48	42.63	-0.0506	3.4915	-0.1697
864	SLU 68	1.05	0.46	42.37	-0.0502	3.4789	-0.1627
864	SLU 69	1.06	0.49	43.06	-0.0511	3.5128	-0.1744
864	SLU 70	1.07	0.47	43.06	-0.0512	3.5135	-0.1683
864	SLU 71	1.05	0.48	42.8	-0.0508	3.4997	-0.1715
864	SLU 72	1.06	0.46	42.8	-0.0508	3.5004	-0.1654
864	SLU 73	1.09	0.57	45.31	-0.054	3.6372	-0.2035
864	SLU 74	1.1	0.6	46.01	-0.0549	3.6711	-0.2151
864	SLU 75	1.11	0.59	46	-0.055	3.6718	-0.209
864	SLU 76	1.11	0.57	45.74	-0.0547	3.6592	-0.2021
864	SLU 77	1.12	0.6	46.44	-0.0555	3.6931	-0.2137
864	SLU 78	1.13	0.58	46.44	-0.0556	3.6938	-0.2076
864	SLU 79	1.11	0.59	46.18	-0.0552	3.6801	-0.2108
864	SLU 80	1.12	0.57	46.18	-0.0552	3.6807	-0.2047
864	SLU 81	1.1	0.65	46.76	-0.0558	3.7133	-0.2305
864	SLU 82	1.11	0.63	46.76	-0.0559	3.714	-0.2244
864	SLU 83	1.12	0.64	47.19	-0.0564	3.7353	-0.2291
864	SLU 84	1.13	0.63	47.19	-0.0565	3.736	-0.223
864	SLE RA 1	0.77	0.35	31.51	-0.0371	2.6175	-0.1258
864	SLE RA 2	0.78	0.33	31.5	-0.0372	2.6182	-0.119
864	SLE RA 3	0.79	0.36	31.97	-0.0378	2.6408	-0.1268
864	SLE RA 4	0.79	0.34	31.97	-0.0378	2.6413	-0.1227
864	SLE RA 5	0.79	0.33	31.79	-0.0376	2.6329	-0.118
864	SLE RA 6	0.8	0.35	32.26	-0.0382	2.6555	-0.1258
864	SLE RA 7	0.8	0.34	32.25	-0.0383	2.656	-0.1217
864	SLE RA 8	0.79	0.35	32.08	-0.038	2.6468	-0.1239
864	SLE RA 9	0.8	0.34	32.08	-0.038	2.6473	-0.1198
864	SLE RA 10	0.82	0.41	33.75	-0.0401	2.7384	-0.1452
864	SLE RA 11	0.82	0.43	34.22	-0.0407	2.7611	-0.153
864	SLE RA 12	0.83	0.42	34.22	-0.0408	2.7615	-0.1489
864	SLE RA 13	0.83	0.4	34.04	-0.0406	2.7531	-0.1443
864	SLE RA 14	0.83	0.43	34.51	-0.0412	2.7757	-0.152
864	SLE RA 15	0.84	0.42	34.5	-0.0412	2.7762	-0.148
864	SLE RA 16	0.83	0.42	34.33	-0.0409	2.767	-0.1501
864	SLE RA 17	0.84	0.41	34.33	-0.041	2.7675	-0.146
864	SLE RA 18	0.82	0.46	34.72	-0.0413	2.7892	-0.1632
864	SLE RA 19	0.83	0.45	34.72	-0.0414	2.7896	-0.1592
864	SLE RA 20	0.83	0.46	35.01	-0.0418	2.8039	-0.1623
864	SLE RA 21	0.84	0.44	35.01	-0.0418	2.8043	-0.1582
864	SLE FR 1	0.77	0.35	31.51	-0.0371	2.6175	-0.1258
864	SLE FR 2	0.77	0.35	31.51	-0.0371	2.6176	-0.1244
864	SLE FR 3	0.77	0.35	31.62	-0.0373	2.6233	-0.1254
864	SLE FR 4	0.79	0.38	32.47	-0.0384	2.6691	-0.1357
864	SLE FR 5	0.79	0.38	32.59	-0.0386	2.6749	-0.1366
864	SLE FR 6	0.8	0.41	33.12	-0.0392	2.7033	-0.1445
864	SLE QP 1	0.77	0.35	31.51	-0.0371	2.6175	-0.1258
864	SLE QP 2	0.78	0.38	32.47	-0.0384	2.669	-0.137
864	SLD 1	2.01	1.16	24.22	-0.0264	2.2881	-0.4053
864	SLD 2	1.73	1.78	23.86	-0.0281	2.2501	-0.6222
864	SLD 3	2.47	-0.33	24.9	-0.0234	2.3633	0.1141
864	SLD 4	2.2	0.29	24.53	-0.0251	2.3254	-0.1028
864	SLD 5	0.5	2.76	29.04	-0.0392	2.4473	-0.9669
864	SLD 6	0.32	3.17	28.8	-0.0403	2.4225	-1.1087
864	SLD 7	2.04	-2.2	31.29	-0.0289	2.6981	0.7645
864	SLD 8	1.86	-1.79	31.05	-0.03	2.6733	0.6227
864	SLD 9	-0.29	2.56	33.89	-0.0467	2.6647	-0.8967
864	SLD 10	-0.47	2.97	33.65	-0.0479	2.6399	-1.0385
864	SLD 11	1.25	-2.4	36.15	-0.0365	2.9154	0.8347
864	SLD 12	1.07	-1.99	35.91	-0.0376	2.8906	0.6929
864	SLD 13	-0.63	0.48	40.41	-0.0517	3.0126	-0.1712
864	SLD 14	-0.9	1.1	40.05	-0.0534	2.9746	-0.3882
864	SLD 15	-0.17	-1.01	41.09	-0.0486	3.0878	0.3482
864	SLD 16	-0.44	-0.39	40.72	-0.0503	3.0499	0.1313
864	SLV 1	3.66	2.15	13.18	-0.0103	1.7806	-0.7517
864	SLV 2	3.02	3.6	12.32	-0.0143	1.6921	-1.257
864	SLV 3	4.72	-1.24	14.72	-0.0033	1.9527	0.4337
864	SLV 4	4.08	0.21	13.87	-0.0073	1.8642	-0.0716
864	SLV 5	0.14	5.82	24.48	-0.0399	2.1567	-2.0327
864	SLV 6	-0.27	6.75	23.93	-0.0425	2.0998	-2.3575
864	SLV 7	3.69	-5.5	29.64	-0.0165	2.7302	1.9187
864	SLV 8	3.28	-4.57	29.09	-0.0191	2.6733	1.5939
864	SLV 9	-1.71	5.34	35.85	-0.0577	2.6646	-1.8679
864	SLV 10	-2.12	6.27	35.3	-0.0602	2.6078	-2.1927
864	SLV 11	1.84	-5.98	41.01	-0.0343	3.2381	2.0835
864	SLV 12	1.43	-5.05	40.46	-0.0369	3.1813	1.7587
864	SLV 13	-2.51	0.56	51.07	-0.0695	3.4738	-0.2024
864	SLV 14	-3.15	2.01	50.22	-0.0735	3.3853	-0.7078
864	SLV 15	-1.45	-2.84	52.62	-0.0625	3.6458	0.983

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
864	SLV 16	-2.09	-1.38	51.77	-0.0665	3.5574	0.4777
864	CRTFP Ux+	0	0	0	0	0	0
864	CRTFP Ux-	0	0	0	0	0	0
864	CRTFP Uy+	0	0	0	0	0	0
864	CRTFP Uy-	0	0	0	0	0	0
866	SLU 1	1.43	0.17	64.26	0.0406	0.4968	-0.0046
866	SLU 2	1.41	0.14	64.25	0.0406	0.5067	-0.0038
866	SLU 3	1.47	0.18	65.71	0.0417	0.5115	-0.0046
866	SLU 4	1.46	0.16	65.7	0.0416	0.5175	-0.0041
866	SLU 5	1.44	0.14	65.15	0.0411	0.5152	-0.0039
866	SLU 6	1.5	0.18	66.62	0.0422	0.52	-0.0048
866	SLU 7	1.49	0.16	66.61	0.0422	0.526	-0.0043
866	SLU 8	1.49	0.17	66.07	0.0417	0.5136	-0.0049
866	SLU 9	1.48	0.15	66.06	0.0417	0.5196	-0.0044
866	SLU 10	1.49	0.25	71.94	0.046	0.5819	-0.0042
866	SLU 11	1.55	0.3	73.41	0.0471	0.5867	-0.0051
866	SLU 12	1.54	0.28	73.4	0.0471	0.5927	-0.0046
866	SLU 13	1.52	0.25	72.85	0.0466	0.5903	-0.0043
866	SLU 14	1.58	0.3	74.31	0.0476	0.5951	-0.0052
866	SLU 15	1.57	0.27	74.31	0.0476	0.6011	-0.0047
866	SLU 16	1.57	0.28	73.76	0.0471	0.5888	-0.0053
866	SLU 17	1.56	0.26	73.76	0.0471	0.5947	-0.0048
866	SLU 18	1.55	0.34	75.25	0.0484	0.6041	-0.0052
866	SLU 19	1.54	0.32	75.25	0.0484	0.6101	-0.0047
866	SLU 20	1.58	0.33	76.16	0.0489	0.6125	-0.0053
866	SLU 21	1.57	0.31	76.15	0.0489	0.6185	-0.0048
866	SLU 22	1.55	0.31	72.05	0.0463	0.5719	-0.0048
866	SLU 23	1.52	0.28	72.04	0.0463	0.5818	-0.004
866	SLU 24	1.58	0.32	73.5	0.0474	0.5866	-0.0049
866	SLU 25	1.57	0.3	73.5	0.0473	0.5926	-0.0044
866	SLU 26	1.55	0.28	72.94	0.0468	0.5903	-0.0042
866	SLU 27	1.61	0.32	74.41	0.0479	0.5951	-0.005
866	SLU 28	1.6	0.3	74.4	0.0479	0.6011	-0.0045
866	SLU 29	1.6	0.31	73.86	0.0474	0.5887	-0.0051
866	SLU 30	1.59	0.29	73.85	0.0474	0.5947	-0.0046
866	SLU 31	1.61	0.39	79.74	0.0517	0.657	-0.0044
866	SLU 32	1.67	0.44	81.2	0.0528	0.6618	-0.0053
866	SLU 33	1.66	0.42	81.2	0.0528	0.6678	-0.0048
866	SLU 34	1.64	0.39	80.64	0.0523	0.6654	-0.0046
866	SLU 35	1.7	0.43	82.11	0.0533	0.6702	-0.0055
866	SLU 36	1.68	0.41	82.1	0.0533	0.6762	-0.005
866	SLU 37	1.69	0.42	81.56	0.0528	0.6639	-0.0056
866	SLU 38	1.67	0.4	81.55	0.0528	0.6698	-0.0051
866	SLU 39	1.66	0.48	83.04	0.0541	0.6792	-0.0054
866	SLU 40	1.65	0.46	83.04	0.0541	0.6852	-0.0049
866	SLU 41	1.69	0.47	83.95	0.0546	0.6876	-0.0056
866	SLU 42	1.68	0.45	83.94	0.0546	0.6936	-0.0051
866	SLU 43	1.82	0.18	80.86	0.0509	0.62	-0.0058
866	SLU 44	1.8	0.14	80.85	0.0508	0.63	-0.005
866	SLU 45	1.86	0.19	82.32	0.0519	0.6348	-0.0059
866	SLU 46	1.85	0.17	82.31	0.0519	0.6408	-0.0054
866	SLU 47	1.83	0.14	81.76	0.0514	0.6384	-0.0052
866	SLU 48	1.89	0.18	83.22	0.0524	0.6432	-0.0061
866	SLU 49	1.88	0.16	83.21	0.0524	0.6492	-0.0056
866	SLU 50	1.88	0.17	82.67	0.0519	0.6369	-0.0062
866	SLU 51	1.87	0.15	82.66	0.0519	0.6429	-0.0057
866	SLU 52	1.88	0.26	88.55	0.0562	0.7051	-0.0055
866	SLU 53	1.94	0.3	90.01	0.0573	0.7099	-0.0063
866	SLU 54	1.93	0.28	90.01	0.0573	0.7159	-0.0059
866	SLU 55	1.91	0.25	89.45	0.0568	0.7136	-0.0056
866	SLU 56	1.97	0.3	90.92	0.0579	0.7184	-0.0065
866	SLU 57	1.96	0.28	90.91	0.0578	0.7244	-0.006
866	SLU 58	1.96	0.28	90.37	0.0574	0.712	-0.0066
866	SLU 59	1.95	0.26	90.36	0.0573	0.718	-0.0061
866	SLU 60	1.94	0.34	91.86	0.0586	0.7274	-0.0065
866	SLU 61	1.93	0.32	91.85	0.0586	0.7334	-0.006
866	SLU 62	1.97	0.34	92.76	0.0592	0.7358	-0.0066
866	SLU 63	1.96	0.32	92.76	0.0591	0.7418	-0.0061
866	SLU 64	1.94	0.32	88.65	0.0566	0.6951	-0.0061
866	SLU 65	1.92	0.28	88.64	0.0565	0.7051	-0.0053
866	SLU 66	1.97	0.33	90.11	0.0576	0.7099	-0.0062
866	SLU 67	1.96	0.31	90.1	0.0576	0.7159	-0.0057
866	SLU 68	1.94	0.28	89.55	0.0571	0.7136	-0.0054
866	SLU 69	2	0.32	91.01	0.0581	0.7183	-0.0063
866	SLU 70	1.99	0.3	91.01	0.0581	0.7243	-0.0058
866	SLU 71	1.99	0.31	90.46	0.0576	0.712	-0.0064
866	SLU 72	1.98	0.29	90.46	0.0576	0.718	-0.0059
866	SLU 73	2	0.4	96.34	0.0619	0.7803	-0.0057
866	SLU 74	2.06	0.44	97.81	0.063	0.7851	-0.0066
866	SLU 75	2.05	0.42	97.8	0.063	0.791	-0.0061
866	SLU 76	2.03	0.39	97.25	0.0625	0.7887	-0.0059
866	SLU 77	2.09	0.44	98.71	0.0636	0.7935	-0.0067
866	SLU 78	2.07	0.42	98.7	0.0635	0.7995	-0.0063
866	SLU 79	2.08	0.42	98.16	0.0631	0.7871	-0.0068
866	SLU 80	2.06	0.4	98.15	0.063	0.7931	-0.0064
866	SLU 81	2.06	0.48	99.65	0.0643	0.8025	-0.0067
866	SLU 82	2.04	0.46	99.64	0.0643	0.8085	-0.0062
866	SLU 83	2.08	0.48	100.55	0.0649	0.8109	-0.0069
866	SLU 84	2.07	0.46	100.55	0.0648	0.8169	-0.0064
866	SLE RA 1	1.46	0.21	66.48	0.0423	0.5182	-0.0046
866	SLE RA 2	1.45	0.19	66.48	0.0422	0.5249	-0.0041
866	SLE RA 3	1.49	0.22	67.45	0.0429	0.5281	-0.0047
866	SLE RA 4	1.48	0.21	67.45	0.0429	0.5321	-0.0044
866	SLE RA 5	1.47	0.19	67.08	0.0426	0.5305	-0.0042
866	SLE RA 6	1.51	0.22	68.06	0.0433	0.5337	-0.0048
866	SLE RA 7	1.5	0.2	68.05	0.0433	0.5377	-0.0045
866	SLE RA 8	1.5	0.21	67.69	0.043	0.5295	-0.0048

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
866	SLE RA 9	1.49	0.19	67.68	0.043	0.5334	-0.0045
866	SLE RA 10	1.51	0.27	71.61	0.0458	0.575	-0.0044
866	SLE RA 11	1.55	0.3	72.58	0.0466	0.5782	-0.005
866	SLE RA 12	1.54	0.28	72.58	0.0465	0.5821	-0.0046
866	SLE RA 13	1.52	0.26	72.21	0.0462	0.5806	-0.0045
866	SLE RA 14	1.56	0.29	73.19	0.0469	0.5838	-0.0051
866	SLE RA 15	1.56	0.28	73.18	0.0469	0.5878	-0.0047
866	SLE RA 16	1.56	0.28	72.82	0.0466	0.5795	-0.0051
866	SLE RA 17	1.55	0.27	72.82	0.0466	0.5835	-0.0048
866	SLE RA 18	1.54	0.32	73.81	0.0474	0.5898	-0.005
866	SLE RA 19	1.54	0.31	73.81	0.0474	0.5938	-0.0047
866	SLE RA 20	1.56	0.32	74.42	0.0478	0.5954	-0.0051
866	SLE RA 21	1.55	0.31	74.41	0.0478	0.5994	-0.0048
866	SLE FR 1	1.46	0.21	66.48	0.0423	0.5182	-0.0046
866	SLE FR 2	1.46	0.21	66.48	0.0423	0.5195	-0.0045
866	SLE FR 3	1.47	0.21	66.72	0.0424	0.5205	-0.0047
866	SLE FR 4	1.49	0.24	68.68	0.0438	0.541	-0.0046
866	SLE FR 5	1.5	0.24	68.92	0.044	0.5419	-0.0048
866	SLE FR 6	1.5	0.27	70.15	0.0448	0.554	-0.0048
866	SLE QP 1	1.46	0.21	66.48	0.0423	0.5182	-0.0046
866	SLE QP 2	1.49	0.25	68.68	0.0438	0.5397	-0.0048
866	SLD 1	6.92	1.15	63.34	0.0193	0.465	-0.0404
866	SLD 2	6.45	1.59	62.76	0.0165	0.4772	-0.0299
866	SLD 3	7.34	-0.45	64.04	0.0302	0.4978	-0.0471
866	SLD 4	6.88	-0.01	63.46	0.0275	0.5101	-0.0366
866	SLD 5	2.56	2.86	66.12	0.0203	0.4653	-0.0071
866	SLD 6	2.25	3.15	65.74	0.0185	0.4733	-0.0003
866	SLD 7	3.97	-2.47	68.45	0.0569	0.5747	-0.0295
866	SLD 8	3.66	-2.18	68.08	0.0551	0.5827	-0.0226
866	SLD 9	-0.69	2.67	69.29	0.0325	0.4966	0.0131
866	SLD 10	-0.99	2.96	68.91	0.0308	0.5046	0.02
866	SLD 11	0.72	-2.66	71.62	0.0691	0.606	-0.0092
866	SLD 12	0.42	-2.37	71.24	0.0673	0.614	-0.0024
866	SLD 13	-3.9	0.5	73.9	0.0601	0.5693	0.0271
866	SLD 14	-4.37	0.94	73.32	0.0574	0.5815	0.0376
866	SLD 15	-3.48	-1.1	74.6	0.0711	0.6021	0.0204
866	SLD 16	-3.95	-0.65	74.02	0.0683	0.6144	0.0309
866	SLV 1	14.2	2.3	56.19	-0.0132	0.3636	-0.0881
866	SLV 2	13.11	3.35	54.84	-0.0196	0.3921	-0.0637
866	SLV 3	15.19	-1.34	57.79	0.0117	0.4385	-0.1038
866	SLV 4	14.1	-0.29	56.44	0.0053	0.467	-0.0794
866	SLV 5	3.99	6.21	62.74	-0.01	0.3683	-0.0102
866	SLV 6	3.29	6.88	61.87	-0.0141	0.3866	0.0055
866	SLV 7	7.28	-5.93	68.07	0.073	0.6181	-0.0624
866	SLV 8	6.58	-5.26	67.2	0.0689	0.6364	-0.0467
866	SLV 9	-3.61	5.75	70.16	0.0187	0.4429	0.0372
866	SLV 10	-4.31	6.42	69.29	0.0146	0.4612	0.0529
866	SLV 11	-0.31	-6.38	75.49	0.1017	0.6927	-0.015
866	SLV 12	-1.01	-5.72	74.62	0.0976	0.7111	0.0007
866	SLV 13	-11.12	0.78	80.92	0.0823	0.6123	0.0699
866	SLV 14	-12.21	1.83	79.57	0.0759	0.6408	0.0943
866	SLV 15	-10.13	-2.86	82.52	0.1072	0.6873	0.0542
866	SLV 16	-11.22	-1.81	81.17	0.1008	0.7158	0.0786
866	CRTFP Ux+	0	0	0	0	0	0
866	CRTFP Ux-	0	0	0	0	0	0
866	CRTFP Uy+	0	0	0	0	0	0
866	CRTFP Uy-	0	0	0	0	0	0
869	SLU 1	-2.22	-1.27	102.28	12.4687	-0.9668	0.2916
869	SLU 2	-2.26	-1.4	102.35	12.4751	-0.976	0.2966
869	SLU 3	-2.28	-1.29	104.72	12.7653	-0.9936	0.2989
869	SLU 4	-2.3	-1.36	104.76	12.7691	-0.999	0.3019
869	SLU 5	-2.29	-1.41	103.86	12.6578	-0.9891	0.3006
869	SLU 6	-2.31	-1.3	106.24	12.948	-1.0067	0.3029
869	SLU 7	-2.33	-1.37	106.28	12.9518	-1.0122	0.306
869	SLU 8	-2.28	-1.3	105.31	12.8341	-0.993	0.2996
869	SLU 9	-2.31	-1.37	105.35	12.8379	-0.9985	0.3026
869	SLU 10	-2.46	-1.44	114.88	14.0027	-1.1272	0.3269
869	SLU 11	-2.48	-1.33	117.26	14.2929	-1.1448	0.3292
869	SLU 12	-2.5	-1.4	117.3	14.2967	-1.1503	0.3322
869	SLU 13	-2.49	-1.45	116.4	14.1854	-1.1404	0.331
869	SLU 14	-2.51	-1.34	118.77	14.4756	-1.1579	0.3332
869	SLU 15	-2.53	-1.41	118.81	14.4794	-1.1634	0.3363
869	SLU 16	-2.48	-1.34	117.85	14.3617	-1.1443	0.3299
869	SLU 17	-2.51	-1.41	117.89	14.3655	-1.1498	0.333
869	SLU 18	-2.5	-1.33	120.18	14.651	-1.1829	0.3349
869	SLU 19	-2.53	-1.41	120.22	14.6548	-1.1884	0.3379
869	SLU 20	-2.54	-1.34	121.7	14.8337	-1.196	0.3389
869	SLU 21	-2.56	-1.42	121.74	14.8375	-1.2015	0.3419
869	SLU 22	-2.44	-1.24	114.93	14.0108	-1.1086	0.3218
869	SLU 23	-2.48	-1.36	114.99	14.0172	-1.1178	0.3269
869	SLU 24	-2.49	-1.25	117.37	14.3074	-1.1353	0.3291
869	SLU 25	-2.52	-1.33	117.41	14.3112	-1.1408	0.3322
869	SLU 26	-2.51	-1.38	116.51	14.1999	-1.1309	0.3309
869	SLU 27	-2.53	-1.26	118.88	14.4901	-1.1485	0.3331
869	SLU 28	-2.55	-1.34	118.92	14.4939	-1.1539	0.3362
869	SLU 29	-2.5	-1.26	117.96	14.3762	-1.1348	0.3298
869	SLU 30	-2.53	-1.34	118	14.3801	-1.1403	0.3329
869	SLU 31	-2.68	-1.4	127.53	15.5448	-1.269	0.3572
869	SLU 32	-2.69	-1.29	129.9	15.835	-1.2866	0.3594
869	SLU 33	-2.72	-1.37	129.94	15.8388	-1.2921	0.3625
869	SLU 34	-2.71	-1.42	129.04	15.7275	-1.2821	0.3612
869	SLU 35	-2.73	-1.3	131.42	16.0177	-1.2997	0.3635
869	SLU 36	-2.75	-1.38	131.46	16.0215	-1.3052	0.3665
869	SLU 37	-2.7	-1.3	130.49	15.9038	-1.2861	0.3601
869	SLU 38	-2.73	-1.38	130.53	15.9076	-1.2916	0.3632
869	SLU 39	-2.72	-1.29	132.83	16.1931	-1.3247	0.3651
869	SLU 40	-2.75	-1.37	132.87	16.1969	-1.3302	0.3681

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
869	SLU 41	-2.76	-1.31	134.35	16.3758	-1.3378	0.3691
869	SLU 42	-2.78	-1.38	134.39	16.3796	-1.3433	0.3722
869	SLU 43	-2.81	-1.67	128.63	15.6806	-1.2083	0.3687
869	SLU 44	-2.85	-1.79	128.69	15.687	-1.2174	0.3737
869	SLU 45	-2.87	-1.68	131.07	15.9772	-1.235	0.376
869	SLU 46	-2.89	-1.76	131.11	15.981	-1.2405	0.379
869	SLU 47	-2.88	-1.81	130.21	15.8697	-1.2305	0.3778
869	SLU 48	-2.9	-1.69	132.59	16.1599	-1.2481	0.38
869	SLU 49	-2.92	-1.77	132.63	16.1637	-1.2536	0.3831
869	SLU 50	-2.88	-1.69	131.66	16.046	-1.2345	0.3767
869	SLU 51	-2.9	-1.77	131.7	16.0498	-1.24	0.3797
869	SLU 52	-3.05	-1.83	141.23	17.2145	-1.3687	0.404
869	SLU 53	-3.07	-1.72	143.6	17.5048	-1.3862	0.4063
869	SLU 54	-3.09	-1.8	143.64	17.5086	-1.3917	0.4093
869	SLU 55	-3.08	-1.85	142.74	17.3972	-1.3818	0.4081
869	SLU 56	-3.1	-1.73	145.12	17.6875	-1.3994	0.4103
869	SLU 57	-3.12	-1.81	145.16	17.6913	-1.4049	0.4134
869	SLU 58	-3.08	-1.73	144.19	17.5736	-1.3857	0.407
869	SLU 59	-3.1	-1.81	144.23	17.5774	-1.3912	0.4101
869	SLU 60	-3.1	-1.72	146.53	17.8629	-1.4243	0.412
869	SLU 61	-3.12	-1.8	146.57	17.8667	-1.4298	0.415
869	SLU 62	-3.13	-1.74	148.05	18.0456	-1.4375	0.416
869	SLU 63	-3.15	-1.81	148.09	18.0494	-1.443	0.419
869	SLU 64	-3.03	-1.63	141.27	17.2227	-1.3501	0.3989
869	SLU 65	-3.07	-1.76	141.34	17.2291	-1.3592	0.404
869	SLU 66	-3.08	-1.65	143.72	17.5193	-1.3768	0.4062
869	SLU 67	-3.11	-1.72	143.76	17.5231	-1.3823	0.4093
869	SLU 68	-3.1	-1.77	142.86	17.4118	-1.3723	0.408
869	SLU 69	-3.12	-1.66	145.23	17.702	-1.3899	0.4103
869	SLU 70	-3.14	-1.73	145.27	17.7058	-1.3954	0.4133
869	SLU 71	-3.09	-1.66	144.31	17.5881	-1.3763	0.4069
869	SLU 72	-3.12	-1.73	144.35	17.5919	-1.3818	0.41
869	SLU 73	-3.27	-1.8	153.87	18.7567	-1.5105	0.4343
869	SLU 74	-3.28	-1.69	156.25	19.0469	-1.528	0.4365
869	SLU 75	-3.31	-1.76	156.29	19.0507	-1.5335	0.4396
869	SLU 76	-3.3	-1.81	155.39	18.9394	-1.5236	0.4383
869	SLU 77	-3.32	-1.7	157.77	19.2296	-1.5411	0.4406
869	SLU 78	-3.34	-1.77	157.81	19.2334	-1.5466	0.4436
869	SLU 79	-3.29	-1.7	156.84	19.1157	-1.5275	0.4373
869	SLU 80	-3.32	-1.77	156.88	19.1195	-1.533	0.4403
869	SLU 81	-3.31	-1.69	159.18	19.405	-1.5661	0.4422
869	SLU 82	-3.34	-1.76	159.22	19.4088	-1.5716	0.4452
869	SLU 83	-3.35	-1.7	160.69	19.5877	-1.5792	0.4462
869	SLU 84	-3.37	-1.78	160.73	19.5915	-1.5847	0.4493
869	SLE RA 1	-2.28	-1.26	105.89	12.9093	-1.0073	0.3002
869	SLE RA 2	-2.31	-1.35	105.94	12.9136	-1.0134	0.3036
869	SLE RA 3	-2.32	-1.27	107.52	13.107	-1.0252	0.3051
869	SLE RA 4	-2.33	-1.32	107.55	13.1096	-1.0288	0.3071
869	SLE RA 5	-2.33	-1.36	106.95	13.0354	-1.0222	0.3063
869	SLE RA 6	-2.34	-1.28	108.53	13.2288	-1.0339	0.3078
869	SLE RA 7	-2.36	-1.33	108.56	13.2314	-1.0376	0.3098
869	SLE RA 8	-2.32	-1.28	107.91	13.1529	-1.0248	0.3056
869	SLE RA 9	-2.34	-1.33	107.94	13.1555	-1.0285	0.3076
869	SLE RA 10	-2.44	-1.37	114.29	13.9319	-1.1143	0.3238
869	SLE RA 11	-2.45	-1.3	115.88	14.1254	-1.126	0.3253
869	SLE RA 12	-2.47	-1.35	115.9	14.128	-1.1297	0.3273
869	SLE RA 13	-2.46	-1.38	115.3	14.0538	-1.123	0.3265
869	SLE RA 14	-2.47	-1.31	116.89	14.2472	-1.1347	0.328
869	SLE RA 15	-2.49	-1.36	116.91	14.2498	-1.1384	0.33
869	SLE RA 16	-2.46	-1.31	116.27	14.1713	-1.1257	0.3258
869	SLE RA 17	-2.47	-1.36	116.3	14.1739	-1.1293	0.3278
869	SLE RA 18	-2.47	-1.3	117.83	14.3642	-1.1514	0.3291
869	SLE RA 19	-2.49	-1.35	117.86	14.3667	-1.1551	0.3311
869	SLE RA 20	-2.49	-1.31	118.84	14.486	-1.1601	0.3318
869	SLE RA 21	-2.51	-1.36	118.87	14.4885	-1.1638	0.3338
869	SLE FR 1	-2.28	-1.26	105.89	12.9093	-1.0073	0.3002
869	SLE FR 2	-2.29	-1.28	105.9	12.9102	-1.0086	0.3009
869	SLE FR 3	-2.29	-1.27	106.3	12.958	-1.0108	0.3013
869	SLE FR 4	-2.34	-1.29	109.48	13.3466	-1.0518	0.3095
869	SLE FR 5	-2.35	-1.28	109.88	13.3945	-1.0541	0.3099
869	SLE FR 6	-2.38	-1.28	111.86	13.6367	-1.0794	0.3146
869	SLE QP 1	-2.28	-1.26	105.89	12.9093	-1.0073	0.3002
869	SLE QP 2	-2.34	-1.28	109.47	13.3458	-1.0506	0.3089
869	SLD 1	6.46	-0.6	116.52	14.3696	-1.1862	-0.8194
869	SLD 2	5.69	-1.26	117.42	14.4704	-1.1705	-0.7058
869	SLD 3	7.13	-3.39	117.7	14.5232	-1.2849	-0.9134
869	SLD 4	6.37	-4.05	118.6	14.6241	-1.2691	-0.7998
869	SLD 5	-0.59	3.28	109.64	13.4021	-0.9445	0.0929
869	SLD 6	-1.09	2.85	110.23	13.468	-0.9342	0.1671
869	SLD 7	1.66	-6.03	113.57	13.9142	-1.2732	-0.2204
869	SLD 8	1.16	-6.46	114.16	13.9801	-1.2629	-0.1462
869	SLD 9	-5.84	3.91	104.79	12.7114	-0.8382	0.7639
869	SLD 10	-6.34	3.48	105.38	12.7773	-0.8279	0.8382
869	SLD 11	-3.59	-5.4	108.72	13.2236	-1.1669	0.4506
869	SLD 12	-4.09	-5.83	109.31	13.2895	-1.1566	0.5249
869	SLD 13	-11.04	1.5	100.34	12.0675	-0.832	1.4175
869	SLD 14	-11.81	0.84	101.25	12.1683	-0.8163	1.5311
869	SLD 15	-10.37	-1.29	101.52	12.2211	-0.9306	1.3235
869	SLD 16	-11.13	-1.95	102.43	12.322	-0.9149	1.4371
869	SLV 1	18.24	0.19	126.02	15.7474	-1.3728	-2.3306
869	SLV 2	16.46	-1.35	128.12	15.9823	-1.3361	-2.0661
869	SLV 3	19.81	-6.13	128.71	16.0987	-1.5962	-2.5498
869	SLV 4	18.03	-7.66	130.81	16.3335	-1.5596	-2.2853
869	SLV 5	1.76	9.01	110	13.4932	-0.8146	-0.1959
869	SLV 6	0.61	8.02	111.35	13.6442	-0.7911	-0.0259
869	SLV 7	6.99	-12.05	118.96	14.6642	-1.5594	-0.9265
869	SLV 8	5.85	-13.04	120.31	14.8151	-1.5359	-0.7565

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
869	SLV 9	-10.52	10.49	98.63	11.8764	-0.5653	1.3742
869	SLV 10	-11.67	9.5	99.99	12.0274	-0.5417	1.5442
869	SLV 11	-5.29	-10.58	107.6	13.0473	-1.31	0.6436
869	SLV 12	-6.44	-11.56	108.95	13.1983	-1.2865	0.8136
869	SLV 13	-22.71	5.11	88.14	10.358	-0.5416	2.903
869	SLV 14	-24.49	3.58	90.24	10.5929	-0.5049	3.1675
869	SLV 15	-21.14	-1.21	90.83	10.7093	-0.765	2.6838
869	SLV 16	-22.92	-2.74	92.93	10.9441	-0.7283	2.9484
869	CRTFP Ux+	0	0	0	0	0	0
869	CRTFP Ux-	0	0	0	0	0	0
869	CRTFP Uy+	0	0	0	0	0	0
869	CRTFP Uy-	0	0	0	0	0	0
872	SLU 1	0.06	0.73	56.61	0.0475	0.7639	0.0363
872	SLU 2	0.04	0.66	56.63	0.0481	0.7625	0.0366
872	SLU 3	0.06	0.76	57.91	0.0488	0.7852	0.0372
872	SLU 4	0.05	0.72	57.93	0.0492	0.7843	0.0374
872	SLU 5	0.04	0.68	57.39	0.0487	0.7745	0.0371
872	SLU 6	0.07	0.77	58.67	0.0494	0.7972	0.0377
872	SLU 7	0.06	0.74	58.68	0.0498	0.7963	0.0379
872	SLU 8	0.07	0.75	58.12	0.0488	0.7878	0.0372
872	SLU 9	0.06	0.71	58.13	0.0491	0.787	0.0374
872	SLU 10	0.04	0.78	64.11	0.0535	0.8827	0.0426
872	SLU 11	0.06	0.88	65.39	0.0542	0.9054	0.0432
872	SLU 12	0.05	0.84	65.4	0.0545	0.9046	0.0434
872	SLU 13	0.05	0.79	64.86	0.0541	0.8947	0.0431
872	SLU 14	0.07	0.89	66.14	0.0548	0.9174	0.0437
872	SLU 15	0.06	0.85	66.16	0.0552	0.9166	0.0439
872	SLU 16	0.07	0.87	65.59	0.0542	0.9081	0.0432
872	SLU 17	0.06	0.83	65.61	0.0545	0.9072	0.0434
872	SLU 18	0.06	0.89	67.29	0.0552	0.9356	0.0448
872	SLU 19	0.05	0.86	67.3	0.0555	0.9348	0.0451
872	SLU 20	0.07	0.91	68.04	0.0558	0.9476	0.0453
872	SLU 21	0.06	0.87	68.06	0.0562	0.9468	0.0455
872	SLU 22	0.07	0.94	63.89	0.0539	0.882	0.0417
872	SLU 23	0.05	0.88	63.91	0.0545	0.8806	0.0421
872	SLU 24	0.07	0.98	65.19	0.0552	0.9033	0.0427
872	SLU 25	0.06	0.94	65.2	0.0556	0.9025	0.0429
872	SLU 26	0.06	0.89	64.66	0.0551	0.8926	0.0425
872	SLU 27	0.08	0.99	65.94	0.0558	0.9153	0.0431
872	SLU 28	0.07	0.95	65.96	0.0562	0.9144	0.0433
872	SLU 29	0.08	0.97	65.39	0.0552	0.9059	0.0427
872	SLU 30	0.07	0.93	65.41	0.0555	0.9051	0.0429
872	SLU 31	0.05	1	71.38	0.0599	1.0008	0.0481
872	SLU 32	0.08	1.1	72.67	0.0606	1.0235	0.0487
872	SLU 33	0.06	1.06	72.68	0.0609	1.0227	0.0489
872	SLU 34	0.06	1.01	72.14	0.0605	1.0128	0.0485
872	SLU 35	0.08	1.11	73.42	0.0612	1.0355	0.0491
872	SLU 36	0.07	1.07	73.43	0.0616	1.0347	0.0493
872	SLU 37	0.09	1.08	72.87	0.0606	1.0262	0.0487
872	SLU 38	0.08	1.05	72.88	0.0609	1.0254	0.0489
872	SLU 39	0.07	1.11	74.57	0.0616	1.0537	0.0503
872	SLU 40	0.06	1.07	74.58	0.062	1.0529	0.0505
872	SLU 41	0.08	1.12	75.32	0.0622	1.0657	0.0508
872	SLU 42	0.07	1.09	75.33	0.0626	1.0649	0.051
872	SLU 43	0.07	0.87	71.1	0.0596	0.9525	0.0453
872	SLU 44	0.05	0.81	71.12	0.0602	0.9511	0.0456
872	SLU 45	0.07	0.91	72.4	0.0609	0.9738	0.0463
872	SLU 46	0.06	0.87	72.41	0.0612	0.973	0.0465
872	SLU 47	0.06	0.82	71.87	0.0608	0.9631	0.0461
872	SLU 48	0.08	0.92	73.15	0.0615	0.9858	0.0467
872	SLU 49	0.07	0.88	73.17	0.0618	0.985	0.0469
872	SLU 50	0.08	0.89	72.6	0.0608	0.9765	0.0463
872	SLU 51	0.07	0.86	72.62	0.0612	0.9757	0.0465
872	SLU 52	0.05	0.93	78.6	0.0655	1.0714	0.0516
872	SLU 53	0.07	1.02	79.88	0.0662	1.0941	0.0523
872	SLU 54	0.06	0.99	79.89	0.0666	1.0933	0.0525
872	SLU 55	0.06	0.94	79.35	0.0662	1.0834	0.0521
872	SLU 56	0.08	1.03	80.63	0.0669	1.1061	0.0527
872	SLU 57	0.07	1	80.65	0.0672	1.1052	0.0529
872	SLU 58	0.09	1.01	80.08	0.0662	1.0967	0.0522
872	SLU 59	0.07	0.97	80.09	0.0666	1.0959	0.0524
872	SLU 60	0.07	1.04	81.78	0.0673	1.1243	0.0539
872	SLU 61	0.06	1	81.79	0.0676	1.1235	0.0541
872	SLU 62	0.08	1.05	82.53	0.0679	1.1363	0.0543
872	SLU 63	0.07	1.01	82.54	0.0682	1.1355	0.0545
872	SLU 64	0.08	1.09	78.37	0.066	1.0706	0.0507
872	SLU 65	0.06	1.02	78.4	0.0666	1.0693	0.0511
872	SLU 66	0.09	1.12	79.68	0.0673	1.0919	0.0517
872	SLU 67	0.07	1.08	79.69	0.0676	1.0911	0.0519
872	SLU 68	0.07	1.04	79.15	0.0672	1.0812	0.0516
872	SLU 69	0.09	1.13	80.43	0.0679	1.1039	0.0522
872	SLU 70	0.08	1.1	80.45	0.0683	1.1031	0.0524
872	SLU 71	0.1	1.11	79.88	0.0672	1.0946	0.0517
872	SLU 72	0.08	1.07	79.89	0.0676	1.0938	0.0519
872	SLU 73	0.06	1.14	85.87	0.0719	1.1895	0.0571
872	SLU 74	0.09	1.24	87.15	0.0726	1.2122	0.0577
872	SLU 75	0.08	1.2	87.17	0.073	1.2114	0.0579
872	SLU 76	0.07	1.15	86.63	0.0726	1.2015	0.0575
872	SLU 77	0.1	1.25	87.91	0.0733	1.2242	0.0582
872	SLU 78	0.08	1.21	87.92	0.0736	1.2234	0.0584
872	SLU 79	0.1	1.23	87.36	0.0726	1.2148	0.0577
872	SLU 80	0.09	1.19	87.37	0.073	1.214	0.0579
872	SLU 81	0.09	1.25	89.05	0.0737	1.2424	0.0593
872	SLU 82	0.07	1.22	89.07	0.074	1.2416	0.0595
872	SLU 83	0.09	1.27	89.81	0.0743	1.2544	0.0598
872	SLU 84	0.08	1.23	89.82	0.0746	1.2536	0.06
872	SLE RA 1	0.06	0.79	58.69	0.0494	0.7976	0.0378

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
872	SLE RA 2	0.05	0.75	58.7	0.0497	0.7967	0.0381
872	SLE RA 3	0.06	0.81	59.56	0.0502	0.8118	0.0385
872	SLE RA 4	0.05	0.79	59.57	0.0504	0.8113	0.0386
872	SLE RA 5	0.05	0.75	59.21	0.0502	0.8047	0.0384
872	SLE RA 6	0.07	0.82	60.06	0.0506	0.8198	0.0388
872	SLE RA 7	0.06	0.8	60.07	0.0509	0.8193	0.0389
872	SLE RA 8	0.07	0.8	59.69	0.0502	0.8136	0.0385
872	SLE RA 9	0.06	0.78	59.7	0.0504	0.813	0.0386
872	SLE RA 10	0.05	0.83	63.69	0.0533	0.8769	0.0421
872	SLE RA 11	0.06	0.89	64.54	0.0538	0.892	0.0425
872	SLE RA 12	0.06	0.87	64.55	0.054	0.8914	0.0426
872	SLE RA 13	0.05	0.83	64.19	0.0537	0.8848	0.0424
872	SLE RA 14	0.07	0.9	65.04	0.0542	0.9	0.0428
872	SLE RA 15	0.06	0.87	65.05	0.0544	0.8994	0.0429
872	SLE RA 16	0.07	0.88	64.68	0.0538	0.8937	0.0425
872	SLE RA 17	0.06	0.86	64.69	0.054	0.8932	0.0426
872	SLE RA 18	0.06	0.9	65.81	0.0545	0.9121	0.0435
872	SLE RA 19	0.05	0.88	65.82	0.0547	0.9116	0.0437
872	SLE RA 20	0.07	0.91	66.31	0.0549	0.9201	0.0439
872	SLE RA 21	0.06	0.88	66.32	0.0551	0.9196	0.044
872	SLE FR 1	0.06	0.79	58.69	0.0494	0.7976	0.0378
872	SLE FR 2	0.06	0.78	58.69	0.0494	0.7974	0.0379
872	SLE FR 3	0.06	0.79	58.89	0.0495	0.8008	0.038
872	SLE FR 4	0.06	0.81	60.83	0.051	0.8318	0.0396
872	SLE FR 5	0.06	0.82	61.02	0.0511	0.8352	0.0397
872	SLE FR 6	0.06	0.84	62.25	0.0519	0.8549	0.0407
872	SLE QP 1	0.06	0.79	58.69	0.0494	0.7976	0.0378
872	SLE QP 2	0.06	0.82	60.82	0.0509	0.832	0.0396
872	SLD 1	5.5	2.24	64.55	0.057	0.8743	0.0066
872	SLD 2	5.09	2.05	64.38	0.0569	0.874	0.0175
872	SLD 3	5.89	0.5	65.17	0.065	0.8598	-0.0004
872	SLD 4	5.49	0.32	65	0.0649	0.8595	0.0105
872	SLD 5	1.16	3.91	61.03	0.0407	0.8667	0.0384
872	SLD 6	0.9	3.79	60.92	0.0406	0.8665	0.0455
872	SLD 7	2.48	-1.87	63.09	0.0672	0.8183	0.015
872	SLD 8	2.22	-1.99	62.98	0.0672	0.8181	0.0221
872	SLD 9	-2.1	3.64	58.66	0.0346	0.8458	0.057
872	SLD 10	-2.36	3.52	58.55	0.0346	0.8456	0.0641
872	SLD 11	-0.78	-2.15	60.72	0.0612	0.7974	0.0336
872	SLD 12	-1.04	-2.27	60.61	0.0611	0.7972	0.0407
872	SLD 13	-5.37	1.33	56.65	0.0369	0.8044	0.0686
872	SLD 14	-5.77	1.14	56.48	0.0368	0.8041	0.0795
872	SLD 15	-4.97	-0.41	57.27	0.0448	0.7899	0.0616
872	SLD 16	-5.38	-0.59	57.1	0.0448	0.7896	0.0725
872	SLV 1	12.78	4.07	69.61	0.0657	0.9326	-0.0375
872	SLV 2	11.84	3.64	69.22	0.0656	0.9319	-0.0122
872	SLV 3	13.71	0.14	71.02	0.0838	0.8995	-0.0539
872	SLV 4	12.76	-0.29	70.63	0.0836	0.8988	-0.0286
872	SLV 5	2.64	7.83	61.39	0.028	0.9124	0.037
872	SLV 6	2.03	7.55	61.15	0.0279	0.912	0.0533
872	SLV 7	5.71	-5.27	66.08	0.0882	0.8022	-0.0177
872	SLV 8	5.1	-5.54	65.83	0.0881	0.8017	-0.0014
872	SLV 9	-4.98	7.19	55.82	0.0137	0.8622	0.0805
872	SLV 10	-5.59	6.91	55.57	0.0136	0.8617	0.0968
872	SLV 11	-1.91	-5.91	60.5	0.0739	0.7519	0.0258
872	SLV 12	-2.52	-6.18	60.25	0.0738	0.7515	0.0421
872	SLV 13	-12.64	1.93	51.02	0.0182	0.7651	0.1077
872	SLV 14	-13.59	1.5	50.63	0.018	0.7644	0.133
872	SLV 15	-11.72	-1.99	52.42	0.0362	0.732	0.0913
872	SLV 16	-12.66	-2.42	52.04	0.0361	0.7313	0.1166
872	CRTFP Ux+	0	0	0	0	0	0
872	CRTFP Ux-	0	0	0	0	0	0
875	SLU 1	0.49	1.69	52.38	0.063	-0.2877	0.0122
875	SLU 2	0.46	1.65	52.4	0.0636	-0.2865	0.0128
875	SLU 3	0.5	1.75	53.57	0.0648	-0.2954	0.0126
875	SLU 4	0.49	1.72	53.59	0.0652	-0.2947	0.013
875	SLU 5	0.48	1.67	53.13	0.0646	-0.2914	0.013
875	SLU 6	0.52	1.77	54.3	0.0658	-0.3002	0.0127
875	SLU 7	0.5	1.75	54.31	0.0662	-0.2996	0.0131
875	SLU 8	0.52	1.74	53.83	0.065	-0.2974	0.0125
875	SLU 9	0.5	1.71	53.84	0.0653	-0.2967	0.0128
875	SLU 10	0.52	1.9	59.12	0.071	-0.3288	0.017
875	SLU 11	0.55	2	60.29	0.0723	-0.3376	0.0167
875	SLU 12	0.54	1.97	60.3	0.0726	-0.3369	0.0171
875	SLU 13	0.53	1.92	59.84	0.072	-0.3337	0.0171
875	SLU 14	0.57	2.02	61.01	0.0733	-0.3425	0.0169
875	SLU 15	0.55	2	61.02	0.0736	-0.3418	0.0173
875	SLU 16	0.57	1.99	60.54	0.0724	-0.3397	0.0166
875	SLU 17	0.55	1.96	60.56	0.0728	-0.339	0.017
875	SLU 18	0.56	2.05	61.98	0.0737	-0.348	0.0181
875	SLU 19	0.55	2.02	61.99	0.074	-0.3474	0.0185
875	SLU 20	0.58	2.07	62.7	0.0746	-0.3529	0.0182
875	SLU 21	0.56	2.05	62.71	0.075	-0.3522	0.0186
875	SLU 22	0.55	2.01	59	0.0716	-0.3331	0.0155
875	SLU 23	0.52	1.97	59.02	0.0722	-0.3319	0.0161
875	SLU 24	0.56	2.07	60.19	0.0734	-0.3408	0.0159
875	SLU 25	0.55	2.05	60.2	0.0737	-0.3401	0.0163
875	SLU 26	0.54	1.99	59.74	0.0731	-0.3368	0.0163
875	SLU 27	0.58	2.09	60.91	0.0744	-0.3456	0.016
875	SLU 28	0.56	2.07	60.92	0.0747	-0.3449	0.0164
875	SLU 29	0.58	2.06	60.44	0.0735	-0.3428	0.0158
875	SLU 30	0.56	2.04	60.46	0.0739	-0.3421	0.0162
875	SLU 31	0.58	2.22	65.73	0.0796	-0.3742	0.0203
875	SLU 32	0.61	2.32	66.9	0.0808	-0.383	0.02
875	SLU 33	0.6	2.3	66.92	0.0812	-0.3823	0.0204
875	SLU 34	0.59	2.25	66.46	0.0806	-0.3791	0.0204
875	SLU 35	0.63	2.35	67.63	0.0818	-0.3879	0.0202

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
875	SLU 36	0.61	2.32	67.64	0.0822	-0.3872	0.0206
875	SLU 37	0.63	2.31	67.16	0.081	-0.3851	0.0199
875	SLU 38	0.61	2.29	67.17	0.0814	-0.3844	0.0203
875	SLU 39	0.62	2.37	68.59	0.0822	-0.3934	0.0214
875	SLU 40	0.61	2.35	68.6	0.0826	-0.3927	0.0218
875	SLU 41	0.64	2.4	69.31	0.0832	-0.3983	0.0215
875	SLU 42	0.62	2.37	69.33	0.0836	-0.3976	0.0219
875	SLU 43	0.61	2.08	65.83	0.0789	-0.3584	0.0147
875	SLU 44	0.59	2.04	65.85	0.0795	-0.3573	0.0154
875	SLU 45	0.63	2.14	67.02	0.0808	-0.3661	0.0151
875	SLU 46	0.61	2.12	67.03	0.0811	-0.3654	0.0155
875	SLU 47	0.6	2.07	66.57	0.0805	-0.3621	0.0155
875	SLU 48	0.64	2.17	67.74	0.0818	-0.371	0.0153
875	SLU 49	0.63	2.14	67.76	0.0821	-0.3703	0.0156
875	SLU 50	0.64	2.13	67.28	0.0809	-0.3682	0.015
875	SLU 51	0.63	2.11	67.29	0.0813	-0.3675	0.0154
875	SLU 52	0.64	2.29	72.57	0.087	-0.3995	0.0195
875	SLU 53	0.68	2.39	73.74	0.0882	-0.4084	0.0193
875	SLU 54	0.67	2.37	73.75	0.0886	-0.4077	0.0196
875	SLU 55	0.66	2.32	73.29	0.088	-0.4044	0.0196
875	SLU 56	0.69	2.42	74.46	0.0892	-0.4132	0.0194
875	SLU 57	0.68	2.39	74.47	0.0896	-0.4125	0.0198
875	SLU 58	0.69	2.38	73.99	0.0884	-0.4104	0.0191
875	SLU 59	0.68	2.36	74	0.0887	-0.4097	0.0195
875	SLU 60	0.69	2.44	75.42	0.0896	-0.4188	0.0206
875	SLU 61	0.67	2.42	75.44	0.09	-0.4181	0.021
875	SLU 62	0.7	2.47	76.15	0.0906	-0.4237	0.0208
875	SLU 63	0.69	2.44	76.16	0.091	-0.423	0.0212
875	SLU 64	0.67	2.4	72.45	0.0875	-0.4038	0.018
875	SLU 65	0.65	2.36	72.47	0.0881	-0.4027	0.0187
875	SLU 66	0.69	2.46	73.64	0.0893	-0.4115	0.0184
875	SLU 67	0.67	2.44	73.65	0.0897	-0.4108	0.0188
875	SLU 68	0.66	2.39	73.19	0.0891	-0.4075	0.0188
875	SLU 69	0.7	2.49	74.36	0.0903	-0.4164	0.0186
875	SLU 70	0.69	2.47	74.37	0.0907	-0.4157	0.0189
875	SLU 71	0.7	2.45	73.89	0.0895	-0.4136	0.0183
875	SLU 72	0.69	2.43	73.9	0.0899	-0.4129	0.0187
875	SLU 73	0.7	2.62	79.18	0.0956	-0.4449	0.0228
875	SLU 74	0.74	2.72	80.35	0.0968	-0.4538	0.0226
875	SLU 75	0.73	2.69	80.36	0.0972	-0.4531	0.023
875	SLU 76	0.72	2.64	79.9	0.0966	-0.4498	0.0229
875	SLU 77	0.75	2.74	81.07	0.0978	-0.4586	0.0227
875	SLU 78	0.74	2.72	81.09	0.0981	-0.4579	0.0231
875	SLU 79	0.75	2.71	80.61	0.097	-0.4558	0.0224
875	SLU 80	0.74	2.68	80.62	0.0973	-0.4551	0.0228
875	SLU 81	0.75	2.77	82.04	0.0982	-0.4642	0.0239
875	SLU 82	0.73	2.74	82.05	0.0985	-0.4635	0.0243
875	SLU 83	0.76	2.79	82.76	0.0992	-0.4691	0.0241
875	SLU 84	0.75	2.77	82.77	0.0995	-0.4684	0.0245
875	SLE RA 1	0.51	1.78	54.27	0.0654	-0.3006	0.0131
875	SLE RA 2	0.49	1.75	54.29	0.0658	-0.2999	0.0136
875	SLE RA 3	0.51	1.82	55.07	0.0667	-0.3058	0.0134
875	SLE RA 4	0.51	1.8	55.08	0.0669	-0.3053	0.0137
875	SLE RA 5	0.5	1.77	54.77	0.0665	-0.3031	0.0137
875	SLE RA 6	0.52	1.83	55.55	0.0673	-0.309	0.0135
875	SLE RA 7	0.51	1.82	55.56	0.0675	-0.3086	0.0138
875	SLE RA 8	0.52	1.81	55.24	0.0668	-0.3071	0.0133
875	SLE RA 9	0.51	1.8	55.25	0.067	-0.3067	0.0136
875	SLE RA 10	0.52	1.92	58.76	0.0708	-0.3281	0.0163
875	SLE RA 11	0.55	1.99	59.54	0.0716	-0.3339	0.0162
875	SLE RA 12	0.54	1.97	59.55	0.0719	-0.3335	0.0164
875	SLE RA 13	0.53	1.94	59.25	0.0715	-0.3313	0.0164
875	SLE RA 14	0.56	2	60.03	0.0723	-0.3372	0.0163
875	SLE RA 15	0.55	1.99	60.03	0.0725	-0.3367	0.0165
875	SLE RA 16	0.56	1.98	59.71	0.0717	-0.3353	0.0161
875	SLE RA 17	0.55	1.96	59.72	0.072	-0.3349	0.0163
875	SLE RA 18	0.55	2.02	60.67	0.0725	-0.3409	0.0171
875	SLE RA 19	0.55	2	60.68	0.0728	-0.3404	0.0173
875	SLE RA 20	0.56	2.04	61.15	0.0732	-0.3441	0.0172
875	SLE RA 21	0.55	2.02	61.16	0.0734	-0.3437	0.0174
875	SLE FR 1	0.51	1.78	54.27	0.0654	-0.3006	0.0131
875	SLE FR 2	0.5	1.77	54.28	0.0655	-0.3005	0.0132
875	SLE FR 3	0.51	1.79	54.47	0.0657	-0.3019	0.0132
875	SLE FR 4	0.52	1.85	56.2	0.0676	-0.3126	0.0144
875	SLE FR 5	0.52	1.86	56.39	0.0678	-0.314	0.0144
875	SLE FR 6	0.53	1.9	57.47	0.069	-0.3208	0.0151
875	SLE QP 1	0.51	1.78	54.27	0.0654	-0.3006	0.0131
875	SLE QP 2	0.52	1.85	56.19	0.0676	-0.3127	0.0143
875	SLD 1	6.02	2.34	51.31	0.0601	-0.0312	-0.0208
875	SLD 2	5.61	2.52	51.29	0.0589	-0.0349	-0.0096
875	SLD 3	6.42	0.71	51.9	0.069	-0.0104	-0.0278
875	SLD 4	6	0.89	51.87	0.0677	-0.014	-0.0167
875	SLD 5	1.64	4.45	53.84	0.0521	-0.2593	0.0125
875	SLD 6	1.37	4.57	53.83	0.0513	-0.2616	0.0198
875	SLD 7	2.96	-1.01	55.8	0.0816	-0.1897	-0.011
875	SLD 8	2.69	-0.89	55.78	0.0808	-0.1921	-0.0037
875	SLD 9	-1.65	4.59	56.6	0.0543	-0.4333	0.0323
875	SLD 10	-1.92	4.71	56.59	0.0535	-0.4357	0.0396
875	SLD 11	-0.33	-0.87	58.56	0.0838	-0.3638	0.0089
875	SLD 12	-0.6	-0.75	58.54	0.083	-0.3662	0.0162
875	SLD 13	-4.96	2.81	60.51	0.0674	-0.6114	0.0453
875	SLD 14	-5.38	3	60.49	0.0662	-0.615	0.0565
875	SLD 15	-4.57	1.18	61.1	0.0763	-0.5906	0.0383
875	SLD 16	-4.98	1.36	61.07	0.075	-0.5942	0.0495
875	SLV 1	13.38	2.94	44.79	0.0499	0.3466	-0.0678
875	SLV 2	12.43	3.36	44.74	0.047	0.3382	-0.0418
875	SLV 3	14.31	-0.78	46.12	0.07	0.3948	-0.0842

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
875	SLV 4	13.35	-0.35	46.07	0.0671	0.3863	-0.0582
875	SLV 5	3.14	7.74	50.76	0.0323	-0.1865	0.0101
875	SLV 6	2.52	8.01	50.73	0.0305	-0.1919	0.0269
875	SLV 7	6.23	-4.64	55.2	0.0992	-0.026	-0.0446
875	SLV 8	5.61	-4.37	55.16	0.0973	-0.0314	-0.0279
875	SLV 9	-4.57	8.08	57.22	0.0378	-0.594	0.0565
875	SLV 10	-5.19	8.35	57.19	0.036	-0.5994	0.0733
875	SLV 11	-1.48	-4.31	61.66	0.1046	-0.4335	0.0018
875	SLV 12	-2.1	-4.04	61.62	0.1028	-0.439	0.0185
875	SLV 13	-12.31	4.06	66.32	0.0681	-1.0118	0.0868
875	SLV 14	-13.27	4.48	66.27	0.0652	-1.0202	0.1129
875	SLV 15	-11.39	0.34	67.65	0.0881	-0.9636	0.0704
875	SLV 16	-12.34	0.76	67.6	0.0852	-0.9721	0.0965
875	CRTFP Ux+	0	0	0	0	0	0
875	CRTFP Ux-	0	0	0	0	0	0
877	SLU 1	-0.69	0.04	33.44	0.0745	-4.5466	0.0097
877	SLU 2	-0.7	-0.04	33.45	0.0745	-4.5458	-0.0097
877	SLU 3	-0.7	0.05	34.24	0.0764	-4.6468	0.0114
877	SLU 4	-0.71	0	34.25	0.0764	-4.6463	-0.0003
877	SLU 5	-0.71	-0.03	33.96	0.0757	-4.609	-0.0084
877	SLU 6	-0.71	0.05	34.74	0.0776	-4.7101	0.0127
877	SLU 7	-0.72	0.01	34.75	0.0776	-4.7095	0.001
877	SLU 8	-0.71	0.05	34.45	0.0769	-4.6732	0.0123
877	SLU 9	-0.72	0	34.45	0.0769	-4.6727	0.0007
877	SLU 10	-0.76	0.02	37.28	0.0841	-5.0386	0.0054
877	SLU 11	-0.76	0.11	38.06	0.0859	-5.1396	0.0265
877	SLU 12	-0.77	0.06	38.07	0.0859	-5.1391	0.0149
877	SLU 13	-0.77	0.03	37.78	0.0852	-5.1018	0.0068
877	SLU 14	-0.77	0.11	38.57	0.0871	-5.2029	0.0279
877	SLU 15	-0.78	0.07	38.57	0.0871	-5.2024	0.0162
877	SLU 16	-0.77	0.11	38.27	0.0864	-5.166	0.0275
877	SLU 17	-0.78	0.07	38.28	0.0864	-5.1655	0.0159
877	SLU 18	-0.77	0.13	38.91	0.0882	-5.2506	0.0314
877	SLU 19	-0.78	0.08	38.91	0.0881	-5.2501	0.0197
877	SLU 20	-0.78	0.13	39.41	0.0893	-5.3139	0.0327
877	SLU 21	-0.79	0.09	39.42	0.0893	-5.3134	0.021
877	SLU 22	-0.75	0.12	37.36	0.0844	-5.0514	0.0281
877	SLU 23	-0.76	0.04	37.37	0.0843	-5.0505	0.0086
877	SLU 24	-0.77	0.12	38.16	0.0862	-5.1516	0.0297
877	SLU 25	-0.78	0.07	38.17	0.0862	-5.151	0.0181
877	SLU 26	-0.77	0.04	37.88	0.0855	-5.1138	0.0099
877	SLU 27	-0.78	0.13	38.66	0.0874	-5.2148	0.031
877	SLU 28	-0.79	0.08	38.67	0.0874	-5.2143	0.0194
877	SLU 29	-0.77	0.13	38.37	0.0867	-5.178	0.0307
877	SLU 30	-0.78	0.08	38.38	0.0867	-5.1774	0.019
877	SLU 31	-0.82	0.1	41.2	0.0939	-5.5433	0.0238
877	SLU 32	-0.83	0.18	41.99	0.0958	-5.6444	0.0449
877	SLU 33	-0.84	0.14	41.99	0.0957	-5.6438	0.0332
877	SLU 34	-0.83	0.1	41.7	0.0951	-5.6066	0.0251
877	SLU 35	-0.84	0.19	42.49	0.0969	-5.7076	0.0462
877	SLU 36	-0.85	0.14	42.5	0.0969	-5.7071	0.0346
877	SLU 37	-0.83	0.19	42.2	0.0962	-5.6708	0.0459
877	SLU 38	-0.84	0.14	42.2	0.0962	-5.6702	0.0342
877	SLU 39	-0.83	0.2	42.83	0.098	-5.7554	0.0498
877	SLU 40	-0.84	0.16	42.84	0.098	-5.7549	0.0381
877	SLU 41	-0.84	0.21	43.33	0.0992	-5.8187	0.0511
877	SLU 42	-0.85	0.16	43.34	0.0991	-5.8182	0.0394
877	SLU 43	-0.87	0.03	42.13	0.0935	-5.7376	0.0063
877	SLU 44	-0.88	-0.05	42.14	0.0935	-5.7367	-0.0131
877	SLU 45	-0.89	0.03	42.93	0.0954	-5.8377	0.008
877	SLU 46	-0.9	-0.01	42.93	0.0954	-5.8372	-0.0037
877	SLU 47	-0.9	-0.05	42.64	0.0947	-5.8	-0.0118
877	SLU 48	-0.9	0.04	43.43	0.0966	-5.901	0.0093
877	SLU 49	-0.91	-0.01	43.44	0.0965	-5.9005	-0.0024
877	SLU 50	-0.89	0.04	43.13	0.0959	-5.8641	0.0089
877	SLU 51	-0.9	-0.01	43.14	0.0959	-5.8636	-0.0027
877	SLU 52	-0.94	0.01	45.97	0.103	-6.2295	0.0021
877	SLU 53	-0.95	0.1	46.75	0.1049	-6.3305	0.0231
877	SLU 54	-0.96	0.05	46.76	0.1049	-6.33	0.0115
877	SLU 55	-0.95	0.02	46.47	0.1042	-6.2928	0.0034
877	SLU 56	-0.96	0.1	47.26	0.1061	-6.3938	0.0245
877	SLU 57	-0.97	0.05	47.26	0.1061	-6.3933	0.0128
877	SLU 58	-0.95	0.1	46.96	0.1054	-6.3569	0.0241
877	SLU 59	-0.96	0.05	46.97	0.1054	-6.3564	0.0125
877	SLU 60	-0.96	0.12	47.6	0.1071	-6.4416	0.028
877	SLU 61	-0.96	0.07	47.6	0.1071	-6.441	0.0163
877	SLU 62	-0.97	0.12	48.1	0.1083	-6.5048	0.0293
877	SLU 63	-0.97	0.07	48.11	0.1083	-6.5043	0.0177
877	SLU 64	-0.93	0.1	46.05	0.1034	-6.2423	0.0247
877	SLU 65	-0.95	0.02	46.06	0.1033	-6.2414	0.0052
877	SLU 66	-0.95	0.11	46.85	0.1052	-6.3425	0.0263
877	SLU 67	-0.96	0.06	46.85	0.1052	-6.342	0.0147
877	SLU 68	-0.96	0.03	46.57	0.1045	-6.3047	0.0066
877	SLU 69	-0.96	0.11	47.35	0.1064	-6.4058	0.0277
877	SLU 70	-0.97	0.07	47.36	0.1064	-6.4052	0.016
877	SLU 71	-0.95	0.11	47.06	0.1057	-6.3689	0.0273
877	SLU 72	-0.96	0.07	47.06	0.1057	-6.3684	0.0157
877	SLU 73	-1.01	0.09	49.89	0.1129	-6.7342	0.0204
877	SLU 74	-1.01	0.17	50.67	0.1147	-6.8353	0.0415
877	SLU 75	-1.02	0.12	50.68	0.1147	-6.8348	0.0299
877	SLU 76	-1.02	0.09	50.39	0.114	-6.7975	0.0217
877	SLU 77	-1.02	0.18	51.18	0.1159	-6.8986	0.0428
877	SLU 78	-1.03	0.13	51.18	0.1159	-6.898	0.0312
877	SLU 79	-1.01	0.17	50.88	0.1152	-6.8617	0.0425
877	SLU 80	-1.02	0.13	50.89	0.1152	-6.8612	0.0308
877	SLU 81	-1.02	0.19	51.52	0.117	-6.9463	0.0464
877	SLU 82	-1.03	0.14	51.52	0.117	-6.9458	0.0347

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
877	SLU 83	-1.03	0.2	52.02	0.1181	-7.0096	0.0477
877	SLU 84	-1.04	0.15	52.03	0.1181	-7.0091	0.036
877	SLE RA 1	-0.7	0.06	34.56	0.0773	-4.6908	0.015
877	SLE RA 2	-0.71	0.01	34.57	0.0773	-4.6903	0.002
877	SLE RA 3	-0.72	0.07	35.09	0.0786	-4.7576	0.0161
877	SLE RA 4	-0.72	0.04	35.1	0.0786	-4.7573	0.0083
877	SLE RA 5	-0.72	0.01	34.9	0.0781	-4.7325	0.0029
877	SLE RA 6	-0.72	0.07	35.43	0.0794	-4.7998	0.0169
877	SLE RA 7	-0.73	0.04	35.43	0.0794	-4.7995	0.0092
877	SLE RA 8	-0.72	0.07	35.23	0.0789	-4.7752	0.0167
877	SLE RA 9	-0.72	0.04	35.24	0.0789	-4.7749	0.0089
877	SLE RA 10	-0.75	0.05	37.12	0.0837	-5.0188	0.0121
877	SLE RA 11	-0.76	0.11	37.64	0.0849	-5.0862	0.0262
877	SLE RA 12	-0.76	0.08	37.65	0.0849	-5.0858	0.0184
877	SLE RA 13	-0.76	0.05	37.46	0.0845	-5.061	0.013
877	SLE RA 14	-0.76	0.11	37.98	0.0857	-5.1283	0.0271
877	SLE RA 15	-0.77	0.08	37.98	0.0857	-5.128	0.0193
877	SLE RA 16	-0.76	0.11	37.78	0.0853	-5.1038	0.0268
877	SLE RA 17	-0.76	0.08	37.79	0.0853	-5.1034	0.0191
877	SLE RA 18	-0.76	0.12	38.21	0.0864	-5.1602	0.0294
877	SLE RA 19	-0.77	0.09	38.21	0.0864	-5.1598	0.0216
877	SLE RA 20	-0.77	0.12	38.54	0.0872	-5.2024	0.0303
877	SLE RA 21	-0.77	0.09	38.55	0.0872	-5.202	0.0225
877	SLE FR 1	-0.7	0.06	34.56	0.0773	-4.6908	0.015
877	SLE FR 2	-0.71	0.05	34.56	0.0773	-4.6907	0.0124
877	SLE FR 3	-0.71	0.06	34.7	0.0777	-4.7077	0.0153
877	SLE FR 4	-0.72	0.07	35.66	0.0801	-4.8315	0.0167
877	SLE FR 5	-0.72	0.08	35.79	0.0804	-4.8485	0.0196
877	SLE FR 6	-0.73	0.09	36.38	0.0819	-4.9255	0.0222
877	SLE QP 1	-0.7	0.06	34.56	0.0773	-4.6908	0.015
877	SLE QP 2	-0.72	0.08	35.65	0.0801	-4.8316	0.0193
877	SLD 1	1.86	0.64	44.57	0.0974	-5.9103	0.1561
877	SLD 2	1.62	0.15	44.89	0.0996	-5.9617	0.0349
877	SLD 3	2.06	-0.72	45.09	0.1007	-5.9829	-0.1818
877	SLD 4	1.82	-1.21	45.4	0.1029	-6.0343	-0.303
877	SLD 5	-0.22	2.39	37.49	0.0799	-5.036	0.5942
877	SLD 6	-0.37	2.07	37.7	0.0813	-5.0696	0.515
877	SLD 7	0.46	-2.13	39.21	0.0909	-5.2781	-0.532
877	SLD 8	0.31	-2.45	39.42	0.0923	-5.3117	-0.6112
877	SLD 9	-1.75	2.61	31.89	0.0678	-4.3516	0.6498
877	SLD 10	-1.91	2.29	32.1	0.0692	-4.3852	0.5706
877	SLD 11	-1.07	-1.91	33.61	0.0788	-4.5937	-0.4764
877	SLD 12	-1.23	-2.23	33.82	0.0803	-4.6273	-0.5556
877	SLD 13	-3.26	1.37	25.91	0.0572	-3.629	0.3416
877	SLD 14	-3.5	0.88	26.22	0.0594	-3.6804	0.2204
877	SLD 15	-3.06	0.01	26.42	0.0605	-3.7016	0.0037
877	SLD 16	-3.3	-0.48	26.74	0.0627	-3.753	-0.1175
877	SLV 1	5.31	1.33	56.52	0.1208	-7.3572	0.3257
877	SLV 2	4.75	0.19	57.26	0.1258	-7.4768	0.0434
877	SLV 3	5.78	-1.74	57.73	0.1284	-7.526	-0.4387
877	SLV 4	5.23	-2.88	58.47	0.1334	-7.6457	-0.721
877	SLV 5	0.46	5.3	39.96	0.0799	-5.3127	1.3189
877	SLV 6	0.11	4.57	40.43	0.0832	-5.3896	1.1375
877	SLV 7	2.04	-4.92	43.98	0.1052	-5.8755	-1.2291
877	SLV 8	1.69	-5.66	44.45	0.1084	-5.9524	-1.4105
877	SLV 9	-3.13	5.82	26.86	0.0517	-3.7109	1.4491
877	SLV 10	-3.49	5.08	27.33	0.055	-3.7878	1.2677
877	SLV 11	-1.55	-4.41	30.88	0.077	-4.2737	-1.0989
877	SLV 12	-1.9	-5.14	31.35	0.0802	-4.3506	-1.2803
877	SLV 13	-6.67	3.04	12.84	0.0267	-2.0176	0.7596
877	SLV 14	-7.22	1.9	13.58	0.0318	-2.1373	0.4773
877	SLV 15	-6.2	-0.03	14.05	0.0343	-2.1865	-0.0048
877	SLV 16	-6.75	-1.17	14.79	0.0393	-2.3061	-0.2871
877	CRTFP Ux+	0	0	0	0	0	0
877	CRTFP Ux-	0	0	0	0	0	0
877	CRTFP Uy+	0	0	0	0	0	0
877	CRTFP Uy-	0	0	0	0	0	0
880	SLU 1	0.82	0.32	29.45	-0.0362	1.8003	-0.1155
880	SLU 2	0.84	0.29	29.44	-0.0363	1.802	-0.1052
880	SLU 3	0.85	0.33	30.11	-0.0372	1.8157	-0.1169
880	SLU 4	0.86	0.31	30.1	-0.0373	1.8168	-0.1108
880	SLU 5	0.86	0.29	29.85	-0.0369	1.8117	-0.1038
880	SLU 6	0.87	0.32	30.52	-0.0378	1.8255	-0.1155
880	SLU 7	0.88	0.3	30.51	-0.0379	1.8265	-0.1094
880	SLU 8	0.86	0.31	30.27	-0.0374	1.8197	-0.1127
880	SLU 9	0.87	0.3	30.26	-0.0375	1.8207	-0.1065
880	SLU 10	0.9	0.41	32.68	-0.0407	1.8838	-0.1447
880	SLU 11	0.91	0.44	33.35	-0.0416	1.8976	-0.1564
880	SLU 12	0.92	0.42	33.34	-0.0417	1.8986	-0.1502
880	SLU 13	0.92	0.4	33.09	-0.0414	1.8935	-0.1433
880	SLU 14	0.93	0.43	33.76	-0.0423	1.9073	-0.155
880	SLU 15	0.94	0.42	33.76	-0.0423	1.9083	-0.1488
880	SLU 16	0.92	0.43	33.51	-0.0419	1.9015	-0.1521
880	SLU 17	0.93	0.41	33.51	-0.042	1.9026	-0.1459
880	SLU 18	0.91	0.48	34.08	-0.0425	1.9172	-0.1718
880	SLU 19	0.92	0.47	34.07	-0.0426	1.9182	-0.1657
880	SLU 20	0.93	0.48	34.49	-0.0431	1.9269	-0.1704
880	SLU 21	0.94	0.46	34.48	-0.0432	1.9279	-0.1643
880	SLU 22	0.9	0.43	32.75	-0.0405	1.8882	-0.1534
880	SLU 23	0.92	0.4	32.74	-0.0407	1.8899	-0.1432
880	SLU 24	0.93	0.43	33.41	-0.0415	1.9037	-0.1549
880	SLU 25	0.94	0.42	33.41	-0.0416	1.9047	-0.1487
880	SLU 26	0.94	0.4	33.15	-0.0413	1.8997	-0.1418
880	SLU 27	0.95	0.43	33.82	-0.0422	1.9134	-0.1535
880	SLU 28	0.96	0.41	33.82	-0.0422	1.9145	-0.1473
880	SLU 29	0.94	0.42	33.58	-0.0418	1.9077	-0.1506
880	SLU 30	0.95	0.4	33.57	-0.0419	1.9087	-0.1445

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
880	SLU 31	0.98	0.51	35.99	-0.0451	1.9718	-0.1826
880	SLU 32	0.99	0.55	36.66	-0.046	1.9855	-0.1943
880	SLU 33	1	0.53	36.65	-0.046	1.9866	-0.1882
880	SLU 34	1	0.51	36.4	-0.0457	1.9815	-0.1812
880	SLU 35	1.01	0.54	37.07	-0.0466	1.9953	-0.1929
880	SLU 36	1.02	0.52	37.06	-0.0467	1.9963	-0.1868
880	SLU 37	1	0.53	36.82	-0.0462	1.9895	-0.19
880	SLU 38	1.01	0.52	36.81	-0.0463	1.9905	-0.1839
880	SLU 39	0.99	0.59	37.38	-0.0469	2.0051	-0.2097
880	SLU 40	1	0.57	37.38	-0.0469	2.0062	-0.2036
880	SLU 41	1.01	0.59	37.8	-0.0475	2.0149	-0.2083
880	SLU 42	1.02	0.57	37.79	-0.0476	2.0159	-0.2022
880	SLU 43	1.04	0.38	37.15	-0.0455	2.3102	-0.1371
880	SLU 44	1.06	0.35	37.14	-0.0457	2.3119	-0.1269
880	SLU 45	1.06	0.39	37.81	-0.0465	2.3256	-0.1386
880	SLU 46	1.08	0.37	37.8	-0.0466	2.3267	-0.1324
880	SLU 47	1.08	0.35	37.55	-0.0463	2.3216	-0.1255
880	SLU 48	1.08	0.38	38.22	-0.0472	2.3354	-0.1372
880	SLU 49	1.1	0.37	38.21	-0.0473	2.3364	-0.131
880	SLU 50	1.07	0.37	37.97	-0.0468	2.3296	-0.1343
880	SLU 51	1.09	0.36	37.96	-0.0469	2.3307	-0.1281
880	SLU 52	1.12	0.47	40.38	-0.0501	2.3937	-0.1663
880	SLU 53	1.13	0.5	41.05	-0.051	2.4075	-0.178
880	SLU 54	1.14	0.48	41.04	-0.0511	2.4085	-0.1719
880	SLU 55	1.14	0.46	40.79	-0.0507	2.4035	-0.1649
880	SLU 56	1.15	0.49	41.46	-0.0516	2.4172	-0.1766
880	SLU 57	1.16	0.48	41.46	-0.0517	2.4182	-0.1704
880	SLU 58	1.14	0.49	41.21	-0.0512	2.4115	-0.1737
880	SLU 59	1.15	0.47	41.21	-0.0513	2.4125	-0.1676
880	SLU 60	1.13	0.54	41.78	-0.0519	2.4271	-0.1934
880	SLU 61	1.14	0.53	41.77	-0.052	2.4281	-0.1873
880	SLU 62	1.15	0.54	42.19	-0.0525	2.4368	-0.192
880	SLU 63	1.16	0.52	42.19	-0.0526	2.4378	-0.1859
880	SLU 64	1.12	0.49	40.45	-0.0499	2.3981	-0.1751
880	SLU 65	1.14	0.46	40.44	-0.05	2.3999	-0.1648
880	SLU 66	1.14	0.49	41.11	-0.0509	2.4136	-0.1765
880	SLU 67	1.16	0.48	41.11	-0.051	2.4146	-0.1704
880	SLU 68	1.16	0.46	40.85	-0.0507	2.4096	-0.1634
880	SLU 69	1.16	0.49	41.53	-0.0515	2.4233	-0.1751
880	SLU 70	1.18	0.47	41.52	-0.0516	2.4244	-0.169
880	SLU 71	1.15	0.48	41.28	-0.0512	2.4176	-0.1722
880	SLU 72	1.17	0.46	41.27	-0.0512	2.4186	-0.1661
880	SLU 73	1.2	0.57	43.69	-0.0545	2.4817	-0.2042
880	SLU 74	1.21	0.61	44.36	-0.0553	2.4954	-0.2159
880	SLU 75	1.22	0.59	44.35	-0.0554	2.4965	-0.2098
880	SLU 76	1.22	0.57	44.1	-0.0551	2.4914	-0.2028
880	SLU 77	1.23	0.6	44.77	-0.056	2.5052	-0.2145
880	SLU 78	1.24	0.58	44.76	-0.056	2.5062	-0.2084
880	SLU 79	1.22	0.59	44.52	-0.0556	2.4994	-0.2117
880	SLU 80	1.23	0.58	44.51	-0.0557	2.5005	-0.2055
880	SLU 81	1.21	0.65	45.09	-0.0562	2.515	-0.2314
880	SLU 82	1.22	0.63	45.08	-0.0563	2.5161	-0.2252
880	SLU 83	1.23	0.65	45.5	-0.0569	2.5248	-0.23
880	SLU 84	1.24	0.63	45.49	-0.0569	2.5258	-0.2238
880	SLE RA 1	0.84	0.35	30.39	-0.0374	1.8254	-0.1263
880	SLE RA 2	0.86	0.33	30.38	-0.0375	1.8265	-0.1195
880	SLE RA 3	0.86	0.36	30.83	-0.0381	1.8357	-0.1273
880	SLE RA 4	0.87	0.34	30.83	-0.0381	1.8364	-0.1232
880	SLE RA 5	0.87	0.33	30.66	-0.0379	1.833	-0.1186
880	SLE RA 6	0.87	0.35	31.11	-0.0385	1.8422	-0.1263
880	SLE RA 7	0.88	0.34	31.1	-0.0386	1.8429	-0.1223
880	SLE RA 8	0.87	0.35	30.94	-0.0383	1.8384	-0.1244
880	SLE RA 9	0.88	0.34	30.94	-0.0383	1.839	-0.1203
880	SLE RA 10	0.9	0.41	32.55	-0.0405	1.8811	-0.1458
880	SLE RA 11	0.9	0.43	32.99	-0.041	1.8903	-0.1536
880	SLE RA 12	0.91	0.42	32.99	-0.0411	1.891	-0.1495
880	SLE RA 13	0.91	0.41	32.82	-0.0409	1.8876	-0.1448
880	SLE RA 14	0.92	0.43	33.27	-0.0415	1.8967	-0.1526
880	SLE RA 15	0.92	0.42	33.26	-0.0415	1.8974	-0.1485
880	SLE RA 16	0.91	0.42	33.1	-0.0412	1.8929	-0.1507
880	SLE RA 17	0.92	0.41	33.1	-0.0413	1.8936	-0.1466
880	SLE RA 18	0.9	0.46	33.48	-0.0416	1.9033	-0.1639
880	SLE RA 19	0.91	0.45	33.48	-0.0417	1.904	-0.1598
880	SLE RA 20	0.92	0.46	33.75	-0.0421	1.9098	-0.1629
880	SLE RA 21	0.92	0.45	33.75	-0.0421	1.9105	-0.1588
880	SLE FR 1	0.84	0.35	30.39	-0.0374	1.8254	-0.1263
880	SLE FR 2	0.84	0.35	30.39	-0.0374	1.8256	-0.125
880	SLE FR 3	0.85	0.35	30.5	-0.0376	1.828	-0.1259
880	SLE FR 4	0.86	0.38	31.32	-0.0387	1.849	-0.1362
880	SLE FR 5	0.86	0.38	31.43	-0.0389	1.8514	-0.1372
880	SLE FR 6	0.87	0.41	31.94	-0.0395	1.8644	-0.1451
880	SLE QP 1	0.84	0.35	30.39	-0.0374	1.8254	-0.1263
880	SLE QP 2	0.86	0.39	31.32	-0.0387	1.8488	-0.1376
880	SLD 1	1.91	1.16	23.44	-0.0267	1.6642	-0.4056
880	SLD 2	1.6	1.78	23.02	-0.0284	1.615	-0.6226
880	SLD 3	2.42	-0.33	24.18	-0.0236	1.7557	0.1136
880	SLD 4	2.12	0.29	23.76	-0.0253	1.7065	-0.1033
880	SLD 5	0.45	2.76	27.91	-0.0395	1.6634	-0.9672
880	SLD 6	0.25	3.17	27.64	-0.0406	1.6312	-1.1089
880	SLD 7	2.16	-2.2	30.37	-0.0292	1.9683	0.7636
880	SLD 8	1.96	-1.79	30.09	-0.0303	1.9361	0.6219
880	SLD 9	-0.24	2.56	32.54	-0.0471	1.7614	-0.897
880	SLD 10	-0.44	2.97	32.27	-0.0482	1.7293	-1.0388
880	SLD 11	1.47	-2.4	35	-0.0368	2.0663	0.8338
880	SLD 12	1.27	-1.99	34.72	-0.0379	2.0342	0.692
880	SLD 13	-0.4	0.48	38.87	-0.052	1.9911	-0.1719
880	SLD 14	-0.7	1.1	38.46	-0.0537	1.9419	-0.3888

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
880	SLD 15	0.12	-1.01	39.61	-0.0489	2.0825	0.3474
880	SLD 16	-0.19	-0.38	39.19	-0.0507	2.0333	0.1305
880	SLV 1	3.33	2.15	12.9	-0.0106	1.422	-0.7518
880	SLV 2	2.61	3.6	11.93	-0.0146	1.3074	-1.257
880	SLV 3	4.5	-1.24	14.58	-0.0035	1.631	0.4333
880	SLV 4	3.79	0.21	13.61	-0.0075	1.5164	-0.072
880	SLV 5	-0.06	5.82	23.41	-0.0403	1.4234	-2.0326
880	SLV 6	-0.52	6.75	22.78	-0.0429	1.3498	-2.3573
880	SLV 7	3.86	-5.5	29.02	-0.0167	2.12	1.9175
880	SLV 8	3.4	-4.57	28.39	-0.0193	2.0464	1.5928
880	SLV 9	-1.68	5.34	34.24	-0.0581	1.6512	-1.868
880	SLV 10	-2.14	6.27	33.62	-0.0606	1.5775	-2.1927
880	SLV 11	2.24	-5.98	39.85	-0.0345	2.3478	2.0821
880	SLV 12	1.78	-5.05	39.23	-0.0371	2.2741	1.7574
880	SLV 13	-2.07	0.56	49.03	-0.0698	2.1811	-0.2032
880	SLV 14	-2.78	2.02	48.05	-0.0739	2.0665	-0.7084
880	SLV 15	-0.89	-2.83	50.71	-0.0628	2.3901	0.9818
880	SLV 16	-1.61	-1.38	49.73	-0.0668	2.2755	0.4766
880	CRTFP Ux+	0	0	0	0	0	0
880	CRTFP Ux-	0	0	0	0	0	0
880	CRTFP Uy+	0	0	0	0	0	0
880	CRTFP Uy-	0	0	0	0	0	0
882	SLU 1	1.24	0.16	56.57	-1.5409	0.4845	0.0353
882	SLU 2	1.22	0.13	56.56	-1.5406	0.4937	0.0355
882	SLU 3	1.28	0.17	57.85	-1.5757	0.4987	0.0363
882	SLU 4	1.27	0.15	57.85	-1.5756	0.5042	0.0364
882	SLU 5	1.25	0.13	57.35	-1.5623	0.5019	0.0361
882	SLU 6	1.3	0.16	58.65	-1.5974	0.5069	0.037
882	SLU 7	1.29	0.15	58.64	-1.5973	0.5124	0.0371
882	SLU 8	1.3	0.15	58.16	-1.5843	0.5008	0.0366
882	SLU 9	1.28	0.13	58.15	-1.5841	0.5063	0.0367
882	SLU 10	1.3	0.23	63.35	-1.7251	0.5662	0.0374
882	SLU 11	1.35	0.27	64.65	-1.7602	0.5712	0.0383
882	SLU 12	1.34	0.25	64.64	-1.7601	0.5767	0.0383
882	SLU 13	1.32	0.23	64.15	-1.7468	0.5743	0.038
882	SLU 14	1.38	0.26	65.44	-1.7819	0.5794	0.0389
882	SLU 15	1.36	0.25	65.44	-1.7818	0.5849	0.039
882	SLU 16	1.37	0.25	64.95	-1.7687	0.5733	0.0386
882	SLU 17	1.36	0.23	64.95	-1.7686	0.5788	0.0386
882	SLU 18	1.35	0.3	66.27	-1.8044	0.5881	0.0381
882	SLU 19	1.34	0.28	66.27	-1.8043	0.5936	0.0382
882	SLU 20	1.37	0.3	67.07	-1.8261	0.5962	0.0387
882	SLU 21	1.36	0.28	67.06	-1.826	0.6017	0.0388
882	SLU 22	1.34	0.28	63.45	-1.7277	0.5573	0.0381
882	SLU 23	1.32	0.25	63.44	-1.7274	0.5665	0.0382
882	SLU 24	1.38	0.29	64.73	-1.7625	0.5715	0.0391
882	SLU 25	1.36	0.27	64.73	-1.7624	0.577	0.0392
882	SLU 26	1.35	0.25	64.23	-1.7491	0.5747	0.0389
882	SLU 27	1.4	0.29	65.53	-1.7842	0.5797	0.0398
882	SLU 28	1.39	0.27	65.52	-1.7841	0.5852	0.0399
882	SLU 29	1.39	0.27	65.04	-1.7711	0.5736	0.0394
882	SLU 30	1.38	0.26	65.03	-1.7709	0.5791	0.0395
882	SLU 31	1.4	0.35	70.23	-1.9119	0.639	0.0402
882	SLU 32	1.45	0.39	71.53	-1.947	0.644	0.0411
882	SLU 33	1.44	0.37	71.52	-1.9469	0.6495	0.0411
882	SLU 34	1.42	0.35	71.03	-1.9336	0.6471	0.0408
882	SLU 35	1.48	0.38	72.32	-1.9687	0.6522	0.0417
882	SLU 36	1.46	0.37	72.32	-1.9686	0.6577	0.0418
882	SLU 37	1.47	0.37	71.83	-1.9555	0.6461	0.0414
882	SLU 38	1.45	0.35	71.83	-1.9554	0.6516	0.0414
882	SLU 39	1.45	0.42	73.15	-1.9912	0.6609	0.0409
882	SLU 40	1.44	0.4	73.15	-1.9911	0.6664	0.041
882	SLU 41	1.47	0.42	73.95	-2.0129	0.669	0.0415
882	SLU 42	1.46	0.4	73.94	-2.0128	0.6745	0.0416
882	SLU 43	1.58	0.16	71.18	-1.9391	0.6049	0.045
882	SLU 44	1.56	0.13	71.17	-1.9389	0.6141	0.0451
882	SLU 45	1.62	0.17	72.46	-1.974	0.6191	0.046
882	SLU 46	1.61	0.16	72.46	-1.9738	0.6246	0.0461
882	SLU 47	1.59	0.13	71.96	-1.9605	0.6222	0.0458
882	SLU 48	1.64	0.17	73.26	-1.9957	0.6273	0.0466
882	SLU 49	1.63	0.15	73.25	-1.9955	0.6328	0.0467
882	SLU 50	1.63	0.16	72.77	-1.9825	0.6212	0.0463
882	SLU 51	1.62	0.14	72.76	-1.9823	0.6267	0.0464
882	SLU 52	1.64	0.23	77.96	-2.1233	0.6866	0.047
882	SLU 53	1.69	0.27	79.26	-2.1584	0.6916	0.0479
882	SLU 54	1.68	0.26	79.25	-2.1583	0.6971	0.048
882	SLU 55	1.66	0.23	78.76	-2.145	0.6947	0.0477
882	SLU 56	1.72	0.27	80.05	-2.1801	0.6998	0.0486
882	SLU 57	1.7	0.25	80.05	-2.18	0.7053	0.0486
882	SLU 58	1.71	0.26	79.56	-2.167	0.6937	0.0482
882	SLU 59	1.7	0.24	79.56	-2.1668	0.6992	0.0483
882	SLU 60	1.69	0.31	80.88	-2.2026	0.7085	0.0477
882	SLU 61	1.68	0.29	80.88	-2.2025	0.714	0.0478
882	SLU 62	1.71	0.3	81.68	-2.2243	0.7166	0.0484
882	SLU 63	1.7	0.29	81.67	-2.2242	0.7221	0.0485
882	SLU 64	1.68	0.28	78.06	-2.1259	0.6777	0.0478
882	SLU 65	1.66	0.26	78.05	-2.1257	0.6869	0.0479
882	SLU 66	1.72	0.29	79.34	-2.1608	0.6919	0.0488
882	SLU 67	1.7	0.28	79.34	-2.1606	0.6974	0.0489
882	SLU 68	1.69	0.25	78.84	-2.1473	0.6951	0.0485
882	SLU 69	1.74	0.29	80.14	-2.1824	0.7001	0.0494
882	SLU 70	1.73	0.27	80.13	-2.1823	0.7056	0.0495
882	SLU 71	1.73	0.28	79.65	-2.1693	0.694	0.0491
882	SLU 72	1.72	0.26	79.64	-2.1691	0.6995	0.0492
882	SLU 73	1.74	0.35	84.84	-2.3101	0.7594	0.0498
882	SLU 74	1.79	0.39	86.14	-2.3452	0.7644	0.0507
882	SLU 75	1.78	0.38	86.13	-2.3451	0.7699	0.0508

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
882	SLU 76	1.76	0.35	85.64	-2.3318	0.7675	0.0505
882	SLU 77	1.82	0.39	86.93	-2.3669	0.7726	0.0514
882	SLU 78	1.8	0.37	86.93	-2.3668	0.7781	0.0514
882	SLU 79	1.81	0.38	86.44	-2.3538	0.7665	0.051
882	SLU 80	1.79	0.36	86.44	-2.3536	0.772	0.0511
882	SLU 81	1.79	0.43	87.76	-2.3894	0.7813	0.0505
882	SLU 82	1.78	0.41	87.76	-2.3893	0.7868	0.0506
882	SLU 83	1.81	0.42	88.56	-2.4111	0.7894	0.0512
882	SLU 84	1.8	0.41	88.55	-2.411	0.7949	0.0513
882	SLE RA 1	1.27	0.19	58.53	-1.5942	0.5053	0.0361
882	SLE RA 2	1.26	0.17	58.53	-1.5941	0.5114	0.0362
882	SLE RA 3	1.3	0.2	59.39	-1.6175	0.5148	0.0368
882	SLE RA 4	1.29	0.19	59.38	-1.6174	0.5185	0.0369
882	SLE RA 5	1.28	0.17	59.06	-1.6085	0.5169	0.0366
882	SLE RA 6	1.31	0.2	59.92	-1.632	0.5202	0.0372
882	SLE RA 7	1.3	0.19	59.92	-1.6319	0.5239	0.0373
882	SLE RA 8	1.31	0.19	59.59	-1.6232	0.5162	0.037
882	SLE RA 9	1.3	0.18	59.59	-1.6231	0.5199	0.0371
882	SLE RA 10	1.31	0.24	63.06	-1.7171	0.5598	0.0375
882	SLE RA 11	1.34	0.26	63.92	-1.7405	0.5631	0.0381
882	SLE RA 12	1.34	0.25	63.91	-1.7404	0.5668	0.0381
882	SLE RA 13	1.32	0.24	63.59	-1.7315	0.5652	0.0379
882	SLE RA 14	1.36	0.26	64.45	-1.7549	0.5685	0.0385
882	SLE RA 15	1.35	0.25	64.45	-1.7548	0.5722	0.0386
882	SLE RA 16	1.36	0.25	64.12	-1.7462	0.5645	0.0383
882	SLE RA 17	1.35	0.24	64.12	-1.7461	0.5682	0.0383
882	SLE RA 18	1.34	0.29	65	-1.7699	0.5744	0.038
882	SLE RA 19	1.33	0.27	65	-1.7698	0.578	0.038
882	SLE RA 20	1.36	0.28	65.53	-1.7844	0.5798	0.0384
882	SLE RA 21	1.35	0.27	65.53	-1.7843	0.5835	0.0385
882	SLE FR 1	1.27	0.19	58.53	-1.5942	0.5053	0.0361
882	SLE FR 2	1.27	0.19	58.53	-1.5942	0.5065	0.0361
882	SLE FR 3	1.28	0.19	58.74	-1.6	0.5075	0.0363
882	SLE FR 4	1.29	0.22	60.47	-1.6469	0.5273	0.0367
882	SLE FR 5	1.3	0.22	60.69	-1.6527	0.5282	0.0369
882	SLE FR 6	1.31	0.24	61.77	-1.6821	0.5398	0.037
882	SLE QP 1	1.27	0.19	58.53	-1.5942	0.5053	0.0361
882	SLE QP 2	1.29	0.22	60.47	-1.647	0.526	0.0367
882	SLD 1	6.14	0.99	55.14	-1.5225	0.4507	0.1403
882	SLD 2	5.69	1.37	54.58	-1.5081	0.4621	0.1357
882	SLD 3	6.53	-0.39	55.96	-1.5399	0.4799	0.1469
882	SLD 4	6.08	0	55.41	-1.5255	0.4913	0.1423
882	SLD 5	2.23	2.47	57.72	-1.5856	0.4571	0.0585
882	SLD 6	1.94	2.72	57.36	-1.5762	0.4646	0.0556
882	SLD 7	3.54	-2.12	60.47	-1.6439	0.5545	0.0806
882	SLD 8	3.24	-1.86	60.11	-1.6345	0.5619	0.0776
882	SLD 9	-0.66	2.3	60.84	-1.6594	0.4901	-0.0042
882	SLD 10	-0.95	2.56	60.48	-1.65	0.4976	-0.0072
882	SLD 11	0.65	-2.28	63.59	-1.7177	0.5875	0.0178
882	SLD 12	0.35	-2.03	63.23	-1.7083	0.595	0.0148
882	SLD 13	-3.49	0.44	65.54	-1.7684	0.5608	-0.0689
882	SLD 14	-3.94	0.83	64.98	-1.754	0.5721	-0.0735
882	SLD 15	-3.1	-0.93	66.36	-1.7858	0.59	-0.0623
882	SLD 16	-3.55	-0.55	65.81	-1.7714	0.6014	-0.0669
882	SLV 1	12.63	1.98	48	-1.3557	0.3487	0.279
882	SLV 2	11.59	2.88	46.71	-1.3222	0.3752	0.2683
882	SLV 3	13.54	-1.15	49.88	-1.3956	0.4154	0.2944
882	SLV 4	12.5	-0.25	48.59	-1.3621	0.442	0.2837
882	SLV 5	3.49	5.34	54.11	-1.5048	0.3671	0.0879
882	SLV 6	2.82	5.92	53.28	-1.4833	0.3842	0.081
882	SLV 7	6.53	-5.09	60.36	-1.6378	0.5895	0.1392
882	SLV 8	5.86	-4.52	59.53	-1.6162	0.6065	0.1323
882	SLV 9	-3.27	4.96	61.42	-1.6777	0.4455	-0.0589
882	SLV 10	-3.94	5.53	60.59	-1.6561	0.4626	-0.0658
882	SLV 11	-0.23	-5.48	67.67	-1.8106	0.6679	-0.0077
882	SLV 12	-0.9	-4.9	66.84	-1.7891	0.685	-0.0145
882	SLV 13	-9.91	0.69	72.36	-1.9318	0.6101	-0.2104
882	SLV 14	-10.95	1.59	71.07	-1.8983	0.6367	-0.221
882	SLV 15	-9	-2.44	74.23	-1.9717	0.6768	-0.195
882	SLV 16	-10.04	-1.54	72.94	-1.9382	0.7034	-0.2056
882	CRTFP Ux+	0	0	0	0	0	0
882	CRTFP Ux-	0	0	0	0	0	0
882	CRTFP Uy+	0	0	0	0	0	0
882	CRTFP Uy-	0	0	0	0	0	0
899	SLU 1	-0.15	0.75	58.18	0.0538	0.6934	0.0386
899	SLU 2	-0.17	0.69	58.22	0.0545	0.692	0.0389
899	SLU 3	-0.15	0.79	59.53	0.0553	0.7127	0.0396
899	SLU 4	-0.16	0.75	59.55	0.0557	0.7118	0.0398
899	SLU 5	-0.16	0.7	59	0.0552	0.7028	0.0394
899	SLU 6	-0.14	0.8	60.3	0.056	0.7235	0.0401
899	SLU 7	-0.15	0.77	60.33	0.0564	0.7226	0.0403
899	SLU 8	-0.14	0.78	59.73	0.0553	0.715	0.0396
899	SLU 9	-0.15	0.74	59.75	0.0557	0.7141	0.0398
899	SLU 10	-0.2	0.81	65.87	0.0604	0.8007	0.0451
899	SLU 11	-0.18	0.91	67.18	0.0612	0.8214	0.0458
899	SLU 12	-0.19	0.87	67.2	0.0616	0.8205	0.046
899	SLU 13	-0.19	0.82	66.65	0.0612	0.8115	0.0456
899	SLU 14	-0.17	0.92	67.95	0.062	0.8322	0.0463
899	SLU 15	-0.18	0.88	67.98	0.0624	0.8313	0.0465
899	SLU 16	-0.17	0.9	67.38	0.0612	0.8237	0.0458
899	SLU 17	-0.18	0.86	67.41	0.0616	0.8229	0.046
899	SLU 18	-0.19	0.92	69.11	0.0623	0.8487	0.0474
899	SLU 19	-0.2	0.89	69.14	0.0627	0.8478	0.0476
899	SLU 20	-0.18	0.94	69.89	0.0631	0.8595	0.048
899	SLU 21	-0.2	0.9	69.91	0.0635	0.8586	0.0481
899	SLU 22	-0.16	0.97	65.66	0.0609	0.8002	0.0444
899	SLU 23	-0.18	0.91	65.71	0.0615	0.7988	0.0447

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
899	SLU 24	-0.16	1.01	67.01	0.0623	0.8195	0.0454
899	SLU 25	-0.18	0.97	67.04	0.0627	0.8186	0.0456
899	SLU 26	-0.18	0.92	66.48	0.0623	0.8096	0.0452
899	SLU 27	-0.16	1.02	67.79	0.0631	0.8303	0.0459
899	SLU 28	-0.17	0.98	67.81	0.0635	0.8294	0.0461
899	SLU 29	-0.15	1	67.21	0.0623	0.8218	0.0454
899	SLU 30	-0.16	0.96	67.24	0.0627	0.821	0.0456
899	SLU 31	-0.21	1.03	73.36	0.0675	0.9075	0.0509
899	SLU 32	-0.19	1.13	74.66	0.0683	0.9282	0.0516
899	SLU 33	-0.21	1.09	74.69	0.0687	0.9273	0.0518
899	SLU 34	-0.21	1.04	74.13	0.0682	0.9183	0.0514
899	SLU 35	-0.19	1.14	75.44	0.069	0.939	0.0521
899	SLU 36	-0.2	1.1	75.46	0.0694	0.9382	0.0523
899	SLU 37	-0.18	1.12	74.87	0.0683	0.9305	0.0516
899	SLU 38	-0.19	1.08	74.89	0.0687	0.9297	0.0518
899	SLU 39	-0.2	1.14	76.6	0.0694	0.9555	0.0532
899	SLU 40	-0.22	1.11	76.62	0.0698	0.9546	0.0534
899	SLU 41	-0.2	1.16	77.37	0.0701	0.9663	0.0537
899	SLU 42	-0.21	1.12	77.4	0.0705	0.9655	0.0539
899	SLU 43	-0.18	0.9	73.07	0.0675	0.8648	0.0482
899	SLU 44	-0.21	0.84	73.11	0.0682	0.8634	0.0485
899	SLU 45	-0.18	0.94	74.41	0.069	0.8841	0.0492
899	SLU 46	-0.2	0.9	74.44	0.0694	0.8832	0.0494
899	SLU 47	-0.2	0.86	73.88	0.0689	0.8742	0.049
899	SLU 48	-0.18	0.95	75.19	0.0697	0.8949	0.0497
899	SLU 49	-0.19	0.92	75.21	0.0701	0.894	0.0499
899	SLU 50	-0.17	0.93	74.62	0.069	0.8864	0.0492
899	SLU 51	-0.19	0.89	74.64	0.0694	0.8855	0.0494
899	SLU 52	-0.23	0.96	80.76	0.0742	0.9721	0.0547
899	SLU 53	-0.21	1.06	82.07	0.075	0.9928	0.0554
899	SLU 54	-0.23	1.02	82.09	0.0753	0.9919	0.0556
899	SLU 55	-0.23	0.98	81.54	0.0749	0.9829	0.0552
899	SLU 56	-0.21	1.07	82.84	0.0757	1.0036	0.0559
899	SLU 57	-0.22	1.04	82.87	0.0761	1.0027	0.0561
899	SLU 58	-0.2	1.05	82.27	0.0749	0.9951	0.0554
899	SLU 59	-0.22	1.01	82.29	0.0753	0.9943	0.0556
899	SLU 60	-0.23	1.08	84	0.0761	1.0201	0.057
899	SLU 61	-0.24	1.04	84.02	0.0765	1.0192	0.0572
899	SLU 62	-0.22	1.09	84.77	0.0768	1.0309	0.0576
899	SLU 63	-0.23	1.05	84.8	0.0772	1.03	0.0577
899	SLU 64	-0.2	1.12	80.55	0.0746	0.9716	0.054
899	SLU 65	-0.22	1.06	80.59	0.0753	0.9702	0.0543
899	SLU 66	-0.2	1.16	81.9	0.0761	0.9909	0.055
899	SLU 67	-0.21	1.12	81.92	0.0765	0.99	0.0552
899	SLU 68	-0.22	1.07	81.37	0.076	0.981	0.0548
899	SLU 69	-0.2	1.17	82.67	0.0768	1.0017	0.0555
899	SLU 70	-0.21	1.13	82.7	0.0772	1.0008	0.0557
899	SLU 71	-0.19	1.15	82.1	0.076	0.9932	0.055
899	SLU 72	-0.2	1.11	82.13	0.0764	0.9924	0.0552
899	SLU 73	-0.25	1.18	88.25	0.0812	1.0789	0.0605
899	SLU 74	-0.23	1.28	89.55	0.082	1.0996	0.0612
899	SLU 75	-0.24	1.24	89.58	0.0824	1.0987	0.0614
899	SLU 76	-0.25	1.19	89.02	0.082	1.0897	0.061
899	SLU 77	-0.23	1.29	90.33	0.0827	1.1104	0.0617
899	SLU 78	-0.24	1.25	90.35	0.0831	1.1095	0.0619
899	SLU 79	-0.22	1.27	89.75	0.082	1.1019	0.0612
899	SLU 80	-0.23	1.23	89.78	0.0824	1.1011	0.0614
899	SLU 81	-0.24	1.29	91.48	0.0831	1.1269	0.0628
899	SLU 82	-0.26	1.26	91.51	0.0835	1.126	0.063
899	SLU 83	-0.24	1.31	92.26	0.0838	1.1377	0.0633
899	SLU 84	-0.25	1.27	92.28	0.0842	1.1368	0.0635
899	SLE RA 1	-0.15	0.82	60.32	0.0558	0.7239	0.0403
899	SLE RA 2	-0.16	0.77	60.35	0.0563	0.7229	0.0405
899	SLE RA 3	-0.15	0.84	61.22	0.0568	0.7368	0.0409
899	SLE RA 4	-0.16	0.82	61.23	0.0571	0.7362	0.0411
899	SLE RA 5	-0.16	0.78	60.86	0.0568	0.7302	0.0408
899	SLE RA 6	-0.15	0.85	61.73	0.0573	0.744	0.0413
899	SLE RA 7	-0.16	0.82	61.75	0.0575	0.7434	0.0414
899	SLE RA 8	-0.14	0.83	61.35	0.0568	0.7383	0.0409
899	SLE RA 9	-0.15	0.81	61.37	0.0571	0.7377	0.0411
899	SLE RA 10	-0.18	0.85	65.45	0.0602	0.7954	0.0446
899	SLE RA 11	-0.17	0.92	66.32	0.0608	0.8092	0.0451
899	SLE RA 12	-0.18	0.9	66.33	0.061	0.8087	0.0452
899	SLE RA 13	-0.18	0.86	65.96	0.0607	0.8026	0.0449
899	SLE RA 14	-0.17	0.93	66.83	0.0613	0.8164	0.0454
899	SLE RA 15	-0.18	0.9	66.85	0.0615	0.8159	0.0455
899	SLE RA 16	-0.16	0.91	66.45	0.0608	0.8108	0.0451
899	SLE RA 17	-0.17	0.89	66.47	0.061	0.8102	0.0452
899	SLE RA 18	-0.18	0.93	67.61	0.0615	0.8274	0.0461
899	SLE RA 19	-0.19	0.91	67.62	0.0618	0.8269	0.0463
899	SLE RA 20	-0.18	0.94	68.12	0.062	0.8346	0.0465
899	SLE RA 21	-0.18	0.91	68.14	0.0623	0.8341	0.0466
899	SLE FR 1	-0.15	0.82	60.32	0.0558	0.7239	0.0403
899	SLE FR 2	-0.15	0.81	60.32	0.0559	0.7237	0.0403
899	SLE FR 3	-0.15	0.82	60.52	0.056	0.7268	0.0404
899	SLE FR 4	-0.16	0.84	62.51	0.0576	0.7548	0.0421
899	SLE FR 5	-0.16	0.85	62.71	0.0577	0.7578	0.0422
899	SLE FR 6	-0.16	0.87	63.96	0.0587	0.7757	0.0432
899	SLE QP 1	-0.15	0.82	60.32	0.0558	0.7239	0.0403
899	SLE QP 2	-0.16	0.85	62.5	0.0575	0.755	0.042
899	SLD 1	5.46	2.27	66.4	0.0654	0.7993	0.0083
899	SLD 2	5	2.09	66.23	0.0653	0.7991	0.019
899	SLD 3	5.89	0.54	67.26	0.0737	0.7855	0.0013
899	SLD 4	5.42	0.35	67.09	0.0736	0.7853	0.012
899	SLD 5	0.96	3.94	62.39	0.0473	0.7892	0.0407
899	SLD 6	0.66	3.82	62.28	0.0473	0.7891	0.0477
899	SLD 7	2.39	-1.84	65.27	0.075	0.7433	0.0172

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
899	SLD 8	2.08	-1.96	65.16	0.0749	0.7431	0.0242
899	SLD 9	-2.4	3.66	59.85	0.0402	0.7668	0.0598
899	SLD 10	-2.7	3.54	59.74	0.0401	0.7666	0.0668
899	SLD 11	-0.97	-2.12	62.73	0.0678	0.7209	0.0363
899	SLD 12	-1.28	-2.24	62.62	0.0678	0.7207	0.0433
899	SLD 13	-5.74	1.35	57.91	0.0415	0.7246	0.072
899	SLD 14	-6.21	1.16	57.75	0.0414	0.7244	0.0827
899	SLD 15	-5.31	-0.39	58.78	0.0498	0.7108	0.065
899	SLD 16	-5.78	-0.57	58.61	0.0497	0.7106	0.0757
899	SLV 1	12.99	4.1	71.68	0.0764	0.86	-0.0367
899	SLV 2	11.91	3.67	71.29	0.0762	0.8596	-0.0118
899	SLV 3	13.98	0.18	73.65	0.0953	0.8287	-0.0532
899	SLV 4	12.9	-0.25	73.26	0.095	0.8282	-0.0282
899	SLV 5	2.46	7.85	62.34	0.0347	0.8341	0.0391
899	SLV 6	1.76	7.57	62.09	0.0345	0.8338	0.0551
899	SLV 7	5.78	-5.23	68.9	0.0975	0.7296	-0.0158
899	SLV 8	5.09	-5.5	68.64	0.0973	0.7293	0.0003
899	SLV 9	-5.4	7.2	56.37	0.0177	0.7806	0.0838
899	SLV 10	-6.1	6.93	56.11	0.0176	0.7804	0.0998
899	SLV 11	-2.08	-5.87	62.92	0.0806	0.6761	0.0289
899	SLV 12	-2.77	-6.15	62.66	0.0804	0.6758	0.045
899	SLV 13	-13.22	1.95	51.75	0.02	0.6817	0.1123
899	SLV 14	-14.3	1.52	51.36	0.0198	0.6813	0.1372
899	SLV 15	-12.22	-1.98	53.72	0.0389	0.6503	0.0958
899	SLV 16	-13.3	-2.4	53.32	0.0386	0.6499	0.1208
899	CRTFP Ux+	0	0	0	0	0	0
899	CRTFP Ux-	0	0	0	0	0	0
902	SLU 1	0.43	1.72	54.47	0.0712	-0.2665	0.0108
902	SLU 2	0.4	1.68	54.51	0.0719	-0.2653	0.0114
902	SLU 3	0.44	1.78	55.72	0.0732	-0.2736	0.0111
902	SLU 4	0.42	1.75	55.75	0.0737	-0.2729	0.0115
902	SLU 5	0.41	1.7	55.27	0.073	-0.2699	0.0115
902	SLU 6	0.45	1.8	56.48	0.0743	-0.2782	0.0113
902	SLU 7	0.44	1.78	56.5	0.0748	-0.2775	0.0116
902	SLU 8	0.45	1.77	55.98	0.0734	-0.2756	0.011
902	SLU 9	0.44	1.74	56.01	0.0738	-0.2749	0.0114
902	SLU 10	0.43	1.93	61.47	0.0803	-0.3038	0.0155
902	SLU 11	0.47	2.03	62.68	0.0817	-0.3121	0.0152
902	SLU 12	0.45	2.01	62.71	0.0821	-0.3114	0.0156
902	SLU 13	0.44	1.96	62.23	0.0814	-0.3084	0.0156
902	SLU 14	0.48	2.06	63.44	0.0828	-0.3166	0.0154
902	SLU 15	0.47	2.03	63.46	0.0832	-0.3159	0.0157
902	SLU 16	0.48	2.02	62.94	0.0818	-0.3141	0.0151
902	SLU 17	0.47	2	62.97	0.0822	-0.3134	0.0155
902	SLU 18	0.47	2.08	64.42	0.0832	-0.3215	0.0166
902	SLU 19	0.45	2.06	64.44	0.0836	-0.3208	0.017
902	SLU 20	0.48	2.11	65.17	0.0843	-0.326	0.0168
902	SLU 21	0.47	2.08	65.19	0.0847	-0.3253	0.0171
902	SLU 22	0.47	2.04	61.37	0.0807	-0.308	0.014
902	SLU 23	0.44	2	61.41	0.0814	-0.3068	0.0146
902	SLU 24	0.48	2.1	62.62	0.0828	-0.3151	0.0143
902	SLU 25	0.46	2.08	62.64	0.0832	-0.3144	0.0147
902	SLU 26	0.45	2.03	62.16	0.0825	-0.3113	0.0147
902	SLU 27	0.49	2.13	63.37	0.0839	-0.3196	0.0144
902	SLU 28	0.48	2.11	63.4	0.0843	-0.3189	0.0148
902	SLU 29	0.5	2.09	62.88	0.0829	-0.3171	0.0142
902	SLU 30	0.48	2.07	62.9	0.0833	-0.3164	0.0146
902	SLU 31	0.47	2.26	68.37	0.0898	-0.3453	0.0187
902	SLU 32	0.51	2.36	69.58	0.0912	-0.3535	0.0184
902	SLU 33	0.49	2.34	69.6	0.0916	-0.3528	0.0188
902	SLU 34	0.48	2.29	69.12	0.0909	-0.3498	0.0188
902	SLU 35	0.52	2.38	70.33	0.0923	-0.3581	0.0185
902	SLU 36	0.51	2.36	70.36	0.0927	-0.3574	0.0189
902	SLU 37	0.53	2.35	69.84	0.0913	-0.3555	0.0183
902	SLU 38	0.51	2.33	69.86	0.0917	-0.3548	0.0187
902	SLU 39	0.51	2.41	71.31	0.0927	-0.3629	0.0198
902	SLU 40	0.49	2.39	71.34	0.0932	-0.3622	0.0202
902	SLU 41	0.52	2.43	72.07	0.0938	-0.3675	0.0199
902	SLU 42	0.51	2.41	72.09	0.0943	-0.3668	0.0203
902	SLU 43	0.54	2.12	68.45	0.0893	-0.3322	0.0129
902	SLU 44	0.51	2.08	68.49	0.09	-0.3311	0.0136
902	SLU 45	0.55	2.18	69.7	0.0913	-0.3393	0.0133
902	SLU 46	0.53	2.16	69.72	0.0918	-0.3386	0.0137
902	SLU 47	0.53	2.11	69.24	0.0911	-0.3356	0.0137
902	SLU 48	0.56	2.21	70.45	0.0924	-0.3439	0.0134
902	SLU 49	0.55	2.18	70.48	0.0929	-0.3432	0.0138
902	SLU 50	0.57	2.17	69.96	0.0915	-0.3413	0.0132
902	SLU 51	0.55	2.15	69.98	0.0919	-0.3406	0.0135
902	SLU 52	0.54	2.34	75.45	0.0984	-0.3695	0.0177
902	SLU 53	0.58	2.44	76.66	0.0998	-0.3778	0.0174
902	SLU 54	0.56	2.41	76.68	0.1002	-0.3771	0.0178
902	SLU 55	0.56	2.36	76.2	0.0995	-0.3741	0.0178
902	SLU 56	0.59	2.46	77.41	0.1009	-0.3824	0.0175
902	SLU 57	0.58	2.44	77.44	0.1013	-0.3817	0.0179
902	SLU 58	0.6	2.43	76.92	0.0999	-0.3798	0.0173
902	SLU 59	0.58	2.4	76.94	0.1003	-0.3791	0.0176
902	SLU 60	0.58	2.49	78.39	0.1013	-0.3872	0.0188
902	SLU 61	0.57	2.46	78.42	0.1017	-0.3865	0.0192
902	SLU 62	0.6	2.51	79.15	0.1024	-0.3917	0.0189
902	SLU 63	0.58	2.49	79.17	0.1028	-0.391	0.0193
902	SLU 64	0.58	2.45	75.35	0.0988	-0.3737	0.0161
902	SLU 65	0.55	2.41	75.38	0.0995	-0.3725	0.0167
902	SLU 66	0.59	2.51	76.6	0.1009	-0.3808	0.0165
902	SLU 67	0.58	2.48	76.62	0.1013	-0.3801	0.0168
902	SLU 68	0.57	2.43	76.14	0.1006	-0.3771	0.0169
902	SLU 69	0.61	2.53	77.35	0.102	-0.3853	0.0166
902	SLU 70	0.59	2.51	77.37	0.1024	-0.3846	0.017

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
902	SLU 71	0.61	2.5	76.86	0.101	-0.3828	0.0163
902	SLU 72	0.59	2.47	76.88	0.1014	-0.3821	0.0167
902	SLU 73	0.58	2.66	82.35	0.1079	-0.411	0.0208
902	SLU 74	0.62	2.76	83.56	0.1093	-0.4193	0.0206
902	SLU 75	0.61	2.74	83.58	0.1097	-0.4186	0.0209
902	SLU 76	0.6	2.69	83.1	0.109	-0.4155	0.021
902	SLU 77	0.64	2.79	84.31	0.1104	-0.4238	0.0207
902	SLU 78	0.62	2.76	84.33	0.1108	-0.4231	0.0211
902	SLU 79	0.64	2.75	83.82	0.1094	-0.4213	0.0204
902	SLU 80	0.62	2.73	83.84	0.1099	-0.4206	0.0208
902	SLU 81	0.62	2.81	85.29	0.1109	-0.4286	0.022
902	SLU 82	0.61	2.79	85.31	0.1113	-0.4279	0.0223
902	SLU 83	0.64	2.84	86.04	0.112	-0.4332	0.0221
902	SLU 84	0.62	2.81	86.07	0.1124	-0.4325	0.0225
902	SLE RA 1	0.44	1.81	56.44	0.0739	-0.2783	0.0117
902	SLE RA 2	0.42	1.78	56.47	0.0744	-0.2776	0.0121
902	SLE RA 3	0.45	1.85	57.28	0.0753	-0.2831	0.0119
902	SLE RA 4	0.43	1.83	57.29	0.0756	-0.2826	0.0122
902	SLE RA 5	0.43	1.8	56.97	0.0751	-0.2806	0.0122
902	SLE RA 6	0.45	1.87	57.78	0.076	-0.2861	0.012
902	SLE RA 7	0.44	1.85	57.79	0.0763	-0.2856	0.0123
902	SLE RA 8	0.46	1.84	57.45	0.0754	-0.2844	0.0118
902	SLE RA 9	0.45	1.83	57.46	0.0757	-0.284	0.0121
902	SLE RA 10	0.44	1.95	61.11	0.08	-0.3032	0.0149
902	SLE RA 11	0.47	2.02	61.92	0.0809	-0.3087	0.0147
902	SLE RA 12	0.45	2.01	61.93	0.0812	-0.3083	0.0149
902	SLE RA 13	0.45	1.97	61.61	0.0807	-0.3062	0.0149
902	SLE RA 14	0.47	2.04	62.42	0.0816	-0.3118	0.0147
902	SLE RA 15	0.46	2.02	62.44	0.0819	-0.3113	0.015
902	SLE RA 16	0.48	2.01	62.09	0.081	-0.3101	0.0146
902	SLE RA 17	0.47	2	62.11	0.0813	-0.3096	0.0148
902	SLE RA 18	0.47	2.05	63.07	0.0819	-0.315	0.0156
902	SLE RA 19	0.46	2.04	63.09	0.0822	-0.3145	0.0159
902	SLE RA 20	0.48	2.07	63.57	0.0827	-0.318	0.0157
902	SLE RA 21	0.46	2.06	63.59	0.083	-0.3175	0.0159
902	SLE FR 1	0.44	1.81	56.44	0.0739	-0.2783	0.0117
902	SLE FR 2	0.43	1.81	56.45	0.074	-0.2782	0.0118
902	SLE FR 3	0.44	1.82	56.64	0.0742	-0.2796	0.0117
902	SLE FR 4	0.44	1.88	58.44	0.0764	-0.2892	0.013
902	SLE FR 5	0.45	1.89	58.63	0.0766	-0.2906	0.0129
902	SLE FR 6	0.45	1.93	59.76	0.0779	-0.2967	0.0136
902	SLE QP 1	0.44	1.81	56.44	0.0739	-0.2783	0.0117
902	SLE QP 2	0.45	1.88	58.43	0.0763	-0.2893	0.0129
902	SLD 1	6.14	2.37	53.41	0.0683	-0.0161	-0.0233
902	SLD 2	5.67	2.56	53.35	0.067	-0.0193	-0.0122
902	SLD 3	6.57	0.74	54.26	0.0775	0.0034	-0.0303
902	SLD 4	6.1	0.92	54.2	0.0762	0.0002	-0.0192
902	SLD 5	1.58	4.48	55.64	0.0602	-0.2363	0.0107
902	SLD 6	1.28	4.6	55.6	0.0593	-0.2384	0.0179
902	SLD 7	3.02	-0.97	58.49	0.0909	-0.1715	-0.0126
902	SLD 8	2.71	-0.85	58.45	0.0901	-0.1735	-0.0054
902	SLD 9	-1.82	4.62	58.42	0.0626	-0.4051	0.0311
902	SLD 10	-2.13	4.74	58.37	0.0618	-0.4072	0.0384
902	SLD 11	-0.38	-0.83	61.26	0.0934	-0.3403	0.0078
902	SLD 12	-0.69	-0.71	61.22	0.0925	-0.3423	0.0151
902	SLD 13	-5.2	2.85	62.66	0.0765	-0.5789	0.0449
902	SLD 14	-5.68	3.03	62.6	0.0752	-0.582	0.056
902	SLD 15	-4.77	1.21	63.51	0.0857	-0.5594	0.038
902	SLD 16	-5.24	1.39	63.45	0.0844	-0.5626	0.049
902	SLV 1	13.76	2.97	46.71	0.0573	0.3507	-0.0717
902	SLV 2	12.67	3.39	46.57	0.0543	0.3433	-0.0459
902	SLV 3	14.76	-0.74	48.65	0.0782	0.3956	-0.088
902	SLV 4	13.67	-0.32	48.5	0.0752	0.3883	-0.0622
902	SLV 5	3.11	7.76	52	0.0394	-0.1643	0.0078
902	SLV 6	2.4	8.04	51.91	0.0375	-0.169	0.0244
902	SLV 7	6.45	-4.6	58.46	0.1092	-0.0144	-0.0465
902	SLV 8	5.75	-4.33	58.37	0.1072	-0.0191	-0.0299
902	SLV 9	-4.86	8.1	58.5	0.0455	-0.5596	0.0557
902	SLV 10	-5.56	8.37	58.4	0.0435	-0.5643	0.0723
902	SLV 11	-1.51	-4.27	64.95	0.1152	-0.4096	0.0014
902	SLV 12	-2.21	-4	64.86	0.1133	-0.4144	0.0179
902	SLV 13	-12.78	4.09	68.36	0.0775	-0.9669	0.0879
902	SLV 14	-13.87	4.51	68.21	0.0745	-0.9743	0.1137
902	SLV 15	-11.77	0.38	70.29	0.0984	-0.922	0.0716
902	SLV 16	-12.87	0.8	70.15	0.0954	-0.9293	0.0974
902	CRTFP Ux+	0	0	0	0	0	0
902	CRTFP Ux-	0	0	0	0	0	0
904	SLU 1	-0.57	0.03	30.93	-0.7967	-5.4117	-0.0084
904	SLU 2	-0.58	-0.03	30.94	-0.797	-5.4113	-0.0256
904	SLU 3	-0.58	0.04	31.67	-0.8157	-5.5363	-0.0074
904	SLU 4	-0.59	0	31.68	-0.8159	-5.5361	-0.0178
904	SLU 5	-0.59	-0.03	31.41	-0.809	-5.49	-0.0247
904	SLU 6	-0.59	0.04	32.14	-0.8277	-5.6151	-0.0066
904	SLU 7	-0.6	0	32.15	-0.8279	-5.6148	-0.0169
904	SLU 8	-0.58	0.04	31.87	-0.8207	-5.5691	-0.0067
904	SLU 9	-0.59	0	31.87	-0.8209	-5.5689	-0.017
904	SLU 10	-0.63	0.02	34.51	-0.8881	-6.0205	-0.0139
904	SLU 11	-0.63	0.09	35.24	-0.9068	-6.1455	0.0042
904	SLU 12	-0.64	0.05	35.25	-0.907	-6.1453	-0.0061
904	SLU 13	-0.64	0.02	34.98	-0.9001	-6.0992	-0.0131
904	SLU 14	-0.64	0.1	35.71	-0.9188	-6.2242	0.0051
904	SLU 15	-0.65	0.06	35.71	-0.919	-6.224	-0.0052
904	SLU 16	-0.63	0.09	35.44	-0.9118	-6.1783	0.005
904	SLU 17	-0.64	0.05	35.44	-0.912	-6.1781	-0.0053
904	SLU 18	-0.63	0.11	36.03	-0.9269	-6.2819	0.0083
904	SLU 19	-0.64	0.07	36.04	-0.9271	-6.2817	-0.0021
904	SLU 20	-0.64	0.11	36.5	-0.9389	-6.3606	0.0091

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
904	SLU 21	-0.65	0.07	36.5	-0.939	-6.3604	-0.0012
904	SLU 22	-0.61	0.1	34.59	-0.8901	-6.036	0.0059
904	SLU 23	-0.63	0.03	34.6	-0.8904	-6.0356	-0.0113
904	SLU 24	-0.63	0.1	35.33	-0.9091	-6.1607	0.0069
904	SLU 25	-0.64	0.06	35.34	-0.9093	-6.1604	-0.0034
904	SLU 26	-0.64	0.03	35.07	-0.9024	-6.1144	-0.0104
904	SLU 27	-0.64	0.11	35.8	-0.9211	-6.2394	0.0078
904	SLU 28	-0.65	0.07	35.8	-0.9212	-6.2392	-0.0026
904	SLU 29	-0.63	0.11	35.53	-0.9141	-6.1935	0.0077
904	SLU 30	-0.64	0.07	35.53	-0.9142	-6.1933	-0.0027
904	SLU 31	-0.68	0.08	38.17	-0.9815	-6.6448	0.0004
904	SLU 32	-0.68	0.15	38.9	-1.0002	-6.7698	0.0186
904	SLU 33	-0.69	0.11	38.91	-1.0004	-6.7696	0.0082
904	SLU 34	-0.69	0.09	38.64	-0.9935	-6.7235	0.0012
904	SLU 35	-0.68	0.16	39.37	-1.0122	-6.8486	0.0194
904	SLU 36	-0.69	0.12	39.37	-1.0123	-6.8483	0.0091
904	SLU 37	-0.68	0.16	39.09	-1.0052	-6.8026	0.0193
904	SLU 38	-0.69	0.12	39.1	-1.0053	-6.8024	0.009
904	SLU 39	-0.68	0.17	39.69	-1.0203	-6.9062	0.0226
904	SLU 40	-0.69	0.13	39.7	-1.0204	-6.906	0.0123
904	SLU 41	-0.69	0.18	40.16	-1.0322	-6.985	0.0235
904	SLU 42	-0.7	0.14	40.16	-1.0324	-6.9848	0.0131
904	SLU 43	-0.72	0.02	38.96	-1.0037	-6.8211	-0.0158
904	SLU 44	-0.74	-0.05	38.97	-1.004	-6.8208	-0.033
904	SLU 45	-0.73	0.03	39.7	-1.0227	-6.9458	-0.0149
904	SLU 46	-0.75	-0.01	39.7	-1.0229	-6.9455	-0.0252
904	SLU 47	-0.75	-0.04	39.44	-1.016	-6.8995	-0.0322
904	SLU 48	-0.74	0.03	40.17	-1.0347	-7.0245	-0.014
904	SLU 49	-0.75	-0.01	40.17	-1.0349	-7.0243	-0.0243
904	SLU 50	-0.74	0.03	39.89	-1.0277	-6.9786	-0.0141
904	SLU 51	-0.75	-0.01	39.9	-1.0279	-6.9784	-0.0244
904	SLU 52	-0.78	0.01	42.54	-1.0951	-7.4299	-0.0214
904	SLU 53	-0.78	0.08	43.27	-1.1138	-7.5549	-0.0032
904	SLU 54	-0.79	0.04	43.27	-1.114	-7.5547	-0.0135
904	SLU 55	-0.79	0.01	43	-1.1071	-7.5086	-0.0205
904	SLU 56	-0.79	0.08	43.73	-1.1258	-7.6337	-0.0023
904	SLU 57	-0.8	0.04	43.74	-1.126	-7.6334	-0.0127
904	SLU 58	-0.78	0.08	43.46	-1.1188	-7.5877	-0.0024
904	SLU 59	-0.79	0.04	43.47	-1.119	-7.5875	-0.0128
904	SLU 60	-0.78	0.1	44.06	-1.1339	-7.6913	0.0008
904	SLU 61	-0.79	0.06	44.06	-1.1341	-7.6911	-0.0095
904	SLU 62	-0.79	0.1	44.52	-1.1459	-7.7701	0.0017
904	SLU 63	-0.8	0.06	44.53	-1.146	-7.7699	-0.0086
904	SLU 64	-0.77	0.09	42.62	-1.0971	-7.4455	-0.0015
904	SLU 65	-0.79	0.02	42.63	-1.0974	-7.4451	-0.0187
904	SLU 66	-0.78	0.09	43.36	-1.1161	-7.5701	-0.0005
904	SLU 67	-0.79	0.05	43.36	-1.1163	-7.5699	-0.0109
904	SLU 68	-0.79	0.02	43.09	-1.1094	-7.5238	-0.0178
904	SLU 69	-0.79	0.1	43.82	-1.1281	-7.6488	0.0003
904	SLU 70	-0.8	0.05	43.83	-1.1282	-7.6486	-0.01
904	SLU 71	-0.79	0.09	43.55	-1.1211	-7.6029	0.0002
904	SLU 72	-0.8	0.05	43.56	-1.1212	-7.6027	-0.0101
904	SLU 73	-0.83	0.07	46.2	-1.1885	-8.0542	-0.007
904	SLU 74	-0.83	0.14	46.93	-1.2072	-8.1793	0.0111
904	SLU 75	-0.84	0.1	46.93	-1.2074	-8.179	0.0008
904	SLU 76	-0.84	0.07	46.66	-1.2005	-8.133	-0.0062
904	SLU 77	-0.84	0.15	47.39	-1.2192	-8.258	0.012
904	SLU 78	-0.85	0.11	47.4	-1.2193	-8.2578	0.0017
904	SLU 79	-0.83	0.15	47.12	-1.2122	-8.2121	0.0119
904	SLU 80	-0.84	0.11	47.13	-1.2124	-8.2119	0.0016
904	SLU 81	-0.83	0.16	47.72	-1.2273	-8.3157	0.0152
904	SLU 82	-0.84	0.12	47.72	-1.2274	-8.3155	0.0048
904	SLU 83	-0.84	0.16	48.18	-1.2393	-8.3944	0.016
904	SLU 84	-0.85	0.12	48.19	-1.2394	-8.3942	0.0057
904	SLE RA 1	-0.58	0.05	31.98	-0.8234	-5.5901	-0.0043
904	SLE RA 2	-0.59	0.01	31.99	-0.8236	-5.5898	-0.0158
904	SLE RA 3	-0.59	0.06	32.47	-0.8361	-5.6732	-0.0037
904	SLE RA 4	-0.6	0.03	32.48	-0.8362	-5.673	-0.0106
904	SLE RA 5	-0.6	0.01	32.3	-0.8316	-5.6423	-0.0152
904	SLE RA 6	-0.6	0.06	32.78	-0.8441	-5.7256	-0.0031
904	SLE RA 7	-0.6	0.03	32.79	-0.8442	-5.7255	-0.01
904	SLE RA 8	-0.59	0.06	32.6	-0.8394	-5.695	-0.0031
904	SLE RA 9	-0.6	0.03	32.61	-0.8395	-5.6949	-0.01
904	SLE RA 10	-0.62	0.04	34.36	-0.8843	-5.9959	-0.008
904	SLE RA 11	-0.62	0.09	34.85	-0.8968	-6.0793	0.0041
904	SLE RA 12	-0.63	0.06	34.85	-0.8969	-6.0791	-0.0028
904	SLE RA 13	-0.63	0.04	34.68	-0.8923	-6.0484	-0.0074
904	SLE RA 14	-0.63	0.09	35.16	-0.9048	-6.1318	0.0047
904	SLE RA 15	-0.63	0.07	35.17	-0.9049	-6.1316	-0.0022
904	SLE RA 16	-0.62	0.09	34.98	-0.9001	-6.1011	0.0046
904	SLE RA 17	-0.63	0.07	34.98	-0.9002	-6.101	-0.0023
904	SLE RA 18	-0.62	0.1	35.38	-0.9102	-6.1702	0.0068
904	SLE RA 19	-0.63	0.07	35.38	-0.9103	-6.1701	-0.0001
904	SLE RA 20	-0.63	0.1	35.69	-0.9182	-6.2227	0.0074
904	SLE RA 21	-0.64	0.08	35.69	-0.9183	-6.2226	0.0005
904	SLE FR 1	-0.58	0.05	31.98	-0.8234	-5.5901	-0.0043
904	SLE FR 2	-0.58	0.04	31.98	-0.8235	-5.59	-0.0066
904	SLE FR 3	-0.58	0.05	32.1	-0.8266	-5.6111	-0.0041
904	SLE FR 4	-0.6	0.06	33	-0.8495	-5.7641	-0.0033
904	SLE FR 5	-0.6	0.07	33.12	-0.8526	-5.7851	-0.0007
904	SLE FR 6	-0.6	0.08	33.68	-0.8668	-5.8801	0.0013
904	SLE QP 1	-0.58	0.05	31.98	-0.8234	-5.5901	-0.0043
904	SLE QP 2	-0.59	0.07	33	-0.8495	-5.7641	-0.001
904	SLD 1	1.67	0.55	41.19	-1.0618	-7.0773	0.1461
904	SLD 2	1.44	0.13	41.52	-1.0694	-7.1411	0.0354
904	SLD 3	1.87	-0.62	41.7	-1.0742	-7.1669	-0.1461
904	SLD 4	1.64	-1.04	42.03	-1.0818	-7.2306	-0.2568

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
904	SLD 5	-0.17	2.05	34.62	-0.893	-6.011	0.5059
904	SLD 6	-0.32	1.77	34.84	-0.898	-6.0526	0.4335
904	SLD 7	0.49	-1.83	36.33	-0.9343	-6.3095	-0.4681
904	SLD 8	0.33	-2.1	36.54	-0.9393	-6.3511	-0.5405
904	SLD 9	-1.52	2.24	29.46	-0.7596	-5.1771	0.5385
904	SLD 10	-1.67	1.96	29.67	-0.7646	-5.2187	0.4661
904	SLD 11	-0.86	-1.64	31.16	-0.8009	-5.4756	-0.4354
904	SLD 12	-1.01	-1.92	31.38	-0.8059	-5.5172	-0.5078
904	SLD 13	-2.82	1.17	23.97	-0.6171	-4.2976	0.2549
904	SLD 14	-3.05	0.75	24.3	-0.6247	-4.3613	0.1441
904	SLD 15	-2.62	0.01	24.48	-0.6295	-4.3872	-0.0373
904	SLD 16	-2.86	-0.41	24.81	-0.6371	-4.4509	-0.148
904	SLV 1	4.7	1.14	52.17	-1.3466	-8.8388	0.3315
904	SLV 2	4.16	0.17	52.93	-1.3643	-8.9873	0.0735
904	SLV 3	5.16	-1.49	53.36	-1.3754	-9.0469	-0.3296
904	SLV 4	4.62	-2.47	54.12	-1.3932	-9.1953	-0.5875
904	SLV 5	0.39	4.55	36.81	-0.9518	-6.3456	1.1456
904	SLV 6	0.05	3.92	37.31	-0.9632	-6.441	0.9798
904	SLV 7	1.92	-4.22	40.78	-1.0479	-7.039	-1.058
904	SLV 8	1.57	-4.85	41.27	-1.0593	-7.1344	-1.2238
904	SLV 9	-2.76	4.99	24.73	-0.6396	-4.3938	1.2218
904	SLV 10	-3.11	4.36	25.22	-0.651	-4.4892	1.056
904	SLV 11	-1.23	-3.79	28.69	-0.7357	-5.0872	-0.9817
904	SLV 12	-1.58	-4.42	29.18	-0.7471	-5.1826	-1.1475
904	SLV 13	-5.81	2.6	11.87	-0.3057	-2.3329	0.5856
904	SLV 14	-6.35	1.62	12.64	-0.3235	-2.4813	0.3276
904	SLV 15	-5.35	-0.03	13.06	-0.3346	-2.5409	-0.0754
904	SLV 16	-5.89	-1.01	13.83	-0.3523	-2.6894	-0.3334
904	CRTFP Ux+	0	0	0	0	0	0
904	CRTFP Ux-	0	0	0	0	0	0
904	CRTFP Uy+	0	0	0	0	0	0
904	CRTFP Uy-	0	0	0	0	0	0
907	SLU 1	1.58	0.21	74.72	-3.545	-0.0628	0.0925
907	SLU 2	1.54	0.17	74.71	-3.5446	-0.0514	0.0915
907	SLU 3	1.62	0.22	76.43	-3.6246	-0.0601	0.0951
907	SLU 4	1.6	0.2	76.42	-3.6244	-0.0533	0.0946
907	SLU 5	1.58	0.17	75.76	-3.5943	-0.0506	0.0933
907	SLU 6	1.65	0.22	77.48	-3.6743	-0.0593	0.0968
907	SLU 7	1.63	0.2	77.47	-3.6741	-0.0525	0.0963
907	SLU 8	1.64	0.2	76.83	-3.6444	-0.0612	0.0959
907	SLU 9	1.62	0.18	76.82	-3.6441	-0.0544	0.0954
907	SLU 10	1.64	0.3	83.72	-3.9665	-0.0407	0.0979
907	SLU 11	1.71	0.35	85.44	-4.0466	-0.0494	0.1015
907	SLU 12	1.69	0.33	85.43	-4.0463	-0.0426	0.1009
907	SLU 13	1.67	0.3	84.77	-4.0162	-0.0399	0.0996
907	SLU 14	1.75	0.35	86.49	-4.0963	-0.0486	0.1032
907	SLU 15	1.73	0.32	86.48	-4.096	-0.0418	0.1027
907	SLU 16	1.74	0.33	85.84	-4.0663	-0.0505	0.1023
907	SLU 17	1.72	0.31	85.83	-4.0661	-0.0437	0.1017
907	SLU 18	1.71	0.39	87.6	-4.1478	-0.0475	0.1016
907	SLU 19	1.69	0.37	87.59	-4.1475	-0.0407	0.101
907	SLU 20	1.74	0.39	88.65	-4.1975	-0.0467	0.1033
907	SLU 21	1.72	0.37	88.64	-4.1972	-0.0399	0.1027
907	SLU 22	1.7	0.36	83.85	-3.9726	-0.0527	0.101
907	SLU 23	1.67	0.33	83.84	-3.9721	-0.0413	0.1001
907	SLU 24	1.75	0.38	85.56	-4.0522	-0.0501	0.1036
907	SLU 25	1.73	0.36	85.55	-4.052	-0.0432	0.1031
907	SLU 26	1.7	0.32	84.89	-4.0218	-0.0406	0.1018
907	SLU 27	1.78	0.37	86.61	-4.1019	-0.0493	0.1053
907	SLU 28	1.76	0.35	86.6	-4.1017	-0.0425	0.1048
907	SLU 29	1.77	0.36	85.95	-4.072	-0.0512	0.1044
907	SLU 30	1.75	0.34	85.95	-4.0717	-0.0444	0.1039
907	SLU 31	1.76	0.46	92.85	-4.3941	-0.0307	0.1064
907	SLU 32	1.84	0.51	94.57	-4.4742	-0.0394	0.11
907	SLU 33	1.82	0.48	94.56	-4.4739	-0.0325	0.1094
907	SLU 34	1.8	0.45	93.9	-4.4438	-0.0299	0.1082
907	SLU 35	1.87	0.5	95.62	-4.5239	-0.0386	0.1117
907	SLU 36	1.85	0.48	95.61	-4.5236	-0.0318	0.1112
907	SLU 37	1.86	0.49	94.97	-4.4939	-0.0405	0.1108
907	SLU 38	1.84	0.46	94.96	-4.4937	-0.0337	0.1102
907	SLU 39	1.84	0.55	96.72	-4.5754	-0.0375	0.1101
907	SLU 40	1.82	0.53	96.72	-4.5751	-0.0306	0.1095
907	SLU 41	1.87	0.54	97.78	-4.6251	-0.0367	0.1118
907	SLU 42	1.85	0.52	97.77	-4.6248	-0.0299	0.1113
907	SLU 43	2.01	0.22	94.01	-4.4619	-0.0851	0.1173
907	SLU 44	1.97	0.18	94	-4.4615	-0.0737	0.1164
907	SLU 45	2.05	0.23	95.72	-4.5416	-0.0824	0.1199
907	SLU 46	2.03	0.21	95.71	-4.5413	-0.0755	0.1194
907	SLU 47	2.01	0.18	95.05	-4.5112	-0.0729	0.1181
907	SLU 48	2.08	0.23	96.77	-4.5912	-0.0816	0.1216
907	SLU 49	2.06	0.21	96.76	-4.591	-0.0748	0.1211
907	SLU 50	2.07	0.21	96.11	-4.5613	-0.0835	0.1207
907	SLU 51	2.05	0.19	96.1	-4.561	-0.0767	0.1202
907	SLU 52	2.07	0.31	103.01	-4.8834	-0.063	0.1227
907	SLU 53	2.14	0.36	104.73	-4.9635	-0.0717	0.1263
907	SLU 54	2.12	0.34	104.72	-4.9632	-0.0649	0.1257
907	SLU 55	2.1	0.31	104.06	-4.9331	-0.0622	0.1245
907	SLU 56	2.18	0.36	105.78	-5.0132	-0.0709	0.128
907	SLU 57	2.16	0.33	105.77	-5.0129	-0.0641	0.1275
907	SLU 58	2.17	0.34	105.12	-4.9832	-0.0728	0.1271
907	SLU 59	2.15	0.32	105.12	-4.983	-0.066	0.1265
907	SLU 60	2.14	0.4	106.88	-5.0647	-0.0698	0.1264
907	SLU 61	2.12	0.38	106.87	-5.0644	-0.063	0.1258
907	SLU 62	2.17	0.4	107.93	-5.1144	-0.069	0.1281
907	SLU 63	2.15	0.38	107.93	-5.1141	-0.0622	0.1275
907	SLU 64	2.13	0.37	103.14	-4.8895	-0.075	0.1258
907	SLU 65	2.1	0.34	103.12	-4.8891	-0.0636	0.1249

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
907	SLU 66	2.17	0.39	104.84	-4.9691	-0.0723	0.1284
907	SLU 67	2.16	0.36	104.84	-4.9689	-0.0655	0.1279
907	SLU 68	2.13	0.33	104.18	-4.9387	-0.0629	0.1266
907	SLU 69	2.21	0.38	105.9	-5.0188	-0.0716	0.1302
907	SLU 70	2.19	0.36	105.89	-5.0186	-0.0647	0.1296
907	SLU 71	2.2	0.37	105.24	-4.9889	-0.0735	0.1292
907	SLU 72	2.18	0.34	105.23	-4.9886	-0.0666	0.1287
907	SLU 73	2.19	0.47	112.14	-5.311	-0.0529	0.1312
907	SLU 74	2.27	0.51	113.86	-5.3911	-0.0617	0.1348
907	SLU 75	2.25	0.49	113.85	-5.3908	-0.0548	0.1343
907	SLU 76	2.23	0.46	113.19	-5.3607	-0.0522	0.133
907	SLU 77	2.3	0.51	114.91	-5.4408	-0.0609	0.1365
907	SLU 78	2.28	0.49	114.9	-5.4405	-0.054	0.136
907	SLU 79	2.29	0.49	114.25	-5.4108	-0.0628	0.1356
907	SLU 80	2.27	0.47	114.24	-5.4106	-0.0559	0.1351
907	SLU 81	2.27	0.56	116.01	-5.4923	-0.0597	0.1349
907	SLU 82	2.25	0.53	116	-5.492	-0.0529	0.1343
907	SLU 83	2.3	0.55	117.06	-5.542	-0.059	0.1366
907	SLU 84	2.28	0.53	117.05	-5.5417	-0.0521	0.1361
907	SLE RA 1	1.61	0.25	77.33	-3.6672	-0.0599	0.0949
907	SLE RA 2	1.59	0.23	77.32	-3.6669	-0.0523	0.0943
907	SLE RA 3	1.64	0.26	78.47	-3.7203	-0.0581	0.0967
907	SLE RA 4	1.63	0.25	78.46	-3.7201	-0.0536	0.0963
907	SLE RA 5	1.61	0.23	78.02	-3.7	-0.0518	0.0954
907	SLE RA 6	1.66	0.26	79.17	-3.7534	-0.0576	0.0978
907	SLE RA 7	1.65	0.25	79.16	-3.7532	-0.0531	0.0974
907	SLE RA 8	1.66	0.25	78.73	-3.7334	-0.0589	0.0972
907	SLE RA 9	1.64	0.23	78.73	-3.7333	-0.0543	0.0968
907	SLE RA 10	1.65	0.31	83.33	-3.9482	-0.0452	0.0985
907	SLE RA 11	1.7	0.35	84.48	-4.0016	-0.051	0.1009
907	SLE RA 12	1.69	0.33	84.47	-4.0014	-0.0464	0.1005
907	SLE RA 13	1.68	0.31	84.03	-3.9813	-0.0447	0.0997
907	SLE RA 14	1.73	0.35	85.18	-4.0347	-0.0505	0.102
907	SLE RA 15	1.71	0.33	85.17	-4.0345	-0.0459	0.1017
907	SLE RA 16	1.72	0.33	84.74	-4.0147	-0.0518	0.1014
907	SLE RA 17	1.71	0.32	84.73	-4.0145	-0.0472	0.1011
907	SLE RA 18	1.7	0.38	85.91	-4.069	-0.0497	0.101
907	SLE RA 19	1.69	0.36	85.91	-4.0688	-0.0452	0.1006
907	SLE RA 20	1.72	0.37	86.61	-4.1021	-0.0492	0.1021
907	SLE RA 21	1.71	0.36	86.61	-4.102	-0.0447	0.1017
907	SLE FR 1	1.61	0.25	77.33	-3.6672	-0.0599	0.0949
907	SLE FR 2	1.61	0.25	77.33	-3.6671	-0.0584	0.0948
907	SLE FR 3	1.62	0.25	77.61	-3.6804	-0.0597	0.0953
907	SLE FR 4	1.64	0.28	79.9	-3.7877	-0.0553	0.0966
907	SLE FR 5	1.65	0.29	80.19	-3.801	-0.0567	0.0972
907	SLE FR 6	1.66	0.31	81.62	-3.8681	-0.0548	0.0979
907	SLE QP 1	1.61	0.25	77.33	-3.6672	-0.0599	0.0949
907	SLE QP 2	1.64	0.29	79.91	-3.7877	-0.0569	0.0967
907	SLD 1	8.07	1.27	71.58	-3.5408	-0.0988	0.4084
907	SLD 2	7.45	1.76	70.84	-3.5049	-0.0757	0.3909
907	SLD 3	8.6	-0.49	72.92	-3.5821	-0.1228	0.3865
907	SLD 4	7.98	0	72.18	-3.5462	-0.0997	0.369
907	SLD 5	2.87	3.17	75.51	-3.6573	-0.0372	0.2265
907	SLD 6	2.46	3.49	75.02	-3.6338	-0.022	0.2151
907	SLD 7	4.64	-2.7	79.97	-3.7951	-0.1171	0.1535
907	SLD 8	4.24	-2.38	79.49	-3.7717	-0.102	0.1421
907	SLD 9	-0.96	2.96	80.32	-3.8038	-0.0117	0.0513
907	SLD 10	-1.36	3.28	79.84	-3.7803	0.0034	0.0399
907	SLD 11	0.81	-2.91	84.79	-3.9417	-0.0917	-0.0216
907	SLD 12	0.41	-2.59	84.3	-3.9182	-0.0765	-0.0331
907	SLD 13	-4.7	0.58	87.64	-4.0292	-0.0141	-0.1756
907	SLD 14	-5.32	1.07	86.89	-3.9933	0.0091	-0.1931
907	SLD 15	-4.17	-1.18	88.98	-4.0706	-0.038	-0.1975
907	SLD 16	-4.79	-0.69	88.23	-4.0347	-0.0149	-0.215
907	SLV 1	16.68	2.53	60.45	-3.2101	-0.158	0.8254
907	SLV 2	15.23	3.68	58.72	-3.1265	-0.1041	0.7847
907	SLV 3	17.92	-1.48	63.49	-3.3046	-0.2129	0.775
907	SLV 4	16.47	-0.33	61.76	-3.221	-0.159	0.7343
907	SLV 5	4.52	6.84	69.75	-3.4854	-0.0132	0.3987
907	SLV 6	3.59	7.58	68.64	-3.4317	0.0215	0.3726
907	SLV 7	8.65	-6.52	79.89	-3.8004	-0.1962	0.2307
907	SLV 8	7.72	-5.78	78.78	-3.7467	-0.1615	0.2046
907	SLV 9	-4.44	6.36	81.04	-3.8287	0.0478	-0.0112
907	SLV 10	-5.37	7.1	79.92	-3.775	0.0825	-0.0373
907	SLV 11	-0.31	-7	91.17	-4.1438	-0.1352	-0.1791
907	SLV 12	-1.24	-6.26	90.06	-4.09	-0.1006	-0.2053
907	SLV 13	-13.19	0.91	98.05	-4.3545	0.0453	-0.5409
907	SLV 14	-14.64	2.06	96.32	-4.2709	0.0992	-0.5816
907	SLV 15	-11.95	-3.1	101.09	-4.449	-0.0096	-0.5913
907	SLV 16	-13.4	-1.95	99.36	-4.3654	0.0443	-0.632
907	CRTFP Ux+	0	0	0	0	0	0
907	CRTFP Ux-	0	0	0	0	0	0
907	CRTFP Uy+	0	0	0	0	0	0
907	CRTFP Uy-	0	0	0	0	0	0
921	SLU 1	0.43	0.16	14.3	-1.4499	0.6452	-0.0136
921	SLU 2	0.45	0.15	14.29	-1.4493	0.6465	-0.0071
921	SLU 3	0.45	0.17	14.62	-1.4822	0.6464	-0.0128
921	SLU 4	0.46	0.16	14.62	-1.4818	0.6472	-0.0089
921	SLU 5	0.46	0.15	14.49	-1.4694	0.6472	-0.0054
921	SLU 6	0.46	0.16	14.82	-1.5024	0.6472	-0.011
921	SLU 7	0.47	0.15	14.81	-1.502	0.6479	-0.0071
921	SLU 8	0.45	0.16	14.7	-1.4902	0.6468	-0.0101
921	SLU 9	0.46	0.15	14.69	-1.4898	0.6475	-0.0062
921	SLU 10	0.48	0.2	15.86	-1.6085	0.6543	-0.0234
921	SLU 11	0.48	0.22	16.19	-1.6414	0.6543	-0.029
921	SLU 12	0.49	0.21	16.19	-1.641	0.655	-0.0251
921	SLU 13	0.49	0.2	16.06	-1.6286	0.6551	-0.0216

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
921	SLU 14	0.49	0.22	16.39	-1.6616	0.655	-0.0272
921	SLU 15	0.5	0.21	16.38	-1.6612	0.6558	-0.0234
921	SLU 16	0.49	0.22	16.27	-1.6494	0.6546	-0.0263
921	SLU 17	0.5	0.21	16.26	-1.649	0.6553	-0.0224
921	SLU 18	0.48	0.24	16.54	-1.6773	0.6564	-0.0368
921	SLU 19	0.49	0.23	16.54	-1.6769	0.6572	-0.0329
921	SLU 20	0.49	0.24	16.74	-1.6975	0.6572	-0.035
921	SLU 21	0.5	0.23	16.74	-1.6971	0.6579	-0.0311
921	SLU 22	0.48	0.22	15.9	-1.6124	0.6566	-0.0282
921	SLU 23	0.49	0.2	15.9	-1.6117	0.6578	-0.0217
921	SLU 24	0.49	0.22	16.22	-1.6447	0.6578	-0.0274
921	SLU 25	0.5	0.21	16.22	-1.6443	0.6585	-0.0235
921	SLU 26	0.5	0.2	16.1	-1.6319	0.6586	-0.02
921	SLU 27	0.5	0.22	16.42	-1.6648	0.6585	-0.0256
921	SLU 28	0.51	0.21	16.42	-1.6644	0.6593	-0.0217
921	SLU 29	0.5	0.21	16.3	-1.6526	0.6581	-0.0247
921	SLU 30	0.51	0.2	16.3	-1.6523	0.6588	-0.0208
921	SLU 31	0.52	0.26	17.47	-1.7709	0.6656	-0.038
921	SLU 32	0.53	0.28	17.79	-1.8039	0.6656	-0.0436
921	SLU 33	0.53	0.27	17.79	-1.8035	0.6663	-0.0397
921	SLU 34	0.53	0.26	17.66	-1.7911	0.6664	-0.0362
921	SLU 35	0.54	0.27	17.99	-1.824	0.6664	-0.0418
921	SLU 36	0.54	0.26	17.99	-1.8236	0.6671	-0.038
921	SLU 37	0.53	0.27	17.87	-1.8118	0.666	-0.0409
921	SLU 38	0.54	0.26	17.87	-1.8115	0.6667	-0.037
921	SLU 39	0.53	0.3	18.15	-1.8398	0.6678	-0.0514
921	SLU 40	0.53	0.29	18.14	-1.8394	0.6685	-0.0475
921	SLU 41	0.54	0.3	18.34	-1.8599	0.6686	-0.0496
921	SLU 42	0.54	0.29	18.34	-1.8596	0.6693	-0.0458
921	SLU 43	0.55	0.19	18.04	-1.8292	0.8349	-0.0127
921	SLU 44	0.56	0.18	18.04	-1.8285	0.8361	-0.0062
921	SLU 45	0.57	0.2	18.36	-1.8615	0.8361	-0.0118
921	SLU 46	0.57	0.19	18.36	-1.8611	0.8369	-0.0079
921	SLU 47	0.57	0.18	18.23	-1.8487	0.8369	-0.0044
921	SLU 48	0.58	0.19	18.56	-1.8816	0.8369	-0.0101
921	SLU 49	0.58	0.19	18.56	-1.8812	0.8376	-0.0062
921	SLU 50	0.57	0.19	18.44	-1.8694	0.8365	-0.0091
921	SLU 51	0.58	0.18	18.44	-1.869	0.8372	-0.0053
921	SLU 52	0.6	0.24	19.61	-1.9877	0.844	-0.0224
921	SLU 53	0.6	0.25	19.93	-2.0207	0.844	-0.0281
921	SLU 54	0.61	0.24	19.93	-2.0203	0.8447	-0.0242
921	SLU 55	0.61	0.23	19.8	-2.0079	0.8447	-0.0207
921	SLU 56	0.61	0.25	20.13	-2.0408	0.8447	-0.0263
921	SLU 57	0.62	0.24	20.12	-2.0404	0.8455	-0.0224
921	SLU 58	0.6	0.25	20.01	-2.0286	0.8443	-0.0254
921	SLU 59	0.61	0.24	20	-2.0282	0.845	-0.0215
921	SLU 60	0.6	0.27	20.28	-2.0566	0.8461	-0.0358
921	SLU 61	0.61	0.27	20.28	-2.0562	0.8469	-0.032
921	SLU 62	0.61	0.27	20.48	-2.0767	0.8469	-0.0341
921	SLU 63	0.62	0.26	20.48	-2.0763	0.8476	-0.0302
921	SLU 64	0.59	0.25	19.64	-1.9916	0.8463	-0.0273
921	SLU 65	0.61	0.23	19.64	-1.991	0.8475	-0.0208
921	SLU 66	0.61	0.25	19.96	-2.024	0.8475	-0.0264
921	SLU 67	0.62	0.24	19.96	-2.0236	0.8482	-0.0226
921	SLU 68	0.62	0.23	19.84	-2.0111	0.8482	-0.0191
921	SLU 69	0.62	0.25	20.16	-2.0441	0.8482	-0.0247
921	SLU 70	0.63	0.24	20.16	-2.0437	0.849	-0.0208
921	SLU 71	0.61	0.24	20.04	-2.0319	0.8478	-0.0238
921	SLU 72	0.62	0.24	20.04	-2.0315	0.8485	-0.0199
921	SLU 73	0.64	0.29	21.21	-2.1502	0.8553	-0.037
921	SLU 74	0.64	0.31	21.53	-2.1832	0.8553	-0.0427
921	SLU 75	0.65	0.3	21.53	-2.1828	0.856	-0.0388
921	SLU 76	0.65	0.29	21.41	-2.1703	0.8561	-0.0353
921	SLU 77	0.65	0.3	21.73	-2.2033	0.8561	-0.0409
921	SLU 78	0.66	0.3	21.73	-2.2029	0.8568	-0.037
921	SLU 79	0.65	0.3	21.61	-2.1911	0.8556	-0.04
921	SLU 80	0.66	0.29	21.61	-2.1907	0.8564	-0.0361
921	SLU 81	0.64	0.33	21.89	-2.2191	0.8575	-0.0505
921	SLU 82	0.65	0.32	21.88	-2.2187	0.8582	-0.0466
921	SLU 83	0.65	0.33	22.09	-2.2392	0.8582	-0.0487
921	SLU 84	0.66	0.32	22.08	-2.2388	0.859	-0.0448
921	SLE RA 1	0.45	0.18	14.76	-1.4963	0.6485	-0.0178
921	SLE RA 2	0.45	0.17	14.75	-1.4959	0.6493	-0.0135
921	SLE RA 3	0.46	0.18	14.97	-1.5179	0.6493	-0.0172
921	SLE RA 4	0.46	0.17	14.97	-1.5176	0.6498	-0.0146
921	SLE RA 5	0.46	0.17	14.89	-1.5093	0.6498	-0.0123
921	SLE RA 6	0.46	0.18	15.1	-1.5313	0.6498	-0.016
921	SLE RA 7	0.47	0.17	15.1	-1.531	0.6503	-0.0135
921	SLE RA 8	0.46	0.18	15.02	-1.5232	0.6495	-0.0154
921	SLE RA 9	0.47	0.17	15.02	-1.5229	0.65	-0.0128
921	SLE RA 10	0.48	0.21	15.8	-1.602	0.6545	-0.0243
921	SLE RA 11	0.48	0.22	16.02	-1.624	0.6545	-0.028
921	SLE RA 12	0.48	0.21	16.02	-1.6237	0.655	-0.0254
921	SLE RA 13	0.48	0.21	15.93	-1.6154	0.655	-0.0231
921	SLE RA 14	0.49	0.22	16.15	-1.6374	0.655	-0.0269
921	SLE RA 15	0.49	0.21	16.15	-1.6372	0.6555	-0.0243
921	SLE RA 16	0.48	0.21	16.07	-1.6293	0.6547	-0.0262
921	SLE RA 17	0.49	0.21	16.07	-1.629	0.6552	-0.0237
921	SLE RA 18	0.48	0.23	16.25	-1.6479	0.656	-0.0332
921	SLE RA 19	0.48	0.23	16.25	-1.6477	0.6564	-0.0306
921	SLE RA 20	0.49	0.23	16.39	-1.6614	0.6565	-0.0321
921	SLE RA 21	0.49	0.23	16.38	-1.6611	0.6569	-0.0295
921	SLE FR 1	0.45	0.18	14.76	-1.4963	0.6485	-0.0178
921	SLE FR 2	0.45	0.18	14.76	-1.4962	0.6486	-0.0169
921	SLE FR 3	0.45	0.18	14.81	-1.5017	0.6487	-0.0173
921	SLE FR 4	0.46	0.19	15.21	-1.5417	0.6509	-0.0215
921	SLE FR 5	0.46	0.19	15.26	-1.5472	0.6509	-0.0219

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
921	SLE FR 6	0.46	0.21	15.51	-1.5721	0.6522	-0.0255
921	SLE QP 1	0.45	0.18	14.76	-1.4963	0.6485	-0.0178
921	SLE QP 2	0.46	0.2	15.21	-1.5418	0.6507	-0.0224
921	SLD 1	0.92	0.58	11.41	-1.1568	0.726	-0.0301
921	SLD 2	0.76	0.89	11.18	-1.1339	0.6967	-0.1557
921	SLD 3	1.19	-0.16	11.81	-1.1962	0.7793	0.2566
921	SLD 4	1.03	0.15	11.58	-1.1734	0.75	0.1311
921	SLD 5	0.21	1.38	13.51	-1.3705	0.5977	-0.4374
921	SLD 6	0.1	1.59	13.36	-1.3556	0.5785	-0.5195
921	SLD 7	1.12	-1.1	14.82	-1.502	0.7753	0.5184
921	SLD 8	1.01	-0.89	14.67	-1.4871	0.7561	0.4363
921	SLD 9	-0.1	1.28	15.74	-1.5965	0.5453	-0.4812
921	SLD 10	-0.21	1.49	15.59	-1.5816	0.5262	-0.5632
921	SLD 11	0.81	-1.2	17.05	-1.7281	0.7229	0.4746
921	SLD 12	0.7	-0.99	16.9	-1.7131	0.7038	0.3926
921	SLD 13	-0.12	0.24	18.84	-1.9102	0.5515	-0.1759
921	SLD 14	-0.28	0.55	18.61	-1.8874	0.5221	-0.3014
921	SLD 15	0.16	-0.5	19.23	-1.9497	0.6047	0.1108
921	SLD 16	-0.01	-0.19	19	-1.9268	0.5754	-0.0147
921	SLV 1	1.55	1.08	6.34	-0.6416	0.8271	-0.033
921	SLV 2	1.16	1.8	5.8	-0.5883	0.7588	-0.3253
921	SLV 3	2.18	-0.62	7.23	-0.7317	0.9488	0.6219
921	SLV 4	1.79	0.11	6.7	-0.6783	0.8805	0.3295
921	SLV 5	-0.1	2.91	11.28	-1.1444	0.5308	-0.9686
921	SLV 6	-0.35	3.38	10.94	-1.1101	0.4869	-1.1565
921	SLV 7	1.99	-2.75	14.27	-1.4444	0.9365	1.2141
921	SLV 8	1.74	-2.28	13.92	-1.4102	0.8925	1.0262
921	SLV 9	-0.83	2.67	16.49	-1.6734	0.4089	-1.071
921	SLV 10	-1.08	3.14	16.15	-1.6392	0.365	-1.2589
921	SLV 11	1.26	-2.99	19.48	-1.9735	0.8146	1.1117
921	SLV 12	1.02	-2.52	19.14	-1.9392	0.7707	0.9238
921	SLV 13	-0.88	0.29	23.71	-2.4053	0.4209	-0.3743
921	SLV 14	-1.26	1.01	23.18	-2.3519	0.3526	-0.6667
921	SLV 15	-0.25	-1.41	24.61	-2.4953	0.5426	0.2805
921	SLV 16	-0.64	-0.69	24.08	-2.442	0.4743	-0.0119
921	CRTFP Ux+	0	0	0	0	0	0
921	CRTFP Ux-	0	0	0	0	0	0
921	CRTFP Uy+	0	0	0	0	0	0
921	CRTFP Uy-	0	0	0	0	0	0
925	SLU 1	-0.35	0.77	60.06	0.068	0.6238	0.0387
925	SLU 2	-0.38	0.71	60.12	0.0687	0.6223	0.039
925	SLU 3	-0.36	0.81	61.46	0.0698	0.6411	0.0397
925	SLU 4	-0.37	0.77	61.5	0.0703	0.6402	0.0399
925	SLU 5	-0.37	0.73	60.93	0.0697	0.632	0.0395
925	SLU 6	-0.36	0.82	62.26	0.0708	0.6508	0.0402
925	SLU 7	-0.37	0.79	62.3	0.0712	0.6499	0.0404
925	SLU 8	-0.35	0.8	61.66	0.0699	0.6431	0.0397
925	SLU 9	-0.36	0.76	61.7	0.0703	0.6422	0.0399
925	SLU 10	-0.44	0.83	67.99	0.0765	0.7197	0.045
925	SLU 11	-0.42	0.93	69.32	0.0776	0.7384	0.0457
925	SLU 12	-0.44	0.9	69.36	0.078	0.7376	0.0459
925	SLU 13	-0.44	0.85	68.79	0.0774	0.7293	0.0455
925	SLU 14	-0.42	0.95	70.12	0.0785	0.7481	0.0462
925	SLU 15	-0.43	0.91	70.16	0.079	0.7472	0.0464
925	SLU 16	-0.41	0.92	69.52	0.0776	0.7404	0.0457
925	SLU 17	-0.42	0.88	69.56	0.0781	0.7396	0.0459
925	SLU 18	-0.44	0.95	71.29	0.0791	0.7629	0.0472
925	SLU 19	-0.46	0.91	71.33	0.0796	0.762	0.0474
925	SLU 20	-0.44	0.96	72.09	0.08	0.7725	0.0478
925	SLU 21	-0.45	0.92	72.13	0.0805	0.7716	0.0479
925	SLU 22	-0.4	0.99	67.79	0.0769	0.7195	0.0444
925	SLU 23	-0.42	0.93	67.86	0.0777	0.718	0.0447
925	SLU 24	-0.41	1.03	69.19	0.0787	0.7368	0.0454
925	SLU 25	-0.42	0.99	69.23	0.0792	0.7359	0.0456
925	SLU 26	-0.42	0.95	68.66	0.0786	0.7277	0.0452
925	SLU 27	-0.4	1.04	69.99	0.0797	0.7464	0.0459
925	SLU 28	-0.42	1.01	70.03	0.0801	0.7455	0.0461
925	SLU 29	-0.39	1.02	69.39	0.0788	0.7388	0.0454
925	SLU 30	-0.41	0.98	69.43	0.0792	0.7379	0.0456
925	SLU 31	-0.48	1.05	75.72	0.0854	0.8153	0.0507
925	SLU 32	-0.47	1.15	77.05	0.0865	0.8341	0.0514
925	SLU 33	-0.48	1.12	77.09	0.0869	0.8332	0.0516
925	SLU 34	-0.48	1.07	76.52	0.0864	0.825	0.0512
925	SLU 35	-0.47	1.17	77.85	0.0874	0.8437	0.0519
925	SLU 36	-0.48	1.13	77.89	0.0879	0.8429	0.0521
925	SLU 37	-0.46	1.14	77.26	0.0866	0.8361	0.0514
925	SLU 38	-0.47	1.1	77.3	0.087	0.8352	0.0516
925	SLU 39	-0.49	1.17	79.03	0.088	0.8585	0.053
925	SLU 40	-0.5	1.13	79.06	0.0885	0.8576	0.0531
925	SLU 41	-0.49	1.18	79.83	0.089	0.8682	0.0535
925	SLU 42	-0.5	1.14	79.86	0.0894	0.8673	0.0537
925	SLU 43	-0.44	0.93	75.43	0.0854	0.7782	0.0483
925	SLU 44	-0.47	0.87	75.49	0.0861	0.7767	0.0486
925	SLU 45	-0.45	0.97	76.83	0.0872	0.7955	0.0493
925	SLU 46	-0.46	0.93	76.86	0.0876	0.7946	0.0495
925	SLU 47	-0.46	0.88	76.29	0.087	0.7863	0.0491
925	SLU 48	-0.45	0.98	77.63	0.0881	0.8051	0.0499
925	SLU 49	-0.46	0.94	77.66	0.0886	0.8042	0.05
925	SLU 50	-0.44	0.96	77.03	0.0872	0.7975	0.0494
925	SLU 51	-0.45	0.92	77.07	0.0877	0.7966	0.0495
925	SLU 52	-0.53	0.99	83.36	0.0939	0.874	0.0546
925	SLU 53	-0.51	1.09	84.69	0.095	0.8928	0.0553
925	SLU 54	-0.53	1.05	84.73	0.0954	0.8919	0.0555
925	SLU 55	-0.53	1	84.16	0.0948	0.8837	0.0551
925	SLU 56	-0.51	1.1	85.49	0.0959	0.9024	0.0559
925	SLU 57	-0.52	1.07	85.53	0.0963	0.9016	0.056
925	SLU 58	-0.5	1.08	84.89	0.095	0.8948	0.0554

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
925	SLU 59	-0.51	1.04	84.93	0.0954	0.8939	0.0555
925	SLU 60	-0.53	1.1	86.66	0.0965	0.9172	0.0569
925	SLU 61	-0.55	1.07	86.7	0.0969	0.9163	0.0571
925	SLU 62	-0.53	1.12	87.46	0.0974	0.9269	0.0574
925	SLU 63	-0.54	1.08	87.5	0.0978	0.926	0.0576
925	SLU 64	-0.49	1.15	83.16	0.0943	0.8738	0.054
925	SLU 65	-0.51	1.09	83.22	0.095	0.8723	0.0543
925	SLU 66	-0.5	1.19	84.56	0.0961	0.8911	0.0551
925	SLU 67	-0.51	1.15	84.6	0.0965	0.8902	0.0552
925	SLU 68	-0.51	1.1	84.02	0.0959	0.882	0.0548
925	SLU 69	-0.49	1.2	85.36	0.097	0.9008	0.0556
925	SLU 70	-0.51	1.16	85.4	0.0975	0.8999	0.0558
925	SLU 71	-0.48	1.18	84.76	0.0961	0.8931	0.0551
925	SLU 72	-0.5	1.14	84.8	0.0966	0.8922	0.0552
925	SLU 73	-0.57	1.21	91.09	0.1028	0.9697	0.0603
925	SLU 74	-0.56	1.31	92.42	0.1039	0.9884	0.0611
925	SLU 75	-0.57	1.27	92.46	0.1043	0.9876	0.0612
925	SLU 76	-0.57	1.22	91.89	0.1037	0.9793	0.0608
925	SLU 77	-0.56	1.32	93.22	0.1048	0.9981	0.0616
925	SLU 78	-0.57	1.29	93.26	0.1052	0.9972	0.0618
925	SLU 79	-0.55	1.3	92.62	0.1039	0.9905	0.0611
925	SLU 80	-0.56	1.26	92.66	0.1043	0.9896	0.0612
925	SLU 81	-0.58	1.32	94.39	0.1054	1.0129	0.0626
925	SLU 82	-0.59	1.29	94.43	0.1058	1.012	0.0628
925	SLU 83	-0.58	1.34	95.19	0.1063	1.0225	0.0631
925	SLU 84	-0.59	1.3	95.23	0.1067	1.0216	0.0633
925	SLE RA 1	-0.37	0.84	62.27	0.0706	0.6511	0.0403
925	SLE RA 2	-0.38	0.8	62.31	0.071	0.6502	0.0405
925	SLE RA 3	-0.37	0.86	63.2	0.0718	0.6627	0.041
925	SLE RA 4	-0.38	0.84	63.23	0.0721	0.6621	0.0411
925	SLE RA 5	-0.38	0.8	62.85	0.0717	0.6566	0.0408
925	SLE RA 6	-0.37	0.87	63.74	0.0724	0.6691	0.0413
925	SLE RA 7	-0.38	0.85	63.76	0.0727	0.6685	0.0415
925	SLE RA 8	-0.36	0.85	63.34	0.0718	0.664	0.041
925	SLE RA 9	-0.37	0.83	63.36	0.0721	0.6634	0.0411
925	SLE RA 10	-0.42	0.88	67.55	0.0762	0.715	0.0445
925	SLE RA 11	-0.41	0.94	68.44	0.077	0.7276	0.045
925	SLE RA 12	-0.42	0.92	68.47	0.0772	0.727	0.0451
925	SLE RA 13	-0.42	0.89	68.09	0.0768	0.7215	0.0448
925	SLE RA 14	-0.41	0.95	68.98	0.0776	0.734	0.0453
925	SLE RA 15	-0.42	0.93	69	0.0779	0.7334	0.0455
925	SLE RA 16	-0.4	0.94	68.58	0.077	0.7289	0.045
925	SLE RA 17	-0.41	0.91	68.6	0.0773	0.7283	0.0451
925	SLE RA 18	-0.43	0.95	69.76	0.078	0.7438	0.046
925	SLE RA 19	-0.43	0.93	69.78	0.0783	0.7432	0.0461
925	SLE RA 20	-0.42	0.96	70.29	0.0786	0.7503	0.0464
925	SLE RA 21	-0.43	0.94	70.32	0.0789	0.7497	0.0465
925	SLE FR 1	-0.37	0.84	62.27	0.0706	0.6511	0.0403
925	SLE FR 2	-0.37	0.83	62.28	0.0707	0.6509	0.0403
925	SLE FR 3	-0.37	0.84	62.48	0.0708	0.6537	0.0404
925	SLE FR 4	-0.39	0.86	64.52	0.0729	0.6788	0.0421
925	SLE FR 5	-0.38	0.88	64.73	0.073	0.6815	0.0422
925	SLE FR 6	-0.4	0.89	66.01	0.0743	0.6975	0.0432
925	SLE QP 1	-0.37	0.84	62.27	0.0706	0.6511	0.0403
925	SLE QP 2	-0.38	0.87	64.52	0.0728	0.679	0.042
925	SLD 1	5.41	2.29	68.64	0.0826	0.7358	0.0108
925	SLD 2	4.89	2.11	68.47	0.0825	0.7357	0.0208
925	SLD 3	5.87	0.56	69.77	0.0914	0.7227	0.0041
925	SLD 4	5.35	0.38	69.6	0.0913	0.7226	0.0141
925	SLD 5	0.75	3.95	64.07	0.0624	0.716	0.041
925	SLD 6	0.41	3.83	63.96	0.0623	0.7159	0.0476
925	SLD 7	2.28	-1.81	67.83	0.0918	0.6721	0.0187
925	SLD 8	1.94	-1.93	67.72	0.0917	0.6721	0.0253
925	SLD 9	-2.71	3.68	61.31	0.0539	0.6858	0.0588
925	SLD 10	-3.05	3.56	61.2	0.0538	0.6858	0.0654
925	SLD 11	-1.18	-2.09	65.07	0.0833	0.642	0.0364
925	SLD 12	-1.52	-2.21	64.96	0.0832	0.6419	0.043
925	SLD 13	-6.12	1.36	59.44	0.0543	0.6353	0.0699
925	SLD 14	-6.64	1.18	59.26	0.0541	0.6352	0.08
925	SLD 15	-5.66	-0.37	60.56	0.0631	0.6222	0.0632
925	SLD 16	-6.18	-0.55	60.39	0.0629	0.6221	0.0733
925	SLV 1	13.18	4.13	74.23	0.0963	0.8129	-0.0311
925	SLV 2	11.97	3.7	73.83	0.0959	0.8127	-0.0077
925	SLV 3	14.25	0.22	76.8	0.1164	0.7829	-0.0467
925	SLV 4	13.04	-0.21	76.39	0.116	0.7828	-0.0233
925	SLV 5	2.26	7.86	63.61	0.0495	0.7646	0.0398
925	SLV 6	1.49	7.59	63.36	0.0493	0.7645	0.0549
925	SLV 7	5.84	-5.19	72.15	0.1163	0.6647	-0.0124
925	SLV 8	5.06	-5.47	71.9	0.116	0.6646	0.0027
925	SLV 9	-5.83	7.21	57.14	0.0295	0.6933	0.0814
925	SLV 10	-6.61	6.93	56.88	0.0293	0.6932	0.0964
925	SLV 11	-2.25	-5.84	65.68	0.0963	0.5934	0.0291
925	SLV 12	-3.03	-6.12	65.42	0.096	0.5933	0.0442
925	SLV 13	-13.81	1.96	52.64	0.0296	0.5751	0.1074
925	SLV 14	-15.02	1.53	52.24	0.0292	0.575	0.1308
925	SLV 15	-12.73	-1.96	55.2	0.0496	0.5452	0.0917
925	SLV 16	-13.94	-2.39	54.8	0.0492	0.545	0.1151
925	CRTFP Ux+	0	0	0	0	0	0
925	CRTFP Ux-	0	0	0	0	0	0
928	SLU 1	0.37	1.74	56.91	0.0859	-0.2458	0.0082
928	SLU 2	0.34	1.7	56.97	0.0867	-0.2446	0.0088
928	SLU 3	0.38	1.8	58.23	0.0883	-0.2523	0.0085
928	SLU 4	0.37	1.78	58.26	0.0888	-0.2516	0.0088
928	SLU 5	0.36	1.73	57.76	0.088	-0.2488	0.0089
928	SLU 6	0.4	1.83	59.02	0.0896	-0.2565	0.0085
928	SLU 7	0.38	1.8	59.06	0.0901	-0.2558	0.0089
928	SLU 8	0.4	1.79	58.49	0.0886	-0.2542	0.0083

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
928	SLU 9	0.38	1.77	58.53	0.089	-0.2535	0.0087
928	SLU 10	0.35	1.96	64.22	0.097	-0.2793	0.0125
928	SLU 11	0.39	2.06	65.48	0.0986	-0.287	0.0122
928	SLU 12	0.37	2.03	65.51	0.0991	-0.2863	0.0125
928	SLU 13	0.37	1.98	65.01	0.0983	-0.2836	0.0126
928	SLU 14	0.41	2.08	66.27	0.1	-0.2913	0.0122
928	SLU 15	0.39	2.06	66.31	0.1004	-0.2905	0.0126
928	SLU 16	0.41	2.05	65.74	0.0989	-0.289	0.012
928	SLU 17	0.39	2.03	65.78	0.0993	-0.2883	0.0124
928	SLU 18	0.39	2.11	67.27	0.1007	-0.2954	0.0135
928	SLU 19	0.37	2.08	67.3	0.1011	-0.2947	0.0138
928	SLU 20	0.4	2.13	68.06	0.102	-0.2996	0.0136
928	SLU 21	0.38	2.11	68.1	0.1024	-0.2989	0.0139
928	SLU 22	0.4	2.07	64.13	0.0974	-0.2834	0.0109
928	SLU 23	0.37	2.03	64.19	0.0981	-0.2822	0.0115
928	SLU 24	0.41	2.13	65.45	0.0997	-0.2899	0.0112
928	SLU 25	0.39	2.11	65.48	0.1002	-0.2892	0.0116
928	SLU 26	0.38	2.05	64.98	0.0994	-0.2864	0.0116
928	SLU 27	0.42	2.15	66.24	0.1011	-0.2941	0.0113
928	SLU 28	0.41	2.13	66.28	0.1015	-0.2934	0.0116
928	SLU 29	0.43	2.12	65.71	0.1	-0.2918	0.0111
928	SLU 30	0.41	2.1	65.75	0.1004	-0.2911	0.0114
928	SLU 31	0.38	2.29	71.44	0.1084	-0.3169	0.0152
928	SLU 32	0.42	2.39	72.7	0.1101	-0.3246	0.0149
928	SLU 33	0.4	2.36	72.74	0.1105	-0.3239	0.0153
928	SLU 34	0.39	2.31	72.23	0.1097	-0.3211	0.0153
928	SLU 35	0.43	2.41	73.49	0.1114	-0.3288	0.015
928	SLU 36	0.41	2.39	73.53	0.1118	-0.3281	0.0153
928	SLU 37	0.44	2.38	72.96	0.1103	-0.3266	0.0148
928	SLU 38	0.42	2.35	73	0.1107	-0.3259	0.0151
928	SLU 39	0.41	2.44	74.49	0.1121	-0.333	0.0162
928	SLU 40	0.39	2.41	74.52	0.1125	-0.3323	0.0166
928	SLU 41	0.43	2.46	75.28	0.1134	-0.3372	0.0163
928	SLU 42	0.41	2.44	75.32	0.1138	-0.3365	0.0167
928	SLU 43	0.48	2.15	71.5	0.1078	-0.3066	0.0097
928	SLU 44	0.45	2.11	71.57	0.1086	-0.3054	0.0103
928	SLU 45	0.49	2.21	72.82	0.1102	-0.3131	0.01
928	SLU 46	0.47	2.19	72.86	0.1106	-0.3124	0.0103
928	SLU 47	0.46	2.13	72.36	0.1099	-0.3097	0.0104
928	SLU 48	0.5	2.23	73.62	0.1115	-0.3174	0.01
928	SLU 49	0.48	2.21	73.65	0.112	-0.3167	0.0104
928	SLU 50	0.5	2.2	73.09	0.1104	-0.3151	0.0098
928	SLU 51	0.48	2.18	73.13	0.1109	-0.3144	0.0102
928	SLU 52	0.45	2.37	78.82	0.1189	-0.3402	0.014
928	SLU 53	0.5	2.47	80.07	0.1205	-0.3479	0.0137
928	SLU 54	0.48	2.44	80.11	0.121	-0.3472	0.014
928	SLU 55	0.47	2.39	79.61	0.1202	-0.3444	0.0141
928	SLU 56	0.51	2.49	80.87	0.1218	-0.3521	0.0137
928	SLU 57	0.49	2.47	80.9	0.1223	-0.3514	0.0141
928	SLU 58	0.51	2.46	80.34	0.1207	-0.3498	0.0136
928	SLU 59	0.49	2.43	80.38	0.1212	-0.3491	0.0139
928	SLU 60	0.49	2.52	81.86	0.1225	-0.3562	0.015
928	SLU 61	0.47	2.49	81.9	0.123	-0.3555	0.0154
928	SLU 62	0.5	2.54	82.65	0.1238	-0.3605	0.0151
928	SLU 63	0.48	2.52	82.69	0.1243	-0.3598	0.0154
928	SLU 64	0.5	2.48	78.73	0.1192	-0.3442	0.0124
928	SLU 65	0.47	2.44	78.79	0.12	-0.343	0.013
928	SLU 66	0.51	2.54	80.04	0.1216	-0.3507	0.0127
928	SLU 67	0.5	2.51	80.08	0.1221	-0.35	0.0131
928	SLU 68	0.49	2.46	79.58	0.1213	-0.3473	0.0131
928	SLU 69	0.53	2.56	80.84	0.1229	-0.355	0.0128
928	SLU 70	0.51	2.54	80.87	0.1234	-0.3543	0.0131
928	SLU 71	0.53	2.53	80.31	0.1218	-0.3527	0.0126
928	SLU 72	0.51	2.5	80.35	0.1223	-0.352	0.0129
928	SLU 73	0.48	2.7	86.04	0.1303	-0.3778	0.0168
928	SLU 74	0.52	2.8	87.29	0.1319	-0.3855	0.0164
928	SLU 75	0.5	2.77	87.33	0.1324	-0.3847	0.0168
928	SLU 76	0.49	2.72	86.83	0.1316	-0.382	0.0168
928	SLU 77	0.54	2.82	88.09	0.1332	-0.3897	0.0165
928	SLU 78	0.52	2.8	88.12	0.1337	-0.389	0.0168
928	SLU 79	0.54	2.79	87.56	0.1322	-0.3874	0.0163
928	SLU 80	0.52	2.76	87.6	0.1326	-0.3867	0.0167
928	SLU 81	0.52	2.85	89.08	0.134	-0.3938	0.0177
928	SLU 82	0.5	2.82	89.12	0.1344	-0.3931	0.0181
928	SLU 83	0.53	2.87	89.88	0.1353	-0.3981	0.0178
928	SLU 84	0.51	2.85	89.91	0.1357	-0.3973	0.0182
928	SLE RA 1	0.38	1.83	58.97	0.0892	-0.2565	0.009
928	SLE RA 2	0.36	1.81	59.01	0.0897	-0.2557	0.0094
928	SLE RA 3	0.39	1.87	59.85	0.0908	-0.2609	0.0091
928	SLE RA 4	0.38	1.86	59.87	0.0911	-0.2604	0.0094
928	SLE RA 5	0.37	1.82	59.54	0.0906	-0.2585	0.0094
928	SLE RA 6	0.4	1.89	60.38	0.0917	-0.2637	0.0092
928	SLE RA 7	0.38	1.88	60.4	0.092	-0.2632	0.0094
928	SLE RA 8	0.4	1.87	60.03	0.0909	-0.2622	0.0091
928	SLE RA 9	0.39	1.85	60.05	0.0912	-0.2617	0.0093
928	SLE RA 10	0.37	1.98	63.85	0.0966	-0.2789	0.0118
928	SLE RA 11	0.39	2.05	64.68	0.0977	-0.284	0.0116
928	SLE RA 12	0.38	2.03	64.71	0.098	-0.2835	0.0119
928	SLE RA 13	0.38	2	64.37	0.0974	-0.2817	0.0119
928	SLE RA 14	0.4	2.06	65.21	0.0985	-0.2868	0.0117
928	SLE RA 15	0.39	2.05	65.24	0.0988	-0.2864	0.0119
928	SLE RA 16	0.4	2.04	64.86	0.0978	-0.2853	0.0115
928	SLE RA 17	0.39	2.02	64.89	0.0981	-0.2848	0.0118
928	SLE RA 18	0.39	2.08	65.88	0.099	-0.2896	0.0125
928	SLE RA 19	0.38	2.06	65.9	0.0993	-0.2891	0.0127
928	SLE RA 20	0.4	2.1	66.4	0.0999	-0.2924	0.0126
928	SLE RA 21	0.39	2.08	66.43	0.1002	-0.2919	0.0128

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
928	SLE FR 1	0.38	1.83	58.97	0.0892	-0.2565	0.009
928	SLE FR 2	0.38	1.83	58.98	0.0893	-0.2564	0.009
928	SLE FR 3	0.38	1.84	59.18	0.0895	-0.2576	0.009
928	SLE FR 4	0.38	1.9	61.05	0.0922	-0.2663	0.0101
928	SLE FR 5	0.39	1.91	61.25	0.0925	-0.2676	0.01
928	SLE FR 6	0.39	1.96	62.42	0.0941	-0.2731	0.0107
928	SLE QP 1	0.38	1.83	58.97	0.0892	-0.2565	0.009
928	SLE QP 2	0.38	1.91	61.04	0.0921	-0.2664	0.01
928	SLD 1	6.27	2.4	55.84	0.0831	-0.0011	-0.024
928	SLD 2	5.74	2.58	55.74	0.0817	-0.0038	-0.0135
928	SLD 3	6.73	0.76	56.98	0.0928	0.017	-0.0307
928	SLD 4	6.2	0.94	56.88	0.0915	0.0143	-0.0202
928	SLD 5	1.54	4.5	57.77	0.0749	-0.2139	0.0081
928	SLD 6	1.19	4.62	57.7	0.074	-0.2157	0.0149
928	SLD 7	3.08	-0.94	61.58	0.1074	-0.1534	-0.0142
928	SLD 8	2.74	-0.83	61.51	0.1065	-0.1552	-0.0073
928	SLD 9	-1.97	4.64	60.58	0.0778	-0.3777	0.0274
928	SLD 10	-2.32	4.76	60.51	0.0769	-0.3795	0.0342
928	SLD 11	-0.43	-0.8	64.39	0.1103	-0.3172	0.0051
928	SLD 12	-0.77	-0.68	64.32	0.1094	-0.319	0.012
928	SLD 13	-5.43	2.87	65.21	0.0928	-0.5472	0.0403
928	SLD 14	-5.96	3.05	65.1	0.0915	-0.5499	0.0507
928	SLD 15	-4.97	1.24	66.35	0.1026	-0.529	0.0336
928	SLD 16	-5.5	1.42	66.24	0.1012	-0.5318	0.0441
928	SLV 1	14.14	2.99	48.9	0.0707	0.355	-0.0696
928	SLV 2	12.92	3.41	48.66	0.0676	0.3487	-0.0452
928	SLV 3	15.23	-0.71	51.5	0.0928	0.397	-0.0851
928	SLV 4	14	-0.29	51.25	0.0897	0.3907	-0.0607
928	SLV 5	3.08	7.78	53.51	0.0527	-0.1426	0.0056
928	SLV 6	2.29	8.05	53.36	0.0507	-0.1467	0.0213
928	SLV 7	6.69	-4.57	62.15	0.1264	-0.0026	-0.0463
928	SLV 8	5.9	-4.3	61.99	0.1244	-0.0067	-0.0306
928	SLV 9	-5.13	8.11	60.09	0.0599	-0.5262	0.0507
928	SLV 10	-5.92	8.38	59.94	0.0578	-0.5303	0.0664
928	SLV 11	-1.53	-4.23	68.73	0.1336	-0.3862	-0.0012
928	SLV 12	-2.31	-3.96	68.57	0.1316	-0.3902	0.0145
928	SLV 13	-13.23	4.11	70.83	0.0946	-0.9235	0.0808
928	SLV 14	-14.46	4.53	70.59	0.0914	-0.9299	0.1052
928	SLV 15	-12.15	0.4	73.42	0.1167	-0.8815	0.0652
928	SLV 16	-13.38	0.82	73.18	0.1136	-0.8879	0.0896
928	CRTFP Ux+	0	0	0	0	0	0
928	CRTFP Ux-	0	0	0	0	0	0
931	SLU 1	0.38	0.05	20.14	0.5703	5.0919	-0.0218
931	SLU 2	0.37	0.04	20.14	0.5704	5.0922	-0.019
931	SLU 3	0.39	0.05	20.61	0.5835	5.2105	-0.0229
931	SLU 4	0.38	0.04	20.61	0.5836	5.2107	-0.0212
931	SLU 5	0.38	0.04	20.43	0.5785	5.1642	-0.019
931	SLU 6	0.4	0.05	20.89	0.5916	5.2825	-0.0229
931	SLU 7	0.39	0.04	20.89	0.5917	5.2827	-0.0212
931	SLU 8	0.4	0.05	20.71	0.5864	5.2358	-0.0218
931	SLU 9	0.39	0.04	20.71	0.5865	5.236	-0.0201
931	SLU 10	0.39	0.07	22.59	0.6399	5.7153	-0.0277
931	SLU 11	0.41	0.08	23.05	0.653	5.8336	-0.0317
931	SLU 12	0.41	0.08	23.06	0.6531	5.8338	-0.0299
931	SLU 13	0.4	0.07	22.88	0.648	5.7872	-0.0277
931	SLU 14	0.42	0.08	23.34	0.6611	5.9056	-0.0316
931	SLU 15	0.41	0.08	23.34	0.6611	5.9058	-0.0299
931	SLU 16	0.42	0.08	23.16	0.6559	5.8589	-0.0306
931	SLU 17	0.41	0.07	23.16	0.656	5.8591	-0.0289
931	SLU 18	0.41	0.09	23.64	0.6696	5.982	-0.0344
931	SLU 19	0.41	0.09	23.64	0.6697	5.9822	-0.0326
931	SLU 20	0.42	0.09	23.92	0.6777	6.0539	-0.0343
931	SLU 21	0.41	0.09	23.92	0.6777	6.0541	-0.0326
931	SLU 22	0.41	0.09	22.62	0.6407	5.721	-0.0325
931	SLU 23	0.4	0.08	22.62	0.6408	5.7213	-0.0297
931	SLU 24	0.42	0.09	23.09	0.6539	5.8396	-0.0336
931	SLU 25	0.41	0.08	23.09	0.654	5.8398	-0.0319
931	SLU 26	0.41	0.08	22.91	0.6489	5.7932	-0.0297
931	SLU 27	0.43	0.09	23.37	0.662	5.9116	-0.0336
931	SLU 28	0.42	0.08	23.37	0.662	5.9118	-0.0319
931	SLU 29	0.43	0.09	23.19	0.6568	5.8649	-0.0325
931	SLU 30	0.42	0.08	23.19	0.6569	5.8651	-0.0308
931	SLU 31	0.42	0.11	25.07	0.7103	6.3443	-0.0385
931	SLU 32	0.44	0.12	25.53	0.7234	6.4627	-0.0424
931	SLU 33	0.44	0.12	25.54	0.7235	6.4629	-0.0407
931	SLU 34	0.43	0.11	25.36	0.7184	6.4163	-0.0384
931	SLU 35	0.45	0.12	25.82	0.7315	6.5347	-0.0424
931	SLU 36	0.44	0.12	25.82	0.7315	6.5349	-0.0406
931	SLU 37	0.45	0.12	25.64	0.7263	6.488	-0.0413
931	SLU 38	0.44	0.11	25.64	0.7264	6.4882	-0.0396
931	SLU 39	0.44	0.13	26.12	0.74	6.6111	-0.0451
931	SLU 40	0.44	0.13	26.12	0.7401	6.6112	-0.0434
931	SLU 41	0.45	0.13	26.4	0.7481	6.683	-0.0451
931	SLU 42	0.44	0.13	26.4	0.7481	6.6832	-0.0433
931	SLU 43	0.48	0.05	25.33	0.7173	6.4038	-0.0247
931	SLU 44	0.47	0.04	25.34	0.7174	6.4041	-0.0219
931	SLU 45	0.49	0.05	25.8	0.7305	6.5224	-0.0258
931	SLU 46	0.49	0.05	25.8	0.7306	6.5226	-0.0241
931	SLU 47	0.48	0.04	25.62	0.7255	6.476	-0.0218
931	SLU 48	0.5	0.05	26.08	0.7386	6.5944	-0.0258
931	SLU 49	0.49	0.04	26.08	0.7386	6.5946	-0.024
931	SLU 50	0.5	0.05	25.9	0.7334	6.5477	-0.0247
931	SLU 51	0.49	0.04	25.9	0.7335	6.5479	-0.023
931	SLU 52	0.5	0.07	27.78	0.7869	7.0271	-0.0306
931	SLU 53	0.52	0.08	28.25	0.8	7.1455	-0.0345
931	SLU 54	0.51	0.08	28.25	0.8001	7.1457	-0.0328
931	SLU 55	0.5	0.07	28.07	0.795	7.0991	-0.0306

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
931	SLU 56	0.52	0.08	28.53	0.8081	7.2175	-0.0345
931	SLU 57	0.52	0.08	28.53	0.8081	7.2177	-0.0328
931	SLU 58	0.52	0.08	28.35	0.8029	7.1708	-0.0335
931	SLU 59	0.52	0.07	28.35	0.803	7.171	-0.0317
931	SLU 60	0.51	0.1	28.83	0.8166	7.2939	-0.0372
931	SLU 61	0.51	0.09	28.83	0.8166	7.294	-0.0355
931	SLU 62	0.52	0.09	29.11	0.8246	7.3658	-0.0372
931	SLU 63	0.52	0.09	29.12	0.8247	7.366	-0.0355
931	SLU 64	0.51	0.09	27.81	0.7877	7.0328	-0.0354
931	SLU 65	0.5	0.08	27.82	0.7878	7.0332	-0.0326
931	SLU 66	0.52	0.09	28.28	0.8009	7.1515	-0.0365
931	SLU 67	0.52	0.09	28.28	0.801	7.1517	-0.0348
931	SLU 68	0.51	0.08	28.1	0.7959	7.1051	-0.0326
931	SLU 69	0.53	0.09	28.56	0.8089	7.2235	-0.0365
931	SLU 70	0.53	0.08	28.56	0.809	7.2237	-0.0347
931	SLU 71	0.53	0.09	28.38	0.8038	7.1768	-0.0354
931	SLU 72	0.52	0.08	28.38	0.8039	7.177	-0.0337
931	SLU 73	0.53	0.11	30.26	0.8573	7.6562	-0.0413
931	SLU 74	0.55	0.12	30.73	0.8704	7.7746	-0.0452
931	SLU 75	0.54	0.12	30.73	0.8704	7.7748	-0.0435
931	SLU 76	0.53	0.11	30.55	0.8653	7.7282	-0.0413
931	SLU 77	0.55	0.12	31.01	0.8784	7.8465	-0.0452
931	SLU 78	0.55	0.12	31.01	0.8785	7.8467	-0.0435
931	SLU 79	0.55	0.12	30.83	0.8733	7.7998	-0.0442
931	SLU 80	0.55	0.11	30.83	0.8734	7.8	-0.0424
931	SLU 81	0.54	0.14	31.31	0.887	7.9229	-0.048
931	SLU 82	0.54	0.13	31.31	0.887	7.9231	-0.0462
931	SLU 83	0.55	0.13	31.59	0.895	7.9949	-0.0479
931	SLU 84	0.55	0.13	31.6	0.8951	7.9951	-0.0462
931	SLE RA 1	0.39	0.06	20.85	0.5904	5.2716	-0.0249
931	SLE RA 2	0.38	0.05	20.85	0.5905	5.2718	-0.023
931	SLE RA 3	0.39	0.06	21.16	0.5992	5.3507	-0.0256
931	SLE RA 4	0.39	0.06	21.16	0.5993	5.3509	-0.0245
931	SLE RA 5	0.39	0.05	21.04	0.5959	5.3198	-0.023
931	SLE RA 6	0.4	0.06	21.35	0.6046	5.3987	-0.0256
931	SLE RA 7	0.4	0.06	21.35	0.6047	5.3988	-0.0244
931	SLE RA 8	0.4	0.06	21.23	0.6012	5.3676	-0.0249
931	SLE RA 9	0.39	0.05	21.23	0.6012	5.3677	-0.0237
931	SLE RA 10	0.4	0.07	22.48	0.6368	5.6872	-0.0288
931	SLE RA 11	0.41	0.08	22.79	0.6456	5.7661	-0.0314
931	SLE RA 12	0.41	0.08	22.79	0.6456	5.7662	-0.0303
931	SLE RA 13	0.4	0.07	22.67	0.6422	5.7352	-0.0288
931	SLE RA 14	0.41	0.08	22.98	0.6509	5.8141	-0.0314
931	SLE RA 15	0.41	0.08	22.98	0.651	5.8142	-0.0303
931	SLE RA 16	0.41	0.08	22.86	0.6475	5.7829	-0.0307
931	SLE RA 17	0.41	0.08	22.86	0.6476	5.7831	-0.0296
931	SLE RA 18	0.41	0.09	23.18	0.6566	5.865	-0.0332
931	SLE RA 19	0.41	0.09	23.18	0.6567	5.8651	-0.0321
931	SLE RA 20	0.41	0.09	23.37	0.662	5.913	-0.0332
931	SLE RA 21	0.41	0.09	23.37	0.662	5.9131	-0.0321
931	SLE FR 1	0.39	0.06	20.85	0.5904	5.2716	-0.0249
931	SLE FR 2	0.39	0.06	20.85	0.5905	5.2717	-0.0245
931	SLE FR 3	0.39	0.06	20.93	0.5926	5.2908	-0.0249
931	SLE FR 4	0.39	0.07	21.55	0.6103	5.4497	-0.027
931	SLE FR 5	0.4	0.07	21.62	0.6125	5.4688	-0.0274
931	SLE FR 6	0.4	0.07	22.02	0.6235	5.5683	-0.0291
931	SLE QP 1	0.39	0.06	20.85	0.5904	5.2716	-0.0249
931	SLE QP 2	0.39	0.07	21.55	0.6103	5.4496	-0.0274
931	SLD 1	2.1	0.34	18.88	0.5283	4.6221	-0.1411
931	SLD 2	1.93	0.46	18.7	0.5234	4.599	-0.1659
931	SLD 3	2.25	-0.11	19.3	0.541	4.7065	-0.0288
931	SLD 4	2.08	0.01	19.12	0.5361	4.6833	-0.0536
931	SLD 5	0.72	0.82	20.13	0.5672	5.0776	-0.2276
931	SLD 6	0.61	0.9	20.01	0.564	5.0625	-0.2438
931	SLD 7	1.2	-0.69	21.56	0.6097	5.3587	0.147
931	SLD 8	1.09	-0.62	21.44	0.6065	5.3435	0.1308
931	SLD 9	-0.3	0.75	21.66	0.6141	5.5557	-0.1856
931	SLD 10	-0.41	0.83	21.54	0.6109	5.5406	-0.2018
931	SLD 11	0.18	-0.76	23.09	0.6566	5.8368	0.189
931	SLD 12	0.07	-0.68	22.97	0.6534	5.8217	0.1728
931	SLD 13	-1.29	0.13	23.98	0.6845	6.216	-0.0012
931	SLD 14	-1.46	0.25	23.79	0.6796	6.1928	-0.026
931	SLD 15	-1.14	-0.33	24.4	0.6972	6.3003	0.1111
931	SLD 16	-1.32	-0.21	24.22	0.6923	6.2771	0.0863
931	SLV 1	4.39	0.7	15.31	0.4186	3.5142	-0.2902
931	SLV 2	4	0.98	14.88	0.4072	3.4602	-0.3479
931	SLV 3	4.73	-0.33	16.28	0.4475	3.7062	-0.0346
931	SLV 4	4.33	-0.05	15.85	0.4361	3.6523	-0.0923
931	SLV 5	1.15	1.77	18.28	0.5109	4.587	-0.484
931	SLV 6	0.9	1.95	18	0.5036	4.5523	-0.5211
931	SLV 7	2.27	-1.66	21.51	0.6073	5.2271	0.368
931	SLV 8	2.01	-1.48	21.24	0.6	5.1925	0.3309
931	SLV 9	-1.23	1.62	21.86	0.6206	5.7068	-0.3857
931	SLV 10	-1.48	1.8	21.59	0.6133	5.6721	-0.4228
931	SLV 11	-0.11	-1.81	25.09	0.717	6.347	0.4663
931	SLV 12	-0.37	-1.64	24.82	0.7097	6.3123	0.4292
931	SLV 13	-3.54	0.19	27.25	0.7845	7.247	0.0375
931	SLV 14	-3.94	0.47	26.82	0.7731	7.1931	-0.0202
931	SLV 15	-3.21	-0.84	28.22	0.8134	7.439	0.2931
931	SLV 16	-3.61	-0.56	27.79	0.802	7.3851	0.2354
931	CRTFP Ux+	0	0	0	0	0	0
931	CRTFP Ux-	0	0	0	0	0	0
931	CRTFP Uy+	0	0	0	0	0	0
931	CRTFP Uy-	0	0	0	0	0	0
932	SLU 1	-0.91	0.07	50.8	-16.9331	-8.634	-0.3378
932	SLU 2	-0.94	-0.04	50.82	-16.9397	-8.6356	-0.3668
932	SLU 3	-0.94	0.08	52.02	-17.3365	-8.8394	-0.3454

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
932	SLU 4	-0.95	0.01	52.03	-17.3405	-8.8403	-0.3628
932	SLU 5	-0.95	-0.04	51.59	-17.1944	-8.7652	-0.3708
932	SLU 6	-0.95	0.08	52.79	-17.5911	-8.969	-0.3494
932	SLU 7	-0.97	0.02	52.8	-17.5951	-8.9699	-0.3668
932	SLU 8	-0.94	0.08	52.34	-17.4424	-8.8933	-0.3458
932	SLU 9	-0.96	0.02	52.35	-17.4464	-8.8942	-0.3632
932	SLU 10	-1.01	0.04	56.69	-18.8755	-9.6305	-0.3805
932	SLU 11	-1.01	0.16	57.89	-19.2723	-9.8343	-0.3591
932	SLU 12	-1.03	0.1	57.9	-19.2763	-9.8352	-0.3765
932	SLU 13	-1.03	0.05	57.46	-19.1302	-9.7601	-0.3846
932	SLU 14	-1.02	0.17	58.66	-19.527	-9.9639	-0.3632
932	SLU 15	-1.04	0.11	58.67	-19.5309	-9.9648	-0.3806
932	SLU 16	-1.01	0.17	58.21	-19.3782	-9.8882	-0.3596
932	SLU 17	-1.03	0.1	58.22	-19.3822	-9.8891	-0.377
932	SLU 18	-1.01	0.19	59.19	-19.6985	-10.0553	-0.3574
932	SLU 19	-1.03	0.13	59.2	-19.7025	-10.0562	-0.3748
932	SLU 20	-1.03	0.2	59.96	-19.9532	-10.1849	-0.3614
932	SLU 21	-1.05	0.13	59.97	-19.9572	-10.1859	-0.3788
932	SLU 22	-0.99	0.17	56.82	-18.9177	-9.6539	-0.3501
932	SLU 23	-1.02	0.06	56.84	-18.9244	-9.6555	-0.3791
932	SLU 24	-1.01	0.18	58.04	-19.3211	-9.8592	-0.3578
932	SLU 25	-1.03	0.12	58.05	-19.3251	-9.8602	-0.3752
932	SLU 26	-1.03	0.07	57.61	-19.1791	-9.7851	-0.3832
932	SLU 27	-1.03	0.19	58.81	-19.5758	-9.9889	-0.3618
932	SLU 28	-1.04	0.12	58.82	-19.5798	-9.9898	-0.3792
932	SLU 29	-1.02	0.19	58.36	-19.4271	-9.9132	-0.3582
932	SLU 30	-1.03	0.12	58.37	-19.4311	-9.9141	-0.3756
932	SLU 31	-1.09	0.15	62.71	-20.8602	-10.6504	-0.3929
932	SLU 32	-1.09	0.27	63.91	-21.257	-10.8541	-0.3715
932	SLU 33	-1.1	0.2	63.92	-21.261	-10.8551	-0.3889
932	SLU 34	-1.1	0.16	63.48	-21.1149	-10.78	-0.3969
932	SLU 35	-1.1	0.28	64.68	-21.5116	-10.9838	-0.3755
932	SLU 36	-1.12	0.21	64.69	-21.5156	-10.9847	-0.3929
932	SLU 37	-1.09	0.27	64.23	-21.3629	-10.9081	-0.3719
932	SLU 38	-1.11	0.21	64.24	-21.3669	-10.909	-0.3893
932	SLU 39	-1.09	0.3	65.21	-21.6832	-11.0752	-0.3698
932	SLU 40	-1.11	0.23	65.22	-21.6872	-11.0761	-0.3872
932	SLU 41	-1.11	0.3	65.98	-21.9379	-11.2048	-0.3738
932	SLU 42	-1.12	0.24	65.99	-21.9419	-11.2057	-0.3912
932	SLU 43	-1.16	0.05	63.98	-21.3325	-10.8746	-0.4349
932	SLU 44	-1.19	-0.06	64	-21.3392	-10.8761	-0.4639
932	SLU 45	-1.18	0.06	65.2	-21.7359	-11.0799	-0.4425
932	SLU 46	-1.2	-0.01	65.21	-21.7399	-11.0808	-0.4599
932	SLU 47	-1.2	-0.05	64.77	-21.5938	-11.0058	-0.4679
932	SLU 48	-1.2	0.07	65.97	-21.9906	-11.2095	-0.4465
932	SLU 49	-1.21	0	65.98	-21.9946	-11.2105	-0.4639
932	SLU 50	-1.19	0.07	65.52	-21.8419	-11.1339	-0.4429
932	SLU 51	-1.2	0	65.53	-21.8459	-11.1348	-0.4603
932	SLU 52	-1.26	0.03	69.87	-23.275	-11.871	-0.4776
932	SLU 53	-1.25	0.15	71.07	-23.6717	-12.0748	-0.4562
932	SLU 54	-1.27	0.08	71.08	-23.6757	-12.0757	-0.4736
932	SLU 55	-1.27	0.04	70.64	-23.5297	-12.0007	-0.4817
932	SLU 56	-1.27	0.16	71.84	-23.9264	-12.2044	-0.4603
932	SLU 57	-1.29	0.09	71.85	-23.9304	-12.2054	-0.4777
932	SLU 58	-1.26	0.15	71.39	-23.7777	-12.1287	-0.4567
932	SLU 59	-1.28	0.09	71.4	-23.7817	-12.1297	-0.4741
932	SLU 60	-1.26	0.18	72.37	-24.0979	-12.2958	-0.4545
932	SLU 61	-1.28	0.11	72.38	-24.1019	-12.2968	-0.4719
932	SLU 62	-1.28	0.18	73.14	-24.3526	-12.4255	-0.4585
932	SLU 63	-1.29	0.12	73.15	-24.3566	-12.4264	-0.4759
932	SLU 64	-1.24	0.16	70	-23.3172	-11.8945	-0.4472
932	SLU 65	-1.26	0.05	70.02	-23.3239	-11.896	-0.4762
932	SLU 66	-1.26	0.17	71.22	-23.7206	-12.0998	-0.4549
932	SLU 67	-1.28	0.1	71.23	-23.7246	-12.1007	-0.4723
932	SLU 68	-1.28	0.05	70.79	-23.5785	-12.0256	-0.4803
932	SLU 69	-1.27	0.17	71.99	-23.9753	-12.2294	-0.4589
932	SLU 70	-1.29	0.11	72	-23.9793	-12.2304	-0.4763
932	SLU 71	-1.26	0.17	71.54	-23.8265	-12.1537	-0.4553
932	SLU 72	-1.28	0.11	71.55	-23.8305	-12.1547	-0.4727
932	SLU 73	-1.34	0.13	75.89	-25.2597	-12.8909	-0.49
932	SLU 74	-1.33	0.25	77.09	-25.6564	-13.0947	-0.4686
932	SLU 75	-1.35	0.19	77.1	-25.6604	-13.0956	-0.486
932	SLU 76	-1.35	0.14	76.66	-25.5143	-13.0205	-0.494
932	SLU 77	-1.35	0.26	77.86	-25.9111	-13.2243	-0.4726
932	SLU 78	-1.36	0.19	77.87	-25.9151	-13.2252	-0.49
932	SLU 79	-1.34	0.26	77.41	-25.7624	-13.1486	-0.469
932	SLU 80	-1.35	0.19	77.42	-25.7664	-13.1495	-0.4864
932	SLU 81	-1.34	0.28	78.39	-26.0826	-13.3157	-0.4669
932	SLU 82	-1.36	0.22	78.4	-26.0866	-13.3166	-0.4843
932	SLU 83	-1.35	0.29	79.16	-26.3373	-13.4454	-0.4709
932	SLU 84	-1.37	0.22	79.17	-26.3413	-13.4463	-0.4883
932	SLE RA 1	-0.93	0.1	52.52	-17.5001	-8.9254	-0.3413
932	SLE RA 2	-0.95	0.02	52.54	-17.5045	-8.9265	-0.3606
932	SLE RA 3	-0.95	0.1	53.34	-17.769	-9.0623	-0.3464
932	SLE RA 4	-0.96	0.06	53.34	-17.7717	-9.0629	-0.358
932	SLE RA 5	-0.96	0.03	53.05	-17.6743	-9.0129	-0.3633
932	SLE RA 6	-0.96	0.11	53.85	-17.9388	-9.1487	-0.3491
932	SLE RA 7	-0.97	0.06	53.86	-17.9415	-9.1494	-0.3607
932	SLE RA 8	-0.95	0.11	53.55	-17.8397	-9.0983	-0.3467
932	SLE RA 9	-0.96	0.06	53.56	-17.8423	-9.0989	-0.3583
932	SLE RA 10	-1	0.08	56.45	-18.7951	-9.5897	-0.3698
932	SLE RA 11	-1	0.16	57.25	-19.0596	-9.7256	-0.3556
932	SLE RA 12	-1.01	0.12	57.26	-19.0622	-9.7262	-0.3672
932	SLE RA 13	-1.01	0.09	56.96	-18.9649	-9.6761	-0.3725
932	SLE RA 14	-1.01	0.17	57.76	-19.2294	-9.812	-0.3582
932	SLE RA 15	-1.02	0.12	57.77	-19.232	-9.8126	-0.3698
932	SLE RA 16	-1	0.17	57.46	-19.1302	-9.7615	-0.3558

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
932	SLE RA 17	-1.01	0.12	57.47	-19.1329	-9.7622	-0.3674
932	SLE RA 18	-1	0.18	58.12	-19.3437	-9.8729	-0.3544
932	SLE RA 19	-1.01	0.14	58.12	-19.3464	-9.8736	-0.366
932	SLE RA 20	-1.01	0.19	58.63	-19.5135	-9.9594	-0.3571
932	SLE RA 21	-1.02	0.14	58.64	-19.5162	-9.96	-0.3687
932	SLE FR 1	-0.93	0.1	52.52	-17.5001	-8.9254	-0.3413
932	SLE FR 2	-0.94	0.08	52.53	-17.501	-8.9256	-0.3452
932	SLE FR 3	-0.94	0.1	52.73	-17.568	-8.96	-0.3424
932	SLE FR 4	-0.96	0.11	54.2	-18.0541	-9.2099	-0.3491
932	SLE FR 5	-0.96	0.12	54.41	-18.1211	-9.2443	-0.3463
932	SLE FR 6	-0.97	0.14	55.32	-18.4219	-9.3992	-0.3479
932	SLE QP 1	-0.93	0.1	52.52	-17.5001	-8.9254	-0.3413
932	SLE QP 2	-0.95	0.12	54.2	-18.0532	-9.2097	-0.3452
932	SLD 1	2.7	0.9	67.76	-22.6412	-11.414	1.2537
932	SLD 2	2.33	0.22	68.31	-22.8065	-11.5106	0.9971
932	SLD 3	3.03	-0.98	68.62	-22.9119	-11.5572	0.8577
932	SLD 4	2.65	-1.66	69.17	-23.0772	-11.6538	0.6012
932	SLD 5	-0.28	3.33	56.87	-18.9898	-9.6367	0.7803
932	SLD 6	-0.52	2.88	57.23	-19.0978	-9.6999	0.6126
932	SLD 7	0.79	-2.94	59.73	-19.8922	-10.1141	-0.5395
932	SLD 8	0.55	-3.38	60.09	-20.0002	-10.1772	-0.7072
932	SLD 9	-2.46	3.63	48.32	-16.1062	-8.2422	0.0167
932	SLD 10	-2.7	3.18	48.68	-16.2142	-8.3053	-0.151
932	SLD 11	-1.38	-2.64	51.17	-17.0086	-8.7195	-1.3031
932	SLD 12	-1.63	-3.08	51.53	-17.1165	-8.7826	-1.4708
932	SLD 13	-4.56	1.9	39.24	-13.0292	-6.7655	-1.2917
932	SLD 14	-4.93	1.22	39.79	-13.1944	-6.8621	-1.5482
932	SLD 15	-4.23	0.02	40.1	-13.2999	-6.9087	-1.6876
932	SLD 16	-4.61	-0.66	40.64	-13.4651	-7.0053	-1.9442
932	SLV 1	7.61	1.87	85.95	-28.7942	-14.3707	3.3799
932	SLV 2	6.72	0.29	87.22	-29.179	-14.5957	2.7823
932	SLV 3	8.35	-2.38	87.94	-29.4244	-14.7034	2.482
932	SLV 4	7.47	-3.97	89.21	-29.8092	-14.9284	1.8845
932	SLV 5	0.63	7.37	60.49	-20.2537	-10.2148	2.2365
932	SLV 6	0.07	6.35	61.31	-20.501	-10.3594	1.8524
932	SLV 7	3.12	-6.81	67.12	-22.3545	-11.3239	-0.7565
932	SLV 8	2.55	-7.83	67.94	-22.6018	-11.4685	-1.1405
932	SLV 9	-4.46	8.07	40.46	-13.5046	-6.9509	0.45
932	SLV 10	-5.03	7.05	41.28	-13.7519	-7.0955	0.066
932	SLV 11	-1.98	-6.1	47.09	-15.6054	-8.0599	-2.5429
932	SLV 12	-2.54	-7.12	47.92	-15.8527	-8.2045	-2.9269
932	SLV 13	-9.38	4.21	19.19	-6.2971	-3.491	-2.575
932	SLV 14	-10.26	2.63	20.47	-6.682	-3.7159	-3.1725
932	SLV 15	-8.63	-0.04	21.18	-6.9274	-3.8237	-3.4728
932	SLV 16	-9.52	-1.63	22.46	-7.3122	-4.0486	-4.0704
932	CRTFP Ux+	0	0	0	0	0	0
932	CRTFP Ux-	0	0	0	0	0	0
932	CRTFP Uy+	0	0	0	0	0	0
932	CRTFP Uy-	0	0	0	0	0	0
934	SLU 1	-0.69	0	31.85	-15.904	-0.8118	-0.3972
934	SLU 2	-0.7	-0.07	31.86	-15.9089	-0.8118	-0.4082
934	SLU 3	-0.71	0.01	32.61	-16.2772	-0.8309	-0.4075
934	SLU 4	-0.72	-0.03	32.61	-16.2801	-0.8309	-0.4141
934	SLU 5	-0.71	-0.06	32.34	-16.1448	-0.8239	-0.4141
934	SLU 6	-0.72	0.02	33.08	-16.5131	-0.8429	-0.4134
934	SLU 7	-0.73	-0.03	33.09	-16.516	-0.8429	-0.42
934	SLU 8	-0.71	0.01	32.81	-16.3759	-0.8359	-0.409
934	SLU 9	-0.72	-0.03	32.81	-16.3787	-0.8359	-0.4157
934	SLU 10	-0.76	-0.02	35.5	-17.6984	-0.9042	-0.4414
934	SLU 11	-0.77	0.06	36.25	-18.0668	-0.9232	-0.4406
934	SLU 12	-0.78	0.02	36.26	-18.0697	-0.9233	-0.4472
934	SLU 13	-0.77	-0.01	35.98	-17.9343	-0.9162	-0.4473
934	SLU 14	-0.78	0.07	36.73	-18.3027	-0.9353	-0.4466
934	SLU 15	-0.79	0.02	36.73	-18.3056	-0.9353	-0.4532
934	SLU 16	-0.77	0.07	36.45	-18.1654	-0.9283	-0.4422
934	SLU 17	-0.78	0.02	36.46	-18.1683	-0.9283	-0.4488
934	SLU 18	-0.77	0.08	37.06	-18.4606	-0.9437	-0.4445
934	SLU 19	-0.78	0.04	37.06	-18.4635	-0.9438	-0.4512
934	SLU 20	-0.78	0.09	37.54	-18.6965	-0.9558	-0.4505
934	SLU 21	-0.79	0.04	37.54	-18.6994	-0.9558	-0.4571
934	SLU 22	-0.75	0.07	35.59	-17.7388	-0.9064	-0.4318
934	SLU 23	-0.77	0	35.6	-17.7437	-0.9065	-0.4429
934	SLU 24	-0.77	0.08	36.34	-18.112	-0.9255	-0.4421
934	SLU 25	-0.78	0.03	36.35	-18.1149	-0.9255	-0.4488
934	SLU 26	-0.78	0	36.07	-17.9796	-0.9185	-0.4488
934	SLU 27	-0.78	0.08	36.82	-18.3479	-0.9376	-0.4481
934	SLU 28	-0.79	0.04	36.83	-18.3508	-0.9376	-0.4547
934	SLU 29	-0.77	0.08	36.54	-18.2106	-0.9306	-0.4437
934	SLU 30	-0.78	0.04	36.55	-18.2135	-0.9306	-0.4503
934	SLU 31	-0.83	0.05	39.24	-19.5332	-0.9988	-0.476
934	SLU 32	-0.83	0.13	39.99	-19.9016	-1.0179	-0.4753
934	SLU 33	-0.84	0.09	39.99	-19.9045	-1.0179	-0.4819
934	SLU 34	-0.84	0.06	39.72	-19.7691	-1.0109	-0.482
934	SLU 35	-0.84	0.13	40.47	-20.1375	-1.0299	-0.4812
934	SLU 36	-0.85	0.09	40.47	-20.1404	-1.03	-0.4879
934	SLU 37	-0.83	0.13	40.19	-20.0002	-1.0229	-0.4769
934	SLU 38	-0.84	0.09	40.19	-20.0031	-1.0229	-0.4835
934	SLU 39	-0.84	0.15	40.79	-20.2954	-1.0384	-0.4792
934	SLU 40	-0.85	0.1	40.8	-20.2982	-1.0384	-0.4858
934	SLU 41	-0.85	0.15	41.27	-20.5313	-1.0504	-0.4852
934	SLU 42	-0.86	0.11	41.28	-20.5342	-1.0505	-0.4918
934	SLU 43	-0.87	-0.02	40.13	-20.0462	-1.0229	-0.5044
934	SLU 44	-0.89	-0.09	40.13	-20.051	-1.0229	-0.5154
934	SLU 45	-0.89	-0.01	40.88	-20.4194	-1.042	-0.5147
934	SLU 46	-0.9	-0.05	40.89	-20.4223	-1.042	-0.5213
934	SLU 47	-0.9	-0.08	40.61	-20.2869	-1.035	-0.5214
934	SLU 48	-0.9	-0.01	41.36	-20.6553	-1.054	-0.5207

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
934	SLU 49	-0.91	-0.05	41.36	-20.6582	-1.054	-0.5273
934	SLU 50	-0.89	-0.01	41.08	-20.518	-1.047	-0.5163
934	SLU 51	-0.9	-0.05	41.09	-20.5209	-1.047	-0.5229
934	SLU 52	-0.95	-0.04	43.78	-21.8406	-1.1153	-0.5486
934	SLU 53	-0.95	0.04	44.53	-22.2089	-1.1343	-0.5479
934	SLU 54	-0.96	0	44.53	-22.2118	-1.1343	-0.5545
934	SLU 55	-0.96	-0.03	44.26	-22.0765	-1.1273	-0.5546
934	SLU 56	-0.96	0.05	45	-22.4448	-1.1464	-0.5538
934	SLU 57	-0.97	0	45.01	-22.4477	-1.1464	-0.5604
934	SLU 58	-0.95	0.05	44.73	-22.3076	-1.1394	-0.5495
934	SLU 59	-0.96	0	44.73	-22.3105	-1.1394	-0.5561
934	SLU 60	-0.96	0.06	45.33	-22.6027	-1.1548	-0.5518
934	SLU 61	-0.97	0.02	45.34	-22.6056	-1.1548	-0.5584
934	SLU 62	-0.97	0.06	45.81	-22.8386	-1.1669	-0.5577
934	SLU 63	-0.98	0.02	45.81	-22.8415	-1.1669	-0.5643
934	SLU 64	-0.94	0.05	43.86	-21.881	-1.1175	-0.5391
934	SLU 65	-0.95	-0.02	43.87	-21.8858	-1.1176	-0.5501
934	SLU 66	-0.95	0.06	44.62	-22.2542	-1.1366	-0.5494
934	SLU 67	-0.96	0.01	44.62	-22.257	-1.1366	-0.556
934	SLU 68	-0.96	-0.02	44.35	-22.1217	-1.1296	-0.5561
934	SLU 69	-0.96	0.06	45.1	-22.4901	-1.1487	-0.5553
934	SLU 70	-0.97	0.02	45.1	-22.493	-1.1487	-0.562
934	SLU 71	-0.96	0.06	44.82	-22.3528	-1.1416	-0.551
934	SLU 72	-0.97	0.02	44.82	-22.3557	-1.1417	-0.5576
934	SLU 73	-1.01	0.03	47.51	-23.6754	-1.2099	-0.5833
934	SLU 74	-1.01	0.11	48.26	-24.0437	-1.229	-0.5826
934	SLU 75	-1.02	0.06	48.27	-24.0466	-1.229	-0.5892
934	SLU 76	-1.02	0.03	47.99	-23.9113	-1.222	-0.5892
934	SLU 77	-1.02	0.11	48.74	-24.2796	-1.241	-0.5885
934	SLU 78	-1.03	0.07	48.74	-24.2825	-1.241	-0.5951
934	SLU 79	-1.02	0.11	48.46	-24.1424	-1.234	-0.5841
934	SLU 80	-1.03	0.07	48.47	-24.1452	-1.234	-0.5908
934	SLU 81	-1.02	0.13	49.07	-24.4375	-1.2495	-0.5865
934	SLU 82	-1.03	0.08	49.07	-24.4404	-1.2495	-0.5931
934	SLU 83	-1.03	0.13	49.55	-24.6734	-1.2615	-0.5924
934	SLU 84	-1.04	0.09	49.55	-24.6763	-1.2616	-0.599
934	SLE RA 1	-0.71	0.02	32.92	-16.4283	-0.8388	-0.4071
934	SLE RA 2	-0.72	-0.02	32.92	-16.4315	-0.8389	-0.4144
934	SLE RA 3	-0.72	0.03	33.42	-16.6771	-0.8516	-0.4139
934	SLE RA 4	-0.72	0	33.43	-16.679	-0.8516	-0.4183
934	SLE RA 5	-0.72	-0.02	33.24	-16.5888	-0.8469	-0.4184
934	SLE RA 6	-0.73	0.03	33.74	-16.8343	-0.8596	-0.4179
934	SLE RA 7	-0.73	0	33.74	-16.8363	-0.8596	-0.4223
934	SLE RA 8	-0.72	0.03	33.56	-16.7428	-0.8549	-0.415
934	SLE RA 9	-0.73	0	33.56	-16.7447	-0.8549	-0.4194
934	SLE RA 10	-0.76	0.01	35.35	-17.6245	-0.9004	-0.4365
934	SLE RA 11	-0.76	0.06	35.85	-17.8701	-0.9131	-0.436
934	SLE RA 12	-0.76	0.03	35.86	-17.872	-0.9131	-0.4405
934	SLE RA 13	-0.76	0.01	35.67	-17.7818	-0.9085	-0.4405
934	SLE RA 14	-0.76	0.07	36.17	-18.0274	-0.9212	-0.44
934	SLE RA 15	-0.77	0.04	36.17	-18.0293	-0.9212	-0.4444
934	SLE RA 16	-0.76	0.07	35.99	-17.9359	-0.9165	-0.4371
934	SLE RA 17	-0.77	0.04	35.99	-17.9378	-0.9165	-0.4415
934	SLE RA 18	-0.76	0.07	36.39	-18.1326	-0.9268	-0.4386
934	SLE RA 19	-0.77	0.05	36.39	-18.1345	-0.9268	-0.4431
934	SLE RA 20	-0.77	0.08	36.71	-18.2899	-0.9348	-0.4426
934	SLE RA 21	-0.78	0.05	36.71	-18.2918	-0.9349	-0.447
934	SLE FR 1	-0.71	0.02	32.92	-16.4283	-0.8388	-0.4071
934	SLE FR 2	-0.71	0.01	32.92	-16.4289	-0.8388	-0.4085
934	SLE FR 3	-0.71	0.03	33.05	-16.4912	-0.8421	-0.4086
934	SLE FR 4	-0.73	0.03	33.96	-16.9402	-0.8652	-0.418
934	SLE FR 5	-0.73	0.04	34.09	-17.0025	-0.8684	-0.4181
934	SLE FR 6	-0.73	0.05	34.65	-17.2804	-0.8828	-0.4229
934	SLE QP 1	-0.71	0.02	32.92	-16.4283	-0.8388	-0.4071
934	SLE QP 2	-0.72	0.04	33.96	-16.9396	-0.8652	-0.4165
934	SLD 1	1.88	0.57	42.21	-21.1135	-1.0636	1.0745
934	SLD 2	1.63	0.11	42.54	-21.2649	-1.072	0.9181
934	SLD 3	2.09	-0.71	42.72	-21.3558	-1.0758	1.2098
934	SLD 4	1.84	-1.17	43.04	-21.5073	-1.0842	1.0534
934	SLD 5	-0.22	2.23	35.62	-17.7974	-0.9048	-0.1468
934	SLD 6	-0.38	1.93	35.83	-17.8964	-0.9102	-0.249
934	SLD 7	0.49	-2.05	37.29	-18.6053	-0.9454	0.3042
934	SLD 8	0.32	-2.36	37.5	-18.7042	-0.9509	0.202
934	SLD 9	-1.77	2.43	30.42	-15.1749	-0.7796	-1.035
934	SLD 10	-1.93	2.13	30.63	-15.2739	-0.785	-1.1372
934	SLD 11	-1.07	-1.85	32.09	-15.9828	-0.8202	-0.5841
934	SLD 12	-1.23	-2.15	32.3	-16.0817	-0.8257	-0.6863
934	SLD 13	-3.29	1.25	24.88	-12.3719	-0.6463	-1.8865
934	SLD 14	-3.54	0.79	25.21	-12.5233	-0.6546	-2.0428
934	SLD 15	-3.08	-0.03	25.38	-12.6142	-0.6585	-1.7512
934	SLD 16	-3.33	-0.5	25.71	-12.7657	-0.6668	-1.9075
934	SLV 1	5.37	1.24	53.28	-26.7106	-1.3297	3.0726
934	SLV 2	4.79	0.16	54.04	-27.0633	-1.3491	2.7084
934	SLV 3	5.86	-1.67	54.45	-27.2755	-1.3581	3.3859
934	SLV 4	5.28	-2.74	55.21	-27.6282	-1.3775	3.0217
934	SLV 5	0.46	4.99	37.85	-18.9538	-0.9582	0.2175
934	SLV 6	0.09	4.3	38.34	-19.1804	-0.9706	-0.0166
934	SLV 7	2.1	-4.7	41.75	-20.8366	-1.0528	1.2617
934	SLV 8	1.72	-5.39	42.24	-21.0633	-1.0653	1.0277
934	SLV 9	-3.17	5.47	25.68	-12.8158	-0.6651	-1.8607
934	SLV 10	-3.54	4.78	26.17	-13.0425	-0.6776	-2.0948
934	SLV 11	-1.53	-4.22	29.58	-14.6987	-0.7598	-0.8165
934	SLV 12	-1.91	-4.92	30.07	-14.9254	-0.7723	-1.0505
934	SLV 13	-6.72	2.82	12.71	-6.251	-0.3529	-3.8548
934	SLV 14	-7.31	1.74	13.47	-6.6036	-0.3723	-4.2189
934	SLV 15	-6.23	-0.08	13.88	-6.8158	-0.3813	-3.5415
934	SLV 16	-6.82	-1.16	14.64	-7.1685	-0.4007	-3.9057

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
934	CRTFP Ux+	0	0	0	0	0	0
934	CRTFP Ux-	0	0	0	0	0	0
934	CRTFP Uy+	0	0	0	0	0	0
934	CRTFP Uy-	0	0	0	0	0	0
935	SLU 1	-0.81	-0.07	33.86	-15.8133	0.1071	-0.4684
935	SLU 2	-0.83	-0.14	33.86	-15.815	0.1074	-0.4788
935	SLU 3	-0.83	-0.06	34.66	-16.1774	0.1099	-0.4807
935	SLU 4	-0.84	-0.11	34.66	-16.1784	0.1101	-0.487
935	SLU 5	-0.84	-0.14	34.36	-16.0456	0.1092	-0.4859
935	SLU 6	-0.84	-0.06	35.16	-16.408	0.1117	-0.4879
935	SLU 7	-0.86	-0.1	35.16	-16.409	0.1118	-0.4941
935	SLU 8	-0.84	-0.06	34.87	-16.2745	0.1106	-0.4827
935	SLU 9	-0.85	-0.1	34.87	-16.2755	0.1108	-0.4889
935	SLU 10	-0.9	-0.1	37.71	-17.5654	0.1203	-0.5199
935	SLU 11	-0.9	-0.02	38.51	-17.9278	0.1228	-0.5219
935	SLU 12	-0.91	-0.06	38.51	-17.9288	0.123	-0.5281
935	SLU 13	-0.91	-0.09	38.22	-17.796	0.1221	-0.527
935	SLU 14	-0.91	-0.01	39.01	-18.1584	0.1246	-0.529
935	SLU 15	-0.93	-0.06	39.01	-18.1594	0.1248	-0.5352
935	SLU 16	-0.91	-0.01	38.72	-18.0249	0.1236	-0.5238
935	SLU 17	-0.92	-0.06	38.72	-18.0259	0.1237	-0.5301
935	SLU 18	-0.91	0	39.36	-18.3139	0.1256	-0.5272
935	SLU 19	-0.92	-0.05	39.36	-18.3149	0.1257	-0.5334
935	SLU 20	-0.92	0	39.87	-18.5445	0.1273	-0.5343
935	SLU 21	-0.93	-0.04	39.87	-18.5455	0.1275	-0.5405
935	SLU 22	-0.89	0	37.81	-17.6079	0.1204	-0.5117
935	SLU 23	-0.9	-0.08	37.81	-17.6097	0.1207	-0.5221
935	SLU 24	-0.91	0	38.6	-17.972	0.1232	-0.524
935	SLU 25	-0.92	-0.04	38.6	-17.973	0.1234	-0.5302
935	SLU 26	-0.92	-0.08	38.31	-17.8402	0.1224	-0.5292
935	SLU 27	-0.92	0.01	39.11	-18.2026	0.125	-0.5312
935	SLU 28	-0.93	-0.04	39.11	-18.2036	0.1251	-0.5374
935	SLU 29	-0.91	0	38.81	-18.0691	0.1239	-0.526
935	SLU 30	-0.92	-0.04	38.81	-18.0701	0.1241	-0.5322
935	SLU 31	-0.97	-0.03	41.66	-19.36	0.1336	-0.5632
935	SLU 32	-0.98	0.05	42.46	-19.7224	0.1361	-0.5651
935	SLU 33	-0.99	0	42.46	-19.7234	0.1363	-0.5713
935	SLU 34	-0.99	-0.03	42.16	-19.5906	0.1354	-0.5703
935	SLU 35	-0.99	0.05	42.96	-19.953	0.1379	-0.5723
935	SLU 36	-1	0.01	42.96	-19.954	0.1381	-0.5785
935	SLU 37	-0.98	0.05	42.67	-19.8195	0.1369	-0.5671
935	SLU 38	-0.99	0.01	42.67	-19.8205	0.137	-0.5733
935	SLU 39	-0.99	0.06	43.31	-20.1085	0.1389	-0.5704
935	SLU 40	-1	0.02	43.31	-20.1095	0.139	-0.5767
935	SLU 41	-1	0.07	43.81	-20.3391	0.1406	-0.5776
935	SLU 42	-1.01	0.02	43.81	-20.3401	0.1408	-0.5838
935	SLU 43	-1.03	-0.11	42.67	-19.942	0.1347	-0.5941
935	SLU 44	-1.05	-0.19	42.67	-19.9437	0.135	-0.6045
935	SLU 45	-1.05	-0.1	43.46	-20.3061	0.1375	-0.6064
935	SLU 46	-1.06	-0.15	43.46	-20.3071	0.1377	-0.6126
935	SLU 47	-1.06	-0.18	43.17	-20.1743	0.1367	-0.6116
935	SLU 48	-1.06	-0.1	43.96	-20.5367	0.1393	-0.6136
935	SLU 49	-1.07	-0.14	43.96	-20.5377	0.1394	-0.6198
935	SLU 50	-1.05	-0.1	43.67	-20.4032	0.1382	-0.6084
935	SLU 51	-1.06	-0.15	43.67	-20.4042	0.1384	-0.6146
935	SLU 52	-1.12	-0.14	46.52	-21.6941	0.1479	-0.6456
935	SLU 53	-1.12	-0.06	47.31	-22.0565	0.1504	-0.6475
935	SLU 54	-1.13	-0.1	47.31	-22.0575	0.1506	-0.6538
935	SLU 55	-1.13	-0.13	47.02	-21.9247	0.1497	-0.6527
935	SLU 56	-1.13	-0.05	47.82	-22.2871	0.1522	-0.6547
935	SLU 57	-1.14	-0.1	47.82	-22.2881	0.1523	-0.6609
935	SLU 58	-1.12	-0.05	47.52	-22.1536	0.1511	-0.6495
935	SLU 59	-1.13	-0.1	47.52	-22.1546	0.1513	-0.6557
935	SLU 60	-1.13	-0.04	48.17	-22.4426	0.1532	-0.6528
935	SLU 61	-1.14	-0.09	48.17	-22.4436	0.1533	-0.6591
935	SLU 62	-1.14	-0.04	48.67	-22.6732	0.1549	-0.66
935	SLU 63	-1.15	-0.08	48.67	-22.6742	0.1551	-0.6662
935	SLU 64	-1.1	-0.05	46.61	-21.7366	0.148	-0.6374
935	SLU 65	-1.12	-0.12	46.61	-21.7384	0.1483	-0.6478
935	SLU 66	-1.12	-0.04	47.41	-22.1007	0.1508	-0.6497
935	SLU 67	-1.14	-0.09	47.41	-22.1017	0.151	-0.6559
935	SLU 68	-1.13	-0.12	47.12	-21.9689	0.15	-0.6549
935	SLU 69	-1.14	-0.04	47.91	-22.3313	0.1526	-0.6569
935	SLU 70	-1.15	-0.08	47.91	-22.3323	0.1527	-0.6631
935	SLU 71	-1.13	-0.04	47.62	-22.1978	0.1515	-0.6517
935	SLU 72	-1.14	-0.08	47.62	-22.1988	0.1517	-0.6579
935	SLU 73	-1.19	-0.08	50.47	-23.4887	0.1612	-0.6889
935	SLU 74	-1.19	0.01	51.26	-23.8511	0.1637	-0.6908
935	SLU 75	-1.21	-0.04	51.26	-23.8521	0.1639	-0.697
935	SLU 76	-1.2	-0.07	50.97	-23.7193	0.1629	-0.696
935	SLU 77	-1.21	0.01	51.76	-24.0817	0.1655	-0.698
935	SLU 78	-1.22	-0.04	51.76	-24.0827	0.1656	-0.7042
935	SLU 79	-1.2	0.01	51.47	-23.9482	0.1644	-0.6928
935	SLU 80	-1.21	-0.04	51.47	-23.9492	0.1646	-0.699
935	SLU 81	-1.2	0.02	52.12	-24.2372	0.1665	-0.6961
935	SLU 82	-1.21	-0.02	52.12	-24.2382	0.1666	-0.7023
935	SLU 83	-1.22	0.03	52.62	-24.4678	0.1682	-0.7033
935	SLU 84	-1.23	-0.02	52.62	-24.4688	0.1684	-0.7095
935	SLE RA 1	-0.83	-0.05	34.99	-16.3261	0.1109	-0.4808
935	SLE RA 2	-0.84	-0.1	34.99	-16.3272	0.1111	-0.4877
935	SLE RA 3	-0.85	-0.05	35.52	-16.5688	0.1128	-0.489
935	SLE RA 4	-0.85	-0.08	35.52	-16.5695	0.1129	-0.4931
935	SLE RA 5	-0.85	-0.1	35.32	-16.4809	0.1123	-0.4925
935	SLE RA 6	-0.85	-0.04	35.85	-16.7225	0.114	-0.4938
935	SLE RA 7	-0.86	-0.07	35.85	-16.7232	0.1141	-0.4979
935	SLE RA 8	-0.85	-0.04	35.66	-16.6335	0.1133	-0.4903
935	SLE RA 9	-0.86	-0.07	35.66	-16.6342	0.1134	-0.4945

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
935	SLE RA 10	-0.89	-0.07	37.56	-17.4941	0.1197	-0.5151
935	SLE RA 11	-0.89	-0.01	38.09	-17.7357	0.1214	-0.5164
935	SLE RA 12	-0.9	-0.04	38.09	-17.7364	0.1215	-0.5206
935	SLE RA 13	-0.9	-0.07	37.89	-17.6479	0.1209	-0.5199
935	SLE RA 14	-0.9	-0.01	38.42	-17.8894	0.1226	-0.5212
935	SLE RA 15	-0.91	-0.04	38.42	-17.8901	0.1227	-0.5253
935	SLE RA 16	-0.9	-0.01	38.23	-17.8004	0.1219	-0.5177
935	SLE RA 17	-0.9	-0.04	38.23	-17.8011	0.122	-0.5219
935	SLE RA 18	-0.9	0	38.66	-17.9931	0.1232	-0.5199
935	SLE RA 19	-0.91	-0.04	38.66	-17.9938	0.1233	-0.5241
935	SLE RA 20	-0.91	0	38.99	-18.1468	0.1244	-0.5247
935	SLE RA 21	-0.91	-0.03	38.99	-18.1475	0.1245	-0.5289
935	SLE FR 1	-0.83	-0.05	34.99	-16.3261	0.1109	-0.4808
935	SLE FR 2	-0.83	-0.06	34.99	-16.3263	0.111	-0.4822
935	SLE FR 3	-0.84	-0.05	35.12	-16.3876	0.1114	-0.4827
935	SLE FR 4	-0.85	-0.05	36.09	-16.8264	0.1147	-0.4939
935	SLE FR 5	-0.86	-0.03	36.22	-16.8877	0.1151	-0.4944
935	SLE FR 6	-0.87	-0.03	36.82	-17.1596	0.1171	-0.5004
935	SLE QP 1	-0.83	-0.05	34.99	-16.3261	0.1109	-0.4808
935	SLE QP 2	-0.85	-0.04	36.09	-16.8262	0.1146	-0.4925
935	SLD 1	2.2	0.56	44.3	-20.7042	0.1612	1.2638
935	SLD 2	1.91	0.06	44.65	-20.8576	0.1622	1.0962
935	SLD 3	2.45	-0.85	44.81	-20.9337	0.1642	1.4047
935	SLD 4	2.15	-1.36	45.16	-21.0872	0.1652	1.2371
935	SLD 5	-0.26	2.38	37.72	-17.6143	0.1238	-0.1497
935	SLD 6	-0.45	2.05	37.95	-17.7146	0.1245	-0.2592
935	SLD 7	0.56	-2.34	39.41	-18.3794	0.1339	0.32
935	SLD 8	0.37	-2.67	39.64	-18.4797	0.1346	0.2104
935	SLD 9	-2.08	2.6	32.54	-15.1726	0.0946	-1.1955
935	SLD 10	-2.27	2.27	32.77	-15.2729	0.0953	-1.305
935	SLD 11	-1.25	-2.12	34.23	-15.9377	0.1048	-0.7259
935	SLD 12	-1.45	-2.45	34.45	-16.0381	0.1054	-0.8354
935	SLD 13	-3.86	1.29	27.02	-12.5652	0.064	-2.2222
935	SLD 14	-4.15	0.78	27.37	-12.7187	0.065	-2.3898
935	SLD 15	-3.61	-0.13	27.53	-12.7947	0.067	-2.0813
935	SLD 16	-3.9	-0.64	27.88	-12.9482	0.068	-2.2489
935	SLV 1	6.29	1.31	55.32	-25.9043	0.2237	3.6165
935	SLV 2	5.61	0.13	56.13	-26.2618	0.2261	3.2261
935	SLV 3	6.86	-1.89	56.5	-26.4397	0.2307	3.9447
935	SLV 4	6.18	-3.07	57.31	-26.7971	0.2331	3.5543
935	SLV 5	0.54	5.43	39.93	-18.6765	0.1363	0.3092
935	SLV 6	0.1	4.67	40.45	-18.9062	0.1378	0.0584
935	SLV 7	2.45	-5.25	43.86	-20.4609	0.1597	1.4033
935	SLV 8	2.01	-6.01	44.38	-20.6906	0.1612	1.1524
935	SLV 9	-3.72	5.93	27.8	-12.9617	0.068	-2.1375
935	SLV 10	-4.16	5.18	28.32	-13.1915	0.0696	-2.3884
935	SLV 11	-1.8	-4.74	31.73	-14.7461	0.0914	-1.0434
935	SLV 12	-2.24	-5.5	32.25	-14.9759	0.093	-1.2943
935	SLV 13	-7.88	3	14.87	-6.8552	-0.0038	-4.5394
935	SLV 14	-8.57	1.82	15.68	-7.2127	-0.0015	-4.9297
935	SLV 15	-7.31	-0.21	16.05	-7.3905	0.0032	-4.2111
935	SLV 16	-7.99	-1.38	16.86	-7.748	0.0056	-4.6015
935	CRTFP Ux+	0	0	0	0	0	0
935	CRTFP Ux-	0	0	0	0	0	0
935	CRTFP Uy+	0	0	0	0	0	0
935	CRTFP Uy-	0	0	0	0	0	0
936	SLU 1	-0.82	-0.14	30.81	-13.3689	0.085	-0.4714
936	SLU 2	-0.83	-0.2	30.8	-13.3668	0.0852	-0.4816
936	SLU 3	-0.84	-0.13	31.52	-13.6694	0.0872	-0.4838
936	SLU 4	-0.85	-0.17	31.52	-13.6682	0.0873	-0.4899
936	SLU 5	-0.85	-0.2	31.25	-13.5577	0.0866	-0.4888
936	SLU 6	-0.85	-0.13	31.98	-13.8603	0.0886	-0.491
936	SLU 7	-0.86	-0.17	31.97	-13.8591	0.0887	-0.4971
936	SLU 8	-0.84	-0.13	31.71	-13.7507	0.0877	-0.4858
936	SLU 9	-0.85	-0.17	31.71	-13.7494	0.0879	-0.4919
936	SLU 10	-0.91	-0.17	34.29	-14.818	0.0953	-0.5232
936	SLU 11	-0.91	-0.1	35.01	-15.1207	0.0973	-0.5254
936	SLU 12	-0.92	-0.14	35	-15.1194	0.0975	-0.5315
936	SLU 13	-0.92	-0.17	34.74	-15.009	0.0967	-0.5304
936	SLU 14	-0.92	-0.1	35.46	-15.3116	0.0987	-0.5325
936	SLU 15	-0.93	-0.14	35.46	-15.3103	0.0988	-0.5387
936	SLU 16	-0.91	-0.1	35.2	-15.202	0.0979	-0.5274
936	SLU 17	-0.92	-0.14	35.19	-15.2007	0.098	-0.5335
936	SLU 18	-0.92	-0.09	35.79	-15.4421	0.0994	-0.5308
936	SLU 19	-0.93	-0.13	35.78	-15.4409	0.0996	-0.5369
936	SLU 20	-0.93	-0.09	36.24	-15.6331	0.1008	-0.538
936	SLU 21	-0.94	-0.13	36.24	-15.6318	0.101	-0.5441
936	SLU 22	-0.89	-0.09	34.38	-14.8567	0.0954	-0.5151
936	SLU 23	-0.91	-0.15	34.37	-14.8546	0.0956	-0.5254
936	SLU 24	-0.91	-0.08	35.09	-15.1572	0.0976	-0.5275
936	SLU 25	-0.92	-0.12	35.09	-15.1559	0.0978	-0.5336
936	SLU 26	-0.92	-0.15	34.82	-15.0455	0.097	-0.5325
936	SLU 27	-0.93	-0.08	35.55	-15.3481	0.099	-0.5347
936	SLU 28	-0.94	-0.12	35.54	-15.3469	0.0992	-0.5408
936	SLU 29	-0.92	-0.08	35.28	-15.2385	0.0982	-0.5295
936	SLU 30	-0.93	-0.12	35.28	-15.2372	0.0983	-0.5356
936	SLU 31	-0.98	-0.12	37.86	-16.3058	0.1058	-0.5669
936	SLU 32	-0.98	-0.05	38.58	-16.6085	0.1078	-0.5691
936	SLU 33	-1	-0.09	38.57	-16.6072	0.1079	-0.5752
936	SLU 34	-0.99	-0.12	38.31	-16.4967	0.1072	-0.5741
936	SLU 35	-1	-0.05	39.03	-16.7994	0.1092	-0.5763
936	SLU 36	-1.01	-0.09	39.03	-16.7981	0.1093	-0.5824
936	SLU 37	-0.99	-0.05	38.77	-16.6898	0.1083	-0.5711
936	SLU 38	-1	-0.09	38.76	-16.6885	0.1085	-0.5772
936	SLU 39	-0.99	-0.04	39.36	-16.9299	0.1099	-0.5745
936	SLU 40	-1	-0.08	39.35	-16.9287	0.11	-0.5807
936	SLU 41	-1.01	-0.04	39.81	-17.1208	0.1113	-0.5817

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
936	SLU 42	-1.02	-0.08	39.8	-17.1196	0.1114	-0.5879
936	SLU 43	-1.04	-0.19	38.83	-16.8695	0.1069	-0.5978
936	SLU 44	-1.05	-0.26	38.82	-16.8673	0.1071	-0.6081
936	SLU 45	-1.06	-0.19	39.54	-17.17	0.1091	-0.6102
936	SLU 46	-1.07	-0.23	39.54	-17.1687	0.1092	-0.6163
936	SLU 47	-1.07	-0.26	39.27	-17.0583	0.1085	-0.6152
936	SLU 48	-1.07	-0.19	39.99	-17.3609	0.1105	-0.6174
936	SLU 49	-1.08	-0.23	39.99	-17.3596	0.1106	-0.6235
936	SLU 50	-1.06	-0.19	39.73	-17.2513	0.1097	-0.6122
936	SLU 51	-1.07	-0.23	39.73	-17.25	0.1098	-0.6183
936	SLU 52	-1.13	-0.23	42.3	-18.3186	0.1172	-0.6496
936	SLU 53	-1.13	-0.16	43.03	-18.6213	0.1192	-0.6518
936	SLU 54	-1.14	-0.2	43.02	-18.62	0.1194	-0.6579
936	SLU 55	-1.14	-0.23	42.76	-18.5095	0.1186	-0.6568
936	SLU 56	-1.14	-0.15	43.48	-18.8122	0.1206	-0.659
936	SLU 57	-1.15	-0.2	43.48	-18.8109	0.1208	-0.6651
936	SLU 58	-1.13	-0.16	43.22	-18.7026	0.1198	-0.6538
936	SLU 59	-1.14	-0.2	43.21	-18.7013	0.1199	-0.6599
936	SLU 60	-1.14	-0.15	43.81	-18.9427	0.1213	-0.6572
936	SLU 61	-1.15	-0.19	43.8	-18.9414	0.1215	-0.6634
936	SLU 62	-1.15	-0.15	44.26	-19.1336	0.1227	-0.6644
936	SLU 63	-1.16	-0.19	44.25	-19.1324	0.1229	-0.6706
936	SLU 64	-1.11	-0.14	42.4	-18.3573	0.1173	-0.6416
936	SLU 65	-1.13	-0.21	42.39	-18.3551	0.1176	-0.6518
936	SLU 66	-1.13	-0.14	43.11	-18.6578	0.1195	-0.6539
936	SLU 67	-1.14	-0.18	43.11	-18.6565	0.1197	-0.6601
936	SLU 68	-1.14	-0.21	42.84	-18.546	0.1189	-0.659
936	SLU 69	-1.14	-0.14	43.56	-18.8487	0.1209	-0.6611
936	SLU 70	-1.16	-0.18	43.56	-18.8474	0.1211	-0.6673
936	SLU 71	-1.14	-0.14	43.3	-18.7391	0.1201	-0.6559
936	SLU 72	-1.15	-0.18	43.3	-18.7378	0.1202	-0.6621
936	SLU 73	-1.2	-0.18	45.87	-19.8064	0.1277	-0.6934
936	SLU 74	-1.2	-0.11	46.6	-20.1091	0.1297	-0.6955
936	SLU 75	-1.21	-0.15	46.59	-20.1078	0.1298	-0.7017
936	SLU 76	-1.21	-0.18	46.33	-19.9973	0.1291	-0.7006
936	SLU 77	-1.22	-0.11	47.05	-20.3	0.1311	-0.7027
936	SLU 78	-1.23	-0.15	47.04	-20.2987	0.1312	-0.7088
936	SLU 79	-1.21	-0.11	46.79	-20.1903	0.1302	-0.6975
936	SLU 80	-1.22	-0.15	46.78	-20.1891	0.1304	-0.7037
936	SLU 81	-1.21	-0.1	47.38	-20.4305	0.1318	-0.701
936	SLU 82	-1.22	-0.14	47.37	-20.4292	0.1319	-0.7071
936	SLU 83	-1.23	-0.1	47.83	-20.6214	0.1332	-0.7081
936	SLU 84	-1.24	-0.14	47.82	-20.6201	0.1333	-0.7143
936	SLE RA 1	-0.84	-0.12	31.83	-13.794	0.0879	-0.4839
936	SLE RA 2	-0.85	-0.17	31.82	-13.7926	0.0881	-0.4907
936	SLE RA 3	-0.85	-0.12	32.3	-13.9943	0.0894	-0.4921
936	SLE RA 4	-0.86	-0.15	32.3	-13.9935	0.0895	-0.4962
936	SLE RA 5	-0.86	-0.16	32.12	-13.9198	0.089	-0.4955
936	SLE RA 6	-0.86	-0.12	32.61	-14.1216	0.0904	-0.4969
936	SLE RA 7	-0.87	-0.14	32.6	-14.1208	0.0905	-0.501
936	SLE RA 8	-0.85	-0.12	32.43	-14.0485	0.0898	-0.4935
936	SLE RA 9	-0.86	-0.14	32.43	-14.0477	0.0899	-0.4976
936	SLE RA 10	-0.9	-0.15	34.15	-14.7601	0.0949	-0.5184
936	SLE RA 11	-0.9	-0.1	34.63	-14.9619	0.0962	-0.5199
936	SLE RA 12	-0.91	-0.12	34.63	-14.961	0.0963	-0.524
936	SLE RA 13	-0.91	-0.14	34.45	-14.8874	0.0958	-0.5232
936	SLE RA 14	-0.91	-0.1	34.93	-15.0891	0.0971	-0.5247
936	SLE RA 15	-0.92	-0.12	34.93	-15.0883	0.0972	-0.5287
936	SLE RA 16	-0.9	-0.1	34.75	-15.016	0.0966	-0.5212
936	SLE RA 17	-0.91	-0.12	34.75	-15.0152	0.0967	-0.5253
936	SLE RA 18	-0.91	-0.09	35.15	-15.1761	0.0976	-0.5235
936	SLE RA 19	-0.91	-0.12	35.14	-15.1753	0.0977	-0.5276
936	SLE RA 20	-0.91	-0.09	35.45	-15.3034	0.0985	-0.5283
936	SLE RA 21	-0.92	-0.12	35.45	-15.3026	0.0986	-0.5324
936	SLE FR 1	-0.84	-0.12	31.83	-13.794	0.0879	-0.4839
936	SLE FR 2	-0.84	-0.13	31.83	-13.7937	0.088	-0.4853
936	SLE FR 3	-0.84	-0.12	31.95	-13.8449	0.0883	-0.4858
936	SLE FR 4	-0.86	-0.12	32.82	-14.2083	0.0909	-0.4971
936	SLE FR 5	-0.86	-0.11	32.94	-14.2595	0.0912	-0.4977
936	SLE FR 6	-0.87	-0.11	33.49	-14.4851	0.0928	-0.5037
936	SLE QP 1	-0.84	-0.12	31.83	-13.794	0.0879	-0.4839
936	SLE QP 2	-0.86	-0.11	32.82	-14.2086	0.0908	-0.4958
936	SLD 1	2.2	0.47	39.64	-17.1455	0.1317	1.2637
936	SLD 2	1.91	0	39.96	-17.279	0.1325	1.0959
936	SLD 3	2.45	-0.86	40.07	-17.329	0.1343	1.4048
936	SLD 4	2.15	-1.33	40.39	-17.4625	0.1351	1.237
936	SLD 5	-0.26	2.15	34.16	-14.7877	0.099	-0.1522
936	SLD 6	-0.46	1.84	34.36	-14.875	0.0995	-0.2619
936	SLD 7	0.56	-2.26	35.6	-15.3995	0.1078	0.318
936	SLD 8	0.37	-2.57	35.81	-15.4867	0.1083	0.2084
936	SLD 9	-2.08	2.34	29.84	-12.9305	0.0734	-1.1999
936	SLD 10	-2.28	2.04	30.05	-13.0178	0.0739	-1.3096
936	SLD 11	-1.26	-2.07	31.28	-13.5423	0.0822	-0.7297
936	SLD 12	-1.45	-2.38	31.49	-13.6295	0.0827	-0.8393
936	SLD 13	-3.87	1.1	25.25	-10.9548	0.0466	-2.2285
936	SLD 14	-4.16	0.63	25.57	-11.0883	0.0473	-2.3963
936	SLD 15	-3.62	-0.22	25.69	-11.1383	0.0492	-2.0875
936	SLD 16	-3.92	-0.69	26.01	-11.2718	0.05	-2.2553
936	SLV 1	6.3	1.19	48.78	-21.0836	0.1865	3.6205
936	SLV 2	5.61	0.09	49.53	-21.3946	0.1883	3.2297
936	SLV 3	6.87	-1.81	49.79	-21.5117	0.1926	3.9492
936	SLV 4	6.19	-2.9	50.54	-21.8227	0.1944	3.5584
936	SLV 5	0.53	5.01	35.95	-15.5686	0.11	0.3076
936	SLV 6	0.09	4.3	36.43	-15.7684	0.1111	0.0564
936	SLV 7	2.45	-4.98	39.32	-16.9955	0.1303	1.4032
936	SLV 8	2.01	-5.68	39.79	-17.1954	0.1315	1.152
936	SLV 9	-3.73	5.45	25.85	-11.2219	0.0502	-2.1435

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
936	SLV 10	-4.17	4.75	26.33	-11.4217	0.0514	-2.3947
936	SLV 11	-1.81	-4.53	29.21	-12.6488	0.0705	-1.048
936	SLV 12	-2.25	-5.23	29.69	-12.8487	0.0717	-1.2991
936	SLV 13	-7.9	2.68	15.11	-6.5946	-0.0127	-4.5499
936	SLV 14	-8.59	1.58	15.85	-6.9055	-0.0109	-4.9407
936	SLV 15	-7.33	-0.32	16.12	-7.0227	-0.0066	-4.2212
936	SLV 16	-8.01	-1.41	16.86	-7.3336	-0.0048	-4.612
936	CRTFP Ux+	0	0	0	0	0	0
936	CRTFP Ux-	0	0	0	0	0	0
936	CRTFP Uy+	0	0	0	0	0	0
936	CRTFP Uy-	0	0	0	0	0	0
937	SLU 1	-0.82	-0.19	28.5	-11.5565	0.0606	-0.4739
937	SLU 2	-0.84	-0.25	28.48	-11.5511	0.0608	-0.484
937	SLU 3	-0.84	-0.19	29.15	-11.8099	0.0622	-0.4863
937	SLU 4	-0.85	-0.23	29.14	-11.8067	0.0623	-0.4923
937	SLU 5	-0.85	-0.25	28.9	-11.7127	0.0618	-0.4912
937	SLU 6	-0.86	-0.19	29.57	-11.9715	0.0632	-0.4935
937	SLU 7	-0.87	-0.22	29.56	-11.9683	0.0633	-0.4996
937	SLU 8	-0.85	-0.19	29.33	-11.8797	0.0626	-0.4883
937	SLU 9	-0.86	-0.22	29.32	-11.8765	0.0627	-0.4944
937	SLU 10	-0.91	-0.24	31.69	-12.7828	0.0678	-0.526
937	SLU 11	-0.92	-0.17	32.36	-13.0416	0.0692	-0.5283
937	SLU 12	-0.93	-0.21	32.36	-13.0384	0.0694	-0.5344
937	SLU 13	-0.92	-0.23	32.11	-12.9444	0.0688	-0.5332
937	SLU 14	-0.93	-0.17	32.78	-13.2032	0.0702	-0.5355
937	SLU 15	-0.94	-0.21	32.77	-13.2	0.0703	-0.5416
937	SLU 16	-0.92	-0.17	32.54	-13.1113	0.0696	-0.5303
937	SLU 17	-0.93	-0.21	32.53	-13.1081	0.0697	-0.5364
937	SLU 18	-0.92	-0.17	33.09	-13.316	0.0707	-0.5339
937	SLU 19	-0.94	-0.2	33.08	-13.3128	0.0708	-0.54
937	SLU 20	-0.94	-0.17	33.5	-13.4776	0.0717	-0.5412
937	SLU 21	-0.95	-0.2	33.49	-13.4744	0.0718	-0.5472
937	SLU 22	-0.9	-0.16	31.78	-12.8187	0.0679	-0.518
937	SLU 23	-0.92	-0.22	31.77	-12.8134	0.0681	-0.5281
937	SLU 24	-0.92	-0.15	32.44	-13.0722	0.0695	-0.5304
937	SLU 25	-0.93	-0.19	32.43	-13.069	0.0696	-0.5365
937	SLU 26	-0.93	-0.21	32.18	-12.975	0.0691	-0.5353
937	SLU 27	-0.93	-0.15	32.85	-13.2338	0.0705	-0.5377
937	SLU 28	-0.94	-0.19	32.85	-13.2306	0.0706	-0.5437
937	SLU 29	-0.92	-0.15	32.61	-13.1419	0.0699	-0.5325
937	SLU 30	-0.93	-0.19	32.61	-13.1387	0.07	-0.5385
937	SLU 31	-0.99	-0.2	34.98	-14.045	0.0751	-0.5702
937	SLU 32	-0.99	-0.14	35.65	-14.3038	0.0765	-0.5725
937	SLU 33	-1	-0.17	35.64	-14.3006	0.0767	-0.5785
937	SLU 34	-1	-0.2	35.4	-14.2066	0.0761	-0.5774
937	SLU 35	-1	-0.13	36.07	-14.4654	0.0775	-0.5797
937	SLU 36	-1.01	-0.17	36.06	-14.4622	0.0776	-0.5857
937	SLU 37	-0.99	-0.13	35.83	-14.3736	0.0769	-0.5745
937	SLU 38	-1.01	-0.17	35.82	-14.3704	0.0771	-0.5805
937	SLU 39	-1	-0.13	36.37	-14.5782	0.078	-0.5781
937	SLU 40	-1.01	-0.17	36.37	-14.575	0.0781	-0.5841
937	SLU 41	-1.01	-0.13	36.79	-14.7398	0.079	-0.5853
937	SLU 42	-1.02	-0.16	36.78	-14.7366	0.0791	-0.5914
937	SLU 43	-1.04	-0.26	35.92	-14.5906	0.0763	-0.6009
937	SLU 44	-1.06	-0.32	35.9	-14.5853	0.0765	-0.611
937	SLU 45	-1.06	-0.26	36.57	-14.8441	0.0779	-0.6133
937	SLU 46	-1.07	-0.3	36.56	-14.8409	0.078	-0.6194
937	SLU 47	-1.07	-0.32	36.32	-14.7469	0.0775	-0.6182
937	SLU 48	-1.08	-0.26	36.99	-15.0057	0.0789	-0.6205
937	SLU 49	-1.09	-0.3	36.98	-15.0025	0.079	-0.6266
937	SLU 50	-1.07	-0.26	36.75	-14.9138	0.0783	-0.6153
937	SLU 51	-1.08	-0.3	36.74	-14.9106	0.0784	-0.6214
937	SLU 52	-1.13	-0.31	39.12	-15.8169	0.0835	-0.653
937	SLU 53	-1.14	-0.24	39.79	-16.0758	0.0849	-0.6554
937	SLU 54	-1.15	-0.28	39.78	-16.0726	0.085	-0.6614
937	SLU 55	-1.14	-0.3	39.53	-15.9785	0.0845	-0.6602
937	SLU 56	-1.15	-0.24	40.2	-16.2374	0.0859	-0.6626
937	SLU 57	-1.16	-0.28	40.19	-16.2342	0.086	-0.6686
937	SLU 58	-1.14	-0.24	39.96	-16.1455	0.0853	-0.6574
937	SLU 59	-1.15	-0.28	39.95	-16.1423	0.0854	-0.6634
937	SLU 60	-1.14	-0.24	40.51	-16.3502	0.0864	-0.661
937	SLU 61	-1.16	-0.28	40.5	-16.3469	0.0865	-0.667
937	SLU 62	-1.16	-0.24	40.92	-16.5118	0.0873	-0.6682
937	SLU 63	-1.17	-0.27	40.91	-16.5085	0.0875	-0.6742
937	SLU 64	-1.12	-0.23	39.21	-15.8529	0.0836	-0.6451
937	SLU 65	-1.14	-0.29	39.19	-15.8475	0.0838	-0.6552
937	SLU 66	-1.14	-0.22	39.86	-16.1063	0.0852	-0.6575
937	SLU 67	-1.15	-0.26	39.85	-16.1031	0.0853	-0.6635
937	SLU 68	-1.15	-0.28	39.61	-16.0091	0.0848	-0.6624
937	SLU 69	-1.15	-0.22	40.28	-16.2679	0.0862	-0.6647
937	SLU 70	-1.16	-0.26	40.27	-16.2647	0.0863	-0.6707
937	SLU 71	-1.14	-0.22	40.04	-16.1761	0.0856	-0.6595
937	SLU 72	-1.15	-0.26	40.03	-16.1729	0.0857	-0.6655
937	SLU 73	-1.21	-0.27	42.4	-17.0792	0.0908	-0.6972
937	SLU 74	-1.21	-0.21	43.07	-17.338	0.0922	-0.6995
937	SLU 75	-1.22	-0.24	43.06	-17.3348	0.0923	-0.7056
937	SLU 76	-1.22	-0.27	42.82	-17.2408	0.0918	-0.7044
937	SLU 77	-1.22	-0.2	43.49	-17.4996	0.0932	-0.7067
937	SLU 78	-1.23	-0.24	43.48	-17.4964	0.0933	-0.7128
937	SLU 79	-1.22	-0.2	43.25	-17.4077	0.0926	-0.7015
937	SLU 80	-1.23	-0.24	43.24	-17.4045	0.0927	-0.7076
937	SLU 81	-1.22	-0.2	43.8	-17.6124	0.0937	-0.7051
937	SLU 82	-1.23	-0.24	43.79	-17.6092	0.0938	-0.7112
937	SLU 83	-1.23	-0.2	44.21	-17.774	0.0946	-0.7123
937	SLU 84	-1.24	-0.24	44.2	-17.7708	0.0948	-0.7184
937	SLE RA 1	-0.84	-0.18	29.44	-11.9171	0.0627	-0.4865
937	SLE RA 2	-0.85	-0.22	29.43	-11.9135	0.0628	-0.4932

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
937	SLE RA 3	-0.86	-0.18	29.87	-12.0861	0.0637	-0.4948
937	SLE RA 4	-0.86	-0.2	29.87	-12.0839	0.0638	-0.4988
937	SLE RA 5	-0.86	-0.22	29.7	-12.0213	0.0635	-0.498
937	SLE RA 6	-0.87	-0.18	30.15	-12.1938	0.0644	-0.4996
937	SLE RA 7	-0.87	-0.2	30.14	-12.1917	0.0645	-0.5036
937	SLE RA 8	-0.86	-0.18	29.99	-12.1326	0.064	-0.4961
937	SLE RA 9	-0.87	-0.2	29.98	-12.1304	0.0641	-0.5001
937	SLE RA 10	-0.9	-0.21	31.57	-12.7346	0.0675	-0.5212
937	SLE RA 11	-0.91	-0.17	32.01	-12.9072	0.0684	-0.5228
937	SLE RA 12	-0.91	-0.19	32.01	-12.9051	0.0685	-0.5268
937	SLE RA 13	-0.91	-0.21	31.84	-12.8424	0.0682	-0.5261
937	SLE RA 14	-0.91	-0.17	32.29	-13.0149	0.0691	-0.5276
937	SLE RA 15	-0.92	-0.19	32.28	-13.0128	0.0692	-0.5316
937	SLE RA 16	-0.91	-0.17	32.13	-12.9537	0.0687	-0.5241
937	SLE RA 17	-0.92	-0.19	32.12	-12.9515	0.0688	-0.5282
937	SLE RA 18	-0.91	-0.17	32.5	-13.0901	0.0694	-0.5265
937	SLE RA 19	-0.92	-0.19	32.49	-13.088	0.0695	-0.5306
937	SLE RA 20	-0.92	-0.16	32.77	-13.1979	0.0701	-0.5313
937	SLE RA 21	-0.93	-0.19	32.77	-13.1957	0.0701	-0.5354
937	SLE FR 1	-0.84	-0.18	29.44	-11.9171	0.0627	-0.4865
937	SLE FR 2	-0.85	-0.19	29.43	-11.9164	0.0627	-0.4878
937	SLE FR 3	-0.85	-0.18	29.55	-11.9602	0.063	-0.4884
937	SLE FR 4	-0.87	-0.19	30.35	-12.2683	0.0647	-0.4999
937	SLE FR 5	-0.87	-0.18	30.46	-12.3121	0.065	-0.5004
937	SLE FR 6	-0.88	-0.17	30.97	-12.5036	0.066	-0.5065
937	SLE QP 1	-0.84	-0.18	29.44	-11.9171	0.0627	-0.4865
937	SLE QP 2	-0.86	-0.18	30.35	-12.269	0.0647	-0.4985
937	SLD 1	2.2	0.38	35.96	-14.4174	0.0995	1.264
937	SLD 2	1.91	-0.05	36.26	-14.5377	0.1	1.096
937	SLD 3	2.45	-0.86	36.34	-14.5694	0.1016	1.4053
937	SLD 4	2.15	-1.29	36.64	-14.6897	0.1022	1.2374
937	SLD 5	-0.27	1.94	31.41	-12.6618	0.0717	-0.1544
937	SLD 6	-0.46	1.66	31.61	-12.7404	0.0721	-0.2642
937	SLD 7	0.56	-2.18	32.67	-13.1684	0.079	0.3167
937	SLD 8	0.36	-2.47	32.86	-13.247	0.0793	0.2069
937	SLD 9	-2.09	2.11	27.84	-11.291	0.0501	-1.2039
937	SLD 10	-2.28	1.83	28.04	-11.3696	0.0504	-1.3137
937	SLD 11	-1.27	-2.02	29.1	-11.7976	0.0573	-0.7329
937	SLD 12	-1.46	-2.3	29.3	-11.8763	0.0577	-0.8427
937	SLD 13	-3.88	0.94	24.07	-9.8483	0.0273	-2.2344
937	SLD 14	-4.17	0.5	24.37	-9.9686	0.0278	-2.4024
937	SLD 15	-3.63	-0.3	24.45	-10.0003	0.0294	-2.0931
937	SLD 16	-3.93	-0.74	24.74	-10.1206	0.0299	-2.2611
937	SLV 1	6.3	1.08	43.48	-17.2987	0.1461	3.6249
937	SLV 2	5.62	0.07	44.18	-17.5788	0.1473	3.2336
937	SLV 3	6.88	-1.72	44.36	-17.6529	0.1511	3.9541
937	SLV 4	6.19	-2.73	45.06	-17.933	0.1523	3.5629
937	SLV 5	0.53	4.62	32.84	-13.1927	0.0813	0.3062
937	SLV 6	0.09	3.97	33.29	-13.3728	0.082	0.0547
937	SLV 7	2.45	-4.71	35.77	-14.3734	0.0981	1.4037
937	SLV 8	2.01	-5.36	36.22	-14.5534	0.0988	1.1522
937	SLV 9	-3.74	5.01	24.49	-9.9846	0.0306	-2.1492
937	SLV 10	-4.18	4.36	24.94	-10.1647	0.0313	-2.4007
937	SLV 11	-1.82	-4.32	27.42	-11.1653	0.0474	-1.0518
937	SLV 12	-2.26	-4.97	27.87	-11.3453	0.0481	-1.3032
937	SLV 13	-7.92	2.38	15.65	-6.605	-0.0229	-4.5599
937	SLV 14	-8.61	1.37	16.34	-6.8852	-0.0217	-4.9512
937	SLV 15	-7.34	-0.42	16.53	-6.9592	-0.0179	-4.2307
937	SLV 16	-8.03	-1.43	17.22	-7.2393	-0.0167	-4.6219
937	CRTFP Ux+	0	0	0	0	0	0
937	CRTFP Ux-	0	0	0	0	0	0
937	CRTFP Uy+	0	0	0	0	0	0
937	CRTFP Uy-	0	0	0	0	0	0
938	SLU 1	-0.82	-0.24	26.97	-10.4001	0.0356	-0.4758
938	SLU 2	-0.84	-0.3	26.95	-10.3924	0.0357	-0.4857
938	SLU 3	-0.85	-0.24	27.59	-10.6236	0.0365	-0.4882
938	SLU 4	-0.86	-0.27	27.57	-10.619	0.0366	-0.4942
938	SLU 5	-0.86	-0.29	27.34	-10.5354	0.0363	-0.4929
938	SLU 6	-0.86	-0.24	27.98	-10.7667	0.0371	-0.4954
938	SLU 7	-0.87	-0.27	27.96	-10.762	0.0372	-0.5014
938	SLU 8	-0.85	-0.24	27.75	-10.6862	0.0368	-0.4902
938	SLU 9	-0.86	-0.27	27.74	-10.6816	0.0368	-0.4962
938	SLU 10	-0.92	-0.29	29.99	-11.4874	0.0396	-0.5282
938	SLU 11	-0.92	-0.24	30.63	-11.7186	0.0404	-0.5307
938	SLU 12	-0.93	-0.27	30.61	-11.714	0.0405	-0.5366
938	SLU 13	-0.93	-0.29	30.38	-11.6304	0.0402	-0.5354
938	SLU 14	-0.93	-0.23	31.02	-11.8617	0.041	-0.5379
938	SLU 15	-0.94	-0.27	31	-11.857	0.0411	-0.5439
938	SLU 16	-0.92	-0.23	30.79	-11.7812	0.0406	-0.5327
938	SLU 17	-0.93	-0.27	30.78	-11.7766	0.0407	-0.5386
938	SLU 18	-0.93	-0.24	31.31	-11.9644	0.0412	-0.5365
938	SLU 19	-0.94	-0.27	31.3	-11.9598	0.0412	-0.5424
938	SLU 20	-0.94	-0.23	31.7	-12.1075	0.0417	-0.5437
938	SLU 21	-0.95	-0.27	31.69	-12.1028	0.0418	-0.5496
938	SLU 22	-0.9	-0.22	30.08	-11.5216	0.0397	-0.5203
938	SLU 23	-0.92	-0.27	30.06	-11.5138	0.0398	-0.5303
938	SLU 24	-0.92	-0.21	30.69	-11.7451	0.0406	-0.5328
938	SLU 25	-0.93	-0.25	30.68	-11.7404	0.0407	-0.5387
938	SLU 26	-0.93	-0.27	30.45	-11.6569	0.0404	-0.5375
938	SLU 27	-0.94	-0.21	31.08	-11.8881	0.0412	-0.54
938	SLU 28	-0.95	-0.24	31.07	-11.8835	0.0413	-0.5459
938	SLU 29	-0.93	-0.21	30.86	-11.8077	0.0408	-0.5348
938	SLU 30	-0.94	-0.24	30.85	-11.803	0.0409	-0.5407
938	SLU 31	-0.99	-0.26	33.1	-12.6088	0.0437	-0.5727
938	SLU 32	-1	-0.21	33.73	-12.8401	0.0445	-0.5752
938	SLU 33	-1.01	-0.24	33.72	-12.8354	0.0446	-0.5812
938	SLU 34	-1.01	-0.26	33.49	-12.7519	0.0443	-0.5799

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
938	SLU 35	-1.01	-0.21	34.12	-12.9831	0.0451	-0.5824
938	SLU 36	-1.02	-0.24	34.11	-12.9785	0.0451	-0.5884
938	SLU 37	-1	-0.21	33.9	-12.9027	0.0447	-0.5772
938	SLU 38	-1.01	-0.24	33.89	-12.898	0.0448	-0.5832
938	SLU 39	-1.01	-0.21	34.42	-13.0859	0.0452	-0.581
938	SLU 40	-1.02	-0.24	34.41	-13.0812	0.0453	-0.5869
938	SLU 41	-1.02	-0.21	34.81	-13.2289	0.0458	-0.5882
938	SLU 42	-1.03	-0.24	34.8	-13.2243	0.0459	-0.5942
938	SLU 43	-1.05	-0.33	34	-13.1357	0.0449	-0.6033
938	SLU 44	-1.06	-0.38	33.98	-13.1279	0.045	-0.6132
938	SLU 45	-1.07	-0.32	34.61	-13.3592	0.0458	-0.6157
938	SLU 46	-1.08	-0.36	34.6	-13.3545	0.0459	-0.6217
938	SLU 47	-1.08	-0.38	34.37	-13.271	0.0456	-0.6204
938	SLU 48	-1.08	-0.32	35	-13.5022	0.0464	-0.6229
938	SLU 49	-1.09	-0.35	34.99	-13.4976	0.0465	-0.6289
938	SLU 50	-1.07	-0.32	34.78	-13.4218	0.0461	-0.6177
938	SLU 51	-1.08	-0.35	34.76	-13.4171	0.0461	-0.6237
938	SLU 52	-1.14	-0.37	37.02	-14.2229	0.0489	-0.6556
938	SLU 53	-1.14	-0.32	37.65	-14.4542	0.0497	-0.6582
938	SLU 54	-1.15	-0.35	37.64	-14.4495	0.0498	-0.6641
938	SLU 55	-1.15	-0.37	37.41	-14.366	0.0495	-0.6629
938	SLU 56	-1.15	-0.32	38.04	-14.5972	0.0503	-0.6654
938	SLU 57	-1.16	-0.35	38.03	-14.5926	0.0504	-0.6713
938	SLU 58	-1.14	-0.32	37.82	-14.5168	0.0499	-0.6602
938	SLU 59	-1.15	-0.35	37.8	-14.5121	0.05	-0.6661
938	SLU 60	-1.15	-0.32	38.34	-14.7	0.0504	-0.6639
938	SLU 61	-1.16	-0.35	38.33	-14.6953	0.0505	-0.6699
938	SLU 62	-1.16	-0.32	38.73	-14.843	0.051	-0.6711
938	SLU 63	-1.17	-0.35	38.72	-14.8384	0.0511	-0.6771
938	SLU 64	-1.12	-0.3	37.1	-14.2571	0.049	-0.6478
938	SLU 65	-1.14	-0.35	37.08	-14.2494	0.0491	-0.6577
938	SLU 66	-1.14	-0.3	37.72	-14.4806	0.0499	-0.6602
938	SLU 67	-1.16	-0.33	37.71	-14.476	0.05	-0.6662
938	SLU 68	-1.15	-0.35	37.47	-14.3924	0.0497	-0.6649
938	SLU 69	-1.16	-0.29	38.11	-14.6237	0.0505	-0.6675
938	SLU 70	-1.17	-0.33	38.1	-14.619	0.0506	-0.6734
938	SLU 71	-1.15	-0.3	37.88	-14.5432	0.0501	-0.6622
938	SLU 72	-1.16	-0.33	37.87	-14.5386	0.0502	-0.6682
938	SLU 73	-1.21	-0.35	40.12	-15.3444	0.053	-0.7002
938	SLU 74	-1.22	-0.29	40.76	-15.5756	0.0538	-0.7027
938	SLU 75	-1.23	-0.32	40.75	-15.571	0.0538	-0.7086
938	SLU 76	-1.23	-0.34	40.51	-15.4874	0.0536	-0.7074
938	SLU 77	-1.23	-0.29	41.15	-15.7187	0.0543	-0.7099
938	SLU 78	-1.24	-0.32	41.14	-15.714	0.0544	-0.7159
938	SLU 79	-1.22	-0.29	40.92	-15.6382	0.054	-0.7047
938	SLU 80	-1.23	-0.32	40.91	-15.6336	0.0541	-0.7106
938	SLU 81	-1.23	-0.29	41.45	-15.8214	0.0545	-0.7085
938	SLU 82	-1.24	-0.32	41.43	-15.8168	0.0546	-0.7144
938	SLU 83	-1.24	-0.29	41.84	-15.9645	0.0551	-0.7157
938	SLU 84	-1.25	-0.32	41.82	-15.9598	0.0552	-0.7216
938	SLE RA 1	-0.85	-0.24	27.86	-10.7205	0.0368	-0.4885
938	SLE RA 2	-0.86	-0.27	27.85	-10.7154	0.0369	-0.4951
938	SLE RA 3	-0.86	-0.23	28.27	-10.8695	0.0374	-0.4968
938	SLE RA 4	-0.87	-0.26	28.26	-10.8664	0.0374	-0.5008
938	SLE RA 5	-0.87	-0.27	28.11	-10.8107	0.0372	-0.5
938	SLE RA 6	-0.87	-0.23	28.53	-10.9649	0.0378	-0.5016
938	SLE RA 7	-0.88	-0.25	28.52	-10.9618	0.0378	-0.5056
938	SLE RA 8	-0.86	-0.23	28.38	-10.9113	0.0375	-0.4982
938	SLE RA 9	-0.87	-0.25	28.37	-10.9082	0.0376	-0.5021
938	SLE RA 10	-0.91	-0.27	29.87	-11.4454	0.0394	-0.5234
938	SLE RA 11	-0.91	-0.23	30.29	-11.5995	0.04	-0.5251
938	SLE RA 12	-0.92	-0.25	30.29	-11.5964	0.04	-0.5291
938	SLE RA 13	-0.92	-0.27	30.13	-11.5407	0.0398	-0.5283
938	SLE RA 14	-0.92	-0.23	30.55	-11.6949	0.0404	-0.5299
938	SLE RA 15	-0.93	-0.25	30.55	-11.6918	0.0404	-0.5339
938	SLE RA 16	-0.91	-0.23	30.4	-11.6413	0.0401	-0.5265
938	SLE RA 17	-0.92	-0.25	30.4	-11.6382	0.0402	-0.5304
938	SLE RA 18	-0.92	-0.23	30.75	-11.7634	0.0405	-0.529
938	SLE RA 19	-0.92	-0.25	30.75	-11.7603	0.0405	-0.5329
938	SLE RA 20	-0.93	-0.23	31.01	-11.8588	0.0409	-0.5338
938	SLE RA 21	-0.93	-0.25	31.01	-11.8557	0.0409	-0.5377
938	SLE FR 1	-0.85	-0.24	27.86	-10.7205	0.0368	-0.4885
938	SLE FR 2	-0.85	-0.24	27.86	-10.7195	0.0368	-0.4898
938	SLE FR 3	-0.85	-0.24	27.96	-10.7587	0.0369	-0.4905
938	SLE FR 4	-0.87	-0.24	28.72	-11.0324	0.0379	-0.502
938	SLE FR 5	-0.87	-0.23	28.83	-11.0715	0.038	-0.5026
938	SLE FR 6	-0.88	-0.23	29.31	-11.242	0.0386	-0.5087
938	SLE QP 1	-0.85	-0.24	27.86	-10.7205	0.0368	-0.4885
938	SLE QP 2	-0.87	-0.23	28.73	-11.0334	0.0379	-0.5007
938	SLD 1	2.2	0.3	33.32	-12.5477	0.0665	1.2648
938	SLD 2	1.91	-0.1	33.61	-12.6618	0.0668	1.0966
938	SLD 3	2.45	-0.86	33.66	-12.6818	0.0682	1.4064
938	SLD 4	2.15	-1.26	33.95	-12.796	0.0685	1.2382
938	SLD 5	-0.27	1.76	29.54	-11.264	0.0439	-0.156
938	SLD 6	-0.46	1.5	29.73	-11.3386	0.044	-0.2659
938	SLD 7	0.55	-2.11	30.67	-11.7113	0.0495	0.3159
938	SLD 8	0.36	-2.37	30.86	-11.7859	0.0497	0.206
938	SLD 9	-2.1	1.9	26.6	-10.2809	0.0261	-1.2073
938	SLD 10	-2.29	1.64	26.78	-10.3555	0.0263	-1.3172
938	SLD 11	-1.27	-1.96	27.73	-10.7282	0.0317	-0.7354
938	SLD 12	-1.47	-2.23	27.91	-10.8028	0.0319	-0.8453
938	SLD 13	-3.89	0.79	23.51	-9.2708	0.0073	-2.2395
938	SLD 14	-4.18	0.39	23.8	-9.385	0.0075	-2.4077
938	SLD 15	-3.64	-0.37	23.85	-9.405	0.009	-2.098
938	SLD 16	-3.94	-0.77	24.13	-9.5191	0.0092	-2.2661
938	SLV 1	6.31	0.98	39.48	-14.579	0.105	3.6296
938	SLV 2	5.63	0.04	40.15	-14.8448	0.1056	3.2379

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
938	SLV 3	6.89	-1.65	40.27	-14.891	0.1089	3.9595
938	SLV 4	6.2	-2.58	40.94	-15.1568	0.1095	3.5678
938	SLV 5	0.53	4.27	30.64	-11.5782	0.052	0.3052
938	SLV 6	0.09	3.67	31.07	-11.7491	0.0523	0.0535
938	SLV 7	2.45	-4.48	33.27	-12.6184	0.065	1.4048
938	SLV 8	2.01	-5.08	33.7	-12.7893	0.0654	1.1531
938	SLV 9	-3.75	4.61	23.75	-9.2775	0.0104	-2.1544
938	SLV 10	-4.19	4.01	24.18	-9.4484	0.0107	-2.4061
938	SLV 11	-1.82	-4.14	26.38	-10.3177	0.0234	-1.0548
938	SLV 12	-2.26	-4.74	26.81	-10.4886	0.0238	-1.3066
938	SLV 13	-7.94	2.12	16.52	-6.91	-0.0337	-4.5691
938	SLV 14	-8.62	1.18	17.18	-7.1758	-0.0332	-4.9608
938	SLV 15	-7.36	-0.51	17.3	-7.222	-0.0298	-4.2392
938	SLV 16	-8.05	-1.45	17.97	-7.4878	-0.0292	-4.6309
938	CRTFP Ux+	0	0	0	0	0	0
938	CRTFP Ux-	0	0	0	0	0	0
938	CRTFP Uy+	0	0	0	0	0	0
938	CRTFP Uy-	0	0	0	0	0	0
939	SLU 1	-0.83	-0.29	26.23	-9.8945	0.0112	-0.4771
939	SLU 2	-0.84	-0.33	26.21	-9.8854	0.0113	-0.4869
939	SLU 3	-0.85	-0.29	26.83	-10.1051	0.0115	-0.4896
939	SLU 4	-0.86	-0.31	26.81	-10.0996	0.0115	-0.4954
939	SLU 5	-0.86	-0.33	26.59	-10.0206	0.0114	-0.4941
939	SLU 6	-0.86	-0.29	27.2	-10.2402	0.0117	-0.4968
939	SLU 7	-0.87	-0.31	27.19	-10.2347	0.0117	-0.5026
939	SLU 8	-0.85	-0.29	26.99	-10.1648	0.0116	-0.4916
939	SLU 9	-0.86	-0.31	26.97	-10.1593	0.0116	-0.4974
939	SLU 10	-0.92	-0.34	29.17	-10.9265	0.012	-0.5297
939	SLU 11	-0.92	-0.29	29.79	-11.1462	0.0122	-0.5324
939	SLU 12	-0.93	-0.32	29.78	-11.1407	0.0123	-0.5382
939	SLU 13	-0.93	-0.34	29.55	-11.0617	0.0122	-0.5369
939	SLU 14	-0.94	-0.29	30.17	-11.2813	0.0124	-0.5396
939	SLU 15	-0.95	-0.32	30.16	-11.2759	0.0125	-0.5454
939	SLU 16	-0.93	-0.29	29.95	-11.2059	0.0123	-0.5344
939	SLU 17	-0.94	-0.32	29.94	-11.2005	0.0123	-0.5402
939	SLU 18	-0.93	-0.29	30.47	-11.3819	0.0123	-0.5383
939	SLU 19	-0.94	-0.32	30.45	-11.3764	0.0123	-0.5442
939	SLU 20	-0.95	-0.29	30.85	-11.517	0.0125	-0.5455
939	SLU 21	-0.96	-0.32	30.83	-11.5115	0.0125	-0.5514
939	SLU 22	-0.91	-0.27	29.26	-10.9596	0.0121	-0.522
939	SLU 23	-0.92	-0.32	29.24	-10.9505	0.0121	-0.5317
939	SLU 24	-0.93	-0.27	29.86	-11.1701	0.0124	-0.5344
939	SLU 25	-0.94	-0.3	29.84	-11.1647	0.0124	-0.5403
939	SLU 26	-0.93	-0.31	29.62	-11.0856	0.0123	-0.539
939	SLU 27	-0.94	-0.27	30.23	-11.3053	0.0125	-0.5417
939	SLU 28	-0.95	-0.29	30.22	-11.2998	0.0126	-0.5475
939	SLU 29	-0.93	-0.27	30.02	-11.2299	0.0124	-0.5364
939	SLU 30	-0.94	-0.29	30	-11.2244	0.0125	-0.5423
939	SLU 31	-1	-0.32	32.2	-11.9916	0.0129	-0.5746
939	SLU 32	-1	-0.27	32.82	-12.2113	0.0131	-0.5773
939	SLU 33	-1.01	-0.3	32.81	-12.2058	0.0132	-0.5831
939	SLU 34	-1.01	-0.32	32.58	-12.1268	0.0131	-0.5818
939	SLU 35	-1.01	-0.27	33.2	-12.3464	0.0133	-0.5845
939	SLU 36	-1.02	-0.3	33.19	-12.3409	0.0133	-0.5903
939	SLU 37	-1	-0.27	32.98	-12.271	0.0132	-0.5793
939	SLU 38	-1.01	-0.3	32.97	-12.2656	0.0132	-0.5851
939	SLU 39	-1.01	-0.27	33.5	-12.4469	0.0132	-0.5832
939	SLU 40	-1.02	-0.3	33.48	-12.4415	0.0132	-0.5891
939	SLU 41	-1.02	-0.27	33.88	-12.5821	0.0133	-0.5904
939	SLU 42	-1.03	-0.3	33.86	-12.5766	0.0134	-0.5963
939	SLU 43	-1.05	-0.38	33.06	-12.4977	0.0142	-0.6049
939	SLU 44	-1.07	-0.43	33.04	-12.4886	0.0143	-0.6146
939	SLU 45	-1.07	-0.38	33.66	-12.7083	0.0145	-0.6173
939	SLU 46	-1.08	-0.41	33.64	-12.7028	0.0146	-0.6231
939	SLU 47	-1.08	-0.43	33.42	-12.6237	0.0145	-0.6218
939	SLU 48	-1.08	-0.38	34.04	-12.8434	0.0147	-0.6245
939	SLU 49	-1.09	-0.41	34.02	-12.8379	0.0148	-0.6304
939	SLU 50	-1.07	-0.38	33.82	-12.768	0.0146	-0.6193
939	SLU 51	-1.08	-0.41	33.8	-12.7625	0.0146	-0.6252
939	SLU 52	-1.14	-0.43	36	-13.5297	0.0151	-0.6575
939	SLU 53	-1.14	-0.38	36.62	-13.7494	0.0153	-0.6601
939	SLU 54	-1.16	-0.41	36.61	-13.7439	0.0153	-0.666
939	SLU 55	-1.15	-0.43	36.38	-13.6649	0.0153	-0.6647
939	SLU 56	-1.16	-0.38	37	-13.8845	0.0155	-0.6674
939	SLU 57	-1.17	-0.41	36.99	-13.8791	0.0155	-0.6732
939	SLU 58	-1.15	-0.38	36.78	-13.8091	0.0154	-0.6622
939	SLU 59	-1.16	-0.41	36.77	-13.8037	0.0154	-0.668
939	SLU 60	-1.15	-0.39	37.3	-13.9851	0.0153	-0.6661
939	SLU 61	-1.17	-0.42	37.29	-13.9796	0.0154	-0.6719
939	SLU 62	-1.17	-0.39	37.68	-14.1202	0.0155	-0.6733
939	SLU 63	-1.18	-0.41	37.66	-14.1147	0.0155	-0.6791
939	SLU 64	-1.13	-0.36	36.09	-13.5628	0.0151	-0.6498
939	SLU 65	-1.14	-0.41	36.07	-13.5537	0.0152	-0.6595
939	SLU 66	-1.15	-0.36	36.69	-13.7733	0.0154	-0.6622
939	SLU 67	-1.16	-0.39	36.67	-13.7679	0.0155	-0.668
939	SLU 68	-1.16	-0.41	36.45	-13.6888	0.0154	-0.6667
939	SLU 69	-1.16	-0.36	37.06	-13.9085	0.0156	-0.6694
939	SLU 70	-1.17	-0.39	37.05	-13.903	0.0156	-0.6752
939	SLU 71	-1.15	-0.36	36.85	-13.8331	0.0155	-0.6642
939	SLU 72	-1.16	-0.39	36.83	-13.8276	0.0155	-0.67
939	SLU 73	-1.22	-0.41	39.03	-14.5948	0.016	-0.7023
939	SLU 74	-1.22	-0.36	39.65	-14.8145	0.0162	-0.705
939	SLU 75	-1.23	-0.39	39.64	-14.809	0.0162	-0.7109
939	SLU 76	-1.23	-0.41	39.41	-14.73	0.0161	-0.7096
939	SLU 77	-1.23	-0.36	40.03	-14.9496	0.0164	-0.7122
939	SLU 78	-1.25	-0.39	40.02	-14.9441	0.0164	-0.7181
939	SLU 79	-1.23	-0.36	39.81	-14.8742	0.0162	-0.707

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
939	SLU 80	-1.24	-0.39	39.8	-14.8687	0.0163	-0.7129
939	SLU 81	-1.23	-0.37	40.33	-15.0501	0.0162	-0.711
939	SLU 82	-1.24	-0.4	40.31	-15.0447	0.0163	-0.7168
939	SLU 83	-1.25	-0.37	40.71	-15.1853	0.0164	-0.7182
939	SLU 84	-1.26	-0.4	40.69	-15.1798	0.0164	-0.724
939	SLE RA 1	-0.85	-0.28	27.1	-10.1988	0.0114	-0.49
939	SLE RA 2	-0.86	-0.31	27.08	-10.1928	0.0115	-0.4964
939	SLE RA 3	-0.86	-0.28	27.49	-10.3392	0.0116	-0.4982
939	SLE RA 4	-0.87	-0.3	27.48	-10.3355	0.0117	-0.5021
939	SLE RA 5	-0.87	-0.31	27.33	-10.2829	0.0116	-0.5013
939	SLE RA 6	-0.87	-0.28	27.75	-10.4293	0.0118	-0.503
939	SLE RA 7	-0.88	-0.3	27.74	-10.4256	0.0118	-0.5069
939	SLE RA 8	-0.87	-0.28	27.6	-10.379	0.0117	-0.4996
939	SLE RA 9	-0.87	-0.3	27.59	-10.3754	0.0117	-0.5035
939	SLE RA 10	-0.91	-0.32	29.06	-10.8868	0.012	-0.525
939	SLE RA 11	-0.91	-0.28	29.47	-11.0333	0.0121	-0.5268
939	SLE RA 12	-0.92	-0.3	29.46	-11.0296	0.0122	-0.5307
939	SLE RA 13	-0.92	-0.32	29.31	-10.9769	0.0121	-0.5298
939	SLE RA 14	-0.92	-0.28	29.72	-11.1234	0.0123	-0.5316
939	SLE RA 15	-0.93	-0.3	29.71	-11.1197	0.0123	-0.5355
939	SLE RA 16	-0.92	-0.28	29.58	-11.0731	0.0122	-0.5281
939	SLE RA 17	-0.92	-0.3	29.57	-11.0695	0.0122	-0.532
939	SLE RA 18	-0.92	-0.29	29.92	-11.1904	0.0122	-0.5308
939	SLE RA 19	-0.93	-0.31	29.91	-11.1867	0.0122	-0.5346
939	SLE RA 20	-0.93	-0.29	30.17	-11.2805	0.0123	-0.5356
939	SLE RA 21	-0.94	-0.3	30.16	-11.2768	0.0123	-0.5395
939	SLE FR 1	-0.85	-0.28	27.1	-10.1988	0.0114	-0.49
939	SLE FR 2	-0.85	-0.29	27.09	-10.1976	0.0115	-0.4913
939	SLE FR 3	-0.85	-0.28	27.2	-10.2349	0.0115	-0.4919
939	SLE FR 4	-0.87	-0.29	27.94	-10.4951	0.0117	-0.5035
939	SLE FR 5	-0.87	-0.28	28.04	-10.5323	0.0117	-0.5041
939	SLE FR 6	-0.88	-0.28	28.51	-10.6946	0.0118	-0.5104
939	SLE QP 1	-0.85	-0.28	27.1	-10.1988	0.0114	-0.49
939	SLE QP 2	-0.87	-0.28	27.94	-10.4963	0.0117	-0.5022
939	SLD 1	2.2	0.24	31.71	-11.5287	0.0344	1.266
939	SLD 2	1.91	-0.14	32	-11.6434	0.0344	1.0977
939	SLD 3	2.45	-0.86	32.03	-11.6545	0.0357	1.4079
939	SLD 4	2.16	-1.23	32.31	-11.7692	0.0356	1.2396
939	SLD 5	-0.27	1.6	28.55	-10.5949	0.0166	-0.1571
939	SLD 6	-0.46	1.35	28.74	-10.6698	0.0166	-0.2671
939	SLD 7	0.55	-2.05	29.59	-11.0144	0.0207	0.3157
939	SLD 8	0.36	-2.29	29.78	-11.0893	0.0207	0.2057
939	SLD 9	-2.1	1.73	26.11	-9.9033	0.0026	-1.2101
939	SLD 10	-2.3	1.48	26.29	-9.9782	0.0026	-1.3201
939	SLD 11	-1.28	-1.92	27.15	-10.3228	0.0067	-0.7373
939	SLD 12	-1.47	-2.17	27.34	-10.3977	0.0067	-0.8473
939	SLD 13	-3.9	0.67	23.58	-9.2234	-0.0123	-2.244
939	SLD 14	-4.19	0.29	23.86	-9.3381	-0.0123	-2.4123
939	SLD 15	-3.65	-0.43	23.89	-9.3492	-0.0111	-2.1021
939	SLD 16	-3.94	-0.8	24.17	-9.4639	-0.0111	-2.2704
939	SLV 1	6.32	0.89	36.77	-12.9142	0.065	3.6346
939	SLV 2	5.63	0.02	37.43	-13.1814	0.0649	3.2425
939	SLV 3	6.9	-1.59	37.5	-13.2064	0.0678	3.965
939	SLV 4	6.21	-2.46	38.16	-13.4735	0.0678	3.573
939	SLV 5	0.53	3.97	29.37	-10.7328	0.0233	0.3048
939	SLV 6	0.09	3.41	29.8	-10.9045	0.0233	0.0528
939	SLV 7	2.45	-4.28	31.8	-11.7067	0.0328	1.4064
939	SLV 8	2.01	-4.84	32.23	-11.8784	0.0328	1.1544
939	SLV 9	-3.75	4.28	23.66	-9.1142	-0.0095	-2.1588
939	SLV 10	-4.19	3.72	24.09	-9.2859	-0.0095	-2.4108
939	SLV 11	-1.83	-3.98	26.09	-10.0881	0	-1.0572
939	SLV 12	-2.27	-4.54	26.51	-10.2598	0	-1.3092
939	SLV 13	-7.95	1.89	17.73	-7.5191	-0.0444	-4.5774
939	SLV 14	-8.64	1.02	18.39	-7.7862	-0.0445	-4.9694
939	SLV 15	-7.38	-0.58	18.46	-7.8112	-0.0416	-4.2469
939	SLV 16	-8.06	-1.45	19.12	-8.0784	-0.0416	-4.639
939	CRTFP Ux+	0	0	0	0	0	0
939	CRTFP Ux-	0	0	0	0	0	0
939	CRTFP Uy+	0	0	0	0	0	0
939	CRTFP Uy-	0	0	0	0	0	0
940	SLU 1	-0.83	-0.33	26.24	-10.0083	-0.0116	-0.4779
940	SLU 2	-0.85	-0.37	26.22	-9.999	-0.0116	-0.4875
940	SLU 3	-0.85	-0.33	26.84	-10.2221	-0.0119	-0.4903
940	SLU 4	-0.86	-0.35	26.82	-10.2165	-0.0119	-0.4961
940	SLU 5	-0.86	-0.37	26.6	-10.1363	-0.0118	-0.4947
940	SLU 6	-0.86	-0.33	27.22	-10.3594	-0.0121	-0.4975
940	SLU 7	-0.87	-0.35	27.2	-10.3538	-0.0121	-0.5033
940	SLU 8	-0.85	-0.33	27	-10.283	-0.012	-0.4923
940	SLU 9	-0.86	-0.35	26.98	-10.2774	-0.012	-0.4981
940	SLU 10	-0.92	-0.38	29.21	-11.0656	-0.0138	-0.5307
940	SLU 11	-0.93	-0.34	29.83	-11.2887	-0.0141	-0.5335
940	SLU 12	-0.94	-0.37	29.81	-11.2831	-0.0141	-0.5393
940	SLU 13	-0.93	-0.38	29.59	-11.2029	-0.014	-0.5379
940	SLU 14	-0.94	-0.34	30.21	-11.426	-0.0143	-0.5407
940	SLU 15	-0.95	-0.37	30.19	-11.4204	-0.0143	-0.5465
940	SLU 16	-0.93	-0.34	29.99	-11.3496	-0.0142	-0.5355
940	SLU 17	-0.94	-0.37	29.97	-11.344	-0.0142	-0.5413
940	SLU 18	-0.94	-0.35	30.51	-11.5321	-0.0147	-0.5397
940	SLU 19	-0.95	-0.37	30.5	-11.5265	-0.0147	-0.5454
940	SLU 20	-0.95	-0.35	30.89	-11.6694	-0.0149	-0.5469
940	SLU 21	-0.96	-0.37	30.88	-11.6638	-0.0149	-0.5526
940	SLU 22	-0.91	-0.31	29.29	-11.0978	-0.0137	-0.5232
940	SLU 23	-0.92	-0.36	29.27	-11.0885	-0.0137	-0.5327
940	SLU 24	-0.93	-0.31	29.89	-11.3116	-0.014	-0.5356
940	SLU 25	-0.94	-0.34	29.87	-11.306	-0.014	-0.5413
940	SLU 26	-0.94	-0.36	29.65	-11.2259	-0.0139	-0.5399
940	SLU 27	-0.94	-0.31	30.27	-11.4489	-0.0142	-0.5428

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
940	SLU 28	-0.95	-0.34	30.25	-11.4433	-0.0142	-0.5485
940	SLU 29	-0.93	-0.31	30.05	-11.3725	-0.0141	-0.5376
940	SLU 30	-0.94	-0.34	30.03	-11.3669	-0.0141	-0.5433
940	SLU 31	-1	-0.37	32.26	-12.1551	-0.0159	-0.5759
940	SLU 32	-1	-0.33	32.88	-12.3782	-0.0162	-0.5788
940	SLU 33	-1.01	-0.35	32.86	-12.3726	-0.0162	-0.5845
940	SLU 34	-1.01	-0.37	32.64	-12.2925	-0.0161	-0.5831
940	SLU 35	-1.02	-0.33	33.26	-12.5155	-0.0164	-0.586
940	SLU 36	-1.03	-0.35	33.24	-12.51	-0.0164	-0.5917
940	SLU 37	-1.01	-0.33	33.04	-12.4391	-0.0163	-0.5808
940	SLU 38	-1.02	-0.35	33.02	-12.4335	-0.0163	-0.5865
940	SLU 39	-1.01	-0.33	33.56	-12.6216	-0.0168	-0.5849
940	SLU 40	-1.02	-0.36	33.55	-12.616	-0.0168	-0.5906
940	SLU 41	-1.03	-0.33	33.94	-12.7589	-0.017	-0.5921
940	SLU 42	-1.04	-0.36	33.93	-12.7533	-0.017	-0.5978
940	SLU 43	-1.05	-0.43	33.07	-12.6373	-0.0144	-0.6058
940	SLU 44	-1.07	-0.47	33.05	-12.628	-0.0144	-0.6154
940	SLU 45	-1.07	-0.43	33.67	-12.851	-0.0147	-0.6182
940	SLU 46	-1.08	-0.45	33.65	-12.8455	-0.0147	-0.6239
940	SLU 47	-1.08	-0.47	33.42	-12.7653	-0.0146	-0.6226
940	SLU 48	-1.09	-0.43	34.04	-12.9884	-0.0149	-0.6254
940	SLU 49	-1.1	-0.45	34.03	-12.9828	-0.0149	-0.6311
940	SLU 50	-1.08	-0.43	33.83	-12.9119	-0.0148	-0.6202
940	SLU 51	-1.09	-0.45	33.81	-12.9063	-0.0148	-0.6259
940	SLU 52	-1.14	-0.49	36.03	-13.6946	-0.0166	-0.6586
940	SLU 53	-1.15	-0.44	36.66	-13.9177	-0.0169	-0.6614
940	SLU 54	-1.16	-0.47	36.64	-13.9121	-0.0169	-0.6672
940	SLU 55	-1.16	-0.49	36.41	-13.8319	-0.0168	-0.6658
940	SLU 56	-1.16	-0.44	37.03	-14.055	-0.0171	-0.6686
940	SLU 57	-1.17	-0.47	37.02	-14.0494	-0.0171	-0.6743
940	SLU 58	-1.15	-0.44	36.82	-13.9785	-0.0169	-0.6634
940	SLU 59	-1.16	-0.47	36.8	-13.9729	-0.0169	-0.6691
940	SLU 60	-1.16	-0.45	37.34	-14.161	-0.0175	-0.6675
940	SLU 61	-1.17	-0.47	37.33	-14.1554	-0.0175	-0.6733
940	SLU 62	-1.17	-0.45	37.72	-14.2983	-0.0177	-0.6747
940	SLU 63	-1.18	-0.47	37.7	-14.2927	-0.0177	-0.6805
940	SLU 64	-1.13	-0.42	36.12	-13.7268	-0.0165	-0.651
940	SLU 65	-1.15	-0.46	36.09	-13.7175	-0.0165	-0.6606
940	SLU 66	-1.15	-0.42	36.72	-13.9406	-0.0168	-0.6634
940	SLU 67	-1.16	-0.44	36.7	-13.935	-0.0168	-0.6692
940	SLU 68	-1.16	-0.46	36.47	-13.8548	-0.0167	-0.6678
940	SLU 69	-1.16	-0.42	37.09	-14.0779	-0.017	-0.6706
940	SLU 70	-1.17	-0.44	37.08	-14.0723	-0.017	-0.6764
940	SLU 71	-1.15	-0.42	36.88	-14.0014	-0.0169	-0.6654
940	SLU 72	-1.16	-0.44	36.86	-13.9959	-0.0169	-0.6712
940	SLU 73	-1.22	-0.47	39.08	-14.7841	-0.0187	-0.7038
940	SLU 74	-1.23	-0.43	39.7	-15.0072	-0.019	-0.7066
940	SLU 75	-1.24	-0.46	39.69	-15.0016	-0.019	-0.7124
940	SLU 76	-1.23	-0.47	39.46	-14.9214	-0.0189	-0.711
940	SLU 77	-1.24	-0.43	40.08	-15.1445	-0.0192	-0.7138
940	SLU 78	-1.25	-0.46	40.07	-15.1389	-0.0192	-0.7196
940	SLU 79	-1.23	-0.43	39.86	-15.068	-0.019	-0.7086
940	SLU 80	-1.24	-0.46	39.85	-15.0625	-0.019	-0.7144
940	SLU 81	-1.24	-0.44	40.39	-15.2505	-0.0196	-0.7128
940	SLU 82	-1.25	-0.46	40.37	-15.2449	-0.0196	-0.7185
940	SLU 83	-1.25	-0.43	40.77	-15.3878	-0.0198	-0.72
940	SLU 84	-1.26	-0.46	40.75	-15.3823	-0.0198	-0.7257
940	SLE RA 1	-0.85	-0.32	27.11	-10.3196	-0.0122	-0.4909
940	SLE RA 2	-0.86	-0.35	27.1	-10.3134	-0.0122	-0.4972
940	SLE RA 3	-0.87	-0.32	27.51	-10.4621	-0.0124	-0.4991
940	SLE RA 4	-0.87	-0.34	27.5	-10.4584	-0.0124	-0.5029
940	SLE RA 5	-0.87	-0.35	27.35	-10.405	-0.0123	-0.502
940	SLE RA 6	-0.87	-0.32	27.76	-10.5537	-0.0126	-0.5039
940	SLE RA 7	-0.88	-0.34	27.75	-10.55	-0.0126	-0.5077
940	SLE RA 8	-0.87	-0.32	27.62	-10.5027	-0.0125	-0.5005
940	SLE RA 9	-0.87	-0.34	27.61	-10.499	-0.0125	-0.5043
940	SLE RA 10	-0.91	-0.36	29.09	-11.0245	-0.0137	-0.526
940	SLE RA 11	-0.92	-0.33	29.5	-11.1732	-0.0139	-0.5279
940	SLE RA 12	-0.92	-0.35	29.49	-11.1695	-0.0139	-0.5317
940	SLE RA 13	-0.92	-0.36	29.34	-11.116	-0.0138	-0.5308
940	SLE RA 14	-0.92	-0.33	29.76	-11.2648	-0.014	-0.5327
940	SLE RA 15	-0.93	-0.35	29.75	-11.261	-0.014	-0.5365
940	SLE RA 16	-0.92	-0.33	29.61	-11.2138	-0.0139	-0.5293
940	SLE RA 17	-0.92	-0.35	29.6	-11.2101	-0.0139	-0.5331
940	SLE RA 18	-0.92	-0.34	29.96	-11.3354	-0.0143	-0.532
940	SLE RA 19	-0.93	-0.35	29.95	-11.3317	-0.0143	-0.5358
940	SLE RA 20	-0.93	-0.34	30.21	-11.427	-0.0144	-0.5368
940	SLE RA 21	-0.94	-0.35	30.2	-11.4233	-0.0144	-0.5406
940	SLE FR 1	-0.85	-0.32	27.11	-10.3196	-0.0122	-0.4909
940	SLE FR 2	-0.85	-0.33	27.11	-10.3184	-0.0122	-0.4921
940	SLE FR 3	-0.85	-0.32	27.21	-10.3562	-0.0123	-0.4928
940	SLE FR 4	-0.88	-0.33	27.96	-10.6231	-0.0128	-0.5045
940	SLE FR 5	-0.88	-0.33	28.07	-10.661	-0.0129	-0.5051
940	SLE FR 6	-0.89	-0.33	28.54	-10.8275	-0.0133	-0.5114
940	SLE QP 1	-0.85	-0.32	27.11	-10.3196	-0.0122	-0.4909
940	SLE QP 2	-0.87	-0.33	27.97	-10.6244	-0.0128	-0.5032
940	SLD 1	2.21	0.17	31.1	-11.323	0.0051	1.2676
940	SLD 2	1.91	-0.18	31.39	-11.4441	0.0049	1.0992
940	SLD 3	2.45	-0.87	31.4	-11.4447	0.0042	1.4097
940	SLD 4	2.16	-1.22	31.68	-11.5658	0.004	1.2413
940	SLD 5	-0.27	1.46	28.41	-10.628	-0.0061	-0.1577
940	SLD 6	-0.47	1.24	28.59	-10.7071	-0.0062	-0.2677
940	SLD 7	0.55	-2.01	29.4	-11.0336	-0.009	0.3159
940	SLD 8	0.36	-2.23	29.58	-11.1128	-0.0092	0.2058
940	SLD 9	-2.11	1.58	26.35	-10.136	-0.0165	-1.2123
940	SLD 10	-2.3	1.35	26.54	-10.2151	-0.0166	-1.3223
940	SLD 11	-1.28	-1.89	27.34	-10.5416	-0.0195	-0.7387

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
940	SLD 12	-1.47	-2.12	27.53	-10.6207	-0.0196	-0.8488
940	SLD 13	-3.91	0.56	24.25	-9.6829	-0.0297	-2.2477
940	SLD 14	-4.2	0.21	24.54	-9.804	-0.0299	-2.4161
940	SLD 15	-3.66	-0.48	24.55	-9.8046	-0.0306	-2.1057
940	SLD 16	-3.95	-0.83	24.84	-9.9257	-0.0308	-2.274
940	SLV 1	6.33	0.8	35.3	-12.2612	0.0292	3.6396
940	SLV 2	5.65	-0.01	35.97	-12.5433	0.0287	3.2474
940	SLV 3	6.91	-1.56	35.99	-12.5437	0.0271	3.9706
940	SLV 4	6.22	-2.37	36.66	-12.8257	0.0266	3.5784
940	SLV 5	0.53	3.72	29.01	-10.6387	0.003	0.3048
940	SLV 6	0.09	3.2	29.44	-10.82	0.0027	0.0527
940	SLV 7	2.46	-4.13	31.31	-11.5802	-0.0039	1.4082
940	SLV 8	2.01	-4.65	31.74	-11.7615	-0.0042	1.1561
940	SLV 9	-3.76	4	24.2	-9.4873	-0.0214	-2.1626
940	SLV 10	-4.2	3.47	24.63	-9.6685	-0.0218	-2.4146
940	SLV 11	-1.83	-3.85	26.5	-10.4287	-0.0284	-1.0591
940	SLV 12	-2.27	-4.38	26.93	-10.61	-0.0287	-1.3112
940	SLV 13	-7.97	1.71	19.27	-8.423	-0.0523	-4.5848
940	SLV 14	-8.65	0.9	19.94	-8.7051	-0.0528	-4.977
940	SLV 15	-7.39	-0.64	19.96	-8.7055	-0.0544	-4.2538
940	SLV 16	-8.08	-1.45	20.63	-8.9875	-0.0549	-4.646
940	CRTFP Ux+	0	0	0	0	0	0
940	CRTFP Ux-	0	0	0	0	0	0
940	CRTFP Uy+	0	0	0	0	0	0
940	CRTFP Uy-	0	0	0	0	0	0
941	SLU 1	-0.83	-0.36	26.94	-10.6879	-0.0317	-0.4783
941	SLU 2	-0.85	-0.4	26.91	-10.6796	-0.0318	-0.4877
941	SLU 3	-0.85	-0.36	27.55	-10.9197	-0.0326	-0.4907
941	SLU 4	-0.86	-0.39	27.54	-10.9148	-0.0326	-0.4963
941	SLU 5	-0.86	-0.4	27.3	-10.8283	-0.0323	-0.4948
941	SLU 6	-0.86	-0.36	27.94	-11.0684	-0.0331	-0.4979
941	SLU 7	-0.87	-0.39	27.93	-11.0634	-0.0331	-0.5035
941	SLU 8	-0.86	-0.36	27.72	-10.9852	-0.0328	-0.4927
941	SLU 9	-0.86	-0.39	27.7	-10.9802	-0.0328	-0.4983
941	SLU 10	-0.92	-0.42	30.02	-11.8449	-0.0366	-0.5312
941	SLU 11	-0.93	-0.38	30.65	-12.085	-0.0374	-0.5343
941	SLU 12	-0.94	-0.41	30.64	-12.0801	-0.0374	-0.5399
941	SLU 13	-0.93	-0.42	30.4	-11.9936	-0.0371	-0.5384
941	SLU 14	-0.94	-0.38	31.04	-12.2337	-0.0379	-0.5415
941	SLU 15	-0.95	-0.41	31.03	-12.2287	-0.0379	-0.547
941	SLU 16	-0.93	-0.38	30.82	-12.1505	-0.0376	-0.5363
941	SLU 17	-0.94	-0.41	30.8	-12.1455	-0.0376	-0.5418
941	SLU 18	-0.94	-0.39	31.37	-12.3526	-0.0386	-0.5406
941	SLU 19	-0.95	-0.41	31.35	-12.3476	-0.0386	-0.5462
941	SLU 20	-0.95	-0.39	31.76	-12.5012	-0.0391	-0.5478
941	SLU 21	-0.96	-0.41	31.74	-12.4963	-0.0391	-0.5533
941	SLU 22	-0.91	-0.35	30.1	-11.8761	-0.0365	-0.5239
941	SLU 23	-0.93	-0.39	30.07	-11.8679	-0.0366	-0.5332
941	SLU 24	-0.93	-0.35	30.71	-12.108	-0.0373	-0.5363
941	SLU 25	-0.94	-0.38	30.7	-12.103	-0.0374	-0.5419
941	SLU 26	-0.94	-0.4	30.46	-12.0165	-0.0371	-0.5404
941	SLU 27	-0.94	-0.36	31.1	-12.2566	-0.0379	-0.5434
941	SLU 28	-0.95	-0.38	31.09	-12.2517	-0.0379	-0.549
941	SLU 29	-0.93	-0.35	30.88	-12.1734	-0.0375	-0.5382
941	SLU 30	-0.94	-0.38	30.86	-12.1685	-0.0376	-0.5438
941	SLU 31	-1	-0.41	33.17	-13.0332	-0.0414	-0.5768
941	SLU 32	-1.01	-0.37	33.81	-13.2733	-0.0421	-0.5798
941	SLU 33	-1.02	-0.4	33.8	-13.2683	-0.0422	-0.5854
941	SLU 34	-1.01	-0.42	33.56	-13.1818	-0.0419	-0.5839
941	SLU 35	-1.02	-0.37	34.2	-13.4219	-0.0426	-0.587
941	SLU 36	-1.03	-0.4	34.19	-13.417	-0.0427	-0.5926
941	SLU 37	-1.01	-0.37	33.98	-13.3387	-0.0423	-0.5818
941	SLU 38	-1.02	-0.4	33.96	-13.3338	-0.0424	-0.5874
941	SLU 39	-1.02	-0.38	34.53	-13.5409	-0.0433	-0.5861
941	SLU 40	-1.03	-0.41	34.51	-13.5359	-0.0434	-0.5917
941	SLU 41	-1.03	-0.38	34.91	-13.6895	-0.0438	-0.5933
941	SLU 42	-1.04	-0.41	34.9	-13.6845	-0.0439	-0.5989
941	SLU 43	-1.05	-0.47	33.94	-13.4868	-0.0396	-0.6062
941	SLU 44	-1.07	-0.51	33.91	-13.4786	-0.0397	-0.6156
941	SLU 45	-1.07	-0.47	34.55	-13.7187	-0.0405	-0.6186
941	SLU 46	-1.08	-0.5	34.54	-13.7137	-0.0405	-0.6242
941	SLU 47	-1.08	-0.51	34.3	-13.6272	-0.0402	-0.6227
941	SLU 48	-1.09	-0.47	34.94	-13.8673	-0.041	-0.6258
941	SLU 49	-1.1	-0.5	34.93	-13.8624	-0.041	-0.6314
941	SLU 50	-1.08	-0.47	34.71	-13.7841	-0.0407	-0.6206
941	SLU 51	-1.09	-0.5	34.7	-13.7792	-0.0407	-0.6262
941	SLU 52	-1.14	-0.53	37.01	-14.6439	-0.0445	-0.6591
941	SLU 53	-1.15	-0.49	37.65	-14.884	-0.0453	-0.6622
941	SLU 54	-1.16	-0.52	37.64	-14.879	-0.0453	-0.6678
941	SLU 55	-1.16	-0.53	37.4	-14.7925	-0.045	-0.6663
941	SLU 56	-1.16	-0.49	38.04	-15.0326	-0.0458	-0.6693
941	SLU 57	-1.17	-0.52	38.03	-15.0277	-0.0458	-0.6749
941	SLU 58	-1.15	-0.49	37.82	-14.9494	-0.0455	-0.6641
941	SLU 59	-1.16	-0.52	37.8	-14.9445	-0.0455	-0.6697
941	SLU 60	-1.16	-0.5	38.36	-15.1515	-0.0465	-0.6685
941	SLU 61	-1.17	-0.52	38.35	-15.1466	-0.0465	-0.6741
941	SLU 62	-1.17	-0.5	38.75	-15.3002	-0.047	-0.6756
941	SLU 63	-1.18	-0.53	38.74	-15.2952	-0.047	-0.6812
941	SLU 64	-1.13	-0.46	37.09	-14.6751	-0.0444	-0.6518
941	SLU 65	-1.15	-0.51	37.07	-14.6668	-0.0445	-0.6611
941	SLU 66	-1.15	-0.47	37.71	-14.9069	-0.0452	-0.6641
941	SLU 67	-1.16	-0.49	37.7	-14.902	-0.0453	-0.6697
941	SLU 68	-1.16	-0.51	37.46	-14.8155	-0.045	-0.6683
941	SLU 69	-1.17	-0.47	38.1	-15.0556	-0.0457	-0.6713
941	SLU 70	-1.17	-0.49	38.09	-15.0506	-0.0458	-0.6769
941	SLU 71	-1.16	-0.47	37.87	-14.9724	-0.0454	-0.6661
941	SLU 72	-1.17	-0.49	37.86	-14.9674	-0.0455	-0.6717

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
941	SLU 73	-1.22	-0.53	40.17	-15.8321	-0.0492	-0.7047
941	SLU 74	-1.23	-0.49	40.81	-16.0722	-0.05	-0.7077
941	SLU 75	-1.24	-0.51	40.8	-16.0673	-0.0501	-0.7133
941	SLU 76	-1.24	-0.53	40.56	-15.9808	-0.0498	-0.7118
941	SLU 77	-1.24	-0.49	41.2	-16.2209	-0.0505	-0.7149
941	SLU 78	-1.25	-0.51	41.19	-16.2159	-0.0506	-0.7205
941	SLU 79	-1.23	-0.49	40.97	-16.1377	-0.0502	-0.7097
941	SLU 80	-1.24	-0.51	40.96	-16.1327	-0.0502	-0.7153
941	SLU 81	-1.24	-0.49	41.52	-16.3398	-0.0512	-0.714
941	SLU 82	-1.25	-0.52	41.51	-16.3349	-0.0513	-0.7196
941	SLU 83	-1.25	-0.49	41.91	-16.4885	-0.0517	-0.7212
941	SLU 84	-1.26	-0.52	41.9	-16.4835	-0.0518	-0.7268
941	SLE RA 1	-0.85	-0.36	27.84	-11.0274	-0.0331	-0.4914
941	SLE RA 2	-0.86	-0.39	27.82	-11.0219	-0.0331	-0.4976
941	SLE RA 3	-0.87	-0.36	28.25	-11.1819	-0.0337	-0.4996
941	SLE RA 4	-0.87	-0.38	28.24	-11.1786	-0.0337	-0.5033
941	SLE RA 5	-0.87	-0.39	28.08	-11.121	-0.0335	-0.5024
941	SLE RA 6	-0.88	-0.36	28.51	-11.281	-0.034	-0.5044
941	SLE RA 7	-0.88	-0.38	28.5	-11.2777	-0.034	-0.5081
941	SLE RA 8	-0.87	-0.36	28.36	-11.2256	-0.0338	-0.5009
941	SLE RA 9	-0.88	-0.38	28.35	-11.2223	-0.0338	-0.5047
941	SLE RA 10	-0.91	-0.4	29.89	-11.7987	-0.0363	-0.5266
941	SLE RA 11	-0.92	-0.37	30.32	-11.9588	-0.0369	-0.5286
941	SLE RA 12	-0.92	-0.39	30.31	-11.9555	-0.0369	-0.5324
941	SLE RA 13	-0.92	-0.4	30.15	-11.8978	-0.0367	-0.5314
941	SLE RA 14	-0.93	-0.37	30.58	-12.0579	-0.0372	-0.5334
941	SLE RA 15	-0.93	-0.39	30.57	-12.0546	-0.0372	-0.5372
941	SLE RA 16	-0.92	-0.37	30.43	-12.0024	-0.037	-0.53
941	SLE RA 17	-0.93	-0.39	30.42	-11.9991	-0.037	-0.5337
941	SLE RA 18	-0.92	-0.38	30.79	-12.1372	-0.0377	-0.5328
941	SLE RA 19	-0.93	-0.39	30.78	-12.1339	-0.0377	-0.5366
941	SLE RA 20	-0.93	-0.38	31.05	-12.2363	-0.038	-0.5376
941	SLE RA 21	-0.94	-0.39	31.04	-12.233	-0.038	-0.5414
941	SLE FR 1	-0.85	-0.36	27.84	-11.0274	-0.0331	-0.4914
941	SLE FR 2	-0.85	-0.36	27.84	-11.0263	-0.0331	-0.4926
941	SLE FR 3	-0.86	-0.36	27.94	-11.067	-0.0332	-0.4933
941	SLE FR 4	-0.88	-0.37	28.72	-11.3592	-0.0345	-0.505
941	SLE FR 5	-0.88	-0.36	28.83	-11.4	-0.0346	-0.5057
941	SLE FR 6	-0.89	-0.37	29.32	-11.5823	-0.0354	-0.5121
941	SLE QP 1	-0.85	-0.36	27.84	-11.0274	-0.0331	-0.4914
941	SLE QP 2	-0.87	-0.36	28.73	-11.3603	-0.0345	-0.5038
941	SLD 1	2.21	0.12	31.4	-11.867	-0.022	1.2694
941	SLD 2	1.92	-0.21	31.7	-11.9988	-0.0224	1.101
941	SLD 3	2.46	-0.88	31.68	-11.9861	-0.023	1.4117
941	SLD 4	2.16	-1.21	31.98	-12.1179	-0.0233	1.2433
941	SLD 5	-0.27	1.35	29.04	-11.3084	-0.0292	-0.1578
941	SLD 6	-0.47	1.14	29.23	-11.3946	-0.0295	-0.2679
941	SLD 7	0.55	-1.98	29.99	-11.7053	-0.0324	0.3163
941	SLD 8	0.36	-2.19	30.19	-11.7915	-0.0326	0.2063
941	SLD 9	-2.11	1.46	27.26	-10.9292	-0.0363	-1.2139
941	SLD 10	-2.3	1.25	27.46	-11.0153	-0.0365	-1.324
941	SLD 11	-1.28	-1.87	28.22	-11.3261	-0.0395	-0.7398
941	SLD 12	-1.47	-2.08	28.41	-11.4122	-0.0397	-0.8498
941	SLD 13	-3.91	0.48	25.47	-10.6027	-0.0456	-2.2509
941	SLD 14	-4.21	0.15	25.77	-10.7346	-0.0459	-2.4193
941	SLD 15	-3.66	-0.52	25.76	-10.7218	-0.0465	-2.1087
941	SLD 16	-3.96	-0.85	26.05	-10.8536	-0.0469	-2.277
941	SLV 1	6.34	0.72	34.98	-12.5478	-0.0054	3.6446
941	SLV 2	5.66	-0.04	35.68	-12.8549	-0.0062	3.2524
941	SLV 3	6.92	-1.54	35.65	-12.8244	-0.0076	3.9761
941	SLV 4	6.23	-2.3	36.34	-13.1315	-0.0084	3.5839
941	SLV 5	0.53	3.52	29.47	-11.2445	-0.0223	0.3052
941	SLV 6	0.09	3.03	29.92	-11.4418	-0.0229	0.0532
941	SLV 7	2.46	-4.02	31.69	-12.1665	-0.0295	1.4101
941	SLV 8	2.02	-4.51	32.14	-12.3638	-0.0301	1.158
941	SLV 9	-3.77	3.78	25.31	-10.3569	-0.0388	-2.1656
941	SLV 10	-4.21	3.29	25.76	-10.5542	-0.0394	-2.4177
941	SLV 11	-1.84	-3.76	27.53	-11.2789	-0.0461	-1.0608
941	SLV 12	-2.28	-4.25	27.98	-11.4762	-0.0466	-1.3128
941	SLV 13	-7.98	1.57	21.11	-9.5892	-0.0605	-4.5915
941	SLV 14	-8.67	0.81	21.8	-9.8962	-0.0613	-4.9837
941	SLV 15	-7.4	-0.69	21.78	-9.8658	-0.0627	-4.2601
941	SLV 16	-8.09	-1.45	22.47	-10.1728	-0.0635	-4.6522
941	CRTFP Ux+	0	0	0	0	0	0
941	CRTFP Ux-	0	0	0	0	0	0
941	CRTFP Uy+	0	0	0	0	0	0
941	CRTFP Uy-	0	0	0	0	0	0
942	SLU 1	-0.83	-0.39	28.21	-11.8558	-0.0479	-0.4784
942	SLU 2	-0.85	-0.43	28.19	-11.8499	-0.048	-0.4875
942	SLU 3	-0.85	-0.39	28.86	-12.1186	-0.0491	-0.4908
942	SLU 4	-0.86	-0.41	28.85	-12.115	-0.0492	-0.4962
942	SLU 5	-0.86	-0.43	28.6	-12.0176	-0.0488	-0.4947
942	SLU 6	-0.86	-0.39	29.27	-12.2864	-0.0499	-0.4979
942	SLU 7	-0.87	-0.42	29.26	-12.2828	-0.05	-0.5034
942	SLU 8	-0.86	-0.39	29.03	-12.1913	-0.0494	-0.4927
942	SLU 9	-0.87	-0.42	29.02	-12.1878	-0.0495	-0.4982
942	SLU 10	-0.92	-0.45	31.48	-13.1779	-0.0549	-0.5315
942	SLU 11	-0.93	-0.42	32.15	-13.4466	-0.0561	-0.5347
942	SLU 12	-0.94	-0.44	32.14	-13.443	-0.0561	-0.5402
942	SLU 13	-0.94	-0.45	31.89	-13.3456	-0.0557	-0.5386
942	SLU 14	-0.94	-0.42	32.56	-13.6143	-0.0568	-0.5418
942	SLU 15	-0.95	-0.44	32.55	-13.6108	-0.0569	-0.5473
942	SLU 16	-0.93	-0.42	32.32	-13.5193	-0.0563	-0.5367
942	SLU 17	-0.94	-0.44	32.31	-13.5157	-0.0564	-0.5421
942	SLU 18	-0.94	-0.42	32.91	-13.7529	-0.0577	-0.5412
942	SLU 19	-0.95	-0.45	32.9	-13.7494	-0.0578	-0.5467
942	SLU 20	-0.95	-0.42	33.32	-13.9207	-0.0585	-0.5483

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
942	SLU 21	-0.96	-0.45	33.31	-13.9171	-0.0586	-0.5538
942	SLU 22	-0.91	-0.38	31.55	-13.2075	-0.0547	-0.5243
942	SLU 23	-0.93	-0.42	31.54	-13.2016	-0.0549	-0.5334
942	SLU 24	-0.93	-0.39	32.2	-13.4703	-0.056	-0.5367
942	SLU 25	-0.94	-0.41	32.19	-13.4667	-0.0561	-0.5421
942	SLU 26	-0.94	-0.43	31.95	-13.3693	-0.0557	-0.5406
942	SLU 27	-0.94	-0.39	32.61	-13.638	-0.0568	-0.5438
942	SLU 28	-0.95	-0.41	32.6	-13.6345	-0.0569	-0.5493
942	SLU 29	-0.94	-0.39	32.37	-13.543	-0.0563	-0.5386
942	SLU 30	-0.94	-0.41	32.36	-13.5394	-0.0564	-0.5441
942	SLU 31	-1	-0.45	34.82	-14.5295	-0.0618	-0.5774
942	SLU 32	-1.01	-0.41	35.49	-14.7982	-0.0629	-0.5806
942	SLU 33	-1.02	-0.43	35.48	-14.7947	-0.063	-0.586
942	SLU 34	-1.01	-0.45	35.23	-14.6973	-0.0626	-0.5845
942	SLU 35	-1.02	-0.41	35.9	-14.966	-0.0637	-0.5877
942	SLU 36	-1.03	-0.44	35.89	-14.9624	-0.0638	-0.5932
942	SLU 37	-1.01	-0.41	35.66	-14.871	-0.0632	-0.5825
942	SLU 38	-1.02	-0.44	35.65	-14.8674	-0.0633	-0.588
942	SLU 39	-1.02	-0.42	36.25	-15.1046	-0.0646	-0.5871
942	SLU 40	-1.03	-0.44	36.24	-15.101	-0.0647	-0.5925
942	SLU 41	-1.03	-0.42	36.66	-15.2723	-0.0654	-0.5942
942	SLU 42	-1.04	-0.44	36.65	-15.2688	-0.0655	-0.5997
942	SLU 43	-1.05	-0.51	35.53	-14.9491	-0.0599	-0.6062
942	SLU 44	-1.07	-0.55	35.51	-14.9432	-0.06	-0.6153
942	SLU 45	-1.07	-0.51	36.18	-15.2119	-0.0611	-0.6186
942	SLU 46	-1.08	-0.53	36.16	-15.2084	-0.0612	-0.624
942	SLU 47	-1.08	-0.55	35.92	-15.111	-0.0608	-0.6225
942	SLU 48	-1.09	-0.51	36.59	-15.3797	-0.0619	-0.6257
942	SLU 49	-1.1	-0.53	36.57	-15.3761	-0.062	-0.6312
942	SLU 50	-1.08	-0.51	36.35	-15.2847	-0.0614	-0.6205
942	SLU 51	-1.09	-0.53	36.34	-15.2811	-0.0615	-0.626
942	SLU 52	-1.14	-0.57	38.79	-16.2712	-0.0669	-0.6593
942	SLU 53	-1.15	-0.53	39.46	-16.5399	-0.0681	-0.6625
942	SLU 54	-1.16	-0.56	39.45	-16.5363	-0.0681	-0.668
942	SLU 55	-1.16	-0.57	39.21	-16.4389	-0.0677	-0.6664
942	SLU 56	-1.16	-0.53	39.87	-16.7076	-0.0688	-0.6696
942	SLU 57	-1.17	-0.56	39.86	-16.7041	-0.0689	-0.6751
942	SLU 58	-1.15	-0.53	39.63	-16.6126	-0.0683	-0.6645
942	SLU 59	-1.16	-0.56	39.62	-16.6091	-0.0684	-0.6699
942	SLU 60	-1.16	-0.54	40.22	-16.8462	-0.0697	-0.669
942	SLU 61	-1.17	-0.57	40.21	-16.8427	-0.0698	-0.6745
942	SLU 62	-1.17	-0.54	40.63	-17.014	-0.0705	-0.6761
942	SLU 63	-1.18	-0.57	40.62	-17.0104	-0.0706	-0.6816
942	SLU 64	-1.13	-0.5	38.87	-16.3008	-0.0667	-0.6521
942	SLU 65	-1.15	-0.54	38.85	-16.2949	-0.0669	-0.6612
942	SLU 66	-1.15	-0.5	39.52	-16.5636	-0.068	-0.6645
942	SLU 67	-1.16	-0.53	39.51	-16.56	-0.0681	-0.6699
942	SLU 68	-1.16	-0.54	39.26	-16.4626	-0.0677	-0.6684
942	SLU 69	-1.17	-0.51	39.93	-16.7313	-0.0688	-0.6716
942	SLU 70	-1.18	-0.53	39.92	-16.7278	-0.0689	-0.6771
942	SLU 71	-1.16	-0.51	39.69	-16.6363	-0.0683	-0.6664
942	SLU 72	-1.17	-0.53	39.68	-16.6328	-0.0684	-0.6719
942	SLU 73	-1.22	-0.57	42.14	-17.6228	-0.0738	-0.7052
942	SLU 74	-1.23	-0.53	42.81	-17.8915	-0.0749	-0.7084
942	SLU 75	-1.24	-0.55	42.8	-17.888	-0.075	-0.7138
942	SLU 76	-1.24	-0.57	42.55	-17.7906	-0.0746	-0.7123
942	SLU 77	-1.24	-0.53	43.22	-18.0593	-0.0757	-0.7155
942	SLU 78	-1.25	-0.55	43.21	-18.0557	-0.0758	-0.721
942	SLU 79	-1.23	-0.53	42.98	-17.9643	-0.0752	-0.7103
942	SLU 80	-1.24	-0.55	42.97	-17.9607	-0.0753	-0.7158
942	SLU 81	-1.24	-0.54	43.57	-18.1979	-0.0766	-0.7149
942	SLU 82	-1.25	-0.56	43.56	-18.1943	-0.0767	-0.7203
942	SLU 83	-1.25	-0.54	43.98	-18.3657	-0.0774	-0.722
942	SLU 84	-1.26	-0.56	43.97	-18.3621	-0.0775	-0.7275
942	SLE RA 1	-0.85	-0.39	29.17	-12.242	-0.0498	-0.4915
942	SLE RA 2	-0.86	-0.41	29.15	-12.2381	-0.0499	-0.4976
942	SLE RA 3	-0.87	-0.39	29.6	-12.4172	-0.0507	-0.4998
942	SLE RA 4	-0.87	-0.41	29.59	-12.4148	-0.0507	-0.5034
942	SLE RA 5	-0.87	-0.42	29.43	-12.3499	-0.0504	-0.5024
942	SLE RA 6	-0.88	-0.39	29.87	-12.529	-0.0512	-0.5045
942	SLE RA 7	-0.88	-0.41	29.86	-12.5267	-0.0513	-0.5082
942	SLE RA 8	-0.87	-0.39	29.71	-12.4657	-0.0509	-0.5011
942	SLE RA 9	-0.88	-0.41	29.7	-12.4633	-0.0509	-0.5047
942	SLE RA 10	-0.91	-0.43	31.34	-13.1234	-0.0545	-0.5269
942	SLE RA 11	-0.92	-0.41	31.79	-13.3025	-0.0553	-0.5291
942	SLE RA 12	-0.92	-0.42	31.78	-13.3001	-0.0553	-0.5327
942	SLE RA 13	-0.92	-0.43	31.62	-13.2352	-0.055	-0.5317
942	SLE RA 14	-0.93	-0.41	32.06	-13.4143	-0.0558	-0.5338
942	SLE RA 15	-0.93	-0.42	32.06	-13.412	-0.0559	-0.5375
942	SLE RA 16	-0.92	-0.41	31.9	-13.351	-0.0555	-0.5304
942	SLE RA 17	-0.93	-0.42	31.9	-13.3486	-0.0555	-0.534
942	SLE RA 18	-0.93	-0.41	32.3	-13.5067	-0.0564	-0.5334
942	SLE RA 19	-0.93	-0.43	32.29	-13.5044	-0.0565	-0.537
942	SLE RA 20	-0.93	-0.41	32.57	-13.6186	-0.0569	-0.5381
942	SLE RA 21	-0.94	-0.43	32.56	-13.6162	-0.057	-0.5418
942	SLE FR 1	-0.85	-0.39	29.17	-12.242	-0.0498	-0.4915
942	SLE FR 2	-0.86	-0.39	29.16	-12.2412	-0.0498	-0.4928
942	SLE FR 3	-0.86	-0.39	29.28	-12.2868	-0.05	-0.4934
942	SLE FR 4	-0.88	-0.4	30.1	-12.6206	-0.0518	-0.5053
942	SLE FR 5	-0.88	-0.4	30.21	-12.6662	-0.052	-0.506
942	SLE FR 6	-0.89	-0.4	30.73	-12.8744	-0.0531	-0.5125
942	SLE QP 1	-0.85	-0.39	29.17	-12.242	-0.0498	-0.4915
942	SLE QP 2	-0.88	-0.39	30.1	-12.6214	-0.0518	-0.5041
942	SLD 1	2.21	0.07	32.49	-13.0678	-0.0446	1.2714
942	SLD 2	1.92	-0.24	32.8	-13.2128	-0.0449	1.1031
942	SLD 3	2.46	-0.9	32.77	-13.1876	-0.0459	1.4137
942	SLD 4	2.17	-1.21	33.08	-13.3326	-0.0463	1.2455

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
942	SLD 5	-0.27	1.27	30.34	-12.5479	-0.0475	-0.1576
942	SLD 6	-0.47	1.07	30.54	-12.6427	-0.0478	-0.2676
942	SLD 7	0.55	-1.97	31.28	-12.9475	-0.052	0.3169
942	SLD 8	0.36	-2.17	31.48	-13.0422	-0.0523	0.2069
942	SLD 9	-2.11	1.38	28.73	-12.2006	-0.0513	-1.2151
942	SLD 10	-2.31	1.18	28.93	-12.2954	-0.0516	-1.3251
942	SLD 11	-1.29	-1.86	29.67	-12.6002	-0.0559	-0.7406
942	SLD 12	-1.48	-2.06	29.87	-12.695	-0.0561	-0.8506
942	SLD 13	-3.92	0.42	27.13	-11.9102	-0.0573	-2.2537
942	SLD 14	-4.21	0.11	27.44	-12.0552	-0.0577	-2.4219
942	SLD 15	-3.67	-0.55	27.41	-12.0301	-0.0587	-2.1113
942	SLD 16	-3.96	-0.86	27.72	-12.1751	-0.0591	-2.2796
942	SLV 1	6.35	0.65	35.69	-13.6679	-0.0349	3.6496
942	SLV 2	5.67	-0.06	36.41	-14.0057	-0.0358	3.2577
942	SLV 3	6.93	-1.54	36.35	-13.9463	-0.038	3.9813
942	SLV 4	6.25	-2.26	37.06	-14.2841	-0.0389	3.5894
942	SLV 5	0.53	3.37	30.66	-12.4552	-0.0419	0.306
942	SLV 6	0.09	2.91	31.12	-12.6723	-0.0425	0.0541
942	SLV 7	2.46	-3.95	32.85	-13.3833	-0.0522	1.4118
942	SLV 8	2.02	-4.41	33.31	-13.6004	-0.0527	1.1599
942	SLV 9	-3.77	3.62	26.9	-11.6425	-0.0509	-2.1681
942	SLV 10	-4.21	3.16	27.36	-11.8596	-0.0515	-2.42
942	SLV 11	-1.84	-3.7	29.09	-12.5706	-0.0611	-1.0623
942	SLV 12	-2.28	-4.16	29.55	-12.7877	-0.0617	-1.3142
942	SLV 13	-8	1.47	23.14	-10.9588	-0.0647	-4.5976
942	SLV 14	-8.68	0.76	23.86	-11.2965	-0.0657	-4.9895
942	SLV 15	-7.42	-0.73	23.8	-11.2372	-0.0678	-4.2659
942	SLV 16	-8.1	-1.44	24.52	-11.575	-0.0687	-4.6578
942	CRTFP Ux+	0	0	0	0	0	0
942	CRTFP Ux-	0	0	0	0	0	0
942	CRTFP Uy+	0	0	0	0	0	0
942	CRTFP Uy-	0	0	0	0	0	0
943	SLU 1	-0.83	-0.41	29.91	-13.4064	-0.0583	-0.4782
943	SLU 2	-0.85	-0.45	29.9	-13.404	-0.0585	-0.4871
943	SLU 3	-0.85	-0.41	30.6	-13.7101	-0.0598	-0.4905
943	SLU 4	-0.86	-0.43	30.59	-13.7087	-0.06	-0.4958
943	SLU 5	-0.86	-0.45	30.33	-13.5968	-0.0594	-0.4942
943	SLU 6	-0.86	-0.41	31.04	-13.903	-0.0608	-0.4976
943	SLU 7	-0.87	-0.44	31.03	-13.9015	-0.0609	-0.503
943	SLU 8	-0.86	-0.41	30.78	-13.792	-0.0601	-0.4924
943	SLU 9	-0.86	-0.44	30.77	-13.7906	-0.0603	-0.4978
943	SLU 10	-0.92	-0.47	33.43	-14.9456	-0.0668	-0.5314
943	SLU 11	-0.93	-0.44	34.13	-15.2517	-0.0682	-0.5348
943	SLU 12	-0.94	-0.46	34.13	-15.2503	-0.0683	-0.5402
943	SLU 13	-0.94	-0.48	33.86	-15.1384	-0.0677	-0.5385
943	SLU 14	-0.94	-0.44	34.57	-15.4446	-0.0691	-0.5419
943	SLU 15	-0.95	-0.46	34.56	-15.4431	-0.0692	-0.5473
943	SLU 16	-0.93	-0.44	34.31	-15.3336	-0.0684	-0.5367
943	SLU 17	-0.94	-0.46	34.31	-15.3322	-0.0686	-0.5421
943	SLU 18	-0.94	-0.44	34.95	-15.6086	-0.0702	-0.5415
943	SLU 19	-0.95	-0.47	34.94	-15.6072	-0.0703	-0.5468
943	SLU 20	-0.95	-0.45	35.39	-15.8015	-0.0711	-0.5486
943	SLU 21	-0.96	-0.47	35.38	-15.8	-0.0712	-0.554
943	SLU 22	-0.91	-0.4	33.5	-14.9726	-0.0666	-0.5245
943	SLU 23	-0.93	-0.44	33.48	-14.9702	-0.0668	-0.5334
943	SLU 24	-0.93	-0.41	34.19	-15.2763	-0.0681	-0.5368
943	SLU 25	-0.94	-0.43	34.18	-15.2749	-0.0683	-0.5421
943	SLU 26	-0.94	-0.45	33.92	-15.163	-0.0677	-0.5405
943	SLU 27	-0.95	-0.41	34.63	-15.4692	-0.069	-0.5439
943	SLU 28	-0.95	-0.43	34.62	-15.4677	-0.0692	-0.5492
943	SLU 29	-0.94	-0.41	34.37	-15.3582	-0.0684	-0.5387
943	SLU 30	-0.95	-0.43	34.36	-15.3568	-0.0685	-0.544
943	SLU 31	-1	-0.47	37.01	-16.5118	-0.0751	-0.5777
943	SLU 32	-1.01	-0.43	37.72	-16.8179	-0.0764	-0.5811
943	SLU 33	-1.02	-0.46	37.71	-16.8165	-0.0766	-0.5864
943	SLU 34	-1.02	-0.47	37.45	-16.7046	-0.076	-0.5848
943	SLU 35	-1.02	-0.43	38.16	-17.0108	-0.0774	-0.5882
943	SLU 36	-1.03	-0.46	38.15	-17.0093	-0.0775	-0.5935
943	SLU 37	-1.01	-0.43	37.9	-16.8998	-0.0767	-0.583
943	SLU 38	-1.02	-0.46	37.89	-16.8984	-0.0769	-0.5883
943	SLU 39	-1.02	-0.44	38.54	-17.1748	-0.0785	-0.5878
943	SLU 40	-1.03	-0.47	38.53	-17.1734	-0.0786	-0.5931
943	SLU 41	-1.03	-0.44	38.98	-17.3677	-0.0794	-0.5949
943	SLU 42	-1.04	-0.47	38.97	-17.3662	-0.0795	-0.6002
943	SLU 43	-1.05	-0.53	37.65	-16.8913	-0.0729	-0.6058
943	SLU 44	-1.07	-0.57	37.64	-16.8889	-0.0731	-0.6147
943	SLU 45	-1.07	-0.53	38.35	-17.1951	-0.0745	-0.6181
943	SLU 46	-1.08	-0.56	38.34	-17.1936	-0.0746	-0.6235
943	SLU 47	-1.08	-0.57	38.07	-17.0817	-0.0741	-0.6218
943	SLU 48	-1.09	-0.54	38.78	-17.3879	-0.0754	-0.6252
943	SLU 49	-1.1	-0.56	38.77	-17.3865	-0.0755	-0.6306
943	SLU 50	-1.08	-0.54	38.53	-17.2769	-0.0748	-0.6201
943	SLU 51	-1.09	-0.56	38.52	-17.2755	-0.0749	-0.6254
943	SLU 52	-1.15	-0.6	41.17	-18.4305	-0.0815	-0.659
943	SLU 53	-1.15	-0.56	41.88	-18.7367	-0.0828	-0.6624
943	SLU 54	-1.16	-0.58	41.87	-18.7352	-0.0829	-0.6678
943	SLU 55	-1.16	-0.6	41.61	-18.6233	-0.0824	-0.6661
943	SLU 56	-1.16	-0.56	42.31	-18.9295	-0.0837	-0.6695
943	SLU 57	-1.17	-0.59	42.31	-18.9281	-0.0839	-0.6749
943	SLU 58	-1.15	-0.56	42.06	-18.8185	-0.0831	-0.6644
943	SLU 59	-1.16	-0.58	42.05	-18.8171	-0.0832	-0.6697
943	SLU 60	-1.16	-0.57	42.7	-19.0936	-0.0848	-0.6691
943	SLU 61	-1.17	-0.59	42.69	-19.0921	-0.085	-0.6745
943	SLU 62	-1.18	-0.57	43.13	-19.2864	-0.0857	-0.6762
943	SLU 63	-1.18	-0.59	43.12	-19.285	-0.0859	-0.6816
943	SLU 64	-1.13	-0.53	41.24	-18.4575	-0.0812	-0.6521
943	SLU 65	-1.15	-0.57	41.22	-18.4551	-0.0814	-0.661

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
943	SLU 66	-1.15	-0.53	41.93	-18.7613	-0.0828	-0.6644
943	SLU 67	-1.16	-0.55	41.92	-18.7598	-0.0829	-0.6697
943	SLU 68	-1.16	-0.57	41.66	-18.6479	-0.0823	-0.6681
943	SLU 69	-1.17	-0.53	42.37	-18.9541	-0.0837	-0.6715
943	SLU 70	-1.18	-0.56	42.36	-18.9527	-0.0838	-0.6768
943	SLU 71	-1.16	-0.53	42.11	-18.8431	-0.0831	-0.6663
943	SLU 72	-1.17	-0.56	42.1	-18.8417	-0.0832	-0.6716
943	SLU 73	-1.23	-0.59	44.76	-19.9967	-0.0898	-0.7053
943	SLU 74	-1.23	-0.56	45.46	-20.3029	-0.0911	-0.7087
943	SLU 75	-1.24	-0.58	45.46	-20.3014	-0.0912	-0.714
943	SLU 76	-1.24	-0.6	45.19	-20.1895	-0.0907	-0.7124
943	SLU 77	-1.24	-0.56	45.9	-20.4957	-0.092	-0.7158
943	SLU 78	-1.25	-0.58	45.89	-20.4943	-0.0921	-0.7211
943	SLU 79	-1.23	-0.56	45.64	-20.3847	-0.0914	-0.7106
943	SLU 80	-1.24	-0.58	45.64	-20.3833	-0.0915	-0.7159
943	SLU 81	-1.24	-0.56	46.28	-20.6598	-0.0931	-0.7154
943	SLU 82	-1.25	-0.59	46.27	-20.6583	-0.0932	-0.7207
943	SLU 83	-1.26	-0.57	46.72	-20.8526	-0.094	-0.7225
943	SLU 84	-1.26	-0.59	46.71	-20.8512	-0.0942	-0.7278
943	SLE RA 1	-0.85	-0.41	30.93	-13.8538	-0.0607	-0.4914
943	SLE RA 2	-0.86	-0.43	30.92	-13.8523	-0.0608	-0.4974
943	SLE RA 3	-0.87	-0.41	31.4	-14.0564	-0.0617	-0.4996
943	SLE RA 4	-0.87	-0.42	31.39	-14.0554	-0.0618	-0.5032
943	SLE RA 5	-0.87	-0.44	31.22	-13.9808	-0.0614	-0.5021
943	SLE RA 6	-0.88	-0.41	31.69	-14.1849	-0.0623	-0.5044
943	SLE RA 7	-0.88	-0.43	31.68	-14.184	-0.0624	-0.5079
943	SLE RA 8	-0.87	-0.41	31.52	-14.1109	-0.0619	-0.5009
943	SLE RA 9	-0.88	-0.43	31.51	-14.11	-0.062	-0.5045
943	SLE RA 10	-0.92	-0.45	33.28	-14.88	-0.0663	-0.5269
943	SLE RA 11	-0.92	-0.43	33.75	-15.0841	-0.0672	-0.5292
943	SLE RA 12	-0.93	-0.44	33.74	-15.0831	-0.0673	-0.5327
943	SLE RA 13	-0.92	-0.45	33.57	-15.0085	-0.067	-0.5316
943	SLE RA 14	-0.93	-0.43	34.04	-15.2126	-0.0679	-0.5339
943	SLE RA 15	-0.93	-0.44	34.04	-15.2117	-0.0679	-0.5375
943	SLE RA 16	-0.92	-0.43	33.87	-15.1387	-0.0674	-0.5305
943	SLE RA 17	-0.93	-0.44	33.86	-15.1377	-0.0675	-0.534
943	SLE RA 18	-0.93	-0.43	34.3	-15.322	-0.0686	-0.5336
943	SLE RA 19	-0.93	-0.45	34.29	-15.3211	-0.0687	-0.5372
943	SLE RA 20	-0.94	-0.43	34.59	-15.4506	-0.0692	-0.5384
943	SLE RA 21	-0.94	-0.45	34.58	-15.4496	-0.0693	-0.5419
943	SLE FR 1	-0.85	-0.41	30.93	-13.8538	-0.0607	-0.4914
943	SLE FR 2	-0.86	-0.41	30.93	-13.8535	-0.0607	-0.4926
943	SLE FR 3	-0.86	-0.41	31.05	-13.9053	-0.0609	-0.4933
943	SLE FR 4	-0.88	-0.42	31.94	-14.294	-0.0631	-0.5053
943	SLE FR 5	-0.88	-0.41	32.06	-14.3457	-0.0633	-0.506
943	SLE FR 6	-0.89	-0.42	32.61	-14.5879	-0.0646	-0.5125
943	SLE QP 1	-0.85	-0.41	30.93	-13.8538	-0.0607	-0.4914
943	SLE QP 2	-0.88	-0.41	31.94	-14.2943	-0.063	-0.5041
943	SLD 1	2.22	0.03	34.2	-14.7987	-0.0607	1.2735
943	SLD 2	1.92	-0.26	34.52	-14.9571	-0.061	1.1055
943	SLD 3	2.47	-0.93	34.49	-14.9289	-0.0626	1.4159
943	SLD 4	2.17	-1.21	34.81	-15.0872	-0.0629	1.2479
943	SLD 5	-0.27	1.21	32.12	-14.2202	-0.0594	-0.1571
943	SLD 6	-0.46	1.03	32.33	-14.3238	-0.0596	-0.2669
943	SLD 7	0.56	-1.96	33.09	-14.6541	-0.0657	0.3176
943	SLD 8	0.36	-2.15	33.3	-14.7576	-0.0659	0.2078
943	SLD 9	-2.12	1.32	30.59	-13.831	-0.0601	-1.2159
943	SLD 10	-2.31	1.13	30.8	-13.9346	-0.0603	-1.3258
943	SLD 11	-1.29	-1.86	31.55	-14.2649	-0.0665	-0.7413
943	SLD 12	-1.48	-2.04	31.76	-14.3684	-0.0667	-0.8511
943	SLD 13	-3.92	0.38	29.07	-13.5014	-0.0632	-2.256
943	SLD 14	-4.22	0.1	29.39	-13.6598	-0.0635	-2.4241
943	SLD 15	-3.68	-0.57	29.36	-13.6315	-0.0651	-2.1137
943	SLD 16	-3.97	-0.86	29.68	-13.7899	-0.0654	-2.2817
943	SLV 1	6.36	0.58	37.23	-15.4777	-0.0576	3.6546
943	SLV 2	5.68	-0.09	37.98	-15.8466	-0.0582	3.2632
943	SLV 3	6.94	-1.57	37.9	-15.7789	-0.0619	3.9864
943	SLV 4	6.26	-2.24	38.65	-16.1478	-0.0625	3.595
943	SLV 5	0.53	3.27	32.38	-14.1294	-0.0547	0.3073
943	SLV 6	0.1	2.84	32.86	-14.3665	-0.0552	0.0558
943	SLV 7	2.46	-3.92	34.62	-15.1332	-0.0691	1.4134
943	SLV 8	2.02	-4.35	35.1	-15.3703	-0.0695	1.1619
943	SLV 9	-3.78	3.52	28.79	-13.2183	-0.0565	-2.17
943	SLV 10	-4.22	3.09	29.26	-13.4554	-0.057	-2.4216
943	SLV 11	-1.85	-3.67	31.02	-14.2221	-0.0709	-1.0639
943	SLV 12	-2.29	-4.1	31.5	-14.4592	-0.0713	-1.3155
943	SLV 13	-8.01	1.41	25.24	-12.4408	-0.0635	-4.6032
943	SLV 14	-8.69	0.75	25.98	-12.8097	-0.0642	-4.9946
943	SLV 15	-7.43	-0.74	25.91	-12.742	-0.0678	-4.2714
943	SLV 16	-8.11	-1.41	26.65	-13.1109	-0.0685	-4.6628
943	CRTFP Ux+	0	0	0	0	0	0
943	CRTFP Ux-	0	0	0	0	0	0
943	CRTFP Uy+	0	0	0	0	0	0
943	CRTFP Uy-	0	0	0	0	0	0
944	SLU 1	-0.83	-0.42	31.82	-15.2061	-0.0607	-0.4774
944	SLU 2	-0.85	-0.46	31.81	-15.2083	-0.061	-0.4861
944	SLU 3	-0.85	-0.42	32.56	-15.5574	-0.0624	-0.4897
944	SLU 4	-0.86	-0.44	32.56	-15.5588	-0.0625	-0.4949
944	SLU 5	-0.86	-0.46	32.28	-15.4299	-0.0619	-0.4932
944	SLU 6	-0.86	-0.42	33.03	-15.779	-0.0633	-0.4967
944	SLU 7	-0.87	-0.45	33.03	-15.7804	-0.0635	-0.502
944	SLU 8	-0.85	-0.42	32.75	-15.6492	-0.0626	-0.4916
944	SLU 9	-0.86	-0.45	32.75	-15.6506	-0.0628	-0.4968
944	SLU 10	-0.92	-0.48	35.61	-16.9976	-0.0697	-0.5308
944	SLU 11	-0.93	-0.44	36.37	-17.3467	-0.0711	-0.5343
944	SLU 12	-0.94	-0.47	36.36	-17.3481	-0.0712	-0.5395
944	SLU 13	-0.94	-0.48	36.08	-17.2192	-0.0707	-0.5379

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
944	SLU 14	-0.94	-0.45	36.83	-17.5683	-0.072	-0.5414
944	SLU 15	-0.95	-0.47	36.83	-17.5697	-0.0722	-0.5466
944	SLU 16	-0.93	-0.44	36.55	-17.4385	-0.0713	-0.5362
944	SLU 17	-0.94	-0.47	36.55	-17.4399	-0.0715	-0.5414
944	SLU 18	-0.94	-0.45	37.25	-17.7622	-0.0732	-0.5412
944	SLU 19	-0.95	-0.47	37.25	-17.7635	-0.0734	-0.5464
944	SLU 20	-0.95	-0.45	37.72	-17.9837	-0.0741	-0.5483
944	SLU 21	-0.96	-0.48	37.71	-17.9851	-0.0743	-0.5535
944	SLU 22	-0.91	-0.41	35.67	-17.0204	-0.0694	-0.524
944	SLU 23	-0.93	-0.45	35.67	-17.0227	-0.0696	-0.5327
944	SLU 24	-0.93	-0.41	36.42	-17.3718	-0.071	-0.5363
944	SLU 25	-0.94	-0.44	36.42	-17.3731	-0.0712	-0.5415
944	SLU 26	-0.94	-0.45	36.14	-17.2443	-0.0706	-0.5398
944	SLU 27	-0.94	-0.42	36.89	-17.5934	-0.0719	-0.5433
944	SLU 28	-0.95	-0.44	36.88	-17.5947	-0.0721	-0.5485
944	SLU 29	-0.94	-0.42	36.61	-17.4636	-0.0712	-0.5382
944	SLU 30	-0.94	-0.44	36.6	-17.4649	-0.0714	-0.5434
944	SLU 31	-1	-0.47	39.47	-18.812	-0.0784	-0.5774
944	SLU 32	-1.01	-0.44	40.22	-19.1611	-0.0797	-0.5809
944	SLU 33	-1.02	-0.46	40.22	-19.1624	-0.0799	-0.5861
944	SLU 34	-1.02	-0.48	39.94	-19.0335	-0.0793	-0.5844
944	SLU 35	-1.02	-0.44	40.69	-19.3826	-0.0806	-0.588
944	SLU 36	-1.03	-0.46	40.69	-19.384	-0.0808	-0.5932
944	SLU 37	-1.01	-0.44	40.41	-19.2528	-0.08	-0.5828
944	SLU 38	-1.02	-0.46	40.41	-19.2542	-0.0801	-0.588
944	SLU 39	-1.02	-0.44	41.11	-19.5765	-0.0818	-0.5878
944	SLU 40	-1.03	-0.47	41.11	-19.5779	-0.082	-0.593
944	SLU 41	-1.03	-0.45	41.58	-19.7981	-0.0828	-0.5949
944	SLU 42	-1.04	-0.47	41.57	-19.7995	-0.0829	-0.6001
944	SLU 43	-1.05	-0.54	40.04	-19.1458	-0.076	-0.6047
944	SLU 44	-1.07	-0.58	40.03	-19.1481	-0.0763	-0.6134
944	SLU 45	-1.07	-0.55	40.78	-19.4972	-0.0776	-0.6169
944	SLU 46	-1.08	-0.57	40.78	-19.4986	-0.0778	-0.6221
944	SLU 47	-1.08	-0.59	40.5	-19.3697	-0.0772	-0.6204
944	SLU 48	-1.08	-0.55	41.25	-19.7188	-0.0785	-0.624
944	SLU 49	-1.09	-0.57	41.25	-19.7201	-0.0787	-0.6292
944	SLU 50	-1.08	-0.55	40.97	-19.589	-0.0779	-0.6188
944	SLU 51	-1.08	-0.57	40.97	-19.5903	-0.078	-0.624
944	SLU 52	-1.14	-0.61	43.84	-20.9374	-0.085	-0.658
944	SLU 53	-1.15	-0.57	44.59	-21.2865	-0.0863	-0.6616
944	SLU 54	-1.16	-0.59	44.58	-21.2878	-0.0865	-0.6668
944	SLU 55	-1.16	-0.61	44.3	-21.1589	-0.0859	-0.6651
944	SLU 56	-1.16	-0.57	45.05	-21.508	-0.0873	-0.6687
944	SLU 57	-1.17	-0.6	45.05	-21.5094	-0.0874	-0.6739
944	SLU 58	-1.15	-0.57	44.78	-21.3782	-0.0866	-0.6635
944	SLU 59	-1.16	-0.6	44.77	-21.3796	-0.0868	-0.6687
944	SLU 60	-1.16	-0.58	45.47	-21.7019	-0.0885	-0.6685
944	SLU 61	-1.17	-0.6	45.47	-21.7033	-0.0886	-0.6737
944	SLU 62	-1.17	-0.58	45.94	-21.9235	-0.0894	-0.6756
944	SLU 63	-1.18	-0.6	45.94	-21.9249	-0.0896	-0.6808
944	SLU 64	-1.13	-0.54	43.9	-20.9602	-0.0846	-0.6513
944	SLU 65	-1.15	-0.58	43.89	-20.9624	-0.0849	-0.66
944	SLU 66	-1.15	-0.54	44.64	-21.3115	-0.0863	-0.6635
944	SLU 67	-1.16	-0.57	44.64	-21.3129	-0.0864	-0.6687
944	SLU 68	-1.16	-0.58	44.36	-21.184	-0.0858	-0.667
944	SLU 69	-1.17	-0.54	45.11	-21.5331	-0.0872	-0.6706
944	SLU 70	-1.18	-0.57	45.11	-21.5345	-0.0874	-0.6758
944	SLU 71	-1.16	-0.54	44.83	-21.4033	-0.0865	-0.6654
944	SLU 72	-1.17	-0.57	44.83	-21.4047	-0.0867	-0.6706
944	SLU 73	-1.23	-0.6	47.69	-22.7517	-0.0936	-0.7046
944	SLU 74	-1.23	-0.56	48.45	-23.1008	-0.095	-0.7082
944	SLU 75	-1.24	-0.59	48.44	-23.1022	-0.0951	-0.7134
944	SLU 76	-1.24	-0.6	48.16	-22.9733	-0.0946	-0.7117
944	SLU 77	-1.24	-0.57	48.91	-23.3224	-0.0959	-0.7153
944	SLU 78	-1.25	-0.59	48.91	-23.3238	-0.0961	-0.7205
944	SLU 79	-1.23	-0.57	48.63	-23.1926	-0.0952	-0.7101
944	SLU 80	-1.24	-0.59	48.63	-23.194	-0.0954	-0.7153
944	SLU 81	-1.24	-0.57	49.33	-23.5163	-0.0971	-0.7151
944	SLU 82	-1.25	-0.6	49.33	-23.5176	-0.0973	-0.7203
944	SLU 83	-1.26	-0.57	49.8	-23.7378	-0.098	-0.7222
944	SLU 84	-1.27	-0.6	49.79	-23.7392	-0.0982	-0.7274
944	SLE RA 1	-0.85	-0.41	32.92	-15.7244	-0.0632	-0.4907
944	SLE RA 2	-0.86	-0.44	32.91	-15.726	-0.0634	-0.4965
944	SLE RA 3	-0.87	-0.42	33.42	-15.9587	-0.0643	-0.4989
944	SLE RA 4	-0.87	-0.43	33.41	-15.9596	-0.0644	-0.5024
944	SLE RA 5	-0.87	-0.44	33.23	-15.8737	-0.064	-0.5012
944	SLE RA 6	-0.88	-0.42	33.73	-16.1064	-0.0649	-0.5036
944	SLE RA 7	-0.88	-0.43	33.72	-16.1073	-0.065	-0.5071
944	SLE RA 8	-0.87	-0.42	33.54	-16.0199	-0.0644	-0.5002
944	SLE RA 9	-0.88	-0.43	33.54	-16.0208	-0.0646	-0.5036
944	SLE RA 10	-0.92	-0.46	35.45	-16.9188	-0.0692	-0.5263
944	SLE RA 11	-0.92	-0.43	35.95	-17.1515	-0.0701	-0.5287
944	SLE RA 12	-0.93	-0.45	35.95	-17.1525	-0.0702	-0.5322
944	SLE RA 13	-0.92	-0.46	35.76	-17.0665	-0.0698	-0.531
944	SLE RA 14	-0.93	-0.43	36.26	-17.2993	-0.0707	-0.5334
944	SLE RA 15	-0.93	-0.45	36.26	-17.3002	-0.0708	-0.5369
944	SLE RA 16	-0.92	-0.43	36.08	-17.2127	-0.0703	-0.5299
944	SLE RA 17	-0.93	-0.45	36.07	-17.2136	-0.0704	-0.5334
944	SLE RA 18	-0.93	-0.44	36.54	-17.4285	-0.0715	-0.5333
944	SLE RA 19	-0.93	-0.45	36.54	-17.4294	-0.0716	-0.5368
944	SLE RA 20	-0.94	-0.44	36.85	-17.5762	-0.0721	-0.538
944	SLE RA 21	-0.94	-0.45	36.85	-17.5771	-0.0722	-0.5415
944	SLE FR 1	-0.85	-0.41	32.92	-15.7244	-0.0632	-0.4907
944	SLE FR 2	-0.86	-0.42	32.92	-15.7247	-0.0632	-0.4919
944	SLE FR 3	-0.86	-0.42	33.04	-15.7835	-0.0634	-0.4926
944	SLE FR 4	-0.88	-0.43	34	-16.236	-0.0657	-0.5047
944	SLE FR 5	-0.88	-0.42	34.13	-16.2947	-0.0659	-0.5054

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
944	SLE FR 6	-0.89	-0.43	34.73	-16.5765	-0.0674	-0.512
944	SLE QP 1	-0.85	-0.41	32.92	-15.7244	-0.0632	-0.4907
944	SLE QP 2	-0.88	-0.42	34.01	-16.2357	-0.0657	-0.5035
944	SLD 1	2.22	-0.02	36.29	-16.8993	-0.0683	1.2762
944	SLD 2	1.93	-0.28	36.62	-17.0691	-0.0683	1.1085
944	SLD 3	2.47	-0.96	36.61	-17.0548	-0.0708	1.4185
944	SLD 4	2.18	-1.23	36.93	-17.2246	-0.0708	1.2508
944	SLD 5	-0.27	1.18	34.16	-16.1688	-0.0627	-0.1558
944	SLD 6	-0.46	1.01	34.37	-16.2798	-0.0627	-0.2654
944	SLD 7	0.56	-1.97	35.2	-16.6873	-0.071	0.3186
944	SLD 8	0.37	-2.14	35.41	-16.7983	-0.071	0.209
944	SLD 9	-2.12	1.3	32.6	-15.6731	-0.0604	-1.216
944	SLD 10	-2.31	1.13	32.81	-15.784	-0.0604	-1.3256
944	SLD 11	-1.29	-1.85	33.64	-16.1915	-0.0687	-0.7416
944	SLD 12	-1.48	-2.02	33.85	-16.3025	-0.0687	-0.8512
944	SLD 13	-3.93	0.39	31.08	-15.2467	-0.0606	-2.2578
944	SLD 14	-4.22	0.12	31.41	-15.4165	-0.0606	-2.4255
944	SLD 15	-3.68	-0.56	31.39	-15.4023	-0.0631	-2.1155
944	SLD 16	-3.97	-0.83	31.72	-15.572	-0.0631	-2.2832
944	SLV 1	6.37	0.49	39.36	-17.7937	-0.0719	3.66
944	SLV 2	5.69	-0.14	40.12	-18.1892	-0.0719	3.2694
944	SLV 3	6.95	-1.65	40.09	-18.1513	-0.0775	3.9917
944	SLV 4	6.27	-2.28	40.85	-18.5467	-0.0775	3.6012
944	SLV 5	0.54	3.2	34.39	-16.0931	-0.059	0.3094
944	SLV 6	0.1	2.8	34.87	-16.3472	-0.0591	0.0584
944	SLV 7	2.47	-3.93	36.8	-17.2849	-0.0777	1.4151
944	SLV 8	2.03	-4.33	37.28	-17.539	-0.0777	1.1641
944	SLV 9	-3.78	3.48	30.73	-14.9323	-0.0536	-2.1711
944	SLV 10	-4.22	3.08	31.21	-15.1865	-0.0537	-2.4221
944	SLV 11	-1.85	-3.64	33.14	-16.1241	-0.0723	-1.0654
944	SLV 12	-2.29	-4.04	33.62	-16.3783	-0.0723	-1.3164
944	SLV 13	-8.02	1.43	27.17	-13.9246	-0.0539	-4.6082
944	SLV 14	-8.7	0.81	27.92	-14.32	-0.0539	-4.9987
944	SLV 15	-7.44	-0.71	27.89	-14.2821	-0.0595	-4.2765
944	SLV 16	-8.13	-1.33	28.65	-14.6776	-0.0595	-4.667
944	CRTFP Ux+	0	0	0	0	0	0
944	CRTFP Ux-	0	0	0	0	0	0
944	CRTFP Uy+	0	0	0	0	0	0
944	CRTFP Uy-	0	0	0	0	0	0
945	SLU 1	-0.56	-0.28	22.6	-11.4052	1.3852	-0.3047
945	SLU 2	-0.57	-0.31	22.61	-11.4098	1.3852	-0.3087
945	SLU 3	-0.57	-0.29	23.14	-11.6725	1.4178	-0.3128
945	SLU 4	-0.58	-0.3	23.14	-11.6752	1.4178	-0.3152
945	SLU 5	-0.58	-0.31	22.94	-11.5774	1.4056	-0.3133
945	SLU 6	-0.58	-0.29	23.47	-11.8401	1.4382	-0.3174
945	SLU 7	-0.59	-0.3	23.47	-11.8429	1.4382	-0.3198
945	SLU 8	-0.58	-0.29	23.27	-11.7405	1.4259	-0.3139
945	SLU 9	-0.58	-0.3	23.27	-11.7432	1.4259	-0.3163
945	SLU 10	-0.62	-0.32	25.34	-12.774	1.5521	-0.3383
945	SLU 11	-0.63	-0.3	25.87	-13.0367	1.5847	-0.3424
945	SLU 12	-0.63	-0.32	25.87	-13.0395	1.5847	-0.3448
945	SLU 13	-0.63	-0.33	25.67	-12.9417	1.5724	-0.343
945	SLU 14	-0.64	-0.3	26.2	-13.2044	1.605	-0.347
945	SLU 15	-0.64	-0.32	26.2	-13.2071	1.605	-0.3495
945	SLU 16	-0.63	-0.3	26	-13.1047	1.5928	-0.3436
945	SLU 17	-0.64	-0.32	26	-13.1075	1.5928	-0.346
945	SLU 18	-0.64	-0.3	26.5	-13.3542	1.6235	-0.347
945	SLU 19	-0.64	-0.32	26.5	-13.3569	1.6235	-0.3494
945	SLU 20	-0.64	-0.3	26.84	-13.5218	1.6439	-0.3517
945	SLU 21	-0.65	-0.32	26.84	-13.5245	1.6439	-0.3541
945	SLU 22	-0.62	-0.28	25.37	-12.7863	1.5542	-0.3368
945	SLU 23	-0.63	-0.31	25.37	-12.7909	1.5542	-0.3408
945	SLU 24	-0.63	-0.28	25.9	-13.0536	1.5868	-0.3449
945	SLU 25	-0.64	-0.3	25.9	-13.0563	1.5868	-0.3473
945	SLU 26	-0.63	-0.31	25.7	-12.9585	1.5746	-0.3454
945	SLU 27	-0.64	-0.28	26.23	-13.2212	1.6072	-0.3495
945	SLU 28	-0.64	-0.3	26.23	-13.2239	1.6072	-0.3519
945	SLU 29	-0.63	-0.28	26.03	-13.1216	1.5949	-0.346
945	SLU 30	-0.64	-0.3	26.03	-13.1243	1.5949	-0.3484
945	SLU 31	-0.68	-0.32	28.1	-14.1551	1.721	-0.3704
945	SLU 32	-0.68	-0.29	28.63	-14.4178	1.7537	-0.3745
945	SLU 33	-0.69	-0.31	28.63	-14.4205	1.7537	-0.3769
945	SLU 34	-0.69	-0.32	28.43	-14.3227	1.7414	-0.3751
945	SLU 35	-0.69	-0.29	28.96	-14.5854	1.774	-0.3791
945	SLU 36	-0.7	-0.31	28.96	-14.5882	1.774	-0.3815
945	SLU 37	-0.69	-0.29	28.76	-14.4858	1.7617	-0.3757
945	SLU 38	-0.69	-0.31	28.76	-14.4886	1.7618	-0.3781
945	SLU 39	-0.69	-0.3	29.27	-14.7352	1.7925	-0.3791
945	SLU 40	-0.7	-0.31	29.27	-14.738	1.7925	-0.3815
945	SLU 41	-0.7	-0.3	29.6	-14.9029	1.8129	-0.3837
945	SLU 42	-0.71	-0.31	29.6	-14.9056	1.8129	-0.3861
945	SLU 43	-0.71	-0.37	28.44	-14.3533	1.7429	-0.3851
945	SLU 44	-0.72	-0.4	28.44	-14.3579	1.7429	-0.3891
945	SLU 45	-0.72	-0.37	28.97	-14.6206	1.7755	-0.3932
945	SLU 46	-0.73	-0.39	28.97	-14.6233	1.7755	-0.3956
945	SLU 47	-0.73	-0.4	28.77	-14.5255	1.7632	-0.3937
945	SLU 48	-0.73	-0.37	29.3	-14.7882	1.7958	-0.3978
945	SLU 49	-0.74	-0.39	29.3	-14.7909	1.7958	-0.4002
945	SLU 50	-0.73	-0.37	29.1	-14.6886	1.7836	-0.3943
945	SLU 51	-0.73	-0.39	29.1	-14.6913	1.7836	-0.3967
945	SLU 52	-0.77	-0.41	31.17	-15.7221	1.9097	-0.4187
945	SLU 53	-0.78	-0.39	31.7	-15.9848	1.9423	-0.4228
945	SLU 54	-0.78	-0.4	31.7	-15.9875	1.9423	-0.4252
945	SLU 55	-0.78	-0.41	31.5	-15.8897	1.93	-0.4234
945	SLU 56	-0.79	-0.39	32.03	-16.1524	1.9626	-0.4274
945	SLU 57	-0.79	-0.4	32.03	-16.1552	1.9626	-0.4299
945	SLU 58	-0.78	-0.39	31.83	-16.0528	1.9504	-0.424

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
945	SLU 59	-0.79	-0.4	31.83	-16.0555	1.9504	-0.4264
945	SLU 60	-0.79	-0.39	32.34	-16.3022	1.9812	-0.4274
945	SLU 61	-0.79	-0.41	32.34	-16.305	1.9812	-0.4298
945	SLU 62	-0.79	-0.39	32.67	-16.4699	2.0015	-0.4321
945	SLU 63	-0.8	-0.41	32.67	-16.4726	2.0015	-0.4345
945	SLU 64	-0.76	-0.36	31.2	-15.7344	1.9118	-0.4172
945	SLU 65	-0.77	-0.39	31.2	-15.7389	1.9119	-0.4212
945	SLU 66	-0.78	-0.37	31.73	-16.0016	1.9445	-0.4253
945	SLU 67	-0.79	-0.38	31.74	-16.0044	1.9445	-0.4277
945	SLU 68	-0.78	-0.39	31.54	-15.9066	1.9322	-0.4258
945	SLU 69	-0.79	-0.37	32.07	-16.1693	1.9648	-0.4299
945	SLU 70	-0.79	-0.39	32.07	-16.172	1.9648	-0.4323
945	SLU 71	-0.78	-0.37	31.87	-16.0696	1.9526	-0.4264
945	SLU 72	-0.79	-0.38	31.87	-16.0724	1.9526	-0.4288
945	SLU 73	-0.83	-0.41	33.93	-17.1032	2.0787	-0.4508
945	SLU 74	-0.83	-0.38	34.46	-17.3659	2.1113	-0.4549
945	SLU 75	-0.84	-0.4	34.46	-17.3686	2.1113	-0.4573
945	SLU 76	-0.84	-0.41	34.26	-17.2708	2.099	-0.4555
945	SLU 77	-0.84	-0.38	34.8	-17.5335	2.1316	-0.4595
945	SLU 78	-0.85	-0.4	34.8	-17.5362	2.1316	-0.4619
945	SLU 79	-0.83	-0.38	34.59	-17.4339	2.1194	-0.4561
945	SLU 80	-0.84	-0.4	34.6	-17.4366	2.1194	-0.4585
945	SLU 81	-0.84	-0.38	35.1	-17.6833	2.1502	-0.4595
945	SLU 82	-0.85	-0.4	35.1	-17.686	2.1502	-0.4619
945	SLU 83	-0.85	-0.38	35.43	-17.8509	2.1705	-0.4641
945	SLU 84	-0.85	-0.4	35.43	-17.8537	2.1705	-0.4666
945	SLE RA 1	-0.58	-0.28	23.39	-11.7998	1.4335	-0.3138
945	SLE RA 2	-0.58	-0.3	23.39	-11.8029	1.4335	-0.3165
945	SLE RA 3	-0.59	-0.28	23.75	-11.978	1.4553	-0.3192
945	SLE RA 4	-0.59	-0.29	23.75	-11.9798	1.4553	-0.3208
945	SLE RA 5	-0.59	-0.3	23.62	-11.9146	1.4471	-0.3196
945	SLE RA 6	-0.59	-0.28	23.97	-12.0898	1.4688	-0.3223
945	SLE RA 7	-0.6	-0.3	23.97	-12.0916	1.4688	-0.3239
945	SLE RA 8	-0.59	-0.28	23.84	-12.0233	1.4607	-0.32
945	SLE RA 9	-0.59	-0.3	23.84	-12.0252	1.4607	-0.3216
945	SLE RA 10	-0.62	-0.31	25.21	-12.7124	1.5447	-0.3363
945	SLE RA 11	-0.62	-0.29	25.57	-12.8875	1.5665	-0.339
945	SLE RA 12	-0.63	-0.3	25.57	-12.8893	1.5665	-0.3406
945	SLE RA 13	-0.62	-0.31	25.44	-12.8241	1.5583	-0.3394
945	SLE RA 14	-0.63	-0.29	25.79	-12.9993	1.58	-0.3421
945	SLE RA 15	-0.63	-0.3	25.79	-13.0011	1.58	-0.3437
945	SLE RA 16	-0.62	-0.29	25.66	-12.9328	1.5719	-0.3398
945	SLE RA 17	-0.63	-0.3	25.66	-12.9347	1.5719	-0.3414
945	SLE RA 18	-0.63	-0.29	25.99	-13.0991	1.5924	-0.3421
945	SLE RA 19	-0.63	-0.31	25.99	-13.1009	1.5924	-0.3437
945	SLE RA 20	-0.63	-0.3	26.21	-13.2109	1.606	-0.3452
945	SLE RA 21	-0.64	-0.31	26.22	-13.2127	1.606	-0.3468
945	SLE FR 1	-0.58	-0.28	23.39	-11.7998	1.4335	-0.3138
945	SLE FR 2	-0.58	-0.28	23.39	-11.8004	1.4335	-0.3144
945	SLE FR 3	-0.58	-0.28	23.48	-11.8445	1.4389	-0.3151
945	SLE FR 4	-0.59	-0.29	24.17	-12.1902	1.4812	-0.3228
945	SLE FR 5	-0.59	-0.29	24.26	-12.2343	1.4866	-0.3235
945	SLE FR 6	-0.6	-0.29	24.69	-12.4495	1.5129	-0.328
945	SLE QP 1	-0.58	-0.28	23.39	-11.7998	1.4335	-0.3138
945	SLE QP 2	-0.59	-0.29	24.17	-12.1896	1.4812	-0.3223
945	SLD 1	1.51	-0.05	25.81	-12.7684	1.5807	0.8882
945	SLD 2	1.31	-0.22	26.03	-12.889	1.5943	0.7851
945	SLD 3	1.68	-0.69	26.05	-12.8956	1.5949	0.9853
945	SLD 4	1.48	-0.86	26.27	-13.0163	1.6085	0.8823
945	SLD 5	-0.18	0.79	24.27	-12.1489	1.4871	-0.0883
945	SLD 6	-0.31	0.67	24.41	-12.2278	1.496	-0.1557
945	SLD 7	0.38	-1.35	25.06	-12.5731	1.5344	0.2356
945	SLD 8	0.25	-1.46	25.2	-12.6519	1.5433	0.1682
945	SLD 9	-1.43	0.89	23.15	-11.7273	1.419	-0.8129
945	SLD 10	-1.56	0.78	23.29	-11.8061	1.4279	-0.8802
945	SLD 11	-0.87	-1.24	23.94	-12.1515	1.4663	-0.4889
945	SLD 12	-1	-1.36	24.08	-12.2303	1.4752	-0.5563
945	SLD 13	-2.66	0.29	22.08	-11.363	1.3538	-1.5269
945	SLD 14	-2.86	0.12	22.3	-11.4836	1.3675	-1.63
945	SLD 15	-2.5	-0.35	22.32	-11.4902	1.368	-1.4297
945	SLD 16	-2.69	-0.52	22.53	-11.6108	1.3816	-1.5328
945	SLV 1	4.33	0.24	28.02	-13.549	1.7145	2.5095
945	SLV 2	3.86	-0.15	28.52	-13.8299	1.7462	2.2695
945	SLV 3	4.72	-1.21	28.56	-13.8401	1.7472	2.7362
945	SLV 4	4.26	-1.6	29.07	-14.1211	1.7789	2.4962
945	SLV 5	0.37	2.13	24.41	-12.1077	1.4962	0.2245
945	SLV 6	0.07	1.88	24.74	-12.2883	1.5166	0.0702
945	SLV 7	1.67	-2.69	26.23	-13.0782	1.6051	0.9803
945	SLV 8	1.38	-2.94	26.56	-13.2588	1.6255	0.826
945	SLV 9	-2.56	2.37	21.79	-11.1204	1.3369	-1.4706
945	SLV 10	-2.86	2.12	22.12	-11.301	1.3572	-1.6249
945	SLV 11	-1.26	-2.45	23.61	-12.091	1.4458	-0.7149
945	SLV 12	-1.55	-2.7	23.93	-12.2715	1.4662	-0.8691
945	SLV 13	-5.44	1.03	19.28	-10.2581	1.1835	-3.1409
945	SLV 14	-5.9	0.64	19.78	-10.5391	1.2152	-3.3809
945	SLV 15	-5.05	-0.42	19.82	-10.5493	1.2161	-2.9141
945	SLV 16	-5.51	-0.81	20.33	-10.8303	1.2479	-3.1541
945	CRTFP Ux+	0	0	0	0	0	0
945	CRTFP Ux-	0	0	0	0	0	0
945	CRTFP Uy+	0	0	0	0	0	0
945	CRTFP Uy-	0	0	0	0	0	0
948	SLU 1	-2.33	-1.26	108.51	-28.4263	-2.0586	-0.6438
948	SLU 2	-2.37	-1.39	108.54	-28.4372	-2.0703	-0.6557
948	SLU 3	-2.39	-1.28	111.08	-29.1006	-2.1118	-0.6602
948	SLU 4	-2.42	-1.35	111.1	-29.1072	-2.1188	-0.6673
948	SLU 5	-2.41	-1.4	110.1	-28.8502	-2.098	-0.6652
948	SLU 6	-2.42	-1.29	112.64	-29.5137	-2.1394	-0.6696

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
948	SLU 7	-2.45	-1.36	112.66	-29.5202	-2.1465	-0.6768
948	SLU 8	-2.4	-1.29	111.63	-29.2524	-2.1139	-0.6627
948	SLU 9	-2.42	-1.36	111.65	-29.2589	-2.1209	-0.6698
948	SLU 10	-2.61	-1.43	121.88	-31.9192	-2.3715	-0.716
948	SLU 11	-2.63	-1.32	124.42	-32.5827	-2.4129	-0.7205
948	SLU 12	-2.65	-1.39	124.44	-32.5892	-2.42	-0.7276
948	SLU 13	-2.64	-1.44	123.44	-32.3323	-2.3991	-0.7255
948	SLU 14	-2.66	-1.33	125.98	-32.9957	-2.4406	-0.7299
948	SLU 15	-2.69	-1.4	126	-33.0023	-2.4476	-0.7371
948	SLU 16	-2.64	-1.33	124.97	-32.7344	-2.415	-0.723
948	SLU 17	-2.66	-1.4	124.99	-32.741	-2.422	-0.7301
948	SLU 18	-2.67	-1.32	127.56	-33.4007	-2.4888	-0.73
948	SLU 19	-2.7	-1.39	127.58	-33.4072	-2.4958	-0.7371
948	SLU 20	-2.71	-1.33	129.12	-33.8137	-2.5164	-0.7394
948	SLU 21	-2.73	-1.41	129.14	-33.8202	-2.5235	-0.7466
948	SLU 22	-2.58	-1.23	121.96	-31.9419	-2.351	-0.7068
948	SLU 23	-2.62	-1.35	122	-31.9527	-2.3627	-0.7187
948	SLU 24	-2.63	-1.24	124.54	-32.6162	-2.4042	-0.7231
948	SLU 25	-2.66	-1.32	124.56	-32.6227	-2.4112	-0.7303
948	SLU 26	-2.65	-1.36	123.56	-32.3658	-2.3903	-0.7281
948	SLU 27	-2.67	-1.25	126.1	-33.0292	-2.4318	-0.7326
948	SLU 28	-2.69	-1.33	126.12	-33.0358	-2.4388	-0.7397
948	SLU 29	-2.64	-1.25	125.09	-32.7679	-2.4062	-0.7256
948	SLU 30	-2.66	-1.33	125.11	-32.7745	-2.4133	-0.7328
948	SLU 31	-2.85	-1.39	135.34	-35.4348	-2.6638	-0.779
948	SLU 32	-2.87	-1.28	137.87	-36.0983	-2.7053	-0.7835
948	SLU 33	-2.9	-1.36	137.9	-36.1048	-2.7123	-0.7906
948	SLU 34	-2.89	-1.4	136.9	-35.8478	-2.6914	-0.7884
948	SLU 35	-2.9	-1.29	139.44	-36.5113	-2.7329	-0.7929
948	SLU 36	-2.93	-1.37	139.46	-36.5178	-2.7399	-0.8
948	SLU 37	-2.88	-1.29	138.43	-36.25	-2.7074	-0.7859
948	SLU 38	-2.9	-1.37	138.45	-36.2565	-2.7144	-0.7931
948	SLU 39	-2.92	-1.29	141.02	-36.9162	-2.7812	-0.7929
948	SLU 40	-2.94	-1.36	141.04	-36.9228	-2.7882	-0.8001
948	SLU 41	-2.95	-1.3	142.58	-37.3293	-2.8088	-0.8024
948	SLU 42	-2.97	-1.37	142.6	-37.3358	-2.8158	-0.8095
948	SLU 43	-2.95	-1.66	136.44	-35.7488	-2.576	-0.8154
948	SLU 44	-2.99	-1.78	136.48	-35.7597	-2.5877	-0.8273
948	SLU 45	-3.01	-1.67	139.02	-36.4232	-2.6292	-0.8317
948	SLU 46	-3.03	-1.74	139.04	-36.4297	-2.6362	-0.8389
948	SLU 47	-3.02	-1.79	138.04	-36.1728	-2.6153	-0.8367
948	SLU 48	-3.04	-1.68	140.58	-36.8362	-2.6568	-0.8412
948	SLU 49	-3.07	-1.75	140.6	-36.8427	-2.6638	-0.8483
948	SLU 50	-3.02	-1.68	139.57	-36.5749	-2.6312	-0.8342
948	SLU 51	-3.04	-1.75	139.59	-36.5814	-2.6383	-0.8414
948	SLU 52	-3.23	-1.82	149.82	-39.2418	-2.8888	-0.8876
948	SLU 53	-3.25	-1.71	152.35	-39.9053	-2.9303	-0.8921
948	SLU 54	-3.27	-1.78	152.38	-39.9118	-2.9373	-0.8992
948	SLU 55	-3.26	-1.83	151.38	-39.6548	-2.9164	-0.897
948	SLU 56	-3.28	-1.72	153.92	-40.3183	-2.9579	-0.9015
948	SLU 57	-3.3	-1.79	153.94	-40.3248	-2.9649	-0.9086
948	SLU 58	-3.25	-1.72	152.9	-40.057	-2.9324	-0.8945
948	SLU 59	-3.28	-1.79	152.93	-40.0635	-2.9394	-0.9017
948	SLU 60	-3.29	-1.71	155.5	-40.7232	-3.0062	-0.9015
948	SLU 61	-3.31	-1.78	155.52	-40.7298	-3.0132	-0.9087
948	SLU 62	-3.32	-1.72	157.06	-41.1363	-3.0338	-0.911
948	SLU 63	-3.35	-1.8	157.08	-41.1428	-3.0408	-0.9181
948	SLU 64	-3.19	-1.62	149.9	-39.2644	-2.8683	-0.8783
948	SLU 65	-3.23	-1.74	149.94	-39.2753	-2.88	-0.8902
948	SLU 66	-3.25	-1.63	152.47	-39.9387	-2.9215	-0.8947
948	SLU 67	-3.28	-1.71	152.5	-39.9453	-2.9285	-0.9018
948	SLU 68	-3.27	-1.76	151.5	-39.6883	-2.9077	-0.8997
948	SLU 69	-3.28	-1.64	154.04	-40.3518	-2.9491	-0.9041
948	SLU 70	-3.31	-1.72	154.06	-40.3583	-2.9562	-0.9113
948	SLU 71	-3.26	-1.64	153.03	-40.0905	-2.9236	-0.8972
948	SLU 72	-3.28	-1.72	153.05	-40.097	-2.9306	-0.9043
948	SLU 73	-3.47	-1.78	163.28	-42.7574	-3.1812	-0.9506
948	SLU 74	-3.49	-1.67	165.81	-43.4208	-3.2226	-0.955
948	SLU 75	-3.51	-1.75	165.83	-43.4273	-3.2297	-0.9622
948	SLU 76	-3.5	-1.79	164.84	-43.1704	-3.2088	-0.96
948	SLU 77	-3.52	-1.68	167.37	-43.8339	-3.2503	-0.9644
948	SLU 78	-3.55	-1.76	167.4	-43.8404	-3.2573	-0.9716
948	SLU 79	-3.49	-1.68	166.36	-43.5725	-3.2247	-0.9575
948	SLU 80	-3.52	-1.76	166.39	-43.5791	-3.2317	-0.9647
948	SLU 81	-3.53	-1.68	168.96	-44.2388	-3.2985	-0.9645
948	SLU 82	-3.56	-1.75	168.98	-44.2453	-3.3055	-0.9716
948	SLU 83	-3.56	-1.69	170.52	-44.6518	-3.3262	-0.9739
948	SLU 84	-3.59	-1.76	170.54	-44.6584	-3.3332	-0.9811
948	SLE RA 1	-2.4	-1.25	112.35	-29.4307	-2.1422	-0.6618
948	SLE RA 2	-2.43	-1.34	112.38	-29.438	-2.15	-0.6697
948	SLE RA 3	-2.44	-1.26	114.07	-29.8803	-2.1776	-0.6727
948	SLE RA 4	-2.46	-1.31	114.08	-29.8847	-2.1823	-0.6775
948	SLE RA 5	-2.45	-1.34	113.42	-29.7134	-2.1684	-0.676
948	SLE RA 6	-2.46	-1.27	115.11	-30.1557	-2.196	-0.679
948	SLE RA 7	-2.48	-1.32	115.12	-30.16	-2.2007	-0.6838
948	SLE RA 8	-2.45	-1.27	114.43	-29.9815	-2.179	-0.6744
948	SLE RA 9	-2.46	-1.32	114.45	-29.9858	-2.1837	-0.6791
948	SLE RA 10	-2.59	-1.36	121.27	-31.7594	-2.3507	-0.71
948	SLE RA 11	-2.6	-1.29	122.96	-32.2017	-2.3784	-0.7129
948	SLE RA 12	-2.62	-1.34	122.97	-32.206	-2.383	-0.7177
948	SLE RA 13	-2.61	-1.37	122.31	-32.0347	-2.3691	-0.7162
948	SLE RA 14	-2.62	-1.3	124	-32.477	-2.3968	-0.7192
948	SLE RA 15	-2.64	-1.35	124.01	-32.4814	-2.4015	-0.724
948	SLE RA 16	-2.6	-1.3	123.33	-32.3028	-2.3798	-0.7146
948	SLE RA 17	-2.62	-1.34	123.34	-32.3072	-2.3844	-0.7193
948	SLE RA 18	-2.63	-1.29	125.05	-32.747	-2.429	-0.7192
948	SLE RA 19	-2.65	-1.34	125.07	-32.7514	-2.4336	-0.724

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
948	SLE RA 20	-2.65	-1.3	126.09	-33.0224	-2.4474	-0.7255
948	SLE RA 21	-2.67	-1.35	126.11	-33.0267	-2.452	-0.7303
948	SLE FR 1	-2.4	-1.25	112.35	-29.4307	-2.1422	-0.6618
948	SLE FR 2	-2.41	-1.27	112.36	-29.4322	-2.1437	-0.6634
948	SLE FR 3	-2.41	-1.26	112.77	-29.5409	-2.1495	-0.6643
948	SLE FR 4	-2.48	-1.28	116.17	-30.4271	-2.2298	-0.6806
948	SLE FR 5	-2.48	-1.27	116.58	-30.5358	-2.2356	-0.6815
948	SLE FR 6	-2.52	-1.27	118.7	-31.0889	-2.2856	-0.6905
948	SLE QP 1	-2.4	-1.25	112.35	-29.4307	-2.1422	-0.6618
948	SLE QP 2	-2.47	-1.27	116.16	-30.4256	-2.2282	-0.679
948	SLD 1	6.84	-0.6	127.86	-33.0746	-2.6804	1.7535
948	SLD 2	5.94	-1.25	128.52	-33.2816	-2.6534	1.5254
948	SLD 3	7.6	-3.36	129.24	-33.4226	-2.7986	1.9488
948	SLD 4	6.7	-4.02	129.9	-33.6295	-2.7716	1.7207
948	SLD 5	-0.67	3.24	117.47	-30.656	-2.1894	-0.2051
948	SLD 6	-1.25	2.82	117.9	-30.7912	-2.1717	-0.3543
948	SLD 7	1.86	-5.97	122.06	-31.8159	-2.5833	0.4459
948	SLD 8	1.27	-6.4	122.49	-31.9511	-2.5657	0.2967
948	SLD 9	-6.21	3.87	109.84	-28.9001	-1.8907	-1.6548
948	SLD 10	-6.8	3.44	110.27	-29.0354	-1.8731	-1.8039
948	SLD 11	-3.69	-5.35	114.42	-30.06	-2.2847	-1.0038
948	SLD 12	-4.27	-5.77	114.85	-30.1953	-2.267	-1.153
948	SLD 13	-11.64	1.49	102.42	-27.2217	-1.6848	-3.0787
948	SLD 14	-12.54	0.83	103.08	-27.4287	-1.6578	-3.3069
948	SLD 15	-10.88	-1.28	103.8	-27.5697	-1.803	-2.8834
948	SLD 16	-11.78	-1.93	104.46	-27.7766	-1.776	-3.1116
948	SLV 1	19.32	0.18	143.59	-36.6363	-3.2914	5.0122
948	SLV 2	17.22	-1.34	145.13	-37.1183	-3.2286	4.4807
948	SLV 3	21.08	-6.07	146.75	-37.4337	-3.5597	5.4669
948	SLV 4	18.99	-7.59	148.28	-37.9157	-3.4969	4.9354
948	SLV 5	1.75	8.91	119.34	-30.9969	-2.151	0.4297
948	SLV 6	0.4	7.94	120.33	-31.3067	-2.1106	0.0881
948	SLV 7	7.63	-11.93	129.86	-33.6548	-3.0454	1.9455
948	SLV 8	6.29	-12.91	130.85	-33.9646	-3.005	1.6039
948	SLV 9	-11.23	10.38	101.47	-26.8866	-1.4514	-2.962
948	SLV 10	-12.57	9.4	102.46	-27.1964	-1.411	-3.3036
948	SLV 11	-5.34	-10.47	112	-29.5446	-2.3458	-1.4462
948	SLV 12	-6.69	-11.44	112.98	-29.8544	-2.3054	-1.7878
948	SLV 13	-23.93	5.06	84.04	-22.9355	-0.9595	-6.2935
948	SLV 14	-26.02	3.54	85.57	-23.4176	-0.8967	-6.825
948	SLV 15	-22.16	-1.19	87.2	-23.7329	-1.2278	-5.8388
948	SLV 16	-24.26	-2.71	88.73	-24.2149	-1.165	-6.3702
948	CRTFP Ux+	0	0	0	0	0	0
948	CRTFP Ux-	0	0	0	0	0	0
948	CRTFP Uy+	0	0	0	0	0	0
948	CRTFP Uy-	0	0	0	0	0	0
951	SLU 1	0.59	0.09	27.14	-7.8088	-1.7368	0.2141
951	SLU 2	0.58	0.08	27.12	-7.8103	-1.7353	0.2091
951	SLU 3	0.61	0.1	27.76	-7.9828	-1.7761	0.2201
951	SLU 4	0.6	0.09	27.74	-7.9837	-1.7752	0.2171
951	SLU 5	0.59	0.08	27.5	-7.9181	-1.7595	0.2133
951	SLU 6	0.62	0.1	28.14	-8.0905	-1.8003	0.2243
951	SLU 7	0.61	0.09	28.12	-8.0915	-1.7994	0.2213
951	SLU 8	0.62	0.09	27.9	-8.0243	-1.7853	0.2225
951	SLU 9	0.61	0.09	27.89	-8.0252	-1.7844	0.2195
951	SLU 10	0.62	0.13	30.37	-8.7315	-1.943	0.2246
951	SLU 11	0.65	0.15	31.01	-8.904	-1.9838	0.2356
951	SLU 12	0.64	0.14	31	-8.9049	-1.9829	0.2326
951	SLU 13	0.63	0.13	30.75	-8.8393	-1.9673	0.2288
951	SLU 14	0.66	0.15	31.39	-9.0118	-2.008	0.2398
951	SLU 15	0.65	0.14	31.38	-9.0127	-2.0071	0.2368
951	SLU 16	0.65	0.14	31.15	-8.9455	-1.993	0.238
951	SLU 17	0.65	0.13	31.14	-8.9464	-1.9921	0.235
951	SLU 18	0.64	0.16	31.79	-9.1248	-2.0335	0.2363
951	SLU 19	0.64	0.16	31.77	-9.1257	-2.0326	0.2333
951	SLU 20	0.66	0.16	32.17	-9.2326	-2.0578	0.2405
951	SLU 21	0.65	0.16	32.15	-9.2335	-2.0569	0.2375
951	SLU 22	0.64	0.15	30.44	-8.7444	-1.9472	0.2345
951	SLU 23	0.63	0.14	30.42	-8.746	-1.9457	0.2295
951	SLU 24	0.66	0.16	31.05	-8.9184	-1.9865	0.2405
951	SLU 25	0.65	0.15	31.04	-8.9193	-1.9856	0.2375
951	SLU 26	0.64	0.14	30.79	-8.8537	-1.97	0.2337
951	SLU 27	0.67	0.16	31.43	-9.0262	-2.0108	0.2447
951	SLU 28	0.66	0.15	31.42	-9.0271	-2.0099	0.2417
951	SLU 29	0.67	0.15	31.19	-8.9599	-1.9958	0.2429
951	SLU 30	0.66	0.14	31.18	-8.9609	-1.9949	0.2399
951	SLU 31	0.66	0.19	33.67	-9.6672	-2.1535	0.245
951	SLU 32	0.69	0.21	34.3	-9.8396	-2.1942	0.256
951	SLU 33	0.69	0.2	34.29	-9.8406	-2.1933	0.253
951	SLU 34	0.68	0.19	34.05	-9.7749	-2.1777	0.2492
951	SLU 35	0.7	0.21	34.68	-9.9474	-2.2185	0.2602
951	SLU 36	0.7	0.2	34.67	-9.9483	-2.2176	0.2572
951	SLU 37	0.7	0.2	34.45	-9.8811	-2.2035	0.2584
951	SLU 38	0.69	0.19	34.43	-9.8821	-2.2026	0.2554
951	SLU 39	0.69	0.22	35.08	-10.0604	-2.244	0.2567
951	SLU 40	0.68	0.22	35.07	-10.0614	-2.2431	0.2537
951	SLU 41	0.7	0.22	35.46	-10.1682	-2.2682	0.2609
951	SLU 42	0.7	0.21	35.45	-10.1691	-2.2673	0.2579
951	SLU 43	0.76	0.1	34.15	-9.8306	-2.1856	0.2713
951	SLU 44	0.74	0.09	34.13	-9.8322	-2.1842	0.2663
951	SLU 45	0.77	0.11	34.77	-10.0046	-2.2249	0.2773
951	SLU 46	0.76	0.1	34.76	-10.0055	-2.224	0.2743
951	SLU 47	0.76	0.09	34.51	-9.9399	-2.2084	0.2705
951	SLU 48	0.78	0.11	35.15	-10.1124	-2.2492	0.2815
951	SLU 49	0.78	0.1	35.14	-10.1133	-2.2483	0.2785
951	SLU 50	0.78	0.1	34.91	-10.0461	-2.2342	0.2797
951	SLU 51	0.77	0.09	34.9	-10.0471	-2.2333	0.2767

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
951	SLU 52	0.78	0.14	37.39	-10.7534	-2.3919	0.2818
951	SLU 53	0.81	0.16	38.02	-10.9258	-2.4326	0.2928
951	SLU 54	0.8	0.15	38.01	-10.9268	-2.4318	0.2898
951	SLU 55	0.79	0.14	37.77	-10.8611	-2.4161	0.286
951	SLU 56	0.82	0.16	38.4	-11.0336	-2.4569	0.297
951	SLU 57	0.81	0.15	38.39	-11.0345	-2.456	0.294
951	SLU 58	0.82	0.15	38.17	-10.9673	-2.4419	0.2953
951	SLU 59	0.81	0.14	38.15	-10.9683	-2.441	0.2922
951	SLU 60	0.81	0.17	38.8	-11.1466	-2.4824	0.2935
951	SLU 61	0.8	0.17	38.79	-11.1476	-2.4815	0.2905
951	SLU 62	0.82	0.17	39.18	-11.2544	-2.5067	0.2977
951	SLU 63	0.81	0.16	39.17	-11.2553	-2.5058	0.2947
951	SLU 64	0.8	0.16	37.45	-10.7662	-2.3961	0.2917
951	SLU 65	0.79	0.15	37.43	-10.7678	-2.3946	0.2867
951	SLU 66	0.82	0.17	38.06	-10.9402	-2.4354	0.2977
951	SLU 67	0.81	0.16	38.05	-10.9412	-2.4345	0.2947
951	SLU 68	0.8	0.15	37.81	-10.8756	-2.4189	0.2909
951	SLU 69	0.83	0.17	38.44	-11.048	-2.4596	0.3019
951	SLU 70	0.82	0.16	38.43	-11.0489	-2.4588	0.2989
951	SLU 71	0.83	0.16	38.21	-10.9818	-2.4446	0.3001
951	SLU 72	0.82	0.15	38.2	-10.9827	-2.4437	0.2971
951	SLU 73	0.83	0.2	40.68	-11.689	-2.6023	0.3022
951	SLU 74	0.85	0.22	41.31	-11.8615	-2.6431	0.3132
951	SLU 75	0.85	0.21	41.3	-11.8624	-2.6422	0.3102
951	SLU 76	0.84	0.2	41.06	-11.7968	-2.6266	0.3064
951	SLU 77	0.87	0.21	41.69	-11.9692	-2.6674	0.3174
951	SLU 78	0.86	0.21	41.68	-11.9702	-2.6665	0.3144
951	SLU 79	0.86	0.21	41.46	-11.903	-2.6524	0.3157
951	SLU 80	0.86	0.2	41.45	-11.9039	-2.6515	0.3127
951	SLU 81	0.85	0.23	42.09	-12.0823	-2.6928	0.3139
951	SLU 82	0.85	0.22	42.08	-12.0832	-2.692	0.3109
951	SLU 83	0.87	0.23	42.47	-12.19	-2.7171	0.3181
951	SLU 84	0.86	0.22	42.46	-12.191	-2.7162	0.3151
951	SLE RA 1	0.61	0.11	28.08	-8.0761	-1.7969	0.2199
951	SLE RA 2	0.6	0.1	28.07	-8.0771	-1.7959	0.2166
951	SLE RA 3	0.62	0.12	28.49	-8.1921	-1.8231	0.2239
951	SLE RA 4	0.61	0.11	28.48	-8.1927	-1.8225	0.2219
951	SLE RA 5	0.61	0.1	28.32	-8.149	-1.8121	0.2194
951	SLE RA 6	0.63	0.11	28.75	-8.2639	-1.8393	0.2267
951	SLE RA 7	0.62	0.11	28.74	-8.2646	-1.8387	0.2247
951	SLE RA 8	0.62	0.11	28.59	-8.2198	-1.8293	0.2255
951	SLE RA 9	0.62	0.11	28.58	-8.2204	-1.8287	0.2235
951	SLE RA 10	0.62	0.14	30.24	-8.6913	-1.9344	0.2269
951	SLE RA 11	0.64	0.15	30.66	-8.8062	-1.9616	0.2342
951	SLE RA 12	0.64	0.14	30.65	-8.8069	-1.961	0.2322
951	SLE RA 13	0.63	0.14	30.49	-8.7631	-1.9506	0.2297
951	SLE RA 14	0.65	0.15	30.91	-8.8781	-1.9777	0.237
951	SLE RA 15	0.64	0.14	30.91	-8.8787	-1.9771	0.235
951	SLE RA 16	0.65	0.14	30.76	-8.8339	-1.9677	0.2359
951	SLE RA 17	0.64	0.14	30.75	-8.8345	-1.9671	0.2339
951	SLE RA 18	0.64	0.16	31.18	-8.9534	-1.9947	0.2347
951	SLE RA 19	0.64	0.15	31.17	-8.9541	-1.9941	0.2327
951	SLE RA 20	0.65	0.16	31.43	-9.0253	-2.0109	0.2375
951	SLE RA 21	0.64	0.15	31.42	-9.0259	-2.0103	0.2355
951	SLE FR 1	0.61	0.11	28.08	-8.0761	-1.7969	0.2199
951	SLE FR 2	0.61	0.11	28.08	-8.0763	-1.7967	0.2193
951	SLE FR 3	0.61	0.11	28.18	-8.1048	-1.8034	0.221
951	SLE FR 4	0.62	0.12	29.01	-8.3395	-1.8561	0.2237
951	SLE FR 5	0.62	0.13	29.11	-8.368	-1.8627	0.2255
951	SLE FR 6	0.62	0.13	29.63	-8.5148	-1.8958	0.2273
951	SLE QP 1	0.61	0.11	28.08	-8.0761	-1.7969	0.2199
951	SLE QP 2	0.62	0.13	29.01	-8.3393	-1.8563	0.2244
951	SLD 1	3.03	0.23	25.92	-7.5656	-1.6576	1.0578
951	SLD 2	2.79	0.43	25.62	-7.4947	-1.6384	0.989
951	SLD 3	3.23	-0.43	26.39	-7.682	-1.6877	1.128
951	SLD 4	2.99	-0.22	26.1	-7.6111	-1.6685	1.0592
951	SLD 5	1.08	1.11	27.42	-7.9431	-1.7544	0.3801
951	SLD 6	0.92	1.25	27.22	-7.8967	-1.7419	0.3351
951	SLD 7	1.75	-1.07	29	-8.3313	-1.8547	0.6141
951	SLD 8	1.59	-0.94	28.8	-8.2849	-1.8422	0.5691
951	SLD 9	-0.36	1.19	29.22	-8.3937	-1.8703	-0.1204
951	SLD 10	-0.51	1.32	29.03	-8.3473	-1.8578	-0.1654
951	SLD 11	0.31	-1	30.8	-8.7818	-1.9707	0.1136
951	SLD 12	0.16	-0.86	30.61	-8.7355	-1.9581	0.0686
951	SLD 13	-1.76	0.47	31.93	-9.0675	-2.044	-0.6105
951	SLD 14	-1.99	0.68	31.63	-8.9966	-2.0248	-0.6793
951	SLD 15	-1.56	-0.18	32.4	-9.1839	-2.0741	-0.5403
951	SLD 16	-1.79	0.03	32.11	-9.113	-2.0549	-0.6091
951	SLV 1	6.26	0.34	21.78	-6.5307	-1.3921	2.1753
951	SLV 2	5.71	0.82	21.09	-6.3655	-1.3474	2.015
951	SLV 3	6.73	-1.15	22.86	-6.7951	-1.4604	2.3372
951	SLV 4	6.18	-0.67	22.17	-6.6299	-1.4157	2.1769
951	SLV 5	1.69	2.37	25.33	-7.424	-1.621	0.5916
951	SLV 6	1.34	2.68	24.88	-7.3178	-1.5923	0.4886
951	SLV 7	3.25	-2.6	28.92	-8.3054	-1.8488	1.1311
951	SLV 8	2.9	-2.29	28.48	-8.1992	-1.8201	1.0281
951	SLV 9	-1.67	2.54	29.55	-8.4794	-1.8924	-0.5794
951	SLV 10	-2.02	2.85	29.1	-8.3732	-1.8637	-0.6824
951	SLV 11	-0.11	-2.43	33.14	-9.3608	-2.1202	-0.0399
951	SLV 12	-0.46	-2.12	32.7	-9.2546	-2.0915	-0.1429
951	SLV 13	-4.94	0.92	35.85	-10.0487	-2.2968	-1.7282
951	SLV 14	-5.49	1.4	35.16	-9.8835	-2.2521	-1.8884
951	SLV 15	-4.47	-0.57	36.93	-10.3131	-2.3651	-1.5663
951	SLV 16	-5.02	-0.09	36.24	-10.1479	-2.3204	-1.7266
951	CRTFP Ux+	0	0	0	0	0	0
951	CRTFP Ux-	0	0	0	0	0	0
951	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
951	CRTFP Uy-	0	0	0	0	0	0
952	SLU 1	0.88	0.15	38.29	-9.9651	0.0549	0.3073
952	SLU 2	0.86	0.14	38.25	-9.9633	0.0553	0.3012
952	SLU 3	0.9	0.16	39.16	-10.1827	0.0563	0.3156
952	SLU 4	0.89	0.15	39.13	-10.1816	0.0566	0.3119
952	SLU 5	0.88	0.13	38.79	-10.0982	0.0562	0.3075
952	SLU 6	0.92	0.16	39.69	-10.3175	0.0572	0.3219
952	SLU 7	0.91	0.15	39.67	-10.3165	0.0574	0.3182
952	SLU 8	0.91	0.15	39.36	-10.2348	0.0566	0.3199
952	SLU 9	0.9	0.14	39.34	-10.2338	0.0569	0.3162
952	SLU 10	0.91	0.21	42.81	-11.1194	0.063	0.3194
952	SLU 11	0.95	0.23	43.72	-11.3387	0.064	0.3338
952	SLU 12	0.94	0.22	43.69	-11.3377	0.0643	0.3301
952	SLU 13	0.93	0.2	43.35	-11.2543	0.0639	0.3257
952	SLU 14	0.97	0.23	44.25	-11.4736	0.0649	0.3401
952	SLU 15	0.96	0.22	44.23	-11.4725	0.0651	0.3365
952	SLU 16	0.96	0.22	43.92	-11.3909	0.0643	0.3381
952	SLU 17	0.95	0.21	43.9	-11.3898	0.0646	0.3345
952	SLU 18	0.95	0.25	44.81	-11.6166	0.0659	0.3333
952	SLU 19	0.94	0.24	44.78	-11.6156	0.0661	0.3297
952	SLU 20	0.97	0.25	45.34	-11.7515	0.0667	0.3396
952	SLU 21	0.96	0.24	45.32	-11.7504	0.067	0.336
952	SLU 22	0.95	0.24	42.91	-11.14	0.0627	0.3317
952	SLU 23	0.93	0.22	42.87	-11.1382	0.0631	0.3256
952	SLU 24	0.97	0.24	43.78	-11.3576	0.0641	0.34
952	SLU 25	0.96	0.24	43.75	-11.3565	0.0644	0.3363
952	SLU 26	0.95	0.22	43.41	-11.2731	0.064	0.3319
952	SLU 27	0.99	0.24	44.31	-11.4924	0.065	0.3463
952	SLU 28	0.98	0.23	44.29	-11.4914	0.0653	0.3426
952	SLU 29	0.98	0.23	43.98	-11.4097	0.0644	0.3443
952	SLU 30	0.97	0.22	43.96	-11.4087	0.0647	0.3406
952	SLU 31	0.98	0.29	47.43	-12.2943	0.0708	0.3438
952	SLU 32	1.02	0.31	48.34	-12.5136	0.0718	0.3582
952	SLU 33	1.01	0.31	48.31	-12.5126	0.0721	0.3545
952	SLU 34	1	0.29	47.97	-12.4292	0.0717	0.3501
952	SLU 35	1.04	0.31	48.87	-12.6485	0.0727	0.3645
952	SLU 36	1.03	0.3	48.85	-12.6474	0.073	0.3609
952	SLU 37	1.03	0.3	48.54	-12.5658	0.0721	0.3625
952	SLU 38	1.02	0.29	48.52	-12.5647	0.0724	0.3589
952	SLU 39	1.02	0.33	49.43	-12.7915	0.0737	0.3577
952	SLU 40	1.01	0.33	49.4	-12.7905	0.074	0.3541
952	SLU 41	1.04	0.33	49.96	-12.9264	0.0746	0.364
952	SLU 42	1.03	0.33	49.94	-12.9253	0.0748	0.3604
952	SLU 43	1.12	0.17	48.2	-12.5518	0.0686	0.3911
952	SLU 44	1.1	0.15	48.16	-12.55	0.0691	0.385
952	SLU 45	1.14	0.17	49.06	-12.7694	0.0701	0.3994
952	SLU 46	1.13	0.17	49.04	-12.7683	0.0703	0.3957
952	SLU 47	1.12	0.15	48.69	-12.6849	0.07	0.3913
952	SLU 48	1.16	0.17	49.6	-12.9042	0.0709	0.4057
952	SLU 49	1.15	0.16	49.57	-12.9032	0.0712	0.402
952	SLU 50	1.15	0.16	49.27	-12.8215	0.0704	0.4037
952	SLU 51	1.14	0.15	49.24	-12.8205	0.0706	0.4001
952	SLU 52	1.15	0.22	52.72	-13.7061	0.0768	0.4032
952	SLU 53	1.19	0.24	53.62	-13.9254	0.0778	0.4176
952	SLU 54	1.18	0.24	53.6	-13.9244	0.078	0.414
952	SLU 55	1.17	0.22	53.25	-13.841	0.0777	0.4095
952	SLU 56	1.21	0.24	54.16	-14.0603	0.0786	0.4239
952	SLU 57	1.2	0.23	54.13	-14.0592	0.0789	0.4203
952	SLU 58	1.2	0.23	53.83	-13.9776	0.0781	0.422
952	SLU 59	1.19	0.22	53.8	-13.9765	0.0783	0.4183
952	SLU 60	1.19	0.27	54.71	-14.2033	0.0796	0.4171
952	SLU 61	1.18	0.26	54.69	-14.2023	0.0799	0.4135
952	SLU 62	1.21	0.26	55.25	-14.3382	0.0805	0.4235
952	SLU 63	1.2	0.26	55.22	-14.3371	0.0808	0.4198
952	SLU 64	1.19	0.25	52.82	-13.7267	0.0765	0.4155
952	SLU 65	1.17	0.24	52.78	-13.7249	0.0769	0.4094
952	SLU 66	1.21	0.26	53.68	-13.9443	0.0779	0.4238
952	SLU 67	1.2	0.25	53.66	-13.9432	0.0782	0.4201
952	SLU 68	1.19	0.24	53.31	-13.8598	0.0778	0.4157
952	SLU 69	1.23	0.26	54.22	-14.0791	0.0788	0.4301
952	SLU 70	1.22	0.25	54.19	-14.0781	0.079	0.4264
952	SLU 71	1.22	0.25	53.89	-13.9964	0.0782	0.4281
952	SLU 72	1.21	0.24	53.86	-13.9954	0.0785	0.4245
952	SLU 73	1.22	0.31	57.34	-14.881	0.0846	0.4276
952	SLU 74	1.26	0.33	58.24	-15.1003	0.0856	0.442
952	SLU 75	1.25	0.32	58.22	-15.0993	0.0859	0.4384
952	SLU 76	1.24	0.31	57.87	-15.0159	0.0855	0.4339
952	SLU 77	1.28	0.33	58.78	-15.2352	0.0865	0.4483
952	SLU 78	1.27	0.32	58.75	-15.2341	0.0867	0.4447
952	SLU 79	1.27	0.32	58.45	-15.1525	0.0859	0.4464
952	SLU 80	1.26	0.31	58.42	-15.1514	0.0862	0.4427
952	SLU 81	1.26	0.35	59.33	-15.3782	0.0875	0.4415
952	SLU 82	1.25	0.34	59.31	-15.3772	0.0877	0.4379
952	SLU 83	1.28	0.35	59.87	-15.5131	0.0883	0.4479
952	SLU 84	1.27	0.34	59.84	-15.512	0.0886	0.4442
952	SLE RA 1	0.9	0.17	39.61	-10.3008	0.0571	0.3142
952	SLE RA 2	0.88	0.17	39.59	-10.2996	0.0574	0.3102
952	SLE RA 3	0.91	0.18	40.19	-10.4458	0.058	0.3198
952	SLE RA 4	0.91	0.17	40.17	-10.4451	0.0582	0.3173
952	SLE RA 5	0.9	0.16	39.94	-10.3895	0.058	0.3144
952	SLE RA 6	0.92	0.18	40.55	-10.5357	0.0586	0.324
952	SLE RA 7	0.92	0.17	40.53	-10.535	0.0588	0.3215
952	SLE RA 8	0.92	0.17	40.33	-10.4806	0.0582	0.3227
952	SLE RA 9	0.91	0.17	40.31	-10.4799	0.0584	0.3202
952	SLE RA 10	0.92	0.21	42.63	-11.0703	0.0625	0.3223
952	SLE RA 11	0.95	0.23	43.23	-11.2165	0.0632	0.3319
952	SLE RA 12	0.94	0.22	43.21	-11.2158	0.0634	0.3295

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
952	SLE RA 13	0.93	0.21	42.98	-11.1602	0.0631	0.3265
952	SLE RA 14	0.96	0.23	43.59	-11.3064	0.0638	0.3361
952	SLE RA 15	0.95	0.22	43.57	-11.3057	0.0639	0.3337
952	SLE RA 16	0.96	0.22	43.37	-11.2513	0.0634	0.3348
952	SLE RA 17	0.95	0.21	43.35	-11.2506	0.0636	0.3324
952	SLE RA 18	0.95	0.24	43.96	-11.4018	0.0644	0.3316
952	SLE RA 19	0.94	0.24	43.94	-11.4011	0.0646	0.3292
952	SLE RA 20	0.96	0.24	44.31	-11.4917	0.065	0.3358
952	SLE RA 21	0.95	0.23	44.3	-11.491	0.0652	0.3334
952	SLE FR 1	0.9	0.17	39.61	-10.3008	0.0571	0.3142
952	SLE FR 2	0.89	0.17	39.61	-10.3006	0.0571	0.3134
952	SLE FR 3	0.9	0.17	39.76	-10.3368	0.0573	0.3159
952	SLE FR 4	0.91	0.19	40.91	-10.6309	0.0594	0.3186
952	SLE FR 5	0.92	0.19	41.06	-10.6671	0.0595	0.3211
952	SLE FR 6	0.92	0.21	41.79	-10.8513	0.0608	0.3229
952	SLE QP 1	0.9	0.17	39.61	-10.3008	0.0571	0.3142
952	SLE QP 2	0.91	0.19	40.92	-10.6311	0.0593	0.3194
952	SLD 1	4.42	0.29	36.44	-9.749	0.0598	1.5461
952	SLD 2	4.08	0.61	36	-9.655	0.0599	1.4261
952	SLD 3	4.72	-0.66	37.09	-9.884	0.0618	1.6484
952	SLD 4	4.37	-0.34	36.66	-9.79	0.0619	1.5284
952	SLD 5	1.58	1.61	38.66	-10.1783	0.0563	0.5536
952	SLD 6	1.36	1.82	38.38	-10.1169	0.0564	0.4751
952	SLD 7	2.56	-1.56	40.84	-10.6284	0.0632	0.8944
952	SLD 8	2.33	-1.35	40.55	-10.5669	0.0632	0.816
952	SLD 9	-0.51	1.74	41.29	-10.6953	0.0554	-0.1771
952	SLD 10	-0.74	1.95	41	-10.6338	0.0554	-0.2556
952	SLD 11	0.47	-1.43	43.46	-11.1453	0.0622	0.1638
952	SLD 12	0.24	-1.22	43.17	-11.0839	0.0623	0.0853
952	SLD 13	-2.55	0.73	45.18	-11.4722	0.0567	-0.8895
952	SLD 14	-2.89	1.05	44.74	-11.3781	0.0567	-1.0095
952	SLD 15	-2.26	-0.22	45.83	-11.6072	0.0587	-0.7872
952	SLD 16	-2.6	0.1	45.39	-11.5132	0.0588	-0.9073
952	SLV 1	9.13	0.39	30.46	-8.5695	0.0606	3.1892
952	SLV 2	8.33	1.14	29.44	-8.3505	0.0608	2.9096
952	SLV 3	9.81	-1.78	31.94	-8.876	0.0653	3.4279
952	SLV 4	9.01	-1.03	30.92	-8.657	0.0655	3.1483
952	SLV 5	2.48	3.41	35.71	-9.5853	0.0525	0.8662
952	SLV 6	1.96	3.89	35.06	-9.4445	0.0526	0.6866
952	SLV 7	4.76	-3.81	40.64	-10.6069	0.0682	1.6619
952	SLV 8	4.24	-3.33	39.99	-10.4662	0.0683	1.4823
952	SLV 9	-2.42	3.72	41.85	-10.796	0.0503	-0.8434
952	SLV 10	-2.94	4.2	41.19	-10.6553	0.0504	-1.023
952	SLV 11	-0.14	-3.5	46.78	-11.8176	0.0659	-0.0477
952	SLV 12	-0.65	-3.02	46.12	-11.6769	0.0661	-0.2273
952	SLV 13	-7.19	1.41	50.92	-12.6052	0.0531	-2.5095
952	SLV 14	-7.99	2.17	49.9	-12.3862	0.0533	-2.789
952	SLV 15	-6.5	-0.75	52.39	-12.9117	0.0578	-2.2707
952	SLV 16	-7.31	0	51.38	-12.6927	0.058	-2.5503
952	CRTFP Ux+	0	0	0	0	0	0
952	CRTFP Ux-	0	0	0	0	0	0
952	CRTFP Uy+	0	0	0	0	0	0
952	CRTFP Uy-	0	0	0	0	0	0
953	SLU 1	0.89	0.17	36.63	-8.4101	0.0561	0.3112
953	SLU 2	0.87	0.16	36.57	-8.4032	0.0565	0.3053
953	SLU 3	0.91	0.18	37.45	-8.5881	0.0575	0.3197
953	SLU 4	0.9	0.17	37.41	-8.584	0.0577	0.3161
953	SLU 5	0.89	0.16	37.08	-8.5137	0.0573	0.3117
953	SLU 6	0.93	0.18	37.95	-8.6987	0.0584	0.3261
953	SLU 7	0.92	0.17	37.92	-8.6945	0.0586	0.3225
953	SLU 8	0.92	0.17	37.64	-8.6312	0.0578	0.3241
953	SLU 9	0.91	0.16	37.61	-8.627	0.0581	0.3205
953	SLU 10	0.92	0.23	40.9	-9.3538	0.0643	0.3237
953	SLU 11	0.96	0.25	41.77	-9.5387	0.0654	0.3381
953	SLU 12	0.95	0.24	41.74	-9.5346	0.0656	0.3345
953	SLU 13	0.94	0.23	41.41	-9.4643	0.0652	0.3301
953	SLU 14	0.98	0.25	42.28	-9.6493	0.0663	0.3445
953	SLU 15	0.97	0.24	42.25	-9.6452	0.0665	0.3409
953	SLU 16	0.98	0.24	41.97	-9.5818	0.0657	0.3424
953	SLU 17	0.97	0.23	41.93	-9.5776	0.0659	0.3389
953	SLU 18	0.96	0.27	42.81	-9.7681	0.0673	0.3375
953	SLU 19	0.95	0.26	42.77	-9.7639	0.0676	0.3339
953	SLU 20	0.98	0.27	43.31	-9.8786	0.0682	0.3439
953	SLU 21	0.97	0.26	43.28	-9.8745	0.0684	0.3403
953	SLU 22	0.96	0.25	41.01	-9.3763	0.0641	0.3358
953	SLU 23	0.94	0.24	40.95	-9.3694	0.0644	0.3299
953	SLU 24	0.98	0.26	41.83	-9.5543	0.0655	0.3443
953	SLU 25	0.97	0.26	41.8	-9.5502	0.0657	0.3407
953	SLU 26	0.96	0.24	41.46	-9.4799	0.0653	0.3363
953	SLU 27	1	0.26	42.34	-9.6649	0.0664	0.3507
953	SLU 28	0.99	0.26	42.3	-9.6607	0.0666	0.3471
953	SLU 29	0.99	0.25	42.02	-9.5974	0.0658	0.3486
953	SLU 30	0.98	0.25	41.99	-9.5932	0.066	0.3451
953	SLU 31	0.99	0.31	45.28	-10.32	0.0723	0.3482
953	SLU 32	1.03	0.33	46.15	-10.5049	0.0734	0.3626
953	SLU 33	1.02	0.33	46.12	-10.5008	0.0736	0.3591
953	SLU 34	1.01	0.31	45.79	-10.4305	0.0732	0.3546
953	SLU 35	1.05	0.33	46.66	-10.6155	0.0743	0.369
953	SLU 36	1.04	0.33	46.63	-10.6113	0.0745	0.3655
953	SLU 37	1.05	0.32	46.35	-10.548	0.0737	0.367
953	SLU 38	1.04	0.32	46.32	-10.5438	0.0739	0.3634
953	SLU 39	1.03	0.36	47.19	-10.7343	0.0753	0.3621
953	SLU 40	1.02	0.35	47.16	-10.7301	0.0756	0.3585
953	SLU 41	1.05	0.35	47.7	-10.8448	0.0762	0.3685
953	SLU 42	1.04	0.35	47.66	-10.8407	0.0764	0.3649
953	SLU 43	1.13	0.19	46.11	-10.6018	0.0702	0.3962
953	SLU 44	1.11	0.18	46.06	-10.5949	0.0705	0.3902

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
953	SLU 45	1.15	0.2	46.93	-10.7799	0.0716	0.4046
953	SLU 46	1.14	0.19	46.9	-10.7757	0.0718	0.4011
953	SLU 47	1.13	0.18	46.57	-10.7055	0.0714	0.3967
953	SLU 48	1.17	0.2	47.44	-10.8904	0.0725	0.4111
953	SLU 49	1.16	0.19	47.41	-10.8863	0.0727	0.4075
953	SLU 50	1.17	0.19	47.13	-10.8229	0.0719	0.409
953	SLU 51	1.16	0.18	47.09	-10.8188	0.0721	0.4054
953	SLU 52	1.16	0.25	50.38	-11.5455	0.0784	0.4086
953	SLU 53	1.21	0.27	51.26	-11.7305	0.0795	0.423
953	SLU 54	1.2	0.26	51.23	-11.7264	0.0797	0.4194
953	SLU 55	1.18	0.25	50.89	-11.6561	0.0793	0.415
953	SLU 56	1.22	0.27	51.77	-11.841	0.0804	0.4294
953	SLU 57	1.21	0.26	51.73	-11.8369	0.0806	0.4259
953	SLU 58	1.22	0.26	51.45	-11.7735	0.0798	0.4274
953	SLU 59	1.21	0.25	51.42	-11.7694	0.08	0.4238
953	SLU 60	1.2	0.29	52.29	-11.9598	0.0814	0.4224
953	SLU 61	1.19	0.28	52.26	-11.9557	0.0816	0.4189
953	SLU 62	1.22	0.29	52.8	-12.0704	0.0823	0.4289
953	SLU 63	1.21	0.28	52.77	-12.0663	0.0825	0.4253
953	SLU 64	1.2	0.28	50.49	-11.568	0.0782	0.4208
953	SLU 65	1.18	0.26	50.44	-11.5611	0.0785	0.4148
953	SLU 66	1.22	0.28	51.31	-11.7461	0.0796	0.4292
953	SLU 67	1.21	0.28	51.28	-11.7419	0.0798	0.4256
953	SLU 68	1.2	0.26	50.95	-11.6717	0.0794	0.4212
953	SLU 69	1.24	0.28	51.82	-11.8566	0.0805	0.4356
953	SLU 70	1.23	0.28	51.79	-11.8525	0.0807	0.432
953	SLU 71	1.24	0.27	51.51	-11.7891	0.0799	0.4336
953	SLU 72	1.23	0.27	51.48	-11.785	0.0801	0.43
953	SLU 73	1.23	0.34	54.77	-12.5117	0.0864	0.4332
953	SLU 74	1.28	0.36	55.64	-12.6967	0.0875	0.4476
953	SLU 75	1.27	0.35	55.61	-12.6925	0.0877	0.444
953	SLU 76	1.25	0.33	55.27	-12.6223	0.0873	0.4396
953	SLU 77	1.29	0.35	56.15	-12.8072	0.0884	0.454
953	SLU 78	1.28	0.35	56.11	-12.8031	0.0886	0.4504
953	SLU 79	1.29	0.34	55.84	-12.7397	0.0878	0.452
953	SLU 80	1.28	0.34	55.8	-12.7356	0.088	0.4484
953	SLU 81	1.27	0.38	56.68	-12.926	0.0894	0.447
953	SLU 82	1.26	0.37	56.64	-12.9219	0.0896	0.4434
953	SLU 83	1.29	0.38	57.18	-13.0366	0.0903	0.4534
953	SLU 84	1.28	0.37	57.15	-13.0324	0.0905	0.4499
953	SLE RA 1	0.91	0.19	37.88	-8.6861	0.0584	0.3183
953	SLE RA 2	0.9	0.19	37.84	-8.6815	0.0586	0.3143
953	SLE RA 3	0.92	0.2	38.43	-8.8048	0.0593	0.3239
953	SLE RA 4	0.92	0.19	38.4	-8.8021	0.0595	0.3215
953	SLE RA 5	0.91	0.19	38.18	-8.7552	0.0592	0.3186
953	SLE RA 6	0.94	0.2	38.76	-8.8785	0.0599	0.3282
953	SLE RA 7	0.93	0.19	38.74	-8.8758	0.0601	0.3258
953	SLE RA 8	0.93	0.19	38.56	-8.8335	0.0595	0.3268
953	SLE RA 9	0.92	0.19	38.53	-8.8308	0.0597	0.3244
953	SLE RA 10	0.93	0.23	40.73	-9.3153	0.0639	0.3265
953	SLE RA 11	0.96	0.25	41.31	-9.4386	0.0646	0.3361
953	SLE RA 12	0.95	0.24	41.29	-9.4358	0.0647	0.3338
953	SLE RA 13	0.94	0.23	41.07	-9.389	0.0644	0.3308
953	SLE RA 14	0.97	0.25	41.65	-9.5123	0.0652	0.3404
953	SLE RA 15	0.96	0.24	41.63	-9.5095	0.0653	0.338
953	SLE RA 16	0.97	0.24	41.44	-9.4673	0.0648	0.3391
953	SLE RA 17	0.96	0.23	41.42	-9.4645	0.0649	0.3367
953	SLE RA 18	0.96	0.26	42	-9.5915	0.0659	0.3358
953	SLE RA 19	0.95	0.26	41.98	-9.5887	0.066	0.3334
953	SLE RA 20	0.97	0.26	42.34	-9.6652	0.0665	0.34
953	SLE RA 21	0.96	0.26	42.32	-9.6624	0.0666	0.3377
953	SLE FR 1	0.91	0.19	37.88	-8.6861	0.0584	0.3183
953	SLE FR 2	0.9	0.19	37.87	-8.6852	0.0584	0.3175
953	SLE FR 3	0.91	0.19	38.01	-8.7156	0.0586	0.32
953	SLE FR 4	0.92	0.21	39.11	-8.9568	0.0607	0.3227
953	SLE FR 5	0.93	0.21	39.25	-8.9872	0.0609	0.3252
953	SLE FR 6	0.93	0.23	39.94	-9.1388	0.0621	0.327
953	SLE QP 1	0.91	0.19	37.88	-8.6861	0.0584	0.3183
953	SLE QP 2	0.92	0.21	39.12	-8.9577	0.0606	0.3235
953	SLD 1	4.43	0.25	34.57	-8.3136	0.0648	1.5504
953	SLD 2	4.09	0.59	34.14	-8.2299	0.0646	1.4298
953	SLD 3	4.73	-0.7	35.18	-8.4143	0.0666	1.6532
953	SLD 4	4.38	-0.35	34.75	-8.3305	0.0664	1.5326
953	SLD 5	1.59	1.6	36.91	-8.6267	0.0591	0.5571
953	SLD 6	1.36	1.82	36.62	-8.5719	0.0591	0.4782
953	SLD 7	2.57	-1.56	38.94	-8.9621	0.0652	0.8996
953	SLD 8	2.35	-1.33	38.65	-8.9074	0.0651	0.8208
953	SLD 9	-0.5	1.76	39.58	-9.0081	0.0562	-0.1737
953	SLD 10	-0.73	1.98	39.29	-8.9533	0.0561	-0.2525
953	SLD 11	0.48	-1.4	41.61	-9.3435	0.0622	0.1688
953	SLD 12	0.25	-1.17	41.32	-9.2888	0.0621	0.09
953	SLD 13	-2.54	0.78	43.48	-9.5849	0.0548	-0.8856
953	SLD 14	-2.88	1.12	43.05	-9.5012	0.0547	-1.0061
953	SLD 15	-2.24	-0.16	44.09	-9.6855	0.0567	-0.7828
953	SLD 16	-2.59	0.18	43.66	-9.6018	0.0565	-0.9034
953	SLV 1	9.13	0.27	28.5	-7.4523	0.0703	3.1937
953	SLV 2	8.33	1.07	27.49	-7.2573	0.07	2.9129
953	SLV 3	9.82	-1.89	29.89	-7.6815	0.0745	3.4336
953	SLV 4	9.02	-1.09	28.87	-7.4864	0.0742	3.1528
953	SLV 5	2.48	3.37	34.01	-8.192	0.0573	0.8689
953	SLV 6	1.96	3.88	33.35	-8.0667	0.0571	0.6884
953	SLV 7	4.77	-3.83	38.62	-8.9558	0.0711	1.6685
953	SLV 8	4.26	-3.31	37.97	-8.8304	0.0709	1.488
953	SLV 9	-2.41	3.74	40.26	-9.0851	0.0503	-0.8409
953	SLV 10	-2.93	4.25	39.61	-8.9597	0.0501	-1.0214
953	SLV 11	-0.12	-3.45	44.88	-9.8488	0.0642	-0.0414
953	SLV 12	-0.64	-2.94	44.22	-9.7234	0.064	-0.2219

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
953	SLV 13	-7.17	1.52	49.36	-10.4291	0.0471	-2.5057
953	SLV 14	-7.98	2.31	48.35	-10.234	0.0468	-2.7866
953	SLV 15	-6.48	-0.64	50.74	-10.6582	0.0513	-2.2659
953	SLV 16	-7.29	0.15	49.73	-10.4631	0.051	-2.5467
953	CRTFP Ux+	0	0	0	0	0	0
953	CRTFP Ux-	0	0	0	0	0	0
953	CRTFP Uy+	0	0	0	0	0	0
953	CRTFP Uy-	0	0	0	0	0	0
954	SLU 1	0.9	0.2	35.06	-7.0174	0.0487	0.3149
954	SLU 2	0.88	0.19	35	-7.0063	0.0489	0.3092
954	SLU 3	0.92	0.21	35.84	-7.1603	0.0499	0.3235
954	SLU 4	0.91	0.2	35.8	-7.1537	0.05	0.3201
954	SLU 5	0.9	0.19	35.48	-7.0952	0.0497	0.3157
954	SLU 6	0.94	0.2	36.32	-7.2493	0.0506	0.33
954	SLU 7	0.93	0.2	36.28	-7.2426	0.0508	0.3266
954	SLU 8	0.93	0.19	36.03	-7.1952	0.0502	0.3279
954	SLU 9	0.92	0.19	35.99	-7.1886	0.0503	0.3245
954	SLU 10	0.93	0.26	39.1	-7.7728	0.0558	0.3277
954	SLU 11	0.97	0.28	39.94	-7.9269	0.0568	0.3421
954	SLU 12	0.96	0.27	39.91	-7.9202	0.057	0.3386
954	SLU 13	0.95	0.26	39.58	-7.8618	0.0566	0.3342
954	SLU 14	0.99	0.28	40.43	-8.0158	0.0576	0.3486
954	SLU 15	0.98	0.27	40.39	-8.0092	0.0577	0.3451
954	SLU 16	0.99	0.27	40.13	-7.9617	0.0571	0.3465
954	SLU 17	0.98	0.26	40.09	-7.9551	0.0572	0.343
954	SLU 18	0.97	0.3	40.92	-8.1124	0.0586	0.3414
954	SLU 19	0.96	0.29	40.89	-8.1058	0.0587	0.3379
954	SLU 20	0.99	0.3	41.41	-8.2013	0.0593	0.3479
954	SLU 21	0.98	0.29	41.37	-8.1947	0.0594	0.3444
954	SLU 22	0.97	0.28	39.22	-7.7962	0.0557	0.3397
954	SLU 23	0.95	0.27	39.15	-7.7852	0.0559	0.3339
954	SLU 24	0.99	0.29	40	-7.9392	0.0569	0.3483
954	SLU 25	0.98	0.29	39.96	-7.9326	0.0571	0.3448
954	SLU 26	0.97	0.27	39.64	-7.8741	0.0567	0.3404
954	SLU 27	1.01	0.29	40.48	-8.0281	0.0577	0.3548
954	SLU 28	1	0.29	40.44	-8.0215	0.0578	0.3513
954	SLU 29	1	0.28	40.18	-7.974	0.0572	0.3527
954	SLU 30	0.99	0.28	40.15	-7.9674	0.0573	0.3492
954	SLU 31	1	0.35	43.26	-8.5517	0.0628	0.3524
954	SLU 32	1.04	0.36	44.1	-8.7057	0.0638	0.3668
954	SLU 33	1.03	0.36	44.06	-8.6991	0.064	0.3633
954	SLU 34	1.02	0.34	43.74	-8.6406	0.0636	0.3589
954	SLU 35	1.06	0.36	44.58	-8.7946	0.0646	0.3733
954	SLU 36	1.05	0.36	44.55	-8.788	0.0647	0.3698
954	SLU 37	1.06	0.35	44.29	-8.7406	0.0641	0.3712
954	SLU 38	1.05	0.35	44.25	-8.734	0.0642	0.3677
954	SLU 39	1.04	0.39	45.08	-8.8913	0.0656	0.3662
954	SLU 40	1.03	0.38	45.04	-8.8846	0.0657	0.3627
954	SLU 41	1.06	0.39	45.56	-8.9802	0.0663	0.3727
954	SLU 42	1.05	0.38	45.53	-8.9736	0.0665	0.3692
954	SLU 43	1.14	0.23	44.15	-8.8555	0.0609	0.4009
954	SLU 44	1.13	0.22	44.09	-8.8445	0.0611	0.3952
954	SLU 45	1.17	0.23	44.93	-8.9985	0.0621	0.4095
954	SLU 46	1.16	0.23	44.89	-8.9919	0.0622	0.4061
954	SLU 47	1.14	0.21	44.57	-8.9334	0.0619	0.4017
954	SLU 48	1.18	0.23	45.41	-9.0874	0.0628	0.416
954	SLU 49	1.17	0.23	45.38	-9.0808	0.063	0.4126
954	SLU 50	1.18	0.22	45.12	-9.0334	0.0624	0.4139
954	SLU 51	1.17	0.22	45.08	-9.0267	0.0625	0.4105
954	SLU 52	1.18	0.29	48.19	-9.611	0.068	0.4137
954	SLU 53	1.22	0.31	49.04	-9.765	0.069	0.4281
954	SLU 54	1.21	0.3	49	-9.7584	0.0692	0.4246
954	SLU 55	1.2	0.29	48.68	-9.6999	0.0688	0.4202
954	SLU 56	1.24	0.31	49.52	-9.854	0.0698	0.4346
954	SLU 57	1.23	0.3	49.48	-9.8473	0.0699	0.4311
954	SLU 58	1.23	0.3	49.22	-9.7999	0.0693	0.4325
954	SLU 59	1.22	0.29	49.18	-9.7933	0.0694	0.429
954	SLU 60	1.22	0.33	50.02	-9.9506	0.0708	0.4274
954	SLU 61	1.21	0.32	49.98	-9.944	0.0709	0.4239
954	SLU 62	1.24	0.33	50.5	-10.0395	0.0715	0.4339
954	SLU 63	1.23	0.32	50.46	-10.0329	0.0716	0.4304
954	SLU 64	1.21	0.31	48.31	-9.6344	0.0679	0.4257
954	SLU 65	1.2	0.3	48.25	-9.6233	0.0681	0.4199
954	SLU 66	1.24	0.32	49.09	-9.7774	0.0691	0.4343
954	SLU 67	1.23	0.32	49.05	-9.7707	0.0693	0.4308
954	SLU 68	1.21	0.3	48.73	-9.7122	0.0689	0.4264
954	SLU 69	1.26	0.32	49.57	-9.8663	0.0699	0.4408
954	SLU 70	1.25	0.31	49.53	-9.8596	0.07	0.4373
954	SLU 71	1.25	0.31	49.27	-9.8122	0.0694	0.4387
954	SLU 72	1.24	0.3	49.24	-9.8056	0.0695	0.4352
954	SLU 73	1.25	0.38	52.35	-10.3899	0.075	0.4384
954	SLU 74	1.29	0.39	53.19	-10.5439	0.076	0.4528
954	SLU 75	1.28	0.39	53.16	-10.5373	0.0762	0.4493
954	SLU 76	1.27	0.37	52.83	-10.4788	0.0758	0.4449
954	SLU 77	1.31	0.39	53.68	-10.6328	0.0768	0.4593
954	SLU 78	1.3	0.39	53.64	-10.6262	0.0769	0.4558
954	SLU 79	1.3	0.38	53.38	-10.5788	0.0763	0.4572
954	SLU 80	1.29	0.38	53.34	-10.5721	0.0764	0.4537
954	SLU 81	1.29	0.42	54.17	-10.7294	0.0778	0.4522
954	SLU 82	1.28	0.41	54.14	-10.7228	0.0779	0.4487
954	SLU 83	1.31	0.41	54.66	-10.8184	0.0785	0.4587
954	SLU 84	1.3	0.41	54.62	-10.8117	0.0787	0.4552
954	SLE RA 1	0.92	0.22	36.25	-7.2399	0.0507	0.322
954	SLE RA 2	0.91	0.21	36.2	-7.2325	0.0508	0.3182
954	SLE RA 3	0.93	0.23	36.77	-7.3352	0.0515	0.3277
954	SLE RA 4	0.93	0.22	36.74	-7.3308	0.0516	0.3254
954	SLE RA 5	0.92	0.21	36.53	-7.2918	0.0513	0.3225

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
954	SLE RA 6	0.95	0.23	37.09	-7.3945	0.052	0.3321
954	SLE RA 7	0.94	0.22	37.06	-7.3901	0.0521	0.3298
954	SLE RA 8	0.94	0.22	36.89	-7.3584	0.0517	0.3307
954	SLE RA 9	0.94	0.22	36.87	-7.354	0.0518	0.3284
954	SLE RA 10	0.94	0.26	38.94	-7.7435	0.0555	0.3305
954	SLE RA 11	0.97	0.28	39.5	-7.8462	0.0561	0.3401
954	SLE RA 12	0.96	0.27	39.48	-7.8418	0.0562	0.3378
954	SLE RA 13	0.95	0.26	39.26	-7.8028	0.0559	0.3348
954	SLE RA 14	0.98	0.27	39.83	-7.9055	0.0566	0.3444
954	SLE RA 15	0.97	0.27	39.8	-7.9011	0.0567	0.3421
954	SLE RA 16	0.98	0.27	39.63	-7.8695	0.0563	0.343
954	SLE RA 17	0.97	0.26	39.6	-7.865	0.0564	0.3407
954	SLE RA 18	0.97	0.29	40.16	-7.9699	0.0573	0.3397
954	SLE RA 19	0.96	0.29	40.13	-7.9655	0.0574	0.3373
954	SLE RA 20	0.98	0.29	40.48	-8.0292	0.0578	0.344
954	SLE RA 21	0.97	0.29	40.45	-8.0248	0.0579	0.3417
954	SLE FR 1	0.92	0.22	36.25	-7.2399	0.0507	0.322
954	SLE FR 2	0.91	0.22	36.24	-7.2384	0.0507	0.3212
954	SLE FR 3	0.92	0.22	36.38	-7.2636	0.0509	0.3238
954	SLE FR 4	0.93	0.24	37.41	-7.4574	0.0527	0.3265
954	SLE FR 5	0.94	0.24	37.55	-7.4826	0.0529	0.329
954	SLE FR 6	0.94	0.26	38.2	-7.6049	0.054	0.3308
954	SLE QP 1	0.92	0.22	36.25	-7.2399	0.0507	0.322
954	SLE QP 2	0.93	0.24	37.42	-7.4589	0.0527	0.3273
954	SLD 1	4.44	0.24	32.69	-6.9736	0.0611	1.5543
954	SLD 2	4.09	0.6	32.25	-6.9009	0.0609	1.4333
954	SLD 3	4.74	-0.71	33.26	-7.0544	0.0624	1.6574
954	SLD 4	4.39	-0.35	32.83	-6.9817	0.0623	1.5365
954	SLD 5	1.6	1.62	35.2	-7.2036	0.0531	0.5603
954	SLD 6	1.37	1.85	34.92	-7.1561	0.053	0.4812
954	SLD 7	2.58	-1.55	37.13	-7.4729	0.0577	0.9042
954	SLD 8	2.36	-1.31	36.85	-7.4255	0.0576	0.8252
954	SLD 9	-0.49	1.8	37.99	-7.4923	0.0477	-0.1705
954	SLD 10	-0.72	2.03	37.71	-7.4449	0.0476	-0.2496
954	SLD 11	0.49	-1.37	39.92	-7.7617	0.0523	0.1734
954	SLD 12	0.27	-1.13	39.64	-7.7142	0.0522	0.0943
954	SLD 13	-2.52	0.84	42.01	-7.9361	0.0431	-0.8819
954	SLD 14	-2.87	1.2	41.57	-7.8634	0.0429	-1.0028
954	SLD 15	-2.23	-0.11	42.58	-8.0169	0.0444	-0.7787
954	SLD 16	-2.58	0.25	42.15	-7.9442	0.0443	-0.8997
954	SLV 1	9.14	0.21	26.36	-6.3241	0.0723	3.1977
954	SLV 2	8.33	1.05	25.35	-6.155	0.0719	2.9159
954	SLV 3	9.83	-1.96	27.67	-6.5099	0.0755	3.4385
954	SLV 4	9.02	-1.12	26.67	-6.3407	0.0751	3.1568
954	SLV 5	2.49	3.37	32.27	-6.8658	0.0539	0.8714
954	SLV 6	1.97	3.91	31.63	-6.757	0.0536	0.6903
954	SLV 7	4.79	-3.85	36.67	-7.4849	0.0644	1.6742
954	SLV 8	4.27	-3.31	36.02	-7.3762	0.0641	1.4931
954	SLV 9	-2.4	3.79	38.82	-7.5416	0.0412	-0.8385
954	SLV 10	-2.92	4.33	38.17	-7.4329	0.041	-1.0196
954	SLV 11	-0.1	-3.43	43.21	-8.1608	0.0517	-0.0357
954	SLV 12	-0.62	-2.89	42.56	-8.052	0.0515	-0.2168
954	SLV 13	-7.16	1.6	48.17	-8.5771	0.0302	-2.5021
954	SLV 14	-7.97	2.44	47.17	-8.4079	0.0298	-2.7839
954	SLV 15	-6.47	-0.56	49.49	-8.7628	0.0334	-2.2613
954	SLV 16	-7.28	0.28	48.48	-8.5937	0.033	-2.5431
954	CRTFP Ux+	0	0	0	0	0	0
954	CRTFP Ux-	0	0	0	0	0	0
954	CRTFP Uy+	0	0	0	0	0	0
954	CRTFP Uy-	0	0	0	0	0	0
955	SLU 1	0.91	0.23	33.8	-5.8747	0.036	0.3183
955	SLU 2	0.89	0.22	33.73	-5.8607	0.0361	0.3127
955	SLU 3	0.93	0.24	34.54	-5.9891	0.0368	0.3271
955	SLU 4	0.92	0.23	34.5	-5.9808	0.0369	0.3237
955	SLU 5	0.91	0.22	34.19	-5.932	0.0366	0.3193
955	SLU 6	0.95	0.24	35.01	-6.0604	0.0374	0.3336
955	SLU 7	0.94	0.23	34.97	-6.0521	0.0374	0.3303
955	SLU 8	0.94	0.23	34.72	-6.0173	0.037	0.3315
955	SLU 9	0.93	0.22	34.68	-6.0089	0.0371	0.3281
955	SLU 10	0.94	0.3	37.65	-6.4759	0.0414	0.3314
955	SLU 11	0.98	0.32	38.47	-6.6043	0.0421	0.3457
955	SLU 12	0.97	0.31	38.43	-6.596	0.0422	0.3423
955	SLU 13	0.96	0.3	38.11	-6.5472	0.0419	0.338
955	SLU 14	1	0.32	38.93	-6.6756	0.0426	0.3523
955	SLU 15	0.99	0.31	38.89	-6.6673	0.0427	0.3489
955	SLU 16	1	0.3	38.65	-6.6325	0.0423	0.3502
955	SLU 17	0.99	0.3	38.61	-6.6241	0.0424	0.3468
955	SLU 18	0.98	0.34	39.4	-6.7535	0.0435	0.345
955	SLU 19	0.97	0.33	39.36	-6.7451	0.0436	0.3416
955	SLU 20	1	0.34	39.86	-6.8248	0.044	0.3516
955	SLU 21	0.99	0.33	39.82	-6.8164	0.0441	0.3482
955	SLU 22	0.98	0.32	37.77	-6.4994	0.0413	0.3433
955	SLU 23	0.96	0.31	37.7	-6.4854	0.0414	0.3377
955	SLU 24	1	0.33	38.52	-6.6138	0.0422	0.352
955	SLU 25	0.99	0.32	38.48	-6.6054	0.0422	0.3486
955	SLU 26	0.98	0.31	38.16	-6.5567	0.0419	0.3442
955	SLU 27	1.02	0.33	38.98	-6.6851	0.0427	0.3586
955	SLU 28	1.01	0.32	38.94	-6.6767	0.0428	0.3552
955	SLU 29	1.01	0.32	38.7	-6.642	0.0424	0.3564
955	SLU 30	1	0.31	38.66	-6.6336	0.0424	0.3531
955	SLU 31	1.01	0.39	41.62	-7.1006	0.0467	0.3563
955	SLU 32	1.05	0.41	42.44	-7.229	0.0475	0.3707
955	SLU 33	1.05	0.4	42.4	-7.2206	0.0475	0.3673
955	SLU 34	1.03	0.39	42.09	-7.1719	0.0472	0.3629
955	SLU 35	1.07	0.4	42.9	-7.3003	0.048	0.3772
955	SLU 36	1.06	0.4	42.86	-7.2919	0.0481	0.3739
955	SLU 37	1.07	0.39	42.62	-7.2571	0.0476	0.3751

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
955	SLU 38	1.06	0.39	42.58	-7.2488	0.0477	0.3717
955	SLU 39	1.05	0.43	43.37	-7.3782	0.0489	0.37
955	SLU 40	1.04	0.42	43.33	-7.3698	0.0489	0.3666
955	SLU 41	1.07	0.43	43.84	-7.4495	0.0494	0.3765
955	SLU 42	1.06	0.42	43.8	-7.4411	0.0495	0.3732
955	SLU 43	1.15	0.27	42.57	-7.4229	0.0449	0.4053
955	SLU 44	1.14	0.26	42.5	-7.4089	0.045	0.3997
955	SLU 45	1.18	0.28	43.32	-7.5374	0.0458	0.414
955	SLU 46	1.17	0.27	43.28	-7.529	0.0459	0.4106
955	SLU 47	1.16	0.26	42.97	-7.4802	0.0456	0.4062
955	SLU 48	1.2	0.28	43.78	-7.6087	0.0463	0.4206
955	SLU 49	1.19	0.27	43.74	-7.6003	0.0464	0.4172
955	SLU 50	1.19	0.27	43.5	-7.5655	0.046	0.4184
955	SLU 51	1.18	0.26	43.46	-7.5571	0.046	0.4151
955	SLU 52	1.19	0.34	46.43	-8.0241	0.0503	0.4183
955	SLU 53	1.23	0.35	47.24	-8.1526	0.0511	0.4327
955	SLU 54	1.22	0.35	47.2	-8.1442	0.0511	0.4293
955	SLU 55	1.21	0.33	46.89	-8.0954	0.0508	0.4249
955	SLU 56	1.25	0.35	47.71	-8.2239	0.0516	0.4393
955	SLU 57	1.24	0.35	47.67	-8.2155	0.0517	0.4359
955	SLU 58	1.24	0.34	47.42	-8.1807	0.0513	0.4371
955	SLU 59	1.23	0.34	47.38	-8.1723	0.0513	0.4337
955	SLU 60	1.23	0.38	48.18	-8.3017	0.0525	0.432
955	SLU 61	1.22	0.37	48.13	-8.2934	0.0525	0.4286
955	SLU 62	1.25	0.38	48.64	-8.373	0.053	0.4385
955	SLU 63	1.24	0.37	48.6	-8.3647	0.0531	0.4352
955	SLU 64	1.22	0.36	46.55	-8.0476	0.0503	0.4302
955	SLU 65	1.21	0.35	46.48	-8.0336	0.0504	0.4246
955	SLU 66	1.25	0.37	47.29	-8.1621	0.0511	0.4389
955	SLU 67	1.24	0.36	47.25	-8.1537	0.0512	0.4356
955	SLU 68	1.23	0.35	46.94	-8.1049	0.0509	0.4312
955	SLU 69	1.27	0.37	47.76	-8.2334	0.0517	0.4455
955	SLU 70	1.26	0.36	47.72	-8.225	0.0517	0.4421
955	SLU 71	1.26	0.36	47.47	-8.1902	0.0513	0.4434
955	SLU 72	1.25	0.35	47.43	-8.1818	0.0514	0.44
955	SLU 73	1.26	0.43	50.4	-8.6488	0.0557	0.4433
955	SLU 74	1.3	0.44	51.22	-8.7772	0.0564	0.4576
955	SLU 75	1.29	0.44	51.18	-8.7689	0.0565	0.4542
955	SLU 76	1.28	0.42	50.86	-8.7201	0.0562	0.4498
955	SLU 77	1.32	0.44	51.68	-8.8485	0.0569	0.4642
955	SLU 78	1.31	0.44	51.64	-8.8402	0.057	0.4608
955	SLU 79	1.31	0.43	51.4	-8.8054	0.0566	0.4621
955	SLU 80	1.31	0.43	51.36	-8.797	0.0567	0.4587
955	SLU 81	1.3	0.47	52.15	-8.9264	0.0578	0.4569
955	SLU 82	1.29	0.46	52.11	-8.9181	0.0579	0.4535
955	SLU 83	1.32	0.47	52.61	-8.9977	0.0583	0.4635
955	SLU 84	1.31	0.46	52.57	-8.9893	0.0584	0.4601
955	SLE RA 1	0.93	0.26	34.93	-6.0532	0.0375	0.3255
955	SLE RA 2	0.92	0.25	34.89	-6.0438	0.0376	0.3217
955	SLE RA 3	0.94	0.26	35.43	-6.1295	0.0381	0.3313
955	SLE RA 4	0.94	0.26	35.4	-6.1239	0.0381	0.329
955	SLE RA 5	0.93	0.25	35.19	-6.0914	0.0379	0.3261
955	SLE RA 6	0.96	0.26	35.74	-6.177	0.0384	0.3357
955	SLE RA 7	0.95	0.26	35.71	-6.1714	0.0385	0.3334
955	SLE RA 8	0.95	0.25	35.55	-6.1482	0.0382	0.3342
955	SLE RA 9	0.94	0.25	35.52	-6.1426	0.0382	0.332
955	SLE RA 10	0.95	0.3	37.5	-6.454	0.0411	0.3342
955	SLE RA 11	0.98	0.31	38.05	-6.5396	0.0416	0.3437
955	SLE RA 12	0.97	0.31	38.02	-6.534	0.0416	0.3415
955	SLE RA 13	0.96	0.3	37.81	-6.5015	0.0414	0.3385
955	SLE RA 14	0.99	0.31	38.35	-6.5871	0.0419	0.3481
955	SLE RA 15	0.98	0.31	38.33	-6.5815	0.042	0.3459
955	SLE RA 16	0.99	0.31	38.17	-6.5583	0.0417	0.3467
955	SLE RA 17	0.98	0.3	38.14	-6.5528	0.0418	0.3444
955	SLE RA 18	0.98	0.33	38.67	-6.6391	0.0425	0.3432
955	SLE RA 19	0.97	0.32	38.64	-6.6335	0.0426	0.341
955	SLE RA 20	0.99	0.33	38.98	-6.6866	0.0429	0.3476
955	SLE RA 21	0.98	0.32	38.95	-6.681	0.0429	0.3454
955	SLE FR 1	0.93	0.26	34.93	-6.0532	0.0375	0.3255
955	SLE FR 2	0.92	0.25	34.92	-6.0513	0.0375	0.3247
955	SLE FR 3	0.93	0.25	35.05	-6.0722	0.0376	0.3272
955	SLE FR 4	0.94	0.28	36.04	-6.2271	0.039	0.33
955	SLE FR 5	0.95	0.28	36.18	-6.2479	0.0391	0.3326
955	SLE FR 6	0.95	0.29	36.8	-6.3461	0.04	0.3344
955	SLE QP 1	0.93	0.26	34.93	-6.0532	0.0375	0.3255
955	SLE QP 2	0.94	0.28	36.05	-6.2289	0.039	0.3308
955	SLD 1	4.45	0.25	31	-5.8138	0.0517	1.5577
955	SLD 2	4.1	0.63	30.57	-5.7522	0.0516	1.4364
955	SLD 3	4.74	-0.71	31.56	-5.8909	0.0527	1.6612
955	SLD 4	4.4	-0.33	31.13	-5.8292	0.0526	1.54
955	SLD 5	1.6	1.67	33.75	-5.9984	0.0414	0.5633
955	SLD 6	1.38	1.91	33.48	-5.9582	0.0413	0.4841
955	SLD 7	2.59	-1.55	35.64	-6.2552	0.0445	0.9083
955	SLD 8	2.37	-1.3	35.36	-6.215	0.0445	0.8291
955	SLD 9	-0.48	1.86	36.75	-6.2429	0.0335	-0.1675
955	SLD 10	-0.71	2.1	36.47	-6.2026	0.0334	-0.2467
955	SLD 11	0.51	-1.36	38.63	-6.4997	0.0367	0.1775
955	SLD 12	0.28	-1.11	38.35	-6.4594	0.0366	0.0983
955	SLD 13	-2.51	0.89	40.97	-6.6286	0.0254	-0.8784
955	SLD 14	-2.86	1.27	40.54	-6.567	0.0253	-0.9996
955	SLD 15	-2.22	-0.08	41.53	-6.7057	0.0264	-0.7748
955	SLD 16	-2.56	0.3	41.11	-6.644	0.0263	-0.8961
955	SLV 1	9.14	0.19	24.23	-5.2579	0.0688	3.201
955	SLV 2	8.33	1.08	23.24	-5.1143	0.0685	2.9186
955	SLV 3	9.84	-2.01	25.52	-5.4369	0.071	3.4426
955	SLV 4	9.03	-1.12	24.53	-5.2933	0.0707	3.1602
955	SLV 5	2.49	3.44	30.73	-5.6908	0.0447	0.8738

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
955	SLV 6	1.97	4.01	30.09	-5.5985	0.0445	0.6923
955	SLV 7	4.8	-3.9	35.01	-6.2874	0.0519	1.6792
955	SLV 8	4.28	-3.33	34.37	-6.1951	0.0518	1.4977
955	SLV 9	-2.4	3.88	37.73	-6.2628	0.0262	-0.8361
955	SLV 10	-2.92	4.45	37.09	-6.1705	0.026	-1.0176
955	SLV 11	-0.08	-3.46	42.01	-6.8593	0.0335	-0.0307
955	SLV 12	-0.61	-2.89	41.38	-6.7671	0.0333	-0.2122
955	SLV 13	-7.14	1.68	47.58	-7.1645	0.0073	-2.4986
955	SLV 14	-7.96	2.56	46.58	-7.021	0.007	-2.781
955	SLV 15	-6.45	-0.53	48.86	-7.3435	0.0094	-2.257
955	SLV 16	-7.26	0.36	47.87	-7.2	0.0092	-2.5394
955	CRTFP Ux+	0	0	0	0	0	0
955	CRTFP Ux-	0	0	0	0	0	0
955	CRTFP Uy+	0	0	0	0	0	0
955	CRTFP Uy-	0	0	0	0	0	0
956	SLU 1	0.91	0.27	32.95	-5.0477	0.0206	0.3214
956	SLU 2	0.9	0.26	32.88	-5.032	0.0206	0.3159
956	SLU 3	0.94	0.28	33.68	-5.1418	0.021	0.3302
956	SLU 4	0.93	0.27	33.64	-5.1324	0.021	0.327
956	SLU 5	0.92	0.26	33.34	-5.0907	0.0208	0.3226
956	SLU 6	0.96	0.28	34.13	-5.2005	0.0213	0.3369
956	SLU 7	0.95	0.27	34.09	-5.191	0.0213	0.3336
956	SLU 8	0.95	0.27	33.86	-5.1651	0.0211	0.3347
956	SLU 9	0.94	0.26	33.82	-5.1556	0.0211	0.3314
956	SLU 10	0.95	0.34	36.68	-5.5366	0.0239	0.3348
956	SLU 11	0.99	0.36	37.48	-5.6464	0.0243	0.3491
956	SLU 12	0.98	0.35	37.43	-5.637	0.0243	0.3458
956	SLU 13	0.97	0.34	37.13	-5.5953	0.0242	0.3414
956	SLU 14	1.01	0.36	37.93	-5.7051	0.0246	0.3557
956	SLU 15	1	0.35	37.89	-5.6957	0.0246	0.3524
956	SLU 16	1.01	0.35	37.65	-5.6697	0.0244	0.3535
956	SLU 17	1	0.34	37.61	-5.6603	0.0244	0.3502
956	SLU 18	0.99	0.39	38.37	-5.7686	0.0253	0.3483
956	SLU 19	0.98	0.38	38.33	-5.7592	0.0253	0.345
956	SLU 20	1.01	0.39	38.83	-5.8273	0.0256	0.3549
956	SLU 21	1	0.38	38.78	-5.8179	0.0256	0.3517
956	SLU 22	0.99	0.36	36.8	-5.5598	0.0239	0.3465
956	SLU 23	0.97	0.35	36.73	-5.544	0.0239	0.3411
956	SLU 24	1.01	0.37	37.53	-5.6538	0.0243	0.3554
956	SLU 25	1	0.37	37.48	-5.6444	0.0244	0.3521
956	SLU 26	0.99	0.35	37.18	-5.6027	0.0242	0.3477
956	SLU 27	1.03	0.37	37.98	-5.7125	0.0246	0.362
956	SLU 28	1.02	0.37	37.94	-5.7031	0.0246	0.3587
956	SLU 29	1.02	0.36	37.7	-5.6771	0.0244	0.3598
956	SLU 30	1.01	0.36	37.66	-5.6677	0.0244	0.3566
956	SLU 31	1.02	0.44	40.52	-6.0487	0.0272	0.3599
956	SLU 32	1.06	0.45	41.32	-6.1585	0.0277	0.3742
956	SLU 33	1.05	0.45	41.28	-6.1491	0.0277	0.3709
956	SLU 34	1.04	0.43	40.97	-6.1074	0.0275	0.3665
956	SLU 35	1.08	0.45	41.77	-6.2172	0.0279	0.3808
956	SLU 36	1.07	0.45	41.73	-6.2077	0.028	0.3776
956	SLU 37	1.08	0.44	41.5	-6.1818	0.0278	0.3787
956	SLU 38	1.07	0.44	41.46	-6.1723	0.0278	0.3754
956	SLU 39	1.06	0.48	42.22	-6.2807	0.0286	0.3734
956	SLU 40	1.05	0.47	42.18	-6.2712	0.0286	0.3702
956	SLU 41	1.08	0.48	42.67	-6.3394	0.0289	0.3801
956	SLU 42	1.07	0.47	42.63	-6.3299	0.0289	0.3768
956	SLU 43	1.16	0.32	41.52	-6.3864	0.0256	0.4092
956	SLU 44	1.15	0.31	41.45	-6.3707	0.0256	0.4037
956	SLU 45	1.19	0.33	42.25	-6.4805	0.026	0.418
956	SLU 46	1.18	0.32	42.21	-6.4711	0.0261	0.4148
956	SLU 47	1.17	0.31	41.9	-6.4294	0.0259	0.4104
956	SLU 48	1.21	0.33	42.7	-6.5392	0.0263	0.4247
956	SLU 49	1.2	0.32	42.66	-6.5298	0.0263	0.4214
956	SLU 50	1.2	0.32	42.43	-6.5038	0.0261	0.4225
956	SLU 51	1.19	0.31	42.38	-6.4944	0.0261	0.4192
956	SLU 52	1.2	0.39	45.25	-6.8754	0.0289	0.4226
956	SLU 53	1.24	0.41	46.04	-6.9852	0.0294	0.4369
956	SLU 54	1.23	0.4	46	-6.9758	0.0294	0.4336
956	SLU 55	1.22	0.39	45.7	-6.9341	0.0292	0.4292
956	SLU 56	1.26	0.41	46.5	-7.0439	0.0296	0.4435
956	SLU 57	1.25	0.4	46.46	-7.0344	0.0296	0.4402
956	SLU 58	1.26	0.4	46.22	-7.0085	0.0294	0.4413
956	SLU 59	1.25	0.39	46.18	-6.999	0.0295	0.438
956	SLU 60	1.24	0.43	46.94	-7.1074	0.0303	0.4361
956	SLU 61	1.23	0.43	46.9	-7.0979	0.0303	0.4328
956	SLU 62	1.26	0.43	47.39	-7.1661	0.0306	0.4427
956	SLU 63	1.25	0.43	47.35	-7.1566	0.0306	0.4395
956	SLU 64	1.24	0.41	45.37	-6.8985	0.0289	0.4343
956	SLU 65	1.22	0.4	45.3	-6.8828	0.0289	0.4289
956	SLU 66	1.26	0.42	46.09	-6.9926	0.0294	0.4432
956	SLU 67	1.25	0.41	46.05	-6.9832	0.0294	0.4399
956	SLU 68	1.24	0.4	45.75	-6.9415	0.0292	0.4355
956	SLU 69	1.28	0.42	46.55	-7.0513	0.0296	0.4498
956	SLU 70	1.27	0.41	46.5	-7.0418	0.0297	0.4465
956	SLU 71	1.27	0.41	46.27	-7.0159	0.0295	0.4476
956	SLU 72	1.26	0.4	46.23	-7.0064	0.0295	0.4444
956	SLU 73	1.27	0.48	49.09	-7.3874	0.0322	0.4477
956	SLU 74	1.31	0.5	49.89	-7.4972	0.0327	0.462
956	SLU 75	1.3	0.5	49.85	-7.4878	0.0327	0.4587
956	SLU 76	1.29	0.48	49.54	-7.4461	0.0325	0.4543
956	SLU 77	1.33	0.5	50.34	-7.5559	0.033	0.4686
956	SLU 78	1.32	0.5	50.3	-7.5465	0.033	0.4654
956	SLU 79	1.33	0.49	50.07	-7.5205	0.0328	0.4665
956	SLU 80	1.32	0.49	50.02	-7.5111	0.0328	0.4632
956	SLU 81	1.31	0.53	50.79	-7.6194	0.0336	0.4612
956	SLU 82	1.3	0.52	50.74	-7.61	0.0337	0.4579

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
956	SLU 83	1.33	0.53	51.24	-7.6781	0.0339	0.4679
956	SLU 84	1.32	0.52	51.2	-7.6687	0.0339	0.4646
956	SLE RA 1	0.93	0.3	34.05	-5.194	0.0215	0.3286
956	SLE RA 2	0.92	0.29	34	-5.1835	0.0215	0.3249
956	SLE RA 3	0.95	0.3	34.54	-5.2567	0.0218	0.3345
956	SLE RA 4	0.95	0.3	34.51	-5.2504	0.0218	0.3323
956	SLE RA 5	0.94	0.29	34.31	-5.2226	0.0217	0.3294
956	SLE RA 6	0.96	0.3	34.84	-5.2959	0.022	0.3389
956	SLE RA 7	0.96	0.3	34.81	-5.2896	0.022	0.3367
956	SLE RA 8	0.96	0.29	34.65	-5.2722	0.0219	0.3374
956	SLE RA 9	0.95	0.29	34.63	-5.266	0.0219	0.3353
956	SLE RA 10	0.96	0.34	36.53	-5.52	0.0237	0.3375
956	SLE RA 11	0.99	0.36	37.07	-5.5932	0.024	0.347
956	SLE RA 12	0.98	0.35	37.04	-5.5869	0.024	0.3448
956	SLE RA 13	0.97	0.34	36.84	-5.5591	0.0239	0.3419
956	SLE RA 14	1	0.36	37.37	-5.6323	0.0242	0.3515
956	SLE RA 15	0.99	0.35	37.34	-5.626	0.0242	0.3493
956	SLE RA 16	1	0.35	37.18	-5.6087	0.0241	0.35
956	SLE RA 17	0.99	0.35	37.16	-5.6024	0.0241	0.3478
956	SLE RA 18	0.99	0.37	37.67	-5.6746	0.0247	0.3465
956	SLE RA 19	0.98	0.37	37.64	-5.6683	0.0247	0.3443
956	SLE RA 20	1	0.37	37.97	-5.7137	0.0248	0.3509
956	SLE RA 21	0.99	0.37	37.94	-5.7075	0.0249	0.3488
956	SLE FR 1	0.93	0.3	34.05	-5.194	0.0215	0.3286
956	SLE FR 2	0.93	0.29	34.04	-5.1919	0.0215	0.3279
956	SLE FR 3	0.94	0.3	34.17	-5.2096	0.0216	0.3304
956	SLE FR 4	0.95	0.32	35.13	-5.3361	0.0225	0.3332
956	SLE FR 5	0.95	0.32	35.26	-5.3538	0.0225	0.3357
956	SLE FR 6	0.96	0.33	35.86	-5.4343	0.0231	0.3375
956	SLE QP 1	0.93	0.3	34.05	-5.194	0.0215	0.3286
956	SLE QP 2	0.95	0.32	35.14	-5.3382	0.0225	0.334
956	SLD 1	4.45	0.29	29.63	-4.9085	0.0402	1.5606
956	SLD 2	4.1	0.7	29.2	-4.8562	0.0402	1.4392
956	SLD 3	4.75	-0.7	30.2	-4.9893	0.0393	1.6644
956	SLD 4	4.4	-0.3	29.77	-4.937	0.0394	1.543
956	SLD 5	1.61	1.75	32.7	-5.096	0.0291	0.566
956	SLD 6	1.38	2.01	32.42	-5.0618	0.0291	0.4867
956	SLD 7	2.6	-1.57	34.59	-5.3653	0.0261	0.9119
956	SLD 8	2.38	-1.3	34.31	-5.3311	0.0262	0.8326
956	SLD 9	-0.48	1.94	35.96	-5.3453	0.0187	-0.1647
956	SLD 10	-0.7	2.2	35.68	-5.3111	0.0188	-0.244
956	SLD 11	0.52	-1.37	37.85	-5.6145	0.0158	0.1812
956	SLD 12	0.29	-1.11	37.57	-5.5804	0.0158	0.1019
956	SLD 13	-2.5	0.93	40.5	-5.7394	0.0055	-0.8751
956	SLD 14	-2.85	1.34	40.08	-5.6871	0.0056	-0.9964
956	SLD 15	-2.2	-0.06	41.07	-5.8202	0.0047	-0.7713
956	SLD 16	-2.55	0.34	40.64	-5.7679	0.0047	-0.8927
956	SLV 1	9.15	0.23	22.26	-4.3328	0.064	3.2036
956	SLV 2	8.33	1.17	21.27	-4.211	0.0641	2.9209
956	SLV 3	9.84	-2.04	23.55	-4.5212	0.0619	3.4458
956	SLV 4	9.03	-1.1	22.56	-4.3995	0.062	3.1631
956	SLV 5	2.49	3.57	29.49	-4.7716	0.0381	0.8759
956	SLV 6	1.97	4.18	28.85	-4.6933	0.0381	0.6942
956	SLV 7	4.81	-3.99	33.79	-5.3998	0.0311	1.6833
956	SLV 8	4.29	-3.39	33.15	-5.3216	0.0312	1.5017
956	SLV 9	-2.39	4.02	37.12	-5.3548	0.0137	-0.8337
956	SLV 10	-2.91	4.63	36.49	-5.2766	0.0138	-1.0154
956	SLV 11	-0.07	-3.54	41.42	-5.983	0.0068	-0.0263
956	SLV 12	-0.59	-2.94	40.78	-5.9048	0.0068	-0.208
956	SLV 13	-7.13	1.73	47.71	-6.2769	-0.0171	-2.4952
956	SLV 14	-7.94	2.67	46.72	-6.1551	-0.017	-2.7779
956	SLV 15	-6.43	-0.54	49	-6.4653	-0.0192	-2.253
956	SLV 16	-7.25	0.41	48.01	-6.3436	-0.0191	-2.5356
956	CRTFP Ux+	0	0	0	0	0	0
956	CRTFP Ux-	0	0	0	0	0	0
956	CRTFP Uy+	0	0	0	0	0	0
956	CRTFP Uy-	0	0	0	0	0	0
957	SLU 1	0.92	0.31	32.59	-4.566	0.0041	0.3239
957	SLU 2	0.91	0.3	32.52	-4.5495	0.004	0.3186
957	SLU 3	0.95	0.32	33.31	-4.6485	0.0041	0.3329
957	SLU 4	0.94	0.31	33.27	-4.6386	0.0041	0.3297
957	SLU 5	0.93	0.3	32.97	-4.601	0.004	0.3253
957	SLU 6	0.97	0.32	33.76	-4.7	0.0041	0.3396
957	SLU 7	0.96	0.31	33.71	-4.6901	0.0041	0.3364
957	SLU 8	0.96	0.31	33.48	-4.669	0.0041	0.3373
957	SLU 9	0.95	0.3	33.44	-4.6591	0.0041	0.3342
957	SLU 10	0.96	0.39	36.24	-4.9877	0.0052	0.3376
957	SLU 11	1	0.41	37.04	-5.0867	0.0053	0.3518
957	SLU 12	0.99	0.41	36.99	-5.0768	0.0053	0.3486
957	SLU 13	0.98	0.39	36.69	-5.0393	0.0053	0.3443
957	SLU 14	1.02	0.41	37.48	-5.1382	0.0054	0.3585
957	SLU 15	1.01	0.4	37.44	-5.1283	0.0053	0.3554
957	SLU 16	1.01	0.4	37.21	-5.1073	0.0053	0.3563
957	SLU 17	1	0.39	37.17	-5.0974	0.0053	0.3531
957	SLU 18	1	0.44	37.91	-5.192	0.0058	0.351
957	SLU 19	0.99	0.43	37.87	-5.1822	0.0058	0.3478
957	SLU 20	1.02	0.44	38.36	-5.2436	0.0058	0.3577
957	SLU 21	1.01	0.43	38.32	-5.2337	0.0058	0.3545
957	SLU 22	0.99	0.41	36.36	-5.0104	0.0053	0.3493
957	SLU 23	0.98	0.4	36.29	-4.9939	0.0052	0.3439
957	SLU 24	1.02	0.42	37.09	-5.0929	0.0053	0.3582
957	SLU 25	1.01	0.41	37.04	-5.083	0.0053	0.355
957	SLU 26	1	0.4	36.74	-5.0454	0.0052	0.3507
957	SLU 27	1.04	0.42	37.53	-5.1444	0.0053	0.3649
957	SLU 28	1.03	0.41	37.49	-5.1345	0.0053	0.3617
957	SLU 29	1.03	0.41	37.26	-5.1134	0.0053	0.3627
957	SLU 30	1.02	0.4	37.22	-5.1035	0.0052	0.3595

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
957	SLU 31	1.03	0.49	40.02	-5.4322	0.0064	0.3629
957	SLU 32	1.07	0.51	40.81	-5.5311	0.0065	0.3772
957	SLU 33	1.06	0.5	40.77	-5.5212	0.0065	0.374
957	SLU 34	1.05	0.49	40.47	-5.4837	0.0064	0.3696
957	SLU 35	1.09	0.51	41.26	-5.5826	0.0065	0.3839
957	SLU 36	1.08	0.5	41.22	-5.5728	0.0065	0.3807
957	SLU 37	1.08	0.5	40.99	-5.5517	0.0065	0.3816
957	SLU 38	1.08	0.49	40.95	-5.5418	0.0065	0.3784
957	SLU 39	1.07	0.54	41.69	-5.6365	0.007	0.3763
957	SLU 40	1.06	0.53	41.65	-5.6266	0.007	0.3732
957	SLU 41	1.09	0.54	42.14	-5.688	0.007	0.383
957	SLU 42	1.08	0.53	42.1	-5.6781	0.007	0.3799
957	SLU 43	1.17	0.37	41.07	-5.7834	0.0049	0.4124
957	SLU 44	1.16	0.36	41	-5.7669	0.0048	0.4071
957	SLU 45	1.2	0.38	41.79	-5.8659	0.0049	0.4214
957	SLU 46	1.19	0.37	41.75	-5.856	0.0049	0.4182
957	SLU 47	1.18	0.36	41.45	-5.8184	0.0048	0.4138
957	SLU 48	1.22	0.38	42.24	-5.9174	0.0049	0.4281
957	SLU 49	1.21	0.37	42.2	-5.9075	0.0049	0.4249
957	SLU 50	1.21	0.37	41.96	-5.8864	0.0049	0.4258
957	SLU 51	1.2	0.36	41.92	-5.8766	0.0049	0.4227
957	SLU 52	1.21	0.45	44.73	-6.2052	0.0061	0.4261
957	SLU 53	1.25	0.47	45.52	-6.3042	0.0062	0.4403
957	SLU 54	1.24	0.46	45.47	-6.2943	0.0061	0.4371
957	SLU 55	1.23	0.45	45.17	-6.2567	0.0061	0.4328
957	SLU 56	1.27	0.47	45.96	-6.3557	0.0062	0.447
957	SLU 57	1.26	0.46	45.92	-6.3458	0.0061	0.4439
957	SLU 58	1.26	0.46	45.69	-6.3247	0.0061	0.4448
957	SLU 59	1.26	0.45	45.65	-6.3148	0.0061	0.4416
957	SLU 60	1.25	0.5	46.39	-6.4095	0.0067	0.4395
957	SLU 61	1.24	0.49	46.35	-6.3996	0.0066	0.4363
957	SLU 62	1.27	0.5	46.84	-6.461	0.0067	0.4462
957	SLU 63	1.26	0.49	46.8	-6.4511	0.0066	0.443
957	SLU 64	1.24	0.47	44.85	-6.2278	0.0061	0.4378
957	SLU 65	1.23	0.46	44.78	-6.2113	0.006	0.4324
957	SLU 66	1.27	0.48	45.57	-6.3103	0.0061	0.4467
957	SLU 67	1.26	0.47	45.52	-6.3004	0.0061	0.4435
957	SLU 68	1.25	0.46	45.22	-6.2629	0.006	0.4392
957	SLU 69	1.29	0.48	46.01	-6.3618	0.0061	0.4534
957	SLU 70	1.28	0.47	45.97	-6.3519	0.0061	0.4502
957	SLU 71	1.28	0.47	45.74	-6.3309	0.0061	0.4512
957	SLU 72	1.27	0.46	45.7	-6.321	0.0061	0.448
957	SLU 73	1.28	0.55	48.5	-6.6496	0.0072	0.4514
957	SLU 74	1.32	0.57	49.29	-6.7486	0.0073	0.4656
957	SLU 75	1.31	0.56	49.25	-6.7387	0.0073	0.4625
957	SLU 76	1.3	0.55	48.95	-6.7011	0.0073	0.4581
957	SLU 77	1.34	0.57	49.74	-6.8001	0.0074	0.4724
957	SLU 78	1.33	0.56	49.7	-6.7902	0.0073	0.4692
957	SLU 79	1.34	0.56	49.47	-6.7691	0.0073	0.4701
957	SLU 80	1.33	0.55	49.43	-6.7592	0.0073	0.4669
957	SLU 81	1.32	0.6	50.17	-6.8539	0.0078	0.4648
957	SLU 82	1.31	0.59	50.13	-6.844	0.0078	0.4617
957	SLU 83	1.34	0.6	50.62	-6.9054	0.0078	0.4715
957	SLU 84	1.33	0.59	50.58	-6.8955	0.0078	0.4684
957	SLE RA 1	0.94	0.34	33.67	-4.693	0.0044	0.3312
957	SLE RA 2	0.93	0.33	33.62	-4.682	0.0044	0.3276
957	SLE RA 3	0.96	0.35	34.15	-4.748	0.0044	0.3371
957	SLE RA 4	0.95	0.34	34.12	-4.7414	0.0044	0.335
957	SLE RA 5	0.94	0.33	33.92	-4.7163	0.0044	0.3321
957	SLE RA 6	0.97	0.35	34.45	-4.7823	0.0044	0.3416
957	SLE RA 7	0.97	0.34	34.42	-4.7757	0.0044	0.3395
957	SLE RA 8	0.97	0.34	34.26	-4.7616	0.0044	0.3401
957	SLE RA 9	0.96	0.34	34.24	-4.7551	0.0044	0.338
957	SLE RA 10	0.97	0.39	36.1	-4.9741	0.0052	0.3403
957	SLE RA 11	0.99	0.41	36.63	-5.0401	0.0053	0.3498
957	SLE RA 12	0.99	0.4	36.6	-5.0335	0.0052	0.3476
957	SLE RA 13	0.98	0.39	36.4	-5.0085	0.0052	0.3447
957	SLE RA 14	1.01	0.41	36.93	-5.0745	0.0053	0.3542
957	SLE RA 15	1	0.4	36.9	-5.0679	0.0052	0.3521
957	SLE RA 16	1	0.4	36.75	-5.0538	0.0052	0.3527
957	SLE RA 17	1	0.4	36.72	-5.0472	0.0052	0.3506
957	SLE RA 18	0.99	0.43	37.22	-5.1103	0.0056	0.3492
957	SLE RA 19	0.99	0.42	37.19	-5.1037	0.0056	0.3471
957	SLE RA 20	1.01	0.43	37.51	-5.1447	0.0056	0.3537
957	SLE RA 21	1	0.42	37.49	-5.1381	0.0056	0.3516
957	SLE FR 1	0.94	0.34	33.67	-4.693	0.0044	0.3312
957	SLE FR 2	0.94	0.34	33.66	-4.6908	0.0044	0.3305
957	SLE FR 3	0.95	0.34	33.79	-4.7067	0.0044	0.333
957	SLE FR 4	0.95	0.36	34.72	-4.816	0.0048	0.3359
957	SLE FR 5	0.96	0.37	34.85	-4.8319	0.0048	0.3384
957	SLE FR 6	0.97	0.38	35.44	-4.9016	0.005	0.3402
957	SLE QP 1	0.94	0.34	33.67	-4.693	0.0044	0.3312
957	SLE QP 2	0.96	0.37	34.73	-4.8182	0.0048	0.3366
957	SLD 1	4.46	0.36	28.64	-4.2945	0.0269	1.5628
957	SLD 2	4.11	0.79	28.21	-4.2486	0.0271	1.4414
957	SLD 3	4.76	-0.68	29.23	-4.3783	0.0255	1.6668
957	SLD 4	4.41	-0.25	28.8	-4.3324	0.0258	1.5454
957	SLD 5	1.62	1.86	32.1	-4.5421	0.0134	0.5683
957	SLD 6	1.39	2.15	31.81	-4.5122	0.0135	0.4889
957	SLD 7	2.61	-1.6	34.04	-4.8213	0.0089	0.9148
957	SLD 8	2.38	-1.32	33.76	-4.7914	0.0091	0.8354
957	SLD 9	-0.47	2.05	35.7	-4.845	0.0004	-0.1623
957	SLD 10	-0.7	2.33	35.42	-4.815	0.0006	-0.2416
957	SLD 11	0.53	-1.41	37.65	-5.1242	-0.004	0.1843
957	SLD 12	0.3	-1.13	37.37	-5.0942	-0.0038	0.1049
957	SLD 13	-2.49	0.98	40.66	-5.304	-0.0162	-0.8722
957	SLD 14	-2.84	1.42	40.24	-5.2581	-0.016	-0.9936

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
957	SLD 15	-2.19	-0.06	41.25	-5.3877	-0.0175	-0.7683
957	SLD 16	-2.54	0.38	40.82	-5.3418	-0.0173	-0.8897
957	SLV 1	9.15	0.31	20.5	-3.5928	0.0564	3.2053
957	SLV 2	8.33	1.32	19.5	-3.4859	0.057	2.9226
957	SLV 3	9.85	-2.06	21.83	-3.7884	0.0534	3.4479
957	SLV 4	9.03	-1.05	20.83	-3.6815	0.0539	3.1652
957	SLV 5	2.49	3.78	28.61	-4.1722	0.0248	0.8776
957	SLV 6	1.97	4.42	27.97	-4.1035	0.0252	0.6959
957	SLV 7	4.82	-4.13	33.05	-4.8242	0.0146	1.6865
957	SLV 8	4.3	-3.49	32.41	-4.7556	0.0149	1.5048
957	SLV 9	-2.39	4.22	37.05	-4.8808	-0.0054	-0.8316
957	SLV 10	-2.91	4.87	36.41	-4.8121	-0.0051	-1.0133
957	SLV 11	-0.06	-3.69	41.49	-5.5328	-0.0156	-0.0227
957	SLV 12	-0.58	-3.05	40.85	-5.4642	-0.0153	-0.2044
957	SLV 13	-7.12	1.78	48.63	-5.9548	-0.0444	-2.492
957	SLV 14	-7.93	2.79	47.64	-5.848	-0.0438	-2.7748
957	SLV 15	-6.42	-0.59	49.97	-6.1504	-0.0474	-2.2494
957	SLV 16	-7.23	0.42	48.97	-6.0436	-0.0469	-2.5321
957	CRTFP Ux+	0	0	0	0	0	0
957	CRTFP Ux-	0	0	0	0	0	0
957	CRTFP Uy+	0	0	0	0	0	0
957	CRTFP Uy-	0	0	0	0	0	0
958	SLU 1	0.93	0.36	32.71	-4.4415	-0.0122	0.3259
958	SLU 2	0.91	0.35	32.64	-4.4249	-0.0123	0.3207
958	SLU 3	0.95	0.37	33.43	-4.5215	-0.0126	0.3349
958	SLU 4	0.94	0.36	33.39	-4.5115	-0.0126	0.3318
958	SLU 5	0.93	0.35	33.09	-4.4749	-0.0125	0.3275
958	SLU 6	0.97	0.37	33.89	-4.5714	-0.0128	0.3417
958	SLU 7	0.96	0.36	33.85	-4.5615	-0.0129	0.3386
958	SLU 8	0.96	0.36	33.61	-4.5414	-0.0127	0.3394
958	SLU 9	0.96	0.35	33.57	-4.5315	-0.0127	0.3363
958	SLU 10	0.97	0.45	36.36	-4.842	-0.0131	0.3398
958	SLU 11	1.01	0.47	37.16	-4.9386	-0.0134	0.354
958	SLU 12	1	0.46	37.12	-4.9286	-0.0135	0.3509
958	SLU 13	0.98	0.45	36.81	-4.892	-0.0134	0.3466
958	SLU 14	1.02	0.47	37.61	-4.9886	-0.0136	0.3607
958	SLU 15	1.02	0.46	37.57	-4.9786	-0.0137	0.3576
958	SLU 16	1.02	0.46	37.33	-4.9586	-0.0135	0.3585
958	SLU 17	1.01	0.45	37.29	-4.9486	-0.0136	0.3554
958	SLU 18	1	0.5	38.02	-5.0374	-0.0133	0.3531
958	SLU 19	0.99	0.5	37.98	-5.0275	-0.0134	0.35
958	SLU 20	1.02	0.5	38.48	-5.0874	-0.0136	0.3599
958	SLU 21	1.01	0.49	38.44	-5.0774	-0.0137	0.3568
958	SLU 22	1	0.47	36.48	-4.8645	-0.0131	0.3514
958	SLU 23	0.98	0.45	36.41	-4.8479	-0.0132	0.3462
958	SLU 24	1.02	0.48	37.21	-4.9444	-0.0135	0.3604
958	SLU 25	1.02	0.47	37.17	-4.9344	-0.0136	0.3573
958	SLU 26	1	0.45	36.87	-4.8978	-0.0135	0.353
958	SLU 27	1.04	0.48	37.66	-4.9944	-0.0137	0.3672
958	SLU 28	1.03	0.47	37.62	-4.9844	-0.0138	0.3641
958	SLU 29	1.04	0.47	37.38	-4.9644	-0.0136	0.3649
958	SLU 30	1.03	0.46	37.34	-4.9544	-0.0137	0.3618
958	SLU 31	1.04	0.55	40.14	-5.265	-0.014	0.3653
958	SLU 32	1.08	0.58	40.93	-5.3615	-0.0143	0.3795
958	SLU 33	1.07	0.57	40.89	-5.3516	-0.0144	0.3764
958	SLU 34	1.06	0.55	40.59	-5.3149	-0.0143	0.372
958	SLU 35	1.1	0.58	41.38	-5.4115	-0.0146	0.3862
958	SLU 36	1.09	0.57	41.34	-5.4015	-0.0146	0.3831
958	SLU 37	1.09	0.57	41.11	-5.3815	-0.0144	0.3839
958	SLU 38	1.08	0.56	41.07	-5.3715	-0.0145	0.3808
958	SLU 39	1.07	0.61	41.8	-5.4603	-0.0143	0.3786
958	SLU 40	1.07	0.6	41.76	-5.4504	-0.0143	0.3755
958	SLU 41	1.09	0.61	42.25	-5.5103	-0.0145	0.3854
958	SLU 42	1.09	0.6	42.21	-5.5003	-0.0146	0.3823
958	SLU 43	1.18	0.43	41.23	-5.629	-0.0155	0.415
958	SLU 44	1.16	0.42	41.16	-5.6124	-0.0156	0.4098
958	SLU 45	1.21	0.44	41.95	-5.7089	-0.0159	0.424
958	SLU 46	1.2	0.43	41.91	-5.699	-0.016	0.4209
958	SLU 47	1.18	0.42	41.61	-5.6623	-0.0159	0.4165
958	SLU 48	1.22	0.44	42.4	-5.7589	-0.0161	0.4307
958	SLU 49	1.22	0.43	42.36	-5.7489	-0.0162	0.4276
958	SLU 50	1.22	0.43	42.13	-5.7289	-0.016	0.4285
958	SLU 51	1.21	0.42	42.09	-5.7189	-0.0161	0.4254
958	SLU 52	1.22	0.52	44.88	-6.0295	-0.0165	0.4288
958	SLU 53	1.26	0.54	45.67	-6.1261	-0.0167	0.443
958	SLU 54	1.25	0.53	45.63	-6.1161	-0.0168	0.4399
958	SLU 55	1.24	0.52	45.33	-6.0795	-0.0167	0.4356
958	SLU 56	1.28	0.54	46.13	-6.176	-0.017	0.4498
958	SLU 57	1.27	0.53	46.09	-6.166	-0.017	0.4467
958	SLU 58	1.27	0.53	45.85	-6.146	-0.0168	0.4475
958	SLU 59	1.26	0.52	45.81	-6.136	-0.0169	0.4444
958	SLU 60	1.26	0.58	46.54	-6.2249	-0.0167	0.4422
958	SLU 61	1.25	0.57	46.5	-6.2149	-0.0168	0.4391
958	SLU 62	1.27	0.58	46.99	-6.2748	-0.0169	0.4489
958	SLU 63	1.27	0.57	46.95	-6.2649	-0.017	0.4458
958	SLU 64	1.25	0.54	45	-6.0519	-0.0164	0.4404
958	SLU 65	1.24	0.53	44.93	-6.0353	-0.0166	0.4353
958	SLU 66	1.28	0.55	45.73	-6.1319	-0.0168	0.4494
958	SLU 67	1.27	0.54	45.69	-6.1219	-0.0169	0.4463
958	SLU 68	1.26	0.52	45.39	-6.0853	-0.0168	0.442
958	SLU 69	1.3	0.55	46.18	-6.1818	-0.0171	0.4562
958	SLU 70	1.29	0.54	46.14	-6.1719	-0.0171	0.4531
958	SLU 71	1.29	0.54	45.9	-6.1518	-0.0169	0.4539
958	SLU 72	1.28	0.53	45.86	-6.1419	-0.017	0.4508
958	SLU 73	1.29	0.62	48.65	-6.4524	-0.0174	0.4543
958	SLU 74	1.33	0.65	49.45	-6.549	-0.0176	0.4685
958	SLU 75	1.32	0.64	49.41	-6.539	-0.0177	0.4654

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
958	SLU 76	1.31	0.62	49.11	-6.5024	-0.0176	0.4611
958	SLU 77	1.35	0.65	49.9	-6.5989	-0.0179	0.4753
958	SLU 78	1.34	0.64	49.86	-6.589	-0.018	0.4722
958	SLU 79	1.34	0.64	49.62	-6.5689	-0.0177	0.473
958	SLU 80	1.33	0.63	49.58	-6.559	-0.0178	0.4699
958	SLU 81	1.33	0.68	50.32	-6.6478	-0.0176	0.4676
958	SLU 82	1.32	0.67	50.28	-6.6378	-0.0177	0.4645
958	SLU 83	1.35	0.68	50.77	-6.6978	-0.0178	0.4744
958	SLU 84	1.34	0.67	50.73	-6.6878	-0.0179	0.4713
958	SLE RA 1	0.95	0.39	33.79	-4.5624	-0.0124	0.3332
958	SLE RA 2	0.94	0.38	33.74	-4.5513	-0.0125	0.3297
958	SLE RA 3	0.96	0.4	34.27	-4.6157	-0.0127	0.3392
958	SLE RA 4	0.96	0.39	34.24	-4.609	-0.0127	0.3371
958	SLE RA 5	0.95	0.38	34.04	-4.5846	-0.0127	0.3342
958	SLE RA 6	0.98	0.4	34.57	-4.649	-0.0129	0.3437
958	SLE RA 7	0.97	0.39	34.55	-4.6423	-0.0129	0.3416
958	SLE RA 8	0.97	0.39	34.39	-4.629	-0.0128	0.3422
958	SLE RA 9	0.97	0.39	34.36	-4.6223	-0.0128	0.3401
958	SLE RA 10	0.97	0.45	36.22	-4.8294	-0.0131	0.3424
958	SLE RA 11	1	0.46	36.75	-4.8937	-0.0132	0.3519
958	SLE RA 12	0.99	0.46	36.72	-4.8871	-0.0133	0.3498
958	SLE RA 13	0.99	0.45	36.52	-4.8627	-0.0132	0.347
958	SLE RA 14	1.01	0.46	37.05	-4.927	-0.0134	0.3564
958	SLE RA 15	1.01	0.46	37.03	-4.9204	-0.0135	0.3543
958	SLE RA 16	1.01	0.46	36.87	-4.9071	-0.0133	0.3549
958	SLE RA 17	1	0.45	36.84	-4.9004	-0.0134	0.3528
958	SLE RA 18	1	0.49	37.33	-4.9596	-0.0132	0.3513
958	SLE RA 19	0.99	0.48	37.3	-4.953	-0.0133	0.3493
958	SLE RA 20	1.01	0.49	37.63	-4.9929	-0.0134	0.3558
958	SLE RA 21	1	0.48	37.6	-4.9863	-0.0134	0.3538
958	SLE FR 1	0.95	0.39	33.79	-4.5624	-0.0124	0.3332
958	SLE FR 2	0.94	0.39	33.78	-4.5602	-0.0124	0.3325
958	SLE FR 3	0.95	0.39	33.91	-4.5757	-0.0125	0.335
958	SLE FR 4	0.96	0.42	34.84	-4.6793	-0.0127	0.3379
958	SLE FR 5	0.97	0.42	34.97	-4.6949	-0.0127	0.3404
958	SLE FR 6	0.97	0.44	35.56	-4.761	-0.0128	0.3423
958	SLE QP 1	0.95	0.39	33.79	-4.5624	-0.0124	0.3332
958	SLE QP 2	0.96	0.42	34.85	-4.6815	-0.0127	0.3386
958	SLD 1	4.46	0.44	28.05	-3.9867	0.0138	1.5644
958	SLD 2	4.11	0.9	27.61	-3.9432	0.0142	1.4431
958	SLD 3	4.76	-0.66	28.67	-4.0703	0.0119	1.6685
958	SLD 4	4.41	-0.2	28.23	-4.0269	0.0123	1.5472
958	SLD 5	1.62	2.01	31.95	-4.3539	-0.0019	0.57
958	SLD 6	1.39	2.32	31.66	-4.3256	-0.0016	0.4907
958	SLD 7	2.62	-1.66	34.01	-4.6327	-0.0083	0.9169
958	SLD 8	2.39	-1.35	33.72	-4.6043	-0.008	0.8376
958	SLD 9	-0.47	2.2	35.97	-4.7588	-0.0174	-0.1603
958	SLD 10	-0.69	2.5	35.69	-4.7304	-0.0171	-0.2396
958	SLD 11	0.53	-1.48	38.04	-5.0375	-0.0237	0.1866
958	SLD 12	0.31	-1.17	37.75	-5.0092	-0.0234	0.1073
958	SLD 13	-2.49	1.04	41.47	-5.3362	-0.0377	-0.8699
958	SLD 14	-2.84	1.5	41.03	-5.2928	-0.0372	-0.9912
958	SLD 15	-2.19	-0.06	42.09	-5.4198	-0.0396	-0.7658
958	SLD 16	-2.54	0.4	41.65	-5.3764	-0.0391	-0.8872
958	SLV 1	9.15	0.43	18.95	-3.0553	0.0492	3.2062
958	SLV 2	8.33	1.51	17.93	-2.9542	0.0502	2.9236
958	SLV 3	9.85	-2.08	20.36	-3.2506	0.0448	3.4492
958	SLV 4	9.03	-1	19.34	-3.1495	0.0459	3.1666
958	SLV 5	2.49	4.05	28.11	-3.9148	0.0124	0.8789
958	SLV 6	1.97	4.75	27.46	-3.8498	0.013	0.6973
958	SLV 7	4.83	-4.33	32.82	-4.5658	-0.0022	1.6886
958	SLV 8	4.31	-3.64	32.16	-4.5008	-0.0016	1.507
958	SLV 9	-2.38	4.48	37.54	-4.8623	-0.0238	-0.8298
958	SLV 10	-2.91	5.17	36.88	-4.7973	-0.0231	-1.0114
958	SLV 11	-0.05	-3.91	42.24	-5.5133	-0.0384	-0.02
958	SLV 12	-0.57	-3.21	41.59	-5.4483	-0.0377	-0.2016
958	SLV 13	-7.11	1.84	50.36	-6.2136	-0.0712	-2.4893
958	SLV 14	-7.92	2.92	49.34	-6.1125	-0.0702	-2.7719
958	SLV 15	-6.41	-0.67	51.77	-6.4089	-0.0756	-2.2464
958	SLV 16	-7.22	0.41	50.75	-6.3078	-0.0746	-2.529
958	CRTFP Ux+	0	0	0	0	0	0
958	CRTFP Ux-	0	0	0	0	0	0
958	CRTFP Uy+	0	0	0	0	0	0
958	CRTFP Uy-	0	0	0	0	0	0
959	SLU 1	0.93	0.42	33.3	-4.6623	-0.0273	0.3272
959	SLU 2	0.92	0.4	33.23	-4.6459	-0.0275	0.3222
959	SLU 3	0.96	0.43	34.04	-4.7484	-0.0281	0.3363
959	SLU 4	0.95	0.42	34	-4.7386	-0.0282	0.3333
959	SLU 5	0.93	0.4	33.7	-4.6997	-0.028	0.329
959	SLU 6	0.97	0.43	34.5	-4.8022	-0.0286	0.3431
959	SLU 7	0.97	0.41	34.47	-4.7924	-0.0287	0.3401
959	SLU 8	0.97	0.42	34.22	-4.7699	-0.0283	0.3408
959	SLU 9	0.96	0.4	34.18	-4.7601	-0.0284	0.3378
959	SLU 10	0.97	0.51	37.01	-5.0854	-0.0302	0.3413
959	SLU 11	1.01	0.54	37.81	-5.188	-0.0308	0.3554
959	SLU 12	1	0.53	37.78	-5.1781	-0.0309	0.3524
959	SLU 13	0.99	0.51	37.47	-5.1392	-0.0307	0.3481
959	SLU 14	1.03	0.54	38.28	-5.2417	-0.0313	0.3622
959	SLU 15	1.02	0.53	38.24	-5.2319	-0.0314	0.3592
959	SLU 16	1.02	0.53	38	-5.2094	-0.031	0.3599
959	SLU 17	1.01	0.52	37.96	-5.1996	-0.0311	0.3569
959	SLU 18	1.01	0.58	38.69	-5.2902	-0.0312	0.3546
959	SLU 19	1	0.56	38.65	-5.2804	-0.0313	0.3515
959	SLU 20	1.02	0.58	39.15	-5.344	-0.0317	0.3613
959	SLU 21	1.02	0.56	39.11	-5.3342	-0.0318	0.3583
959	SLU 22	1	0.53	37.13	-5.1081	-0.0302	0.3528
959	SLU 23	0.99	0.51	37.06	-5.0917	-0.0303	0.3478

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
959	SLU 24	1.03	0.54	37.87	-5.1942	-0.0309	0.3619
959	SLU 25	1.02	0.53	37.83	-5.1844	-0.0311	0.3589
959	SLU 26	1.01	0.51	37.53	-5.1455	-0.0308	0.3545
959	SLU 27	1.05	0.54	38.33	-5.248	-0.0314	0.3687
959	SLU 28	1.04	0.53	38.3	-5.2381	-0.0315	0.3657
959	SLU 29	1.04	0.53	38.05	-5.2157	-0.0312	0.3664
959	SLU 30	1.03	0.52	38.01	-5.2058	-0.0313	0.3634
959	SLU 31	1.04	0.62	40.84	-5.5312	-0.0331	0.3669
959	SLU 32	1.08	0.65	41.65	-5.6337	-0.0337	0.381
959	SLU 33	1.07	0.64	41.61	-5.6239	-0.0338	0.378
959	SLU 34	1.06	0.62	41.3	-5.585	-0.0336	0.3737
959	SLU 35	1.1	0.65	42.11	-5.6875	-0.0342	0.3878
959	SLU 36	1.09	0.64	42.07	-5.6777	-0.0343	0.3848
959	SLU 37	1.09	0.64	41.83	-5.6552	-0.0339	0.3855
959	SLU 38	1.09	0.63	41.79	-5.6454	-0.034	0.3825
959	SLU 39	1.08	0.69	42.52	-5.736	-0.0341	0.3801
959	SLU 40	1.07	0.68	42.48	-5.7261	-0.0342	0.3771
959	SLU 41	1.1	0.69	42.98	-5.7898	-0.0345	0.3869
959	SLU 42	1.09	0.68	42.94	-5.7799	-0.0347	0.3839
959	SLU 43	1.18	0.5	41.97	-5.9082	-0.0345	0.4167
959	SLU 44	1.17	0.48	41.91	-5.8918	-0.0347	0.4116
959	SLU 45	1.21	0.51	42.72	-5.9943	-0.0353	0.4257
959	SLU 46	1.2	0.5	42.68	-5.9844	-0.0354	0.4227
959	SLU 47	1.19	0.48	42.37	-5.9456	-0.0352	0.4184
959	SLU 48	1.23	0.51	43.18	-6.0481	-0.0358	0.4325
959	SLU 49	1.22	0.5	43.14	-6.0382	-0.0359	0.4295
959	SLU 50	1.22	0.5	42.9	-6.0158	-0.0355	0.4302
959	SLU 51	1.21	0.49	42.86	-6.0059	-0.0356	0.4272
959	SLU 52	1.22	0.6	45.68	-6.3313	-0.0374	0.4307
959	SLU 53	1.26	0.62	46.49	-6.4338	-0.038	0.4449
959	SLU 54	1.25	0.61	46.45	-6.424	-0.0381	0.4418
959	SLU 55	1.24	0.59	46.15	-6.3851	-0.0379	0.4375
959	SLU 56	1.28	0.62	46.95	-6.4876	-0.0385	0.4516
959	SLU 57	1.27	0.61	46.92	-6.4778	-0.0386	0.4486
959	SLU 58	1.28	0.61	46.67	-6.4553	-0.0382	0.4494
959	SLU 59	1.27	0.6	46.63	-6.4454	-0.0383	0.4463
959	SLU 60	1.26	0.66	47.36	-6.5361	-0.0384	0.444
959	SLU 61	1.25	0.65	47.33	-6.5262	-0.0385	0.4409
959	SLU 62	1.28	0.66	47.83	-6.5899	-0.0389	0.4508
959	SLU 63	1.27	0.65	47.79	-6.58	-0.039	0.4477
959	SLU 64	1.26	0.62	45.8	-6.3539	-0.0374	0.4422
959	SLU 65	1.24	0.6	45.74	-6.3375	-0.0375	0.4372
959	SLU 66	1.28	0.63	46.55	-6.4401	-0.0381	0.4513
959	SLU 67	1.27	0.62	46.51	-6.4302	-0.0383	0.4483
959	SLU 68	1.26	0.6	46.2	-6.3913	-0.038	0.444
959	SLU 69	1.3	0.63	47.01	-6.4939	-0.0386	0.4581
959	SLU 70	1.29	0.62	46.97	-6.484	-0.0387	0.4551
959	SLU 71	1.29	0.62	46.73	-6.4615	-0.0384	0.4558
959	SLU 72	1.29	0.61	46.69	-6.4517	-0.0385	0.4528
959	SLU 73	1.29	0.71	49.51	-6.7771	-0.0403	0.4563
959	SLU 74	1.33	0.74	50.32	-6.8796	-0.0409	0.4704
959	SLU 75	1.33	0.73	50.28	-6.8697	-0.041	0.4674
959	SLU 76	1.31	0.71	49.98	-6.8309	-0.0408	0.4631
959	SLU 77	1.35	0.74	50.78	-6.9334	-0.0414	0.4772
959	SLU 78	1.35	0.73	50.75	-6.9235	-0.0415	0.4742
959	SLU 79	1.35	0.73	50.5	-6.9011	-0.0411	0.4749
959	SLU 80	1.34	0.72	50.46	-6.8912	-0.0412	0.4719
959	SLU 81	1.33	0.78	51.19	-6.9818	-0.0413	0.4695
959	SLU 82	1.32	0.77	51.16	-6.972	-0.0414	0.4665
959	SLU 83	1.35	0.78	51.66	-7.0356	-0.0418	0.4763
959	SLU 84	1.34	0.77	51.62	-7.0258	-0.0419	0.4733
959	SLE RA 1	0.95	0.45	34.39	-4.7897	-0.0281	0.3345
959	SLE RA 2	0.94	0.44	34.35	-4.7787	-0.0282	0.3312
959	SLE RA 3	0.97	0.46	34.89	-4.8471	-0.0286	0.3406
959	SLE RA 4	0.96	0.45	34.86	-4.8405	-0.0287	0.3386
959	SLE RA 5	0.95	0.44	34.66	-4.8146	-0.0286	0.3357
959	SLE RA 6	0.98	0.46	35.19	-4.8829	-0.029	0.3451
959	SLE RA 7	0.97	0.45	35.17	-4.8764	-0.029	0.3431
959	SLE RA 8	0.98	0.45	35.01	-4.8614	-0.0288	0.3436
959	SLE RA 9	0.97	0.44	34.98	-4.8548	-0.0288	0.3416
959	SLE RA 10	0.98	0.51	36.87	-5.0718	-0.03	0.3439
959	SLE RA 11	1	0.53	37.4	-5.1401	-0.0304	0.3534
959	SLE RA 12	1	0.52	37.38	-5.1335	-0.0305	0.3513
959	SLE RA 13	0.99	0.51	37.17	-5.1076	-0.0304	0.3485
959	SLE RA 14	1.02	0.53	37.71	-5.176	-0.0308	0.3579
959	SLE RA 15	1.01	0.52	37.69	-5.1694	-0.0308	0.3559
959	SLE RA 16	1.01	0.52	37.52	-5.1544	-0.0306	0.3563
959	SLE RA 17	1.01	0.52	37.5	-5.1479	-0.0307	0.3543
959	SLE RA 18	1	0.56	37.99	-5.2083	-0.0307	0.3528
959	SLE RA 19	1	0.55	37.96	-5.2017	-0.0308	0.3507
959	SLE RA 20	1.01	0.56	38.29	-5.2441	-0.031	0.3573
959	SLE RA 21	1.01	0.55	38.27	-5.2376	-0.0311	0.3553
959	SLE FR 1	0.95	0.45	34.39	-4.7897	-0.0281	0.3345
959	SLE FR 2	0.95	0.45	34.38	-4.7875	-0.0281	0.3339
959	SLE FR 3	0.96	0.45	34.51	-4.804	-0.0282	0.3364
959	SLE FR 4	0.96	0.48	35.46	-4.9131	-0.0289	0.3393
959	SLE FR 5	0.97	0.48	35.59	-4.9296	-0.029	0.3418
959	SLE FR 6	0.98	0.5	36.19	-4.999	-0.0294	0.3437
959	SLE QP 1	0.95	0.45	34.39	-4.7897	-0.0281	0.3345
959	SLE QP 2	0.97	0.48	35.47	-4.9153	-0.0289	0.34
959	SLD 1	4.46	0.53	27.83	-3.9725	0.0018	1.5653
959	SLD 2	4.11	1.03	27.37	-3.9273	0.0024	1.4441
959	SLD 3	4.76	-0.65	28.5	-4.0555	-0.0007	1.6694
959	SLD 4	4.41	-0.15	28.05	-4.0103	0	1.5482
959	SLD 5	1.62	2.2	32.24	-4.5145	-0.0161	0.5711
959	SLD 6	1.39	2.53	31.94	-4.4849	-0.0157	0.4919
959	SLD 7	2.62	-1.74	34.48	-4.7913	-0.0242	0.9182

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
959	SLD 8	2.39	-1.41	34.18	-4.7617	-0.0238	0.839
959	SLD 9	-0.46	2.37	36.76	-5.0689	-0.034	-0.159
959	SLD 10	-0.69	2.7	36.46	-5.0393	-0.0335	-0.2382
959	SLD 11	0.54	-1.56	39	-5.3456	-0.0421	0.1882
959	SLD 12	0.31	-1.23	38.7	-5.316	-0.0417	0.1089
959	SLD 13	-2.48	1.11	42.89	-5.8202	-0.0578	-0.8682
959	SLD 14	-2.83	1.61	42.44	-5.775	-0.0571	-0.9894
959	SLD 15	-2.18	-0.07	43.56	-5.9033	-0.0602	-0.7641
959	SLD 16	-2.53	0.43	43.11	-5.858	-0.0596	-0.8853
959	SLV 1	9.14	0.57	17.6	-2.7089	0.0429	3.2065
959	SLV 2	8.33	1.74	16.54	-2.6035	0.0444	2.9241
959	SLV 3	9.85	-2.13	19.13	-2.9026	0.0372	3.4495
959	SLV 4	9.03	-0.96	18.07	-2.7972	0.0387	3.1672
959	SLV 5	2.49	4.39	27.97	-3.9777	0.0009	0.8797
959	SLV 6	1.97	5.15	27.29	-3.9099	0.0019	0.6982
959	SLV 7	4.83	-4.59	33.07	-4.6233	-0.0178	1.6899
959	SLV 8	4.31	-3.84	32.39	-4.5555	-0.0169	1.5084
959	SLV 9	-2.38	4.8	38.55	-5.275	-0.0409	-0.8284
959	SLV 10	-2.9	5.55	37.87	-5.2072	-0.0399	-1.0099
959	SLV 11	-0.04	-4.18	43.65	-5.9206	-0.0597	-0.0182
959	SLV 12	-0.56	-3.43	42.97	-5.8529	-0.0587	-0.1997
959	SLV 13	-7.1	1.92	52.86	-7.0334	-0.0965	-2.4872
959	SLV 14	-7.91	3.09	51.8	-6.9279	-0.095	-2.7695
959	SLV 15	-6.4	-0.77	54.39	-7.227	-0.1021	-2.2441
959	SLV 16	-7.21	0.4	53.33	-7.1216	-0.1007	-2.5265
959	CRTFP Ux+	0	0	0	0	0	0
959	CRTFP Ux-	0	0	0	0	0	0
959	CRTFP Uy+	0	0	0	0	0	0
959	CRTFP Uy-	0	0	0	0	0	0
960	SLU 1	0.93	0.48	34.3	-5.1965	-0.0402	0.328
960	SLU 2	0.92	0.46	34.25	-5.1804	-0.0404	0.3231
960	SLU 3	0.96	0.49	35.07	-5.2966	-0.0413	0.3371
960	SLU 4	0.95	0.48	35.04	-5.287	-0.0415	0.3342
960	SLU 5	0.94	0.46	34.73	-5.2429	-0.0411	0.3299
960	SLU 6	0.98	0.49	35.56	-5.3592	-0.042	0.3439
960	SLU 7	0.97	0.47	35.52	-5.3495	-0.0422	0.341
960	SLU 8	0.97	0.48	35.26	-5.3216	-0.0416	0.3416
960	SLU 9	0.96	0.46	35.23	-5.3119	-0.0418	0.3387
960	SLU 10	0.97	0.58	38.13	-5.6816	-0.0448	0.3422
960	SLU 11	1.01	0.61	38.95	-5.7979	-0.0457	0.3563
960	SLU 12	1	0.6	38.92	-5.7882	-0.0458	0.3533
960	SLU 13	0.99	0.58	38.61	-5.7442	-0.0455	0.349
960	SLU 14	1.03	0.61	39.44	-5.8604	-0.0464	0.3631
960	SLU 15	1.02	0.6	39.4	-5.8508	-0.0465	0.3601
960	SLU 16	1.02	0.6	39.14	-5.8228	-0.046	0.3608
960	SLU 17	1.01	0.59	39.11	-5.8132	-0.0461	0.3578
960	SLU 18	1.01	0.66	39.85	-5.9125	-0.0464	0.3554
960	SLU 19	1	0.64	39.81	-5.9029	-0.0466	0.3524
960	SLU 20	1.03	0.66	40.33	-5.9751	-0.0471	0.3622
960	SLU 21	1.02	0.64	40.29	-5.9654	-0.0473	0.3592
960	SLU 22	1	0.61	38.24	-5.7051	-0.0448	0.3536
960	SLU 23	0.99	0.58	38.19	-5.689	-0.045	0.3487
960	SLU 24	1.03	0.62	39.02	-5.8053	-0.0459	0.3627
960	SLU 25	1.02	0.6	38.98	-5.7956	-0.046	0.3598
960	SLU 26	1.01	0.58	38.67	-5.7516	-0.0457	0.3555
960	SLU 27	1.05	0.61	39.5	-5.8678	-0.0466	0.3696
960	SLU 28	1.04	0.6	39.46	-5.8582	-0.0467	0.3666
960	SLU 29	1.04	0.6	39.2	-5.8302	-0.0462	0.3672
960	SLU 30	1.03	0.59	39.17	-5.8206	-0.0463	0.3643
960	SLU 31	1.04	0.71	42.07	-6.1903	-0.0493	0.3678
960	SLU 32	1.08	0.74	42.9	-6.3065	-0.0502	0.3819
960	SLU 33	1.07	0.72	42.86	-6.2969	-0.0503	0.3789
960	SLU 34	1.06	0.71	42.55	-6.2528	-0.05	0.3746
960	SLU 35	1.1	0.74	43.38	-6.3691	-0.0509	0.3887
960	SLU 36	1.09	0.72	43.34	-6.3594	-0.051	0.3857
960	SLU 37	1.1	0.73	43.08	-6.3315	-0.0505	0.3864
960	SLU 38	1.09	0.71	43.05	-6.3218	-0.0506	0.3834
960	SLU 39	1.08	0.78	43.79	-6.4212	-0.051	0.381
960	SLU 40	1.07	0.77	43.75	-6.4115	-0.0511	0.378
960	SLU 41	1.1	0.78	44.27	-6.4838	-0.0517	0.3878
960	SLU 42	1.09	0.77	44.23	-6.4741	-0.0518	0.3848
960	SLU 43	1.19	0.58	43.24	-6.581	-0.0507	0.4176
960	SLU 44	1.17	0.56	43.19	-6.5649	-0.051	0.4127
960	SLU 45	1.21	0.59	44.01	-6.6812	-0.0518	0.4268
960	SLU 46	1.2	0.58	43.98	-6.6715	-0.052	0.4238
960	SLU 47	1.19	0.56	43.67	-6.6275	-0.0517	0.4195
960	SLU 48	1.23	0.59	44.49	-6.7437	-0.0525	0.4336
960	SLU 49	1.22	0.58	44.46	-6.7341	-0.0527	0.4306
960	SLU 50	1.22	0.58	44.2	-6.7061	-0.0521	0.4312
960	SLU 51	1.22	0.57	44.17	-6.6965	-0.0523	0.4283
960	SLU 52	1.23	0.68	47.07	-7.0662	-0.0553	0.4318
960	SLU 53	1.26	0.72	47.89	-7.1824	-0.0562	0.4459
960	SLU 54	1.26	0.7	47.86	-7.1728	-0.0563	0.4429
960	SLU 55	1.24	0.68	47.55	-7.1287	-0.056	0.4386
960	SLU 56	1.28	0.71	48.37	-7.245	-0.0569	0.4527
960	SLU 57	1.28	0.7	48.34	-7.2353	-0.057	0.4497
960	SLU 58	1.28	0.7	48.08	-7.2074	-0.0565	0.4504
960	SLU 59	1.27	0.69	48.05	-7.1977	-0.0566	0.4474
960	SLU 60	1.26	0.76	48.78	-7.2971	-0.0569	0.445
960	SLU 61	1.25	0.74	48.75	-7.2874	-0.0571	0.442
960	SLU 62	1.28	0.76	49.27	-7.3596	-0.0576	0.4518
960	SLU 63	1.27	0.74	49.23	-7.35	-0.0578	0.4488
960	SLU 64	1.26	0.71	47.18	-7.0897	-0.0553	0.4432
960	SLU 65	1.24	0.68	47.13	-7.0736	-0.0555	0.4383
960	SLU 66	1.28	0.72	47.96	-7.1898	-0.0564	0.4524
960	SLU 67	1.28	0.7	47.92	-7.1802	-0.0565	0.4494
960	SLU 68	1.26	0.68	47.61	-7.1361	-0.0562	0.4451

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
960	SLU 69	1.3	0.72	48.44	-7.2524	-0.0571	0.4592
960	SLU 70	1.29	0.7	48.4	-7.2427	-0.0572	0.4562
960	SLU 71	1.3	0.71	48.14	-7.2148	-0.0567	0.4569
960	SLU 72	1.29	0.69	48.11	-7.2051	-0.0568	0.4539
960	SLU 73	1.3	0.81	51.01	-7.5748	-0.0598	0.4574
960	SLU 74	1.34	0.84	51.84	-7.6911	-0.0607	0.4715
960	SLU 75	1.33	0.83	51.8	-7.6814	-0.0609	0.4685
960	SLU 76	1.32	0.81	51.49	-7.6374	-0.0605	0.4642
960	SLU 77	1.36	0.84	52.32	-7.7536	-0.0614	0.4783
960	SLU 78	1.35	0.83	52.28	-7.744	-0.0616	0.4753
960	SLU 79	1.35	0.83	52.02	-7.716	-0.061	0.476
960	SLU 80	1.34	0.82	51.99	-7.7064	-0.0611	0.473
960	SLU 81	1.33	0.88	52.73	-7.8057	-0.0615	0.4706
960	SLU 82	1.33	0.87	52.69	-7.7961	-0.0616	0.4676
960	SLU 83	1.35	0.88	53.21	-7.8683	-0.0622	0.4774
960	SLU 84	1.34	0.87	53.17	-7.8586	-0.0623	0.4744
960	SLE RA 1	0.95	0.52	35.43	-5.3418	-0.0415	0.3353
960	SLE RA 2	0.94	0.5	35.39	-5.3311	-0.0417	0.332
960	SLE RA 3	0.97	0.52	35.94	-5.4086	-0.0423	0.3414
960	SLE RA 4	0.96	0.51	35.92	-5.4021	-0.0423	0.3394
960	SLE RA 5	0.96	0.5	35.71	-5.3728	-0.0421	0.3366
960	SLE RA 6	0.98	0.52	36.26	-5.4503	-0.0427	0.3459
960	SLE RA 7	0.98	0.51	36.24	-5.4438	-0.0428	0.344
960	SLE RA 8	0.98	0.52	36.07	-5.4252	-0.0425	0.3444
960	SLE RA 9	0.97	0.51	36.05	-5.4188	-0.0425	0.3424
960	SLE RA 10	0.98	0.58	37.98	-5.6652	-0.0446	0.3448
960	SLE RA 11	1	0.61	38.53	-5.7427	-0.0452	0.3542
960	SLE RA 12	1	0.6	38.51	-5.7363	-0.0452	0.3522
960	SLE RA 13	0.99	0.58	38.3	-5.7069	-0.045	0.3493
960	SLE RA 14	1.02	0.61	38.85	-5.7844	-0.0456	0.3587
960	SLE RA 15	1.01	0.6	38.83	-5.778	-0.0457	0.3567
960	SLE RA 16	1.01	0.6	38.66	-5.7594	-0.0454	0.3572
960	SLE RA 17	1.01	0.59	38.63	-5.7529	-0.0454	0.3552
960	SLE RA 18	1	0.63	39.12	-5.8192	-0.0457	0.3536
960	SLE RA 19	1	0.63	39.1	-5.8127	-0.0457	0.3516
960	SLE RA 20	1.02	0.63	39.44	-5.8609	-0.0461	0.3581
960	SLE RA 21	1.01	0.62	39.42	-5.8544	-0.0462	0.3561
960	SLE FR 1	0.95	0.52	35.43	-5.3418	-0.0415	0.3353
960	SLE FR 2	0.95	0.51	35.42	-5.3396	-0.0415	0.3347
960	SLE FR 3	0.96	0.52	35.56	-5.3585	-0.0417	0.3371
960	SLE FR 4	0.96	0.55	36.53	-5.4829	-0.0428	0.3401
960	SLE FR 5	0.97	0.55	36.67	-5.5017	-0.0429	0.3426
960	SLE FR 6	0.98	0.58	37.28	-5.5805	-0.0436	0.3444
960	SLE QP 1	0.95	0.52	35.43	-5.3418	-0.0415	0.3353
960	SLE QP 2	0.97	0.55	36.54	-5.485	-0.0428	0.3408
960	SLD 1	4.46	0.63	27.94	-4.2203	-0.0083	1.5656
960	SLD 2	4.11	1.18	27.46	-4.1691	-0.0075	1.4445
960	SLD 3	4.76	-0.64	28.68	-4.3075	-0.0112	1.6698
960	SLD 4	4.41	-0.1	28.2	-4.2563	-0.0104	1.5487
960	SLD 5	1.62	2.41	32.92	-4.9824	-0.0282	0.5717
960	SLD 6	1.39	2.77	32.61	-4.9489	-0.0276	0.4925
960	SLD 7	2.62	-1.83	35.38	-5.273	-0.0378	0.9189
960	SLD 8	2.39	-1.48	35.07	-5.2396	-0.0373	0.8397
960	SLD 9	-0.46	2.58	38	-5.7304	-0.0482	-0.1581
960	SLD 10	-0.69	2.94	37.69	-5.697	-0.0477	-0.2373
960	SLD 11	0.54	-1.66	40.47	-6.0211	-0.0579	0.189
960	SLD 12	0.31	-1.31	40.15	-5.9876	-0.0573	0.1099
960	SLD 13	-2.48	1.2	44.87	-6.7137	-0.0752	-0.8671
960	SLD 14	-2.83	1.75	44.4	-6.6625	-0.0743	-0.9882
960	SLD 15	-2.18	-0.07	45.61	-6.8009	-0.0781	-0.7629
960	SLD 16	-2.53	0.47	45.14	-6.7497	-0.0772	-0.8841
960	SLV 1	9.14	0.7	16.43	-2.5252	0.0379	3.2062
960	SLV 2	8.32	1.97	15.32	-2.406	0.0398	2.9241
960	SLV 3	9.84	-2.21	18.11	-2.7281	0.0312	3.4493
960	SLV 4	9.03	-0.94	17	-2.6088	0.0331	3.1672
960	SLV 5	2.49	4.79	28.14	-4.3098	-0.0088	0.8801
960	SLV 6	1.97	5.61	27.42	-4.2332	-0.0076	0.6988
960	SLV 7	4.83	-4.9	33.76	-4.986	-0.031	1.6904
960	SLV 8	4.31	-4.09	33.04	-4.9094	-0.0298	1.5091
960	SLV 9	-2.38	5.19	40.03	-6.0606	-0.0558	-0.8275
960	SLV 10	-2.9	6.01	39.32	-5.984	-0.0545	-1.0088
960	SLV 11	-0.03	-4.5	45.65	-6.7368	-0.078	-0.0172
960	SLV 12	-0.56	-3.69	44.94	-6.6602	-0.0767	-0.1985
960	SLV 13	-7.09	2.04	56.07	-8.3612	-0.1187	-2.4856
960	SLV 14	-7.91	3.31	54.96	-8.2419	-0.1167	-2.7677
960	SLV 15	-6.39	-0.87	57.76	-8.5641	-0.1253	-2.2425
960	SLV 16	-7.21	0.4	56.65	-8.4448	-0.1234	-2.5246
960	CRTFP Ux+	0	0	0	0	0	0
960	CRTFP Ux-	0	0	0	0	0	0
960	CRTFP Uy+	0	0	0	0	0	0
960	CRTFP Uy-	0	0	0	0	0	0
961	SLU 1	0.8	0.47	30.72	-5.0793	0.8256	0.27
961	SLU 2	0.79	0.44	30.67	-5.0659	0.8243	0.2666
961	SLU 3	0.83	0.48	31.41	-5.1812	0.8442	0.2777
961	SLU 4	0.82	0.46	31.39	-5.1732	0.8434	0.2756
961	SLU 5	0.81	0.44	31.11	-5.1295	0.8358	0.2725
961	SLU 6	0.84	0.48	31.85	-5.2448	0.8558	0.2836
961	SLU 7	0.84	0.46	31.82	-5.2368	0.8549	0.2815
961	SLU 8	0.84	0.47	31.58	-5.2066	0.8487	0.2818
961	SLU 9	0.83	0.45	31.56	-5.1985	0.8479	0.2798
961	SLU 10	0.84	0.56	34.14	-5.5686	0.9176	0.2797
961	SLU 11	0.87	0.6	34.88	-5.6839	0.9375	0.2908
961	SLU 12	0.87	0.58	34.86	-5.6758	0.9367	0.2887
961	SLU 13	0.86	0.56	34.58	-5.6322	0.9292	0.2856
961	SLU 14	0.89	0.6	35.32	-5.7475	0.9491	0.2967
961	SLU 15	0.88	0.58	35.29	-5.7395	0.9483	0.2946
961	SLU 16	0.88	0.59	35.05	-5.7092	0.9421	0.2949

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
961	SLU 17	0.88	0.57	35.03	-5.7012	0.9413	0.2929
961	SLU 18	0.87	0.64	35.67	-5.7974	0.959	0.2887
961	SLU 19	0.86	0.63	35.65	-5.7894	0.9582	0.2866
961	SLU 20	0.89	0.64	36.11	-5.8611	0.9705	0.2946
961	SLU 21	0.88	0.62	36.08	-5.853	0.9697	0.2926
961	SLU 22	0.87	0.59	34.25	-5.5897	0.9204	0.2888
961	SLU 23	0.86	0.56	34.2	-5.5762	0.9191	0.2853
961	SLU 24	0.89	0.6	34.94	-5.6916	0.939	0.2965
961	SLU 25	0.88	0.58	34.92	-5.6835	0.9382	0.2944
961	SLU 26	0.87	0.56	34.64	-5.6398	0.9306	0.2912
961	SLU 27	0.91	0.6	35.38	-5.7552	0.9506	0.3024
961	SLU 28	0.9	0.58	35.35	-5.7471	0.9498	0.3003
961	SLU 29	0.9	0.59	35.11	-5.7169	0.9436	0.3006
961	SLU 30	0.89	0.57	35.09	-5.7088	0.9427	0.2985
961	SLU 31	0.9	0.68	37.67	-6.0789	1.0124	0.2984
961	SLU 32	0.94	0.72	38.41	-6.1943	1.0324	0.3096
961	SLU 33	0.93	0.7	38.39	-6.1862	1.0316	0.3075
961	SLU 34	0.92	0.68	38.11	-6.1425	1.024	0.3043
961	SLU 35	0.95	0.71	38.85	-6.2579	1.0439	0.3155
961	SLU 36	0.95	0.7	38.82	-6.2498	1.0431	0.3134
961	SLU 37	0.95	0.71	38.58	-6.2196	1.0369	0.3137
961	SLU 38	0.94	0.69	38.56	-6.2115	1.0361	0.3116
961	SLU 39	0.93	0.76	39.2	-6.3078	1.0538	0.3075
961	SLU 40	0.93	0.74	39.18	-6.2997	1.053	0.3054
961	SLU 41	0.95	0.76	39.64	-6.3714	1.0653	0.3134
961	SLU 42	0.94	0.74	39.61	-6.3633	1.0645	0.3113
961	SLU 43	1.02	0.57	38.72	-6.4282	1.0408	0.3446
961	SLU 44	1.01	0.55	38.68	-6.4147	1.0394	0.3411
961	SLU 45	1.05	0.58	39.42	-6.53	1.0594	0.3523
961	SLU 46	1.04	0.56	39.39	-6.522	1.0586	0.3502
961	SLU 47	1.03	0.54	39.11	-6.4783	1.051	0.347
961	SLU 48	1.06	0.58	39.85	-6.5937	1.0709	0.3582
961	SLU 49	1.06	0.56	39.83	-6.5856	1.0701	0.3561
961	SLU 50	1.06	0.57	39.59	-6.5554	1.0639	0.3564
961	SLU 51	1.05	0.55	39.56	-6.5473	1.0631	0.3543
961	SLU 52	1.06	0.66	42.15	-6.9174	1.1328	0.3542
961	SLU 53	1.09	0.7	42.89	-7.0327	1.1527	0.3654
961	SLU 54	1.09	0.68	42.86	-7.0247	1.1519	0.3633
961	SLU 55	1.08	0.66	42.58	-6.981	1.1443	0.3601
961	SLU 56	1.11	0.7	43.32	-7.0963	1.1643	0.3713
961	SLU 57	1.1	0.68	43.3	-7.0883	1.1635	0.3692
961	SLU 58	1.1	0.69	43.06	-7.0581	1.1573	0.3695
961	SLU 59	1.1	0.67	43.03	-7.05	1.1564	0.3674
961	SLU 60	1.09	0.74	43.68	-7.1463	1.1741	0.3633
961	SLU 61	1.08	0.73	43.65	-7.1382	1.1733	0.3612
961	SLU 62	1.11	0.74	44.11	-7.2099	1.1857	0.3692
961	SLU 63	1.1	0.73	44.09	-7.2018	1.1849	0.3671
961	SLU 64	1.09	0.69	42.25	-6.9385	1.1356	0.3634
961	SLU 65	1.08	0.66	42.21	-6.9251	1.1343	0.3599
961	SLU 66	1.11	0.7	42.95	-7.0404	1.1542	0.371
961	SLU 67	1.1	0.68	42.92	-7.0323	1.1534	0.369
961	SLU 68	1.09	0.66	42.64	-6.9887	1.1458	0.3658
961	SLU 69	1.13	0.7	43.38	-7.104	1.1657	0.3769
961	SLU 70	1.12	0.68	43.36	-7.0959	1.1649	0.3749
961	SLU 71	1.12	0.69	43.12	-7.0657	1.1587	0.3752
961	SLU 72	1.11	0.67	43.09	-7.0577	1.1579	0.3731
961	SLU 73	1.12	0.78	45.68	-7.4277	1.2276	0.373
961	SLU 74	1.16	0.82	46.42	-7.5431	1.2475	0.3841
961	SLU 75	1.15	0.8	46.39	-7.535	1.2467	0.3821
961	SLU 76	1.14	0.78	46.11	-7.4913	1.2392	0.3789
961	SLU 77	1.17	0.82	46.85	-7.6067	1.2591	0.39
961	SLU 78	1.17	0.8	46.83	-7.5986	1.2583	0.388
961	SLU 79	1.17	0.81	46.59	-7.5684	1.2521	0.3883
961	SLU 80	1.16	0.79	46.56	-7.5603	1.2513	0.3862
961	SLU 81	1.15	0.86	47.21	-7.6566	1.269	0.3821
961	SLU 82	1.15	0.84	47.18	-7.6485	1.2681	0.38
961	SLU 83	1.17	0.86	47.64	-7.7202	1.2805	0.388
961	SLU 84	1.16	0.84	47.62	-7.7122	1.2797	0.3859
961	SLE RA 1	0.82	0.5	31.72	-5.2251	0.8527	0.2754
961	SLE RA 2	0.81	0.49	31.7	-5.2162	0.8518	0.2731
961	SLE RA 3	0.84	0.51	32.19	-5.2931	0.8651	0.2805
961	SLE RA 4	0.83	0.5	32.17	-5.2877	0.8645	0.2791
961	SLE RA 5	0.83	0.49	31.99	-5.2586	0.8595	0.277
961	SLE RA 6	0.85	0.51	32.48	-5.3355	0.8728	0.2844
961	SLE RA 7	0.84	0.5	32.46	-5.3301	0.8723	0.2831
961	SLE RA 8	0.84	0.5	32.3	-5.31	0.8681	0.2833
961	SLE RA 9	0.84	0.49	32.29	-5.3046	0.8676	0.2819
961	SLE RA 10	0.85	0.57	34.01	-5.5513	0.914	0.2818
961	SLE RA 11	0.87	0.59	34.5	-5.6282	0.9273	0.2892
961	SLE RA 12	0.86	0.58	34.49	-5.6228	0.9268	0.2878
961	SLE RA 13	0.86	0.57	34.3	-5.5937	0.9217	0.2857
961	SLE RA 14	0.88	0.59	34.79	-5.6706	0.935	0.2932
961	SLE RA 15	0.87	0.58	34.78	-5.6652	0.9345	0.2918
961	SLE RA 16	0.88	0.58	34.62	-5.6451	0.9303	0.292
961	SLE RA 17	0.87	0.57	34.6	-5.6397	0.9298	0.2906
961	SLE RA 18	0.87	0.62	35.03	-5.7039	0.9416	0.2879
961	SLE RA 19	0.86	0.61	35.01	-5.6985	0.9411	0.2865
961	SLE RA 20	0.88	0.62	35.32	-5.7463	0.9493	0.2918
961	SLE RA 21	0.87	0.61	35.3	-5.7409	0.9488	0.2904
961	SLE FR 1	0.82	0.5	31.72	-5.2251	0.8527	0.2754
961	SLE FR 2	0.82	0.5	31.72	-5.2233	0.8525	0.2749
961	SLE FR 3	0.83	0.5	31.84	-5.2421	0.8558	0.277
961	SLE FR 4	0.83	0.53	32.71	-5.367	0.8792	0.2787
961	SLE FR 5	0.84	0.54	32.83	-5.3857	0.8825	0.2807
961	SLE FR 6	0.84	0.56	33.38	-5.4645	0.8972	0.2816
961	SLE QP 1	0.82	0.5	31.72	-5.2251	0.8527	0.2754
961	SLE QP 2	0.84	0.54	32.72	-5.3688	0.8794	0.2791

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
961	SLD 1	3.85	1.13	24.43	-3.9773	0.672	1.3362
961	SLD 2	3.55	1.64	24	-3.9268	0.6605	1.2171
961	SLD 3	4.11	-0.05	25.14	-4.0618	0.6898	1.4428
961	SLD 4	3.81	0.46	24.7	-4.0113	0.6783	1.3237
961	SLD 5	1.4	2.42	29.24	-4.8321	0.7922	0.4556
961	SLD 6	1.2	2.76	28.96	-4.7991	0.7847	0.3777
961	SLD 7	2.27	-1.53	31.59	-5.1137	0.8515	0.811
961	SLD 8	2.07	-1.19	31.3	-5.0807	0.844	0.7332
961	SLD 9	-0.4	2.27	34.13	-5.6568	0.9147	-0.1749
961	SLD 10	-0.6	2.6	33.85	-5.6238	0.9072	-0.2528
961	SLD 11	0.47	-1.68	36.48	-5.9384	0.974	0.1805
961	SLD 12	0.27	-1.35	36.19	-5.9054	0.9665	0.1027
961	SLD 13	-2.14	0.62	40.73	-6.7263	1.0804	-0.7654
961	SLD 14	-2.44	1.13	40.3	-6.6757	1.0689	-0.8846
961	SLD 15	-1.88	-0.57	41.43	-6.8107	1.0982	-0.6588
961	SLD 16	-2.18	-0.06	41	-6.7602	1.0867	-0.7779
961	SLV 1	7.9	1.9	13.34	-2.1126	0.3945	2.752
961	SLV 2	7.19	3.09	12.33	-1.9948	0.3677	2.4746
961	SLV 3	8.5	-0.8	14.95	-2.3085	0.4351	3.0008
961	SLV 4	7.8	0.38	13.94	-2.1908	0.4083	2.7233
961	SLV 5	2.15	4.85	24.64	-4.1149	0.6769	0.6912
961	SLV 6	1.7	5.61	23.99	-4.0393	0.6597	0.5129
961	SLV 7	4.18	-4.17	30	-4.768	0.8123	1.5205
961	SLV 8	3.73	-3.41	29.35	-4.6923	0.7951	1.3422
961	SLV 9	-2.05	4.48	36.09	-6.0452	0.9637	-0.7839
961	SLV 10	-2.51	5.25	35.44	-5.9695	0.9465	-0.9623
961	SLV 11	-0.03	-4.53	41.44	-6.6983	1.0991	0.0454
961	SLV 12	-0.48	-3.77	40.79	-6.6226	1.0819	-0.133
961	SLV 13	-6.13	0.69	51.49	-8.5468	1.3504	-2.1651
961	SLV 14	-6.83	1.88	50.48	-8.429	1.3237	-2.4426
961	SLV 15	-5.52	-2.01	53.1	-8.7427	1.391	-1.9163
961	SLV 16	-6.22	-0.83	52.09	-8.625	1.3643	-2.1938
961	CRTFP Ux+	0	0	0	0	0	0
961	CRTFP Ux-	0	0	0	0	0	0
961	CRTFP Uy+	0	0	0	0	0	0
961	CRTFP Uy-	0	0	0	0	0	0
962	SLU 1	0.59	0.38	23.33	-4.0958	3.05	0.1579
962	SLU 2	0.58	0.36	23.3	-4.0864	3.0462	0.1578
962	SLU 3	0.61	0.39	23.86	-4.1801	3.1196	0.1629
962	SLU 4	0.6	0.37	23.84	-4.1745	3.1173	0.1629
962	SLU 5	0.6	0.36	23.63	-4.139	3.0895	0.1622
962	SLU 6	0.62	0.39	24.19	-4.2327	3.1629	0.1673
962	SLU 7	0.62	0.37	24.17	-4.2271	3.1606	0.1673
962	SLU 8	0.62	0.38	23.99	-4.201	3.1366	0.1667
962	SLU 9	0.61	0.37	23.97	-4.1954	3.1344	0.1666
962	SLU 10	0.62	0.45	25.93	-4.4986	3.3907	0.1573
962	SLU 11	0.64	0.48	26.49	-4.5923	3.4641	0.1624
962	SLU 12	0.64	0.47	26.48	-4.5867	3.4618	0.1624
962	SLU 13	0.63	0.45	26.27	-4.5512	3.434	0.1617
962	SLU 14	0.65	0.48	26.83	-4.6449	3.5074	0.1668
962	SLU 15	0.65	0.47	26.81	-4.6393	3.5051	0.1668
962	SLU 16	0.65	0.47	26.63	-4.6132	3.4811	0.1662
962	SLU 17	0.65	0.46	26.61	-4.6076	3.4789	0.1661
962	SLU 18	0.64	0.52	27.09	-4.6846	3.5422	0.1572
962	SLU 19	0.64	0.5	27.07	-4.679	3.5399	0.1571
962	SLU 20	0.65	0.52	27.42	-4.7373	3.5855	0.1616
962	SLU 21	0.65	0.5	27.41	-4.7316	3.5832	0.1615
962	SLU 22	0.64	0.47	26.01	-4.5144	3.4005	0.1619
962	SLU 23	0.63	0.45	25.98	-4.505	3.3967	0.1618
962	SLU 24	0.65	0.48	26.54	-4.5987	3.47	0.167
962	SLU 25	0.65	0.47	26.52	-4.5931	3.4677	0.1669
962	SLU 26	0.64	0.45	26.31	-4.5576	3.44	0.1662
962	SLU 27	0.67	0.48	26.87	-4.6513	3.5133	0.1714
962	SLU 28	0.66	0.46	26.85	-4.6457	3.511	0.1713
962	SLU 29	0.66	0.47	26.67	-4.6196	3.4871	0.1707
962	SLU 30	0.66	0.46	26.65	-4.614	3.4848	0.1707
962	SLU 31	0.66	0.55	28.61	-4.9172	3.7412	0.1613
962	SLU 32	0.69	0.57	29.17	-5.0109	3.8145	0.1665
962	SLU 33	0.68	0.56	29.16	-5.0053	3.8122	0.1664
962	SLU 34	0.68	0.54	28.95	-4.9699	3.7845	0.1657
962	SLU 35	0.7	0.57	29.51	-5.0635	3.8578	0.1709
962	SLU 36	0.7	0.56	29.49	-5.0579	3.8555	0.1708
962	SLU 37	0.7	0.57	29.31	-5.0318	3.8316	0.1702
962	SLU 38	0.69	0.55	29.29	-5.0262	3.8293	0.1701
962	SLU 39	0.69	0.61	29.77	-5.1033	3.8926	0.1612
962	SLU 40	0.68	0.59	29.75	-5.0976	3.8903	0.1611
962	SLU 41	0.7	0.61	30.1	-5.1559	3.9359	0.1656
962	SLU 42	0.69	0.59	30.09	-5.1503	3.9336	0.1655
962	SLU 43	0.75	0.46	29.41	-5.181	3.8449	0.2039
962	SLU 44	0.75	0.44	29.38	-5.1716	3.8411	0.2038
962	SLU 45	0.77	0.47	29.94	-5.2653	3.9144	0.2089
962	SLU 46	0.77	0.46	29.92	-5.2597	3.9121	0.2089
962	SLU 47	0.76	0.44	29.71	-5.2242	3.8844	0.2082
962	SLU 48	0.78	0.47	30.27	-5.3179	3.9577	0.2133
962	SLU 49	0.78	0.45	30.25	-5.3123	3.9554	0.2133
962	SLU 50	0.78	0.46	30.07	-5.2862	3.9315	0.2127
962	SLU 51	0.77	0.45	30.05	-5.2806	3.9292	0.2126
962	SLU 52	0.78	0.54	32.01	-5.5838	4.1856	0.2032
962	SLU 53	0.8	0.56	32.57	-5.6775	4.2589	0.2084
962	SLU 54	0.8	0.55	32.56	-5.6719	4.2566	0.2083
962	SLU 55	0.79	0.54	32.34	-5.6364	4.2289	0.2076
962	SLU 56	0.82	0.56	32.91	-5.7301	4.3022	0.2128
962	SLU 57	0.81	0.55	32.89	-5.7245	4.2999	0.2127
962	SLU 58	0.81	0.56	32.7	-5.6984	4.276	0.2122
962	SLU 59	0.81	0.54	32.69	-5.6928	4.2737	0.2121
962	SLU 60	0.8	0.6	33.17	-5.7698	4.337	0.2031
962	SLU 61	0.8	0.59	33.15	-5.7642	4.3347	0.2031

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
962	SLU 62	0.81	0.6	33.5	-5.8225	4.3803	0.2075
962	SLU 63	0.81	0.58	33.48	-5.8169	4.3781	0.2075
962	SLU 64	0.8	0.55	32.09	-5.5996	4.1953	0.2079
962	SLU 65	0.79	0.53	32.06	-5.5902	4.1915	0.2078
962	SLU 66	0.82	0.56	32.62	-5.6839	4.2649	0.213
962	SLU 67	0.81	0.55	32.6	-5.6783	4.2626	0.2129
962	SLU 68	0.8	0.53	32.39	-5.6429	4.2348	0.2122
962	SLU 69	0.83	0.56	32.95	-5.7365	4.3082	0.2174
962	SLU 70	0.82	0.55	32.93	-5.7309	4.3059	0.2173
962	SLU 71	0.82	0.55	32.75	-5.7048	4.2819	0.2167
962	SLU 72	0.82	0.54	32.73	-5.6992	4.2796	0.2166
962	SLU 73	0.83	0.63	34.69	-6.0024	4.536	0.2073
962	SLU 74	0.85	0.66	35.25	-6.0961	4.6094	0.2124
962	SLU 75	0.85	0.64	35.24	-6.0905	4.6071	0.2124
962	SLU 76	0.84	0.63	35.02	-6.0551	4.5793	0.2117
962	SLU 77	0.86	0.66	35.59	-6.1488	4.6527	0.2168
962	SLU 78	0.86	0.64	35.57	-6.1431	4.6504	0.2168
962	SLU 79	0.86	0.65	35.38	-6.1171	4.6264	0.2162
962	SLU 80	0.85	0.64	35.37	-6.1114	4.6242	0.2161
962	SLU 81	0.85	0.69	35.85	-6.1885	4.6875	0.2072
962	SLU 82	0.84	0.68	35.83	-6.1828	4.6852	0.2071
962	SLU 83	0.86	0.69	36.18	-6.2411	4.7308	0.2116
962	SLU 84	0.86	0.68	36.17	-6.2355	4.7285	0.2115
962	SLE RA 1	0.61	0.41	24.09	-4.2154	3.1501	0.159
962	SLE RA 2	0.6	0.39	24.07	-4.2091	3.1476	0.159
962	SLE RA 3	0.62	0.41	24.45	-4.2716	3.1965	0.1624
962	SLE RA 4	0.61	0.4	24.44	-4.2678	3.195	0.1624
962	SLE RA 5	0.61	0.39	24.3	-4.2442	3.1765	0.1619
962	SLE RA 6	0.62	0.41	24.67	-4.3067	3.2254	0.1653
962	SLE RA 7	0.62	0.4	24.66	-4.3029	3.2239	0.1653
962	SLE RA 8	0.62	0.41	24.54	-4.2855	3.2079	0.1649
962	SLE RA 9	0.62	0.4	24.52	-4.2818	3.2064	0.1649
962	SLE RA 10	0.62	0.46	25.83	-4.4839	3.3773	0.1586
962	SLE RA 11	0.64	0.47	26.2	-4.5464	3.4262	0.1621
962	SLE RA 12	0.64	0.47	26.19	-4.5427	3.4247	0.162
962	SLE RA 13	0.63	0.45	26.05	-4.519	3.4062	0.1616
962	SLE RA 14	0.65	0.47	26.43	-4.5815	3.4551	0.165
962	SLE RA 15	0.64	0.46	26.41	-4.5777	3.4535	0.165
962	SLE RA 16	0.64	0.47	26.29	-4.5603	3.4376	0.1646
962	SLE RA 17	0.64	0.46	26.28	-4.5566	3.436	0.1645
962	SLE RA 18	0.64	0.5	26.6	-4.608	3.4783	0.1586
962	SLE RA 19	0.63	0.49	26.59	-4.6042	3.4767	0.1585
962	SLE RA 20	0.65	0.5	26.82	-4.643	3.5071	0.1615
962	SLE RA 21	0.64	0.49	26.81	-4.6393	3.5056	0.1614
962	SLE FR 1	0.61	0.41	24.09	-4.2154	3.1501	0.159
962	SLE FR 2	0.6	0.4	24.09	-4.2141	3.1496	0.159
962	SLE FR 3	0.61	0.41	24.18	-4.2294	3.1617	0.1602
962	SLE FR 4	0.61	0.43	24.84	-4.3319	3.2481	0.1589
962	SLE FR 5	0.62	0.43	24.93	-4.3472	3.2601	0.1601
962	SLE FR 6	0.62	0.45	25.35	-4.4117	3.3142	0.1588
962	SLE QP 1	0.61	0.41	24.09	-4.2154	3.1501	0.159
962	SLE QP 2	0.61	0.43	24.85	-4.3331	3.2486	0.1589
962	SLD 1	2.83	0.9	18.22	-3.1327	2.3878	0.9139
962	SLD 2	2.61	1.3	17.88	-3.0925	2.3443	0.7842
962	SLD 3	3.03	-0.02	18.78	-3.2017	2.4606	1.0724
962	SLD 4	2.8	0.37	18.44	-3.1616	2.4171	0.9427
962	SLD 5	1.03	1.91	22.07	-3.8754	2.8876	0.168
962	SLD 6	0.88	2.17	21.85	-3.8492	2.8592	0.0832
962	SLD 7	1.67	-1.18	23.93	-4.1055	3.1303	0.6962
962	SLD 8	1.52	-0.92	23.72	-4.0793	3.1019	0.6114
962	SLD 9	-0.29	1.78	25.98	-4.587	3.3953	-0.2936
962	SLD 10	-0.44	2.04	25.76	-4.5608	3.3669	-0.3784
962	SLD 11	0.35	-1.3	27.84	-4.8171	3.6379	0.2346
962	SLD 12	0.2	-1.04	27.63	-4.7909	3.6095	0.1498
962	SLD 13	-1.57	0.49	31.25	-5.5047	4.08	-0.6249
962	SLD 14	-1.8	0.89	30.91	-5.4646	4.0366	-0.7546
962	SLD 15	-1.38	-0.43	31.81	-5.5738	4.1528	-0.4664
962	SLD 16	-1.6	-0.03	31.48	-5.5336	4.1093	-0.5961
962	SLV 1	5.81	1.5	9.34	-1.5238	1.2356	1.9271
962	SLV 2	5.29	2.43	8.57	-1.4304	1.1343	1.6249
962	SLV 3	6.25	-0.61	10.62	-1.6837	1.4018	2.2929
962	SLV 4	5.74	0.32	9.85	-1.5902	1.3006	1.9908
962	SLV 5	1.58	3.8	18.39	-3.2639	2.4099	0.1862
962	SLV 6	1.25	4.39	17.89	-3.2039	2.3449	-0.008
962	SLV 7	3.07	-3.24	22.65	-3.7967	2.964	1.4058
962	SLV 8	2.74	-2.64	22.15	-3.7367	2.8989	1.2116
962	SLV 9	-1.51	3.51	27.54	-4.9296	3.5982	-0.8938
962	SLV 10	-1.84	4.11	27.04	-4.8696	3.5332	-1.088
962	SLV 11	-0.02	-3.52	31.8	-5.4624	4.1523	0.3257
962	SLV 12	-0.35	-2.93	31.3	-5.4024	4.0872	0.1316
962	SLV 13	-4.51	0.55	39.85	-7.0761	5.1966	-1.673
962	SLV 14	-5.03	1.47	39.07	-6.9826	5.0954	-1.9752
962	SLV 15	-4.06	-1.56	41.12	-7.2359	5.3628	-1.3072
962	SLV 16	-4.58	-0.64	40.35	-7.1425	5.2616	-1.6093
962	CRTFP Ux+	0	0	0	0	0	0
962	CRTFP Ux-	0	0	0	0	0	0
962	CRTFP Uy+	0	0	0	0	0	0
962	CRTFP Uy-	0	0	0	0	0	0
964	SLU 1	0.45	0.07	29.12	0.5701	7.2874	-0.0228
964	SLU 2	0.44	0.05	29.13	0.5704	7.289	-0.0189
964	SLU 3	0.47	0.07	29.8	0.5835	7.4586	-0.0241
964	SLU 4	0.46	0.06	29.81	0.5837	7.4595	-0.0217
964	SLU 5	0.45	0.05	29.54	0.5785	7.392	-0.0187
964	SLU 6	0.48	0.07	30.21	0.5915	7.5616	-0.0239
964	SLU 7	0.47	0.06	30.22	0.5918	7.5626	-0.0216
964	SLU 8	0.47	0.07	29.95	0.5862	7.4934	-0.0225
964	SLU 9	0.47	0.06	29.95	0.5864	7.4944	-0.0201

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
964	SLU 10	0.46	0.1	32.69	0.6407	8.1855	-0.0307
964	SLU 11	0.49	0.12	33.36	0.6537	8.3551	-0.0359
964	SLU 12	0.48	0.11	33.36	0.6539	8.3561	-0.0335
964	SLU 13	0.47	0.1	33.1	0.6488	8.2885	-0.0305
964	SLU 14	0.5	0.12	33.77	0.6618	8.4581	-0.0357
964	SLU 15	0.49	0.11	33.78	0.662	8.4591	-0.0333
964	SLU 16	0.5	0.11	33.51	0.6565	8.39	-0.0342
964	SLU 17	0.49	0.1	33.51	0.6567	8.3909	-0.0319
964	SLU 18	0.49	0.13	34.21	0.6704	8.5681	-0.0396
964	SLU 19	0.48	0.12	34.21	0.6706	8.5691	-0.0373
964	SLU 20	0.5	0.13	34.62	0.6785	8.6712	-0.0395
964	SLU 21	0.49	0.12	34.62	0.6787	8.6721	-0.0371
964	SLU 22	0.49	0.12	32.73	0.6412	8.192	-0.0372
964	SLU 23	0.47	0.11	32.74	0.6416	8.1935	-0.0333
964	SLU 24	0.5	0.13	33.4	0.6546	8.3632	-0.0385
964	SLU 25	0.49	0.12	33.41	0.6548	8.3641	-0.0361
964	SLU 26	0.48	0.11	33.15	0.6496	8.2966	-0.0331
964	SLU 27	0.51	0.13	33.82	0.6627	8.4662	-0.0383
964	SLU 28	0.5	0.12	33.82	0.6629	8.4672	-0.036
964	SLU 29	0.51	0.12	33.55	0.6574	8.398	-0.0369
964	SLU 30	0.5	0.11	33.56	0.6576	8.399	-0.0345
964	SLU 31	0.5	0.16	36.29	0.7118	9.0901	-0.0451
964	SLU 32	0.53	0.17	36.96	0.7249	9.2597	-0.0502
964	SLU 33	0.52	0.17	36.97	0.7251	9.2606	-0.0479
964	SLU 34	0.51	0.15	36.71	0.7199	9.1931	-0.0449
964	SLU 35	0.54	0.17	37.37	0.733	9.3627	-0.0501
964	SLU 36	0.53	0.16	37.38	0.7332	9.3637	-0.0477
964	SLU 37	0.53	0.17	37.11	0.7276	9.2945	-0.0486
964	SLU 38	0.53	0.16	37.12	0.7278	9.2955	-0.0463
964	SLU 39	0.52	0.19	37.81	0.7416	9.4727	-0.054
964	SLU 40	0.52	0.18	37.82	0.7418	9.4737	-0.0517
964	SLU 41	0.53	0.19	38.22	0.7497	9.5757	-0.0538
964	SLU 42	0.53	0.18	38.23	0.7499	9.5767	-0.0515
964	SLU 43	0.58	0.07	36.63	0.7167	9.1635	-0.0247
964	SLU 44	0.56	0.05	36.63	0.717	9.165	-0.0208
964	SLU 45	0.59	0.07	37.3	0.7301	9.3347	-0.026
964	SLU 46	0.58	0.06	37.31	0.7303	9.3356	-0.0236
964	SLU 47	0.57	0.05	37.05	0.7251	9.2681	-0.0206
964	SLU 48	0.6	0.07	37.71	0.7382	9.4377	-0.0258
964	SLU 49	0.59	0.06	37.72	0.7384	9.4387	-0.0235
964	SLU 50	0.6	0.07	37.45	0.7328	9.3695	-0.0244
964	SLU 51	0.59	0.06	37.45	0.7331	9.3705	-0.022
964	SLU 52	0.59	0.1	40.19	0.7873	10.0616	-0.0326
964	SLU 53	0.61	0.12	40.86	0.8003	10.2312	-0.0378
964	SLU 54	0.61	0.11	40.87	0.8006	10.2321	-0.0354
964	SLU 55	0.6	0.1	40.6	0.7954	10.1646	-0.0324
964	SLU 56	0.62	0.12	41.27	0.8084	10.3342	-0.0376
964	SLU 57	0.62	0.11	41.28	0.8086	10.3352	-0.0352
964	SLU 58	0.62	0.11	41.01	0.8031	10.266	-0.0362
964	SLU 59	0.61	0.1	41.01	0.8033	10.267	-0.0338
964	SLU 60	0.61	0.13	41.71	0.817	10.4442	-0.0415
964	SLU 61	0.6	0.13	41.71	0.8173	10.4451	-0.0392
964	SLU 62	0.62	0.13	42.12	0.8251	10.5472	-0.0414
964	SLU 63	0.61	0.12	42.13	0.8253	10.5482	-0.039
964	SLU 64	0.61	0.12	40.23	0.7878	10.068	-0.0391
964	SLU 65	0.6	0.11	40.24	0.7882	10.0696	-0.0352
964	SLU 66	0.63	0.13	40.91	0.8012	10.2393	-0.0404
964	SLU 67	0.62	0.12	40.91	0.8014	10.2402	-0.038
964	SLU 68	0.61	0.11	40.65	0.7963	10.1727	-0.035
964	SLU 69	0.64	0.13	41.32	0.8093	10.3423	-0.0402
964	SLU 70	0.63	0.12	41.32	0.8095	10.3432	-0.0379
964	SLU 71	0.63	0.12	41.05	0.804	10.2741	-0.0388
964	SLU 72	0.62	0.11	41.06	0.8042	10.2751	-0.0364
964	SLU 73	0.62	0.16	43.8	0.8584	10.9661	-0.047
964	SLU 74	0.65	0.18	44.46	0.8715	11.1358	-0.0521
964	SLU 75	0.64	0.17	44.47	0.8717	11.1367	-0.0498
964	SLU 76	0.63	0.16	44.21	0.8665	11.0692	-0.0468
964	SLU 77	0.66	0.17	44.88	0.8796	11.2388	-0.052
964	SLU 78	0.65	0.17	44.88	0.8798	11.2398	-0.0496
964	SLU 79	0.66	0.17	44.61	0.8742	11.1706	-0.0505
964	SLU 80	0.65	0.16	44.62	0.8745	11.1716	-0.0482
964	SLU 81	0.65	0.19	45.31	0.8882	11.3488	-0.0559
964	SLU 82	0.64	0.18	45.32	0.8884	11.3497	-0.0536
964	SLU 83	0.66	0.19	45.72	0.8963	11.4518	-0.0558
964	SLU 84	0.65	0.18	45.73	0.8965	11.4528	-0.0534
964	SLE RA 1	0.46	0.08	30.15	0.5904	7.5458	-0.0269
964	SLE RA 2	0.45	0.07	30.16	0.5906	7.5469	-0.0243
964	SLE RA 3	0.47	0.09	30.61	0.5993	7.66	-0.0278
964	SLE RA 4	0.47	0.08	30.61	0.5995	7.6606	-0.0262
964	SLE RA 5	0.46	0.07	30.43	0.596	7.6156	-0.0242
964	SLE RA 6	0.48	0.09	30.88	0.6047	7.7287	-0.0277
964	SLE RA 7	0.47	0.08	30.88	0.6049	7.7293	-0.0261
964	SLE RA 8	0.48	0.08	30.7	0.6012	7.6832	-0.0267
964	SLE RA 9	0.47	0.08	30.71	0.6013	7.6838	-0.0251
964	SLE RA 10	0.47	0.1	32.53	0.6375	8.1446	-0.0322
964	SLE RA 11	0.49	0.12	32.98	0.6462	8.2577	-0.0356
964	SLE RA 12	0.48	0.11	32.98	0.6463	8.2583	-0.034
964	SLE RA 13	0.48	0.1	32.81	0.6429	8.2133	-0.032
964	SLE RA 14	0.5	0.12	33.25	0.6515	8.3263	-0.0355
964	SLE RA 15	0.49	0.11	33.26	0.6517	8.327	-0.0339
964	SLE RA 16	0.49	0.11	33.08	0.648	8.2809	-0.0345
964	SLE RA 17	0.49	0.11	33.08	0.6481	8.2815	-0.033
964	SLE RA 18	0.49	0.13	33.54	0.6573	8.3997	-0.0381
964	SLE RA 19	0.48	0.12	33.55	0.6574	8.4003	-0.0366
964	SLE RA 20	0.49	0.13	33.82	0.6627	8.4684	-0.038
964	SLE RA 21	0.49	0.12	33.82	0.6628	8.469	-0.0365
964	SLE FR 1	0.46	0.08	30.15	0.5904	7.5458	-0.0269

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
964	SLE FR 2	0.46	0.08	30.16	0.5904	7.546	-0.0264
964	SLE FR 3	0.47	0.08	30.26	0.5925	7.5733	-0.0269
964	SLE FR 4	0.47	0.09	31.17	0.6105	7.8022	-0.0298
964	SLE FR 5	0.47	0.1	31.28	0.6126	7.8295	-0.0302
964	SLE FR 6	0.48	0.11	31.85	0.6238	7.9728	-0.0325
964	SLE QP 1	0.46	0.08	30.15	0.5904	7.5458	-0.0269
964	SLE QP 2	0.47	0.1	31.17	0.6105	7.802	-0.0303
964	SLD 1	2.94	0.48	26.62	0.4976	6.3793	-0.1689
964	SLD 2	2.69	0.65	26.39	0.4946	6.3632	-0.2058
964	SLD 3	3.14	-0.16	27.29	0.5125	6.5115	-0.0108
964	SLD 4	2.89	0.01	27.06	0.5094	6.4954	-0.0477
964	SLD 5	0.94	1.15	28.82	0.5547	7.1776	-0.3052
964	SLD 6	0.78	1.26	28.68	0.5526	7.167	-0.3293
964	SLD 7	1.63	-0.97	31.07	0.6041	7.6181	0.222
964	SLD 8	1.47	-0.86	30.92	0.6021	7.6076	0.1978
964	SLD 9	-0.53	1.06	31.42	0.6188	7.9964	-0.2584
964	SLD 10	-0.69	1.17	31.28	0.6168	7.9858	-0.2825
964	SLD 11	0.17	-1.06	33.67	0.6683	8.4369	0.2688
964	SLD 12	0	-0.95	33.52	0.6662	8.4264	0.2446
964	SLD 13	-1.95	0.18	35.28	0.7115	9.1086	-0.0129
964	SLD 14	-2.2	0.35	35.05	0.7084	9.0925	-0.0498
964	SLD 15	-1.74	-0.45	35.95	0.7263	9.2408	0.1452
964	SLD 16	-1.99	-0.29	35.73	0.7233	9.2247	0.1084
964	SLV 1	6.24	0.98	20.53	0.3468	4.4737	-0.35
964	SLV 2	5.66	1.37	20	0.3396	4.4362	-0.4359
964	SLV 3	6.72	-0.47	22.05	0.3805	4.7758	0.0098
964	SLV 4	6.14	-0.08	21.52	0.3733	4.7384	-0.0762
964	SLV 5	1.57	2.49	25.75	0.4815	6.3516	-0.6571
964	SLV 6	1.19	2.74	25.41	0.4769	6.3275	-0.7123
964	SLV 7	3.18	-2.34	30.84	0.5938	7.3589	0.5421
964	SLV 8	2.81	-2.09	30.5	0.5892	7.3348	0.4868
964	SLV 9	-1.87	2.28	31.84	0.6317	8.2692	-0.5474
964	SLV 10	-2.24	2.53	31.5	0.6271	8.2451	-0.6026
964	SLV 11	-0.25	-2.55	36.93	0.744	9.2764	0.6517
964	SLV 12	-0.62	-2.3	36.59	0.7394	9.2524	0.5965
964	SLV 13	-5.2	0.28	40.82	0.8476	10.8656	0.0156
964	SLV 14	-5.78	0.66	40.29	0.8404	10.8281	-0.0703
964	SLV 15	-4.71	-1.17	42.34	0.8813	11.1678	0.3753
964	SLV 16	-5.29	-0.78	41.81	0.8741	11.1303	0.2894
964	CRTFP Ux+	0	0	0	0	0	0
964	CRTFP Ux-	0	0	0	0	0	0
964	CRTFP Uy+	0	0	0	0	0	0
964	CRTFP Uy-	0	0	0	0	0	0
967	SLU 1	-0.39	-0.23	20.97	0.0142	-5.6617	-0.0744
967	SLU 2	-0.39	-0.25	20.98	0.0142	-5.6674	-0.0815
967	SLU 3	-0.4	-0.23	21.47	0.0145	-5.7933	-0.0753
967	SLU 4	-0.4	-0.24	21.47	0.0145	-5.7967	-0.0795
967	SLU 5	-0.4	-0.25	21.27	0.0143	-5.7447	-0.0823
967	SLU 6	-0.4	-0.23	21.76	0.0146	-5.8707	-0.076
967	SLU 7	-0.41	-0.25	21.77	0.0146	-5.8741	-0.0803
967	SLU 8	-0.4	-0.23	21.56	0.0144	-5.8164	-0.076
967	SLU 9	-0.4	-0.25	21.56	0.0144	-5.8198	-0.0803
967	SLU 10	-0.44	-0.25	23.59	0.0162	-6.3958	-0.0833
967	SLU 11	-0.44	-0.24	24.08	0.0165	-6.5218	-0.077
967	SLU 12	-0.44	-0.25	24.08	0.0165	-6.5252	-0.0813
967	SLU 13	-0.44	-0.26	23.88	0.0163	-6.4732	-0.0841
967	SLU 14	-0.44	-0.24	24.37	0.0166	-6.5991	-0.0778
967	SLU 15	-0.45	-0.25	24.38	0.0166	-6.6026	-0.0821
967	SLU 16	-0.44	-0.24	24.17	0.0164	-6.5449	-0.0778
967	SLU 17	-0.44	-0.25	24.17	0.0164	-6.5483	-0.082
967	SLU 18	-0.45	-0.24	24.7	0.017	-6.7023	-0.077
967	SLU 19	-0.45	-0.25	24.71	0.017	-6.7057	-0.0812
967	SLU 20	-0.45	-0.24	24.99	0.0171	-6.7797	-0.0777
967	SLU 21	-0.46	-0.25	25	0.0171	-6.7831	-0.082
967	SLU 22	-0.43	-0.22	23.6	0.0161	-6.3853	-0.0723
967	SLU 23	-0.44	-0.24	23.61	0.0161	-6.391	-0.0794
967	SLU 24	-0.44	-0.22	24.1	0.0164	-6.5169	-0.0731
967	SLU 25	-0.44	-0.24	24.1	0.0164	-6.5204	-0.0774
967	SLU 26	-0.44	-0.25	23.9	0.0162	-6.4684	-0.0802
967	SLU 27	-0.44	-0.23	24.39	0.0165	-6.5943	-0.0739
967	SLU 28	-0.45	-0.24	24.39	0.0165	-6.5977	-0.0782
967	SLU 29	-0.44	-0.23	24.19	0.0163	-6.54	-0.0739
967	SLU 30	-0.44	-0.24	24.19	0.0163	-6.5435	-0.0781
967	SLU 31	-0.48	-0.25	26.22	0.0181	-7.1194	-0.0812
967	SLU 32	-0.48	-0.23	26.71	0.0184	-7.2454	-0.0749
967	SLU 33	-0.49	-0.24	26.71	0.0184	-7.2488	-0.0792
967	SLU 34	-0.48	-0.25	26.51	0.0182	-7.1968	-0.082
967	SLU 35	-0.49	-0.23	27	0.0185	-7.3228	-0.0757
967	SLU 36	-0.49	-0.24	27	0.0185	-7.3262	-0.0799
967	SLU 37	-0.48	-0.23	26.8	0.0183	-7.2685	-0.0756
967	SLU 38	-0.49	-0.24	26.8	0.0183	-7.2719	-0.0799
967	SLU 39	-0.49	-0.23	27.33	0.019	-7.4259	-0.0748
967	SLU 40	-0.5	-0.24	27.33	0.019	-7.4294	-0.0791
967	SLU 41	-0.5	-0.23	27.62	0.0191	-7.5033	-0.0756
967	SLU 42	-0.5	-0.24	27.63	0.0191	-7.5067	-0.0799
967	SLU 43	-0.49	-0.3	26.36	0.0177	-7.1121	-0.0975
967	SLU 44	-0.49	-0.32	26.37	0.0177	-7.1178	-0.1046
967	SLU 45	-0.5	-0.3	26.86	0.0181	-7.2437	-0.0983
967	SLU 46	-0.5	-0.31	26.86	0.0181	-7.2471	-0.1026
967	SLU 47	-0.5	-0.32	26.66	0.0179	-7.1951	-0.1054
967	SLU 48	-0.5	-0.3	27.15	0.0182	-7.3211	-0.0991
967	SLU 49	-0.51	-0.32	27.16	0.0182	-7.3245	-0.1033
967	SLU 50	-0.5	-0.3	26.95	0.018	-7.2668	-0.0991
967	SLU 51	-0.5	-0.32	26.95	0.018	-7.2702	-0.1033
967	SLU 52	-0.54	-0.33	28.98	0.0197	-7.8462	-0.1064
967	SLU 53	-0.54	-0.31	29.47	0.0201	-7.9722	-0.1001
967	SLU 54	-0.55	-0.32	29.47	0.0201	-7.9756	-0.1043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
967	SLU 55	-0.54	-0.33	29.27	0.0198	-7.9236	-0.1071
967	SLU 56	-0.55	-0.31	29.76	0.0202	-8.0495	-0.1009
967	SLU 57	-0.55	-0.32	29.77	0.0202	-8.053	-0.1051
967	SLU 58	-0.54	-0.31	29.56	0.02	-7.9953	-0.1008
967	SLU 59	-0.55	-0.32	29.56	0.02	-7.9987	-0.1051
967	SLU 60	-0.55	-0.31	30.09	0.0206	-8.1527	-0.1
967	SLU 61	-0.55	-0.32	30.1	0.0206	-8.1561	-0.1043
967	SLU 62	-0.56	-0.31	30.38	0.0207	-8.2301	-0.1008
967	SLU 63	-0.56	-0.32	30.39	0.0207	-8.2335	-0.1051
967	SLU 64	-0.53	-0.29	28.99	0.0197	-7.8357	-0.0954
967	SLU 65	-0.54	-0.31	29	0.0197	-7.8414	-0.1025
967	SLU 66	-0.54	-0.29	29.49	0.02	-7.9673	-0.0962
967	SLU 67	-0.54	-0.31	29.49	0.02	-7.9708	-0.1005
967	SLU 68	-0.54	-0.32	29.29	0.0198	-7.9188	-0.1033
967	SLU 69	-0.55	-0.3	29.78	0.0201	-8.0447	-0.097
967	SLU 70	-0.55	-0.31	29.78	0.0201	-8.0481	-0.1012
967	SLU 71	-0.54	-0.3	29.58	0.0199	-7.9904	-0.0969
967	SLU 72	-0.54	-0.31	29.58	0.0199	-7.9939	-0.1012
967	SLU 73	-0.58	-0.32	31.61	0.0217	-8.5698	-0.1042
967	SLU 74	-0.58	-0.3	32.1	0.022	-8.6958	-0.098
967	SLU 75	-0.59	-0.31	32.1	0.022	-8.6992	-0.1022
967	SLU 76	-0.59	-0.32	31.9	0.0218	-8.6472	-0.105
967	SLU 77	-0.59	-0.3	32.39	0.0221	-8.7732	-0.0987
967	SLU 78	-0.59	-0.31	32.4	0.0221	-8.7766	-0.103
967	SLU 79	-0.58	-0.3	32.19	0.0219	-8.7189	-0.0987
967	SLU 80	-0.59	-0.31	32.19	0.0219	-8.7223	-0.103
967	SLU 81	-0.59	-0.3	32.72	0.0225	-8.8763	-0.0979
967	SLU 82	-0.6	-0.31	32.72	0.0225	-8.8798	-0.1022
967	SLU 83	-0.6	-0.3	33.01	0.0227	-8.9537	-0.0987
967	SLU 84	-0.6	-0.31	33.02	0.0227	-8.9571	-0.1029
967	SLE RA 1	-0.4	-0.23	21.72	0.0147	-5.8684	-0.0738
967	SLE RA 2	-0.4	-0.24	21.73	0.0147	-5.8722	-0.0786
967	SLE RA 3	-0.41	-0.23	22.05	0.0149	-5.9562	-0.0744
967	SLE RA 4	-0.41	-0.24	22.06	0.0149	-5.9585	-0.0772
967	SLE RA 5	-0.41	-0.24	21.92	0.0148	-5.9238	-0.0791
967	SLE RA 6	-0.41	-0.23	22.25	0.015	-6.0078	-0.0749
967	SLE RA 7	-0.41	-0.24	22.25	0.015	-6.01	-0.0777
967	SLE RA 8	-0.41	-0.23	22.11	0.0149	-5.9716	-0.0749
967	SLE RA 9	-0.41	-0.24	22.12	0.0149	-5.9739	-0.0777
967	SLE RA 10	-0.43	-0.24	23.47	0.016	-6.3578	-0.0797
967	SLE RA 11	-0.43	-0.23	23.79	0.0163	-6.4418	-0.0756
967	SLE RA 12	-0.44	-0.24	23.8	0.0163	-6.4441	-0.0784
967	SLE RA 13	-0.44	-0.25	23.66	0.0161	-6.4094	-0.0803
967	SLE RA 14	-0.44	-0.23	23.99	0.0163	-6.4934	-0.0761
967	SLE RA 15	-0.44	-0.24	23.99	0.0163	-6.4957	-0.0789
967	SLE RA 16	-0.43	-0.23	23.85	0.0162	-6.4572	-0.0761
967	SLE RA 17	-0.44	-0.24	23.86	0.0162	-6.4595	-0.0789
967	SLE RA 18	-0.44	-0.23	24.21	0.0166	-6.5622	-0.0755
967	SLE RA 19	-0.44	-0.24	24.21	0.0166	-6.5645	-0.0784
967	SLE RA 20	-0.44	-0.23	24.4	0.0167	-6.6138	-0.076
967	SLE RA 21	-0.45	-0.24	24.41	0.0167	-6.616	-0.0789
967	SLE FR 1	-0.4	-0.23	21.72	0.0147	-5.8684	-0.0738
967	SLE FR 2	-0.4	-0.23	21.72	0.0147	-5.8692	-0.0748
967	SLE FR 3	-0.4	-0.23	21.8	0.0147	-5.889	-0.074
967	SLE FR 4	-0.41	-0.23	22.47	0.0153	-6.0773	-0.0753
967	SLE FR 5	-0.41	-0.23	22.55	0.0153	-6.0972	-0.0746
967	SLE FR 6	-0.42	-0.23	22.97	0.0157	-6.2153	-0.0747
967	SLE QP 1	-0.4	-0.23	21.72	0.0147	-5.8684	-0.0738
967	SLE QP 2	-0.41	-0.23	22.47	0.0153	-6.0765	-0.0743
967	SLD 1	1.29	-0.15	25.65	0.0265	-6.9991	-0.0486
967	SLD 2	1.12	-0.25	25.7	0.0258	-7.0138	-0.0831
967	SLD 3	1.44	-0.63	25.97	0.0272	-7.1327	-0.2055
967	SLD 4	1.26	-0.74	26.01	0.0265	-7.1474	-0.24
967	SLD 5	-0.09	0.55	22.94	0.0177	-6.148	0.1775
967	SLD 6	-0.2	0.48	22.97	0.0172	-6.1576	0.1549
967	SLD 7	0.39	-1.06	23.98	0.0201	-6.5935	-0.3456
967	SLD 8	0.28	-1.13	24.01	0.0197	-6.6031	-0.3681
967	SLD 9	-1.1	0.68	20.93	0.0109	-5.55	0.2194
967	SLD 10	-1.21	0.61	20.96	0.0104	-5.5596	0.1969
967	SLD 11	-0.62	-0.93	21.96	0.0134	-5.9955	-0.3036
967	SLD 12	-0.74	-1	21.99	0.0129	-6.0051	-0.3262
967	SLD 13	-2.09	0.28	18.92	0.0041	-5.0056	0.0913
967	SLD 14	-2.26	0.17	18.97	0.0033	-5.0203	0.0568
967	SLD 15	-1.94	-0.2	19.24	0.0048	-5.1393	-0.0656
967	SLD 16	-2.12	-0.31	19.28	0.0041	-5.154	-0.1001
967	SLV 1	3.58	-0.06	29.93	0.0415	-8.2396	-0.0204
967	SLV 2	3.18	-0.3	30.04	0.0398	-8.2738	-0.1006
967	SLV 3	3.91	-1.15	30.65	0.0433	-8.5455	-0.3753
967	SLV 4	3.51	-1.4	30.75	0.0415	-8.5797	-0.4556
967	SLV 5	0.35	1.52	23.61	0.0208	-6.2556	0.494
967	SLV 6	0.09	1.36	23.67	0.0197	-6.2776	0.4424
967	SLV 7	1.46	-2.12	25.99	0.0266	-7.2754	-0.6893
967	SLV 8	1.2	-2.28	26.06	0.0255	-7.2974	-0.7409
967	SLV 9	-2.03	1.82	18.88	0.0051	-4.8557	0.5922
967	SLV 10	-2.28	1.66	18.95	0.004	-4.8777	0.5406
967	SLV 11	-0.91	-1.82	21.26	0.0109	-5.8755	-0.5911
967	SLV 12	-1.17	-1.98	21.33	0.0098	-5.8975	-0.6427
967	SLV 13	-4.33	0.94	14.18	-0.011	-3.5733	0.3069
967	SLV 14	-4.73	0.69	14.29	-0.0127	-3.6076	0.2267
967	SLV 15	-4	-0.15	14.9	-0.0092	-3.8793	-0.0481
967	SLV 16	-4.4	-0.4	15	-0.0109	-3.9135	-0.1283
967	CRTFP Ux+	0	0	0	0	0	0
967	CRTFP Ux-	0	0	0	0	0	0
967	CRTFP Uy+	0	0	0	0	0	0
967	CRTFP Uy-	0	0	0	0	0	0
970	SLU 1	-0.46	0.67	53.43	-1.4333	0.4837	0.0171
970	SLU 2	-0.48	0.62	53.51	-1.4349	0.4824	0.0168

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
970	SLU 3	-0.47	0.71	54.68	-1.4667	0.4971	0.0176
970	SLU 4	-0.49	0.67	54.73	-1.4676	0.4963	0.0174
970	SLU 5	-0.48	0.63	54.22	-1.454	0.4898	0.0172
970	SLU 6	-0.47	0.72	55.39	-1.4858	0.5045	0.018
970	SLU 7	-0.49	0.69	55.44	-1.4867	0.5037	0.0178
970	SLU 8	-0.46	0.7	54.86	-1.4715	0.4986	0.0179
970	SLU 9	-0.48	0.67	54.9	-1.4725	0.4978	0.0177
970	SLU 10	-0.56	0.73	60.47	-1.6224	0.5575	0.0191
970	SLU 11	-0.55	0.81	61.65	-1.6542	0.5721	0.02
970	SLU 12	-0.56	0.78	61.7	-1.6552	0.5713	0.0197
970	SLU 13	-0.56	0.74	61.19	-1.6415	0.5649	0.0195
970	SLU 14	-0.55	0.82	62.36	-1.6733	0.5795	0.0204
970	SLU 15	-0.56	0.79	62.41	-1.6743	0.5788	0.0201
970	SLU 16	-0.54	0.8	61.83	-1.659	0.5736	0.0202
970	SLU 17	-0.55	0.77	61.87	-1.66	0.5728	0.02
970	SLU 18	-0.57	0.82	63.39	-1.7012	0.5909	0.0204
970	SLU 19	-0.59	0.79	63.43	-1.7022	0.5901	0.0202
970	SLU 20	-0.58	0.84	64.1	-1.7203	0.5984	0.0208
970	SLU 21	-0.59	0.8	64.14	-1.7213	0.5976	0.0206
970	SLU 22	-0.53	0.86	60.32	-1.6178	0.5575	0.0197
970	SLU 23	-0.55	0.81	60.39	-1.6194	0.5562	0.0193
970	SLU 24	-0.54	0.9	61.57	-1.6511	0.5709	0.0202
970	SLU 25	-0.55	0.86	61.61	-1.6521	0.5701	0.02
970	SLU 26	-0.55	0.82	61.1	-1.6385	0.5636	0.0197
970	SLU 27	-0.54	0.91	62.28	-1.6702	0.5783	0.0206
970	SLU 28	-0.55	0.88	62.32	-1.6712	0.5775	0.0204
970	SLU 29	-0.53	0.89	61.74	-1.656	0.5724	0.0205
970	SLU 30	-0.54	0.85	61.79	-1.6569	0.5716	0.0203
970	SLU 31	-0.63	0.92	67.36	-1.8069	0.6312	0.0217
970	SLU 32	-0.62	1	68.54	-1.8387	0.6459	0.0225
970	SLU 33	-0.63	0.97	68.58	-1.8396	0.6451	0.0223
970	SLU 34	-0.63	0.93	68.07	-1.826	0.6387	0.0221
970	SLU 35	-0.62	1.01	69.25	-1.8578	0.6533	0.0229
970	SLU 36	-0.63	0.98	69.29	-1.8587	0.6525	0.0227
970	SLU 37	-0.61	0.99	68.71	-1.8435	0.6474	0.0228
970	SLU 38	-0.62	0.96	68.76	-1.8444	0.6466	0.0226
970	SLU 39	-0.64	1.01	70.27	-1.8857	0.6647	0.023
970	SLU 40	-0.65	0.98	70.32	-1.8866	0.6639	0.0228
970	SLU 41	-0.64	1.02	70.98	-1.9048	0.6721	0.0234
970	SLU 42	-0.65	0.99	71.03	-1.9057	0.6714	0.0232
970	SLU 43	-0.58	0.81	67.1	-1.8001	0.6035	0.0214
970	SLU 44	-0.6	0.76	67.17	-1.8017	0.6022	0.021
970	SLU 45	-0.59	0.84	68.35	-1.8335	0.6169	0.0219
970	SLU 46	-0.6	0.81	68.4	-1.8344	0.6161	0.0217
970	SLU 47	-0.6	0.77	67.89	-1.8208	0.6097	0.0214
970	SLU 48	-0.59	0.85	69.06	-1.8526	0.6243	0.0223
970	SLU 49	-0.6	0.82	69.11	-1.8535	0.6235	0.0221
970	SLU 50	-0.58	0.83	68.53	-1.8383	0.6184	0.0222
970	SLU 51	-0.59	0.8	68.57	-1.8392	0.6176	0.022
970	SLU 52	-0.68	0.86	74.14	-1.9892	0.6773	0.0233
970	SLU 53	-0.67	0.95	75.32	-2.021	0.6919	0.0242
970	SLU 54	-0.68	0.92	75.36	-2.0219	0.6912	0.024
970	SLU 55	-0.68	0.88	74.86	-2.0083	0.6847	0.0237
970	SLU 56	-0.67	0.96	76.03	-2.0401	0.6994	0.0246
970	SLU 57	-0.68	0.93	76.08	-2.041	0.6986	0.0244
970	SLU 58	-0.66	0.94	75.5	-2.0258	0.6934	0.0245
970	SLU 59	-0.67	0.91	75.54	-2.0267	0.6926	0.0243
970	SLU 60	-0.69	0.96	77.06	-2.068	0.7108	0.0247
970	SLU 61	-0.7	0.93	77.1	-2.0689	0.71	0.0245
970	SLU 62	-0.69	0.97	77.77	-2.0871	0.7182	0.0251
970	SLU 63	-0.7	0.94	77.81	-2.088	0.7174	0.0249
970	SLU 64	-0.64	1	73.99	-1.9845	0.6773	0.0239
970	SLU 65	-0.66	0.95	74.06	-1.9861	0.676	0.0236
970	SLU 66	-0.65	1.03	75.24	-2.0179	0.6907	0.0245
970	SLU 67	-0.67	1	75.28	-2.0189	0.6899	0.0243
970	SLU 68	-0.66	0.96	74.77	-2.0052	0.6834	0.024
970	SLU 69	-0.65	1.04	75.95	-2.037	0.6981	0.0249
970	SLU 70	-0.67	1.01	75.99	-2.0379	0.6973	0.0247
970	SLU 71	-0.64	1.02	75.41	-2.0227	0.6922	0.0247
970	SLU 72	-0.66	0.99	75.46	-2.0237	0.6914	0.0245
970	SLU 73	-0.74	1.05	81.03	-2.1736	0.7511	0.0259
970	SLU 74	-0.73	1.14	82.2	-2.2054	0.7657	0.0268
970	SLU 75	-0.74	1.11	82.25	-2.2064	0.7649	0.0266
970	SLU 76	-0.74	1.07	81.74	-2.1927	0.7585	0.0263
970	SLU 77	-0.73	1.15	82.92	-2.2245	0.7731	0.0272
970	SLU 78	-0.74	1.12	82.96	-2.2255	0.7724	0.027
970	SLU 79	-0.72	1.13	82.38	-2.2103	0.7672	0.0271
970	SLU 80	-0.73	1.1	82.42	-2.2112	0.7664	0.0268
970	SLU 81	-0.76	1.15	83.94	-2.2524	0.7845	0.0272
970	SLU 82	-0.77	1.12	83.99	-2.2534	0.7838	0.027
970	SLU 83	-0.76	1.16	84.65	-2.2715	0.792	0.0276
970	SLU 84	-0.77	1.13	84.7	-2.2725	0.7912	0.0274
970	SLE RA 1	-0.48	0.73	55.4	-1.486	0.5048	0.0179
970	SLE RA 2	-0.5	0.69	55.45	-1.4871	0.5039	0.0176
970	SLE RA 3	-0.49	0.75	56.23	-1.5083	0.5137	0.0182
970	SLE RA 4	-0.5	0.73	56.26	-1.5089	0.5132	0.0181
970	SLE RA 5	-0.5	0.7	55.92	-1.4998	0.5089	0.0179
970	SLE RA 6	-0.49	0.76	56.71	-1.521	0.5187	0.0185
970	SLE RA 7	-0.5	0.74	56.74	-1.5216	0.5181	0.0183
970	SLE RA 8	-0.48	0.74	56.35	-1.5115	0.5147	0.0184
970	SLE RA 9	-0.49	0.72	56.38	-1.5121	0.5142	0.0182
970	SLE RA 10	-0.55	0.76	60.09	-1.6121	0.554	0.0192
970	SLE RA 11	-0.54	0.82	60.88	-1.6333	0.5637	0.0197
970	SLE RA 12	-0.55	0.8	60.91	-1.6339	0.5632	0.0196
970	SLE RA 13	-0.55	0.77	60.57	-1.6248	0.5589	0.0194
970	SLE RA 14	-0.54	0.83	61.35	-1.646	0.5687	0.02
970	SLE RA 15	-0.55	0.81	61.38	-1.6466	0.5682	0.0199

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
970	SLE RA 16	-0.53	0.81	61	-1.6365	0.5647	0.0199
970	SLE RA 17	-0.54	0.79	61.03	-1.6371	0.5642	0.0198
970	SLE RA 18	-0.56	0.83	62.04	-1.6646	0.5763	0.0201
970	SLE RA 19	-0.56	0.81	62.07	-1.6653	0.5758	0.0199
970	SLE RA 20	-0.56	0.84	62.51	-1.6774	0.5812	0.0203
970	SLE RA 21	-0.56	0.82	62.54	-1.678	0.5807	0.0202
970	SLE FR 1	-0.48	0.73	55.4	-1.486	0.5048	0.0179
970	SLE FR 2	-0.48	0.72	55.41	-1.4862	0.5046	0.0178
970	SLE FR 3	-0.48	0.73	55.59	-1.4911	0.5068	0.018
970	SLE FR 4	-0.51	0.75	57.4	-1.5398	0.5261	0.0185
970	SLE FR 5	-0.5	0.76	57.58	-1.5447	0.5282	0.0186
970	SLE FR 6	-0.52	0.78	58.72	-1.5753	0.5405	0.019
970	SLE QP 1	-0.48	0.73	55.4	-1.486	0.5048	0.0179
970	SLE QP 2	-0.5	0.76	57.39	-1.5396	0.5262	0.0185
970	SLD 1	4.59	1.98	61.17	-1.6381	0.5887	0.1395
970	SLD 2	4.1	1.82	61.02	-1.634	0.5887	0.1333
970	SLD 3	5.01	0.5	62.36	-1.6654	0.5778	0.1471
970	SLD 4	4.52	0.34	62.21	-1.6613	0.5778	0.1409
970	SLD 5	0.48	3.4	56.74	-1.5285	0.5616	0.0444
970	SLD 6	0.16	3.29	56.64	-1.5258	0.5616	0.0404
970	SLD 7	1.87	-1.54	60.72	-1.6195	0.5251	0.0697
970	SLD 8	1.55	-1.64	60.62	-1.6168	0.5251	0.0656
970	SLD 9	-2.56	3.16	54.16	-1.4624	0.5274	-0.0286
970	SLD 10	-2.88	3.05	54.06	-1.4597	0.5274	-0.0327
970	SLD 11	-1.17	-1.78	58.14	-1.5534	0.4909	-0.0033
970	SLD 12	-1.48	-1.88	58.04	-1.5508	0.4909	-0.0074
970	SLD 13	-5.53	1.18	52.57	-1.4179	0.4747	-0.1039
970	SLD 14	-6.01	1.02	52.42	-1.4138	0.4747	-0.1101
970	SLD 15	-5.11	-0.3	53.76	-1.4452	0.4637	-0.0963
970	SLD 16	-5.6	-0.46	53.61	-1.4411	0.4638	-0.1025
970	SLV 1	11.41	3.55	66.29	-1.7717	0.6729	0.3017
970	SLV 2	10.28	3.18	65.93	-1.7621	0.673	0.2872
970	SLV 3	12.38	0.2	68.99	-1.8337	0.648	0.3194
970	SLV 4	11.25	-0.16	68.64	-1.8241	0.648	0.3049
970	SLV 5	1.78	6.74	56.01	-1.5168	0.6081	0.0792
970	SLV 6	1.06	6.5	55.78	-1.5106	0.6081	0.0699
970	SLV 7	5.04	-4.42	65.04	-1.7236	0.5249	0.138
970	SLV 8	4.31	-4.66	64.81	-1.7174	0.525	0.1287
970	SLV 9	-5.32	6.18	49.97	-1.3618	0.5275	-0.0917
970	SLV 10	-6.04	5.94	49.74	-1.3556	0.5276	-0.101
970	SLV 11	-2.06	-4.99	59	-1.5686	0.4444	-0.0328
970	SLV 12	-2.79	-5.22	58.77	-1.5625	0.4444	-0.0421
970	SLV 13	-12.26	1.68	46.14	-1.2551	0.4045	-0.2679
970	SLV 14	-13.39	1.31	45.79	-1.2455	0.4045	-0.2823
970	SLV 15	-11.28	-1.67	48.85	-1.3172	0.3795	-0.2502
970	SLV 16	-12.42	-2.03	48.49	-1.3076	0.3796	-0.2647
970	CRTFP Ux+	0	0	0	0	0	0
970	CRTFP Ux-	0	0	0	0	0	0
970	CRTFP Uy+	0	0	0	0	0	0
970	CRTFP Uy-	0	0	0	0	0	0
973	SLU 1	0.29	1.5	51.17	-1.3594	-0.1958	0.012
973	SLU 2	0.26	1.47	51.24	-1.3609	-0.1948	0.0117
973	SLU 3	0.3	1.55	52.36	-1.3909	-0.201	0.0124
973	SLU 4	0.28	1.53	52.41	-1.3918	-0.2004	0.0122
973	SLU 5	0.27	1.49	51.96	-1.3798	-0.1982	0.012
973	SLU 6	0.31	1.58	53.08	-1.4098	-0.2044	0.0127
973	SLU 7	0.29	1.56	53.12	-1.4108	-0.2038	0.0125
973	SLU 8	0.31	1.55	52.6	-1.3973	-0.2026	0.0127
973	SLU 9	0.3	1.53	52.64	-1.3982	-0.202	0.0125
973	SLU 10	0.26	1.69	57.75	-1.534	-0.2218	0.0139
973	SLU 11	0.29	1.78	58.87	-1.564	-0.2281	0.0147
973	SLU 12	0.28	1.76	58.91	-1.5649	-0.2274	0.0144
973	SLU 13	0.27	1.71	58.46	-1.5529	-0.2252	0.0143
973	SLU 14	0.3	1.8	59.58	-1.5829	-0.2315	0.015
973	SLU 15	0.29	1.78	59.63	-1.5838	-0.2308	0.0148
973	SLU 16	0.31	1.77	59.1	-1.5703	-0.2297	0.015
973	SLU 17	0.29	1.75	59.15	-1.5712	-0.2291	0.0147
973	SLU 18	0.28	1.82	60.46	-1.6067	-0.2345	0.0153
973	SLU 19	0.26	1.8	60.5	-1.6076	-0.2338	0.0151
973	SLU 20	0.29	1.84	61.18	-1.6256	-0.2379	0.0156
973	SLU 21	0.28	1.82	61.22	-1.6265	-0.2373	0.0154
973	SLU 22	0.3	1.78	57.67	-1.5318	-0.2252	0.0141
973	SLU 23	0.27	1.75	57.75	-1.5334	-0.2242	0.0137
973	SLU 24	0.31	1.84	58.87	-1.5634	-0.2304	0.0144
973	SLU 25	0.29	1.82	58.91	-1.5643	-0.2298	0.0142
973	SLU 26	0.29	1.77	58.46	-1.5523	-0.2276	0.014
973	SLU 27	0.32	1.86	59.59	-1.5823	-0.2338	0.0147
973	SLU 28	0.31	1.84	59.63	-1.5832	-0.2332	0.0145
973	SLU 29	0.33	1.83	59.11	-1.5697	-0.232	0.0147
973	SLU 30	0.31	1.81	59.15	-1.5706	-0.2314	0.0145
973	SLU 31	0.27	1.97	64.25	-1.7064	-0.2512	0.016
973	SLU 32	0.3	2.06	65.38	-1.7364	-0.2575	0.0167
973	SLU 33	0.29	2.04	65.42	-1.7374	-0.2568	0.0165
973	SLU 34	0.28	1.99	64.97	-1.7254	-0.2547	0.0163
973	SLU 35	0.32	2.08	66.09	-1.7554	-0.2609	0.017
973	SLU 36	0.3	2.06	66.14	-1.7563	-0.2602	0.0168
973	SLU 37	0.32	2.05	65.61	-1.7428	-0.2591	0.017
973	SLU 38	0.3	2.03	65.65	-1.7437	-0.2585	0.0168
973	SLU 39	0.29	2.1	66.97	-1.7791	-0.2639	0.0173
973	SLU 40	0.28	2.08	67.01	-1.78	-0.2633	0.0171
973	SLU 41	0.3	2.12	67.68	-1.798	-0.2673	0.0177
973	SLU 42	0.29	2.1	67.73	-1.7989	-0.2667	0.0174
973	SLU 43	0.37	1.85	64.29	-1.7081	-0.2445	0.0149
973	SLU 44	0.35	1.82	64.36	-1.7096	-0.2435	0.0146
973	SLU 45	0.38	1.91	65.48	-1.7396	-0.2497	0.0153
973	SLU 46	0.37	1.89	65.53	-1.7405	-0.2491	0.0151
973	SLU 47	0.36	1.84	65.07	-1.7285	-0.2469	0.0149

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
973	SLU 48	0.39	1.93	66.2	-1.7585	-0.2531	0.0156
973	SLU 49	0.38	1.91	66.24	-1.7594	-0.2525	0.0154
973	SLU 50	0.4	1.9	65.72	-1.746	-0.2513	0.0156
973	SLU 51	0.38	1.88	65.76	-1.7469	-0.2507	0.0154
973	SLU 52	0.34	2.04	70.86	-1.8827	-0.2705	0.0168
973	SLU 53	0.38	2.13	71.99	-1.9127	-0.2767	0.0176
973	SLU 54	0.36	2.11	72.03	-1.9136	-0.2761	0.0173
973	SLU 55	0.35	2.07	71.58	-1.9016	-0.2739	0.0172
973	SLU 56	0.39	2.15	72.7	-1.9316	-0.2801	0.0179
973	SLU 57	0.37	2.13	72.75	-1.9325	-0.2795	0.0177
973	SLU 58	0.39	2.12	72.22	-1.919	-0.2784	0.0179
973	SLU 59	0.37	2.1	72.27	-1.9199	-0.2777	0.0176
973	SLU 60	0.36	2.17	73.58	-1.9554	-0.2831	0.0182
973	SLU 61	0.35	2.15	73.62	-1.9563	-0.2825	0.018
973	SLU 62	0.38	2.19	74.3	-1.9743	-0.2865	0.0185
973	SLU 63	0.36	2.17	74.34	-1.9752	-0.2859	0.0183
973	SLU 64	0.39	2.14	70.79	-1.8805	-0.2739	0.017
973	SLU 65	0.36	2.1	70.87	-1.8821	-0.2729	0.0166
973	SLU 66	0.39	2.19	71.99	-1.9121	-0.2791	0.0173
973	SLU 67	0.38	2.17	72.03	-1.913	-0.2785	0.0171
973	SLU 68	0.37	2.13	71.58	-1.901	-0.2763	0.0169
973	SLU 69	0.41	2.21	72.71	-1.931	-0.2825	0.0176
973	SLU 70	0.39	2.19	72.75	-1.9319	-0.2819	0.0174
973	SLU 71	0.41	2.18	72.22	-1.9184	-0.2807	0.0176
973	SLU 72	0.39	2.16	72.27	-1.9193	-0.2801	0.0174
973	SLU 73	0.35	2.33	77.37	-2.0551	-0.2999	0.0189
973	SLU 74	0.39	2.41	78.5	-2.0851	-0.3061	0.0196
973	SLU 75	0.37	2.39	78.54	-2.086	-0.3055	0.0194
973	SLU 76	0.36	2.35	78.09	-2.0741	-0.3033	0.0192
973	SLU 77	0.4	2.43	79.21	-2.1041	-0.3095	0.0199
973	SLU 78	0.38	2.41	79.25	-2.105	-0.3089	0.0197
973	SLU 79	0.4	2.4	78.73	-2.0915	-0.3078	0.0199
973	SLU 80	0.38	2.38	78.77	-2.0924	-0.3071	0.0197
973	SLU 81	0.38	2.46	80.09	-2.1278	-0.3125	0.0202
973	SLU 82	0.36	2.43	80.13	-2.1287	-0.3119	0.02
973	SLU 83	0.39	2.48	80.8	-2.1467	-0.3159	0.0206
973	SLU 84	0.37	2.46	80.85	-2.1476	-0.3153	0.0203
973	SLE RA 1	0.29	1.58	53.03	-1.4087	-0.2042	0.0126
973	SLE RA 2	0.28	1.56	53.07	-1.4097	-0.2035	0.0124
973	SLE RA 3	0.3	1.62	53.82	-1.4297	-0.2077	0.0128
973	SLE RA 4	0.29	1.6	53.85	-1.4303	-0.2073	0.0127
973	SLE RA 5	0.28	1.57	53.55	-1.4223	-0.2058	0.0126
973	SLE RA 6	0.31	1.63	54.3	-1.4423	-0.21	0.0131
973	SLE RA 7	0.3	1.62	54.33	-1.4429	-0.2095	0.0129
973	SLE RA 8	0.31	1.61	53.98	-1.4339	-0.2088	0.013
973	SLE RA 9	0.3	1.6	54.01	-1.4345	-0.2084	0.0129
973	SLE RA 10	0.27	1.71	57.41	-1.5251	-0.2216	0.0139
973	SLE RA 11	0.3	1.77	58.16	-1.5451	-0.2257	0.0144
973	SLE RA 12	0.28	1.75	58.19	-1.5457	-0.2253	0.0142
973	SLE RA 13	0.28	1.72	57.89	-1.5377	-0.2238	0.0141
973	SLE RA 14	0.3	1.78	58.64	-1.5577	-0.228	0.0146
973	SLE RA 15	0.29	1.77	58.67	-1.5583	-0.2276	0.0144
973	SLE RA 16	0.3	1.76	58.32	-1.5493	-0.2268	0.0146
973	SLE RA 17	0.29	1.75	58.35	-1.5499	-0.2264	0.0144
973	SLE RA 18	0.29	1.79	59.22	-1.5735	-0.23	0.0148
973	SLE RA 19	0.28	1.78	59.25	-1.5741	-0.2296	0.0146
973	SLE RA 20	0.3	1.81	59.7	-1.5861	-0.2323	0.015
973	SLE RA 21	0.28	1.8	59.73	-1.5867	-0.2318	0.0148
973	SLE FR 1	0.29	1.58	53.03	-1.4087	-0.2042	0.0126
973	SLE FR 2	0.29	1.58	53.04	-1.4089	-0.2041	0.0126
973	SLE FR 3	0.3	1.59	53.22	-1.4137	-0.2051	0.0127
973	SLE FR 4	0.29	1.64	54.9	-1.4583	-0.2118	0.0132
973	SLE FR 5	0.3	1.65	55.08	-1.4632	-0.2129	0.0133
973	SLE FR 6	0.29	1.69	56.12	-1.4911	-0.2171	0.0137
973	SLE QP 1	0.29	1.58	53.03	-1.4087	-0.2042	0.0126
973	SLE QP 2	0.29	1.65	54.89	-1.4581	-0.212	0.0133
973	SLD 1	5.47	2.06	50.23	-1.334	0.0107	0.1341
973	SLD 2	4.98	2.22	50.1	-1.3315	0.0087	0.128
973	SLD 3	5.89	0.67	51.45	-1.3618	0.0253	0.1416
973	SLD 4	5.4	0.82	51.33	-1.3592	0.0233	0.1356
973	SLD 5	1.29	3.86	51.65	-1.3793	-0.1671	0.0392
973	SLD 6	0.97	3.96	51.57	-1.3776	-0.1684	0.0352
973	SLD 7	2.7	-0.79	55.74	-1.4717	-0.1182	0.0643
973	SLD 8	2.38	-0.69	55.66	-1.4701	-0.1195	0.0603
973	SLD 9	-1.79	3.98	54.11	-1.4462	-0.3045	-0.0338
973	SLD 10	-2.11	4.08	54.03	-1.4445	-0.3058	-0.0377
973	SLD 11	-0.38	-0.67	58.2	-1.5386	-0.2555	-0.0087
973	SLD 12	-0.71	-0.57	58.12	-1.5369	-0.2568	-0.0127
973	SLD 13	-4.81	2.47	58.44	-1.557	-0.4473	-0.109
973	SLD 14	-5.31	2.62	58.32	-1.5545	-0.4493	-0.1151
973	SLD 15	-4.39	1.07	59.67	-1.5847	-0.4326	-0.1015
973	SLD 16	-4.89	1.23	59.54	-1.5822	-0.4346	-0.1076
973	SLV 1	12.41	2.57	44.02	-1.1686	0.3095	0.296
973	SLV 2	11.25	2.93	43.74	-1.1627	0.3048	0.2819
973	SLV 3	13.39	-0.6	46.8	-1.2315	0.3435	0.3136
973	SLV 4	12.24	-0.24	46.52	-1.2256	0.3388	0.2994
973	SLV 5	2.63	6.67	47.46	-1.2769	-0.1063	0.0739
973	SLV 6	1.89	6.9	47.27	-1.2732	-0.1093	0.0648
973	SLV 7	5.91	-3.89	56.73	-1.4865	0.0071	0.1324
973	SLV 8	5.17	-3.66	56.54	-1.4827	0.0041	0.1233
973	SLV 9	-4.59	6.95	53.23	-1.4335	-0.428	-0.0968
973	SLV 10	-5.33	7.19	53.04	-1.4298	-0.431	-0.1059
973	SLV 11	-1.31	-3.61	62.5	-1.6431	-0.3146	-0.0382
973	SLV 12	-2.05	-3.38	62.31	-1.6393	-0.3176	-0.0474
973	SLV 13	-11.65	3.53	63.26	-1.6906	-0.7628	-0.2729
973	SLV 14	-12.81	3.89	62.97	-1.6847	-0.7674	-0.2871
973	SLV 15	-10.67	0.36	66.04	-1.7535	-0.7287	-0.2553

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
973	SLV 16	-11.82	0.72	65.75	-1.7476	-0.7334	-0.2695
973	CRTFP Ux+	0	0	0	0	0	0
973	CRTFP Ux-	0	0	0	0	0	0
973	CRTFP Uy+	0	0	0	0	0	0
973	CRTFP Uy-	0	0	0	0	0	0
1012	SLU 1	-0.36	-0.23	21.75	0.0154	-5.8181	-0.0745
1012	SLU 2	-0.37	-0.25	21.75	0.0154	-5.8247	-0.0816
1012	SLU 3	-0.37	-0.23	22.26	0.0158	-5.9542	-0.0753
1012	SLU 4	-0.37	-0.24	22.26	0.0158	-5.9581	-0.0796
1012	SLU 5	-0.37	-0.25	22.05	0.0155	-5.9047	-0.0824
1012	SLU 6	-0.37	-0.23	22.56	0.0159	-6.0342	-0.0761
1012	SLU 7	-0.38	-0.25	22.56	0.0159	-6.0381	-0.0804
1012	SLU 8	-0.37	-0.23	22.34	0.0156	-5.9781	-0.0761
1012	SLU 9	-0.37	-0.25	22.35	0.0156	-5.982	-0.0803
1012	SLU 10	-0.41	-0.26	24.47	0.0176	-6.5673	-0.0834
1012	SLU 11	-0.41	-0.24	24.98	0.018	-6.6968	-0.0772
1012	SLU 12	-0.42	-0.25	24.99	0.018	-6.7008	-0.0814
1012	SLU 13	-0.41	-0.26	24.77	0.0178	-6.6473	-0.0842
1012	SLU 14	-0.42	-0.24	25.28	0.0181	-6.7768	-0.0779
1012	SLU 15	-0.42	-0.25	25.28	0.0181	-6.7807	-0.0822
1012	SLU 16	-0.41	-0.24	25.06	0.0179	-6.7207	-0.0779
1012	SLU 17	-0.41	-0.25	25.07	0.0179	-6.7246	-0.0821
1012	SLU 18	-0.42	-0.24	25.63	0.0186	-6.879	-0.0771
1012	SLU 19	-0.42	-0.25	25.64	0.0186	-6.8829	-0.0814
1012	SLU 20	-0.43	-0.24	25.93	0.0187	-6.959	-0.0779
1012	SLU 21	-0.43	-0.25	25.94	0.0187	-6.9629	-0.0821
1012	SLU 22	-0.4	-0.22	24.48	0.0176	-6.5581	-0.0725
1012	SLU 23	-0.41	-0.24	24.49	0.0176	-6.5646	-0.0795
1012	SLU 24	-0.41	-0.22	25	0.0179	-6.6941	-0.0733
1012	SLU 25	-0.41	-0.24	25	0.0179	-6.6981	-0.0775
1012	SLU 26	-0.41	-0.25	24.79	0.0177	-6.6446	-0.0803
1012	SLU 27	-0.41	-0.23	25.29	0.018	-6.7741	-0.074
1012	SLU 28	-0.42	-0.24	25.3	0.018	-6.7781	-0.0783
1012	SLU 29	-0.41	-0.23	25.08	0.0178	-6.718	-0.074
1012	SLU 30	-0.41	-0.24	25.08	0.0178	-6.722	-0.0782
1012	SLU 31	-0.45	-0.25	27.21	0.0198	-7.3073	-0.0813
1012	SLU 32	-0.45	-0.23	27.72	0.0201	-7.4368	-0.0751
1012	SLU 33	-0.46	-0.24	27.72	0.0201	-7.4407	-0.0793
1012	SLU 34	-0.45	-0.25	27.51	0.0199	-7.3872	-0.0821
1012	SLU 35	-0.46	-0.23	28.02	0.0203	-7.5167	-0.0759
1012	SLU 36	-0.46	-0.24	28.02	0.0203	-7.5207	-0.0801
1012	SLU 37	-0.45	-0.23	27.8	0.02	-7.4606	-0.0758
1012	SLU 38	-0.46	-0.24	27.81	0.02	-7.4646	-0.0801
1012	SLU 39	-0.46	-0.23	28.37	0.0207	-7.619	-0.0751
1012	SLU 40	-0.47	-0.24	28.37	0.0207	-7.6229	-0.0793
1012	SLU 41	-0.47	-0.23	28.67	0.0209	-7.6989	-0.0758
1012	SLU 42	-0.47	-0.24	28.67	0.0209	-7.7029	-0.0801
1012	SLU 43	-0.45	-0.3	27.33	0.0193	-7.3098	-0.0976
1012	SLU 44	-0.46	-0.32	27.34	0.0193	-7.3164	-0.1047
1012	SLU 45	-0.46	-0.3	27.85	0.0196	-7.4459	-0.0984
1012	SLU 46	-0.47	-0.31	27.85	0.0196	-7.4499	-0.1027
1012	SLU 47	-0.46	-0.32	27.64	0.0194	-7.3964	-0.1054
1012	SLU 48	-0.47	-0.3	28.14	0.0197	-7.5259	-0.0992
1012	SLU 49	-0.47	-0.32	28.15	0.0198	-7.5298	-0.1034
1012	SLU 50	-0.46	-0.3	27.93	0.0195	-7.4698	-0.0992
1012	SLU 51	-0.47	-0.32	27.93	0.0195	-7.4737	-0.1034
1012	SLU 52	-0.5	-0.33	30.06	0.0215	-8.059	-0.1065
1012	SLU 53	-0.51	-0.31	30.57	0.0219	-8.1885	-0.1002
1012	SLU 54	-0.51	-0.32	30.57	0.0219	-8.1925	-0.1045
1012	SLU 55	-0.51	-0.33	30.36	0.0216	-8.139	-0.1073
1012	SLU 56	-0.51	-0.31	30.87	0.022	-8.2685	-0.101
1012	SLU 57	-0.51	-0.32	30.87	0.022	-8.2725	-0.1052
1012	SLU 58	-0.51	-0.31	30.65	0.0217	-8.2124	-0.101
1012	SLU 59	-0.51	-0.32	30.66	0.0217	-8.2164	-0.1052
1012	SLU 60	-0.52	-0.31	31.22	0.0225	-8.3707	-0.1002
1012	SLU 61	-0.52	-0.32	31.22	0.0225	-8.3747	-0.1044
1012	SLU 62	-0.52	-0.31	31.52	0.0226	-8.4507	-0.101
1012	SLU 63	-0.52	-0.32	31.52	0.0226	-8.4547	-0.1052
1012	SLU 64	-0.5	-0.29	30.07	0.0214	-8.0498	-0.0955
1012	SLU 65	-0.5	-0.31	30.07	0.0215	-8.0564	-0.1026
1012	SLU 66	-0.5	-0.29	30.58	0.0218	-8.1859	-0.0963
1012	SLU 67	-0.51	-0.31	30.59	0.0218	-8.1898	-0.1006
1012	SLU 68	-0.51	-0.32	30.37	0.0216	-8.1363	-0.1034
1012	SLU 69	-0.51	-0.3	30.88	0.0219	-8.2658	-0.0971
1012	SLU 70	-0.51	-0.31	30.88	0.0219	-8.2698	-0.1014
1012	SLU 71	-0.5	-0.3	30.66	0.0217	-8.2098	-0.0971
1012	SLU 72	-0.51	-0.31	30.67	0.0217	-8.2137	-0.1013
1012	SLU 73	-0.54	-0.32	32.8	0.0237	-8.799	-0.1044
1012	SLU 74	-0.55	-0.3	33.3	0.024	-8.9285	-0.0982
1012	SLU 75	-0.55	-0.31	33.31	0.024	-8.9324	-0.1024
1012	SLU 76	-0.55	-0.32	33.1	0.0238	-8.879	-0.1052
1012	SLU 77	-0.55	-0.3	33.6	0.0241	-9.0085	-0.0989
1012	SLU 78	-0.55	-0.32	33.61	0.0241	-9.0124	-0.1032
1012	SLU 79	-0.55	-0.3	33.39	0.0239	-8.9524	-0.0989
1012	SLU 80	-0.55	-0.32	33.39	0.0239	-8.9563	-0.1031
1012	SLU 81	-0.56	-0.3	33.95	0.0246	-9.1107	-0.0981
1012	SLU 82	-0.56	-0.31	33.96	0.0246	-9.1146	-0.1024
1012	SLU 83	-0.56	-0.3	34.25	0.0247	-9.1907	-0.0989
1012	SLU 84	-0.56	-0.32	34.26	0.0247	-9.1946	-0.1031
1012	SLE RA 1	-0.37	-0.23	22.53	0.016	-6.0295	-0.0739
1012	SLE RA 2	-0.38	-0.24	22.53	0.016	-6.0339	-0.0787
1012	SLE RA 3	-0.38	-0.23	22.87	0.0163	-6.1202	-0.0745
1012	SLE RA 4	-0.38	-0.24	22.87	0.0163	-6.1229	-0.0773
1012	SLE RA 5	-0.38	-0.24	22.73	0.0161	-6.0872	-0.0792
1012	SLE RA 6	-0.38	-0.23	23.07	0.0163	-6.1736	-0.075
1012	SLE RA 7	-0.38	-0.24	23.07	0.0163	-6.1762	-0.0778
1012	SLE RA 8	-0.38	-0.23	22.93	0.0162	-6.1362	-0.075

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1012	SLE RA 9	-0.38	-0.24	22.93	0.0162	-6.1388	-0.0778
1012	SLE RA 10	-0.4	-0.24	24.35	0.0175	-6.529	-0.0799
1012	SLE RA 11	-0.41	-0.23	24.68	0.0177	-6.6153	-0.0757
1012	SLE RA 12	-0.41	-0.24	24.69	0.0177	-6.618	-0.0785
1012	SLE RA 13	-0.41	-0.25	24.55	0.0176	-6.5823	-0.0804
1012	SLE RA 14	-0.41	-0.23	24.88	0.0178	-6.6686	-0.0762
1012	SLE RA 15	-0.41	-0.24	24.89	0.0178	-6.6713	-0.079
1012	SLE RA 16	-0.41	-0.23	24.74	0.0177	-6.6312	-0.0762
1012	SLE RA 17	-0.41	-0.24	24.74	0.0177	-6.6339	-0.079
1012	SLE RA 18	-0.41	-0.23	25.12	0.0181	-6.7368	-0.0757
1012	SLE RA 19	-0.42	-0.24	25.12	0.0181	-6.7394	-0.0785
1012	SLE RA 20	-0.42	-0.23	25.32	0.0182	-6.7901	-0.0762
1012	SLE RA 21	-0.42	-0.24	25.32	0.0182	-6.7927	-0.079
1012	SLE FR 1	-0.37	-0.23	22.53	0.016	-6.0295	-0.0739
1012	SLE FR 2	-0.37	-0.23	22.53	0.016	-6.0304	-0.0749
1012	SLE FR 3	-0.37	-0.23	22.61	0.0161	-6.0508	-0.0741
1012	SLE FR 4	-0.39	-0.23	23.31	0.0167	-6.2426	-0.0754
1012	SLE FR 5	-0.39	-0.23	23.38	0.0167	-6.263	-0.0747
1012	SLE FR 6	-0.39	-0.23	23.82	0.0171	-6.3832	-0.0748
1012	SLE QP 1	-0.37	-0.23	22.53	0.016	-6.0295	-0.0739
1012	SLE QP 2	-0.38	-0.23	23.3	0.0167	-6.2417	-0.0745
1012	SLD 1	1.35	-0.14	27.13	0.0293	-7.2581	-0.048
1012	SLD 2	1.17	-0.25	27.13	0.0284	-7.2661	-0.0825
1012	SLD 3	1.5	-0.63	27.47	0.0302	-7.3873	-0.2047
1012	SLD 4	1.32	-0.73	27.47	0.0293	-7.3953	-0.2392
1012	SLD 5	-0.06	0.55	23.93	0.0193	-6.3492	0.1772
1012	SLD 6	-0.17	0.48	23.93	0.0187	-6.3545	0.1546
1012	SLD 7	0.44	-1.06	25.08	0.0222	-6.7799	-0.345
1012	SLD 8	0.32	-1.13	25.08	0.0216	-6.7852	-0.3676
1012	SLD 9	-1.09	0.67	21.53	0.0117	-5.6982	0.2187
1012	SLD 10	-1.2	0.6	21.53	0.0111	-5.7035	0.1961
1012	SLD 11	-0.6	-0.93	22.68	0.0146	-6.1289	-0.3036
1012	SLD 12	-0.71	-1	22.68	0.014	-6.1342	-0.3261
1012	SLD 13	-2.09	0.28	19.13	0.004	-5.0881	0.0903
1012	SLD 14	-2.27	0.17	19.14	0.0031	-5.0961	0.0558
1012	SLD 15	-1.94	-0.2	19.48	0.0049	-5.2173	-0.0664
1012	SLD 16	-2.12	-0.31	19.48	0.004	-5.2253	-0.1009
1012	SLV 1	3.67	-0.05	32.25	0.0463	-8.6235	-0.0189
1012	SLV 2	3.26	-0.3	32.26	0.0443	-8.6423	-0.0992
1012	SLV 3	4.02	-1.14	33.05	0.0483	-8.9203	-0.3733
1012	SLV 4	3.6	-1.39	33.06	0.0463	-8.9391	-0.4536
1012	SLV 5	0.38	1.52	24.78	0.0228	-6.5029	0.4935
1012	SLV 6	0.12	1.36	24.79	0.0215	-6.515	0.4419
1012	SLV 7	1.53	-2.11	27.43	0.0296	-7.4922	-0.6878
1012	SLV 8	1.26	-2.27	27.44	0.0283	-7.5043	-0.7395
1012	SLV 9	-2.03	1.82	19.17	0.005	-4.9791	0.5905
1012	SLV 10	-2.3	1.66	19.17	0.0037	-4.9912	0.5389
1012	SLV 11	-0.89	-1.82	21.82	0.0118	-5.9684	-0.5908
1012	SLV 12	-1.15	-1.98	21.83	0.0105	-5.9805	-0.6424
1012	SLV 13	-4.37	0.94	13.55	-0.013	-3.5443	0.3047
1012	SLV 14	-4.79	0.69	13.56	-0.015	-3.5631	0.2244
1012	SLV 15	-4.03	-0.15	14.35	-0.011	-3.8411	-0.0497
1012	SLV 16	-4.44	-0.4	14.35	-0.013	-3.8599	-0.13
1012	CRTFP Ux+	0	0	0	0	0	0
1012	CRTFP Ux-	0	0	0	0	0	0
1012	CRTFP Uy+	0	0	0	0	0	0
1012	CRTFP Uy-	0	0	0	0	0	0
1014	SLU 1	-0.61	-0.4	38.91	-9.5421	-6.7548	-0.235
1014	SLU 2	-0.62	-0.44	38.92	-9.5446	-6.758	-0.2449
1014	SLU 3	-0.62	-0.41	39.83	-9.7687	-6.9142	-0.2396
1014	SLU 4	-0.63	-0.43	39.84	-9.7702	-6.9162	-0.2456
1014	SLU 5	-0.63	-0.44	39.46	-9.6809	-6.8508	-0.2474
1014	SLU 6	-0.63	-0.41	40.36	-9.9051	-7.007	-0.2421
1014	SLU 7	-0.64	-0.43	40.37	-9.9065	-7.0089	-0.2481
1014	SLU 8	-0.62	-0.41	39.98	-9.8149	-6.9403	-0.24
1014	SLU 9	-0.63	-0.43	39.99	-9.8163	-6.9422	-0.2459
1014	SLU 10	-0.69	-0.45	43.79	-10.721	-7.6054	-0.2664
1014	SLU 11	-0.7	-0.42	44.7	-10.9451	-7.7616	-0.2612
1014	SLU 12	-0.7	-0.44	44.7	-10.9466	-7.7635	-0.2671
1014	SLU 13	-0.7	-0.45	44.32	-10.8573	-7.6981	-0.2689
1014	SLU 14	-0.7	-0.42	45.23	-11.0815	-7.8543	-0.2636
1014	SLU 15	-0.71	-0.44	45.24	-11.083	-7.8563	-0.2696
1014	SLU 16	-0.7	-0.42	44.85	-10.9913	-7.7876	-0.2615
1014	SLU 17	-0.7	-0.44	44.86	-10.9927	-7.7895	-0.2674
1014	SLU 18	-0.71	-0.42	45.86	-11.2227	-7.9653	-0.2657
1014	SLU 19	-0.72	-0.44	45.87	-11.2242	-7.9672	-0.2716
1014	SLU 20	-0.72	-0.42	46.4	-11.3591	-8.058	-0.2682
1014	SLU 21	-0.73	-0.44	46.41	-11.3605	-8.0599	-0.2741
1014	SLU 22	-0.68	-0.39	43.8	-10.7295	-7.6055	-0.2516
1014	SLU 23	-0.69	-0.43	43.82	-10.7319	-7.6088	-0.2615
1014	SLU 24	-0.69	-0.39	44.72	-10.9561	-7.765	-0.2563
1014	SLU 25	-0.7	-0.42	44.73	-10.9575	-7.7669	-0.2622
1014	SLU 26	-0.7	-0.43	44.35	-10.8683	-7.7015	-0.264
1014	SLU 27	-0.7	-0.4	45.26	-11.0924	-7.8577	-0.2588
1014	SLU 28	-0.71	-0.42	45.27	-11.0939	-7.8597	-0.2647
1014	SLU 29	-0.69	-0.4	44.88	-11.0022	-7.791	-0.2566
1014	SLU 30	-0.7	-0.42	44.88	-11.0037	-7.793	-0.2626
1014	SLU 31	-0.76	-0.44	48.68	-11.9083	-8.4561	-0.283
1014	SLU 32	-0.77	-0.4	49.59	-12.1325	-8.6123	-0.2778
1014	SLU 33	-0.77	-0.43	49.6	-12.1339	-8.6143	-0.2837
1014	SLU 34	-0.77	-0.44	49.22	-12.0447	-8.5489	-0.2855
1014	SLU 35	-0.77	-0.41	50.13	-12.2688	-8.7051	-0.2803
1014	SLU 36	-0.78	-0.43	50.14	-12.2703	-8.707	-0.2862
1014	SLU 37	-0.77	-0.41	49.74	-12.1786	-8.6384	-0.2781
1014	SLU 38	-0.77	-0.43	49.75	-12.1801	-8.6403	-0.2841
1014	SLU 39	-0.78	-0.4	50.76	-12.4101	-8.816	-0.2824
1014	SLU 40	-0.79	-0.43	50.76	-12.4115	-8.818	-0.2883

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1014	SLU 41	-0.79	-0.41	51.29	-12.5464	-8.9088	-0.2848
1014	SLU 42	-0.8	-0.43	51.3	-12.5479	-8.9107	-0.2908
1014	SLU 43	-0.77	-0.53	48.9	-11.9977	-8.4895	-0.2998
1014	SLU 44	-0.78	-0.56	48.91	-12.0001	-8.4927	-0.3097
1014	SLU 45	-0.78	-0.53	49.82	-12.2243	-8.649	-0.3044
1014	SLU 46	-0.79	-0.55	49.83	-12.2257	-8.6509	-0.3104
1014	SLU 47	-0.78	-0.57	49.45	-12.1365	-8.5855	-0.3122
1014	SLU 48	-0.79	-0.53	50.36	-12.3606	-8.7417	-0.3069
1014	SLU 49	-0.79	-0.56	50.37	-12.3621	-8.7437	-0.3129
1014	SLU 50	-0.78	-0.53	49.97	-12.2704	-8.675	-0.3048
1014	SLU 51	-0.79	-0.56	49.98	-12.2719	-8.6769	-0.3107
1014	SLU 52	-0.85	-0.57	53.78	-13.1765	-9.3401	-0.3312
1014	SLU 53	-0.85	-0.54	54.69	-13.4007	-9.4963	-0.3259
1014	SLU 54	-0.86	-0.56	54.7	-13.4021	-9.4983	-0.3319
1014	SLU 55	-0.86	-0.58	54.32	-13.3129	-9.4328	-0.3337
1014	SLU 56	-0.86	-0.54	55.23	-13.5371	-9.5891	-0.3284
1014	SLU 57	-0.87	-0.57	55.23	-13.5385	-9.591	-0.3344
1014	SLU 58	-0.85	-0.54	54.84	-13.4468	-9.5223	-0.3263
1014	SLU 59	-0.86	-0.57	54.85	-13.4483	-9.5243	-0.3322
1014	SLU 60	-0.87	-0.54	55.85	-13.6783	-9.7	-0.3305
1014	SLU 61	-0.88	-0.56	55.86	-13.6797	-9.7019	-0.3364
1014	SLU 62	-0.88	-0.54	56.39	-13.8146	-9.7927	-0.333
1014	SLU 63	-0.89	-0.57	56.4	-13.8161	-9.7947	-0.3389
1014	SLU 64	-0.84	-0.51	53.79	-13.185	-9.3403	-0.3164
1014	SLU 65	-0.85	-0.55	53.81	-13.1875	-9.3435	-0.3263
1014	SLU 66	-0.85	-0.52	54.72	-13.4116	-9.4997	-0.3211
1014	SLU 67	-0.86	-0.54	54.72	-13.4131	-9.5017	-0.327
1014	SLU 68	-0.85	-0.56	54.35	-13.3238	-9.4363	-0.3288
1014	SLU 69	-0.86	-0.52	55.25	-13.548	-9.5925	-0.3236
1014	SLU 70	-0.86	-0.55	55.26	-13.5494	-9.5944	-0.3295
1014	SLU 71	-0.85	-0.52	54.87	-13.4578	-9.5258	-0.3214
1014	SLU 72	-0.86	-0.55	54.88	-13.4592	-9.5277	-0.3273
1014	SLU 73	-0.92	-0.56	58.68	-14.3639	-10.1909	-0.3478
1014	SLU 74	-0.92	-0.53	59.58	-14.588	-10.3471	-0.3426
1014	SLU 75	-0.93	-0.55	59.59	-14.5895	-10.349	-0.3485
1014	SLU 76	-0.93	-0.57	59.21	-14.5002	-10.2836	-0.3503
1014	SLU 77	-0.93	-0.53	60.12	-14.7244	-10.4398	-0.3451
1014	SLU 78	-0.94	-0.56	60.13	-14.7259	-10.4418	-0.351
1014	SLU 79	-0.92	-0.53	59.74	-14.6342	-10.3731	-0.3429
1014	SLU 80	-0.93	-0.56	59.75	-14.6356	-10.3751	-0.3488
1014	SLU 81	-0.94	-0.53	60.75	-14.8656	-10.5508	-0.3471
1014	SLU 82	-0.95	-0.55	60.76	-14.8671	-10.5527	-0.3531
1014	SLU 83	-0.95	-0.53	61.29	-15.002	-10.6435	-0.3496
1014	SLU 84	-0.96	-0.56	61.29	-15.0034	-10.6455	-0.3556
1014	SLE RA 1	-0.63	-0.4	40.3	-9.8814	-6.9978	-0.2397
1014	SLE RA 2	-0.64	-0.42	40.31	-9.883	-7	-0.2463
1014	SLE RA 3	-0.64	-0.4	40.92	-10.0324	-7.1042	-0.2429
1014	SLE RA 4	-0.64	-0.42	40.92	-10.0334	-7.1055	-0.2468
1014	SLE RA 5	-0.64	-0.43	40.67	-9.9739	-7.0618	-0.248
1014	SLE RA 6	-0.64	-0.4	41.28	-10.1233	-7.166	-0.2445
1014	SLE RA 7	-0.65	-0.42	41.28	-10.1243	-7.1673	-0.2485
1014	SLE RA 8	-0.64	-0.4	41.02	-10.0632	-7.1215	-0.2431
1014	SLE RA 9	-0.64	-0.42	41.03	-10.0642	-7.1228	-0.247
1014	SLE RA 10	-0.68	-0.43	43.56	-10.6673	-7.5649	-0.2607
1014	SLE RA 11	-0.69	-0.41	44.16	-10.8167	-7.669	-0.2572
1014	SLE RA 12	-0.69	-0.42	44.17	-10.8177	-7.6703	-0.2611
1014	SLE RA 13	-0.69	-0.43	43.92	-10.7582	-7.6267	-0.2623
1014	SLE RA 14	-0.69	-0.41	44.52	-10.9076	-7.7309	-0.2588
1014	SLE RA 15	-0.7	-0.43	44.53	-10.9086	-7.7322	-0.2628
1014	SLE RA 16	-0.69	-0.41	44.27	-10.8475	-7.6864	-0.2574
1014	SLE RA 17	-0.69	-0.43	44.27	-10.8484	-7.6877	-0.2614
1014	SLE RA 18	-0.7	-0.41	44.94	-11.0018	-7.8048	-0.2602
1014	SLE RA 19	-0.7	-0.42	44.95	-11.0027	-7.8061	-0.2642
1014	SLE RA 20	-0.7	-0.41	45.3	-11.0927	-7.8667	-0.2619
1014	SLE RA 21	-0.71	-0.43	45.3	-11.0936	-7.868	-0.2658
1014	SLE FR 1	-0.63	-0.4	40.3	-9.8814	-6.9978	-0.2397
1014	SLE FR 2	-0.63	-0.4	40.31	-9.8817	-6.9983	-0.2411
1014	SLE FR 3	-0.63	-0.4	40.45	-9.9177	-7.0226	-0.2404
1014	SLE FR 4	-0.65	-0.41	41.7	-10.2178	-7.2404	-0.2472
1014	SLE FR 5	-0.65	-0.4	41.84	-10.2539	-7.2647	-0.2466
1014	SLE FR 6	-0.66	-0.4	42.62	-10.4416	-7.4013	-0.25
1014	SLE QP 1	-0.63	-0.4	40.3	-9.8814	-6.9978	-0.2397
1014	SLE QP 2	-0.65	-0.4	41.7	-10.2175	-7.2399	-0.2459
1014	SLD 1	2.43	-0.25	48.61	-11.4263	-8.4392	0.6533
1014	SLD 2	2.12	-0.44	48.62	-11.4734	-8.4395	0.536
1014	SLD 3	2.69	-1.1	49.22	-11.5524	-8.5519	0.4786
1014	SLD 4	2.38	-1.29	49.23	-11.5995	-8.5522	0.3613
1014	SLD 5	-0.06	0.97	42.83	-10.3806	-7.4287	0.3096
1014	SLD 6	-0.27	0.84	42.84	-10.4114	-7.4289	0.233
1014	SLD 7	0.8	-1.87	44.89	-10.8008	-7.8044	-0.2728
1014	SLD 8	0.6	-1.99	44.89	-10.8316	-7.8046	-0.3495
1014	SLD 9	-1.9	1.19	38.5	-9.6034	-6.6752	-0.1423
1014	SLD 10	-2.1	1.06	38.5	-9.6341	-6.6755	-0.219
1014	SLD 11	-1.03	-1.65	40.55	-10.0236	-7.0509	-0.7247
1014	SLD 12	-1.23	-1.77	40.56	-10.0544	-7.0512	-0.8014
1014	SLD 13	-3.68	0.49	34.16	-8.8355	-5.9276	-0.853
1014	SLD 14	-3.99	0.29	34.17	-8.8826	-5.928	-0.9704
1014	SLD 15	-3.42	-0.36	34.77	-8.9616	-6.0403	-1.0278
1014	SLD 16	-3.73	-0.56	34.78	-9.0087	-6.0407	-1.1451
1014	SLV 1	6.55	-0.07	57.88	-13.0496	-10.0489	1.8513
1014	SLV 2	5.83	-0.52	57.91	-13.1593	-10.0497	1.578
1014	SLV 3	7.16	-2	59.3	-13.3395	-10.3086	1.4547
1014	SLV 4	6.43	-2.45	59.33	-13.4492	-10.3094	1.1814
1014	SLV 5	0.72	2.69	44.39	-10.6087	-7.6887	1.0315
1014	SLV 6	0.25	2.4	44.41	-10.6792	-7.6892	0.8558
1014	SLV 7	2.74	-3.72	49.13	-11.5749	-8.5542	-0.2903
1014	SLV 8	2.27	-4.01	49.15	-11.6454	-8.5547	-0.4659

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1014	SLV 9	-3.57	3.21	34.24	-8.7896	-5.9252	-0.0259
1014	SLV 10	-4.04	2.92	34.26	-8.8601	-5.9257	-0.2015
1014	SLV 11	-1.55	-3.21	38.98	-9.7558	-6.7906	-1.3476
1014	SLV 12	-2.01	-3.49	39	-9.8263	-6.7912	-1.5233
1014	SLV 13	-7.73	1.64	24.06	-6.9858	-4.1705	-1.6732
1014	SLV 14	-8.46	1.19	24.09	-7.0955	-4.1713	-1.9465
1014	SLV 15	-7.12	-0.28	25.48	-7.2757	-4.4302	-2.0698
1014	SLV 16	-7.85	-0.73	25.51	-7.3854	-4.4309	-2.343
1014	CRTFP Ux+	0	0	0	0	0	0
1014	CRTFP Ux-	0	0	0	0	0	0
1014	CRTFP Uy+	0	0	0	0	0	0
1014	CRTFP Uy-	0	0	0	0	0	0
1016	SLU 1	-0.56	-0.38	34.91	-10.3288	-0.9213	-0.2074
1016	SLU 2	-0.57	-0.41	34.92	-10.3287	-0.9217	-0.2121
1016	SLU 3	-0.58	-0.38	35.73	-10.5716	-0.9429	-0.2122
1016	SLU 4	-0.58	-0.4	35.74	-10.5716	-0.9432	-0.215
1016	SLU 5	-0.58	-0.42	35.41	-10.4784	-0.9344	-0.2143
1016	SLU 6	-0.58	-0.39	36.22	-10.7213	-0.9556	-0.2144
1016	SLU 7	-0.59	-0.41	36.23	-10.7212	-0.9559	-0.2172
1016	SLU 8	-0.57	-0.39	35.88	-10.6282	-0.9466	-0.2118
1016	SLU 9	-0.58	-0.41	35.88	-10.6281	-0.9469	-0.2146
1016	SLU 10	-0.64	-0.42	39.27	-11.574	-1.0363	-0.2367
1016	SLU 11	-0.65	-0.39	40.09	-11.8169	-1.0576	-0.2368
1016	SLU 12	-0.65	-0.41	40.09	-11.8169	-1.0578	-0.2396
1016	SLU 13	-0.65	-0.43	39.76	-11.7237	-1.049	-0.2389
1016	SLU 14	-0.65	-0.4	40.57	-11.9666	-1.0703	-0.239
1016	SLU 15	-0.66	-0.42	40.58	-11.9666	-1.0705	-0.2418
1016	SLU 16	-0.64	-0.4	40.23	-11.8735	-1.0613	-0.2364
1016	SLU 17	-0.65	-0.42	40.24	-11.8735	-1.0615	-0.2392
1016	SLU 18	-0.66	-0.39	41.13	-12.1078	-1.085	-0.2426
1016	SLU 19	-0.67	-0.41	41.13	-12.1078	-1.0853	-0.2454
1016	SLU 20	-0.67	-0.4	41.61	-12.2575	-1.0977	-0.2448
1016	SLU 21	-0.67	-0.42	41.62	-12.2575	-1.098	-0.2476
1016	SLU 22	-0.63	-0.37	39.29	-11.5902	-1.0365	-0.23
1016	SLU 23	-0.64	-0.4	39.3	-11.5901	-1.0369	-0.2347
1016	SLU 24	-0.64	-0.37	40.11	-11.833	-1.0581	-0.2348
1016	SLU 25	-0.65	-0.39	40.12	-11.833	-1.0584	-0.2376
1016	SLU 26	-0.64	-0.41	39.78	-11.7398	-1.0496	-0.2368
1016	SLU 27	-0.65	-0.37	40.59	-11.9827	-1.0708	-0.237
1016	SLU 28	-0.65	-0.4	40.6	-11.9827	-1.0711	-0.2398
1016	SLU 29	-0.64	-0.37	40.25	-11.8896	-1.0618	-0.2343
1016	SLU 30	-0.65	-0.4	40.26	-11.8895	-1.0621	-0.2371
1016	SLU 31	-0.71	-0.41	43.65	-12.8355	-1.1515	-0.2593
1016	SLU 32	-0.71	-0.38	44.46	-13.0783	-1.1728	-0.2594
1016	SLU 33	-0.72	-0.4	44.47	-13.0783	-1.173	-0.2622
1016	SLU 34	-0.71	-0.42	44.14	-12.9851	-1.1642	-0.2614
1016	SLU 35	-0.72	-0.38	44.95	-13.228	-1.1855	-0.2616
1016	SLU 36	-0.72	-0.41	44.95	-13.228	-1.1857	-0.2644
1016	SLU 37	-0.71	-0.38	44.6	-13.1349	-1.1765	-0.2589
1016	SLU 38	-0.72	-0.41	44.61	-13.1349	-1.1767	-0.2617
1016	SLU 39	-0.73	-0.38	45.5	-13.3692	-1.2002	-0.2651
1016	SLU 40	-0.73	-0.4	45.51	-13.3692	-1.2005	-0.2679
1016	SLU 41	-0.73	-0.38	45.99	-13.5189	-1.2129	-0.2673
1016	SLU 42	-0.74	-0.41	45.99	-13.5189	-1.2132	-0.2701
1016	SLU 43	-0.71	-0.49	43.88	-12.9949	-1.1582	-0.2619
1016	SLU 44	-0.72	-0.53	43.9	-12.9949	-1.1586	-0.2666
1016	SLU 45	-0.72	-0.5	44.71	-13.2377	-1.1798	-0.2667
1016	SLU 46	-0.73	-0.52	44.71	-13.2377	-1.1801	-0.2695
1016	SLU 47	-0.73	-0.53	44.38	-13.1445	-1.1713	-0.2688
1016	SLU 48	-0.73	-0.5	45.19	-13.3874	-1.1925	-0.2689
1016	SLU 49	-0.74	-0.52	45.2	-13.3874	-1.1928	-0.2717
1016	SLU 50	-0.72	-0.5	44.85	-13.2943	-1.1835	-0.2663
1016	SLU 51	-0.73	-0.52	44.86	-13.2943	-1.1838	-0.2691
1016	SLU 52	-0.79	-0.54	48.25	-14.2402	-1.2732	-0.2912
1016	SLU 53	-0.79	-0.51	49.06	-14.4831	-1.2945	-0.2913
1016	SLU 54	-0.8	-0.53	49.07	-14.483	-1.2947	-0.2941
1016	SLU 55	-0.8	-0.54	48.73	-14.3899	-1.2859	-0.2934
1016	SLU 56	-0.8	-0.51	49.54	-14.6328	-1.3071	-0.2935
1016	SLU 57	-0.8	-0.53	49.55	-14.6327	-1.3074	-0.2963
1016	SLU 58	-0.79	-0.51	49.2	-14.5396	-1.2982	-0.2909
1016	SLU 59	-0.8	-0.53	49.21	-14.5396	-1.2984	-0.2937
1016	SLU 60	-0.81	-0.51	50.1	-14.774	-1.3219	-0.2971
1016	SLU 61	-0.82	-0.53	50.11	-14.7739	-1.3222	-0.2999
1016	SLU 62	-0.81	-0.51	50.58	-14.9237	-1.3346	-0.2993
1016	SLU 63	-0.82	-0.53	50.59	-14.9236	-1.3349	-0.3021
1016	SLU 64	-0.77	-0.48	48.26	-14.2563	-1.2733	-0.2845
1016	SLU 65	-0.79	-0.52	48.27	-14.2563	-1.2738	-0.2892
1016	SLU 66	-0.79	-0.49	49.08	-14.4991	-1.295	-0.2893
1016	SLU 67	-0.79	-0.51	49.09	-14.4991	-1.2953	-0.2921
1016	SLU 68	-0.79	-0.52	48.76	-14.406	-1.2865	-0.2913
1016	SLU 69	-0.79	-0.49	49.57	-14.6488	-1.3077	-0.2915
1016	SLU 70	-0.8	-0.51	49.57	-14.6488	-1.308	-0.2943
1016	SLU 71	-0.79	-0.49	49.22	-14.5557	-1.2987	-0.2888
1016	SLU 72	-0.79	-0.51	49.23	-14.5557	-1.299	-0.2916
1016	SLU 73	-0.85	-0.53	52.62	-15.5016	-1.3884	-0.3138
1016	SLU 74	-0.86	-0.5	53.43	-15.7445	-1.4097	-0.3139
1016	SLU 75	-0.86	-0.52	53.44	-15.7444	-1.4099	-0.3167
1016	SLU 76	-0.86	-0.53	53.11	-15.6513	-1.4011	-0.3159
1016	SLU 77	-0.86	-0.5	53.92	-15.8942	-1.4223	-0.3161
1016	SLU 78	-0.87	-0.52	53.93	-15.8941	-1.4226	-0.3189
1016	SLU 79	-0.86	-0.5	53.58	-15.801	-1.4134	-0.3134
1016	SLU 80	-0.86	-0.52	53.59	-15.801	-1.4136	-0.3162
1016	SLU 81	-0.87	-0.5	54.48	-16.0354	-1.4371	-0.3196
1016	SLU 82	-0.88	-0.52	54.48	-16.0353	-1.4374	-0.3224
1016	SLU 83	-0.88	-0.5	54.96	-16.1851	-1.4498	-0.3218
1016	SLU 84	-0.89	-0.52	54.97	-16.185	-1.4501	-0.3246
1016	SLE RA 1	-0.58	-0.37	36.16	-10.6892	-0.9542	-0.2139

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1016	SLE RA 2	-0.59	-0.4	36.17	-10.6891	-0.9545	-0.217
1016	SLE RA 3	-0.59	-0.38	36.71	-10.8511	-0.9686	-0.2171
1016	SLE RA 4	-0.59	-0.39	36.72	-10.851	-0.9688	-0.2189
1016	SLE RA 5	-0.59	-0.4	36.49	-10.7889	-0.9629	-0.2184
1016	SLE RA 6	-0.59	-0.38	37.03	-10.9508	-0.9771	-0.2185
1016	SLE RA 7	-0.6	-0.39	37.04	-10.9508	-0.9773	-0.2204
1016	SLE RA 8	-0.59	-0.38	36.8	-10.8888	-0.9711	-0.2168
1016	SLE RA 9	-0.59	-0.39	36.81	-10.8887	-0.9713	-0.2186
1016	SLE RA 10	-0.63	-0.41	39.07	-11.5194	-1.0309	-0.2334
1016	SLE RA 11	-0.64	-0.38	39.61	-11.6813	-1.045	-0.2335
1016	SLE RA 12	-0.64	-0.4	39.62	-11.6813	-1.0452	-0.2354
1016	SLE RA 13	-0.64	-0.41	39.39	-11.6191	-1.0394	-0.2348
1016	SLE RA 14	-0.64	-0.39	39.93	-11.7811	-1.0535	-0.2349
1016	SLE RA 15	-0.65	-0.4	39.94	-11.781	-1.0537	-0.2368
1016	SLE RA 16	-0.64	-0.39	39.71	-11.719	-1.0475	-0.2332
1016	SLE RA 17	-0.64	-0.4	39.71	-11.719	-1.0477	-0.235
1016	SLE RA 18	-0.65	-0.38	40.3	-11.8752	-1.0634	-0.2373
1016	SLE RA 19	-0.65	-0.4	40.31	-11.8752	-1.0635	-0.2392
1016	SLE RA 20	-0.65	-0.39	40.63	-11.975	-1.0718	-0.2388
1016	SLE RA 21	-0.66	-0.4	40.63	-11.975	-1.072	-0.2406
1016	SLE FR 1	-0.58	-0.37	36.16	-10.6892	-0.9542	-0.2139
1016	SLE FR 2	-0.58	-0.38	36.16	-10.6892	-0.9542	-0.2145
1016	SLE FR 3	-0.58	-0.38	36.29	-10.7291	-0.9576	-0.2145
1016	SLE FR 4	-0.6	-0.38	37.41	-11.045	-0.987	-0.2215
1016	SLE FR 5	-0.6	-0.38	37.53	-11.0849	-0.9903	-0.2215
1016	SLE FR 6	-0.61	-0.38	38.23	-11.2822	-1.0088	-0.2256
1016	SLE QP 1	-0.58	-0.37	36.16	-10.6892	-0.9542	-0.2139
1016	SLE QP 2	-0.6	-0.38	37.4	-11.045	-0.9869	-0.2209
1016	SLD 1	2.32	-0.23	43.04	-11.8855	-1.1262	0.7932
1016	SLD 2	2.03	-0.41	43.08	-11.974	-1.1273	0.686
1016	SLD 3	2.57	-1.03	43.57	-11.9984	-1.1402	0.8835
1016	SLD 4	2.27	-1.21	43.61	-12.0869	-1.1413	0.7764
1016	SLD 5	-0.04	0.91	38.28	-11.1102	-1.0074	-0.0348
1016	SLD 6	-0.24	0.8	38.3	-11.168	-1.0081	-0.1048
1016	SLD 7	0.77	-1.76	40.06	-11.4867	-1.0539	0.2664
1016	SLD 8	0.58	-1.87	40.08	-11.5445	-1.0546	0.1964
1016	SLD 9	-1.78	1.12	34.72	-10.5455	-0.9193	-0.6382
1016	SLD 10	-1.97	1	34.75	-10.6033	-0.92	-0.7083
1016	SLD 11	-0.97	-1.55	36.5	-10.9219	-0.9658	-0.337
1016	SLD 12	-1.16	-1.67	36.53	-10.9798	-0.9665	-0.407
1016	SLD 13	-3.48	0.45	31.19	-10.0031	-0.8326	-1.2182
1016	SLD 14	-3.77	0.28	31.23	-10.0915	-0.8337	-1.3254
1016	SLD 15	-3.23	-0.35	31.73	-10.116	-0.8466	-1.1278
1016	SLD 16	-3.52	-0.52	31.77	-10.2045	-0.8476	-1.235
1016	SLV 1	6.23	-0.06	50.61	-13.0146	-1.3133	2.152
1016	SLV 2	5.55	-0.47	50.7	-13.2206	-1.3158	1.9023
1016	SLV 3	6.81	-1.88	51.83	-13.275	-1.3454	2.3619
1016	SLV 4	6.12	-2.29	51.93	-13.481	-1.3479	2.1123
1016	SLV 5	0.7	2.54	39.49	-11.2056	-1.0357	0.2153
1016	SLV 6	0.26	2.28	39.55	-11.338	-1.0373	0.0549
1016	SLV 7	2.6	-3.51	43.58	-12.0736	-1.1428	0.9151
1016	SLV 8	2.17	-3.77	43.64	-12.2061	-1.1444	0.7547
1016	SLV 9	-3.37	3.02	31.17	-9.8839	-0.8295	-1.1965
1016	SLV 10	-3.81	2.76	31.23	-10.0163	-0.8311	-1.357
1016	SLV 11	-1.46	-3.03	35.26	-10.752	-0.9366	-0.4967
1016	SLV 12	-1.9	-3.29	35.32	-10.8844	-0.9382	-0.6571
1016	SLV 13	-7.33	1.53	22.88	-8.6089	-0.626	-2.5541
1016	SLV 14	-8.01	1.12	22.97	-8.815	-0.6285	-2.8037
1016	SLV 15	-6.75	-0.28	24.11	-8.8693	-0.6581	-2.3442
1016	SLV 16	-7.44	-0.69	24.2	-9.0754	-0.6606	-2.5938
1016	CRTFP Ux+	0	0	0	0	0	0
1016	CRTFP Ux-	0	0	0	0	0	0
1016	CRTFP Uy+	0	0	0	0	0	0
1016	CRTFP Uy-	0	0	0	0	0	0
1017	SLU 1	-0.64	-0.43	38.47	-10.4002	0.076	-0.2234
1017	SLU 2	-0.65	-0.47	38.49	-10.4	0.0759	-0.2276
1017	SLU 3	-0.66	-0.43	39.37	-10.6411	0.0779	-0.2286
1017	SLU 4	-0.66	-0.46	39.39	-10.641	0.0779	-0.2312
1017	SLU 5	-0.66	-0.47	39.02	-10.5502	0.077	-0.2299
1017	SLU 6	-0.66	-0.44	39.9	-10.7913	0.0791	-0.2309
1017	SLU 7	-0.67	-0.46	39.92	-10.7912	0.079	-0.2335
1017	SLU 8	-0.65	-0.44	39.53	-10.7006	0.0784	-0.2279
1017	SLU 9	-0.66	-0.46	39.54	-10.7005	0.0783	-0.2304
1017	SLU 10	-0.73	-0.48	43.28	-11.6332	0.0854	-0.2557
1017	SLU 11	-0.74	-0.44	44.16	-11.8743	0.0875	-0.2567
1017	SLU 12	-0.74	-0.47	44.18	-11.8742	0.0874	-0.2593
1017	SLU 13	-0.74	-0.49	43.81	-11.7835	0.0866	-0.258
1017	SLU 14	-0.74	-0.45	44.69	-12.0245	0.0887	-0.259
1017	SLU 15	-0.75	-0.47	44.71	-12.0244	0.0886	-0.2615
1017	SLU 16	-0.73	-0.45	44.32	-11.9339	0.0879	-0.2559
1017	SLU 17	-0.74	-0.47	44.33	-11.9337	0.0878	-0.2585
1017	SLU 18	-0.75	-0.45	45.31	-12.1619	0.0896	-0.2635
1017	SLU 19	-0.76	-0.47	45.32	-12.1618	0.0896	-0.2661
1017	SLU 20	-0.76	-0.45	45.84	-12.3122	0.0908	-0.2657
1017	SLU 21	-0.77	-0.48	45.85	-12.3121	0.0907	-0.2683
1017	SLU 22	-0.72	-0.41	43.28	-11.6499	0.0858	-0.2495
1017	SLU 23	-0.73	-0.46	43.3	-11.6497	0.0857	-0.2538
1017	SLU 24	-0.73	-0.42	44.19	-11.8908	0.0878	-0.2548
1017	SLU 25	-0.74	-0.44	44.2	-11.8907	0.0877	-0.2574
1017	SLU 26	-0.73	-0.46	43.83	-11.8	0.0869	-0.2561
1017	SLU 27	-0.74	-0.42	44.72	-12.041	0.0889	-0.2571
1017	SLU 28	-0.74	-0.45	44.73	-12.0409	0.0889	-0.2596
1017	SLU 29	-0.73	-0.42	44.34	-11.9504	0.0882	-0.254
1017	SLU 30	-0.74	-0.45	44.35	-11.9502	0.0881	-0.2566
1017	SLU 31	-0.81	-0.47	48.09	-12.883	0.0952	-0.2819
1017	SLU 32	-0.81	-0.43	48.98	-13.124	0.0973	-0.2829
1017	SLU 33	-0.82	-0.46	48.99	-13.1239	0.0972	-0.2855

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1017	SLU 34	-0.81	-0.47	48.62	-13.0332	0.0964	-0.2841
1017	SLU 35	-0.82	-0.44	49.5	-13.2743	0.0985	-0.2851
1017	SLU 36	-0.82	-0.46	49.52	-13.2742	0.0984	-0.2877
1017	SLU 37	-0.81	-0.44	49.13	-13.1836	0.0977	-0.2821
1017	SLU 38	-0.82	-0.46	49.14	-13.1835	0.0977	-0.2847
1017	SLU 39	-0.83	-0.43	50.12	-13.4117	0.0995	-0.2897
1017	SLU 40	-0.84	-0.46	50.14	-13.4116	0.0994	-0.2922
1017	SLU 41	-0.84	-0.44	50.65	-13.5619	0.1006	-0.2919
1017	SLU 42	-0.84	-0.46	50.66	-13.5618	0.1006	-0.2945
1017	SLU 43	-0.81	-0.56	48.36	-13.0918	0.0954	-0.2814
1017	SLU 44	-0.82	-0.6	48.38	-13.0916	0.0953	-0.2857
1017	SLU 45	-0.82	-0.57	49.27	-13.3327	0.0974	-0.2867
1017	SLU 46	-0.83	-0.59	49.28	-13.3326	0.0973	-0.2893
1017	SLU 47	-0.83	-0.61	48.91	-13.2418	0.0965	-0.2879
1017	SLU 48	-0.83	-0.57	49.8	-13.4829	0.0985	-0.2889
1017	SLU 49	-0.84	-0.59	49.81	-13.4828	0.0985	-0.2915
1017	SLU 50	-0.82	-0.57	49.42	-13.3922	0.0978	-0.2859
1017	SLU 51	-0.83	-0.59	49.43	-13.3921	0.0977	-0.2885
1017	SLU 52	-0.9	-0.62	53.17	-14.3248	0.1048	-0.3138
1017	SLU 53	-0.9	-0.58	54.06	-14.5659	0.1069	-0.3148
1017	SLU 54	-0.91	-0.6	54.07	-14.5658	0.1068	-0.3173
1017	SLU 55	-0.91	-0.62	53.7	-14.475	0.106	-0.316
1017	SLU 56	-0.91	-0.58	54.58	-14.7161	0.1081	-0.317
1017	SLU 57	-0.92	-0.61	54.6	-14.716	0.108	-0.3196
1017	SLU 58	-0.9	-0.58	54.21	-14.6254	0.1073	-0.314
1017	SLU 59	-0.91	-0.61	54.22	-14.6253	0.1073	-0.3165
1017	SLU 60	-0.92	-0.58	55.2	-14.8535	0.1091	-0.3215
1017	SLU 61	-0.93	-0.6	55.22	-14.8534	0.109	-0.3241
1017	SLU 62	-0.93	-0.58	55.73	-15.0037	0.1102	-0.3238
1017	SLU 63	-0.93	-0.61	55.74	-15.0036	0.1102	-0.3263
1017	SLU 64	-0.88	-0.55	53.17	-14.3415	0.1052	-0.3076
1017	SLU 65	-0.89	-0.59	53.19	-14.3413	0.1051	-0.3118
1017	SLU 66	-0.9	-0.55	54.08	-14.5824	0.1072	-0.3129
1017	SLU 67	-0.9	-0.58	54.09	-14.5823	0.1071	-0.3154
1017	SLU 68	-0.9	-0.59	53.72	-14.4915	0.1063	-0.3141
1017	SLU 69	-0.9	-0.56	54.61	-14.7326	0.1084	-0.3151
1017	SLU 70	-0.91	-0.58	54.62	-14.7325	0.1083	-0.3177
1017	SLU 71	-0.89	-0.56	54.23	-14.6419	0.1076	-0.3121
1017	SLU 72	-0.9	-0.58	54.24	-14.6418	0.1075	-0.3146
1017	SLU 73	-0.97	-0.6	57.98	-15.5745	0.1147	-0.3399
1017	SLU 74	-0.98	-0.56	58.87	-15.8156	0.1167	-0.3409
1017	SLU 75	-0.98	-0.59	58.88	-15.8155	0.1167	-0.3435
1017	SLU 76	-0.98	-0.61	58.51	-15.7248	0.1158	-0.3422
1017	SLU 77	-0.98	-0.57	59.4	-15.9659	0.1179	-0.3432
1017	SLU 78	-0.99	-0.59	59.41	-15.9657	0.1178	-0.3458
1017	SLU 79	-0.97	-0.57	59.02	-15.8752	0.1172	-0.3401
1017	SLU 80	-0.98	-0.59	59.03	-15.8751	0.1171	-0.3427
1017	SLU 81	-1	-0.56	60.02	-16.1032	0.1189	-0.3477
1017	SLU 82	-1	-0.59	60.03	-16.1031	0.1188	-0.3503
1017	SLU 83	-1	-0.57	60.54	-16.2535	0.1201	-0.3499
1017	SLU 84	-1.01	-0.59	60.56	-16.2534	0.12	-0.3525
1017	SLE RA 1	-0.66	-0.42	39.84	-10.7573	0.0788	-0.2308
1017	SLE RA 2	-0.67	-0.45	39.86	-10.7571	0.0787	-0.2337
1017	SLE RA 3	-0.67	-0.43	40.45	-10.9179	0.0801	-0.2344
1017	SLE RA 4	-0.68	-0.44	40.46	-10.9178	0.08	-0.2361
1017	SLE RA 5	-0.67	-0.45	40.21	-10.8573	0.0795	-0.2352
1017	SLE RA 6	-0.68	-0.43	40.8	-11.018	0.0809	-0.2359
1017	SLE RA 7	-0.68	-0.45	40.81	-11.0179	0.0808	-0.2376
1017	SLE RA 8	-0.67	-0.43	40.55	-10.9576	0.0804	-0.2338
1017	SLE RA 9	-0.68	-0.45	40.56	-10.9575	0.0803	-0.2355
1017	SLE RA 10	-0.72	-0.46	43.05	-11.5793	0.0851	-0.2524
1017	SLE RA 11	-0.73	-0.44	43.64	-11.74	0.0865	-0.2531
1017	SLE RA 12	-0.73	-0.45	43.65	-11.7399	0.0864	-0.2548
1017	SLE RA 13	-0.73	-0.46	43.4	-11.6794	0.0859	-0.2539
1017	SLE RA 14	-0.73	-0.44	43.99	-11.8402	0.0872	-0.2546
1017	SLE RA 15	-0.73	-0.45	44	-11.8401	0.0872	-0.2563
1017	SLE RA 16	-0.72	-0.44	43.74	-11.7797	0.0867	-0.2526
1017	SLE RA 17	-0.73	-0.45	43.75	-11.7796	0.0867	-0.2543
1017	SLE RA 18	-0.74	-0.44	44.41	-11.9318	0.0879	-0.2576
1017	SLE RA 19	-0.74	-0.45	44.41	-11.9317	0.0878	-0.2593
1017	SLE RA 20	-0.74	-0.44	44.76	-12.0319	0.0887	-0.2591
1017	SLE RA 21	-0.75	-0.46	44.77	-12.0318	0.0886	-0.2608
1017	SLE FR 1	-0.66	-0.42	39.84	-10.7573	0.0788	-0.2308
1017	SLE FR 2	-0.66	-0.43	39.85	-10.7572	0.0788	-0.2314
1017	SLE FR 3	-0.66	-0.43	39.99	-10.7973	0.0791	-0.2314
1017	SLE FR 4	-0.69	-0.43	41.22	-11.1096	0.0815	-0.2394
1017	SLE FR 5	-0.69	-0.43	41.35	-11.1497	0.0818	-0.2395
1017	SLE FR 6	-0.7	-0.43	42.13	-11.3445	0.0833	-0.2442
1017	SLE QP 1	-0.66	-0.42	39.84	-10.7573	0.0788	-0.2308
1017	SLE QP 2	-0.68	-0.43	41.21	-11.1096	0.0815	-0.2389
1017	SLD 1	2.74	-0.23	47.04	-11.6537	0.1051	0.9617
1017	SLD 2	2.4	-0.43	47.08	-11.7588	0.1056	0.8422
1017	SLD 3	3.03	-1.16	47.63	-11.7647	0.1064	1.0619
1017	SLD 4	2.69	-1.36	47.66	-11.8698	0.1069	0.9425
1017	SLD 5	-0.03	1.08	42.06	-11.086	0.0865	-0.0096
1017	SLD 6	-0.26	0.95	42.09	-11.1547	0.0868	-0.0877
1017	SLD 7	0.93	-2.03	44.02	-11.4559	0.0909	0.3245
1017	SLD 8	0.7	-2.15	44.05	-11.5246	0.0912	0.2465
1017	SLD 9	-2.07	1.3	38.38	-10.6947	0.0718	-0.7242
1017	SLD 10	-2.29	1.17	38.41	-10.7634	0.0721	-0.8023
1017	SLD 11	-1.11	-1.81	40.34	-11.0646	0.0762	-0.39
1017	SLD 12	-1.34	-1.93	40.36	-11.1333	0.0765	-0.4681
1017	SLD 13	-4.06	0.5	34.76	-10.3494	0.0562	-1.4202
1017	SLD 14	-4.4	0.31	34.8	-10.4545	0.0566	-1.5397
1017	SLD 15	-3.77	-0.43	35.35	-10.4604	0.0575	-1.32
1017	SLD 16	-4.11	-0.62	35.39	-10.5655	0.0579	-1.4394
1017	SLV 1	7.33	-0.01	54.86	-12.3851	0.1367	2.5698

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1017	SLV 2	6.53	-0.46	54.95	-12.63	0.1378	2.2916
1017	SLV 3	8	-2.12	56.21	-12.6418	0.1398	2.8037
1017	SLV 4	7.2	-2.57	56.3	-12.8866	0.1408	2.5255
1017	SLV 5	0.84	2.97	43.24	-11.0611	0.0932	0.2966
1017	SLV 6	0.33	2.68	43.3	-11.2185	0.0939	0.1178
1017	SLV 7	3.07	-4.05	47.75	-11.9165	0.1035	1.0764
1017	SLV 8	2.56	-4.34	47.8	-12.0739	0.1041	0.8976
1017	SLV 9	-3.93	3.49	34.62	-10.1453	0.0589	-1.3753
1017	SLV 10	-4.44	3.2	34.68	-10.3027	0.0596	-1.5541
1017	SLV 11	-1.7	-3.53	39.13	-11.0007	0.0691	-0.5955
1017	SLV 12	-2.21	-3.82	39.18	-11.1581	0.0698	-0.7743
1017	SLV 13	-8.57	1.71	26.13	-9.3326	0.0222	-3.0032
1017	SLV 14	-9.37	1.26	26.21	-9.5775	0.0233	-3.2814
1017	SLV 15	-7.9	-0.39	27.48	-9.5892	0.0253	-2.7693
1017	SLV 16	-8.7	-0.84	27.57	-9.8341	0.0263	-3.0475
1017	CRTFP Ux+	0	0	0	0	0	0
1017	CRTFP Ux-	0	0	0	0	0	0
1017	CRTFP Uy+	0	0	0	0	0	0
1017	CRTFP Uy-	0	0	0	0	0	0
1018	SLU 1	-0.62	-0.4	36.3	-8.9417	0.0601	-0.2155
1018	SLU 2	-0.63	-0.44	36.32	-8.9426	0.0599	-0.2198
1018	SLU 3	-0.63	-0.4	37.15	-9.1451	0.0616	-0.2205
1018	SLU 4	-0.64	-0.43	37.16	-9.1457	0.0615	-0.2231
1018	SLU 5	-0.64	-0.44	36.82	-9.0701	0.0609	-0.2218
1018	SLU 6	-0.64	-0.4	37.64	-9.2725	0.0626	-0.2226
1018	SLU 7	-0.65	-0.43	37.65	-9.2731	0.0625	-0.2252
1018	SLU 8	-0.63	-0.41	37.29	-9.1966	0.062	-0.2196
1018	SLU 9	-0.64	-0.43	37.3	-9.1971	0.0619	-0.2222
1018	SLU 10	-0.71	-0.45	40.84	-9.9892	0.0672	-0.2474
1018	SLU 11	-0.71	-0.41	41.67	-10.1917	0.0689	-0.2481
1018	SLU 12	-0.72	-0.44	41.68	-10.1922	0.0688	-0.2507
1018	SLU 13	-0.72	-0.46	41.34	-10.1166	0.0682	-0.2494
1018	SLU 14	-0.72	-0.42	42.16	-10.3191	0.0699	-0.2502
1018	SLU 15	-0.73	-0.44	42.18	-10.3197	0.0698	-0.2528
1018	SLU 16	-0.71	-0.42	41.81	-10.2431	0.0693	-0.2472
1018	SLU 17	-0.72	-0.44	41.82	-10.2437	0.0692	-0.2498
1018	SLU 18	-0.73	-0.42	42.75	-10.4368	0.0705	-0.2549
1018	SLU 19	-0.74	-0.44	42.77	-10.4373	0.0704	-0.2575
1018	SLU 20	-0.74	-0.42	43.25	-10.5642	0.0715	-0.257
1018	SLU 21	-0.75	-0.44	43.26	-10.5648	0.0714	-0.2596
1018	SLU 22	-0.69	-0.38	40.83	-10.0004	0.0677	-0.241
1018	SLU 23	-0.7	-0.42	40.85	-10.0014	0.0675	-0.2453
1018	SLU 24	-0.71	-0.38	41.68	-10.2038	0.0692	-0.246
1018	SLU 25	-0.71	-0.41	41.69	-10.2044	0.0691	-0.2486
1018	SLU 26	-0.71	-0.43	41.35	-10.1288	0.0685	-0.2473
1018	SLU 27	-0.71	-0.39	42.17	-10.3313	0.0702	-0.2481
1018	SLU 28	-0.72	-0.41	42.19	-10.3319	0.0701	-0.2507
1018	SLU 29	-0.7	-0.39	41.82	-10.2553	0.0696	-0.2451
1018	SLU 30	-0.71	-0.41	41.83	-10.2559	0.0695	-0.2477
1018	SLU 31	-0.78	-0.43	45.37	-11.0479	0.0748	-0.2729
1018	SLU 32	-0.79	-0.4	46.2	-11.2504	0.0765	-0.2736
1018	SLU 33	-0.79	-0.42	46.21	-11.251	0.0764	-0.2762
1018	SLU 34	-0.79	-0.44	45.87	-11.1754	0.0758	-0.2749
1018	SLU 35	-0.79	-0.4	46.69	-11.3778	0.0775	-0.2757
1018	SLU 36	-0.8	-0.43	46.71	-11.3784	0.0774	-0.2783
1018	SLU 37	-0.78	-0.4	46.34	-11.3019	0.0769	-0.2727
1018	SLU 38	-0.79	-0.43	46.35	-11.3024	0.0768	-0.2753
1018	SLU 39	-0.81	-0.4	47.29	-11.4955	0.0781	-0.2804
1018	SLU 40	-0.81	-0.42	47.3	-11.4961	0.078	-0.283
1018	SLU 41	-0.81	-0.4	47.78	-11.623	0.0791	-0.2825
1018	SLU 42	-0.82	-0.43	47.8	-11.6235	0.079	-0.2851
1018	SLU 43	-0.78	-0.52	45.63	-11.2612	0.0755	-0.2714
1018	SLU 44	-0.79	-0.56	45.66	-11.2622	0.0754	-0.2757
1018	SLU 45	-0.79	-0.53	46.48	-11.4646	0.0771	-0.2764
1018	SLU 46	-0.8	-0.55	46.49	-11.4652	0.077	-0.279
1018	SLU 47	-0.8	-0.57	46.15	-11.3896	0.0763	-0.2777
1018	SLU 48	-0.8	-0.53	46.98	-11.592	0.078	-0.2785
1018	SLU 49	-0.81	-0.55	46.99	-11.5926	0.0779	-0.2811
1018	SLU 50	-0.79	-0.53	46.62	-11.5161	0.0774	-0.2755
1018	SLU 51	-0.8	-0.56	46.64	-11.5167	0.0774	-0.2781
1018	SLU 52	-0.87	-0.58	50.18	-12.3087	0.0827	-0.3033
1018	SLU 53	-0.87	-0.54	51	-12.5112	0.0843	-0.304
1018	SLU 54	-0.88	-0.56	51.02	-12.5117	0.0843	-0.3066
1018	SLU 55	-0.88	-0.58	50.67	-12.4362	0.0836	-0.3053
1018	SLU 56	-0.88	-0.54	51.5	-12.6386	0.0853	-0.3061
1018	SLU 57	-0.89	-0.57	51.51	-12.6392	0.0852	-0.3087
1018	SLU 58	-0.87	-0.54	51.14	-12.5626	0.0847	-0.3031
1018	SLU 59	-0.88	-0.57	51.16	-12.5632	0.0846	-0.3057
1018	SLU 60	-0.89	-0.54	52.09	-12.7563	0.0859	-0.3108
1018	SLU 61	-0.9	-0.57	52.1	-12.7569	0.0858	-0.3134
1018	SLU 62	-0.9	-0.54	52.58	-12.8837	0.0869	-0.3129
1018	SLU 63	-0.91	-0.57	52.6	-12.8843	0.0868	-0.3155
1018	SLU 64	-0.85	-0.51	50.16	-12.3199	0.0831	-0.2969
1018	SLU 65	-0.87	-0.55	50.19	-12.3209	0.083	-0.3012
1018	SLU 66	-0.87	-0.51	51.01	-12.5233	0.0846	-0.3019
1018	SLU 67	-0.87	-0.53	51.03	-12.5239	0.0846	-0.3045
1018	SLU 68	-0.87	-0.55	50.68	-12.4483	0.0839	-0.3032
1018	SLU 69	-0.87	-0.51	51.51	-12.6508	0.0856	-0.304
1018	SLU 70	-0.88	-0.54	51.52	-12.6514	0.0855	-0.3066
1018	SLU 71	-0.86	-0.51	51.15	-12.5748	0.085	-0.301
1018	SLU 72	-0.87	-0.54	51.17	-12.5754	0.0849	-0.3036
1018	SLU 73	-0.94	-0.56	54.71	-13.3675	0.0903	-0.3288
1018	SLU 74	-0.95	-0.52	55.53	-13.5699	0.0919	-0.3295
1018	SLU 75	-0.95	-0.55	55.55	-13.5705	0.0919	-0.3321
1018	SLU 76	-0.95	-0.56	55.2	-13.4949	0.0912	-0.3308
1018	SLU 77	-0.95	-0.53	56.03	-13.6974	0.0929	-0.3316
1018	SLU 78	-0.96	-0.55	56.04	-13.6979	0.0928	-0.3342

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1018	SLU 79	-0.94	-0.53	55.67	-13.6214	0.0923	-0.3286
1018	SLU 80	-0.95	-0.55	55.69	-13.622	0.0922	-0.3312
1018	SLU 81	-0.97	-0.52	56.62	-13.815	0.0935	-0.3363
1018	SLU 82	-0.97	-0.55	56.64	-13.8156	0.0934	-0.3389
1018	SLU 83	-0.97	-0.53	57.12	-13.9425	0.0945	-0.3384
1018	SLU 84	-0.98	-0.55	57.13	-13.943	0.0944	-0.341
1018	SLE RA 1	-0.64	-0.39	37.59	-9.2442	0.0623	-0.2228
1018	SLE RA 2	-0.65	-0.42	37.61	-9.2448	0.0622	-0.2256
1018	SLE RA 3	-0.65	-0.4	38.16	-9.3798	0.0633	-0.2261
1018	SLE RA 4	-0.65	-0.41	38.17	-9.3802	0.0632	-0.2279
1018	SLE RA 5	-0.65	-0.42	37.94	-9.3298	0.0628	-0.227
1018	SLE RA 6	-0.65	-0.4	38.49	-9.4648	0.0639	-0.2275
1018	SLE RA 7	-0.66	-0.41	38.5	-9.4651	0.0639	-0.2292
1018	SLE RA 8	-0.65	-0.4	38.25	-9.4141	0.0635	-0.2255
1018	SLE RA 9	-0.65	-0.41	38.26	-9.4145	0.0635	-0.2272
1018	SLE RA 10	-0.7	-0.43	40.62	-9.9425	0.067	-0.244
1018	SLE RA 11	-0.7	-0.4	41.17	-10.0775	0.0681	-0.2445
1018	SLE RA 12	-0.71	-0.42	41.18	-10.0779	0.0681	-0.2463
1018	SLE RA 13	-0.7	-0.43	40.95	-10.0275	0.0677	-0.2454
1018	SLE RA 14	-0.71	-0.41	41.5	-10.1625	0.0688	-0.2459
1018	SLE RA 15	-0.71	-0.42	41.51	-10.1628	0.0687	-0.2476
1018	SLE RA 16	-0.7	-0.41	41.27	-10.1118	0.0684	-0.2439
1018	SLE RA 17	-0.71	-0.42	41.27	-10.1122	0.0683	-0.2456
1018	SLE RA 18	-0.72	-0.4	41.9	-10.2409	0.0692	-0.2491
1018	SLE RA 19	-0.72	-0.42	41.91	-10.2413	0.0691	-0.2508
1018	SLE RA 20	-0.72	-0.41	42.23	-10.3259	0.0698	-0.2504
1018	SLE RA 21	-0.72	-0.42	42.24	-10.3263	0.0698	-0.2521
1018	SLE FR 1	-0.64	-0.39	37.59	-9.2442	0.0623	-0.2228
1018	SLE FR 2	-0.64	-0.4	37.6	-9.2443	0.0622	-0.2233
1018	SLE FR 3	-0.64	-0.39	37.72	-9.2782	0.0625	-0.2233
1018	SLE FR 4	-0.66	-0.4	38.89	-9.5433	0.0643	-0.2312
1018	SLE FR 5	-0.66	-0.4	39.02	-9.5772	0.0646	-0.2312
1018	SLE FR 6	-0.68	-0.4	39.74	-9.7425	0.0657	-0.2359
1018	SLE QP 1	-0.64	-0.39	37.59	-9.2442	0.0623	-0.2228
1018	SLE QP 2	-0.66	-0.4	38.88	-9.5432	0.0643	-0.2307
1018	SLD 1	2.77	-0.15	44.03	-9.7992	0.0834	0.9729
1018	SLD 2	2.43	-0.34	44.05	-9.8935	0.084	0.8536
1018	SLD 3	3.06	-1.08	44.59	-9.8994	0.0844	1.0733
1018	SLD 4	2.72	-1.26	44.61	-9.9937	0.085	0.954
1018	SLD 5	-0.01	1.11	39.57	-9.4514	0.0684	-0.0007
1018	SLD 6	-0.23	0.99	39.58	-9.513	0.0688	-0.0787
1018	SLD 7	0.95	-1.97	41.45	-9.7853	0.0718	0.3339
1018	SLD 8	0.73	-2.09	41.46	-9.847	0.0722	0.2559
1018	SLD 9	-2.05	1.3	36.31	-9.2394	0.0565	-0.7172
1018	SLD 10	-2.27	1.18	36.32	-9.3011	0.0569	-0.7952
1018	SLD 11	-1.09	-1.78	38.18	-9.5734	0.0599	-0.3826
1018	SLD 12	-1.32	-1.9	38.2	-9.635	0.0603	-0.4606
1018	SLD 13	-4.04	0.47	33.15	-9.0927	0.0437	-1.4153
1018	SLD 14	-4.38	0.28	33.18	-9.187	0.0443	-1.5346
1018	SLD 15	-3.75	-0.45	33.72	-9.1929	0.0447	-1.3149
1018	SLD 16	-4.1	-0.64	33.74	-9.2872	0.0453	-1.4342
1018	SLV 1	7.37	0.13	50.94	-10.144	0.1088	2.585
1018	SLV 2	6.57	-0.3	50.99	-10.3637	0.1103	2.3071
1018	SLV 3	8.04	-1.95	52.23	-10.3761	0.1112	2.8192
1018	SLV 4	7.24	-2.38	52.28	-10.5958	0.1127	2.5413
1018	SLV 5	0.87	3	40.53	-9.3339	0.0738	0.3064
1018	SLV 6	0.36	2.73	40.56	-9.4751	0.0747	0.1278
1018	SLV 7	3.1	-3.96	44.84	-10.1074	0.0818	1.0872
1018	SLV 8	2.59	-4.23	44.87	-10.2486	0.0828	0.9086
1018	SLV 9	-3.91	3.44	32.9	-8.8378	0.0459	-1.3699
1018	SLV 10	-4.43	3.16	32.93	-8.979	0.0469	-1.5485
1018	SLV 11	-1.68	-3.52	37.2	-9.6113	0.054	-0.5891
1018	SLV 12	-2.19	-3.8	37.23	-9.7525	0.0549	-0.7677
1018	SLV 13	-8.57	1.59	25.49	-8.4906	0.016	-3.0027
1018	SLV 14	-9.36	1.16	25.53	-8.7103	0.0174	-3.2805
1018	SLV 15	-7.9	-0.5	26.78	-8.7227	0.0184	-2.7684
1018	SLV 16	-8.69	-0.93	26.83	-8.9424	0.0199	-3.0463
1018	CRTFP Ux+	0	0	0	0	0	0
1018	CRTFP Ux-	0	0	0	0	0	0
1018	CRTFP Uy+	0	0	0	0	0	0
1018	CRTFP Uy-	0	0	0	0	0	0
1019	SLU 1	-0.6	-0.35	34.69	-7.9225	0.041	-0.2071
1019	SLU 2	-0.61	-0.39	34.71	-7.9251	0.0408	-0.2114
1019	SLU 3	-0.61	-0.35	35.49	-8.0997	0.042	-0.2119
1019	SLU 4	-0.62	-0.38	35.51	-8.1012	0.0419	-0.2145
1019	SLU 5	-0.61	-0.39	35.18	-8.0358	0.0415	-0.2133
1019	SLU 6	-0.62	-0.36	35.96	-8.2103	0.0427	-0.2138
1019	SLU 7	-0.62	-0.38	35.98	-8.2119	0.0426	-0.2164
1019	SLU 8	-0.61	-0.36	35.62	-8.1438	0.0423	-0.2108
1019	SLU 9	-0.61	-0.38	35.64	-8.1453	0.0423	-0.2134
1019	SLU 10	-0.69	-0.4	39.04	-8.8479	0.0455	-0.2384
1019	SLU 11	-0.69	-0.36	39.82	-9.0224	0.0467	-0.2389
1019	SLU 12	-0.7	-0.39	39.84	-9.024	0.0466	-0.2415
1019	SLU 13	-0.69	-0.41	39.51	-8.9585	0.0461	-0.2403
1019	SLU 14	-0.69	-0.37	40.29	-9.1331	0.0473	-0.2408
1019	SLU 15	-0.7	-0.39	40.31	-9.1346	0.0473	-0.2434
1019	SLU 16	-0.68	-0.37	39.95	-9.0666	0.047	-0.2378
1019	SLU 17	-0.69	-0.39	39.97	-9.0681	0.0469	-0.2404
1019	SLU 18	-0.71	-0.37	40.87	-9.2408	0.0476	-0.2457
1019	SLU 19	-0.71	-0.39	40.89	-9.2423	0.0475	-0.2483
1019	SLU 20	-0.71	-0.37	41.34	-9.3514	0.0483	-0.2475
1019	SLU 21	-0.72	-0.39	41.36	-9.3529	0.0482	-0.2502
1019	SLU 22	-0.67	-0.33	39.02	-8.8523	0.0459	-0.2318
1019	SLU 23	-0.68	-0.37	39.05	-8.8549	0.0458	-0.2362
1019	SLU 24	-0.68	-0.33	39.83	-9.0295	0.047	-0.2366
1019	SLU 25	-0.69	-0.35	39.84	-9.031	0.0469	-0.2393
1019	SLU 26	-0.69	-0.37	39.52	-8.9655	0.0465	-0.238

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1019	SLU 27	-0.69	-0.33	40.29	-9.1401	0.0477	-0.2385
1019	SLU 28	-0.69	-0.36	40.31	-9.1416	0.0476	-0.2411
1019	SLU 29	-0.68	-0.34	39.96	-9.0736	0.0473	-0.2355
1019	SLU 30	-0.69	-0.36	39.97	-9.0751	0.0472	-0.2381
1019	SLU 31	-0.76	-0.38	43.38	-9.7777	0.0504	-0.2632
1019	SLU 32	-0.76	-0.34	44.16	-9.9522	0.0516	-0.2637
1019	SLU 33	-0.77	-0.37	44.17	-9.9538	0.0515	-0.2663
1019	SLU 34	-0.76	-0.38	43.85	-9.8883	0.0511	-0.2651
1019	SLU 35	-0.76	-0.34	44.63	-10.0628	0.0523	-0.2655
1019	SLU 36	-0.77	-0.37	44.64	-10.0644	0.0522	-0.2682
1019	SLU 37	-0.76	-0.35	44.29	-9.9963	0.0519	-0.2626
1019	SLU 38	-0.76	-0.37	44.3	-9.9979	0.0518	-0.2652
1019	SLU 39	-0.78	-0.34	45.2	-10.1705	0.0525	-0.2704
1019	SLU 40	-0.79	-0.37	45.22	-10.1721	0.0524	-0.273
1019	SLU 41	-0.78	-0.35	45.67	-10.2812	0.0532	-0.2723
1019	SLU 42	-0.79	-0.37	45.69	-10.2827	0.0531	-0.2749
1019	SLU 43	-0.75	-0.46	43.61	-9.9805	0.0516	-0.2607
1019	SLU 44	-0.76	-0.5	43.63	-9.9831	0.0514	-0.265
1019	SLU 45	-0.77	-0.47	44.41	-10.1576	0.0526	-0.2655
1019	SLU 46	-0.77	-0.49	44.43	-10.1592	0.0526	-0.2681
1019	SLU 47	-0.77	-0.51	44.1	-10.0937	0.0521	-0.2669
1019	SLU 48	-0.77	-0.47	44.88	-10.2683	0.0533	-0.2674
1019	SLU 49	-0.78	-0.49	44.9	-10.2698	0.0532	-0.27
1019	SLU 50	-0.76	-0.47	44.54	-10.2018	0.053	-0.2644
1019	SLU 51	-0.77	-0.49	44.56	-10.2033	0.0529	-0.267
1019	SLU 52	-0.84	-0.51	47.96	-10.9059	0.0561	-0.2921
1019	SLU 53	-0.84	-0.48	48.74	-11.0804	0.0573	-0.2926
1019	SLU 54	-0.85	-0.5	48.76	-11.082	0.0572	-0.2952
1019	SLU 55	-0.85	-0.52	48.43	-11.0165	0.0568	-0.2939
1019	SLU 56	-0.85	-0.48	49.21	-11.191	0.0579	-0.2944
1019	SLU 57	-0.86	-0.5	49.23	-11.1926	0.0579	-0.297
1019	SLU 58	-0.84	-0.48	48.87	-11.1245	0.0576	-0.2915
1019	SLU 59	-0.85	-0.5	48.89	-11.1261	0.0575	-0.2941
1019	SLU 60	-0.86	-0.48	49.79	-11.2987	0.0582	-0.2993
1019	SLU 61	-0.87	-0.5	49.81	-11.3003	0.0581	-0.3019
1019	SLU 62	-0.87	-0.48	50.26	-11.4094	0.0589	-0.3012
1019	SLU 63	-0.87	-0.51	50.28	-11.4109	0.0588	-0.3038
1019	SLU 64	-0.82	-0.44	47.94	-10.9103	0.0565	-0.2854
1019	SLU 65	-0.83	-0.48	47.97	-10.9129	0.0564	-0.2898
1019	SLU 66	-0.84	-0.44	48.75	-11.0874	0.0576	-0.2903
1019	SLU 67	-0.84	-0.47	48.76	-11.089	0.0575	-0.2929
1019	SLU 68	-0.84	-0.49	48.44	-11.0235	0.0571	-0.2917
1019	SLU 69	-0.84	-0.45	49.21	-11.1981	0.0583	-0.2921
1019	SLU 70	-0.85	-0.47	49.23	-11.1996	0.0582	-0.2947
1019	SLU 71	-0.83	-0.45	48.88	-11.1315	0.0579	-0.2892
1019	SLU 72	-0.84	-0.47	48.89	-11.1331	0.0578	-0.2918
1019	SLU 73	-0.91	-0.49	52.3	-11.8356	0.061	-0.3168
1019	SLU 74	-0.91	-0.45	53.08	-12.0102	0.0622	-0.3173
1019	SLU 75	-0.92	-0.48	53.09	-12.0117	0.0621	-0.3199
1019	SLU 76	-0.92	-0.5	52.77	-11.9463	0.0617	-0.3187
1019	SLU 77	-0.92	-0.46	53.54	-12.1208	0.0629	-0.3192
1019	SLU 78	-0.93	-0.48	53.56	-12.1224	0.0628	-0.3218
1019	SLU 79	-0.91	-0.46	53.21	-12.0543	0.0625	-0.3162
1019	SLU 80	-0.92	-0.48	53.22	-12.0559	0.0624	-0.3188
1019	SLU 81	-0.93	-0.46	54.12	-12.2285	0.0631	-0.3241
1019	SLU 82	-0.94	-0.48	54.14	-12.2301	0.063	-0.3267
1019	SLU 83	-0.94	-0.46	54.59	-12.3391	0.0638	-0.3259
1019	SLU 84	-0.95	-0.48	54.61	-12.3407	0.0637	-0.3285
1019	SLE RA 1	-0.62	-0.34	35.92	-8.1882	0.0424	-0.2141
1019	SLE RA 2	-0.63	-0.37	35.94	-8.1899	0.0423	-0.217
1019	SLE RA 3	-0.63	-0.35	36.46	-8.3063	0.0431	-0.2174
1019	SLE RA 4	-0.63	-0.36	36.47	-8.3073	0.043	-0.2191
1019	SLE RA 5	-0.63	-0.37	36.25	-8.2637	0.0428	-0.2183
1019	SLE RA 6	-0.63	-0.35	36.77	-8.38	0.0435	-0.2186
1019	SLE RA 7	-0.63	-0.36	36.79	-8.3811	0.0435	-0.2203
1019	SLE RA 8	-0.62	-0.35	36.55	-8.3357	0.0433	-0.2166
1019	SLE RA 9	-0.63	-0.37	36.56	-8.3367	0.0432	-0.2184
1019	SLE RA 10	-0.68	-0.38	38.83	-8.8051	0.0454	-0.2351
1019	SLE RA 11	-0.68	-0.35	39.35	-8.9214	0.0462	-0.2354
1019	SLE RA 12	-0.68	-0.37	39.36	-8.9225	0.0461	-0.2371
1019	SLE RA 13	-0.68	-0.38	39.14	-8.8788	0.0458	-0.2363
1019	SLE RA 14	-0.68	-0.36	39.66	-8.9952	0.0466	-0.2366
1019	SLE RA 15	-0.69	-0.37	39.67	-8.9962	0.0466	-0.2384
1019	SLE RA 16	-0.68	-0.36	39.43	-8.9509	0.0464	-0.2346
1019	SLE RA 17	-0.68	-0.37	39.45	-8.9519	0.0463	-0.2364
1019	SLE RA 18	-0.69	-0.35	40.05	-9.067	0.0468	-0.2399
1019	SLE RA 19	-0.7	-0.37	40.06	-9.068	0.0467	-0.2416
1019	SLE RA 20	-0.69	-0.36	40.36	-9.1408	0.0473	-0.2411
1019	SLE RA 21	-0.7	-0.37	40.37	-9.1418	0.0472	-0.2429
1019	SLE FR 1	-0.62	-0.34	35.92	-8.1882	0.0424	-0.2141
1019	SLE FR 2	-0.62	-0.35	35.93	-8.1885	0.0424	-0.2147
1019	SLE FR 3	-0.62	-0.35	36.05	-8.2177	0.0426	-0.2146
1019	SLE FR 4	-0.64	-0.35	37.16	-8.4522	0.0437	-0.2224
1019	SLE FR 5	-0.64	-0.35	37.29	-8.4813	0.0439	-0.2224
1019	SLE FR 6	-0.65	-0.35	37.99	-8.6276	0.0446	-0.227
1019	SLE QP 1	-0.62	-0.34	35.92	-8.1882	0.0424	-0.2141
1019	SLE QP 2	-0.64	-0.35	37.16	-8.4518	0.0437	-0.2219
1019	SLD 1	2.8	-0.04	41.75	-8.5508	0.059	0.9843
1019	SLD 2	2.46	-0.22	41.75	-8.6287	0.0597	0.8652
1019	SLD 3	3.09	-0.96	42.31	-8.6449	0.06	1.0848
1019	SLD 4	2.75	-1.14	42.31	-8.7228	0.0607	0.9657
1019	SLD 5	0.02	1.17	37.7	-8.3252	0.0466	0.0086
1019	SLD 6	-0.21	1.05	37.7	-8.3761	0.0471	-0.0692
1019	SLD 7	0.97	-1.89	39.54	-8.6386	0.05	0.3436
1019	SLD 8	0.75	-2.01	39.54	-8.6895	0.0505	0.2658
1019	SLD 9	-2.03	1.31	34.78	-8.2142	0.037	-0.7095
1019	SLD 10	-2.25	1.2	34.78	-8.2651	0.0374	-0.7874

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1019	SLD 11	-1.07	-1.75	36.62	-8.5276	0.0404	-0.3745
1019	SLD 12	-1.3	-1.86	36.62	-8.5785	0.0408	-0.4523
1019	SLD 13	-4.02	0.44	32.02	-8.1809	0.0268	-1.4094
1019	SLD 14	-4.37	0.26	32.02	-8.2588	0.0274	-1.5285
1019	SLD 15	-3.74	-0.48	32.57	-8.2749	0.0278	-1.3089
1019	SLD 16	-4.08	-0.66	32.57	-8.3528	0.0285	-1.428
1019	SLV 1	7.41	0.34	47.92	-8.6853	0.0794	2.6
1019	SLV 2	6.61	-0.08	47.92	-8.8668	0.0811	2.3225
1019	SLV 3	8.08	-1.74	49.19	-8.9031	0.0818	2.8345
1019	SLV 4	7.28	-2.15	49.19	-9.0845	0.0834	2.557
1019	SLV 5	0.89	3.08	38.47	-8.1606	0.0506	0.3165
1019	SLV 6	0.38	2.81	38.47	-8.2772	0.0516	0.1382
1019	SLV 7	3.13	-3.84	42.69	-8.8863	0.0584	1.0983
1019	SLV 8	2.62	-4.11	42.69	-9.0029	0.0595	0.92
1019	SLV 9	-3.9	3.41	31.63	-7.9007	0.028	-1.3637
1019	SLV 10	-4.41	3.15	31.63	-8.0173	0.029	-1.542
1019	SLV 11	-1.66	-3.51	35.86	-8.6265	0.0358	-0.5819
1019	SLV 12	-2.17	-3.77	35.85	-8.7431	0.0369	-0.7603
1019	SLV 13	-8.56	1.46	25.13	-7.8191	0.004	-3.0007
1019	SLV 14	-9.35	1.05	25.13	-8.0006	0.0057	-3.2782
1019	SLV 15	-7.89	-0.62	26.4	-8.0369	0.0064	-2.7662
1019	SLV 16	-8.68	-1.03	26.4	-8.2183	0.008	-3.0437
1019	CRTFP Ux+	0	0	0	0	0	0
1019	CRTFP Ux-	0	0	0	0	0	0
1019	CRTFP Uy+	0	0	0	0	0	0
1019	CRTFP Uy-	0	0	0	0	0	0
1020	SLU 1	-0.57	-0.29	33.7	-7.381	0.0209	-0.198
1020	SLU 2	-0.58	-0.33	33.73	-7.3854	0.0208	-0.2024
1020	SLU 3	-0.59	-0.29	34.48	-7.5442	0.0214	-0.2026
1020	SLU 4	-0.59	-0.31	34.5	-7.5468	0.0214	-0.2052
1020	SLU 5	-0.59	-0.33	34.19	-7.4861	0.0212	-0.2041
1020	SLU 6	-0.59	-0.29	34.94	-7.6449	0.0218	-0.2042
1020	SLU 7	-0.6	-0.31	34.96	-7.6475	0.0217	-0.2069
1020	SLU 8	-0.58	-0.29	34.6	-7.5825	0.0217	-0.2013
1020	SLU 9	-0.59	-0.32	34.62	-7.5851	0.0216	-0.204
1020	SLU 10	-0.66	-0.33	37.96	-8.2509	0.0226	-0.2288
1020	SLU 11	-0.66	-0.29	38.71	-8.4097	0.0233	-0.229
1020	SLU 12	-0.67	-0.32	38.73	-8.4123	0.0232	-0.2316
1020	SLU 13	-0.67	-0.34	38.41	-8.3517	0.023	-0.2305
1020	SLU 14	-0.67	-0.3	39.16	-8.5104	0.0237	-0.2306
1020	SLU 15	-0.67	-0.32	39.18	-8.5131	0.0236	-0.2333
1020	SLU 16	-0.66	-0.3	38.83	-8.4481	0.0235	-0.2277
1020	SLU 17	-0.67	-0.32	38.85	-8.4507	0.0234	-0.2304
1020	SLU 18	-0.68	-0.3	39.74	-8.6175	0.0236	-0.2357
1020	SLU 19	-0.69	-0.32	39.76	-8.6201	0.0235	-0.2383
1020	SLU 20	-0.69	-0.3	40.19	-8.7183	0.0239	-0.2373
1020	SLU 21	-0.69	-0.32	40.21	-8.7209	0.0238	-0.24
1020	SLU 22	-0.64	-0.26	37.92	-8.2481	0.0231	-0.2219
1020	SLU 23	-0.65	-0.3	37.95	-8.2525	0.0229	-0.2263
1020	SLU 24	-0.65	-0.26	38.7	-8.4112	0.0236	-0.2265
1020	SLU 25	-0.66	-0.28	38.72	-8.4139	0.0235	-0.2291
1020	SLU 26	-0.66	-0.3	38.41	-8.3532	0.0233	-0.228
1020	SLU 27	-0.66	-0.26	39.16	-8.512	0.024	-0.2282
1020	SLU 28	-0.67	-0.28	39.18	-8.5146	0.0239	-0.2308
1020	SLU 29	-0.65	-0.26	38.83	-8.4496	0.0238	-0.2252
1020	SLU 30	-0.66	-0.29	38.85	-8.4522	0.0237	-0.2279
1020	SLU 31	-0.73	-0.31	42.18	-9.118	0.0248	-0.2527
1020	SLU 32	-0.73	-0.27	42.93	-9.2768	0.0254	-0.2529
1020	SLU 33	-0.74	-0.29	42.95	-9.2794	0.0254	-0.2555
1020	SLU 34	-0.73	-0.31	42.63	-9.2188	0.0252	-0.2544
1020	SLU 35	-0.74	-0.27	43.38	-9.3775	0.0258	-0.2545
1020	SLU 36	-0.74	-0.29	43.4	-9.3801	0.0257	-0.2572
1020	SLU 37	-0.73	-0.27	43.05	-9.3152	0.0257	-0.2516
1020	SLU 38	-0.73	-0.29	43.07	-9.3178	0.0256	-0.2543
1020	SLU 39	-0.75	-0.27	43.96	-9.4846	0.0257	-0.2596
1020	SLU 40	-0.76	-0.29	43.98	-9.4872	0.0256	-0.2622
1020	SLU 41	-0.75	-0.27	44.41	-9.5854	0.0261	-0.2613
1020	SLU 42	-0.76	-0.3	44.43	-9.588	0.026	-0.2639
1020	SLU 43	-0.72	-0.38	42.36	-9.2981	0.0264	-0.2492
1020	SLU 44	-0.73	-0.42	42.4	-9.3024	0.0263	-0.2536
1020	SLU 45	-0.73	-0.38	43.15	-9.4612	0.027	-0.2538
1020	SLU 46	-0.74	-0.41	43.17	-9.4638	0.0269	-0.2564
1020	SLU 47	-0.74	-0.43	42.85	-9.4032	0.0267	-0.2553
1020	SLU 48	-0.74	-0.39	43.6	-9.5619	0.0273	-0.2554
1020	SLU 49	-0.75	-0.41	43.62	-9.5646	0.0273	-0.2581
1020	SLU 50	-0.73	-0.39	43.27	-9.4996	0.0272	-0.2525
1020	SLU 51	-0.74	-0.41	43.29	-9.5022	0.0271	-0.2552
1020	SLU 52	-0.81	-0.43	46.63	-10.168	0.0282	-0.28
1020	SLU 53	-0.81	-0.39	47.37	-10.3267	0.0288	-0.2802
1020	SLU 54	-0.82	-0.41	47.39	-10.3293	0.0287	-0.2828
1020	SLU 55	-0.81	-0.43	47.08	-10.2687	0.0285	-0.2817
1020	SLU 56	-0.81	-0.39	47.83	-10.4275	0.0292	-0.2818
1020	SLU 57	-0.82	-0.42	47.85	-10.4301	0.0291	-0.2845
1020	SLU 58	-0.81	-0.4	47.5	-10.3651	0.029	-0.2789
1020	SLU 59	-0.81	-0.42	47.52	-10.3677	0.029	-0.2816
1020	SLU 60	-0.83	-0.39	48.4	-10.5346	0.0291	-0.2869
1020	SLU 61	-0.84	-0.42	48.42	-10.5372	0.029	-0.2895
1020	SLU 62	-0.83	-0.4	48.86	-10.6353	0.0295	-0.2885
1020	SLU 63	-0.84	-0.42	48.88	-10.6379	0.0294	-0.2912
1020	SLU 64	-0.79	-0.35	46.58	-10.1652	0.0286	-0.2731
1020	SLU 65	-0.8	-0.39	46.62	-10.1695	0.0285	-0.2775
1020	SLU 66	-0.8	-0.35	47.37	-10.3283	0.0291	-0.2777
1020	SLU 67	-0.81	-0.38	47.39	-10.3309	0.0291	-0.2803
1020	SLU 68	-0.81	-0.4	47.07	-10.2703	0.0288	-0.2792
1020	SLU 69	-0.81	-0.36	47.82	-10.429	0.0295	-0.2794
1020	SLU 70	-0.81	-0.38	47.84	-10.4316	0.0294	-0.282
1020	SLU 71	-0.8	-0.36	47.49	-10.3666	0.0294	-0.2764

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1020	SLU 72	-0.81	-0.38	47.51	-10.3693	0.0293	-0.2791
1020	SLU 73	-0.88	-0.4	50.85	-11.035	0.0303	-0.3039
1020	SLU 74	-0.88	-0.36	51.59	-11.1938	0.031	-0.3041
1020	SLU 75	-0.89	-0.39	51.61	-11.1964	0.0309	-0.3067
1020	SLU 76	-0.88	-0.4	51.3	-11.1358	0.0307	-0.3056
1020	SLU 77	-0.88	-0.36	52.05	-11.2946	0.0314	-0.3057
1020	SLU 78	-0.89	-0.39	52.07	-11.2972	0.0313	-0.3084
1020	SLU 79	-0.87	-0.37	51.72	-11.2322	0.0312	-0.3028
1020	SLU 80	-0.88	-0.39	51.74	-11.2348	0.0311	-0.3055
1020	SLU 81	-0.9	-0.37	52.62	-11.4016	0.0312	-0.3108
1020	SLU 82	-0.9	-0.39	52.64	-11.4042	0.0312	-0.3134
1020	SLU 83	-0.9	-0.37	53.08	-11.5024	0.0316	-0.3125
1020	SLU 84	-0.91	-0.39	53.1	-11.505	0.0315	-0.3151
1020	SLE RA 1	-0.59	-0.28	34.91	-7.6288	0.0215	-0.2048
1020	SLE RA 2	-0.6	-0.31	34.93	-7.6317	0.0214	-0.2078
1020	SLE RA 3	-0.6	-0.28	35.43	-7.7375	0.0219	-0.2079
1020	SLE RA 4	-0.61	-0.3	35.44	-7.7393	0.0218	-0.2097
1020	SLE RA 5	-0.6	-0.31	35.23	-7.6988	0.0217	-0.2089
1020	SLE RA 6	-0.6	-0.28	35.73	-7.8047	0.0221	-0.209
1020	SLE RA 7	-0.61	-0.3	35.74	-7.8064	0.0221	-0.2108
1020	SLE RA 8	-0.6	-0.28	35.51	-7.7631	0.022	-0.2071
1020	SLE RA 9	-0.6	-0.3	35.52	-7.7649	0.022	-0.2088
1020	SLE RA 10	-0.65	-0.31	37.75	-8.2087	0.0227	-0.2254
1020	SLE RA 11	-0.65	-0.28	38.25	-8.3146	0.0231	-0.2255
1020	SLE RA 12	-0.66	-0.3	38.26	-8.3163	0.0231	-0.2272
1020	SLE RA 13	-0.65	-0.31	38.05	-8.2759	0.0229	-0.2265
1020	SLE RA 14	-0.65	-0.29	38.55	-8.3817	0.0234	-0.2266
1020	SLE RA 15	-0.66	-0.3	38.56	-8.3835	0.0233	-0.2283
1020	SLE RA 16	-0.65	-0.29	38.33	-8.3401	0.0233	-0.2246
1020	SLE RA 17	-0.65	-0.3	38.34	-8.3419	0.0232	-0.2264
1020	SLE RA 18	-0.66	-0.29	38.93	-8.4531	0.0233	-0.23
1020	SLE RA 19	-0.67	-0.3	38.95	-8.4548	0.0232	-0.2317
1020	SLE RA 20	-0.67	-0.29	39.23	-8.5203	0.0235	-0.2311
1020	SLE RA 21	-0.67	-0.3	39.25	-8.522	0.0235	-0.2328
1020	SLE FR 1	-0.59	-0.28	34.91	-7.6288	0.0215	-0.2048
1020	SLE FR 2	-0.59	-0.28	34.91	-7.6294	0.0215	-0.2054
1020	SLE FR 3	-0.59	-0.28	35.03	-7.6557	0.0216	-0.2053
1020	SLE FR 4	-0.62	-0.29	36.12	-7.8767	0.022	-0.213
1020	SLE FR 5	-0.61	-0.28	36.24	-7.9029	0.0222	-0.2128
1020	SLE FR 6	-0.63	-0.28	36.92	-8.0409	0.0224	-0.2174
1020	SLE QP 1	-0.59	-0.28	34.91	-7.6288	0.0215	-0.2048
1020	SLE QP 2	-0.61	-0.28	36.11	-7.8761	0.0221	-0.2124
1020	SLD 1	2.83	0.1	40.25	-7.9164	0.0354	0.9961
1020	SLD 2	2.49	-0.08	40.23	-7.9761	0.0361	0.8772
1020	SLD 3	3.12	-0.82	40.81	-8.0068	0.0342	1.0967
1020	SLD 4	2.78	-0.99	40.79	-8.0665	0.0348	0.9778
1020	SLD 5	0.04	1.25	36.51	-7.7404	0.0278	0.0186
1020	SLD 6	-0.18	1.14	36.5	-7.7795	0.0283	-0.0591
1020	SLD 7	1	-1.8	38.38	-8.0419	0.0237	0.354
1020	SLD 8	0.78	-1.92	38.36	-8.0809	0.0241	0.2762
1020	SLD 9	-2.01	1.35	33.87	-7.6712	0.02	-0.701
1020	SLD 10	-2.23	1.24	33.85	-7.7103	0.0204	-0.7787
1020	SLD 11	-1.05	-1.7	35.73	-7.9727	0.0159	-0.3656
1020	SLD 12	-1.27	-1.82	35.72	-8.0117	0.0163	-0.4434
1020	SLD 13	-4.01	0.43	31.44	-7.6856	0.0093	-1.4025
1020	SLD 14	-4.35	0.26	31.42	-7.7453	0.0099	-1.5215
1020	SLD 15	-3.72	-0.49	32	-7.7761	0.008	-1.3019
1020	SLD 16	-4.06	-0.66	31.98	-7.8358	0.0087	-1.4209
1020	SLV 1	7.45	0.57	45.82	-7.9732	0.0533	2.6149
1020	SLV 2	6.65	0.17	45.77	-8.1123	0.0548	2.3378
1020	SLV 3	8.12	-1.51	47.1	-8.1822	0.0504	2.8496
1020	SLV 4	7.32	-1.91	47.05	-8.3213	0.052	2.5726
1020	SLV 5	0.92	3.19	37.1	-7.5643	0.0354	0.3272
1020	SLV 6	0.41	2.93	37.06	-7.6537	0.0364	0.1491
1020	SLV 7	3.16	-3.73	41.36	-8.2611	0.026	1.1098
1020	SLV 8	2.65	-3.99	41.32	-8.3505	0.027	0.9317
1020	SLV 9	-3.88	3.42	30.91	-7.4016	0.0171	-1.3565
1020	SLV 10	-4.39	3.17	30.87	-7.491	0.0181	-1.5345
1020	SLV 11	-1.64	-3.5	35.17	-8.0984	0.0077	-0.5739
1020	SLV 12	-2.15	-3.75	35.13	-8.1878	0.0087	-0.7519
1020	SLV 13	-8.55	1.34	25.18	-7.4309	-0.0079	-2.9973
1020	SLV 14	-9.34	0.95	25.13	-7.57	-0.0063	-3.2744
1020	SLV 15	-7.88	-0.73	26.46	-7.6399	-0.0107	-2.7625
1020	SLV 16	-8.67	-1.13	26.41	-7.779	-0.0091	-3.0396
1020	CRTFP Ux+	0	0	0	0	0	0
1020	CRTFP Ux-	0	0	0	0	0	0
1020	CRTFP Uy+	0	0	0	0	0	0
1020	CRTFP Uy-	0	0	0	0	0	0
1021	SLU 1	-0.55	-0.21	33.34	-7.3118	0.0017	-0.1882
1021	SLU 2	-0.56	-0.25	33.38	-7.3178	0.0016	-0.1927
1021	SLU 3	-0.56	-0.21	34.12	-7.4731	0.0018	-0.1926
1021	SLU 4	-0.57	-0.23	34.14	-7.4766	0.0017	-0.1953
1021	SLU 5	-0.56	-0.25	33.83	-7.4157	0.0017	-0.1942
1021	SLU 6	-0.56	-0.21	34.56	-7.571	0.0018	-0.194
1021	SLU 7	-0.57	-0.23	34.59	-7.5745	0.0018	-0.1967
1021	SLU 8	-0.55	-0.21	34.23	-7.5076	0.0019	-0.1912
1021	SLU 9	-0.56	-0.24	34.26	-7.5112	0.0018	-0.1938
1021	SLU 10	-0.63	-0.25	37.59	-8.1911	0.0008	-0.2184
1021	SLU 11	-0.63	-0.21	38.33	-8.3463	0.001	-0.2182
1021	SLU 12	-0.64	-0.23	38.35	-8.3499	0.0009	-0.2209
1021	SLU 13	-0.64	-0.25	38.04	-8.289	0.0009	-0.2198
1021	SLU 14	-0.64	-0.21	38.77	-8.4442	0.0011	-0.2197
1021	SLU 15	-0.64	-0.23	38.8	-8.4478	0.001	-0.2223
1021	SLU 16	-0.63	-0.21	38.45	-8.3809	0.0011	-0.2168
1021	SLU 17	-0.64	-0.24	38.47	-8.3845	0.001	-0.2195
1021	SLU 18	-0.65	-0.21	39.36	-8.5593	0.0006	-0.2249
1021	SLU 19	-0.66	-0.24	39.38	-8.5629	0.0005	-0.2275

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1021	SLU 20	-0.66	-0.21	39.81	-8.6572	0.0007	-0.2263
1021	SLU 21	-0.66	-0.24	39.83	-8.6608	0.0006	-0.229
1021	SLU 22	-0.61	-0.17	37.54	-8.1811	0.0013	-0.2112
1021	SLU 23	-0.62	-0.21	37.58	-8.1871	0.0011	-0.2157
1021	SLU 24	-0.62	-0.17	38.31	-8.3423	0.0013	-0.2156
1021	SLU 25	-0.63	-0.19	38.34	-8.3459	0.0012	-0.2182
1021	SLU 26	-0.63	-0.21	38.02	-8.285	0.0012	-0.2172
1021	SLU 27	-0.63	-0.17	38.76	-8.4402	0.0014	-0.217
1021	SLU 28	-0.64	-0.19	38.78	-8.4438	0.0013	-0.2197
1021	SLU 29	-0.62	-0.17	38.43	-8.3769	0.0014	-0.2141
1021	SLU 30	-0.63	-0.2	38.45	-8.3805	0.0013	-0.2168
1021	SLU 31	-0.7	-0.21	41.79	-9.0603	0.0004	-0.2413
1021	SLU 32	-0.7	-0.17	42.52	-9.2156	0.0005	-0.2412
1021	SLU 33	-0.71	-0.19	42.55	-9.2191	0.0004	-0.2439
1021	SLU 34	-0.7	-0.21	42.23	-9.1582	0.0004	-0.2428
1021	SLU 35	-0.7	-0.17	42.97	-9.3135	0.0006	-0.2426
1021	SLU 36	-0.71	-0.2	42.99	-9.317	0.0005	-0.2453
1021	SLU 37	-0.69	-0.18	42.64	-9.2501	0.0006	-0.2398
1021	SLU 38	-0.7	-0.2	42.66	-9.2537	0.0006	-0.2425
1021	SLU 39	-0.72	-0.17	43.56	-9.4286	0.0001	-0.2478
1021	SLU 40	-0.73	-0.2	43.58	-9.4322	0.0001	-0.2505
1021	SLU 41	-0.72	-0.18	44	-9.5265	0.0002	-0.2493
1021	SLU 42	-0.73	-0.2	44.02	-9.5301	0.0001	-0.252
1021	SLU 43	-0.69	-0.29	41.91	-9.2073	0.0024	-0.2368
1021	SLU 44	-0.7	-0.32	41.95	-9.2133	0.0023	-0.2413
1021	SLU 45	-0.7	-0.28	42.68	-9.3686	0.0024	-0.2412
1021	SLU 46	-0.71	-0.31	42.71	-9.3722	0.0024	-0.2438
1021	SLU 47	-0.7	-0.33	42.39	-9.3112	0.0024	-0.2428
1021	SLU 48	-0.7	-0.29	43.13	-9.4665	0.0025	-0.2426
1021	SLU 49	-0.71	-0.31	43.15	-9.4701	0.0024	-0.2453
1021	SLU 50	-0.69	-0.29	42.8	-9.4032	0.0026	-0.2397
1021	SLU 51	-0.7	-0.31	42.82	-9.4067	0.0025	-0.2424
1021	SLU 52	-0.77	-0.33	46.16	-10.0866	0.0015	-0.2669
1021	SLU 53	-0.77	-0.29	46.9	-10.2418	0.0017	-0.2668
1021	SLU 54	-0.78	-0.31	46.92	-10.2454	0.0016	-0.2695
1021	SLU 55	-0.78	-0.33	46.6	-10.1845	0.0016	-0.2684
1021	SLU 56	-0.78	-0.29	47.34	-10.3397	0.0017	-0.2682
1021	SLU 57	-0.78	-0.31	47.36	-10.3433	0.0017	-0.2709
1021	SLU 58	-0.77	-0.29	47.01	-10.2764	0.0018	-0.2654
1021	SLU 59	-0.78	-0.31	47.03	-10.28	0.0017	-0.2681
1021	SLU 60	-0.79	-0.29	47.93	-10.4548	0.0013	-0.2734
1021	SLU 61	-0.8	-0.31	47.95	-10.4584	0.0012	-0.2761
1021	SLU 62	-0.8	-0.29	48.37	-10.5527	0.0014	-0.2749
1021	SLU 63	-0.8	-0.31	48.39	-10.5563	0.0013	-0.2776
1021	SLU 64	-0.75	-0.25	46.1	-10.0766	0.0019	-0.2598
1021	SLU 65	-0.77	-0.29	46.14	-10.0826	0.0018	-0.2643
1021	SLU 66	-0.77	-0.25	46.88	-10.2378	0.002	-0.2641
1021	SLU 67	-0.77	-0.27	46.9	-10.2414	0.0019	-0.2668
1021	SLU 68	-0.77	-0.29	46.59	-10.1805	0.0019	-0.2658
1021	SLU 69	-0.77	-0.25	47.32	-10.3357	0.002	-0.2656
1021	SLU 70	-0.78	-0.27	47.35	-10.3393	0.002	-0.2683
1021	SLU 71	-0.76	-0.25	46.99	-10.2724	0.0021	-0.2627
1021	SLU 72	-0.77	-0.27	47.02	-10.276	0.002	-0.2654
1021	SLU 73	-0.84	-0.29	50.35	-10.9558	0.001	-0.2899
1021	SLU 74	-0.84	-0.25	51.09	-11.1111	0.0012	-0.2898
1021	SLU 75	-0.85	-0.27	51.11	-11.1147	0.0011	-0.2925
1021	SLU 76	-0.84	-0.29	50.8	-11.0537	0.0011	-0.2914
1021	SLU 77	-0.84	-0.25	51.53	-11.209	0.0013	-0.2912
1021	SLU 78	-0.85	-0.27	51.56	-11.2126	0.0012	-0.2939
1021	SLU 79	-0.84	-0.25	51.21	-11.1457	0.0013	-0.2884
1021	SLU 80	-0.84	-0.28	51.23	-11.1492	0.0012	-0.2911
1021	SLU 81	-0.86	-0.25	52.12	-11.3241	0.0008	-0.2964
1021	SLU 82	-0.87	-0.27	52.14	-11.3277	0.0007	-0.2991
1021	SLU 83	-0.86	-0.25	52.57	-11.422	0.0009	-0.2979
1021	SLU 84	-0.87	-0.27	52.59	-11.4256	0.0008	-0.3006
1021	SLE RA 1	-0.56	-0.2	34.54	-7.5602	0.0016	-0.1948
1021	SLE RA 2	-0.57	-0.22	34.57	-7.5642	0.0015	-0.1978
1021	SLE RA 3	-0.57	-0.2	35.06	-7.6677	0.0016	-0.1977
1021	SLE RA 4	-0.58	-0.21	35.07	-7.6701	0.0016	-0.1995
1021	SLE RA 5	-0.58	-0.23	34.86	-7.6294	0.0016	-0.1988
1021	SLE RA 6	-0.58	-0.2	35.36	-7.7329	0.0017	-0.1987
1021	SLE RA 7	-0.58	-0.21	35.37	-7.7353	0.0016	-0.2005
1021	SLE RA 8	-0.57	-0.2	35.14	-7.6907	0.0017	-0.1968
1021	SLE RA 9	-0.58	-0.22	35.15	-7.6931	0.0017	-0.1985
1021	SLE RA 10	-0.62	-0.23	37.38	-8.1463	0.001	-0.2149
1021	SLE RA 11	-0.62	-0.2	37.87	-8.2498	0.0011	-0.2148
1021	SLE RA 12	-0.63	-0.21	37.88	-8.2522	0.001	-0.2166
1021	SLE RA 13	-0.63	-0.23	37.67	-8.2116	0.001	-0.2159
1021	SLE RA 14	-0.62	-0.2	38.16	-8.3151	0.0011	-0.2157
1021	SLE RA 15	-0.63	-0.22	38.18	-8.3175	0.0011	-0.2175
1021	SLE RA 16	-0.62	-0.2	37.94	-8.2729	0.0012	-0.2138
1021	SLE RA 17	-0.62	-0.22	37.96	-8.2753	0.0011	-0.2156
1021	SLE RA 18	-0.63	-0.2	38.55	-8.3918	0.0008	-0.2192
1021	SLE RA 19	-0.64	-0.22	38.57	-8.3942	0.0008	-0.221
1021	SLE RA 20	-0.64	-0.2	38.85	-8.4571	0.0009	-0.2202
1021	SLE RA 21	-0.64	-0.22	38.87	-8.4595	0.0009	-0.222
1021	SLE FR 1	-0.56	-0.2	34.54	-7.5602	0.0016	-0.1948
1021	SLE FR 2	-0.57	-0.2	34.55	-7.561	0.0016	-0.1954
1021	SLE FR 3	-0.57	-0.2	34.66	-7.5863	0.0016	-0.1952
1021	SLE FR 4	-0.59	-0.2	35.75	-7.8105	0.0014	-0.2027
1021	SLE FR 5	-0.59	-0.2	35.87	-7.8358	0.0014	-0.2025
1021	SLE FR 6	-0.6	-0.2	36.55	-7.976	0.0012	-0.207
1021	SLE QP 1	-0.56	-0.2	34.54	-7.5602	0.0016	-0.1948
1021	SLE QP 2	-0.59	-0.2	35.75	-7.8097	0.0014	-0.2021
1021	SLD 1	2.86	0.23	39.51	-7.8498	0.0124	1.0083
1021	SLD 2	2.52	0.06	39.47	-7.8916	0.013	0.8895
1021	SLD 3	3.15	-0.7	40.09	-7.9412	0.0109	1.109

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1021	SLD 4	2.81	-0.86	40.05	-7.983	0.0115	0.9902
1021	SLD 5	0.07	1.36	36.01	-7.6757	0.0069	0.0293
1021	SLD 6	-0.15	1.25	35.98	-7.7031	0.0073	-0.0483
1021	SLD 7	1.03	-1.72	37.94	-7.9803	0.0018	0.3649
1021	SLD 8	0.81	-1.83	37.91	-8.0077	0.0022	0.2873
1021	SLD 9	-1.98	1.43	33.59	-7.6117	0.0006	-0.6916
1021	SLD 10	-2.2	1.32	33.56	-7.639	0.001	-0.7692
1021	SLD 11	-1.02	-1.65	35.51	-7.9163	-0.0046	-0.3559
1021	SLD 12	-1.24	-1.76	35.49	-7.9436	-0.0042	-0.4335
1021	SLD 13	-3.98	0.46	31.44	-7.6364	-0.0087	-1.3945
1021	SLD 14	-4.32	0.3	31.4	-7.6782	-0.0081	-1.5132
1021	SLD 15	-3.7	-0.46	32.02	-7.7278	-0.0103	-1.2938
1021	SLD 16	-4.04	-0.62	31.98	-7.7696	-0.0097	-1.4126
1021	SLV 1	7.49	0.76	44.58	-7.9091	0.0271	2.6296
1021	SLV 2	6.69	0.37	44.48	-8.0065	0.0285	2.353
1021	SLV 3	8.16	-1.33	45.9	-8.1194	0.0236	2.8646
1021	SLV 4	7.37	-1.71	45.8	-8.2168	0.025	2.588
1021	SLV 5	0.95	3.32	36.41	-7.5039	0.0142	0.3385
1021	SLV 6	0.44	3.07	36.34	-7.5664	0.0151	0.1607
1021	SLV 7	3.19	-3.64	40.82	-8.2049	0.0025	1.1216
1021	SLV 8	2.68	-3.89	40.75	-8.2675	0.0034	0.9438
1021	SLV 9	-3.85	3.49	30.74	-7.3519	-0.0006	-1.3481
1021	SLV 10	-4.36	3.24	30.68	-7.4145	0.0003	-1.5259
1021	SLV 11	-1.62	-3.47	35.15	-8.0529	-0.0124	-0.565
1021	SLV 12	-2.12	-3.72	35.09	-8.1155	-0.0115	-0.7427
1021	SLV 13	-8.54	1.32	25.69	-7.4026	-0.0223	-2.9922
1021	SLV 14	-9.33	0.93	25.59	-7.4999	-0.0209	-3.2688
1021	SLV 15	-7.87	-0.77	27.01	-7.6129	-0.0258	-2.7573
1021	SLV 16	-8.66	-1.16	26.91	-7.7102	-0.0244	-3.0339
1021	CRTFP Ux+	0	0	0	0	0	0
1021	CRTFP Ux-	0	0	0	0	0	0
1021	CRTFP Uy+	0	0	0	0	0	0
1021	CRTFP Uy-	0	0	0	0	0	0
1022	SLU 1	-0.52	-0.12	33.56	-7.6712	-0.0148	-0.1778
1022	SLU 2	-0.53	-0.16	33.6	-7.6786	-0.0149	-0.1824
1022	SLU 3	-0.53	-0.11	34.34	-7.8415	-0.0152	-0.1818
1022	SLU 4	-0.54	-0.14	34.36	-7.8459	-0.0152	-0.1846
1022	SLU 5	-0.53	-0.16	34.05	-7.7801	-0.0151	-0.1836
1022	SLU 6	-0.53	-0.11	34.79	-7.9431	-0.0154	-0.1831
1022	SLU 7	-0.54	-0.14	34.81	-7.9475	-0.0154	-0.1858
1022	SLU 8	-0.52	-0.12	34.45	-7.8743	-0.0151	-0.1803
1022	SLU 9	-0.53	-0.14	34.48	-7.8788	-0.0152	-0.183
1022	SLU 10	-0.6	-0.15	37.87	-8.6177	-0.0179	-0.2072
1022	SLU 11	-0.6	-0.11	38.61	-8.7807	-0.0182	-0.2066
1022	SLU 12	-0.61	-0.13	38.64	-8.7851	-0.0183	-0.2094
1022	SLU 13	-0.61	-0.15	38.32	-8.7193	-0.0181	-0.2084
1022	SLU 14	-0.6	-0.11	39.06	-8.8822	-0.0184	-0.2079
1022	SLU 15	-0.61	-0.13	39.08	-8.8867	-0.0184	-0.2106
1022	SLU 16	-0.6	-0.11	38.73	-8.8135	-0.0182	-0.2051
1022	SLU 17	-0.6	-0.14	38.75	-8.8179	-0.0182	-0.2078
1022	SLU 18	-0.62	-0.11	39.66	-9.0129	-0.0191	-0.2132
1022	SLU 19	-0.63	-0.13	39.69	-9.0173	-0.0192	-0.216
1022	SLU 20	-0.62	-0.11	40.11	-9.1144	-0.0193	-0.2145
1022	SLU 21	-0.63	-0.13	40.14	-9.1189	-0.0193	-0.2172
1022	SLU 22	-0.58	-0.07	37.81	-8.601	-0.0175	-0.1998
1022	SLU 23	-0.59	-0.11	37.85	-8.6084	-0.0176	-0.2043
1022	SLU 24	-0.59	-0.06	38.59	-8.7713	-0.0179	-0.2038
1022	SLU 25	-0.6	-0.09	38.61	-8.7757	-0.018	-0.2066
1022	SLU 26	-0.6	-0.11	38.29	-8.7099	-0.0178	-0.2056
1022	SLU 27	-0.6	-0.06	39.03	-8.8729	-0.0181	-0.2051
1022	SLU 28	-0.6	-0.09	39.06	-8.8773	-0.0181	-0.2078
1022	SLU 29	-0.59	-0.07	38.7	-8.8041	-0.0179	-0.2023
1022	SLU 30	-0.6	-0.09	38.72	-8.8086	-0.0179	-0.205
1022	SLU 31	-0.67	-0.1	42.12	-9.5476	-0.0206	-0.2291
1022	SLU 32	-0.66	-0.06	42.86	-9.7105	-0.0209	-0.2286
1022	SLU 33	-0.67	-0.08	42.88	-9.7149	-0.021	-0.2314
1022	SLU 34	-0.67	-0.1	42.57	-9.6491	-0.0208	-0.2304
1022	SLU 35	-0.67	-0.06	43.31	-9.812	-0.0211	-0.2299
1022	SLU 36	-0.68	-0.08	43.33	-9.8165	-0.0212	-0.2326
1022	SLU 37	-0.66	-0.06	42.97	-9.7433	-0.0209	-0.2271
1022	SLU 38	-0.67	-0.09	43	-9.7477	-0.0209	-0.2298
1022	SLU 39	-0.68	-0.06	43.91	-9.9427	-0.0218	-0.2352
1022	SLU 40	-0.69	-0.08	43.94	-9.9471	-0.0219	-0.2379
1022	SLU 41	-0.69	-0.06	44.36	-10.0442	-0.022	-0.2365
1022	SLU 42	-0.69	-0.08	44.38	-10.0487	-0.0221	-0.2392
1022	SLU 43	-0.65	-0.17	42.17	-9.6537	-0.0183	-0.2236
1022	SLU 44	-0.66	-0.21	42.21	-9.6611	-0.0184	-0.2282
1022	SLU 45	-0.66	-0.17	42.95	-9.824	-0.0187	-0.2276
1022	SLU 46	-0.67	-0.19	42.98	-9.8285	-0.0187	-0.2304
1022	SLU 47	-0.67	-0.21	42.66	-9.7627	-0.0186	-0.2294
1022	SLU 48	-0.67	-0.17	43.4	-9.9256	-0.0189	-0.2289
1022	SLU 49	-0.67	-0.19	43.42	-9.93	-0.0189	-0.2316
1022	SLU 50	-0.66	-0.17	43.07	-9.8569	-0.0186	-0.2261
1022	SLU 51	-0.67	-0.19	43.09	-9.8613	-0.0187	-0.2288
1022	SLU 52	-0.73	-0.2	46.49	-10.6003	-0.0214	-0.2529
1022	SLU 53	-0.73	-0.16	47.23	-10.7632	-0.0217	-0.2524
1022	SLU 54	-0.74	-0.18	47.25	-10.7677	-0.0218	-0.2552
1022	SLU 55	-0.74	-0.2	46.93	-10.7019	-0.0216	-0.2542
1022	SLU 56	-0.74	-0.16	47.67	-10.8648	-0.0219	-0.2537
1022	SLU 57	-0.74	-0.18	47.7	-10.8692	-0.0219	-0.2564
1022	SLU 58	-0.73	-0.17	47.34	-10.7961	-0.0217	-0.2509
1022	SLU 59	-0.74	-0.19	47.36	-10.8005	-0.0217	-0.2536
1022	SLU 60	-0.75	-0.16	48.28	-10.9954	-0.0226	-0.259
1022	SLU 61	-0.76	-0.19	48.3	-10.9999	-0.0227	-0.2617
1022	SLU 62	-0.76	-0.16	48.72	-11.097	-0.0228	-0.2603
1022	SLU 63	-0.76	-0.19	48.75	-11.1014	-0.0228	-0.263
1022	SLU 64	-0.71	-0.12	46.42	-10.5835	-0.021	-0.2456

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1022	SLU 65	-0.73	-0.16	46.46	-10.5909	-0.0211	-0.2501
1022	SLU 66	-0.73	-0.12	47.2	-10.7538	-0.0214	-0.2496
1022	SLU 67	-0.73	-0.14	47.22	-10.7583	-0.0215	-0.2524
1022	SLU 68	-0.73	-0.16	46.91	-10.6925	-0.0213	-0.2514
1022	SLU 69	-0.73	-0.12	47.65	-10.8554	-0.0216	-0.2509
1022	SLU 70	-0.74	-0.14	47.67	-10.8599	-0.0216	-0.2536
1022	SLU 71	-0.72	-0.12	47.31	-10.7867	-0.0214	-0.2481
1022	SLU 72	-0.73	-0.14	47.34	-10.7911	-0.0214	-0.2508
1022	SLU 73	-0.8	-0.15	50.73	-11.5301	-0.0241	-0.2749
1022	SLU 74	-0.8	-0.11	51.47	-11.693	-0.0244	-0.2744
1022	SLU 75	-0.81	-0.13	51.5	-11.6975	-0.0245	-0.2772
1022	SLU 76	-0.8	-0.15	51.18	-11.6317	-0.0243	-0.2762
1022	SLU 77	-0.8	-0.11	51.92	-11.7946	-0.0246	-0.2757
1022	SLU 78	-0.81	-0.13	51.94	-11.799	-0.0247	-0.2784
1022	SLU 79	-0.79	-0.12	51.58	-11.7259	-0.0244	-0.2729
1022	SLU 80	-0.8	-0.14	51.61	-11.7303	-0.0244	-0.2756
1022	SLU 81	-0.82	-0.11	52.52	-11.9252	-0.0253	-0.281
1022	SLU 82	-0.82	-0.14	52.55	-11.9297	-0.0254	-0.2837
1022	SLU 83	-0.82	-0.11	52.97	-12.0268	-0.0255	-0.2823
1022	SLU 84	-0.83	-0.14	52.99	-12.0312	-0.0256	-0.285
1022	SLE RA 1	-0.54	-0.1	34.77	-7.9368	-0.0156	-0.1841
1022	SLE RA 2	-0.54	-0.13	34.8	-7.9417	-0.0156	-0.1871
1022	SLE RA 3	-0.54	-0.1	35.29	-8.0504	-0.0158	-0.1868
1022	SLE RA 4	-0.55	-0.12	35.31	-8.0533	-0.0159	-0.1886
1022	SLE RA 5	-0.55	-0.13	35.1	-8.0095	-0.0157	-0.1879
1022	SLE RA 6	-0.55	-0.1	35.59	-8.1181	-0.0159	-0.1876
1022	SLE RA 7	-0.55	-0.12	35.61	-8.121	-0.016	-0.1894
1022	SLE RA 8	-0.54	-0.1	35.37	-8.0723	-0.0158	-0.1857
1022	SLE RA 9	-0.55	-0.12	35.39	-8.0752	-0.0158	-0.1876
1022	SLE RA 10	-0.59	-0.13	37.65	-8.5679	-0.0176	-0.2036
1022	SLE RA 11	-0.59	-0.1	38.14	-8.6765	-0.0178	-0.2033
1022	SLE RA 12	-0.6	-0.11	38.16	-8.6794	-0.0179	-0.2051
1022	SLE RA 13	-0.59	-0.13	37.95	-8.6356	-0.0178	-0.2045
1022	SLE RA 14	-0.59	-0.1	38.44	-8.7442	-0.018	-0.2041
1022	SLE RA 15	-0.6	-0.11	38.46	-8.7472	-0.018	-0.206
1022	SLE RA 16	-0.59	-0.1	38.22	-8.6984	-0.0178	-0.2023
1022	SLE RA 17	-0.59	-0.12	38.23	-8.7013	-0.0179	-0.2041
1022	SLE RA 18	-0.6	-0.1	38.84	-8.8313	-0.0184	-0.2077
1022	SLE RA 19	-0.61	-0.11	38.86	-8.8342	-0.0185	-0.2095
1022	SLE RA 20	-0.61	-0.1	39.14	-8.899	-0.0186	-0.2085
1022	SLE RA 21	-0.61	-0.11	39.16	-8.902	-0.0186	-0.2103
1022	SLE FR 1	-0.54	-0.1	34.77	-7.9368	-0.0156	-0.1841
1022	SLE FR 2	-0.54	-0.11	34.78	-7.9378	-0.0156	-0.1847
1022	SLE FR 3	-0.54	-0.1	34.89	-7.9639	-0.0156	-0.1844
1022	SLE FR 4	-0.56	-0.11	36	-8.2061	-0.0164	-0.1918
1022	SLE FR 5	-0.56	-0.1	36.11	-8.2322	-0.0165	-0.1915
1022	SLE FR 6	-0.57	-0.1	36.81	-8.3841	-0.017	-0.1959
1022	SLE QP 1	-0.54	-0.1	34.77	-7.9368	-0.0156	-0.1841
1022	SLE QP 2	-0.56	-0.1	35.99	-8.2052	-0.0164	-0.1912
1022	SLD 1	2.9	0.58	39.45	-8.2761	-0.0073	1.0208
1022	SLD 2	2.56	0.42	39.39	-8.3011	-0.0068	0.9023
1022	SLD 3	3.19	-0.35	40.07	-8.3767	-0.0091	1.1215
1022	SLD 4	2.85	-0.52	40.01	-8.4018	-0.0086	1.003
1022	SLD 5	0.1	1.55	36.11	-8.0694	-0.011	0.0406
1022	SLD 6	-0.12	1.44	36.07	-8.0858	-0.0107	-0.0368
1022	SLD 7	1.06	-1.56	38.16	-8.4048	-0.0171	0.3763
1022	SLD 8	0.84	-1.67	38.12	-8.4212	-0.0168	0.2989
1022	SLD 9	-1.95	1.46	33.87	-7.9892	-0.0161	-0.6812
1022	SLD 10	-2.17	1.36	33.83	-8.0055	-0.0157	-0.7587
1022	SLD 11	-0.99	-1.64	35.92	-8.3245	-0.0222	-0.3455
1022	SLD 12	-1.22	-1.75	35.88	-8.3409	-0.0219	-0.4229
1022	SLD 13	-3.96	0.31	31.98	-8.0086	-0.0242	-1.3853
1022	SLD 14	-4.3	0.15	31.92	-8.0336	-0.0237	-1.5038
1022	SLD 15	-3.67	-0.62	32.6	-8.1092	-0.0261	-1.2846
1022	SLD 16	-4.01	-0.78	32.54	-8.1342	-0.0255	-1.4031
1022	SLV 1	7.53	1.45	44.11	-8.3802	0.0049	2.6441
1022	SLV 2	6.74	1.08	43.97	-8.4386	0.0061	2.3681
1022	SLV 3	8.2	-0.66	45.51	-8.6104	0.0007	2.8791
1022	SLV 4	7.41	-1.03	45.37	-8.6688	0.0019	2.6031
1022	SLV 5	0.99	3.63	36.33	-7.8986	-0.0039	0.3503
1022	SLV 6	0.48	3.39	36.24	-7.9361	-0.0031	0.1729
1022	SLV 7	3.23	-3.4	41	-8.6658	-0.0178	1.1337
1022	SLV 8	2.72	-3.65	40.9	-8.7034	-0.0171	0.9563
1022	SLV 9	-3.83	3.44	31.08	-7.7069	-0.0158	-1.3386
1022	SLV 10	-4.34	3.2	30.99	-7.7445	-0.015	-1.516
1022	SLV 11	-1.59	-3.59	35.75	-8.4742	-0.0297	-0.5552
1022	SLV 12	-2.1	-3.84	35.66	-8.5118	-0.0289	-0.7326
1022	SLV 13	-8.52	0.83	26.62	-7.7415	-0.0347	-2.9854
1022	SLV 14	-9.31	0.45	26.48	-7.7999	-0.0335	-3.2614
1022	SLV 15	-7.85	-1.28	28.02	-7.9717	-0.0389	-2.7504
1022	SLV 16	-8.64	-1.66	27.88	-8.0301	-0.0377	-3.0264
1022	CRTFP Ux+	0	0	0	0	0	0
1022	CRTFP Ux-	0	0	0	0	0	0
1022	CRTFP Uy+	0	0	0	0	0	0
1022	CRTFP Uy-	0	0	0	0	0	0
1023	SLU 1	-0.49	-0.01	34.23	-8.3778	-0.0266	-0.1667
1023	SLU 2	-0.5	-0.05	34.27	-8.3864	-0.0267	-0.1713
1023	SLU 3	-0.5	-0.01	35.03	-8.5661	-0.0273	-0.1704
1023	SLU 4	-0.51	-0.03	35.06	-8.5712	-0.0274	-0.1732
1023	SLU 5	-0.5	-0.05	34.73	-8.497	-0.0271	-0.1723
1023	SLU 6	-0.5	-0.01	35.48	-8.6767	-0.0277	-0.1715
1023	SLU 7	-0.51	-0.03	35.51	-8.6818	-0.0277	-0.1742
1023	SLU 8	-0.49	-0.01	35.14	-8.599	-0.0274	-0.1687
1023	SLU 9	-0.5	-0.04	35.17	-8.6041	-0.0274	-0.1715
1023	SLU 10	-0.57	-0.04	38.67	-9.4378	-0.0313	-0.1952
1023	SLU 11	-0.57	0.01	39.42	-9.6175	-0.0319	-0.1943
1023	SLU 12	-0.57	-0.01	39.45	-9.6227	-0.0319	-0.1971

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1023	SLU 13	-0.57	-0.04	39.13	-9.5484	-0.0316	-0.1962
1023	SLU 14	-0.57	0.01	39.88	-9.7281	-0.0322	-0.1953
1023	SLU 15	-0.58	-0.01	39.91	-9.7333	-0.0323	-0.1981
1023	SLU 16	-0.56	0	39.54	-9.6504	-0.0319	-0.1926
1023	SLU 17	-0.57	-0.02	39.56	-9.6556	-0.032	-0.1954
1023	SLU 18	-0.58	0.01	40.51	-9.8799	-0.0331	-0.2008
1023	SLU 19	-0.59	-0.02	40.54	-9.885	-0.0332	-0.2036
1023	SLU 20	-0.59	0.01	40.97	-9.9905	-0.0335	-0.2018
1023	SLU 21	-0.6	-0.01	40.99	-9.9956	-0.0336	-0.2046
1023	SLU 22	-0.55	0.05	38.59	-9.4148	-0.0309	-0.1876
1023	SLU 23	-0.56	0.01	38.63	-9.4233	-0.031	-0.1922
1023	SLU 24	-0.56	0.06	39.39	-9.603	-0.0316	-0.1913
1023	SLU 25	-0.57	0.03	39.41	-9.6082	-0.0317	-0.1941
1023	SLU 26	-0.56	0.01	39.09	-9.5339	-0.0314	-0.1933
1023	SLU 27	-0.56	0.06	39.84	-9.7136	-0.032	-0.1924
1023	SLU 28	-0.57	0.04	39.87	-9.7188	-0.032	-0.1952
1023	SLU 29	-0.55	0.05	39.5	-9.6359	-0.0316	-0.1896
1023	SLU 30	-0.56	0.03	39.53	-9.6411	-0.0317	-0.1924
1023	SLU 31	-0.63	0.03	43.03	-10.4748	-0.0356	-0.2161
1023	SLU 32	-0.63	0.07	43.78	-10.6545	-0.0362	-0.2152
1023	SLU 33	-0.64	0.05	43.81	-10.6597	-0.0362	-0.218
1023	SLU 34	-0.63	0.03	43.49	-10.5854	-0.0359	-0.2172
1023	SLU 35	-0.63	0.07	44.24	-10.7651	-0.0365	-0.2163
1023	SLU 36	-0.64	0.05	44.27	-10.7703	-0.0366	-0.2191
1023	SLU 37	-0.62	0.07	43.9	-10.6874	-0.0362	-0.2135
1023	SLU 38	-0.63	0.04	43.92	-10.6926	-0.0363	-0.2163
1023	SLU 39	-0.65	0.07	44.87	-10.9169	-0.0374	-0.2217
1023	SLU 40	-0.65	0.05	44.9	-10.922	-0.0375	-0.2245
1023	SLU 41	-0.65	0.07	45.33	-11.0274	-0.0378	-0.2227
1023	SLU 42	-0.66	0.05	45.35	-11.0326	-0.0378	-0.2255
1023	SLU 43	-0.61	-0.04	43.01	-10.5356	-0.0331	-0.2095
1023	SLU 44	-0.62	-0.08	43.05	-10.5442	-0.0332	-0.2141
1023	SLU 45	-0.62	-0.03	43.8	-10.7239	-0.0338	-0.2132
1023	SLU 46	-0.63	-0.06	43.83	-10.729	-0.0339	-0.216
1023	SLU 47	-0.63	-0.08	43.5	-10.6548	-0.0336	-0.2152
1023	SLU 48	-0.62	-0.03	44.26	-10.8345	-0.0342	-0.2143
1023	SLU 49	-0.63	-0.05	44.29	-10.8396	-0.0342	-0.2171
1023	SLU 50	-0.62	-0.04	43.92	-10.7568	-0.0339	-0.2115
1023	SLU 51	-0.63	-0.06	43.94	-10.7619	-0.0339	-0.2143
1023	SLU 52	-0.69	-0.06	47.44	-11.5956	-0.0378	-0.238
1023	SLU 53	-0.69	-0.02	48.2	-11.7753	-0.0384	-0.2371
1023	SLU 54	-0.7	-0.04	48.22	-11.7805	-0.0384	-0.2399
1023	SLU 55	-0.7	-0.06	47.9	-11.7062	-0.0381	-0.239
1023	SLU 56	-0.69	-0.02	48.65	-11.8859	-0.0388	-0.2382
1023	SLU 57	-0.7	-0.04	48.68	-11.8911	-0.0388	-0.241
1023	SLU 58	-0.69	-0.02	48.31	-11.8082	-0.0384	-0.2354
1023	SLU 59	-0.69	-0.05	48.34	-11.8134	-0.0385	-0.2382
1023	SLU 60	-0.71	-0.02	49.28	-12.0377	-0.0396	-0.2436
1023	SLU 61	-0.72	-0.04	49.31	-12.0428	-0.0397	-0.2464
1023	SLU 62	-0.71	-0.02	49.74	-12.1483	-0.04	-0.2446
1023	SLU 63	-0.72	-0.04	49.77	-12.1534	-0.0401	-0.2474
1023	SLU 64	-0.67	0.02	47.37	-11.5726	-0.0374	-0.2304
1023	SLU 65	-0.69	-0.02	47.41	-11.5811	-0.0375	-0.2351
1023	SLU 66	-0.68	0.03	48.16	-11.7608	-0.0381	-0.2342
1023	SLU 67	-0.69	0.01	48.19	-11.766	-0.0382	-0.237
1023	SLU 68	-0.69	-0.01	47.86	-11.6917	-0.0379	-0.2361
1023	SLU 69	-0.69	0.03	48.62	-11.8714	-0.0385	-0.2352
1023	SLU 70	-0.69	0.01	48.64	-11.8766	-0.0385	-0.238
1023	SLU 71	-0.68	0.02	48.28	-11.7937	-0.0382	-0.2325
1023	SLU 72	-0.69	0	48.3	-11.7989	-0.0382	-0.2353
1023	SLU 73	-0.75	0	51.8	-12.6326	-0.0421	-0.2589
1023	SLU 74	-0.75	0.05	52.56	-12.8123	-0.0427	-0.2581
1023	SLU 75	-0.76	0.02	52.58	-12.8175	-0.0427	-0.2609
1023	SLU 76	-0.76	0	52.26	-12.7432	-0.0424	-0.26
1023	SLU 77	-0.76	0.05	53.01	-12.9229	-0.0431	-0.2591
1023	SLU 78	-0.76	0.02	53.04	-12.9281	-0.0431	-0.2619
1023	SLU 79	-0.75	0.04	52.67	-12.8452	-0.0427	-0.2564
1023	SLU 80	-0.76	0.02	52.7	-12.8504	-0.0428	-0.2591
1023	SLU 81	-0.77	0.04	53.64	-13.0747	-0.0439	-0.2645
1023	SLU 82	-0.78	0.02	53.67	-13.0798	-0.044	-0.2673
1023	SLU 83	-0.77	0.04	54.1	-13.1852	-0.0443	-0.2656
1023	SLU 84	-0.78	0.02	54.13	-13.1904	-0.0444	-0.2684
1023	SLE RA 1	-0.5	0	35.48	-8.6741	-0.0278	-0.1726
1023	SLE RA 2	-0.51	-0.02	35.51	-8.6798	-0.0279	-0.1757
1023	SLE RA 3	-0.51	0.01	36.01	-8.7996	-0.0283	-0.1751
1023	SLE RA 4	-0.52	-0.01	36.03	-8.803	-0.0283	-0.177
1023	SLE RA 5	-0.51	-0.02	35.81	-8.7535	-0.0281	-0.1764
1023	SLE RA 6	-0.51	0.01	36.31	-8.8733	-0.0286	-0.1758
1023	SLE RA 7	-0.52	-0.01	36.33	-8.8768	-0.0286	-0.1777
1023	SLE RA 8	-0.51	0	36.08	-8.8215	-0.0283	-0.174
1023	SLE RA 9	-0.51	-0.01	36.1	-8.825	-0.0284	-0.1759
1023	SLE RA 10	-0.56	-0.01	38.44	-9.3808	-0.0309	-0.1917
1023	SLE RA 11	-0.56	0.02	38.94	-9.5006	-0.0314	-0.1911
1023	SLE RA 12	-0.56	0	38.96	-9.504	-0.0314	-0.1929
1023	SLE RA 13	-0.56	-0.01	38.74	-9.4545	-0.0312	-0.1923
1023	SLE RA 14	-0.56	0.02	39.24	-9.5743	-0.0316	-0.1918
1023	SLE RA 15	-0.56	0	39.26	-9.5777	-0.0316	-0.1936
1023	SLE RA 16	-0.55	0.01	39.01	-9.5225	-0.0314	-0.1899
1023	SLE RA 17	-0.56	0	39.03	-9.5259	-0.0314	-0.1918
1023	SLE RA 18	-0.57	0.02	39.66	-9.6755	-0.0322	-0.1954
1023	SLE RA 19	-0.57	0	39.68	-9.6789	-0.0322	-0.1972
1023	SLE RA 20	-0.57	0.02	39.97	-9.7492	-0.0324	-0.1961
1023	SLE RA 21	-0.58	0	39.98	-9.7526	-0.0325	-0.1979
1023	SLE FR 1	-0.5	0	35.48	-8.6741	-0.0278	-0.1726
1023	SLE FR 2	-0.51	0	35.48	-8.6752	-0.0279	-0.1733
1023	SLE FR 3	-0.5	0	35.6	-8.7036	-0.0279	-0.1729
1023	SLE FR 4	-0.53	0	36.74	-8.9756	-0.0292	-0.1801

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1023	SLE FR 5	-0.52	0.01	36.85	-9.004	-0.0292	-0.1797
1023	SLE FR 6	-0.54	0.01	37.57	-9.1748	-0.03	-0.184
1023	SLE QP 1	-0.5	0	35.48	-8.6741	-0.0278	-0.1726
1023	SLE QP 2	-0.52	0.01	36.73	-8.9745	-0.0291	-0.1795
1023	SLD 1	2.94	0.75	39.94	-9.1152	-0.0216	1.0335
1023	SLD 2	2.6	0.59	39.86	-9.125	-0.0212	0.9153
1023	SLD 3	3.22	-0.2	40.6	-9.235	-0.0237	1.1342
1023	SLD 4	2.89	-0.36	40.52	-9.2449	-0.0232	1.016
1023	SLD 5	0.14	1.69	36.71	-8.8331	-0.0239	0.0526
1023	SLD 6	-0.08	1.59	36.66	-8.8396	-0.0236	-0.0246
1023	SLD 7	1.1	-1.46	38.91	-9.2327	-0.0307	0.3883
1023	SLD 8	0.88	-1.57	38.86	-9.2392	-0.0304	0.311
1023	SLD 9	-1.92	1.58	34.61	-8.7098	-0.0279	-0.6699
1023	SLD 10	-2.14	1.48	34.56	-8.7162	-0.0276	-0.7472
1023	SLD 11	-0.96	-1.58	36.81	-9.1094	-0.0347	-0.3343
1023	SLD 12	-1.18	-1.68	36.76	-9.1158	-0.0344	-0.4115
1023	SLD 13	-3.93	0.37	32.94	-8.7041	-0.0351	-1.3749
1023	SLD 14	-4.27	0.21	32.87	-8.7139	-0.0346	-1.4931
1023	SLD 15	-3.64	-0.58	33.6	-8.8239	-0.0371	-1.2742
1023	SLD 16	-3.98	-0.73	33.53	-8.8338	-0.0367	-1.3925
1023	SLV 1	7.57	1.7	44.26	-9.3152	-0.0116	2.6583
1023	SLV 2	6.78	1.34	44.08	-9.3381	-0.0107	2.383
1023	SLV 3	8.24	-0.44	45.76	-9.5881	-0.0162	2.8933
1023	SLV 4	7.45	-0.81	45.59	-9.6111	-0.0153	2.6179
1023	SLV 5	1.02	3.83	36.74	-8.6588	-0.0171	0.3627
1023	SLV 6	0.51	3.59	36.63	-8.6735	-0.0164	0.1857
1023	SLV 7	3.26	-3.31	41.75	-9.5686	-0.0324	1.1459
1023	SLV 8	2.75	-3.55	41.64	-9.5834	-0.0318	0.9689
1023	SLV 9	-3.8	3.56	31.83	-8.3656	-0.0265	-1.3279
1023	SLV 10	-4.31	3.33	31.72	-8.3803	-0.0259	-1.5048
1023	SLV 11	-1.56	-3.58	36.84	-9.2754	-0.0418	-0.5447
1023	SLV 12	-2.07	-3.81	36.72	-9.2902	-0.0412	-0.7216
1023	SLV 13	-8.5	0.82	27.88	-8.3379	-0.043	-2.9769
1023	SLV 14	-9.29	0.45	27.7	-8.3608	-0.0421	-3.2522
1023	SLV 15	-7.83	-1.32	29.38	-8.6108	-0.0476	-2.7419
1023	SLV 16	-8.62	-1.69	29.2	-8.6338	-0.0467	-3.0172
1023	CRTFP Ux+	0	0	0	0	0	0
1023	CRTFP Ux-	0	0	0	0	0	0
1023	CRTFP Uy+	0	0	0	0	0	0
1023	CRTFP Uy-	0	0	0	0	0	0
1024	SLU 1	-0.45	0.1	35.17	-9.3109	-0.0313	-0.1548
1024	SLU 2	-0.47	0.06	35.22	-9.3206	-0.0314	-0.1596
1024	SLU 3	-0.46	0.11	35.99	-9.523	-0.0321	-0.1583
1024	SLU 4	-0.47	0.09	36.02	-9.5287	-0.0322	-0.1611
1024	SLU 5	-0.47	0.07	35.69	-9.4437	-0.0318	-0.1604
1024	SLU 6	-0.47	0.11	36.46	-9.6461	-0.0326	-0.1591
1024	SLU 7	-0.47	0.09	36.49	-9.6519	-0.0326	-0.1619
1024	SLU 8	-0.46	0.11	36.11	-9.5572	-0.0322	-0.1564
1024	SLU 9	-0.47	0.08	36.14	-9.563	-0.0323	-0.1593
1024	SLU 10	-0.53	0.09	39.77	-10.5129	-0.0364	-0.1825
1024	SLU 11	-0.53	0.14	40.54	-10.7153	-0.0372	-0.1812
1024	SLU 12	-0.54	0.12	40.57	-10.7211	-0.0372	-0.184
1024	SLU 13	-0.54	0.09	40.24	-10.6361	-0.0369	-0.1833
1024	SLU 14	-0.53	0.14	41.01	-10.8385	-0.0376	-0.182
1024	SLU 15	-0.54	0.12	41.04	-10.8442	-0.0377	-0.1849
1024	SLU 16	-0.52	0.13	40.66	-10.7496	-0.0373	-0.1794
1024	SLU 17	-0.53	0.11	40.69	-10.7554	-0.0373	-0.1822
1024	SLU 18	-0.55	0.14	41.67	-11.0143	-0.0385	-0.1876
1024	SLU 19	-0.56	0.12	41.7	-11.0201	-0.0386	-0.1904
1024	SLU 20	-0.55	0.14	42.14	-11.1375	-0.039	-0.1884
1024	SLU 21	-0.56	0.12	42.17	-11.1432	-0.039	-0.1912
1024	SLU 22	-0.51	0.18	39.68	-10.4843	-0.0361	-0.1746
1024	SLU 23	-0.52	0.14	39.72	-10.4939	-0.0362	-0.1794
1024	SLU 24	-0.52	0.19	40.5	-10.6963	-0.037	-0.1781
1024	SLU 25	-0.53	0.17	40.53	-10.7021	-0.037	-0.1809
1024	SLU 26	-0.53	0.14	40.19	-10.6171	-0.0367	-0.1802
1024	SLU 27	-0.52	0.19	40.97	-10.8194	-0.0374	-0.1789
1024	SLU 28	-0.53	0.17	41	-10.8252	-0.0374	-0.1817
1024	SLU 29	-0.52	0.18	40.62	-10.7306	-0.037	-0.1762
1024	SLU 30	-0.52	0.16	40.64	-10.7364	-0.0371	-0.1791
1024	SLU 31	-0.59	0.17	44.28	-11.6863	-0.0413	-0.2023
1024	SLU 32	-0.59	0.22	45.05	-11.8886	-0.042	-0.201
1024	SLU 33	-0.6	0.19	45.08	-11.8944	-0.042	-0.2038
1024	SLU 34	-0.59	0.17	44.74	-11.8094	-0.0417	-0.2031
1024	SLU 35	-0.59	0.22	45.52	-12.0118	-0.0425	-0.2018
1024	SLU 36	-0.6	0.2	45.55	-12.0176	-0.0425	-0.2047
1024	SLU 37	-0.58	0.21	45.17	-11.9229	-0.0421	-0.1992
1024	SLU 38	-0.59	0.19	45.19	-11.9287	-0.0421	-0.202
1024	SLU 39	-0.61	0.22	46.18	-12.1876	-0.0434	-0.2074
1024	SLU 40	-0.61	0.19	46.21	-12.1934	-0.0434	-0.2102
1024	SLU 41	-0.61	0.22	46.65	-12.3108	-0.0438	-0.2082
1024	SLU 42	-0.62	0.2	46.68	-12.3166	-0.0438	-0.211
1024	SLU 43	-0.57	0.1	44.18	-11.7019	-0.0391	-0.1945
1024	SLU 44	-0.58	0.07	44.22	-11.7116	-0.0391	-0.1992
1024	SLU 45	-0.58	0.11	45	-11.914	-0.0399	-0.198
1024	SLU 46	-0.59	0.09	45.03	-11.9197	-0.0399	-0.2008
1024	SLU 47	-0.59	0.07	44.69	-11.8347	-0.0396	-0.2
1024	SLU 48	-0.58	0.12	45.47	-12.0371	-0.0403	-0.1988
1024	SLU 49	-0.59	0.09	45.5	-12.0429	-0.0404	-0.2016
1024	SLU 50	-0.57	0.11	45.11	-11.9483	-0.04	-0.1961
1024	SLU 51	-0.58	0.09	45.14	-11.954	-0.04	-0.1989
1024	SLU 52	-0.65	0.09	48.77	-12.9039	-0.0442	-0.2221
1024	SLU 53	-0.65	0.14	49.55	-13.1063	-0.0449	-0.2209
1024	SLU 54	-0.65	0.12	49.58	-13.1121	-0.045	-0.2237
1024	SLU 55	-0.65	0.1	49.24	-13.0271	-0.0446	-0.2229
1024	SLU 56	-0.65	0.14	50.02	-13.2295	-0.0454	-0.2217
1024	SLU 57	-0.66	0.12	50.05	-13.2352	-0.0454	-0.2245

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1024	SLU 58	-0.64	0.13	49.67	-13.1406	-0.045	-0.219
1024	SLU 59	-0.65	0.11	49.69	-13.1464	-0.045	-0.2219
1024	SLU 60	-0.66	0.14	50.68	-13.4053	-0.0463	-0.2272
1024	SLU 61	-0.67	0.12	50.71	-13.4111	-0.0463	-0.2301
1024	SLU 62	-0.67	0.14	51.15	-13.5285	-0.0467	-0.228
1024	SLU 63	-0.67	0.12	51.17	-13.5342	-0.0468	-0.2309
1024	SLU 64	-0.63	0.18	48.68	-12.8753	-0.0439	-0.2143
1024	SLU 65	-0.64	0.14	48.73	-12.8849	-0.044	-0.219
1024	SLU 66	-0.64	0.19	49.51	-13.0873	-0.0447	-0.2178
1024	SLU 67	-0.65	0.17	49.53	-13.0931	-0.0447	-0.2206
1024	SLU 68	-0.64	0.15	49.2	-13.0081	-0.0444	-0.2198
1024	SLU 69	-0.64	0.2	49.98	-13.2104	-0.0451	-0.2186
1024	SLU 70	-0.65	0.17	50	-13.2162	-0.0452	-0.2214
1024	SLU 71	-0.63	0.19	49.62	-13.1216	-0.0448	-0.2159
1024	SLU 72	-0.64	0.16	49.65	-13.1274	-0.0448	-0.2187
1024	SLU 73	-0.71	0.17	53.28	-14.0773	-0.049	-0.2419
1024	SLU 74	-0.7	0.22	54.06	-14.2796	-0.0497	-0.2407
1024	SLU 75	-0.71	0.2	54.09	-14.2854	-0.0498	-0.2435
1024	SLU 76	-0.71	0.17	53.75	-14.2004	-0.0495	-0.2427
1024	SLU 77	-0.71	0.22	54.53	-14.4028	-0.0502	-0.2415
1024	SLU 78	-0.71	0.2	54.55	-14.4086	-0.0502	-0.2443
1024	SLU 79	-0.7	0.21	54.17	-14.3139	-0.0498	-0.2388
1024	SLU 80	-0.71	0.19	54.2	-14.3197	-0.0499	-0.2417
1024	SLU 81	-0.72	0.22	55.19	-14.5786	-0.0511	-0.247
1024	SLU 82	-0.73	0.2	55.21	-14.5844	-0.0511	-0.2499
1024	SLU 83	-0.72	0.22	55.65	-14.7018	-0.0515	-0.2478
1024	SLU 84	-0.73	0.2	55.68	-14.7076	-0.0516	-0.2507
1024	SLE RA 1	-0.47	0.12	36.46	-9.6462	-0.0327	-0.1605
1024	SLE RA 2	-0.48	0.1	36.49	-9.6526	-0.0327	-0.1636
1024	SLE RA 3	-0.48	0.13	37.01	-9.7875	-0.0332	-0.1628
1024	SLE RA 4	-0.48	0.12	37.03	-9.7914	-0.0333	-0.1647
1024	SLE RA 5	-0.48	0.1	36.8	-9.7347	-0.033	-0.1642
1024	SLE RA 6	-0.48	0.13	37.32	-9.8696	-0.0335	-0.1633
1024	SLE RA 7	-0.48	0.12	37.34	-9.8735	-0.0336	-0.1652
1024	SLE RA 8	-0.47	0.13	37.08	-9.8104	-0.0333	-0.1616
1024	SLE RA 9	-0.48	0.11	37.1	-9.8142	-0.0333	-0.1635
1024	SLE RA 10	-0.52	0.12	39.52	-10.4475	-0.0361	-0.1789
1024	SLE RA 11	-0.52	0.15	40.04	-10.5824	-0.0366	-0.1781
1024	SLE RA 12	-0.53	0.13	40.06	-10.5863	-0.0366	-0.18
1024	SLE RA 13	-0.52	0.12	39.84	-10.5296	-0.0364	-0.1795
1024	SLE RA 14	-0.52	0.15	40.35	-10.6645	-0.0369	-0.1786
1024	SLE RA 15	-0.53	0.13	40.37	-10.6684	-0.0369	-0.1805
1024	SLE RA 16	-0.52	0.14	40.12	-10.6053	-0.0367	-0.1768
1024	SLE RA 17	-0.52	0.13	40.14	-10.6091	-0.0367	-0.1787
1024	SLE RA 18	-0.53	0.15	40.79	-10.7817	-0.0375	-0.1823
1024	SLE RA 19	-0.54	0.13	40.81	-10.7856	-0.0375	-0.1842
1024	SLE RA 20	-0.53	0.15	41.11	-10.8639	-0.0378	-0.1828
1024	SLE RA 21	-0.54	0.13	41.12	-10.8677	-0.0378	-0.1847
1024	SLE FR 1	-0.47	0.12	36.46	-9.6462	-0.0327	-0.1605
1024	SLE FR 2	-0.47	0.12	36.47	-9.6475	-0.0327	-0.1611
1024	SLE FR 3	-0.47	0.12	36.58	-9.679	-0.0328	-0.1607
1024	SLE FR 4	-0.49	0.13	37.77	-9.9881	-0.0341	-0.1677
1024	SLE FR 5	-0.49	0.13	37.88	-10.0197	-0.0343	-0.1672
1024	SLE FR 6	-0.5	0.14	38.63	-10.214	-0.0351	-0.1714
1024	SLE QP 1	-0.47	0.12	36.46	-9.6462	-0.0327	-0.1605
1024	SLE QP 2	-0.49	0.13	37.76	-9.9868	-0.0341	-0.167
1024	SLD 1	2.97	0.93	40.76	-10.2393	-0.028	1.0466
1024	SLD 2	2.64	0.78	40.67	-10.2355	-0.0277	0.9287
1024	SLD 3	3.26	-0.03	41.47	-10.386	-0.0301	1.1472
1024	SLD 4	2.92	-0.18	41.38	-10.3822	-0.0297	1.0293
1024	SLD 5	0.17	1.86	37.59	-9.8408	-0.0292	0.0653
1024	SLD 6	-0.05	1.76	37.54	-9.8383	-0.029	-0.0117
1024	SLD 7	1.13	-1.35	39.97	-10.3297	-0.0361	0.4007
1024	SLD 8	0.91	-1.45	39.91	-10.3272	-0.0359	0.3237
1024	SLD 9	-1.89	1.71	35.61	-9.6465	-0.0324	-0.6577
1024	SLD 10	-2.11	1.61	35.55	-9.644	-0.0322	-0.7347
1024	SLD 11	-0.93	-1.5	37.98	-10.1354	-0.0392	-0.3223
1024	SLD 12	-1.15	-1.6	37.93	-10.1329	-0.039	-0.3993
1024	SLD 13	-3.9	0.44	34.14	-9.5915	-0.0385	-1.3634
1024	SLD 14	-4.24	0.29	34.05	-9.5877	-0.0382	-1.4813
1024	SLD 15	-3.61	-0.52	34.85	-9.7382	-0.0406	-1.2628
1024	SLD 16	-3.95	-0.67	34.76	-9.7344	-0.0403	-1.3806
1024	SLV 1	7.61	1.97	44.81	-10.5903	-0.0199	2.6722
1024	SLV 2	6.83	1.62	44.6	-10.5814	-0.0191	2.3977
1024	SLV 3	8.28	-0.21	46.43	-10.9235	-0.0246	2.907
1024	SLV 4	7.5	-0.56	46.22	-10.9146	-0.0238	2.6324
1024	SLV 5	1.06	4.05	37.45	-9.664	-0.0229	0.3757
1024	SLV 6	0.55	3.83	37.32	-9.6584	-0.0224	0.1993
1024	SLV 7	3.3	-3.22	42.85	-10.7747	-0.0384	1.1583
1024	SLV 8	2.79	-3.45	42.72	-10.769	-0.038	0.9819
1024	SLV 9	-3.77	3.71	32.8	-9.2047	-0.0303	-1.3159
1024	SLV 10	-4.27	3.48	32.66	-9.199	-0.0298	-1.4923
1024	SLV 11	-1.53	-3.57	38.2	-10.3153	-0.0458	-0.5333
1024	SLV 12	-2.04	-3.79	38.07	-10.3097	-0.0453	-0.7098
1024	SLV 13	-8.48	0.82	29.29	-9.0591	-0.0445	-2.9665
1024	SLV 14	-9.26	0.47	29.09	-9.0502	-0.0437	-3.241
1024	SLV 15	-7.8	-1.36	30.92	-9.3923	-0.0491	-2.7317
1024	SLV 16	-8.59	-1.71	30.71	-9.3834	-0.0484	-3.0062
1024	CRTFP Ux+	0	0	0	0	0	0
1024	CRTFP Ux-	0	0	0	0	0	0
1024	CRTFP Uy+	0	0	0	0	0	0
1024	CRTFP Uy-	0	0	0	0	0	0
1025	SLU 1	-0.42	0.22	36.1	-10.3048	-0.0257	-0.1421
1025	SLU 2	-0.43	0.19	36.15	-10.3155	-0.0257	-0.1469
1025	SLU 3	-0.43	0.24	36.95	-10.5419	-0.0263	-0.1453
1025	SLU 4	-0.44	0.22	36.98	-10.5484	-0.0264	-0.1481
1025	SLU 5	-0.43	0.19	36.63	-10.4522	-0.0261	-0.1475

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1025	SLU 6	-0.43	0.24	37.43	-10.6787	-0.0267	-0.1458
1025	SLU 7	-0.44	0.22	37.46	-10.6851	-0.0267	-0.1487
1025	SLU 8	-0.42	0.23	37.07	-10.5783	-0.0264	-0.1433
1025	SLU 9	-0.43	0.21	37.1	-10.5847	-0.0265	-0.1462
1025	SLU 10	-0.49	0.23	40.85	-11.6528	-0.0298	-0.1688
1025	SLU 11	-0.49	0.28	41.65	-11.8793	-0.0303	-0.1671
1025	SLU 12	-0.5	0.26	41.68	-11.8857	-0.0304	-0.17
1025	SLU 13	-0.5	0.23	41.33	-11.7896	-0.0301	-0.1693
1025	SLU 14	-0.49	0.28	42.13	-12.016	-0.0307	-0.1677
1025	SLU 15	-0.5	0.26	42.16	-12.0224	-0.0308	-0.1706
1025	SLU 16	-0.48	0.27	41.77	-11.9156	-0.0304	-0.1651
1025	SLU 17	-0.49	0.25	41.8	-11.9221	-0.0305	-0.168
1025	SLU 18	-0.51	0.28	42.82	-12.2153	-0.0314	-0.1733
1025	SLU 19	-0.52	0.26	42.85	-12.2217	-0.0315	-0.1762
1025	SLU 20	-0.51	0.29	43.3	-12.352	-0.0318	-0.1739
1025	SLU 21	-0.52	0.26	43.33	-12.3584	-0.0318	-0.1768
1025	SLU 22	-0.47	0.32	40.75	-11.6195	-0.0295	-0.1607
1025	SLU 23	-0.49	0.28	40.8	-11.6302	-0.0296	-0.1655
1025	SLU 24	-0.48	0.33	41.6	-11.8567	-0.0302	-0.1638
1025	SLU 25	-0.49	0.31	41.63	-11.8631	-0.0302	-0.1667
1025	SLU 26	-0.49	0.29	41.28	-11.767	-0.03	-0.1661
1025	SLU 27	-0.48	0.34	42.08	-11.9934	-0.0306	-0.1644
1025	SLU 28	-0.49	0.32	42.11	-11.9998	-0.0306	-0.1673
1025	SLU 29	-0.48	0.33	41.72	-11.893	-0.0303	-0.1619
1025	SLU 30	-0.48	0.31	41.75	-11.8994	-0.0303	-0.1647
1025	SLU 31	-0.55	0.32	45.5	-12.9675	-0.0336	-0.1873
1025	SLU 32	-0.55	0.37	46.3	-13.194	-0.0342	-0.1857
1025	SLU 33	-0.55	0.35	46.33	-13.2004	-0.0342	-0.1886
1025	SLU 34	-0.55	0.33	45.98	-13.1043	-0.034	-0.1879
1025	SLU 35	-0.55	0.38	46.78	-13.3308	-0.0346	-0.1863
1025	SLU 36	-0.56	0.36	46.81	-13.3372	-0.0346	-0.1892
1025	SLU 37	-0.54	0.37	46.42	-13.2304	-0.0343	-0.1837
1025	SLU 38	-0.55	0.35	46.44	-13.2368	-0.0343	-0.1866
1025	SLU 39	-0.56	0.38	47.47	-13.53	-0.0353	-0.1919
1025	SLU 40	-0.57	0.35	47.49	-13.5364	-0.0353	-0.1948
1025	SLU 41	-0.56	0.38	47.95	-13.6668	-0.0356	-0.1925
1025	SLU 42	-0.57	0.36	47.98	-13.6732	-0.0357	-0.1954
1025	SLU 43	-0.52	0.26	45.34	-12.9455	-0.0321	-0.1784
1025	SLU 44	-0.54	0.22	45.39	-12.9562	-0.0321	-0.1832
1025	SLU 45	-0.53	0.27	46.19	-13.1826	-0.0327	-0.1815
1025	SLU 46	-0.54	0.25	46.22	-13.189	-0.0328	-0.1844
1025	SLU 47	-0.54	0.23	45.87	-13.0929	-0.0325	-0.1838
1025	SLU 48	-0.54	0.28	46.67	-13.3194	-0.0331	-0.1821
1025	SLU 49	-0.54	0.26	46.7	-13.3258	-0.0331	-0.185
1025	SLU 50	-0.53	0.27	46.31	-13.219	-0.0328	-0.1795
1025	SLU 51	-0.54	0.24	46.33	-13.2254	-0.0328	-0.1824
1025	SLU 52	-0.6	0.26	50.09	-14.2935	-0.0361	-0.205
1025	SLU 53	-0.6	0.31	50.89	-14.52	-0.0367	-0.2034
1025	SLU 54	-0.61	0.29	50.91	-14.5264	-0.0368	-0.2063
1025	SLU 55	-0.6	0.27	50.57	-14.4303	-0.0365	-0.2056
1025	SLU 56	-0.6	0.32	51.37	-14.6567	-0.0371	-0.2039
1025	SLU 57	-0.61	0.3	51.4	-14.6631	-0.0371	-0.2068
1025	SLU 58	-0.59	0.31	51	-14.5563	-0.0368	-0.2014
1025	SLU 59	-0.6	0.29	51.03	-14.5627	-0.0369	-0.2043
1025	SLU 60	-0.61	0.32	52.05	-14.856	-0.0378	-0.2096
1025	SLU 61	-0.62	0.29	52.08	-14.8624	-0.0378	-0.2125
1025	SLU 62	-0.62	0.32	52.54	-14.9927	-0.0382	-0.2102
1025	SLU 63	-0.63	0.3	52.56	-14.9991	-0.0382	-0.213
1025	SLU 64	-0.58	0.35	49.99	-14.2602	-0.0359	-0.197
1025	SLU 65	-0.59	0.32	50.04	-14.2709	-0.036	-0.2018
1025	SLU 66	-0.59	0.37	50.84	-14.4974	-0.0366	-0.2001
1025	SLU 67	-0.6	0.35	50.87	-14.5038	-0.0366	-0.203
1025	SLU 68	-0.59	0.32	50.52	-14.4076	-0.0363	-0.2023
1025	SLU 69	-0.59	0.37	51.32	-14.6341	-0.0369	-0.2007
1025	SLU 70	-0.6	0.35	51.35	-14.6405	-0.037	-0.2036
1025	SLU 71	-0.58	0.36	50.95	-14.5337	-0.0367	-0.1981
1025	SLU 72	-0.59	0.34	50.98	-14.5401	-0.0367	-0.201
1025	SLU 73	-0.66	0.36	54.74	-15.6082	-0.04	-0.2236
1025	SLU 74	-0.65	0.41	55.54	-15.8347	-0.0406	-0.222
1025	SLU 75	-0.66	0.39	55.56	-15.8411	-0.0406	-0.2248
1025	SLU 76	-0.66	0.36	55.22	-15.745	-0.0404	-0.2242
1025	SLU 77	-0.65	0.41	56.02	-15.9714	-0.0409	-0.2225
1025	SLU 78	-0.66	0.39	56.05	-15.9778	-0.041	-0.2254
1025	SLU 79	-0.65	0.4	55.65	-15.8711	-0.0407	-0.22
1025	SLU 80	-0.65	0.38	55.68	-15.8775	-0.0407	-0.2228
1025	SLU 81	-0.67	0.41	56.7	-16.1707	-0.0416	-0.2282
1025	SLU 82	-0.68	0.39	56.73	-16.1771	-0.0417	-0.231
1025	SLU 83	-0.67	0.42	57.18	-16.3074	-0.042	-0.2287
1025	SLU 84	-0.68	0.39	57.21	-16.3138	-0.0421	-0.2316
1025	SLE RA 1	-0.43	0.25	37.43	-10.6804	-0.0268	-0.1474
1025	SLE RA 2	-0.44	0.23	37.46	-10.6876	-0.0268	-0.1506
1025	SLE RA 3	-0.44	0.26	38	-10.8385	-0.0272	-0.1495
1025	SLE RA 4	-0.44	0.25	38.02	-10.8428	-0.0272	-0.1514
1025	SLE RA 5	-0.44	0.23	37.79	-10.7787	-0.0271	-0.151
1025	SLE RA 6	-0.44	0.26	38.32	-10.9297	-0.0275	-0.1499
1025	SLE RA 7	-0.45	0.25	38.34	-10.934	-0.0275	-0.1518
1025	SLE RA 8	-0.44	0.26	38.07	-10.8628	-0.0273	-0.1482
1025	SLE RA 9	-0.44	0.24	38.09	-10.8671	-0.0273	-0.1501
1025	SLE RA 10	-0.48	0.25	40.6	-11.5791	-0.0295	-0.1652
1025	SLE RA 11	-0.48	0.29	41.13	-11.7301	-0.0299	-0.1641
1025	SLE RA 12	-0.49	0.27	41.15	-11.7344	-0.0299	-0.166
1025	SLE RA 13	-0.49	0.26	40.92	-11.6703	-0.0297	-0.1656
1025	SLE RA 14	-0.48	0.29	41.45	-11.8213	-0.0301	-0.1645
1025	SLE RA 15	-0.49	0.28	41.47	-11.8255	-0.0302	-0.1664
1025	SLE RA 16	-0.48	0.28	41.21	-11.7543	-0.0299	-0.1628
1025	SLE RA 17	-0.48	0.27	41.23	-11.7586	-0.03	-0.1647
1025	SLE RA 18	-0.49	0.29	41.91	-11.9541	-0.0306	-0.1682

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1025	SLE RA 19	-0.5	0.27	41.93	-11.9584	-0.0306	-0.1701
1025	SLE RA 20	-0.49	0.29	42.23	-12.0453	-0.0308	-0.1686
1025	SLE RA 21	-0.5	0.28	42.25	-12.0495	-0.0309	-0.1705
1025	SLE FR 1	-0.43	0.25	37.43	-10.6804	-0.0268	-0.1474
1025	SLE FR 2	-0.43	0.25	37.44	-10.6819	-0.0268	-0.1481
1025	SLE FR 3	-0.43	0.25	37.56	-10.7169	-0.0269	-0.1476
1025	SLE FR 4	-0.45	0.26	38.78	-11.064	-0.0279	-0.1543
1025	SLE FR 5	-0.45	0.26	38.9	-11.099	-0.028	-0.1538
1025	SLE FR 6	-0.46	0.27	39.67	-11.3173	-0.0287	-0.1578
1025	SLE QP 1	-0.43	0.25	37.43	-10.6804	-0.0268	-0.1474
1025	SLE QP 2	-0.45	0.26	38.77	-11.0625	-0.0279	-0.1537
1025	SLD 1	3.01	1.11	41.61	-11.4645	-0.023	1.0602
1025	SLD 2	2.68	0.97	41.51	-11.4488	-0.0228	0.9427
1025	SLD 3	3.3	0.13	42.37	-11.6403	-0.0248	1.1606
1025	SLD 4	2.97	-0.02	42.28	-11.6245	-0.0246	1.0432
1025	SLD 5	0.21	2.03	38.48	-10.9193	-0.0237	0.0788
1025	SLD 6	-0.01	1.94	38.42	-10.909	-0.0236	0.0021
1025	SLD 7	1.17	-1.24	41.03	-11.5052	-0.0298	0.4138
1025	SLD 8	0.95	-1.33	40.97	-11.4949	-0.0297	0.337
1025	SLD 9	-1.85	1.86	36.58	-10.6302	-0.0262	-0.6444
1025	SLD 10	-2.07	1.77	36.52	-10.6199	-0.026	-0.7211
1025	SLD 11	-0.89	-1.41	39.13	-11.216	-0.0323	-0.3094
1025	SLD 12	-1.11	-1.5	39.07	-11.2057	-0.0321	-0.3862
1025	SLD 13	-3.87	0.54	35.27	-10.5006	-0.0312	-1.3505
1025	SLD 14	-4.2	0.4	35.18	-10.4848	-0.031	-1.468
1025	SLD 15	-3.58	-0.44	36.04	-10.6763	-0.0331	-1.25
1025	SLD 16	-3.92	-0.58	35.94	-10.6606	-0.0328	-1.3675
1025	SLV 1	7.66	2.2	45.43	-12.0164	-0.0165	2.686
1025	SLV 2	6.87	1.87	45.21	-11.9798	-0.016	2.4125
1025	SLV 3	8.33	-0.02	47.18	-12.4154	-0.0206	2.9205
1025	SLV 4	7.54	-0.35	46.95	-12.3787	-0.0201	2.6469
1025	SLV 5	1.1	4.27	38.17	-10.7499	-0.0183	0.3895
1025	SLV 6	0.59	4.06	38.02	-10.7263	-0.018	0.2137
1025	SLV 7	3.34	-3.13	43.98	-12.0798	-0.0321	1.171
1025	SLV 8	2.83	-3.35	43.83	-12.0563	-0.0318	0.9952
1025	SLV 9	-3.73	3.87	33.72	-10.0688	-0.0241	-1.3025
1025	SLV 10	-4.24	3.66	33.57	-10.0453	-0.0237	-1.4784
1025	SLV 11	-1.5	-3.53	39.52	-11.3988	-0.0379	-0.521
1025	SLV 12	-2	-3.74	39.38	-11.3752	-0.0375	-0.6969
1025	SLV 13	-8.45	0.87	30.6	-9.7463	-0.0357	-2.9542
1025	SLV 14	-9.23	0.55	30.37	-9.7097	-0.0352	-3.2278
1025	SLV 15	-7.78	-1.35	32.34	-10.1453	-0.0399	-2.7198
1025	SLV 16	-8.56	-1.68	32.12	-10.1086	-0.0394	-2.9934
1025	CRTFP Ux+	0	0	0	0	0	0
1025	CRTFP Ux-	0	0	0	0	0	0
1025	CRTFP Uy+	0	0	0	0	0	0
1025	CRTFP Uy-	0	0	0	0	0	0
1026	SLU 1	-0.34	0.31	33.08	-10.0585	0.6096	-0.1226
1026	SLU 2	-0.35	0.28	33.13	-10.0691	0.6104	-0.1265
1026	SLU 3	-0.35	0.33	33.86	-10.2914	0.6239	-0.1255
1026	SLU 4	-0.36	0.31	33.89	-10.2978	0.6244	-0.1278
1026	SLU 5	-0.36	0.28	33.57	-10.2028	0.6185	-0.1269
1026	SLU 6	-0.35	0.33	34.3	-10.4251	0.632	-0.1259
1026	SLU 7	-0.36	0.31	34.33	-10.4315	0.6325	-0.1282
1026	SLU 8	-0.34	0.32	33.97	-10.3259	0.6259	-0.1235
1026	SLU 9	-0.35	0.3	34	-10.3323	0.6263	-0.1258
1026	SLU 10	-0.41	0.33	37.45	-11.382	0.6898	-0.1461
1026	SLU 11	-0.4	0.38	38.18	-11.6043	0.7033	-0.1452
1026	SLU 12	-0.41	0.36	38.2	-11.6107	0.7038	-0.1475
1026	SLU 13	-0.41	0.33	37.89	-11.5157	0.698	-0.1466
1026	SLU 14	-0.41	0.38	38.62	-11.738	0.7115	-0.1456
1026	SLU 15	-0.41	0.36	38.65	-11.7444	0.7119	-0.1479
1026	SLU 16	-0.4	0.37	38.29	-11.6389	0.7053	-0.1432
1026	SLU 17	-0.41	0.35	38.31	-11.6452	0.7058	-0.1455
1026	SLU 18	-0.42	0.38	39.25	-11.9341	0.7231	-0.1508
1026	SLU 19	-0.43	0.36	39.28	-11.9405	0.7235	-0.153
1026	SLU 20	-0.42	0.39	39.69	-12.0678	0.7312	-0.1512
1026	SLU 21	-0.43	0.37	39.72	-12.0742	0.7317	-0.1535
1026	SLU 22	-0.39	0.41	37.35	-11.3491	0.6882	-0.1402
1026	SLU 23	-0.4	0.38	37.4	-11.3597	0.689	-0.144
1026	SLU 24	-0.4	0.43	38.13	-11.582	0.7025	-0.1431
1026	SLU 25	-0.4	0.41	38.16	-11.5884	0.703	-0.1454
1026	SLU 26	-0.4	0.38	37.84	-11.4934	0.6971	-0.1445
1026	SLU 27	-0.4	0.43	38.57	-11.7157	0.7106	-0.1435
1026	SLU 28	-0.4	0.41	38.6	-11.7221	0.7111	-0.1458
1026	SLU 29	-0.39	0.42	38.24	-11.6166	0.7045	-0.1411
1026	SLU 30	-0.4	0.4	38.26	-11.6229	0.7049	-0.1434
1026	SLU 31	-0.46	0.43	41.72	-12.6726	0.7684	-0.1637
1026	SLU 32	-0.45	0.48	42.45	-12.895	0.7819	-0.1628
1026	SLU 33	-0.46	0.46	42.47	-12.9013	0.7824	-0.1651
1026	SLU 34	-0.46	0.43	42.16	-12.8063	0.7766	-0.1641
1026	SLU 35	-0.45	0.48	42.89	-13.0287	0.7901	-0.1632
1026	SLU 36	-0.46	0.46	42.92	-13.035	0.7905	-0.1655
1026	SLU 37	-0.44	0.47	42.56	-12.9295	0.7839	-0.1608
1026	SLU 38	-0.45	0.45	42.58	-12.9358	0.7844	-0.163
1026	SLU 39	-0.47	0.48	43.52	-13.2247	0.8017	-0.1683
1026	SLU 40	-0.47	0.46	43.55	-13.2311	0.8021	-0.1706
1026	SLU 41	-0.47	0.49	43.96	-13.3584	0.8098	-0.1688
1026	SLU 42	-0.47	0.47	43.99	-13.3648	0.8103	-0.171
1026	SLU 43	-0.43	0.37	41.55	-12.6336	0.7655	-0.1534
1026	SLU 44	-0.44	0.34	41.59	-12.6441	0.7663	-0.1572
1026	SLU 45	-0.44	0.38	42.32	-12.8665	0.7798	-0.1563
1026	SLU 46	-0.44	0.36	42.35	-12.8728	0.7803	-0.1586
1026	SLU 47	-0.44	0.34	42.03	-12.7779	0.7744	-0.1576
1026	SLU 48	-0.44	0.39	42.76	-13.0002	0.7879	-0.1567
1026	SLU 49	-0.45	0.37	42.79	-13.0065	0.7884	-0.159
1026	SLU 50	-0.43	0.38	42.43	-12.901	0.7818	-0.1543

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1026	SLU 51	-0.44	0.36	42.46	-12.9073	0.7823	-0.1565
1026	SLU 52	-0.5	0.39	45.91	-13.9571	0.8457	-0.1769
1026	SLU 53	-0.49	0.43	46.64	-14.1794	0.8592	-0.176
1026	SLU 54	-0.5	0.41	46.67	-14.1857	0.8597	-0.1783
1026	SLU 55	-0.5	0.39	46.35	-14.0908	0.8539	-0.1773
1026	SLU 56	-0.49	0.44	47.08	-14.3131	0.8674	-0.1764
1026	SLU 57	-0.5	0.42	47.11	-14.3194	0.8679	-0.1787
1026	SLU 58	-0.49	0.43	46.75	-14.2139	0.8612	-0.1739
1026	SLU 59	-0.49	0.41	46.77	-14.2203	0.8617	-0.1762
1026	SLU 60	-0.51	0.44	47.71	-14.5092	0.879	-0.1815
1026	SLU 61	-0.51	0.42	47.74	-14.5155	0.8795	-0.1838
1026	SLU 62	-0.51	0.44	48.16	-14.6429	0.8871	-0.182
1026	SLU 63	-0.52	0.43	48.18	-14.6492	0.8876	-0.1842
1026	SLU 64	-0.47	0.47	45.81	-13.9242	0.8441	-0.171
1026	SLU 65	-0.49	0.44	45.86	-13.9348	0.8449	-0.1748
1026	SLU 66	-0.48	0.49	46.59	-14.1571	0.8584	-0.1739
1026	SLU 67	-0.49	0.47	46.62	-14.1634	0.8589	-0.1762
1026	SLU 68	-0.49	0.44	46.3	-14.0685	0.853	-0.1752
1026	SLU 69	-0.48	0.49	47.03	-14.2908	0.8665	-0.1743
1026	SLU 70	-0.49	0.47	47.06	-14.2971	0.867	-0.1766
1026	SLU 71	-0.48	0.48	46.7	-14.1916	0.8604	-0.1718
1026	SLU 72	-0.48	0.46	46.73	-14.198	0.8609	-0.1741
1026	SLU 73	-0.54	0.49	50.18	-15.2477	0.9243	-0.1945
1026	SLU 74	-0.54	0.54	50.91	-15.47	0.9378	-0.1936
1026	SLU 75	-0.54	0.52	50.94	-15.4764	0.9383	-0.1958
1026	SLU 76	-0.54	0.49	50.62	-15.3814	0.9325	-0.1949
1026	SLU 77	-0.54	0.54	51.35	-15.6037	0.946	-0.194
1026	SLU 78	-0.55	0.52	51.38	-15.6101	0.9465	-0.1963
1026	SLU 79	-0.53	0.53	51.02	-15.5045	0.9398	-0.1915
1026	SLU 80	-0.54	0.51	51.04	-15.5109	0.9403	-0.1938
1026	SLU 81	-0.55	0.54	51.98	-15.7998	0.9576	-0.1991
1026	SLU 82	-0.56	0.52	52.01	-15.8061	0.9581	-0.2014
1026	SLU 83	-0.55	0.55	52.42	-15.9335	0.9657	-0.1995
1026	SLU 84	-0.56	0.53	52.45	-15.9398	0.9662	-0.2018
1026	SLE RA 1	-0.36	0.34	34.3	-10.4273	0.632	-0.1277
1026	SLE RA 2	-0.36	0.32	34.33	-10.4343	0.6326	-0.1302
1026	SLE RA 3	-0.36	0.35	34.82	-10.5825	0.6416	-0.1296
1026	SLE RA 4	-0.37	0.34	34.84	-10.5868	0.6419	-0.1311
1026	SLE RA 5	-0.36	0.32	34.63	-10.5235	0.638	-0.1305
1026	SLE RA 6	-0.36	0.35	35.12	-10.6717	0.647	-0.1299
1026	SLE RA 7	-0.37	0.34	35.13	-10.6759	0.6473	-0.1314
1026	SLE RA 8	-0.36	0.35	34.89	-10.6055	0.6429	-0.1282
1026	SLE RA 9	-0.36	0.33	34.91	-10.6098	0.6432	-0.1298
1026	SLE RA 10	-0.4	0.35	37.21	-11.3096	0.6855	-0.1433
1026	SLE RA 11	-0.4	0.38	37.7	-11.4578	0.6945	-0.1427
1026	SLE RA 12	-0.4	0.37	37.72	-11.462	0.6948	-0.1442
1026	SLE RA 13	-0.4	0.35	37.51	-11.3987	0.691	-0.1436
1026	SLE RA 14	-0.4	0.39	37.99	-11.5469	0.7	-0.143
1026	SLE RA 15	-0.4	0.37	38.01	-11.5512	0.7003	-0.1445
1026	SLE RA 16	-0.39	0.38	37.77	-11.4808	0.6959	-0.1414
1026	SLE RA 17	-0.4	0.37	37.79	-11.4851	0.6962	-0.1429
1026	SLE RA 18	-0.41	0.39	38.42	-11.6777	0.7077	-0.1464
1026	SLE RA 19	-0.41	0.37	38.43	-11.6819	0.708	-0.1479
1026	SLE RA 20	-0.41	0.39	38.71	-11.7668	0.7131	-0.1467
1026	SLE RA 21	-0.41	0.38	38.73	-11.771	0.7134	-0.1482
1026	SLE FR 1	-0.36	0.34	34.3	-10.4273	0.632	-0.1277
1026	SLE FR 2	-0.36	0.33	34.31	-10.4287	0.6321	-0.1282
1026	SLE FR 3	-0.36	0.34	34.42	-10.4629	0.6342	-0.1278
1026	SLE FR 4	-0.37	0.35	35.54	-10.8038	0.6548	-0.1338
1026	SLE FR 5	-0.37	0.35	35.66	-10.838	0.6569	-0.1334
1026	SLE FR 6	-0.38	0.36	36.36	-11.0525	0.6699	-0.137
1026	SLE QP 1	-0.36	0.34	34.3	-10.4273	0.632	-0.1277
1026	SLE QP 2	-0.37	0.35	35.54	-10.8024	0.6547	-0.1333
1026	SLD 1	2.76	1.13	37.98	-11.3271	0.7029	0.9572
1026	SLD 2	2.46	1.01	37.89	-11.3041	0.7013	0.8535
1026	SLD 3	3.02	0.23	38.71	-11.508	0.7157	1.0484
1026	SLD 4	2.72	0.11	38.62	-11.485	0.714	0.9447
1026	SLD 5	0.23	1.97	35.18	-10.6895	0.6502	0.0739
1026	SLD 6	0.03	1.89	35.12	-10.6745	0.6491	0.0061
1026	SLD 7	1.09	-1.03	37.61	-11.2925	0.6926	0.3778
1026	SLD 8	0.9	-1.1	37.55	-11.2775	0.6915	0.3101
1026	SLD 9	-1.64	1.81	33.52	-10.3273	0.6179	-0.5767
1026	SLD 10	-1.84	1.73	33.46	-10.3123	0.6169	-0.6444
1026	SLD 11	-0.77	-1.19	35.96	-10.9303	0.6604	-0.2727
1026	SLD 12	-0.97	-1.26	35.9	-10.9153	0.6593	-0.3404
1026	SLD 13	-3.46	0.59	32.46	-10.1197	0.5954	-1.2113
1026	SLD 14	-3.76	0.48	32.37	-10.0967	0.5938	-1.315
1026	SLD 15	-3.2	-0.3	33.19	-10.3006	0.6082	-1.1201
1026	SLD 16	-3.5	-0.42	33.1	-10.2776	0.6065	-1.2238
1026	SLV 1	6.96	2.13	41.28	-12.0422	0.7681	2.4177
1026	SLV 2	6.25	1.86	41.07	-11.9886	0.7643	2.1764
1026	SLV 3	7.56	0.09	42.94	-12.4529	0.797	2.6307
1026	SLV 4	6.86	-0.18	42.72	-12.3993	0.7933	2.3894
1026	SLV 5	1.03	4.01	34.78	-10.5606	0.6455	0.3503
1026	SLV 6	0.58	3.84	34.64	-10.5261	0.6431	0.1952
1026	SLV 7	3.05	-2.76	40.31	-11.9297	0.742	1.0603
1026	SLV 8	2.59	-2.93	40.17	-11.8952	0.7395	0.9052
1026	SLV 9	-3.34	3.64	30.9	-9.7095	0.5699	-1.1718
1026	SLV 10	-3.79	3.47	30.76	-9.6751	0.5675	-1.3269
1026	SLV 11	-1.32	-3.13	36.43	-11.0786	0.6664	-0.4618
1026	SLV 12	-1.77	-3.31	36.29	-11.0442	0.664	-0.6169
1026	SLV 13	-7.6	0.88	28.35	-9.2054	0.5162	-2.656
1026	SLV 14	-8.31	0.61	28.14	-9.1518	0.5124	-2.8973
1026	SLV 15	-6.99	-1.15	30.01	-9.6161	0.5451	-2.443
1026	SLV 16	-7.7	-1.42	29.79	-9.5626	0.5414	-2.6843
1026	CRTFP Ux+	0	0	0	0	0	0
1026	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1026	CRTFP Uy+	0	0	0	0	0	0
1026	CRTFP Uy-	0	0	0	0	0	0
1028	SLU 1	-0.85	1.07	86.18	-19.597	0.1306	-0.1711
1028	SLU 2	-0.89	0.99	86.31	-19.6212	0.129	-0.1792
1028	SLU 3	-0.87	1.12	88.2	-20.0529	0.1352	-0.1746
1028	SLU 4	-0.89	1.07	88.28	-20.0674	0.1343	-0.1795
1028	SLU 5	-0.89	1.01	87.46	-19.8818	0.1315	-0.1792
1028	SLU 6	-0.87	1.14	89.35	-20.3135	0.1377	-0.1746
1028	SLU 7	-0.89	1.09	89.43	-20.328	0.1368	-0.1795
1028	SLU 8	-0.86	1.11	88.48	-20.1182	0.1356	-0.171
1028	SLU 9	-0.88	1.06	88.56	-20.1327	0.1347	-0.1759
1028	SLU 10	-1.03	1.16	97.53	-22.1757	0.1556	-0.2085
1028	SLU 11	-1.01	1.29	99.42	-22.6074	0.1618	-0.2039
1028	SLU 12	-1.03	1.24	99.5	-22.622	0.1609	-0.2088
1028	SLU 13	-1.03	1.17	98.68	-22.4363	0.1581	-0.2084
1028	SLU 14	-1.01	1.31	100.57	-22.868	0.1643	-0.2038
1028	SLU 15	-1.03	1.26	100.65	-22.8826	0.1634	-0.2087
1028	SLU 16	-1	1.27	99.7	-22.6727	0.1621	-0.2002
1028	SLU 17	-1.02	1.22	99.78	-22.6872	0.1612	-0.2051
1028	SLU 18	-1.05	1.31	102.21	-23.2463	0.1685	-0.2128
1028	SLU 19	-1.07	1.26	102.28	-23.2608	0.1676	-0.2177
1028	SLU 20	-1.06	1.33	103.36	-23.5069	0.171	-0.2128
1028	SLU 21	-1.08	1.28	103.44	-23.5214	0.1701	-0.2177
1028	SLU 22	-0.97	1.37	97.28	-22.1143	0.1565	-0.1943
1028	SLU 23	-1	1.29	97.42	-22.1386	0.155	-0.2024
1028	SLU 24	-0.99	1.42	99.31	-22.5703	0.1612	-0.1978
1028	SLU 25	-1.01	1.37	99.38	-22.5848	0.1603	-0.2027
1028	SLU 26	-1.01	1.31	98.57	-22.3992	0.1575	-0.2024
1028	SLU 27	-0.99	1.44	100.46	-22.8309	0.1637	-0.1978
1028	SLU 28	-1.01	1.39	100.54	-22.8454	0.1628	-0.2027
1028	SLU 29	-0.97	1.41	99.59	-22.6356	0.1615	-0.1942
1028	SLU 30	-0.99	1.36	99.67	-22.6501	0.1606	-0.1991
1028	SLU 31	-1.14	1.46	108.64	-24.6931	0.1816	-0.2317
1028	SLU 32	-1.13	1.59	110.53	-25.1248	0.1878	-0.2271
1028	SLU 33	-1.15	1.54	110.61	-25.1393	0.1869	-0.232
1028	SLU 34	-1.15	1.47	109.79	-24.9537	0.1841	-0.2316
1028	SLU 35	-1.13	1.61	111.68	-25.3854	0.1903	-0.227
1028	SLU 36	-1.15	1.56	111.76	-25.3999	0.1894	-0.2319
1028	SLU 37	-1.12	1.57	110.81	-25.1901	0.1881	-0.2234
1028	SLU 38	-1.14	1.52	110.89	-25.2046	0.1872	-0.2283
1028	SLU 39	-1.17	1.61	113.31	-25.7636	0.1945	-0.236
1028	SLU 40	-1.19	1.56	113.39	-25.7782	0.1936	-0.2409
1028	SLU 41	-1.17	1.63	114.47	-26.0243	0.197	-0.236
1028	SLU 42	-1.19	1.58	114.54	-26.0388	0.1961	-0.2409
1028	SLU 43	-1.07	1.29	108.22	-24.613	0.1608	-0.2144
1028	SLU 44	-1.1	1.21	108.35	-24.6372	0.1593	-0.2226
1028	SLU 45	-1.09	1.34	110.24	-25.0689	0.1655	-0.218
1028	SLU 46	-1.11	1.29	110.32	-25.0834	0.1646	-0.2229
1028	SLU 47	-1.1	1.23	109.5	-24.8978	0.1618	-0.2226
1028	SLU 48	-1.09	1.36	111.39	-25.3295	0.168	-0.218
1028	SLU 49	-1.11	1.31	111.47	-25.344	0.1671	-0.2229
1028	SLU 50	-1.07	1.33	110.52	-25.1342	0.1658	-0.2144
1028	SLU 51	-1.09	1.28	110.6	-25.1487	0.1649	-0.2193
1028	SLU 52	-1.24	1.38	119.57	-27.1917	0.1859	-0.2519
1028	SLU 53	-1.23	1.51	121.46	-27.6234	0.1921	-0.2472
1028	SLU 54	-1.25	1.46	121.54	-27.6379	0.1912	-0.2521
1028	SLU 55	-1.24	1.39	120.72	-27.4523	0.1884	-0.2518
1028	SLU 56	-1.23	1.53	122.61	-27.884	0.1946	-0.2472
1028	SLU 57	-1.25	1.48	122.69	-27.8985	0.1937	-0.2521
1028	SLU 58	-1.21	1.49	121.74	-27.6887	0.1924	-0.2436
1028	SLU 59	-1.23	1.44	121.82	-27.7032	0.1915	-0.2485
1028	SLU 60	-1.27	1.53	124.25	-28.2623	0.1988	-0.2562
1028	SLU 61	-1.29	1.48	124.33	-28.2768	0.1979	-0.2611
1028	SLU 62	-1.27	1.55	125.4	-28.5229	0.2013	-0.2562
1028	SLU 63	-1.29	1.5	125.48	-28.5374	0.2004	-0.2611
1028	SLU 64	-1.18	1.59	119.33	-27.1303	0.1868	-0.2376
1028	SLU 65	-1.22	1.51	119.46	-27.1546	0.1853	-0.2458
1028	SLU 66	-1.2	1.64	121.35	-27.5863	0.1915	-0.2412
1028	SLU 67	-1.22	1.59	121.43	-27.6008	0.1906	-0.2461
1028	SLU 68	-1.22	1.53	120.61	-27.4152	0.1878	-0.2458
1028	SLU 69	-1.21	1.66	122.5	-27.8469	0.194	-0.2412
1028	SLU 70	-1.23	1.61	122.58	-27.8614	0.1931	-0.2461
1028	SLU 71	-1.19	1.63	121.63	-27.6515	0.1918	-0.2376
1028	SLU 72	-1.21	1.58	121.71	-27.6661	0.1909	-0.2425
1028	SLU 73	-1.36	1.67	130.68	-29.7091	0.2119	-0.275
1028	SLU 74	-1.35	1.81	132.57	-30.1408	0.218	-0.2704
1028	SLU 75	-1.37	1.76	132.65	-30.1553	0.2171	-0.2753
1028	SLU 76	-1.36	1.69	131.83	-29.9697	0.2144	-0.275
1028	SLU 77	-1.35	1.82	133.72	-30.4014	0.2205	-0.2704
1028	SLU 78	-1.37	1.78	133.8	-30.4159	0.2196	-0.2753
1028	SLU 79	-1.33	1.79	132.85	-30.2061	0.2184	-0.2668
1028	SLU 80	-1.35	1.74	132.93	-30.2206	0.2175	-0.2717
1028	SLU 81	-1.39	1.83	135.36	-30.7796	0.2248	-0.2794
1028	SLU 82	-1.41	1.78	135.44	-30.7942	0.2239	-0.2843
1028	SLU 83	-1.39	1.85	136.51	-31.0402	0.2273	-0.2794
1028	SLU 84	-1.41	1.8	136.59	-31.0548	0.2264	-0.2843
1028	SLE RA 1	-0.89	1.16	89.35	-20.3162	0.138	-0.1777
1028	SLE RA 2	-0.91	1.1	89.44	-20.3324	0.137	-0.1831
1028	SLE RA 3	-0.9	1.19	90.7	-20.6202	0.1411	-0.1801
1028	SLE RA 4	-0.91	1.16	90.75	-20.6299	0.1405	-0.1833
1028	SLE RA 5	-0.91	1.11	90.2	-20.5061	0.1386	-0.1831
1028	SLE RA 6	-0.9	1.2	91.46	-20.7939	0.1428	-0.18
1028	SLE RA 7	-0.91	1.17	91.52	-20.8036	0.1422	-0.1833
1028	SLE RA 8	-0.89	1.18	90.88	-20.6637	0.1413	-0.1776
1028	SLE RA 9	-0.9	1.15	90.94	-20.6734	0.1407	-0.1809
1028	SLE RA 10	-1	1.21	96.92	-22.0354	0.1547	-0.2026
1028	SLE RA 11	-0.99	1.3	98.18	-22.3232	0.1588	-0.1996

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1028	SLE RA 12	-1.01	1.27	98.23	-22.3329	0.1582	-0.2028
1028	SLE RA 13	-1	1.23	97.69	-22.2091	0.1564	-0.2026
1028	SLE RA 14	-0.99	1.31	98.94	-22.4969	0.1605	-0.1995
1028	SLE RA 15	-1.01	1.28	99	-22.5066	0.1599	-0.2028
1028	SLE RA 16	-0.98	1.29	98.36	-22.3667	0.159	-0.1971
1028	SLE RA 17	-1	1.26	98.42	-22.3764	0.1584	-0.2004
1028	SLE RA 18	-1.02	1.32	100.04	-22.7491	0.1633	-0.2055
1028	SLE RA 19	-1.03	1.28	100.09	-22.7588	0.1627	-0.2088
1028	SLE RA 20	-1.02	1.33	100.8	-22.9228	0.165	-0.2055
1028	SLE RA 21	-1.03	1.3	100.86	-22.9325	0.1644	-0.2088
1028	SLE FR 1	-0.89	1.16	89.35	-20.3162	0.138	-0.1777
1028	SLE FR 2	-0.89	1.15	89.37	-20.3194	0.1378	-0.1788
1028	SLE FR 3	-0.89	1.16	89.66	-20.3857	0.1386	-0.1777
1028	SLE FR 4	-0.93	1.19	92.57	-21.0493	0.1454	-0.1871
1028	SLE FR 5	-0.93	1.21	92.86	-21.1156	0.1462	-0.186
1028	SLE FR 6	-0.95	1.24	94.69	-21.5326	0.1506	-0.1916
1028	SLE QP 1	-0.89	1.16	89.35	-20.3162	0.138	-0.1777
1028	SLE QP 2	-0.93	1.21	92.56	-21.0461	0.1456	-0.186
1028	SLD 1	7.21	3.13	98.74	-22.4012	0.1879	1.7799
1028	SLD 2	6.41	2.88	98.49	-22.3455	0.1887	1.5926
1028	SLD 3	7.89	0.79	100.8	-22.8033	0.1735	1.9413
1028	SLD 4	7.09	0.55	100.56	-22.7477	0.1743	1.754
1028	SLD 5	0.63	5.37	91.32	-20.8526	0.1799	0.1921
1028	SLD 6	0.1	5.2	91.16	-20.8162	0.1804	0.0696
1028	SLD 7	2.89	-2.41	98.2	-22.193	0.132	0.7301
1028	SLD 8	2.37	-2.58	98.04	-22.1566	0.1326	0.6076
1028	SLD 9	-4.22	4.99	87.07	-19.9356	0.1586	-0.9797
1028	SLD 10	-4.74	4.83	86.91	-19.8992	0.1591	-1.1022
1028	SLD 11	-1.96	-2.79	93.95	-21.2759	0.1107	-0.4417
1028	SLD 12	-2.48	-2.96	93.79	-21.2396	0.1113	-0.5642
1028	SLD 13	-8.94	1.87	84.55	-19.3445	0.1168	-2.1261
1028	SLD 14	-9.74	1.62	84.31	-19.2888	0.1176	-2.3134
1028	SLD 15	-8.26	-0.47	86.62	-19.7466	0.1025	-1.9647
1028	SLD 16	-9.06	-0.72	86.37	-19.6909	0.1033	-2.152
1028	SLV 1	18.1	5.61	107.11	-24.2375	0.2446	4.4134
1028	SLV 2	16.25	5.03	106.53	-24.1078	0.2465	3.977
1028	SLV 3	19.69	0.33	111.8	-25.151	0.212	4.7898
1028	SLV 4	17.83	-0.25	111.23	-25.0213	0.2139	4.3533
1028	SLV 5	2.7	10.64	89.91	-20.6403	0.2244	0.6978
1028	SLV 6	1.51	10.27	89.54	-20.5569	0.2256	0.4173
1028	SLV 7	7.98	-6.97	105.54	-23.6852	0.1157	1.9523
1028	SLV 8	6.79	-7.34	105.17	-23.6019	0.117	1.6718
1028	SLV 9	-8.64	9.75	79.94	-18.4902	0.1742	-2.0439
1028	SLV 10	-9.83	9.38	79.57	-18.4069	0.1754	-2.3244
1028	SLV 11	-3.36	-7.86	95.57	-21.5352	0.0655	-0.7894
1028	SLV 12	-4.55	-8.23	95.2	-21.4519	0.0667	-1.0699
1028	SLV 13	-19.68	2.66	73.89	-17.0708	0.0772	-4.7254
1028	SLV 14	-21.54	2.08	73.31	-16.9412	0.0791	-5.1619
1028	SLV 15	-18.1	-2.62	78.58	-17.9843	0.0446	-4.3491
1028	SLV 16	-19.96	-3.2	78	-17.8546	0.0465	-4.7855
1028	CRTFP Ux+	0	0	0	0	0	0
1028	CRTFP Ux-	0	0	0	0	0	0
1028	CRTFP Uy+	0	0	0	0	0	0
1028	CRTFP Uy-	0	0	0	0	0	0
1030	SLU 1	-0.29	0.53	33.97	-9.9677	-0.5959	-0.0891
1030	SLU 2	-0.3	0.49	34.02	-9.9795	-0.597	-0.0945
1030	SLU 3	-0.29	0.55	34.76	-10.1943	-0.6097	-0.0908
1030	SLU 4	-0.3	0.53	34.79	-10.2014	-0.6103	-0.094
1030	SLU 5	-0.3	0.5	34.47	-10.1091	-0.6049	-0.0943
1030	SLU 6	-0.29	0.56	35.21	-10.324	-0.6176	-0.0905
1030	SLU 7	-0.3	0.54	35.24	-10.331	-0.6182	-0.0938
1030	SLU 8	-0.29	0.54	34.87	-10.2269	-0.6117	-0.0886
1030	SLU 9	-0.29	0.52	34.9	-10.234	-0.6123	-0.0918
1030	SLU 10	-0.35	0.57	38.42	-11.2606	-0.6734	-0.1109
1030	SLU 11	-0.34	0.63	39.16	-11.4754	-0.6862	-0.1071
1030	SLU 12	-0.35	0.61	39.19	-11.4825	-0.6868	-0.1104
1030	SLU 13	-0.35	0.58	38.88	-11.3902	-0.6813	-0.1106
1030	SLU 14	-0.34	0.64	39.61	-11.6051	-0.694	-0.1068
1030	SLU 15	-0.35	0.62	39.65	-11.6122	-0.6947	-0.1101
1030	SLU 16	-0.34	0.62	39.27	-11.5081	-0.6881	-0.1049
1030	SLU 17	-0.35	0.6	39.31	-11.5151	-0.6888	-0.1082
1030	SLU 18	-0.36	0.64	40.26	-11.7978	-0.7052	-0.1124
1030	SLU 19	-0.37	0.62	40.29	-11.8049	-0.7058	-0.1157
1030	SLU 20	-0.36	0.65	40.71	-11.9275	-0.713	-0.1121
1030	SLU 21	-0.37	0.63	40.74	-11.9345	-0.7137	-0.1154
1030	SLU 22	-0.33	0.66	38.32	-11.2261	-0.6716	-0.1009
1030	SLU 23	-0.34	0.63	38.38	-11.2379	-0.6727	-0.1063
1030	SLU 24	-0.33	0.68	39.11	-11.4528	-0.6854	-0.1026
1030	SLU 25	-0.34	0.66	39.15	-11.4599	-0.686	-0.1058
1030	SLU 26	-0.34	0.64	38.83	-11.3676	-0.6806	-0.1061
1030	SLU 27	-0.33	0.69	39.57	-11.5824	-0.6933	-0.1023
1030	SLU 28	-0.34	0.67	39.6	-11.5895	-0.6939	-0.1056
1030	SLU 29	-0.33	0.68	39.23	-11.4854	-0.6874	-0.1004
1030	SLU 30	-0.34	0.66	39.26	-11.4925	-0.688	-0.1037
1030	SLU 31	-0.39	0.71	42.78	-12.519	-0.7492	-0.1227
1030	SLU 32	-0.39	0.77	43.52	-12.7339	-0.7619	-0.1189
1030	SLU 33	-0.39	0.75	43.55	-12.741	-0.7625	-0.1222
1030	SLU 34	-0.39	0.72	43.23	-12.6487	-0.757	-0.1224
1030	SLU 35	-0.39	0.77	43.97	-12.8635	-0.7698	-0.1186
1030	SLU 36	-0.39	0.75	44	-12.8706	-0.7704	-0.1219
1030	SLU 37	-0.38	0.76	43.63	-12.7665	-0.7639	-0.1167
1030	SLU 38	-0.39	0.74	43.66	-12.7736	-0.7645	-0.12
1030	SLU 39	-0.4	0.78	44.61	-13.0563	-0.7809	-0.1242
1030	SLU 40	-0.41	0.76	44.64	-13.0634	-0.7815	-0.1275
1030	SLU 41	-0.4	0.79	45.06	-13.1859	-0.7887	-0.1239
1030	SLU 42	-0.41	0.77	45.09	-13.193	-0.7894	-0.1272
1030	SLU 43	-0.36	0.64	42.67	-12.5265	-0.7487	-0.1117

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1030	SLU 44	-0.37	0.61	42.72	-12.5383	-0.7498	-0.1172
1030	SLU 45	-0.36	0.66	43.46	-12.7532	-0.7625	-0.1134
1030	SLU 46	-0.37	0.64	43.49	-12.7602	-0.7631	-0.1167
1030	SLU 47	-0.37	0.61	43.17	-12.668	-0.7577	-0.117
1030	SLU 48	-0.36	0.67	43.91	-12.8828	-0.7704	-0.1132
1030	SLU 49	-0.37	0.65	43.94	-12.8899	-0.771	-0.1165
1030	SLU 50	-0.36	0.66	43.57	-12.7858	-0.7645	-0.1112
1030	SLU 51	-0.37	0.64	43.6	-12.7929	-0.7651	-0.1145
1030	SLU 52	-0.42	0.69	47.12	-13.8194	-0.8263	-0.1335
1030	SLU 53	-0.42	0.74	47.86	-14.0343	-0.839	-0.1298
1030	SLU 54	-0.42	0.72	47.89	-14.0413	-0.8396	-0.133
1030	SLU 55	-0.42	0.69	47.57	-13.9491	-0.8341	-0.1333
1030	SLU 56	-0.42	0.75	48.31	-14.1639	-0.8469	-0.1295
1030	SLU 57	-0.42	0.73	48.34	-14.171	-0.8475	-0.1328
1030	SLU 58	-0.41	0.74	47.97	-14.0669	-0.841	-0.1276
1030	SLU 59	-0.42	0.72	48	-14.074	-0.8416	-0.1308
1030	SLU 60	-0.43	0.75	48.95	-14.3567	-0.858	-0.1351
1030	SLU 61	-0.44	0.73	48.99	-14.3637	-0.8586	-0.1383
1030	SLU 62	-0.43	0.76	49.41	-14.4863	-0.8659	-0.1348
1030	SLU 63	-0.44	0.74	49.44	-14.4934	-0.8665	-0.1381
1030	SLU 64	-0.4	0.77	47.02	-13.785	-0.8244	-0.1236
1030	SLU 65	-0.41	0.74	47.07	-13.7968	-0.8255	-0.129
1030	SLU 66	-0.41	0.8	47.81	-14.0116	-0.8382	-0.1252
1030	SLU 67	-0.41	0.78	47.84	-14.0187	-0.8388	-0.1285
1030	SLU 68	-0.41	0.75	47.52	-13.9264	-0.8334	-0.1288
1030	SLU 69	-0.41	0.8	48.26	-14.1413	-0.8461	-0.125
1030	SLU 70	-0.41	0.78	48.3	-14.1483	-0.8467	-0.1283
1030	SLU 71	-0.4	0.79	47.92	-14.0442	-0.8402	-0.123
1030	SLU 72	-0.41	0.77	47.96	-14.0513	-0.8408	-0.1263
1030	SLU 73	-0.47	0.82	51.48	-15.0779	-0.902	-0.1453
1030	SLU 74	-0.46	0.88	52.21	-15.2927	-0.9147	-0.1416
1030	SLU 75	-0.47	0.86	52.25	-15.2998	-0.9153	-0.1448
1030	SLU 76	-0.47	0.83	51.93	-15.2075	-0.9099	-0.1451
1030	SLU 77	-0.46	0.89	52.67	-15.4224	-0.9226	-0.1413
1030	SLU 78	-0.47	0.87	52.7	-15.4294	-0.9232	-0.1446
1030	SLU 79	-0.45	0.87	52.33	-15.3253	-0.9167	-0.1394
1030	SLU 80	-0.46	0.85	52.36	-15.3324	-0.9173	-0.1426
1030	SLU 81	-0.47	0.89	53.31	-15.6151	-0.9337	-0.1469
1030	SLU 82	-0.48	0.87	53.34	-15.6222	-0.9343	-0.1501
1030	SLU 83	-0.47	0.9	53.76	-15.7447	-0.9416	-0.1466
1030	SLU 84	-0.48	0.88	53.79	-15.7518	-0.9422	-0.1499
1030	SLE RA 1	-0.3	0.57	35.21	-10.3272	-0.6175	-0.0924
1030	SLE RA 2	-0.31	0.54	35.25	-10.3351	-0.6182	-0.0961
1030	SLE RA 3	-0.3	0.58	35.74	-10.4783	-0.6267	-0.0936
1030	SLE RA 4	-0.31	0.57	35.76	-10.4831	-0.6271	-0.0958
1030	SLE RA 5	-0.31	0.55	35.55	-10.4215	-0.6235	-0.0959
1030	SLE RA 6	-0.3	0.59	36.04	-10.5648	-0.632	-0.0934
1030	SLE RA 7	-0.31	0.57	36.06	-10.5695	-0.6324	-0.0956
1030	SLE RA 8	-0.3	0.58	35.81	-10.5001	-0.628	-0.0921
1030	SLE RA 9	-0.3	0.56	35.84	-10.5048	-0.6285	-0.0943
1030	SLE RA 10	-0.34	0.6	38.18	-11.1892	-0.6692	-0.107
1030	SLE RA 11	-0.34	0.63	38.67	-11.3324	-0.6777	-0.1045
1030	SLE RA 12	-0.34	0.62	38.7	-11.3371	-0.6781	-0.1066
1030	SLE RA 13	-0.34	0.6	38.48	-11.2756	-0.6745	-0.1068
1030	SLE RA 14	-0.34	0.64	38.98	-11.4188	-0.683	-0.1043
1030	SLE RA 15	-0.34	0.63	39	-11.4236	-0.6834	-0.1065
1030	SLE RA 16	-0.33	0.63	38.75	-11.3542	-0.679	-0.103
1030	SLE RA 17	-0.34	0.62	38.77	-11.3589	-0.6795	-0.1052
1030	SLE RA 18	-0.35	0.64	39.4	-11.5473	-0.6904	-0.108
1030	SLE RA 19	-0.35	0.63	39.43	-11.5521	-0.6908	-0.1102
1030	SLE RA 20	-0.35	0.65	39.71	-11.6338	-0.6956	-0.1078
1030	SLE RA 21	-0.35	0.63	39.73	-11.6385	-0.6961	-0.11
1030	SLE FR 1	-0.3	0.57	35.21	-10.3272	-0.6175	-0.0924
1030	SLE FR 2	-0.3	0.56	35.22	-10.3288	-0.6177	-0.0932
1030	SLE FR 3	-0.3	0.57	35.33	-10.3618	-0.6196	-0.0924
1030	SLE FR 4	-0.32	0.58	36.48	-10.6948	-0.6395	-0.0978
1030	SLE FR 5	-0.31	0.59	36.59	-10.7278	-0.6415	-0.097
1030	SLE FR 6	-0.32	0.6	37.31	-10.9373	-0.654	-0.1002
1030	SLE QP 1	-0.3	0.57	35.21	-10.3272	-0.6175	-0.0924
1030	SLE QP 2	-0.31	0.59	36.47	-10.6933	-0.6394	-0.0971
1030	SLD 1	3.05	1.34	38.78	-11.4806	-0.6755	1.0814
1030	SLD 2	2.72	1.26	38.68	-11.4507	-0.6737	0.9669
1030	SLD 3	3.33	0.37	39.58	-11.6873	-0.69	1.1803
1030	SLD 4	3	0.29	39.48	-11.6573	-0.6882	1.0659
1030	SLD 5	0.33	2.29	35.96	-10.6213	-0.6285	0.1265
1030	SLD 6	0.12	2.23	35.9	-10.6017	-0.6274	0.0517
1030	SLD 7	1.26	-0.92	38.64	-11.3102	-0.6769	0.4565
1030	SLD 8	1.05	-0.97	38.58	-11.2906	-0.6757	0.3817
1030	SLD 9	-1.67	2.15	34.36	-10.0959	-0.603	-0.5759
1030	SLD 10	-1.88	2.1	34.3	-10.0763	-0.6019	-0.6507
1030	SLD 11	-0.75	-1.06	37.04	-10.7848	-0.6514	-0.246
1030	SLD 12	-0.96	-1.11	36.98	-10.7652	-0.6502	-0.3208
1030	SLD 13	-3.63	0.88	33.46	-9.7292	-0.5905	-1.2601
1030	SLD 14	-3.95	0.8	33.36	-9.6993	-0.5888	-1.3746
1030	SLD 15	-3.35	-0.08	34.26	-9.9359	-0.605	-1.1611
1030	SLD 16	-3.68	-0.16	34.16	-9.9059	-0.6033	-1.2756
1030	SLV 1	7.55	2.3	41.91	-12.5468	-0.7245	2.6602
1030	SLV 2	6.8	2.12	41.68	-12.4771	-0.7203	2.3936
1030	SLV 3	8.2	0.13	43.73	-13.0164	-0.7574	2.8904
1030	SLV 4	7.45	-0.06	43.5	-12.9467	-0.7533	2.6239
1030	SLV 5	1.19	4.44	35.37	-10.549	-0.6156	0.4265
1030	SLV 6	0.71	4.32	35.22	-10.5042	-0.613	0.2552
1030	SLV 7	3.35	-2.82	41.46	-12.1144	-0.7255	1.1941
1030	SLV 8	2.87	-2.94	41.31	-12.0696	-0.7228	1.0228
1030	SLV 9	-3.49	4.12	31.63	-9.3169	-0.5559	-1.217
1030	SLV 10	-3.98	4	31.48	-9.2721	-0.5533	-1.3883
1030	SLV 11	-1.33	-3.14	37.72	-10.8823	-0.6658	-0.4494

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1030	SLV 12	-1.82	-3.26	37.57	-10.8375	-0.6631	-0.6207
1030	SLV 13	-8.07	1.24	29.44	-8.4398	-0.5255	-2.8181
1030	SLV 14	-8.83	1.05	29.21	-8.3701	-0.5214	-3.0847
1030	SLV 15	-7.42	-0.94	31.26	-8.9094	-0.5584	-2.5878
1030	SLV 16	-8.18	-1.12	31.03	-8.8397	-0.5543	-2.8544
1030	CRTFP Ux+	0	0	0	0	0	0
1030	CRTFP Ux-	0	0	0	0	0	0
1030	CRTFP Uy+	0	0	0	0	0	0
1030	CRTFP Uy-	0	0	0	0	0	0
1031	SLU 1	-0.27	0.62	35.85	-9.5706	0.0572	-0.0951
1031	SLU 2	-0.29	0.59	35.91	-9.5832	0.0571	-0.1006
1031	SLU 3	-0.28	0.65	36.68	-9.7834	0.0587	-0.0971
1031	SLU 4	-0.29	0.63	36.72	-9.791	0.0586	-0.1004
1031	SLU 5	-0.29	0.6	36.39	-9.705	0.0579	-0.1002
1031	SLU 6	-0.28	0.66	37.16	-9.9052	0.0595	-0.0968
1031	SLU 7	-0.29	0.64	37.19	-9.9128	0.0594	-0.1001
1031	SLU 8	-0.27	0.64	36.8	-9.8141	0.0588	-0.0945
1031	SLU 9	-0.28	0.62	36.84	-9.8217	0.0588	-0.0977
1031	SLU 10	-0.34	0.68	40.53	-10.7916	0.0656	-0.1192
1031	SLU 11	-0.33	0.74	41.3	-10.9918	0.0672	-0.1157
1031	SLU 12	-0.34	0.72	41.33	-10.9994	0.0672	-0.119
1031	SLU 13	-0.34	0.69	41	-10.9134	0.0665	-0.1188
1031	SLU 14	-0.33	0.75	41.77	-11.1136	0.068	-0.1154
1031	SLU 15	-0.34	0.73	41.81	-11.1211	0.068	-0.1187
1031	SLU 16	-0.33	0.74	41.42	-11.0225	0.0674	-0.1131
1031	SLU 17	-0.34	0.72	41.45	-11.0301	0.0673	-0.1163
1031	SLU 18	-0.35	0.76	42.44	-11.2968	0.0694	-0.1217
1031	SLU 19	-0.36	0.74	42.48	-11.3044	0.0694	-0.125
1031	SLU 20	-0.35	0.77	42.92	-11.4186	0.0702	-0.1214
1031	SLU 21	-0.36	0.75	42.96	-11.4262	0.0702	-0.1246
1031	SLU 22	-0.32	0.78	40.42	-10.7564	0.0655	-0.1097
1031	SLU 23	-0.33	0.74	40.48	-10.7691	0.0654	-0.1152
1031	SLU 24	-0.32	0.8	41.25	-10.9693	0.067	-0.1117
1031	SLU 25	-0.33	0.78	41.29	-10.9769	0.0669	-0.115
1031	SLU 26	-0.33	0.75	40.96	-10.8909	0.0662	-0.1148
1031	SLU 27	-0.32	0.81	41.73	-11.0911	0.0678	-0.1114
1031	SLU 28	-0.33	0.79	41.76	-11.0987	0.0677	-0.1147
1031	SLU 29	-0.32	0.8	41.37	-11	0.0671	-0.1091
1031	SLU 30	-0.32	0.77	41.41	-11.0076	0.0671	-0.1123
1031	SLU 31	-0.39	0.83	45.1	-11.9774	0.074	-0.1338
1031	SLU 32	-0.38	0.9	45.87	-12.1776	0.0755	-0.1303
1031	SLU 33	-0.39	0.88	45.9	-12.1852	0.0755	-0.1336
1031	SLU 34	-0.39	0.84	45.57	-12.0992	0.0748	-0.1334
1031	SLU 35	-0.38	0.91	46.34	-12.2994	0.0764	-0.13
1031	SLU 36	-0.38	0.88	46.38	-12.307	0.0763	-0.1333
1031	SLU 37	-0.37	0.89	45.98	-12.2083	0.0757	-0.1277
1031	SLU 38	-0.38	0.87	46.02	-12.2159	0.0756	-0.1309
1031	SLU 39	-0.39	0.91	47.01	-12.4826	0.0777	-0.1363
1031	SLU 40	-0.4	0.89	47.05	-12.4902	0.0777	-0.1396
1031	SLU 41	-0.39	0.92	47.49	-12.6044	0.0785	-0.136
1031	SLU 42	-0.4	0.9	47.52	-12.612	0.0785	-0.1392
1031	SLU 43	-0.34	0.76	45.04	-12.0352	0.0715	-0.1187
1031	SLU 44	-0.36	0.72	45.1	-12.0478	0.0714	-0.1241
1031	SLU 45	-0.35	0.78	45.87	-12.248	0.073	-0.1207
1031	SLU 46	-0.36	0.76	45.91	-12.2556	0.0729	-0.1239
1031	SLU 47	-0.36	0.73	45.58	-12.1696	0.0722	-0.1238
1031	SLU 48	-0.35	0.79	46.35	-12.3698	0.0738	-0.1203
1031	SLU 49	-0.36	0.77	46.38	-12.3774	0.0737	-0.1236
1031	SLU 50	-0.34	0.78	45.99	-12.2787	0.0731	-0.118
1031	SLU 51	-0.35	0.75	46.03	-12.2863	0.0731	-0.1213
1031	SLU 52	-0.41	0.82	49.72	-13.2562	0.08	-0.1427
1031	SLU 53	-0.4	0.88	50.49	-13.4564	0.0815	-0.1393
1031	SLU 54	-0.41	0.86	50.52	-13.464	0.0815	-0.1425
1031	SLU 55	-0.41	0.83	50.19	-13.3779	0.0808	-0.1424
1031	SLU 56	-0.4	0.89	50.96	-13.5782	0.0824	-0.1389
1031	SLU 57	-0.41	0.87	51	-13.5857	0.0823	-0.1422
1031	SLU 58	-0.39	0.87	50.61	-13.4871	0.0817	-0.1366
1031	SLU 59	-0.4	0.85	50.64	-13.4947	0.0816	-0.1399
1031	SLU 60	-0.42	0.89	51.63	-13.7614	0.0837	-0.1452
1031	SLU 61	-0.43	0.87	51.67	-13.769	0.0837	-0.1485
1031	SLU 62	-0.42	0.9	52.11	-13.8832	0.0845	-0.1449
1031	SLU 63	-0.43	0.88	52.15	-13.8908	0.0845	-0.1482
1031	SLU 64	-0.38	0.91	49.61	-13.221	0.0798	-0.1333
1031	SLU 65	-0.4	0.87	49.67	-13.2337	0.0797	-0.1387
1031	SLU 66	-0.39	0.94	50.44	-13.4339	0.0813	-0.1353
1031	SLU 67	-0.4	0.91	50.48	-13.4415	0.0813	-0.1385
1031	SLU 68	-0.4	0.88	50.14	-13.3555	0.0805	-0.1384
1031	SLU 69	-0.39	0.95	50.91	-13.5557	0.0821	-0.1349
1031	SLU 70	-0.4	0.92	50.95	-13.5633	0.0821	-0.1382
1031	SLU 71	-0.38	0.93	50.56	-13.4646	0.0815	-0.1326
1031	SLU 72	-0.39	0.91	50.6	-13.4722	0.0814	-0.1359
1031	SLU 73	-0.45	0.97	54.29	-14.442	0.0883	-0.1573
1031	SLU 74	-0.44	1.03	55.05	-14.6422	0.0899	-0.1539
1031	SLU 75	-0.45	1.01	55.09	-14.6498	0.0898	-0.1571
1031	SLU 76	-0.45	0.98	54.76	-14.5638	0.0891	-0.157
1031	SLU 77	-0.44	1.04	55.53	-14.764	0.0907	-0.1535
1031	SLU 78	-0.45	1.02	55.57	-14.7716	0.0906	-0.1568
1031	SLU 79	-0.44	1.02	55.17	-14.6729	0.09	-0.1512
1031	SLU 80	-0.45	1	55.21	-14.6805	0.0899	-0.1545
1031	SLU 81	-0.46	1.04	56.2	-14.9472	0.092	-0.1598
1031	SLU 82	-0.47	1.02	56.24	-14.9548	0.092	-0.1631
1031	SLU 83	-0.46	1.05	56.68	-15.069	0.0929	-0.1595
1031	SLU 84	-0.47	1.03	56.71	-15.0766	0.0928	-0.1628
1031	SLE RA 1	-0.29	0.67	37.16	-9.9094	0.0596	-0.0993
1031	SLE RA 2	-0.3	0.64	37.2	-9.9178	0.0595	-0.1029
1031	SLE RA 3	-0.29	0.68	37.71	-10.0513	0.0606	-0.1006
1031	SLE RA 4	-0.3	0.67	37.74	-10.0564	0.0605	-0.1028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1031	SLE RA 5	-0.3	0.65	37.51	-9.999	0.0601	-0.1027
1031	SLE RA 6	-0.29	0.69	38.03	-10.1325	0.0611	-0.1004
1031	SLE RA 7	-0.3	0.68	38.05	-10.1375	0.0611	-0.1026
1031	SLE RA 8	-0.29	0.68	37.79	-10.0718	0.0607	-0.0989
1031	SLE RA 9	-0.29	0.67	37.81	-10.0768	0.0606	-0.101
1031	SLE RA 10	-0.33	0.71	40.27	-10.7234	0.0652	-0.1153
1031	SLE RA 11	-0.33	0.75	40.79	-10.8569	0.0663	-0.113
1031	SLE RA 12	-0.33	0.73	40.81	-10.8619	0.0662	-0.1152
1031	SLE RA 13	-0.33	0.71	40.59	-10.8046	0.0658	-0.1151
1031	SLE RA 14	-0.33	0.75	41.1	-10.938	0.0668	-0.1128
1031	SLE RA 15	-0.33	0.74	41.13	-10.9431	0.0668	-0.115
1031	SLE RA 16	-0.32	0.74	40.87	-10.8773	0.0664	-0.1113
1031	SLE RA 17	-0.33	0.73	40.89	-10.8824	0.0663	-0.1134
1031	SLE RA 18	-0.34	0.76	41.55	-11.0602	0.0677	-0.117
1031	SLE RA 19	-0.34	0.74	41.58	-11.0653	0.0677	-0.1192
1031	SLE RA 20	-0.34	0.76	41.87	-11.1414	0.0683	-0.1168
1031	SLE RA 21	-0.34	0.75	41.89	-11.1464	0.0682	-0.119
1031	SLE FR 1	-0.29	0.67	37.16	-9.9094	0.0596	-0.0993
1031	SLE FR 2	-0.29	0.66	37.16	-9.9111	0.0596	-0.1
1031	SLE FR 3	-0.29	0.67	37.28	-9.9419	0.0598	-0.0992
1031	SLE FR 4	-0.3	0.69	38.48	-10.2563	0.062	-0.1053
1031	SLE FR 5	-0.3	0.7	38.6	-10.2871	0.0622	-0.1045
1031	SLE FR 6	-0.31	0.71	39.35	-10.4848	0.0637	-0.1082
1031	SLE QP 1	-0.29	0.67	37.16	-9.9094	0.0596	-0.0993
1031	SLE QP 2	-0.3	0.69	38.47	-10.2546	0.062	-0.1046
1031	SLD 1	3.41	1.48	40.7	-11.0739	0.0749	1.1949
1031	SLD 2	3.06	1.41	40.59	-11.0439	0.0747	1.0702
1031	SLD 3	3.72	0.43	41.55	-11.2841	0.0764	1.3018
1031	SLD 4	3.36	0.36	41.45	-11.2541	0.0762	1.1771
1031	SLD 5	0.41	2.52	37.86	-10.187	0.0636	0.1451
1031	SLD 6	0.18	2.48	37.79	-10.1674	0.0635	0.0636
1031	SLD 7	1.43	-0.96	40.72	-10.8875	0.0687	0.5015
1031	SLD 8	1.2	-1	40.65	-10.8679	0.0685	0.4201
1031	SLD 9	-1.8	2.39	36.3	-9.6413	0.0555	-0.6293
1031	SLD 10	-2.04	2.34	36.23	-9.6217	0.0554	-0.7108
1031	SLD 11	-0.78	-1.09	39.16	-10.3419	0.0605	-0.2728
1031	SLD 12	-1.02	-1.14	39.09	-10.3223	0.0604	-0.3543
1031	SLD 13	-3.97	1.02	35.5	-9.2552	0.0478	-1.3864
1031	SLD 14	-4.32	0.95	35.4	-9.2252	0.0477	-1.511
1031	SLD 15	-3.66	-0.02	36.36	-9.4653	0.0493	-1.2794
1031	SLD 16	-4.02	-0.09	36.25	-9.4353	0.0492	-1.4041
1031	SLV 1	8.39	2.48	43.71	-12.1829	0.0922	2.9355
1031	SLV 2	7.56	2.32	43.46	-12.113	0.0919	2.6451
1031	SLV 3	9.11	0.12	45.65	-12.6607	0.0957	3.185
1031	SLV 4	8.27	-0.04	45.41	-12.5908	0.0953	2.8946
1031	SLV 5	1.36	4.84	37.14	-10.1205	0.0659	0.4787
1031	SLV 6	0.83	4.74	36.98	-10.0756	0.0657	0.2921
1031	SLV 7	3.75	-3.03	43.62	-11.713	0.0774	1.3105
1031	SLV 8	3.21	-3.14	43.46	-11.6681	0.0772	1.1239
1031	SLV 9	-3.82	4.52	33.49	-8.8412	0.0469	-1.3331
1031	SLV 10	-4.35	4.42	33.33	-8.7963	0.0467	-1.5197
1031	SLV 11	-1.43	-3.35	39.97	-10.4337	0.0584	-0.5013
1031	SLV 12	-1.97	-3.45	39.81	-10.3888	0.0581	-0.6879
1031	SLV 13	-8.88	1.43	31.54	-7.9185	0.0287	-3.1038
1031	SLV 14	-9.71	1.27	31.3	-7.8486	0.0284	-3.3942
1031	SLV 15	-8.16	-0.94	33.49	-8.3962	0.0322	-2.8543
1031	SLV 16	-9	-1.1	33.24	-8.3264	0.0318	-3.1447
1031	CRTFP Ux+	0	0	0	0	0	0
1031	CRTFP Ux-	0	0	0	0	0	0
1031	CRTFP Uy+	0	0	0	0	0	0
1031	CRTFP Uy-	0	0	0	0	0	0
1032	SLU 1	-0.24	0.65	34.15	-8.2095	0.0548	-0.0816
1032	SLU 2	-0.25	0.61	34.22	-8.2221	0.0547	-0.0872
1032	SLU 3	-0.24	0.68	34.94	-8.3871	0.0562	-0.0833
1032	SLU 4	-0.25	0.65	34.98	-8.3947	0.0561	-0.0866
1032	SLU 5	-0.25	0.62	34.67	-8.324	0.0554	-0.0866
1032	SLU 6	-0.24	0.69	35.39	-8.489	0.0569	-0.0827
1032	SLU 7	-0.25	0.67	35.43	-8.4966	0.0569	-0.0861
1032	SLU 8	-0.23	0.67	35.06	-8.4132	0.0563	-0.0804
1032	SLU 9	-0.24	0.65	35.09	-8.4208	0.0562	-0.0838
1032	SLU 10	-0.3	0.71	38.58	-9.2341	0.0629	-0.1048
1032	SLU 11	-0.29	0.77	39.3	-9.3991	0.0644	-0.1008
1032	SLU 12	-0.3	0.75	39.34	-9.4067	0.0643	-0.1042
1032	SLU 13	-0.3	0.72	39.03	-9.336	0.0636	-0.1042
1032	SLU 14	-0.29	0.78	39.75	-9.501	0.0651	-0.1003
1032	SLU 15	-0.3	0.76	39.79	-9.5086	0.0651	-0.1036
1032	SLU 16	-0.28	0.77	39.42	-9.4252	0.0645	-0.098
1032	SLU 17	-0.29	0.75	39.46	-9.4328	0.0644	-0.1014
1032	SLU 18	-0.31	0.79	40.38	-9.6552	0.0665	-0.1067
1032	SLU 19	-0.32	0.77	40.42	-9.6628	0.0664	-0.1101
1032	SLU 20	-0.31	0.8	40.84	-9.757	0.0672	-0.1061
1032	SLU 21	-0.32	0.78	40.87	-9.7646	0.0672	-0.1095
1032	SLU 22	-0.27	0.8	38.47	-9.202	0.0627	-0.095
1032	SLU 23	-0.29	0.77	38.54	-9.2146	0.0626	-0.1006
1032	SLU 24	-0.28	0.83	39.26	-9.3797	0.0641	-0.0967
1032	SLU 25	-0.29	0.81	39.3	-9.3872	0.0641	-0.1
1032	SLU 26	-0.29	0.78	38.99	-9.3165	0.0634	-0.1
1032	SLU 27	-0.28	0.84	39.71	-9.4815	0.0649	-0.0961
1032	SLU 28	-0.29	0.82	39.75	-9.4891	0.0648	-0.0995
1032	SLU 29	-0.27	0.82	39.38	-9.4057	0.0642	-0.0939
1032	SLU 30	-0.28	0.8	39.42	-9.4133	0.0642	-0.0972
1032	SLU 31	-0.34	0.87	42.9	-10.2266	0.0708	-0.1182
1032	SLU 32	-0.33	0.93	43.62	-10.3917	0.0723	-0.1143
1032	SLU 33	-0.34	0.91	43.66	-10.3992	0.0722	-0.1176
1032	SLU 34	-0.34	0.88	43.35	-10.3285	0.0716	-0.1176
1032	SLU 35	-0.33	0.94	44.08	-10.4935	0.0731	-0.1137
1032	SLU 36	-0.34	0.92	44.11	-10.5011	0.073	-0.1171

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1032	SLU 37	-0.32	0.92	43.74	-10.4177	0.0724	-0.1114
1032	SLU 38	-0.33	0.9	43.78	-10.4253	0.0724	-0.1148
1032	SLU 39	-0.35	0.94	44.71	-10.6477	0.0744	-0.1201
1032	SLU 40	-0.36	0.92	44.74	-10.6553	0.0744	-0.1235
1032	SLU 41	-0.34	0.95	45.16	-10.7496	0.0752	-0.1195
1032	SLU 42	-0.35	0.93	45.2	-10.7571	0.0751	-0.1229
1032	SLU 43	-0.29	0.79	42.92	-10.332	0.0685	-0.1014
1032	SLU 44	-0.31	0.76	42.98	-10.3447	0.0684	-0.107
1032	SLU 45	-0.3	0.82	43.7	-10.5097	0.0699	-0.1031
1032	SLU 46	-0.31	0.8	43.74	-10.5173	0.0698	-0.1065
1032	SLU 47	-0.31	0.77	43.43	-10.4465	0.0691	-0.1065
1032	SLU 48	-0.3	0.83	44.16	-10.6115	0.0706	-0.1026
1032	SLU 49	-0.31	0.81	44.2	-10.6191	0.0706	-0.1059
1032	SLU 50	-0.29	0.81	43.82	-10.5357	0.07	-0.1003
1032	SLU 51	-0.3	0.79	43.86	-10.5433	0.0699	-0.1037
1032	SLU 52	-0.36	0.85	47.34	-11.3567	0.0766	-0.1246
1032	SLU 53	-0.35	0.92	48.07	-11.5217	0.0781	-0.1207
1032	SLU 54	-0.36	0.89	48.11	-11.5293	0.078	-0.1241
1032	SLU 55	-0.36	0.86	47.8	-11.4585	0.0773	-0.1241
1032	SLU 56	-0.35	0.93	48.52	-11.6235	0.0788	-0.1201
1032	SLU 57	-0.36	0.9	48.56	-11.6311	0.0788	-0.1235
1032	SLU 58	-0.34	0.91	48.18	-11.5477	0.0782	-0.1179
1032	SLU 59	-0.35	0.89	48.22	-11.5553	0.0781	-0.1213
1032	SLU 60	-0.36	0.93	49.15	-11.7777	0.0802	-0.1266
1032	SLU 61	-0.37	0.91	49.19	-11.7853	0.0801	-0.1299
1032	SLU 62	-0.36	0.94	49.6	-11.8796	0.0809	-0.126
1032	SLU 63	-0.37	0.92	49.64	-11.8872	0.0809	-0.1294
1032	SLU 64	-0.33	0.95	47.24	-11.3245	0.0764	-0.1148
1032	SLU 65	-0.35	0.91	47.3	-11.3372	0.0763	-0.1205
1032	SLU 66	-0.34	0.97	48.03	-11.5022	0.0778	-0.1165
1032	SLU 67	-0.35	0.95	48.07	-11.5098	0.0778	-0.1199
1032	SLU 68	-0.35	0.92	47.76	-11.439	0.0771	-0.1199
1032	SLU 69	-0.33	0.98	48.48	-11.6041	0.0786	-0.116
1032	SLU 70	-0.34	0.96	48.52	-11.6116	0.0785	-0.1193
1032	SLU 71	-0.33	0.97	48.14	-11.5282	0.0779	-0.1137
1032	SLU 72	-0.34	0.95	48.18	-11.5358	0.0779	-0.1171
1032	SLU 73	-0.4	1.01	51.67	-12.3492	0.0845	-0.138
1032	SLU 74	-0.39	1.07	52.39	-12.5142	0.086	-0.1341
1032	SLU 75	-0.4	1.05	52.43	-12.5218	0.086	-0.1375
1032	SLU 76	-0.4	1.02	52.12	-12.451	0.0853	-0.1375
1032	SLU 77	-0.38	1.08	52.84	-12.6161	0.0868	-0.1336
1032	SLU 78	-0.39	1.06	52.88	-12.6236	0.0867	-0.1369
1032	SLU 79	-0.38	1.06	52.5	-12.5402	0.0861	-0.1313
1032	SLU 80	-0.39	1.04	52.54	-12.5478	0.0861	-0.1347
1032	SLU 81	-0.4	1.09	53.47	-12.7703	0.0881	-0.14
1032	SLU 82	-0.41	1.06	53.51	-12.7778	0.0881	-0.1433
1032	SLU 83	-0.4	1.1	53.92	-12.8721	0.0889	-0.1394
1032	SLU 84	-0.41	1.07	53.96	-12.8797	0.0888	-0.1428
1032	SLE RA 1	-0.25	0.69	35.39	-8.493	0.0571	-0.0854
1032	SLE RA 2	-0.26	0.67	35.43	-8.5015	0.057	-0.0891
1032	SLE RA 3	-0.25	0.71	35.91	-8.6115	0.058	-0.0865
1032	SLE RA 4	-0.26	0.7	35.94	-8.6166	0.0579	-0.0888
1032	SLE RA 5	-0.26	0.68	35.73	-8.5694	0.0575	-0.0888
1032	SLE RA 6	-0.25	0.72	36.21	-8.6794	0.0585	-0.0861
1032	SLE RA 7	-0.25	0.7	36.24	-8.6845	0.0584	-0.0884
1032	SLE RA 8	-0.24	0.71	35.99	-8.6288	0.0581	-0.0846
1032	SLE RA 9	-0.25	0.69	36.02	-8.6339	0.058	-0.0869
1032	SLE RA 10	-0.29	0.74	38.34	-9.1761	0.0624	-0.1009
1032	SLE RA 11	-0.28	0.78	38.82	-9.2862	0.0634	-0.0982
1032	SLE RA 12	-0.29	0.76	38.85	-9.2912	0.0634	-0.1005
1032	SLE RA 13	-0.29	0.74	38.64	-9.244	0.0629	-0.1005
1032	SLE RA 14	-0.28	0.78	39.12	-9.3541	0.0639	-0.0979
1032	SLE RA 15	-0.29	0.77	39.15	-9.3591	0.0639	-0.1001
1032	SLE RA 16	-0.28	0.77	38.9	-9.3035	0.0635	-0.0964
1032	SLE RA 17	-0.28	0.76	38.92	-9.3086	0.0635	-0.0986
1032	SLE RA 18	-0.29	0.79	39.54	-9.4569	0.0648	-0.1021
1032	SLE RA 19	-0.3	0.77	39.57	-9.4619	0.0648	-0.1044
1032	SLE RA 20	-0.29	0.79	39.84	-9.5248	0.0653	-0.1018
1032	SLE RA 21	-0.3	0.78	39.87	-9.5298	0.0653	-0.104
1032	SLE FR 1	-0.25	0.69	35.39	-8.493	0.0571	-0.0854
1032	SLE FR 2	-0.25	0.69	35.4	-8.4947	0.057	-0.0861
1032	SLE FR 3	-0.25	0.7	35.51	-8.5202	0.0573	-0.0852
1032	SLE FR 4	-0.26	0.72	36.64	-8.7839	0.0594	-0.0912
1032	SLE FR 5	-0.26	0.72	36.75	-8.8093	0.0596	-0.0903
1032	SLE FR 6	-0.27	0.74	37.46	-8.975	0.0609	-0.0938
1032	SLE QP 1	-0.25	0.69	35.39	-8.493	0.0571	-0.0854
1032	SLE QP 2	-0.26	0.72	36.63	-8.7822	0.0594	-0.0904
1032	SLD 1	3.47	1.47	38.43	-9.4946	0.0746	1.2144
1032	SLD 2	3.11	1.41	38.33	-9.468	0.0744	1.0892
1032	SLD 3	3.78	0.44	39.25	-9.6796	0.0763	1.3216
1032	SLD 4	3.42	0.39	39.15	-9.653	0.0761	1.1965
1032	SLD 5	0.46	2.5	35.96	-8.72	0.0614	0.1604
1032	SLD 6	0.22	2.47	35.89	-8.7026	0.0612	0.0786
1032	SLD 7	1.48	-0.9	38.67	-9.3367	0.0671	0.518
1032	SLD 8	1.25	-0.94	38.6	-9.3193	0.067	0.4362
1032	SLD 9	-1.77	2.38	34.66	-8.2451	0.0518	-0.6171
1032	SLD 10	-2	2.35	34.6	-8.2277	0.0517	-0.6989
1032	SLD 11	-0.74	-1.03	37.38	-8.8617	0.0575	-0.2595
1032	SLD 12	-0.98	-1.06	37.31	-8.8443	0.0574	-0.3413
1032	SLD 13	-3.94	1.05	34.12	-7.9114	0.0426	-1.3773
1032	SLD 14	-4.3	1	34.02	-7.8848	0.0425	-1.5025
1032	SLD 15	-3.63	0.03	34.94	-8.0964	0.0444	-1.27
1032	SLD 16	-3.99	-0.02	34.84	-8.0698	0.0442	-1.3952
1032	SLV 1	8.46	2.42	40.87	-10.4588	0.095	2.962
1032	SLV 2	7.63	2.3	40.64	-10.3968	0.0946	2.6705
1032	SLV 3	9.18	0.11	42.72	-10.8796	0.099	3.2124
1032	SLV 4	8.35	-0.01	42.49	-10.8176	0.0986	2.9209

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1032	SLV 5	1.41	4.76	35.14	-8.6576	0.0642	0.4955
1032	SLV 6	0.87	4.69	34.99	-8.6177	0.0639	0.3082
1032	SLV 7	3.8	-2.95	41.31	-10.0603	0.0773	1.3301
1032	SLV 8	3.27	-3.03	41.16	-10.0204	0.0771	1.1427
1032	SLV 9	-3.79	4.47	32.11	-7.544	0.0417	-1.3236
1032	SLV 10	-4.33	4.39	31.96	-7.5041	0.0415	-1.5109
1032	SLV 11	-1.4	-3.24	38.28	-8.9467	0.0549	-0.489
1032	SLV 12	-1.93	-3.32	38.13	-8.9068	0.0546	-0.6764
1032	SLV 13	-8.87	1.45	30.78	-6.7468	0.0202	-3.1017
1032	SLV 14	-9.7	1.33	30.55	-6.6848	0.0198	-3.3932
1032	SLV 15	-8.15	-0.86	32.63	-7.1676	0.0241	-2.8514
1032	SLV 16	-8.99	-0.98	32.4	-7.1056	0.0237	-3.1429
1032	CRTFP Ux+	0	0	0	0	0	0
1032	CRTFP Ux-	0	0	0	0	0	0
1032	CRTFP Uy+	0	0	0	0	0	0
1032	CRTFP Uy-	0	0	0	0	0	0
1033	SLU 1	-0.2	0.67	32.65	-7.0749	0.0444	-0.0678
1033	SLU 2	-0.21	0.64	32.72	-7.0877	0.0443	-0.0736
1033	SLU 3	-0.2	0.7	33.4	-7.2235	0.0455	-0.0692
1033	SLU 4	-0.21	0.68	33.45	-7.2312	0.0454	-0.0727
1033	SLU 5	-0.21	0.65	33.15	-7.1733	0.0449	-0.0728
1033	SLU 6	-0.2	0.71	33.84	-7.309	0.0461	-0.0684
1033	SLU 7	-0.21	0.69	33.88	-7.3167	0.046	-0.0719
1033	SLU 8	-0.19	0.69	33.52	-7.246	0.0455	-0.0663
1033	SLU 9	-0.2	0.67	33.56	-7.2537	0.0455	-0.0697
1033	SLU 10	-0.26	0.74	36.86	-7.9357	0.0509	-0.0901
1033	SLU 11	-0.25	0.8	37.54	-8.0714	0.0522	-0.0857
1033	SLU 12	-0.26	0.78	37.58	-8.0792	0.0521	-0.0892
1033	SLU 13	-0.26	0.75	37.29	-8.0213	0.0515	-0.0893
1033	SLU 14	-0.25	0.81	37.97	-8.157	0.0527	-0.0849
1033	SLU 15	-0.26	0.79	38.01	-8.1647	0.0527	-0.0884
1033	SLU 16	-0.24	0.79	37.65	-8.094	0.0522	-0.0828
1033	SLU 17	-0.25	0.77	37.7	-8.1017	0.0522	-0.0862
1033	SLU 18	-0.26	0.81	38.57	-8.2863	0.0539	-0.0914
1033	SLU 19	-0.27	0.79	38.61	-8.294	0.0538	-0.0949
1033	SLU 20	-0.26	0.82	39	-8.3718	0.0545	-0.0906
1033	SLU 21	-0.27	0.8	39.04	-8.3796	0.0544	-0.0941
1033	SLU 22	-0.23	0.83	36.76	-7.9064	0.0508	-0.08
1033	SLU 23	-0.25	0.79	36.83	-7.9193	0.0507	-0.0858
1033	SLU 24	-0.23	0.85	37.51	-8.055	0.0519	-0.0814
1033	SLU 25	-0.24	0.83	37.55	-8.0627	0.0519	-0.0848
1033	SLU 26	-0.25	0.8	37.26	-8.0048	0.0513	-0.085
1033	SLU 27	-0.23	0.86	37.94	-8.1405	0.0525	-0.0806
1033	SLU 28	-0.24	0.84	37.98	-8.1483	0.0524	-0.0841
1033	SLU 29	-0.23	0.85	37.62	-8.0775	0.052	-0.0784
1033	SLU 30	-0.24	0.83	37.66	-8.0852	0.0519	-0.0819
1033	SLU 31	-0.29	0.89	40.96	-8.7673	0.0574	-0.1023
1033	SLU 32	-0.28	0.95	41.65	-8.903	0.0586	-0.0979
1033	SLU 33	-0.29	0.93	41.69	-8.9107	0.0585	-0.1013
1033	SLU 34	-0.29	0.9	41.4	-8.8528	0.058	-0.1015
1033	SLU 35	-0.28	0.96	42.08	-8.9885	0.0592	-0.0971
1033	SLU 36	-0.29	0.94	42.12	-8.9962	0.0591	-0.1005
1033	SLU 37	-0.27	0.95	41.76	-8.9255	0.0586	-0.0949
1033	SLU 38	-0.28	0.93	41.8	-8.9332	0.0586	-0.0984
1033	SLU 39	-0.3	0.97	42.67	-9.1178	0.0603	-0.1036
1033	SLU 40	-0.31	0.95	42.71	-9.1255	0.0603	-0.107
1033	SLU 41	-0.3	0.98	43.1	-9.2033	0.0609	-0.1028
1033	SLU 42	-0.31	0.96	43.14	-9.2111	0.0609	-0.1062
1033	SLU 43	-0.24	0.82	41.04	-8.9122	0.0555	-0.084
1033	SLU 44	-0.26	0.79	41.11	-8.9251	0.0554	-0.0898
1033	SLU 45	-0.25	0.85	41.79	-9.0608	0.0566	-0.0854
1033	SLU 46	-0.26	0.83	41.83	-9.0686	0.0565	-0.0889
1033	SLU 47	-0.26	0.8	41.54	-9.0107	0.056	-0.089
1033	SLU 48	-0.24	0.86	42.23	-9.1464	0.0572	-0.0846
1033	SLU 49	-0.25	0.84	42.27	-9.1541	0.0571	-0.0881
1033	SLU 50	-0.24	0.84	41.91	-9.0833	0.0566	-0.0825
1033	SLU 51	-0.25	0.82	41.95	-9.0911	0.0566	-0.0859
1033	SLU 52	-0.31	0.89	45.25	-9.7731	0.062	-0.1063
1033	SLU 53	-0.29	0.95	45.93	-9.9088	0.0633	-0.1019
1033	SLU 54	-0.3	0.93	45.97	-9.9165	0.0632	-0.1053
1033	SLU 55	-0.3	0.9	45.68	-9.8586	0.0626	-0.1055
1033	SLU 56	-0.29	0.96	46.36	-9.9944	0.0638	-0.1011
1033	SLU 57	-0.3	0.94	46.4	-10.0021	0.0638	-0.1046
1033	SLU 58	-0.29	0.94	46.04	-9.9313	0.0633	-0.0989
1033	SLU 59	-0.3	0.92	46.08	-9.939	0.0633	-0.1024
1033	SLU 60	-0.31	0.96	46.95	-10.1236	0.065	-0.1076
1033	SLU 61	-0.32	0.94	47	-10.1314	0.0649	-0.1111
1033	SLU 62	-0.31	0.97	47.39	-10.2092	0.0656	-0.1068
1033	SLU 63	-0.32	0.95	47.43	-10.2169	0.0655	-0.1103
1033	SLU 64	-0.28	0.98	45.15	-9.7438	0.0619	-0.0962
1033	SLU 65	-0.29	0.94	45.22	-9.7566	0.0618	-0.102
1033	SLU 66	-0.28	1	45.9	-9.8923	0.063	-0.0976
1033	SLU 67	-0.29	0.98	45.94	-9.9001	0.063	-0.101
1033	SLU 68	-0.29	0.95	45.65	-9.8422	0.0624	-0.1012
1033	SLU 69	-0.28	1.01	46.33	-9.9779	0.0636	-0.0968
1033	SLU 70	-0.29	0.99	46.37	-9.9856	0.0635	-0.1002
1033	SLU 71	-0.27	1	46.01	-9.9149	0.0631	-0.0946
1033	SLU 72	-0.28	0.98	46.05	-9.9226	0.063	-0.0981
1033	SLU 73	-0.34	1.04	49.35	-10.6046	0.0685	-0.1185
1033	SLU 74	-0.33	1.1	50.04	-10.7403	0.0697	-0.114
1033	SLU 75	-0.34	1.08	50.08	-10.7481	0.0696	-0.1175
1033	SLU 76	-0.34	1.05	49.79	-10.6902	0.0691	-0.1177
1033	SLU 77	-0.33	1.11	50.47	-10.8259	0.0703	-0.1133
1033	SLU 78	-0.34	1.09	50.51	-10.8336	0.0702	-0.1167
1033	SLU 79	-0.32	1.1	50.15	-10.7628	0.0697	-0.1111
1033	SLU 80	-0.33	1.08	50.19	-10.7706	0.0697	-0.1146
1033	SLU 81	-0.35	1.12	51.06	-10.9552	0.0714	-0.1197

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1033	SLU 82	-0.36	1.1	51.1	-10.9629	0.0714	-0.1232
1033	SLU 83	-0.34	1.13	51.49	-11.0407	0.072	-0.119
1033	SLU 84	-0.35	1.11	51.53	-11.0484	0.072	-0.1224
1033	SLE RA 1	-0.21	0.72	33.83	-7.3124	0.0462	-0.0713
1033	SLE RA 2	-0.22	0.69	33.87	-7.321	0.0461	-0.0752
1033	SLE RA 3	-0.21	0.73	34.33	-7.4115	0.0469	-0.0722
1033	SLE RA 4	-0.22	0.72	34.35	-7.4167	0.0469	-0.0745
1033	SLE RA 5	-0.22	0.7	34.16	-7.3781	0.0465	-0.0747
1033	SLE RA 6	-0.21	0.74	34.62	-7.4685	0.0473	-0.0717
1033	SLE RA 7	-0.21	0.73	34.64	-7.4737	0.0473	-0.074
1033	SLE RA 8	-0.2	0.73	34.4	-7.4265	0.047	-0.0703
1033	SLE RA 9	-0.21	0.72	34.43	-7.4317	0.0469	-0.0726
1033	SLE RA 10	-0.25	0.76	36.63	-7.8864	0.0506	-0.0862
1033	SLE RA 11	-0.24	0.8	37.09	-7.9768	0.0514	-0.0832
1033	SLE RA 12	-0.25	0.79	37.11	-7.982	0.0514	-0.0855
1033	SLE RA 13	-0.25	0.77	36.92	-7.9434	0.051	-0.0856
1033	SLE RA 14	-0.24	0.81	37.37	-8.0339	0.0518	-0.0827
1033	SLE RA 15	-0.25	0.79	37.4	-8.039	0.0517	-0.085
1033	SLE RA 16	-0.23	0.8	37.16	-7.9918	0.0514	-0.0813
1033	SLE RA 17	-0.24	0.78	37.19	-7.997	0.0514	-0.0836
1033	SLE RA 18	-0.25	0.81	37.77	-8.12	0.0525	-0.087
1033	SLE RA 19	-0.26	0.8	37.8	-8.1252	0.0525	-0.0893
1033	SLE RA 20	-0.25	0.82	38.06	-8.1771	0.0529	-0.0865
1033	SLE RA 21	-0.26	0.8	38.08	-8.1822	0.0529	-0.0888
1033	SLE FR 1	-0.21	0.72	33.83	-7.3124	0.0462	-0.0713
1033	SLE FR 2	-0.21	0.71	33.84	-7.3142	0.0462	-0.0721
1033	SLE FR 3	-0.21	0.72	33.94	-7.3353	0.0463	-0.0711
1033	SLE FR 4	-0.22	0.74	35.02	-7.5564	0.0481	-0.0768
1033	SLE FR 5	-0.22	0.75	35.12	-7.5775	0.0483	-0.0758
1033	SLE FR 6	-0.23	0.76	35.8	-7.7162	0.0494	-0.0792
1033	SLE QP 1	-0.21	0.72	33.83	-7.3124	0.0462	-0.0713
1033	SLE QP 2	-0.22	0.74	35.01	-7.5547	0.0481	-0.076
1033	SLD 1	3.52	1.46	36.33	-8.1213	0.0645	1.2332
1033	SLD 2	3.16	1.42	36.24	-8.0981	0.0644	1.1077
1033	SLD 3	3.83	0.46	37.1	-8.2813	0.0661	1.3408
1033	SLD 4	3.47	0.42	37.01	-8.2581	0.0659	1.2153
1033	SLD 5	0.5	2.48	34.25	-7.4861	0.0507	0.1758
1033	SLD 6	0.26	2.46	34.19	-7.4709	0.0506	0.0937
1033	SLD 7	1.53	-0.85	36.83	-8.0195	0.0559	0.5344
1033	SLD 8	1.29	-0.87	36.76	-8.0044	0.0558	0.4523
1033	SLD 9	-1.73	2.36	33.26	-7.1051	0.0404	-0.6044
1033	SLD 10	-1.97	2.34	33.19	-7.0899	0.0403	-0.6865
1033	SLD 11	-0.7	-0.97	35.83	-7.6385	0.0456	-0.2458
1033	SLD 12	-0.94	-0.99	35.77	-7.6234	0.0455	-0.3278
1033	SLD 13	-3.91	1.07	33.01	-6.8513	0.0303	-1.3673
1033	SLD 14	-4.27	1.03	32.92	-6.8281	0.0301	-1.4929
1033	SLD 15	-3.6	0.07	33.78	-7.0114	0.0318	-1.2597
1033	SLD 16	-3.96	0.03	33.69	-6.9881	0.0317	-1.3853
1033	SLV 1	8.53	2.37	38.13	-8.8884	0.0866	2.9869
1033	SLV 2	7.7	2.29	37.91	-8.8343	0.0863	2.6945
1033	SLV 3	9.25	0.11	39.88	-9.2528	0.0902	3.238
1033	SLV 4	8.42	0.02	39.66	-9.1987	0.0898	2.9455
1033	SLV 5	1.46	4.68	33.32	-7.4114	0.0543	0.5122
1033	SLV 6	0.92	4.63	33.18	-7.3767	0.0541	0.3242
1033	SLV 7	3.86	-2.86	39.17	-8.6261	0.0662	1.349
1033	SLV 8	3.32	-2.92	39.03	-8.5913	0.066	1.1611
1033	SLV 9	-3.76	4.41	30.99	-6.5181	0.0302	-1.3132
1033	SLV 10	-4.3	4.35	30.85	-6.4834	0.03	-1.5011
1033	SLV 11	-1.36	-3.14	36.84	-7.7328	0.0421	-0.4763
1033	SLV 12	-1.9	-3.19	36.7	-7.698	0.0419	-0.6643
1033	SLV 13	-8.85	1.46	30.36	-5.9108	0.0064	-3.0976
1033	SLV 14	-9.69	1.38	30.14	-5.8567	0.006	-3.39
1033	SLV 15	-8.13	-0.8	32.11	-6.2752	0.0099	-2.8465
1033	SLV 16	-8.97	-0.88	31.89	-6.2211	0.0096	-3.139
1033	CRTFP Ux+	0	0	0	0	0	0
1033	CRTFP Ux-	0	0	0	0	0	0
1033	CRTFP Uy+	0	0	0	0	0	0
1033	CRTFP Uy-	0	0	0	0	0	0
1034	SLU 1	-0.16	0.7	31.55	-6.2707	0.0291	-0.0537
1034	SLU 2	-0.17	0.66	31.62	-6.2839	0.029	-0.0597
1034	SLU 3	-0.16	0.72	32.27	-6.3989	0.0298	-0.0548
1034	SLU 4	-0.17	0.7	32.31	-6.4068	0.0298	-0.0583
1034	SLU 5	-0.17	0.67	32.03	-6.3582	0.0294	-0.0587
1034	SLU 6	-0.16	0.73	32.69	-6.4732	0.0301	-0.0537
1034	SLU 7	-0.17	0.72	32.73	-6.4811	0.0301	-0.0573
1034	SLU 8	-0.15	0.72	32.38	-6.4194	0.0298	-0.0517
1034	SLU 9	-0.16	0.7	32.42	-6.4273	0.0297	-0.0553
1034	SLU 10	-0.22	0.77	35.59	-7.0151	0.0335	-0.075
1034	SLU 11	-0.2	0.83	36.24	-7.1301	0.0343	-0.07
1034	SLU 12	-0.21	0.81	36.28	-7.138	0.0342	-0.0736
1034	SLU 13	-0.21	0.78	36	-7.0894	0.0338	-0.074
1034	SLU 14	-0.2	0.84	36.66	-7.2044	0.0346	-0.069
1034	SLU 15	-0.21	0.82	36.7	-7.2123	0.0346	-0.0726
1034	SLU 16	-0.19	0.82	36.35	-7.1506	0.0342	-0.067
1034	SLU 17	-0.2	0.8	36.39	-7.1585	0.0342	-0.0706
1034	SLU 18	-0.22	0.84	37.22	-7.3153	0.0354	-0.0755
1034	SLU 19	-0.23	0.82	37.26	-7.3232	0.0354	-0.0791
1034	SLU 20	-0.22	0.85	37.64	-7.3896	0.0358	-0.0745
1034	SLU 21	-0.23	0.83	37.68	-7.3975	0.0358	-0.0781
1034	SLU 22	-0.19	0.85	35.49	-6.9881	0.0333	-0.0645
1034	SLU 23	-0.2	0.82	35.56	-7.0013	0.0333	-0.0705
1034	SLU 24	-0.19	0.88	36.21	-7.1163	0.034	-0.0656
1034	SLU 25	-0.2	0.86	36.26	-7.1242	0.034	-0.0691
1034	SLU 26	-0.2	0.83	35.98	-7.0756	0.0336	-0.0695
1034	SLU 27	-0.19	0.89	36.63	-7.1906	0.0344	-0.0645
1034	SLU 28	-0.2	0.87	36.67	-7.1985	0.0344	-0.0681
1034	SLU 29	-0.18	0.87	36.33	-7.1367	0.034	-0.0625

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1034	SLU 30	-0.19	0.85	36.37	-7.1446	0.034	-0.0661
1034	SLU 31	-0.25	0.92	39.53	-7.7325	0.0377	-0.0858
1034	SLU 32	-0.23	0.98	40.18	-7.8475	0.0385	-0.0808
1034	SLU 33	-0.24	0.96	40.22	-7.8554	0.0385	-0.0844
1034	SLU 34	-0.25	0.93	39.95	-7.8068	0.0381	-0.0848
1034	SLU 35	-0.23	0.99	40.6	-7.9218	0.0389	-0.0798
1034	SLU 36	-0.24	0.97	40.64	-7.9297	0.0388	-0.0834
1034	SLU 37	-0.23	0.98	40.29	-7.868	0.0385	-0.0778
1034	SLU 38	-0.24	0.96	40.34	-7.8758	0.0384	-0.0814
1034	SLU 39	-0.25	1	41.16	-8.0327	0.0397	-0.0864
1034	SLU 40	-0.26	0.98	41.2	-8.0406	0.0397	-0.0899
1034	SLU 41	-0.25	1.01	41.58	-8.107	0.04	-0.0853
1034	SLU 42	-0.26	0.99	41.62	-8.1149	0.04	-0.0889
1034	SLU 43	-0.19	0.85	39.66	-7.906	0.0363	-0.0661
1034	SLU 44	-0.21	0.82	39.73	-7.9191	0.0363	-0.0721
1034	SLU 45	-0.2	0.88	40.38	-8.0342	0.0371	-0.0672
1034	SLU 46	-0.21	0.86	40.42	-8.0421	0.037	-0.0708
1034	SLU 47	-0.21	0.83	40.15	-7.9935	0.0366	-0.0711
1034	SLU 48	-0.19	0.89	40.8	-8.1085	0.0374	-0.0662
1034	SLU 49	-0.2	0.87	40.84	-8.1164	0.0374	-0.0697
1034	SLU 50	-0.19	0.87	40.49	-8.0546	0.037	-0.0641
1034	SLU 51	-0.2	0.85	40.54	-8.0625	0.037	-0.0677
1034	SLU 52	-0.25	0.92	43.7	-8.6504	0.0407	-0.0874
1034	SLU 53	-0.24	0.98	44.35	-8.7654	0.0415	-0.0824
1034	SLU 54	-0.25	0.96	44.39	-8.7733	0.0415	-0.086
1034	SLU 55	-0.25	0.93	44.12	-8.7247	0.0411	-0.0864
1034	SLU 56	-0.24	0.99	44.77	-8.8397	0.0419	-0.0814
1034	SLU 57	-0.25	0.97	44.81	-8.8476	0.0418	-0.085
1034	SLU 58	-0.23	0.98	44.46	-8.7858	0.0415	-0.0794
1034	SLU 59	-0.24	0.96	44.51	-8.7937	0.0415	-0.083
1034	SLU 60	-0.26	1	45.33	-8.9506	0.0427	-0.088
1034	SLU 61	-0.27	0.98	45.37	-8.9585	0.0427	-0.0916
1034	SLU 62	-0.25	1.01	45.75	-9.0249	0.0431	-0.087
1034	SLU 63	-0.26	0.99	45.79	-9.0328	0.043	-0.0905
1034	SLU 64	-0.22	1.01	43.6	-8.6234	0.0406	-0.077
1034	SLU 65	-0.24	0.98	43.67	-8.6365	0.0405	-0.0829
1034	SLU 66	-0.23	1.04	44.33	-8.7515	0.0413	-0.078
1034	SLU 67	-0.24	1.02	44.37	-8.7594	0.0413	-0.0816
1034	SLU 68	-0.24	0.99	44.09	-8.7108	0.0409	-0.0819
1034	SLU 69	-0.22	1.05	44.74	-8.8259	0.0417	-0.077
1034	SLU 70	-0.23	1.03	44.78	-8.8337	0.0416	-0.0806
1034	SLU 71	-0.22	1.03	44.44	-8.772	0.0413	-0.0749
1034	SLU 72	-0.23	1.01	44.48	-8.7799	0.0412	-0.0785
1034	SLU 73	-0.28	1.08	47.64	-9.3677	0.045	-0.0982
1034	SLU 74	-0.27	1.14	48.29	-9.4827	0.0458	-0.0932
1034	SLU 75	-0.28	1.12	48.34	-9.4906	0.0457	-0.0968
1034	SLU 76	-0.28	1.09	48.06	-9.4421	0.0453	-0.0972
1034	SLU 77	-0.27	1.15	48.71	-9.5571	0.0461	-0.0922
1034	SLU 78	-0.28	1.13	48.75	-9.565	0.0461	-0.0958
1034	SLU 79	-0.26	1.13	48.41	-9.5032	0.0457	-0.0902
1034	SLU 80	-0.27	1.11	48.45	-9.5111	0.0457	-0.0938
1034	SLU 81	-0.29	1.15	49.27	-9.6679	0.047	-0.0988
1034	SLU 82	-0.3	1.13	49.32	-9.6758	0.0469	-0.1024
1034	SLU 83	-0.28	1.17	49.69	-9.7423	0.0473	-0.0978
1034	SLU 84	-0.29	1.15	49.73	-9.7502	0.0473	-0.1013
1034	SLE RA 1	-0.17	0.74	32.67	-6.4757	0.0303	-0.0568
1034	SLE RA 2	-0.18	0.72	32.72	-6.4845	0.0302	-0.0608
1034	SLE RA 3	-0.17	0.76	33.16	-6.5611	0.0308	-0.0575
1034	SLE RA 4	-0.17	0.75	33.18	-6.5664	0.0307	-0.0599
1034	SLE RA 5	-0.17	0.73	33	-6.534	0.0305	-0.0601
1034	SLE RA 6	-0.17	0.77	33.43	-6.6107	0.031	-0.0568
1034	SLE RA 7	-0.17	0.75	33.46	-6.6159	0.031	-0.0592
1034	SLE RA 8	-0.16	0.76	33.23	-6.5748	0.0307	-0.0555
1034	SLE RA 9	-0.17	0.74	33.26	-6.58	0.0307	-0.0579
1034	SLE RA 10	-0.21	0.79	35.37	-6.9719	0.0332	-0.071
1034	SLE RA 11	-0.2	0.83	35.8	-7.0486	0.0337	-0.0677
1034	SLE RA 12	-0.2	0.81	35.83	-7.0539	0.0337	-0.0701
1034	SLE RA 13	-0.2	0.79	35.65	-7.0215	0.0335	-0.0703
1034	SLE RA 14	-0.19	0.83	36.08	-7.0982	0.034	-0.067
1034	SLE RA 15	-0.2	0.82	36.11	-7.1034	0.034	-0.0694
1034	SLE RA 16	-0.19	0.82	35.88	-7.0623	0.0337	-0.0657
1034	SLE RA 17	-0.2	0.81	35.9	-7.0675	0.0337	-0.068
1034	SLE RA 18	-0.21	0.84	36.45	-7.1721	0.0345	-0.0714
1034	SLE RA 19	-0.21	0.83	36.48	-7.1773	0.0345	-0.0738
1034	SLE RA 20	-0.2	0.85	36.73	-7.2216	0.0348	-0.0707
1034	SLE RA 21	-0.21	0.83	36.76	-7.2269	0.0347	-0.0731
1034	SLE FR 1	-0.17	0.74	32.67	-6.4757	0.0303	-0.0568
1034	SLE FR 2	-0.17	0.74	32.68	-6.4774	0.0303	-0.0576
1034	SLE FR 3	-0.16	0.74	32.79	-6.4955	0.0304	-0.0565
1034	SLE FR 4	-0.18	0.77	33.82	-6.6864	0.0315	-0.062
1034	SLE FR 5	-0.18	0.77	33.92	-6.7044	0.0316	-0.0609
1034	SLE FR 6	-0.19	0.79	34.56	-6.8239	0.0324	-0.0641
1034	SLE QP 1	-0.17	0.74	32.67	-6.4757	0.0303	-0.0568
1034	SLE QP 2	-0.18	0.77	33.81	-6.6846	0.0316	-0.0612
1034	SLD 1	3.57	1.45	34.63	-7.0804	0.0486	1.2517
1034	SLD 2	3.21	1.43	34.54	-7.0603	0.0485	1.1258
1034	SLD 3	3.88	0.47	35.37	-7.2214	0.0498	1.3595
1034	SLD 4	3.52	0.45	35.28	-7.2013	0.0496	1.2336
1034	SLD 5	0.54	2.47	32.95	-6.5932	0.0349	0.1914
1034	SLD 6	0.31	2.45	32.89	-6.58	0.0348	0.1091
1034	SLD 7	1.57	-0.8	35.42	-7.0629	0.0388	0.5508
1034	SLD 8	1.34	-0.81	35.36	-7.0498	0.0388	0.4685
1034	SLD 9	-1.69	2.36	32.26	-6.3194	0.0244	-0.5909
1034	SLD 10	-1.93	2.34	32.2	-6.3063	0.0243	-0.6732
1034	SLD 11	-0.66	-0.91	34.73	-6.7892	0.0283	-0.2315
1034	SLD 12	-0.9	-0.92	34.67	-6.7761	0.0282	-0.3138
1034	SLD 13	-3.88	1.09	32.34	-6.1679	0.0135	-1.356

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1034	SLD 14	-4.24	1.07	32.25	-6.1478	0.0134	-1.4819
1034	SLD 15	-3.57	0.11	33.08	-6.3089	0.0147	-1.2482
1034	SLD 16	-3.93	0.09	32.99	-6.2888	0.0145	-1.3741
1034	SLV 1	8.6	2.33	35.75	-7.6174	0.0714	3.0102
1034	SLV 2	7.76	2.28	35.54	-7.5705	0.0712	2.717
1034	SLV 3	9.32	0.12	37.44	-7.9386	0.0742	3.2619
1034	SLV 4	8.48	0.06	37.22	-7.8918	0.0739	2.9686
1034	SLV 5	1.51	4.61	31.87	-6.4852	0.0394	0.5289
1034	SLV 6	0.97	4.58	31.74	-6.4551	0.0392	0.3404
1034	SLV 7	3.91	-2.78	37.49	-7.5561	0.0485	1.3676
1034	SLV 8	3.37	-2.82	37.35	-7.526	0.0484	1.1791
1034	SLV 9	-3.72	4.36	30.27	-5.8432	0.0148	-1.3015
1034	SLV 10	-4.26	4.32	30.13	-5.8131	0.0146	-1.4899
1034	SLV 11	-1.32	-3.04	35.88	-6.9141	0.0239	-0.4628
1034	SLV 12	-1.86	-3.07	35.74	-6.884	0.0237	-0.6512
1034	SLV 13	-8.83	1.48	30.39	-5.4774	-0.0108	-3.091
1034	SLV 14	-9.68	1.43	30.18	-5.4306	-0.0111	-3.3842
1034	SLV 15	-8.11	-0.74	32.08	-5.7987	-0.0081	-2.8394
1034	SLV 16	-8.95	-0.79	31.87	-5.7519	-0.0083	-3.1326
1034	CRTFP Ux+	0	0	0	0	0	0
1034	CRTFP Ux-	0	0	0	0	0	0
1034	CRTFP Uy+	0	0	0	0	0	0
1034	CRTFP Uy-	0	0	0	0	0	0
1035	SLU 1	-0.12	0.73	30.94	-5.8575	0.0113	-0.0392
1035	SLU 2	-0.13	0.7	31.01	-5.8708	0.0113	-0.0454
1035	SLU 3	-0.12	0.76	31.65	-5.9753	0.0115	-0.0398
1035	SLU 4	-0.13	0.74	31.69	-5.9833	0.0115	-0.0436
1035	SLU 5	-0.13	0.71	31.42	-5.9398	0.0113	-0.0441
1035	SLU 6	-0.11	0.77	32.06	-6.0443	0.0116	-0.0386
1035	SLU 7	-0.12	0.75	32.1	-6.0523	0.0116	-0.0423
1035	SLU 8	-0.11	0.75	31.76	-5.9955	0.0114	-0.0367
1035	SLU 9	-0.12	0.73	31.8	-6.0035	0.0114	-0.0404
1035	SLU 10	-0.17	0.8	34.88	-6.541	0.0131	-0.0593
1035	SLU 11	-0.16	0.86	35.52	-6.6456	0.0134	-0.0538
1035	SLU 12	-0.17	0.84	35.56	-6.6536	0.0134	-0.0575
1035	SLU 13	-0.17	0.81	35.3	-6.61	0.0132	-0.0581
1035	SLU 14	-0.15	0.87	35.93	-6.7146	0.0135	-0.0525
1035	SLU 15	-0.16	0.85	35.97	-6.7226	0.0135	-0.0563
1035	SLU 16	-0.15	0.86	35.64	-6.6657	0.0133	-0.0506
1035	SLU 17	-0.16	0.84	35.68	-6.6737	0.0133	-0.0543
1035	SLU 18	-0.17	0.88	36.47	-6.815	0.014	-0.0591
1035	SLU 19	-0.18	0.86	36.52	-6.823	0.014	-0.0628
1035	SLU 20	-0.17	0.89	36.88	-6.884	0.014	-0.0578
1035	SLU 21	-0.18	0.87	36.93	-6.892	0.014	-0.0616
1035	SLU 22	-0.14	0.89	34.79	-6.5159	0.013	-0.0485
1035	SLU 23	-0.16	0.85	34.87	-6.5292	0.013	-0.0547
1035	SLU 24	-0.14	0.91	35.5	-6.6338	0.0132	-0.0492
1035	SLU 25	-0.15	0.89	35.54	-6.6418	0.0132	-0.0529
1035	SLU 26	-0.16	0.86	35.28	-6.5982	0.013	-0.0535
1035	SLU 27	-0.14	0.93	35.91	-6.7028	0.0133	-0.0479
1035	SLU 28	-0.15	0.91	35.95	-6.7107	0.0133	-0.0517
1035	SLU 29	-0.14	0.91	35.62	-6.6539	0.0131	-0.046
1035	SLU 30	-0.15	0.89	35.66	-6.6619	0.0131	-0.0497
1035	SLU 31	-0.2	0.96	38.74	-7.1995	0.0148	-0.0686
1035	SLU 32	-0.18	1.02	39.38	-7.304	0.0151	-0.0631
1035	SLU 33	-0.19	1	39.42	-7.312	0.0151	-0.0668
1035	SLU 34	-0.2	0.97	39.15	-7.2685	0.0149	-0.0674
1035	SLU 35	-0.18	1.03	39.79	-7.373	0.0152	-0.0619
1035	SLU 36	-0.19	1.01	39.83	-7.381	0.0152	-0.0656
1035	SLU 37	-0.18	1.01	39.49	-7.3241	0.015	-0.06
1035	SLU 38	-0.19	0.99	39.53	-7.3321	0.015	-0.0637
1035	SLU 39	-0.2	1.04	40.33	-7.4734	0.0157	-0.0684
1035	SLU 40	-0.21	1.02	40.37	-7.4814	0.0157	-0.0721
1035	SLU 41	-0.2	1.05	40.74	-7.5424	0.0157	-0.0672
1035	SLU 42	-0.21	1.03	40.78	-7.5504	0.0157	-0.0709
1035	SLU 43	-0.14	0.89	38.9	-7.389	0.0141	-0.0477
1035	SLU 44	-0.16	0.86	38.97	-7.4023	0.014	-0.0539
1035	SLU 45	-0.14	0.92	39.61	-7.5068	0.0143	-0.0484
1035	SLU 46	-0.15	0.9	39.65	-7.5148	0.0143	-0.0521
1035	SLU 47	-0.15	0.87	39.38	-7.4713	0.0141	-0.0527
1035	SLU 48	-0.14	0.93	40.02	-7.5758	0.0144	-0.0471
1035	SLU 49	-0.15	0.91	40.06	-7.5838	0.0144	-0.0509
1035	SLU 50	-0.13	0.92	39.72	-7.527	0.0142	-0.0452
1035	SLU 51	-0.14	0.9	39.76	-7.535	0.0142	-0.049
1035	SLU 52	-0.2	0.97	42.85	-8.0725	0.0159	-0.0678
1035	SLU 53	-0.18	1.03	43.48	-8.1771	0.0162	-0.0623
1035	SLU 54	-0.19	1.01	43.52	-8.1851	0.0162	-0.066
1035	SLU 55	-0.2	0.98	43.26	-8.1415	0.016	-0.0666
1035	SLU 56	-0.18	1.04	43.89	-8.2461	0.0163	-0.0611
1035	SLU 57	-0.19	1.02	43.93	-8.2541	0.0163	-0.0648
1035	SLU 58	-0.17	1.02	43.6	-8.1972	0.0161	-0.0592
1035	SLU 59	-0.18	1	43.64	-8.2052	0.0161	-0.0629
1035	SLU 60	-0.2	1.04	44.43	-8.3465	0.0168	-0.0676
1035	SLU 61	-0.21	1.02	44.48	-8.3545	0.0168	-0.0713
1035	SLU 62	-0.19	1.05	44.85	-8.4155	0.0168	-0.0664
1035	SLU 63	-0.21	1.03	44.89	-8.4234	0.0168	-0.0701
1035	SLU 64	-0.17	1.05	42.76	-8.0474	0.0158	-0.0571
1035	SLU 65	-0.19	1.02	42.83	-8.0607	0.0157	-0.0632
1035	SLU 66	-0.17	1.08	43.46	-8.1653	0.016	-0.0577
1035	SLU 67	-0.18	1.06	43.5	-8.1732	0.016	-0.0614
1035	SLU 68	-0.18	1.03	43.24	-8.1297	0.0158	-0.062
1035	SLU 69	-0.17	1.09	43.87	-8.2343	0.0161	-0.0565
1035	SLU 70	-0.18	1.07	43.92	-8.2422	0.0161	-0.0602
1035	SLU 71	-0.16	1.07	43.58	-8.1854	0.0159	-0.0546
1035	SLU 72	-0.17	1.05	43.62	-8.1934	0.0159	-0.0583
1035	SLU 73	-0.23	1.12	46.7	-8.731	0.0176	-0.0772
1035	SLU 74	-0.21	1.18	47.34	-8.8355	0.0179	-0.0717

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1035	SLU 75	-0.22	1.16	47.38	-8.8435	0.0179	-0.0754
1035	SLU 76	-0.22	1.13	47.11	-8.8	0.0177	-0.0759
1035	SLU 77	-0.21	1.19	47.75	-8.9045	0.018	-0.0704
1035	SLU 78	-0.22	1.18	47.79	-8.9125	0.018	-0.0741
1035	SLU 79	-0.2	1.18	47.45	-8.8556	0.0178	-0.0685
1035	SLU 80	-0.21	1.16	47.49	-8.8636	0.0178	-0.0722
1035	SLU 81	-0.22	1.2	48.29	-9.0049	0.0185	-0.077
1035	SLU 82	-0.24	1.18	48.33	-9.0129	0.0185	-0.0807
1035	SLU 83	-0.22	1.21	48.7	-9.0739	0.0185	-0.0757
1035	SLU 84	-0.23	1.19	48.74	-9.0819	0.0185	-0.0794
1035	SLE RA 1	-0.12	0.77	32.04	-6.0456	0.0118	-0.0418
1035	SLE RA 2	-0.13	0.75	32.09	-6.0545	0.0117	-0.046
1035	SLE RA 3	-0.12	0.79	32.51	-6.1242	0.0119	-0.0423
1035	SLE RA 4	-0.13	0.78	32.54	-6.1295	0.0119	-0.0448
1035	SLE RA 5	-0.13	0.76	32.36	-6.1005	0.0118	-0.0451
1035	SLE RA 6	-0.12	0.8	32.79	-6.1702	0.012	-0.0415
1035	SLE RA 7	-0.13	0.79	32.81	-6.1755	0.012	-0.0439
1035	SLE RA 8	-0.12	0.79	32.59	-6.1376	0.0119	-0.0402
1035	SLE RA 9	-0.13	0.78	32.62	-6.1429	0.0119	-0.0427
1035	SLE RA 10	-0.16	0.82	34.67	-6.5013	0.013	-0.0553
1035	SLE RA 11	-0.15	0.86	35.1	-6.571	0.0132	-0.0516
1035	SLE RA 12	-0.16	0.85	35.12	-6.5763	0.0132	-0.054
1035	SLE RA 13	-0.16	0.83	34.94	-6.5473	0.0131	-0.0544
1035	SLE RA 14	-0.15	0.87	35.37	-6.617	0.0132	-0.0507
1035	SLE RA 15	-0.16	0.86	35.4	-6.6223	0.0132	-0.0532
1035	SLE RA 16	-0.15	0.86	35.17	-6.5844	0.0131	-0.0495
1035	SLE RA 17	-0.15	0.85	35.2	-6.5898	0.0131	-0.052
1035	SLE RA 18	-0.16	0.87	35.73	-6.6839	0.0136	-0.0551
1035	SLE RA 19	-0.17	0.86	35.76	-6.6893	0.0135	-0.0576
1035	SLE RA 20	-0.16	0.88	36	-6.7299	0.0136	-0.0543
1035	SLE RA 21	-0.17	0.87	36.03	-6.7353	0.0136	-0.0568
1035	SLE FR 1	-0.12	0.77	32.04	-6.0456	0.0118	-0.0418
1035	SLE FR 2	-0.13	0.77	32.05	-6.0474	0.0118	-0.0427
1035	SLE FR 3	-0.12	0.78	32.15	-6.064	0.0118	-0.0415
1035	SLE FR 4	-0.14	0.8	33.16	-6.2389	0.0123	-0.0466
1035	SLE FR 5	-0.13	0.81	33.26	-6.2555	0.0123	-0.0455
1035	SLE FR 6	-0.14	0.82	33.89	-6.3648	0.0127	-0.0485
1035	SLE QP 1	-0.12	0.77	32.04	-6.0456	0.0118	-0.0418
1035	SLE QP 2	-0.13	0.8	33.15	-6.2371	0.0123	-0.0458
1035	SLD 1	3.62	1.47	33.46	-6.4479	0.0295	1.2698
1035	SLD 2	3.26	1.46	33.37	-6.4304	0.0295	1.1436
1035	SLD 3	3.93	0.5	34.18	-6.5786	0.0304	1.3778
1035	SLD 4	3.57	0.49	34.1	-6.5611	0.0303	1.2516
1035	SLD 5	0.59	2.47	32.16	-6.1053	0.0162	0.2074
1035	SLD 6	0.35	2.46	32.1	-6.0938	0.0161	0.1249
1035	SLD 7	1.62	-0.75	34.57	-6.5409	0.019	0.5674
1035	SLD 8	1.38	-0.76	34.52	-6.5294	0.019	0.4849
1035	SLD 9	-1.65	2.36	31.78	-5.9448	0.0056	-0.5765
1035	SLD 10	-1.89	2.36	31.72	-5.9333	0.0056	-0.659
1035	SLD 11	-0.62	-0.85	34.2	-6.3804	0.0084	-0.2166
1035	SLD 12	-0.86	-0.86	34.14	-6.3689	0.0084	-0.299
1035	SLD 13	-3.84	1.12	32.2	-5.9132	-0.0057	-1.3433
1035	SLD 14	-4.2	1.11	32.11	-5.8956	-0.0058	-1.4694
1035	SLD 15	-3.53	0.15	32.93	-6.0438	-0.0049	-1.2353
1035	SLD 16	-3.89	0.14	32.84	-6.0263	-0.0049	-1.3614
1035	SLV 1	8.66	2.32	33.9	-6.7361	0.0527	3.032
1035	SLV 2	7.82	2.29	33.69	-6.6951	0.0525	2.7381
1035	SLV 3	9.38	0.13	35.55	-7.0341	0.0546	3.284
1035	SLV 4	8.54	0.11	35.34	-6.9932	0.0545	2.9901
1035	SLV 5	1.55	4.58	30.91	-5.9418	0.0214	0.5457
1035	SLV 6	1.01	4.56	30.78	-5.9155	0.0213	0.3568
1035	SLV 7	3.96	-2.71	36.4	-6.9353	0.028	1.3857
1035	SLV 8	3.42	-2.73	36.27	-6.909	0.0279	1.1968
1035	SLV 9	-3.69	4.33	30.03	-5.5652	-0.0033	-1.2885
1035	SLV 10	-4.23	4.32	29.89	-5.5389	-0.0034	-1.4773
1035	SLV 11	-1.28	-2.96	35.52	-6.5588	0.0033	-0.4485
1035	SLV 12	-1.82	-2.97	35.39	-6.5325	0.0032	-0.6373
1035	SLV 13	-8.81	1.5	30.95	-5.481	-0.0299	-3.0818
1035	SLV 14	-9.65	1.48	30.75	-5.4401	-0.03	-3.3756
1035	SLV 15	-8.09	-0.69	32.6	-5.7791	-0.0279	-2.8298
1035	SLV 16	-8.93	-0.71	32.4	-5.7381	-0.0281	-3.1236
1035	CRTFP Ux+	0	0	0	0	0	0
1035	CRTFP Ux-	0	0	0	0	0	0
1035	CRTFP Uy+	0	0	0	0	0	0
1035	CRTFP Uy-	0	0	0	0	0	0
1036	SLU 1	-0.07	0.77	30.88	-5.8586	-0.0072	-0.0242
1036	SLU 2	-0.09	0.74	30.95	-5.8718	-0.0071	-0.0306
1036	SLU 3	-0.07	0.8	31.59	-5.9768	-0.0074	-0.0245
1036	SLU 4	-0.09	0.78	31.63	-5.9847	-0.0074	-0.0283
1036	SLU 5	-0.09	0.75	31.36	-5.9417	-0.0073	-0.0291
1036	SLU 6	-0.07	0.81	32	-6.0467	-0.0076	-0.023
1036	SLU 7	-0.08	0.79	32.04	-6.0546	-0.0076	-0.0269
1036	SLU 8	-0.07	0.79	31.7	-5.9984	-0.0076	-0.0213
1036	SLU 9	-0.08	0.77	31.75	-6.0063	-0.0075	-0.0251
1036	SLU 10	-0.13	0.85	34.81	-6.5401	-0.0079	-0.0431
1036	SLU 11	-0.11	0.91	35.44	-6.645	-0.0081	-0.037
1036	SLU 12	-0.12	0.89	35.48	-6.653	-0.0081	-0.0408
1036	SLU 13	-0.12	0.86	35.22	-6.61	-0.0081	-0.0416
1036	SLU 14	-0.11	0.92	35.85	-6.7149	-0.0083	-0.0355
1036	SLU 15	-0.12	0.9	35.9	-6.7229	-0.0083	-0.0394
1036	SLU 16	-0.1	0.9	35.56	-6.6667	-0.0083	-0.0338
1036	SLU 17	-0.11	0.88	35.6	-6.6746	-0.0083	-0.0376
1036	SLU 18	-0.12	0.92	36.39	-6.8133	-0.0083	-0.042
1036	SLU 19	-0.14	0.9	36.43	-6.8212	-0.0083	-0.0459
1036	SLU 20	-0.12	0.94	36.8	-6.8832	-0.0085	-0.0406
1036	SLU 21	-0.13	0.92	36.84	-6.8911	-0.0084	-0.0444
1036	SLU 22	-0.1	0.93	34.72	-6.5165	-0.0081	-0.032

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1036	SLU 23	-0.11	0.9	34.79	-6.5297	-0.0081	-0.0384
1036	SLU 24	-0.1	0.96	35.43	-6.6346	-0.0083	-0.0323
1036	SLU 25	-0.11	0.94	35.47	-6.6426	-0.0083	-0.0361
1036	SLU 26	-0.11	0.91	35.21	-6.5996	-0.0083	-0.0369
1036	SLU 27	-0.09	0.97	35.84	-6.7045	-0.0085	-0.0308
1036	SLU 28	-0.1	0.95	35.88	-6.7125	-0.0085	-0.0347
1036	SLU 29	-0.09	0.95	35.55	-6.6563	-0.0085	-0.029
1036	SLU 30	-0.1	0.93	35.59	-6.6642	-0.0085	-0.0329
1036	SLU 31	-0.15	1.01	38.65	-7.198	-0.0088	-0.0509
1036	SLU 32	-0.13	1.07	39.29	-7.3029	-0.0091	-0.0448
1036	SLU 33	-0.14	1.05	39.33	-7.3108	-0.0091	-0.0486
1036	SLU 34	-0.15	1.02	39.06	-7.2679	-0.009	-0.0494
1036	SLU 35	-0.13	1.08	39.7	-7.3728	-0.0093	-0.0433
1036	SLU 36	-0.14	1.06	39.74	-7.3807	-0.0093	-0.0472
1036	SLU 37	-0.12	1.06	39.4	-7.3245	-0.0093	-0.0415
1036	SLU 38	-0.13	1.04	39.45	-7.3325	-0.0092	-0.0454
1036	SLU 39	-0.15	1.08	40.23	-7.4711	-0.0092	-0.0498
1036	SLU 40	-0.16	1.07	40.27	-7.4791	-0.0092	-0.0537
1036	SLU 41	-0.14	1.1	40.64	-7.541	-0.0094	-0.0484
1036	SLU 42	-0.15	1.08	40.69	-7.549	-0.0094	-0.0522
1036	SLU 43	-0.09	0.94	38.83	-7.3906	-0.009	-0.0288
1036	SLU 44	-0.11	0.91	38.9	-7.4039	-0.009	-0.0352
1036	SLU 45	-0.09	0.97	39.53	-7.5088	-0.0092	-0.0291
1036	SLU 46	-0.1	0.95	39.57	-7.5167	-0.0092	-0.0329
1036	SLU 47	-0.1	0.92	39.31	-7.4737	-0.0092	-0.0337
1036	SLU 48	-0.08	0.98	39.94	-7.5787	-0.0094	-0.0276
1036	SLU 49	-0.1	0.97	39.99	-7.5866	-0.0094	-0.0315
1036	SLU 50	-0.08	0.97	39.65	-7.5304	-0.0094	-0.0258
1036	SLU 51	-0.09	0.95	39.69	-7.5383	-0.0094	-0.0297
1036	SLU 52	-0.14	1.02	42.75	-8.0721	-0.0097	-0.0477
1036	SLU 53	-0.12	1.08	43.39	-8.1771	-0.01	-0.0416
1036	SLU 54	-0.14	1.06	43.43	-8.185	-0.01	-0.0454
1036	SLU 55	-0.14	1.03	43.17	-8.142	-0.0099	-0.0462
1036	SLU 56	-0.12	1.09	43.8	-8.247	-0.0102	-0.0401
1036	SLU 57	-0.13	1.07	43.84	-8.2549	-0.0102	-0.044
1036	SLU 58	-0.12	1.08	43.51	-8.1987	-0.0102	-0.0383
1036	SLU 59	-0.13	1.06	43.55	-8.2066	-0.0101	-0.0422
1036	SLU 60	-0.14	1.1	44.34	-8.3453	-0.0101	-0.0466
1036	SLU 61	-0.15	1.08	44.38	-8.3532	-0.0101	-0.0505
1036	SLU 62	-0.14	1.11	44.75	-8.4152	-0.0103	-0.0452
1036	SLU 63	-0.15	1.09	44.79	-8.4231	-0.0103	-0.049
1036	SLU 64	-0.11	1.1	42.67	-8.0485	-0.0099	-0.0366
1036	SLU 65	-0.13	1.07	42.74	-8.0617	-0.0099	-0.043
1036	SLU 66	-0.11	1.13	43.37	-8.1667	-0.0101	-0.0369
1036	SLU 67	-0.12	1.11	43.42	-8.1746	-0.0101	-0.0407
1036	SLU 68	-0.12	1.08	43.15	-8.1316	-0.0101	-0.0415
1036	SLU 69	-0.11	1.14	43.79	-8.2365	-0.0103	-0.0354
1036	SLU 70	-0.12	1.13	43.83	-8.2445	-0.0103	-0.0392
1036	SLU 71	-0.1	1.13	43.49	-8.1883	-0.0103	-0.0336
1036	SLU 72	-0.11	1.11	43.54	-8.1962	-0.0103	-0.0375
1036	SLU 73	-0.16	1.18	46.6	-8.73	-0.0107	-0.0555
1036	SLU 74	-0.15	1.24	47.23	-8.8349	-0.0109	-0.0494
1036	SLU 75	-0.16	1.22	47.27	-8.8429	-0.0109	-0.0532
1036	SLU 76	-0.16	1.19	47.01	-8.7999	-0.0109	-0.054
1036	SLU 77	-0.14	1.25	47.64	-8.9048	-0.0111	-0.0479
1036	SLU 78	-0.15	1.23	47.69	-8.9128	-0.0111	-0.0517
1036	SLU 79	-0.14	1.24	47.35	-8.8566	-0.0111	-0.0461
1036	SLU 80	-0.15	1.22	47.39	-8.8645	-0.0111	-0.05
1036	SLU 81	-0.16	1.26	48.18	-9.0032	-0.011	-0.0544
1036	SLU 82	-0.17	1.24	48.22	-9.0111	-0.011	-0.0583
1036	SLU 83	-0.16	1.27	48.59	-9.0731	-0.0112	-0.0529
1036	SLU 84	-0.17	1.25	48.63	-9.081	-0.0112	-0.0568
1036	SLE RA 1	-0.08	0.81	31.98	-6.0466	-0.0074	-0.0264
1036	SLE RA 2	-0.09	0.79	32.02	-6.0554	-0.0074	-0.0307
1036	SLE RA 3	-0.08	0.83	32.45	-6.1253	-0.0076	-0.0266
1036	SLE RA 4	-0.09	0.82	32.48	-6.1306	-0.0076	-0.0292
1036	SLE RA 5	-0.09	0.8	32.3	-6.102	-0.0075	-0.0297
1036	SLE RA 6	-0.08	0.84	32.72	-6.1719	-0.0077	-0.0256
1036	SLE RA 7	-0.08	0.83	32.75	-6.1772	-0.0077	-0.0282
1036	SLE RA 8	-0.07	0.83	32.53	-6.1398	-0.0077	-0.0245
1036	SLE RA 9	-0.08	0.82	32.56	-6.145	-0.0077	-0.027
1036	SLE RA 10	-0.12	0.87	34.6	-6.5009	-0.0079	-0.039
1036	SLE RA 11	-0.1	0.91	35.02	-6.5709	-0.0081	-0.0349
1036	SLE RA 12	-0.11	0.89	35.05	-6.5761	-0.0081	-0.0375
1036	SLE RA 13	-0.11	0.87	34.87	-6.5475	-0.0081	-0.038
1036	SLE RA 14	-0.1	0.91	35.29	-6.6174	-0.0082	-0.034
1036	SLE RA 15	-0.11	0.9	35.32	-6.6227	-0.0082	-0.0365
1036	SLE RA 16	-0.1	0.9	35.1	-6.5853	-0.0082	-0.0328
1036	SLE RA 17	-0.11	0.89	35.13	-6.5906	-0.0082	-0.0354
1036	SLE RA 18	-0.11	0.92	35.65	-6.683	-0.0082	-0.0383
1036	SLE RA 19	-0.12	0.91	35.68	-6.6883	-0.0082	-0.0409
1036	SLE RA 20	-0.11	0.93	35.93	-6.7296	-0.0083	-0.0373
1036	SLE RA 21	-0.12	0.91	35.95	-6.7349	-0.0083	-0.0399
1036	SLE FR 1	-0.08	0.81	31.98	-6.0466	-0.0074	-0.0264
1036	SLE FR 2	-0.08	0.81	31.99	-6.0483	-0.0074	-0.0273
1036	SLE FR 3	-0.08	0.82	32.09	-6.0652	-0.0075	-0.026
1036	SLE FR 4	-0.09	0.84	33.09	-6.2393	-0.0076	-0.0308
1036	SLE FR 5	-0.09	0.85	33.19	-6.2561	-0.0077	-0.0296
1036	SLE FR 6	-0.1	0.87	33.81	-6.3648	-0.0078	-0.0324
1036	SLE QP 1	-0.08	0.81	31.98	-6.0466	-0.0074	-0.0264
1036	SLE QP 2	-0.09	0.84	33.08	-6.2375	-0.0077	-0.03
1036	SLD 1	3.67	1.49	32.95	-6.2639	0.0104	1.2874
1036	SLD 2	3.31	1.49	32.87	-6.248	0.0104	1.161
1036	SLD 3	3.98	0.53	33.68	-6.3942	0.0095	1.3955
1036	SLD 4	3.62	0.54	33.59	-6.3782	0.0095	1.2691
1036	SLD 5	0.63	2.49	31.95	-6.0507	-0.0008	0.2236
1036	SLD 6	0.4	2.49	31.9	-6.0403	-0.0008	0.1411

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1036	SLD 7	1.67	-0.7	34.38	-6.4849	-0.0039	0.5839
1036	SLD 8	1.43	-0.7	34.32	-6.4744	-0.0039	0.5014
1036	SLD 9	-1.61	2.39	31.84	-6.0006	-0.0114	-0.5613
1036	SLD 10	-1.85	2.39	31.78	-5.9901	-0.0114	-0.6439
1036	SLD 11	-0.58	-0.8	34.26	-6.4347	-0.0145	-0.201
1036	SLD 12	-0.81	-0.8	34.2	-6.4243	-0.0145	-0.2836
1036	SLD 13	-3.8	1.15	32.56	-6.0968	-0.0248	-1.3291
1036	SLD 14	-4.16	1.16	32.48	-6.0808	-0.0248	-1.4554
1036	SLD 15	-3.49	0.2	33.29	-6.227	-0.0257	-1.221
1036	SLD 16	-3.85	0.2	33.2	-6.2111	-0.0257	-1.3473
1036	SLV 1	8.72	2.32	32.82	-6.3048	0.0347	3.0519
1036	SLV 2	7.87	2.33	32.61	-6.2676	0.0346	2.7577
1036	SLV 3	9.44	0.15	34.47	-6.6017	0.0325	3.3041
1036	SLV 4	8.6	0.16	34.26	-6.5645	0.0325	3.0099
1036	SLV 5	1.6	4.58	30.53	-5.8138	0.0084	0.5625
1036	SLV 6	1.06	4.58	30.4	-5.7899	0.0083	0.3734
1036	SLV 7	4.01	-2.66	36.04	-6.8034	0.0011	1.4032
1036	SLV 8	3.47	-2.65	35.9	-6.7795	0.0011	1.2141
1036	SLV 9	-3.65	4.34	30.25	-5.6955	-0.0164	-1.2741
1036	SLV 10	-4.19	4.35	30.12	-5.6716	-0.0164	-1.4632
1036	SLV 11	-1.24	-2.9	35.76	-6.6851	-0.0236	-0.4333
1036	SLV 12	-1.78	-2.89	35.63	-6.6612	-0.0237	-0.6224
1036	SLV 13	-8.78	1.53	31.89	-5.9105	-0.0478	-3.0698
1036	SLV 14	-9.62	1.54	31.69	-5.8733	-0.0478	-3.3641
1036	SLV 15	-8.05	-0.64	33.55	-6.2074	-0.0499	-2.8176
1036	SLV 16	-8.9	-0.63	33.34	-6.1702	-0.05	-3.1119
1036	CRTFP Ux+	0	0	0	0	0	0
1036	CRTFP Ux-	0	0	0	0	0	0
1036	CRTFP Uy+	0	0	0	0	0	0
1036	CRTFP Uy-	0	0	0	0	0	0
1037	SLU 1	-0.03	0.82	31.36	-6.2668	-0.0245	-0.0089
1037	SLU 2	-0.05	0.79	31.43	-6.2797	-0.0244	-0.0155
1037	SLU 3	-0.03	0.85	32.08	-6.3957	-0.0251	-0.0088
1037	SLU 4	-0.04	0.83	32.12	-6.4034	-0.0251	-0.0128
1037	SLU 5	-0.04	0.8	31.85	-6.3566	-0.0249	-0.0138
1037	SLU 6	-0.03	0.86	32.5	-6.4726	-0.0256	-0.0071
1037	SLU 7	-0.04	0.84	32.54	-6.4803	-0.0255	-0.0111
1037	SLU 8	-0.02	0.84	32.2	-6.4206	-0.0254	-0.0055
1037	SLU 9	-0.03	0.82	32.24	-6.4283	-0.0254	-0.0095
1037	SLU 10	-0.08	0.9	35.35	-7.0038	-0.0277	-0.0265
1037	SLU 11	-0.06	0.96	35.99	-7.1198	-0.0284	-0.0198
1037	SLU 12	-0.07	0.94	36.04	-7.1275	-0.0284	-0.0238
1037	SLU 13	-0.08	0.91	35.77	-7.0807	-0.0281	-0.0248
1037	SLU 14	-0.06	0.97	36.42	-7.1967	-0.0289	-0.0181
1037	SLU 15	-0.07	0.95	36.46	-7.2044	-0.0288	-0.0221
1037	SLU 16	-0.05	0.96	36.12	-7.1447	-0.0287	-0.0165
1037	SLU 17	-0.06	0.94	36.16	-7.1524	-0.0286	-0.0204
1037	SLU 18	-0.08	0.98	36.96	-7.3012	-0.0292	-0.0246
1037	SLU 19	-0.09	0.96	37	-7.3089	-0.0291	-0.0285
1037	SLU 20	-0.07	0.99	37.38	-7.3781	-0.0296	-0.0229
1037	SLU 21	-0.08	0.97	37.42	-7.3858	-0.0296	-0.0268
1037	SLU 22	-0.05	0.98	35.27	-6.9814	-0.0279	-0.0151
1037	SLU 23	-0.07	0.95	35.33	-6.9942	-0.0278	-0.0217
1037	SLU 24	-0.05	1.01	35.98	-7.1103	-0.0285	-0.015
1037	SLU 25	-0.06	0.99	36.03	-7.118	-0.0285	-0.019
1037	SLU 26	-0.06	0.96	35.76	-7.0711	-0.0283	-0.02
1037	SLU 27	-0.04	1.02	36.41	-7.1872	-0.029	-0.0133
1037	SLU 28	-0.06	1	36.45	-7.1949	-0.0289	-0.0173
1037	SLU 29	-0.04	1.01	36.11	-7.1352	-0.0288	-0.0117
1037	SLU 30	-0.05	0.99	36.15	-7.1429	-0.0288	-0.0156
1037	SLU 31	-0.1	1.06	39.25	-7.7183	-0.0311	-0.0326
1037	SLU 32	-0.08	1.13	39.9	-7.8344	-0.0318	-0.026
1037	SLU 33	-0.09	1.11	39.94	-7.8421	-0.0318	-0.0299
1037	SLU 34	-0.09	1.08	39.68	-7.7952	-0.0315	-0.0309
1037	SLU 35	-0.08	1.14	40.33	-7.9113	-0.0323	-0.0243
1037	SLU 36	-0.09	1.12	40.37	-7.919	-0.0322	-0.0282
1037	SLU 37	-0.07	1.12	40.03	-7.8593	-0.0321	-0.0226
1037	SLU 38	-0.08	1.1	40.07	-7.867	-0.032	-0.0266
1037	SLU 39	-0.09	1.14	40.86	-8.0158	-0.0326	-0.0307
1037	SLU 40	-0.11	1.13	40.9	-8.0235	-0.0325	-0.0347
1037	SLU 41	-0.09	1.16	41.29	-8.0927	-0.033	-0.029
1037	SLU 42	-0.1	1.14	41.33	-8.1004	-0.033	-0.033
1037	SLU 43	-0.03	1	39.43	-7.9019	-0.0307	-0.0094
1037	SLU 44	-0.05	0.97	39.49	-7.9147	-0.0306	-0.0161
1037	SLU 45	-0.03	1.03	40.14	-8.0308	-0.0313	-0.0094
1037	SLU 46	-0.04	1.02	40.19	-8.0385	-0.0313	-0.0133
1037	SLU 47	-0.05	0.99	39.92	-7.9916	-0.031	-0.0144
1037	SLU 48	-0.03	1.05	40.57	-8.1077	-0.0318	-0.0077
1037	SLU 49	-0.04	1.03	40.61	-8.1154	-0.0317	-0.0117
1037	SLU 50	-0.02	1.03	40.27	-8.0557	-0.0316	-0.0061
1037	SLU 51	-0.04	1.01	40.31	-8.0634	-0.0315	-0.01
1037	SLU 52	-0.08	1.09	43.41	-8.6388	-0.0339	-0.027
1037	SLU 53	-0.07	1.15	44.06	-8.7548	-0.0346	-0.0204
1037	SLU 54	-0.08	1.13	44.1	-8.7626	-0.0345	-0.0243
1037	SLU 55	-0.08	1.1	43.83	-8.7157	-0.0343	-0.0253
1037	SLU 56	-0.06	1.16	44.48	-8.8317	-0.035	-0.0187
1037	SLU 57	-0.07	1.14	44.53	-8.8395	-0.035	-0.0226
1037	SLU 58	-0.06	1.14	44.19	-8.7798	-0.0348	-0.017
1037	SLU 59	-0.07	1.13	44.23	-8.7875	-0.0348	-0.021
1037	SLU 60	-0.08	1.17	45.02	-8.9363	-0.0353	-0.0251
1037	SLU 61	-0.09	1.15	45.06	-8.944	-0.0353	-0.0291
1037	SLU 62	-0.07	1.18	45.44	-9.0132	-0.0358	-0.0234
1037	SLU 63	-0.09	1.16	45.49	-9.0209	-0.0358	-0.0274
1037	SLU 64	-0.05	1.17	43.33	-8.6164	-0.0341	-0.0156
1037	SLU 65	-0.07	1.14	43.4	-8.6293	-0.034	-0.0222
1037	SLU 66	-0.05	1.2	44.05	-8.7453	-0.0347	-0.0155
1037	SLU 67	-0.06	1.18	44.09	-8.753	-0.0347	-0.0195

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1037	SLU 68	-0.07	1.15	43.82	-8.7062	-0.0344	-0.0205
1037	SLU 69	-0.05	1.21	44.47	-8.8222	-0.0352	-0.0139
1037	SLU 70	-0.06	1.19	44.52	-8.8299	-0.0351	-0.0178
1037	SLU 71	-0.04	1.19	44.18	-8.7702	-0.035	-0.0122
1037	SLU 72	-0.05	1.18	44.22	-8.778	-0.0349	-0.0162
1037	SLU 73	-0.1	1.25	47.32	-9.3534	-0.0373	-0.0332
1037	SLU 74	-0.08	1.31	47.97	-9.4694	-0.038	-0.0265
1037	SLU 75	-0.09	1.3	48.01	-9.4771	-0.0379	-0.0305
1037	SLU 76	-0.1	1.27	47.74	-9.4303	-0.0377	-0.0315
1037	SLU 77	-0.08	1.33	48.39	-9.5463	-0.0384	-0.0248
1037	SLU 78	-0.09	1.31	48.43	-9.554	-0.0384	-0.0288
1037	SLU 79	-0.07	1.31	48.1	-9.4943	-0.0382	-0.0232
1037	SLU 80	-0.09	1.29	48.14	-9.502	-0.0382	-0.0272
1037	SLU 81	-0.1	1.33	48.93	-9.6508	-0.0387	-0.0313
1037	SLU 82	-0.11	1.31	48.97	-9.6586	-0.0387	-0.0352
1037	SLU 83	-0.09	1.34	49.35	-9.7277	-0.0392	-0.0296
1037	SLU 84	-0.1	1.33	49.39	-9.7355	-0.0392	-0.0336
1037	SLE RA 1	-0.04	0.86	32.47	-6.471	-0.0254	-0.0107
1037	SLE RA 2	-0.05	0.84	32.52	-6.4796	-0.0254	-0.0151
1037	SLE RA 3	-0.04	0.88	32.95	-6.5569	-0.0259	-0.0106
1037	SLE RA 4	-0.04	0.87	32.98	-6.5621	-0.0259	-0.0132
1037	SLE RA 5	-0.05	0.85	32.8	-6.5308	-0.0257	-0.0139
1037	SLE RA 6	-0.03	0.89	33.24	-6.6082	-0.0262	-0.0095
1037	SLE RA 7	-0.04	0.88	33.26	-6.6133	-0.0262	-0.0121
1037	SLE RA 8	-0.03	0.88	33.04	-6.5735	-0.0261	-0.0084
1037	SLE RA 9	-0.04	0.87	33.07	-6.5787	-0.026	-0.011
1037	SLE RA 10	-0.07	0.92	35.13	-6.9623	-0.0276	-0.0224
1037	SLE RA 11	-0.06	0.96	35.57	-7.0396	-0.0281	-0.0179
1037	SLE RA 12	-0.06	0.95	35.59	-7.0448	-0.028	-0.0206
1037	SLE RA 13	-0.07	0.93	35.41	-7.0135	-0.0279	-0.0212
1037	SLE RA 14	-0.05	0.97	35.85	-7.0909	-0.0284	-0.0168
1037	SLE RA 15	-0.06	0.96	35.88	-7.096	-0.0283	-0.0194
1037	SLE RA 16	-0.05	0.96	35.65	-7.0562	-0.0282	-0.0157
1037	SLE RA 17	-0.06	0.94	35.68	-7.0614	-0.0282	-0.0184
1037	SLE RA 18	-0.07	0.97	36.21	-7.1606	-0.0286	-0.0211
1037	SLE RA 19	-0.07	0.96	36.23	-7.1657	-0.0285	-0.0237
1037	SLE RA 20	-0.06	0.98	36.49	-7.2118	-0.0289	-0.02
1037	SLE RA 21	-0.07	0.97	36.52	-7.217	-0.0288	-0.0226
1037	SLE FR 1	-0.04	0.86	32.47	-6.471	-0.0254	-0.0107
1037	SLE FR 2	-0.04	0.86	32.48	-6.4727	-0.0254	-0.0115
1037	SLE FR 3	-0.03	0.87	32.59	-6.4915	-0.0256	-0.0102
1037	SLE FR 4	-0.05	0.89	33.6	-6.6796	-0.0264	-0.0147
1037	SLE FR 5	-0.04	0.9	33.71	-6.6984	-0.0265	-0.0133
1037	SLE FR 6	-0.05	0.92	34.34	-6.8158	-0.027	-0.0159
1037	SLE QP 1	-0.04	0.86	32.47	-6.471	-0.0254	-0.0107
1037	SLE QP 2	-0.04	0.9	33.59	-6.6779	-0.0264	-0.0138
1037	SLD 1	3.72	1.53	32.78	-6.486	-0.0081	1.3043
1037	SLD 2	3.36	1.55	32.69	-6.4704	-0.0081	1.1779
1037	SLD 3	4.03	0.57	33.53	-6.6259	-0.0095	1.4125
1037	SLD 4	3.67	0.59	33.44	-6.6103	-0.0095	1.286
1037	SLD 5	0.68	2.54	32.23	-6.4109	-0.0188	0.24
1037	SLD 6	0.44	2.55	32.17	-6.4007	-0.0188	0.1574
1037	SLD 7	1.71	-0.66	34.72	-6.8772	-0.0234	0.6004
1037	SLD 8	1.48	-0.65	34.66	-6.867	-0.0234	0.5178
1037	SLD 9	-1.56	2.44	32.52	-6.4887	-0.0294	-0.5453
1037	SLD 10	-1.8	2.45	32.47	-6.4785	-0.0294	-0.628
1037	SLD 11	-0.53	-0.76	35.01	-6.955	-0.034	-0.185
1037	SLD 12	-0.77	-0.75	34.96	-6.9448	-0.0339	-0.2676
1037	SLD 13	-3.76	1.2	33.75	-6.7454	-0.0433	-1.3136
1037	SLD 14	-4.12	1.22	33.66	-6.7298	-0.0433	-1.44
1037	SLD 15	-3.45	0.24	34.5	-6.8853	-0.0447	-1.2055
1037	SLD 16	-3.81	0.26	34.41	-6.8697	-0.0446	-1.3319
1037	SLV 1	8.77	2.35	31.71	-6.2335	0.0163	3.0699
1037	SLV 2	7.92	2.39	31.5	-6.1972	0.0164	2.7755
1037	SLV 3	9.49	0.18	33.41	-6.5518	0.0132	3.3222
1037	SLV 4	8.65	0.22	33.2	-6.5156	0.0133	3.0277
1037	SLV 5	1.65	4.62	30.49	-6.068	-0.0088	0.5792
1037	SLV 6	1.11	4.64	30.36	-6.0447	-0.0088	0.3899
1037	SLV 7	4.06	-2.62	36.14	-7.1291	-0.0193	1.42
1037	SLV 8	3.51	-2.6	36.01	-7.1058	-0.0192	1.2308
1037	SLV 9	-3.6	4.39	31.17	-6.2499	-0.0335	-1.2584
1037	SLV 10	-4.15	4.41	31.04	-6.2266	-0.0335	-1.4476
1037	SLV 11	-1.19	-2.85	36.83	-7.3111	-0.044	-0.4175
1037	SLV 12	-1.74	-2.83	36.7	-7.2878	-0.0439	-0.6068
1037	SLV 13	-8.74	1.58	33.99	-6.8401	-0.0661	-3.0553
1037	SLV 14	-9.58	1.61	33.78	-6.8039	-0.066	-3.3497
1037	SLV 15	-8.01	-0.6	35.68	-7.1585	-0.0692	-2.803
1037	SLV 16	-8.86	-0.56	35.48	-7.1222	-0.0691	-3.0975
1037	CRTFP Ux+	0	0	0	0	0	0
1037	CRTFP Ux-	0	0	0	0	0	0
1037	CRTFP Uy+	0	0	0	0	0	0
1037	CRTFP Uy-	0	0	0	0	0	0
1038	SLU 1	0.01	0.87	32.31	-7.0446	-0.0387	0.0067
1038	SLU 2	-0.01	0.84	32.38	-7.057	-0.0386	-0.0001
1038	SLU 3	0.01	0.9	33.06	-7.1937	-0.0398	0.0071
1038	SLU 4	0	0.89	33.1	-7.2012	-0.0397	0.003
1038	SLU 5	0	0.86	32.82	-7.1465	-0.0393	0.0018
1038	SLU 6	0.02	0.92	33.5	-7.2832	-0.0404	0.009
1038	SLU 7	0.01	0.9	33.54	-7.2906	-0.0404	0.0049
1038	SLU 8	0.02	0.9	33.19	-7.2236	-0.0401	0.0105
1038	SLU 9	0.01	0.88	33.23	-7.231	-0.04	0.0064
1038	SLU 10	-0.03	0.96	36.43	-7.8893	-0.044	-0.0095
1038	SLU 11	-0.01	1.03	37.11	-8.026	-0.0451	-0.0023
1038	SLU 12	-0.02	1.01	37.15	-8.0334	-0.045	-0.0064
1038	SLU 13	-0.03	0.98	36.87	-7.9787	-0.0447	-0.0076
1038	SLU 14	-0.01	1.04	37.55	-8.1154	-0.0458	-0.0004
1038	SLU 15	-0.02	1.02	37.59	-8.1229	-0.0457	-0.0045

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1038	SLU 16	0	1.02	37.24	-8.0558	-0.0454	0.0011
1038	SLU 17	-0.02	1	37.28	-8.0632	-0.0454	-0.003
1038	SLU 18	-0.03	1.05	38.1	-8.2335	-0.0464	-0.0067
1038	SLU 19	-0.04	1.03	38.14	-8.241	-0.0463	-0.0108
1038	SLU 20	-0.02	1.06	38.54	-8.323	-0.047	-0.0048
1038	SLU 21	-0.03	1.04	38.58	-8.3304	-0.047	-0.0089
1038	SLU 22	0	1.04	36.36	-7.8679	-0.0442	0.0022
1038	SLU 23	-0.02	1.01	36.42	-7.8803	-0.0441	-0.0046
1038	SLU 24	0	1.08	37.1	-8.017	-0.0452	0.0026
1038	SLU 25	-0.01	1.06	37.14	-8.0244	-0.0451	-0.0015
1038	SLU 26	-0.01	1.03	36.86	-7.9697	-0.0448	-0.0027
1038	SLU 27	0.01	1.09	37.54	-8.1064	-0.0459	0.0045
1038	SLU 28	-0.01	1.07	37.58	-8.1139	-0.0458	0.0004
1038	SLU 29	0.01	1.07	37.23	-8.0468	-0.0455	0.006
1038	SLU 30	0	1.05	37.27	-8.0542	-0.0455	0.0019
1038	SLU 31	-0.05	1.14	40.47	-8.7125	-0.0494	-0.014
1038	SLU 32	-0.03	1.2	41.15	-8.8492	-0.0505	-0.0068
1038	SLU 33	-0.04	1.18	41.19	-8.8567	-0.0505	-0.0109
1038	SLU 34	-0.04	1.15	40.91	-8.802	-0.0501	-0.0121
1038	SLU 35	-0.02	1.21	41.59	-8.9387	-0.0512	-0.0049
1038	SLU 36	-0.03	1.19	41.63	-8.9461	-0.0511	-0.009
1038	SLU 37	-0.02	1.19	41.28	-8.879	-0.0509	-0.0034
1038	SLU 38	-0.03	1.17	41.32	-8.8865	-0.0508	-0.0075
1038	SLU 39	-0.04	1.22	42.14	-9.0568	-0.0518	-0.0112
1038	SLU 40	-0.05	1.2	42.18	-9.0642	-0.0517	-0.0153
1038	SLU 41	-0.03	1.23	42.58	-9.1463	-0.0525	-0.0093
1038	SLU 42	-0.05	1.21	42.62	-9.1537	-0.0524	-0.0134
1038	SLU 43	0.02	1.08	40.62	-8.8758	-0.0485	0.0102
1038	SLU 44	0	1.05	40.69	-8.8881	-0.0484	0.0034
1038	SLU 45	0.02	1.11	41.37	-9.0249	-0.0495	0.0106
1038	SLU 46	0.01	1.09	41.41	-9.0323	-0.0495	0.0066
1038	SLU 47	0.01	1.06	41.13	-8.9776	-0.0491	0.0053
1038	SLU 48	0.03	1.12	41.81	-9.1143	-0.0502	0.0125
1038	SLU 49	0.02	1.1	41.85	-9.1218	-0.0501	0.0085
1038	SLU 50	0.03	1.1	41.5	-9.0547	-0.0498	0.014
1038	SLU 51	0.02	1.08	41.54	-9.0621	-0.0498	0.0099
1038	SLU 52	-0.03	1.17	44.74	-9.7204	-0.0537	-0.006
1038	SLU 53	0	1.23	45.41	-9.8571	-0.0549	0.0013
1038	SLU 54	-0.02	1.21	45.45	-9.8645	-0.0548	-0.0028
1038	SLU 55	-0.02	1.18	45.18	-9.8099	-0.0544	-0.0041
1038	SLU 56	0	1.24	45.85	-9.9466	-0.0555	0.0032
1038	SLU 57	-0.01	1.22	45.89	-9.954	-0.0555	-0.0009
1038	SLU 58	0.01	1.22	45.55	-9.8869	-0.0552	0.0046
1038	SLU 59	-0.01	1.21	45.59	-9.8944	-0.0551	0.0006
1038	SLU 60	-0.02	1.25	46.41	-10.0647	-0.0561	-0.0032
1038	SLU 61	-0.03	1.23	46.45	-10.0721	-0.0561	-0.0073
1038	SLU 62	-0.01	1.26	46.84	-10.1541	-0.0568	-0.0013
1038	SLU 63	-0.02	1.25	46.88	-10.1616	-0.0567	-0.0054
1038	SLU 64	0.01	1.25	44.66	-9.699	-0.0539	0.0057
1038	SLU 65	-0.01	1.22	44.73	-9.7114	-0.0538	-0.0011
1038	SLU 66	0.01	1.28	45.41	-9.8481	-0.055	0.0061
1038	SLU 67	0	1.26	45.45	-9.8555	-0.0549	0.0021
1038	SLU 68	-0.01	1.23	45.17	-9.8009	-0.0545	0.0008
1038	SLU 69	0.01	1.29	45.85	-9.9376	-0.0556	0.008
1038	SLU 70	0	1.27	45.89	-9.945	-0.0556	0.004
1038	SLU 71	0.02	1.27	45.54	-9.8779	-0.0553	0.0095
1038	SLU 72	0.01	1.26	45.58	-9.8854	-0.0552	0.0054
1038	SLU 73	-0.04	1.34	48.78	-10.5436	-0.0592	-0.0105
1038	SLU 74	-0.02	1.4	49.46	-10.6804	-0.0603	-0.0032
1038	SLU 75	-0.03	1.38	49.5	-10.6878	-0.0602	-0.0073
1038	SLU 76	-0.03	1.35	49.22	-10.6331	-0.0598	-0.0086
1038	SLU 77	-0.01	1.41	49.9	-10.7698	-0.061	-0.0013
1038	SLU 78	-0.02	1.4	49.94	-10.7773	-0.0609	-0.0054
1038	SLU 79	-0.01	1.39	49.59	-10.7102	-0.0606	0.0001
1038	SLU 80	-0.02	1.38	49.63	-10.7176	-0.0606	-0.0039
1038	SLU 81	-0.03	1.42	50.45	-10.8879	-0.0616	-0.0077
1038	SLU 82	-0.04	1.4	50.49	-10.8954	-0.0615	-0.0118
1038	SLU 83	-0.03	1.43	50.89	-10.9774	-0.0622	-0.0058
1038	SLU 84	-0.04	1.42	50.93	-10.9848	-0.0622	-0.0099
1038	SLE RA 1	0.01	0.92	33.47	-7.2798	-0.0403	0.0054
1038	SLE RA 2	0	0.9	33.51	-7.2881	-0.0402	0.0008
1038	SLE RA 3	0.01	0.94	33.96	-7.3792	-0.041	0.0057
1038	SLE RA 4	0	0.93	33.99	-7.3842	-0.0409	0.0029
1038	SLE RA 5	0	0.91	33.81	-7.3477	-0.0407	0.0021
1038	SLE RA 6	0.01	0.95	34.26	-7.4389	-0.0414	0.0069
1038	SLE RA 7	0.01	0.94	34.28	-7.4438	-0.0414	0.0042
1038	SLE RA 8	0.02	0.94	34.05	-7.3991	-0.0412	0.0079
1038	SLE RA 9	0.01	0.93	34.08	-7.4041	-0.0412	0.0052
1038	SLE RA 10	-0.02	0.98	36.21	-7.8429	-0.0438	-0.0054
1038	SLE RA 11	-0.01	1.02	36.66	-7.9341	-0.0445	-0.0006
1038	SLE RA 12	-0.02	1.01	36.69	-7.939	-0.0445	-0.0033
1038	SLE RA 13	-0.02	0.99	36.5	-7.9026	-0.0442	-0.0041
1038	SLE RA 14	0	1.03	36.96	-7.9937	-0.045	0.0007
1038	SLE RA 15	-0.01	1.02	36.98	-7.9987	-0.0449	-0.002
1038	SLE RA 16	0	1.02	36.75	-7.954	-0.0447	0.0017
1038	SLE RA 17	-0.01	1.01	36.78	-7.9589	-0.0447	-0.0011
1038	SLE RA 18	-0.02	1.04	37.32	-8.0725	-0.0454	-0.0036
1038	SLE RA 19	-0.02	1.03	37.35	-8.0774	-0.0453	-0.0063
1038	SLE RA 20	-0.01	1.05	37.62	-8.1321	-0.0458	-0.0023
1038	SLE RA 21	-0.02	1.03	37.64	-8.1371	-0.0458	-0.005
1038	SLE FR 1	0.01	0.92	33.47	-7.2798	-0.0403	0.0054
1038	SLE FR 2	0.01	0.92	33.48	-7.2815	-0.0403	0.0045
1038	SLE FR 3	0.01	0.92	33.59	-7.3037	-0.0405	0.0059
1038	SLE FR 4	0	0.95	34.63	-7.5193	-0.0418	0.0018
1038	SLE FR 5	0	0.96	34.74	-7.5415	-0.042	0.0032
1038	SLE FR 6	0	0.98	35.4	-7.6761	-0.0428	0.0009
1038	SLE QP 1	0.01	0.92	33.47	-7.2798	-0.0403	0.0054

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1038	SLE QP 2	0	0.96	34.62	-7.5176	-0.0418	0.0027
1038	SLD 1	3.77	1.59	33.28	-7.137	-0.0234	1.3207
1038	SLD 2	3.41	1.62	33.2	-7.1205	-0.0233	1.1942
1038	SLD 3	4.08	0.62	34.07	-7.296	-0.0251	1.4287
1038	SLD 4	3.72	0.65	33.98	-7.2796	-0.0251	1.3023
1038	SLD 5	0.73	2.6	33.05	-7.1651	-0.0336	0.2566
1038	SLD 6	0.49	2.62	32.99	-7.1544	-0.0336	0.1739
1038	SLD 7	1.76	-0.61	35.66	-7.6953	-0.0395	0.6167
1038	SLD 8	1.52	-0.59	35.6	-7.6845	-0.0395	0.5341
1038	SLD 9	-1.52	2.51	33.65	-7.3507	-0.0442	-0.5287
1038	SLD 10	-1.75	2.53	33.59	-7.34	-0.0441	-0.6113
1038	SLD 11	-0.49	-0.71	36.26	-7.8809	-0.0501	-0.1686
1038	SLD 12	-0.72	-0.69	36.2	-7.8701	-0.05	-0.2512
1038	SLD 13	-3.71	1.26	35.27	-7.7557	-0.0586	-1.2969
1038	SLD 14	-4.07	1.29	35.18	-7.7392	-0.0585	-1.4233
1038	SLD 15	-3.4	0.3	36.05	-7.9147	-0.0603	-1.1889
1038	SLD 16	-3.77	0.33	35.97	-7.8983	-0.0603	-1.3153
1038	SLV 1	8.81	2.4	31.51	-6.6324	0.0013	3.0861
1038	SLV 2	7.97	2.46	31.3	-6.5941	0.0015	2.7916
1038	SLV 3	9.54	0.21	33.29	-6.9937	-0.0027	3.3382
1038	SLV 4	8.69	0.28	33.08	-6.9554	-0.0026	3.0437
1038	SLV 5	1.69	4.69	31.03	-6.7106	-0.0228	0.5958
1038	SLV 6	1.15	4.74	30.9	-6.686	-0.0227	0.4065
1038	SLV 7	4.1	-2.6	36.95	-7.915	-0.0362	1.4361
1038	SLV 8	3.56	-2.55	36.82	-7.8904	-0.0361	1.2469
1038	SLV 9	-3.56	4.47	32.43	-7.1449	-0.0475	-1.2415
1038	SLV 10	-4.1	4.51	32.3	-7.1203	-0.0474	-1.4308
1038	SLV 11	-1.15	-2.83	38.35	-8.3492	-0.0609	-0.4012
1038	SLV 12	-1.69	-2.78	38.22	-8.3246	-0.0608	-0.5904
1038	SLV 13	-8.69	1.63	36.17	-8.0799	-0.0811	-3.0383
1038	SLV 14	-9.53	1.7	35.96	-8.0416	-0.0809	-3.3328
1038	SLV 15	-7.97	-0.55	37.95	-8.4412	-0.0851	-2.7862
1038	SLV 16	-8.81	-0.48	37.74	-8.4029	-0.0849	-3.0807
1038	CRTFP Ux+	0	0	0	0	0	0
1038	CRTFP Ux-	0	0	0	0	0	0
1038	CRTFP Uy+	0	0	0	0	0	0
1038	CRTFP Uy-	0	0	0	0	0	0
1039	SLU 1	0.06	0.94	33.62	-8.1177	-0.0475	0.0225
1039	SLU 2	0.04	0.91	33.68	-8.1297	-0.0474	0.0155
1039	SLU 3	0.06	0.97	34.4	-8.2947	-0.0488	0.0233
1039	SLU 4	0.05	0.95	34.44	-8.3019	-0.0487	0.0191
1039	SLU 5	0.04	0.92	34.15	-8.2362	-0.0482	0.0176
1039	SLU 6	0.07	0.98	34.86	-8.4011	-0.0496	0.0254
1039	SLU 7	0.05	0.97	34.9	-8.4083	-0.0495	0.0212
1039	SLU 8	0.07	0.96	34.54	-8.3307	-0.0491	0.0267
1039	SLU 9	0.06	0.95	34.58	-8.3379	-0.049	0.0225
1039	SLU 10	0.01	1.04	37.91	-9.1119	-0.054	0.0078
1039	SLU 11	0.04	1.1	38.63	-9.2768	-0.0554	0.0155
1039	SLU 12	0.03	1.08	38.67	-9.284	-0.0553	0.0114
1039	SLU 13	0.02	1.05	38.37	-9.2183	-0.0548	0.0099
1039	SLU 14	0.04	1.11	39.09	-9.3832	-0.0562	0.0177
1039	SLU 15	0.03	1.1	39.13	-9.3904	-0.0561	0.0135
1039	SLU 16	0.05	1.09	38.77	-9.3128	-0.0557	0.019
1039	SLU 17	0.03	1.08	38.81	-9.32	-0.0557	0.0148
1039	SLU 18	0.02	1.12	39.66	-9.5208	-0.057	0.0114
1039	SLU 19	0.01	1.11	39.7	-9.528	-0.0569	0.0072
1039	SLU 20	0.03	1.14	40.12	-9.6272	-0.0578	0.0135
1039	SLU 21	0.02	1.12	40.16	-9.6344	-0.0577	0.0094
1039	SLU 22	0.05	1.11	37.85	-9.0913	-0.0542	0.0197
1039	SLU 23	0.03	1.09	37.91	-9.1033	-0.0541	0.0127
1039	SLU 24	0.05	1.15	38.62	-9.2682	-0.0555	0.0205
1039	SLU 25	0.04	1.13	38.66	-9.2754	-0.0554	0.0163
1039	SLU 26	0.04	1.1	38.37	-9.2097	-0.0549	0.0148
1039	SLU 27	0.06	1.16	39.09	-9.3746	-0.0563	0.0226
1039	SLU 28	0.05	1.15	39.12	-9.3818	-0.0562	0.0184
1039	SLU 29	0.06	1.14	38.77	-9.3042	-0.0558	0.0239
1039	SLU 30	0.05	1.13	38.81	-9.3114	-0.0557	0.0197
1039	SLU 31	0.01	1.22	42.14	-10.0854	-0.0607	0.005
1039	SLU 32	0.03	1.28	42.85	-10.2503	-0.0621	0.0127
1039	SLU 33	0.02	1.26	42.89	-10.2575	-0.062	0.0086
1039	SLU 34	0.01	1.23	42.6	-10.1918	-0.0615	0.0071
1039	SLU 35	0.03	1.29	43.31	-10.3567	-0.0629	0.0149
1039	SLU 36	0.02	1.28	43.35	-10.3639	-0.0628	0.0107
1039	SLU 37	0.04	1.27	43	-10.2863	-0.0624	0.0162
1039	SLU 38	0.03	1.26	43.04	-10.2935	-0.0624	0.012
1039	SLU 39	0.02	1.3	43.89	-10.4943	-0.0637	0.0086
1039	SLU 40	0	1.28	43.93	-10.5015	-0.0636	0.0044
1039	SLU 41	0.02	1.31	44.35	-10.6007	-0.0645	0.0107
1039	SLU 42	0.01	1.3	44.39	-10.6079	-0.0644	0.0066
1039	SLU 43	0.08	1.16	42.26	-10.2193	-0.0595	0.0302
1039	SLU 44	0.06	1.13	42.32	-10.2313	-0.0594	0.0232
1039	SLU 45	0.08	1.19	43.04	-10.3962	-0.0607	0.031
1039	SLU 46	0.07	1.17	43.07	-10.4034	-0.0607	0.0268
1039	SLU 47	0.06	1.14	42.78	-10.3377	-0.0602	0.0253
1039	SLU 48	0.09	1.2	43.5	-10.5027	-0.0615	0.0331
1039	SLU 49	0.07	1.19	43.54	-10.5099	-0.0614	0.0289
1039	SLU 50	0.09	1.18	43.18	-10.4322	-0.0611	0.0344
1039	SLU 51	0.08	1.17	43.22	-10.4394	-0.061	0.0302
1039	SLU 52	0.04	1.26	46.55	-11.2134	-0.066	0.0155
1039	SLU 53	0.06	1.32	47.27	-11.3783	-0.0673	0.0232
1039	SLU 54	0.05	1.3	47.3	-11.3855	-0.0673	0.0191
1039	SLU 55	0.04	1.27	47.01	-11.3199	-0.0668	0.0176
1039	SLU 56	0.06	1.33	47.73	-11.4848	-0.0681	0.0254
1039	SLU 57	0.05	1.32	47.76	-11.492	-0.0681	0.0212
1039	SLU 58	0.07	1.31	47.41	-11.4143	-0.0677	0.0267
1039	SLU 59	0.06	1.3	47.45	-11.4215	-0.0676	0.0225
1039	SLU 60	0.05	1.34	48.3	-11.6223	-0.0689	0.0191

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1039	SLU 61	0.03	1.33	48.34	-11.6295	-0.0689	0.0149
1039	SLU 62	0.05	1.36	48.76	-11.7288	-0.0697	0.0212
1039	SLU 63	0.04	1.34	48.8	-11.736	-0.0697	0.0171
1039	SLU 64	0.07	1.33	46.48	-11.1928	-0.0662	0.0274
1039	SLU 65	0.05	1.31	46.55	-11.2048	-0.0661	0.0204
1039	SLU 66	0.07	1.37	47.26	-11.3697	-0.0674	0.0282
1039	SLU 67	0.06	1.35	47.3	-11.3769	-0.0674	0.024
1039	SLU 68	0.06	1.32	47.01	-11.3113	-0.0669	0.0225
1039	SLU 69	0.08	1.38	47.72	-11.4762	-0.0682	0.0303
1039	SLU 70	0.07	1.37	47.76	-11.4834	-0.0681	0.0261
1039	SLU 71	0.08	1.36	47.41	-11.4057	-0.0678	0.0316
1039	SLU 72	0.07	1.35	47.44	-11.4129	-0.0677	0.0274
1039	SLU 73	0.03	1.44	50.78	-12.1869	-0.0727	0.0127
1039	SLU 74	0.05	1.5	51.49	-12.3518	-0.074	0.0204
1039	SLU 75	0.04	1.48	51.53	-12.359	-0.074	0.0163
1039	SLU 76	0.03	1.45	51.24	-12.2934	-0.0735	0.0148
1039	SLU 77	0.05	1.51	51.95	-12.4583	-0.0748	0.0226
1039	SLU 78	0.04	1.5	51.99	-12.4655	-0.0748	0.0184
1039	SLU 79	0.06	1.49	51.64	-12.3878	-0.0744	0.0239
1039	SLU 80	0.05	1.48	51.67	-12.395	-0.0743	0.0197
1039	SLU 81	0.04	1.52	52.52	-12.5958	-0.0756	0.0163
1039	SLU 82	0.02	1.5	52.56	-12.603	-0.0756	0.0121
1039	SLU 83	0.04	1.53	52.99	-12.7023	-0.0764	0.0184
1039	SLU 84	0.03	1.52	53.02	-12.7095	-0.0764	0.0143
1039	SLE RA 1	0.06	0.99	34.83	-8.3959	-0.0494	0.0217
1039	SLE RA 2	0.04	0.97	34.87	-8.4039	-0.0494	0.017
1039	SLE RA 3	0.06	1.01	35.35	-8.5138	-0.0503	0.0222
1039	SLE RA 4	0.05	1	35.37	-8.5186	-0.0502	0.0194
1039	SLE RA 5	0.05	0.98	35.18	-8.4749	-0.0499	0.0184
1039	SLE RA 6	0.06	1.02	35.65	-8.5848	-0.0508	0.0236
1039	SLE RA 7	0.05	1.01	35.68	-8.5896	-0.0507	0.0208
1039	SLE RA 8	0.06	1.01	35.44	-8.5378	-0.0505	0.0245
1039	SLE RA 9	0.06	0.99	35.47	-8.5426	-0.0505	0.0217
1039	SLE RA 10	0.03	1.06	37.69	-9.0586	-0.0538	0.0119
1039	SLE RA 11	0.04	1.1	38.17	-9.1686	-0.0547	0.017
1039	SLE RA 12	0.03	1.09	38.19	-9.1734	-0.0546	0.0143
1039	SLE RA 13	0.03	1.06	38	-9.1296	-0.0543	0.0133
1039	SLE RA 14	0.05	1.11	38.47	-9.2395	-0.0552	0.0185
1039	SLE RA 15	0.04	1.09	38.5	-9.2443	-0.0552	0.0157
1039	SLE RA 16	0.05	1.09	38.26	-9.1926	-0.0549	0.0193
1039	SLE RA 17	0.04	1.08	38.29	-9.1974	-0.0549	0.0166
1039	SLE RA 18	0.03	1.11	38.86	-9.3312	-0.0557	0.0143
1039	SLE RA 19	0.03	1.1	38.88	-9.336	-0.0557	0.0115
1039	SLE RA 20	0.04	1.12	39.16	-9.4022	-0.0563	0.0157
1039	SLE RA 21	0.03	1.11	39.19	-9.407	-0.0562	0.0129
1039	SLE FR 1	0.06	0.99	34.83	-8.3959	-0.0494	0.0217
1039	SLE FR 2	0.05	0.98	34.84	-8.3975	-0.0494	0.0207
1039	SLE FR 3	0.06	0.99	34.95	-8.4243	-0.0496	0.0222
1039	SLE FR 4	0.05	1.02	36.04	-8.6781	-0.0513	0.0185
1039	SLE FR 5	0.05	1.03	36.16	-8.7049	-0.0515	0.02
1039	SLE FR 6	0.04	1.05	36.84	-8.8636	-0.0526	0.018
1039	SLE QP 1	0.06	0.99	34.83	-8.3959	-0.0494	0.0217
1039	SLE QP 2	0.05	1.02	36.04	-8.6765	-0.0513	0.0194
1039	SLD 1	3.81	1.65	34.15	-8.1079	-0.033	1.3364
1039	SLD 2	3.45	1.69	34.06	-8.0896	-0.0329	1.21
1039	SLD 3	4.12	0.67	34.98	-8.2927	-0.0349	1.4443
1039	SLD 4	3.76	0.72	34.89	-8.2744	-0.0348	1.3179
1039	SLD 5	0.77	2.68	34.23	-8.2289	-0.0429	0.2732
1039	SLD 6	0.54	2.71	34.17	-8.2169	-0.0429	0.1906
1039	SLD 7	1.8	-0.57	36.99	-8.8449	-0.0493	0.6329
1039	SLD 8	1.57	-0.54	36.93	-8.8329	-0.0493	0.5503
1039	SLD 9	-1.47	2.59	35.14	-8.52	-0.0534	-0.5114
1039	SLD 10	-1.71	2.62	35.08	-8.5081	-0.0533	-0.594
1039	SLD 11	-0.44	-0.66	37.9	-9.1361	-0.0598	-0.1517
1039	SLD 12	-0.68	-0.63	37.84	-9.1241	-0.0597	-0.2343
1039	SLD 13	-3.66	1.33	37.18	-9.0786	-0.0679	-1.279
1039	SLD 14	-4.03	1.38	37.09	-9.0603	-0.0678	-1.4054
1039	SLD 15	-3.35	0.36	38.01	-9.2634	-0.0698	-1.1711
1039	SLD 16	-3.72	0.4	37.92	-9.2451	-0.0697	-1.2975
1039	SLV 1	8.86	2.45	31.66	-7.3523	-0.0084	3.1004
1039	SLV 2	8.01	2.55	31.44	-7.3097	-0.0082	2.8061
1039	SLV 3	9.58	0.24	33.54	-7.7716	-0.0128	3.3522
1039	SLV 4	8.73	0.34	33.32	-7.729	-0.0126	3.0578
1039	SLV 5	1.74	4.79	31.91	-7.6506	-0.0318	0.6123
1039	SLV 6	1.2	4.86	31.77	-7.6232	-0.0317	0.4232
1039	SLV 7	4.15	-2.59	38.17	-9.0483	-0.0464	1.4515
1039	SLV 8	3.6	-2.52	38.04	-9.0209	-0.0463	1.2624
1039	SLV 9	-3.51	4.57	34.04	-8.3321	-0.0563	-1.2235
1039	SLV 10	-4.05	4.64	33.9	-8.3047	-0.0562	-1.4126
1039	SLV 11	-1.1	-2.81	40.3	-9.7298	-0.071	-0.3843
1039	SLV 12	-1.64	-2.74	40.16	-9.7024	-0.0708	-0.5734
1039	SLV 13	-8.64	1.71	38.75	-9.6239	-0.0901	-3.0189
1039	SLV 14	-9.48	1.81	38.53	-9.5814	-0.0899	-3.3133
1039	SLV 15	-7.91	-0.5	40.63	-10.0433	-0.0945	-2.7672
1039	SLV 16	-8.76	-0.4	40.41	-10.0007	-0.0943	-3.0615
1039	CRTFP Ux+	0	0	0	0	0	0
1039	CRTFP Ux-	0	0	0	0	0	0
1039	CRTFP Uy+	0	0	0	0	0	0
1039	CRTFP Uy-	0	0	0	0	0	0
1040	SLU 1	0.1	1	35.07	-9.3676	-0.0476	0.0387
1040	SLU 2	0.08	0.98	35.13	-9.3795	-0.0475	0.0316
1040	SLU 3	0.11	1.04	35.88	-9.5769	-0.0488	0.0399
1040	SLU 4	0.1	1.02	35.92	-9.584	-0.0487	0.0356
1040	SLU 5	0.09	0.99	35.61	-9.5055	-0.0482	0.0339
1040	SLU 6	0.11	1.05	36.37	-9.7029	-0.0496	0.0422
1040	SLU 7	0.1	1.04	36.4	-9.7101	-0.0495	0.038
1040	SLU 8	0.12	1.03	36.04	-9.6197	-0.0491	0.0434

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1040	SLU 9	0.11	1.02	36.07	-9.6268	-0.0491	0.0391
1040	SLU 10	0.07	1.12	39.56	-10.5363	-0.0541	0.0256
1040	SLU 11	0.09	1.18	40.31	-10.7338	-0.0554	0.0339
1040	SLU 12	0.08	1.16	40.35	-10.7409	-0.0554	0.0296
1040	SLU 13	0.07	1.13	40.04	-10.6624	-0.0549	0.0279
1040	SLU 14	0.1	1.19	40.8	-10.8598	-0.0562	0.0362
1040	SLU 15	0.08	1.18	40.84	-10.8669	-0.0562	0.032
1040	SLU 16	0.1	1.17	40.47	-10.7765	-0.0558	0.0374
1040	SLU 17	0.09	1.16	40.5	-10.7837	-0.0557	0.0331
1040	SLU 18	0.08	1.2	41.4	-11.0202	-0.0571	0.0301
1040	SLU 19	0.07	1.19	41.43	-11.0274	-0.057	0.0258
1040	SLU 20	0.09	1.22	41.88	-11.1463	-0.0578	0.0325
1040	SLU 21	0.07	1.2	41.92	-11.1534	-0.0578	0.0282
1040	SLU 22	0.1	1.19	39.5	-10.5164	-0.0543	0.0376
1040	SLU 23	0.08	1.16	39.56	-10.5283	-0.0542	0.0305
1040	SLU 24	0.1	1.23	40.31	-10.7257	-0.0555	0.0389
1040	SLU 25	0.09	1.21	40.35	-10.7329	-0.0555	0.0346
1040	SLU 26	0.09	1.18	40.04	-10.6544	-0.055	0.0329
1040	SLU 27	0.11	1.24	40.8	-10.8518	-0.0563	0.0412
1040	SLU 28	0.1	1.22	40.83	-10.8589	-0.0563	0.0369
1040	SLU 29	0.11	1.22	40.47	-10.7685	-0.0559	0.0423
1040	SLU 30	0.1	1.2	40.5	-10.7756	-0.0558	0.0381
1040	SLU 31	0.06	1.3	43.99	-11.6852	-0.0608	0.0245
1040	SLU 32	0.09	1.37	44.74	-11.8826	-0.0622	0.0328
1040	SLU 33	0.07	1.35	44.78	-11.8897	-0.0621	0.0286
1040	SLU 34	0.07	1.32	44.47	-11.8112	-0.0616	0.0269
1040	SLU 35	0.09	1.38	45.23	-12.0086	-0.063	0.0352
1040	SLU 36	0.08	1.36	45.27	-12.0158	-0.0629	0.0309
1040	SLU 37	0.1	1.36	44.9	-11.9254	-0.0625	0.0363
1040	SLU 38	0.08	1.34	44.93	-11.9325	-0.0624	0.0321
1040	SLU 39	0.07	1.39	45.83	-12.1691	-0.0638	0.0291
1040	SLU 40	0.06	1.37	45.86	-12.1762	-0.0637	0.0248
1040	SLU 41	0.08	1.4	46.31	-12.2951	-0.0646	0.0314
1040	SLU 42	0.07	1.39	46.35	-12.3022	-0.0645	0.0271
1040	SLU 43	0.14	1.24	44.07	-11.784	-0.0595	0.0507
1040	SLU 44	0.12	1.21	44.13	-11.7959	-0.0594	0.0436
1040	SLU 45	0.14	1.27	44.88	-11.9933	-0.0608	0.0519
1040	SLU 46	0.13	1.26	44.92	-12.0004	-0.0607	0.0476
1040	SLU 47	0.12	1.23	44.61	-11.9219	-0.0602	0.0459
1040	SLU 48	0.15	1.29	45.37	-12.1193	-0.0616	0.0542
1040	SLU 49	0.13	1.27	45.41	-12.1265	-0.0615	0.05
1040	SLU 50	0.15	1.27	45.04	-12.0361	-0.0611	0.0554
1040	SLU 51	0.14	1.25	45.07	-12.0432	-0.061	0.0511
1040	SLU 52	0.1	1.35	48.56	-12.9527	-0.0661	0.0376
1040	SLU 53	0.12	1.41	49.31	-13.1501	-0.0674	0.0459
1040	SLU 54	0.11	1.4	49.35	-13.1573	-0.0673	0.0416
1040	SLU 55	0.11	1.37	49.04	-13.0788	-0.0669	0.0399
1040	SLU 56	0.13	1.43	49.8	-13.2762	-0.0682	0.0482
1040	SLU 57	0.12	1.41	49.84	-13.2833	-0.0681	0.0439
1040	SLU 58	0.13	1.41	49.47	-13.1929	-0.0677	0.0493
1040	SLU 59	0.12	1.39	49.51	-13.2001	-0.0677	0.0451
1040	SLU 60	0.11	1.44	50.4	-13.4366	-0.069	0.0421
1040	SLU 61	0.1	1.42	50.43	-13.4438	-0.069	0.0378
1040	SLU 62	0.12	1.45	50.88	-13.5627	-0.0698	0.0444
1040	SLU 63	0.11	1.44	50.92	-13.5698	-0.0697	0.0402
1040	SLU 64	0.13	1.43	48.5	-12.9328	-0.0663	0.0496
1040	SLU 65	0.11	1.4	48.56	-12.9447	-0.0662	0.0425
1040	SLU 66	0.14	1.46	49.31	-13.1421	-0.0675	0.0508
1040	SLU 67	0.12	1.45	49.35	-13.1493	-0.0674	0.0466
1040	SLU 68	0.12	1.41	49.04	-13.0707	-0.0669	0.0449
1040	SLU 69	0.14	1.48	49.8	-13.2682	-0.0683	0.0532
1040	SLU 70	0.13	1.46	49.83	-13.2753	-0.0682	0.0489
1040	SLU 71	0.15	1.46	49.47	-13.1849	-0.0678	0.0543
1040	SLU 72	0.13	1.44	49.5	-13.192	-0.0678	0.05
1040	SLU 73	0.09	1.54	52.99	-14.1016	-0.0728	0.0365
1040	SLU 74	0.12	1.6	53.74	-14.299	-0.0741	0.0448
1040	SLU 75	0.11	1.59	53.78	-14.3061	-0.0741	0.0405
1040	SLU 76	0.1	1.55	53.47	-14.2276	-0.0736	0.0388
1040	SLU 77	0.12	1.62	54.23	-14.425	-0.0749	0.0472
1040	SLU 78	0.11	1.6	54.27	-14.4322	-0.0749	0.0429
1040	SLU 79	0.13	1.6	53.9	-14.3417	-0.0745	0.0483
1040	SLU 80	0.12	1.58	53.94	-14.3489	-0.0744	0.044
1040	SLU 81	0.11	1.63	54.83	-14.5855	-0.0758	0.041
1040	SLU 82	0.09	1.61	54.86	-14.5926	-0.0757	0.0368
1040	SLU 83	0.11	1.64	55.31	-14.7115	-0.0765	0.0434
1040	SLU 84	0.1	1.63	55.35	-14.7186	-0.0765	0.0391
1040	SLE RA 1	0.1	1.06	36.33	-9.6958	-0.0495	0.0384
1040	SLE RA 2	0.09	1.04	36.37	-9.7038	-0.0494	0.0337
1040	SLE RA 3	0.11	1.08	36.88	-9.8354	-0.0503	0.0392
1040	SLE RA 4	0.1	1.07	36.9	-9.8401	-0.0503	0.0364
1040	SLE RA 5	0.09	1.05	36.7	-9.7878	-0.0499	0.0352
1040	SLE RA 6	0.11	1.09	37.2	-9.9194	-0.0508	0.0408
1040	SLE RA 7	0.1	1.08	37.22	-9.9242	-0.0508	0.0379
1040	SLE RA 8	0.11	1.08	36.98	-9.8639	-0.0505	0.0415
1040	SLE RA 9	0.1	1.07	37	-9.8686	-0.0505	0.0387
1040	SLE RA 10	0.08	1.13	39.33	-10.475	-0.0538	0.0297
1040	SLE RA 11	0.09	1.17	39.83	-10.6066	-0.0547	0.0352
1040	SLE RA 12	0.09	1.16	39.85	-10.6114	-0.0547	0.0324
1040	SLE RA 13	0.08	1.14	39.65	-10.559	-0.0544	0.0312
1040	SLE RA 14	0.1	1.18	40.15	-10.6906	-0.0553	0.0368
1040	SLE RA 15	0.09	1.17	40.18	-10.6954	-0.0552	0.0339
1040	SLE RA 16	0.1	1.17	39.93	-10.6351	-0.055	0.0375
1040	SLE RA 17	0.09	1.16	39.96	-10.6399	-0.0549	0.0347
1040	SLE RA 18	0.09	1.19	40.55	-10.7976	-0.0558	0.0327
1040	SLE RA 19	0.08	1.18	40.58	-10.8023	-0.0558	0.0298
1040	SLE RA 20	0.09	1.2	40.88	-10.8816	-0.0563	0.0342
1040	SLE RA 21	0.08	1.19	40.9	-10.8864	-0.0563	0.0314

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1040	SLE FR 1	0.1	1.06	36.33	-9.6958	-0.0495	0.0384
1040	SLE FR 2	0.1	1.05	36.34	-9.6974	-0.0495	0.0374
1040	SLE FR 3	0.11	1.06	36.46	-9.7294	-0.0497	0.039
1040	SLE FR 4	0.1	1.09	37.61	-10.0279	-0.0514	0.0357
1040	SLE FR 5	0.1	1.1	37.73	-10.06	-0.0516	0.0373
1040	SLE FR 6	0.09	1.12	38.44	-10.2467	-0.0527	0.0355
1040	SLE QP 1	0.1	1.06	36.33	-9.6958	-0.0495	0.0384
1040	SLE QP 2	0.1	1.1	37.6	-10.0263	-0.0514	0.0367
1040	SLD 1	3.86	1.71	35.18	-9.2775	-0.0336	1.3518
1040	SLD 2	3.5	1.77	35.09	-9.2571	-0.0336	1.2255
1040	SLD 3	4.17	0.72	36.06	-9.4888	-0.0353	1.4595
1040	SLD 4	3.8	0.78	35.96	-9.4684	-0.0353	1.3332
1040	SLD 5	0.82	2.77	35.56	-9.4849	-0.0435	0.2902
1040	SLD 6	0.59	2.81	35.5	-9.4715	-0.0434	0.2077
1040	SLD 7	1.85	-0.53	38.48	-10.1891	-0.0492	0.6491
1040	SLD 8	1.61	-0.49	38.42	-10.1758	-0.0491	0.5666
1040	SLD 9	-1.42	2.68	36.78	-9.8769	-0.0536	-0.4933
1040	SLD 10	-1.66	2.72	36.72	-9.8636	-0.0536	-0.5758
1040	SLD 11	-0.39	-0.62	39.7	-10.5812	-0.0593	-0.1343
1040	SLD 12	-0.63	-0.58	39.63	-10.5678	-0.0593	-0.2169
1040	SLD 13	-3.61	1.41	39.23	-10.5843	-0.0675	-1.2598
1040	SLD 14	-3.97	1.47	39.14	-10.5639	-0.0674	-1.3861
1040	SLD 15	-3.3	0.42	40.11	-10.7956	-0.0692	-1.1522
1040	SLD 16	-3.66	0.48	40.01	-10.7752	-0.0692	-1.2784
1040	SLV 1	8.9	2.5	31.97	-8.2811	-0.0099	3.1133
1040	SLV 2	8.05	2.64	31.75	-8.2336	-0.0097	2.8192
1040	SLV 3	9.62	0.25	33.95	-8.7602	-0.0137	3.3646
1040	SLV 4	8.77	0.4	33.74	-8.7126	-0.0136	3.0705
1040	SLV 5	1.79	4.89	32.94	-8.7843	-0.033	0.629
1040	SLV 6	1.25	4.99	32.8	-8.7538	-0.033	0.44
1040	SLV 7	4.19	-2.58	39.55	-10.3813	-0.046	1.4665
1040	SLV 8	3.65	-2.49	39.41	-10.3507	-0.0459	1.2775
1040	SLV 9	-3.45	4.68	35.78	-9.702	-0.0568	-1.2041
1040	SLV 10	-3.99	4.77	35.64	-9.6714	-0.0568	-1.3931
1040	SLV 11	-1.05	-2.8	42.4	-11.2989	-0.0698	-0.3666
1040	SLV 12	-1.59	-2.7	42.26	-11.2684	-0.0697	-0.5556
1040	SLV 13	-8.58	1.79	41.46	-11.3401	-0.0892	-2.9971
1040	SLV 14	-9.42	1.94	41.24	-11.2925	-0.089	-3.2912
1040	SLV 15	-7.86	-0.45	43.45	-11.8191	-0.0931	-2.7459
1040	SLV 16	-8.7	-0.31	43.23	-11.7716	-0.0929	-3.04
1040	CRTFP Ux+	0	0	0	0	0	0
1040	CRTFP Ux-	0	0	0	0	0	0
1040	CRTFP Uy+	0	0	0	0	0	0
1040	CRTFP Uy-	0	0	0	0	0	0
1041	SLU 1	0.14	0.96	32.97	-9.6286	0.5868	0.0319
1041	SLU 2	0.12	0.94	33.02	-9.6398	0.5878	0.0258
1041	SLU 3	0.14	0.99	33.74	-9.8478	0.6004	0.0327
1041	SLU 4	0.13	0.98	33.77	-9.8545	0.6011	0.0291
1041	SLU 5	0.13	0.95	33.48	-9.7717	0.596	0.0279
1041	SLU 6	0.15	1.01	34.2	-9.9797	0.6086	0.0348
1041	SLU 7	0.14	0.99	34.23	-9.9864	0.6092	0.0311
1041	SLU 8	0.15	0.99	33.89	-9.8924	0.603	0.036
1041	SLU 9	0.14	0.97	33.92	-9.8991	0.6036	0.0324
1041	SLU 10	0.11	1.07	37.2	-10.847	0.6619	0.0194
1041	SLU 11	0.13	1.13	37.92	-11.0551	0.6745	0.0263
1041	SLU 12	0.12	1.12	37.95	-11.0618	0.6751	0.0226
1041	SLU 13	0.11	1.09	37.66	-10.9789	0.67	0.0214
1041	SLU 14	0.14	1.14	38.38	-11.1869	0.6826	0.0284
1041	SLU 15	0.13	1.13	38.41	-11.1937	0.6833	0.0247
1041	SLU 16	0.14	1.12	38.07	-11.0997	0.6771	0.0296
1041	SLU 17	0.13	1.11	38.1	-11.1064	0.6777	0.0259
1041	SLU 18	0.12	1.15	38.94	-11.3533	0.6926	0.0227
1041	SLU 19	0.11	1.14	38.97	-11.36	0.6933	0.019
1041	SLU 20	0.13	1.17	39.4	-11.4852	0.7007	0.0248
1041	SLU 21	0.12	1.16	39.43	-11.4919	0.7014	0.0211
1041	SLU 22	0.14	1.14	37.15	-10.8294	0.6608	0.0292
1041	SLU 23	0.12	1.11	37.2	-10.8406	0.6619	0.0231
1041	SLU 24	0.14	1.17	37.92	-11.0486	0.6745	0.03
1041	SLU 25	0.13	1.16	37.95	-11.0553	0.6751	0.0264
1041	SLU 26	0.13	1.13	37.66	-10.9725	0.67	0.0252
1041	SLU 27	0.15	1.19	38.38	-11.1805	0.6826	0.0321
1041	SLU 28	0.14	1.17	38.41	-11.1872	0.6832	0.0284
1041	SLU 29	0.15	1.17	38.07	-11.0932	0.677	0.0333
1041	SLU 30	0.14	1.15	38.1	-11.0999	0.6777	0.0297
1041	SLU 31	0.11	1.25	41.38	-12.0479	0.7359	0.0166
1041	SLU 32	0.13	1.31	42.1	-12.2559	0.7485	0.0236
1041	SLU 33	0.12	1.29	42.13	-12.2626	0.7492	0.0199
1041	SLU 34	0.12	1.27	41.84	-12.1798	0.7441	0.0187
1041	SLU 35	0.14	1.32	42.56	-12.3878	0.7567	0.0256
1041	SLU 36	0.13	1.31	42.59	-12.3945	0.7573	0.022
1041	SLU 37	0.14	1.3	42.25	-12.3005	0.7511	0.0269
1041	SLU 38	0.13	1.29	42.28	-12.3072	0.7517	0.0232
1041	SLU 39	0.12	1.33	43.12	-12.5541	0.7667	0.02
1041	SLU 40	0.11	1.32	43.15	-12.5608	0.7673	0.0163
1041	SLU 41	0.13	1.35	43.58	-12.686	0.7748	0.0221
1041	SLU 42	0.12	1.33	43.61	-12.6927	0.7754	0.0184
1041	SLU 43	0.18	1.19	41.42	-12.1055	0.7375	0.0424
1041	SLU 44	0.16	1.16	41.48	-12.1166	0.7385	0.0363
1041	SLU 45	0.18	1.22	42.19	-12.3246	0.7511	0.0433
1041	SLU 46	0.17	1.21	42.22	-12.3314	0.7517	0.0396
1041	SLU 47	0.17	1.18	41.93	-12.2485	0.7466	0.0384
1041	SLU 48	0.19	1.23	42.65	-12.4565	0.7592	0.0453
1041	SLU 49	0.18	1.22	42.68	-12.4633	0.7598	0.0416
1041	SLU 50	0.19	1.21	42.34	-12.3692	0.7537	0.0466
1041	SLU 51	0.18	1.2	42.37	-12.376	0.7543	0.0429
1041	SLU 52	0.15	1.3	45.66	-13.3239	0.8126	0.0299
1041	SLU 53	0.17	1.36	46.37	-13.5319	0.8252	0.0368

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1041	SLU 54	0.16	1.34	46.41	-13.5386	0.8258	0.0331
1041	SLU 55	0.16	1.31	46.12	-13.4558	0.8207	0.0319
1041	SLU 56	0.18	1.37	46.83	-13.6638	0.8333	0.0389
1041	SLU 57	0.17	1.36	46.86	-13.6705	0.8339	0.0352
1041	SLU 58	0.18	1.35	46.52	-13.5765	0.8278	0.0401
1041	SLU 59	0.17	1.34	46.55	-13.5832	0.8284	0.0364
1041	SLU 60	0.16	1.38	47.4	-13.8301	0.8433	0.0332
1041	SLU 61	0.15	1.37	47.43	-13.8368	0.8439	0.0296
1041	SLU 62	0.17	1.4	47.86	-13.962	0.8514	0.0353
1041	SLU 63	0.16	1.38	47.89	-13.9687	0.852	0.0316
1041	SLU 64	0.18	1.36	45.6	-13.3063	0.8115	0.0397
1041	SLU 65	0.16	1.34	45.66	-13.3175	0.8125	0.0336
1041	SLU 66	0.19	1.4	46.38	-13.5255	0.8251	0.0405
1041	SLU 67	0.17	1.38	46.41	-13.5322	0.8257	0.0369
1041	SLU 68	0.17	1.36	46.12	-13.4494	0.8206	0.0357
1041	SLU 69	0.19	1.41	46.83	-13.6574	0.8332	0.0426
1041	SLU 70	0.18	1.4	46.87	-13.6641	0.8339	0.0389
1041	SLU 71	0.19	1.39	46.52	-13.5701	0.8277	0.0438
1041	SLU 72	0.18	1.38	46.56	-13.5768	0.8283	0.0402
1041	SLU 73	0.15	1.48	49.84	-14.5247	0.8866	0.0272
1041	SLU 74	0.17	1.53	50.56	-14.7327	0.8992	0.0341
1041	SLU 75	0.16	1.52	50.59	-14.7394	0.8998	0.0304
1041	SLU 76	0.16	1.49	50.3	-14.6566	0.8947	0.0292
1041	SLU 77	0.18	1.55	51.02	-14.8646	0.9073	0.0362
1041	SLU 78	0.17	1.54	51.05	-14.8713	0.9079	0.0325
1041	SLU 79	0.18	1.53	50.7	-14.7773	0.9018	0.0374
1041	SLU 80	0.17	1.52	50.74	-14.784	0.9024	0.0337
1041	SLU 81	0.16	1.56	51.58	-15.031	0.9173	0.0305
1041	SLU 82	0.15	1.55	51.61	-15.0377	0.9179	0.0268
1041	SLU 83	0.17	1.57	52.04	-15.1628	0.9254	0.0326
1041	SLU 84	0.16	1.56	52.07	-15.1696	0.926	0.0289
1041	SLE RA 1	0.14	1.01	34.16	-9.9717	0.608	0.0312
1041	SLE RA 2	0.13	1	34.2	-9.9791	0.6086	0.0271
1041	SLE RA 3	0.14	1.03	34.68	-10.1178	0.617	0.0317
1041	SLE RA 4	0.13	1.02	34.7	-10.1223	0.6175	0.0293
1041	SLE RA 5	0.13	1	34.5	-10.0671	0.6141	0.0284
1041	SLE RA 6	0.15	1.04	34.98	-10.2057	0.6225	0.0331
1041	SLE RA 7	0.14	1.03	35	-10.2102	0.6229	0.0306
1041	SLE RA 8	0.15	1.03	34.77	-10.1475	0.6188	0.0339
1041	SLE RA 9	0.14	1.02	34.8	-10.152	0.6192	0.0315
1041	SLE RA 10	0.12	1.09	36.98	-10.784	0.658	0.0228
1041	SLE RA 11	0.13	1.12	37.46	-10.9227	0.6664	0.0274
1041	SLE RA 12	0.13	1.11	37.48	-10.9271	0.6668	0.025
1041	SLE RA 13	0.12	1.1	37.29	-10.8719	0.6634	0.0241
1041	SLE RA 14	0.14	1.13	37.77	-11.0106	0.6718	0.0288
1041	SLE RA 15	0.13	1.12	37.79	-11.0151	0.6723	0.0263
1041	SLE RA 16	0.14	1.12	37.56	-10.9524	0.6682	0.0296
1041	SLE RA 17	0.13	1.11	37.58	-10.9569	0.6686	0.0272
1041	SLE RA 18	0.13	1.14	38.14	-11.1215	0.6785	0.025
1041	SLE RA 19	0.12	1.13	38.16	-11.1259	0.6789	0.0226
1041	SLE RA 20	0.13	1.15	38.45	-11.2094	0.6839	0.0264
1041	SLE RA 21	0.12	1.14	38.47	-11.2139	0.6843	0.0239
1041	SLE FR 1	0.14	1.01	34.16	-9.9717	0.608	0.0312
1041	SLE FR 2	0.14	1.01	34.17	-9.9732	0.6081	0.0303
1041	SLE FR 3	0.14	1.01	34.28	-10.0068	0.6101	0.0317
1041	SLE FR 4	0.13	1.05	35.36	-10.3181	0.6293	0.0285
1041	SLE FR 5	0.14	1.05	35.48	-10.3518	0.6313	0.0299
1041	SLE FR 6	0.13	1.08	36.15	-10.5466	0.6432	0.0281
1041	SLE QP 1	0.14	1.01	34.16	-9.9717	0.608	0.0312
1041	SLE QP 2	0.14	1.05	35.36	-10.3166	0.6291	0.0293
1041	SLD 1	3.55	1.59	32.72	-9.491	0.5922	1.2209
1041	SLD 2	3.22	1.67	32.64	-9.4712	0.5905	1.1048
1041	SLD 3	3.83	0.69	33.55	-9.6998	0.6069	1.3214
1041	SLD 4	3.5	0.76	33.46	-9.68	0.6053	1.2053
1041	SLD 5	0.79	2.58	33.33	-9.7557	0.5959	0.2549
1041	SLD 6	0.58	2.63	33.27	-9.7428	0.5948	0.179
1041	SLD 7	1.73	-0.45	36.08	-10.4518	0.6452	0.5899
1041	SLD 8	1.51	-0.4	36.02	-10.4389	0.6441	0.5141
1041	SLD 9	-1.24	2.5	34.69	-10.1943	0.6141	-0.4554
1041	SLD 10	-1.45	2.55	34.63	-10.1814	0.6131	-0.5313
1041	SLD 11	-0.31	-0.53	37.44	-10.8905	0.6634	-0.1203
1041	SLD 12	-0.52	-0.48	37.38	-10.8775	0.6624	-0.1962
1041	SLD 13	-3.23	1.34	37.25	-10.9532	0.6529	-1.1467
1041	SLD 14	-3.56	1.41	37.17	-10.9334	0.6513	-1.2628
1041	SLD 15	-2.95	0.43	38.08	-11.162	0.6677	-1.0462
1041	SLD 16	-3.28	0.5	37.99	-11.1422	0.6661	-1.1623
1041	SLV 1	8.12	2.29	29.21	-8.3914	0.5431	2.8169
1041	SLV 2	7.35	2.47	29.01	-8.3453	0.5393	2.5465
1041	SLV 3	8.77	0.24	31.09	-8.8649	0.5766	3.0517
1041	SLV 4	8	0.41	30.88	-8.8188	0.5729	2.7813
1041	SLV 5	1.67	4.51	30.71	-9.0288	0.5531	0.5558
1041	SLV 6	1.18	4.63	30.58	-8.9992	0.5507	0.382
1041	SLV 7	3.85	-2.35	36.95	-10.6071	0.6649	1.3385
1041	SLV 8	3.36	-2.23	36.82	-10.5775	0.6625	1.1647
1041	SLV 9	-3.08	4.33	33.9	-10.0557	0.5958	-1.1061
1041	SLV 10	-3.58	4.45	33.77	-10.0261	0.5934	-1.2798
1041	SLV 11	-0.91	-2.53	40.13	-11.634	0.7076	-0.3234
1041	SLV 12	-1.4	-2.42	40	-11.6044	0.7052	-0.4972
1041	SLV 13	-7.73	1.69	39.83	-11.8144	0.6854	-2.7227
1041	SLV 14	-8.5	1.86	39.63	-11.7683	0.6816	-2.9931
1041	SLV 15	-7.08	-0.37	41.7	-12.2879	0.7189	-2.4879
1041	SLV 16	-7.85	-0.2	41.5	-12.2418	0.7152	-2.7583
1041	CRTFP Ux+	0	0	0	0	0	0
1041	CRTFP Ux-	0	0	0	0	0	0
1041	CRTFP Uy+	0	0	0	0	0	0
1041	CRTFP Uy-	0	0	0	0	0	0
1043	SLU 1	0.45	2.38	83.22	-18.762	0.0227	0.1046

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1043	SLU 2	0.4	2.33	83.35	-18.7857	0.0238	0.0937
1043	SLU 3	0.46	2.47	85.18	-19.1975	0.0227	0.1075
1043	SLU 4	0.43	2.43	85.25	-19.2117	0.0234	0.1009
1043	SLU 5	0.42	2.36	84.52	-19.0468	0.0236	0.0979
1043	SLU 6	0.48	2.5	86.34	-19.4585	0.0225	0.1116
1043	SLU 7	0.45	2.47	86.42	-19.4727	0.0232	0.1051
1043	SLU 8	0.48	2.45	85.55	-19.2842	0.0222	0.1129
1043	SLU 9	0.45	2.42	85.63	-19.2984	0.0229	0.1064
1043	SLU 10	0.38	2.68	93.93	-21.1672	0.0252	0.0899
1043	SLU 11	0.44	2.82	95.75	-21.579	0.0241	0.1037
1043	SLU 12	0.41	2.79	95.83	-21.5932	0.0248	0.0971
1043	SLU 13	0.39	2.72	95.09	-21.4283	0.025	0.0941
1043	SLU 14	0.45	2.85	96.91	-21.8401	0.0238	0.1079
1043	SLU 15	0.43	2.82	96.99	-21.8543	0.0245	0.1013
1043	SLU 16	0.46	2.81	96.13	-21.6657	0.0235	0.1092
1043	SLU 17	0.43	2.77	96.21	-21.6799	0.0242	0.1026
1043	SLU 18	0.42	2.89	98.33	-22.1642	0.0246	0.0992
1043	SLU 19	0.39	2.85	98.4	-22.1784	0.0253	0.0927
1043	SLU 20	0.43	2.92	99.49	-22.4253	0.0244	0.1034
1043	SLU 21	0.4	2.89	99.57	-22.4395	0.0251	0.0968
1043	SLU 22	0.46	2.83	93.82	-21.1389	0.0221	0.1079
1043	SLU 23	0.41	2.78	93.95	-21.1626	0.0232	0.097
1043	SLU 24	0.47	2.91	95.77	-21.5744	0.0221	0.1108
1043	SLU 25	0.44	2.88	95.85	-21.5886	0.0228	0.1042
1043	SLU 26	0.43	2.81	95.11	-21.4237	0.023	0.1012
1043	SLU 27	0.49	2.95	96.94	-21.8355	0.0219	0.115
1043	SLU 28	0.46	2.92	97.02	-21.8497	0.0226	0.1084
1043	SLU 29	0.49	2.9	96.15	-21.6611	0.0216	0.1163
1043	SLU 30	0.46	2.87	96.23	-21.6753	0.0223	0.1097
1043	SLU 31	0.39	3.13	104.52	-23.5442	0.0246	0.0932
1043	SLU 32	0.45	3.27	106.35	-23.9559	0.0235	0.107
1043	SLU 33	0.42	3.23	106.42	-23.9701	0.0242	0.1005
1043	SLU 34	0.41	3.17	105.69	-23.8052	0.0244	0.0974
1043	SLU 35	0.47	3.3	107.51	-24.217	0.0232	0.1112
1043	SLU 36	0.44	3.27	107.59	-24.2312	0.024	0.1046
1043	SLU 37	0.47	3.25	106.72	-24.0426	0.0229	0.1125
1043	SLU 38	0.44	3.22	106.8	-24.0568	0.0237	0.1059
1043	SLU 39	0.43	3.33	108.92	-24.5411	0.024	0.1025
1043	SLU 40	0.4	3.3	109	-24.5553	0.0247	0.096
1043	SLU 41	0.44	3.37	110.09	-24.8022	0.0238	0.1067
1043	SLU 42	0.42	3.34	110.17	-24.8164	0.0245	0.1001
1043	SLU 43	0.58	2.94	104.56	-23.5757	0.0297	0.1349
1043	SLU 44	0.53	2.89	104.69	-23.5993	0.0308	0.1239
1043	SLU 45	0.59	3.03	106.51	-24.0111	0.0297	0.1377
1043	SLU 46	0.56	3	106.59	-24.0253	0.0304	0.1312
1043	SLU 47	0.55	2.93	105.85	-23.8604	0.0306	0.1281
1043	SLU 48	0.6	3.06	107.68	-24.2722	0.0295	0.1419
1043	SLU 49	0.58	3.03	107.75	-24.2864	0.0302	0.1353
1043	SLU 50	0.61	3.01	106.89	-24.0978	0.0292	0.1432
1043	SLU 51	0.58	2.98	106.97	-24.112	0.0299	0.1366
1043	SLU 52	0.51	3.24	115.26	-25.9809	0.0322	0.1202
1043	SLU 53	0.57	3.38	117.08	-26.3926	0.0311	0.1339
1043	SLU 54	0.54	3.35	117.16	-26.4069	0.0318	0.1274
1043	SLU 55	0.52	3.28	116.42	-26.242	0.032	0.1243
1043	SLU 56	0.58	3.41	118.25	-26.6537	0.0308	0.1381
1043	SLU 57	0.56	3.38	118.33	-26.6679	0.0315	0.1316
1043	SLU 58	0.59	3.37	117.46	-26.4793	0.0305	0.1394
1043	SLU 59	0.56	3.34	117.54	-26.4936	0.0312	0.1329
1043	SLU 60	0.54	3.45	119.66	-26.9778	0.0316	0.1295
1043	SLU 61	0.52	3.42	119.74	-26.9921	0.0323	0.1229
1043	SLU 62	0.56	3.48	120.83	-27.2389	0.0314	0.1336
1043	SLU 63	0.53	3.45	120.9	-27.2531	0.0321	0.1271
1043	SLU 64	0.59	3.39	115.15	-25.9526	0.0291	0.1382
1043	SLU 65	0.54	3.34	115.28	-25.9763	0.0302	0.1272
1043	SLU 66	0.6	3.48	117.11	-26.388	0.0291	0.141
1043	SLU 67	0.57	3.44	117.18	-26.4022	0.0298	0.1345
1043	SLU 68	0.56	3.37	116.45	-26.2374	0.03	0.1314
1043	SLU 69	0.62	3.51	118.27	-26.6491	0.0289	0.1452
1043	SLU 70	0.59	3.48	118.35	-26.6633	0.0296	0.1387
1043	SLU 71	0.62	3.46	117.48	-26.4747	0.0286	0.1465
1043	SLU 72	0.59	3.43	117.56	-26.489	0.0293	0.14
1043	SLU 73	0.52	3.69	125.86	-28.3578	0.0316	0.1235
1043	SLU 74	0.58	3.83	127.68	-28.7696	0.0305	0.1373
1043	SLU 75	0.55	3.8	127.76	-28.7838	0.0312	0.1307
1043	SLU 76	0.54	3.73	127.02	-28.6189	0.0314	0.1276
1043	SLU 77	0.6	3.86	128.84	-29.0306	0.0302	0.1414
1043	SLU 78	0.57	3.83	128.92	-29.0449	0.0309	0.1349
1043	SLU 79	0.6	3.82	128.06	-28.8563	0.0299	0.1427
1043	SLU 80	0.57	3.78	128.14	-28.8705	0.0307	0.1362
1043	SLU 81	0.56	3.9	130.26	-29.3548	0.031	0.1328
1043	SLU 82	0.53	3.86	130.33	-29.369	0.0317	0.1262
1043	SLU 83	0.57	3.93	131.42	-29.6159	0.0308	0.1369
1043	SLU 84	0.55	3.9	131.5	-29.6301	0.0315	0.1304
1043	SLE RA 1	0.45	2.51	86.25	-19.4411	0.0225	0.1056
1043	SLE RA 2	0.42	2.48	86.34	-19.4569	0.0233	0.0983
1043	SLE RA 3	0.46	2.57	87.55	-19.7314	0.0225	0.1075
1043	SLE RA 4	0.44	2.55	87.6	-19.7409	0.023	0.1031
1043	SLE RA 5	0.43	2.5	87.11	-19.631	0.0231	0.1011
1043	SLE RA 6	0.47	2.59	88.33	-19.9055	0.0224	0.1102
1043	SLE RA 7	0.45	2.57	88.38	-19.915	0.0228	0.1059
1043	SLE RA 8	0.47	2.56	87.8	-19.7892	0.0222	0.1111
1043	SLE RA 9	0.45	2.54	87.86	-19.7987	0.0226	0.1067
1043	SLE RA 10	0.4	2.71	93.38	-21.0446	0.0242	0.0958
1043	SLE RA 11	0.44	2.8	94.6	-21.3191	0.0234	0.1049
1043	SLE RA 12	0.42	2.78	94.65	-21.3286	0.0239	0.1006
1043	SLE RA 13	0.42	2.73	94.16	-21.2187	0.024	0.0985
1043	SLE RA 14	0.45	2.82	95.38	-21.4932	0.0233	0.1077

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1043	SLE RA 15	0.44	2.8	95.43	-21.5026	0.0237	0.1034
1043	SLE RA 16	0.46	2.79	94.85	-21.3769	0.0231	0.1086
1043	SLE RA 17	0.44	2.77	94.91	-21.3864	0.0235	0.1042
1043	SLE RA 18	0.43	2.85	96.32	-21.7093	0.0238	0.102
1043	SLE RA 19	0.41	2.83	96.37	-21.7187	0.0243	0.0976
1043	SLE RA 20	0.44	2.87	97.1	-21.8833	0.0236	0.1047
1043	SLE RA 21	0.42	2.85	97.15	-21.8928	0.0241	0.1004
1043	SLE FR 1	0.45	2.51	86.25	-19.4411	0.0225	0.1056
1043	SLE FR 2	0.44	2.5	86.27	-19.4443	0.0226	0.1041
1043	SLE FR 3	0.45	2.52	86.56	-19.5107	0.0224	0.1067
1043	SLE FR 4	0.44	2.6	89.29	-20.1247	0.023	0.103
1043	SLE FR 5	0.45	2.62	89.58	-20.1912	0.0228	0.1056
1043	SLE FR 6	0.44	2.68	91.28	-20.5752	0.0231	0.1038
1043	SLE QP 1	0.45	2.51	86.25	-19.4411	0.0225	0.1056
1043	SLE QP 2	0.44	2.61	89.27	-20.1216	0.0229	0.1045
1043	SLD 1	8.75	3.28	81.71	-18.4169	0.1959	2.1113
1043	SLD 2	7.94	3.52	81.49	-18.3774	0.1939	1.9199
1043	SLD 3	9.44	1.06	83.85	-18.8295	0.2107	2.2749
1043	SLD 4	8.63	1.31	83.63	-18.79	0.2087	2.0836
1043	SLD 5	2.04	6.12	83.79	-18.9913	0.0528	0.4921
1043	SLD 6	1.5	6.28	83.65	-18.9655	0.0515	0.3671
1043	SLD 7	4.33	-1.25	90.93	-20.3668	0.1019	1.0377
1043	SLD 8	3.8	-1.09	90.79	-20.341	0.1006	0.9126
1043	SLD 9	-2.91	6.31	87.75	-19.9021	-0.0549	-0.7037
1043	SLD 10	-3.44	6.47	87.61	-19.8763	-0.0562	-0.8287
1043	SLD 11	-0.62	-1.06	94.9	-21.2777	-0.0057	-0.1581
1043	SLD 12	-1.15	-0.9	94.75	-21.2518	-0.007	-0.2832
1043	SLD 13	-7.74	3.92	94.91	-21.4531	-0.1629	-1.8746
1043	SLD 14	-8.55	4.16	94.69	-21.4136	-0.1649	-2.066
1043	SLD 15	-7.05	1.7	97.06	-21.8657	-0.1482	-1.711
1043	SLD 16	-7.87	1.95	96.83	-21.8262	-0.1502	-1.9023
1043	SLV 1	19.88	4.08	71.63	-16.145	0.4283	4.7992
1043	SLV 2	17.99	4.65	71.12	-16.053	0.4236	4.3536
1043	SLV 3	21.49	-0.94	76.49	-17.0807	0.4623	5.1813
1043	SLV 4	19.59	-0.37	75.98	-16.9886	0.4576	4.7356
1043	SLV 5	4.17	10.56	76.7	-17.5253	0.0938	1.0098
1043	SLV 6	2.95	10.93	76.37	-17.4661	0.0908	0.7234
1043	SLV 7	9.51	-6.16	92.89	-20.6441	0.207	2.2833
1043	SLV 8	8.3	-5.79	92.56	-20.585	0.204	1.9969
1043	SLV 9	-7.41	11.02	85.98	-19.6581	-0.1582	-1.7879
1043	SLV 10	-8.63	11.38	85.65	-19.599	-0.1613	-2.0744
1043	SLV 11	-2.06	-5.7	102.17	-22.777	-0.045	-0.5145
1043	SLV 12	-3.28	-5.34	101.84	-22.7178	-0.0481	-0.8009
1043	SLV 13	-18.7	5.59	102.57	-23.2545	-0.4118	-4.5266
1043	SLV 14	-20.6	6.16	102.05	-23.1625	-0.4165	-4.9723
1043	SLV 15	-17.1	0.58	107.42	-24.1901	-0.3779	-4.1446
1043	SLV 16	-19	1.14	106.91	-24.0981	-0.3826	-4.5903
1043	CRTFP Ux+	0	0	0	0	0	0
1043	CRTFP Ux-	0	0	0	0	0	0
1043	CRTFP Uy+	0	0	0	0	0	0
1043	CRTFP Uy-	0	0	0	0	0	0
1045	SLU 1	0.21	0.91	32.03	-9.5282	-0.5855	0.0907
1045	SLU 2	0.2	0.89	32.07	-9.5387	-0.5863	0.0839
1045	SLU 3	0.22	0.94	32.78	-9.7466	-0.5992	0.0933
1045	SLU 4	0.21	0.93	32.8	-9.7529	-0.5997	0.0892
1045	SLU 5	0.2	0.9	32.52	-9.67	-0.5945	0.0867
1045	SLU 6	0.23	0.96	33.22	-9.878	-0.6074	0.0961
1045	SLU 7	0.22	0.94	33.25	-9.8842	-0.6079	0.092
1045	SLU 8	0.23	0.94	32.92	-9.7909	-0.6019	0.0963
1045	SLU 9	0.22	0.93	32.95	-9.7972	-0.6024	0.0923
1045	SLU 10	0.19	1.03	36.14	-10.7436	-0.6603	0.0855
1045	SLU 11	0.22	1.08	36.84	-10.9516	-0.6731	0.0948
1045	SLU 12	0.21	1.07	36.87	-10.9579	-0.6736	0.0908
1045	SLU 13	0.2	1.05	36.58	-10.875	-0.6685	0.0883
1045	SLU 14	0.23	1.1	37.29	-11.0829	-0.6813	0.0976
1045	SLU 15	0.21	1.09	37.32	-11.0892	-0.6818	0.0936
1045	SLU 16	0.23	1.08	36.99	-10.9959	-0.6758	0.0979
1045	SLU 17	0.22	1.07	37.01	-11.0021	-0.6763	0.0938
1045	SLU 18	0.21	1.11	37.83	-11.2496	-0.6912	0.0929
1045	SLU 19	0.2	1.1	37.86	-11.2559	-0.6917	0.0889
1045	SLU 20	0.22	1.13	38.28	-11.381	-0.6994	0.0957
1045	SLU 21	0.21	1.11	38.31	-11.3872	-0.6999	0.0917
1045	SLU 22	0.22	1.09	36.1	-10.7292	-0.6597	0.0973
1045	SLU 23	0.21	1.07	36.14	-10.7396	-0.6605	0.0905
1045	SLU 24	0.23	1.12	36.85	-10.9476	-0.6734	0.0998
1045	SLU 25	0.22	1.11	36.88	-10.9539	-0.6739	0.0958
1045	SLU 26	0.21	1.08	36.59	-10.871	-0.6687	0.0933
1045	SLU 27	0.24	1.13	37.3	-11.0789	-0.6816	0.1026
1045	SLU 28	0.23	1.12	37.32	-11.0852	-0.6821	0.0986
1045	SLU 29	0.24	1.11	37	-10.9919	-0.6761	0.1029
1045	SLU 30	0.23	1.1	37.02	-10.9981	-0.6766	0.0988
1045	SLU 31	0.2	1.21	40.21	-11.9446	-0.7345	0.092
1045	SLU 32	0.23	1.26	40.91	-12.1526	-0.7474	0.1014
1045	SLU 33	0.22	1.25	40.94	-12.1588	-0.7479	0.0973
1045	SLU 34	0.21	1.22	40.66	-12.0759	-0.7427	0.0948
1045	SLU 35	0.23	1.27	41.36	-12.2839	-0.7556	0.1042
1045	SLU 36	0.22	1.26	41.39	-12.2902	-0.756	0.1001
1045	SLU 37	0.24	1.25	41.06	-12.1968	-0.7501	0.1044
1045	SLU 38	0.23	1.24	41.09	-12.2031	-0.7506	0.1003
1045	SLU 39	0.22	1.29	41.9	-12.4506	-0.7654	0.0995
1045	SLU 40	0.21	1.28	41.93	-12.4568	-0.7659	0.0954
1045	SLU 41	0.23	1.3	42.35	-12.5819	-0.7736	0.1023
1045	SLU 42	0.22	1.29	42.38	-12.5882	-0.7741	0.0982
1045	SLU 43	0.28	1.12	40.24	-11.975	-0.7357	0.1157
1045	SLU 44	0.26	1.1	40.28	-11.9854	-0.7365	0.1089
1045	SLU 45	0.28	1.16	40.99	-12.1934	-0.7494	0.1183
1045	SLU 46	0.27	1.14	41.01	-12.1996	-0.7499	0.1142

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1045	SLU 47	0.27	1.12	40.73	-12.1167	-0.7447	0.1117
1045	SLU 48	0.29	1.17	41.44	-12.3247	-0.7576	0.1211
1045	SLU 49	0.28	1.16	41.46	-12.331	-0.7581	0.117
1045	SLU 50	0.29	1.15	41.13	-12.2376	-0.7521	0.1213
1045	SLU 51	0.28	1.14	41.16	-12.2439	-0.7526	0.1172
1045	SLU 52	0.25	1.25	44.35	-13.1904	-0.8105	0.1104
1045	SLU 53	0.28	1.3	45.05	-13.3983	-0.8233	0.1198
1045	SLU 54	0.27	1.29	45.08	-13.4046	-0.8238	0.1157
1045	SLU 55	0.26	1.26	44.8	-13.3217	-0.8187	0.1132
1045	SLU 56	0.29	1.31	45.5	-13.5297	-0.8315	0.1226
1045	SLU 57	0.28	1.3	45.53	-13.5359	-0.832	0.1185
1045	SLU 58	0.29	1.29	45.2	-13.4426	-0.826	0.1228
1045	SLU 59	0.28	1.28	45.23	-13.4488	-0.8265	0.1188
1045	SLU 60	0.27	1.33	46.04	-13.6963	-0.8414	0.1179
1045	SLU 61	0.26	1.31	46.07	-13.7026	-0.8419	0.1138
1045	SLU 62	0.28	1.34	46.49	-13.8277	-0.8496	0.1207
1045	SLU 63	0.27	1.33	46.52	-13.8339	-0.8501	0.1166
1045	SLU 64	0.29	1.3	44.31	-13.1759	-0.8099	0.1222
1045	SLU 65	0.27	1.28	44.36	-13.1863	-0.8107	0.1154
1045	SLU 66	0.29	1.33	45.06	-13.3943	-0.8236	0.1248
1045	SLU 67	0.28	1.32	45.09	-13.4006	-0.8241	0.1207
1045	SLU 68	0.27	1.29	44.8	-13.3177	-0.8189	0.1183
1045	SLU 69	0.3	1.35	45.51	-13.5257	-0.8318	0.1276
1045	SLU 70	0.29	1.33	45.54	-13.5319	-0.8323	0.1235
1045	SLU 71	0.3	1.33	45.21	-13.4386	-0.8263	0.1278
1045	SLU 72	0.29	1.31	45.23	-13.4448	-0.8268	0.1238
1045	SLU 73	0.26	1.42	48.42	-14.3913	-0.8847	0.117
1045	SLU 74	0.29	1.47	49.12	-14.5993	-0.8976	0.1264
1045	SLU 75	0.28	1.46	49.15	-14.6055	-0.8981	0.1223
1045	SLU 76	0.27	1.43	48.87	-14.5226	-0.8929	0.1198
1045	SLU 77	0.3	1.49	49.57	-14.7306	-0.9058	0.1292
1045	SLU 78	0.29	1.47	49.6	-14.7369	-0.9062	0.1251
1045	SLU 79	0.3	1.47	49.27	-14.6435	-0.9003	0.1294
1045	SLU 80	0.29	1.46	49.3	-14.6498	-0.9008	0.1253
1045	SLU 81	0.28	1.5	50.12	-14.8973	-0.9156	0.1244
1045	SLU 82	0.27	1.49	50.14	-14.9035	-0.9161	0.1204
1045	SLU 83	0.29	1.51	50.56	-15.0286	-0.9238	0.1272
1045	SLU 84	0.28	1.5	50.59	-15.0349	-0.9243	0.1232
1045	SLE RA 1	0.22	0.96	33.19	-9.8714	-0.6067	0.0926
1045	SLE RA 2	0.21	0.95	33.22	-9.8783	-0.6072	0.0881
1045	SLE RA 3	0.22	0.98	33.69	-10.017	-0.6158	0.0943
1045	SLE RA 4	0.21	0.97	33.71	-10.0211	-0.6161	0.0916
1045	SLE RA 5	0.21	0.96	33.52	-9.9659	-0.6127	0.0899
1045	SLE RA 6	0.23	0.99	33.99	-10.1045	-0.6213	0.0962
1045	SLE RA 7	0.22	0.98	34.01	-10.1087	-0.6216	0.0935
1045	SLE RA 8	0.23	0.98	33.79	-10.0465	-0.6176	0.0963
1045	SLE RA 9	0.22	0.97	33.81	-10.0507	-0.6179	0.0936
1045	SLE RA 10	0.2	1.04	35.93	-10.6816	-0.6566	0.0891
1045	SLE RA 11	0.22	1.08	36.4	-10.8203	-0.6651	0.0953
1045	SLE RA 12	0.21	1.07	36.42	-10.8245	-0.6655	0.0926
1045	SLE RA 13	0.21	1.05	36.23	-10.7692	-0.662	0.091
1045	SLE RA 14	0.22	1.09	36.7	-10.9078	-0.6706	0.0972
1045	SLE RA 15	0.22	1.08	36.72	-10.912	-0.6709	0.0945
1045	SLE RA 16	0.23	1.07	36.5	-10.8498	-0.6669	0.0974
1045	SLE RA 17	0.22	1.07	36.52	-10.854	-0.6673	0.0946
1045	SLE RA 18	0.21	1.1	37.06	-11.019	-0.6771	0.0941
1045	SLE RA 19	0.21	1.09	37.08	-11.0231	-0.6775	0.0913
1045	SLE RA 20	0.22	1.1	37.36	-11.1065	-0.6826	0.0959
1045	SLE RA 21	0.21	1.1	37.38	-11.1107	-0.6829	0.0932
1045	SLE FR 1	0.22	0.96	33.19	-9.8714	-0.6067	0.0926
1045	SLE FR 2	0.22	0.96	33.2	-9.8728	-0.6068	0.0917
1045	SLE FR 3	0.22	0.96	33.31	-9.9064	-0.6089	0.0933
1045	SLE FR 4	0.21	1	34.36	-10.217	-0.6279	0.0921
1045	SLE FR 5	0.22	1.01	34.47	-10.2507	-0.63	0.0938
1045	SLE FR 6	0.22	1.03	35.12	-10.4452	-0.6419	0.0933
1045	SLE QP 1	0.22	0.96	33.19	-9.8714	-0.6067	0.0926
1045	SLE QP 2	0.22	1	34.35	-10.2157	-0.6278	0.093
1045	SLD 1	3.47	1.23	31.12	-9.3158	-0.5613	1.2286
1045	SLD 2	3.15	1.35	31.05	-9.2992	-0.5599	1.1209
1045	SLD 3	3.74	0.37	31.9	-9.503	-0.575	1.3211
1045	SLD 4	3.42	0.49	31.82	-9.4864	-0.5736	1.2134
1045	SLD 5	0.84	2.36	32.22	-9.6647	-0.5873	0.3123
1045	SLD 6	0.64	2.44	32.17	-9.6539	-0.5864	0.2419
1045	SLD 7	1.73	-0.52	34.8	-10.2887	-0.633	0.6209
1045	SLD 8	1.53	-0.44	34.75	-10.2778	-0.6321	0.5505
1045	SLD 9	-1.09	2.45	33.95	-10.1535	-0.6235	-0.3644
1045	SLD 10	-1.3	2.52	33.9	-10.1426	-0.6226	-0.4348
1045	SLD 11	-0.2	-0.43	36.53	-10.7774	-0.6693	-0.0559
1045	SLD 12	-0.41	-0.36	36.48	-10.7666	-0.6684	-0.1263
1045	SLD 13	-2.99	1.52	36.88	-10.9449	-0.682	-1.0274
1045	SLD 14	-3.3	1.63	36.8	-10.9283	-0.6807	-1.1351
1045	SLD 15	-2.72	0.65	37.66	-11.1321	-0.6958	-0.9348
1045	SLD 16	-3.04	0.77	37.58	-11.1155	-0.6944	-1.0425
1045	SLV 1	7.83	1.51	26.82	-8.1157	-0.4725	2.7499
1045	SLV 2	7.09	1.78	26.64	-8.0771	-0.4692	2.499
1045	SLV 3	8.45	-0.45	28.57	-8.5402	-0.5036	2.9653
1045	SLV 4	7.71	-0.18	28.39	-8.5016	-0.5004	2.7144
1045	SLV 5	1.68	4.08	29.46	-8.9484	-0.5346	0.6063
1045	SLV 6	1.21	4.26	29.35	-8.9236	-0.5325	0.4451
1045	SLV 7	3.76	-2.46	35.31	-10.3635	-0.6383	1.3245
1045	SLV 8	3.29	-2.28	35.19	-10.3387	-0.6363	1.1632
1045	SLV 9	-2.85	4.28	33.51	-10.0926	-0.6194	-0.9772
1045	SLV 10	-3.32	4.46	33.39	-10.0678	-0.6173	-1.1384
1045	SLV 11	-0.78	-2.25	39.35	-11.5077	-0.7232	-0.259
1045	SLV 12	-1.25	-2.08	39.24	-11.4829	-0.7211	-0.4202
1045	SLV 13	-7.28	2.18	40.31	-11.9297	-0.7553	-2.5284
1045	SLV 14	-8.02	2.46	40.13	-11.8911	-0.7521	-2.7793

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1045	SLV 15	-6.66	0.22	42.06	-12.3542	-0.7864	-2.3129
1045	SLV 16	-7.39	0.49	41.88	-12.3156	-0.7832	-2.5638
1045	CRTFP Ux+	0	0	0	0	0	0
1045	CRTFP Ux-	0	0	0	0	0	0
1045	CRTFP Uy+	0	0	0	0	0	0
1045	CRTFP Uy-	0	0	0	0	0	0
1046	SLU 1	0.28	0.93	34.76	-9.6469	0.0272	0.094
1046	SLU 2	0.26	0.9	34.81	-9.6576	0.0273	0.0868
1046	SLU 3	0.29	0.96	35.57	-9.8655	0.028	0.0965
1046	SLU 4	0.27	0.95	35.6	-9.8719	0.028	0.0922
1046	SLU 5	0.27	0.92	35.29	-9.7892	0.0277	0.0898
1046	SLU 6	0.29	0.97	36.06	-9.9971	0.0284	0.0995
1046	SLU 7	0.28	0.96	36.09	-10.0035	0.0284	0.0951
1046	SLU 8	0.3	0.95	35.73	-9.9101	0.0281	0.1
1046	SLU 9	0.28	0.94	35.76	-9.9165	0.0281	0.0956
1046	SLU 10	0.26	1.06	39.2	-10.8673	0.0315	0.0867
1046	SLU 11	0.29	1.11	39.96	-11.0752	0.0322	0.0964
1046	SLU 12	0.27	1.1	39.99	-11.0817	0.0322	0.092
1046	SLU 13	0.27	1.07	39.69	-10.999	0.0319	0.0897
1046	SLU 14	0.29	1.12	40.45	-11.2068	0.0326	0.0994
1046	SLU 15	0.28	1.11	40.48	-11.2133	0.0326	0.095
1046	SLU 16	0.3	1.1	40.12	-11.1198	0.0323	0.0999
1046	SLU 17	0.28	1.09	40.15	-11.1263	0.0323	0.0955
1046	SLU 18	0.28	1.14	41.03	-11.3751	0.0333	0.0939
1046	SLU 19	0.27	1.13	41.06	-11.3815	0.0333	0.0895
1046	SLU 20	0.29	1.15	41.52	-11.5067	0.0337	0.0968
1046	SLU 21	0.28	1.14	41.55	-11.5131	0.0338	0.0925
1046	SLU 22	0.29	1.11	39.16	-10.853	0.0314	0.0988
1046	SLU 23	0.27	1.09	39.21	-10.8638	0.0314	0.0915
1046	SLU 24	0.3	1.15	39.98	-11.0717	0.0321	0.1012
1046	SLU 25	0.29	1.13	40.01	-11.0781	0.0321	0.0969
1046	SLU 26	0.28	1.1	39.7	-10.9954	0.0318	0.0945
1046	SLU 27	0.31	1.16	40.46	-11.2033	0.0325	0.1042
1046	SLU 28	0.3	1.15	40.49	-11.2097	0.0325	0.0999
1046	SLU 29	0.31	1.14	40.14	-11.1163	0.0322	0.1047
1046	SLU 30	0.3	1.13	40.17	-11.1227	0.0322	0.1004
1046	SLU 31	0.27	1.24	43.61	-12.0735	0.0356	0.0914
1046	SLU 32	0.3	1.3	44.37	-12.2814	0.0363	0.1011
1046	SLU 33	0.29	1.28	44.4	-12.2878	0.0364	0.0968
1046	SLU 34	0.28	1.26	44.09	-12.2051	0.0361	0.0944
1046	SLU 35	0.31	1.31	44.85	-12.413	0.0368	0.1041
1046	SLU 36	0.3	1.3	44.88	-12.4195	0.0368	0.0998
1046	SLU 37	0.31	1.29	44.53	-12.326	0.0365	0.1046
1046	SLU 38	0.3	1.28	44.56	-12.3325	0.0365	0.1003
1046	SLU 39	0.29	1.33	45.44	-12.5812	0.0374	0.0986
1046	SLU 40	0.28	1.32	45.47	-12.5877	0.0375	0.0943
1046	SLU 41	0.3	1.34	45.92	-12.7129	0.0379	0.1016
1046	SLU 42	0.29	1.33	45.95	-12.7193	0.0379	0.0973
1046	SLU 43	0.36	1.14	43.68	-12.1274	0.034	0.1206
1046	SLU 44	0.34	1.12	43.73	-12.1381	0.034	0.1134
1046	SLU 45	0.36	1.17	44.49	-12.346	0.0347	0.1231
1046	SLU 46	0.35	1.16	44.52	-12.3524	0.0347	0.1187
1046	SLU 47	0.34	1.13	44.21	-12.2697	0.0344	0.1163
1046	SLU 48	0.37	1.19	44.97	-12.4776	0.0351	0.126
1046	SLU 49	0.36	1.17	45	-12.484	0.0351	0.1217
1046	SLU 50	0.37	1.17	44.65	-12.3906	0.0348	0.1265
1046	SLU 51	0.36	1.15	44.68	-12.397	0.0348	0.1222
1046	SLU 52	0.34	1.27	48.12	-13.3478	0.0383	0.1133
1046	SLU 53	0.36	1.32	48.88	-13.5557	0.039	0.1229
1046	SLU 54	0.35	1.31	48.91	-13.5622	0.039	0.1186
1046	SLU 55	0.35	1.28	48.6	-13.4795	0.0387	0.1162
1046	SLU 56	0.37	1.34	49.37	-13.6873	0.0394	0.1259
1046	SLU 57	0.36	1.32	49.4	-13.6938	0.0394	0.1216
1046	SLU 58	0.37	1.32	49.04	-13.6003	0.0391	0.1264
1046	SLU 59	0.36	1.3	49.07	-13.6068	0.0391	0.1221
1046	SLU 60	0.36	1.36	49.95	-13.8556	0.0401	0.1204
1046	SLU 61	0.34	1.34	49.98	-13.862	0.0401	0.1161
1046	SLU 62	0.37	1.37	50.44	-13.9872	0.0405	0.1234
1046	SLU 63	0.35	1.36	50.47	-13.9936	0.0405	0.1191
1046	SLU 64	0.37	1.33	48.08	-13.3335	0.0381	0.1253
1046	SLU 65	0.35	1.31	48.13	-13.3443	0.0381	0.1181
1046	SLU 66	0.38	1.36	48.89	-13.5522	0.0388	0.1278
1046	SLU 67	0.37	1.35	48.92	-13.5586	0.0388	0.1235
1046	SLU 68	0.36	1.32	48.62	-13.4759	0.0386	0.1211
1046	SLU 69	0.39	1.37	49.38	-13.6838	0.0393	0.1308
1046	SLU 70	0.37	1.36	49.41	-13.6902	0.0393	0.1265
1046	SLU 71	0.39	1.35	49.05	-13.5968	0.039	0.1313
1046	SLU 72	0.38	1.34	49.08	-13.6032	0.039	0.127
1046	SLU 73	0.35	1.46	52.52	-14.554	0.0424	0.118
1046	SLU 74	0.38	1.51	53.28	-14.7619	0.0431	0.1277
1046	SLU 75	0.37	1.5	53.31	-14.7683	0.0431	0.1234
1046	SLU 76	0.36	1.47	53.01	-14.6856	0.0428	0.121
1046	SLU 77	0.39	1.52	53.77	-14.8935	0.0435	0.1307
1046	SLU 78	0.38	1.51	53.8	-14.9	0.0435	0.1264
1046	SLU 79	0.39	1.5	53.44	-14.8065	0.0432	0.1312
1046	SLU 80	0.38	1.49	53.47	-14.813	0.0432	0.1269
1046	SLU 81	0.37	1.54	54.35	-15.0617	0.0442	0.1252
1046	SLU 82	0.36	1.53	54.38	-15.0682	0.0442	0.1209
1046	SLU 83	0.38	1.56	54.84	-15.1934	0.0446	0.1282
1046	SLU 84	0.37	1.54	54.87	-15.1998	0.0446	0.1238
1046	SLE RA 1	0.28	0.98	36.02	-9.9915	0.0284	0.0954
1046	SLE RA 2	0.27	0.97	36.05	-9.9986	0.0284	0.0906
1046	SLE RA 3	0.29	1	36.56	-10.1372	0.0289	0.097
1046	SLE RA 4	0.28	0.99	36.58	-10.1415	0.0289	0.0941
1046	SLE RA 5	0.27	0.97	36.37	-10.0864	0.0287	0.0925
1046	SLE RA 6	0.29	1.01	36.88	-10.225	0.0292	0.099
1046	SLE RA 7	0.28	1	36.9	-10.2293	0.0292	0.0961

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1046	SLE RA 8	0.29	1	36.67	-10.167	0.029	0.0993
1046	SLE RA 9	0.29	0.99	36.69	-10.1713	0.029	0.0965
1046	SLE RA 10	0.27	1.07	38.98	-10.8051	0.0313	0.0905
1046	SLE RA 11	0.29	1.1	39.49	-10.9437	0.0317	0.0969
1046	SLE RA 12	0.28	1.09	39.51	-10.948	0.0317	0.0941
1046	SLE RA 13	0.27	1.07	39.3	-10.8929	0.0315	0.0925
1046	SLE RA 14	0.29	1.11	39.81	-11.0315	0.032	0.0989
1046	SLE RA 15	0.29	1.1	39.83	-11.0358	0.032	0.096
1046	SLE RA 16	0.29	1.1	39.59	-10.9735	0.0318	0.0993
1046	SLE RA 17	0.29	1.09	39.61	-10.9778	0.0318	0.0964
1046	SLE RA 18	0.28	1.12	40.2	-11.1436	0.0325	0.0953
1046	SLE RA 19	0.27	1.11	40.22	-11.1479	0.0325	0.0924
1046	SLE RA 20	0.29	1.13	40.52	-11.2314	0.0328	0.0973
1046	SLE RA 21	0.28	1.12	40.54	-11.2357	0.0328	0.0944
1046	SLE FR 1	0.28	0.98	36.02	-9.9915	0.0284	0.0954
1046	SLE FR 2	0.28	0.98	36.02	-9.9929	0.0284	0.0944
1046	SLE FR 3	0.28	0.98	36.15	-10.0266	0.0285	0.0962
1046	SLE FR 4	0.28	1.02	37.28	-10.3385	0.0296	0.0944
1046	SLE FR 5	0.28	1.03	37.4	-10.3722	0.0297	0.0961
1046	SLE FR 6	0.28	1.05	38.11	-10.5675	0.0304	0.0953
1046	SLE QP 1	0.28	0.98	36.02	-9.9915	0.0284	0.0954
1046	SLE QP 2	0.28	1.02	37.27	-10.3371	0.0296	0.0953
1046	SLD 1	3.88	1.26	33.48	-9.4081	0.0362	1.3556
1046	SLD 2	3.53	1.4	33.39	-9.3905	0.0362	1.2335
1046	SLD 3	4.18	0.31	34.3	-9.593	0.0378	1.4588
1046	SLD 4	3.83	0.46	34.22	-9.5754	0.0378	1.3367
1046	SLD 5	0.98	2.5	34.9	-9.7811	0.0292	0.3384
1046	SLD 6	0.75	2.59	34.85	-9.7696	0.0292	0.2586
1046	SLD 7	1.96	-0.65	37.64	-10.3974	0.0345	0.6825
1046	SLD 8	1.73	-0.55	37.59	-10.3859	0.0345	0.6027
1046	SLD 9	-1.17	2.6	36.96	-10.2883	0.0248	-0.412
1046	SLD 10	-1.4	2.69	36.9	-10.2768	0.0248	-0.4918
1046	SLD 11	-0.18	-0.55	39.7	-10.9046	0.0301	-0.068
1046	SLD 12	-0.41	-0.45	39.64	-10.8931	0.0301	-0.1478
1046	SLD 13	-3.26	1.59	40.33	-11.0988	0.0215	-1.146
1046	SLD 14	-3.61	1.73	40.24	-11.0812	0.0214	-1.2681
1046	SLD 15	-2.97	0.64	41.15	-11.2837	0.0231	-1.0428
1046	SLD 16	-3.32	0.79	41.07	-11.2661	0.023	-1.1649
1046	SLV 1	8.71	1.54	28.41	-8.1688	0.0451	3.0436
1046	SLV 2	7.89	1.87	28.22	-8.1278	0.0451	2.7593
1046	SLV 3	9.4	-0.61	30.28	-8.5883	0.0488	3.2845
1046	SLV 4	8.58	-0.27	30.08	-8.5474	0.0487	3.0001
1046	SLV 5	1.9	4.37	31.82	-9.0574	0.0288	0.6632
1046	SLV 6	1.38	4.58	31.69	-9.031	0.0287	0.4805
1046	SLV 7	4.2	-2.77	38.04	-10.4558	0.0409	1.4661
1046	SLV 8	3.68	-2.55	37.91	-10.4295	0.0409	1.2834
1046	SLV 9	-3.11	4.6	36.63	-10.2448	0.0184	-1.0927
1046	SLV 10	-3.64	4.82	36.51	-10.2184	0.0184	-1.2755
1046	SLV 11	-0.81	-2.54	42.85	-11.6432	0.0305	-0.2898
1046	SLV 12	-1.34	-2.32	42.73	-11.6169	0.0305	-0.4725
1046	SLV 13	-8.02	2.31	44.46	-12.1269	0.0106	-2.8095
1046	SLV 14	-8.83	2.65	44.26	-12.0859	0.0105	-3.0938
1046	SLV 15	-7.33	0.17	46.33	-12.5464	0.0142	-2.5686
1046	SLV 16	-8.14	0.51	46.13	-12.5054	0.0141	-2.8529
1046	CRTFP Ux+	0	0	0	0	0	0
1046	CRTFP Ux-	0	0	0	0	0	0
1046	CRTFP Uy+	0	0	0	0	0	0
1046	CRTFP Uy-	0	0	0	0	0	0
1047	SLU 1	0.32	0.81	33.87	-8.7045	0.0283	0.1066
1047	SLU 2	0.3	0.79	33.92	-8.7148	0.0284	0.0993
1047	SLU 3	0.32	0.84	34.65	-8.8987	0.0291	0.1094
1047	SLU 4	0.31	0.83	34.68	-8.9049	0.0291	0.105
1047	SLU 5	0.3	0.8	34.39	-8.8319	0.0288	0.1024
1047	SLU 6	0.33	0.85	35.13	-9.0159	0.0295	0.1125
1047	SLU 7	0.32	0.84	35.16	-9.022	0.0296	0.1081
1047	SLU 8	0.33	0.83	34.81	-8.9388	0.0292	0.1129
1047	SLU 9	0.32	0.82	34.84	-8.9449	0.0292	0.1085
1047	SLU 10	0.3	0.93	38.17	-9.7906	0.0329	0.1002
1047	SLU 11	0.33	0.98	38.9	-9.9745	0.0337	0.1103
1047	SLU 12	0.32	0.97	38.93	-9.9807	0.0337	0.1059
1047	SLU 13	0.31	0.94	38.64	-9.9077	0.0334	0.1034
1047	SLU 14	0.34	0.99	39.38	-10.0917	0.0341	0.1135
1047	SLU 15	0.33	0.98	39.41	-10.0978	0.0341	0.1091
1047	SLU 16	0.34	0.97	39.06	-10.0146	0.0338	0.1139
1047	SLU 17	0.33	0.96	39.09	-10.0207	0.0338	0.1095
1047	SLU 18	0.32	1.01	39.94	-10.2414	0.0349	0.108
1047	SLU 19	0.31	1	39.97	-10.2475	0.0349	0.1036
1047	SLU 20	0.33	1.02	40.41	-10.3585	0.0353	0.1112
1047	SLU 21	0.32	1.01	40.44	-10.3647	0.0353	0.1068
1047	SLU 22	0.33	0.98	38.13	-9.7779	0.0328	0.1125
1047	SLU 23	0.31	0.96	38.18	-9.7882	0.0328	0.1052
1047	SLU 24	0.34	1.01	38.92	-9.9721	0.0335	0.1153
1047	SLU 25	0.33	1	38.95	-9.9783	0.0335	0.1109
1047	SLU 26	0.32	0.97	38.66	-9.9053	0.0332	0.1083
1047	SLU 27	0.35	1.02	39.39	-10.0893	0.034	0.1184
1047	SLU 28	0.34	1.01	39.42	-10.0954	0.034	0.114
1047	SLU 29	0.35	1	39.08	-10.0122	0.0336	0.1188
1047	SLU 30	0.34	0.99	39.11	-10.0183	0.0337	0.1144
1047	SLU 31	0.32	1.1	42.43	-10.864	0.0374	0.1061
1047	SLU 32	0.35	1.15	43.17	-11.048	0.0381	0.1163
1047	SLU 33	0.33	1.14	43.2	-11.0541	0.0381	0.1118
1047	SLU 34	0.33	1.11	42.91	-10.9811	0.0378	0.1093
1047	SLU 35	0.36	1.16	43.64	-11.1651	0.0385	0.1194
1047	SLU 36	0.34	1.15	43.67	-11.1712	0.0385	0.115
1047	SLU 37	0.36	1.15	43.33	-11.088	0.0382	0.1198
1047	SLU 38	0.34	1.13	43.36	-11.0941	0.0382	0.1154
1047	SLU 39	0.34	1.18	44.21	-11.3148	0.0393	0.1139

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1047	SLU 40	0.33	1.17	44.24	-11.3209	0.0393	0.1095
1047	SLU 41	0.35	1.19	44.68	-11.4319	0.0397	0.1171
1047	SLU 42	0.34	1.18	44.71	-11.4381	0.0397	0.1127
1047	SLU 43	0.4	0.99	42.56	-10.9479	0.0353	0.1366
1047	SLU 44	0.38	0.97	42.61	-10.9581	0.0353	0.1292
1047	SLU 45	0.41	1.02	43.35	-11.1421	0.0361	0.1393
1047	SLU 46	0.4	1.01	43.38	-11.1482	0.0361	0.1349
1047	SLU 47	0.39	0.98	43.08	-11.0752	0.0358	0.1324
1047	SLU 48	0.42	1.03	43.82	-11.2592	0.0365	0.1425
1047	SLU 49	0.41	1.02	43.85	-11.2653	0.0365	0.1381
1047	SLU 50	0.42	1.01	43.51	-11.1821	0.0362	0.1429
1047	SLU 51	0.41	1	43.54	-11.1883	0.0362	0.1385
1047	SLU 52	0.39	1.11	46.86	-12.0339	0.0399	0.1302
1047	SLU 53	0.42	1.16	47.6	-12.2179	0.0406	0.1403
1047	SLU 54	0.4	1.15	47.63	-12.224	0.0407	0.1359
1047	SLU 55	0.4	1.12	47.33	-12.151	0.0404	0.1333
1047	SLU 56	0.43	1.17	48.07	-12.335	0.0411	0.1435
1047	SLU 57	0.41	1.16	48.1	-12.3411	0.0411	0.1391
1047	SLU 58	0.43	1.16	47.76	-12.2579	0.0408	0.1438
1047	SLU 59	0.41	1.14	47.79	-12.2641	0.0408	0.1394
1047	SLU 60	0.41	1.19	48.63	-12.4847	0.0418	0.138
1047	SLU 61	0.4	1.18	48.66	-12.4909	0.0419	0.1336
1047	SLU 62	0.42	1.2	49.11	-12.6019	0.0423	0.1411
1047	SLU 63	0.41	1.19	49.14	-12.608	0.0423	0.1367
1047	SLU 64	0.42	1.16	46.83	-12.0213	0.0397	0.1425
1047	SLU 65	0.4	1.14	46.88	-12.0315	0.0398	0.1351
1047	SLU 66	0.43	1.19	47.62	-12.2155	0.0405	0.1452
1047	SLU 67	0.42	1.18	47.65	-12.2216	0.0405	0.1408
1047	SLU 68	0.41	1.16	47.35	-12.1486	0.0402	0.1383
1047	SLU 69	0.44	1.21	48.09	-12.3326	0.0409	0.1484
1047	SLU 70	0.43	1.19	48.12	-12.3387	0.041	0.144
1047	SLU 71	0.44	1.19	47.77	-12.2555	0.0406	0.1488
1047	SLU 72	0.43	1.17	47.8	-12.2617	0.0406	0.1444
1047	SLU 73	0.41	1.29	51.13	-13.1073	0.0443	0.1361
1047	SLU 74	0.44	1.34	51.87	-13.2913	0.0451	0.1462
1047	SLU 75	0.42	1.32	51.9	-13.2974	0.0451	0.1418
1047	SLU 76	0.42	1.3	51.6	-13.2244	0.0448	0.1393
1047	SLU 77	0.44	1.35	52.34	-13.4084	0.0455	0.1494
1047	SLU 78	0.43	1.33	52.37	-13.4145	0.0455	0.145
1047	SLU 79	0.45	1.33	52.03	-13.3313	0.0452	0.1497
1047	SLU 80	0.43	1.32	52.05	-13.3375	0.0452	0.1453
1047	SLU 81	0.43	1.37	52.9	-13.5581	0.0463	0.1439
1047	SLU 82	0.42	1.35	52.93	-13.5643	0.0463	0.1395
1047	SLU 83	0.44	1.38	53.37	-13.6753	0.0467	0.147
1047	SLU 84	0.43	1.37	53.4	-13.6814	0.0467	0.1426
1047	SLE RA 1	0.32	0.86	35.09	-9.0112	0.0296	0.1083
1047	SLE RA 2	0.31	0.84	35.12	-9.018	0.0296	0.1034
1047	SLE RA 3	0.33	0.88	35.61	-9.1407	0.0301	0.1101
1047	SLE RA 4	0.32	0.87	35.63	-9.1448	0.0301	0.1072
1047	SLE RA 5	0.31	0.85	35.43	-9.0961	0.0299	0.1055
1047	SLE RA 6	0.33	0.88	35.93	-9.2188	0.0304	0.1122
1047	SLE RA 7	0.32	0.88	35.95	-9.2229	0.0304	0.1093
1047	SLE RA 8	0.33	0.87	35.71	-9.1674	0.0302	0.1125
1047	SLE RA 9	0.33	0.86	35.73	-9.1715	0.0302	0.1096
1047	SLE RA 10	0.31	0.94	37.95	-9.7352	0.0327	0.104
1047	SLE RA 11	0.33	0.97	38.44	-9.8579	0.0332	0.1108
1047	SLE RA 12	0.32	0.96	38.46	-9.862	0.0332	0.1078
1047	SLE RA 13	0.32	0.95	38.27	-9.8133	0.033	0.1061
1047	SLE RA 14	0.34	0.98	38.76	-9.936	0.0334	0.1129
1047	SLE RA 15	0.33	0.97	38.78	-9.9401	0.0335	0.1099
1047	SLE RA 16	0.34	0.97	38.55	-9.8846	0.0332	0.1131
1047	SLE RA 17	0.33	0.96	38.57	-9.8887	0.0332	0.1102
1047	SLE RA 18	0.33	0.99	39.13	-10.0358	0.034	0.1092
1047	SLE RA 19	0.32	0.98	39.15	-10.0399	0.034	0.1063
1047	SLE RA 20	0.33	1	39.45	-10.1139	0.0342	0.1113
1047	SLE RA 21	0.32	0.99	39.47	-10.118	0.0343	0.1084
1047	SLE FR 1	0.32	0.86	35.09	-9.0112	0.0296	0.1083
1047	SLE FR 2	0.32	0.86	35.09	-9.0126	0.0296	0.1073
1047	SLE FR 3	0.32	0.86	35.21	-9.0425	0.0297	0.1091
1047	SLE FR 4	0.32	0.9	36.31	-9.32	0.0309	0.1076
1047	SLE FR 5	0.33	0.9	36.43	-9.3498	0.031	0.1094
1047	SLE FR 6	0.32	0.93	37.11	-9.5235	0.0318	0.1088
1047	SLE QP 1	0.32	0.86	35.09	-9.0112	0.0296	0.1083
1047	SLE QP 2	0.32	0.9	36.3	-9.3186	0.0309	0.1086
1047	SLD 1	3.93	1.12	32.3	-8.4675	0.037	1.371
1047	SLD 2	3.58	1.28	32.22	-8.449	0.037	1.2482
1047	SLD 3	4.22	0.2	33.09	-8.6296	0.0385	1.4745
1047	SLD 4	3.87	0.36	33	-8.6111	0.0386	1.3517
1047	SLD 5	1.02	2.34	33.92	-8.8207	0.0303	0.352
1047	SLD 6	0.79	2.45	33.87	-8.8086	0.0303	0.2718
1047	SLD 7	2	-0.74	36.54	-9.361	0.0356	0.697
1047	SLD 8	1.77	-0.64	36.49	-9.3489	0.0357	0.6168
1047	SLD 9	-1.13	2.44	36.11	-9.2883	0.0262	-0.3997
1047	SLD 10	-1.36	2.54	36.06	-9.2762	0.0262	-0.4799
1047	SLD 11	-0.14	-0.65	38.73	-9.8286	0.0315	-0.0546
1047	SLD 12	-0.37	-0.55	38.68	-9.8164	0.0315	-0.1349
1047	SLD 13	-3.23	1.44	39.59	-10.0261	0.0232	-1.1346
1047	SLD 14	-3.58	1.6	39.51	-10.0076	0.0233	-1.2573
1047	SLD 15	-2.93	0.51	40.38	-10.1882	0.0248	-1.0311
1047	SLD 16	-3.28	0.67	40.3	-10.1696	0.0249	-1.1538
1047	SLV 1	8.76	1.39	26.97	-7.3319	0.0451	3.0619
1047	SLV 2	7.94	1.76	26.77	-7.2887	0.0453	2.776
1047	SLV 3	9.45	-0.71	28.75	-7.7	0.0488	3.3035
1047	SLV 4	8.63	-0.34	28.55	-7.6569	0.0489	3.0176
1047	SLV 5	1.94	4.17	30.83	-8.1717	0.0296	0.6772
1047	SLV 6	1.42	4.41	30.7	-8.1439	0.0297	0.4935
1047	SLV 7	4.25	-2.84	36.77	-9.3987	0.0418	1.4824

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1047	SLV 8	3.72	-2.6	36.65	-9.371	0.0419	1.2986
1047	SLV 9	-3.08	4.4	35.95	-9.2662	0.0199	-1.0815
1047	SLV 10	-3.6	4.64	35.83	-9.2385	0.02	-1.2652
1047	SLV 11	-0.77	-2.61	41.9	-10.4933	0.0321	-0.2763
1047	SLV 12	-1.3	-2.38	41.77	-10.4655	0.0322	-0.4601
1047	SLV 13	-7.98	2.14	44.04	-10.9803	0.0129	-2.8004
1047	SLV 14	-8.8	2.51	43.85	-10.9372	0.0131	-3.0863
1047	SLV 15	-7.29	0.03	45.83	-11.3484	0.0165	-2.5589
1047	SLV 16	-8.11	0.4	45.63	-11.3053	0.0167	-2.8448
1047	CRTFP Ux+	0	0	0	0	0	0
1047	CRTFP Ux-	0	0	0	0	0	0
1047	CRTFP Uy+	0	0	0	0	0	0
1047	CRTFP Uy-	0	0	0	0	0	0
1048	SLU 1	0.35	0.67	33.09	-7.9092	0.0202	0.1188
1048	SLU 2	0.33	0.65	33.14	-7.919	0.0202	0.1113
1048	SLU 3	0.36	0.7	33.86	-8.0826	0.0207	0.1218
1048	SLU 4	0.35	0.69	33.89	-8.0885	0.0207	0.1174
1048	SLU 5	0.34	0.66	33.6	-8.0239	0.0205	0.1146
1048	SLU 6	0.37	0.71	34.32	-8.1875	0.021	0.1252
1048	SLU 7	0.36	0.7	34.35	-8.1933	0.0211	0.1207
1048	SLU 8	0.37	0.69	34.01	-8.1189	0.0208	0.1254
1048	SLU 9	0.36	0.68	34.04	-8.1248	0.0208	0.1209
1048	SLU 10	0.34	0.78	37.26	-8.8783	0.0237	0.1134
1048	SLU 11	0.37	0.83	37.98	-9.0419	0.0243	0.1239
1048	SLU 12	0.36	0.82	38.01	-9.0478	0.0243	0.1194
1048	SLU 13	0.35	0.79	37.72	-8.9832	0.0241	0.1167
1048	SLU 14	0.38	0.84	38.44	-9.1468	0.0246	0.1272
1048	SLU 15	0.37	0.82	38.47	-9.1527	0.0246	0.1227
1048	SLU 16	0.38	0.82	38.13	-9.0782	0.0243	0.1275
1048	SLU 17	0.37	0.81	38.16	-9.0841	0.0244	0.123
1048	SLU 18	0.36	0.86	38.98	-9.2796	0.0252	0.1217
1048	SLU 19	0.35	0.85	39.01	-9.2855	0.0252	0.1173
1048	SLU 20	0.37	0.87	39.44	-9.3845	0.0255	0.1251
1048	SLU 21	0.36	0.86	39.47	-9.3904	0.0256	0.1206
1048	SLU 22	0.37	0.83	37.23	-8.8675	0.0236	0.1258
1048	SLU 23	0.35	0.81	37.28	-8.8773	0.0236	0.1184
1048	SLU 24	0.38	0.86	38	-9.0409	0.0241	0.1289
1048	SLU 25	0.37	0.84	38.03	-9.0468	0.0241	0.1244
1048	SLU 26	0.36	0.82	37.74	-8.9822	0.0239	0.1217
1048	SLU 27	0.39	0.87	38.46	-9.1458	0.0244	0.1322
1048	SLU 28	0.38	0.85	38.49	-9.1517	0.0245	0.1277
1048	SLU 29	0.39	0.85	38.15	-9.0772	0.0242	0.1325
1048	SLU 30	0.38	0.84	38.18	-9.0831	0.0242	0.128
1048	SLU 31	0.36	0.94	41.4	-9.8366	0.0271	0.1204
1048	SLU 32	0.39	0.99	42.12	-10.0002	0.0277	0.1309
1048	SLU 33	0.38	0.97	42.15	-10.0061	0.0277	0.1265
1048	SLU 34	0.37	0.95	41.86	-9.9415	0.0274	0.1237
1048	SLU 35	0.4	0.99	42.58	-10.1051	0.028	0.1343
1048	SLU 36	0.39	0.98	42.61	-10.111	0.028	0.1298
1048	SLU 37	0.4	0.98	42.28	-10.0365	0.0277	0.1345
1048	SLU 38	0.39	0.97	42.3	-10.0424	0.0278	0.13
1048	SLU 39	0.38	1.02	43.12	-10.2379	0.0286	0.1288
1048	SLU 40	0.37	1	43.15	-10.2438	0.0286	0.1243
1048	SLU 41	0.39	1.02	43.58	-10.3428	0.0289	0.1321
1048	SLU 42	0.38	1.01	43.61	-10.3487	0.029	0.1276
1048	SLU 43	0.45	0.82	41.6	-9.9534	0.025	0.152
1048	SLU 44	0.43	0.8	41.65	-9.9632	0.0251	0.1445
1048	SLU 45	0.46	0.85	42.37	-10.1268	0.0256	0.1551
1048	SLU 46	0.45	0.84	42.39	-10.1327	0.0256	0.1506
1048	SLU 47	0.44	0.81	42.11	-10.068	0.0254	0.1479
1048	SLU 48	0.47	0.86	42.83	-10.2316	0.0259	0.1584
1048	SLU 49	0.46	0.84	42.85	-10.2375	0.026	0.1539
1048	SLU 50	0.47	0.84	42.52	-10.1631	0.0257	0.1586
1048	SLU 51	0.46	0.83	42.55	-10.169	0.0257	0.1542
1048	SLU 52	0.44	0.93	45.77	-10.9225	0.0286	0.1466
1048	SLU 53	0.47	0.98	46.49	-11.0861	0.0291	0.1571
1048	SLU 54	0.45	0.96	46.52	-11.092	0.0292	0.1526
1048	SLU 55	0.45	0.94	46.23	-11.0274	0.0289	0.1499
1048	SLU 56	0.48	0.99	46.95	-11.1909	0.0295	0.1604
1048	SLU 57	0.46	0.97	46.98	-11.1968	0.0295	0.156
1048	SLU 58	0.48	0.97	46.64	-11.1224	0.0292	0.1607
1048	SLU 59	0.46	0.96	46.67	-11.1283	0.0293	0.1562
1048	SLU 60	0.46	1.01	47.49	-11.3238	0.0301	0.155
1048	SLU 61	0.45	0.99	47.51	-11.3297	0.0301	0.1505
1048	SLU 62	0.47	1.02	47.95	-11.4287	0.0304	0.1583
1048	SLU 63	0.46	1	47.97	-11.4346	0.0304	0.1538
1048	SLU 64	0.47	0.98	45.74	-10.9117	0.0284	0.1591
1048	SLU 65	0.45	0.96	45.79	-10.9215	0.0285	0.1516
1048	SLU 66	0.48	1.01	46.51	-11.0851	0.029	0.1621
1048	SLU 67	0.47	0.99	46.54	-11.091	0.029	0.1576
1048	SLU 68	0.46	0.97	46.25	-11.0264	0.0288	0.1549
1048	SLU 69	0.49	1.01	46.97	-11.19	0.0293	0.1654
1048	SLU 70	0.48	1	47	-11.1959	0.0293	0.1609
1048	SLU 71	0.49	1	46.66	-11.1214	0.0291	0.1657
1048	SLU 72	0.48	0.99	46.69	-11.1273	0.0291	0.1612
1048	SLU 73	0.46	1.09	49.91	-11.8808	0.032	0.1537
1048	SLU 74	0.49	1.13	50.63	-12.0444	0.0325	0.1642
1048	SLU 75	0.48	1.12	50.66	-12.0503	0.0326	0.1597
1048	SLU 76	0.47	1.1	50.37	-11.9857	0.0323	0.157
1048	SLU 77	0.5	1.14	51.09	-12.1493	0.0329	0.1675
1048	SLU 78	0.48	1.13	51.12	-12.1552	0.0329	0.163
1048	SLU 79	0.5	1.13	50.78	-12.0807	0.0326	0.1678
1048	SLU 80	0.49	1.11	50.81	-12.0866	0.0326	0.1633
1048	SLU 81	0.48	1.16	51.63	-12.2821	0.0335	0.162
1048	SLU 82	0.47	1.15	51.66	-12.288	0.0335	0.1575
1048	SLU 83	0.49	1.17	52.09	-12.387	0.0338	0.1653
1048	SLU 84	0.48	1.16	52.12	-12.3929	0.0338	0.1608

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1048	SLE RA 1	0.36	0.72	34.27	-8.183	0.0211	0.1208
1048	SLE RA 2	0.34	0.71	34.31	-8.1895	0.0212	0.1158
1048	SLE RA 3	0.36	0.74	34.79	-8.2986	0.0215	0.1228
1048	SLE RA 4	0.36	0.73	34.81	-8.3025	0.0215	0.1199
1048	SLE RA 5	0.35	0.71	34.61	-8.2594	0.0214	0.118
1048	SLE RA 6	0.37	0.74	35.09	-8.3685	0.0217	0.1251
1048	SLE RA 7	0.36	0.73	35.11	-8.3724	0.0217	0.1221
1048	SLE RA 8	0.37	0.73	34.89	-8.3228	0.0216	0.1252
1048	SLE RA 9	0.36	0.72	34.91	-8.3267	0.0216	0.1222
1048	SLE RA 10	0.35	0.79	37.05	-8.8291	0.0235	0.1172
1048	SLE RA 11	0.37	0.82	37.53	-8.9381	0.0239	0.1242
1048	SLE RA 12	0.36	0.81	37.55	-8.9421	0.0239	0.1212
1048	SLE RA 13	0.36	0.8	37.36	-8.899	0.0237	0.1194
1048	SLE RA 14	0.38	0.83	37.84	-9.008	0.0241	0.1264
1048	SLE RA 15	0.37	0.82	37.86	-9.012	0.0241	0.1234
1048	SLE RA 16	0.38	0.82	37.64	-8.9623	0.0239	0.1266
1048	SLE RA 17	0.37	0.81	37.66	-8.9663	0.0239	0.1236
1048	SLE RA 18	0.36	0.84	38.2	-9.0966	0.0245	0.1228
1048	SLE RA 19	0.36	0.83	38.22	-9.1005	0.0245	0.1198
1048	SLE RA 20	0.37	0.85	38.51	-9.1665	0.0247	0.125
1048	SLE RA 21	0.36	0.84	38.53	-9.1704	0.0247	0.122
1048	SLE FR 1	0.36	0.72	34.27	-8.183	0.0211	0.1208
1048	SLE FR 2	0.36	0.72	34.28	-8.1843	0.0211	0.1198
1048	SLE FR 3	0.36	0.72	34.4	-8.211	0.0212	0.1217
1048	SLE FR 4	0.36	0.75	35.46	-8.4584	0.0221	0.1204
1048	SLE FR 5	0.36	0.76	35.58	-8.485	0.0222	0.1223
1048	SLE FR 6	0.36	0.78	36.24	-8.6398	0.0228	0.1218
1048	SLE QP 1	0.36	0.72	34.27	-8.183	0.0211	0.1208
1048	SLE QP 2	0.36	0.76	35.45	-8.4571	0.0221	0.1214
1048	SLD 1	3.97	0.98	31.25	-7.6716	0.0288	1.3852
1048	SLD 2	3.61	1.15	31.16	-7.6499	0.029	1.2618
1048	SLD 3	4.27	0.07	32.01	-7.8161	0.0301	1.4889
1048	SLD 4	3.91	0.24	31.92	-7.7945	0.0303	1.3656
1048	SLD 5	1.05	2.17	33.06	-8.006	0.0221	0.365
1048	SLD 6	0.82	2.28	33	-7.9918	0.0222	0.2844
1048	SLD 7	2.04	-0.86	35.58	-8.4879	0.0265	0.7108
1048	SLD 8	1.81	-0.75	35.52	-8.4737	0.0266	0.6302
1048	SLD 9	-1.09	2.26	35.38	-8.4404	0.0176	-0.3874
1048	SLD 10	-1.32	2.37	35.32	-8.4263	0.0178	-0.468
1048	SLD 11	-0.1	-0.77	37.9	-8.9223	0.0221	-0.0416
1048	SLD 12	-0.33	-0.66	37.84	-8.9081	0.0222	-0.1222
1048	SLD 13	-3.19	1.27	38.99	-9.1197	0.014	-1.1228
1048	SLD 14	-3.54	1.44	38.9	-9.098	0.0142	-1.2461
1048	SLD 15	-2.89	0.36	39.74	-9.2642	0.0153	-1.0191
1048	SLD 16	-3.25	0.53	39.65	-9.2426	0.0155	-1.1424
1048	SLV 1	8.8	1.25	25.64	-6.6229	0.0377	3.078
1048	SLV 2	7.98	1.64	25.44	-6.5725	0.0382	2.7907
1048	SLV 3	9.49	-0.82	27.36	-6.9519	0.0408	3.3201
1048	SLV 4	8.67	-0.42	27.15	-6.9014	0.0413	3.0329
1048	SLV 5	1.98	3.97	29.94	-7.4166	0.0221	0.6903
1048	SLV 6	1.45	4.22	29.81	-7.3842	0.0224	0.5057
1048	SLV 7	4.29	-2.92	35.66	-8.513	0.0323	1.4975
1048	SLV 8	3.76	-2.66	35.53	-8.4806	0.0326	1.3129
1048	SLV 9	-3.04	4.18	35.38	-8.4336	0.0117	-1.0701
1048	SLV 10	-3.57	4.43	35.24	-8.4012	0.012	-1.2547
1048	SLV 11	-0.73	-2.71	41.1	-9.5299	0.0218	-0.2629
1048	SLV 12	-1.26	-2.46	40.96	-9.4975	0.0222	-0.4476
1048	SLV 13	-7.95	1.93	43.75	-10.0128	0.003	-2.7901
1048	SLV 14	-8.77	2.33	43.55	-9.9623	0.0035	-3.0773
1048	SLV 15	-7.26	-0.13	45.47	-10.3417	0.0061	-2.5479
1048	SLV 16	-8.08	0.26	45.26	-10.2912	0.0066	-2.8352
1048	CRTFP Ux+	0	0	0	0	0	0
1048	CRTFP Ux-	0	0	0	0	0	0
1048	CRTFP Uy+	0	0	0	0	0	0
1048	CRTFP Uy-	0	0	0	0	0	0
1049	SLU 1	0.39	0.54	32.68	-7.4045	0.0057	0.1308
1049	SLU 2	0.36	0.52	32.72	-7.4138	0.0058	0.1232
1049	SLU 3	0.4	0.56	33.43	-7.5644	0.0059	0.1341
1049	SLU 4	0.38	0.54	33.46	-7.57	0.0059	0.1295
1049	SLU 5	0.37	0.52	33.18	-7.5108	0.0059	0.1266
1049	SLU 6	0.41	0.56	33.88	-7.6614	0.006	0.1376
1049	SLU 7	0.39	0.55	33.91	-7.667	0.006	0.133
1049	SLU 8	0.41	0.55	33.58	-7.5985	0.0059	0.1377
1049	SLU 9	0.39	0.54	33.61	-7.6041	0.0059	0.1332
1049	SLU 10	0.37	0.63	36.76	-8.2945	0.0074	0.1263
1049	SLU 11	0.41	0.67	37.47	-8.4451	0.0075	0.1372
1049	SLU 12	0.39	0.66	37.5	-8.4507	0.0076	0.1327
1049	SLU 13	0.38	0.64	37.22	-8.3915	0.0075	0.1298
1049	SLU 14	0.42	0.68	37.92	-8.5421	0.0076	0.1407
1049	SLU 15	0.4	0.67	37.95	-8.5477	0.0077	0.1362
1049	SLU 16	0.42	0.66	37.62	-8.4793	0.0075	0.1409
1049	SLU 17	0.4	0.65	37.65	-8.4848	0.0076	0.1363
1049	SLU 18	0.4	0.7	38.45	-8.6627	0.008	0.1352
1049	SLU 19	0.39	0.69	38.47	-8.6683	0.0081	0.1307
1049	SLU 20	0.41	0.71	38.9	-8.7597	0.0081	0.1387
1049	SLU 21	0.4	0.69	38.93	-8.7653	0.0082	0.1342
1049	SLU 22	0.41	0.68	36.74	-8.286	0.0072	0.1389
1049	SLU 23	0.39	0.66	36.79	-8.2953	0.0072	0.1314
1049	SLU 24	0.42	0.7	37.5	-8.4459	0.0074	0.1423
1049	SLU 25	0.41	0.68	37.52	-8.4515	0.0074	0.1377
1049	SLU 26	0.4	0.66	37.24	-8.3923	0.0073	0.1348
1049	SLU 27	0.43	0.7	37.95	-8.5429	0.0075	0.1458
1049	SLU 28	0.42	0.69	37.98	-8.5485	0.0075	0.1412
1049	SLU 29	0.43	0.69	37.65	-8.48	0.0074	0.1459
1049	SLU 30	0.42	0.68	37.68	-8.4856	0.0074	0.1414
1049	SLU 31	0.4	0.77	40.83	-9.176	0.0088	0.1345
1049	SLU 32	0.43	0.81	41.54	-9.3266	0.009	0.1454

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1049	SLU 33	0.42	0.8	41.56	-9.3322	0.009	0.1409
1049	SLU 34	0.41	0.78	41.28	-9.273	0.0089	0.138
1049	SLU 35	0.44	0.82	41.99	-9.4236	0.0091	0.1489
1049	SLU 36	0.43	0.81	42.02	-9.4292	0.0091	0.1444
1049	SLU 37	0.44	0.81	41.69	-9.3607	0.009	0.1491
1049	SLU 38	0.43	0.79	41.72	-9.3663	0.009	0.1445
1049	SLU 39	0.43	0.84	42.51	-9.5442	0.0095	0.1434
1049	SLU 40	0.41	0.83	42.54	-9.5497	0.0095	0.1389
1049	SLU 41	0.44	0.85	42.96	-9.6412	0.0096	0.1469
1049	SLU 42	0.42	0.84	42.99	-9.6468	0.0096	0.1424
1049	SLU 43	0.49	0.65	41.08	-9.3236	0.0069	0.1672
1049	SLU 44	0.47	0.63	41.13	-9.3329	0.007	0.1596
1049	SLU 45	0.5	0.67	41.84	-9.4835	0.0071	0.1705
1049	SLU 46	0.49	0.66	41.87	-9.4891	0.0072	0.166
1049	SLU 47	0.48	0.63	41.58	-9.4299	0.0071	0.1631
1049	SLU 48	0.51	0.68	42.29	-9.5805	0.0072	0.174
1049	SLU 49	0.5	0.66	42.32	-9.5861	0.0073	0.1694
1049	SLU 50	0.51	0.66	41.99	-9.5176	0.0071	0.1741
1049	SLU 51	0.5	0.65	42.02	-9.5232	0.0072	0.1696
1049	SLU 52	0.48	0.74	45.17	-10.2136	0.0086	0.1627
1049	SLU 53	0.51	0.79	45.88	-10.3642	0.0087	0.1737
1049	SLU 54	0.5	0.77	45.91	-10.3698	0.0088	0.1691
1049	SLU 55	0.49	0.75	45.62	-10.3107	0.0087	0.1662
1049	SLU 56	0.52	0.79	46.33	-10.4613	0.0088	0.1771
1049	SLU 57	0.51	0.78	46.36	-10.4669	0.0089	0.1726
1049	SLU 58	0.52	0.78	46.03	-10.3984	0.0087	0.1773
1049	SLU 59	0.51	0.76	46.06	-10.404	0.0088	0.1727
1049	SLU 60	0.51	0.81	46.85	-10.5818	0.0092	0.1717
1049	SLU 61	0.5	0.8	46.88	-10.5874	0.0093	0.1671
1049	SLU 62	0.52	0.82	47.31	-10.6788	0.0093	0.1751
1049	SLU 63	0.51	0.81	47.34	-10.6844	0.0094	0.1706
1049	SLU 64	0.52	0.79	45.15	-10.2051	0.0084	0.1754
1049	SLU 65	0.5	0.77	45.2	-10.2144	0.0084	0.1678
1049	SLU 66	0.53	0.81	45.91	-10.365	0.0086	0.1787
1049	SLU 67	0.52	0.8	45.93	-10.3706	0.0086	0.1742
1049	SLU 68	0.51	0.78	45.65	-10.3114	0.0085	0.1713
1049	SLU 69	0.54	0.82	46.36	-10.462	0.0087	0.1822
1049	SLU 70	0.53	0.8	46.39	-10.4676	0.0087	0.1776
1049	SLU 71	0.54	0.8	46.06	-10.3991	0.0086	0.1823
1049	SLU 72	0.53	0.79	46.08	-10.4047	0.0086	0.1778
1049	SLU 73	0.51	0.88	49.24	-11.0951	0.0101	0.1709
1049	SLU 74	0.54	0.93	49.94	-11.2457	0.0102	0.1819
1049	SLU 75	0.53	0.91	49.97	-11.2513	0.0102	0.1773
1049	SLU 76	0.52	0.89	49.69	-11.1922	0.0102	0.1744
1049	SLU 77	0.55	0.93	50.4	-11.3428	0.0103	0.1853
1049	SLU 78	0.54	0.92	50.43	-11.3483	0.0103	0.1808
1049	SLU 79	0.55	0.92	50.1	-11.2799	0.0102	0.1855
1049	SLU 80	0.54	0.91	50.12	-11.2855	0.0102	0.1809
1049	SLU 81	0.53	0.95	50.92	-11.4633	0.0107	0.1799
1049	SLU 82	0.52	0.94	50.95	-11.4689	0.0107	0.1753
1049	SLU 83	0.54	0.96	51.37	-11.5603	0.0108	0.1833
1049	SLU 84	0.53	0.95	51.4	-11.5659	0.0108	0.1788
1049	SLE RA 1	0.39	0.58	33.84	-7.6563	0.0061	0.1331
1049	SLE RA 2	0.38	0.56	33.87	-7.6625	0.0062	0.128
1049	SLE RA 3	0.4	0.59	34.34	-7.7629	0.0063	0.1353
1049	SLE RA 4	0.39	0.58	34.36	-7.7667	0.0063	0.1323
1049	SLE RA 5	0.39	0.57	34.17	-7.7272	0.0062	0.1304
1049	SLE RA 6	0.41	0.59	34.64	-7.8276	0.0063	0.1376
1049	SLE RA 7	0.4	0.59	34.66	-7.8314	0.0064	0.1346
1049	SLE RA 8	0.41	0.59	34.44	-7.7857	0.0063	0.1377
1049	SLE RA 9	0.4	0.58	34.46	-7.7894	0.0063	0.1347
1049	SLE RA 10	0.39	0.64	36.56	-8.2497	0.0072	0.1301
1049	SLE RA 11	0.41	0.67	37.03	-8.3501	0.0073	0.1374
1049	SLE RA 12	0.4	0.66	37.05	-8.3538	0.0074	0.1344
1049	SLE RA 13	0.39	0.64	36.86	-8.3144	0.0073	0.1325
1049	SLE RA 14	0.41	0.67	37.34	-8.4148	0.0074	0.1397
1049	SLE RA 15	0.4	0.66	37.35	-8.4185	0.0074	0.1367
1049	SLE RA 16	0.41	0.66	37.13	-8.3728	0.0073	0.1398
1049	SLE RA 17	0.41	0.65	37.15	-8.3766	0.0074	0.1368
1049	SLE RA 18	0.4	0.69	37.68	-8.4951	0.0077	0.1361
1049	SLE RA 19	0.39	0.68	37.7	-8.4989	0.0077	0.1331
1049	SLE RA 20	0.41	0.69	37.99	-8.5598	0.0077	0.1384
1049	SLE RA 21	0.4	0.68	38.01	-8.5635	0.0078	0.1354
1049	SLE FR 1	0.39	0.58	33.84	-7.6563	0.0061	0.1331
1049	SLE FR 2	0.39	0.57	33.84	-7.6576	0.0061	0.1321
1049	SLE FR 3	0.4	0.58	33.96	-7.6822	0.0062	0.134
1049	SLE FR 4	0.39	0.61	35	-7.9092	0.0066	0.133
1049	SLE FR 5	0.4	0.61	35.11	-7.9338	0.0066	0.1349
1049	SLE FR 6	0.4	0.63	35.76	-8.0757	0.0069	0.1346
1049	SLE QP 1	0.39	0.58	33.84	-7.6563	0.0061	0.1331
1049	SLE QP 2	0.4	0.61	34.99	-7.908	0.0066	0.134
1049	SLD 1	4	0.83	30.56	-7.158	0.0146	1.3983
1049	SLD 2	3.65	1.01	30.46	-7.1302	0.015	1.2745
1049	SLD 3	4.3	-0.06	31.29	-7.2934	0.0155	1.5023
1049	SLD 4	3.95	0.12	31.2	-7.2656	0.0159	1.3785
1049	SLD 5	1.09	2	32.56	-7.4825	0.0076	0.3775
1049	SLD 6	0.86	2.12	32.49	-7.4644	0.0078	0.2965
1049	SLD 7	2.08	-0.98	35.02	-7.9339	0.0105	0.7241
1049	SLD 8	1.85	-0.86	34.96	-7.9157	0.0108	0.6432
1049	SLD 9	-1.06	2.08	35.03	-7.9002	0.0024	-0.3752
1049	SLD 10	-1.29	2.2	34.96	-7.8821	0.0027	-0.4561
1049	SLD 11	-0.07	-0.9	37.49	-8.3516	0.0053	-0.0286
1049	SLD 12	-0.3	-0.78	37.43	-8.3334	0.0056	-0.1095
1049	SLD 13	-3.16	1.1	38.79	-8.5503	-0.0027	-1.1105
1049	SLD 14	-3.51	1.28	38.69	-8.5225	-0.0023	-1.2343
1049	SLD 15	-2.86	0.21	39.53	-8.6857	-0.0018	-1.0065
1049	SLD 16	-3.21	0.39	39.43	-8.658	-0.0014	-1.1303

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1049	SLV 1	8.84	1.1	24.63	-6.1564	0.0254	3.0919
1049	SLV 2	8.01	1.52	24.4	-6.0917	0.0263	2.8034
1049	SLV 3	9.53	-0.93	26.31	-6.465	0.0274	3.3345
1049	SLV 4	8.71	-0.52	26.08	-6.4004	0.0283	3.0461
1049	SLV 5	2.02	3.77	29.38	-6.9254	0.009	0.7027
1049	SLV 6	1.49	4.04	29.23	-6.8839	0.0096	0.5174
1049	SLV 7	4.33	-3.01	34.97	-7.9543	0.0158	1.5116
1049	SLV 8	3.8	-2.74	34.82	-7.9127	0.0164	1.3262
1049	SLV 9	-3.01	3.96	35.16	-7.9032	-0.0032	-1.0583
1049	SLV 10	-3.54	4.23	35.01	-7.8616	-0.0026	-1.2436
1049	SLV 11	-0.69	-2.82	40.75	-8.9321	0.0036	-0.2494
1049	SLV 12	-1.23	-2.55	40.61	-8.8905	0.0042	-0.4347
1049	SLV 13	-7.91	1.74	43.91	-9.4156	-0.0151	-2.7781
1049	SLV 14	-8.74	2.15	43.68	-9.3509	-0.0142	-3.0665
1049	SLV 15	-7.22	-0.3	45.58	-9.7243	-0.0131	-2.5354
1049	SLV 16	-8.05	0.12	45.35	-9.6596	-0.0122	-2.8239
1049	CRTFP Ux+	0	0	0	0	0	0
1049	CRTFP Ux-	0	0	0	0	0	0
1049	CRTFP Uy+	0	0	0	0	0	0
1049	CRTFP Uy-	0	0	0	0	0	0
1050	SLU 1	0.42	0.4	32.78	-7.2929	-0.0127	0.1425
1050	SLU 2	0.4	0.38	32.82	-7.3014	-0.0126	0.1348
1050	SLU 3	0.43	0.42	33.53	-7.4492	-0.0129	0.1461
1050	SLU 4	0.42	0.41	33.56	-7.4543	-0.0129	0.1415
1050	SLU 5	0.41	0.39	33.28	-7.3966	-0.0128	0.1384
1050	SLU 6	0.44	0.42	33.99	-7.5444	-0.0131	0.1497
1050	SLU 7	0.43	0.41	34.02	-7.5495	-0.0131	0.1451
1050	SLU 8	0.44	0.41	33.69	-7.4834	-0.013	0.1498
1050	SLU 9	0.43	0.4	33.71	-7.4884	-0.013	0.1451
1050	SLU 10	0.41	0.48	36.85	-8.1559	-0.0134	0.139
1050	SLU 11	0.44	0.52	37.56	-8.3037	-0.0138	0.1503
1050	SLU 12	0.43	0.51	37.59	-8.3088	-0.0137	0.1457
1050	SLU 13	0.42	0.49	37.3	-8.2511	-0.0136	0.1427
1050	SLU 14	0.45	0.53	38.01	-8.3989	-0.014	0.154
1050	SLU 15	0.44	0.51	38.04	-8.404	-0.0139	0.1494
1050	SLU 16	0.45	0.51	37.71	-8.3378	-0.0139	0.154
1050	SLU 17	0.44	0.5	37.74	-8.3429	-0.0138	0.1494
1050	SLU 18	0.44	0.55	38.53	-8.5136	-0.0139	0.1485
1050	SLU 19	0.42	0.54	38.56	-8.5187	-0.0138	0.1439
1050	SLU 20	0.45	0.55	38.98	-8.6088	-0.0141	0.1522
1050	SLU 21	0.44	0.54	39.01	-8.6139	-0.014	0.1475
1050	SLU 22	0.45	0.53	36.84	-8.1503	-0.0137	0.1518
1050	SLU 23	0.42	0.51	36.88	-8.1588	-0.0136	0.1441
1050	SLU 24	0.46	0.54	37.59	-8.3066	-0.014	0.1554
1050	SLU 25	0.44	0.53	37.62	-8.3117	-0.0139	0.1508
1050	SLU 26	0.44	0.51	37.34	-8.254	-0.0138	0.1478
1050	SLU 27	0.47	0.55	38.05	-8.4018	-0.0141	0.1591
1050	SLU 28	0.46	0.53	38.07	-8.4069	-0.0141	0.1545
1050	SLU 29	0.47	0.54	37.75	-8.3407	-0.0141	0.1591
1050	SLU 30	0.45	0.52	37.77	-8.3458	-0.014	0.1545
1050	SLU 31	0.44	0.61	40.91	-9.0133	-0.0145	0.1483
1050	SLU 32	0.47	0.65	41.62	-9.161	-0.0148	0.1597
1050	SLU 33	0.46	0.63	41.65	-9.1661	-0.0148	0.1551
1050	SLU 34	0.45	0.61	41.36	-9.1085	-0.0147	0.152
1050	SLU 35	0.48	0.65	42.07	-9.2562	-0.015	0.1633
1050	SLU 36	0.47	0.64	42.1	-9.2613	-0.015	0.1587
1050	SLU 37	0.48	0.64	41.77	-9.1952	-0.0149	0.1633
1050	SLU 38	0.47	0.62	41.8	-9.2003	-0.0149	0.1587
1050	SLU 39	0.47	0.67	42.59	-9.371	-0.0149	0.1579
1050	SLU 40	0.45	0.66	42.62	-9.3761	-0.0149	0.1532
1050	SLU 41	0.48	0.68	43.04	-9.4662	-0.0151	0.1615
1050	SLU 42	0.46	0.66	43.07	-9.4713	-0.0151	0.1569
1050	SLU 43	0.53	0.48	41.22	-9.1869	-0.0161	0.182
1050	SLU 44	0.51	0.46	41.27	-9.1954	-0.016	0.1743
1050	SLU 45	0.55	0.5	41.98	-9.3431	-0.0164	0.1856
1050	SLU 46	0.53	0.49	42	-9.3482	-0.0163	0.181
1050	SLU 47	0.52	0.46	41.72	-9.2906	-0.0162	0.1779
1050	SLU 48	0.56	0.5	42.43	-9.4383	-0.0166	0.1893
1050	SLU 49	0.54	0.49	42.46	-9.4434	-0.0165	0.1847
1050	SLU 50	0.56	0.49	42.13	-9.3773	-0.0165	0.1893
1050	SLU 51	0.54	0.48	42.16	-9.3824	-0.0164	0.1847
1050	SLU 52	0.53	0.56	45.29	-10.0498	-0.0169	0.1785
1050	SLU 53	0.56	0.6	46	-10.1976	-0.0172	0.1899
1050	SLU 54	0.55	0.59	46.03	-10.2027	-0.0172	0.1853
1050	SLU 55	0.54	0.57	45.75	-10.145	-0.0171	0.1822
1050	SLU 56	0.57	0.6	46.46	-10.2928	-0.0174	0.1935
1050	SLU 57	0.56	0.59	46.48	-10.2979	-0.0174	0.1889
1050	SLU 58	0.57	0.59	46.16	-10.2318	-0.0173	0.1935
1050	SLU 59	0.56	0.58	46.18	-10.2369	-0.0173	0.1889
1050	SLU 60	0.55	0.63	46.97	-10.4076	-0.0174	0.188
1050	SLU 61	0.54	0.61	47	-10.4126	-0.0173	0.1834
1050	SLU 62	0.56	0.63	47.43	-10.5028	-0.0175	0.1917
1050	SLU 63	0.55	0.62	47.45	-10.5079	-0.0175	0.1871
1050	SLU 64	0.56	0.61	45.28	-10.0442	-0.0171	0.1913
1050	SLU 65	0.54	0.58	45.32	-10.0527	-0.0171	0.1836
1050	SLU 66	0.57	0.62	46.03	-10.2005	-0.0174	0.195
1050	SLU 67	0.56	0.61	46.06	-10.2056	-0.0174	0.1904
1050	SLU 68	0.55	0.59	45.78	-10.1479	-0.0172	0.1873
1050	SLU 69	0.58	0.63	46.49	-10.2957	-0.0176	0.1986
1050	SLU 70	0.57	0.61	46.52	-10.3008	-0.0175	0.194
1050	SLU 71	0.58	0.61	46.19	-10.2346	-0.0175	0.1986
1050	SLU 72	0.57	0.6	46.21	-10.2397	-0.0175	0.194
1050	SLU 73	0.55	0.69	49.35	-10.9072	-0.0179	0.1879
1050	SLU 74	0.59	0.72	50.06	-11.055	-0.0183	0.1992
1050	SLU 75	0.57	0.71	50.09	-11.0601	-0.0182	0.1946
1050	SLU 76	0.56	0.69	49.8	-11.0024	-0.0181	0.1915
1050	SLU 77	0.6	0.73	50.52	-11.1502	-0.0185	0.2029

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1050	SLU 78	0.58	0.71	50.54	-11.1553	-0.0184	0.1982
1050	SLU 79	0.6	0.72	50.21	-11.0891	-0.0184	0.2029
1050	SLU 80	0.58	0.7	50.24	-11.0942	-0.0183	0.1983
1050	SLU 81	0.58	0.75	51.03	-11.2649	-0.0184	0.1974
1050	SLU 82	0.57	0.74	51.06	-11.27	-0.0183	0.1928
1050	SLU 83	0.59	0.75	51.49	-11.3601	-0.0186	0.201
1050	SLU 84	0.58	0.74	51.51	-11.3652	-0.0185	0.1964
1050	SLE RA 1	0.43	0.44	33.94	-7.5379	-0.013	0.1451
1050	SLE RA 2	0.41	0.42	33.97	-7.5436	-0.0129	0.14
1050	SLE RA 3	0.43	0.45	34.44	-7.6421	-0.0131	0.1476
1050	SLE RA 4	0.43	0.44	34.46	-7.6455	-0.0131	0.1445
1050	SLE RA 5	0.42	0.43	34.27	-7.607	-0.013	0.1424
1050	SLE RA 6	0.44	0.45	34.74	-7.7055	-0.0133	0.15
1050	SLE RA 7	0.43	0.44	34.76	-7.7089	-0.0132	0.1469
1050	SLE RA 8	0.44	0.44	34.54	-7.6648	-0.0132	0.15
1050	SLE RA 9	0.43	0.44	34.56	-7.6682	-0.0132	0.1469
1050	SLE RA 10	0.42	0.49	36.65	-8.1132	-0.0135	0.1428
1050	SLE RA 11	0.44	0.52	37.13	-8.2117	-0.0137	0.1504
1050	SLE RA 12	0.43	0.51	37.14	-8.2151	-0.0137	0.1473
1050	SLE RA 13	0.43	0.49	36.95	-8.1767	-0.0136	0.1453
1050	SLE RA 14	0.45	0.52	37.43	-8.2752	-0.0138	0.1528
1050	SLE RA 15	0.44	0.51	37.45	-8.2786	-0.0138	0.1497
1050	SLE RA 16	0.45	0.51	37.23	-8.2345	-0.0138	0.1528
1050	SLE RA 17	0.44	0.5	37.25	-8.2379	-0.0137	0.1497
1050	SLE RA 18	0.44	0.54	37.77	-8.3517	-0.0138	0.1492
1050	SLE RA 19	0.43	0.53	37.79	-8.3551	-0.0138	0.1461
1050	SLE RA 20	0.45	0.54	38.08	-8.4152	-0.0139	0.1516
1050	SLE RA 21	0.44	0.53	38.09	-8.4186	-0.0139	0.1485
1050	SLE FR 1	0.43	0.44	33.94	-7.5379	-0.013	0.1451
1050	SLE FR 2	0.42	0.44	33.94	-7.539	-0.013	0.1441
1050	SLE FR 3	0.43	0.44	34.06	-7.5633	-0.013	0.1461
1050	SLE FR 4	0.43	0.46	35.09	-7.7832	-0.0132	0.1453
1050	SLE FR 5	0.43	0.47	35.21	-7.8074	-0.0133	0.1473
1050	SLE FR 6	0.43	0.49	35.86	-7.9448	-0.0134	0.1471
1050	SLE QP 1	0.43	0.44	33.94	-7.5379	-0.013	0.1451
1050	SLE QP 2	0.43	0.47	35.09	-7.782	-0.0132	0.1463
1050	SLD 1	4.04	0.95	30.37	-7.028	-0.0029	1.4104
1050	SLD 2	3.68	1.14	30.25	-6.9903	-0.0023	1.2861
1050	SLD 3	4.34	0.07	31.1	-7.1631	-0.0035	1.5145
1050	SLD 4	3.98	0.26	30.99	-7.1254	-0.0029	1.3903
1050	SLD 5	1.12	1.92	32.57	-7.3575	-0.0094	0.3895
1050	SLD 6	0.89	2.04	32.5	-7.3329	-0.009	0.3083
1050	SLD 7	2.12	-1.03	35.03	-7.808	-0.0113	0.7368
1050	SLD 8	1.88	-0.91	34.96	-7.7834	-0.0109	0.6556
1050	SLD 9	-1.02	1.84	35.22	-7.7807	-0.0155	-0.3629
1050	SLD 10	-1.26	1.96	35.14	-7.7561	-0.0151	-0.4441
1050	SLD 11	-0.03	-1.11	37.68	-8.2312	-0.0175	-0.0156
1050	SLD 12	-0.26	-0.99	37.61	-8.2066	-0.0171	-0.0968
1050	SLD 13	-3.12	0.68	39.19	-8.4386	-0.0235	-1.0976
1050	SLD 14	-3.48	0.87	39.07	-8.4009	-0.0229	-1.2219
1050	SLD 15	-2.82	-0.21	39.92	-8.5738	-0.0241	-0.9934
1050	SLD 16	-3.18	-0.02	39.81	-8.5361	-0.0235	-1.1177
1050	SLV 1	8.87	1.58	24.05	-6.0207	0.0109	3.1035
1050	SLV 2	8.04	2.01	23.79	-5.9329	0.0123	2.8141
1050	SLV 3	9.57	-0.43	25.73	-6.3289	0.0095	3.3466
1050	SLV 4	8.74	0	25.47	-6.2411	0.0109	3.0572
1050	SLV 5	2.05	3.78	29.28	-6.8012	-0.0042	0.7143
1050	SLV 6	1.52	4.06	29.11	-6.7447	-0.0033	0.5283
1050	SLV 7	4.37	-2.93	34.87	-7.8287	-0.0087	1.5248
1050	SLV 8	3.84	-2.65	34.7	-7.7722	-0.0078	1.3388
1050	SLV 9	-2.97	3.58	35.48	-7.7919	-0.0186	-1.0461
1050	SLV 10	-3.51	3.86	35.31	-7.7354	-0.0177	-1.2321
1050	SLV 11	-0.66	-3.12	41.07	-8.8194	-0.0232	-0.2356
1050	SLV 12	-1.19	-2.84	40.9	-8.7629	-0.0223	-0.4216
1050	SLV 13	-7.88	0.93	44.71	-9.323	-0.0374	-2.7645
1050	SLV 14	-8.7	1.37	44.45	-9.2351	-0.036	-3.0539
1050	SLV 15	-7.18	-1.08	46.39	-9.6312	-0.0387	-2.5214
1050	SLV 16	-8.01	-0.64	46.12	-9.5434	-0.0373	-2.8108
1050	CRTFP Ux+	0	0	0	0	0	0
1050	CRTFP Ux-	0	0	0	0	0	0
1050	CRTFP Uy+	0	0	0	0	0	0
1050	CRTFP Uy-	0	0	0	0	0	0
1051	SLU 1	0.45	0.28	33.49	-7.6401	-0.0329	0.1539
1051	SLU 2	0.43	0.26	33.53	-7.6473	-0.0328	0.1461
1051	SLU 3	0.46	0.3	34.26	-7.8042	-0.0337	0.1578
1051	SLU 4	0.45	0.28	34.29	-7.8085	-0.0336	0.1531
1051	SLU 5	0.44	0.26	34	-7.7476	-0.0333	0.1499
1051	SLU 6	0.47	0.3	34.73	-7.9046	-0.0342	0.1616
1051	SLU 7	0.46	0.29	34.75	-7.9089	-0.0341	0.157
1051	SLU 8	0.47	0.29	34.42	-7.8409	-0.0339	0.1615
1051	SLU 9	0.46	0.27	34.44	-7.8452	-0.0339	0.1568
1051	SLU 10	0.44	0.35	37.63	-8.5368	-0.0364	0.1514
1051	SLU 11	0.48	0.39	38.36	-8.6937	-0.0373	0.1631
1051	SLU 12	0.46	0.37	38.38	-8.698	-0.0372	0.1585
1051	SLU 13	0.45	0.35	38.09	-8.6372	-0.0369	0.1552
1051	SLU 14	0.49	0.39	38.82	-8.7941	-0.0378	0.167
1051	SLU 15	0.48	0.37	38.85	-8.7984	-0.0377	0.1623
1051	SLU 16	0.49	0.38	38.52	-8.7304	-0.0375	0.1668
1051	SLU 17	0.47	0.36	38.54	-8.7347	-0.0375	0.1622
1051	SLU 18	0.47	0.41	39.34	-8.9108	-0.0381	0.1615
1051	SLU 19	0.46	0.4	39.37	-8.9152	-0.038	0.1568
1051	SLU 20	0.48	0.41	39.81	-9.0112	-0.0386	0.1653
1051	SLU 21	0.47	0.4	39.83	-9.0155	-0.0385	0.1606
1051	SLU 22	0.48	0.39	37.62	-8.5351	-0.0367	0.1644
1051	SLU 23	0.46	0.37	37.66	-8.5423	-0.0366	0.1566
1051	SLU 24	0.49	0.41	38.4	-8.6992	-0.0375	0.1683
1051	SLU 25	0.48	0.39	38.42	-8.7035	-0.0374	0.1636

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1051	SLU 26	0.47	0.37	38.13	-8.6427	-0.0371	0.1604
1051	SLU 27	0.5	0.41	38.86	-8.7996	-0.038	0.1721
1051	SLU 28	0.49	0.39	38.88	-8.8039	-0.0379	0.1674
1051	SLU 29	0.5	0.4	38.55	-8.7359	-0.0377	0.172
1051	SLU 30	0.49	0.38	38.58	-8.7402	-0.0376	0.1673
1051	SLU 31	0.47	0.46	41.76	-9.4318	-0.0402	0.1619
1051	SLU 32	0.51	0.49	42.49	-9.5887	-0.0411	0.1736
1051	SLU 33	0.5	0.48	42.52	-9.593	-0.041	0.1689
1051	SLU 34	0.49	0.46	42.23	-9.5322	-0.0407	0.1657
1051	SLU 35	0.52	0.5	42.96	-9.6891	-0.0416	0.1774
1051	SLU 36	0.51	0.48	42.98	-9.6934	-0.0415	0.1728
1051	SLU 37	0.52	0.49	42.65	-9.6254	-0.0413	0.1773
1051	SLU 38	0.51	0.47	42.67	-9.6297	-0.0413	0.1727
1051	SLU 39	0.5	0.52	43.47	-9.8058	-0.0419	0.172
1051	SLU 40	0.49	0.51	43.5	-9.8102	-0.0418	0.1673
1051	SLU 41	0.52	0.52	43.94	-9.9062	-0.0424	0.1758
1051	SLU 42	0.5	0.51	43.96	-9.9106	-0.0423	0.1711
1051	SLU 43	0.57	0.33	42.12	-9.6252	-0.0415	0.1965
1051	SLU 44	0.55	0.31	42.16	-9.6324	-0.0414	0.1887
1051	SLU 45	0.59	0.34	42.89	-9.7893	-0.0423	0.2004
1051	SLU 46	0.57	0.33	42.92	-9.7936	-0.0422	0.1957
1051	SLU 47	0.56	0.31	42.63	-9.7328	-0.0419	0.1925
1051	SLU 48	0.6	0.35	43.36	-9.8897	-0.0428	0.2042
1051	SLU 49	0.58	0.33	43.38	-9.894	-0.0427	0.1995
1051	SLU 50	0.6	0.34	43.05	-9.826	-0.0425	0.2041
1051	SLU 51	0.58	0.32	43.07	-9.8303	-0.0424	0.1994
1051	SLU 52	0.57	0.4	46.26	-10.522	-0.045	0.194
1051	SLU 53	0.6	0.43	46.99	-10.6789	-0.0459	0.2057
1051	SLU 54	0.59	0.42	47.01	-10.6832	-0.0458	0.201
1051	SLU 55	0.58	0.4	46.72	-10.6223	-0.0455	0.1978
1051	SLU 56	0.61	0.44	47.45	-10.7793	-0.0464	0.2095
1051	SLU 57	0.6	0.42	47.48	-10.7836	-0.0463	0.2048
1051	SLU 58	0.61	0.42	47.14	-10.7156	-0.0461	0.2094
1051	SLU 59	0.6	0.41	47.17	-10.7199	-0.046	0.2047
1051	SLU 60	0.6	0.46	47.97	-10.896	-0.0467	0.204
1051	SLU 61	0.58	0.45	48	-10.9003	-0.0466	0.1994
1051	SLU 62	0.61	0.46	48.44	-10.9964	-0.0472	0.2079
1051	SLU 63	0.59	0.45	48.46	-11.0007	-0.0471	0.2032
1051	SLU 64	0.61	0.44	46.25	-10.5202	-0.0453	0.2069
1051	SLU 65	0.58	0.42	46.29	-10.5274	-0.0452	0.1991
1051	SLU 66	0.62	0.45	47.02	-10.6843	-0.0461	0.2109
1051	SLU 67	0.6	0.44	47.05	-10.6887	-0.046	0.2062
1051	SLU 68	0.59	0.42	46.76	-10.6278	-0.0457	0.203
1051	SLU 69	0.63	0.46	47.49	-10.7847	-0.0466	0.2147
1051	SLU 70	0.61	0.44	47.51	-10.7891	-0.0465	0.21
1051	SLU 71	0.63	0.44	47.18	-10.721	-0.0463	0.2146
1051	SLU 72	0.61	0.43	47.21	-10.7253	-0.0462	0.2099
1051	SLU 73	0.6	0.51	50.39	-11.417	-0.0488	0.2045
1051	SLU 74	0.63	0.54	51.12	-11.5739	-0.0497	0.2162
1051	SLU 75	0.62	0.53	51.15	-11.5782	-0.0496	0.2115
1051	SLU 76	0.61	0.51	50.86	-11.5174	-0.0493	0.2083
1051	SLU 77	0.64	0.54	51.59	-11.6743	-0.0502	0.22
1051	SLU 78	0.63	0.53	51.61	-11.6786	-0.0501	0.2153
1051	SLU 79	0.64	0.53	51.28	-11.6106	-0.0499	0.2199
1051	SLU 80	0.63	0.52	51.3	-11.6149	-0.0498	0.2152
1051	SLU 81	0.63	0.57	52.1	-11.791	-0.0505	0.2145
1051	SLU 82	0.62	0.55	52.13	-11.7953	-0.0504	0.2099
1051	SLU 83	0.64	0.57	52.57	-11.8914	-0.051	0.2184
1051	SLU 84	0.63	0.56	52.59	-11.8957	-0.0509	0.2137
1051	SLE RA 1	0.46	0.31	34.67	-7.8958	-0.034	0.1569
1051	SLE RA 2	0.44	0.3	34.7	-7.9006	-0.0339	0.1517
1051	SLE RA 3	0.47	0.32	35.19	-8.0052	-0.0345	0.1595
1051	SLE RA 4	0.46	0.31	35.2	-8.0081	-0.0345	0.1564
1051	SLE RA 5	0.45	0.3	35.01	-7.9675	-0.0343	0.1542
1051	SLE RA 6	0.47	0.32	35.5	-8.0721	-0.0349	0.162
1051	SLE RA 7	0.46	0.32	35.51	-8.075	-0.0348	0.1589
1051	SLE RA 8	0.47	0.32	35.29	-8.0296	-0.0347	0.162
1051	SLE RA 9	0.46	0.31	35.31	-8.0325	-0.0346	0.1589
1051	SLE RA 10	0.45	0.36	37.43	-8.4936	-0.0363	0.1552
1051	SLE RA 11	0.48	0.38	37.92	-8.5982	-0.037	0.163
1051	SLE RA 12	0.47	0.37	37.93	-8.6011	-0.0369	0.1599
1051	SLE RA 13	0.46	0.36	37.74	-8.5605	-0.0367	0.1578
1051	SLE RA 14	0.48	0.38	38.23	-8.6651	-0.0373	0.1656
1051	SLE RA 15	0.48	0.38	38.24	-8.668	-0.0372	0.1625
1051	SLE RA 16	0.48	0.38	38.02	-8.6227	-0.0371	0.1655
1051	SLE RA 17	0.48	0.37	38.04	-8.6255	-0.037	0.1624
1051	SLE RA 18	0.47	0.4	38.57	-8.743	-0.0375	0.1619
1051	SLE RA 19	0.47	0.39	38.59	-8.7458	-0.0374	0.1588
1051	SLE RA 20	0.48	0.4	38.88	-8.8099	-0.0378	0.1645
1051	SLE RA 21	0.47	0.39	38.9	-8.8128	-0.0377	0.1614
1051	SLE FR 1	0.46	0.31	34.67	-7.8958	-0.034	0.1569
1051	SLE FR 2	0.46	0.31	34.68	-7.8967	-0.034	0.1558
1051	SLE FR 3	0.46	0.32	34.79	-7.9225	-0.0342	0.1579
1051	SLE FR 4	0.46	0.34	35.85	-8.1509	-0.035	0.1574
1051	SLE FR 5	0.47	0.34	35.96	-8.1767	-0.0352	0.1594
1051	SLE FR 6	0.47	0.36	36.62	-8.3194	-0.0357	0.1594
1051	SLE QP 1	0.46	0.31	34.67	-7.8958	-0.034	0.1569
1051	SLE QP 2	0.46	0.34	35.84	-8.1499	-0.0351	0.1584
1051	SLD 1	4.07	0.84	30.77	-7.3488	-0.0229	1.4212
1051	SLD 2	3.71	1.03	30.63	-7.2964	-0.022	1.2966
1051	SLD 3	4.37	-0.04	31.53	-7.4929	-0.0239	1.5256
1051	SLD 4	4.01	0.15	31.39	-7.4404	-0.023	1.401
1051	SLD 5	1.15	1.79	33.2	-7.7005	-0.0301	0.401
1051	SLD 6	0.92	1.92	33.11	-7.6662	-0.0295	0.3196
1051	SLD 7	2.15	-1.15	35.72	-8.1805	-0.0333	0.7489
1051	SLD 8	1.92	-1.02	35.63	-8.1462	-0.0328	0.6674
1051	SLD 9	-0.99	1.7	36.05	-8.1536	-0.0373	-0.3506

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1051	SLD 10	-1.22	1.83	35.96	-8.1194	-0.0368	-0.4321
1051	SLD 11	0.01	-1.24	38.57	-8.6337	-0.0406	-0.0028
1051	SLD 12	-0.23	-1.11	38.48	-8.5994	-0.0401	-0.0842
1051	SLD 13	-3.08	0.53	40.29	-8.8595	-0.0471	-1.0842
1051	SLD 14	-3.44	0.72	40.15	-8.807	-0.0463	-1.2088
1051	SLD 15	-2.78	-0.35	41.05	-9.0035	-0.0481	-0.9798
1051	SLD 16	-3.14	-0.16	40.91	-8.951	-0.0472	-1.1045
1051	SLV 1	8.9	1.47	23.99	-6.2788	-0.0065	3.1128
1051	SLV 2	8.06	1.93	23.67	-6.1566	-0.0046	2.8226
1051	SLV 3	9.59	-0.53	25.71	-6.6068	-0.0088	3.3564
1051	SLV 4	8.76	-0.07	25.39	-6.4846	-0.0068	3.0661
1051	SLV 5	2.08	3.64	29.74	-7.112	-0.0234	0.7251
1051	SLV 6	1.54	3.93	29.53	-7.0335	-0.0222	0.5386
1051	SLV 7	4.4	-3.03	35.46	-8.2054	-0.0309	1.5369
1051	SLV 8	3.87	-2.74	35.26	-8.1269	-0.0297	1.3503
1051	SLV 9	-2.94	3.42	36.43	-8.173	-0.0405	-1.0335
1051	SLV 10	-3.47	3.72	36.22	-8.0945	-0.0392	-1.2201
1051	SLV 11	-0.62	-3.25	42.15	-9.2664	-0.048	-0.2218
1051	SLV 12	-1.15	-2.96	41.95	-9.1879	-0.0467	-0.4083
1051	SLV 13	-7.83	0.75	46.29	-9.8152	-0.0633	-2.7493
1051	SLV 14	-8.67	1.21	45.97	-9.6931	-0.0613	-3.0396
1051	SLV 15	-7.14	-1.25	48.01	-10.1432	-0.0656	-2.5058
1051	SLV 16	-7.97	-0.79	47.69	-10.0211	-0.0636	-2.796
1051	CRTFP Ux+	0	0	0	0	0	0
1051	CRTFP Ux-	0	0	0	0	0	0
1051	CRTFP Uy+	0	0	0	0	0	0
1051	CRTFP Uy-	0	0	0	0	0	0
1052	SLU 1	0.48	0.19	34.84	-8.4744	-0.0532	0.165
1052	SLU 2	0.46	0.16	34.88	-8.4798	-0.053	0.1571
1052	SLU 3	0.49	0.2	35.64	-8.6586	-0.0545	0.1692
1052	SLU 4	0.48	0.18	35.66	-8.6618	-0.0543	0.1645
1052	SLU 5	0.47	0.17	35.36	-8.5928	-0.0538	0.1611
1052	SLU 6	0.5	0.2	36.13	-8.7716	-0.0553	0.1732
1052	SLU 7	0.49	0.18	36.15	-8.7748	-0.0552	0.1685
1052	SLU 8	0.5	0.19	35.81	-8.7005	-0.0548	0.173
1052	SLU 9	0.49	0.17	35.83	-8.7037	-0.0547	0.1682
1052	SLU 10	0.48	0.24	39.13	-9.4696	-0.0593	0.1635
1052	SLU 11	0.51	0.27	39.89	-9.6484	-0.0608	0.1756
1052	SLU 12	0.5	0.26	39.92	-9.6516	-0.0607	0.1709
1052	SLU 13	0.49	0.24	39.61	-9.5826	-0.0602	0.1675
1052	SLU 14	0.52	0.28	40.38	-9.7614	-0.0616	0.1796
1052	SLU 15	0.51	0.26	40.4	-9.7646	-0.0615	0.1749
1052	SLU 16	0.52	0.27	40.06	-9.6903	-0.0611	0.1793
1052	SLU 17	0.51	0.25	40.08	-9.6935	-0.061	0.1746
1052	SLU 18	0.51	0.3	40.91	-9.8884	-0.0622	0.1741
1052	SLU 19	0.49	0.29	40.94	-9.8916	-0.0621	0.1694
1052	SLU 20	0.52	0.3	41.4	-10.0014	-0.063	0.1781
1052	SLU 21	0.5	0.29	41.42	-10.0047	-0.0629	0.1734
1052	SLU 22	0.51	0.28	39.13	-9.4728	-0.0597	0.1766
1052	SLU 23	0.49	0.26	39.17	-9.4782	-0.0596	0.1687
1052	SLU 24	0.53	0.29	39.94	-9.657	-0.061	0.1808
1052	SLU 25	0.51	0.28	39.96	-9.6602	-0.0609	0.1761
1052	SLU 26	0.5	0.26	39.66	-9.5912	-0.0604	0.1727
1052	SLU 27	0.54	0.29	40.42	-9.77	-0.0618	0.1848
1052	SLU 28	0.52	0.28	40.45	-9.7733	-0.0617	0.1801
1052	SLU 29	0.54	0.28	40.1	-9.6989	-0.0613	0.1846
1052	SLU 30	0.52	0.27	40.13	-9.7021	-0.0612	0.1799
1052	SLU 31	0.51	0.34	43.42	-10.468	-0.0659	0.1751
1052	SLU 32	0.54	0.37	44.19	-10.6468	-0.0674	0.1872
1052	SLU 33	0.53	0.36	44.21	-10.65	-0.0673	0.1825
1052	SLU 34	0.52	0.34	43.91	-10.581	-0.0667	0.1791
1052	SLU 35	0.56	0.37	44.68	-10.7598	-0.0682	0.1912
1052	SLU 36	0.54	0.36	44.7	-10.7631	-0.0681	0.1865
1052	SLU 37	0.56	0.36	44.36	-10.6887	-0.0677	0.1909
1052	SLU 38	0.54	0.35	44.38	-10.6919	-0.0676	0.1862
1052	SLU 39	0.54	0.39	45.21	-10.8868	-0.0688	0.1857
1052	SLU 40	0.53	0.38	45.23	-10.8901	-0.0687	0.181
1052	SLU 41	0.55	0.39	45.69	-10.9998	-0.0696	0.1897
1052	SLU 42	0.54	0.38	45.72	-11.0031	-0.0695	0.185
1052	SLU 43	0.61	0.21	43.82	-10.6744	-0.0669	0.2105
1052	SLU 44	0.59	0.19	43.85	-10.6798	-0.0667	0.2026
1052	SLU 45	0.62	0.22	44.62	-10.8586	-0.0682	0.2147
1052	SLU 46	0.61	0.21	44.64	-10.8618	-0.068	0.21
1052	SLU 47	0.6	0.19	44.34	-10.7928	-0.0675	0.2066
1052	SLU 48	0.63	0.22	45.11	-10.9716	-0.069	0.2187
1052	SLU 49	0.62	0.21	45.13	-10.9749	-0.0689	0.214
1052	SLU 50	0.63	0.21	44.79	-10.9005	-0.0685	0.2185
1052	SLU 51	0.62	0.2	44.81	-10.9037	-0.0684	0.2138
1052	SLU 52	0.61	0.27	48.11	-11.6696	-0.0731	0.209
1052	SLU 53	0.64	0.3	48.87	-11.8484	-0.0745	0.2211
1052	SLU 54	0.63	0.28	48.9	-11.8516	-0.0744	0.2164
1052	SLU 55	0.62	0.27	48.59	-11.7826	-0.0739	0.213
1052	SLU 56	0.65	0.3	49.36	-11.9614	-0.0753	0.2251
1052	SLU 57	0.64	0.29	49.38	-11.9647	-0.0752	0.2204
1052	SLU 58	0.65	0.29	49.04	-11.8903	-0.0748	0.2249
1052	SLU 59	0.64	0.28	49.06	-11.8935	-0.0747	0.2201
1052	SLU 60	0.64	0.32	49.89	-12.0884	-0.0759	0.2196
1052	SLU 61	0.62	0.31	49.91	-12.0917	-0.0758	0.2149
1052	SLU 62	0.65	0.32	50.38	-12.2014	-0.0768	0.2236
1052	SLU 63	0.64	0.31	50.4	-12.2047	-0.0766	0.2189
1052	SLU 64	0.65	0.31	48.11	-11.6728	-0.0734	0.2221
1052	SLU 65	0.62	0.28	48.15	-11.6782	-0.0733	0.2142
1052	SLU 66	0.66	0.32	48.92	-11.857	-0.0747	0.2263
1052	SLU 67	0.64	0.3	48.94	-11.8602	-0.0746	0.2216
1052	SLU 68	0.63	0.28	48.63	-11.7913	-0.0741	0.2182
1052	SLU 69	0.67	0.32	49.4	-11.97	-0.0755	0.2303
1052	SLU 70	0.66	0.3	49.42	-11.9733	-0.0754	0.2256

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1052	SLU 71	0.67	0.31	49.08	-11.8989	-0.075	0.2301
1052	SLU 72	0.65	0.29	49.11	-11.9021	-0.0749	0.2254
1052	SLU 73	0.64	0.36	52.4	-12.668	-0.0796	0.2206
1052	SLU 74	0.68	0.39	53.17	-12.8468	-0.0811	0.2327
1052	SLU 75	0.66	0.38	53.19	-12.85	-0.081	0.228
1052	SLU 76	0.65	0.36	52.89	-12.781	-0.0804	0.2246
1052	SLU 77	0.69	0.39	53.65	-12.9598	-0.0819	0.2367
1052	SLU 78	0.67	0.38	53.68	-12.9631	-0.0818	0.232
1052	SLU 79	0.69	0.38	53.34	-12.8887	-0.0814	0.2365
1052	SLU 80	0.67	0.37	53.36	-12.8919	-0.0813	0.2317
1052	SLU 81	0.67	0.42	54.19	-13.0868	-0.0825	0.2312
1052	SLU 82	0.66	0.4	54.21	-13.0901	-0.0824	0.2265
1052	SLU 83	0.68	0.42	54.67	-13.1999	-0.0833	0.2352
1052	SLU 84	0.67	0.4	54.69	-13.2031	-0.0832	0.2305
1052	SLE RA 1	0.49	0.21	36.07	-8.7597	-0.055	0.1683
1052	SLE RA 2	0.47	0.2	36.09	-8.7633	-0.0549	0.1631
1052	SLE RA 3	0.5	0.22	36.6	-8.8825	-0.0559	0.1711
1052	SLE RA 4	0.49	0.21	36.62	-8.8846	-0.0558	0.168
1052	SLE RA 5	0.48	0.2	36.41	-8.8386	-0.0555	0.1657
1052	SLE RA 6	0.5	0.22	36.93	-8.9578	-0.0564	0.1738
1052	SLE RA 7	0.5	0.21	36.94	-8.96	-0.0564	0.1706
1052	SLE RA 8	0.5	0.21	36.71	-8.9104	-0.0561	0.1736
1052	SLE RA 9	0.5	0.21	36.73	-8.9125	-0.056	0.1705
1052	SLE RA 10	0.49	0.25	38.93	-9.4231	-0.0592	0.1673
1052	SLE RA 11	0.51	0.27	39.44	-9.5423	-0.0601	0.1754
1052	SLE RA 12	0.5	0.26	39.45	-9.5445	-0.0601	0.1722
1052	SLE RA 13	0.49	0.25	39.25	-9.4985	-0.0597	0.17
1052	SLE RA 14	0.52	0.27	39.76	-9.6177	-0.0607	0.178
1052	SLE RA 15	0.51	0.26	39.77	-9.6198	-0.0606	0.1749
1052	SLE RA 16	0.52	0.27	39.55	-9.5702	-0.0604	0.1779
1052	SLE RA 17	0.51	0.26	39.56	-9.5724	-0.0603	0.1747
1052	SLE RA 18	0.51	0.29	40.12	-9.7023	-0.0611	0.1744
1052	SLE RA 19	0.5	0.28	40.13	-9.7045	-0.061	0.1712
1052	SLE RA 20	0.51	0.29	40.44	-9.7777	-0.0616	0.177
1052	SLE RA 21	0.51	0.28	40.45	-9.7798	-0.0616	0.1739
1052	SLE FR 1	0.49	0.21	36.07	-8.7597	-0.055	0.1683
1052	SLE FR 2	0.49	0.21	36.07	-8.7604	-0.055	0.1673
1052	SLE FR 3	0.49	0.21	36.2	-8.7898	-0.0553	0.1694
1052	SLE FR 4	0.49	0.23	37.29	-9.0432	-0.0568	0.1691
1052	SLE FR 5	0.5	0.24	37.41	-9.0726	-0.0571	0.1712
1052	SLE FR 6	0.5	0.25	38.09	-9.231	-0.0581	0.1713
1052	SLE QP 1	0.49	0.21	36.07	-8.7597	-0.055	0.1683
1052	SLE QP 2	0.49	0.24	37.28	-9.0425	-0.0569	0.1701
1052	SLD 1	4.09	0.75	31.8	-8.1486	-0.0427	1.431
1052	SLD 2	3.74	0.96	31.64	-8.0762	-0.0416	1.3061
1052	SLD 3	4.39	-0.13	32.59	-8.3124	-0.0444	1.5355
1052	SLD 4	4.04	0.08	32.43	-8.24	-0.0433	1.4106
1052	SLD 5	1.18	1.69	34.47	-8.5387	-0.0503	0.412
1052	SLD 6	0.95	1.83	34.36	-8.4914	-0.0495	0.3303
1052	SLD 7	2.18	-1.25	37.1	-9.0847	-0.0559	0.7603
1052	SLD 8	1.95	-1.11	37	-9.0374	-0.0552	0.6787
1052	SLD 9	-0.96	1.59	37.57	-9.0476	-0.0586	-0.3384
1052	SLD 10	-1.19	1.72	37.46	-9.0002	-0.0578	-0.4201
1052	SLD 11	0.04	-1.35	40.2	-9.5936	-0.0642	0.0099
1052	SLD 12	-0.2	-1.22	40.09	-9.5463	-0.0635	-0.0717
1052	SLD 13	-3.05	0.4	42.14	-9.845	-0.0704	-1.0704
1052	SLD 14	-3.4	0.6	41.97	-9.7725	-0.0693	-1.1953
1052	SLD 15	-2.75	-0.48	42.93	-10.0088	-0.0721	-0.9659
1052	SLD 16	-3.11	-0.28	42.76	-9.9363	-0.071	-1.0908
1052	SLV 1	8.92	1.42	24.48	-6.955	-0.0238	3.12
1052	SLV 2	8.08	1.89	24.09	-6.7862	-0.0212	2.829
1052	SLV 3	9.61	-0.59	26.28	-7.3272	-0.0276	3.3638
1052	SLV 4	8.78	-0.11	25.89	-7.1585	-0.025	3.0729
1052	SLV 5	2.1	3.55	30.78	-7.8806	-0.0415	0.7351
1052	SLV 6	1.57	3.86	30.53	-7.7722	-0.0399	0.5481
1052	SLV 7	4.43	-3.13	36.77	-9.1213	-0.0544	1.5479
1052	SLV 8	3.9	-2.83	36.52	-9.0129	-0.0527	1.361
1052	SLV 9	-2.91	3.3	38.04	-9.0721	-0.061	-1.0207
1052	SLV 10	-3.44	3.61	37.79	-8.9636	-0.0593	-1.2077
1052	SLV 11	-0.58	-3.38	44.03	-10.3128	-0.0739	-0.2078
1052	SLV 12	-1.12	-3.08	43.78	-10.2043	-0.0722	-0.3948
1052	SLV 13	-7.79	0.59	48.68	-10.9265	-0.0887	-2.7327
1052	SLV 14	-8.62	1.06	48.29	-10.7578	-0.0861	-3.0236
1052	SLV 15	-7.09	-1.42	50.47	-11.2987	-0.0925	-2.4888
1052	SLV 16	-7.93	-0.94	50.08	-11.13	-0.0899	-2.7797
1052	CRTFP Ux+	0	0	0	0	0	0
1052	CRTFP Ux-	0	0	0	0	0	0
1052	CRTFP Uy+	0	0	0	0	0	0
1052	CRTFP Uy-	0	0	0	0	0	0
1053	SLU 1	0.51	0.12	36.79	-9.7884	-0.0711	0.1758
1053	SLU 2	0.48	0.1	36.82	-9.7915	-0.0709	0.1679
1053	SLU 3	0.52	0.13	37.64	-10.0047	-0.0729	0.1803
1053	SLU 4	0.51	0.12	37.66	-10.0065	-0.0727	0.1756
1053	SLU 5	0.5	0.1	37.34	-9.9245	-0.072	0.1721
1053	SLU 6	0.53	0.13	38.16	-10.1377	-0.0739	0.1845
1053	SLU 7	0.52	0.11	38.17	-10.1395	-0.0738	0.1798
1053	SLU 8	0.53	0.12	37.82	-10.0544	-0.0733	0.1841
1053	SLU 9	0.52	0.11	37.84	-10.0562	-0.0732	0.1794
1053	SLU 10	0.51	0.17	41.31	-10.9457	-0.0797	0.1753
1053	SLU 11	0.54	0.2	42.13	-11.1589	-0.0816	0.1877
1053	SLU 12	0.53	0.19	42.15	-11.1607	-0.0815	0.183
1053	SLU 13	0.52	0.17	41.83	-11.0787	-0.0808	0.1795
1053	SLU 14	0.55	0.2	42.65	-11.2919	-0.0827	0.1919
1053	SLU 15	0.54	0.18	42.66	-11.2937	-0.0826	0.1872
1053	SLU 16	0.55	0.19	42.31	-11.2086	-0.0821	0.1915
1053	SLU 17	0.54	0.18	42.33	-11.2104	-0.0819	0.1868
1053	SLU 18	0.54	0.22	43.2	-11.4373	-0.0837	0.1864

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1053	SLU 19	0.52	0.21	43.22	-11.4391	-0.0835	0.1817
1053	SLU 20	0.55	0.22	43.72	-11.5702	-0.0848	0.1905
1053	SLU 21	0.54	0.21	43.74	-11.5721	-0.0846	0.1858
1053	SLU 22	0.54	0.21	41.33	-10.955	-0.0801	0.1885
1053	SLU 23	0.52	0.19	41.36	-10.9581	-0.0799	0.1806
1053	SLU 24	0.56	0.21	42.18	-11.1713	-0.0819	0.193
1053	SLU 25	0.54	0.2	42.2	-11.1731	-0.0817	0.1883
1053	SLU 26	0.53	0.18	41.88	-11.0911	-0.081	0.1848
1053	SLU 27	0.57	0.21	42.7	-11.3043	-0.0829	0.1972
1053	SLU 28	0.56	0.2	42.71	-11.3061	-0.0828	0.1924
1053	SLU 29	0.57	0.21	42.36	-11.221	-0.0823	0.1968
1053	SLU 30	0.55	0.19	42.38	-11.2228	-0.0822	0.1921
1053	SLU 31	0.54	0.26	45.85	-12.1123	-0.0887	0.188
1053	SLU 32	0.58	0.29	46.67	-12.3255	-0.0906	0.2004
1053	SLU 33	0.56	0.27	46.69	-12.3273	-0.0905	0.1957
1053	SLU 34	0.55	0.25	46.37	-12.2453	-0.0898	0.1922
1053	SLU 35	0.59	0.28	47.19	-12.4585	-0.0917	0.2046
1053	SLU 36	0.58	0.27	47.2	-12.4603	-0.0916	0.1998
1053	SLU 37	0.59	0.28	46.85	-12.3752	-0.0911	0.2042
1053	SLU 38	0.58	0.26	46.87	-12.377	-0.0909	0.1995
1053	SLU 39	0.57	0.31	47.74	-12.6039	-0.0927	0.1991
1053	SLU 40	0.56	0.29	47.76	-12.6057	-0.0925	0.1943
1053	SLU 41	0.59	0.31	48.26	-12.7368	-0.0938	0.2032
1053	SLU 42	0.57	0.29	48.28	-12.7387	-0.0936	0.1985
1053	SLU 43	0.65	0.13	46.27	-12.3249	-0.0894	0.2242
1053	SLU 44	0.62	0.11	46.3	-12.328	-0.0892	0.2163
1053	SLU 45	0.66	0.13	47.12	-12.5412	-0.0911	0.2287
1053	SLU 46	0.65	0.12	47.14	-12.5431	-0.091	0.224
1053	SLU 47	0.64	0.1	46.82	-12.461	-0.0903	0.2205
1053	SLU 48	0.67	0.13	47.64	-12.6742	-0.0922	0.2329
1053	SLU 49	0.66	0.12	47.65	-12.676	-0.0921	0.2281
1053	SLU 50	0.67	0.13	47.3	-12.5909	-0.0916	0.2325
1053	SLU 51	0.66	0.11	47.32	-12.5928	-0.0914	0.2278
1053	SLU 52	0.65	0.18	50.79	-13.4822	-0.098	0.2237
1053	SLU 53	0.68	0.21	51.61	-13.6954	-0.0999	0.2361
1053	SLU 54	0.67	0.19	51.63	-13.6973	-0.0998	0.2314
1053	SLU 55	0.66	0.17	51.31	-13.6152	-0.099	0.2279
1053	SLU 56	0.69	0.2	52.13	-13.8284	-0.101	0.2403
1053	SLU 57	0.68	0.19	52.14	-13.8303	-0.1008	0.2356
1053	SLU 58	0.69	0.2	51.79	-13.7451	-0.1003	0.2399
1053	SLU 59	0.68	0.18	51.81	-13.747	-0.1002	0.2352
1053	SLU 60	0.68	0.23	52.68	-13.9738	-0.1019	0.2348
1053	SLU 61	0.66	0.21	52.7	-13.9756	-0.1018	0.23
1053	SLU 62	0.69	0.23	53.2	-14.1068	-0.103	0.2389
1053	SLU 63	0.68	0.21	53.22	-14.1086	-0.1029	0.2342
1053	SLU 64	0.68	0.21	50.81	-13.4915	-0.0984	0.2369
1053	SLU 65	0.66	0.19	50.84	-13.4946	-0.0982	0.229
1053	SLU 66	0.7	0.22	51.66	-13.7078	-0.1001	0.2414
1053	SLU 67	0.68	0.21	51.68	-13.7097	-0.1	0.2367
1053	SLU 68	0.67	0.19	51.36	-13.6276	-0.0993	0.2332
1053	SLU 69	0.71	0.22	52.18	-13.8408	-0.1012	0.2456
1053	SLU 70	0.69	0.21	52.19	-13.8426	-0.1011	0.2408
1053	SLU 71	0.71	0.21	51.84	-13.7575	-0.1006	0.2452
1053	SLU 72	0.69	0.2	51.86	-13.7594	-0.1004	0.2405
1053	SLU 73	0.68	0.26	55.33	-14.6488	-0.107	0.2364
1053	SLU 74	0.72	0.29	56.15	-14.862	-0.1089	0.2488
1053	SLU 75	0.7	0.28	56.17	-14.8639	-0.1088	0.2441
1053	SLU 76	0.69	0.26	55.85	-14.7818	-0.108	0.2406
1053	SLU 77	0.73	0.29	56.67	-14.995	-0.11	0.253
1053	SLU 78	0.72	0.28	56.68	-14.9969	-0.1098	0.2482
1053	SLU 79	0.73	0.28	56.33	-14.9117	-0.1093	0.2526
1053	SLU 80	0.72	0.27	56.35	-14.9136	-0.1092	0.2479
1053	SLU 81	0.71	0.31	57.22	-15.1404	-0.1109	0.2475
1053	SLU 82	0.7	0.3	57.24	-15.1422	-0.1108	0.2427
1053	SLU 83	0.73	0.31	57.74	-15.2734	-0.112	0.2516
1053	SLU 84	0.71	0.3	57.76	-15.2752	-0.1119	0.2469
1053	SLE RA 1	0.52	0.15	38.09	-10.1217	-0.0737	0.1794
1053	SLE RA 2	0.5	0.13	38.11	-10.1238	-0.0736	0.1742
1053	SLE RA 3	0.53	0.15	38.65	-10.2659	-0.0749	0.1824
1053	SLE RA 4	0.52	0.14	38.67	-10.2671	-0.0748	0.1793
1053	SLE RA 5	0.51	0.13	38.45	-10.2124	-0.0743	0.1769
1053	SLE RA 6	0.53	0.15	39	-10.3545	-0.0756	0.1852
1053	SLE RA 7	0.53	0.14	39.01	-10.3558	-0.0755	0.1821
1053	SLE RA 8	0.53	0.14	38.77	-10.299	-0.0752	0.185
1053	SLE RA 9	0.52	0.14	38.79	-10.3003	-0.0751	0.1818
1053	SLE RA 10	0.52	0.18	41.1	-10.8932	-0.0794	0.1791
1053	SLE RA 11	0.54	0.2	41.65	-11.0354	-0.0807	0.1874
1053	SLE RA 12	0.53	0.19	41.66	-11.0366	-0.0806	0.1842
1053	SLE RA 13	0.52	0.18	41.44	-10.9819	-0.0801	0.1819
1053	SLE RA 14	0.55	0.2	41.99	-11.124	-0.0814	0.1902
1053	SLE RA 15	0.54	0.19	42	-11.1253	-0.0813	0.187
1053	SLE RA 16	0.55	0.19	41.77	-11.0685	-0.081	0.1899
1053	SLE RA 17	0.54	0.18	41.78	-11.0697	-0.0809	0.1868
1053	SLE RA 18	0.54	0.21	42.36	-11.2209	-0.0821	0.1865
1053	SLE RA 19	0.53	0.2	42.38	-11.2222	-0.082	0.1833
1053	SLE RA 20	0.55	0.21	42.71	-11.3096	-0.0828	0.1893
1053	SLE RA 21	0.54	0.2	42.72	-11.3108	-0.0827	0.1861
1053	SLE FR 1	0.52	0.15	38.09	-10.1217	-0.0737	0.1794
1053	SLE FR 2	0.51	0.14	38.09	-10.1221	-0.0737	0.1784
1053	SLE FR 3	0.52	0.14	38.22	-10.1572	-0.074	0.1805
1053	SLE FR 4	0.52	0.16	39.37	-10.4519	-0.0762	0.1805
1053	SLE FR 5	0.53	0.17	39.51	-10.4869	-0.0765	0.1827
1053	SLE FR 6	0.53	0.18	40.23	-10.6713	-0.0779	0.183
1053	SLE QP 1	0.52	0.15	38.09	-10.1217	-0.0737	0.1794
1053	SLE QP 2	0.52	0.17	39.37	-10.4515	-0.0762	0.1816
1053	SLD 1	4.12	0.7	33.43	-9.415	-0.0605	1.4397
1053	SLD 2	3.76	0.92	33.22	-9.3176	-0.0591	1.3146

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1053	SLD 3	4.42	-0.19	34.28	-9.6119	-0.0629	1.5443
1053	SLD 4	4.06	0.03	34.07	-9.5144	-0.0615	1.4192
1053	SLD 5	1.21	1.64	36.34	-9.8592	-0.0681	0.4225
1053	SLD 6	0.98	1.78	36.21	-9.7955	-0.0672	0.3407
1053	SLD 7	2.21	-1.32	39.16	-10.5154	-0.0761	0.7712
1053	SLD 8	1.97	-1.18	39.03	-10.4517	-0.0752	0.6894
1053	SLD 9	-0.93	1.52	39.72	-10.4513	-0.0772	-0.3263
1053	SLD 10	-1.16	1.66	39.58	-10.3876	-0.0763	-0.408
1053	SLD 11	0.07	-1.44	42.53	-11.1074	-0.0852	0.0224
1053	SLD 12	-0.16	-1.3	42.4	-11.0437	-0.0843	-0.0594
1053	SLD 13	-3.01	0.3	44.67	-11.3885	-0.0909	-1.0561
1053	SLD 14	-3.37	0.52	44.46	-11.2911	-0.0895	-1.1812
1053	SLD 15	-2.71	-0.59	45.52	-11.5854	-0.0933	-0.9515
1053	SLD 16	-3.07	-0.37	45.31	-11.4879	-0.0919	-1.0766
1053	SLV 1	8.93	1.39	25.49	-8.0313	-0.0395	3.125
1053	SLV 2	8.09	1.89	25.01	-7.8043	-0.0363	2.8335
1053	SLV 3	9.63	-0.63	27.41	-8.4778	-0.045	3.3691
1053	SLV 4	8.79	-0.13	26.93	-8.2509	-0.0417	3.0776
1053	SLV 5	2.13	3.51	32.38	-9.0871	-0.0575	0.7443
1053	SLV 6	1.59	3.83	32.07	-8.9412	-0.0554	0.5569
1053	SLV 7	4.46	-3.22	38.78	-10.5755	-0.0757	1.558
1053	SLV 8	3.92	-2.9	38.47	-10.4296	-0.0736	1.3707
1053	SLV 9	-2.87	3.23	40.27	-10.4733	-0.0788	-1.0076
1053	SLV 10	-3.41	3.55	39.97	-10.3275	-0.0768	-1.1949
1053	SLV 11	-0.54	-3.5	46.67	-11.9617	-0.097	-0.1938
1053	SLV 12	-1.08	-3.18	46.36	-11.8159	-0.095	-0.3812
1053	SLV 13	-7.75	0.46	51.81	-12.6521	-0.1107	-2.7145
1053	SLV 14	-8.58	0.96	51.33	-12.4252	-0.1075	-3.006
1053	SLV 15	-7.05	-1.56	53.73	-13.0986	-0.1162	-2.4704
1053	SLV 16	-7.88	-1.06	53.25	-12.8717	-0.1129	-2.7619
1053	CRTFP Ux+	0	0	0	0	0	0
1053	CRTFP Ux-	0	0	0	0	0	0
1053	CRTFP Uy+	0	0	0	0	0	0
1053	CRTFP Uy-	0	0	0	0	0	0
1054	SLU 1	0.53	0.09	39.23	-11.5499	-0.0841	0.1865
1054	SLU 2	0.51	0.07	39.25	-11.5505	-0.0838	0.1787
1054	SLU 3	0.55	0.1	40.14	-11.8097	-0.0861	0.1914
1054	SLU 4	0.53	0.08	40.16	-11.8101	-0.086	0.1866
1054	SLU 5	0.52	0.07	39.81	-11.7103	-0.0851	0.183
1054	SLU 6	0.56	0.1	40.69	-11.9695	-0.0874	0.1957
1054	SLU 7	0.55	0.08	40.71	-11.9699	-0.0872	0.191
1054	SLU 8	0.56	0.09	40.34	-11.8695	-0.0866	0.1952
1054	SLU 9	0.55	0.07	40.35	-11.8699	-0.0865	0.1905
1054	SLU 10	0.54	0.14	44.05	-12.9293	-0.0943	0.1871
1054	SLU 11	0.57	0.16	44.94	-13.1885	-0.0966	0.1998
1054	SLU 12	0.56	0.15	44.95	-13.1888	-0.0965	0.1951
1054	SLU 13	0.55	0.13	44.6	-13.0891	-0.0956	0.1914
1054	SLU 14	0.58	0.16	45.49	-13.3483	-0.0979	0.2041
1054	SLU 15	0.57	0.15	45.5	-13.3487	-0.0977	0.1994
1054	SLU 16	0.58	0.15	45.13	-13.2483	-0.0971	0.2036
1054	SLU 17	0.57	0.14	45.14	-13.2487	-0.097	0.1989
1054	SLU 18	0.57	0.19	46.08	-13.5196	-0.0991	0.1986
1054	SLU 19	0.56	0.17	46.09	-13.52	-0.0989	0.1939
1054	SLU 20	0.58	0.18	46.63	-13.6794	-0.1003	0.2029
1054	SLU 21	0.57	0.17	46.64	-13.6798	-0.1002	0.1982
1054	SLU 22	0.57	0.17	44.08	-12.9455	-0.0948	0.2003
1054	SLU 23	0.55	0.15	44.11	-12.9461	-0.0946	0.1924
1054	SLU 24	0.59	0.18	44.99	-13.2053	-0.0969	0.2051
1054	SLU 25	0.57	0.17	45.01	-13.2056	-0.0967	0.2004
1054	SLU 26	0.56	0.15	44.66	-13.1059	-0.0958	0.1968
1054	SLU 27	0.6	0.18	45.54	-13.3651	-0.0981	0.2095
1054	SLU 28	0.59	0.16	45.56	-13.3655	-0.098	0.2047
1054	SLU 29	0.6	0.17	45.19	-13.2651	-0.0974	0.209
1054	SLU 30	0.58	0.16	45.2	-13.2655	-0.0972	0.2042
1054	SLU 31	0.58	0.22	48.9	-14.3249	-0.1051	0.2008
1054	SLU 32	0.61	0.24	49.79	-14.5841	-0.1074	0.2136
1054	SLU 33	0.6	0.23	49.8	-14.5844	-0.1072	0.2088
1054	SLU 34	0.59	0.22	49.45	-14.4847	-0.1064	0.2052
1054	SLU 35	0.62	0.24	50.34	-14.7439	-0.1086	0.2179
1054	SLU 36	0.61	0.23	50.35	-14.7442	-0.1085	0.2132
1054	SLU 37	0.62	0.23	49.98	-14.6439	-0.1079	0.2174
1054	SLU 38	0.61	0.22	49.99	-14.6443	-0.1077	0.2127
1054	SLU 39	0.61	0.27	50.93	-14.9152	-0.1098	0.2124
1054	SLU 40	0.59	0.25	50.94	-14.9156	-0.1097	0.2076
1054	SLU 41	0.62	0.27	51.48	-15.075	-0.1111	0.2167
1054	SLU 42	0.61	0.25	51.5	-15.0754	-0.111	0.2119
1054	SLU 43	0.68	0.09	49.34	-14.5364	-0.1056	0.2378
1054	SLU 44	0.66	0.07	49.36	-14.537	-0.1053	0.2299
1054	SLU 45	0.69	0.1	50.25	-14.7962	-0.1076	0.2426
1054	SLU 46	0.68	0.08	50.26	-14.7966	-0.1075	0.2379
1054	SLU 47	0.67	0.07	49.91	-14.6968	-0.1066	0.2342
1054	SLU 48	0.71	0.09	50.8	-14.956	-0.1089	0.2469
1054	SLU 49	0.69	0.08	50.81	-14.9564	-0.1088	0.2422
1054	SLU 50	0.71	0.09	50.44	-14.856	-0.1081	0.2465
1054	SLU 51	0.69	0.07	50.46	-14.8564	-0.108	0.2417
1054	SLU 52	0.68	0.14	54.15	-15.9158	-0.1158	0.2383
1054	SLU 53	0.72	0.16	55.04	-16.175	-0.1181	0.251
1054	SLU 54	0.71	0.15	55.06	-16.1753	-0.118	0.2463
1054	SLU 55	0.69	0.13	54.71	-16.0756	-0.1171	0.2427
1054	SLU 56	0.73	0.16	55.59	-16.3348	-0.1194	0.2554
1054	SLU 57	0.72	0.15	55.61	-16.3351	-0.1193	0.2506
1054	SLU 58	0.73	0.15	55.23	-16.2348	-0.1187	0.2549
1054	SLU 59	0.72	0.14	55.25	-16.2352	-0.1185	0.2501
1054	SLU 60	0.72	0.18	56.19	-16.5061	-0.1206	0.2498
1054	SLU 61	0.7	0.17	56.2	-16.5065	-0.1204	0.2451
1054	SLU 62	0.73	0.18	56.74	-16.6659	-0.1219	0.2542
1054	SLU 63	0.71	0.17	56.75	-16.6663	-0.1217	0.2494

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1054	SLU 64	0.72	0.17	54.19	-15.932	-0.1163	0.2516
1054	SLU 65	0.7	0.15	54.21	-15.9326	-0.1161	0.2437
1054	SLU 66	0.73	0.18	55.1	-16.1918	-0.1184	0.2564
1054	SLU 67	0.72	0.16	55.11	-16.1921	-0.1182	0.2516
1054	SLU 68	0.71	0.15	54.76	-16.0924	-0.1174	0.248
1054	SLU 69	0.75	0.18	55.65	-16.3516	-0.1197	0.2607
1054	SLU 70	0.73	0.16	55.67	-16.3519	-0.1195	0.256
1054	SLU 71	0.75	0.17	55.29	-16.2516	-0.1189	0.2602
1054	SLU 72	0.73	0.16	55.31	-16.252	-0.1188	0.2555
1054	SLU 73	0.72	0.22	59.01	-17.3114	-0.1266	0.2521
1054	SLU 74	0.76	0.24	59.89	-17.5706	-0.1289	0.2648
1054	SLU 75	0.74	0.23	59.91	-17.5709	-0.1287	0.2601
1054	SLU 76	0.73	0.21	59.56	-17.4712	-0.1279	0.2564
1054	SLU 77	0.77	0.24	60.44	-17.7304	-0.1302	0.2691
1054	SLU 78	0.76	0.23	60.46	-17.7307	-0.13	0.2644
1054	SLU 79	0.77	0.23	60.09	-17.6304	-0.1294	0.2687
1054	SLU 80	0.76	0.22	60.1	-17.6308	-0.1293	0.2639
1054	SLU 81	0.75	0.27	61.04	-17.9017	-0.1313	0.2636
1054	SLU 82	0.74	0.25	61.05	-17.902	-0.1312	0.2589
1054	SLU 83	0.77	0.26	61.59	-18.0615	-0.1326	0.2679
1054	SLU 84	0.75	0.25	61.6	-18.0619	-0.1325	0.2632
1054	SLE RA 1	0.55	0.11	40.62	-11.9487	-0.0871	0.1905
1054	SLE RA 2	0.53	0.1	40.63	-11.9491	-0.087	0.1852
1054	SLE RA 3	0.55	0.12	41.22	-12.1218	-0.0885	0.1937
1054	SLE RA 4	0.55	0.11	41.23	-12.1221	-0.0884	0.1905
1054	SLE RA 5	0.54	0.1	41	-12.0556	-0.0878	0.1881
1054	SLE RA 6	0.56	0.12	41.59	-12.2284	-0.0893	0.1966
1054	SLE RA 7	0.55	0.11	41.6	-12.2286	-0.0892	0.1934
1054	SLE RA 8	0.56	0.11	41.35	-12.1617	-0.0888	0.1963
1054	SLE RA 9	0.55	0.1	41.36	-12.162	-0.0887	0.1931
1054	SLE RA 10	0.55	0.14	43.83	-12.8682	-0.094	0.1908
1054	SLE RA 11	0.57	0.16	44.42	-13.041	-0.0955	0.1993
1054	SLE RA 12	0.56	0.15	44.43	-13.0413	-0.0954	0.1962
1054	SLE RA 13	0.55	0.14	44.2	-12.9748	-0.0948	0.1937
1054	SLE RA 14	0.58	0.16	44.79	-13.1476	-0.0964	0.2022
1054	SLE RA 15	0.57	0.15	44.8	-13.1478	-0.0963	0.199
1054	SLE RA 16	0.58	0.16	44.55	-13.0809	-0.0958	0.2019
1054	SLE RA 17	0.57	0.15	44.56	-13.0812	-0.0957	0.1987
1054	SLE RA 18	0.57	0.18	45.18	-13.2618	-0.0971	0.1985
1054	SLE RA 19	0.56	0.17	45.19	-13.262	-0.097	0.1954
1054	SLE RA 20	0.58	0.18	45.55	-13.3683	-0.098	0.2014
1054	SLE RA 21	0.57	0.17	45.56	-13.3686	-0.0979	0.1982
1054	SLE FR 1	0.55	0.11	40.62	-11.9487	-0.0871	0.1905
1054	SLE FR 2	0.54	0.11	40.62	-11.9487	-0.0871	0.1894
1054	SLE FR 3	0.55	0.11	40.76	-11.9913	-0.0875	0.1916
1054	SLE FR 4	0.55	0.13	41.99	-12.3427	-0.0901	0.1918
1054	SLE FR 5	0.56	0.13	42.13	-12.3852	-0.0905	0.194
1054	SLE FR 6	0.56	0.15	42.9	-12.6052	-0.0921	0.1945
1054	SLE QP 1	0.55	0.11	40.62	-11.9487	-0.0871	0.1905
1054	SLE QP 2	0.55	0.13	41.99	-12.3426	-0.0901	0.1929
1054	SLD 1	4.14	0.68	35.55	-11.0906	-0.0736	1.4475
1054	SLD 2	3.78	0.91	35.29	-10.966	-0.0719	1.3221
1054	SLD 3	4.44	-0.22	36.46	-11.3337	-0.0765	1.5521
1054	SLD 4	4.08	0.01	36.21	-11.2091	-0.0749	1.4268
1054	SLD 5	1.24	1.62	38.71	-11.6202	-0.081	0.4327
1054	SLD 6	1	1.77	38.55	-11.5388	-0.0799	0.3508
1054	SLD 7	2.24	-1.37	41.76	-12.4308	-0.0908	0.7816
1054	SLD 8	2	-1.23	41.6	-12.3493	-0.0897	0.6996
1054	SLD 9	-0.9	1.49	42.38	-12.3359	-0.0905	-0.3139
1054	SLD 10	-1.13	1.64	42.21	-12.2544	-0.0895	-0.3958
1054	SLD 11	0.1	-1.5	45.43	-13.1464	-0.1003	0.035
1054	SLD 12	-0.13	-1.35	45.26	-13.065	-0.0993	-0.0469
1054	SLD 13	-2.97	0.26	47.76	-13.4761	-0.1054	-1.041
1054	SLD 14	-3.33	0.48	47.51	-13.3515	-0.1038	-1.1664
1054	SLD 15	-2.67	-0.64	48.68	-13.7192	-0.1083	-0.9364
1054	SLD 16	-3.03	-0.41	48.43	-13.5946	-0.1067	-1.0617
1054	SLV 1	8.94	1.38	26.94	-9.4191	-0.0514	3.128
1054	SLV 2	8.1	1.91	26.35	-9.1288	-0.0476	2.836
1054	SLV 3	9.64	-0.66	29.02	-9.9703	-0.0581	3.3722
1054	SLV 4	8.8	-0.13	28.43	-9.6801	-0.0543	3.0803
1054	SLV 5	2.15	3.51	34.42	-10.6792	-0.069	0.753
1054	SLV 6	1.61	3.85	34.04	-10.4926	-0.0665	0.5653
1054	SLV 7	4.48	-3.29	41.35	-12.5168	-0.0914	1.5672
1054	SLV 8	3.94	-2.95	40.97	-12.3302	-0.0889	1.3795
1054	SLV 9	-2.84	3.22	43	-12.355	-0.0913	-0.9938
1054	SLV 10	-3.38	3.56	42.62	-12.1684	-0.0889	-1.1814
1054	SLV 11	-0.51	-3.59	49.93	-14.1926	-0.1137	-0.1796
1054	SLV 12	-1.05	-3.25	49.55	-14.006	-0.1113	-0.3672
1054	SLV 13	-7.7	0.4	55.55	-15.0051	-0.1259	-2.6945
1054	SLV 14	-8.53	0.92	54.96	-14.7149	-0.1221	-2.9865
1054	SLV 15	-7	-1.65	57.63	-15.5563	-0.1326	-2.4503
1054	SLV 16	-7.83	-1.12	57.03	-15.2661	-0.1289	-2.7422
1054	CRTFP Ux+	0	0	0	0	0	0
1054	CRTFP Ux-	0	0	0	0	0	0
1054	CRTFP Uy+	0	0	0	0	0	0
1054	CRTFP Uy-	0	0	0	0	0	0
1055	SLU 1	0.63	0.11	48	-10.6106	1.6357	0.1447
1055	SLU 2	0.6	0.08	48.03	-10.6125	1.6375	0.1396
1055	SLU 3	0.64	0.11	49.13	-10.8552	1.6737	0.1483
1055	SLU 4	0.63	0.1	49.14	-10.8564	1.6748	0.1452
1055	SLU 5	0.62	0.08	48.71	-10.7619	1.6602	0.1431
1055	SLU 6	0.66	0.11	49.81	-11.0046	1.6963	0.1518
1055	SLU 7	0.64	0.1	49.82	-11.0058	1.6974	0.1487
1055	SLU 8	0.66	0.1	49.36	-10.9094	1.6811	0.1517
1055	SLU 9	0.64	0.09	49.38	-10.9105	1.6822	0.1487
1055	SLU 10	0.63	0.16	53.92	-11.902	1.8375	0.1436
1055	SLU 11	0.67	0.19	55.02	-12.1447	1.8736	0.1522

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1055	SLU 12	0.66	0.17	55.03	-12.1459	1.8747	0.1492
1055	SLU 13	0.65	0.16	54.6	-12.0514	1.8601	0.1471
1055	SLU 14	0.69	0.19	55.7	-12.2941	1.8963	0.1557
1055	SLU 15	0.67	0.17	55.71	-12.2953	1.8974	0.1527
1055	SLU 16	0.69	0.18	55.25	-12.1988	1.881	0.1557
1055	SLU 17	0.67	0.16	55.27	-12.2	1.8821	0.1526
1055	SLU 18	0.67	0.21	56.42	-12.4527	1.9213	0.1503
1055	SLU 19	0.66	0.2	56.43	-12.4538	1.9224	0.1473
1055	SLU 20	0.69	0.21	57.1	-12.6021	1.944	0.1538
1055	SLU 21	0.67	0.2	57.11	-12.6032	1.9451	0.1508
1055	SLU 22	0.68	0.2	53.97	-11.9165	1.8371	0.1521
1055	SLU 23	0.65	0.17	53.99	-11.9185	1.839	0.147
1055	SLU 24	0.69	0.2	55.09	-12.1612	1.8751	0.1557
1055	SLU 25	0.68	0.19	55.11	-12.1623	1.8762	0.1526
1055	SLU 26	0.66	0.17	54.67	-12.0679	1.8616	0.1506
1055	SLU 27	0.71	0.2	55.77	-12.3106	1.8977	0.1592
1055	SLU 28	0.69	0.19	55.79	-12.3117	1.8988	0.1562
1055	SLU 29	0.71	0.19	55.33	-12.2153	1.8825	0.1592
1055	SLU 30	0.69	0.18	55.34	-12.2165	1.8836	0.1561
1055	SLU 31	0.68	0.25	59.88	-13.2079	2.0389	0.151
1055	SLU 32	0.72	0.28	60.98	-13.4506	2.075	0.1596
1055	SLU 33	0.71	0.27	61	-13.4518	2.0761	0.1566
1055	SLU 34	0.69	0.25	60.56	-13.3573	2.0615	0.1545
1055	SLU 35	0.74	0.28	61.66	-13.6	2.0977	0.1632
1055	SLU 36	0.72	0.26	61.68	-13.6012	2.0988	0.1601
1055	SLU 37	0.74	0.27	61.22	-13.5048	2.0824	0.1631
1055	SLU 38	0.72	0.25	61.23	-13.5059	2.0835	0.1601
1055	SLU 39	0.72	0.3	62.38	-13.7586	2.1227	0.1578
1055	SLU 40	0.7	0.29	62.4	-13.7598	2.1238	0.1547
1055	SLU 41	0.73	0.3	63.06	-13.908	2.1454	0.1613
1055	SLU 42	0.72	0.29	63.08	-13.9092	2.1465	0.1582
1055	SLU 43	0.8	0.11	60.36	-13.346	2.0574	0.1856
1055	SLU 44	0.77	0.09	60.38	-13.3479	2.0592	0.1805
1055	SLU 45	0.82	0.12	61.48	-13.5906	2.0953	0.1891
1055	SLU 46	0.8	0.1	61.5	-13.5918	2.0964	0.1861
1055	SLU 47	0.79	0.08	61.06	-13.4973	2.0819	0.184
1055	SLU 48	0.83	0.11	62.16	-13.74	2.118	0.1926
1055	SLU 49	0.82	0.1	62.18	-13.7412	2.1191	0.1896
1055	SLU 50	0.83	0.1	61.72	-13.6448	2.1027	0.1926
1055	SLU 51	0.81	0.09	61.73	-13.646	2.1038	0.1896
1055	SLU 52	0.8	0.16	66.28	-14.6374	2.2591	0.1844
1055	SLU 53	0.85	0.19	67.37	-14.8801	2.2952	0.1931
1055	SLU 54	0.83	0.18	67.39	-14.8813	2.2963	0.19
1055	SLU 55	0.82	0.16	66.95	-14.7868	2.2818	0.1879
1055	SLU 56	0.86	0.19	68.05	-15.0295	2.3179	0.1966
1055	SLU 57	0.85	0.17	68.07	-15.0307	2.319	0.1935
1055	SLU 58	0.86	0.18	67.61	-14.9342	2.3026	0.1965
1055	SLU 59	0.84	0.16	67.62	-14.9354	2.3037	0.1935
1055	SLU 60	0.84	0.21	68.78	-15.1881	2.343	0.1912
1055	SLU 61	0.83	0.2	68.79	-15.1893	2.3441	0.1881
1055	SLU 62	0.86	0.21	69.46	-15.3375	2.3656	0.1947
1055	SLU 63	0.84	0.2	69.47	-15.3387	2.3667	0.1917
1055	SLU 64	0.85	0.2	66.33	-14.6519	2.2588	0.193
1055	SLU 65	0.82	0.18	66.35	-14.6539	2.2606	0.1879
1055	SLU 66	0.86	0.21	67.45	-14.8966	2.2967	0.1966
1055	SLU 67	0.85	0.19	67.46	-14.8978	2.2978	0.1935
1055	SLU 68	0.84	0.17	67.03	-14.8033	2.2833	0.1914
1055	SLU 69	0.88	0.2	68.13	-15.046	2.3194	0.2001
1055	SLU 70	0.86	0.19	68.14	-15.0472	2.3205	0.197
1055	SLU 71	0.88	0.19	67.68	-14.9507	2.3041	0.2
1055	SLU 72	0.86	0.18	67.7	-14.9519	2.3052	0.197
1055	SLU 73	0.85	0.25	72.24	-15.9434	2.4605	0.1919
1055	SLU 74	0.89	0.28	73.34	-16.186	2.4966	0.2005
1055	SLU 75	0.88	0.27	73.35	-16.1872	2.4977	0.1975
1055	SLU 76	0.87	0.25	72.92	-16.0927	2.4832	0.1954
1055	SLU 77	0.91	0.28	74.02	-16.3354	2.5193	0.204
1055	SLU 78	0.89	0.26	74.03	-16.3366	2.5204	0.201
1055	SLU 79	0.91	0.27	73.58	-16.2402	2.504	0.204
1055	SLU 80	0.89	0.26	73.59	-16.2414	2.5051	0.2009
1055	SLU 81	0.89	0.31	74.74	-16.494	2.5444	0.1986
1055	SLU 82	0.88	0.29	74.76	-16.4952	2.5455	0.1956
1055	SLU 83	0.91	0.3	75.42	-16.6434	2.567	0.2021
1055	SLU 84	0.89	0.29	75.43	-16.6446	2.5681	0.1991
1055	SLE RA 1	0.64	0.13	49.71	-10.9837	1.6932	0.1468
1055	SLE RA 2	0.62	0.12	49.72	-10.985	1.6945	0.1434
1055	SLE RA 3	0.65	0.14	50.46	-11.1468	1.7186	0.1492
1055	SLE RA 4	0.64	0.13	50.47	-11.1476	1.7193	0.1472
1055	SLE RA 5	0.63	0.12	50.18	-11.0846	1.7096	0.1458
1055	SLE RA 6	0.66	0.14	50.91	-11.2464	1.7337	0.1515
1055	SLE RA 7	0.65	0.13	50.92	-11.2472	1.7344	0.1495
1055	SLE RA 8	0.66	0.13	50.61	-11.1829	1.7235	0.1515
1055	SLE RA 9	0.65	0.12	50.62	-11.1837	1.7242	0.1495
1055	SLE RA 10	0.64	0.17	53.65	-11.8446	1.8278	0.1461
1055	SLE RA 11	0.67	0.19	54.38	-12.0064	1.8518	0.1518
1055	SLE RA 12	0.66	0.18	54.39	-12.0072	1.8526	0.1498
1055	SLE RA 13	0.65	0.17	54.1	-11.9442	1.8429	0.1484
1055	SLE RA 14	0.68	0.19	54.84	-12.106	1.8669	0.1542
1055	SLE RA 15	0.67	0.18	54.85	-12.1068	1.8677	0.1521
1055	SLE RA 16	0.68	0.18	54.54	-12.0425	1.8568	0.1541
1055	SLE RA 17	0.67	0.17	54.55	-12.0433	1.8575	0.1521
1055	SLE RA 18	0.67	0.2	55.32	-12.2118	1.8836	0.1506
1055	SLE RA 19	0.66	0.19	55.33	-12.2125	1.8844	0.1485
1055	SLE RA 20	0.68	0.2	55.77	-12.3114	1.8988	0.1529
1055	SLE RA 21	0.67	0.19	55.78	-12.3121	1.8995	0.1509
1055	SLE FR 1	0.64	0.13	49.71	-10.9837	1.6932	0.1468
1055	SLE FR 2	0.64	0.13	49.71	-10.984	1.6935	0.1461
1055	SLE FR 3	0.65	0.13	49.89	-11.0235	1.6993	0.1478

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1055	SLE FR 4	0.65	0.15	51.39	-11.3524	1.7506	0.1473
1055	SLE FR 5	0.65	0.15	51.57	-11.392	1.7564	0.1489
1055	SLE FR 6	0.66	0.17	52.51	-11.5977	1.7884	0.1487
1055	SLE QP 1	0.64	0.13	49.71	-10.9837	1.6932	0.1468
1055	SLE QP 2	0.65	0.15	51.39	-11.3521	1.7504	0.1479
1055	SLD 1	4.71	0.77	42.86	-9.842	1.4401	1.0943
1055	SLD 2	4.29	1.04	42.55	-9.7485	1.4397	0.9861
1055	SLD 3	5.05	-0.25	44.03	-10.0818	1.4726	1.1943
1055	SLD 4	4.64	0.01	43.73	-9.9884	1.4723	1.0861
1055	SLD 5	1.42	1.85	47.11	-10.5518	1.608	0.2994
1055	SLD 6	1.15	2.02	46.91	-10.4907	1.6078	0.2287
1055	SLD 7	2.56	-1.57	51.02	-11.3514	1.7165	0.6326
1055	SLD 8	2.29	-1.4	50.81	-11.2903	1.7162	0.5619
1055	SLD 9	-0.99	1.71	51.97	-11.414	1.7845	-0.266
1055	SLD 10	-1.26	1.88	51.77	-11.3529	1.7843	-0.3367
1055	SLD 11	0.15	-1.72	55.87	-12.2135	1.893	0.0672
1055	SLD 12	-0.12	-1.54	55.67	-12.1524	1.8927	-0.0035
1055	SLD 13	-3.34	0.29	59.06	-12.7159	2.0285	-0.7902
1055	SLD 14	-3.75	0.56	58.75	-12.6224	2.0281	-0.8984
1055	SLD 15	-2.99	-0.73	60.23	-12.9557	2.061	-0.6902
1055	SLD 16	-3.41	-0.46	59.92	-12.8623	2.0607	-0.7984
1055	SLV 1	10.14	1.57	31.46	-7.8238	1.0245	2.362
1055	SLV 2	9.18	2.19	30.74	-7.6061	1.0236	2.11
1055	SLV 3	10.94	-0.77	34.12	-8.3679	1.099	2.595
1055	SLV 4	9.98	-0.14	33.4	-8.1502	1.0982	2.343
1055	SLV 5	2.45	4.01	41.5	-9.5057	1.4197	0.502
1055	SLV 6	1.83	4.42	41.04	-9.3657	1.4191	0.3401
1055	SLV 7	5.11	-3.77	50.37	-11.3194	1.6682	1.2785
1055	SLV 8	4.5	-3.37	49.9	-11.1795	1.6677	1.1166
1055	SLV 9	-3.2	3.68	52.88	-11.5247	1.8331	-0.8207
1055	SLV 10	-3.81	4.08	52.42	-11.3848	1.8325	-0.9826
1055	SLV 11	-0.53	-4.11	61.74	-13.3385	2.0816	-0.0442
1055	SLV 12	-1.15	-3.71	61.28	-13.1986	2.0811	-0.2062
1055	SLV 13	-8.68	0.45	69.38	-14.554	2.4025	-2.0471
1055	SLV 14	-9.64	1.08	68.66	-14.3363	2.4017	-2.2991
1055	SLV 15	-7.88	-1.89	72.04	-15.0981	2.4771	-1.8142
1055	SLV 16	-8.84	-1.26	71.32	-14.8804	2.4763	-2.0661
1055	CRTFP Ux+	0	0	0	0	0	0
1055	CRTFP Ux-	0	0	0	0	0	0
1055	CRTFP Uy+	0	0	0	0	0	0
1055	CRTFP Uy-	0	0	0	0	0	0
18435	SLU 1	0.58	-33.21	29.22	5.2205	0.0627	-0.0011
18435	SLU 2	0.56	-36.02	29.29	5.2006	0.0628	-0.0009
18435	SLU 3	0.7	-34.78	36.49	5.5092	0.1014	-0.0015
18435	SLU 4	0.68	-36.46	36.53	5.4973	0.1015	-0.0014
18435	SLU 5	0.69	-34.98	37.61	5.4011	0.1085	-0.0014
18435	SLU 6	0.83	-33.74	44.81	5.7097	0.1471	-0.002
18435	SLU 7	0.81	-35.43	44.86	5.6978	0.1471	-0.0019
18435	SLU 8	0.84	-31.14	45.87	5.6214	0.154	-0.002
18435	SLU 9	0.83	-32.82	45.91	5.6095	0.1541	-0.0019
18435	SLU 10	0.65	-53.48	31.72	6.0188	0.0666	-0.0012
18435	SLU 11	0.79	-52.24	38.92	6.3274	0.1052	-0.0018
18435	SLU 12	0.78	-53.93	38.96	6.3155	0.1052	-0.0017
18435	SLU 13	0.78	-52.45	40.04	6.2193	0.1122	-0.0017
18435	SLU 14	0.92	-51.21	47.24	6.5279	0.1508	-0.0023
18435	SLU 15	0.91	-52.89	47.29	6.516	0.1509	-0.0022
18435	SLU 16	0.93	-48.6	48.3	6.4396	0.1577	-0.0023
18435	SLU 17	0.92	-50.29	48.34	6.4277	0.1578	-0.0022
18435	SLU 18	0.71	-58.15	32.69	6.3893	0.0681	-0.0015
18435	SLU 19	0.7	-59.84	32.73	6.3774	0.0681	-0.0014
18435	SLU 20	0.84	-57.12	41.01	6.5898	0.1137	-0.002
18435	SLU 21	0.83	-58.81	41.06	6.5779	0.1138	-0.0019
18435	SLU 22	0.76	-55.09	36.4	6.1637	0.0937	-0.0017
18435	SLU 23	0.74	-57.9	36.48	6.1439	0.0938	-0.0015
18435	SLU 24	0.88	-56.66	43.67	6.4525	0.1324	-0.0021
18435	SLU 25	0.87	-58.35	43.72	6.4405	0.1325	-0.002
18435	SLU 26	0.87	-56.87	44.8	6.3443	0.1395	-0.0019
18435	SLU 27	1.01	-55.63	52	6.6529	0.178	-0.0025
18435	SLU 28	1	-57.31	52.04	6.641	0.1781	-0.0024
18435	SLU 29	1.02	-53.02	53.05	6.5646	0.185	-0.0026
18435	SLU 30	1.01	-54.71	53.1	6.5527	0.185	-0.0025
18435	SLU 31	0.83	-75.37	38.91	6.9621	0.0976	-0.0018
18435	SLU 32	0.97	-74.12	46.1	7.2707	0.1361	-0.0024
18435	SLU 33	0.96	-75.81	46.15	7.2588	0.1362	-0.0023
18435	SLU 34	0.96	-74.33	47.23	7.1625	0.1432	-0.0022
18435	SLU 35	1.1	-73.09	54.43	7.4711	0.1818	-0.0028
18435	SLU 36	1.09	-74.78	54.47	7.4592	0.1818	-0.0027
18435	SLU 37	1.11	-70.49	55.48	7.3828	0.1887	-0.0029
18435	SLU 38	1.1	-72.17	55.53	7.3709	0.1888	-0.0028
18435	SLU 39	0.89	-80.04	39.87	7.3326	0.099	-0.0021
18435	SLU 40	0.88	-81.73	39.92	7.3207	0.0991	-0.002
18435	SLU 41	1.02	-79.01	48.2	7.533	0.1447	-0.0025
18435	SLU 42	1.01	-80.69	48.24	7.5211	0.1448	-0.0024
18435	SLU 43	0.69	-35.66	35.52	6.4632	0.0709	-0.0013
18435	SLU 44	0.67	-38.47	35.59	6.4434	0.071	-0.0011
18435	SLU 45	0.81	-37.23	42.79	6.7519	0.1096	-0.0017
18435	SLU 46	0.8	-38.92	42.83	6.74	0.1097	-0.0016
18435	SLU 47	0.8	-37.44	43.92	6.6438	0.1167	-0.0015
18435	SLU 48	0.94	-36.2	51.11	6.9524	0.1553	-0.0021
18435	SLU 49	0.93	-37.89	51.16	6.9405	0.1553	-0.002
18435	SLU 50	0.95	-33.6	52.17	6.8641	0.1622	-0.0022
18435	SLU 51	0.94	-35.28	52.21	6.8522	0.1623	-0.0021
18435	SLU 52	0.76	-55.94	38.02	7.2616	0.0748	-0.0014
18435	SLU 53	0.9	-54.7	45.22	7.5701	0.1134	-0.002
18435	SLU 54	0.89	-56.38	45.26	7.5582	0.1134	-0.0019
18435	SLU 55	0.89	-54.91	46.35	7.462	0.1204	-0.0018
18435	SLU 56	1.03	-53.66	53.54	7.7706	0.159	-0.0024

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18435	SLU 57	1.02	-55.35	53.59	7.7587	0.1591	-0.0023
18435	SLU 58	1.04	-51.06	54.6	7.6823	0.1659	-0.0025
18435	SLU 59	1.03	-52.75	54.64	7.6704	0.166	-0.0024
18435	SLU 60	0.82	-60.61	38.99	7.6321	0.0763	-0.0017
18435	SLU 61	0.81	-62.3	39.03	7.6202	0.0763	-0.0016
18435	SLU 62	0.95	-59.58	47.32	7.8325	0.1219	-0.0021
18435	SLU 63	0.94	-61.27	47.36	7.8206	0.122	-0.002
18435	SLU 64	0.87	-57.55	42.7	7.4064	0.1019	-0.0018
18435	SLU 65	0.85	-60.36	42.78	7.3866	0.102	-0.0016
18435	SLU 66	0.99	-59.12	49.97	7.6952	0.1406	-0.0022
18435	SLU 67	0.98	-60.81	50.02	7.6833	0.1407	-0.0021
18435	SLU 68	0.98	-59.33	51.1	7.5871	0.1477	-0.0021
18435	SLU 69	1.12	-58.08	58.3	7.8956	0.1862	-0.0027
18435	SLU 70	1.11	-59.77	58.34	7.8837	0.1863	-0.0026
18435	SLU 71	1.13	-55.48	59.35	7.8074	0.1932	-0.0027
18435	SLU 72	1.12	-57.17	59.4	7.7954	0.1932	-0.0026
18435	SLU 73	0.94	-77.82	45.21	8.2048	0.1058	-0.0019
18435	SLU 74	1.08	-76.58	52.4	8.5134	0.1443	-0.0025
18435	SLU 75	1.07	-78.27	52.45	8.5015	0.1444	-0.0024
18435	SLU 76	1.07	-76.79	53.53	8.4053	0.1514	-0.0024
18435	SLU 77	1.21	-75.55	60.73	8.7138	0.19	-0.003
18435	SLU 78	1.2	-77.24	60.77	8.7019	0.19	-0.0029
18435	SLU 79	1.22	-72.95	61.78	8.6256	0.1969	-0.003
18435	SLU 80	1.21	-74.63	61.83	8.6136	0.197	-0.0029
18435	SLU 81	1	-82.5	46.18	8.5753	0.1072	-0.0022
18435	SLU 82	0.99	-84.18	46.22	8.5634	0.1073	-0.0021
18435	SLU 83	1.13	-81.46	54.5	8.7758	0.1529	-0.0027
18435	SLU 84	1.12	-83.15	54.54	8.7639	0.153	-0.0026
18435	SLE RA 1	0.63	-39.46	31.27	5.49	0.0716	-0.0013
18435	SLE RA 2	0.62	-41.33	31.32	5.4767	0.0717	-0.0011
18435	SLE RA 3	0.71	-40.5	36.12	5.6825	0.0974	-0.0016
18435	SLE RA 4	0.7	-41.63	36.15	5.6745	0.0974	-0.0015
18435	SLE RA 5	0.7	-40.64	36.87	5.6104	0.1021	-0.0014
18435	SLE RA 6	0.79	-39.82	41.67	5.8161	0.1278	-0.0019
18435	SLE RA 7	0.79	-40.94	41.7	5.8082	0.1278	-0.0018
18435	SLE RA 8	0.8	-38.08	42.37	5.7572	0.1324	-0.0019
18435	SLE RA 9	0.8	-39.2	42.4	5.7493	0.1325	-0.0018
18435	SLE RA 10	0.68	-52.97	32.94	6.0222	0.0741	-0.0013
18435	SLE RA 11	0.77	-52.15	37.74	6.2279	0.0999	-0.0018
18435	SLE RA 12	0.76	-53.27	37.77	6.22	0.0999	-0.0017
18435	SLE RA 13	0.77	-52.29	38.49	6.1558	0.1046	-0.0016
18435	SLE RA 14	0.86	-51.46	43.29	6.3616	0.1303	-0.0021
18435	SLE RA 15	0.85	-52.58	43.32	6.3536	0.1303	-0.002
18435	SLE RA 16	0.86	-49.72	43.99	6.3027	0.1349	-0.0021
18435	SLE RA 17	0.86	-50.85	44.02	6.2948	0.135	-0.002
18435	SLE RA 18	0.72	-56.09	33.58	6.2692	0.0751	-0.0016
18435	SLE RA 19	0.71	-57.22	33.61	6.2613	0.0752	-0.0015
18435	SLE RA 20	0.8	-55.4	39.13	6.4028	0.1056	-0.0019
18435	SLE RA 21	0.8	-56.53	39.16	6.3949	0.1056	-0.0018
18435	SLE FR 1	0.63	-39.46	31.27	5.49	0.0716	-0.0013
18435	SLE FR 2	0.63	-39.83	31.28	5.4873	0.0716	-0.0013
18435	SLE FR 3	0.66	-39.18	33.49	5.5434	0.0837	-0.0014
18435	SLE FR 4	0.65	-44.82	31.97	5.7211	0.0727	-0.0013
18435	SLE FR 5	0.69	-44.17	34.18	5.7772	0.0848	-0.0015
18435	SLE FR 6	0.67	-47.77	32.43	5.8796	0.0734	-0.0014
18435	SLE QP 1	0.63	-39.46	31.27	5.49	0.0716	-0.0013
18435	SLE QP 2	0.66	-44.45	31.96	5.7237	0.0726	-0.0014
18435	SLD 1	27.96	-92.08	31.19	5.973	1.454	0.0209
18435	SLD 2	27.38	56.42	30.47	4.6031	1.4294	0.0271
18435	SLD 3	29.34	-293.52	32.05	7.797	1.5257	0.0175
18435	SLD 4	28.76	-145.03	31.33	6.4271	1.5011	0.0237
18435	SLD 5	6.85	220.53	30.56	3.2742	0.3825	0.0093
18435	SLD 6	6.48	317.59	30.09	2.3788	0.3664	0.0134
18435	SLD 7	11.46	-450.95	33.42	9.3544	0.6218	-0.0019
18435	SLD 8	11.08	-353.89	32.95	8.4591	0.6057	0.0021
18435	SLD 9	-9.77	265	30.98	2.9884	-0.4604	-0.0048
18435	SLD 10	-10.14	362.05	30.51	2.093	-0.4765	-0.0008
18435	SLD 11	-5.17	-406.48	33.84	9.0686	-0.2212	-0.0161
18435	SLD 12	-5.54	-309.43	33.37	8.1733	-0.2372	-0.0121
18435	SLD 13	-27.45	56.13	32.6	5.0203	-1.3559	-0.0264
18435	SLD 14	-28.03	204.63	31.88	3.6504	-1.3805	-0.0202
18435	SLD 15	-26.07	-145.31	33.46	6.8444	-1.2841	-0.0298
18435	SLD 16	-26.65	3.18	32.74	5.4745	-1.3087	-0.0236
18435	SLV 1	64.57	-160.04	30.17	6.3399	3.3066	0.0507
18435	SLV 2	63.23	185.84	28.5	3.1492	3.2493	0.0652
18435	SLV 3	67.8	-621.72	32.13	10.5232	3.4739	0.0428
18435	SLV 4	66.46	-275.84	30.46	7.3325	3.4166	0.0573
18435	SLV 5	15.16	561.81	28.74	0.1107	0.7989	0.0236
18435	SLV 6	14.3	784.11	27.66	-1.94	0.7621	0.033
18435	SLV 7	25.92	-977.1	35.28	14.0549	1.3566	-0.0025
18435	SLV 8	25.06	-754.8	34.2	12.0043	1.3198	0.0068
18435	SLV 9	-23.75	665.91	29.73	-0.5568	-1.1745	-0.0096
18435	SLV 10	-24.61	888.2	28.65	-2.6075	-1.2113	-0.0003
18435	SLV 11	-12.99	-873	36.27	13.3874	-0.6168	-0.0357
18435	SLV 12	-13.85	-650.71	35.19	11.3368	-0.6536	-0.0264
18435	SLV 13	-65.14	186.94	33.47	4.115	-3.2714	-0.06
18435	SLV 14	-66.49	532.82	31.8	0.9242	-3.3287	-0.0456
18435	SLV 15	-61.92	-274.73	35.43	8.2983	-3.1041	-0.0679
18435	SLV 16	-63.26	71.15	33.76	5.1075	-3.1614	-0.0534
18435	CRTFP Ux+	0	0	0	0	0	0
18435	CRTFP Ux-	0	0	0	0	0	0
18435	CRTFP Uy+	0	0	0	0	0	0
18435	CRTFP Uy-	0	0	0	0	0	0
18436	SLU 1	0.34	36.5	35.35	36.4058	-0.0145	-0.0025
18436	SLU 2	0.31	14.01	35.37	36.0636	-0.0189	-0.0022
18436	SLU 3	0.2	34.83	42.28	37.1428	-0.0634	-0.0034
18436	SLU 4	0.18	21.34	42.29	36.9375	-0.066	-0.0031

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18436	SLU 5	0.13	13	43.13	36.0598	-0.0777	-0.0031
18436	SLU 6	0.02	33.82	50.04	37.139	-0.1223	-0.0043
18436	SLU 7	0	20.33	50.05	36.9337	-0.1249	-0.004
18436	SLU 8	-0.02	34.48	50.87	36.3981	-0.1323	-0.0043
18436	SLU 9	-0.04	20.98	50.88	36.1928	-0.1349	-0.0041
18436	SLU 10	0.41	9.93	38.76	41.301	-0.0113	-0.0027
18436	SLU 11	0.3	30.75	45.67	42.3802	-0.0559	-0.004
18436	SLU 12	0.28	17.26	45.68	42.1749	-0.0585	-0.0037
18436	SLU 13	0.23	8.92	46.52	41.2971	-0.0702	-0.0036
18436	SLU 14	0.12	29.75	53.43	42.3763	-0.1147	-0.0049
18436	SLU 15	0.1	16.25	53.44	42.171	-0.1174	-0.0046
18436	SLU 16	0.09	30.4	54.25	41.6354	-0.1247	-0.0049
18436	SLU 17	0.07	16.91	54.27	41.4301	-0.1273	-0.0047
18436	SLU 18	0.49	30.67	40.19	43.8877	-0.0038	-0.0034
18436	SLU 19	0.47	17.18	40.2	43.6824	-0.0064	-0.0031
18436	SLU 20	0.31	29.66	47.95	43.8839	-0.0626	-0.0043
18436	SLU 21	0.29	16.17	47.96	43.6786	-0.0652	-0.0041
18436	SLU 22	0.35	22.34	43.07	41.3702	-0.0413	-0.0036
18436	SLU 23	0.32	-0.15	43.09	41.028	-0.0456	-0.0033
18436	SLU 24	0.21	20.67	50	42.1072	-0.0902	-0.0045
18436	SLU 25	0.19	7.18	50.02	41.9019	-0.0928	-0.0043
18436	SLU 26	0.14	-1.16	50.85	41.0241	-0.1045	-0.0042
18436	SLU 27	0.03	19.66	57.76	42.1034	-0.1491	-0.0054
18436	SLU 28	0.01	6.17	57.78	41.8981	-0.1517	-0.0052
18436	SLU 29	-0.01	20.32	58.59	41.3625	-0.159	-0.0054
18436	SLU 30	-0.03	6.82	58.6	41.1572	-0.1616	-0.0052
18436	SLU 31	0.42	-4.23	46.48	46.2653	-0.0381	-0.0039
18436	SLU 32	0.32	16.59	53.39	47.3446	-0.0826	-0.0051
18436	SLU 33	0.3	3.1	53.41	47.1393	-0.0853	-0.0048
18436	SLU 34	0.24	-5.24	54.24	46.2615	-0.097	-0.0048
18436	SLU 35	0.14	15.58	61.15	47.3407	-0.1415	-0.006
18436	SLU 36	0.12	2.09	61.16	47.1354	-0.1441	-0.0058
18436	SLU 37	0.1	16.24	61.98	46.5998	-0.1515	-0.006
18436	SLU 38	0.08	2.75	61.99	46.3945	-0.1541	-0.0058
18436	SLU 39	0.5	16.51	47.91	48.8521	-0.0305	-0.0045
18436	SLU 40	0.48	3.02	47.92	48.6468	-0.0331	-0.0043
18436	SLU 41	0.32	15.5	55.67	48.8483	-0.0894	-0.0054
18436	SLU 42	0.3	2.01	55.68	48.6429	-0.092	-0.0052
18436	SLU 43	0.44	52.3	43.3	45.6255	-0.0097	-0.0029
18436	SLU 44	0.4	29.81	43.32	45.2833	-0.014	-0.0025
18436	SLU 45	0.3	50.64	50.24	46.3625	-0.0586	-0.0037
18436	SLU 46	0.28	37.14	50.25	46.1572	-0.0612	-0.0035
18436	SLU 47	0.23	28.8	51.08	45.2794	-0.0729	-0.0034
18436	SLU 48	0.12	49.63	57.99	46.3587	-0.1174	-0.0046
18436	SLU 49	0.1	36.13	58.01	46.1533	-0.1201	-0.0044
18436	SLU 50	0.08	50.28	58.82	45.6178	-0.1274	-0.0047
18436	SLU 51	0.06	36.79	58.83	45.4124	-0.13	-0.0045
18436	SLU 52	0.51	25.74	46.71	50.5206	-0.0065	-0.0031
18436	SLU 53	0.4	46.56	53.63	51.5999	-0.051	-0.0043
18436	SLU 54	0.38	33.06	53.64	51.3946	-0.0536	-0.0041
18436	SLU 55	0.33	24.73	54.47	50.5168	-0.0654	-0.004
18436	SLU 56	0.22	45.55	61.38	51.596	-0.1099	-0.0052
18436	SLU 57	0.2	32.06	61.4	51.3907	-0.1125	-0.005
18436	SLU 58	0.18	46.21	62.21	50.8551	-0.1199	-0.0053
18436	SLU 59	0.16	32.71	62.22	50.6498	-0.1225	-0.0051
18436	SLU 60	0.59	46.48	48.14	53.1074	0.0011	-0.0038
18436	SLU 61	0.57	32.98	48.16	52.9021	-0.0015	-0.0035
18436	SLU 62	0.41	45.47	55.9	53.1035	-0.0578	-0.0047
18436	SLU 63	0.39	31.98	55.92	52.8982	-0.0604	-0.0044
18436	SLU 64	0.45	38.14	51.03	50.5898	-0.0365	-0.004
18436	SLU 65	0.42	15.65	51.05	50.2477	-0.0408	-0.0036
18436	SLU 66	0.31	36.47	57.96	51.3269	-0.0853	-0.0049
18436	SLU 67	0.29	22.98	57.97	51.1216	-0.088	-0.0046
18436	SLU 68	0.24	14.64	58.81	50.2438	-0.0997	-0.0045
18436	SLU 69	0.13	35.47	65.72	51.323	-0.1442	-0.0058
18436	SLU 70	0.11	21.97	65.73	51.1177	-0.1468	-0.0055
18436	SLU 71	0.09	36.12	66.54	50.5821	-0.1542	-0.0058
18436	SLU 72	0.07	22.63	66.56	50.3768	-0.1568	-0.0056
18436	SLU 73	0.52	11.57	54.44	55.485	-0.0333	-0.0042
18436	SLU 74	0.41	32.4	61.35	56.5642	-0.0778	-0.0054
18436	SLU 75	0.39	18.9	61.36	56.3589	-0.0804	-0.0052
18436	SLU 76	0.34	10.56	62.2	55.4812	-0.0922	-0.0051
18436	SLU 77	0.23	31.39	69.11	56.5604	-0.1367	-0.0064
18436	SLU 78	0.21	17.89	69.12	56.3551	-0.1393	-0.0061
18436	SLU 79	0.2	32.05	69.93	55.8195	-0.1467	-0.0064
18436	SLU 80	0.18	18.55	69.95	55.6142	-0.1493	-0.0062
18436	SLU 81	0.6	32.32	55.87	58.0718	-0.0257	-0.0049
18436	SLU 82	0.58	18.82	55.88	57.8665	-0.0283	-0.0046
18436	SLU 83	0.42	31.31	63.63	58.0679	-0.0846	-0.0058
18436	SLU 84	0.4	17.81	63.64	57.8626	-0.0872	-0.0055
18436	SLE RA 1	0.34	32.45	37.55	37.8242	-0.0222	-0.0028
18436	SLE RA 2	0.32	17.46	37.57	37.5961	-0.0251	-0.0026
18436	SLE RA 3	0.25	31.34	42.18	38.3156	-0.0547	-0.0034
18436	SLE RA 4	0.24	22.34	42.18	38.1787	-0.0565	-0.0033
18436	SLE RA 5	0.2	16.79	42.74	37.5935	-0.0643	-0.0032
18436	SLE RA 6	0.13	30.67	47.35	38.313	-0.094	-0.004
18436	SLE RA 7	0.12	21.67	47.36	38.1761	-0.0957	-0.0039
18436	SLE RA 8	0.1	31.11	47.9	37.819	-0.1007	-0.0041
18436	SLE RA 9	0.09	22.11	47.91	37.6822	-0.1024	-0.0039
18436	SLE RA 10	0.39	14.74	39.83	41.0876	-0.02	-0.003
18436	SLE RA 11	0.32	28.62	44.44	41.8071	-0.0497	-0.0038
18436	SLE RA 12	0.31	19.63	44.44	41.6703	-0.0515	-0.0037
18436	SLE RA 13	0.27	14.07	45	41.0851	-0.0593	-0.0036
18436	SLE RA 14	0.2	27.95	49.61	41.8046	-0.089	-0.0044
18436	SLE RA 15	0.19	18.95	49.62	41.6677	-0.0907	-0.0043
18436	SLE RA 16	0.17	28.39	50.16	41.3106	-0.0956	-0.0044
18436	SLE RA 17	0.16	19.39	50.17	41.1737	-0.0974	-0.0043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18436	SLE RA 18	0.44	28.57	40.78	42.8121	-0.015	-0.0034
18436	SLE RA 19	0.43	19.57	40.79	42.6753	-0.0167	-0.0033
18436	SLE RA 20	0.32	27.9	45.95	42.8096	-0.0542	-0.004
18436	SLE RA 21	0.31	18.9	45.96	42.6727	-0.056	-0.0039
18436	SLE FR 1	0.34	32.45	37.55	37.8242	-0.0222	-0.0028
18436	SLE FR 2	0.34	29.45	37.56	37.7786	-0.0227	-0.0028
18436	SLE FR 3	0.3	32.18	39.62	37.8232	-0.0379	-0.0031
18436	SLE FR 4	0.37	28.29	38.52	39.275	-0.0206	-0.003
18436	SLE FR 5	0.33	31.02	40.59	39.3195	-0.0357	-0.0033
18436	SLE FR 6	0.39	30.51	39.17	40.3182	-0.0186	-0.0031
18436	SLE QP 1	0.34	32.45	37.55	37.8242	-0.0222	-0.0028
18436	SLE QP 2	0.37	31.29	38.52	39.3206	-0.02	-0.003
18436	SLD 1	29	307.81	40	45.87	1.3919	0.0508
18436	SLD 2	28.37	155.19	39.98	45.3169	1.3612	0.062
18436	SLD 3	30.44	61.51	39.51	45.2333	1.4613	0.0442
18436	SLD 4	29.82	-91.11	39.49	44.6803	1.4306	0.0554
18436	SLD 5	6.88	514.78	39.72	42.3487	0.3037	0.0212
18436	SLD 6	6.47	415.03	39.7	41.9872	0.2837	0.0285
18436	SLD 7	11.69	-306.22	38.07	40.2266	0.5351	-0.0008
18436	SLD 8	11.28	-405.96	38.06	39.8652	0.515	0.0065
18436	SLD 9	-10.54	468.54	38.98	38.776	-0.555	-0.0125
18436	SLD 10	-10.95	368.79	38.97	38.4145	-0.5751	-0.0052
18436	SLD 11	-5.73	-352.46	37.34	36.6539	-0.3237	-0.0345
18436	SLD 12	-6.13	-452.2	37.33	36.2924	-0.3437	-0.0272
18436	SLD 13	-29.07	153.68	37.56	33.9609	-1.4706	-0.0615
18436	SLD 14	-29.69	1.07	37.53	33.4078	-1.5013	-0.0503
18436	SLD 15	-27.63	-92.62	37.06	33.3243	-1.4012	-0.0681
18436	SLD 16	-28.25	-245.23	37.04	32.7712	-1.4319	-0.0569
18436	SLV 1	67.38	670.15	41.97	54.639	3.2854	0.123
18436	SLV 2	65.93	314.68	41.92	53.3508	3.2139	0.1491
18436	SLV 3	70.75	108.48	40.84	53.1518	3.4474	0.1077
18436	SLV 4	69.3	-246.99	40.79	51.8636	3.3759	0.1338
18436	SLV 5	15.6	1135.72	41.28	46.3924	0.7382	0.0535
18436	SLV 6	14.67	907.26	41.24	45.5644	0.6923	0.0703
18436	SLV 7	26.85	-736.51	37.52	41.4352	1.2781	0.0025
18436	SLV 8	25.92	-964.97	37.48	40.6072	1.2322	0.0193
18436	SLV 9	-25.18	1027.55	39.56	38.0339	-1.2722	-0.0253
18436	SLV 10	-26.11	799.09	39.53	37.206	-1.3181	-0.0086
18436	SLV 11	-13.93	-844.69	35.8	33.0767	-0.7323	-0.0763
18436	SLV 12	-14.86	-1073.14	35.77	32.2488	-0.7782	-0.0596
18436	SLV 13	-68.56	309.57	36.25	26.7775	-3.4159	-0.1399
18436	SLV 14	-70.01	-45.9	36.2	25.4893	-3.4874	-0.1138
18436	SLV 15	-65.18	-252.1	35.12	25.2904	-3.254	-0.1552
18436	SLV 16	-66.63	-607.57	35.07	24.0022	-3.3254	-0.1291
18436	CRTFP Ux+	0	0	0	-0.0001	0	0
18436	CRTFP Ux-	0	0	0	0.0001	0	0
18436	CRTFP Uy+	0	-0.01	0	0	0	0
18436	CRTFP Uy-	0	0.01	0	0	0	0

1.3 Pressioni massime sul terreno

***Nodo**: Nodo che interagisce col terreno.*
***Ind.**: indice del nodo.*
***Pressione minima**: situazione in cui si verifica la pressione minima nel nodo.*
***Cont.**: nome breve della condizione o combinazione di carico a cui si riferisce la pressione minima.*
***uz**: spostamento massimo verticale del nodo. [m]*
***Valore**: pressione minima sul terreno del nodo. [kN/m²]*
***Pressione massima**: situazione in cui si verifica la pressione massima nel nodo.*
***Cont.**: nome breve della condizione o combinazione di carico a cui si riferisce la pressione massima.*
***uz**: spostamento minimo verticale del nodo. [m]*
***Valore**: pressione massima sul terreno del nodo. [kN/m²]*

Compressione estrema massima -163.481 al nodo di indice 239, di coordinate x = -24.4, y = -3.28, z = -1.58, nel contesto SLV 1.
Spostamento estremo minimo -0.0054494 al nodo di indice 239, di coordinate x = -24.4, y = -3.28, z = -1.58, nel contesto SLV 1.
Spostamento estremo massimo -0.0007238 al nodo di indice 920, di coordinate x = -0.47, y = 5.53, z = -1.58, nel contesto SLV 2.

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
11	SLU 83	-0.0040578	-121.734	SLV 15	-0.0025879	-77.638
12	SLU 83	-0.0040541	-121.623	SLU 2	-0.0025939	-77.817
13	SLU 83	-0.0040477	-121.431	SLU 2	-0.0025935	-77.806
14	SLU 83	-0.0040378	-121.133	SLU 2	-0.0025911	-77.734
15	SLU 83	-0.0040242	-120.725	SLU 2	-0.0025865	-77.596
16	SLU 83	-0.004004	-120.12	SLU 2	-0.0025775	-77.326
17	SLU 83	-0.0039771	-119.313	SLV 4	-0.0025507	-76.52
18	SLU 84	-0.003999	-119.969	SLU 1	-0.0025518	-76.554
19	SLU 83	-0.003994	-119.82	SLU 2	-0.0025521	-76.562
20	SLU 83	-0.0039813	-119.438	SLU 2	-0.0025475	-76.425
21	SLU 83	-0.0039661	-118.982	SLU 2	-0.0025416	-76.247
22	SLU 83	-0.0039511	-118.533	SLU 2	-0.0025358	-76.074
23	SLU 83	-0.0039326	-117.977	SLU 2	-0.0025276	-75.829
24	SLU 83	-0.0039033	-117.098	SLV 4	-0.0025011	-75.033
25	SLU 83	-0.0038616	-115.847	SLU 2	-0.0024788	-74.363
26	SLU 83	-0.003835	-115.049	SLV 4	-0.0024551	-73.654
27	SLU 84	-0.0038655	-115.965	SLU 1	-0.0024778	-74.335
28	SLU 84	-0.0039333	-118	SLU 1	-0.0025065	-75.194
29	SLU 84	-0.0039202	-117.606	SLU 1	-0.0025014	-75.041
30	SLU 84	-0.0038915	-116.745	SLU 1	-0.0024864	-74.592
31	SLU 84	-0.0038552	-115.657	SLU 1	-0.0024667	-74.001
32	SLU 84	-0.0037851	-113.552	SLU 1	-0.0024261	-72.783
33	SLU 84	-0.0037592	-112.776	SLV 2	-0.0024019	-72.056

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
34	SLU 84	-0.0037903	-113.709	SLU 1	-0.0024269	-72.806
35	SLU 84	-0.0037925	-113.774	SLU 1	-0.002426	-72.779
37	SLU 84	-0.003862	-115.86	SLU 1	-0.0024577	-73.732
38	SLU 84	-0.0038421	-115.263	SLU 1	-0.002448	-73.441
39	SLU 84	-0.0038092	-114.277	SLU 1	-0.0024298	-72.894
40	SLU 84	-0.0037709	-113.128	SLU 1	-0.0024077	-72.231
41	SLU 84	-0.003737	-112.11	SLU 1	-0.0023874	-71.622
42	SLU 84	-0.0037091	-111.273	SLU 1	-0.0023735	-71.204
43	SLU 84	-0.0036808	-110.423	SLV 2	-0.0023409	-70.228
44	SLU 84	-0.003721	-111.631	SLU 1	-0.002379	-71.37
45	SLU 84	-0.0037886	-113.657	SLU 1	-0.0024076	-72.228
46	SLU 84	-0.0037659	-112.977	SLU 1	-0.0023958	-71.875
47	SLU 84	-0.0037342	-112.026	SLU 1	-0.0023778	-71.334
48	SLU 84	-0.0037012	-111.037	SLU 1	-0.0023588	-70.764
49	SLU 84	-0.0036728	-110.185	SLU 1	-0.0023424	-70.271
50	SLU 84	-0.003653	-109.591	SLU 1	-0.0023316	-69.948
51	SLU 84	-0.0036346	-109.038	SLU 1	-0.0023218	-69.654
52	SLU 84	-0.0036021	-108.064	SLV 2	-0.002275	-68.25
53	SLU 84	-0.0037126	-111.377	SLV 10	-0.0023378	-70.133
54	SLU 84	-0.00369	-110.701	SLU 1	-0.0023437	-70.311
55	SLU 84	-0.0036646	-109.938	SLU 1	-0.0023294	-69.881
56	SLU 84	-0.0036368	-109.103	SLU 1	-0.0023134	-69.403
57	SLU 84	-0.0036103	-108.31	SLU 1	-0.0022984	-68.952
58	SLU 84	-0.0035858	-107.574	SLU 1	-0.0022846	-68.539
59	SLU 84	-0.0035608	-106.823	SLV 2	-0.0022693	-68.08
60	SLU 84	-0.0035245	-105.734	SLV 2	-0.0022071	-66.213
61	SLU 84	-0.0036703	-110.109	SLV 10	-0.0022859	-68.576
62	SLU 84	-0.0036472	-109.416	SLV 10	-0.0022971	-68.914
63	SLU 84	-0.0036226	-108.679	SLV 6	-0.0022985	-68.954
64	SLU 84	-0.0035945	-107.835	SLU 1	-0.0022841	-68.523
65	SLU 84	-0.0035662	-106.985	SLU 1	-0.0022677	-68.031
66	SLU 84	-0.0035385	-106.155	SLU 1	-0.0022518	-67.555
67	SLU 84	-0.0035103	-105.308	SLV 2	-0.0022232	-66.696
68	SLU 84	-0.0034725	-104.176	SLV 2	-0.0021608	-64.823
123	SLU 83	-0.0046967	-140.901	SLV 16	-0.0027449	-82.348
124	SLU 83	-0.0046947	-140.84	SLV 12	-0.0028057	-84.172
125	SLU 83	-0.0047109	-141.327	SLV 12	-0.0028377	-85.132
126	SLU 83	-0.0047424	-142.273	SLV 12	-0.0028764	-86.292
127	SLU 83	-0.0047835	-143.506	SLV 12	-0.0029176	-87.528
128	SLU 83	-0.00479	-143.7	SLV 12	-0.0029312	-87.935
129	SLU 83	-0.0048089	-144.267	SLV 16	-0.0025816	-77.449
130	SLU 83	-0.0047535	-142.604	SLV 16	-0.0026294	-78.882
131	SLU 83	-0.0047145	-141.434	SLV 16	-0.0026869	-80.606
144	SLU 83	-0.0045016	-135.048	SLV 7	-0.0027201	-81.604
146	SLU 83	-0.0045627	-136.88	SLV 7	-0.0027446	-82.339
148	SLU 83	-0.0045938	-137.815	SLV 7	-0.0027522	-82.566
150	SLU 83	-0.0046064	-138.193	SLV 7	-0.0027449	-82.346
152	SLU 83	-0.0046111	-138.334	SLV 7	-0.0027298	-81.893
154	SLU 83	-0.0046154	-138.463	SLV 7	-0.0027119	-81.357
156	SLU 83	-0.0046249	-138.748	SLV 3	-0.0026662	-79.987
158	SLU 83	-0.004643	-139.289	SLV 3	-0.0026128	-78.384
159	SLU 83	-0.004668	-140.04	SLV 3	-0.002568	-77.039
160	SLU 83	-0.004708	-141.241	SLV 3	-0.0025215	-75.645
161	SLU 83	-0.0047581	-142.742	SLV 3	-0.0024807	-74.421
162	SLU 83	-0.0044971	-134.913	SLV 12	-0.0027888	-83.664
163	SLU 83	-0.0043921	-131.764	SLV 11	-0.0027231	-81.692
164	SLU 83	-0.0042953	-128.858	SLV 7	-0.0026579	-79.737
165	SLU 83	-0.0042355	-127.066	SLV 7	-0.0026154	-78.462
166	SLU 83	-0.0042257	-126.771	SLV 7	-0.0026037	-78.112
167	SLU 83	-0.0042629	-127.887	SLV 7	-0.0026208	-78.623
168	SLU 83	-0.0043283	-129.849	SLV 7	-0.0026542	-79.627
169	SLU 83	-0.0043872	-131.615	SLV 7	-0.0026815	-80.444
170	SLU 83	-0.0045687	-137.061	SLV 16	-0.0025671	-77.014
171	SLU 83	-0.0045041	-135.124	SLV 16	-0.0026024	-78.071
172	SLU 83	-0.0044635	-133.905	SLV 16	-0.0026488	-79.463
173	SLU 83	-0.004452	-133.559	SLV 12	-0.0027063	-81.189
174	SLU 83	-0.0044709	-134.127	SLV 12	-0.0027367	-82.102
175	SLU 83	-0.0045162	-135.486	SLV 12	-0.0027813	-83.438
176	SLU 83	-0.0045729	-137.186	SLV 12	-0.00283	-84.899
177	SLU 83	-0.0046202	-138.607	SLV 12	-0.0028682	-86.046
178	SLU 83	-0.0046474	-139.421	SLV 16	-0.0025378	-76.135
180	SLU 83	-0.0043433	-130.3	SLV 7	-0.0026657	-79.972
182	SLU 83	-0.0043928	-131.785	SLV 7	-0.0026846	-80.539
183	SLU 83	-0.0044152	-132.457	SLV 7	-0.0026883	-80.648
184	SLU 83	-0.0044199	-132.596	SLV 7	-0.0026779	-80.338
185	SLU 83	-0.0044185	-132.556	SLV 7	-0.0026614	-79.841
186	SLU 83	-0.0044222	-132.665	SLV 7	-0.0026456	-79.367
187	SLU 83	-0.004438	-133.139	SLV 3	-0.0025995	-77.986
188	SLU 83	-0.004469	-134.071	SLV 3	-0.0025578	-76.735
189	SLU 83	-0.0045143	-135.429	SLV 3	-0.0025232	-75.696
190	SLU 83	-0.00457	-137.1	SLV 3	-0.0024942	-74.827
191	SLU 83	-0.0046309	-138.926	SLV 3	-0.002468	-74.041
192	SLU 83	-0.0043776	-131.329	SLV 16	-0.0025041	-75.123
193	SLU 83	-0.0042862	-128.585	SLV 16	-0.0025194	-75.581
194	SLU 83	-0.0042271	-126.813	SLV 16	-0.002549	-76.471
195	SLU 83	-0.0042083	-126.25	SLV 16	-0.0025994	-77.983
196	SLU 83	-0.0042324	-126.972	SLV 12	-0.0026351	-79.052
197	SLU 83	-0.0042954	-128.862	SLV 12	-0.0026882	-80.646
198	SLU 83	-0.0043867	-131.6	SLV 12	-0.0027567	-82.701
199	SLU 83	-0.0044961	-134.883	SLV 8	-0.0028291	-84.872
200	SLU 83	-0.0044894	-134.681	SLV 16	-0.0024956	-74.869
203	SLU 83	-0.0042128	-126.385	SLV 7	-0.002625	-78.751
205	SLU 83	-0.0042418	-127.253	SLV 7	-0.0026351	-79.054
206	SLU 83	-0.0042495	-127.484	SLV 7	-0.0026311	-78.934
207	SLU 83	-0.0042411	-127.232	SLV 7	-0.0026146	-78.438
208	SLU 83	-0.0042307	-126.92	SLV 7	-0.0025946	-77.839
209	SLU 83	-0.0042319	-126.958	SLV 3	-0.0025748	-77.243

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
210	SLU 83	-0.0042537	-127.611	SLV 3	-0.0025336	-76.008
211	SLU 83	-0.0042982	-128.945	SLV 3	-0.0025036	-75.109
212	SLU 83	-0.0043606	-130.818	SLV 3	-0.0024833	-74.498
213	SLU 83	-0.0044319	-132.957	SLV 3	-0.0024687	-74.062
214	SLU 83	-0.0045065	-135.194	SLV 3	-0.0024562	-73.687
215	SLU 83	-0.0041693	-125.079	SLV 16	-0.0024301	-72.903
216	SLU 83	-0.0040564	-121.693	SLV 16	-0.0024275	-72.826
217	SLU 83	-0.0039844	-119.533	SLV 16	-0.0024431	-73.294
218	SLU 83	-0.003962	-118.86	SLV 16	-0.0024852	-74.556
219	SLU 83	-0.0039929	-119.786	SLV 12	-0.0025304	-75.912
220	SLU 83	-0.004076	-122.279	SLV 12	-0.0025936	-77.808
221	SLU 83	-0.0042042	-126.127	SLV 12	-0.0026826	-80.479
222	SLU 83	-0.0043579	-130.737	SLV 8	-0.0027746	-83.239
223	SLU 83	-0.0043171	-129.513	SLV 16	-0.0024417	-73.251
225	SLU 83	-0.0040899	-122.696	SLV 11	-0.0025809	-77.426
227	SLU 83	-0.0041012	-123.036	SLV 7	-0.002589	-77.67
228	SLU 83	-0.0040948	-122.844	SLV 7	-0.0025787	-77.361
229	SLU 83	-0.0040703	-122.109	SLV 7	-0.0025541	-76.624
230	SLU 83	-0.0040474	-121.422	SLV 7	-0.0025288	-75.863
231	SLU 83	-0.0040441	-121.324	SLV 3	-0.0025015	-75.046
232	SLU 83	-0.0040702	-122.107	SLV 3	-0.0024662	-73.985
233	SLU 83	-0.0041276	-123.827	SLV 3	-0.0024467	-73.402
234	SLU 83	-0.0042075	-126.225	SLV 3	-0.0024395	-73.186
235	SLU 83	-0.0042887	-128.662	SLV 3	-0.0024365	-73.095
236	SLU 83	-0.00437	-131.1	SLV 3	-0.0024337	-73.01
239	SLV 1	-0.0054494	-163.481	SLV 16	-0.0009651	-28.953
255	SLU 83	-0.0041033	-123.1	SLV 16	-0.0020876	-62.627
257	SLU 83	-0.0041757	-125.271	SLV 16	-0.002191	-65.729
261	SLU 83	-0.0040895	-122.684	SLV 16	-0.0023472	-70.415
262	SLU 83	-0.003917	-117.511	SLV 16	-0.0023311	-69.933
263	SLU 83	-0.0038061	-114.182	SLV 16	-0.0023206	-69.619
264	SLU 83	-0.0037324	-111.972	SLV 16	-0.0023286	-69.859
265	SLU 83	-0.0037107	-111.321	SLV 16	-0.0023652	-70.956
266	SLU 83	-0.0037482	-112.445	SLU 2	-0.0024075	-72.224
267	SLU 83	-0.0038458	-115.374	SLU 2	-0.002466	-73.979
268	SLU 83	-0.0040001	-120.004	SLU 2	-0.0025601	-76.803
269	SLU 83	-0.0040514	-121.542	SLU 2	-0.0025915	-77.745
270	SLU 83	-0.0041642	-124.927	SLU 2	-0.0026609	-79.828
272	SLU 83	-0.0039547	-118.642	SLV 11	-0.0025224	-75.672
274	SLU 83	-0.0039559	-118.676	SLU 2	-0.0025299	-75.896
275	SLU 83	-0.003945	-118.349	SLU 2	-0.0025249	-75.746
276	SLU 83	-0.0039021	-117.062	SLV 7	-0.0024926	-74.779
277	SLU 83	-0.0038659	-115.976	SLV 7	-0.0024618	-73.854
278	SLU 83	-0.0038563	-115.688	SLV 3	-0.0024265	-72.796
279	SLU 83	-0.003884	-116.519	SLV 3	-0.0023947	-71.84
280	SLU 83	-0.0039504	-118.511	SLV 3	-0.0023815	-71.446
281	SLU 83	-0.0040479	-121.437	SLV 3	-0.0023822	-71.466
282	SLU 83	-0.0041208	-123.623	SLV 3	-0.0023823	-71.468
283	SLU 83	-0.0041908	-125.725	SLV 3	-0.0023782	-71.346
287	SLU 83	-0.0042521	-127.564	SLV 3	-0.0022158	-66.475
289	SLU 83	-0.0041669	-125.008	SLV 3	-0.0021122	-63.365
304	SLV 14	-0.0051461	-154.384	SLV 3	-0.0008986	-26.957
308	SLV 14	-0.0053092	-159.277	SLV 3	-0.0008704	-26.111
309	SLV 14	-0.0047355	-142.065	SLV 3	-0.0008641	-25.924
310	SLV 14	-0.0042375	-127.126	SLV 3	-0.0008697	-26.091
311	SLV 14	-0.0038255	-114.765	SLV 3	-0.0008889	-26.667
312	SLV 1	-0.0053866	-161.598	SLV 16	-0.000912	-27.361
313	SLV 1	-0.0048697	-146.091	SLV 16	-0.0009065	-27.194
314	SLV 1	-0.0044033	-132.099	SLV 16	-0.0009086	-27.257
315	SLV 1	-0.0040012	-120.037	SLV 16	-0.0009204	-27.612
316	SLV 1	-0.0036683	-110.05	SLV 16	-0.0009431	-28.292
317	SLV 1	-0.0034039	-102.116	SLV 16	-0.0009773	-29.319
318	SLV 1	-0.0032041	-96.123	SLV 16	-0.0010237	-30.71
319	SLV 1	-0.003064	-91.92	SLV 16	-0.0010828	-32.485
320	SLU 83	-0.0029989	-89.967	SLV 16	-0.0011555	-34.666
321	SLU 83	-0.0030363	-91.09	SLV 16	-0.0012423	-37.27
322	SLU 83	-0.0031165	-93.494	SLV 16	-0.0013434	-40.303
323	SLU 83	-0.0032346	-97.039	SLV 16	-0.0014582	-43.746
324	SLU 83	-0.0033838	-101.514	SLV 16	-0.0015846	-47.538
325	SLU 83	-0.0035528	-106.585	SLV 16	-0.0017185	-51.555
326	SLU 83	-0.0037241	-111.724	SLV 16	-0.0018525	-55.575
327	SLU 83	-0.0038705	-116.116	SLV 16	-0.0019745	-59.236
328	SLU 83	-0.0039552	-118.656	SLV 16	-0.0020676	-62.029
329	SLU 83	-0.003988	-119.64	SLV 16	-0.0021354	-64.061
330	SLU 83	-0.0039714	-119.143	SLV 16	-0.0021844	-65.532
331	SLU 83	-0.003918	-117.539	SLV 16	-0.0022159	-66.477
332	SLU 83	-0.0038321	-114.962	SLV 16	-0.0022271	-66.813
333	SLU 83	-0.0036841	-110.522	SLV 16	-0.002225	-66.751
334	SLU 83	-0.0035748	-107.245	SLV 16	-0.0022137	-66.412
335	SLU 83	-0.0034974	-104.923	SLV 16	-0.0022158	-66.475
336	SLU 83	-0.0034733	-104.199	SLU 2	-0.0022349	-67.047
337	SLU 83	-0.0035121	-105.362	SLU 2	-0.0022564	-67.693
338	SLU 83	-0.0036139	-108.418	SLU 2	-0.0023175	-69.526
339	SLU 83	-0.0037702	-113.107	SLU 2	-0.0024129	-72.386
340	SLU 83	-0.0040155	-120.464	SLU 2	-0.0025636	-76.907
341	SLV 14	-0.0034997	-104.992	SLV 3	-0.0009225	-27.675
342	SLV 14	-0.0032555	-97.666	SLV 3	-0.000971	-29.129
343	SLV 14	-0.003086	-92.579	SLV 3	-0.0010349	-31.047
344	SLV 14	-0.0029835	-89.506	SLV 3	-0.001115	-33.45
345	SLU 83	-0.0030193	-90.58	SLV 3	-0.001212	-36.359
346	SLU 83	-0.003112	-93.361	SLV 3	-0.001326	-39.779
347	SLU 83	-0.0032499	-97.496	SLV 3	-0.0014561	-43.684
348	SLU 83	-0.0034235	-102.705	SLV 3	-0.0015995	-47.986
349	SLU 83	-0.0036178	-108.535	SLV 3	-0.0017501	-52.504
350	SLU 83	-0.0038085	-114.254	SLV 3	-0.0018969	-56.906
351	SLU 83	-0.003993	-119.791	SLV 3	-0.0020592	-61.775
352	SLU 83	-0.0039575	-118.725	SLV 3	-0.0020218	-60.654

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
353	SLU 83	-0.004094	-122.821	SLV 3	-0.0021852	-65.557
354	SLU 83	-0.0040782	-122.347	SLV 3	-0.0021628	-64.884
355	SLU 83	-0.0041039	-123.117	SLV 3	-0.0022434	-67.301
356	SLU 83	-0.0040671	-122.014	SLV 3	-0.0022834	-68.503
357	SLU 83	-0.0039945	-119.835	SLV 3	-0.0023045	-69.134
358	SLU 83	-0.003933	-117.989	SLV 3	-0.002314	-69.42
359	SLU 83	-0.0038641	-115.923	SLV 3	-0.0023162	-69.485
360	SLU 83	-0.0037704	-113.112	SLV 3	-0.0023165	-69.494
361	SLU 83	-0.0037049	-111.146	SLV 3	-0.0023272	-69.815
362	SLU 83	-0.0036803	-110.408	SLV 3	-0.0023571	-70.712
363	SLU 83	-0.003697	-110.91	SLU 2	-0.0023713	-71.138
364	SLU 83	-0.003744	-112.319	SLU 2	-0.0023984	-71.953
365	SLU 83	-0.0037975	-113.926	SLU 2	-0.0024297	-72.892
366	SLU 83	-0.0038244	-114.733	SLU 2	-0.0024439	-73.317
367	SLU 83	-0.0039149	-117.446	SLV 16	-0.0020156	-60.467
369	SLU 83	-0.0039852	-119.556	SLV 16	-0.0021173	-63.519
370	SLV 14	-0.004778	-143.341	SLV 3	-0.0008613	-25.84
371	SLU 83	-0.0040725	-122.175	SLV 3	-0.0021622	-64.865
374	SLU 83	-0.0039895	-119.685	SLV 3	-0.0020611	-61.832
376	SLV 1	-0.0049966	-149.899	SLV 16	-0.0009019	-27.058
377	SLU 83	-0.0038108	-114.325	SLU 2	-0.0024329	-72.986
381	SLU 83	-0.0037835	-113.505	SLV 16	-0.0019687	-59.061
383	SLU 83	-0.0038484	-115.451	SLV 16	-0.0020659	-61.978
384	SLV 14	-0.0044849	-134.547	SLV 3	-0.0008374	-25.122
385	SLU 83	-0.0039441	-118.322	SLV 3	-0.0021287	-63.86
388	SLU 83	-0.0038671	-116.012	SLV 3	-0.0020344	-61.033
390	SLV 1	-0.004647	-139.41	SLV 16	-0.0008575	-25.725
391	SLU 83	-0.0037188	-111.563	SLU 2	-0.0023724	-71.171
395	SLU 83	-0.0036927	-110.782	SLV 16	-0.0019389	-58.168
397	SLU 83	-0.0037522	-112.566	SLV 16	-0.0020317	-60.951
398	SLV 14	-0.0042807	-128.422	SLV 3	-0.0008286	-24.859
399	SLU 83	-0.0038538	-115.614	SLV 3	-0.0021106	-63.317
402	SLU 83	-0.0037827	-113.48	SLV 3	-0.0020231	-60.692
404	SLV 1	-0.0044062	-132.187	SLV 16	-0.0008314	-24.942
405	SLU 83	-0.0036884	-110.653	SLU 2	-0.0023509	-70.527
409	SLU 83	-0.0033566	-100.699	SLU 2	-0.002143	-64.29
410	SLU 83	-0.0036303	-108.91	SLV 16	-0.0019206	-57.619
412	SLU 83	-0.0036845	-110.534	SLV 16	-0.0020087	-60.26
413	SLV 14	-0.0041699	-125.098	SLV 3	-0.0008351	-25.052
414	SLU 84	-0.0037882	-113.645	SLV 3	-0.0021013	-63.039
417	SLU 83	-0.0037227	-111.682	SLV 3	-0.0020205	-60.616
420	SLV 1	-0.0042706	-128.118	SLV 16	-0.0008215	-24.646
421	SLU 83	-0.0037152	-111.456	SLU 2	-0.0023655	-70.965
424	SLU 83	-0.0035886	-107.659	SLV 16	-0.0019098	-57.295
426	SLU 83	-0.0036375	-109.124	SLV 16	-0.0019923	-59.77
427	SLV 14	-0.0041501	-124.502	SLV 3	-0.0008557	-25.67
428	SLU 84	-0.0037377	-112.131	SLV 3	-0.0020957	-62.872
431	SLU 84	-0.0036779	-110.338	SLV 3	-0.0020219	-60.656
434	SLV 1	-0.0042317	-126.95	SLV 16	-0.0008252	-24.757
435	SLU 83	-0.0037799	-113.397	SLU 2	-0.0024042	-72.127
439	SLU 83	-0.0035632	-106.895	SLV 16	-0.0019036	-57.109
441	SLU 84	-0.0036068	-108.203	SLV 16	-0.0019798	-59.395
442	SLV 14	-0.0042126	-126.377	SLV 3	-0.0008884	-26.653
443	SLU 84	-0.0036964	-110.892	SLV 3	-0.0020893	-62.679
446	SLU 84	-0.0036422	-109.266	SLV 3	-0.002023	-60.691
453	SLV 1	-0.0042771	-128.313	SLV 16	-0.0008398	-25.195
454	SLU 84	-0.0038488	-115.464	SLU 1	-0.0024458	-73.374
458	SLU 84	-0.0035514	-106.543	SLV 14	-0.0019015	-57.045
460	SLU 84	-0.0035899	-107.697	SLV 14	-0.001972	-59.16
461	SLV 14	-0.0043418	-130.255	SLV 3	-0.0009304	-27.913
462	SLU 84	-0.0036611	-109.834	SLV 3	-0.0020776	-62.327
465	SLU 84	-0.0036124	-108.373	SLV 3	-0.0020199	-60.597
468	SLV 1	-0.0043895	-131.686	SLV 16	-0.0008628	-25.883
470	SLU 84	-0.0035655	-106.965	SLU 1	-0.0022638	-67.913
471	SLU 84	-0.0037459	-112.377	SLU 1	-0.002375	-71.25
472	SLU 84	-0.003988	-119.641	SLU 1	-0.0025243	-75.73
473	SLU 83	-0.0040144	-120.431	SLU 2	-0.0025419	-76.258
474	SLU 84	-0.0038915	-116.744	SLU 1	-0.0024709	-74.126
476	SLU 84	-0.0035511	-106.533	SLV 14	-0.0019047	-57.14
478	SLU 84	-0.0035843	-107.53	SLV 13	-0.0019702	-59.105
479	SLV 14	-0.0045134	-135.401	SLV 3	-0.0009773	-29.318
480	SLU 84	-0.0036313	-108.94	SLV 1	-0.0020602	-61.805
483	SLU 84	-0.0035881	-107.642	SLV 1	-0.0020104	-60.312
486	SLU 84	-0.0038742	-116.225	SLU 1	-0.002459	-73.769
489	SLV 1	-0.0045433	-136.3	SLV 16	-0.0008913	-26.739
493	SLU 84	-0.0035586	-106.758	SLV 13	-0.0019108	-57.325
495	SLU 84	-0.0035867	-107.6	SLV 13	-0.001971	-59.131
496	SLV 14	-0.0046907	-140.721	SLV 3	-0.0010223	-30.67
497	SLU 84	-0.0036091	-108.272	SLV 2	-0.0020376	-61.128
500	SLU 84	-0.0035712	-107.135	SLV 2	-0.0019967	-59.901
502	SLU 84	-0.0038221	-114.664	SLU 1	-0.0024253	-72.76
505	SLV 4	-0.0047015	-141.044	SLV 13	-0.0009199	-27.598
509	SLV 14	-0.0048215	-144.644	SLV 3	-0.0010558	-31.673
510	SLU 84	-0.0035676	-107.028	SLV 13	-0.0019196	-57.589
512	SLU 84	-0.0035905	-107.716	SLV 13	-0.0019758	-59.275
513	SLU 84	-0.0035994	-107.981	SLV 2	-0.0020115	-60.345
516	SLU 84	-0.0035668	-107.003	SLV 2	-0.0019773	-59.318
518	SLU 84	-0.003744	-112.321	SLU 1	-0.0023754	-71.262
520	SLV 4	-0.0049607	-148.82	SLV 13	-0.000879	-26.371
521	SLV 4	-0.0047802	-143.405	SLV 13	-0.0009697	-29.092
522	SLV 4	-0.0046306	-138.919	SLV 13	-0.0010641	-31.923
523	SLV 4	-0.0044954	-134.861	SLV 13	-0.0011591	-34.772
524	SLV 2	-0.0043643	-130.929	SLV 15	-0.0012527	-37.58
525	SLV 2	-0.004233	-126.989	SLV 15	-0.001344	-40.32
526	SLV 2	-0.0040996	-122.989	SLV 15	-0.0014328	-42.984
527	SLU 84	-0.0040182	-120.546	SLV 15	-0.0015188	-45.565
528	SLU 84	-0.0039791	-119.372	SLV 15	-0.0016015	-48.044

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
529	SLU 84	-0.0039344	-118.031	SLV 15	-0.0016792	-50.376
530	SLU 84	-0.0038828	-116.484	SLV 15	-0.0017497	-52.49
531	SLU 84	-0.0038234	-114.703	SLV 15	-0.0018092	-54.275
532	SLU 84	-0.003757	-112.711	SLV 15	-0.0018533	-55.6
533	SLU 84	-0.0036888	-110.663	SLV 15	-0.0018786	-56.358
534	SLU 84	-0.0036289	-108.866	SLV 13	-0.0018857	-56.57
535	SLU 84	-0.0035808	-107.425	SLV 13	-0.0019506	-58.519
536	SLU 84	-0.0036094	-108.282	SLV 13	-0.0020167	-60.5
537	SLU 84	-0.0036416	-109.247	SLV 13	-0.0021025	-63.074
538	SLU 84	-0.0036688	-110.063	SLV 13	-0.0021983	-65.949
539	SLU 84	-0.0036857	-110.57	SLV 13	-0.0022935	-68.804
540	SLU 84	-0.0036893	-110.678	SLU 1	-0.0023403	-70.208
541	SLU 84	-0.0036784	-110.351	SLU 1	-0.0023318	-69.955
542	SLU 84	-0.0036549	-109.648	SLU 1	-0.002316	-69.48
543	SLU 84	-0.0036338	-109.013	SLU 1	-0.002302	-69.059
544	SLU 84	-0.0036164	-108.493	SLU 1	-0.0022909	-68.726
545	SLU 84	-0.0036362	-109.087	SLU 1	-0.0023036	-69.108
546	SLU 84	-0.0036566	-109.699	SLU 1	-0.0023304	-69.911
547	SLU 84	-0.0036634	-109.902	SLV 2	-0.0022898	-68.693
548	SLU 84	-0.0036714	-110.141	SLV 2	-0.0022253	-66.758
549	SLU 84	-0.0036723	-110.169	SLV 2	-0.0021586	-64.757
550	SLU 84	-0.0036628	-109.884	SLV 2	-0.0020985	-62.956
551	SLU 84	-0.0036447	-109.342	SLV 2	-0.0020557	-61.671
552	SLU 84	-0.0035987	-107.96	SLV 2	-0.0020022	-60.067
553	SLU 84	-0.003568	-107.04	SLV 2	-0.0019704	-59.111
554	SLU 84	-0.0035492	-106.475	SLV 2	-0.0019439	-58.316
555	SLU 84	-0.0035882	-107.646	SLV 2	-0.0019479	-58.438
556	SLU 84	-0.0036619	-109.856	SLV 2	-0.0019468	-58.404
557	SLU 84	-0.0037296	-111.888	SLV 2	-0.0019205	-57.614
558	SLU 84	-0.0037977	-113.932	SLV 2	-0.0018693	-56.078
559	SLU 84	-0.0038612	-115.836	SLV 2	-0.001801	-54.029
560	SLU 84	-0.0039188	-117.565	SLV 2	-0.0017218	-51.655
561	SLU 84	-0.0039711	-119.134	SLV 2	-0.0016361	-49.083
562	SLU 84	-0.0040193	-120.58	SLV 2	-0.0015462	-46.386
563	SLV 15	-0.0041006	-123.017	SLV 2	-0.0014533	-43.6
564	SLV 16	-0.0042614	-127.842	SLV 1	-0.0013581	-40.743
565	SLV 16	-0.0044313	-132.94	SLV 1	-0.001261	-37.831
566	SLV 16	-0.0046213	-138.638	SLV 1	-0.0011653	-34.96
567	SLV 14	-0.004853	-145.59	SLV 3	-0.0010759	-32.277
568	SLV 14	-0.00516	-154.8	SLV 3	-0.0010008	-30.025
570	SLV 4	-0.0048074	-144.221	SLV 13	-0.0009413	-28.239
578	SLV 4	-0.0048155	-144.464	SLV 13	-0.0009476	-28.429
592	SLU 84	-0.0036543	-109.628	SLV 15	-0.0018952	-56.855
596	SLU 84	-0.0035663	-106.99	SLV 13	-0.0019248	-57.744
599	SLU 84	-0.0035874	-107.623	SLV 13	-0.00198	-59.399
608	SLU 84	-0.003593	-107.789	SLU 1	-0.0022743	-68.228
610	SLU 84	-0.0035583	-106.748	SLU 1	-0.0022527	-67.581
612	SLU 84	-0.003575	-107.249	SLU 1	-0.0022635	-67.905
618	SLU 84	-0.0036416	-109.249	SLV 10	-0.0023043	-69.129
623	SLU 84	-0.0035131	-105.393	SLU 1	-0.0022368	-67.104
632	SLU 84	-0.0036115	-108.346	SLV 2	-0.0019928	-59.785
635	SLU 84	-0.0035809	-107.427	SLV 2	-0.0019611	-58.832
638	SLU 84	-0.0035972	-107.917	SLV 2	-0.001947	-58.41
651	SLV 14	-0.0048418	-145.253	SLV 3	-0.0010649	-31.948
653	SLU 84	-0.0034984	-104.952	SLV 2	-0.0019389	-58.167
655	SLU 84	-0.0035719	-107.158	SLV 2	-0.0019431	-58.293
657	SLV 4	-0.0049376	-148.128	SLV 13	-0.0008917	-26.752
658	SLV 4	-0.0047567	-142.702	SLV 13	-0.0009826	-29.477
659	SLV 4	-0.0046058	-138.175	SLV 13	-0.0010776	-32.328
660	SLV 2	-0.0044691	-134.074	SLV 15	-0.0011732	-35.197
661	SLV 2	-0.0043366	-130.098	SLV 15	-0.0012675	-38.024
662	SLV 2	-0.0042037	-126.111	SLV 15	-0.0013595	-40.784
663	SLV 2	-0.0040687	-122.062	SLV 15	-0.0014489	-43.468
664	SLU 84	-0.0040076	-120.227	SLV 15	-0.0015356	-46.068
665	SLU 84	-0.0039676	-119.029	SLV 15	-0.0016188	-48.564
666	SLU 84	-0.003922	-117.661	SLV 15	-0.0016971	-50.913
667	SLU 84	-0.0038695	-116.085	SLV 15	-0.0017681	-53.042
668	SLU 84	-0.0038091	-114.274	SLV 15	-0.0018281	-54.843
669	SLU 84	-0.0037416	-112.249	SLV 15	-0.0018729	-56.187
670	SLU 84	-0.0036723	-110.168	SLV 15	-0.0018992	-56.976
671	SLU 84	-0.0036117	-108.351	SLV 15	-0.001908	-57.24
672	SLU 84	-0.0035777	-107.332	SLV 13	-0.0019099	-57.298
673	SLU 84	-0.0035624	-106.872	SLV 13	-0.0019263	-57.789
674	SLU 84	-0.0035732	-107.195	SLV 13	-0.0019589	-58.766
675	SLU 84	-0.0035912	-107.736	SLV 13	-0.0020136	-60.409
676	SLU 84	-0.0036154	-108.463	SLV 13	-0.0020907	-62.722
677	SLU 84	-0.0036346	-109.039	SLV 13	-0.0021777	-65.33
678	SLU 84	-0.0036434	-109.303	SLV 13	-0.0022639	-67.916
679	SLU 83	-0.0036388	-109.164	SLU 2	-0.0023042	-69.127
680	SLU 83	-0.0036196	-108.589	SLU 2	-0.0022905	-68.715
681	SLU 83	-0.0035878	-107.633	SLU 2	-0.0022693	-68.078
682	SLU 83	-0.0035457	-106.37	SLU 2	-0.0022426	-67.277
683	SLU 83	-0.0035108	-105.325	SLU 2	-0.0022212	-66.637
684	SLU 84	-0.0035455	-106.365	SLU 1	-0.0022438	-67.313
685	SLU 84	-0.003569	-107.069	SLU 1	-0.0022592	-67.777
686	SLU 84	-0.003563	-106.89	SLV 10	-0.0022255	-66.766
687	SLU 84	-0.0035639	-106.917	SLV 10	-0.002222	-66.661
688	SLU 84	-0.0035584	-106.751	SLV 10	-0.0022357	-67.072
689	SLU 84	-0.0035115	-105.344	SLU 1	-0.00223	-66.9
690	SLU 84	-0.0034618	-103.854	SLU 1	-0.0021999	-65.997
691	SLU 84	-0.0033922	-101.767	SLU 1	-0.0021576	-64.727
692	SLU 84	-0.0033703	-101.108	SLV 2	-0.0021336	-64.007
693	SLU 84	-0.0033678	-101.035	SLV 2	-0.0020944	-62.832
694	SLU 84	-0.0033746	-101.237	SLV 2	-0.0020354	-61.062
695	SLU 84	-0.0033821	-101.463	SLV 2	-0.0019709	-59.127
696	SLU 84	-0.0033823	-101.469	SLV 2	-0.0019045	-57.136
697	SLU 84	-0.0033717	-101.152	SLV 2	-0.0018449	-55.348

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
698	SLU 84	-0.0033522	-100.567	SLV 2	-0.0018025	-54.075
699	SLU 84	-0.0033333	-99.999	SLV 2	-0.0018252	-54.757
700	SLU 84	-0.0034893	-104.678	SLV 2	-0.0019341	-58.023
701	SLU 84	-0.0035673	-107.018	SLV 2	-0.0019406	-58.218
702	SLU 84	-0.0036001	-108.002	SLV 2	-0.0019402	-58.206
703	SLU 84	-0.0036722	-110.167	SLV 2	-0.0019134	-57.402
704	SLU 84	-0.0037447	-112.341	SLV 2	-0.0018621	-55.864
705	SLU 84	-0.0038124	-114.371	SLV 2	-0.0017939	-53.816
706	SLU 84	-0.0038741	-116.222	SLV 2	-0.0017149	-51.446
707	SLU 84	-0.0039303	-117.91	SLV 2	-0.0016293	-48.879
708	SLU 84	-0.0039823	-119.469	SLV 2	-0.0015396	-46.189
709	SLV 15	-0.0040625	-121.874	SLV 2	-0.001447	-43.411
710	SLV 15	-0.0042275	-126.825	SLV 2	-0.0013523	-40.57
711	SLV 15	-0.0044006	-132.019	SLV 2	-0.0012567	-37.7
712	SLV 13	-0.0045935	-137.805	SLV 4	-0.0011625	-34.875
713	SLV 13	-0.004828	-144.84	SLV 4	-0.0010747	-32.242
714	SLV 13	-0.0051355	-154.064	SLV 4	-0.0010007	-30.022
715	SLV 13	-0.0047833	-143.499	SLV 4	-0.0010548	-31.643
718	SLU 84	-0.0034785	-104.354	SLV 2	-0.0019375	-58.125
720	SLU 84	-0.0035502	-106.507	SLV 4	-0.00194	-58.199
721	SLV 15	-0.0046148	-138.445	SLV 2	-0.0010225	-30.676
723	SLU 83	-0.0033969	-101.908	SLU 2	-0.0021406	-64.219
725	SLU 83	-0.0032162	-96.487	SLU 2	-0.0020309	-60.928
726	SLU 83	-0.0029371	-88.112	SLV 3	-0.0017533	-52.6
728	SLU 83	-0.0029932	-89.797	SLV 3	-0.0016968	-50.903
729	SLV 15	-0.0043925	-131.776	SLV 2	-0.0009805	-29.414
732	SLV 4	-0.004421	-132.63	SLV 13	-0.0009217	-27.651
733	SLU 84	-0.0035586	-106.758	SLV 15	-0.0019684	-59.051
735	SLU 84	-0.0036086	-108.258	SLV 15	-0.0020021	-60.063
736	SLU 84	-0.0035109	-105.327	SLV 4	-0.0019624	-58.871
738	SLU 83	-0.0034904	-104.713	SLV 4	-0.001932	-57.959
739	SLU 83	-0.0033277	-99.831	SLV 16	-0.0020504	-61.512
741	SLU 83	-0.0031376	-94.129	SLV 16	-0.0019102	-57.307
742	SLU 83	-0.0028345	-85.035	SLV 3	-0.0016152	-48.455
744	SLU 83	-0.0028972	-86.915	SLV 3	-0.0015624	-46.873
746	SLV 4	-0.004248	-127.439	SLV 13	-0.0009018	-27.055
747	SLV 15	-0.0041591	-124.773	SLV 2	-0.0009367	-28.1
749	SLU 83	-0.0035449	-106.347	SLV 4	-0.0019879	-59.637
751	SLU 83	-0.0035122	-105.367	SLV 4	-0.0019535	-58.604
752	SLU 84	-0.0035649	-106.946	SLV 15	-0.002016	-60.481
754	SLU 84	-0.0036242	-108.725	SLV 15	-0.0020529	-61.587
755	SLU 83	-0.0032849	-98.546	SLV 16	-0.0019673	-59.018
757	SLU 83	-0.0030852	-92.555	SLV 16	-0.0018179	-54.538
758	SLU 83	-0.0027928	-83.784	SLV 3	-0.0015453	-46.359
760	SLU 83	-0.0028621	-85.863	SLV 3	-0.0014963	-44.888
762	SLV 4	-0.004107	-123.209	SLV 13	-0.000885	-26.549
763	SLV 15	-0.0039395	-118.186	SLV 2	-0.0008957	-26.87
765	SLU 83	-0.0035861	-107.584	SLV 4	-0.0020187	-60.56
767	SLU 83	-0.0035412	-106.236	SLV 4	-0.0019804	-59.412
768	SLU 84	-0.0035625	-106.875	SLV 15	-0.0020541	-61.623
770	SLU 84	-0.0036312	-108.935	SLV 13	-0.0020927	-62.782
771	SLU 83	-0.0031647	-94.94	SLV 16	-0.0018584	-55.753
772	SLU 83	-0.0026131	-78.393	SLV 16	-0.001397	-41.909
773	SLU 83	-0.0024543	-73.629	SLV 16	-0.0012852	-38.556
774	SLU 83	-0.002361	-70.829	SLV 16	-0.0012533	-37.598
775	SLU 83	-0.0023266	-69.799	SLV 16	-0.0012914	-38.743
776	SLU 83	-0.0023395	-70.185	SLV 16	-0.0013815	-41.446
777	SLU 83	-0.0023881	-71.643	SLV 16	-0.0015048	-45.145
778	SLU 83	-0.0024628	-73.885	SLU 2	-0.0015695	-47.086
779	SLU 83	-0.0025549	-76.648	SLV 3	-0.0016086	-48.259
780	SLU 83	-0.0026548	-79.645	SLV 3	-0.0015756	-47.269
781	SLU 83	-0.0027498	-82.493	SLV 3	-0.001543	-46.29
782	SLU 83	-0.0028228	-84.684	SLV 3	-0.0015063	-45.19
783	SLU 83	-0.0032816	-98.449	SLV 16	-0.0019314	-57.942
786	SLU 83	-0.003072	-92.161	SLV 16	-0.0017728	-53.183
798	SLU 83	-0.0028078	-84.233	SLV 3	-0.001539	-46.169
800	SLU 83	-0.0028808	-86.423	SLV 3	-0.0014917	-44.752
802	SLV 4	-0.0040149	-120.448	SLV 13	-0.0008749	-26.246
803	SLV 15	-0.0037456	-112.369	SLV 2	-0.0008594	-25.781
805	SLU 84	-0.0036288	-108.864	SLV 4	-0.0020484	-61.451
807	SLU 83	-0.0035714	-107.143	SLV 4	-0.0020067	-60.201
808	SLU 84	-0.0035468	-106.403	SLV 13	-0.0020727	-62.182
810	SLU 84	-0.003625	-108.75	SLV 13	-0.0021087	-63.261
811	SLU 83	-0.0031889	-95.667	SLV 14	-0.0018455	-55.365
812	SLU 83	-0.0026462	-79.387	SLV 14	-0.0014211	-42.632
813	SLU 83	-0.0024882	-74.646	SLV 14	-0.0013118	-39.355
814	SLU 83	-0.0023956	-71.869	SLV 14	-0.001283	-38.49
815	SLU 83	-0.0023622	-70.865	SLV 14	-0.0013247	-39.741
816	SLU 83	-0.0023759	-71.278	SLV 14	-0.0014187	-42.56
817	SLU 83	-0.0024255	-72.766	SLV 14	-0.0015455	-46.365
818	SLU 83	-0.0025013	-75.039	SLU 2	-0.0015937	-47.811
819	SLU 83	-0.0025946	-77.837	SLV 3	-0.0016324	-48.971
820	SLU 83	-0.0026957	-80.871	SLV 3	-0.0015966	-47.897
821	SLU 83	-0.0027919	-83.758	SLV 3	-0.0015619	-46.856
822	SLU 83	-0.0028657	-85.972	SLV 3	-0.0015241	-45.724
823	SLU 83	-0.0033172	-99.515	SLV 14	-0.0019352	-58.055
825	SLU 83	-0.0031226	-93.677	SLV 14	-0.001791	-53.729
826	SLU 83	-0.0028574	-85.722	SLV 3	-0.0015659	-46.977
828	SLU 83	-0.0029279	-87.837	SLV 3	-0.0015186	-45.559
830	SLV 4	-0.0039858	-119.573	SLV 13	-0.0008748	-26.244
831	SLV 15	-0.0035799	-107.396	SLV 2	-0.000828	-24.841
833	SLU 84	-0.0036732	-110.195	SLV 2	-0.0020701	-62.104
835	SLU 83	-0.0036033	-108.099	SLV 2	-0.0020263	-60.789
836	SLU 84	-0.0035245	-105.735	SLV 13	-0.002063	-61.89
838	SLU 84	-0.0036125	-108.374	SLV 13	-0.0020976	-62.927
839	SLU 83	-0.0033816	-101.447	SLV 14	-0.0019584	-58.751
841	SLU 83	-0.0032018	-96.053	SLV 14	-0.0018274	-54.821

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
842	SLU 83	-0.0029414	-88.241	SLV 1	-0.0016189	-48.566
844	SLU 83	-0.0030072	-90.216	SLV 1	-0.0015729	-47.188
846	SLV 4	-0.0040331	-120.992	SLV 13	-0.000888	-26.64
847	SLV 15	-0.0034383	-103.15	SLV 2	-0.0008007	-24.022
849	SLU 84	-0.0037242	-111.726	SLV 2	-0.0020767	-62.3
851	SLU 83	-0.0036417	-109.251	SLV 2	-0.0020305	-60.916
852	SLU 84	-0.0035135	-105.404	SLV 13	-0.0020305	-60.915
854	SLU 84	-0.0036114	-108.341	SLV 13	-0.0020673	-62.019
855	SLU 84	-0.0034569	-103.708	SLV 14	-0.0019811	-59.433
857	SLU 84	-0.0032918	-98.753	SLV 14	-0.0018648	-55.943
858	SLU 84	-0.0030451	-91.352	SLV 1	-0.0016802	-50.405
860	SLU 84	-0.0031063	-93.188	SLV 1	-0.0016362	-49.086
862	SLV 4	-0.0041716	-125.149	SLV 13	-0.0009183	-27.549
863	SLV 15	-0.0033128	-99.385	SLV 2	-0.0007758	-23.273
865	SLU 84	-0.0037911	-113.733	SLV 2	-0.0020677	-62.031
867	SLU 83	-0.0036958	-110.875	SLV 2	-0.0020176	-60.527
868	SLU 84	-0.0035434	-106.301	SLV 13	-0.001984	-59.519
870	SLU 84	-0.0036514	-109.543	SLV 13	-0.0020239	-60.718
871	SLU 84	-0.003537	-106.11	SLV 14	-0.0020019	-60.058
873	SLU 84	-0.0033862	-101.586	SLV 14	-0.0019007	-57.022
874	SLU 84	-0.0031613	-94.84	SLV 2	-0.0017452	-52.355
876	SLU 84	-0.0032181	-96.543	SLV 2	-0.0017026	-51.077
878	SLV 4	-0.004418	-132.539	SLV 13	-0.0009706	-29.117
879	SLV 15	-0.0031928	-95.784	SLV 2	-0.0007509	-22.528
881	SLU 84	-0.0038872	-116.616	SLV 2	-0.0020441	-61.322
883	SLU 83	-0.003779	-113.371	SLV 2	-0.0019894	-59.681
884	SLV 4	-0.004891	-146.729	SLV 13	-0.0009967	-29.901
885	SLV 4	-0.0043141	-129.424	SLV 13	-0.0009848	-29.543
886	SLV 4	-0.0037908	-113.723	SLV 13	-0.0009839	-29.518
887	SLV 4	-0.0033422	-100.266	SLV 13	-0.0009995	-29.986
888	SLV 4	-0.0029795	-89.384	SLV 13	-0.001035	-31.049
889	SLU 83	-0.0027663	-82.989	SLV 13	-0.0010924	-32.773
890	SLU 83	-0.0026916	-80.749	SLV 13	-0.0011727	-35.182
891	SLU 83	-0.002696	-80.879	SLV 13	-0.0012752	-38.256
892	SLU 83	-0.0027723	-83.168	SLV 13	-0.0013969	-41.907
893	SLU 83	-0.0029096	-87.288	SLV 13	-0.0015321	-45.962
894	SLU 83	-0.003092	-92.761	SLV 13	-0.0016711	-50.132
895	SLU 83	-0.0032971	-98.912	SLV 13	-0.0017996	-53.988
896	SLU 84	-0.0034938	-104.814	SLV 13	-0.0018981	-56.943
897	SLU 84	-0.0035542	-106.627	SLV 13	-0.0019215	-57.644
898	SLU 84	-0.0036244	-108.731	SLV 14	-0.0020222	-60.666
900	SLU 84	-0.0034877	-104.632	SLV 14	-0.0019362	-58.086
901	SLU 84	-0.0032902	-98.705	SLV 2	-0.0018158	-54.475
903	SLU 84	-0.0033426	-100.278	SLV 2	-0.0017729	-53.186
905	SLV 4	-0.0047896	-143.688	SLV 13	-0.0010505	-31.516
906	SLU 84	-0.0040228	-120.685	SLV 2	-0.0020024	-60.072
908	SLU 83	-0.0039097	-117.292	SLV 2	-0.0019457	-58.371
909	SLU 83	-0.003853	-115.589	SLV 2	-0.0019156	-57.469
910	SLU 83	-0.0037072	-111.217	SLV 2	-0.0018239	-54.716
911	SLU 83	-0.0035397	-106.191	SLV 2	-0.0017021	-51.062
912	SLU 83	-0.0033825	-101.476	SLV 2	-0.0015694	-47.083
913	SLU 83	-0.0032556	-97.669	SLV 2	-0.0014385	-43.155
914	SLU 83	-0.0031703	-95.11	SLV 2	-0.0013164	-39.492
915	SLU 83	-0.0031318	-93.955	SLV 2	-0.0012065	-36.195
916	SLV 15	-0.0032032	-96.096	SLV 2	-0.0011093	-33.28
917	SLV 15	-0.0033657	-100.97	SLV 2	-0.0010238	-30.715
918	SLV 15	-0.0035743	-107.23	SLV 2	-0.0009479	-28.437
919	SLV 15	-0.003821	-114.629	SLV 2	-0.0008789	-26.366
920	SLV 15	-0.0030665	-91.995	SLV 2	-0.0007238	-21.714
922	SLV 15	-0.0040912	-122.736	SLV 2	-0.0008137	-24.411
924	SLU 84	-0.0037302	-111.905	SLV 14	-0.002048	-61.44
926	SLU 84	-0.0036076	-108.227	SLV 14	-0.0019771	-59.314
927	SLU 84	-0.0034398	-103.194	SLV 2	-0.0018966	-56.897
929	SLU 84	-0.003488	-104.639	SLV 2	-0.0018531	-55.592
930	SLU 84	-0.0041289	-123.867	SLV 2	-0.001958	-58.741
933	SLV 4	-0.0052986	-158.959	SLV 13	-0.0011628	-34.884
946	SLU 84	-0.0039274	-117.822	SLV 13	-0.0018286	-54.858
949	SLU 84	-0.0041355	-124.064	SLV 13	-0.0019005	-57.014
963	SLU 84	-0.0042529	-127.587	SLV 2	-0.001872	-56.161
968	SLU 84	-0.0042876	-128.628	SLV 13	-0.0018428	-55.283
969	SLU 84	-0.0038745	-116.235	SLV 14	-0.0020906	-62.719
971	SLU 84	-0.0037657	-112.972	SLV 14	-0.0020349	-61.047
972	SLU 84	-0.0036273	-108.82	SLV 2	-0.0019961	-59.883
974	SLU 84	-0.0036713	-110.14	SLV 2	-0.001952	-58.56
975	SLU 84	-0.0045828	-137.484	SLV 13	-0.0018099	-54.297
976	SLU 84	-0.004291	-128.73	SLV 13	-0.0017812	-53.437
977	SLU 84	-0.0040181	-120.544	SLV 13	-0.0017341	-52.023
978	SLU 84	-0.0037902	-113.705	SLV 13	-0.0016911	-50.733
979	SLU 84	-0.0036225	-108.676	SLV 14	-0.001667	-50.011
980	SLU 84	-0.003522	-105.66	SLV 14	-0.0016671	-50.012
981	SLU 84	-0.0034885	-104.655	SLV 14	-0.0016975	-50.925
982	SLU 84	-0.003516	-105.479	SLV 14	-0.0017567	-52.702
983	SLU 84	-0.003592	-107.759	SLV 14	-0.0018385	-55.156
984	SLU 84	-0.0036964	-110.893	SLV 14	-0.0019314	-57.941
985	SLU 84	-0.0037998	-113.995	SLV 14	-0.0020176	-60.528
986	SLU 84	-0.0038601	-115.804	SLV 14	-0.0020718	-62.153
987	SLU 84	-0.0038239	-114.716	SLV 14	-0.0020615	-61.846
988	SLU 84	-0.0037112	-111.337	SLV 14	-0.0020133	-60.398
989	SLU 84	-0.0035472	-106.417	SLV 14	-0.0019569	-58.706
990	SLU 84	-0.0033738	-101.215	SLV 14	-0.0019095	-57.286
991	SLU 84	-0.0032211	-96.634	SLV 14	-0.0018835	-56.504
992	SLU 84	-0.0031082	-93.247	SLV 10	-0.0018831	-56.492
993	SLU 84	-0.0030461	-91.383	SLV 10	-0.0018682	-56.047
994	SLU 84	-0.0030393	-91.179	SLV 10	-0.0018826	-56.477
995	SLU 84	-0.0030872	-92.615	SLV 6	-0.0018975	-56.925
996	SLU 84	-0.0031835	-95.504	SLV 6	-0.0019315	-57.946
997	SLU 84	-0.0033156	-99.467	SLV 2	-0.0019661	-58.983

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
998	SLU 84	-0.0034623	-103.868	SLV 2	-0.001986	-59.58
999	SLU 84	-0.0035911	-107.733	SLV 2	-0.0019984	-59.951
1000	SLU 84	-0.0036576	-109.729	SLV 2	-0.0019787	-59.361
1001	SLU 84	-0.0036564	-109.692	SLV 2	-0.0019274	-57.823
1002	SLU 84	-0.0035835	-107.504	SLV 2	-0.0018427	-55.28
1003	SLU 84	-0.0034862	-104.586	SLV 2	-0.0017476	-52.427
1004	SLU 84	-0.0034012	-102.036	SLV 2	-0.0016599	-49.796
1005	SLU 84	-0.0033538	-100.613	SLV 2	-0.0015919	-47.756
1006	SLU 84	-0.0033606	-100.818	SLV 2	-0.0015517	-46.552
1007	SLU 84	-0.0034311	-102.933	SLV 2	-0.0015443	-46.329
1008	SLU 84	-0.0035684	-107.053	SLV 2	-0.0015713	-47.14
1009	SLU 84	-0.0037689	-113.066	SLV 2	-0.0016315	-48.944
1010	SLU 84	-0.0040207	-120.622	SLV 2	-0.0017195	-51.584
1011	SLU 84	-0.0043024	-129.072	SLV 2	-0.0018246	-54.738
1013	SLU 84	-0.0044483	-133.448	SLV 13	-0.0017599	-52.796
1015	SLV 3	-0.0046342	-139.027	SLV 14	-0.0016611	-49.832
1027	SLU 84	-0.004088	-122.64	SLV 14	-0.0021701	-65.104
1029	SLU 84	-0.0039842	-119.526	SLV 14	-0.0021198	-63.594
1042	SLU 84	-0.003875	-116.251	SLV 2	-0.0021266	-63.799
1044	SLU 84	-0.0039175	-117.525	SLV 2	-0.0020824	-62.472
1055	SLU 84	-0.0045341	-136.023	SLV 2	-0.0016967	-50.901

1.4 Cedimenti fondazioni superficiali

***Nodo**: nodo che interagisce col terreno.*
***Ind.**: indice del nodo.*
***spostamento nodale massimo**: situazione in cui si verifica lo spostamento massimo verticale nel nodo calcolato dal solutore ad elementi finiti. Lo spostamento massimo con segno è quello con valore massimo lungo l'asse Z, dove valori positivi rappresentano spostamenti verso l'alto.*
***Cont.**: nome breve della condizione o combinazione di carico a cui si riferisce lo spostamento.*
***uz**: spostamento verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento è dotato di segno. [m]*
***Press.**: pressione sul terreno corrispondente allo spostamento. Valori positivi indicano trazione, valori negativi indicano compressione. [kN/m²]*
***spostamento nodale minimo**: situazione in cui si verifica lo spostamento minimo verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento minimo con segno è quello con valore minimo lungo l'asse Z, dove valori negativi rappresentano spostamenti verso il basso.*
***Cont.**: nome breve della condizione o combinazione di carico a cui si riferisce lo spostamento.*
***uz**: spostamento verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento è dotato di segno. [m]*
***Press.**: pressione sul terreno corrispondente allo spostamento. Valori positivi indicano trazione, valori negativi indicano compressione. [kN/m²]*
***Cedimento elastico**: cedimento teorico elastico massimo.*
***Cont.**: nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico elastico massimo.*
***v.**: valore del cedimento teorico elastico massimo. [m]*
***Cedimento edometrico**: cedimento teorico edometrico massimo.*
***Cont.**: nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico edometrico massimo.*
***v.**: valore del cedimento teorico edometrico massimo. [m]*
***Cedimento di consolidazione**: cedimento teorico di consolidazione massimo.*
***Cont.**: nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico di consolidazione massimo.*
***v.**: valore del cedimento teorico di consolidazione massimo. [m]*

Spostamento estremo minimo -0.0041657 al nodo di indice 239, di coordinate x = -24.4, y = -3.28, z = -1.58, nel contesto SLD 1.
Spostamento estremo massimo -0.001394 al nodo di indice 920, di coordinate x = -0.47, y = 5.53, z = -1.58, nel contesto SLD 2.
Cedimento elastico estremo massimo 0.0018933 al nodo di indice 502, di coordinate x = -11.36, y = 0.36, z = -1.58, nel contesto SLE rara 21.

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
11	SLE RA 2	-2.7E-03	-80.201	SLE RA 20	-3.0E-03	-90.239	SLE RA 20	1.23E-03				
12	SLE RA 2	-2.7E-03	-80.234	SLE RA 20	-3.0E-03	-90.172	SLE RA 20	1.25E-03				
13	SLE RA 2	-2.7E-03	-80.22	SLE RA 20	-3.0E-03	-90.045	SLE RA 20	1.25E-03				
14	SLE RA 2	-2.7E-03	-80.141	SLE RA 20	-3.0E-03	-89.841	SLE RA 20	1.22E-03				
15	SLE RA 2	-2.7E-03	-79.993	SLE RA 20	-3.0E-03	-89.556	SLE RA 20	0.001171				
16	SLE RA 2	-2.7E-03	-79.711	SLE RA 20	-3.0E-03	-89.124	SLE RA 20	1.10E-03				
17	SLE RA 2	-2.6E-03	-79.291	SLE RA 20	-3.0E-03	-88.542	SLE RA 20	1.01E-03				
18	SLE RA 1	-2.6E-03	-78.953	SLE RA 21	-3.0E-03	-88.907	SLE RA 20	1.36E-03				
19	SLE RA 2	-2.6E-03	-78.958	SLE RA 20	-3.0E-03	-88.811	SLE RA 20	1.38E-03				
20	SLE RA 2	-2.6E-03	-78.815	SLE RA 20	-3.0E-03	-88.542	SLE RA 20	0.001366				
21	SLE RA 2	-2.6E-03	-78.627	SLE RA 20	-2.9E-03	-88.219	SLE RA 20	1.34E-03				
22	SLE RA 2	-2.6E-03	-78.445	SLE RA 20	-2.9E-03	-87.903	SLE RA 20	1.31E-03				
23	SLE RA 2	-2.6E-03	-78.189	SLE RA 20	-2.9E-03	-87.506	SLE RA 20	1.24E-03				
24	SLE RA 2	-2.6E-03	-77.718	SLE RA 20	-2.9E-03	-86.87	SLE RA 20	0.001144				
25	SLE RA 2	-2.6E-03	-76.695	SLE RA 20	-2.9E-03	-85.903	SLE RA 20	1.31E-03				
26	SLE RA 2	-2.5E-03	-76.273	SLE RA 20	-2.8E-03	-85.326	SLE RA 20	1.23E-03				
27	SLE RA 1	-2.6E-03	-76.67	SLE RA 21	-2.9E-03	-85.976	SLE RA 20	1.38E-03				
28	SLE RA 1	-2.6E-03	-77.57	SLE RA 21	-2.9E-03	-87.425	SLE RA 20	1.43E-03				
29	SLE RA 1	-2.6E-03	-77.411	SLE RA 21	-2.9E-03	-87.146	SLE RA 20	1.45E-03				
30	SLE RA 1	-2.6E-03	-76.945	SLE RA 21	-2.9E-03	-86.521	SLE RA 20	1.46E-03				
31	SLE RA 1	-2.5E-03	-76.334	SLE RA 21	-2.9E-03	-85.727	SLE RA 20	1.44E-03				
32	SLE RA 1	-2.5E-03	-75.085	SLE RA 21	-2.8E-03	-84.178	SLE RA 21	1.36E-03				
33	SLE RA 1	-2.5E-03	-74.673	SLE RA 21	-2.8E-03	-83.615	SLE RA 21	1.29E-03				
34	SLE RA 1	-2.5E-03	-75.112	SLE RA 21	-2.8E-03	-84.284	SLE RA 21	1.41E-03				
35	SLE RA 1	-2.5E-03	-75.087	SLE RA 21	-2.8E-03	-84.322	SLE RA 21	1.45E-03				
37	SLE RA 1	-2.5E-03	-76.081	SLE RA 21	-2.9E-03	-85.818	SLE RA 21	1.48E-03				
38	SLE RA 1	-2.5E-03	-75.781	SLE RA 21	-2.8E-03	-85.387	SLE RA 21	1.50E-03				
39	SLE RA 1	-2.5E-03	-75.215	SLE RA 21	-2.8E-03	-84.666	SLE RA 21	1.51E-03				
40	SLE RA 1	-2.5E-03	-74.533	SLE RA 21	-2.8E-03	-83.822	SLE RA 21	1.50E-03				
41	SLE RA 1	-2.5E-03	-73.909	SLE RA 21	-2.8E-03	-83.07	SLE RA 21	1.47E-03				
42	SLE RA 1	-2.4E-03	-73.479	SLE RA 21	-2.7E-03	-82.462	SLE RA 21	0.001386				
43	SLE RA 1	-2.4E-03	-73.013	SLE RA 21	-2.7E-03	-81.844	SLE RA 21	1.31E-03				
44	SLE RA 1	-2.5E-03	-73.65	SLE RA 21	-2.8E-03	-82.721	SLE RA 21	1.44E-03				
45	SLE RA 1	-2.5E-03	-74.55	SLE RA 21	-2.8E-03	-84.163	SLE RA 21	1.49E-03				
46	SLE RA 1	-2.5E-03	-74.186	SLE RA 21	-2.8E-03	-83.669	SLE RA 21	1.51E-03				
47	SLE RA 1	-2.5E-03	-73.629	SLE RA 21	-2.8E-03	-82.971	SLE RA 21	1.51E-03				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
48	SLE RA 1	-2.4E-03	-73.043	SLE RA 21	-2.7E-03	-82.245	SLE RA 21	1.50E-03				
49	SLE RA 1	-2.4E-03	-72.536	SLE RA 21	-2.7E-03	-81.618	SLE RA 21	1.47E-03				
50	SLE RA 1	-2.4E-03	-72.204	SLE RA 21	-2.7E-03	-81.184	SLE RA 21	1.43E-03				
51	SLE RA 1	-2.4E-03	-71.902	SLE RA 21	-2.7E-03	-80.78	SLE RA 21	1.38E-03				
52	SLE RA 1	-2.4E-03	-71.35	SLE RA 21	-2.7E-03	-80.069	SLE RA 21	1.31E-03				
53	SLE RA 1	-2.4E-03	-72.962	SLE RA 21	-2.7E-03	-82.451	SLE RA 21	1.46E-03				
54	SLE RA 1	-2.4E-03	-72.595	SLE RA 21	-2.7E-03	-81.958	SLE RA 21	1.48E-03				
55	SLE RA 1	-2.4E-03	-72.152	SLE RA 21	-2.7E-03	-81.398	SLE RA 21	1.48E-03				
56	SLE RA 1	-2.4E-03	-71.661	SLE RA 21	-2.7E-03	-80.785	SLE RA 21	1.47E-03				
57	SLE RA 1	-2.4E-03	-71.197	SLE RA 21	-2.7E-03	-80.202	SLE RA 21	0.001444				
58	SLE RA 1	-2.4E-03	-70.773	SLE RA 21	-2.7E-03	-79.663	SLE RA 21	0.001406				
59	SLE RA 1	-2.3E-03	-70.342	SLE RA 21	-2.6E-03	-79.114	SLE RA 21	1.36E-03				
60	SLD 2	-2.3E-03	-69.583	SLE RA 21	-2.6E-03	-78.316	SLE RA 21	0.001282				
61	SLD 10	-2.4E-03	-71.998	SLE RA 21	-2.7E-03	-81.499	SLE RA 21	1.43E-03				
62	SLE RA 1	-2.4E-03	-71.696	SLE RA 21	-2.7E-03	-80.992	SLE RA 21	1.44E-03				
63	SLE RA 1	-2.4E-03	-71.268	SLE RA 21	-2.7E-03	-80.451	SLE RA 21	1.44E-03				
64	SLE RA 1	-2.4E-03	-70.767	SLE RA 21	-2.7E-03	-79.83	SLE RA 21	1.43E-03				
65	SLE RA 1	-2.3E-03	-70.261	SLE RA 21	-2.6E-03	-79.205	SLE RA 21	1.41E-03				
66	SLE RA 1	-2.3E-03	-69.772	SLE RA 21	-2.6E-03	-78.595	SLE RA 21	0.001372				
67	SLE RA 1	-2.3E-03	-69.275	SLE RA 21	-2.6E-03	-77.973	SLE RA 21	0.001324				
68	SLD 2	-2.3E-03	-68.346	SLE RA 21	-2.6E-03	-77.145	SLE RA 21	1.25E-03				
123	SLD 16	-3.0E-03	-90.414	SLE RA 20	-3.5E-03	-104.569	SLE RA 20	1.36E-05				
124	SLD 12	-3.0E-03	-91.052	SLE RA 20	-3.5E-03	-104.516	SLE RA 20	1.57E-05				
125	SLD 12	-3.1E-03	-91.623	SLE RA 20	-3.5E-03	-104.866	SLE RA 20	2.67E-05				
126	SLD 12	-3.1E-03	-92.452	SLE RA 20	-3.5E-03	-105.553	SLE RA 20	3.93E-05				
127	SLD 12	-3.1E-03	-93.422	SLE RA 20	-3.5E-03	-106.452	SLE RA 20	4.79E-05				
128	SLD 12	-3.1E-03	-93.639	SLE RA 20	-3.6E-03	-106.584	SLE RA 20	5.81E-05				
129	SLD 16	-3.0E-03	-89.678	SLD 1	-3.6E-03	-108.073						
130	SLD 16	-3.0E-03	-89.63	SLE RA 20	-3.5E-03	-105.836	SLE RA 20	2.94E-06				
131	SLD 16	-3.0E-03	-89.895	SLE RA 20	-3.5E-03	-104.967	SLE RA 20	9.90E-06				
144	SLD 7	-2.9E-03	-87.537	SLE RA 20	-3.3E-03	-100.171	SLE RA 20	2.21E-04				
146	SLD 7	-3.0E-03	-88.589	SLE RA 20	-3.4E-03	-101.537	SLE RA 20	1.84E-04				
148	SLD 7	-3.0E-03	-89.07	SLE RA 20	-3.4E-03	-102.237	SLE RA 20	1.32E-04				
150	SLD 7	-3.0E-03	-89.147	SLE RA 20	-3.4E-03	-102.525	SLE RA 20	9.95E-05				
152	SLD 7	-3.0E-03	-89.03	SLE RA 20	-3.4E-03	-102.637	SLE RA 20	7.09E-05				
154	SLD 7	-3.0E-03	-88.872	SLE RA 20	-3.4E-03	-102.738	SLE RA 20	4.37E-05				
156	SLD 3	-3.0E-03	-88.512	SLE RA 20	-3.4E-03	-102.954	SLE RA 20	1.64E-05				
158	SLD 3	-2.9E-03	-88.053	SLE RA 20	-3.4E-03	-103.357	SLE RA 20	1.23E-05				
159	SLD 3	-2.9E-03	-87.781	SLD 14	-3.5E-03	-103.95	SLE RA 20	8.24E-06				
160	SLD 3	-2.9E-03	-87.661	SLD 14	-3.5E-03	-105.733	SLE RA 20	7.37E-07				
161	SLD 3	-2.9E-03	-87.728	SLD 14	-3.6E-03	-107.729						
162	SLD 12	-2.9E-03	-88.393	SLE RA 20	-3.3E-03	-100.062	SLE RA 20	2.19E-04				
163	SLD 11	-2.9E-03	-86.311	SLE RA 20	-3.3E-03	-97.725	SLE RA 20	2.28E-04				
164	SLD 7	-2.8E-03	-84.336	SLE RA 20	-3.2E-03	-95.572	SLE RA 20	2.45E-04				
165	SLD 7	-2.8E-03	-83.087	SLE RA 20	-3.1E-03	-94.243	SLE RA 20	2.76E-04				
166	SLD 7	-2.8E-03	-82.818	SLE RA 20	-3.1E-03	-94.025	SLE RA 20	3.19E-04				
167	SLD 7	-2.8E-03	-83.47	SLE RA 20	-3.2E-03	-94.852	SLE RA 20	0.000362				
168	SLD 7	-2.8E-03	-84.667	SLE RA 20	-3.2E-03	-96.308	SLE RA 20	3.87E-04				
169	SLD 7	-2.9E-03	-85.719	SLE RA 20	-3.3E-03	-97.622	SLE RA 20	3.80E-04				
170	SLD 16	-2.9E-03	-86.672	SLE RA 20	-3.4E-03	-101.721	SLE RA 20	6.01E-05				
171	SLD 16	-2.9E-03	-86.353	SLE RA 20	-3.3E-03	-100.284	SLE RA 20	1.05E-04				
172	SLD 16	-2.9E-03	-86.452	SLE RA 20	-3.3E-03	-99.376	SLE RA 20	1.37E-04				
173	SLD 12	-2.9E-03	-86.952	SLE RA 20	-3.3E-03	-99.112	SLE RA 20	1.61E-04				
174	SLD 12	-2.9E-03	-87.532	SLE RA 20	-3.3E-03	-99.522	SLE RA 20	1.89E-04				
175	SLD 12	-3.0E-03	-88.595	SLE RA 20	-3.4E-03	-100.514	SLE RA 20	2.10E-04				
176	SLD 12	-3.0E-03	-89.842	SLE RA 20	-3.4E-03	-101.758	SLE RA 20	2.22E-04				
177	SLD 12	-3.0E-03	-90.847	SLE RA 20	-3.4E-03	-102.796	SLE RA 20	2.47E-04				
178	SLD 16	-2.9E-03	-87.229	SLD 1	-3.5E-03	-103.906	SLE RA 20	2.60E-06				
180	SLD 7	-2.8E-03	-84.987	SLE RA 20	-3.2E-03	-96.641	SLE RA 20	3.99E-04				
182	SLD 7	-2.9E-03	-85.836	SLE RA 20	-3.3E-03	-97.751	SLE RA 20	0.00038				
183	SLD 7	-2.9E-03	-86.167	SLE RA 20	-3.3E-03	-98.257	SLE RA 20	3.48E-04				
184	SLD 7	-2.9E-03	-86.113	SLE RA 20	-3.3E-03	-98.367	SLE RA 20	3.04E-04				
185	SLD 7	-2.9E-03	-85.91	SLE RA 20	-3.3E-03	-98.346	SLE RA 20	2.61E-04				
186	SLD 7	-2.9E-03	-85.773	SLE RA 20	-3.3E-03	-98.433	SLE RA 20	2.19E-04				
187	SLD 3	-2.8E-03	-85.468	SLE RA 20	-3.3E-03	-98.789	SLE RA 20	1.74E-04				
188	SLD 3	-2.8E-03	-85.312	SLE RA 20	-3.3E-03	-99.481	SLE RA 20	1.31E-04				
189	SLD 3	-2.8E-03	-85.409	SLE RA 20	-3.3E-03	-100.487	SLE RA 20	9.57E-05				
190	SLD 3	-2.9E-03	-85.696	SLD 14	-3.4E-03	-102.033	SLE RA 20	4.77E-05				
191	SLD 3	-2.9E-03	-86.078	SLD 14	-3.5E-03	-104.158	SLE RA 20	0.000002				
192	SLD 16	-2.8E-03	-83.629	SLE RA 20	-3.2E-03	-97.466	SLE RA 20	1.90E-04				
193	SLD 16	-2.8E-03	-82.739	SLE RA 20	-3.2E-03	-95.432	SLE RA 20	2.47E-04				
194	SLD 16	-2.7E-03	-82.406	SLE RA 20	-3.1E-03	-94.113	SLE RA 20	2.88E-04				
195	SLD 16	-2.8E-03	-82.804	SLE RA 20	-3.1E-03	-93.688	SLE RA 20	3.22E-04				
196	SLD 12	-2.8E-03	-83.448	SLE RA 20	-3.1E-03	-94.211	SLE RA 20	0.00035				
197	SLD 12	-2.8E-03	-84.825	SLE RA 20	-3.2E-03	-95.596	SLE RA 20	3.75E-04				
198	SLD 12	-2.9E-03	-86.727	SLE RA 20	-3.3E-03	-97.607	SLE RA 20	0.000386				
199	SLD 8	-3.0E-03	-88.89	SLE RA 20	-3.3E-03	-100.021	SLE RA 20	3.70E-04				
200	SLD 16	-2.8E-03	-84.841	SLE RA 20	-3.3E-03	-99.949	SLE RA 20	1.00E-04				
203	SLD 7	-2.8E-03	-82.934	SLE RA 20	-3.1E-03	-93.726	SLE RA 20	5.68E-04				
205	SLD 7	-2.8E-03	-83.435	SLE RA 20	-3.1E-03	-94.381	SLE RA 20	5.61E-04				
206	SLD 7	-2.8E-03	-83.498	SLE RA 20	-3.2E-03	-94.56	SLE RA 20	5.32E-04				
207	SLD 7	-2.8E-03	-83.215	SLE RA 20	-3.1E-03	-94.383	SLE RA 20	0.000491				
208	SLD 7	-2.8E-03	-82.866	SLE RA 20	-3.1E-03	-94.16	SLE RA 20	4.43E-04				
209	SLD 3	-2.8E-03	-82.716	SLE RA 20	-3.1E-03	-94.195	SLE RA 20	3.92E-04				
210	SLD 3	-2.7E-03	-82.464	SLE RA 20	-3.2E-03	-94.683	SLE RA 20	3.37E-04				
211	SLD 3	-2.8E-03	-82.617	SLE RA 20	-3.2E-03	-95.673	SLE RA 20	2.85E-04				
212	SLD 3	-2.8E-03	-83.097	SLE RA 20	-3.2E-03	-97.06	SLE RA 20	2.35E-04				
213	SLD 3	-2.8E-03	-83.752	SLE RA 20	-3.3E-03	-98.641	SLE RA 20	1.73E-04				
214	SLD 3	-2.8E-03	-84.469	SLD 14	-3.4E-03	-100.654	SLE RA 20	9.09E-05				
215	SLD 16	-2.7E-03	-80.242	SLE RA 20	-3.1E-03	-92.827	SLE RA 20	3.28E-04				
216	SLD 16	-2.6E-03	-78.872	SLE RA 20	-3.0E-03	-90.317	SLE RA 20	3.84E-04				
217	SLD 16	-2.6E-03	-78.207	SLE RA 20	-3.0E-03	-88.711	SLE RA 20	4.27E-04				
218	SLD 16	-2.6E-03	-78.454	SLE RA 20	-2.9E-03	-88.204	SLE RA 20	4.60E-04				
219	SLE RA 2	-2.6E-03	-79.287	SLE RA 20	-3.0E-03	-88.877	SLE RA 20	4.94E-04				
220	SLE RA 2	-2.7E-03	-80.829	SLE RA 20	-3.0E-03	-90.707	SLE RA 20	5.18E-04				
221	SLE RA 2	-2.8E-03	-83.251	SLE RA 20	-3.1E-03	-93.539	SLE RA 20	5.24E-04				
222	SLE RA 2	-2.9E-03	-86.174	SLE RA 20	-3.2E-03	-96.934	SLE RA 20	5.25E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
223	SLD 16	-2.7E-03	-82.133	SLE RA 20	-3.2E-03	-96.111	SLE RA 20	2.55E-04				
225	SLE RA 2	-2.7E-03	-80.834	SLE RA 20	-3.0E-03	-90.98	SLE RA 20	6.87E-04				
227	SLE RA 2	-2.7E-03	-81.141	SLE RA 20	-3.0E-03	-91.244	SLE RA 20	6.95E-04				
228	SLD 7	-2.7E-03	-81.016	SLE RA 20	-3.0E-03	-91.11	SLE RA 20	6.71E-04				
229	SLD 7	-2.7E-03	-80.446	SLE RA 20	-3.0E-03	-90.576	SLE RA 20	6.39E-04				
230	SLD 7	-2.7E-03	-79.885	SLE RA 20	-3.0E-03	-90.076	SLE RA 20	5.94E-04				
231	SLD 3	-2.7E-03	-79.575	SLE RA 20	-3.0E-03	-90.01	SLE RA 20	5.44E-04				
232	SLD 3	-2.6E-03	-79.45	SLE RA 20	-3.0E-03	-90.595	SLE RA 20	4.92E-04				
233	SLD 3	-2.7E-03	-79.889	SLE RA 20	-3.1E-03	-91.871	SLE RA 20	4.37E-04				
234	SLD 3	-2.7E-03	-80.743	SLE RA 20	-3.1E-03	-93.645	SLE RA 20	3.80E-04				
235	SLD 3	-2.7E-03	-81.661	SLE RA 20	-3.2E-03	-95.448	SLE RA 20	3.19E-04				
236	SLD 3	-2.8E-03	-82.579	SLE RA 20	-3.2E-03	-97.25	SLE RA 20	2.45E-04				
239	SLD 16	-2.2E-03	-67.462	SLD 1	-4.2E-03	-124.972	SLE RA 20	4.71E-05				
255	SLD 16	-2.5E-03	-75.119	SLD 1	-3.1E-03	-93.831	SLE RA 20	3.04E-04				
257	SLD 16	-2.6E-03	-77.282	SLD 1	-3.2E-03	-94.588	SLE RA 20	3.74E-04				
261	SLD 16	-2.6E-03	-78.256	SLE RA 20	-3.0E-03	-91.041	SLE RA 20	4.38E-04				
262	SLD 16	-2.5E-03	-76.019	SLE RA 20	-2.9E-03	-87.211	SLE RA 20	4.65E-04				
263	SLD 16	-2.5E-03	-74.57	SLE RA 20	-2.8E-03	-84.743	SLE RA 20	4.97E-04				
264	SLD 16	-2.5E-03	-73.787	SLE RA 20	-0.00277	-83.1	SLE RA 20	5.32E-04				
265	SLE RA 2	-2.5E-03	-73.788	SLE RA 20	-2.8E-03	-82.609	SLE RA 20	0.000568				
266	SLE RA 2	-2.5E-03	-74.438	SLE RA 20	-2.8E-03	-83.428	SLE RA 20	5.74E-04				
267	SLE RA 2	-2.5E-03	-76.259	SLE RA 20	-2.9E-03	-85.58	SLE RA 20	0.000597				
268	SLE RA 2	-2.6E-03	-79.187	SLE RA 20	-3.0E-03	-88.989	SLE RA 20	6.38E-04				
269	SLE RA 2	-2.7E-03	-80.163	SLE RA 20	-3.0E-03	-90.122	SLE RA 20	6.37E-04				
270	SLE RA 2	-2.7E-03	-82.321	SLE RA 20	-3.1E-03	-92.617	SLE RA 20	6.29E-04				
272	SLE RA 2	-2.6E-03	-78.129	SLE RA 20	-2.9E-03	-87.964	SLE RA 20	8.14E-04				
274	SLE RA 2	-2.6E-03	-78.238	SLE RA 20	-2.9E-03	-88.001	SLE RA 20	8.09E-04				
275	SLE RA 2	-2.6E-03	-78.079	SLE RA 20	-2.9E-03	-87.767	SLE RA 20	8.20E-04				
276	SLE RA 2	-2.6E-03	-77.313	SLE RA 20	-2.9E-03	-86.825	SLE RA 20	7.80E-04				
277	SLE RA 2	-2.6E-03	-76.677	SLE RA 20	-2.9E-03	-86.03	SLE RA 20	0.000727				
278	SLD 3	-2.5E-03	-76.411	SLE RA 20	-2.9E-03	-85.824	SLE RA 20	6.66E-04				
279	SLD 3	-2.5E-03	-76.35	SLE RA 20	-2.9E-03	-86.444	SLE RA 20	6.02E-04				
280	SLD 3	-2.6E-03	-76.977	SLE RA 20	-2.9E-03	-87.921	SLE RA 20	5.46E-04				
281	SLD 3	-2.6E-03	-78.138	SLE RA 20	-3.0E-03	-90.086	SLE RA 20	4.96E-04				
282	SLD 3	-2.6E-03	-78.996	SLE RA 20	-3.1E-03	-91.702	SLE RA 20	4.63E-04				
283	SLD 3	-2.7E-03	-79.765	SLE RA 20	-3.1E-03	-93.255	SLE RA 20	4.44E-04				
287	SLD 3	-2.6E-03	-78.402	SLD 14	-3.2E-03	-96.259	SLE RA 20	3.12E-04				
289	SLD 3	-2.5E-03	-76.08	SLD 14	-3.2E-03	-95.116	SLE RA 20	0.000239				
304	SLD 3	-2.1E-03	-63.435	SLD 14	-3.9E-03	-117.906	SLE RA 20	5.02E-05				
308	SLD 3	-2.1E-03	-64.236	SLD 14	-4.0E-03	-121.153	SLE RA 21	5.26E-05				
309	SLD 3	-2.0E-03	-59.174	SLD 14	-3.6E-03	-108.815	SLE RA 21	0.000066				
310	SLD 3	-1.8E-03	-55.016	SLD 14	-3.3E-03	-98.202	SLE RA 20	6.08E-05				
311	SLD 3	-1.7E-03	-51.888	SLD 14	-3.0E-03	-89.545	SLE RA 20	4.55E-05				
312	SLD 16	-2.2E-03	-65.789	SLD 1	-4.1E-03	-123.17	SLE RA 20	5.09E-05				
313	SLD 16	-2.0E-03	-61.231	SLD 1	-3.7E-03	-112.054	SLE RA 20	6.11E-05				
314	SLD 16	-1.9E-03	-57.27	SLD 1	-3.4E-03	-102.085	SLE RA 20	5.65E-05				
315	SLD 16	-1.8E-03	-54.07	SLD 1	-3.1E-03	-93.578	SLE RA 20	4.42E-05				
316	SLD 16	-1.7E-03	-51.697	SLD 1	-2.9E-03	-86.645	SLE RA 20	3.21E-05				
317	SLD 16	-1.7E-03	-50.158	SLD 1	-2.7E-03	-81.277	SLE RA 20	2.32E-05				
318	SLD 16	-1.6E-03	-49.434	SLD 1	-2.6E-03	-77.398	SLE RA 20	1.76E-05				
319	SLD 16	-1.6E-03	-49.497	SLD 1	-2.5E-03	-74.907	SLE RA 20	0.000015				
320	SLD 16	-1.7E-03	-50.316	SLD 1	-2.5E-03	-73.694	SLE RA 20	1.49E-05				
321	SLD 16	-1.7E-03	-51.857	SLD 1	-2.5E-03	-73.653	SLE RA 20	1.71E-05				
322	SLD 16	-1.8E-03	-54.081	SLD 1	-2.5E-03	-74.673	SLE RA 20	2.24E-05				
323	SLD 16	-1.9E-03	-56.923	SLD 1	-2.6E-03	-76.626	SLE RA 20	3.11E-05				
324	SLD 16	-2.0E-03	-60.278	SLD 1	-2.6E-03	-79.334	SLE RA 20	8.89E-05				
325	SLD 16	-2.1E-03	-63.961	SLD 1	-2.8E-03	-82.525	SLE RA 20	0.000185				
326	SLD 16	-2.3E-03	-67.672	SLD 1	-2.9E-03	-85.779	SLE RA 20	3.07E-04				
327	SLD 16	-2.4E-03	-70.94	SLD 1	-2.9E-03	-88.462	SLE RA 20	3.75E-04				
328	SLD 16	-2.4E-03	-73.116	SLD 1	-3.0E-03	-89.715	SLE RA 20	4.51E-04				
329	SLD 16	-2.5E-03	-74.362	SLD 1	-3.0E-03	-89.785	SLE RA 20	4.96E-04				
330	SLD 16	-2.5E-03	-74.794	SLD 1	-3.0E-03	-88.659	SLE RA 20	5.47E-04				
331	SLD 16	-2.5E-03	-74.569	SLE RA 20	-2.9E-03	-87.217	SLE RA 20	5.38E-04				
332	SLD 16	-2.5E-03	-73.703	SLE RA 20	-2.8E-03	-85.311	SLE RA 20	5.31E-04				
333	SLD 16	-2.4E-03	-71.933	SLE RA 20	-2.7E-03	-82.025	SLE RA 20	5.37E-04				
334	SLD 16	-2.3E-03	-70.494	SLE RA 20	-2.7E-03	-79.595	SLE RA 20	5.56E-04				
335	SLD 16	-2.3E-03	-69.591	SLE RA 20	-2.6E-03	-77.871	SLE RA 20	5.92E-04				
336	SLE RA 2	-2.3E-03	-69.094	SLE RA 20	-2.6E-03	-77.325	SLE RA 20	6.18E-04				
337	SLE RA 2	-2.3E-03	-69.766	SLE RA 20	-2.6E-03	-78.172	SLE RA 20	6.59E-04				
338	SLE RA 2	-2.4E-03	-71.668	SLE RA 20	-2.7E-03	-80.419	SLE RA 20	0.000692				
339	SLE RA 2	-2.5E-03	-74.632	SLE RA 20	-2.8E-03	-83.872	SLE RA 20	7.33E-04				
340	SLE RA 2	-2.6E-03	-79.316	SLE RA 20	-3.0E-03	-89.293	SLE RA 20	7.15E-04				
341	SLD 3	-1.7E-03	-49.809	SLD 14	-2.8E-03	-82.859	SLE RA 20	3.11E-05				
342	SLD 3	-1.6E-03	-48.749	SLD 14	-2.6E-03	-78.047	SLE RA 20	2.13E-05				
343	SLD 3	-1.6E-03	-48.66	SLD 14	-2.5E-03	-74.966	SLE RA 20	0.000016				
344	SLD 3	-1.6E-03	-49.495	SLD 14	-2.4E-03	-73.461	SLE RA 20	1.46E-05				
345	SLD 3	-1.7E-03	-51.205	SLD 14	-2.4E-03	-73.385	SLE RA 20	1.58E-05				
346	SLD 3	-1.8E-03	-53.734	SLD 14	-2.5E-03	-74.588	SLE RA 20	2.03E-05				
347	SLD 3	-1.9E-03	-56.997	SLD 14	-2.6E-03	-76.899	SLE RA 20	0.000028				
348	SLD 3	-2.0E-03	-60.849	SLD 14	-2.7E-03	-80.083	SLE RA 20	5.22E-05				
349	SLD 3	-2.2E-03	-65.035	SLD 14	-2.8E-03	-83.78	SLE RA 20	1.28E-04				
350	SLD 3	-2.3E-03	-69.131	SLD 14	-2.9E-03	-87.422	SLE RA 20	2.38E-04				
351	SLD 3	-2.4E-03	-73.358	SLD 14	-3.0E-03	-90.692	SLE RA 20	3.78E-04				
352	SLD 3	-2.4E-03	-72.466	SLD 14	-3.0E-03	-90.141	SLE RA 20	3.44E-04				
353	SLD 3	-2.5E-03	-76.151	SLD 14	-3.1E-03	-92.005	SLE RA 20	4.81E-04				
354	SLD 3	-2.5E-03	-75.68	SLD 14	-3.1E-03	-91.835	SLE RA 20	4.68E-04				
355	SLD 3	-2.6E-03	-77.013	SLD 14	-3.1E-03	-91.545	SLE RA 20	5.06E-04				
356	SLD 3	-2.6E-03	-77.098	SLE RA 20	-3.0E-03	-90.488	SLE RA 20	5.21E-04				
357	SLD 3	-2.6E-03	-76.518	SLE RA 20	-3.0E-03	-88.881	SLE RA 20	5.38E-04				
358	SLD 3	-2.5E-03	-75.919	SLE RA 20	-2.9E-03	-87.517	SLE RA 20	5.60E-04				
359	SLD 3	-2.5E-03	-75.137	SLE RA 20	-2.9E-03	-85.99	SLE RA 20	5.95E-04				
360	SLD 3	-2.5E-03	-74.033	SLE RA 20	-2.8E-03	-83.911	SLE RA 20	6.51E-04				
361	SLD 3	-2.4E-03	-73.385	SLE RA 20	-2.7E-03	-82.454	SLE RA 20	7.12E-04				
362	SLE RA 2	-2.4E-03	-73.066	SLE RA 20	-2.7E-03	-81.903	SLE RA 20	7.74E-04				
363	SLE RA 2	-2.4E-03	-73.322	SLE RA 20	-2.7E-03	-82.267	SLE RA 20	8.35E-04				
364	SLE RA 2	-2.5E-03	-74.166	SLE RA 20	-2.8E-03	-83.3	SLE RA 20	8.88E-04				
365	SLE RA 2	-2.5E-03	-75.141	SLE RA 20	-2.8E-03	-84.48	SLE RA 20	9.26E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
366	SLE RA 2	-2.5E-03	-75.584	SLE RA 20	-2.8E-03	-85.065	SLE RA 20	9.38E-04				
367	SLD 16	-2.4E-03	-71.979	SLD 1	-3.0E-03	-89.214	SLE RA 20	0.000419				
369	SLD 16	-2.5E-03	-74.096	SLD 1	-3.0E-03	-89.933	SLE RA 20	5.02E-04				
370	SLD 3	-2.0E-03	-59.479	SLD 14	-3.7E-03	-109.702	SLE RA 21	6.62E-05				
371	SLD 3	-2.5E-03	-75.602	SLD 14	-3.1E-03	-91.669	SLE RA 20	4.86E-04				
374	SLD 3	-2.4E-03	-73.339	SLD 14	-3.0E-03	-90.558	SLE RA 20	3.95E-04				
376	SLD 16	-2.1E-03	-62.224	SLD 1	-3.8E-03	-114.733	SLE RA 20	6.04E-05				
377	SLE RA 2	-2.5E-03	-75.248	SLE RA 20	-2.8E-03	-84.752	SLE RA 20	0.000928				
381	SLD 16	-2.3E-03	-69.827	SLD 1	-2.9E-03	-85.935	SLE RA 20	5.46E-04				
383	SLD 16	-2.4E-03	-71.822	SLD 1	-2.9E-03	-86.549	SLE RA 20	6.21E-04				
384	SLD 3	-1.9E-03	-56.453	SLD 14	-3.4E-03	-103.216	SLE RA 21	6.62E-05				
385	SLD 3	-2.5E-03	-73.656	SLD 14	-2.9E-03	-88.307	SLE RA 20	0.000574				
388	SLD 3	-2.4E-03	-71.551	SLD 14	-2.9E-03	-87.282	SLE RA 20	4.90E-04				
390	SLD 16	-1.9E-03	-58.273	SLD 1	-3.6E-03	-106.861	SLE RA 20	5.73E-05				
391	SLE RA 2	-2.4E-03	-73.383	SLE RA 20	-2.8E-03	-82.693	SLE RA 20	1.04E-03				
395	SLD 16	-2.3E-03	-68.365	SLD 1	-2.8E-03	-83.613	SLE RA 20	6.35E-04				
397	SLD 16	-2.3E-03	-70.24	SLD 1	-2.8E-03	-84.126	SLE RA 20	7.02E-04				
398	SLD 3	-1.8E-03	-54.515	SLD 14	-3.3E-03	-98.767	SLE RA 21	0.000057				
399	SLD 3	-2.4E-03	-72.352	SLD 14	-2.9E-03	-85.854	SLE RA 20	6.73E-04				
402	SLD 3	-2.3E-03	-70.401	SLD 14	-2.8E-03	-84.914	SLE RA 20	0.000585				
404	SLD 16	-1.9E-03	-55.65	SLD 1	-3.4E-03	-101.479	SLE RA 20	4.62E-05				
405	SLE RA 2	-2.4E-03	-72.728	SLE RA 20	-2.7E-03	-82.004	SLE RA 20	1.18E-03				
409	SLE RA 2	-2.2E-03	-66.297	SLE RA 20	-2.5E-03	-74.637	SLE RA 20	9.43E-04				
410	SLD 16	-2.2E-03	-67.38	SLD 1	-2.7E-03	-81.963	SLE RA 20	7.07E-04				
412	SLD 16	-2.3E-03	-69.13	SLD 1	-2.7E-03	-82.379	SLE RA 20	7.92E-04				
413	SLD 3	-1.8E-03	-53.703	SLD 14	-3.2E-03	-96.447	SLE RA 21	0.000049				
414	SLD 3	-2.4E-03	-71.446	SLE RA 21	-2.8E-03	-84.229	SLE RA 20	0.000775				
417	SLD 3	-2.3E-03	-69.649	SLD 14	-2.8E-03	-83.144	SLE RA 20	6.74E-04				
420	SLD 16	-1.8E-03	-54.277	SLD 1	-3.3E-03	-98.487	SLE RA 20	3.76E-05				
421	SLE RA 2	-2.4E-03	-73.191	SLE RA 20	-2.8E-03	-82.583	SLE RA 20	1.36E-03				
424	SLD 16	-2.2E-03	-66.727	SLD 1	-2.7E-03	-80.811	SLE RA 20	8.05E-04				
426	SLD 16	-2.3E-03	-68.344	SLD 1	-2.7E-03	-81.142	SLE RA 20	8.82E-04				
427	SLD 3	-1.8E-03	-53.976	SLD 14	-3.2E-03	-96.196	SLE RA 21	4.66E-05				
428	SLD 3	-2.4E-03	-70.764	SLE RA 21	-2.8E-03	-83.092	SLE RA 21	8.86E-04				
431	SLD 3	-2.3E-03	-69.122	SLE RA 21	-2.7E-03	-81.759	SLE RA 21	7.93E-04				
434	SLD 16	-1.8E-03	-54.024	SLD 1	-3.3E-03	-97.683	SLE RA 20	3.52E-05				
435	SLE RA 2	-0.00248	-74.401	SLE RA 20	-2.8E-03	-84.003	SLE RA 20	1.59E-03				
439	SLD 16	-2.2E-03	-66.318	SLD 1	-2.7E-03	-80.063	SLE RA 20	9.11E-04				
441	SLD 16	-2.3E-03	-67.79	SLD 1	-2.7E-03	-80.322	SLE RA 20	9.79E-04				
442	SLD 3	-1.8E-03	-55.216	SLD 14	-3.3E-03	-97.814	SLE RA 21	7.52E-05				
443	SLD 3	-2.3E-03	-70.175	SLE RA 21	-2.7E-03	-82.158	SLE RA 21	9.80E-04				
446	SLD 3	-2.3E-03	-68.696	SLE RA 21	-2.7E-03	-80.948	SLE RA 21	8.77E-04				
453	SLD 16	-1.8E-03	-54.729	SLD 1	-3.3E-03	-98.779	SLE RA 20	3.98E-05				
454	SLE RA 1	-2.5E-03	-75.701	SLE RA 21	-2.9E-03	-85.519	SLE RA 20	1.81E-03				
458	SLD 14	-2.2E-03	-66.112	SLD 3	-2.7E-03	-79.65	SLE RA 20	0.001029				
460	SLD 14	-2.2E-03	-67.448	SLD 3	-2.7E-03	-79.83	SLE RA 20	1.09E-03				
461	SLD 3	-1.9E-03	-57.226	SLD 14	-3.4E-03	-100.942	SLE RA 21	1.29E-04				
462	SLD 3	-2.3E-03	-69.584	SLE RA 21	-2.7E-03	-81.358	SLE RA 21	1.06E-03				
465	SLD 3	-2.3E-03	-68.281	SLE RA 21	-2.7E-03	-80.27	SLE RA 21	9.86E-04				
468	SLD 16	-1.9E-03	-56.186	SLD 1	-3.4E-03	-101.383	SLE RA 20	0.000075				
470	SLE RA 1	-2.3E-03	-70.109	SLE RA 21	-2.6E-03	-79.194	SLE RA 20	0.00136				
471	SLE RA 1	-2.5E-03	-73.545	SLE RA 21	-2.8E-03	-83.193	SLE RA 20	1.42E-03				
472	SLE RA 1	-2.6E-03	-78.154	SLE RA 21	-3.0E-03	-88.565	SLE RA 20	1.48E-03				
473	SLE RA 2	-2.6E-03	-78.689	SLE RA 20	-3.0E-03	-89.159	SLE RA 20	1.57E-03				
474	SLE RA 1	-2.5E-03	-76.492	SLE RA 21	-2.9E-03	-86.451	SLE RA 20	1.85E-03				
476	SLD 14	-2.2E-03	-66.102	SLD 3	-2.6E-03	-79.49	SLE RA 21	1.15E-03				
478	SLD 13	-2.2E-03	-67.312	SLE RA 21	-2.7E-03	-79.651	SLE RA 21	1.20E-03				
479	SLD 3	-2.0E-03	-59.703	SLD 14	-3.5E-03	-105.016	SLE RA 21	2.01E-04				
480	SLD 1	-2.3E-03	-68.982	SLE RA 21	-2.7E-03	-80.679	SLE RA 21	1.16E-03				
483	SLD 1	-2.3E-03	-67.844	SLE RA 21	-2.7E-03	-79.711	SLE RA 21	1.09E-03				
486	SLE RA 1	-2.5E-03	-76.134	SLE RA 21	-2.9E-03	-86.058	SLE RA 21	1.89E-03				
489	SLD 16	-1.9E-03	-58.118	SLD 1	-3.5E-03	-104.921	SLE RA 21	1.48E-04				
493	SLD 13	-2.2E-03	-66.221	SLD 4	-2.7E-03	-79.513	SLE RA 21	1.13E-03				
495	SLD 13	-2.2E-03	-67.301	SLE RA 21	-2.7E-03	-79.672	SLE RA 21	1.18E-03				
496	SLD 3	-2.1E-03	-62.191	SLD 14	-0.00364	-109.201	SLE RA 21	2.80E-04				
497	SLD 2	-0.00228	-68.4	SLE RA 21	-2.7E-03	-80.167	SLE RA 21	0.001237				
500	SLD 2	-2.2E-03	-67.439	SLE RA 21	-2.6E-03	-79.318	SLE RA 21	1.18E-03				
502	SLE RA 1	-2.5E-03	-75.104	SLE RA 21	-2.8E-03	-84.894	SLE RA 21	1.89E-03				
505	SLD 13	-2.0E-03	-60.088	SLD 4	-3.6E-03	-108.553	SLE RA 21	2.20E-04				
509	SLD 3	-2.1E-03	-64.029	SLD 14	-3.7E-03	-112.288	SLE RA 21	2.97E-04				
510	SLD 13	-2.2E-03	-66.393	SLD 4	-2.7E-03	-79.549	SLE RA 21	1.17E-03				
512	SLD 13	-2.2E-03	-67.362	SLE RA 21	-2.7E-03	-79.727	SLE RA 21	1.21E-03				
513	SLD 2	-2.3E-03	-67.92	SLE RA 21	-2.7E-03	-79.934	SLE RA 21	1.28E-03				
516	SLD 2	-2.2E-03	-67.105	SLE RA 21	-2.6E-03	-79.202	SLE RA 21	1.24E-03				
518	SLE RA 1	-2.5E-03	-73.57	SLE RA 21	-2.8E-03	-83.151	SLE RA 21	1.86E-03				
520	SLD 13	-2.0E-03	-61.44	SLD 4	-3.8E-03	-113.751	SLE RA 21	1.88E-04				
521	SLD 13	-2.1E-03	-61.83	SLD 4	-3.7E-03	-110.667	SLE RA 21	2.85E-04				
522	SLD 13	-2.1E-03	-62.565	SLD 4	-3.6E-03	-108.278	SLE RA 21	2.96E-04				
523	SLD 13	-2.1E-03	-63.435	SLD 4	-3.5E-03	-106.198	SLE RA 21	3.89E-04				
524	SLD 15	-2.1E-03	-64.312	SLD 2	-3.5E-03	-104.197	SLE RA 21	4.11E-04				
525	SLD 15	-2.2E-03	-65.138	SLD 2	-3.4E-03	-102.171	SLE RA 21	0.000425				
526	SLD 15	-2.2E-03	-65.893	SLD 2	-3.3E-03	-100.08	SLE RA 21	4.45E-04				
527	SLD 15	-2.2E-03	-66.568	SLD 2	-3.3E-03	-97.914	SLE RA 21	4.91E-04				
528	SLD 15	-2.2E-03	-67.149	SLD 2	-3.2E-03	-95.665	SLE RA 21	5.50E-04				
529	SLD 15	-2.3E-03	-67.605	SLD 2	-3.1E-03	-93.323	SLE RA 21	6.23E-04				
530	SLD 15	-2.3E-03	-67.892	SLD 2	-3.0E-03	-90.885	SLE RA 21	7.14E-04				
531	SLD 15	-2.3E-03	-67.951	SLD 2	-2.9E-03	-88.37	SLE RA 21	7.94E-04				
532	SLD 15	-2.3E-03	-67.736	SLD 2	-2.9E-03	-85.856	SLE RA 21	9.24E-04				
533	SLD 15	-2.2E-03	-67.261	SLD 2	-2.8E-03	-83.54	SLE RA 21	1.05E-03				
534	SLD 13	-2.2E-03	-66.652	SLD 4	-2.7E-03	-81.705	SLE RA 21	1.17E-03				
535	SLD 13	-2.2E-03	-66.919	SLE RA 21	-2.7E-03	-79.503	SLE RA 21	0.001199				
536	SLD 13	-2.3E-03	-68.077	SLE RA 21	-2.7E-03	-80.13	SLE RA 21	1.24E-03				
537	SLD 13	-2.3E-03	-69.525	SLE RA 21	-2.7E-03	-80.831	SLE RA 21	1.34E-03				
538	SLD 13	-2.4E-03	-71.044	SLE RA 21	-2.7E-03	-81.421	SLE RA 21	1.32E-03				
539	SLD 13	-2.4E-03	-72.436	SLE RA 21	-2.7E-03	-81.785	SLE RA 21	0.001317				
540	SLE RA 1	-2.4E-03	-72.629	SLE RA 21	-2.7E-03	-81.856	SLE RA 21	0.001332				
541	SLE RA 1	-2.4E-03	-72.369	SLE RA 21	-2.7E-03	-81.608	SLE RA 21	1.37E-03				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
542	SLE RA 1	-2.4E-03	-71.873	SLE RA 21	-2.7E-03	-81.087	SLE RA 21	1.42E-03				
543	SLE RA 1	-2.4E-03	-71.427	SLE RA 21	-2.7E-03	-80.62	SLE RA 20	1.49E-03				
544	SLE RA 1	-2.4E-03	-71.067	SLE RA 21	-2.7E-03	-80.244	SLE RA 21	1.54E-03				
545	SLE RA 1	-2.4E-03	-71.391	SLE RA 21	-2.7E-03	-80.721	SLE RA 21	1.60E-03				
546	SLE RA 1	-2.4E-03	-72.195	SLE RA 21	-2.7E-03	-81.235	SLE RA 21	1.78E-03				
547	SLD 2	-2.4E-03	-72.205	SLE RA 21	-2.7E-03	-81.377	SLE RA 21	0.001682				
548	SLD 2	-2.4E-03	-71.464	SLE RA 21	-2.7E-03	-81.545	SLE RA 21	1.62E-03				
549	SLD 2	-2.4E-03	-70.616	SLE RA 21	-2.7E-03	-81.559	SLE RA 21	1.47E-03				
550	SLD 2	-2.3E-03	-69.737	SLE RA 21	-2.7E-03	-81.345	SLE RA 21	0.001382				
551	SLD 2	-2.3E-03	-68.985	SLE RA 21	-2.7E-03	-80.943	SLE RA 21	1.32E-03				
552	SLD 2	-2.3E-03	-67.78	SLE RA 21	-2.7E-03	-79.912	SLE RA 21	1.28E-03				
553	SLD 2	-2.2E-03	-67.019	SLE RA 21	-2.6E-03	-79.223	SLE RA 21	1.13E-03				
554	SLD 2	-2.2E-03	-66.465	SLE RA 21	-2.6E-03	-78.796	SLE RA 21	1.15E-03				
555	SLD 2	-2.2E-03	-66.976	SLD 15	-2.7E-03	-79.741	SLE RA 21	1.09E-03				
556	SLD 2	-2.3E-03	-67.831	SLD 15	-2.7E-03	-81.915	SLE RA 21	0.000963				
557	SLD 2	-2.3E-03	-68.292	SLD 15	-2.8E-03	-84.239	SLE RA 21	8.40E-04				
558	SLD 2	-2.3E-03	-68.442	SLD 15	-2.9E-03	-86.901	SLE RA 21	0.000724				
559	SLD 2	-2.3E-03	-68.322	SLD 15	-3.0E-03	-89.657	SLE RA 21	6.58E-04				
560	SLD 2	-2.3E-03	-67.999	SLD 15	-3.1E-03	-92.392	SLE RA 21	5.88E-04				
561	SLD 2	-2.3E-03	-67.535	SLD 15	-3.2E-03	-95.067	SLE RA 21	5.39E-04				
562	SLD 2	-2.2E-03	-66.972	SLD 15	-3.3E-03	-97.685	SLE RA 21	5.07E-04				
563	SLD 2	-2.2E-03	-66.344	SLD 15	-3.3E-03	-100.273	SLE RA 21	4.89E-04				
564	SLD 1	-2.2E-03	-65.688	SLD 16	-3.4E-03	-102.898	SLE RA 21	4.97E-04				
565	SLD 1	-2.2E-03	-65.07	SLD 16	-3.5E-03	-105.701	SLE RA 21	4.49E-04				
566	SLD 1	-2.2E-03	-64.654	SLD 16	-3.6E-03	-108.944	SLE RA 21	4.05E-04				
567	SLD 3	-2.2E-03	-64.731	SLD 14	-3.8E-03	-113.136	SLE RA 21	3.16E-04				
568	SLD 3	-2.2E-03	-65.763	SLD 14	-4.0E-03	-119.063	SLE RA 21	2.54E-04				
570	SLD 13	-2.0E-03	-61.456	SLD 4	-3.7E-03	-111.004	SLE RA 21	2.63E-04				
578	SLD 13	-2.1E-03	-61.661	SLD 4	-3.7E-03	-111.232	SLE RA 21	2.64E-04				
592	SLD 15	-2.2E-03	-67.063	SLD 2	-2.7E-03	-82.303	SLE RA 21	1.12E-03				
596	SLD 13	-2.2E-03	-66.408	SLD 4	-2.6E-03	-79.348	SLE RA 21	1.17E-03				
599	SLD 13	-2.2E-03	-67.341	SLE RA 21	-2.7E-03	-79.631	SLE RA 21	1.22E-03				
608	SLE RA 1	-2.4E-03	-70.583	SLE RA 21	-2.7E-03	-79.7	SLE RA 21	0.001524				
610	SLE RA 1	-2.3E-03	-69.89	SLE RA 21	-2.6E-03	-78.945	SLE RA 21	1.48E-03				
612	SLE RA 1	-2.3E-03	-70.184	SLE RA 21	-2.6E-03	-79.338	SLE RA 21	1.61E-03				
618	SLE RA 1	-2.4E-03	-71.563	SLE RA 21	-2.7E-03	-80.871	SLE RA 21	1.80E-03				
623	SLE RA 1	-2.3E-03	-69.307	SLE RA 21	-2.6E-03	-78.034	SLE RA 21	1.76E-03				
632	SLD 2	-2.3E-03	-67.789	SLE RA 21	-2.7E-03	-80.186	SLE RA 21	1.26E-03				
635	SLD 2	-2.2E-03	-67.028	SLE RA 21	-2.6E-03	-79.497	SLE RA 21	1.24E-03				
638	SLD 2	-2.2E-03	-67.086	SLD 15	-2.7E-03	-80.043	SLE RA 21	1.05E-03				
651	SLD 3	-2.1E-03	-64.4	SLD 14	-0.00376	-112.801	SLE RA 21	3.13E-04				
653	SLD 2	-2.2E-03	-65.833	SLE RA 21	-2.6E-03	-77.672	SLE RA 21	1.02E-03				
655	SLD 2	-2.2E-03	-66.753	SLD 15	-2.6E-03	-79.376	SLE RA 21	1.05E-03				
657	SLD 13	-2.1E-03	-61.514	SLD 4	-3.8E-03	-113.366	SLE RA 21	1.77E-04				
658	SLD 13	-2.1E-03	-61.904	SLD 4	-3.7E-03	-110.275	SLE RA 21	2.73E-04				
659	SLD 13	-2.1E-03	-62.641	SLD 4	-3.6E-03	-107.862	SLE RA 21	2.91E-04				
660	SLD 15	-2.1E-03	-63.513	SLD 2	-3.5E-03	-105.758	SLE RA 21	3.84E-04				
661	SLD 15	-2.1E-03	-64.391	SLD 2	-3.5E-03	-103.731	SLE RA 21	4.10E-04				
662	SLD 15	-2.2E-03	-65.218	SLD 2	-3.4E-03	-101.677	SLE RA 21	4.28E-04				
663	SLD 15	-2.2E-03	-65.973	SLD 2	-3.3E-03	-99.557	SLE RA 21	4.55E-04				
664	SLD 15	-2.2E-03	-66.647	SLD 2	-3.2E-03	-97.36	SLE RA 21	5.06E-04				
665	SLD 15	-2.2E-03	-67.225	SLD 2	-3.2E-03	-95.078	SLE RA 21	5.70E-04				
666	SLD 15	-2.3E-03	-67.677	SLD 2	-3.1E-03	-92.703	SLE RA 21	6.51E-04				
667	SLD 15	-2.3E-03	-67.958	SLD 2	-3.0E-03	-90.229	SLE RA 21	7.25E-04				
668	SLD 15	-2.3E-03	-68.012	SLD 2	-2.9E-03	-87.676	SLE RA 21	0.000834				
669	SLD 15	-2.3E-03	-67.792	SLD 2	-2.8E-03	-85.122	SLE RA 21	0.000965				
670	SLD 15	-2.2E-03	-67.317	SLD 2	-2.8E-03	-82.757	SLE RA 21	1.09E-03				
671	SLD 15	-2.2E-03	-66.722	SLD 2	-2.7E-03	-80.878	SLE RA 21	0.00105				
672	SLD 13	-2.2E-03	-66.351	SLD 4	-2.7E-03	-79.861	SLE RA 21	1.09E-03				
673	SLD 13	-2.2E-03	-66.359	SLD 4	-2.6E-03	-79.156	SLE RA 21	1.16E-03				
674	SLD 13	-2.2E-03	-66.89	SLE RA 21	-2.6E-03	-79.299	SLE RA 21	1.19E-03				
675	SLD 13	-2.3E-03	-67.782	SLE RA 21	-2.7E-03	-79.69	SLE RA 21	1.31E-03				
676	SLD 13	-2.3E-03	-69.029	SLE RA 21	-2.7E-03	-80.216	SLE RA 21	1.30E-03				
677	SLD 13	-2.3E-03	-70.342	SLE RA 21	-2.7E-03	-80.63	SLE RA 21	1.29E-03				
678	SLD 13	-2.4E-03	-71.526	SLE RA 21	-2.7E-03	-80.814	SLE RA 21	1.30E-03				
679	SLE RA 2	-2.4E-03	-71.547	SLE RA 20	-2.7E-03	-80.703	SLE RA 21	0.001335				
680	SLE RA 2	-2.4E-03	-71.123	SLE RA 20	-2.7E-03	-80.272	SLE RA 21	1.39E-03				
681	SLE RA 2	-2.3E-03	-70.461	SLE RA 20	-2.7E-03	-79.564	SLE RA 21	1.46E-03				
682	SLE RA 2	-2.3E-03	-69.617	SLE RA 20	-2.6E-03	-78.638	SLE RA 21	1.43E-03				
683	SLE RA 2	-2.3E-03	-68.928	SLE RA 20	-2.6E-03	-77.88	SLE RA 21	0.001473				
684	SLE RA 1	-2.3E-03	-69.587	SLE RA 21	-2.6E-03	-78.672	SLE RA 21	1.52E-03				
685	SLE RA 1	-2.3E-03	-70.037	SLE RA 21	-2.6E-03	-79.211	SLE RA 21	1.58E-03				
686	SLE RA 1	-2.3E-03	-69.939	SLE RA 21	-2.6E-03	-79.108	SLE RA 21	1.55E-03				
687	SLD 10	-2.3E-03	-69.933	SLE RA 21	-2.6E-03	-79.132	SLE RA 21	0.001577				
688	SLE RA 1	-2.3E-03	-69.946	SLE RA 21	-2.6E-03	-79.018	SLE RA 21	1.75E-03				
689	SLE RA 1	-2.3E-03	-69.09	SLE RA 21	-2.6E-03	-77.981	SLE RA 21	0.001782				
690	SLE RA 1	-2.3E-03	-68.16	SLE RA 21	-2.6E-03	-76.882	SLE RA 21	1.63E-03				
691	SLE RA 1	-2.2E-03	-66.858	SLE RA 21	-2.5E-03	-75.339	SLE RA 21	1.58E-03				
692	SLE RA 1	-2.2E-03	-66.459	SLE RA 21	-2.5E-03	-74.847	SLE RA 21	0.001524				
693	SLD 2	-2.2E-03	-66.218	SLE RA 21	-2.5E-03	-74.788	SLE RA 21	1.63E-03				
694	SLD 2	-2.2E-03	-65.536	SLE RA 21	-2.5E-03	-74.929	SLE RA 21	1.54E-03				
695	SLD 2	-2.2E-03	-64.79	SLE RA 21	-2.5E-03	-75.088	SLE RA 21	1.50E-03				
696	SLD 2	-2.1E-03	-63.938	SLE RA 21	-2.5E-03	-75.086	SLE RA 21	1.37E-03				
697	SLD 2	-2.1E-03	-63.053	SLE RA 21	-2.5E-03	-74.848	SLE RA 21	1.29E-03				
698	SLD 2	-2.1E-03	-62.289	SLD 15	-2.5E-03	-74.557	SLE RA 21	0.001236				
699	SLD 2	-2.1E-03	-62.404	SLE RA 21	-2.5E-03	-74.002	SLE RA 21	1.11E-03				
700	SLD 2	-2.2E-03	-65.664	SLE RA 21	-2.6E-03	-77.468	SLE RA 21	1.01E-03				
701	SLD 2	-2.2E-03	-66.666	SLD 15	-2.6E-03	-79.271	SLE RA 21	1.05E-03				
702	SLD 2	-2.2E-03	-67.047	SLD 15	-2.7E-03	-80.238	SLE RA 21	9.93E-04				
703	SLD 2	-2.3E-03	-67.552	SLD 15	-2.8E-03	-82.695	SLE RA 21	8.74E-04				
704	SLD 2	-2.3E-03	-67.749	SLD 15	-2.8E-03	-85.482	SLE RA 21	7.55E-04				
705	SLD 2	-2.3E-03	-67.677	SLD 15	-2.9E-03	-88.356	SLE RA 21	6.86E-04				
706	SLD 2	-2.2E-03	-67.402	SLD 15	-3.0E-03	-91.205	SLE RA 21	6.08E-04				
707	SLD 2	-2.2E-03	-66.983	SLD 15	-3.1E-03	-93.99	SLE RA 21	5.51E-04				
708	SLD 2	-2.2E-03	-66.466	SLD 15	-3.2E-03	-96.713	SLE RA 21	5.14E-04				
709	SLD 2	-2.2E-03	-65.883	SLD 15	-3.3E-03	-99.403	SLE RA 21	4.91E-04				
710	SLD 2	-2.2E-03	-65.274	SLD 15	-3.4E-03	-102.121	SLE RA 21	4.61E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
711	SLD 2	-2.2E-03	-64.714	SLD 15	-3.5E-03	-105.005	SLE RA 21	4.45E-04				
712	SLD 4	-2.1E-03	-64.356	SLD 13	-3.6E-03	-108.325	SLE RA 21	0.000399				
713	SLD 4	-2.1E-03	-64.492	SLD 13	-3.8E-03	-112.59	SLE RA 21	3.10E-04				
714	SLD 4	-2.2E-03	-65.55	SLD 13	-4.0E-03	-118.537	SLE RA 21	0.00025				
715	SLD 4	-2.1E-03	-63.68	SLD 13	-3.7E-03	-111.462	SLE RA 21	2.89E-04				
718	SLD 2	-2.2E-03	-65.596	SLE RA 21	-2.6E-03	-77.232	SLE RA 21	9.98E-04				
720	SLD 4	-2.2E-03	-66.472	SLE RA 21	-2.6E-03	-78.823	SLE RA 21	1.03E-03				
721	SLD 2	-2.1E-03	-61.542	SLD 15	-3.6E-03	-107.579	SLE RA 21	2.60E-04				
723	SLE RA 2	-2.2E-03	-66.523	SLE RA 20	-2.5E-03	-75.284	SLE RA 20	1.32E-03				
725	SLE RA 2	-2.1E-03	-63.081	SLE RA 20	-2.4E-03	-71.311	SLE RA 20	1.33E-03				
726	SLD 3	-1.9E-03	-56.759	SLE RA 20	-2.2E-03	-65.18	SLE RA 20	1.25E-03				
728	SLD 3	-1.9E-03	-56.674	SLE RA 20	-2.2E-03	-66.413	SLE RA 20	1.22E-03				
729	SLD 2	-2.0E-03	-58.73	SLD 15	-3.4E-03	-102.46	SLE RA 21	1.69E-04				
732	SLD 13	-1.9E-03	-57.714	SLD 4	-3.4E-03	-102.566	SLE RA 21	9.45E-05				
733	SLD 15	-2.2E-03	-66.864	SLE RA 21	-2.6E-03	-78.964	SLE RA 21	9.26E-04				
735	SLD 15	-2.3E-03	-67.863	SLE RA 21	-2.7E-03	-80.064	SLE RA 21	0.001014				
736	SLD 4	-2.2E-03	-66.329	SLE RA 21	-2.6E-03	-77.956	SLE RA 21	9.16E-04				
738	SLD 4	-2.2E-03	-65.713	SLE RA 20	-2.6E-03	-77.509	SLE RA 21	0.000842				
739	SLD 16	-2.2E-03	-65.017	SLE RA 20	-2.5E-03	-73.732	SLE RA 20	1.23E-03				
741	SLD 16	-2.0E-03	-61.047	SLE RA 20	-2.3E-03	-69.553	SLE RA 20	1.25E-03				
742	SLD 3	-1.8E-03	-53.776	SLE RA 20	-2.1E-03	-62.885	SLE RA 20	0.00111				
744	SLD 3	-1.8E-03	-53.814	SLE RA 20	-2.1E-03	-64.262	SLE RA 20	1.09E-03				
746	SLD 13	-1.9E-03	-55.802	SLD 4	-3.3E-03	-98.693	SLE RA 21	4.48E-05				
747	SLD 2	-1.9E-03	-55.786	SLD 15	-3.2E-03	-97.087	SLE RA 21	8.38E-05				
749	SLD 4	-2.2E-03	-67.07	SLE RA 20	-2.6E-03	-78.712	SLE RA 21	7.80E-04				
751	SLD 4	-2.2E-03	-66.26	SLE RA 20	-2.6E-03	-77.997	SLE RA 21	7.13E-04				
752	SLD 15	-2.3E-03	-67.545	SLE RA 21	-2.6E-03	-79.097	SLE RA 21	7.93E-04				
754	SLD 15	-2.3E-03	-68.69	SLE RA 21	-0.00268	-80.401	SLE RA 21	0.000871				
755	SLD 16	-2.1E-03	-63.45	SLE RA 20	-2.4E-03	-72.771	SLE RA 21	1.20E-03				
757	SLD 16	-2.0E-03	-59.255	SLE RA 20	-2.3E-03	-68.38	SLE RA 21	1.15E-03				
758	SLD 3	-1.7E-03	-52.391	SLE RA 20	-2.1E-03	-61.946	SLE RA 20	9.91E-04				
760	SLD 3	-1.8E-03	-52.551	SLD 14	-2.1E-03	-64.018	SLE RA 21	1.03E-03				
762	SLD 13	-1.8E-03	-54.229	SLD 4	-3.2E-03	-95.53	SLE RA 21	3.51E-05				
763	SLD 2	-1.8E-03	-53.019	SLD 15	-3.1E-03	-92.036	SLE RA 21	3.87E-05				
765	SLD 4	-2.3E-03	-67.959	SLE RA 20	-2.7E-03	-79.627	SLE RA 21	6.64E-04				
767	SLD 4	-2.2E-03	-66.957	SLE RA 20	-2.6E-03	-78.64	SLE RA 20	6.13E-04				
768	SLD 15	-2.3E-03	-68.005	SLE RA 21	-2.6E-03	-79.039	SLE RA 21	6.61E-04				
770	SLD 13	-2.3E-03	-69.28	SLE RA 21	-2.7E-03	-80.55	SLE RA 21	7.49E-04				
771	SLD 16	-2.0E-03	-60.679	SLE RA 20	-2.3E-03	-70.122	SLE RA 21	1.10E-03				
772	SLD 16	-1.6E-03	-48.48	SLD 1	-1.9E-03	-58.216	SLE RA 20	9.15E-04				
773	SLD 16	-1.5E-03	-45.247	SLD 1	-1.8E-03	-55.177	SLE RA 20	6.95E-04				
774	SLD 16	-1.5E-03	-43.78	SLD 1	-1.8E-03	-52.96	SLE RA 20	6.59E-04				
775	SLD 16	-1.5E-03	-43.881	SLE RA 20	-1.7E-03	-51.701	SLE RA 20	6.48E-04				
776	SLD 16	-1.5E-03	-45.183	SLE RA 20	-1.7E-03	-51.984	SLE RA 20	6.58E-04				
777	SLE RA 2	-1.6E-03	-47.276	SLE RA 20	-1.8E-03	-53.051	SLE RA 20	6.82E-04				
778	SLE RA 2	-1.6E-03	-48.685	SLE RA 20	-1.8E-03	-54.692	SLE RA 20	7.15E-04				
779	SLE RA 2	-1.7E-03	-50.422	SLE RA 20	-1.9E-03	-56.715	SLE RA 20	7.52E-04				
780	SLD 3	-1.7E-03	-51.218	SLE RA 20	-2.0E-03	-58.91	SLE RA 20	9.33E-04				
781	SLD 3	-1.7E-03	-51.872	SLE RA 20	-2.0E-03	-60.996	SLE RA 20	9.45E-04				
782	SLD 3	-1.7E-03	-52.231	SLD 14	-2.1E-03	-62.766	SLE RA 21	1.01E-03				
783	SLD 16	-2.1E-03	-62.953	SLE RA 20	-2.4E-03	-72.692	SLE RA 21	1.09E-03				
786	SLD 16	-2.0E-03	-58.526	SLE RA 20	-2.3E-03	-68.081	SLE RA 21	1.04E-03				
798	SLD 3	-1.7E-03	-52.486	SLE RA 20	-2.1E-03	-62.269	SLE RA 21	9.49E-04				
800	SLD 3	-1.8E-03	-52.711	SLD 14	-2.2E-03	-64.611	SLE RA 21	0.000904				
802	SLD 13	-1.8E-03	-53.222	SLD 4	-3.1E-03	-93.473	SLE RA 21	0.00003				
803	SLD 2	-1.7E-03	-50.574	SLD 15	-2.9E-03	-87.576	SLE RA 20	2.96E-05				
805	SLD 4	-2.3E-03	-68.846	SLE RA 21	-2.7E-03	-80.572	SLE RA 20	5.53E-04				
807	SLD 4	-2.3E-03	-67.658	SLE RA 20	-2.6E-03	-79.311	SLE RA 20	5.23E-04				
808	SLD 13	-2.3E-03	-68.063	SLE RA 21	-2.6E-03	-78.688	SLE RA 21	5.85E-04				
810	SLD 13	-2.3E-03	-69.41	SLE RA 21	-2.7E-03	-80.41	SLE RA 21	6.22E-04				
811	SLD 14	-2.0E-03	-60.796	SLE RA 20	-2.4E-03	-70.649	SLE RA 21	9.75E-04				
812	SLD 14	-1.6E-03	-49.178	SLD 3	-2.0E-03	-58.863	SLE RA 21	8.08E-04				
813	SLD 14	-1.5E-03	-45.985	SLD 3	-1.9E-03	-55.813	SLE RA 20	6.16E-04				
814	SLD 14	-1.5E-03	-44.567	SLD 3	-1.8E-03	-53.58	SLE RA 20	5.78E-04				
815	SLD 14	-1.5E-03	-44.723	SLE RA 20	-1.7E-03	-52.479	SLE RA 20	5.66E-04				
816	SLD 14	-1.5E-03	-46.085	SLE RA 20	-1.8E-03	-52.781	SLE RA 20	5.73E-04				
817	SLE RA 2	-1.6E-03	-48.019	SLE RA 20	-1.8E-03	-53.871	SLE RA 20	0.000596				
818	SLE RA 2	-1.6E-03	-49.448	SLE RA 20	-1.9E-03	-55.535	SLE RA 21	7.60E-04				
819	SLE RA 2	-1.7E-03	-51.208	SLE RA 20	-1.9E-03	-57.584	SLE RA 21	0.000785				
820	SLD 3	-1.7E-03	-51.964	SLE RA 20	-2.0E-03	-59.805	SLE RA 21	8.80E-04				
821	SLD 3	-1.8E-03	-52.607	SLE RA 20	-2.1E-03	-61.92	SLE RA 21	8.79E-04				
822	SLD 3	-1.8E-03	-52.962	SLD 14	-2.1E-03	-63.778	SLE RA 21	8.54E-04				
823	SLD 14	-2.1E-03	-63.415	SLE RA 20	-2.4E-03	-73.472	SLE RA 21	9.66E-04				
825	SLD 14	-2.0E-03	-59.345	SLE RA 20	-2.3E-03	-69.192	SLE RA 21	9.42E-04				
826	SLD 3	-1.8E-03	-53.41	SLE RA 20	-2.1E-03	-63.361	SLE RA 21	8.31E-04				
828	SLD 3	-1.8E-03	-53.607	SLD 14	-2.2E-03	-65.63	SLE RA 21	8.27E-04				
830	SLD 13	-1.8E-03	-52.969	SLD 4	-3.1E-03	-92.848	SLE RA 21	3.05E-05				
831	SLD 2	-1.6E-03	-48.476	SLD 15	-2.8E-03	-83.761	SLE RA 20	2.44E-05				
833	SLD 2	-2.3E-03	-69.647	SLE RA 21	-2.7E-03	-81.554	SLE RA 20	4.76E-04				
835	SLD 2	-2.3E-03	-68.288	SLE RA 20	-2.7E-03	-80.016	SLE RA 20	4.51E-04				
836	SLD 13	-2.3E-03	-67.68	SLE RA 21	-2.6E-03	-78.194	SLE RA 21	4.89E-04				
838	SLD 13	-2.3E-03	-69.119	SLE RA 21	-2.7E-03	-80.131	SLE RA 21	5.43E-04				
839	SLD 14	-2.1E-03	-64.459	SLE RA 20	-2.5E-03	-74.895	SLE RA 21	0.000854				
841	SLD 14	-2.0E-03	-60.726	SLE RA 20	-2.4E-03	-70.939	SLE RA 21	9.14E-04				
842	SLD 1	-1.8E-03	-55.067	SLE RA 20	-2.2E-03	-65.214	SLE RA 21	0.000791				
844	SLD 1	-1.8E-03	-55.231	SLD 16	-2.2E-03	-67.236	SLE RA 21	7.14E-04				
846	SLD 13	-1.8E-03	-53.658	SLD 4	-3.1E-03	-93.974	SLE RA 21	3.68E-05				
847	SLD 2	-1.6E-03	-46.672	SLD 15	-2.7E-03	-80.5	SLE RA 20	2.29E-05				
849	SLD 2	-2.3E-03	-70.32	SLE RA 21	-2.8E-03	-82.682	SLE RA 20	4.13E-04				
851	SLD 2	-2.3E-03	-68.788	SLE RA 20	-2.7E-03	-80.866	SLE RA 20	3.90E-04				
852	SLD 13	-2.2E-03	-67.14	SLE RA 21	-2.6E-03	-77.953	SLE RA 21	4.19E-04				
854	SLD 13	-2.3E-03	-68.722	SLE RA 21	-2.7E-03	-80.109	SLE RA 21	4.76E-04				
855	SLD 14	-2.2E-03	-65.621	SLE RA 21	-2.6E-03	-76.562	SLE RA 21	7.41E-04				
857	SLD 14	-2.1E-03	-62.242	SLE RA 21	-2.4E-03	-72.928	SLE RA 21	7.90E-04				
858	SLD 1	-1.9E-03	-57.056	SLE RA 21	-2.3E-03	-67.506	SLE RA 21	6.68E-04				
860	SLD 1	-1.9E-03	-57.195	SLD 16	-2.3E-03	-69.311	SLE RA 21	6.04E-04				
862	SLD 13	-1.8E-03	-55.496	SLD 4	-3.2E-03	-97.202	SLE RA 21	4.76E-05				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
863	SLD 2	-1.5E-03	-45.056	SLD 15	-2.6E-03	-77.602	SLE RA 20	2.42E-05				
865	SLD 2	-2.4E-03	-70.975	SLD 15	-2.8E-03	-84.335	SLE RA 20	3.54E-04				
867	SLD 2	-2.3E-03	-69.243	SLD 15	-2.7E-03	-82.267	SLE RA 20	3.46E-04				
868	SLD 13	-2.2E-03	-66.904	SLE RA 21	-2.6E-03	-78.62	SLE RA 21	3.54E-04				
870	SLD 13	-2.3E-03	-68.643	SLE RA 21	-0.0027	-81	SLE RA 21	4.08E-04				
871	SLD 14	-2.2E-03	-66.814	SLE RA 21	-2.6E-03	-78.336	SLE RA 21	6.25E-04				
873	SLD 14	-2.1E-03	-63.793	SLE RA 21	-2.5E-03	-75.017	SLE RA 21	6.62E-04				
874	SLD 2	-2.0E-03	-59.239	SLE RA 21	-2.3E-03	-70.079	SLE RA 21	5.43E-04				
876	SLD 2	-2.0E-03	-59.345	SLD 15	-2.4E-03	-71.717	SLE RA 21	5.02E-04				
878	SLD 13	-2.0E-03	-58.73	SLD 4	-3.4E-03	-102.926	SLE RA 21	5.63E-05				
879	SLD 2	-1.4E-03	-43.49	SLD 15	-2.5E-03	-74.823	SLE RA 20	2.48E-05				
881	SLD 2	-2.4E-03	-71.779	SLD 15	-2.9E-03	-87.422	SLE RA 20	3.13E-04				
883	SLD 2	-2.3E-03	-69.84	SLD 15	-2.8E-03	-85.041	SLE RA 20	3.02E-04				
884	SLD 13	-2.1E-03	-63.351	SLD 4	-3.8E-03	-113.28	SLE RA 21	4.78E-05				
885	SLD 13	-1.9E-03	-58.141	SLD 4	-3.4E-03	-100.826	SLE RA 21	5.61E-05				
886	SLD 13	-1.8E-03	-53.628	SLD 4	-3.0E-03	-89.613	SLE RA 21	4.88E-05				
887	SLD 13	-1.7E-03	-50.108	SLD 4	-2.7E-03	-80.143	SLE RA 20	3.42E-05				
888	SLD 13	-1.6E-03	-47.751	SLD 4	-2.4E-03	-72.682	SLE RA 20	2.11E-05				
889	SLD 13	-1.6E-03	-46.637	SLD 4	-2.2E-03	-67.334	SLE RA 20	1.27E-05				
890	SLD 13	-1.6E-03	-46.778	SLD 4	-2.1E-03	-64.089	SLE RA 20	1.03E-05				
891	SLD 13	-1.6E-03	-48.121	SLD 4	-2.1E-03	-62.852	SLE RA 20	1.08E-05				
892	SLD 13	-1.7E-03	-50.549	SLD 4	-2.1E-03	-63.453	SLE RA 20	0.000017				
893	SLD 13	-1.8E-03	-53.858	SLD 4	-2.2E-03	-65.65	SLE RA 21	4.03E-05				
894	SLD 13	-1.9E-03	-57.739	SLD 4	-2.3E-03	-69.103	SLE RA 21	1.19E-04				
895	SLD 13	-2.1E-03	-61.747	SLD 4	-2.4E-03	-73.342	SLE RA 21	2.07E-04				
896	SLD 13	-2.2E-03	-65.269	SLD 4	-2.6E-03	-77.717	SLE RA 21	2.66E-04				
897	SLD 13	-2.2E-03	-66.26	SLD 4	-2.6E-03	-79.143	SLE RA 21	2.86E-04				
898	SLD 14	-2.3E-03	-68.088	SLE RA 21	-2.7E-03	-80.273	SLE RA 21	0.000538				
900	SLD 14	-2.2E-03	-65.424	SLE RA 21	-2.6E-03	-77.266	SLE RA 21	5.56E-04				
901	SLD 2	-2.1E-03	-61.643	SLE RA 21	-2.4E-03	-72.931	SLE RA 21	4.56E-04				
903	SLD 2	-2.1E-03	-61.696	SLD 15	-2.5E-03	-74.444	SLE RA 21	4.27E-04				
905	SLD 13	-2.1E-03	-63.632	SLD 4	-3.7E-03	-111.572	SLE RA 21	5.28E-05				
906	SLD 2	-2.4E-03	-72.81	SLD 15	-3.1E-03	-91.876	SLE RA 20	0.000249				
908	SLD 2	-2.4E-03	-70.789	SLD 15	-3.0E-03	-89.378	SLE RA 20	2.35E-04				
909	SLD 2	-2.3E-03	-69.751	SLD 15	-2.9E-03	-88.139	SLE RA 20	2.09E-04				
910	SLD 2	-2.2E-03	-66.897	SLD 15	-2.8E-03	-85.131	SLE RA 20	1.43E-04				
911	SLD 2	-2.1E-03	-63.404	SLD 15	-2.7E-03	-81.876	SLE RA 20	7.06E-05				
912	SLD 2	-2.0E-03	-59.892	SLD 15	-2.6E-03	-79.057	SLE RA 20	3.49E-05				
913	SLD 2	-1.9E-03	-56.753	SLD 15	-2.6E-03	-77.095	SLE RA 20	2.62E-05				
914	SLD 2	-1.8E-03	-54.213	SLD 15	-2.5E-03	-76.227	SLE RA 20	2.14E-05				
915	SLD 2	-1.7E-03	-52.372	SLD 15	-2.6E-03	-76.561	SLE RA 20	0.00002				
916	SLD 2	-1.7E-03	-51.253	SLD 15	-2.6E-03	-78.123	SLE RA 20	2.17E-05				
917	SLD 2	-1.7E-03	-50.817	SLD 15	-2.7E-03	-80.868	SLE RA 20	0.000026				
918	SLD 2	-1.7E-03	-50.983	SLD 15	-2.8E-03	-84.683	SLE RA 20	3.01E-05				
919	SLD 2	-1.7E-03	-51.623	SLD 15	-3.0E-03	-89.372	SLE RA 20	2.74E-05				
920	SLD 2	-1.4E-03	-41.82	SLD 15	-2.4E-03	-71.889	SLE RA 20	1.68E-05				
922	SLD 2	-1.8E-03	-52.547	SLD 15	-3.2E-03	-94.599	SLE RA 20	1.96E-05				
924	SLD 14	-2.3E-03	-69.651	SLE RA 21	-2.8E-03	-82.621	SLE RA 21	4.31E-04				
926	SLD 14	-2.2E-03	-67.341	SLE RA 21	-2.7E-03	-79.921	SLE RA 21	4.40E-04				
927	SLD 2	-2.1E-03	-64.419	SLE RA 21	-2.5E-03	-76.245	SLE RA 21	3.50E-04				
929	SLD 2	-2.1E-03	-64.418	SLD 15	-2.6E-03	-77.651	SLE RA 21	3.36E-04				
930	SLD 2	-2.4E-03	-73.464	SLD 15	-3.2E-03	-95.503	SLE RA 21	2.07E-04				
933	SLD 13	-2.3E-03	-70.405	SLD 4	-4.1E-03	-123.438	SLE RA 21	5.34E-05				
946	SLD 13	-2.3E-03	-69.416	SLD 4	-3.0E-03	-91.163	SLE RA 21	0.00021				
949	SLD 13	-2.4E-03	-72.715	SLD 4	-3.2E-03	-96.176	SLE RA 21	2.49E-04				
963	SLD 2	-2.5E-03	-73.784	SLD 15	-3.3E-03	-100.158	SLE RA 21	1.49E-04				
968	SLD 13	-2.5E-03	-73.743	SLD 4	-3.4E-03	-101.32	SLE RA 21	2.07E-04				
969	SLD 14	-2.4E-03	-71.878	SLE RA 21	-2.9E-03	-85.82	SLE RA 21	3.13E-04				
971	SLD 14	-2.3E-03	-69.918	SLE RA 21	-2.8E-03	-83.425	SLE RA 21	3.13E-04				
972	SLD 2	-2.3E-03	-67.877	SLE RA 21	-2.7E-03	-80.397	SLE RA 21	2.48E-04				
974	SLD 2	-2.3E-03	-67.82	SLD 15	-2.7E-03	-81.715	SLE RA 21	2.39E-04				
975	SLD 13	-2.6E-03	-76.753	SLD 4	-3.7E-03	-110.295	SLE RA 21	1.58E-04				
976	SLD 13	-2.4E-03	-72.991	SLD 4	-3.4E-03	-102.2	SLE RA 21	1.81E-04				
977	SLD 13	-2.3E-03	-69.206	SLD 4	-3.2E-03	-94.876	SLE RA 21	1.66E-04				
978	SLD 13	-2.2E-03	-65.99	SLD 4	-3.0E-03	-88.786	SLE RA 21	1.30E-04				
979	SLD 14	-2.1E-03	-63.713	SLD 3	-2.8E-03	-84.189	SLE RA 21	9.29E-05				
980	SLD 14	-2.1E-03	-62.52	SLD 3	-2.7E-03	-81.217	SLE RA 21	6.89E-05				
981	SLD 14	-2.1E-03	-62.492	SLD 3	-2.7E-03	-79.788	SLE RA 21	0.000064				
982	SLD 14	-2.1E-03	-63.539	SLD 3	-2.7E-03	-79.749	SLE RA 21	8.09E-05				
983	SLD 14	-2.2E-03	-65.437	SLD 3	-2.7E-03	-80.824	SLE RA 21	1.19E-04				
984	SLD 14	-2.3E-03	-67.811	SLD 3	-2.8E-03	-82.587	SLE RA 21	1.85E-04				
985	SLD 14	-2.3E-03	-70.092	SLD 3	-2.8E-03	-84.418	SLE RA 21	2.63E-04				
986	SLD 14	-2.4E-03	-71.474	SLE RA 21	-2.9E-03	-85.505	SLE RA 21	2.87E-04				
987	SLD 14	-2.4E-03	-70.927	SLE RA 21	-2.8E-03	-84.707	SLE RA 21	3.06E-04				
988	SLD 14	-2.3E-03	-69.017	SLE RA 21	-2.7E-03	-82.224	SLE RA 21	2.86E-04				
989	SLD 14	-2.2E-03	-66.411	SLE RA 21	-2.6E-03	-78.608	SLE RA 21	2.56E-04				
990	SLD 14	-2.1E-03	-63.812	SLE RA 21	-2.5E-03	-74.783	SLE RA 21	0.000172				
991	SLD 14	-2.1E-03	-61.724	SLE RA 21	-2.4E-03	-71.415	SLE RA 21	9.63E-05				
992	SLD 10	-2.0E-03	-60.374	SLE RA 21	-2.3E-03	-68.925	SLE RA 21	4.72E-05				
993	SLD 10	-2.0E-03	-59.474	SLE RA 21	-2.3E-03	-67.555	SLE RA 21	2.34E-05				
994	SLD 10	-2.0E-03	-59.584	SLE RA 21	-2.2E-03	-67.408	SLE RA 21	0.000023				
995	SLD 6	-2.0E-03	-60.328	SLE RA 21	-2.3E-03	-68.466	SLE RA 21	0.000037				
996	SLD 6	-2.1E-03	-61.873	SLE RA 21	-2.4E-03	-70.594	SLE RA 21	7.44E-05				
997	SLD 2	-2.1E-03	-63.896	SLE RA 21	-2.5E-03	-73.512	SLE RA 21	0.000131				
998	SLD 2	-2.2E-03	-65.844	SLE RA 21	-2.6E-03	-76.753	SLE RA 21	2.03E-04				
999	SLD 2	-2.2E-03	-67.489	SLE RA 21	-2.7E-03	-79.597	SLE RA 21	2.25E-04				
1000	SLD 2	-2.3E-03	-68.006	SLE RA 21	-2.7E-03	-81.067	SLE RA 21	2.36E-04				
1001	SLD 2	-2.2E-03	-67.338	SLD 15	-2.7E-03	-81.614	SLE RA 21	2.13E-04				
1002	SLD 2	-2.2E-03	-65.422	SLD 15	-2.7E-03	-80.625	SLE RA 21	1.90E-04				
1003	SLD 2	-2.1E-03	-63.097	SLD 15	-2.6E-03	-79.082	SLE RA 21	1.27E-04				
1004	SLD 2	-2.0E-03	-61.011	SLD 15	-2.6E-03	-77.806	SLE RA 21	7.38E-05				
1005	SLD 2	-2.0E-03	-59.616	SLD 15	-2.6E-03	-77.369	SLE RA 21	3.85E-05				
1006	SLD 2	-2.0E-03	-59.206	SLD 15	-2.6E-03	-78.142	SLE RA 21	3.39E-05				
1007	SLD 2	-2.0E-03	-59.954	SLD 15	-2.7E-03	-80.338	SLE RA 21	3.75E-05				
1008	SLD 2	-2.1E-03	-61.916	SLD 15	-2.8E-03	-84.022	SLE RA 21	5.19E-05				
1009	SLD 2	-2.2E-03	-65.035	SLD 15	-3.0E-03	-89.107	SLE RA 21	8.35E-05				
1010	SLD 2	-2.3E-03	-69.106	SLD 15	-3.2E-03	-95.322	SLE RA 21	1.11E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
1011	SLD 2	-2.5E-03	-73.742	SLD 15	-3.4E-03	-102.179	SLE RA 21	1.19E-04				
1013	SLD 13	-2.5E-03	-74.54	SLD 4	-3.6E-03	-107.018	SLE RA 21	1.49E-04				
1015	SLD 14	-2.5E-03	-75.364	SLD 3	-3.8E-03	-113.496	SLE RA 21	7.89E-05				
1027	SLD 14	-2.5E-03	-75.374	SLD 3	-3.0E-03	-90.789	SLE RA 21	2.03E-04				
1029	SLD 14	-2.5E-03	-73.541	SLD 3	-2.9E-03	-88.479	SLE RA 21	2.00E-04				
1042	SLD 2	-2.4E-03	-72.426	SLE RA 21	-2.9E-03	-85.879	SLE RA 21	1.63E-04				
1044	SLD 2	-2.4E-03	-72.351	SLD 15	-2.9E-03	-87.183	SLE RA 21	0.000162				
1055	SLD 2	-2.5E-03	-74.765	SLD 15	-3.7E-03	-110.452	SLE RA 21	5.55E-05				

1.5 Baricentri delle rigidezze

***Quota**: quota alla quale è stato valutato il baricentro delle rigidezze. esprimibile come livello, falda, piano orizzontale alla Z specificata. [m]*
***Posizione**: posizione in pianta del baricentro delle rigidezze.*
***X**: coordinata X. [m]*
***Y**: coordinata Y. [m]*
***Baricentro masse**: posizione in pianta del baricentro delle masse.*
***X**: coordinata X. [m]*
***Y**: coordinata Y. [m]*
***Distanza**: distanza in pianta tra il baricentro delle rigidezze e il baricentro delle masse.*
***X**: coordinata X. [m]*
***Y**: coordinata Y. [m]*

Quota	Posizione		Baricentro masse		Distanza	
	X	Y	X	Y	X	Y
Terra	-11.952	-4.091	-12.336	-3.245	0.384	-0.845
Rialzato	-12.31	1.119	-12.348	1.282	0.037	-0.163
Primo	-12.667	1.803	-12.33	3.496	-0.337	-1.692
Secondo	-13.063	1.057	-12.39	1.242	-0.673	-0.186
Terzo	-13.469	0.724	-12.381	1.236	-1.088	-0.512
Sottotetto	-13.792	0.421	-12.362	1.825	-1.43	-1.403

1.6 Risposta modale

***Modo**: identificativo del modo di vibrare.*
***Periodo**: periodo. [s]*
***Massa X**: massa partecipante in direzione globale X. Il valore è adimensionale.*
***Massa Y**: massa partecipante in direzione globale Y. Il valore è adimensionale.*
***Massa Z**: massa partecipante in direzione globale Z. Il valore è adimensionale.*
***Massa rot. X**: massa rotazionale partecipante attorno la direzione globale X. Il valore è adimensionale.*
***Massa rot. Y**: massa rotazionale partecipante attorno la direzione globale Y. Il valore è adimensionale.*
***Massa rot. Z**: massa rotazionale partecipante attorno la direzione globale Z. Il valore è adimensionale.*
***Massa sX**: massa partecipante in direzione Sisma X. Il valore è adimensionale.*
***Massa sY**: massa partecipante in direzione Sisma Y. Il valore è adimensionale.*

Totale masse partecipanti:

Traslazione X: 0.993232
Traslazione Y: 0.97752
Traslazione Z: 0
Rotazione X: 0.701983
Rotazione Y: 0.96213
Rotazione Z: 0.728964

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
1	1.209566559	0.000004466	0.000000001	0	0.000000002	0.000000619	0.000000748	0.000004466	0.000000001
2	1.094985382	0.000008286	0.000000004	0	0.000000001	0.000001542	0.000001423	0.000008286	0.000000004
3	1.046365743	0.001399505	0.001195102	0	0.000337932	0.000485964	0.002499886	0.001399505	0.001195102
4	0.994440758	0.000232887	0.003184612	0	0.000923345	0.000095781	0.00009229	0.000232887	0.003184612
5	0.939368982	0.001618482	0.003012858	0	0.000861334	0.000468399	0.007147487	0.001618482	0.003012858
6	0.875032299	0.000186345	0.000000003	0	0.000000033	0.000039027	0.000019077	0.000186345	0.000000003
7	0.870585389	0.003486994	0.001156745	0	0.000337202	0.001062631	0.000007736	0.003486994	0.001156745
8	0.812655828	0.000194645	0	0	0.000000004	0.000108028	0.000019579	0.000194645	0
9	0.810856684	0.000112385	0.000000029	0	0.00000013	0.000003073	0.000012189	0.000112385	0.000000029
10	0.766012153	0.000132748	0.00000012	0	0.000000073	0.000001506	0.000014228	0.000132748	0.00000012
11	0.757649679	0.000001693	0.000000125	0	0.000000066	0.00001094	0.000000451	0.000001693	0.000000125
12	0.709321578	0.00092407	0.000014069	0	0.000006227	0.000488204	0.000033754	0.00092407	0.000014069
13	0.704622236	0.000661131	0.000000045	0	0.000000491	0.000552415	0.000047177	0.000661131	0.000000045
14	0.664642004	0.002110055	0.000003165	0	0.000003013	0.00498452	0.000349928	0.002110055	0.000003165
15	0.635505848	0.00777872	0.000329263	0	0.000122537	0.010559818	0.000033748	0.00777872	0.000329263
16	0.626788559	0.002726772	0.005631921	0	0.001659324	0.003033981	0.006685946	0.002726772	0.005631921
17	0.618002657	0.001854274	0.004654744	0	0.001248896	0.001623616	0.001504999	0.001854274	0.004654744
18	0.581714759	0.010733175	0.001876014	0	0.000543217	0.006379956	0.002569148	0.010733175	0.001876014
19	0.573679933	0.011773502	0.002003314	0	0.000627103	0.00768091	0.000194881	0.011773502	0.002003314
20	0.537861543	0.021058949	0.000125241	0	0.000051943	0.019769043	0.00106704	0.021058949	0.000125241
21	0.50128915	0.001324395	0.002192382	0	0.001094107	0.00178012	0.001332771	0.001324395	0.002192382
22	0.478164434	0.011397155	0.000397635	0	0.000200728	0.017075577	0.000162074	0.011397155	0.000397635
23	0.438698235	0.001677038	0.004771874	0	0.002001716	0.002255152	0.002163442	0.001677038	0.004771874
24	0.399123582	0.015406639	0.004114305	0	0.001470218	0.014015941	0.004791008	0.015406639	0.004114305
25	0.383091506	0.016134862	0.004330367	0	0.002263048	0.012588586	0.00586702	0.016134862	0.004330367
26	0.330113167	0.203151628	0.013913455	0	0.014058022	0.215999561	0.014458048	0.203151628	0.013913455
27	0.318147995	0.077071285	0.078157144	0	0.080103845	0.090329004	0.03247336	0.077071285	0.078157144
28	0.291751272	0.192525254	0.011618694	0	0.011073203	0.258054926	0.01683508	0.192525254	0.011618694
29	0.265295597	0.020984566	0.068616001	0	0.054461841	0.026262639	0.057905549	0.020984566	0.068616001

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
30	0.238021768	0.239640355	0.000824585	0	0.00053289	0.245843106	0.003007421	0.239640355	0.000824585
31	0.192203368	0.000336195	0.076514445	0	0.04229643	0.000088396	0.012414666	0.000336195	0.076514445
32	0.140673388	0.020106147	0.01684438	0	0.009642843	0.00003271	0.010272433	0.020106147	0.01684438
33	0.127083321	0.000348863	0.544963152	0	0.292509146	0.000132639	0.369205438	0.000348863	0.544963152
34	0.083251885	0.003094579	0.124848024	0	0.18007823	0.000590689	0.174922814	0.003094579	0.124848024
35	0.074757509	0.123033756	0.002225811	0	0.003473719	0.019730769	0.000851196	0.123033756	0.002225811

1.7 Equilibrio globale forze

***Contributo**: Nome attribuito al sistema risultante.*
***Fx**: Componente X di forza del sistema risultante. [kN]*
***Fy**: Componente Y di forza del sistema risultante. [kN]*
***Fz**: Componente Z di forza del sistema risultante. [kN]*
***Mx**: Componente di momento attorno l'asse X del sistema risultante. [kN*m]*
***My**: Componente di momento attorno l'asse Y del sistema risultante. [kN*m]*
***Mz**: Componente di momento attorno l'asse Z del sistema risultante. [kN*m]*

Bilancio in condizione di carico: Pesi strutturali

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	-0.46316	6.48684	-14424.99527	-14419.091	-178478.165	-77.8238
Reazioni	0.46316	-6.48684	14424.99527	14414.5736	178478.9533	77.8238
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-4.5174	0.7884	0

Bilancio in condizione di carico: Permanenti portati

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-2783.52608	-4330.4955	-34538.4147	0
Reazioni	0	0	2783.52608	4323.3322	34537.1868	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-7.1632	-1.228	0

Bilancio in condizione di carico: Variabile A

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-1928.85727	-2523.5827	-23901.3182	0
Reazioni	0	0	1928.85727	2518.9228	23900.9243	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-4.6599	-0.3939	0

Bilancio in condizione di carico: Neve

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-341.81656	-389.6222	-4246.0159	0
Reazioni	0	0	341.81656	389.814	4244.5579	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.1918	-1.458	0

Bilancio in condizione di carico: Variabile H

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-269.19265	-337.9721	-3341.8982	0
Reazioni	0	0	269.19265	336.9784	3341.0945	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.9937	-0.8037	0

Bilancio in condizione di carico: Vento

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	27.93622	0	-248.2033	0	-445.6469
Reazioni	0	-27.93622	0	248.4767	-0.0219	445.6469
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.2734	-0.0219	0

Bilancio in condizione di carico: Sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	5637.82956	0	0	0	60455.9392	-6294.6848
Reazioni	-5637.82956	0	0	-78.9259	-60429.9854	6294.6848
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-78.9259	25.9538	0

Bilancio in condizione di carico: Sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	5117.13266	0	-54872.3684	0	-63513.128
Reazioni	0	-5117.13266	0	54869.3017	1.1769	63513.128
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-3.0667	1.1769	0

Bilancio in condizione di carico: Eccentricità Y per sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	-2672.9389
Reazioni	0	0	0	-1.1119	-0.0573	2672.9389
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-1.1119	-0.0573	0

Bilancio in condizione di carico: Eccentricità X per sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	1134.7758
Reazioni	0	0	0	0.472	0.0243	-1134.7758
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.472	0.0243	0

Bilancio in condizione di carico: Sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	2410.69263	0	0	0	25850.4954	-2691.5589
Reazioni	-2410.69263	0	0	-33.7481	-25839.3978	2691.5589
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-33.7481	11.0977	0

Bilancio in condizione di carico: Sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	2266.78585	0	-24307.3448	0	-28135.0258
Reazioni	0	-2266.78585	0	24305.9863	0.5214	28135.0258
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-1.3585	0.5214	0

Bilancio in condizione di carico: Eccentricità Y per sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	-1142.9281
Reazioni	0	0	0	-0.4754	-0.0245	1142.9281
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.4754	-0.0245	0

Bilancio in condizione di carico: Eccentricità X per sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	502.6826
Reazioni	0	0	0	0.2091	0.0108	-502.6826
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.2091	0.0108	0

Bilancio in condizione di carico: Rig Ux

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0.01	0	0	0	0.1502	-0.0182
Reazioni	-0.01	0	0	-0.0002	-0.1502	0.0182
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.0002	0	0

Bilancio in condizione di carico: Rig Uy

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0.01	0	-0.1502	0	-0.1236
Reazioni	0	-0.01	0	0.1502	0	0.1236
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Rz

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	0.0001
Reazioni	0	0	0	0	0	-0.0001
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

1.8 Risposta di spettro

***Spettro**: condizione elementare corrispondente allo spettro.*
***N.b.**: nome breve della condizione elementare.*
***Fx**: componente della forza lungo l'asse X. [kN]*
***Fy**: componente della forza lungo l'asse Y. [kN]*
***Fz**: componente della forza lungo l'asse Z. [kN]*
***Mx**: componente della coppia attorno all'asse X. [kN*m]*
***My**: componente della coppia attorno all'asse Y. [kN*m]*
***Mz**: componente della coppia attorno all'asse Z. [kN*m]*
***Max X**: massima reazione lungo l'asse X.*
***Valore**: valore massimo della reazione. [kN]*
***Angolo**: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]*
***Max Y**: massima reazione lungo l'asse Y.*
***Valore**: valore massimo della reazione. [kN]*
***Angolo**: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]*
***Max Z**: massima reazione lungo l'asse Z.*
***Valore**: valore massimo della reazione. [kN]*
***Angolo**: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]*

Spettro	Fx	Fy	Fz	Mx	My	Mz	Max X		Max Y		Max Z	
N.b.							Valore	Angolo	Valore	Angolo	Valore	Angolo
SLV X	3517.2778	309.6513	0	2.698E03	3.316E04	5.620E03	3517.2778	0	3637.5327	91	0	0
SLV Y	309.6513	3637.4326	0	2.532E04	2.814E03	4.503E04	3517.2778	0	3637.5327	91	0	0
X SLD	1503.2926	133.2206	0	1.160E03	1.417E04	2.407E03	1503.2926	179	1604.7996	91	0	0
Y SLD	133.2206	1604.7675	0	1.115E04	1.205E03	1.987E04	1503.2926	179	1604.7996	91	0	0

1.9 Annotazioni solutore

***Informazioni**: informazioni fornite dal solutore al termine del calcolo del modello.*

Informazioni

1.10 Statistiche soluzione

Tipo di equazioni	Lineari
Tecnica di soluzione	Intel MKL PARDISO
Numero equazioni	102066
Elemento min. diagonale	26.77639272
Elemento max diagonale	135998729191731
Rapporto max/min	5079053426786.23
Elementi non nulli	4364468

SIDEL
INGEGNERIA

TABULATI DI CALCOLO – VERIFICHE
CIVICO 47
STATO DI PROGETTO

Sommario

1 Verifiche

1.1 Verifica regolarità strutturale

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

Livello:
Descr: *descrizione livello.*
Quota: *quota livello. [m]*
Q: *quota livello. [m]*
Qinf: *quota livello precedente. [m]*
Comb: *combinazione.*
A1: *a1 (Distribuzione masse).*
A1n: *a1 numeratore (distanza tra centro massa vs. centro rigidezza [se presente] o centro dell'ingombro del piano). [m]*
A1d: *a1 denominatore (ingombro del piano nella medesima direzione [x o y globale]). [m]*
A1r: *a1 rapporto (distanza centro massa/rigidezza su ingombro del piano).*
A2: *a2 (Distribuzione rigidezze).*
A2n: *a2 numeratore (rigidezza max [x o y globale]).*
A2d: *a2 denominatore (rigidezza min [x o y globale]).*
A2r: *a2 rapporto (rigidezza max/min).*
A3: *a3 (Forma compatta).*
A3n: *a3 numeratore (area convessa). [m²]*
A3d: *a3 denominatore (area piano). [m²]*
A3r: *a3 rapporto (area convessa/area piano).*
B: *b (Rapporto lati).*
Bn: *b numeratore (lato max [x o y globale]). [m]*
Bd: *b denominatore (lato min [x o y globale]). [m]*
Br: *b rapporto (lato max/min).*
C: *c (Rapporto rigidezze piano).*
Cn: *c numeratore (rigidezza elementi verticali).*
Cd: *c denominatore (rigidezza piano).*
Cr: *c rapporto (rigidezza elementi verticali/rigidezza piano).*
E1: *e1 (Variazione masse).*
E1n: *e1 numeratore (massa max). [daN]*
E1d: *e1 denominatore (massa min). [daN]*
E1r: *e1 rapporto (massa max/min).*
E2: *e2 (Riduzione rigidezze).*
E2n: *e2 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]*
E2d: *e2 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]*
E2r: *e2 rapporto (variazione massima in decremento Kmax/Kmin).*
E3: *e3 (Incremento rigidezze).*
E3n: *e3 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]*
E3d: *e3 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]*
E3r: *e3 rapporto (variazione massima in incremento Kmax/Kmin).*
F: *f (Rapporto Capacità/Domanda).*
Fn: *f numeratore (rapporto capacità/domanda massimo [c/d max]). [daN]*
Fd: *f denominatore (rapporto capacità/domanda minimo [c/d min]). [daN]*
Fr: *f rapporto (variazione massima [rapporto (c/d max)/(c/d min)]).*
G1: *g1 (Rastremazione di piano).*
G1n: *g1 numeratore (L1). [m]*
G1d: *g1 denominatore (L2). [m]*
G1r: *g1 rapporto (L1/L2).*
G2: *g2 (Rastremazione totale).*
G2n: *g2 numeratore (L0). [m]*
G2d: *g2 denominatore (Li). [m]*
G2r: *g2 rapporto (L0/Li).*
Capacità/Domanda in X:
VrdX: *taglio resistente complessivo in direzione X. [daN]*
VedX: *taglio agente complessivo in direzione X). [daN]*
|Rd/Ed|: *|Rd/Ed| (rapporto capacità/domanda in termini di resistenza a taglio).*
Capacità/Domanda in Y:
VrdY: *taglio resistente complessivo in direzione Y. [daN]*
VedY: *taglio agente complessivo in direzione Y). [daN]*

Verifica regolarità strutturale

Controllo regolarità edificio secondo D.M. 17-01-18 (N.T.C.) §7.2.1 - §C7.2.1

Avvertenze

La seguente procedura valuta la regolarità della costruzione secondo quanto indicato nelle NTC 2018 §7.2.1.

Tali valutazioni sono a carattere puramente informativo e vengono condotte sulla base del modello e delle verifiche presenti alla sua generazione, con le limitazioni indicate nella manualistica.
In ogni caso l'impostazione di regolarità della costruzione, in pianta ed elevazione, va indicata nelle preferenze di analisi dall'utente utilizzatore del software.

Sintesi dei risultati

Orizzontamenti considerati nella valutazione
Livelli di fondazione o di struttura scatolare non dissipativa: Fondazione ascensore(L1), Fondazione(L2),
Livelli di elevazione considerati: Rialzato(L4), Primo(L5), Secondo(L6), Terzo(L7), Sottotetto(L8),

Regolarità in pianta - NO
L'edificio risulta NON regolare in pianta, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio A1 (Distribuzione masse) rispettato, con rapporto massimo 0,17 (limite=0,2) al livello Primo
N.V. - Criterio A2 (Distribuzione rigidezze) non valutabile al livello Rialzato
No - Criterio A3 (Forma compatta) NON rispettato, con rapporto massimo 1978460.2/1569541.9=1.3 (limite=1,05) al livello Primo
Ok - Criterio B (Rapporto lati) rispettato, con rapporto massimo 2,48 (limite=4) al livello Primo
Ok - Criterio C (Rapporto rigidezze piano) rispettato, con rapporto massimo 0 (limite=0,1) al livello Rialzato

Regolarità in altezza - NO
L'edificio risulta NON regolare in altezza, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio D (Altezza elementi sismoresistenti) rispettato, con rapporto massimo 1 (limite=1,01)
No - Criterio E1 (Variazione masse) NON rispettato, con rapporto massimo 172890.9/87369=2 (limite=1,25) tra il livello Primo ed il precedente
N.V. - Criterio E2 (Riduzione rigidezze) non valutabile tra il livello Primo ed il precedente
N.V. - Criterio E3 (Incremento rigidezze) non valutabile tra il livello Primo ed il precedente
No - Criterio F (Rapporto Capacità/Domanda) NON rispettato, con rapporto massimo 30395.2/31.2=974.7 (limite=1) tra il livello Terzo ed il precedente
No - Criterio G1 (Rastremazione di piano) NON rispettato, con rapporto massimo 166/998=0.2 (limite=0,1) tra il livello Secondo ed il precedente
Ok - Criterio G2 (Rastremazione totale) rispettato, con rapporto massimo 0,01 (limite=0,3) tra il livello Terzo ed il precedente

Valori per piano

Verifiche di regolarità in pianta

Livello		A1			A2			A3			B			C		
Descr	Quota	A1n	A1d	A1r	A2n	A2d	A2r	A3n	A3d	A3r	Bn	Bd	Br	Cn	Cd	Cr
Rialzato	1.39	0.16	11.81	0.01				280.1458	255.2282	1.1	24.98	11.81	2.12	0	+∞	0
Primo	4.82	1.69	9.98	0.17				197.846	156.9542	1.26	24.78	9.98	2.48	0	+∞	0
Secondo	8.34	0.67	24.78	0.03				273.4594	258.49	1.06	24.78	11.64	2.13	0	+∞	0
Terzo	11.86	0.51	11.64	0.04				273.4594	254.3484	1.08	24.78	11.64	2.13	0	+∞	0
Sottotetto	15.02	1.4	11.74	0.12				275.6489	259.1993	1.06	24.89	11.73	2.12	0	+∞	0

Verifiche di regolarità in elevazione

Rapporto di regolarità per la condizione D (Altezza elementi sismoresistenti): 16.6/16.6=0.01.

Livello			E1			E2			E3			F			G1			G2		
Descr	Q	Qinf	E1n	E1d	E1r	E2n	E2d	E2r	E3n	E3d	E3r	Fn	Fd	Fr	G1n	G1d	G1r	G2n	G2d	G2r
Primo	4.82	1.39	172891	87369	1.98							33.6	20.3	1.65	0.13	11.81	0.01	0.13	11.81	0.01
Secondo	8.34	4.82	141507	87369	1.62							30395.2	49	620.47	1.66	9.98	0.17	0.13	11.81	0.01
Terzo	11.86	8.34	141507	141507	1							30395.2	31.2	974.66	0	11.64	0	0.13	11.81	0.01
Sottotetto	15.02	11.86	190591	141507	1.35							286.8	58.2	4.93	0.04	11.64	0	0	0.01	0

Dettaglio delle resistenze di piano a taglio (per valutazione punto F)

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Rialzato	1.39	SLD 1	1278505	-136293	9.4	1060221	-23134	45.8
Rialzato	1.39	SLD 2	1278381	-136413	9.4	1059971	-23546	45
Rialzato	1.39	SLD 3	1280446	-138157	9.3	1060013	21139	50.1
Rialzato	1.39	SLD 4	1280292	-138277	9.3	1059781	20727	51.1
Rialzato	1.39	SLD 5	1278298	-38010	33.6	1064071	-74535	14.3
Rialzato	1.39	SLD 6	1278168	-38089	33.6	1063897	-74804	14.2
Rialzato	1.39	SLD 7	1283119	-44223	29	1063087	73041	14.6
Rialzato	1.39	SLD 8	1283181	-44301	29	1062939	72772	14.6
Rialzato	1.39	SLD 9	1279323	44386	28.8	1066032	-74260	14.4
Rialzato	1.39	SLD 10	1279385	44308	28.9	1065947	-74529	14.3
Rialzato	1.39	SLD 11	1283459	38174	33.6	1064872	73317	14.5
Rialzato	1.39	SLD 12	1283656	38096	33.7	1064701	73048	14.6
Rialzato	1.39	SLD 13	1280792	138362	9.3	1065987	-22215	48
Rialzato	1.39	SLD 14	1281012	138242	9.3	1065960	-22627	47.1
Rialzato	1.39	SLD 15	1281661	136499	9.4	1065954	22058	48.3
Rialzato	1.39	SLD 16	1281934	136379	9.4	1065683	21646	49.2
Rialzato	1.39	SLV 1	1270989	-319307	4	1053683	-51577	20.4
Rialzato	1.39	SLV 2	1270756	-319587	4	1053116	-52536	20
Rialzato	1.39	SLV 3	1276703	-323474	3.9	1053357	48768	21.6
Rialzato	1.39	SLV 4	1276511	-323753	3.9	1052840	47809	22
Rialzato	1.39	SLV 5	1271570	-89395	14.2	1062730	-168019	6.3
Rialzato	1.39	SLV 6	1271305	-89575	14.2	1062455	-168635	6.3
Rialzato	1.39	SLV 7	1285617	-103284	12.4	1060794	166463	6.4
Rialzato	1.39	SLV 8	1285758	-103463	12.4	1060490	165847	6.4
Rialzato	1.39	SLV 9	1276340	103548	12.3	1045445	-167335	6.2
Rialzato	1.39	SLV 10	1276254	103369	12.3	1045404	-167951	6.2
Rialzato	1.39	SLV 11	1284363	89660	14.3	1065215	167147	6.4
Rialzato	1.39	SLV 12	1284784	89481	14.4	1064874	166531	6.4
Rialzato	1.39	SLV 13	1266596	323839	3.9	1038197	-49297	21.1
Rialzato	1.39	SLV 14	1267128	323559	3.9	1038867	-50255	20.7
Rialzato	1.39	SLV 15	1268456	319672	4	1041897	51048	20.4
Rialzato	1.39	SLV 16	1268962	319393	4	1041833	50089	20.8
Primo	4.82	SLD 1	692642	-116275	6	577022	-13995	41.2
Primo	4.82	SLD 2	692642	-116395	6	577037	-14407	40.1

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Primo	4.82	SLD 3	692642	-116956	5.9	576930	13354	43.2
Primo	4.82	SLD 4	692642	-117076	5.9	576945	12942	44.6
Primo	4.82	SLD 5	692642	-33757	20.5	578589	-46527	12.4
Primo	4.82	SLD 6	692642	-33835	20.5	578597	-46796	12.4
Primo	4.82	SLD 7	692642	-36027	19.2	577839	44637	12.9
Primo	4.82	SLD 8	692642	-36105	19.2	577847	44368	13
Primo	4.82	SLD 9	692642	36310	19.1	578412	-47002	12.3
Primo	4.82	SLD 10	692642	36232	19.1	578410	-47271	12.2
Primo	4.82	SLD 11	692642	34040	20.3	577895	44162	13.1
Primo	4.82	SLD 12	692642	33961	20.4	577903	43893	13.2
Primo	4.82	SLD 13	692642	117281	5.9	576854	-15576	37
Primo	4.82	SLD 14	692642	117161	5.9	576852	-15988	36.1
Primo	4.82	SLD 15	692642	116600	5.9	576722	11773	49
Primo	4.82	SLD 16	692642	116480	5.9	576719	11361	50.8
Primo	4.82	SLV 1	670308	-272229	2.5	574262	-29863	19.2
Primo	4.82	SLV 2	670308	-272508	2.5	574296	-30821	18.6
Primo	4.82	SLV 3	680695	-273796	2.5	574048	32133	17.9
Primo	4.82	SLV 4	680695	-274076	2.5	574082	31174	18.4
Primo	4.82	SLV 5	692642	-79172	8.7	577955	-103743	5.6
Primo	4.82	SLV 6	692642	-79352	8.7	577977	-104359	5.5
Primo	4.82	SLV 7	686955	-84396	8.1	577239	102909	5.6
Primo	4.82	SLV 8	686955	-84576	8.1	577261	102293	5.6
Primo	4.82	SLV 9	692642	84781	8.2	577889	-104927	5.5
Primo	4.82	SLV 10	692642	84601	8.2	577885	-105543	5.5
Primo	4.82	SLV 11	692642	79557	8.7	576881	101725	5.7
Primo	4.82	SLV 12	692642	79377	8.7	576877	101109	5.7
Primo	4.82	SLV 13	686131	274280	2.5	574254	-33808	17
Primo	4.82	SLV 14	685979	274001	2.5	574248	-34767	16.5
Primo	4.82	SLV 15	691630	272713	2.5	573951	28187	20.4
Primo	4.82	SLV 16	685654	272434	2.5	573945	27229	21.1
Secondo	8.34	SLD 1	902944	-92942	9.7	672769	-2244	299.7
Secondo	8.34	SLD 2	902953	-93062	9.7	672774	-2656	253.3
Secondo	8.34	SLD 3	904246	-93512	9.7	672684	817	823.8
Secondo	8.34	SLD 4	904255	-93632	9.7	672689	405	1661.1
Secondo	8.34	SLD 5	907501	-26924	33.7	673043	-6165	109.2
Secondo	8.34	SLD 6	907473	-27002	33.6	673046	-6434	104.6
Secondo	8.34	SLD 7	906592	-28826	31.5	672760	4038	166.6
Secondo	8.34	SLD 8	906564	-28904	31.4	672763	3769	178.5
Secondo	8.34	SLD 9	907117	29110	31.2	673192	-6403	105.1
Secondo	8.34	SLD 10	907083	29031	31.2	673195	-6672	100.9
Secondo	8.34	SLD 11	906274	27208	33.3	672909	3800	177.1
Secondo	8.34	SLD 12	906246	27130	33.4	672912	3531	190.6
Secondo	8.34	SLD 13	906444	93838	9.7	673266	-3039	221.6
Secondo	8.34	SLD 14	906392	93718	9.7	673271	-3450	195.1
Secondo	8.34	SLD 15	906228	93267	9.7	673181	22	30395.2
Secondo	8.34	SLD 16	906186	93147	9.7	673186	-389	1728.6
Secondo	8.34	SLV 1	882313	-217344	4.1	672168	-3190	210.7
Secondo	8.34	SLV 2	882334	-217623	4.1	672198	-4149	162
Secondo	8.34	SLV 3	868319	-218696	4	672290	3468	193.9
Secondo	8.34	SLV 4	868340	-218976	4	672302	2509	267.9
Secondo	8.34	SLV 5	903567	-63032	14.3	667577	-11812	56.5
Secondo	8.34	SLV 6	897214	-63212	14.2	667370	-12428	53.7
Secondo	8.34	SLV 7	891908	-67540	13.2	651602	10380	62.8
Secondo	8.34	SLV 8	891844	-67719	13.2	651562	9764	66.7
Secondo	8.34	SLV 9	900597	67925	13.3	662071	-12398	53.4
Secondo	8.34	SLV 10	906842	67746	13.4	662406	-13014	50.9
Secondo	8.34	SLV 11	899686	63418	14.2	659414	9794	67.3
Secondo	8.34	SLV 12	899622	63238	14.2	659904	9178	71.9
Secondo	8.34	SLV 13	896888	219181	4.1	671255	-5143	130.5
Secondo	8.34	SLV 14	896012	218902	4.1	672879	-6102	110.3
Secondo	8.34	SLV 15	892989	217829	4.1	673458	1515	444.6
Secondo	8.34	SLV 16	892086	217550	4.1	673469	556	1211.3
Terzo	11.86	SLD 1	902602	-59721	15.1	581226	16427	35.4
Terzo	11.86	SLD 2	902587	-59841	15.1	581234	16016	36.3
Terzo	11.86	SLD 3	902354	-58512	15.4	581231	-18061	32.2
Terzo	11.86	SLD 4	902339	-58632	15.4	581239	-18473	31.5
Terzo	11.86	SLD 5	910195	-19656	46.3	581351	56386	10.3
Terzo	11.86	SLD 6	910185	-19735	46.1	581356	56117	10.4
Terzo	11.86	SLD 7	909370	-15627	58.2	581366	-58575	9.9
Terzo	11.86	SLD 8	909360	-15706	57.9	581371	-58844	9.9
Terzo	11.86	SLD 9	910086	15912	57.2	581461	56210	10.3
Terzo	11.86	SLD 10	910076	15833	57.5	581466	55941	10.4
Terzo	11.86	SLD 11	909260	19940	45.6	581477	-58751	9.9
Terzo	11.86	SLD 12	909250	19862	45.8	581482	-59020	9.9
Terzo	11.86	SLD 13	909673	58838	15.5	581594	15839	36.7
Terzo	11.86	SLD 14	909657	58718	15.5	581602	15427	37.7
Terzo	11.86	SLD 15	909425	60047	15.1	581599	-18650	31.2
Terzo	11.86	SLD 16	909410	59927	15.2	581607	-19061	30.5
Terzo	11.86	SLV 1	861402	-139518	6.2	570980	39044	14.6
Terzo	11.86	SLV 2	861548	-139797	6.2	570998	38086	15
Terzo	11.86	SLV 3	860194	-136830	6.3	570990	-39321	14.5
Terzo	11.86	SLV 4	860790	-137109	6.3	571008	-40279	14.2
Terzo	11.86	SLV 5	884905	-45813	19.3	570217	129809	4.4
Terzo	11.86	SLV 6	884882	-45993	19.2	570175	129193	4.4
Terzo	11.86	SLV 7	894590	-36851	24.3	562372	-131407	4.3
Terzo	11.86	SLV 8	894567	-37031	24.2	562402	-132023	4.3
Terzo	11.86	SLV 9	904072	37237	24.3	565173	129390	4.4
Terzo	11.86	SLV 10	904049	37057	24.4	565229	128773	4.4
Terzo	11.86	SLV 11	895185	46199	19.4	573914	-131827	4.4

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Terzo	11.86	SLV 12	882667	46019	19.2	573839	-132443	4.3
Terzo	11.86	SLV 13	879701	137315	6.4	581833	37645	15.5
Terzo	11.86	SLV 14	879071	137035	6.4	581851	36687	15.9
Terzo	11.86	SLV 15	887198	140003	6.3	581843	-40720	14.3
Terzo	11.86	SLV 16	879769	139724	6.3	581861	-41678	14
Sottotetto	15.02	SLD 1	717875	-15275	47	562713	24918	22.6
Sottotetto	15.02	SLD 2	717882	-15394	46.6	562396	24511	22.9
Sottotetto	15.02	SLD 3	711380	-14186	50.1	557898	-23186	24.1
Sottotetto	15.02	SLD 4	711387	-14305	49.7	557949	-23592	23.7
Sottotetto	15.02	SLD 5	728755	-6140	118.7	570663	79405	7.2
Sottotetto	15.02	SLD 6	728759	-6218	117.2	570929	79139	7.2
Sottotetto	15.02	SLD 7	720156	-2511	286.8	561820	-80939	6.9
Sottotetto	15.02	SLD 8	720161	-2589	278.1	561766	-81204	6.9
Sottotetto	15.02	SLD 9	728390	2796	260.5	557847	78066	7.1
Sottotetto	15.02	SLD 10	728395	2718	268	557922	77800	7.2
Sottotetto	15.02	SLD 11	728560	6425	113.4	562507	-82278	6.8
Sottotetto	15.02	SLD 12	728565	6347	114.8	562431	-82544	6.8
Sottotetto	15.02	SLD 13	726487	14512	50.1	550341	20453	26.9
Sottotetto	15.02	SLD 14	726495	14392	50.5	550159	20047	27.4
Sottotetto	15.02	SLD 15	725992	15600	46.5	574377	-27650	20.8
Sottotetto	15.02	SLD 16	726052	15481	46.9	574327	-28057	20.5
Sottotetto	15.02	SLV 1	683191	-35598	19.2	550883	58747	9.4
Sottotetto	15.02	SLV 2	683121	-35876	19	550885	57800	9.5
Sottotetto	15.02	SLV 3	673254	-33165	20.3	548939	-50500	10.9
Sottotetto	15.02	SLV 4	673260	-33444	20.1	548743	-51446	10.7
Sottotetto	15.02	SLV 5	698513	-14249	49	521033	182378	2.9
Sottotetto	15.02	SLV 6	698524	-14428	48.4	534907	181770	2.9
Sottotetto	15.02	SLV 7	697938	-6140	113.7	562356	-181777	3.1
Sottotetto	15.02	SLV 8	697879	-6319	110.4	562356	-182385	3.1
Sottotetto	15.02	SLV 9	726259	6526	111.3	544560	179246	3
Sottotetto	15.02	SLV 10	720749	6347	113.6	544561	178638	3
Sottotetto	15.02	SLV 11	722218	14634	49.4	539954	-184909	2.9
Sottotetto	15.02	SLV 12	722324	14455	50	539231	-185517	2.9
Sottotetto	15.02	SLV 13	698428	33650	20.8	551545	48307	11.4
Sottotetto	15.02	SLV 14	698436	33372	20.9	550059	47361	11.6
Sottotetto	15.02	SLV 15	704586	36083	19.5	521686	-60939	8.6
Sottotetto	15.02	SLV 16	704595	35804	19.7	520125	-61886	8.4

1.2 Verifiche travate C.A.

Le unità di misura elencate nel capitolo sono in [m, daN, deg] ove non espressamente specificato.

N°: indice progressivo della sezione.
Descrizione: descrizione della sezione.
Tipo: tipo di sezione.
Base: base della sezione. [m]
Altezza: altezza della sezione. [m]
Copriferro sup.: distanza del bordo della staffa dalla superficie superiore del getto. [m]
Copriferro inf.: distanza del bordo della staffa dalla superficie inferiore del getto. [m]
Copriferro lat.: distanza del bordo della staffa dalle superfici laterali del getto. [m]
x: distanza da asse appoggio sinistro. [m]
d: altezza utile. [m]
Af: area di armatura inferiore per unità di lunghezza. [m]
*M: momento flettente. [daN*m/m]*
Comb: combinazione.
x/d: rapporto tra posizione asse neutro e altezza utile.
*Mult: momento ultimo. [daN*m/m]*
V: sforzo di taglio. [daN/m]
Vult: sforzo di taglio ultimo. [daN/m]
Verifica: stato di verifica.
Af: area di armatura. [m²]
Rara: famiglia di combinazione di verifica.
σ c: tensione di compressione nel calcestruzzo. [daN/m²]
σ c limite: tensione di compressione limite nel calcestruzzo. [daN/m²]
σ f: tensione di trazione nell'acciaio. [daN/m²]
σ f limite: tensione di trazione limite nell'acciaio. [daN/m²]
Quasi permanente: famiglia di combinazione di verifica.
Size X: misura dell'impronta al suolo lungo X. [m]
Size Y: misura dell'impronta al suolo lungo Y. [m]
Comb.: combinazione.
Sis.: indicazione combinazione sismica.
Cnd: indicazione condizione di carico (BT breve termine o LT lungo termine).
Fx: componente orizzontale del carico lungo x. [daN]
Fy: componente orizzontale del carico lungo y. [daN]
Fz: componente verticale del carico. [daN]
IncX: inclinazione del carico lungo x. [deg]

IncY: inclinazione del carico lungo y. [deg]
Phi: angolo di attrito di progetto. [deg]
Ad: adesione di progetto. [daN/m²]
RPl: resistenza passiva laterale unitaria di progetto. [daN/m]
γR: coefficiente parziale sulla resistenza di progetto.
Rd: resistenza di progetto. [daN]
Ed: azione di progetto. [daN]
Rd/Ed: coefficiente di sicurezza allo scorrimento.
Aste: numero delle aste del tratto in verifica.
Size X: misura dell'impronta al suolo lungo la direzione X locale. [m]
Size Y: misura dell'impronta al suolo lungo la direzione Y locale. [m]
Type: indicazione del tipo di combinazione statica o sismica.
Cond: indicazione della condizione di carico (BT breve termine o LT lungo termine).
Rd/Ed: coefficiente di sicurezza alla capacità portante.
*Mx: momento risultante agente attorno x. [daN*m]*
*My: momento risultante agente attorno y. [daN*m]*
Inc.x: inclinazione del carico lungo x. [deg]
Inc.y: inclinazione del carico lungo y. [deg]
Ecc.x: eccentricità del carico lungo x. [m]
Ecc.y: eccentricità del carico lungo y. [m]
B': larghezza efficace. [m]
L': lunghezza efficace. [m]
qd: sovraccarico di progetto. [daN/m²]
γs: peso specifico di progetto del suolo. [daN/m³]
Fi: angolo di attrito di progetto. [deg]
Coes: coesione di progetto. [daN/m²]
Amax: accelerazione normalizzata max al suolo.
N:
Nq: fattore di capacità portante per il termine di sovraccarico.
Nc: fattore di capacità portante per il termine coesivo.
Ng: fattore di capacità portante per il termine attritivo.
S:
Sq: fattore correttivo di capacità portante per forma (shape), per il termine di sovraccarico.
Sc: fattore correttivo di capacità portante per forma (shape), per il termine coesivo.
Sg: fattore correttivo di capacità portante per forma (shape), per il termine attritivo.
D:
Dq: fattore correttivo di capacità portante per approfondimento (deep), per il termine di sovraccarico.
Dc: fattore correttivo di capacità portante per approfondimento (deep), per il termine coesivo.
Dg: fattore correttivo di capacità portante per approfondimento (deep), per il termine attritivo.
I:
Iq: fattore correttivo di capacità portante per inclinazione del carico, per il termine di sovraccarico.
Ic: fattore correttivo di capacità portante per inclinazione del carico, per il termine coesivo.
Ig: fattore correttivo di capacità portante per inclinazione del carico, per il termine attritivo.
B:
Bq: fattore correttivo di capacità portante per inclinazione della base, per il termine di sovraccarico.
Bc: fattore correttivo di capacità portante per inclinazione della base, per il termine coesivo.
Bg: fattore correttivo di capacità portante per inclinazione della base, per il termine attritivo.
G:
Gq: fattore correttivo di capacità portante per inclinazione del pendio, per il termine di sovraccarico.
Gc: fattore correttivo di capacità portante per inclinazione del pendio, per il termine coesivo.
Gg: fattore correttivo di capacità portante per inclinazione del pendio, per il termine attritivo.
P:
Pq: fattore correttivo di capacità portante per punzonamento, per il termine di sovraccarico.
Pc: fattore correttivo di capacità portante per punzonamento, per il termine coesivo.
Pg: fattore correttivo di capacità portante per punzonamento, per il termine attritivo.
E:
Eq: fattore correttivo di capacità portante per sisma (earthquake), per il termine di sovraccarico.
Ec: fattore correttivo di capacità portante per sisma (earthquake), per il termine coesivo.
Eg: fattore correttivo di capacità portante per sisma (earthquake), per il termine attritivo.
Tipo: tipologia di cedimento considerato (E = elastico, D = edometrico, Z = consolidazione primaria).
Assoluto: cedimento assoluto massimo.
Sa adm: cedimento assoluto ammissibile. [m]
Sa: cedimento assoluto massimo. [m]
Nodo: nodo dove avviene il cedimento assoluto massimo.
Differenziale: cedimento differenziale massimo.
Sd adm: cedimento differenziale ammissibile. [m]
Sd: cedimento differenziale massimo. [m]
Nodo I: nodo dove avviene il cedimento differenziale massimo.
Nodo j: nodo dove avviene il cedimento differenziale massimo.
Relativo: cedimento relativo massimo.
Sr adm: cedimento relativo ammissibile. [m]
Sr: cedimento relativo massimo. [m]
Nodo: nodo dove avviene il cedimento relativo massimo.

***Rapp. inflessione**: rapporto di inflessione (cedimento relativo max su lunghezza complessiva tratta).*
***RI adm**: rapporto di inflessione ammissibile.*
***RI**: rapporto di inflessione (cedimento relativo max su lunghezza complessiva tratta).*
***Rotazione rigida**: rotazione rigida valutata tra primo ed ultimo punto.*
***RR adm**: rotazione rigida ammissibile. [deg]*
***RR**: rotazione rigida massima (tra primo ed ultimo punto). [deg]*
***Rotazione assoluta**: rotazione assoluta dei singoli tratti.*
***R Adm**: rotazione assoluta ammissibile. [deg]*
***R Max**: rotazione assoluta massima. [deg]*
***Nodo I**: dal nodo.*
***Nodo J**: al nodo.*
***Distorsione angolare positiva**: distorsione angolare positiva (concavità verso l'alto).*
***D+ adm**: distorsione angolare ammissibile. [deg]*
***D+**: distorsione angolare massima positiva (concavità verso l'alto). [deg]*
***Nodo**: nodo dove avviene la distorsione angolare massima positiva (concavità verso l'alto).*
***Distorsione angolare negativa**: distorsione angolare negativa (concavità verso il basso).*
***D- adm**: distorsione angolare ammissibile. [deg]*
***D-**: distorsione angolare massima negativa (concavità verso il basso). [deg]*
***Nodo**: nodo dove avviene la distorsione angolare massima negativa (concavità verso il basso).*
***A sup.**: area efficace di armatura longitudinale superiore. [m²]*
***C.b. sup.**: distanza dal bordo del baricentro dell'armatura longitudinale superiore. [m]*
***A inf.**: area efficace di armatura longitudinale inferiore. [m²]*
***C.b. inf.**: distanza dal bordo del baricentro dell'armatura longitudinale inferiore. [m]*
***M+ela**: momento flettente desunto dal solutore che tende le fibre inferiori. [daN*m]*
***M+des**: momento flettente di progetto che tende le fibre inferiori. [daN*m]*
***M+ult**: momento ultimo per trazione delle fibre inferiori. [daN*m]*
***coeff**: coefficiente di sicurezza.*
***M-ela**: momento flettente desunto dal solutore che tende le fibre superiori. [daN*m]*
***M-des**: momento flettente di progetto che tende le fibre superiori. [daN*m]*
***M-ult**: momento ultimo per trazione delle fibre superiori. [daN*m]*
***A st**: area di staffe per unità di lunghezza. [m²]*
***A sl**: area di armatura longitudinale tesa per valutazione resistenza taglio in assenza di armature a taglio. [m²]*
***A sag**: area equivalente di barre piegate per unità di lunghezza. [m²]*
***Vela**: taglio elastico. [daN]*
***Vdes**: taglio di progetto. [daN]*
***Vrd**: resistenza a taglio della sezione senza armature. [daN]*
***Vrcd**: sforzo di taglio che produce il cedimento delle bielle. [daN]*
***Vrsd**: resistenza a taglio per la presenza delle armature. [daN]*
***Vult**: taglio ultimo. [daN]*
***cotgϑ**: cotg dell'angolo di inclinazione dei puntoni in calcestruzzo.*
***Frequente**: famiglia di combinazione di verifica.*
***Bordo**: bordo interessato dalla fessura.*
***Rara**: famiglia di combinazione per verifica inferiore.*
***Dmax**: distanza massima tra le fessure. [m]*
***Esm**: dilatazione media delle barre di armatura.*
***Wd**: valore di calcolo di apertura delle fessure. [m]*
***Frequente**: famiglia di combinazione per verifica inferiore.*
***Quasi permanente**: famiglia di combinazione per verifica inferiore.*

CORDOLO 1

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

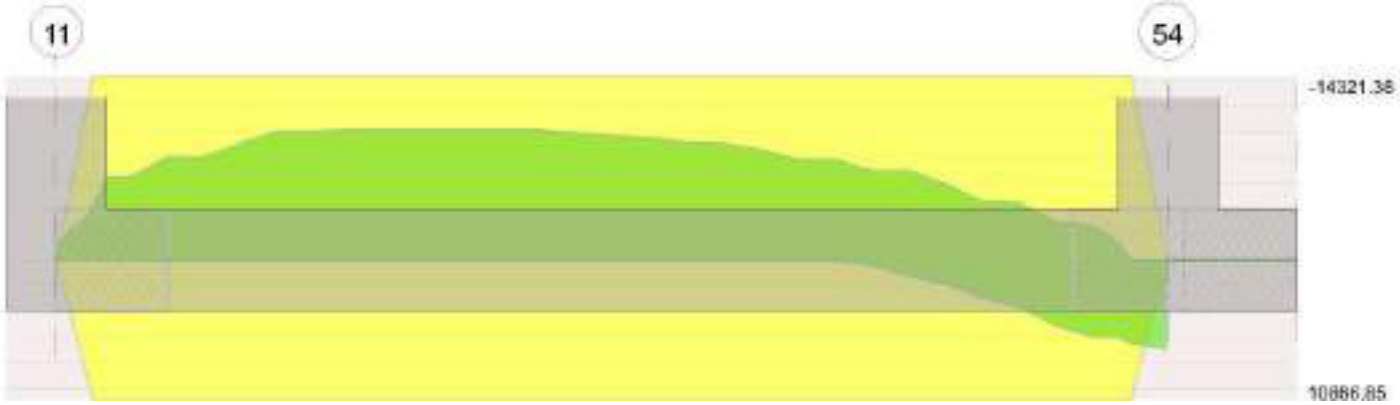


Diagramma verifica stato limite ultimo taglio

Output campate

Campata 1 tra i fili 11 - 54, sezione R 70x45, aste 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.001018	0.052	0.000763	0.052							-4404.76	SLU 83	-5830.62	-15057.39	0.129	2.58	Si
2.48	0.001018	0.052	0.000763	0.052							-8756.03	SLU 84	-9006.43	-15057.39	0.129	1.67	Si
4.73	0.001018	0.052	0.000763	0.052	4955.4	SLU 83	4955.4	11571.27	0.119	2.34							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.001018	0.052	0.000763	0.052							-4948.36	SLV 4	-6470.7	-14321.38	0.232	2.21	Si
2.48	0.001018	0.052	0.000763	0.052							-9503.18	SLV 4	-9697.28	-14321.38	0.232	1.48	Si
4.73	0.001018	0.052	0.000763	0.052	5955.75	SLV 14	5955.75	10866.85	0.2	1.82	771.94	SLV 3	-1528.24	-14321.38	0.232	9.37	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.001018	0.052	0.000763	0.052							-3828.69	SLD 4	-5032.97	-14321.38	0.232	2.85	Si
2.48	0.001018	0.052	0.000763	0.052							-7455.2	SLD 4	-7636.32	-14321.38	0.232	1.88	Si
4.73	0.001018	0.052	0.000763	0.052	4472.26	SLD 14	4472.26	10866.85	0.2	2.43							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000128	0.001018	0	-18047	SLU 84	-18047	-12624	-100005	-20320	-20320	1	1.13	Si
0.23	0.0000128	0.001018	0	-14735	SLU 84	-14735	-11926	-88449	-17972	-17972	1	1.22	Si
2.48	0.0000128	0.001018	0	1388	SLU 83	1388	11926	88449	17972	17972	1	12.95	Si
4.79	0.0000128	0.000763	0	18701	SLU 84	18701	10870	88449	17972	17972	1	0.96	Si
4.96	0.0000128	0.000763	0	18245	SLU 84	18245	11837	100005	20320	20320	1	1.11	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000128	0.001018	0	-19643	SLV 4	-19643	-12624	-100005	-20320	-20320	1	1.03	Si
0.23	0.0000128	0.001018	0	-15815	SLV 4	-15815	-11926	-88449	-17972	-17972	1	1.14	Si
2.48	0.0000128	0.001018	0	1576	SLV 2	1576	11926	88449	17972	17972	1	11.4	Si
4.73	0.0000128	0.000763	0	14810	SLV 4	14810	10870	88449	17972	17972	1	1.21	Si
4.96	0.0000128	0.000763	0	15424	SLV 4	15424	11837	100005	20320	20320	1	1.32	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000128	0.001018	0	-15405	SLD 4	-15405	-12624	-100005	-20320	-20320	1	1.32	Si
0.23	0.0000128	0.001018	0	-12481	SLD 4	-12481	-11926	-88449	-17972	-17972	1	1.44	Si
2.48	0.0000128	0.001018	0	1218	SLD 2	1218	11926	88449	17972	17972	1	14.76	Si
4.73	0.0000128	0.000763	0	13293	SLD 4	13293	10870	88449	17972	17972	1	1.35	Si
4.79	0.0000128	0.000763	0	13825	SLD 4	13825	10870	88449	17972	17972	1	1.3	Si
4.96	0.0000128	0.000763	0	13651	SLD 4	13651	11837	100005	20320	20320	1	1.49	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-630.42	20	-630.42	-26685	1494000	0	36000000	-582.03	2	-582.03	-24636	1120500			Si
0.23	-3254.75	20	-4307.76	159890	1494000	2357503	36000000	-2993.1	2	-3959.98	146981	1120500			Si
2.48	-6463.03	21	-6648.48	246769	1494000	3638500	36000000	-5924.38	2	-6095.95	226261	1120500			Si
4.73	3659.86	20	3659.86	133528	1494000	2037627	36000000	3363.84	2	3363.84	122728	1120500			Si
4.96	4903.5	20	4903.5	207556	1494000	0	36000000	4502.84	2	4502.84	190597	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.18	1.3	SLU 2	ST	LT	1037	381	-42642	1	1	19	0	0	1.1	12971	1105	11.74	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
521,522,523,524,525,526,527,528,529,530,531,532,533	5.18	1.3	SLU 84	ST	BT	2.3	222717	65098	3.42	Si
521,522,523,524,525,526,527,528,529,530,531,532,533	5.18	1.3	SLV 4	SIS	BT	2.3	187693	61002	3.08	Si
521,522,523,524,525,526,527,528,529,530,531,532,533	5.18	1.3	SLD 4	SIS	BT	2.3	205418	51930	3.96	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	413	-65098	-8048.33	-3343.74	0	0	-0.05	-0.12	1.05	5.08	1496	2060	0	14430	
0	3211	-61002	-9617.7	-16915.73	0	3	-0.28	-0.16	0.98	4.63	1496	2060	0	14430	0.07
0	1569	-51930	-7251.84	-8584.12	0	2	-0.17	-0.14	1.02	4.85	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

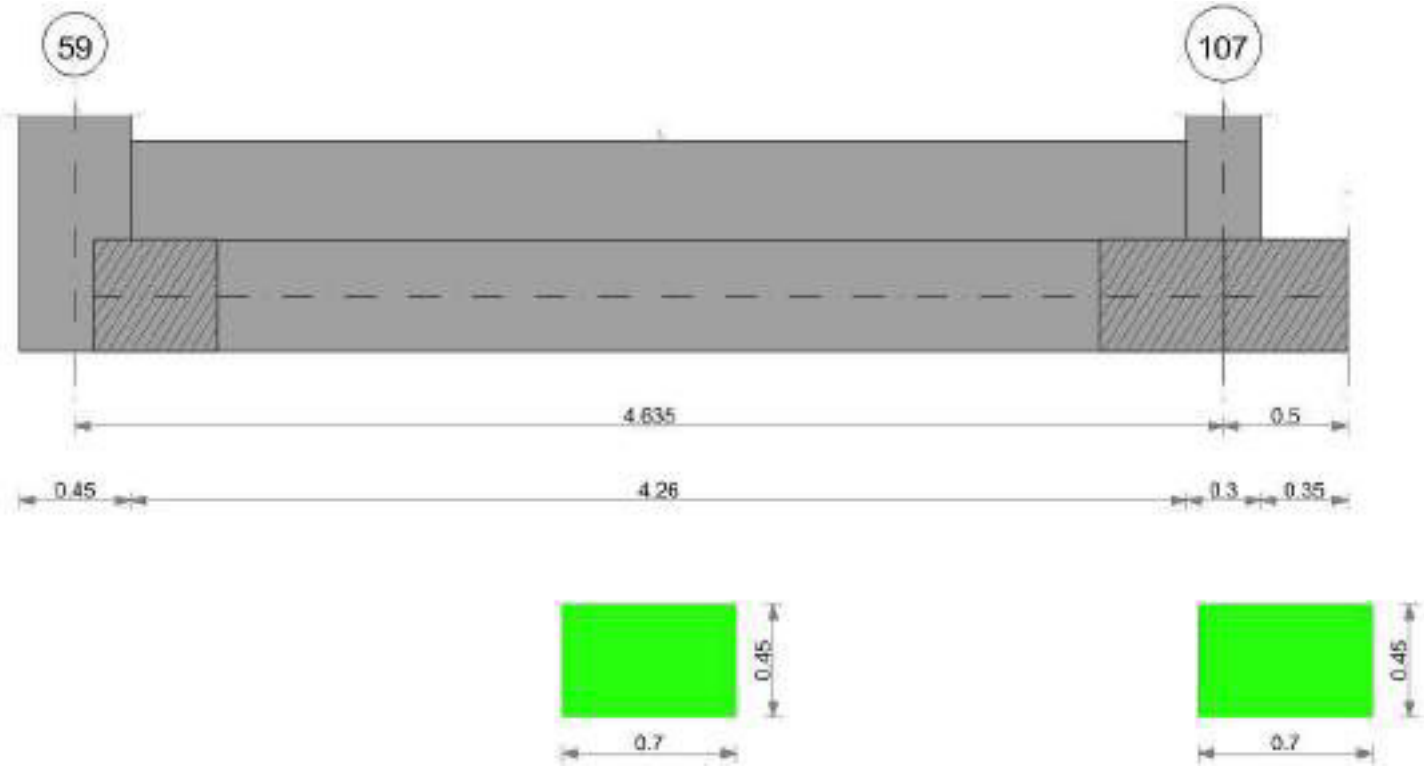
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	897	SLE RA 21	0.05	0	897	884	SLE RA 21	0.05	0	897	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	897	SLE RA 1	0.05	0	897	897	SLE RA 1	0.05	0	897	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	897	SLE RA 1	0.05	0	897	897	SLE RA 1	0.05	0	897	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	897	884	SLE RA 21	0.19	0	897	SLE RA 1	0.1	0	897	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	897	884	SLE RA 1	0.19	0	897	SLE RA 1	0.1	0	897	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	897	884	SLE RA 1	0.19	0	897	SLE RA 1	0.1	0	897	SLE RA 1	Si

CORDOLO 2

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

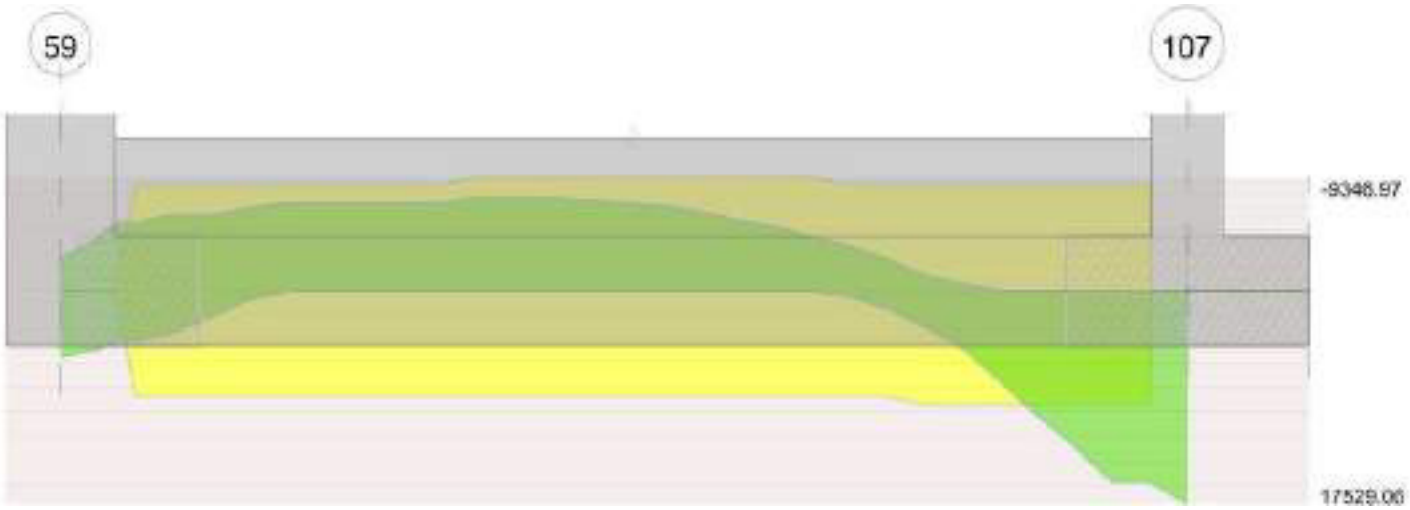


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 59 - 107, sezione R 70x45, aste 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3649	SLV 4	0.119	5227	9522	SLU 84	15877	Si
0.23	0.41	0.0003	3453	SLV 4	0.119	5227	9125	SLU 84	15877	Si
2.32	0.41	0.0003	2704	SLU 84	0.029	5426	6977	SLU 84	15877	Si
4.49	0.41	0.0003	3031	SLU 84	0.029	5426	7823	SLU 84	15877	Si
4.64	0.41	0.0003	3006	SLU 84	0.029	5426	7757	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2974	SLD 4	0.098	6064	7676	SLD 4	15877	Si
0.23	0.41	0.0003	2831	SLD 4	0.098	6064	7306	SLD 4	15877	Si
2.32	0.41	0.0003	2058	SLD 3	0.098	6064	5312	SLD 3	15877	Si
4.49	0.41	0.0003	2220	SLD 3	0.098	6064	5729	SLD 3	15877	Si
4.64	0.41	0.0003	2201	SLD 3	0.098	6064	5680	SLD 3	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000341	2714	SLE RA 21	76827	1494000	952660	36000000	2471	SLE QP 2	69946	1120500	Si
0.23	0.41	0.00000341	2600	SLE RA 21	73618	1494000	912859	36000000	2367	SLE QP 2	67001	1120500	Si
2.32	0.41	0.00000341	1985	SLE RA 21	56192	1494000	696784	36000000	1799	SLE QP 2	50916	1120500	Si
4.49	0.41	0.00000341	2225	SLE RA 21	62979	1494000	780938	36000000	2014	SLE QP 2	57002	1120500	Si
4.64	0.41	0.00000341	2206	SLE RA 21	62450	1494000	774377	36000000	1997	SLE QP 2	56522	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.86	1.3	SLU 10	ST	LT	742	193	-53587	1	0	19	0	0	1.1	16300	767	21.27	Si
4.86	1.3	SLV 14	SIS	LT	11169	-1030	-37597	17	-2	19	0	0	1.1	11436	11217	1.02	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
544,545,546,547,548,549,550,551,552,553,554,555	4.86	1.3	SLU 84	ST	BT	2.3	227706	74526	3.06	Si
544,545,546,547,548,549,550,551,552,553,554,555	4.86	1.3	SLV 4	SIS	BT	2.3	197017	64675	3.05	Si
544,545,546,547,548,549,550,551,552,553,554,555	4.86	1.3	SLD 4	SIS	BT	2.3	212799	56956	3.74	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	178	-74526	-6105.79	-2680.71	0	0	-0.04	-0.08	1.14	4.79	1496	2060	0	14430	
0	1773	-64675	-8069.41	-11229.01	0	2	-0.17	-0.12	1.05	4.51	1496	2060	0	14430	0.07
0	856	-56956	-5817.38	-5901.45	0	1	-0.1	-0.1	1.1	4.65	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

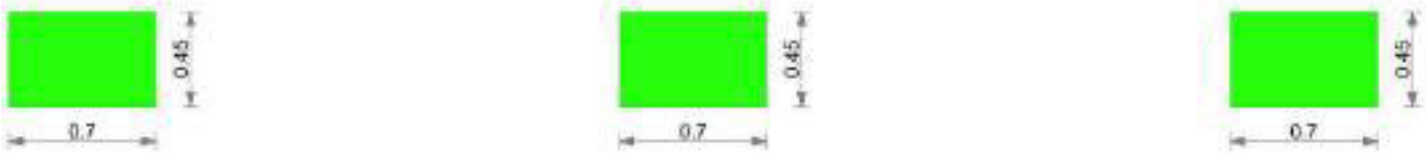
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	987	SLE RA 21	0.05	0	987	975	SLE RA 21	0.05	0	987	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	987	SLE RA 1	0.05	0	987	987	SLE RA 1	0.05	0	987	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	987	SLE RA 1	0.05	0	987	987	SLE RA 1	0.05	0	987	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	987	975	SLE RA 21	0.19	0	987	SLE RA 1	0.1	0	987	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	987	975	SLE RA 1	0.19	0	987	SLE RA 1	0.1	0	987	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	987	975	SLE RA 1	0.19	0	987	SLE RA 1	0.1	0	987	SLE RA 1	Si

CORDOLO 3

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

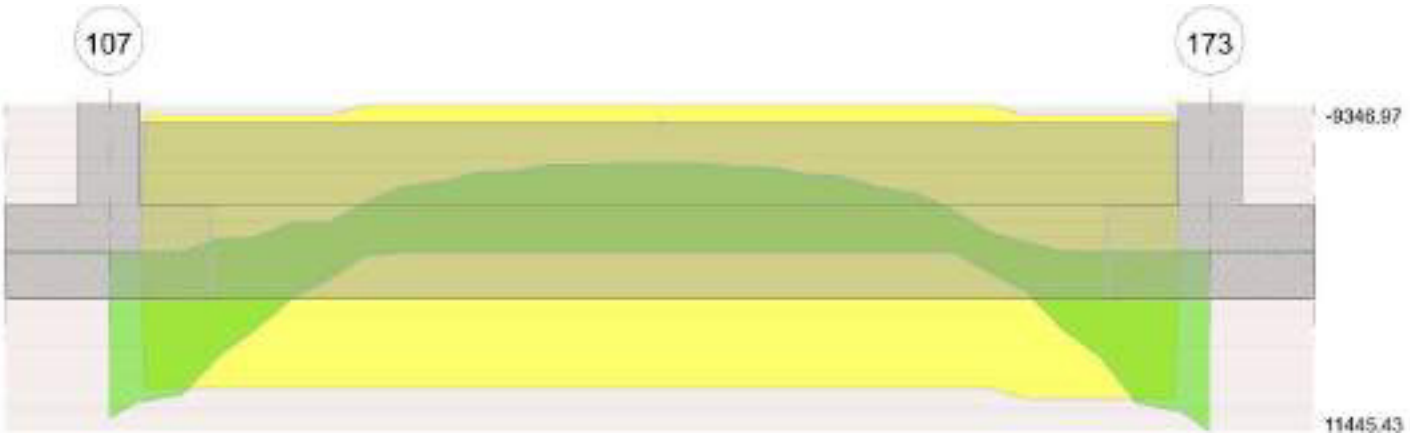
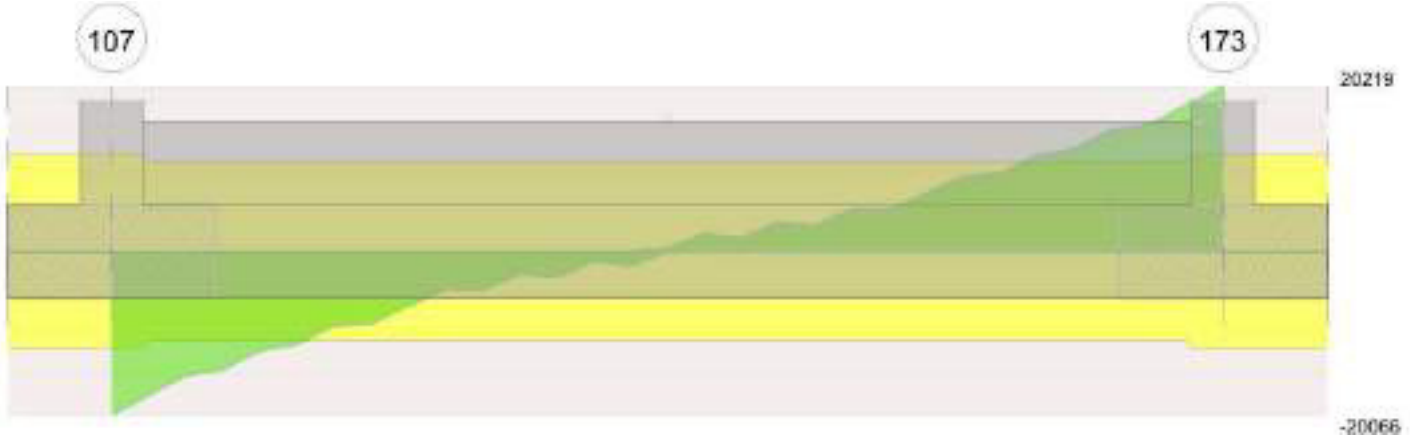


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 107 - 173, sezione R 70x45, aste 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3006	SLU 84	0.023	4058	7757	SLU 84	15877	Si
0.15	0.41	0.0003	2976	SLU 84	0.023	4058	7681	SLU 84	15877	Si
2.66	0.41	0.0003	2296	SLU 84	0.023	4058	5925	SLU 84	15877	Si
5.18	0.41	0.0003	2843	SLU 84	0.023	4058	7337	SLU 84	15877	Si
5.33	0.41	0.0003	2856	SLU 84	0.023	4058	7371	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2201	SLD 3	0.085	4549	5680	SLD 3	15877	Si
0.15	0.41	0.0003	2179	SLD 3	0.085	4549	5623	SLD 3	15877	Si
2.66	0.41	0.0003	1598	SLD 7	0.085	4549	4125	SLD 7	15877	Si
5.18	0.41	0.0003	2077	SLD 15	0.085	4549	5360	SLD 15	15877	Si
5.33	0.41	0.0003	2094	SLD 15	0.085	4549	5405	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000255	2206	SLE RA 21	63165	1494000	783242	36000000	1997	SLE QP 2	57169	1120500	Si
0.15	0.41	0.00000255	2184	SLE RA 21	62544	1494000	775545	36000000	1977	SLE QP 2	56607	1120500	Si
2.66	0.41	0.00000255	1684	SLE RA 21	48220	1494000	597927	36000000	1522	SLE QP 2	43590	1120500	Si
5.18	0.41	0.00000255	2087	SLE RA 21	59758	1494000	740999	36000000	1890	SLE QP 2	54131	1120500	Si
5.33	0.41	0.00000255	2097	SLE RA 21	60035	1494000	744433	36000000	1899	SLE QP 2	54384	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.33	1.3	SLU 35	ST	LT	190	-1437	-61907	0	-1	19	0	0	1.1	18831	1449	12.99	Si
5.33	1.3	SLV 14	SIS	LT	12464	-2074	-50122	14	-2	19	0	0	1.1	15246	12635	1.21	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
564,565,566,567,568,569,570,571,572,573,574,575,576	5.33	1.3	SLU 84	ST	BT	2.3	247291	76181	3.25	Si
564,565,566,567,568,569,570,571,572,573,574,575,576	5.33	1.3	SLV 7	SIS	BT	2.3	221218	56712	3.9	Si
564,565,566,567,568,569,570,571,572,573,574,575,576	5.33	1.3	SLD 7	SIS	BT	2.3	236974	54270	4.37	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1668	-76181	-6694.99	-1118.22	0	-1	-0.01	-0.09	1.12	5.3	1496	2060	0	14430	
0	3610	-56712	-7127.33	-5722.68	0	4	-0.1	-0.13	1.05	5.13	1496	2060	0	14430	0.07
0	968	-54270	-5663.64	-2862.55	0	1	-0.05	-0.1	1.09	5.22	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

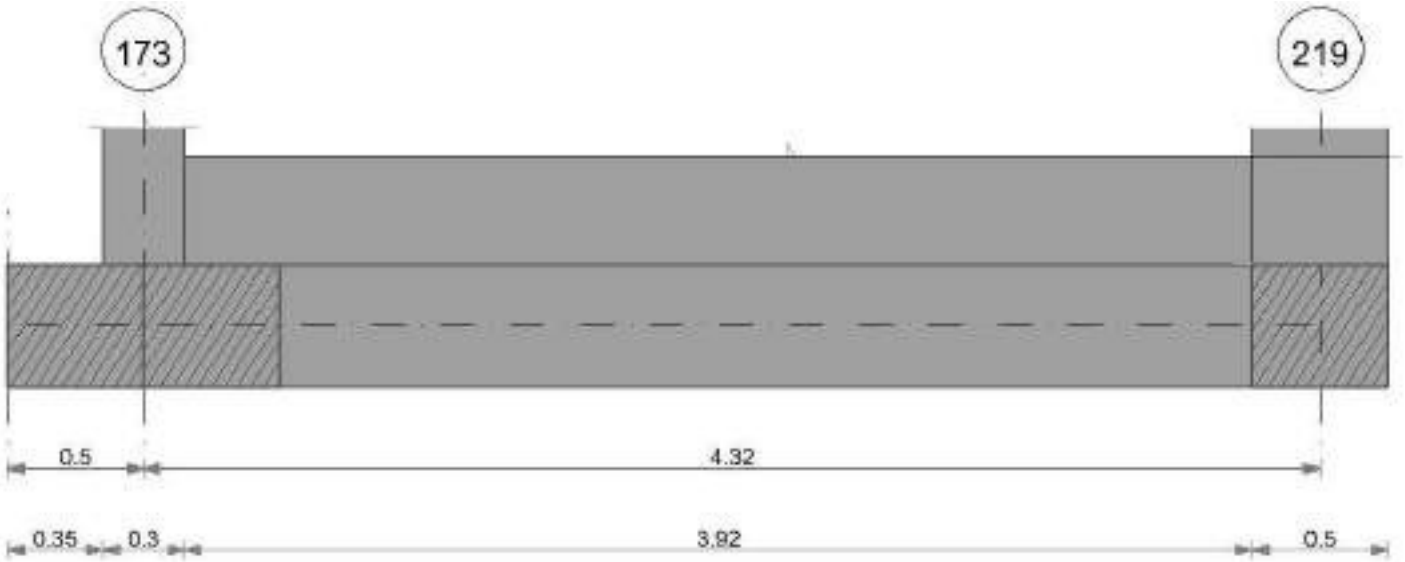
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	987	SLE RA 21	0.05	0	987	1000	SLE RA 21	0.05	0	1000	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	1000	SLE RA 1	0.05	0	1000	1000	SLE RA 1	0.05	0	1000	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	1000	SLE RA 1	0.05	0	1000	1000	SLE RA 1	0.05	0	1000	SLE RA 1	0.0033	0	SLE RA 1	Si

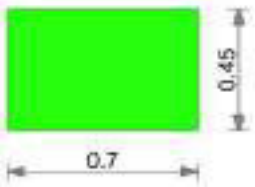
Verifiche geotecniche - Rotazioni assolute e differenziali

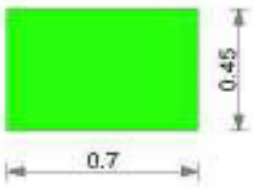
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	1000	987	SLE RA 21	0.19	0	1000	SLE RA 1	0.1	0	1000	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	1000	987	SLE RA 1	0.19	0	1000	SLE RA 1	0.1	0	1000	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	1000	987	SLE RA 1	0.19	0	1000	SLE RA 1	0.1	0	1000	SLE RA 1	Si

CORDOLO 4

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

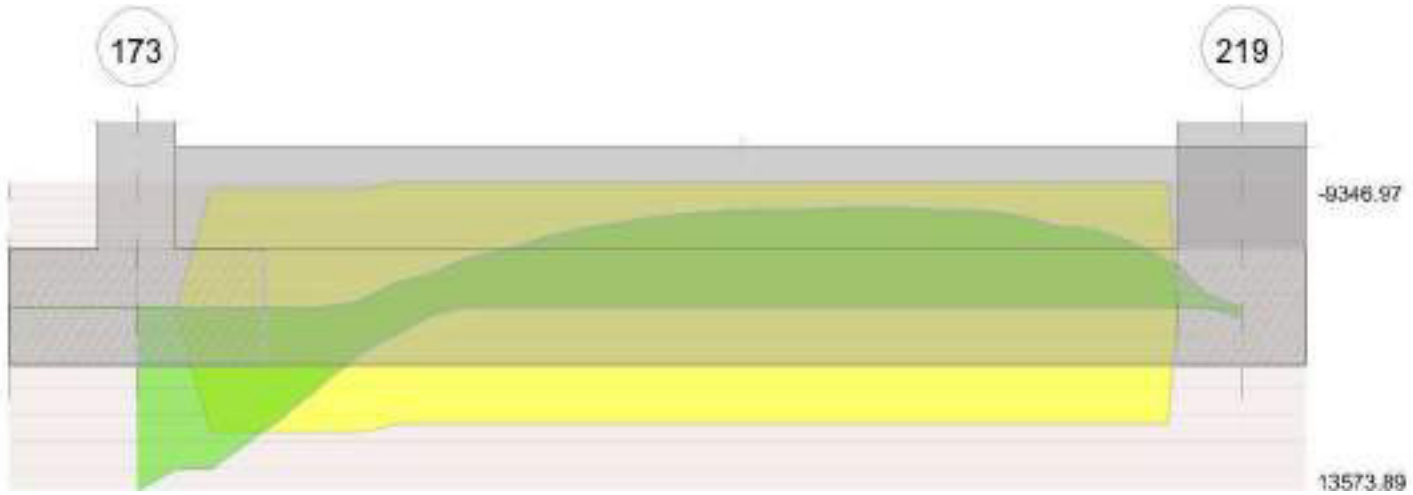


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 173 - 219, sezione R 70x45, aste 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2856	SLU 84	0.02	3335	7371	SLU 84	15877	Si
0.15	0.41	0.0002	2866	SLU 84	0.02	3335	7395	SLU 84	15877	Si
2.16	0.41	0.0002	2579	SLU 84	0.02	3335	6655	SLU 84	15877	Si
4.07	0.41	0.0002	3274	SLU 84	0.02	3335	8448	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2094	SLD 15	0.077	3746	5405	SLD 15	15877	Si
0.15	0.41	0.0002	2109	SLD 15	0.077	3746	5442	SLD 15	15877	Si
2.16	0.41	0.0002	1992	SLD 15	0.077	3746	5141	SLD 15	15877	Si
4.07	0.41	0.0002	2598	SLD 15	0.077	3746	6705	SLD 15	15877	Si
4.32	0.41	0.0002	2731	SLD 15	0.077	3746	7047	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000209	2097	SLE RA 21	60399	1494000	748949	36000000	1899	SLE QP 2	54714	1120500	Si
0.15	0.41	0.00000209	2104	SLE RA 21	60600	1494000	751441	36000000	1906	SLE QP 2	54898	1120500	Si
2.16	0.41	0.00000209	1894	SLE RA 21	54551	1494000	676428	36000000	1717	SLE QP 2	49467	1120500	Si
4.07	0.41	0.00000209	2408	SLE RA 21	69367	1494000	860150	36000000	2193	SLE QP 2	63162	1120500	Si
4.32	0.41	0.00000209	2529	SLE RA 21	72844	1494000	903267	36000000	2304	SLE QP 2	66363	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.57	1.3	SLU 41	ST	LT	-491	-888	-55155	-1	-1	19	0	0	1.1	16777	1015	16.54	Si
4.57	1.3	SLV 3	SIS	LT	-10471	664	-35443	-16	1	19	0	0	1.1	10781	10492	1.03	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
577,578,579,580,581,582,583,584,585,586,587	4.57	1.3	SLU 84	ST	BT	2.3	217220	66431	3.27	Si
577,578,579,580,581,582,583,584,585,586,587	4.57	1.3	SLV 15	SIS	BT	2.3	196643	58391	3.37	Si
577,578,579,580,581,582,583,584,585,586,587	4.57	1.3	SLD 15	SIS	BT	2.3	207874	51149	4.06	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-991	-66431	-4902.96	2203.87	0	-1	0.03	-0.07	1.15	4.5	1496	2060	0	14430	
0	794	-58391	-5857.16	8734.01	0	1	0.15	-0.1	1.1	4.27	1496	2060	0	14430	0.07
0	-11	-51149	-4413.65	4623.73	0	0	0.09	-0.09	1.13	4.39	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	1000	SLE RA 21	0.05	0	1000	1011	SLE RA 21	0.05	0	1011	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	1011	SLE RA 1	0.05	0	1011	1011	SLE RA 1	0.05	0	1011	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	1011	SLE RA 1	0.05	0	1011	1011	SLE RA 1	0.05	0	1011	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	1011	1000	SLE RA 21	0.19	0	1011	SLE RA 1	0.1	0	1011	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	1011	1000	SLE RA 1	0.19	0	1011	SLE RA 1	0.1	0	1011	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	1011	1000	SLE RA 1	0.19	0	1011	SLE RA 1	0.1	0	1011	SLE RA 1	Si

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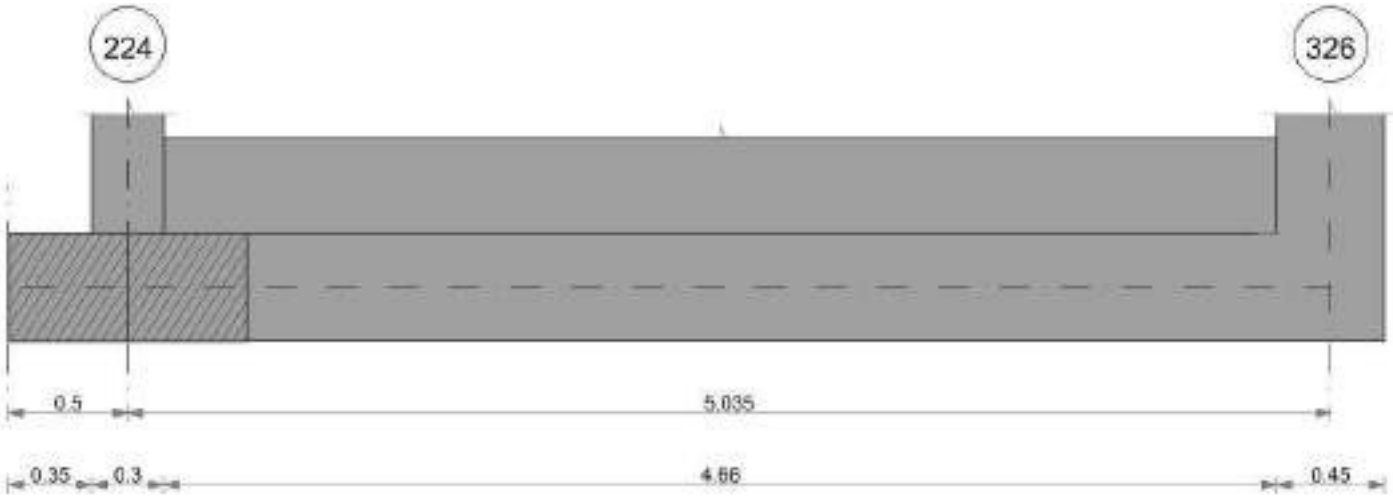
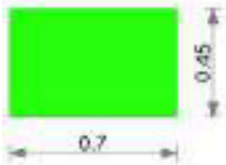
CORDOLO 5

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

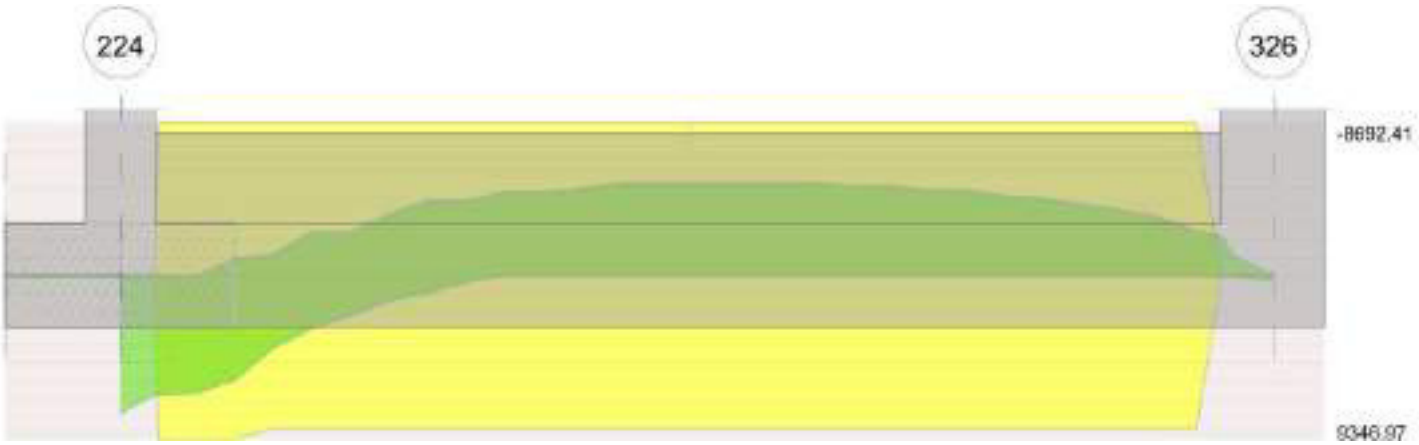
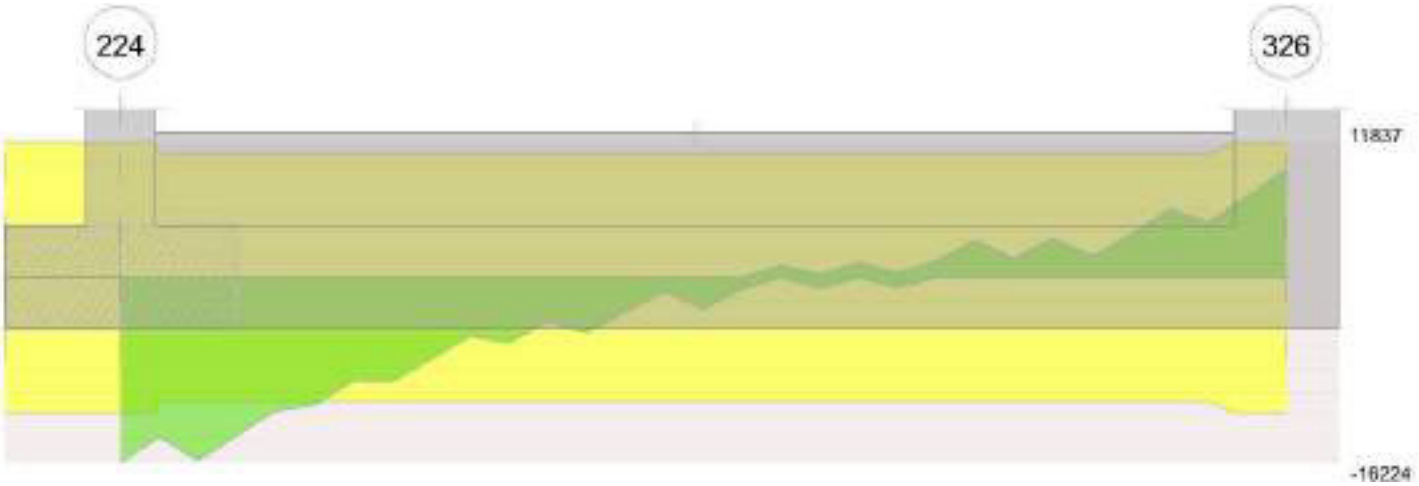


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 224 - 326, sezione R 70x45, aste 618, 617, 616, 615, 614, 613, 612, 611, 610, 609, 608, 607

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
2.52	0.41	0.0002	2401	SLV 15	0.085	2672	6208	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2346	SLD 15	0.07	3092	6055	SLD 15	15877	Si
0.15	0.41	0.0002	2324	SLD 15	0.07	3092	5998	SLD 15	15877	Si
2.52	0.41	0.0002	1950	SLD 15	0.07	3092	5033	SLD 15	15877	Si
4.81	0.41	0.0002	2421	SLD 15	0.07	3092	6247	SLD 15	15877	Si
5.04	0.41	0.0002	2503	SLD 15	0.07	3092	6460	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	2269	SLE RA 20	65673	1494000	814349	36000000	2067	SLE QP 2	59842	1120500	Si
0.15	0.41	0.00000172	2247	SLE RA 20	65036	1494000	806453	36000000	2047	SLE QP 2	59264	1120500	Si
2.52	0.41	0.00000172	1770	SLE RA 20	51246	1494000	635450	36000000	1613	SLE QP 2	46701	1120500	Si
4.81	0.41	0.00000172	1995	SLE RA 20	57754	1494000	716153	36000000	1823	SLE QP 2	52776	1120500	Si
5.04	0.41	0.00000172	2048	SLE RA 20	59274	1494000	735002	36000000	1872	SLE QP 2	54182	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.26	1.3	SLU 27	ST	LT	-1182	-486	-51916	-1	-1	19	0	0	1.1	15792	1278	12.35	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
618,617,616,615,614,613,612,611,610,609,608,607	5.26	1.3	SLU 83	ST	BT	2.3	216660	69786	3.1	Si
618,617,616,615,614,613,612,611,610,609,608,607	5.26	1.3	SLV 15	SIS	BT	2.3	199502	66686	2.99	Si
618,617,616,615,614,613,612,611,610,609,608,607	5.26	1.3	SLD 15	SIS	BT	2.3	213460	56215	3.8	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-697	-69786	-9944.56	-4146.2	0	-1	-0.06	-0.14	1.02	5.14	1496	2060	0	14430	
0	1056	-66686	-11360.61	7925.24	0	1	0.12	-0.17	0.96	5.02	1496	2060	0	14430	0.07
0	226	-56215	-8742.99	1814.04	0	0	0.03	-0.16	0.99	5.2	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

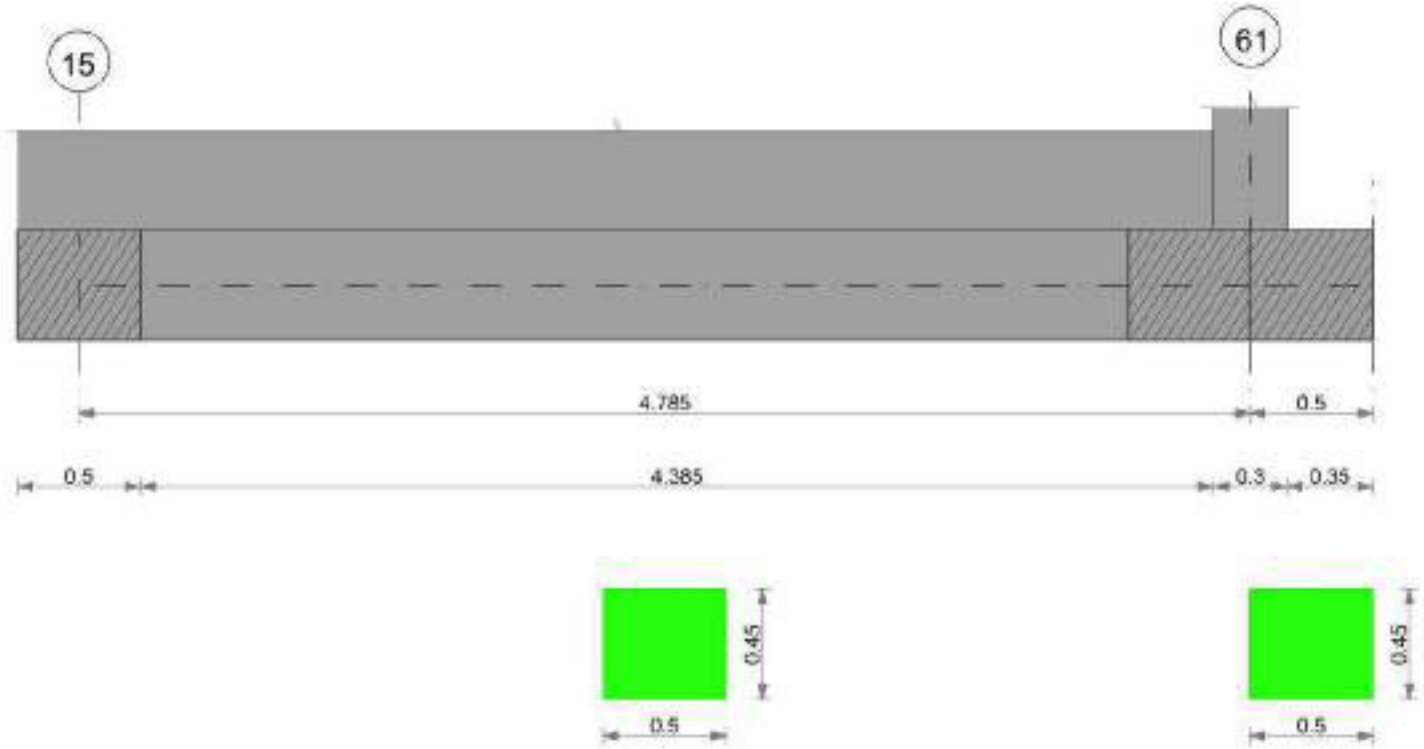
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	908	SLE RA 20	0.05	0	908	922	SLE RA 20	0.05	0	922	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	922	SLE RA 1	0.05	0	922	922	SLE RA 1	0.05	0	922	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	922	SLE RA 1	0.05	0	922	922	SLE RA 1	0.05	0	922	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	922	908	SLE RA 20	0.19	0	922	SLE RA 1	0.1	0	922	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	922	908	SLE RA 1	0.19	0	922	SLE RA 1	0.1	0	922	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	922	908	SLE RA 1	0.19	0	922	SLE RA 1	0.1	0	922	SLE RA 1	Si

CORDOLO 6

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

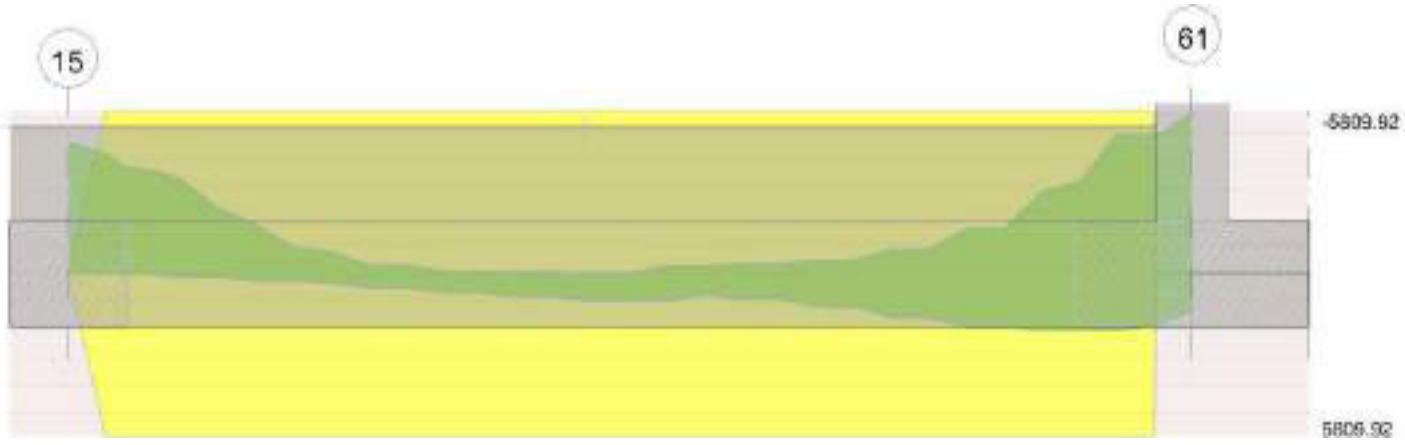
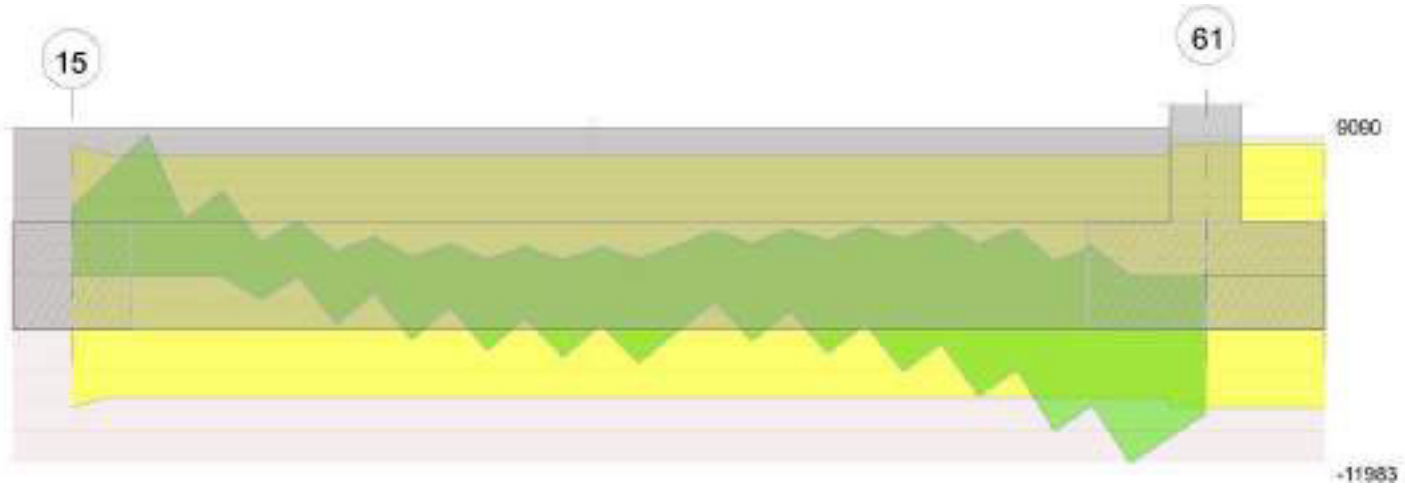


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 15 - 61, sezione R 50x45, aste 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2263	SLV 4	0.085	2637	7870	SLV 4	15877	Si
0.25	0.41	0.0002	2195	SLV 4	0.085	2637	7635	SLV 4	15877	Si
2.39	0.41	0.0002	1762	SLV 2	0.085	2637	6128	SLV 2	15877	Si
4.63	0.41	0.0002	1560	SLU 84	0.017	2711	5428	SLU 84	15877	Si
4.78	0.41	0.0002	1549	SLU 84	0.017	2711	5389	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1688	SLD 4	0.07	3051	5872	SLD 4	15877	Si
0.25	0.41	0.0002	1649	SLD 4	0.07	3051	5736	SLD 4	15877	Si
2.39	0.41	0.0002	1422	SLD 2	0.07	3051	4948	SLD 2	15877	Si
4.63	0.41	0.0002	1162	SLD 2	0.07	3051	4042	SLD 2	15877	Si
4.78	0.41	0.0002	1151	SLD 2	0.07	3051	4004	SLD 2	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000017	1378	SLE RA 21	39899	1494000	494745	36000000	1260	SLE QP 2	36473	1120500	Si
0.25	0.41	0.0000017	1359	SLE RA 21	39366	1494000	488134	36000000	1242	SLE QP 2	35969	1120500	Si
2.39	0.41	0.0000017	1284	SLE RA 21	37193	1494000	461196	36000000	1169	SLE QP 2	33860	1120500	Si
4.63	0.41	0.0000017	1147	SLE RA 21	33223	1494000	411971	36000000	1042	SLE QP 2	30162	1120500	Si
4.78	0.41	0.0000017	1139	SLE RA 21	32987	1494000	409040	36000000	1034	SLE QP 2	29943	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.03	1.1	SLU 44	ST	LT	662	409	-58444	1	0	19	0	0	1.1	17777	779	22.83	Si
5.03	1.1	SLV 16	SIS	LT	8190	1117	-29404	16	2	19	0	0	1.1	8944	8266	1.08	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
353,354,355,356,357,358,359,360,361,362,363,364,365,366	5.03	1.1	SLU 84	ST	BT	2.3	233021	71382	3.26	Si

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
353,354,355,356,357,358,359,360,361,362,363,364,365,366	5.03	1.1	SLV 4	SIS	BT	2.3	205969	68452	3.01	Si
353,354,355,356,357,358,359,360,361,362,363,364,365,366	5.03	1.1	SLD 4	SIS	BT	2.3	219129	57414	3.82	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	303	-71382	-100.02	-3825.67	0	0	-0.05	0	1.1	4.93	1496	2060	0	14430	
0	3243	-68452	-1333.2	-16666.6	0	3	-0.24	-0.02	1.06	4.55	1496	2060	0	14430	0.07
0	1541	-57414	-624.01	-8668.59	0	2	-0.15	-0.01	1.08	4.73	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

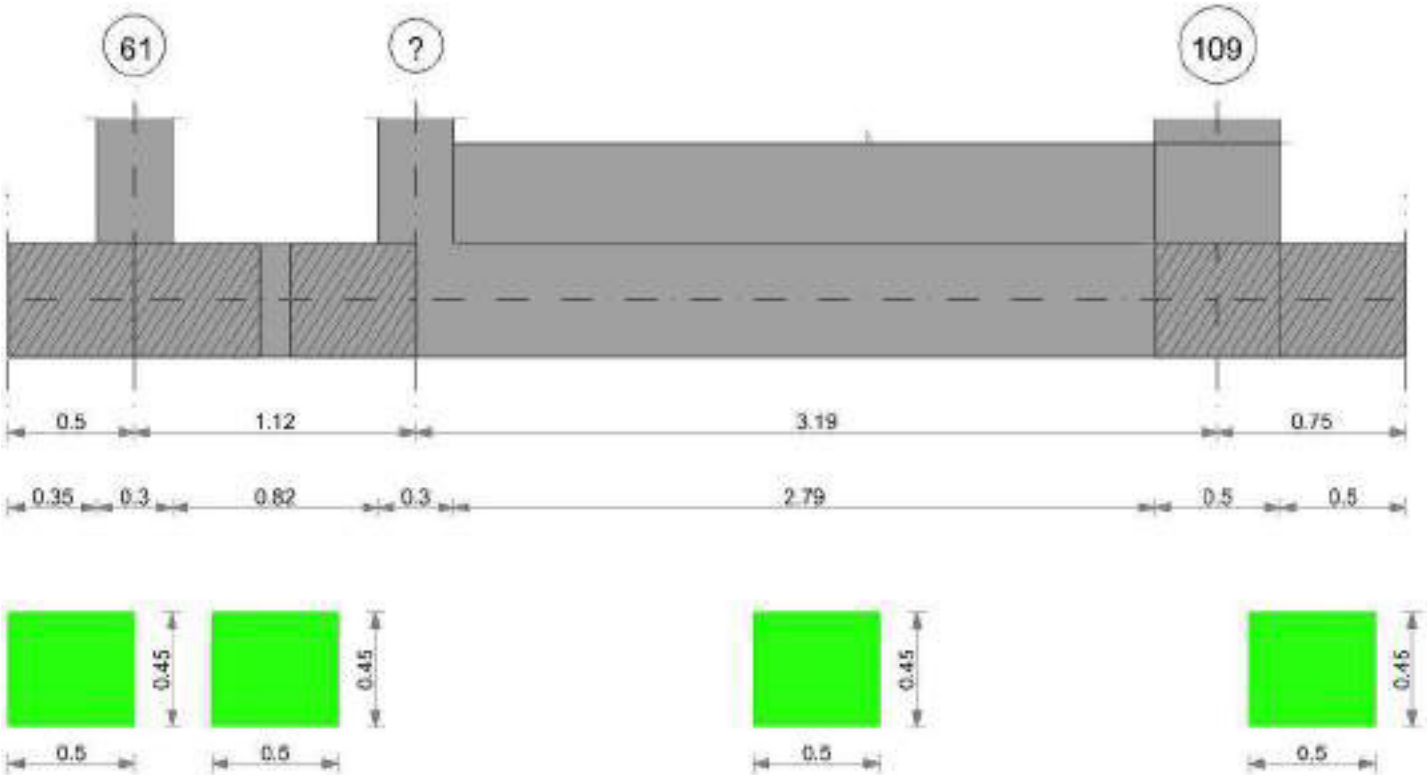
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	671	SLE RA 21	0.05	0.001	671	657	SLE RA 21	0.05	0	671	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	671	SLE RA 1	0.05	0	671	671	SLE RA 1	0.05	0	671	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	671	SLE RA 1	0.05	0	671	671	SLE RA 1	0.05	0	671	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	671	657	SLE RA 21	0.19	0	671	SLE RA 1	0.1	0	671	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	671	657	SLE RA 1	0.19	0	671	SLE RA 1	0.1	0	671	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	671	657	SLE RA 1	0.19	0	671	SLE RA 1	0.1	0	671	SLE RA 1	Si

CORDOLO 7

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

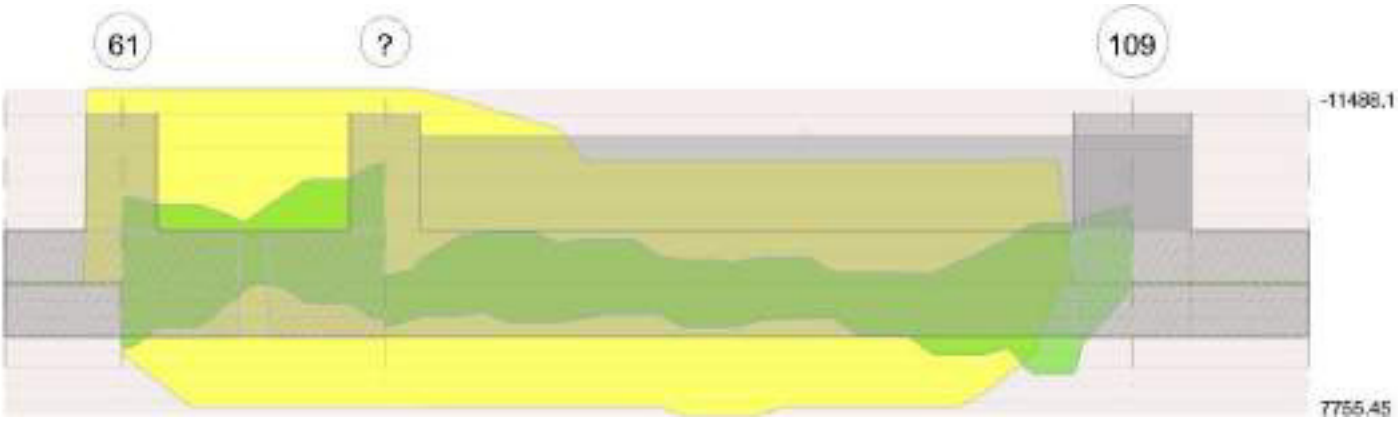
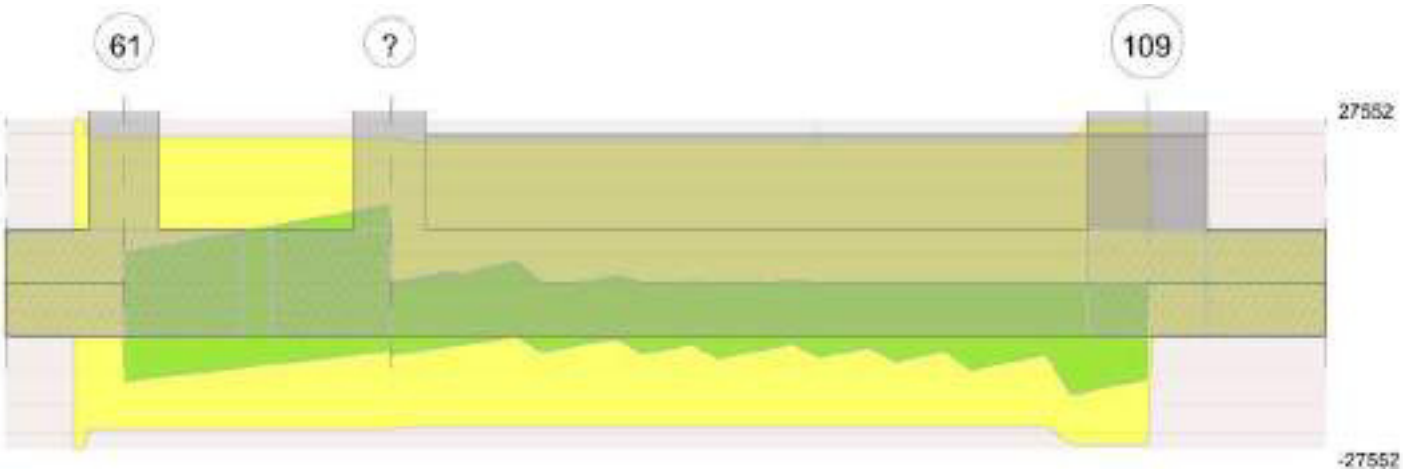


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - ?, sezione R 50x45, asta 534

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052							-735.6	SLU 82	-735.6	-12063.16	0.138	16.4	Si
0.15	0.000823	0.052	0.0004	0.052							-1590.68	SLU 84	-2429.94	-12061.17	0.137	4.96	Si
0.56	0.000823	0.052	0.000509	0.052							-3194.44	SLU 83	-3543.82	-12059.84	0.137	3.4	Si
0.78	0.000823	0.052	0.000509	0.052							-3598.13	SLU 83	-3682.12	-12059.84	0.137	3.28	Si
0.97	0.000823	0.052	0.000509	0.052							-3680.02	SLU 83	-3682.12	-12059.84	0.137	3.28	Si
1.12	0.000823	0.052	0.000509	0.052							-3578.79	SLU 83	-3578.79	-12059.84	0.137	3.37	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052	4435.76	SLV 13	3756.1	4127.78	0.15	1.1	-5274.78	SLV 4	-5087.73	-11479.46	0.252	2.26	Si
0.15	0.000823	0.052	0.0004	0.052	2591.28	SLV 13	2591.28	5753.79	0.174	2.22	-4628.19	SLV 4	-4628.19	-11484.22	0.249	2.48	Si
0.56	0.000823	0.052	0.000509	0.052							-2480.18	SLV 6	-3964.18	-11488.1	0.247	2.9	Si
0.97	0.000823	0.052	0.000509	0.052	1164.18	SLV 3	1164.18	7261.11	0.193	6.24	-6159.52	SLV 14	-6159.52	-11488.1	0.247	1.87	Si
1.12	0.000823	0.052	0.000509	0.052	2613.76	SLV 4	2059.98	7261.11	0.193	3.52	-7497.15	SLV 13	-7048.19	-11488.1	0.247	1.63	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052	1660.23	SLD 13	1228.19	4127.78	0.15	3.36	-2499.25	SLD 4	-2499.25	-11479.46	0.252	4.59	Si
0.15	0.000823	0.052	0.0004	0.052	527.51	SLD 13	527.51	5753.79	0.174	10.91	-2564.43	SLD 4	-2564.43	-11484.22	0.249	4.48	Si
0.56	0.000823	0.052	0.000509	0.052							-2285.08	SLD 6	-3062.92	-11488.1	0.247	3.75	Si
0.97	0.000823	0.052	0.000509	0.052							-4067.01	SLD 14	-4067.01	-11488.1	0.247	2.82	Si
1.12	0.000823	0.052	0.000509	0.052							-4608.08	SLD 13	-4445.67	-11488.1	0.247	2.58	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.000823	0	-8106	SLU 83	-8106	-8875	-63117	-24344	-24344	1	3	Si
0.15	0.0000174	0.000823	0	-6806	SLU 83	-6806	-8875	-63117	-24344	-24344	1	3.58	Si
0.56	0.0000174	0.000823	0	-3300	SLU 77	-3300	-8875	-63117	-24344	-24344	1	7.38	Si
0.97	0.0000174	0.000823	0	311	SLU 40	311	8875	63117	24344	24344	1	78.39	Si
0.97	0.0000174	0.000823	0	-129	SLU 50	-129	-8875	-63117	-24344	-24344	1	189.05	Si
1.12	0.0000174	0.000823	0	1544	SLU 82	1544	8875	63117	24344	24344	1	15.77	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.000823	0	5052	SLV 3	5052	8875	63117	24344	24344	1	4.82	Si
0	0.0000174	0.0004	0	-16212	SLV 14	-16212	-7764	-63178	-24368	-24368	1	1.5	Si
0.15	0.0000174	0.000823	0	6130	SLV 3	6130	8875	63117	24344	24344	1	3.97	Si
0.15	0.0000174	0.0004	0	-15534	SLV 14	-15534	-7764	-63178	-24368	-24368	1	1.57	Si
0.56	0.0000174	0.000823	0	9052	SLV 4	9052	8875	63117	24344	24344	1	2.69	Si
0.56	0.0000174	0.000823	0	-13691	SLV 13	-13691	-8875	-63117	-24344	-24344	1	1.78	Si
0.97	0.0000174	0.000509	0	11953	SLV 4	11953	7764	63178	24368	24368	1	2.04	Si
0.97	0.0000174	0.000823	0	-11858	SLV 13	-11858	-8875	-63117	-24344	-24344	1	2.05	Si
1.12	0.0000174	0.000509	0	13010	SLV 4	13010	7764	63178	24368	24368	1	1.87	Si
1.12	0.0000174	0.000823	0	-11182	SLV 13	-11182	-8875	-63117	-24344	-24344	1	2.18	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.0004	0	-10136	SLD 14	-10136	-7764	-63178	-24368	-24368	1	2.4	Si
0.15	0.0000174	0.0004	0	-9344	SLD 14	-9344	-7764	-63178	-24368	-24368	1	2.61	Si
0.56	0.0000174	0.000823	0	2552	SLD 4	2552	8875	63117	24344	24344	1	9.54	Si
0.56	0.0000174	0.000823	0	-7192	SLD 13	-7192	-8875	-63117	-24344	-24344	1	3.38	Si
0.97	0.0000174	0.000823	0	5148	SLD 4	5148	8875	63117	24344	24344	1	4.73	Si
0.97	0.0000174	0.000823	0	-5053	SLD 13	-5053	-8875	-63117	-24344	-24344	1	4.82	Si
1.12	0.0000174	0.000823	0	6096	SLD 4	6096	8875	63117	24344	24344	1	3.99	Si
1.12	0.0000174	0.000823	0	-4268	SLD 13	-4268	-8875	-63117	-24344	-24344	1	5.7	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-521.93	19	-521.93	28117	1494000	400635	36000000	-419.51	2	-419.51	22599	1120500			Si
0.15	-1157.67	21	-1781.6	94223	1494000	1357993	36000000	-1018.46	2	-1600.83	84663	1120500			Si
0.56	-2351.58	20	-2613.95	135925	1494000	1979783	36000000	-2136.02	2	-2386.72	124109	1120500			Si
0.97	-2720.32	20	-2720.94	141488	1494000	2060813	36000000	-2497.67	2	-2497.67	129878	1120500			Si
1.12	-2649.45	20	-2649.45	137771	1494000	2006669	36000000	-2441.7	2	-2441.7	126968	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 61 - ?, sezione R 50x45, asta 534

Campata 3 tra i fili ? - 109, sezione R 50x45, aste 535, 536, 537, 538, 539, 540, 541, 542, 543

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1525	SLU 84	0.073	13570	5304	SLU 84	34033	Si
0.15	0.41	0.0009	1528	SLU 84	0.072	13292	5315	SLU 84	33314	Si
1.59	0.41	0.0009	1564	SLU 84	0.072	13292	5441	SLU 84	33314	Si
2.94	0.41	0.0009	1530	SLU 83	0.072	13292	5321	SLU 83	33314	Si
3.19	0.41	0.0009	1517	SLU 83	0.072	13292	5275	SLU 83	33314	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1123	SLD 4	0.155	15077	3905	SLD 4	39138	Si
0.15	0.41	0.0009	1122	SLD 4	0.154	14769	3901	SLD 4	38311	Si
1.59	0.41	0.0009	1091	SLD 4	0.154	14769	3795	SLD 4	38311	Si
2.94	0.41	0.0009	1026	SLD 13	0.154	14769	3569	SLD 13	38311	Si
3.19	0.41	0.0009	1019	SLD 15	0.154	14769	3544	SLD 15	38311	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000869	1121	SLE RA 21	29689	1494000	368139	36000000	1017	SLE QP 2	26928	1120500	Si
0.15	0.41	0.00000851	1123	SLE RA 21	29817	1494000	369736	36000000	1019	SLE QP 2	27042	1120500	Si
1.59	0.41	0.00000851	1149	SLE RA 21	30507	1494000	378286	36000000	1041	SLE QP 2	27620	1120500	Si
2.94	0.41	0.00000851	1124	SLE RA 20	29822	1494000	369789	36000000	1015	SLE QP 2	26949	1120500	Si
3.19	0.41	0.00000851	1114	SLE RA 20	29569	1494000	366653	36000000	1006	SLE QP 2	26713	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.31	1.1	SLU 44	ST	LT	288	335	-45515	0	0	19	0	0	1.1	13845	441	31.38	Si
4.31	1.1	SLV 16	SIS	LT	6783	1095	-34597	11	2	19	0	0	1.1	10524	6871	1.53	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
534,535,536,537,538,539,540,541,542,543	4.31	1.1	SLU 83	ST	BT	2.3	204648	55824	3.67	Si
534,535,536,537,538,539,540,541,542,543	4.31	1.1	SLV 4	SIS	BT	2.3	184995	42437	4.36	Si
534,535,536,537,538,539,540,541,542,543	4.31	1.1	SLD 4	SIS	BT	2.3	196260	40100	4.89	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	235	-55824	21.76	335.27	0	0	0.01	0	1.1	4.3	1496	2060	0	14430	
0	1765	-42437	-687.06	-6143.31	0	2	-0.14	-0.02	1.07	4.02	1496	2060	0	14430	0.07
0	884	-40100	-297.82	-2527.38	0	1	-0.06	-0.01	1.09	4.18	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

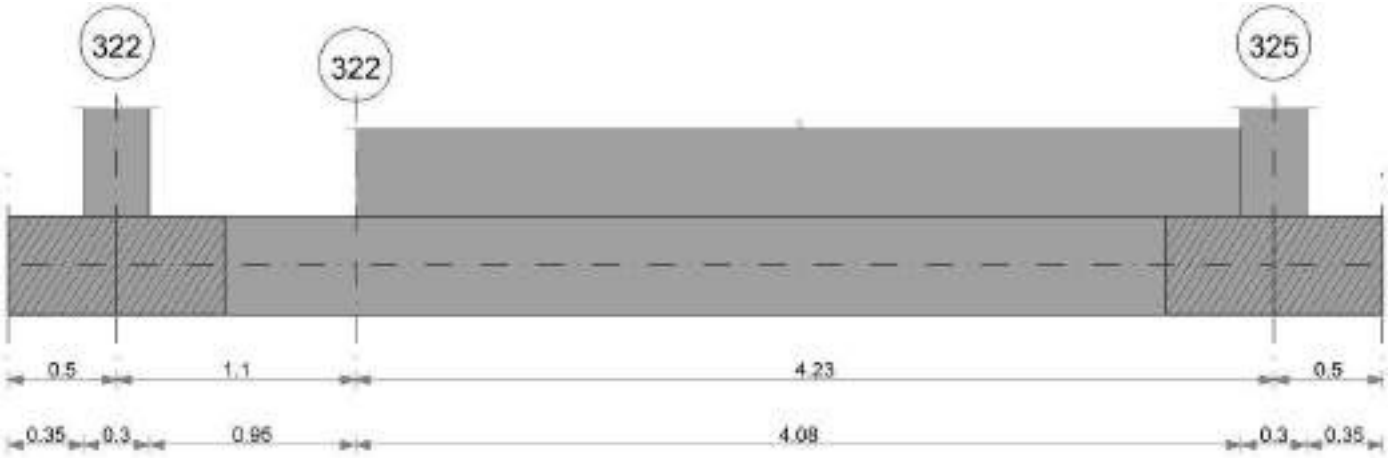
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	682	SLE RA 21	0.05	0	682	671	SLE RA 20	0.05	0	673	SLE FR 4	0.0033	0	SLE RA 1	Si
D	0.05	0	682	SLE RA 1	0.05	0	682	682	SLE RA 1	0.05	0	673	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	682	SLE RA 1	0.05	0	682	682	SLE RA 1	0.05	0	673	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	673	671	SLE RA 21	0.19	0	673	SLE FR 4	0.1	0	682	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	682	673	SLE RA 1	0.19	0	682	SLE RA 1	0.1	0	673	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	682	673	SLE RA 1	0.19	0	682	SLE RA 1	0.1	0	673	SLE RA 1	Si

CORDOLO 8

Geometria



Caratteristiche dei materiali

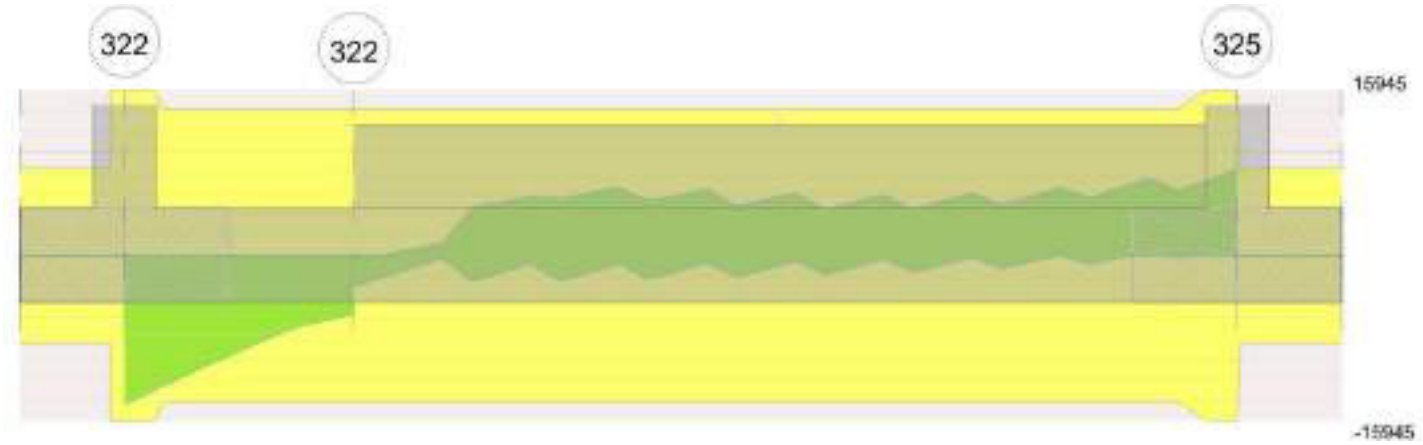
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 322 - 322, sezione R 50x45, asta 844

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	283.03	SLU 84	2084.25	9071.72	0.119	4.35	140.12	SLU 1	-1230.86	-9071.72	0.119	7.37	Si
1.1	0.000603	0.051	0.000603	0.051							-3486.97	SLU 83	-3486.97	-9071.72	0.119	2.6	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	449.48	SLV 15	1980.76	8578.86	0.211	4.33	-120.74	SLV 2	-1043.37	-8578.86	0.211	8.22	Si
1.1	0.000603	0.051	0.000603	0.051							-3398.87	SLV 14	-3398.87	-8578.86	0.211	2.52	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	285.41	SLD 15	1620.46	8578.86	0.211	5.29	43.33	SLD 2	-922.18	-8578.86	0.211	9.3	Si
1.1	0.000603	0.051	0.000603	0.051							-2772.6	SLD 14	-2772.6	-8578.86	0.211	3.09	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-14373	SLU 84	-14373	-8455	-71432	-15945	-15945	1	1.11	Si
0.15	0.0000101	0	0	-12921	SLU 84	-12921	-8455	-71432	-15945	-15945	1	1.23	Si
0.55	0.0000101	0	0	-9219	SLU 84	-9219	-7777	-63336	-14138	-14138	1	1.53	Si
1.1	0.0000101	0.000603	0	-4576	SLU 84	-4576	-8014	-63336	-14138	-14138	1	3.09	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-11195	SLV 16	-11195	-8455	-71432	-15945	-15945	1	1.42	Si
0.15	0.0000101	0	0	-10328	SLV 16	-10328	-8455	-71432	-15945	-15945	1	1.54	Si
0.18	0.0000101	0	0	-10140	SLV 16	-10140	-7777	-63336	-14138	-14138	1	1.39	Si
0.55	0.0000101	0	0	-8186	SLV 16	-8186	-7777	-63336	-14138	-14138	1	1.73	Si
1.1	0.0000101	0.000603	0	-5651	SLV 16	-5651	-8014	-63336	-14138	-14138	1	2.5	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-10237	SLD 16	-10237	-8455	-71432	-15945	-15945	1	1.56	Si
0.15	0.0000101	0	0	-9311	SLD 16	-9311	-8455	-71432	-15945	-15945	1	1.71	Si
0.18	0.0000101	0	0	-9108	SLD 16	-9108	-7777	-63336	-14138	-14138	1	1.55	Si
0.55	0.0000101	0	0	-6977	SLD 16	-6977	-7777	-63336	-14138	-14138	1	2.03	Si
1.1	0.0000101	0.000603	0	-4109	SLD 16	-4109	-8014	-63336	-14138	-14138	1	3.44	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	4945.72	21	4154.92	246217	1494000	0	36000000	4442.08	2	3727.63	220897	1120500			Si
0.15	3443.72	21	3443.72	204072	1494000	0	36000000	3085.67	2	3085.67	182855	1120500			Si
0.55	202.39	21	1523.07	78875	1494000	1183123	36000000	164.37	2	1353.35	70086	1120500			Si
1.1	-2555.9	20	-2555.9	132362	1494000	1985425	36000000	-2304.36	2	-2304.36	119335	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 322 - 322, sezione R 50x45, asta 844

Campata 3 tra i fili 322 - 325, sezione R 50x45, aste 845, 846, 847, 848, 849, 850, 851, 852, 853, 854

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1368	SLU 83	0.042	7953	4210	SLU 83	17882	Si
2.12	0.41	0.0005	1228	SLU 83	0.042	7953	3779	SLU 83	17882	Si
4.08	0.41	0.0005	1493	SLU 83	0.042	7953	4594	SLU 83	17882	Si
4.23	0.41	0.0005	1507	SLU 83	0.042	7953	4638	SLU 83	17882	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1006	SLD 3	0.119	8861	3095	SLD 3	20565	Si
2.12	0.41	0.0005	841	SLD 3	0.119	8861	2587	SLD 3	20565	Si
4.08	0.41	0.0005	1092	SLD 14	0.119	8861	3361	SLD 14	20565	Si
4.23	0.41	0.0005	1110	SLD 14	0.119	8861	3414	SLD 14	20565	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000503	1003	SLE RA 20	27800	1494000	344723	36000000	904	SLE QP 2	25049	1120500	Si
2.12	0.41	0.00000503	900	SLE RA 20	24961	1494000	309519	36000000	812	SLE QP 2	22499	1120500	Si
4.08	0.41	0.00000503	1094	SLE RA 20	30334	1494000	376146	36000000	986	SLE QP 2	27333	1120500	Si
4.23	0.41	0.00000503	1105	SLE RA 20	30625	1494000	379750	36000000	995	SLE QP 2	27596	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
5.33	1.1	SLU 41	ST	LT	-608	-1011	-42844	-1	-1	19	0	0	1.1	13032	1179	11.05	Si
5.33	1.1	SLV 14	SIS	LT	7879	-1577	-33634	13	-3	19	0	0	1.1	10231	8035	1.27	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
844,845,846,847,848,849,850,851,852,853,854	5.33	1.1	SLU 83	ST	BT	2.3	245061	51729	4.74	Si
844,845,846,847,848,849,850,851,852,853,854	5.33	1.1	SLV 1	SIS	BT	2.3	212790	37732	5.64	Si
844,845,846,847,848,849,850,851,852,853,854	5.33	1.1	SLD 1	SIS	BT	2.3	230938	36572	6.31	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1158	-51729	403.4	-1517.98	0	-1	-0.03	0.01	1.08	5.27	1496	2060	0	14430	
0	-2366	-37732	1022.54	-10753.73	0	-4	-0.29	0.03	1.05	4.76	1496	2060	0	14430	0.07
0	-1461	-36572	594.06	-5154.31	0	-2	-0.14	0.02	1.07	5.05	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

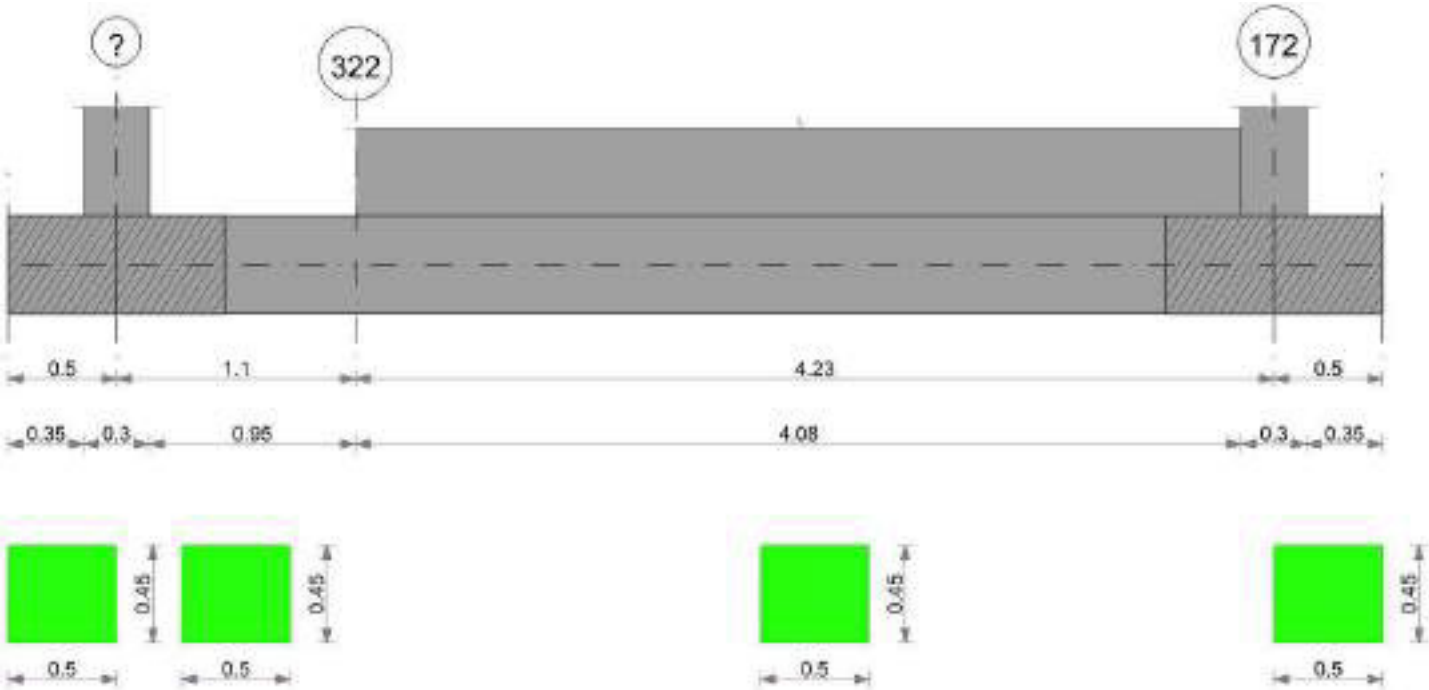
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	811	SLE RA 21	0.05	0	811	812	SLE RA 12	0.05	0	812	SLE RA 12	0.0033	0	SLE RA 12	Si
D	0.05	0	822	SLE RA 1	0.05	0	822	822	SLE RA 1	0.05	0	812	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	822	SLE RA 1	0.05	0	822	822	SLE RA 1	0.05	0	812	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0.01	812	811	SLE RA 12	0.19	0	822	SLE RA 1	0.1	0.01	812	SLE RA 12	Si
D	0.19	0	SLE RA 1	0.19	0	822	812	SLE RA 1	0.19	0	822	SLE RA 1	0.1	0	812	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	822	812	SLE RA 1	0.19	0	822	SLE RA 1	0.1	0	812	SLE RA 1	Si

CORDOLO 9

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

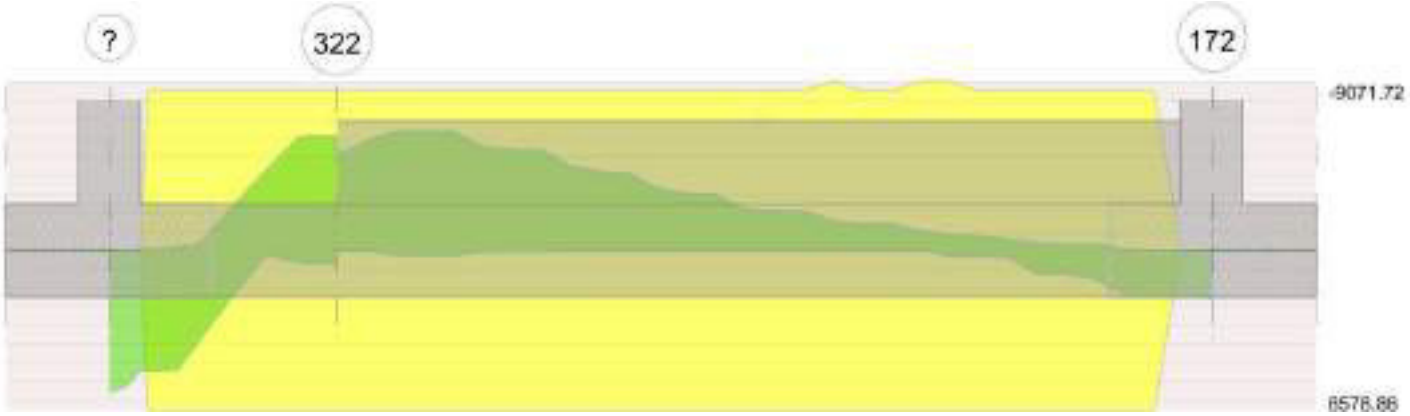
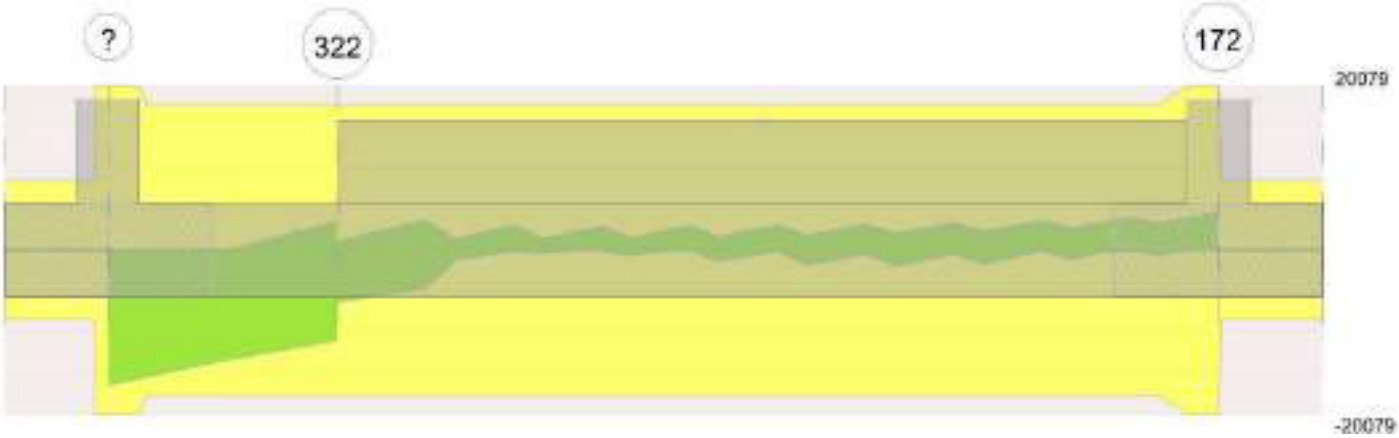


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili ? - 322, sezione R 50x45, asta 833

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	331.43	SLU 84	2342.62	9071.72	0.119	3.87	170.95	SLU 1	-1396.02	-9071.72	0.119	6.5	Si
1.1	0.000603	0.051	0.000603	0.051							-4103.35	SLU 83	-4103.35	-9071.72	0.119	2.21	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	635.98	SLV 15	3114.74	8578.86	0.211	2.75	-241.32	SLV 2	-1797.24	-8578.86	0.211	4.77	Si
1.1	0.000603	0.051	0.000603	0.051	701.13	SLV 3	701.13	8578.86	0.211	12.24	-6147.67	SLV 14	-6147.67	-8578.86	0.211	1.4	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	384.8	SLD 15	2207.29	8578.86	0.211	3.89	9.86	SLD 2	-1308.38	-8578.86	0.211	6.56	Si
1.1	0.000603	0.051	0.000603	0.051							-4187	SLD 14	-4187	-8578.86	0.211	2.05	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000127	0	0	-15507	SLU 83	-15507	-8455	-71432	-20079	-20079	1	1.29	Si
0.15	0.0000127	0	0	-14066	SLU 83	-14066	-8455	-71432	-20079	-20079	1	1.43	Si
0.18	0.0000127	0	0	-13750	SLU 83	-13750	-7777	-63336	-17804	-17804	1	1.29	Si
0.55	0.0000127	0	0	-10398	SLU 83	-10398	-7777	-63336	-17804	-17804	1	1.71	Si
1.1	0.0000127	0.000603	0	-5811	SLU 83	-5811	-8014	-63336	-17804	-17804	1	3.06	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000127	0	0	-16476	SLV 13	-16476	-8455	-71432	-20079	-20079	1	1.22	Si
0.15	0.0000127	0	0	-15624	SLV 13	-15624	-8455	-71432	-20079	-20079	1	1.29	Si
0.18	0.0000127	0	0	-15439	SLV 13	-15439	-7777	-63336	-17804	-17804	1	1.15	Si
0.55	0.0000127	0	0	-13506	SLV 13	-13506	-7777	-63336	-17804	-17804	1	1.32	Si
1.1	0.0000127	0.000603	0	3412	SLV 4	3412	8014	63336	17804	17804	1	5.22	Si
1.1	0.0000127	0.000603	0	-11009	SLV 13	-11009	-8014	-63336	-17804	-17804	1	1.62	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000127	0	0	-12944	SLD 13	-12944	-8455	-71432	-20079	-20079	1	1.55	Si
0.15	0.0000127	0	0	-12027	SLD 13	-12027	-8455	-71432	-20079	-20079	1	1.67	Si
0.18	0.0000127	0	0	-11826	SLD 13	-11826	-7777	-63336	-17804	-17804	1	1.51	Si
0.55	0.0000127	0	0	-9712	SLD 13	-9712	-7777	-63336	-17804	-17804	1	1.83	Si
1.1	0.0000127	0.000603	0	-6880	SLD 13	-6880	-8014	-63336	-17804	-17804	1	2.59	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0.15	3822.42	21	3822.42	226514	1494000	0	36000000	3435.05	2	3435.05	203558	1120500			Si
0.55	238.11	21	1714	88763	1494000	1331441	36000000	197.33	2	1529.5	79208	1120500			Si
1.1	-3011.22	20	-3011.22	155942	1494000	2339124	36000000	-2723.27	2	-2723.27	141029	1120500			Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili ? - 322, sezione R 50x45, asta 833

Campata 3 tra i fili 322 - 172, sezione R 50x45, aste 834, 835, 836, 837, 838, 839, 840, 841, 842, 843

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1347	SLU 83	0.053	9971	4145	SLU 83	22519	Si
2.12	0.41	0.0006	1205	SLU 83	0.053	9971	3706	SLU 83	22519	Si
4.08	0.41	0.0006	1466	SLU 83	0.053	9971	4510	SLU 83	22519	Si
4.23	0.41	0.0006	1480	SLU 83	0.053	9971	4554	SLU 83	22519	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	992	SLD 1	0.133	11092	3053	SLD 1	25896	Si
2.12	0.41	0.0006	829	SLD 1	0.133	11092	2551	SLD 1	25896	Si
4.08	0.41	0.0006	1071	SLD 14	0.133	11092	3295	SLD 14	25896	Si
4.23	0.41	0.0006	1088	SLD 14	0.133	11092	3349	SLD 14	25896	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000634	987	SLE RA 20	26926	1494000	333888	36000000	889	SLE QP 2	24250	1120500	Si
2.12	0.41	0.00000634	883	SLE RA 20	24079	1494000	298586	36000000	796	SLE QP 2	21692	1120500	Si
4.08	0.41	0.00000634	1074	SLE RA 20	29296	1494000	363270	36000000	968	SLE QP 2	26384	1120500	Si
4.23	0.41	0.00000634	1085	SLE RA 20	29581	1494000	366800	36000000	977	SLE QP 2	26641	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.33	1.1	SLU 41	ST	LT	-685	-1011	-42303	-1	-1	19	0	0	1.1	12868	1221	10.54	Si
5.33	1.1	SLV 3	SIS	LT	-8775	67	-37094	-13	0	19	0	0	1.1	11283	8776	1.29	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
833,834,835,836,837,838,839,840,841,842,843	5.33	1.1	SLU 83	ST	BT	2.3	244687	51099	4.79	Si
833,834,835,836,837,838,839,840,841,842,843	5.33	1.1	SLV 1	SIS	BT	2.3	212874	37663	5.65	Si
833,834,835,836,837,838,839,840,841,842,843	5.33	1.1	SLD 1	SIS	BT	2.3	230697	36302	6.35	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1158	-51099	403.4	-1685.44	0	-1	-0.03	0.01	1.08	5.26	1496	2060	0	14430	
0	-2366	-37663	1022.54	-10688.54	0	-4	-0.28	0.03	1.05	4.76	1496	2060	0	14430	0.07
0	-1461	-36302	594.06	-5192.25	0	-2	-0.14	0.02	1.07	5.04	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	771	SLE RA 21	0.05	0	771	772	SLE RA 21	0.05	0	772	SLE RA 21	0.0033	0	SLE RA 21	Si
D	0.05	0	782	SLE RA 1	0.05	0	782	782	SLE RA 1	0.05	0	772	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	782	SLE RA 1	0.05	0	782	782	SLE RA 1	0.05	0	772	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0.01	772	771	SLE RA 21	0.19	0	782	SLE RA 1	0.1	0.01	772	SLE RA 21	Si
D	0.19	0	SLE RA 1	0.19	0	782	772	SLE RA 1	0.19	0	782	SLE RA 1	0.1	0	772	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	782	772	SLE RA 1	0.19	0	782	SLE RA 1	0.1	0	772	SLE RA 1	Si

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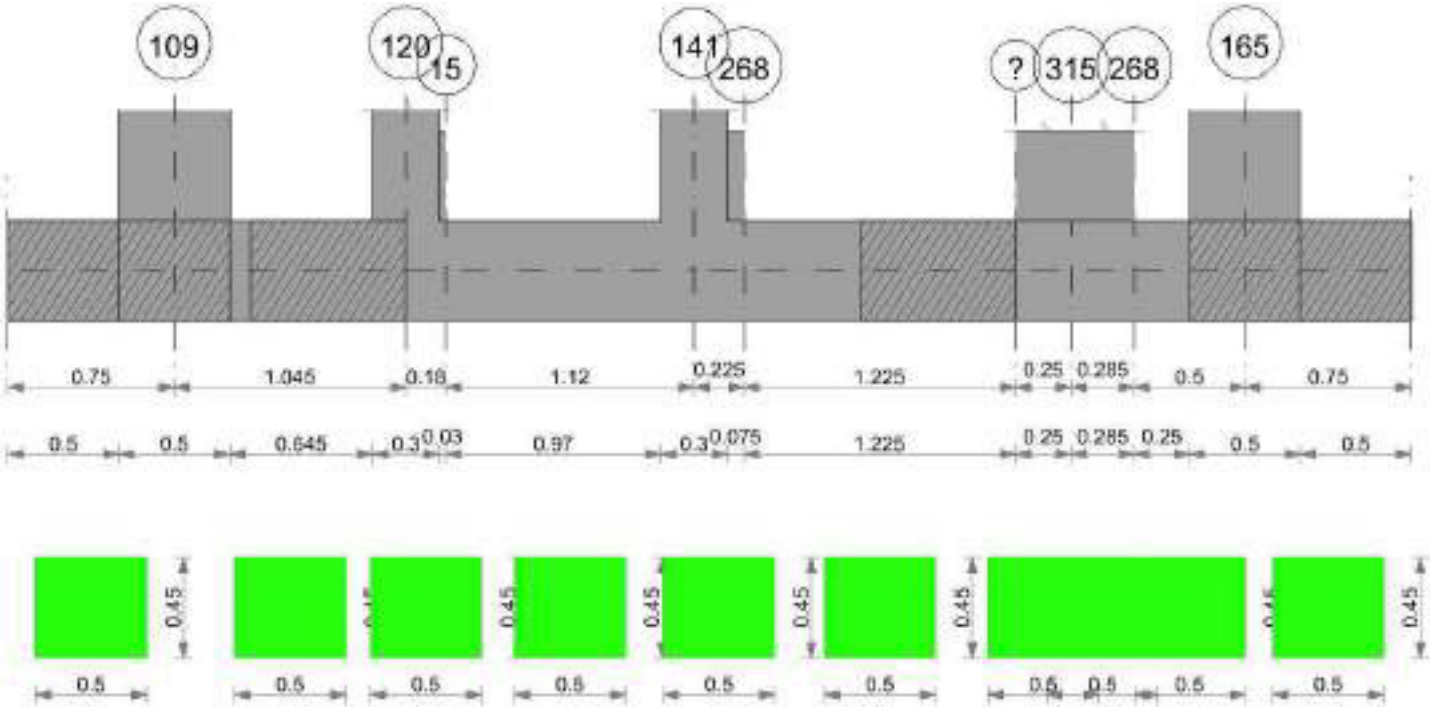
CORDOLO 10

Geometria



Caratteristiche dei materiali

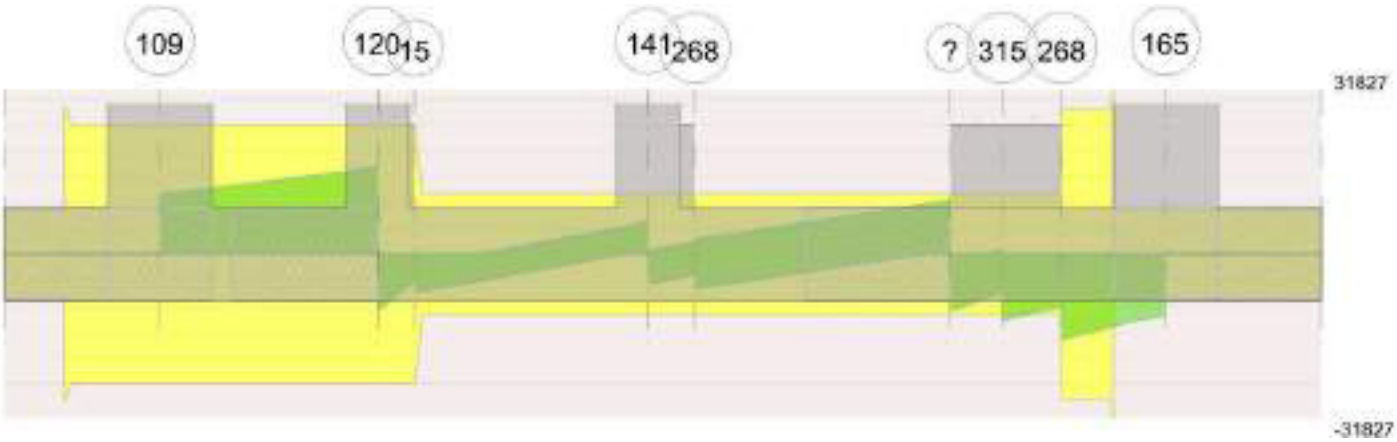
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 109 - 120, sezione R 50x45, asta 556

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-6696.3	SLU 84	-6383.16	-13662.92	0.147	2.14	Si
0.25	0.000942	0.053	0.000628	0.053							-4982.04	SLU 84	-4982.04	-13662.92	0.147	2.74	Si
0.52	0.000942	0.053	0.000628	0.053							-2772.92	SLU 84	-4261.39	-13662.92	0.147	3.21	Si
0.89	0.000942	0.053	0.000628	0.053	825.91	SLU 84	825.91	9390.61	0.127	11.37	528.91	SLU 1	-983.18	-13662.92	0.147	13.9	Si
1.04	0.000942	0.053	0.000628	0.053	2463.57	SLU 84	2016.61	9390.61	0.127	4.66							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-7333.07	SLV 8	-6917.04	-13063.86	0.261	1.89	Si
0.25	0.000942	0.053	0.000628	0.053							-5322.68	SLV 8	-5322.68	-13063.86	0.261	2.45	Si
0.52	0.000942	0.053	0.000628	0.053							-2909.01	SLV 8	-4517.29	-13063.86	0.261	2.89	Si
0.89	0.000942	0.053	0.000628	0.053	1191.04	SLV 16	1191.04	8866.46	0.211	7.44	-67.62	SLV 1	-1323.69	-13063.86	0.261	9.87	Si
1.04	0.000942	0.053	0.000628	0.053	2651.41	SLV 12	2203.01	8866.46	0.211	4.02							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-5760.52	SLD 8	-5458.02	-13063.86	0.261	2.39	Si
0.25	0.000942	0.053	0.000628	0.053							-4225.79	SLD 8	-4225.79	-13063.86	0.261	3.09	Si
0.52	0.000942	0.053	0.000628	0.053							-2326.43	SLD 8	-3598.24	-13063.86	0.261	3.63	Si
0.89	0.000942	0.053	0.000628	0.053	829.58	SLD 16	829.58	8866.46	0.211	10.69	293.85	SLD 1	-945.13	-13063.86	0.261	13.82	Si
1.04	0.000942	0.053	0.000628	0.053	2098.56	SLD 12	1734.32	8866.46	0.211	5.11							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	9406	SLU 84	9406	9278	63019	25025	25025	1	2.66	Si
0.25	0.0000179	0.000942	0	11209	SLU 84	11209	9278	63019	25025	25025	1	2.23	Si
0.52	0.0000179	0.000942	0	13175	SLU 84	13175	9278	63019	25025	25025	1	1.9	Si
0.89	0.0000179	0.000628	0	15876	SLU 84	15876	8105	63019	25025	25025	1	1.58	Si
1.04	0.0000179	0.000628	0	16969	SLU 84	16969	8105	63019	25025	25025	1	1.47	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	11534	SLV 8	11534	9278	63019	25025	25025	1	2.17	Si
0.25	0.0000179	0.000942	0	12755	SLV 8	12755	9278	63019	25025	25025	1	1.96	Si
0.52	0.0000179	0.000942	0	14093	SLV 8	14093	9278	63019	25025	25025	1	1.78	Si
0.89	0.0000179	0.000628	0	15948	SLV 8	15948	8105	63019	25025	25025	1	1.57	Si
1.04	0.0000179	0.000628	0	16705	SLV 8	16705	8105	63019	25025	25025	1	1.5	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	8643	SLD 8	8643	9278	63019	25025	25025	1	2.9	Si
0.25	0.0000179	0.000942	0	9858	SLD 8	9858	9278	63019	25025	25025	1	2.54	Si
0.52	0.0000179	0.000942	0	11187	SLD 8	11187	9278	63019	25025	25025	1	2.24	Si
0.89	0.0000179	0.000628	0	13019	SLD 8	13019	8105	63019	25025	25025	1	1.92	Si
1.04	0.0000179	0.000628	0	13763	SLD 8	13763	8105	63019	25025	25025	1	1.82	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-4961.61	21	-4728.78	240331	1494000	3501967	36000000	-4531.52	2	-4318.41	219475	1120500			Si
0.25	-3689.79	21	-3689.79	187526	1494000	2732527	36000000	-3368.8	2	-3368.8	171213	1120500			Si
0.52	-2052.36	21	-3155.48	160371	1494000	2336838	36000000	-1872.61	2	-2880.5	146396	1120500			Si
0.89	613.03	21	613.03	30266	1494000	467339	36000000	561.71	2	561.71	27732	1120500			Si
1.04	1825.36	21	1494.59	73789	1494000	1139391	36000000	1668.61	2	1366.67	67474	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 15 - 141, sezione R 50x45, asta 558

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1753.4	SLU 84	1753.4	9390.61	0.127	5.36							Si
0.56	0.000942	0.053	0.000628	0.053							-563.52	SLU 83	-611.35	-13662.92	0.147	22.35	Si
0.97	0.000942	0.053	0.000628	0.053	20.6	SLU 61	20.6	9390.61	0.127	455.75	-124.52	SLU 27	-512.44	-13662.92	0.147	26.66	Si
1.12	0.000942	0.053	0.000628	0.053	621.36	SLU 63	263.39	9390.61	0.127	35.65							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	2407.03	SLV 16	2407.03	8866.46	0.211	3.68	-67.62	SLV 1	-398.7	-13063.86	0.261	32.77	Si
0.56	0.000942	0.053	0.000628	0.053	390.57	SLV 7	632.26	8866.46	0.211	14.02	-1165.09	SLV 10	-1420.42	-13063.86	0.261	9.2	Si
0.97	0.000942	0.053	0.000628	0.053	1509.57	SLV 3	1509.57	8866.46	0.211	5.87	-1616.68	SLV 14	-1616.68	-13063.86	0.261	8.08	Si
1.12	0.000942	0.053	0.000628	0.053	2348.56	SLV 3	1887.18	8866.46	0.211	4.7	-1589.51	SLV 14	-1589.51	-13063.86	0.261	8.22	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1699.75	SLD 16	1699.75	8866.46	0.211	5.22							Si
0.56	0.000942	0.053	0.000628	0.053	-44.85	SLD 7	144.91	8866.46	0.211	61.19	-729.68	SLD 10	-844.16	-13063.86	0.261	15.48	Si
0.97	0.000942	0.053	0.000628	0.053	618.76	SLD 3	618.76	8866.46	0.211	14.33	-725.87	SLD 14	-835.28	-13063.86	0.261	15.64	Si
1.12	0.000942	0.053	0.000628	0.053	1225.8	SLD 3	880.5	8866.46	0.211	10.07	-466.74	SLD 14	-466.74	-13063.86	0.261	27.99	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-7223	SLU 83	-7223	-8105	-63019	-25025	-25025	1	3.46	Si
0.04	0.0000084	0.000628	0	-6811	SLU 83	-6811	-8105	-63019	-11771	-11771	1	1.73	Si
0.56	0.0000084	0.000942	0	-1044	SLU 77	-1044	-9278	-63019	-11771	-11771	1	11.27	Si
0.97	0.0000084	0.000942	0	3479	SLU 84	3479	9278	63019	11771	11771	1	3.38	Si
1.12	0.0000084	0.000628	0	5133	SLU 84	5133	8105	63019	11771	11771	1	2.29	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-7452	SLV 14	-7452	-8105	-63019	-25025	-25025	1	3.36	Si
0.04	0.0000084	0.000628	0	-7175	SLV 14	-7175	-8105	-63019	-11771	-11771	1	1.64	Si
0.56	0.0000084	0.000628	0	1922	SLV 3	1922	8105	63019	11771	11771	1	6.13	Si
0.56	0.0000084	0.000942	0	-3331	SLV 14	-3331	-9278	-63019	-11771	-11771	1	3.53	Si
0.97	0.0000084	0.000628	0	5035	SLV 3	5035	8105	63019	11771	11771	1	2.34	Si
0.97	0.0000084	0.000942	0	-370	SLV 14	-370	-9278	-63019	-11771	-11771	1	31.77	Si
1.12	0.0000084	0.000628	0	6182	SLV 3	6182	8105	63019	11771	11771	1	1.9	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-5967	SLD 14	-5967	-8105	-63019	-25025	-25025	1	4.19	Si
0.04	0.0000084	0.000628	0	-5690	SLD 14	-5690	-8105	-63019	-11771	-11771	1	2.07	Si
0.56	0.0000084	0.000942	0	419	SLD 3	419	9278	63019	11771	11771	1	28.06	Si
0.56	0.0000084	0.000942	0	-1829	SLD 14	-1829	-9278	-63019	-11771	-11771	1	6.44	Si
0.97	0.0000084	0.000628	0	3490	SLD 3	3490	8105	63019	11771	11771	1	3.37	Si
1.12	0.0000084	0.000628	0	4617	SLD 3	4617	8105	63019	11771	11771	1	2.55	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1295.89	21	1295.89	63979	1494000	987914	36000000	1169.71	2	1169.71	57749	1120500			Si
0.56	-408.72	20	-442.99	22514	1494000	328065	36000000	-387.26	2	-419.72	21332	1120500			Si
0.97	-67.25	6	-368.65	18736	1494000	273010	36000000	-61.45	1	-351.25	17852	1120500			Si
1.12	445.11	21	161.19	7958	1494000	122879	36000000	379.53	2	121.35	5991	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 6 tra i fili 268 - ?, sezione R 50x45, asta 560

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	268.49	SLU 63	268.49	9390.61	0.127	34.98	94.62	SLU 22	-114.34	-13662.92	0.147	119.5	Si
0.61	0.000942	0.053	0.000628	0.053	185.16	SLU 63	659.01	9390.61	0.127	14.25	63.49	SLU 22	-133	-13662.92	0.147	102.73	Si
1.23	0.000942	0.053	0.000628	0.053	2841.85	SLU 84	2841.85	9390.61	0.127	3.3							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1765.57	SLV 15	1765.57	8866.46	0.211	5.02	-1496.8	SLV 2	-1496.8	-13063.86	0.261	8.73	Si
0.61	0.000942	0.053	0.000628	0.053	1258.13	SLV 3	2275.42	8866.46	0.211	3.9	-1074.9	SLV 14	-1416.58	-13063.86	0.261	9.22	Si
1.06	0.000942	0.053	0.000628	0.053	4135.01	SLV 3	5444.28	8866.46	0.211	1.63	-1657.2	SLV 14	-1663.92	-13063.86	0.261	7.85	Si
1.23	0.000942	0.053	0.000628	0.053	5444.28	SLV 3	5444.28	8866.46	0.211	1.63	-1637.53	SLV 14	-1663.92	-13063.86	0.261	7.85	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	833.56	SLD 15	833.56	8866.46	0.211	10.64	-564.79	SLD 2	-564.79	-13063.86	0.261	23.13	Si
0.61	0.000942	0.053	0.000628	0.053	593.07	SLD 3	1221.07	8866.46	0.211	7.26	-409.84	SLD 14	-434.68	-13063.86	0.261	30.05	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.06	0.000942	0.053	0.000628	0.053	2479.02	SLD 3	3418.9	8866.46	0.211	2.59	-1.21	SLD 14	-278.76	-13063.86	0.261	46.86	Si
1.23	0.000942	0.053	0.000628	0.053	3418.9	SLD 3	3418.9	8866.46	0.211	2.59	387.85	SLD 14	-30.17	-13063.86	0.261	433.04	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000628	0	-2910	SLU 84	-2910	-8105	-63019	-11771	-11771	1	4.04	Si
0.61	0.0000084	0.000628	0	2606	SLU 83	2606	8105	63019	11771	11771	1	4.52	Si
1.23	0.0000084	0.000628	0	8119	SLU 84	8119	8105	63019	11771	11771	1	1.45	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000942	0	2836	SLV 1	2836	9278	63019	11771	11771	1	4.15	Si
0	0.0000084	0.000628	0	-6715	SLV 16	-6715	-8105	-63019	-11771	-11771	1	1.75	Si
0.61	0.0000084	0.000628	0	6564	SLV 1	6564	8105	63019	11771	11771	1	1.79	Si
0.61	0.0000084	0.000942	0	-3027	SLV 16	-3027	-9278	-63019	-11771	-11771	1	3.89	Si
1.23	0.0000084	0.000628	0	10385	SLV 3	10385	8105	63019	11771	11771	1	1.13	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000942	0	102	SLD 1	102	9278	63019	11771	11771	1	115.93	Si
0	0.0000084	0.000628	0	-3980	SLD 16	-3980	-8105	-63019	-11771	-11771	1	2.96	Si
0.61	0.0000084	0.000628	0	3817	SLD 1	3817	8105	63019	11771	11771	1	3.08	Si
0.61	0.0000084	0.000942	0	-280	SLD 16	-280	-9278	-63019	-11771	-11771	1	42.08	Si
1.23	0.0000084	0.000628	0	7574	SLD 3	7574	8105	63019	11771	11771	1	1.55	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	179.46	21	179.46	8860	1494000	136812	36000000	134.38	2	134.38	6635	1120500			Si
0.61	122.44	21	490.39	24211	1494000	373848	36000000	91.62	2	429.42	21201	1120500			Si
1.23	2101.37	21	2101.37	103747	1494000	1601973	36000000	1903.38	2	1903.38	93971	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 9 tra i fili 268 - 165, sezione R 50x45, asta 563

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	348.89	SLU 57	348.89	9390.61	0.127	26.92	238.68	SLU 22	-2457.45	-13662.92	0.147	5.56	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1107.8	SLV 3	1107.8	8866.46	0.211	8	-620.02	SLV 14	-2441.29	-13063.86	0.261	5.35	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	613.97	SLD 3	613.97	8866.46	0.211	14.44	-126.19	SLD 14	-1971.25	-13063.86	0.261	6.63	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-16649	SLU 84	-16649	-7751	-63019	-28078	-28078	1	1.69	Si
0.25	0.0000201	0	0	-13993	SLU 84	-13993	-8455	-71432	-31827	-31827	1	2.27	Si
0.25	0.0000201	0	0	-13991	SLU 84	-13991	-8455	-71432	-31827	-31827	1	2.27	Si
0.27	0	0	0	-13817	SLU 84	-13817	-8455	-71432	0	-8455	1	0.61	Si
0.5	0	0	0	-11367	SLU 84	-11367	-8455	-71432	0	-8455	1	0.74	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-15602	SLV 7	-15602	-7751	-63019	-28078	-28078	1	1.8	Si
0.25	0.0000201	0	0	-13736	SLV 7	-13736	-8455	-71432	-31827	-31827	1	2.32	Si
0.25	0.0000201	0	0	-13735	SLV 7	-13735	-8455	-71432	-31827	-31827	1	2.32	Si
0.27	0	0	0	-13613	SLV 7	-13613	-8455	-71432	0	-8455	1	0.62	Si
0.5	0	0	0	-11912	SLV 7	-11912	-8455	-71432	0	-8455	1	0.71	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-13068	SLD 7	-13068	-7751	-63019	-28078	-28078	1	2.15	Si
0.25	0.0000201	0	0	-11244	SLD 7	-11244	-8455	-71432	-31827	-31827	1	2.83	Si
0.25	0.0000201	0	0	-11243	SLD 7	-11243	-8455	-71432	-31827	-31827	1	2.83	Si
0.27	0	0	0	-11124	SLD 7	-11124	-8455	-71432	0	-8455	1	0.76	Si
0.5	0	0	0	-9451	SLD 7	-9451	-8455	-71432	0	-8455	1	0.89	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	264.41	15	264.41	13054	1494000	201571	36000000	243.89	2	243.89	12041	1120500			Si
0.25	-2562.9	21	-2564.4	-151964	1494000	0	36000000	-2301.59	2	-2302.93	-136470	1120500			Si
0.25	-2564.4	21	-2564.4	-151964	1494000	0	36000000	-2302.93	2	-2302.93	-136470	1120500			Si
0.5	-4901.14	21	-3854.03	-228387	1494000	0	36000000	-4402.13	2	-3463.21	-205227	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 109 - 120, sezione R 50x45, asta 556

Campata 3 tra i fili 120 - 15, sezione R 50x45, asta 557

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1517	SLU 84	0.075	13958	5275	SLU 84	35038	Si
0.09	0.41	0.0009	1526	SLU 84	0.075	13958	5307	SLU 84	35038	Si
0.15	0.41	0.0009	1528	SLU 84	0.075	13958	5314	SLU 84	35038	Si
0.18	0.41	0.0009	1528	SLU 84	0.075	13958	5316	SLU 84	35038	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1028	SLD 11	0.158	15508	3574	SLD 11	40294	Si
0.09	0.41	0.0009	1039	SLD 11	0.158	15508	3613	SLD 11	40294	Si
0.15	0.41	0.0009	1043	SLD 11	0.158	15508	3628	SLD 11	40294	Si
0.18	0.41	0.0009	1045	SLD 11	0.158	15508	3633	SLD 11	40294	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000895	1115	SLE RA 21	29425	1494000	364871	36000000	1006	SLE QP 2	26563	1120500	Si
0.09	0.41	0.00000895	1122	SLE RA 21	29610	1494000	367158	36000000	1012	SLE QP 2	26727	1120500	Si
0.15	0.41	0.00000895	1123	SLE RA 21	29652	1494000	367690	36000000	1014	SLE QP 2	26763	1120500	Si
0.18	0.41	0.00000895	1123	SLE RA 21	29660	1494000	367789	36000000	1014	SLE QP 2	26769	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 15 - 141, sezione R 50x45, asta 558

Campata 5 tra i fili 141 - 268, sezione R 50x45, asta 559

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1525	SLU 84	0.036	6674	5305	SLU 84	16481	Si
0.11	0.41	0.0004	1526	SLU 84	0.036	6674	5306	SLU 84	16481	Si
0.15	0.41	0.0004	1526	SLU 84	0.036	6674	5306	SLU 84	16481	Si
0.22	0.41	0.0004	1526	SLU 84	0.036	6674	5307	SLU 84	16481	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1054	SLD 7	0.109	7446	3666	SLD 7	18953	Si
0.11	0.41	0.0004	1055	SLD 7	0.109	7446	3669	SLD 7	18953	Si
0.15	0.41	0.0004	1055	SLD 7	0.109	7446	3670	SLD 7	18953	Si
0.22	0.41	0.0004	1055	SLD 7	0.109	7446	3671	SLD 7	18953	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	1122	SLE RA 21	31430	1494000	389730	36000000	1012	SLE QP 2	28363	1120500	Si
0.11	0.41	0.00000421	1122	SLE RA 21	31437	1494000	389815	36000000	1013	SLE QP 2	28370	1120500	Si
0.15	0.41	0.00000421	1122	SLE RA 21	31438	1494000	389836	36000000	1013	SLE QP 2	28372	1120500	Si
0.22	0.41	0.00000421	1122	SLE RA 21	31441	1494000	389864	36000000	1013	SLE QP 2	28375	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 6 tra i fili 268 - ?, sezione R 50x45, asta 560

Campata 7 tra i fili ? - 315, sezione R 50x45, asta 561

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1523	SLU 84	0.036	6674	5297	SLU 84	16481	Si
0.12	0.41	0.0004	1516	SLU 84	0.036	6674	5273	SLU 84	16481	Si
0.25	0.41	0.0004	1500	SLU 84	0.036	6674	5216	SLU 84	16481	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1051	SLD 7	0.109	7446	3656	SLD 7	18953	Si
0.12	0.41	0.0004	1044	SLD 7	0.109	7446	3630	SLD 7	18953	Si
0.25	0.41	0.0004	1028	SLD 7	0.109	7446	3576	SLD 7	18953	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	1120	SLE RA 21	31388	1494000	389211	36000000	1012	SLE QP 2	28354	1120500	Si
0.12	0.41	0.00000421	1115	SLE RA 21	31246	1494000	387448	36000000	1008	SLE QP 2	28233	1120500	Si
0.25	0.41	0.00000421	1103	SLE RA 21	30908	1494000	383257	36000000	997	SLE QP 2	27934	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 8 tra i fili 315 - 268, sezione R 50x45, asta 562

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1500	SLU 84	0.036	6674	5216	SLU 84	16481	Si
0.14	0.41	0.0004	1488	SLU 84	0.036	6674	5175	SLU 84	16481	Si
0.28	0.41	0.001	1475	SLU 84	0.085	15602	5131	SLU 84	39314	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1028	SLD 7	0.109	7446	3576	SLD 7	18953	Si
0.14	0.41	0.0004	1017	SLD 7	0.109	7446	3538	SLD 7	18953	Si
0.28	0.41	0.001	1006	SLD 11	0.167	17333	3498	SLD 11	45211	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	1103	SLE RA 21	30908	1494000	383257	36000000	997	SLE QP 2	27934	1120500	Si
0.14	0.41	0.00000421	1094	SLE RA 21	30665	1494000	380246	36000000	989	SLE QP 2	27719	1120500	Si
0.28	0.41	0.00001004	1085	SLE RA 21	28268	1494000	350523	36000000	981	SLE QP 2	25556	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 9 tra i fili 268 - 165, sezione R 50x45, asta 563

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.83	1.1	SLU 41	ST	LT	-212	-166	-51029	0	0	19	0	0	1.1	15522	269	57.63	Si
4.83	1.1	SLV 2	SIS	LT	-7390	-1691	-41552	-10	-2	19	0	0	1.1	12639	7581	1.67	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
556,557,558,559,560,561,562,563	4.83	1.1	SLU 83	ST	BT	2.3	220053	61524	3.58	Si
556,557,558,559,560,561,562,563	4.83	1.1	SLV 7	SIS	BT	2.3	213750	44331	4.82	Si
556,557,558,559,560,561,562,563	4.83	1.1	SLD 5	SIS	BT	2.3	209393	41310	5.07	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-132	-61524	1197.11	-590.74	0	0	-0.01	0.02	1.06	4.81	1496	2060	0	14430	
0	4049	-44331	-1144.37	-668.17	0	5	-0.02	-0.03	1.05	4.8	1496	2060	0	14430	0.07
0	-1949	-41310	1594.15	-894.16	0	-3	-0.02	0.04	1.02	4.79	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

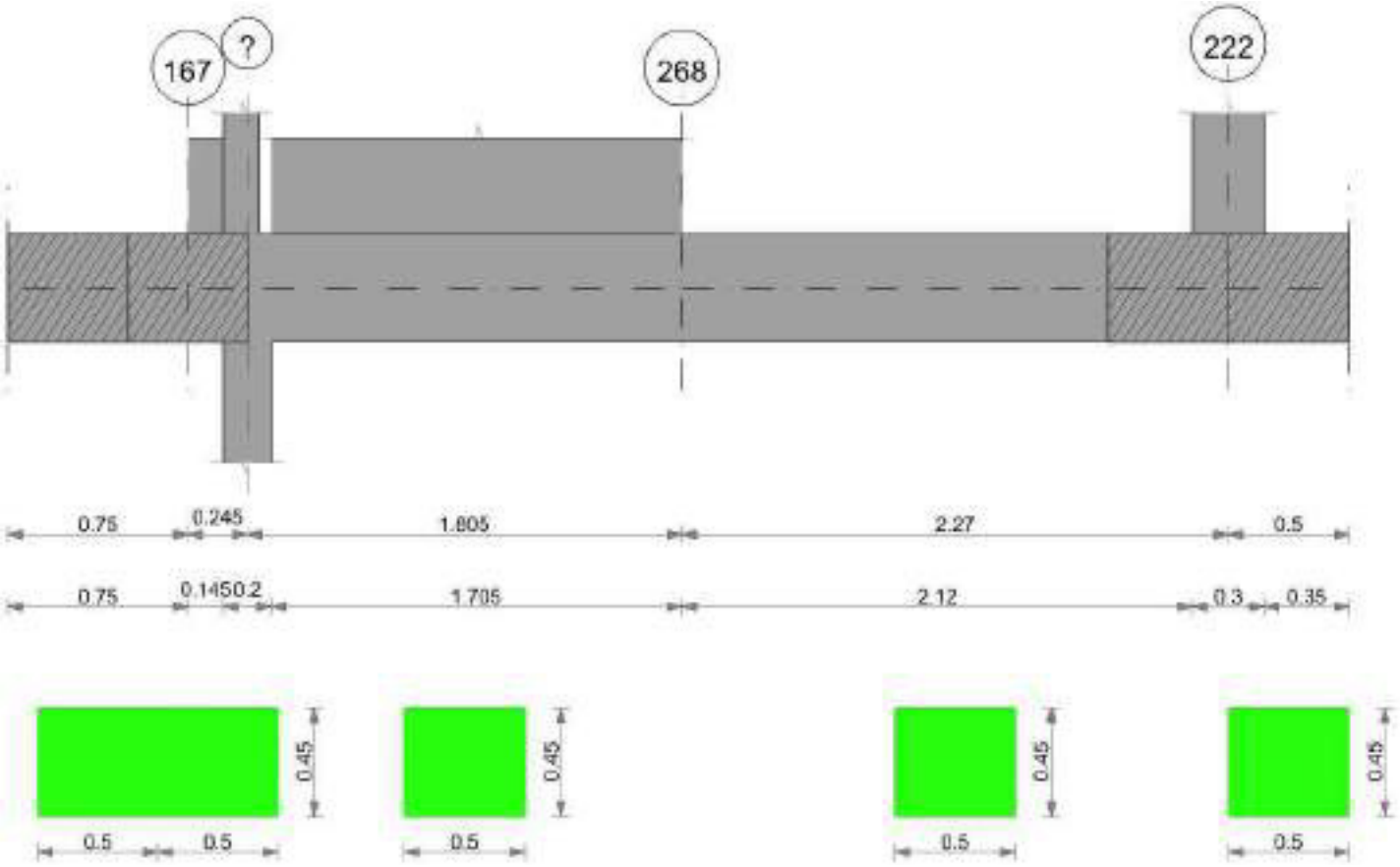
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.002	689	SLE RA 21	0.05	0	689	683	SLE RA 21	0.05	0	689	SLE RA 21	0.0033	0	SLE RA 20	Si
D	0.05	0	691	SLE RA 1	0.05	0	691	691	SLE RA 1	0.05	0	690	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	691	SLE RA 1	0.05	0	691	691	SLE RA 1	0.05	0	690	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0.03	690	689	SLE RA 20	0.19	0.04	689	SLE RA 20	0.1	0.03	690	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	691	690	SLE RA 1	0.19	0	691	SLE RA 1	0.1	0	690	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	691	690	SLE RA 1	0.19	0	691	SLE RA 1	0.1	0	690	SLE RA 1	Si

CORDOLO 11

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

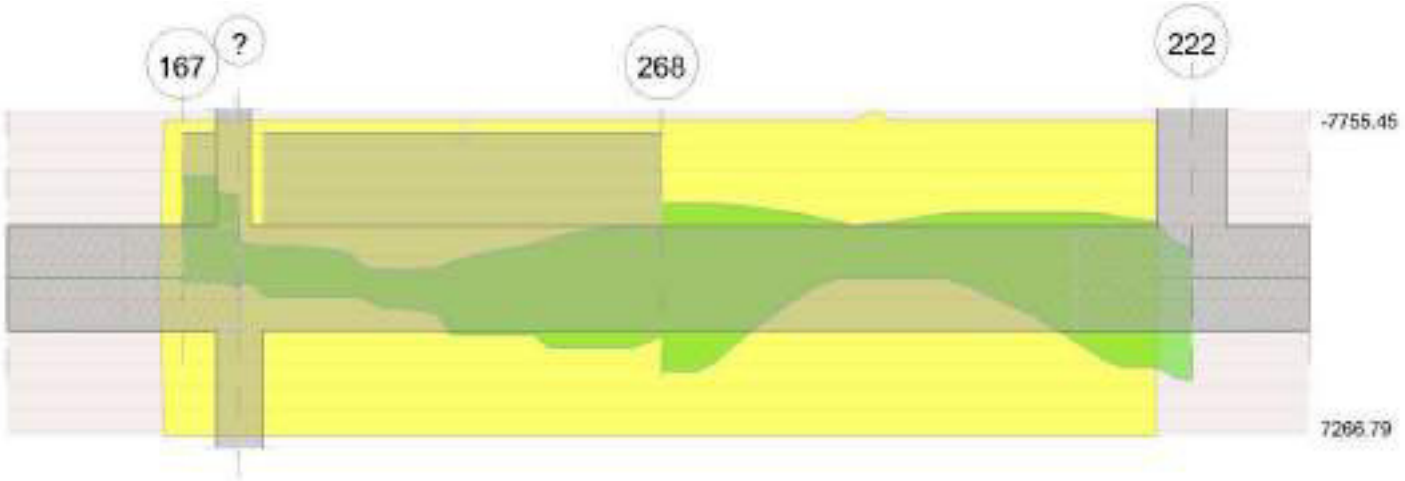
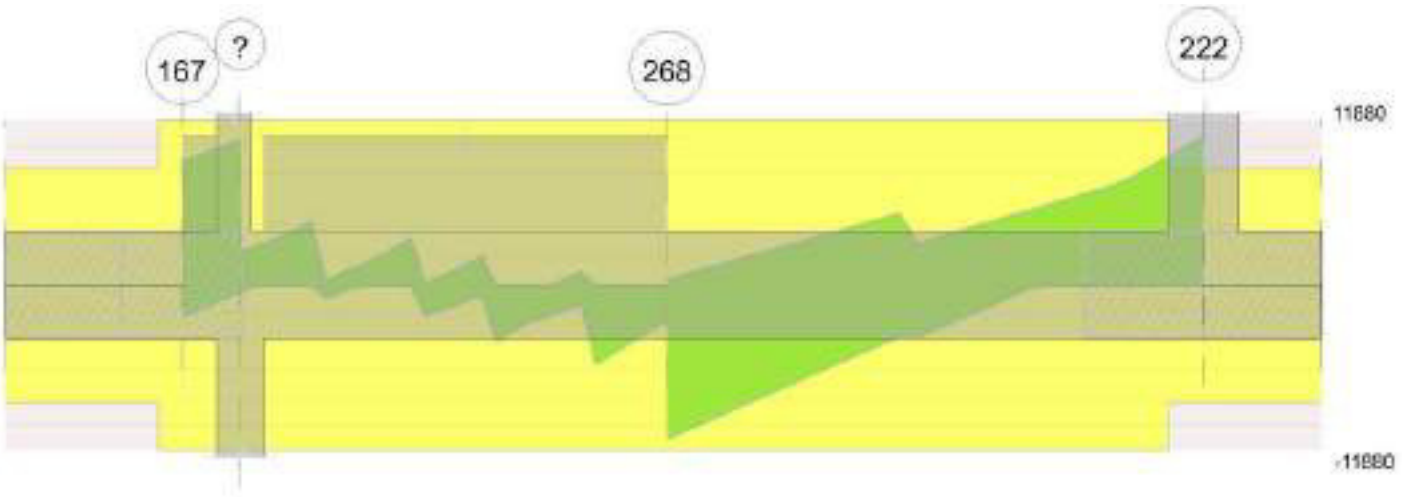


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 4 tra i fili 268 - 222, sezione R 50x45, aste 594, 595

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	726.47	SLU 83	726.47	7755.45	0.113	10.68	382.82	SLU 2	-418.77	-7755.45	0.113	18.52	Si
1.14	0.000509	0.052	0.000509	0.052							-2544.28	SLU 83	-2544.28	-7755.45	0.113	3.05	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	4320.58	SLV 16	4320.58	7266.79	0.197	1.68	-3439.14	SLV 1	-3439.14	-7266.79	0.197	2.11	Si
1.14	0.000509	0.052	0.000509	0.052							-2482.8	SLV 14	-2852.27	-7266.79	0.197	2.55	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	2100.04	SLD 16	2100.04	7266.79	0.197	3.46	-1218.59	SLD 1	-1600.89	-7266.79	0.197	4.54	Si
1.14	0.000509	0.052	0.000509	0.052							-2043.59	SLD 14	-2140.8	-7266.79	0.197	3.39	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	-8003	SLU 83	-8003	-7764	-63178	-11880	-11880	1	1.48	Si
1.14	0.0000085	0.000509	0	136	SLU 44	136	7764	63178	11880	11880	1	87.44	Si
2.12	0.0000085	0	0	9235	SLU 84	9235	8455	71432	13432	13432	1	1.45	Si
2.27	0	0	0	10670	SLU 84	10670	8455	71432	0	8455	1	0.79	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	403	SLV 1	403	7764	63178	11880	11880	1	29.47	Si
0	0.0000085	0.000509	0	-11089	SLV 16	-11089	-7764	-63178	-11880	-11880	1	1.07	Si
1.14	0.0000085	0.000509	0	3386	SLV 2	3386	7764	63178	11880	11880	1	3.51	Si
1.14	0.0000085	0.000509	0	-3226	SLV 15	-3226	-7764	-63178	-11880	-11880	1	3.68	Si
2.12	0.0000085	0	0	8382	SLV 2	8382	8455	71432	13432	13432	1	1.6	Si
2.27	0	0	0	9167	SLV 1	9167	8455	71432	0	8455	1	0.92	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	-7799	SLD 16	-7799	-7764	-63178	-11880	-11880	1	1.52	Si
1.14	0.0000085	0.000509	0	1495	SLD 2	1495	7764	63178	11880	11880	1	7.95	Si
1.14	0.0000085	0.000509	0	-1334	SLD 15	-1334	-7764	-63178	-11880	-11880	1	8.91	Si
2.12	0.0000085	0	0	7182	SLD 2	7182	8455	71432	13432	13432	1	1.87	Si
2.27	0	0	0	8073	SLD 1	8073	8455	71432	0	8455	1	1.05	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	521.89	20	521.89	27605	1494000	414069	36000000	440.72	2	440.72	23311	1120500			Si
1.14	-1878.63	20	-1878.63	99367	1494000	1490504	36000000	-1713.69	2	-1713.69	90643	1120500			Si
2.12	1116.81	21	1116.81	66181	1494000	0	36000000	1057.28	2	1057.28	62654	1120500			Si
2.27	2097.36	21	1628.86	96525	1494000	0	36000000	1959.52	2	1528.61	90584	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 167 - ?, sezione R 50x45, asta 588

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1430	SLU 84	0.036	6718	4973	SLU 84	16592	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.12	0.41	0.0004	1428	SLU 84	0.036	6718	4967	SLU 84	16592	Si
0.15	0.41	0.0004	1428	SLU 84	0.036	6718	4967	SLU 84	16592	Si
0.25	0.41	0.0004	1428	SLU 84	0.036	6718	4969	SLU 84	16592	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	985	SLD 15	0.109	7495	3427	SLD 15	19081	Si
0.12	0.41	0.0004	988	SLD 15	0.109	7495	3437	SLD 15	19081	Si
0.15	0.41	0.0004	989	SLD 15	0.109	7495	3439	SLD 15	19081	Si
0.25	0.41	0.0004	992	SLD 15	0.109	7495	3452	SLD 15	19081	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000424	1051	SLE RA 21	29445	1494000	365118	36000000	951	SLE QP 2	26644	1120500	Si
0.12	0.41	0.00000424	1050	SLE RA 21	29413	1494000	364716	36000000	950	SLE QP 2	26617	1120500	Si
0.15	0.41	0.00000424	1050	SLE RA 21	29411	1494000	364700	36000000	950	SLE QP 2	26616	1120500	Si
0.25	0.41	0.00000424	1050	SLE RA 21	29418	1494000	364781	36000000	951	SLE QP 2	26622	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili ? - 268, sezione R 50x45, aste 589, 590, 591, 592, 593

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1428	SLU 84	0.036	6718	4969	SLU 84	16592	Si
0.1	0.41	0.0004	1429	SLU 84	0.036	6718	4971	SLU 84	16592	Si
0.9	0.41	0.0004	1436	SLU 84	0.036	6718	4995	SLU 84	16592	Si
1.8	0.41	0.0004	1421	SLU 84	0.036	6718	4942	SLU 84	16592	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	992	SLD 15	0.109	7495	3452	SLD 15	19081	Si
0.1	0.41	0.0004	996	SLD 15	0.109	7495	3465	SLD 15	19081	Si
0.9	0.41	0.0004	1033	SLD 15	0.109	7495	3591	SLD 15	19081	Si
1.8	0.41	0.0004	1047	SLD 15	0.109	7495	3640	SLD 15	19081	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000424	1050	SLE RA 21	29418	1494000	364781	36000000	951	SLE QP 2	26622	1120500	Si
0.1	0.41	0.00000424	1051	SLE RA 21	29428	1494000	364913	36000000	951	SLE QP 2	26632	1120500	Si
0.9	0.41	0.00000424	1056	SLE RA 21	29568	1494000	366648	36000000	955	SLE QP 2	26757	1120500	Si
1.8	0.41	0.00000424	1044	SLE RA 21	29245	1494000	362639	36000000	945	SLE QP 2	26471	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 268 - 222, sezione R 50x45, aste 594, 595

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.32	1.1	SLU 27	ST	LT	-515	-255	-36875	-1	0	19	0	0	1.1	11217	574	19.53	Si
4.32	1.1	SLV 2	SIS	LT	-6440	-1711	-29157	-12	-3	19	0	0	1.1	8869	6663	1.33	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
588,589,590,591,592,593,594,595	4.32	1.1	SLU 83	ST	BT	2.3	197363	49923	3.95	Si
588,589,590,591,592,593,594,595	4.32	1.1	SLV 14	SIS	BT	2.3	190687	39128	4.87	Si
588,589,590,591,592,593,594,595	4.32	1.1	SLD 14	SIS	BT	2.3	194729	36417	5.35	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-346	-49923	1038.36	-160.72	0	0	0	0.02	1.06	4.31	1496	2060	0	14430	
0	-898	-39128	663.55	3528.47	0	-1	0.09	0.02	1.07	4.14	1496	2060	0	14430	0.07
0	-514	-36417	686.65	1455.23	0	-1	0.04	0.02	1.06	4.24	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	693	SLE RA 21	0.05	0.001	693	700	SLE RA 20	0.05	0	693	SLE RA 20	0.0033	0	SLE RA 20	Si
D	0.05	0	700	SLE RA 1	0.05	0	700	700	SLE RA 1	0.05	0	698	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	700	SLE RA 1	0.05	0	700	700	SLE RA 1	0.05	0	698	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.02	693	692	SLE RA 20	0.19	0.04	693	SLE RA 20	0.1	0.01	698	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	700	698	SLE RA 1	0.19	0	700	SLE RA 1	0.1	0	698	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	700	698	SLE RA 1	0.19	0	700	SLE RA 1	0.1	0	698	SLE RA 1	Si

CORDOLO 12

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

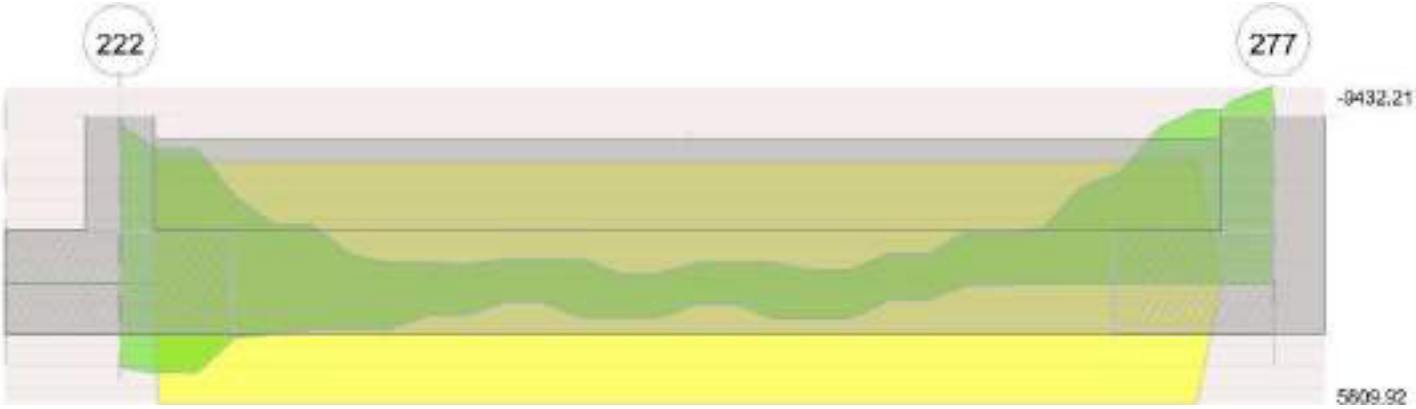
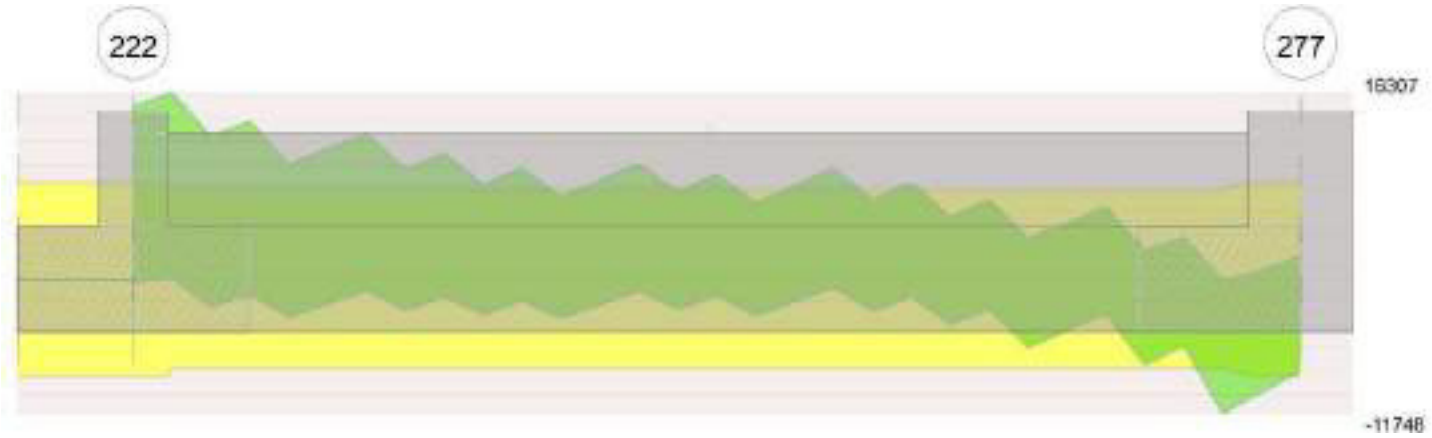


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 222 - 277, sezione R 50x45, aste 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1527	SLU 84	0.017	2681	5313	SLU 84	15877	Si
0.15	0.41	0.0002	1539	SLU 84	0.017	2681	5352	SLU 84	15877	Si
2.52	0.41	0.0002	1727	SLV 15	0.084	2609	6006	SLV 15	15877	Si
4.81	0.41	0.0002	2270	SLV 13	0.084	2609	7897	SLV 13	15877	Si
5.04	0.41	0.0002	2361	SLV 13	0.084	2609	8212	SLV 13	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1124	SLD 15	0.069	3019	3911	SLD 15	15877	Si
0.15	0.41	0.0002	1135	SLD 15	0.069	3019	3949	SLD 15	15877	Si
2.52	0.41	0.0002	1401	SLD 15	0.069	3019	4873	SLD 15	15877	Si
4.81	0.41	0.0002	1715	SLD 13	0.069	3019	5964	SLD 13	15877	Si
5.04	0.41	0.0002	1774	SLD 13	0.069	3019	6169	SLD 13	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1123	SLE RA 21	32535	1494000	403440	36000000	1020	SLE QP 2	29553	1120500	Si
0.15	0.41	0.00000168	1132	SLE RA 21	32776	1494000	406423	36000000	1028	SLE QP 2	29776	1120500	Si
2.52	0.41	0.00000168	1271	SLE RA 21	36821	1494000	456584	36000000	1158	SLE QP 2	33545	1120500	Si
4.81	0.41	0.00000168	1421	SLE RA 21	41171	1494000	510519	36000000	1300	SLE QP 2	37658	1120500	Si
5.04	0.41	0.00000168	1460	SLE RA 21	42276	1494000	524225	36000000	1336	SLE QP 2	38686	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.26	1.1	SLU 27	ST	LT	-840	-219	-50677	-1	0	19	0	0	1.1	15415	868	17.75	Si
5.26	1.1	SLV 2	SIS	LT	-7356	-2631	-28867	-14	-5	19	0	0	1.1	8781	7812	1.12	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
630,631,632,633,634,635,636,637,638,639,640,641,642	5.26	1.1	SLU 83	ST	BT	2.3	241079	68275	3.53	Si
630,631,632,633,634,635,636,637,638,639,640,641,642	5.26	1.1	SLV 15	SIS	BT	2.3	219933	65396	3.36	Si
630,631,632,633,634,635,636,637,638,639,640,641,642	5.26	1.1	SLD 14	SIS	BT	2.3	230546	54741	4.21	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-343	-68275	272.67	4421.88	0	0	0.06	0	1.09	5.13	1496	2060	0	14430	
0	2265	-65396	-862.9	15506.13	0	2	0.24	-0.01	1.07	4.79	1496	2060	0	14430	0.07
0	-724	-54741	422.08	8711.02	0	-1	0.16	0.01	1.08	4.94	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	701	SLE RA 21	0.05	0.001	701	714	SLE RA 21	0.05	0	714	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	714	SLE RA 1	0.05	0	714	714	SLE RA 1	0.05	0	714	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	714	SLE RA 1	0.05	0	714	714	SLE RA 1	0.05	0	714	SLE RA 1	0.0033	0	SLE RA 1	Si

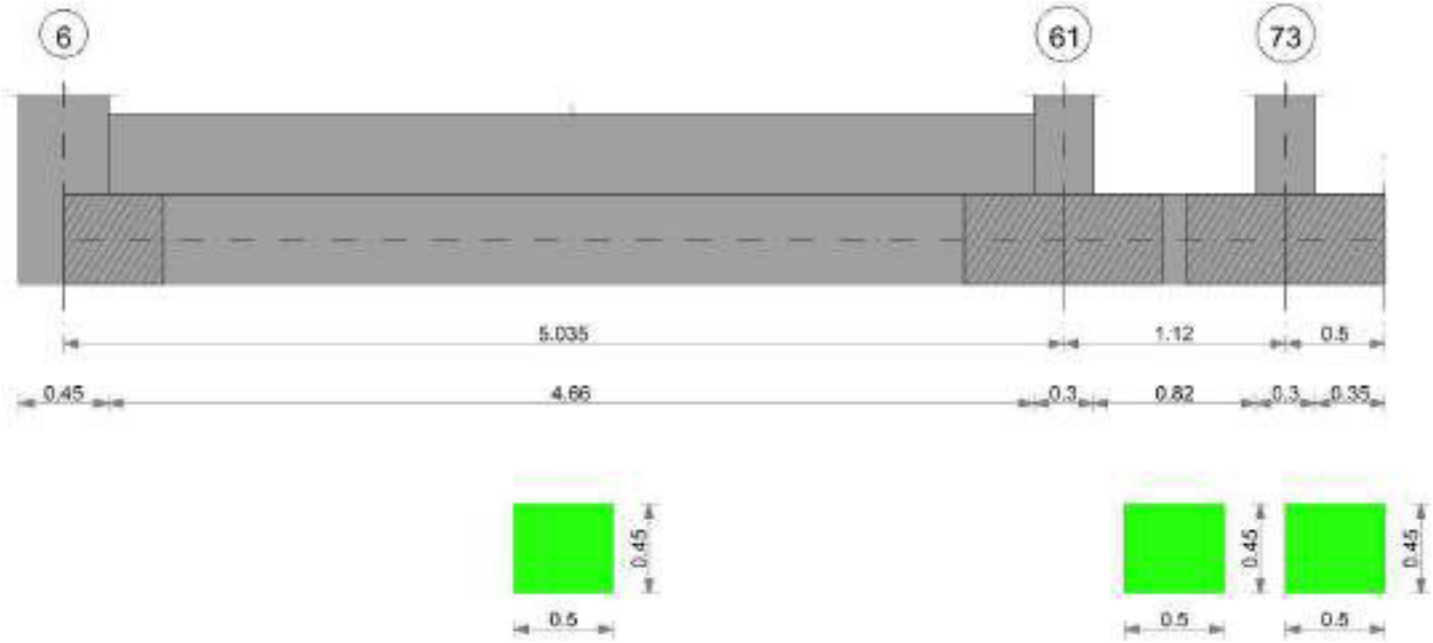
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	714	701	SLE RA 21	0.19	0	714	SLE RA 1	0.1	0	714	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	714	701	SLE RA 1	0.19	0	714	SLE RA 1	0.1	0	714	SLE RA 1	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
Z	0.19	0	SLE RA 1	0.19	0	714	701	SLE RA 1	0.19	0	714	SLE RA 1	0.1	0	714	SLE RA 1	Si

CORDOLO 13

Geometria



Caratteristiche dei materiali

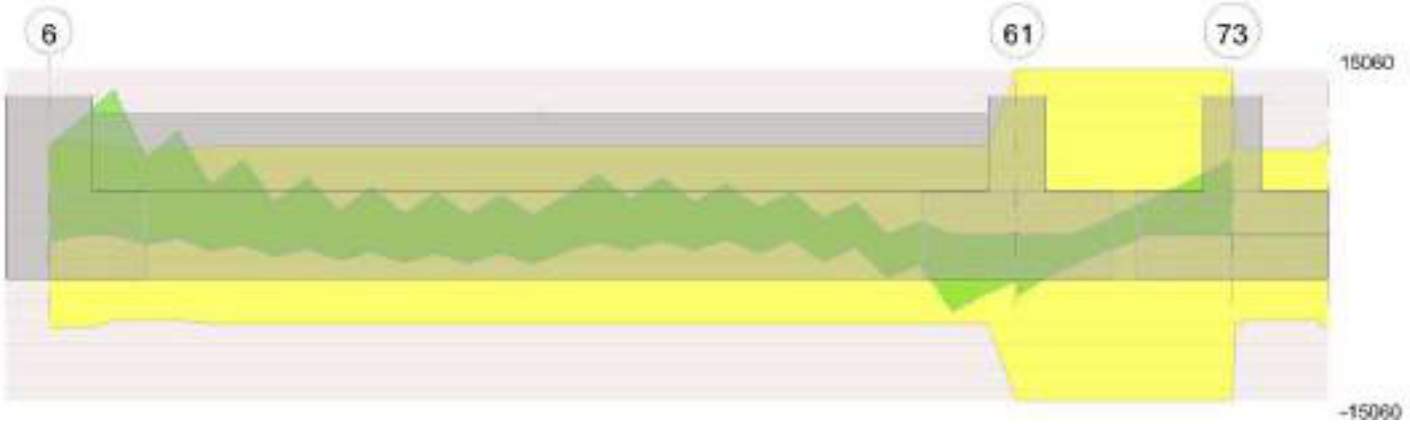
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - 73, sezione R 50x45, asta 731

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-1314	SLU 57	-1314	-9384.5	0.124	7.14	Si
0.15	0.000628	0.053	0.000628	0.053							-1981.9	SLU 84	-2491.43	-9384.5	0.124	3.77	Si
0.52	0.000628	0.053	0.000628	0.053							-2646.48	SLU 83	-2649.3	-9384.5	0.124	3.54	Si
0.56	0.000628	0.053	0.000628	0.053							-2628.24	SLU 83	-2649.3	-9384.5	0.124	3.54	Si
0.97	0.000628	0.053	0.000628	0.053							-1416.14	SLU 81	-2170.35	-9384.5	0.124	4.32	Si
1.12	0.000628	0.053	0.000628	0.053							-544.82	SLU 39	-544.82	-9384.5	0.124	17.22	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-1547.28	SLV 14	-1547.28	-8869.39	0.216	5.73	Si
0.15	0.000628	0.053	0.000628	0.053							-1814.78	SLV 14	-1960.35	-8869.39	0.216	4.52	Si
0.52	0.000628	0.053	0.000628	0.053							-2017.61	SLV 2	-2035.2	-8869.39	0.216	4.36	Si
0.56	0.000628	0.053	0.000628	0.053							-2021.21	SLV 6	-2035.2	-8869.39	0.216	4.36	Si
0.97	0.000628	0.053	0.000628	0.053							-1643.06	SLV 5	-1948.25	-8869.39	0.216	4.55	Si
1.12	0.000628	0.053	0.000628	0.053	825.68	SLV 4	792.97	8869.39	0.216	11.19	-1251.3	SLV 13	-1132.46	-8869.39	0.216	7.83	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-1207.68	SLD 14	-1207.68	-8869.39	0.216	7.34	Si
0.15	0.000628	0.053	0.000628	0.053							-1577.75	SLD 14	-1817.68	-8869.39	0.216	4.88	Si
0.52	0.000628	0.053	0.000628	0.053							-1881.11	SLD 2	-1883.81	-8869.39	0.216	4.71	Si
0.56	0.000628	0.053	0.000628	0.053							-1872.69	SLD 6	-1883.81	-8869.39	0.216	4.71	Si
0.97	0.000628	0.053	0.000628	0.053							-1195.38	SLD 5	-1638.45	-8869.39	0.216	5.41	Si
1.12	0.000628	0.053	0.000628	0.053	231.12	SLD 4	231.12	8869.39	0.216	38.37	-656.74	SLD 13	-643.14	-8869.39	0.216	13.79	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-5541	SLU 83	-5541	-8105	-63019	-15060	-15060	1	2.72	Si
0.15	0.0000108	0.000628	0	-3860	SLU 83	-3860	-8105	-63019	-15060	-15060	1	3.9	Si
0.56	0.0000108	0.000628	0	1126	SLU 49	1126	8105	63019	15060	15060	1	13.38	Si
0.97	0.0000108	0.000628	0	5257	SLU 78	5257	8105	63019	15060	15060	1	2.86	Si
1.12	0.0000108	0.000628	0	6896	SLU 84	6896	8105	63019	15060	15060	1	2.18	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-5118	SLV 1	-5118	-8105	-63019	-15060	-15060	1	2.94	Si
0.15	0.0000108	0.000628	0	-3847	SLV 1	-3847	-8105	-63019	-15060	-15060	1	3.91	Si
0.56	0.0000108	0.000628	0	2091	SLV 16	2091	8105	63019	15060	15060	1	7.2	Si
0.56	0.0000108	0.000628	0	-751	SLV 1	-751	-8105	-63019	-15060	-15060	1	20.04	Si
0.97	0.0000108	0.000628	0	5535	SLV 4	5535	8105	63019	15060	15060	1	2.72	Si
1.12	0.0000108	0.000628	0	6838	SLV 4	6838	8105	63019	15060	15060	1	2.2	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-4217	SLD 1	-4217	-8105	-63019	-15060	-15060	1	3.57	Si
0.15	0.0000108	0.000628	0	-3022	SLD 1	-3022	-8105	-63019	-15060	-15060	1	4.98	Si
0.56	0.0000108	0.000628	0	1276	SLD 16	1276	8105	63019	15060	15060	1	11.8	Si
0.97	0.0000108	0.000628	0	4502	SLD 4	4502	8105	63019	15060	15060	1	3.34	Si
1.12	0.0000108	0.000628	0	5702	SLD 4	5702	8105	63019	15060	15060	1	2.64	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1001.55	15	-1001.55	51751	1494000	776259	36000000	-957.65	2	-957.65	49482	1120500			Si
0.15	-1488.75	21	-1851.58	95672	1494000	1435078	36000000	-1403.93	2	-1713.16	88520	1120500			Si
0.56	-1935.32	20	-1956.43	101089	1494000	1516342	36000000	-1759.34	2	-1788.5	92413	1120500			Si
0.97	-1009.93	18	-1580.1	81645	1494000	1224669	36000000	-856.78	2	-1403.63	72526	1120500			Si
1.12	-337.49	18	-337.49	17438	1494000	261572	36000000	-212.81	2	-212.81	10996	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 6 - 61, sezione R 50x45, aste 745, 744, 743, 742, 741, 740, 739, 738, 737, 736, 735, 734, 733, 732

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2274	SLV 4	0.085	2672	7910	SLV 4	15877	Si
0.23	0.41	0.0002	2216	SLV 4	0.085	2672	7707	SLV 4	15877	Si
2.52	0.41	0.0002	1778	SLV 2	0.085	2672	6184	SLV 2	15877	Si
4.89	0.41	0.0002	1568	SLU 84	0.017	2747	5455	SLU 84	15877	Si
5.04	0.41	0.0005	1558	SLU 84	0.045	8504	5419	SLU 84	21085	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1694	SLD 4	0.07	3092	5894	SLD 4	15877	Si
0.23	0.41	0.0002	1661	SLD 4	0.07	3092	5777	SLD 4	15877	Si
2.52	0.41	0.0002	1432	SLD 2	0.07	3092	4980	SLD 2	15877	Si
4.89	0.41	0.0002	1175	SLD 4	0.07	3092	4087	SLD 4	15877	Si
5.04	0.41	0.0005	1165	SLD 4	0.123	9470	4051	SLD 4	24248	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	1380	SLE RA 21	39963	1494000	495546	36000000	1262	SLE QP 2	36536	1120500	Si
0.23	0.41	0.00000172	1364	SLE RA 21	39497	1494000	489768	36000000	1247	SLE QP 2	36095	1120500	Si
2.52	0.41	0.00000172	1288	SLE RA 21	37300	1494000	462519	36000000	1173	SLE QP 2	33963	1120500	Si
4.89	0.41	0.00000172	1153	SLE RA 21	33389	1494000	414018	36000000	1047	SLE QP 2	30320	1120500	Si
5.04	0.41	0.00000539	1146	SLE RA 21	31619	1494000	392071	36000000	1040	SLE QP 2	28710	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 61 - 73, sezione R 50x45, asta 731

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
6.38	1.1	SLU 44	ST	LT	809	583	-70702	1	0	19	0	0	1.1	21506	997	21.57	Si
6.38	1.1	SLV 13	SIS	LT	9844	-3189	-37645	15	-5	19	0	0	1.1	11451	10347	1.11	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
745,744,743,742,741,740,739,738,737,736,735,734,733,732,731	6.38	1.1	SLU 84	ST	BT	2.3	291186	86261	3.38	Si
745,744,743,742,741,740,739,738,737,736,735,734,733,732,731	6.38	1.1	SLV 4	SIS	BT	2.3	257793	81272	3.17	Si
745,744,743,742,741,740,739,738,737,736,735,734,733,732,731	6.38	1.1	SLD 4	SIS	BT	2.3	274205	68780	3.99	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	475	-86261	-169.87	-7383.5	0	0	-0.09	0	1.1	6.21	1496	2060	0	14430	
0	3901	-81272	-1605.96	-26195.14	0	3	-0.32	-0.02	1.06	5.74	1496	2060	0	14430	0.07
0	1898	-68780	-770.91	-14147.58	0	2	-0.21	-0.01	1.08	5.97	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

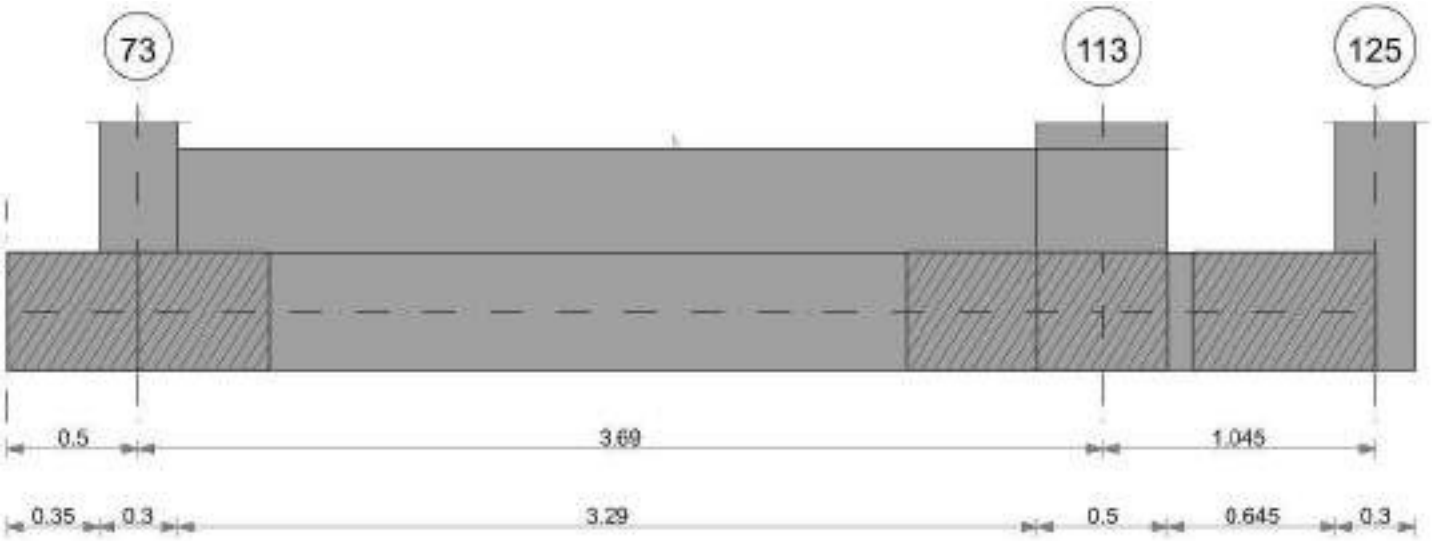
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	535	SLE RA 21	0.05	0.001	535	520	SLE RA 21	0.05	0	534	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	535	SLE RA 1	0.05	0	535	535	SLE RA 1	0.05	0	534	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	535	SLE RA 1	0.05	0	535	535	SLE RA 1	0.05	0	534	SLE RA 1	0.0033	0	SLE RA 1	Si

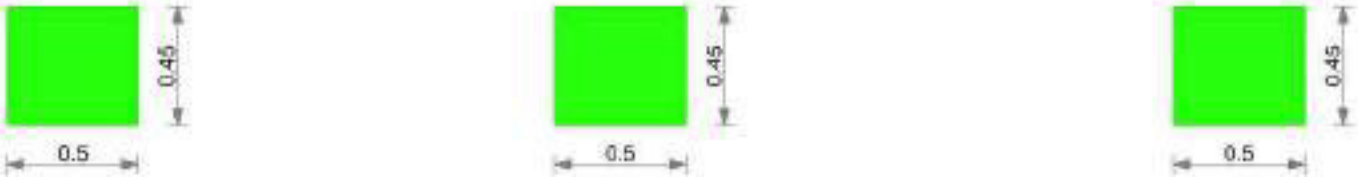
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	534	520	SLE RA 21	0.19	0.01	534	SLE RA 20	0.1	0	535	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	535	534	SLE RA 1	0.19	0	535	SLE RA 1	0.1	0	534	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	535	534	SLE RA 1	0.19	0	535	SLE RA 1	0.1	0	534	SLE RA 1	Si

CORDOLO 14

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

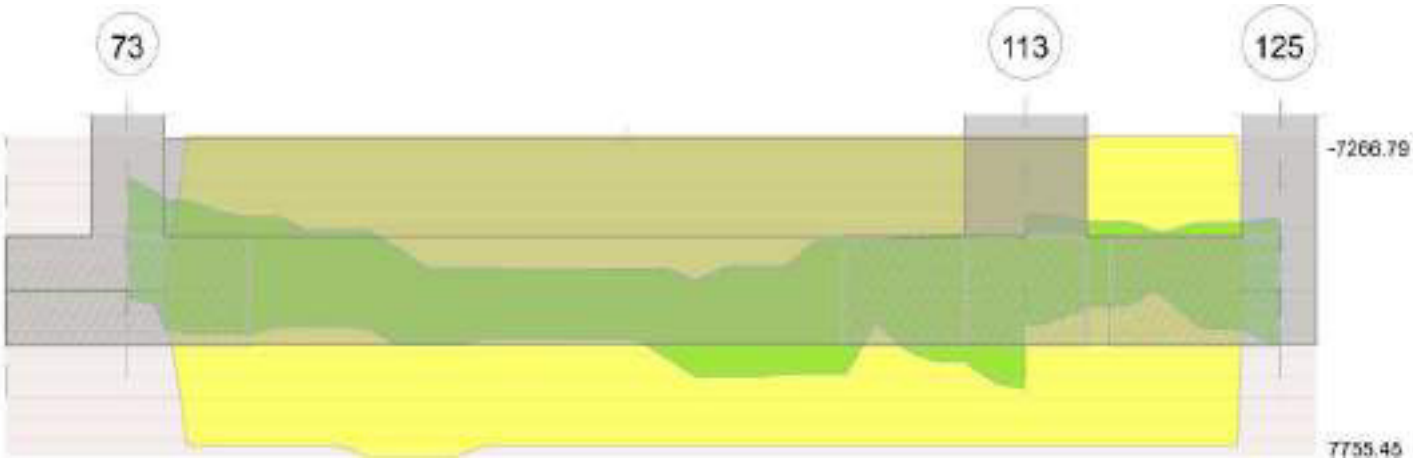
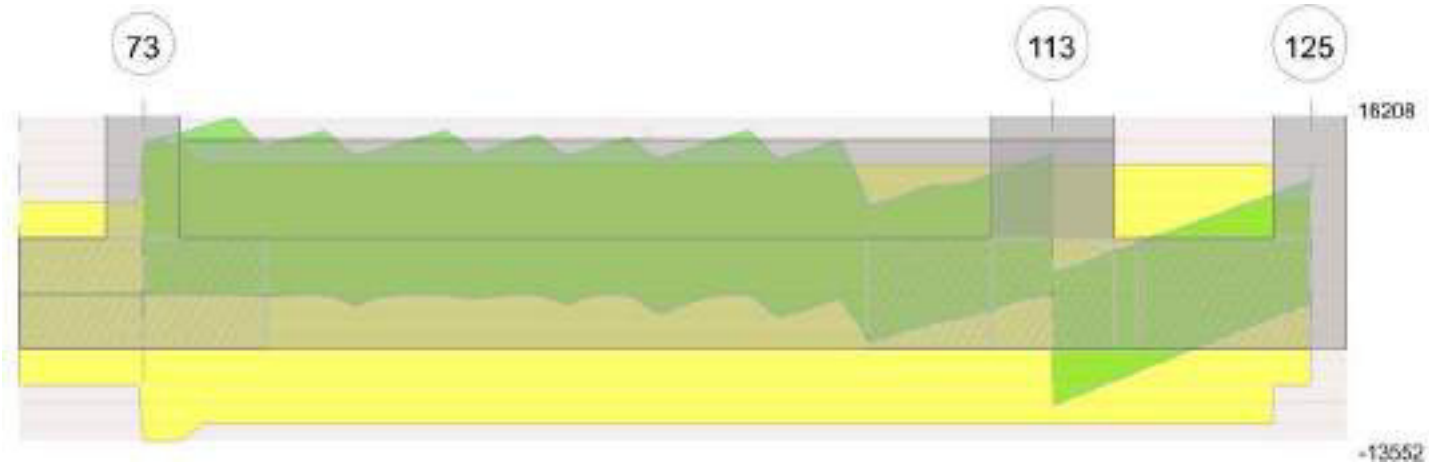


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 113 - 125, sezione R 50x45, asta 710

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-593.87	SLU 60	-593.87	-7755.45	0.113	13.06	Si
0.25	0.000509	0.052	0.000509	0.052							-1891.31	SLU 84	-2266.27	-7755.45	0.113	3.42	Si
0.52	0.000509	0.052	0.000509	0.052							-2276.71	SLU 84	-2288.4	-7755.45	0.113	3.39	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	3226.13	SLV 16	1614.89	7266.79	0.197	4.5	-3949.43	SLV 1	-3622.3	-7266.79	0.197	2.01	Si
0.25	0.000509	0.052	0.000509	0.052	712.73	SLV 14	712.73	7266.79	0.197	10.2	-3234.55	SLV 3	-3234.55	-7266.79	0.197	2.25	Si
0.52	0.000509	0.052	0.000509	0.052							-2212.59	SLV 8	-2853.6	-7266.79	0.197	2.55	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1167.69	SLD 16	238.15	7266.79	0.197	30.51	-1890.99	SLD 1	-1890.99	-7266.79	0.197	3.84	Si
0.25	0.000509	0.052	0.000509	0.052							-2104.2	SLD 3	-2104.2	-7266.79	0.197	3.45	Si
0.52	0.000509	0.052	0.000509	0.052							-1834.14	SLD 8	-2044.16	-7266.79	0.197	3.55	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	-6178	SLU 84	-6178	-7764	-63178	-11986	-11986	1	1.94	Si
0.25	0.0000086	0.000509	0	-2974	SLU 78	-2974	-7764	-63178	-11986	-11986	1	4.03	Si
0.52	0.0000086	0	0	563	SLU 60	563	7764	63178	11986	11986	1	21.28	Si
0.89	0.0000086	0	0	5301	SLU 83	5301	8455	71432	13552	13552	1	2.56	Si
1.04	0	0	0	7237	SLU 83	7237	8455	71432	0	8455	1	1.17	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	1825	SLV 1	1825	7764	63178	11986	11986	1	6.57	Si
0	0.0000086	0.000509	0	-10255	SLV 16	-10255	-7764	-63178	-11986	-11986	1	1.17	Si
0.25	0.0000086	0.000509	0	3858	SLV 1	3858	7764	63178	11986	11986	1	3.11	Si
0.25	0.0000086	0.000509	0	-7973	SLV 16	-7973	-7764	-63178	-11986	-11986	1	1.5	Si
0.52	0.0000086	0	0	6079	SLV 1	6079	7764	63178	11986	11986	1	1.97	Si
0.52	0.0000086	0	0	-5506	SLV 16	-5506	-7764	-63178	-11986	-11986	1	2.18	Si
0.89	0.0000086	0	0	9155	SLV 1	9155	8455	71432	13552	13552	1	1.48	Si
0.89	0.0000086	0	0	-2157	SLV 16	-2157	-8455	-71432	-13552	-13552	1	6.28	Si
1.04	0	0	0	10408	SLV 1	10408	8455	71432	0	8455	1	0.81	Si
1.04	0	0	0	-807	SLV 16	-807	-8455	-71432	0	-8455	1	10.48	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	-6789	SLD 16	-6789	-7764	-63178	-11986	-11986	1	1.77	Si
0.25	0.0000086	0.000509	0	464	SLD 1	464	7764	63178	11986	11986	1	25.86	Si
0.25	0.0000086	0.000509	0	-4579	SLD 16	-4579	-7764	-63178	-11986	-11986	1	2.62	Si
0.52	0.0000086	0	0	2755	SLD 1	2755	7764	63178	11986	11986	1	4.35	Si
0.52	0.0000086	0	0	-2182	SLD 16	-2182	-7764	-63178	-11986	-11986	1	5.49	Si
0.89	0.0000086	0	0	5908	SLD 1	5908	8455	71432	13552	13552	1	2.29	Si
1.04	0	0	0	7189	SLD 1	7189	8455	71432	0	8455	1	1.18	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-434.03	18	-434.03	22957	1494000	344360	36000000	-361.65	2	-361.65	19129	1120500			Si
0.25	-1400.25	21	-1676.63	88683	1494000	1330243	36000000	-1260.91	2	-1525.42	80685	1120500			Si
0.52	-1684.2	21	-1692.88	89542	1494000	1343133	36000000	-1538.85	2	-1544.31	81684	1120500			Si
0.89	-775.85	15	-1396.21	-82739	1494000	0	36000000	-728.86	2	-1289.98	-76443	1120500			Si
1.04	40.81	18	40.81	2418	1494000	0	36000000								Si
1.04	-60.62	7	-60.62	-3592	1494000	0	36000000	-39.55	1	-39.55	-2344	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 73 - 113, sezione R 50x45, aste 719, 718, 717, 716, 715, 714, 713, 712, 711

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1534	SLU 84	0.036	6777	5336	SLU 84	16740	Si
0.15	0.41	0.0004	1537	SLU 84	0.036	6777	5348	SLU 84	16740	Si
1.84	0.41	0.0004	1588	SLU 84	0.036	6777	5522	SLU 84	16740	Si
3.44	0.41	0.0004	1558	SLU 84	0.036	6777	5418	SLU 84	16740	Si
3.69	0.41	0.0004	1552	SLU 84	0.036	6777	5397	SLU 84	16740	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1128	SLD 4	0.11	7560	3923	SLD 4	19251	Si
0.15	0.41	0.0004	1127	SLD 4	0.11	7560	3921	SLD 4	19251	Si
1.84	0.41	0.0004	1094	SLD 4	0.11	7560	3806	SLD 4	19251	Si
3.44	0.41	0.0004	1060	SLD 16	0.11	7560	3688	SLD 16	19251	Si
3.69	0.41	0.0004	1059	SLD 16	0.11	7560	3684	SLD 16	19251	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000428	1128	SLE RA 21	31585	1494000	391659	36000000	1024	SLE QP 2	28667	1120500	Si
0.15	0.41	0.00000428	1131	SLE RA 21	31654	1494000	392505	36000000	1026	SLE QP 2	28726	1120500	Si
1.84	0.41	0.00000428	1167	SLE RA 21	32672	1494000	405132	36000000	1057	SLE QP 2	29594	1120500	Si
3.44	0.41	0.00000428	1145	SLE RA 21	32049	1494000	397407	36000000	1035	SLE QP 2	28977	1120500	Si
3.69	0.41	0.00000428	1141	SLE RA 21	31928	1494000	395911	36000000	1031	SLE QP 2	28861	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 113 - 125, sezione R 50x45, asta 710

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.88	1.1	SLU 44	ST	LT	134	175	-50685	0	0	19	0	0	1.1	15417	221	69.84	Si
4.88	1.1	SLV 16	SIS	LT	7444	1411	-41450	10	2	19	0	0	1.1	12608	7577	1.66	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
719,718,717,716,715,714,713,712,711,710	4.88	1.1	SLU 83	ST	BT	2.3	231097	62106	3.72	Si
719,718,717,716,715,714,713,712,711,710	4.88	1.1	SLV 8	SIS	BT	2.3	207918	44100	4.71	Si
719,718,717,716,715,714,713,712,711,710	4.88	1.1	SLD 8	SIS	BT	2.3	221213	43289	5.11	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	25	-62106	87.99	-120.47	0	0	0	0	1.1	4.88	1496	2060	0	14430	
0	4059	-44100	-1697.97	-2083.57	0	5	-0.05	-0.04	1.02	4.79	1496	2060	0	14430	0.07
0	1824	-43289	-722.34	-968.6	0	2	-0.02	-0.02	1.07	4.84	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

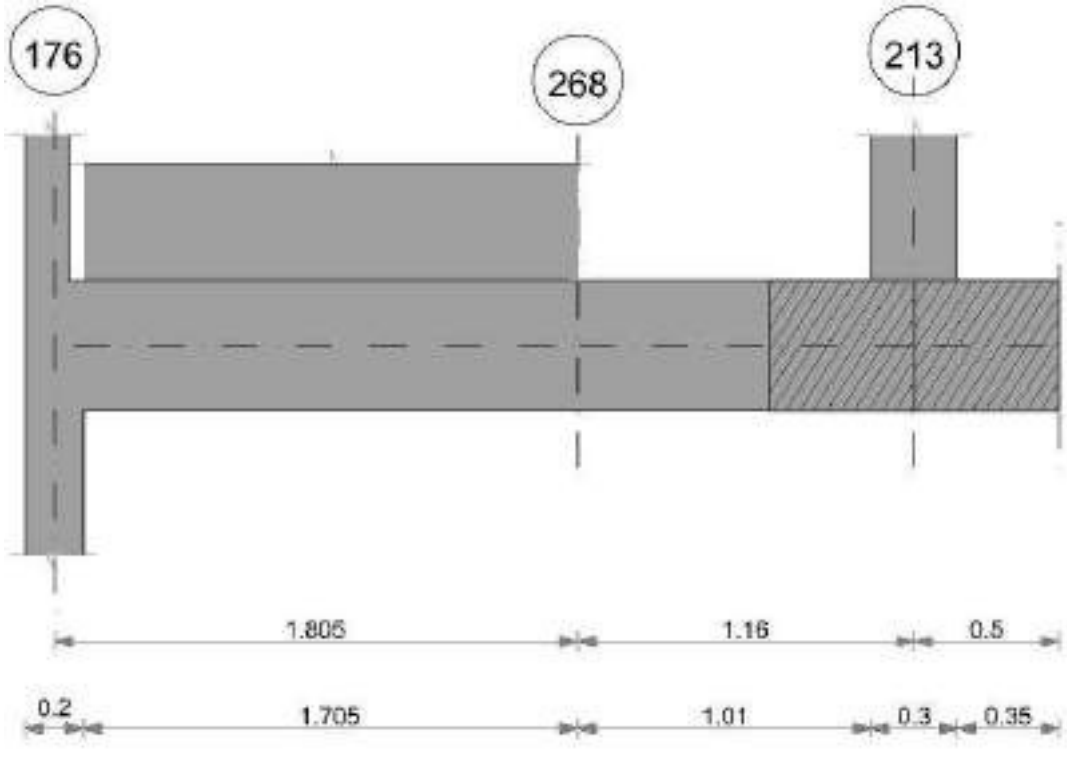
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	545	SLE RA 21	0.05	0	545	535	SLE RA 20	0.05	0	544	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	545	SLE RA 1	0.05	0	545	545	SLE RA 1	0.05	0	544	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	545	SLE RA 1	0.05	0	545	545	SLE RA 1	0.05	0	544	SLE RA 1	0.0033	0	SLE RA 1	Si

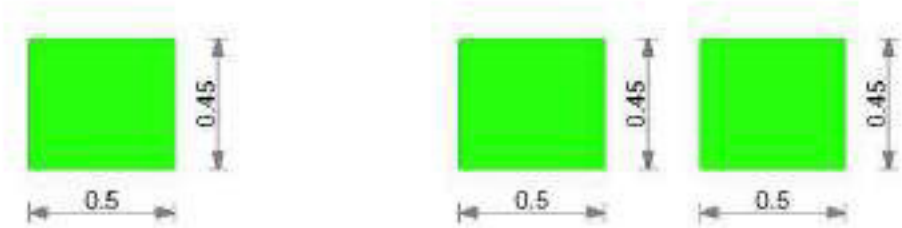
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0.01	544	535	SLE RA 20	0.19	0	544	SLE RA 20	0.1	0	545	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	545	544	SLE RA 1	0.19	0	545	SLE RA 1	0.1	0	544	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	545	544	SLE RA 1	0.19	0	545	SLE RA 1	0.1	0	544	SLE RA 1	Si

CORDOLO 15

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

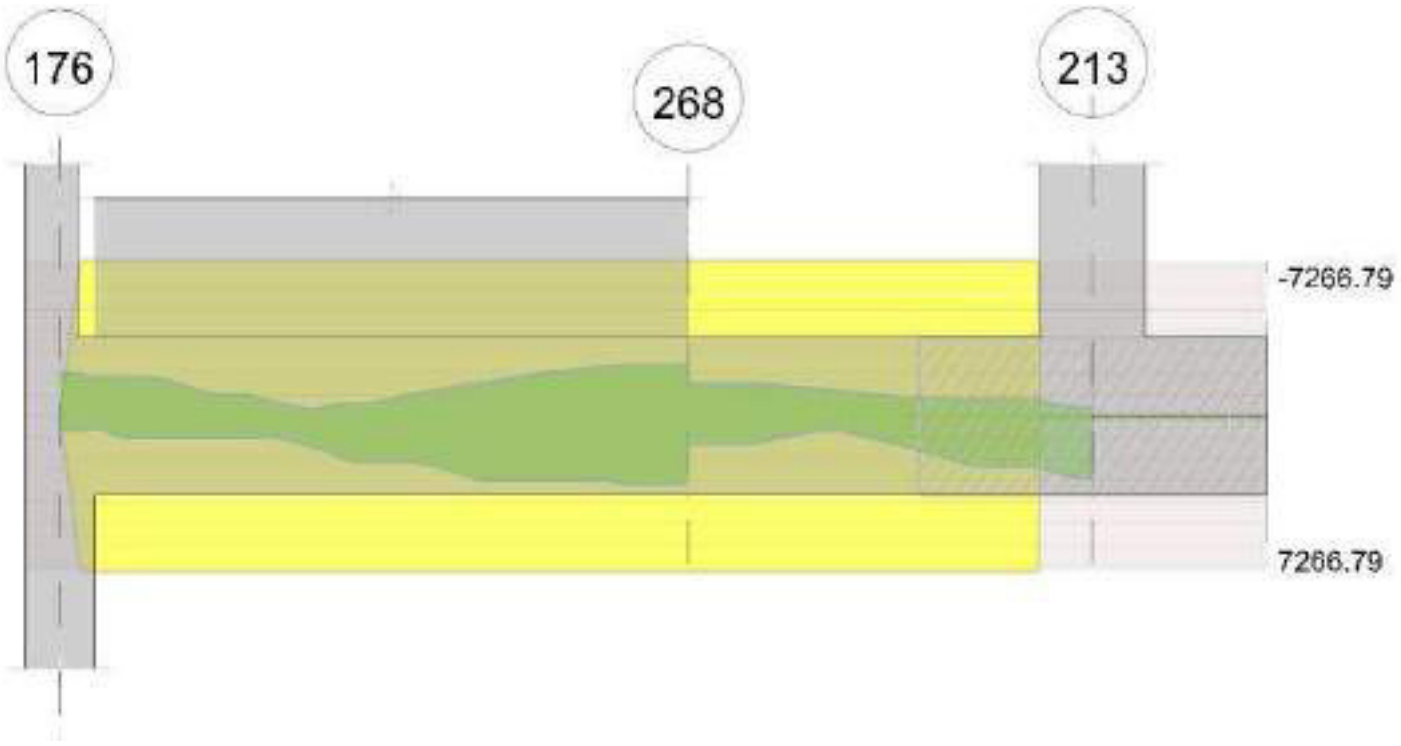
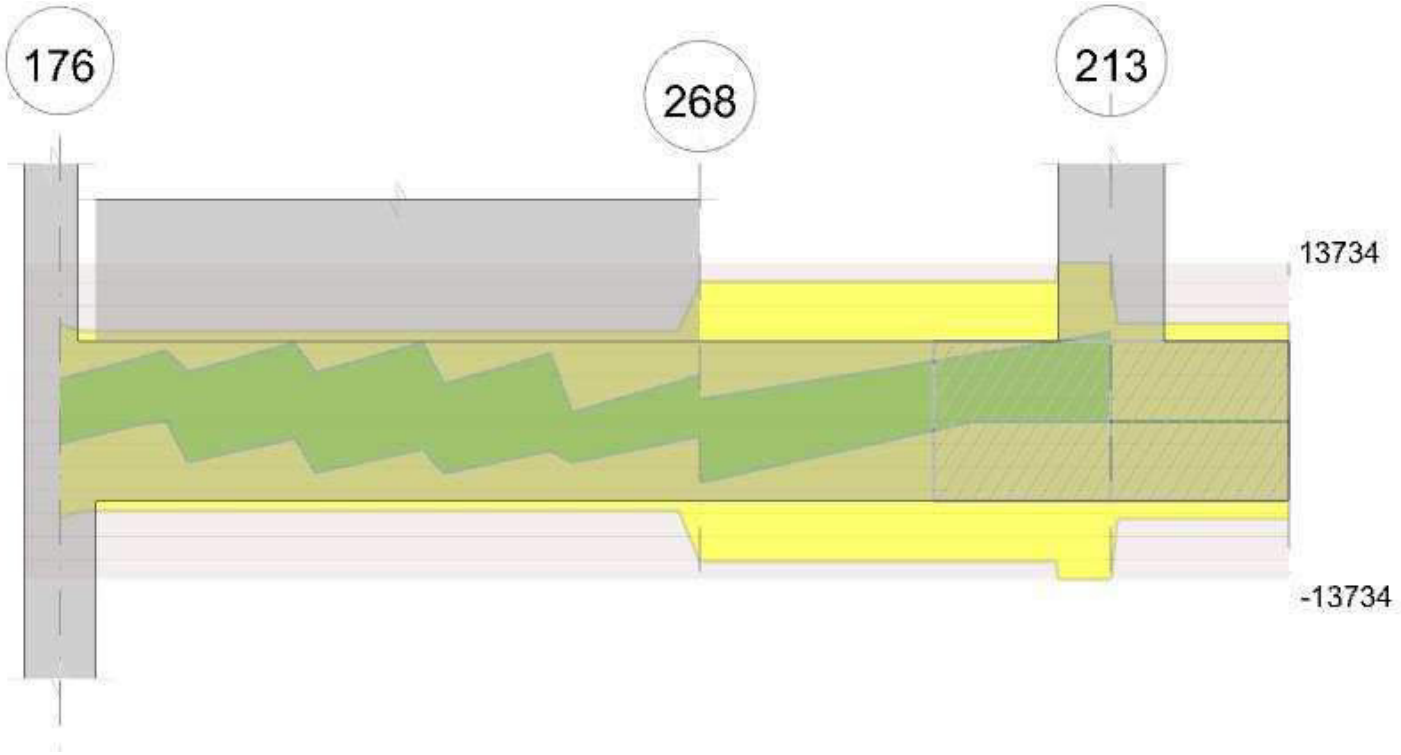


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 268 - 213, sezione R 50x45, asta 654

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-168.12	SLU 71	-418.26	-7755.45	0.113	18.54	Si
0.58	0.000509	0.052	0.000509	0.052	-72.44	SLU 7	316.51	7755.45	0.113	24.5	-200.64	SLU 81	-432.41	-7755.45	0.113	17.94	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1311.39	SLV 15	1311.39	7266.79	0.197	5.54	-1526.58	SLV 2	-1526.58	-7266.79	0.197	4.76	Si
0.58	0.000509	0.052	0.000509	0.052	619.89	SLV 11	1223.63	7266.79	0.197	5.94	-836.4	SLV 6	-918.6	-7266.79	0.197	7.91	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	497.85	SLD 15	497.85	7266.79	0.197	14.6	-713.05	SLD 2	-720.69	-7266.79	0.197	10.08	Si
0.58	0.000509	0.052	0.000509	0.052	211.28	SLD 11	655.52	7266.79	0.197	11.09	-427.79	SLD 6	-550.97	-7266.79	0.197	13.19	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	-2646	SLU 83	-2646	-7764	-63178	-12147	-12147	1	4.59	Si
0.58	0.0000087	0.000509	0	2489	SLU 78	2489	7764	63178	12147	12147	1	4.88	Si
1.01	0.0000087	0	0	6255	SLU 84	6255	8455	71432	13734	13734	1	2.2	Si
1.16	0.0000087	0	0	7568	SLU 84	7568	8455	71432	13734	13734	1	1.81	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	1851	SLV 3	1851	7764	63178	12147	12147	1	6.56	Si
0	0.0000087	0.000509	0	-5316	SLV 14	-5316	-7764	-63178	-12147	-12147	1	2.28	Si
0.58	0.0000087	0.000509	0	4775	SLV 3	4775	7764	63178	12147	12147	1	2.54	Si
0.58	0.0000087	0.000509	0	-1324	SLV 14	-1324	-7764	-63178	-12147	-12147	1	9.18	Si
1.01	0.0000087	0	0	6906	SLV 3	6906	7764	63178	12147	12147	1	1.76	Si
1.01	0.0000087	0	0	6929	SLV 3	6929	8455	71432	13734	13734	1	1.98	Si
1.16	0.0000087	0	0	7723	SLV 7	7723	8455	71432	13734	13734	1	1.78	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	-3268	SLD 14	-3268	-7764	-63178	-12147	-12147	1	3.72	Si
0.58	0.0000087	0.000509	0	3034	SLD 3	3034	7764	63178	12147	12147	1	4	Si
1.01	0.0000087	0	0	5416	SLD 3	5416	8455	71432	13734	13734	1	2.54	Si
1.16	0.0000087	0	0	6283	SLD 7	6283	8455	71432	13734	13734	1	2.19	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-116.14	8	-301.38	15941	1494000	239117	36000000	-108.29	1	-275.2	14556	1120500			Si
0.58	-140.1	18	-311.67	16485	1494000	247276	36000000	-108.26	2	-275.32	14562	1120500			Si
1.01	964.13	15	964.13	57134	1494000	0	36000000	904.67	2	904.67	53610	1120500			Si
1.16	1557.96	15	1307.23	77465	1494000	0	36000000	1459.64	2	1225.4	72617	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 176 - 268, sezione R 50x45, aste 659, 658, 657, 656, 655

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1572	SLU 84	0.018	2949	5467	SLU 84	15877	Si
0.1	0.41	0.0002	1572	SLU 84	0.018	2949	5469	SLU 84	15877	Si
0.9	0.41	0.0002	1580	SLU 84	0.018	2949	5495	SLU 84	15877	Si
1.8	0.41	0.0004	1566	SLU 84	0.037	6867	5446	SLU 84	16965	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1079	SLD 15	0.073	3317	3755	SLD 15	15877	Si
0.1	0.41	0.0002	1083	SLD 15	0.073	3317	3768	SLD 15	15877	Si
0.9	0.41	0.0002	1120	SLD 15	0.073	3317	3895	SLD 15	15877	Si
1.8	0.41	0.0004	1135	SLD 15	0.111	7660	3949	SLD 15	19510	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000185	1157	SLE RA 21	33436	1494000	414603	36000000	1049	SLE QP 2	30319	1120500	Si
0.1	0.41	0.00000185	1157	SLE RA 21	33447	1494000	414739	36000000	1049	SLE QP 2	30330	1120500	Si
0.9	0.41	0.00000185	1163	SLE RA 21	33599	1494000	416631	36000000	1054	SLE QP 2	30466	1120500	Si
1.8	0.41	0.00000433	1152	SLE RA 21	32228	1494000	399625	36000000	1045	SLE QP 2	29229	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 268 - 213, sezione R 50x45, asta 654

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.06	1.1	SLU 32	ST	LT	-237	-233	-28881	0	0	19	0	0	1.1	8785	333	26.4	Si
3.06	1.1	SLV 2	SIS	LT	-4263	-1167	-21687	-11	-3	19	0	0	1.1	6597	4419	1.49	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
659,658,657,656,655,654	3.06	1.1	SLU 83	ST	BT	2.3	143448	35983	3.99	Si
659,658,657,656,655,654	3.06	1.1	SLV 15	SIS	BT	2.3	136820	27909	4.9	Si
659,658,657,656,655,654	3.06	1.1	SLD 14	SIS	BT	2.3	140582	25835	5.44	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-295	-264	-35983	515.08	-263.63	0	0	-0.01	0.01	1.07	3.05	1496	2060	0	14430	
3842	846	-27909	-189.49	2296.47	8	2	0.08	-0.01	1.09	2.9	1496	2060	0	14430	0.07
1434	-360	-25835	378.42	824.12	3	-1	0.03	0.01	1.07	3	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

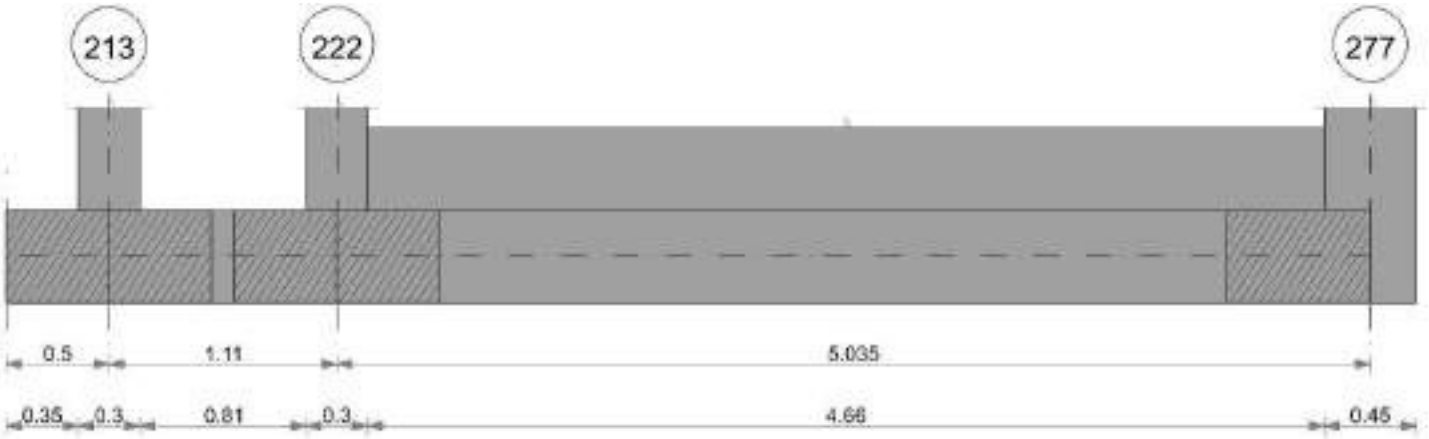
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	546	SLE RA 21	0.05	0.001	546	552	SLE RA 20	0.05	0	551	SLE FR 6	0.0033	0	SLE FR 6	Si
D	0.05	0	552	SLE RA 1	0.05	0	552	552	SLE RA 1	0.05	0	551	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	552	SLE RA 1	0.05	0	552	552	SLE RA 1	0.05	0	551	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	551	546	SLE RA 21	0.19	0	552	SLE RA 1	0.1	0.01	551	SLE FR 6	Si
D	0.19	0	SLE RA 1	0.19	0	552	551	SLE RA 1	0.19	0	552	SLE RA 1	0.1	0	551	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	552	551	SLE RA 1	0.19	0	552	SLE RA 1	0.1	0	551	SLE RA 1	Si

CORDOLO 16

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

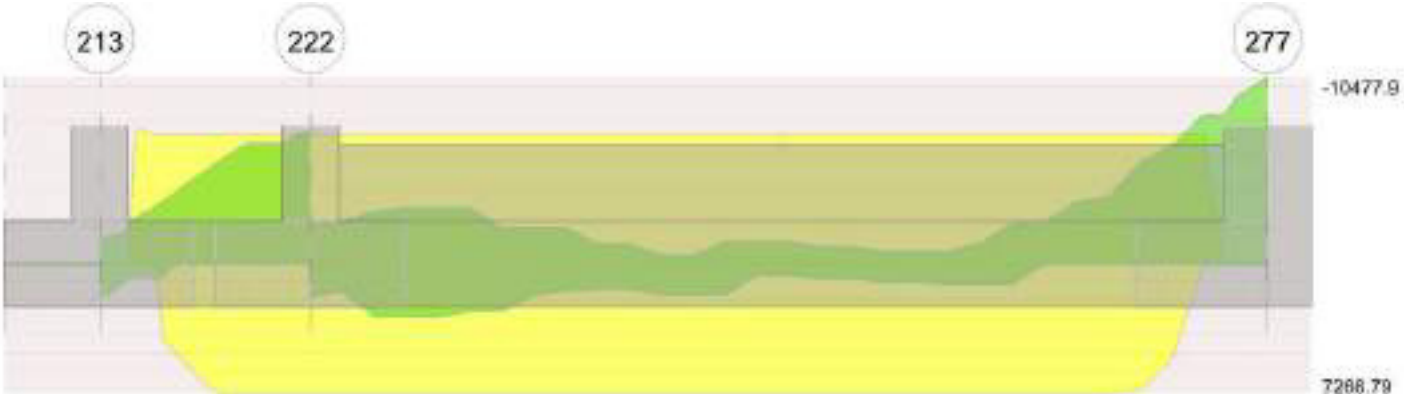
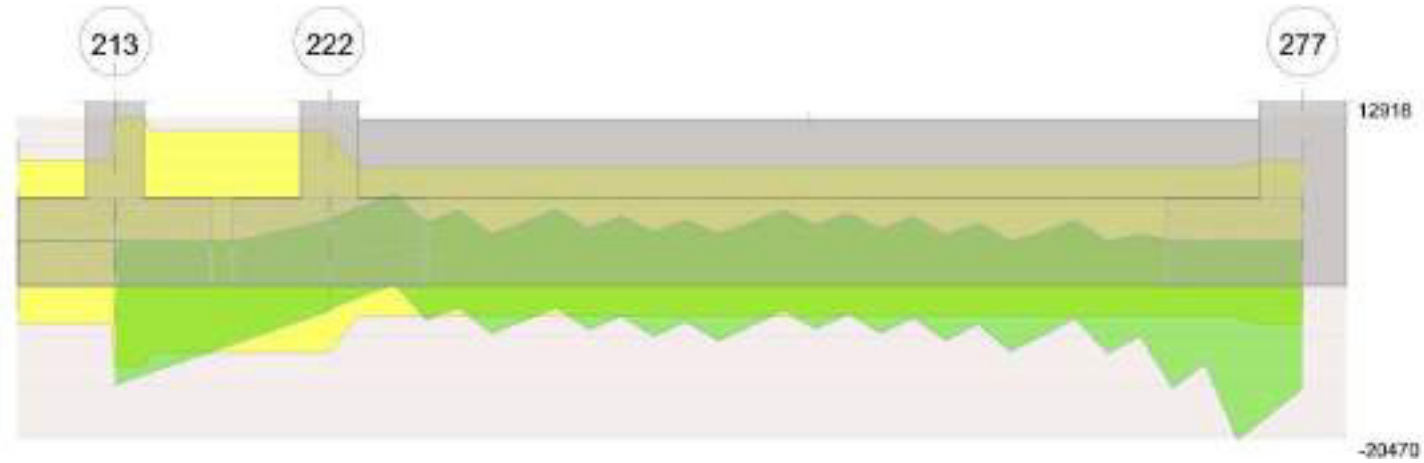


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 213 - 222, sezione R 50x45, asta 450

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-3887.37	SLU 83	-4922.71	-7752.71	0.113	1.57	Si
0.96	0.000509	0.052	0.000509	0.052							-5923.55	SLU 84	-5923.55	-7755.45	0.113	1.31	Si
1.11	0.000509	0.052	0.000509	0.052							-6403.01	SLU 84	-6281.01	-7755.45	0.113	1.23	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-3836.86	SLV 15	-5204.63	-7267.41	0.198	1.4	Si
0.96	0.000509	0.052	0.000509	0.052							-6752.89	SLV 15	-6752.89	-7266.79	0.197	1.08	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-3154.61	SLD 15	-4150.1	-7267.41	0.198	1.75	Si
0.96	0.000509	0.052	0.000509	0.052							-5211.73	SLD 15	-5211.73	-7266.79	0.197	1.39	Si
1.11	0.000509	0.052	0.000509	0.052							-5783.78	SLD 15	-5618.11	-7266.79	0.197	1.29	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-12955	SLU 84	-12955	-8455	-71432	-12918	-12918	1	1	Si
0.15	0.0000082	0	0	-11672	SLU 84	-11672	-8455	-71432	-12918	-12918	1	1.11	Si
0.56	0.0000082	0	0	-8221	SLU 84	-8221	-7764	-63178	-11425	-11425	1	1.39	Si
0.96	0.0000082	0.000509	0	-4766	SLU 84	-4766	-7764	-63178	-11425	-11425	1	2.4	Si
1.11	0.0000082	0.000509	0	-3503	SLU 78	-3503	-7764	-63178	-11425	-11425	1	3.26	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-14819	SLV 15	-14819	-8455	-71432	-12918	-12918	1	0.87	Si
0.56	0.0000082	0	0	-10992	SLV 15	-10992	-7764	-63178	-11425	-11425	1	1.04	Si
0.96	0.0000082	0.000509	0	1559	SLV 2	1559	7764	63178	11425	11425	1	7.33	Si
0.96	0.0000082	0.000509	0	-8198	SLV 15	-8198	-7764	-63178	-11425	-11425	1	1.39	Si
1.11	0.0000082	0.000509	0	2257	SLV 2	2257	7764	63178	11425	11425	1	5.06	Si
1.11	0.0000082	0.000509	0	-7154	SLV 15	-7154	-7764	-63178	-11425	-11425	1	1.6	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-11416	SLD 15	-11416	-8455	-71432	-12918	-12918	1	1.13	Si
0.15	0.0000082	0	0	-10477	SLD 15	-10477	-8455	-71432	-12918	-12918	1	1.23	Si
0.19	0.0000082	0	0	-10258	SLD 15	-10258	-7764	-63178	-11425	-11425	1	1.11	Si
0.56	0.0000082	0	0	-7949	SLD 15	-7949	-7764	-63178	-11425	-11425	1	1.44	Si
0.96	0.0000082	0.000509	0	-5418	SLD 15	-5418	-7764	-63178	-11425	-11425	1	2.11	Si
1.11	0.0000082	0.000509	0	-4474	SLD 15	-4474	-7764	-63178	-11425	-11425	1	2.55	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	517.65	15	135.05	8003	1494000	0	36000000	473.05	2	103.95	6160	1120500			Si
0.15	-572.67	18	-1692.95	-100323	1494000	0	36000000	-505.39	2	-1544.37	-91518	1120500			Si
0.56	-2882.57	20	-3652.3	194378	1494000	2904457	36000000	-2645.64	2	-3360.04	178824	1120500			Si
0.96	-4397.86	21	-4397.86	232618	1494000	3489272	36000000	-4053.94	2	-4053.94	214427	1120500			Si
1.11	-4756.28	21	-4664.62	246728	1494000	3700921	36000000	-4389.37	2	-4302.87	227594	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 213 - 222, sezione R 50x45, asta 450

Campata 3 tra i fili 222 - 277, sezione R 50x45, aste 449, 448, 447, 446, 445, 444, 443, 442, 441, 440, 439, 438, 437

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1538	SLU 84	0.034	6464	5349	SLU 84	15957	Si
0.15	0.41	0.0002	1549	SLU 84	0.017	2747	5389	SLU 84	15877	Si
2.52	0.41	0.0002	1723	SLV 15	0.085	2672	6044	SLU 84	15877	Si
4.81	0.41	0.0002	2278	SLV 14	0.085	2672	7924	SLV 14	15877	Si
5.03	0.41	0.0002	2373	SLV 14	0.085	2672	8254	SLV 14	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1132	SLD 15	0.107	7214	3938	SLD 15	18350	Si
0.15	0.41	0.0002	1143	SLD 15	0.07	3092	3976	SLD 15	15877	Si
2.52	0.41	0.0002	1403	SLD 15	0.07	3092	4881	SLD 15	15877	Si
4.81	0.41	0.0002	1721	SLD 14	0.07	3092	5984	SLD 14	15877	Si
5.03	0.41	0.0002	1782	SLD 14	0.07	3092	6199	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000408	1131	SLE RA 21	31740	1494000	393581	36000000	1027	SLE QP 2	28817	1120500	Si
0.15	0.41	0.00000172	1140	SLE RA 21	32988	1494000	409053	36000000	1035	SLE QP 2	29954	1120500	Si
2.52	0.41	0.00000172	1279	SLE RA 21	37035	1494000	459236	36000000	1165	SLE QP 2	33729	1120500	Si
4.81	0.41	0.00000172	1427	SLE RA 21	41298	1494000	512089	36000000	1305	SLE QP 2	37770	1120500	Si
5.03	0.41	0.00000172	1466	SLE RA 21	42449	1494000	526369	36000000	1342	SLE QP 2	38842	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.37	1.1	SLU 48	ST	LT	-1193	-107	-70130	-1	0	19	0	0	1.1	21332	1198	17.81	Si
6.37	1.1	SLV 2	SIS	LT	-9434	-3085	-36986	-14	-5	19	0	0	1.1	11250	9925	1.13	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
450,449,448,447,446,445,444,443,442,441,440,439,438,437	6.37	1.1	SLU 83	ST	BT	2.3	289242	83155	3.48	Si
450,449,448,447,446,445,444,443,442,441,440,439,438,437	6.37	1.1	SLV 15	SIS	BT	2.3	261643	77753	3.37	Si
450,449,448,447,446,445,444,443,442,441,440,439,438,437	6.37	1.1	SLD 15	SIS	BT	2.3	277158	66079	4.19	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-332	-83155	285.86	7849.05	0	0	0.09	0	1.09	6.18	1496	2060	0	14430	
0	2757	-77753	-1065.6	24786.6	0	2	0.32	-0.01	1.07	5.73	1496	2060	0	14430	0.07
0	1103	-66079	-368.76	13731.34	0	1	0.21	-0.01	1.09	5.95	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

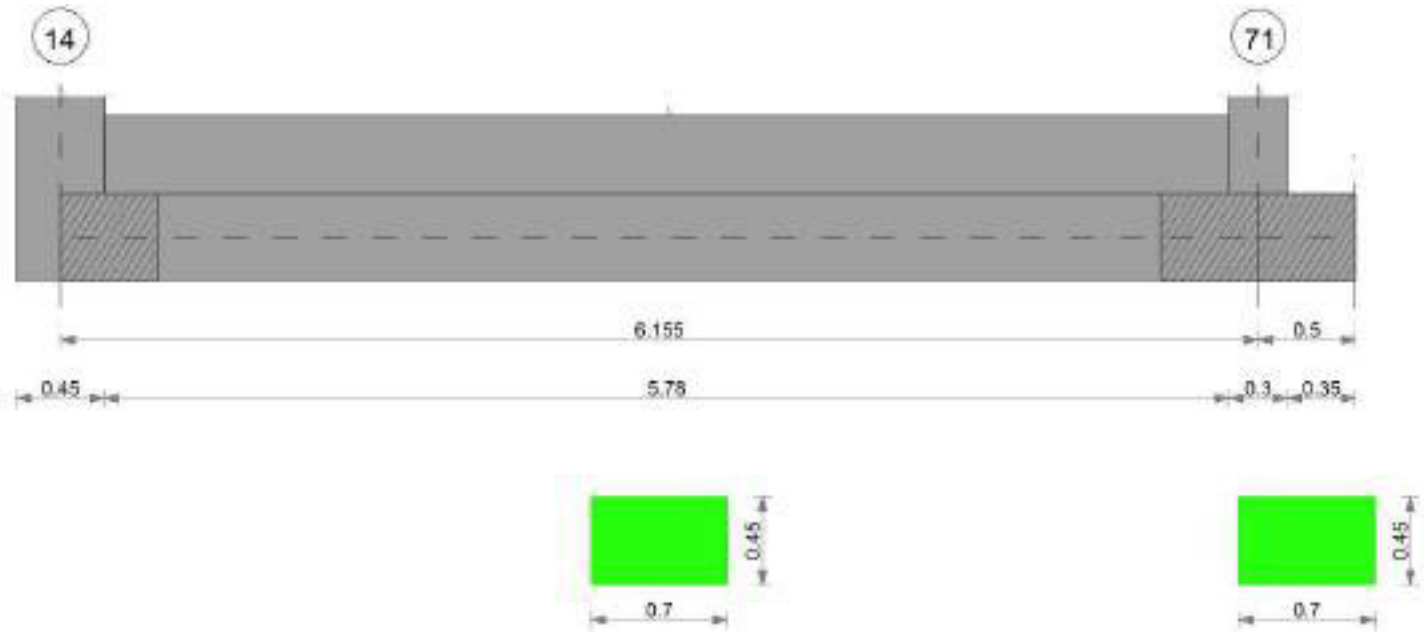
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	553	SLE RA 21	0.05	0.001	553	568	SLE RA 21	0.05	0	555	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	568	SLE RA 1	0.05	0	568	568	SLE RA 1	0.05	0	555	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	568	SLE RA 1	0.05	0	568	568	SLE RA 1	0.05	0	555	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	568	555	SLE RA 21	0.19	0.01	555	SLE RA 20	0.1	0	568	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	568	555	SLE RA 1	0.19	0	568	SLE RA 1	0.1	0	555	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	568	555	SLE RA 1	0.19	0	568	SLE RA 1	0.1	0	555	SLE RA 1	Si

CORDOLO 17

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

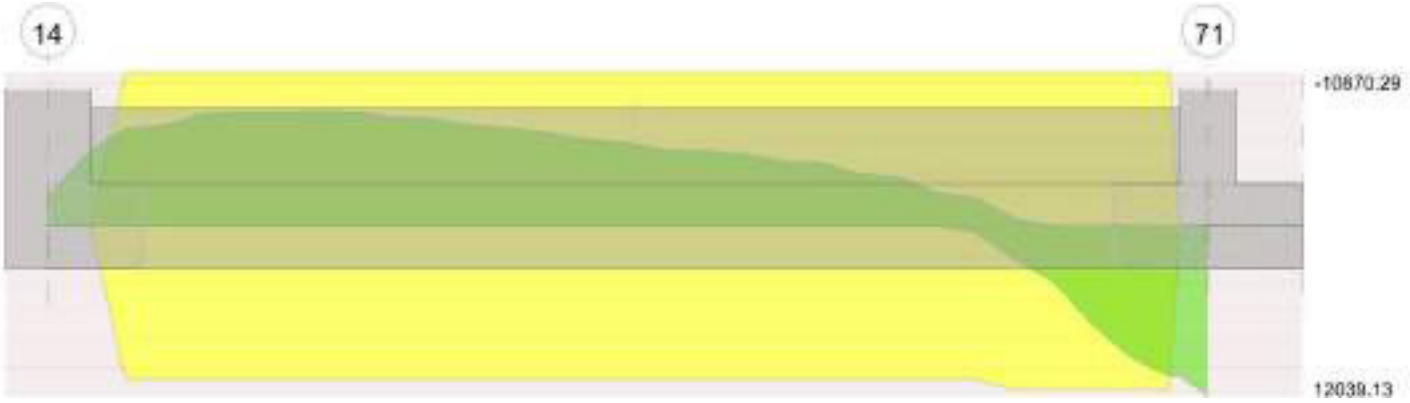
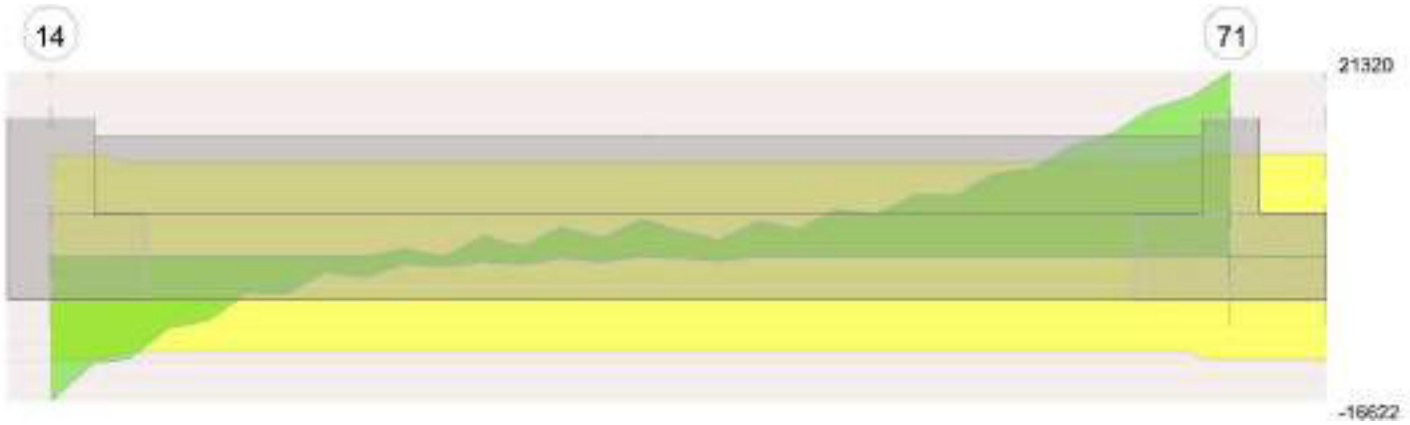


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 14 - 71, sezione R 70x45, aste 772, 771, 770, 769, 768, 767, 766, 765, 764, 763, 762, 761, 760, 759, 758, 757

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	4515	SLV 1	0.119	5189	11652	SLV 1	15877	Si
0.23	0.41	0.0003	4238	SLV 1	0.119	5189	10938	SLV 1	15877	Si
3.08	0.41	0.0003	2345	SLV 1	0.119	5189	6052	SLV 1	15877	Si
6.01	0.41	0.0003	3103	SLU 83	0.029	5386	8007	SLU 83	15877	Si
6.16	0.41	0.0003	3124	SLU 83	0.029	5386	8062	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3361	SLD 1	0.098	6020	8674	SLD 1	15877	Si
0.23	0.41	0.0003	3163	SLD 1	0.098	6020	8161	SLD 1	15877	Si
3.08	0.41	0.0003	1875	SLD 1	0.098	6020	4839	SLD 1	15877	Si
6.01	0.41	0.0003	2348	SLD 1	0.098	6020	6060	SLD 1	15877	Si
6.16	0.41	0.0003	2356	SLD 1	0.098	6020	6081	SLD 1	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000339	2724	SLE RA 20	77148	1494000	956641	36000000	2499	SLE QP 2	70781	1120500	Si
0.23	0.41	0.00000339	2572	SLE RA 20	72847	1494000	903297	36000000	2359	SLE QP 2	66812	1120500	Si
3.08	0.41	0.00000339	1669	SLE RA 20	47256	1494000	585976	36000000	1524	SLE QP 2	43164	1120500	Si
6.01	0.41	0.00000339	2290	SLE RA 20	64856	1494000	804220	36000000	2093	SLE QP 2	59265	1120500	Si
6.16	0.41	0.00000339	2306	SLE RA 20	65303	1494000	809763	36000000	2107	SLE QP 2	59671	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.38	1.3	SLU 27	ST	LT	1666	237	-67938	1	0	19	0	0	1.1	20665	1683	12.28	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
772,771,770,769,768,767,766,765,764,763,762,761,760,759,758,757	6.38	1.3	SLU 83	ST	BT	2.3	272356	91174	2.99	Si
772,771,770,769,768,767,766,765,764,763,762,761,760,759,758,757	6.38	1.3	SLV 1	SIS	BT	2.3	243030	89697	2.71	Si
772,771,770,769,768,767,766,765,764,763,762,761,760,759,758,757	6.38	1.3	SLD 1	SIS	BT	2.3	258073	74641	3.46	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	298	-91174	11912.94	-1923.4	0	0	-0.02	0.13	1.04	6.34	1496	2060	0	14430	
0	-981	-89697	13097.49	-24513.55	0	-1	-0.27	0.15	1.01	5.83	1496	2060	0	14430	0.07
0	-289	-74641	10243.76	-11269.69	0	0	-0.15	0.14	1.03	6.08	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

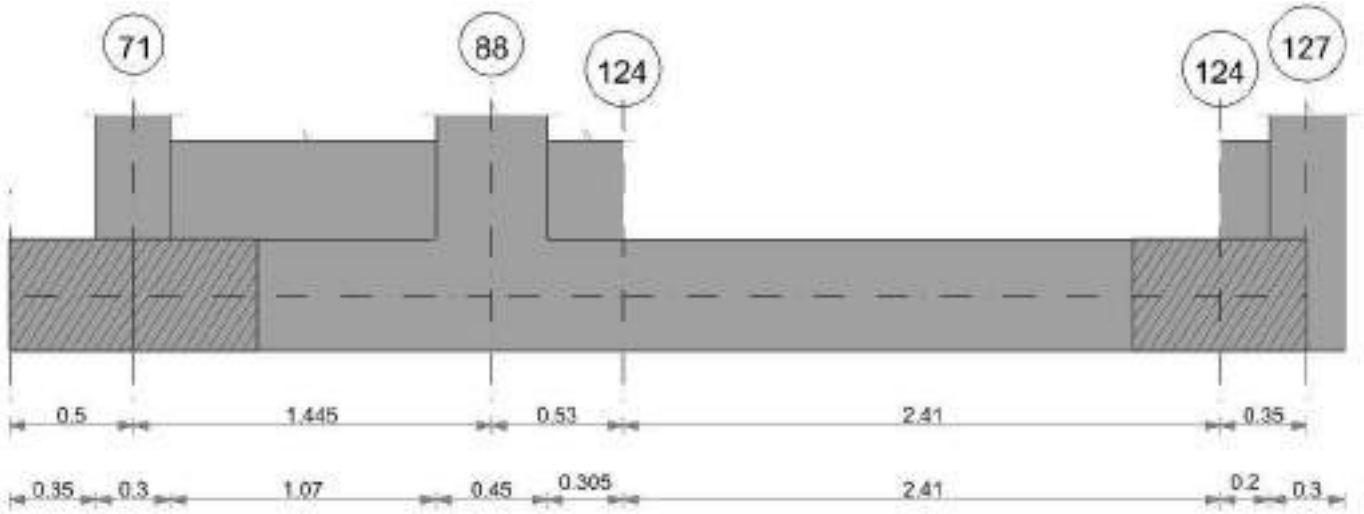
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	328	SLE RA 20	0.05	0	328	312	SLE RA 20	0.05	0	328	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	328	SLE RA 1	0.05	0	328	328	SLE RA 1	0.05	0	328	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	328	SLE RA 1	0.05	0	328	328	SLE RA 1	0.05	0	328	SLE RA 1	0.0033	0	SLE RA 1	Si

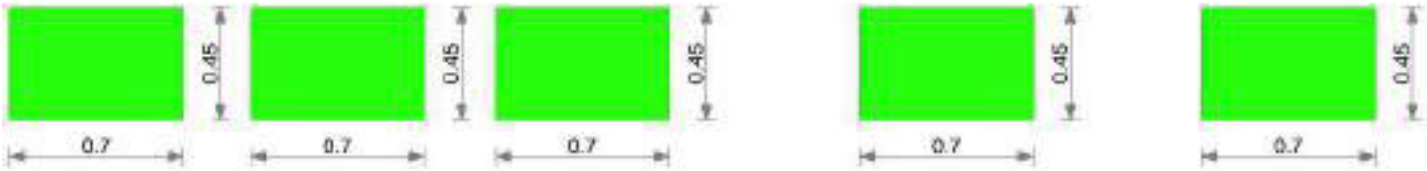
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	328	312	SLE RA 20	0.19	0	328	SLE RA 1	0.1	0	328	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	328	312	SLE RA 1	0.19	0	328	SLE RA 1	0.1	0	328	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	328	312	SLE RA 1	0.19	0	328	SLE RA 1	0.1	0	328	SLE RA 1	Si

CORDOLO 18

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

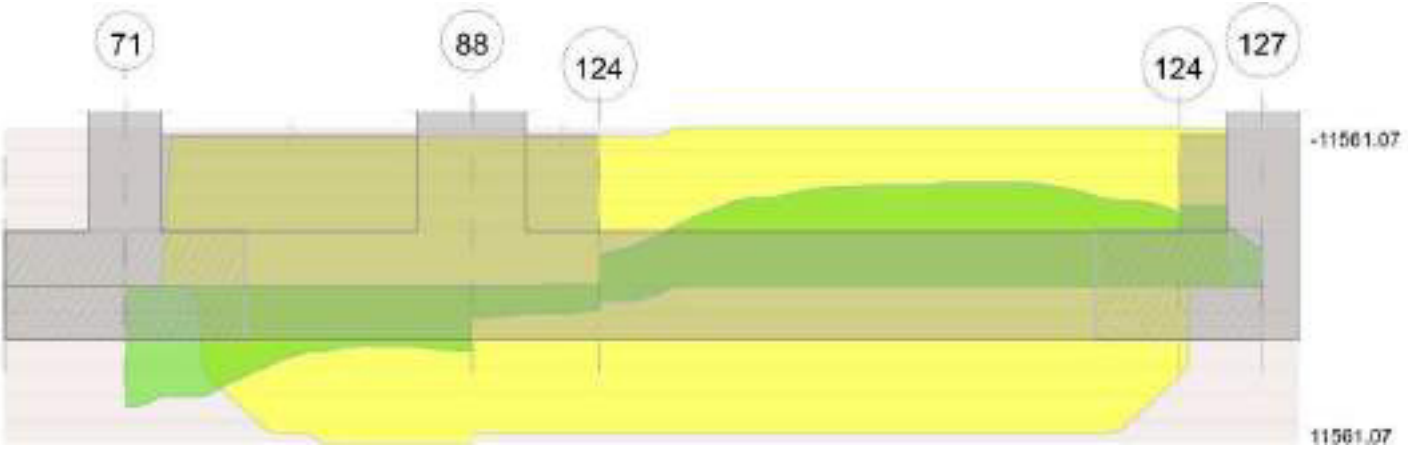
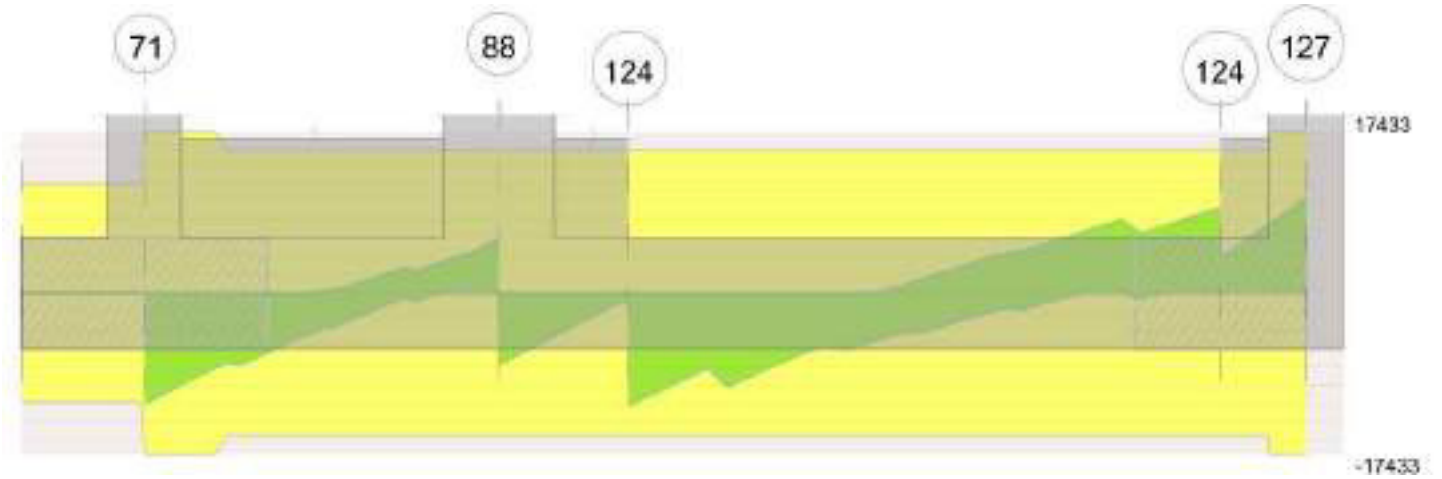


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 4 tra i fili 124 - 124, sezione R 70x45, aste 701, 700, 699, 698, 697, 696

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	90.21	SLU 44	90.21	11561.07	0.116	128.15	-19.25	SLU 41	-1883.52	-11561.07	0.116	6.14	Si
1.21	0.000763	0.052	0.000763	0.052							-7230.2	SLU 83	-7361.16	-11561.07	0.116	1.57	Si
1.61	0.000763	0.052	0.000763	0.052							-7550.64	SLU 83	-7550.64	-11561.07	0.116	1.53	Si
2.41	0.000763	0.052	0.000465	0.052							-4158.26	SLU 84	-5410.12	-11541.17	0.112	2.13	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	1175.7	SLV 16	1175.7	10870.29	0.203	9.25	-1088.05	SLV 1	-2183.15	-10870.29	0.203	4.98	Si
1.21	0.000763	0.052	0.000763	0.052							-5949.31	SLV 1	-5949.31	-10870.29	0.203	1.83	Si
1.61	0.000763	0.052	0.000763	0.052							-5978.45	SLV 1	-5978.45	-10870.29	0.203	1.82	Si
2.41	0.000763	0.052	0.000465	0.052							-3608.14	SLV 15	-3865.72	-10874.01	0.207	2.81	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	529.14	SLD 16	529.14	10870.29	0.203	20.54	-441.48	SLD 1	-1644.17	-10870.29	0.203	6.61	Si
1.21	0.000763	0.052	0.000763	0.052							-5330.93	SLD 1	-5330.93	-10870.29	0.203	2.04	Si
1.61	0.000763	0.052	0.000763	0.052							-5470.07	SLD 1	-5470.07	-10870.29	0.203	1.99	Si
2.41	0.000763	0.052	0.000465	0.052							-3153.55	SLD 15	-3744.5	-10874.01	0.207	2.9	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-12199	SLU 83	-12199	-10870	-88449	-15418	-15418	1	1.26	Si
1.21	0.000011	0.000763	0	-1820	SLU 84	-1820	-10870	-88449	-15418	-15418	1	8.47	Si
2.41	0.000011	0.000763	0	8516	SLU 83	8516	10870	88449	15418	15418	1	1.81	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-9359	SLV 13	-9359	-10870	-88449	-15418	-15418	1	1.65	Si
1.21	0.000011	0.000763	0	1595	SLV 1	1595	10870	88449	15418	15418	1	9.67	Si
1.21	0.000011	0.000763	0	-4136	SLV 16	-4136	-10870	-88449	-15418	-15418	1	3.73	Si
2.41	0.000011	0.000763	0	9289	SLV 1	9289	10870	88449	15418	15418	1	1.66	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-8746	SLD 13	-8746	-10870	-88449	-15418	-15418	1	1.76	Si
1.21	0.000011	0.000763	0	-2498	SLD 16	-2498	-10870	-88449	-15418	-15418	1	6.17	Si
2.41	0.000011	0.000763	0	7254	SLD 1	7254	10870	88449	15418	15418	1	2.13	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	59.29	2	59.29	2223	1494000	33345	36000000	55.72	1	55.72	2089	1120500			Si
1.21	-5339.35	20	-5436.97	203850	1494000	3057755	36000000	-4865.75	2	-4960.69	185993	1120500			Si
2.41	-3071.37	21	-3997.1	154923	1494000	2276301	36000000	-2813.2	2	-3654.34	141638	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 71 - 88, sezione R 70x45, aste 706, 705, 704, 703

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	3124	SLU 83	0.031	5824	8062	SLU 83	15877	Si
0.15	0.41	0.0004	3142	SLU 83	0.031	5824	8110	SLU 83	15877	Si
0.72	0.41	0.0004	3139	SLU 83	0.031	5824	8100	SLU 83	15877	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
1.22	0.41	0.0004	3065	SLU 83	0.031	5824	7909	SLU 83	15877	Si
1.45	0.41	0.0004	3013	SLU 83	0.031	5824	7776	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2356	SLD 1	0.102	6505	6081	SLD 1	15877	Si
0.15	0.41	0.0004	2362	SLD 1	0.102	6505	6096	SLD 1	15877	Si
0.72	0.41	0.0004	2325	SLD 1	0.102	6505	5999	SLD 1	15877	Si
1.22	0.41	0.0004	2237	SLD 1	0.102	6505	5774	SLD 1	15877	Si
1.45	0.41	0.0004	2185	SLD 1	0.102	6505	5639	SLD 1	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	2306	SLE RA 20	65066	1494000	806823	36000000	2107	SLE QP 2	59455	1120500	Si
0.15	0.41	0.00000367	2320	SLE RA 20	65447	1494000	811548	36000000	2119	SLE QP 2	59801	1120500	Si
0.72	0.41	0.00000367	2317	SLE RA 20	65374	1494000	810640	36000000	2116	SLE QP 2	59718	1120500	Si
1.22	0.41	0.00000367	2262	SLE RA 20	63827	1494000	791459	36000000	2066	SLE QP 2	58282	1120500	Si
1.45	0.41	0.00000367	2224	SLE RA 20	62755	1494000	778167	36000000	2030	SLE QP 2	57289	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 88 - 124, sezione R 70x45, asta 702

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	3013	SLU 83	0.031	5824	7776	SLU 83	15877	Si
0.23	0.41	0.0004	2959	SLU 83	0.031	5824	7637	SLU 83	15877	Si
0.27	0.41	0.0004	2949	SLU 83	0.031	5824	7612	SLU 83	15877	Si
0.53	0.41	0.0004	2880	SLU 83	0.031	5824	7432	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2185	SLD 1	0.102	6505	5639	SLD 1	15877	Si
0.23	0.41	0.0004	2132	SLD 1	0.102	6505	5501	SLD 1	15877	Si
0.27	0.41	0.0004	2122	SLD 1	0.102	6505	5476	SLD 1	15877	Si
0.53	0.41	0.0004	2055	SLD 1	0.102	6505	5304	SLD 1	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	2224	SLE RA 20	62755	1494000	778167	36000000	2030	SLE QP 2	57289	1120500	Si
0.23	0.41	0.00000367	2184	SLE RA 20	61633	1494000	764251	36000000	1994	SLE QP 2	56249	1120500	Si
0.27	0.41	0.00000367	2177	SLE RA 20	61424	1494000	761657	36000000	1987	SLE QP 2	56055	1120500	Si
0.53	0.41	0.00000367	2125	SLE RA 20	59971	1494000	743638	36000000	1939	SLE QP 2	54706	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 124 - 124, sezione R 70x45, aste 701, 700, 699, 698, 697, 696

Campata 5 tra i fili 124 - 127, sezione R 70x45, asta 695

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2958	SLU 83	0.031	5824	7632	SLU 83	15877	Si
0.17	0.41	0.0004	3062	SLU 83	0.031	5824	7902	SLU 83	15877	Si
0.2	0.41	0.0004	3078	SLU 83	0.031	5824	7943	SLU 83	15877	Si
0.35	0.41	0.0004	3178	SLU 83	0.031	5824	8203	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2022	SLD 9	0.102	6505	5219	SLD 9	15877	Si
0.17	0.41	0.0004	2097	SLD 9	0.102	6505	5411	SLD 9	15877	Si
0.2	0.41	0.0004	2108	SLD 9	0.102	6505	5441	SLD 9	15877	Si
0.35	0.41	0.0004	2180	SLD 9	0.102	6505	5626	SLD 9	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	2181	SLE RA 20	61536	1494000	763045	36000000	1981	SLE QP 2	55886	1120500	Si
0.17	0.41	0.00000367	2258	SLE RA 20	63705	1494000	789938	36000000	2050	SLE QP 2	57841	1120500	Si
0.2	0.41	0.00000367	2270	SLE RA 20	64039	1494000	794079	36000000	2061	SLE QP 2	58143	1120500	Si
0.35	0.41	0.00000367	2344	SLE RA 20	66130	1494000	820013	36000000	2128	SLE QP 2	60031	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

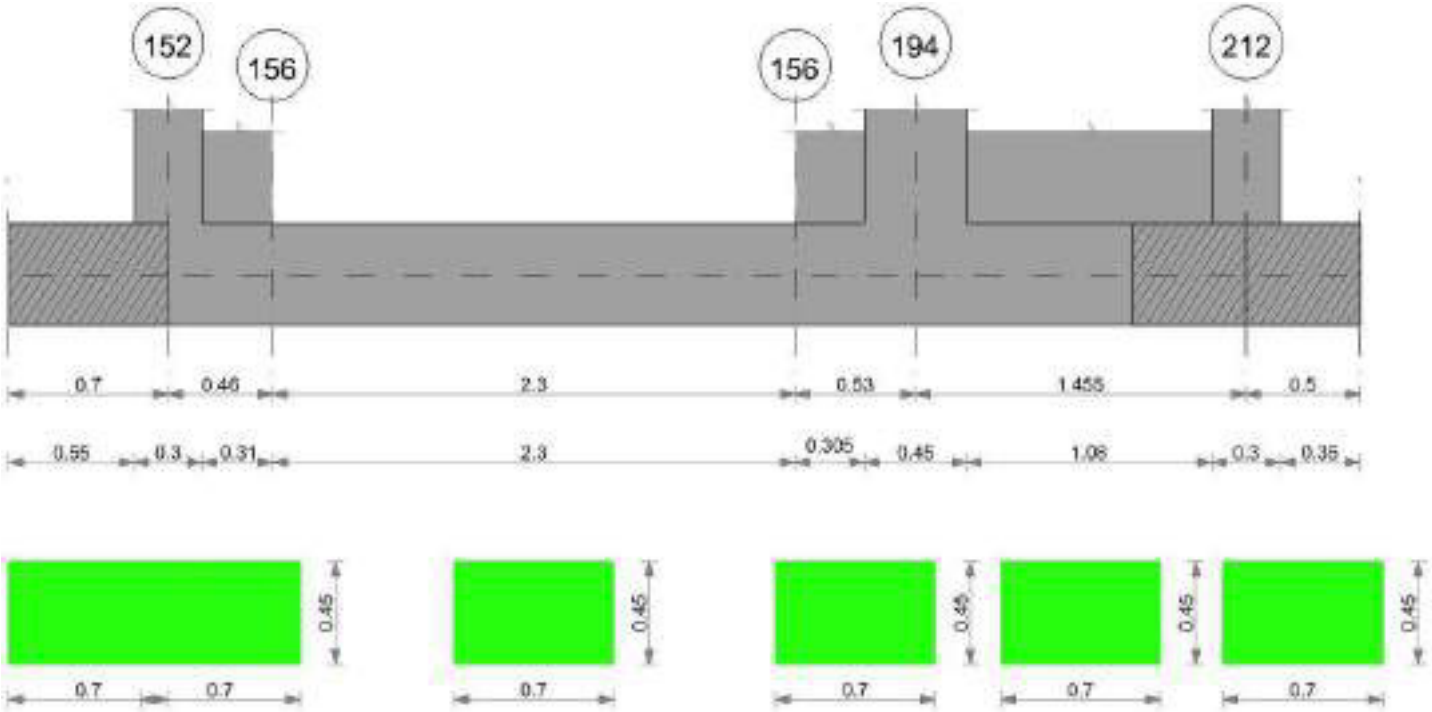
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	339	SLE RA 20	0.05	0	339	328	SLE RA 20	0.05	0	339	SLE RA 20	0.0033	0	SLE RA 20	Si
D	0.05	0	340	SLE RA 1	0.05	0	340	340	SLE RA 1	0.05	0	339	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	340	SLE RA 1	0.05	0	340	340	SLE RA 1	0.05	0	339	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	339	333	SLE RA 20	0.19	0.01	339	SLE RA 20	0.1	0	333	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	340	339	SLE RA 1	0.19	0	340	SLE RA 1	0.1	0	339	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	340	339	SLE RA 1	0.19	0	340	SLE RA 1	0.1	0	339	SLE RA 1	Si

CORDOLO 19

Geometria



Caratteristiche dei materiali

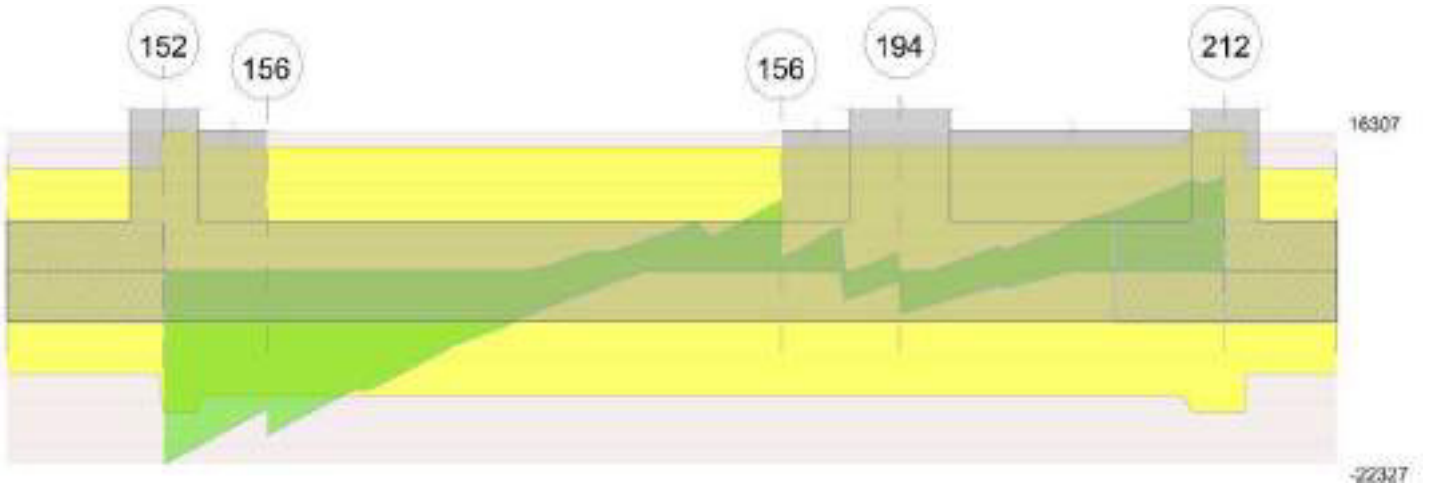
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 156 - 156, sezione R 70x45, aste 671, 670, 669, 668, 667, 666

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	4381.09	SLU 83	4381.09	11561.07	0.116	2.64							Si
1.15	0.000763	0.052	0.000763	0.052							-4389.64	SLU 83	-5000.07	-11561.07	0.116	2.31	Si
1.3	0.000763	0.052	0.000763	0.052							-4856.62	SLU 83	-5009.74	-11561.07	0.116	2.31	Si
2.3	0.000763	0.052	0.000763	0.052							-841.72	SLU 83	-2078.53	-11561.07	0.116	5.56	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	3531.93	SLV 10	3531.93	10870.29	0.203	3.08							Si
1.15	0.000763	0.052	0.000763	0.052							-3378.37	SLV 14	-4433.82	-10870.29	0.203	2.45	Si
1.3	0.000763	0.052	0.000763	0.052							-4045.48	SLV 14	-4488.27	-10870.29	0.203	2.42	Si
2.3	0.000763	0.052	0.000763	0.052	528.38	SLV 3	528.38	10870.29	0.203	20.57	-1593.57	SLV 14	-2312.12	-10870.29	0.203	4.7	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	3204.73	SLD 10	3204.73	10870.29	0.203	3.39							Si
1.15	0.000763	0.052	0.000763	0.052							-3137.36	SLD 14	-3822.92	-10870.29	0.203	2.84	Si
1.3	0.000763	0.052	0.000763	0.052							-3600.73	SLD 14	-3846.44	-10870.29	0.203	2.83	Si
2.3	0.000763	0.052	0.000763	0.052							-987.48	SLD 14	-1775.44	-10870.29	0.203	6.12	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.15	0.0000103	0.000763	0	-4068	SLU 83	-4068	-10870	-88449	-14422	-14422	1	3.55	Si
2.3	0.0000103	0.000763	0	8196	SLU 84	8196	10870	88449	14422	14422	1	1.76	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.15	0.0000103	0.000763	0	-5138	SLV 14	-5138	-10870	-88449	-14422	-14422	1	2.81	Si
2.3	0.0000103	0.000763	0	6294	SLV 2	6294	10870	88449	14422	14422	1	2.29	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000103	0.000763	0	-14346	SLD 14	-14346	-10870	-88449	-14422	-14422	1	1.01	Si
1.15	0.0000103	0.000763	0	-3755	SLD 14	-3755	-10870	-88449	-14422	-14422	1	3.84	Si
2.3	0.0000103	0.000763	0	5876	SLD 2	5876	10870	88449	14422	14422	1	2.45	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	3241.28	20	3241.28	121526	1494000	1822895	36000000	2950.01	2	2950.01	110606	1120500			Si
1.15	-3239.02	20	-3691.31	138400	1494000	2075993	36000000	-2956.58	2	-3364.71	126154	1120500			Si
2.3	-614.31	20	-1528.19	57297	1494000	859457	36000000	-532.59	2	-1372.68	51466	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 152 - 156, sezione R 70x45, asta 672

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3006	SLU 83	0.029	5452	7758	SLU 83	15877	Si
0.15	0.41	0.0003	3005	SLU 83	0.029	5452	7756	SLU 83	15877	Si
0.23	0.41	0.0003	3002	SLU 83	0.029	5452	7747	SLU 83	15877	Si
0.46	0.41	0.0003	2982	SLU 83	0.029	5452	7696	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2064	SLD 6	0.099	6093	5326	SLD 6	15877	Si
0.15	0.41	0.0003	2062	SLD 6	0.099	6093	5322	SLD 6	15877	Si
0.23	0.41	0.0003	2059	SLD 6	0.099	6093	5315	SLD 6	15877	Si
0.46	0.41	0.0003	2046	SLD 10	0.099	6093	5279	SLD 10	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000343	2217	SLE RA 20	62741	1494000	777984	36000000	2011	SLE QP 2	56926	1120500	Si
0.15	0.41	0.00000343	2216	SLE RA 20	62723	1494000	777770	36000000	2011	SLE QP 2	56923	1120500	Si
0.23	0.41	0.00000343	2214	SLE RA 20	62649	1494000	776853	36000000	2009	SLE QP 2	56863	1120500	Si
0.46	0.41	0.00000343	2199	SLE RA 20	62243	1494000	771807	36000000	1997	SLE QP 2	56512	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 156 - 156, sezione R 70x45, aste 671, 670, 669, 668, 667, 666

Campata 4 tra i fili 156 - 194, sezione R 70x45, aste 665, 664

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3042	SLU 83	0.029	5452	7850	SLU 83	15877	Si
0.26	0.41	0.0003	3104	SLU 83	0.029	5452	8011	SLU 83	15877	Si
0.3	0.41	0.0003	3113	SLU 83	0.029	5452	8034	SLU 83	15877	Si
0.53	0.41	0.0003	3159	SLU 83	0.029	5452	8154	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2173	SLD 14	0.099	6093	5607	SLD 14	15877	Si
0.26	0.41	0.0003	2234	SLD 14	0.099	6093	5765	SLD 14	15877	Si
0.3	0.41	0.0003	2243	SLD 14	0.099	6093	5789	SLD 14	15877	Si
0.53	0.41	0.0003	2292	SLD 14	0.099	6093	5914	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000343	2244	SLE RA 20	63524	1494000	787700	36000000	2046	SLE QP 2	57895	1120500	Si
0.26	0.41	0.00000343	2290	SLE RA 20	64822	1494000	803791	36000000	2088	SLE QP 2	59097	1120500	Si
0.3	0.41	0.00000343	2297	SLE RA 20	65010	1494000	806120	36000000	2094	SLE QP 2	59271	1120500	Si
0.53	0.41	0.00000343	2331	SLE RA 20	65980	1494000	818157	36000000	2126	SLE QP 2	60169	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 5 tra i fili 194 - 212, sezione R 70x45, aste 663, 662, 661, 660

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3159	SLU 83	0.029	5452	8154	SLU 83	15877	Si
0.23	0.41	0.0003	3196	SLU 83	0.029	5452	8249	SLU 83	15877	Si
0.73	0.41	0.0003	3251	SLU 83	0.029	5452	8389	SLU 83	15877	Si
1.3	0.41	0.0003	3250	SLU 83	0.029	5452	8387	SLU 83	15877	Si
1.45	0.41	0.0003	3235	SLU 83	0.029	5452	8348	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2292	SLD 14	0.099	6093	5914	SLD 14	15877	Si
0.23	0.41	0.0003	2331	SLD 14	0.099	6093	6016	SLD 14	15877	Si
0.73	0.41	0.0003	2398	SLD 14	0.099	6093	6189	SLD 14	15877	Si
1.3	0.41	0.0003	2425	SLD 14	0.099	6093	6259	SLD 14	15877	Si
1.45	0.41	0.0003	2420	SLD 14	0.099	6093	6245	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000343	2331	SLE RA 20	65980	1494000	818157	36000000	2126	SLE QP 2	60169	1120500	Si
0.23	0.41	0.00000343	2358	SLE RA 20	66751	1494000	827709	36000000	2151	SLE QP 2	60881	1120500	Si
0.73	0.41	0.00000343	2398	SLE RA 20	67883	1494000	841751	36000000	2188	SLE QP 2	61929	1120500	Si
1.3	0.41	0.00000343	2398	SLE RA 20	67864	1494000	841507	36000000	2188	SLE QP 2	61917	1120500	Si
1.45	0.41	0.00000343	2386	SLE RA 20	67543	1494000	837537	36000000	2177	SLE QP 2	61625	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

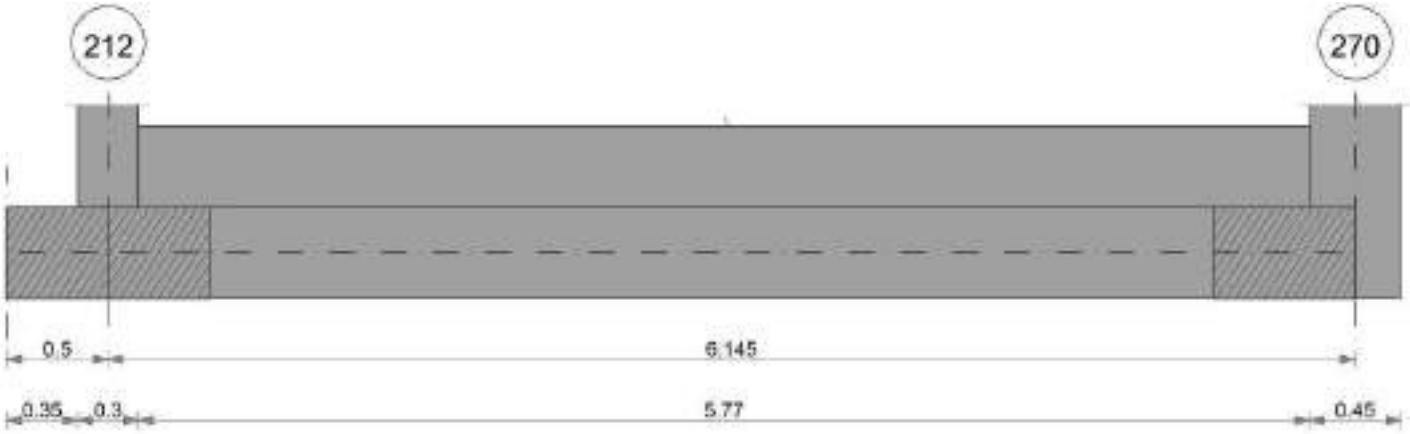
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	366	SLE RA 20	0.05	0	366	354	SLE RA 20	0.05	0	359	SLE RA 15	0.0033	0	SLE RA 15	Si
D	0.05	0	354	SLE RA 1	0.05	0	354	354	SLE RA 1	0.05	0	357	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	354	SLE RA 1	0.05	0	354	354	SLE RA 1	0.05	0	357	SLE RA 1	0.0033	0	SLE RA 1	Si

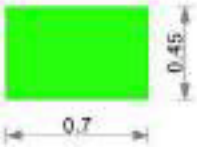
Verifiche geotecniche - Rotazioni assolute e differenziali

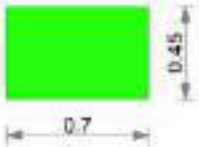
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	359	365	SLE RA 20	0.19	0.01	365	SLE RA 20	0.1	0	359	SLE RA 15	Si
D	0.19	0	SLE RA 1	0.19	0	354	357	SLE RA 1	0.19	0	354	SLE RA 1	0.1	0	357	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	354	357	SLE RA 1	0.19	0	354	SLE RA 1	0.1	0	357	SLE RA 1	Si

CORDOLO 20

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

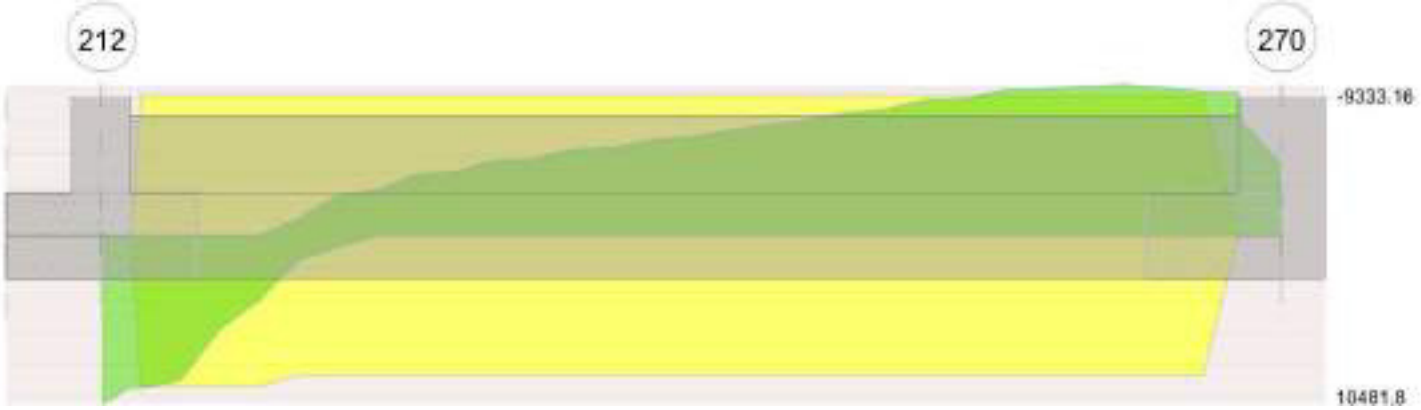
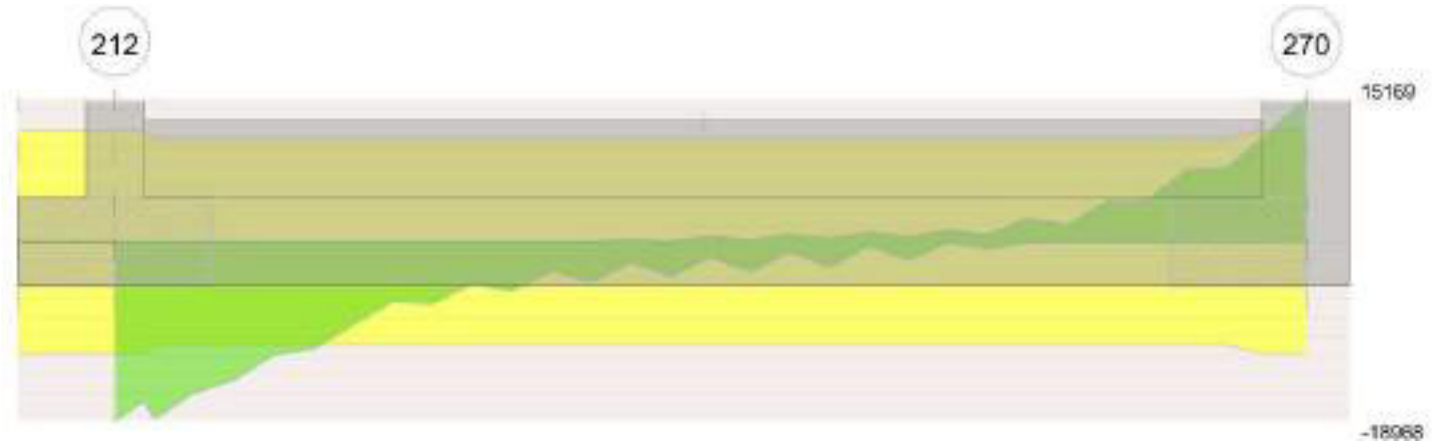


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 212 - 270, sezione R 70x45, aste 314, 313, 312, 311, 310, 309, 308, 307, 306, 305, 304, 303, 302, 301, 300

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
3.07	0.41	0.0002	2338	SLV 14	0.086	2696	6035	SLV 14	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2386	SLD 14	0.071	3120	6157	SLD 14	15877	Si
0.15	0.41	0.0002	2371	SLD 14	0.071	3120	6119	SLD 14	15877	Si
3.07	0.41	0.0002	1864	SLD 14	0.071	3120	4812	SLD 14	15877	Si
5.92	0.41	0.0002	3099	SLD 14	0.071	3120	7999	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000174	2329	SLE RA 20	67422	1494000	836027	36000000	2125	SLE QP 2	61512	1120500	Si
0.15	0.41	0.00000174	2309	SLE RA 20	66817	1494000	828527	36000000	2106	SLE QP 2	60959	1120500	Si
3.07	0.41	0.00000174	1656	SLE RA 20	47936	1494000	594405	36000000	1510	SLE QP 2	43715	1120500	Si
5.92	0.41	0.00000174	2515	SLE RA 20	72783	1494000	902504	36000000	2304	SLE QP 2	66676	1120500	Si
6.15	0.41	0.00000174	2668	SLE RA 21	77233	1494000	957688	36000000	2445	SLE QP 2	70779	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.37	1.3	SLU 23	ST	LT	-445	-145	-62817	0	0	19	0	0	1.1	19107	468	40.79	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
314,313,312,311,310,309,308,307,306,305,304,303,302,301,300	6.37	1.3	SLU 83	ST	BT	2.3	270985	87054	3.11	Si
314,313,312,311,310,309,308,307,306,305,304,303,302,301,300	6.37	1.3	SLV 14	SIS	BT	2.3	241058	85747	2.81	Si
314,313,312,311,310,309,308,307,306,305,304,303,302,301,300	6.37	1.3	SLD 14	SIS	BT	2.3	256215	71277	3.59	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-282	-87054	11647.6	1083.12	0	0	0.01	0.13	1.03	6.35	1496	2060	0	14430	
0	-1499	-85747	13015.8	21603.93	0	-1	0.25	0.15	1	5.87	1496	2060	0	14430	0.07
0	-736	-71277	10098.29	9713.8	0	-1	0.14	0.14	1.02	6.1	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

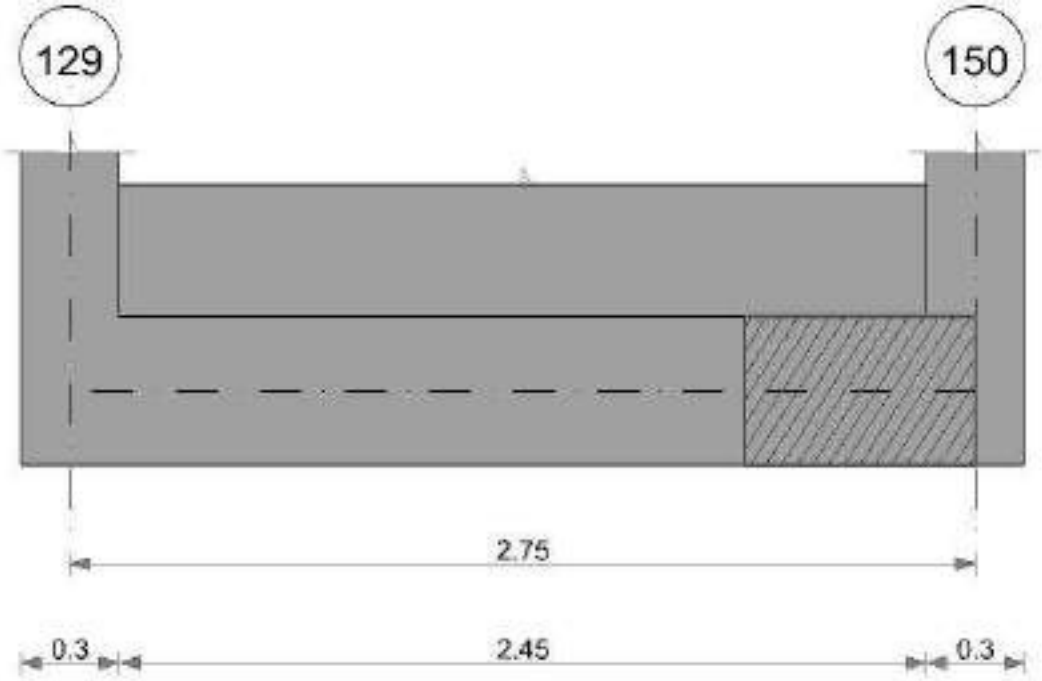
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	351	SLE RA 20	0.05	0	351	308	SLE RA 20	0.05	0	308	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	308	SLE RA 1	0.05	0	308	308	SLE RA 1	0.05	0	308	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	308	SLE RA 1	0.05	0	308	308	SLE RA 1	0.05	0	308	SLE RA 1	0.0033	0	SLE RA 1	Si

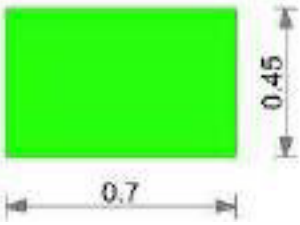
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	308	351	SLE RA 20	0.19	0	308	SLE RA 1	0.1	0	308	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	308	351	SLE RA 1	0.19	0	308	SLE RA 1	0.1	0	308	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	308	351	SLE RA 1	0.19	0	308	SLE RA 1	0.1	0	308	SLE RA 1	Si

CORDOLO 21

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

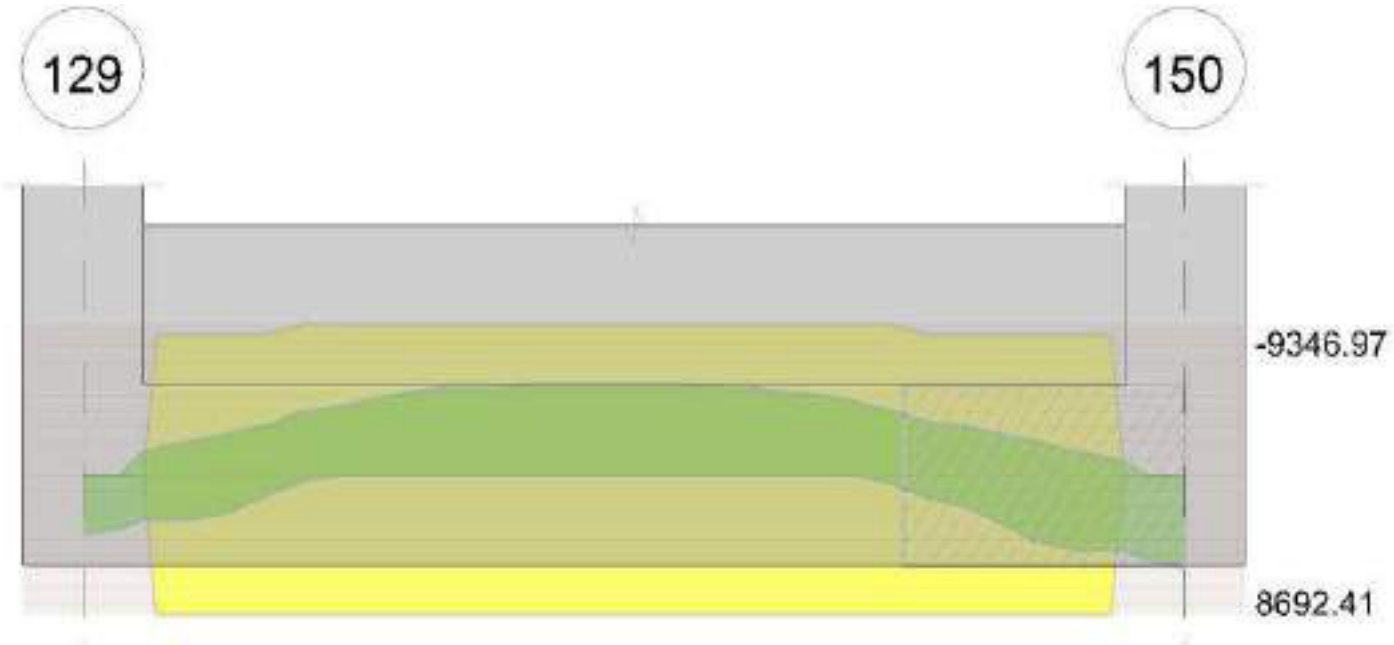
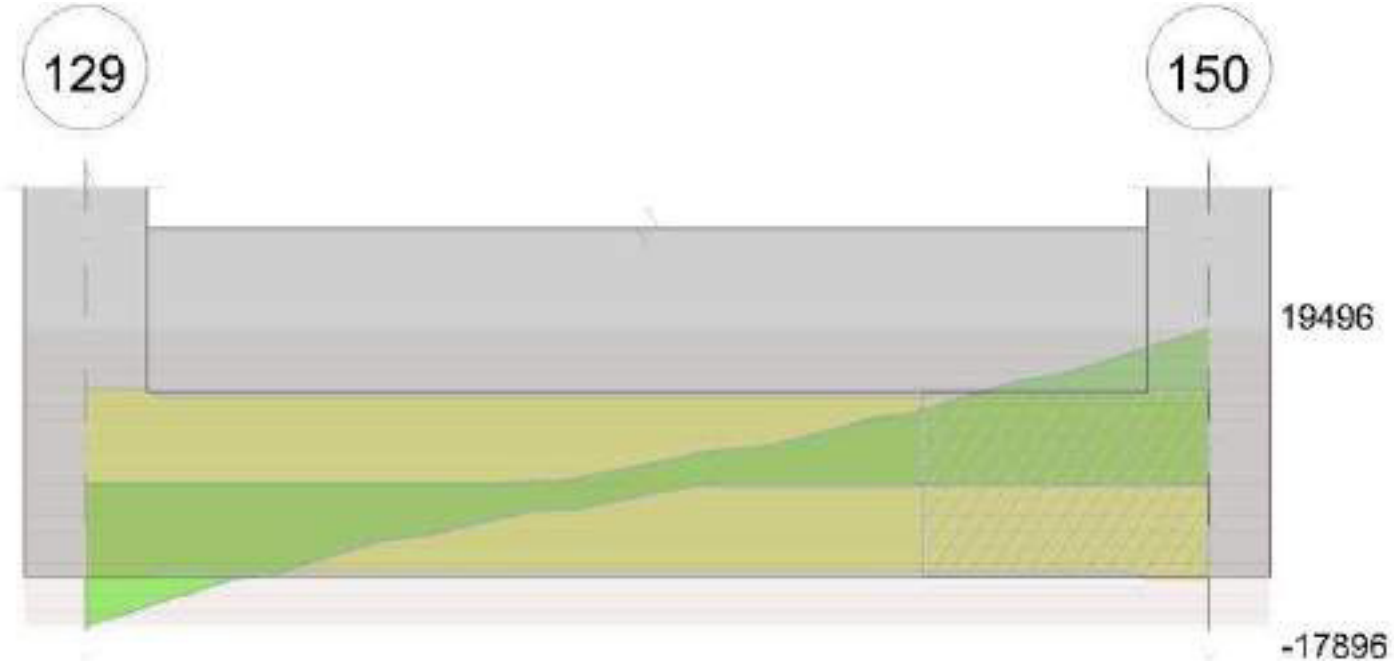


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 129 - 150, sezione R 70x45, aste 688, 689, 690, 691, 692, 693, 694

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3612	SLU 83	0.029	5501	9322	SLU 83	15877	Si
0.15	0.41	0.0003	3578	SLU 83	0.029	5501	9232	SLU 83	15877	Si
1.38	0.41	0.0003	3367	SLU 83	0.029	5501	8688	SLU 83	15877	Si
2.6	0.41	0.0003	3496	SLU 83	0.029	5501	9022	SLU 83	15877	Si
2.75	0.41	0.0003	3513	SLU 83	0.029	5501	9067	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2540	SLD 5	0.099	6147	6555	SLD 5	15877	Si
0.15	0.41	0.0003	2515	SLD 5	0.099	6147	6490	SLD 5	15877	Si
1.38	0.41	0.0003	2369	SLD 10	0.099	6147	6114	SLD 10	15877	Si
2.6	0.41	0.0003	2470	SLD 10	0.099	6147	6375	SLD 10	15877	Si
2.75	0.41	0.0003	2485	SLD 10	0.099	6147	6412	SLD 10	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000346	2667	SLE RA 20	75457	1494000	935671	36000000	2428	SLE QP 2	68701	1120500	Si
0.15	0.41	0.00000346	2641	SLE RA 20	74725	1494000	926589	36000000	2404	SLE QP 2	68021	1120500	Si
1.38	0.41	0.00000346	2485	SLE RA 20	70299	1494000	871711	36000000	2259	SLE QP 2	63922	1120500	Si
2.6	0.41	0.00000346	2581	SLE RA 20	73020	1494000	905446	36000000	2348	SLE QP 2	66438	1120500	Si
2.75	0.41	0.00000346	2594	SLE RA 20	73384	1494000	909958	36000000	2360	SLE QP 2	66781	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.05	1.3	SLU 41	ST	LT	193	-83	-41396	0	0	19	0	0	1.1	12592	210	60.06	Si
3.05	1.3	SLV 15	SIS	LT	7350	887	-33920	12	1	19	0	0	1.1	10318	7403	1.39	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
688,689,690,691,692,693,694	3.05	1.3	SLU 83	ST	BT	2.3	161257	50091	3.22	Si
688,689,690,691,692,693,694	3.05	1.3	SLV 6	SIS	BT	2.3	145373	37334	3.89	Si
688,689,690,691,692,693,694	3.05	1.3	SLD 6	SIS	BT	2.3	154226	35763	4.31	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
230	-46	-50091	1663.58	-125.53	0	0	0	0.03	1.23	3.04	1496	2060	0	14430	
-2851	-2831	-37334	2588.95	-1449.25	-4	-4	-0.04	0.07	1.16	2.97	1496	2060	0	14430	0.07
-1134	-1241	-35763	1765.4	-671.02	-2	-2	-0.02	0.05	1.2	3.01	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.08	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

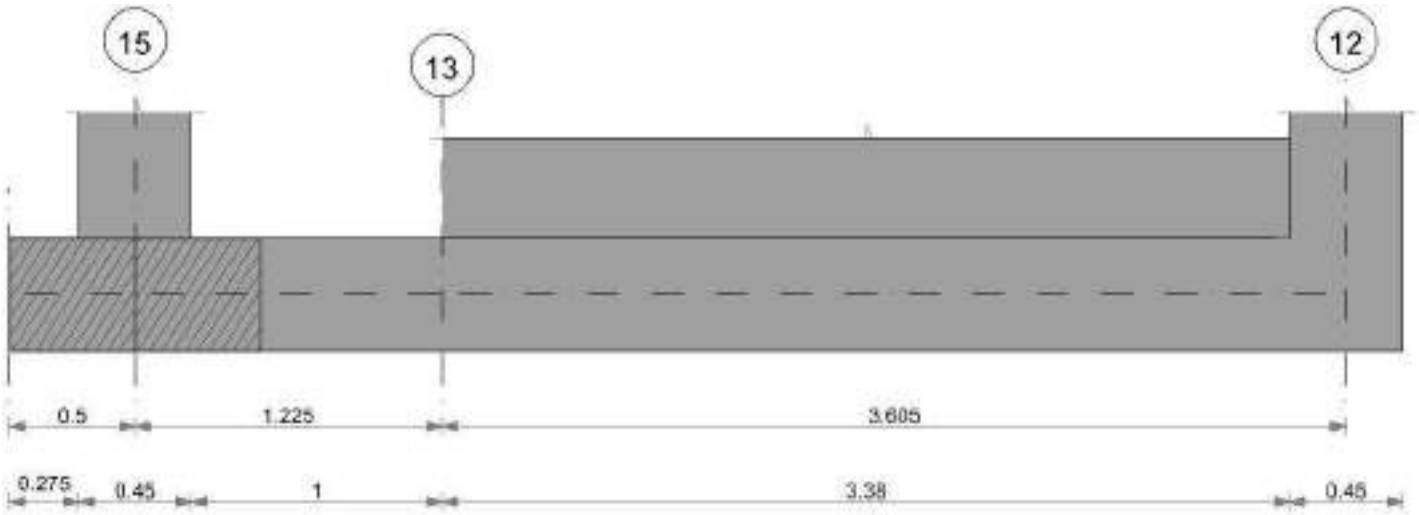
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	169	SLE RA 20	0.05	0	169	162	SLE RA 21	0.05	0	169	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	169	SLE RA 1	0.05	0	169	169	SLE RA 1	0.05	0	169	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	169	SLE RA 1	0.05	0	169	169	SLE RA 1	0.05	0	169	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	169	162	SLE RA 21	0.19	0	169	SLE RA 1	0.1	0	169	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	169	162	SLE RA 1	0.19	0	169	SLE RA 1	0.1	0	169	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	169	162	SLE RA 1	0.19	0	169	SLE RA 1	0.1	0	169	SLE RA 1	Si

CORDOLO 22

Geometria



Caratteristiche dei materiali

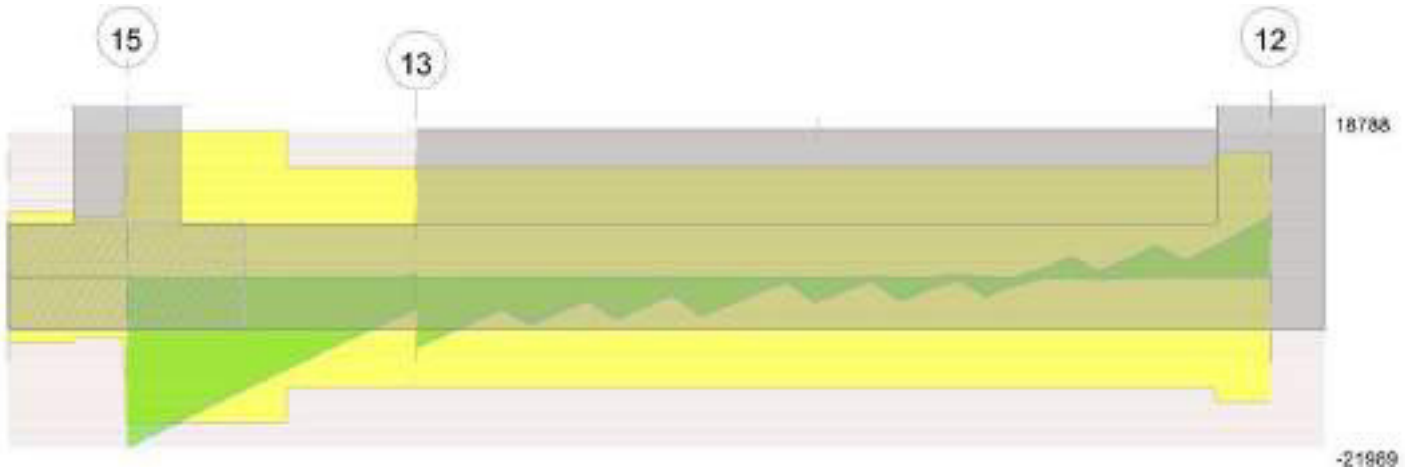
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 15 - 13, sezione R 50x45, asta 299

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000763	0.052	12656.38	SLU 84	10572.12	11254.02	0.132	1.06							Si
0.23	0.000509	0.052	0.000763	0.052	8817.89	SLU 84	8817.89	11254.02	0.132	1.28							Si
0.61	0.000509	0.052	0.000509	0.052	3753.31	SLU 84	5858.39	7755.45	0.113	1.32							Si
1.22	0.000509	0.052	0.000509	0.052	-207.72	SLU 1	378.93	7755.45	0.113	20.47	-341.18	SLU 84	-341.18	-7755.45	0.113	22.73	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000509	0.052	0.000763	0.052	10404.65	SLV 4	10404.65	10716.86	0.238	1.03							Si
0.61	0.000509	0.052	0.000509	0.052	4346.89	SLV 2	6873.33	7266.79	0.197	1.06							Si
1.22	0.000509	0.052	0.000509	0.052	534.05	SLV 9	713.78	7266.79	0.197	10.18	-985.3	SLV 8	-985.3	-7266.79	0.197	7.38	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000763	0.052	11280.63	SLD 4	9418.21	10716.86	0.238	1.14							Si
0.23	0.000509	0.052	0.000763	0.052	7846.61	SLD 4	7846.61	10716.86	0.238	1.37							Si
0.61	0.000509	0.052	0.000509	0.052	3299.33	SLD 2	5192.44	7266.79	0.197	1.4							Si
1.22	0.000509	0.052	0.000509	0.052	107.34	SLD 9	454.1	7266.79	0.197	16	-558.59	SLD 8	-558.59	-7266.79	0.197	13.01	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-18552	SLU 84	-18552	-8381	-63178	-18788	-18788	1	1.01	Si
0.23	0.0000134	0.000509	0	-15593	SLU 84	-15593	-7764	-63178	-18788	-18788	1	1.2	Si
0.61	0.0000134	0.000509	0	-10551	SLU 84	-10551	-7764	-63178	-18788	-18788	1	1.78	Si
1.22	0.0000102	0.000509	0	-2893	SLU 84	-2893	-7764	-63178	-14244	-14244	1	4.92	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-21989	SLV 4	-21989	-8381	-63178	-18788	-18788	1	0.85	Si
0.23	0.0000134	0.000509	0	-18564	SLV 4	-18564	-7764	-63178	-18788	-18788	1	1.01	Si
0.61	0.0000134	0.000509	0	-12755	SLV 4	-12755	-7764	-63178	-18788	-18788	1	1.47	Si
1.22	0.0000102	0.000509	0	292	SLV 13	292	7764	63178	14244	14244	1	48.84	Si
1.22	0.0000102	0.000509	0	-4094	SLV 4	-4094	-7764	-63178	-14244	-14244	1	3.48	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-16585	SLD 4	-16585	-8381	-63178	-18788	-18788	1	1.13	Si
0.23	0.0000134	0.000509	0	-13970	SLD 4	-13970	-7764	-63178	-18788	-18788	1	1.34	Si
0.61	0.0000134	0.000509	0	-9525	SLD 4	-9525	-7764	-63178	-18788	-18788	1	1.97	Si
1.22	0.0000102	0.000509	0	-2843	SLD 4	-2843	-7764	-63178	-14244	-14244	1	5.01	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	9330.15	21	7791.94	701054	1494000	28348739	36000000	8531.87	2	7122.11	640788	1120500			Si
0.23	6497.69	21	6497.69	584608	1494000	23639963	36000000	5936.72	2	5936.72	534137	1120500			Si
0.61	2762.43	21	4314.58	228213	1494000	3423196	36000000	2518.43	2	3938.05	208297	1120500			Si
1.22	-250.85	21	-250.85	13269	1494000	199028	36000000	-225.62	2	-225.62	11934	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.23	inferiore	0.375	0.00069	0.000258	21	0.375	0.00064	0.000242	6	0.375	0.00063	0.000236	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 15 - 13, sezione R 50x45, asta 299

Campata 3 tra i fili 13 - 12, sezione R 50x45, aste 298, 297, 296, 295, 294, 293, 292, 291, 290

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2007	SLV 4	0.145	7698	6979	SLV 4	19893	Si
1.8	0.41	0.0005	1797	SLV 4	0.145	7698	6251	SLV 4	19893	Si
3.38	0.41	0.0005	2292	SLV 4	0.145	7698	7972	SLV 4	19893	Si
3.6	0.41	0.0005	2442	SLV 4	0.145	7698	8493	SLV 4	19893	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1510	SLD 4	0.12	8948	5251	SLD 4	22877	Si
1.8	0.41	0.0005	1354	SLD 4	0.12	8948	4710	SLD 4	22877	Si
3.38	0.41	0.0005	1738	SLD 4	0.12	8948	6046	SLD 4	22877	Si
3.6	0.41	0.0005	1855	SLD 4	0.12	8948	6451	SLD 4	22877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000508	1247	SLE RA 21	34538	1494000	428265	36000000	1139	SLE QP 2	31552	1120500	Si
1.8	0.41	0.00000508	1121	SLE RA 21	31052	1494000	385048	36000000	1024	SLE QP 2	28363	1120500	Si
3.38	0.41	0.00000508	1449	SLE RA 21	40134	1494000	497660	36000000	1325	SLE QP 2	36702	1120500	Si
3.6	0.41	0.00000508	1548	SLE RA 21	42895	1494000	531903	36000000	1416	SLE QP 2	39238	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.05	1.1	SLU 47	ST	LT	97	-960	-56114	0	-1	19	0	0	1.1	17069	965	17.69	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
299,298,297,296,295,294,293,292,291,290	5.05	1.1	SLU 84	ST	BT	2.3	196054	67248	2.92	Si
299,298,297,296,295,294,293,292,291,290	5.05	1.1	SLV 4	SIS	BT	2.3	170001	74007	2.3	Si
299,298,297,296,295,294,293,292,291,290	5.05	1.1	SLD 4	SIS	BT	2.3	183485	58278	3.15	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1090	-67248	-6423.13	28.42	0	-1	0	-0.1	0.91	5.05	1496	2060	0	14430	
0	5956	-74007	-10587.8	1130.33	0	5	0.02	-0.14	0.81	5.02	1496	2060	0	14430	0.07
0	2104	-58278	-7027.18	520.95	0	2	0.01	-0.12	0.86	5.04	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

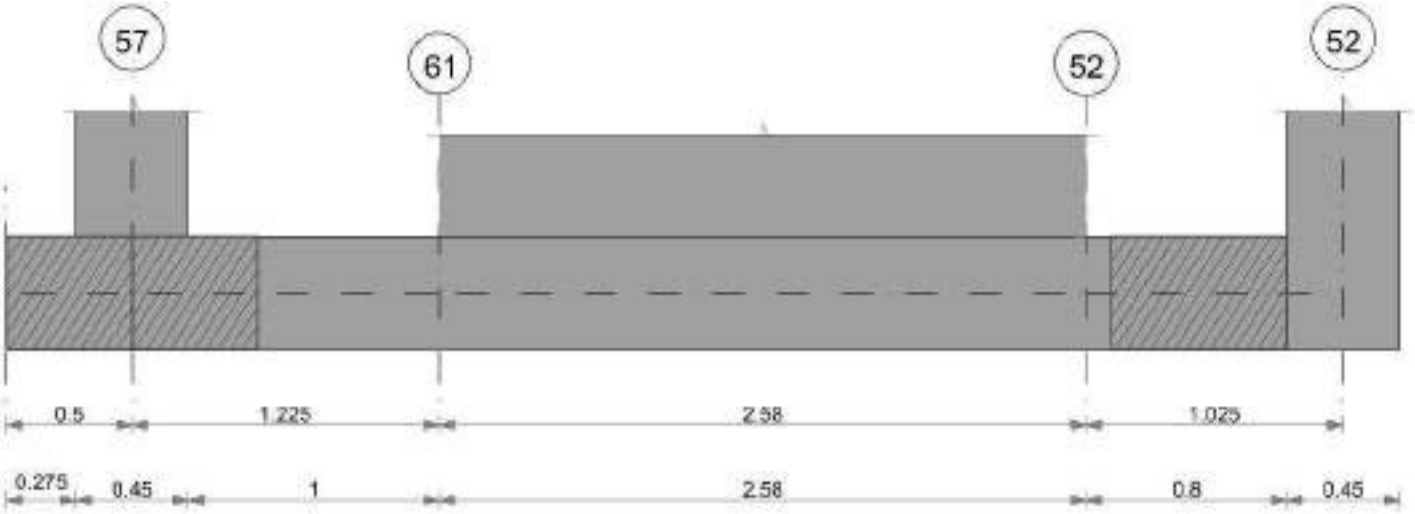
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	578	SLE RA 21	0.05	0	578	933	SLE RA 21	0.05	0	732	SLE FR 6	0.0033	0	SLE FR 6	Si
D	0.05	0	578	SLE RA 1	0.05	0	578	578	SLE RA 1	0.05	0	732	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	578	SLE RA 1	0.05	0	578	578	SLE RA 1	0.05	0	732	SLE RA 1	0.0033	0	SLE RA 1	Si

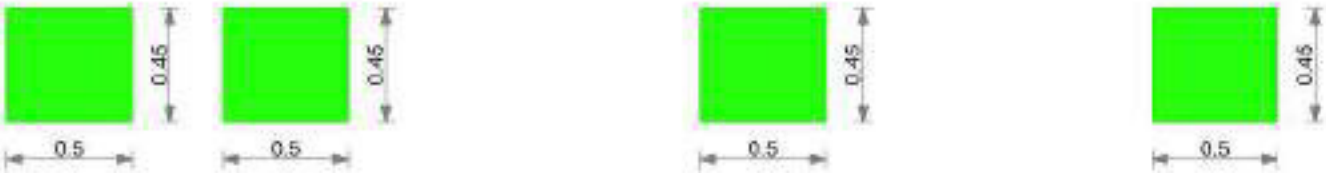
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0.01	578	732	SLE RA 20	0.19	0	578	SLE RA 1	0.1	0.01	732	SLE FR 6	Si
D	0.19	0	SLE RA 1	0.19	0	578	732	SLE RA 1	0.19	0	578	SLE RA 1	0.1	0	732	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	578	732	SLE RA 1	0.19	0	578	SLE RA 1	0.1	0	732	SLE RA 1	Si

CORDOLO 23

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

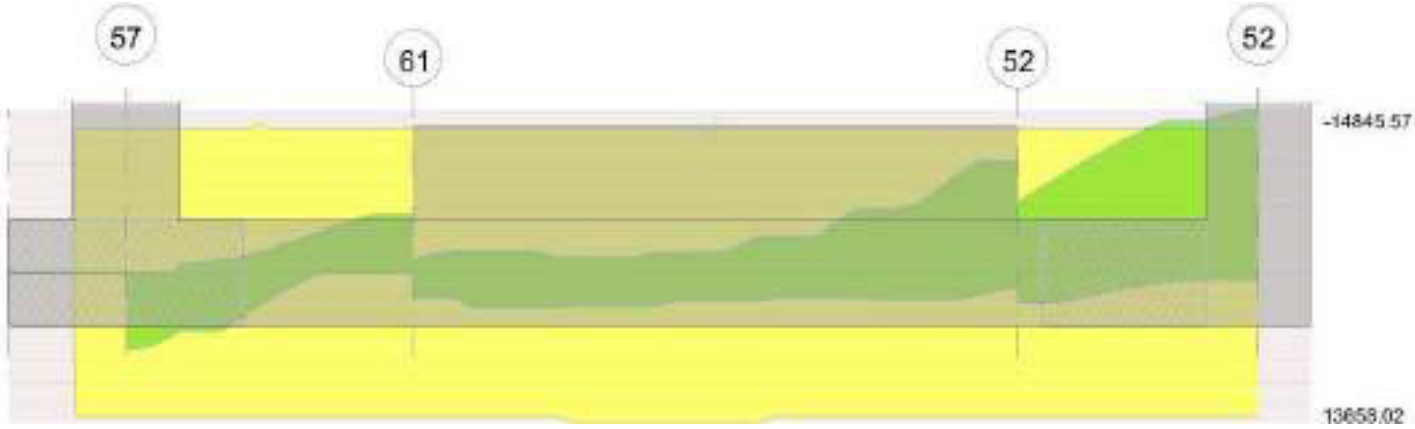
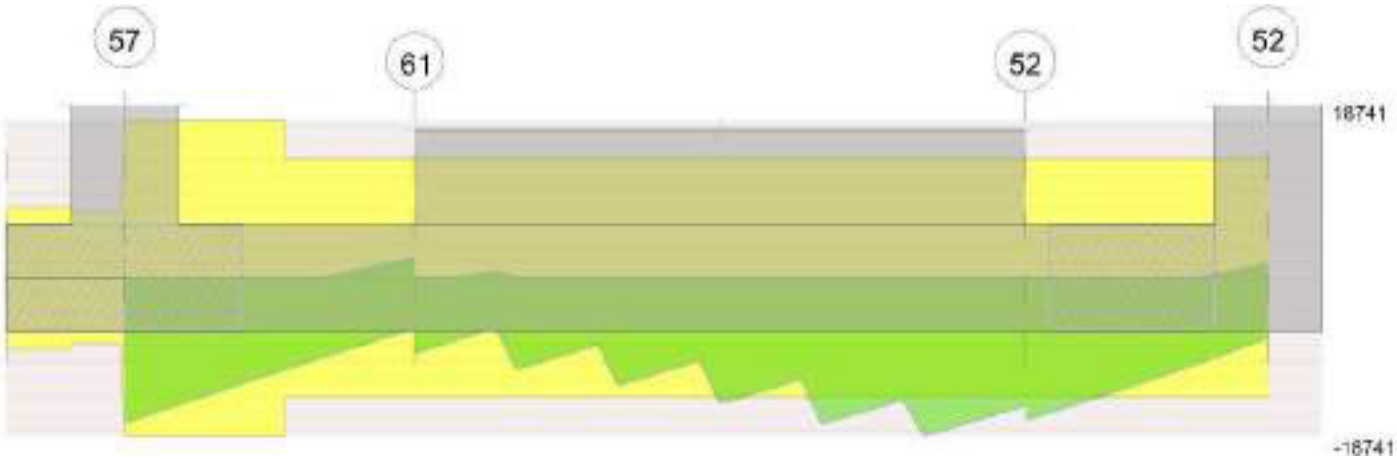


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 57 - 61, sezione R 50x45, asta 374

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	7262.92	SLU 84	5418.96	13658.02	0.143	2.52							Si
0.23	0.000942	0.053	0.000942	0.053	3858.88	SLU 84	3858.88	13658.02	0.143	3.54							Si
0.61	0.000942	0.053	0.000942	0.053	-447.42	SLU 1	1208.37	13658.02	0.143	11.3	-672.41	SLU 84	-2193.06	-13658.02	0.143	6.23	Si
1.23	0.000942	0.053	0.000942	0.053							-4424.02	SLU 84	-4424.02	-13658.02	0.143	3.09	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	8921.95	SLV 3	6993.5	13077.02	0.254	1.87							Si
0.23	0.000942	0.053	0.000942	0.053	5299.32	SLV 3	5299.32	13077.02	0.254	2.47	-159.26	SLV 14	-716.63	-13077.02	0.254	18.25	Si
0.61	0.000942	0.053	0.000942	0.053	293.19	SLV 1	2377.86	13077.02	0.254	5.5	-1231.86	SLV 16	-2109.47	-13077.02	0.254	6.2	Si
1.23	0.000942	0.053	0.000942	0.053							-5223.7	SLV 4	-5223.7	-13077.02	0.254	2.5	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	6596.54	SLD 3	5062.08	13077.02	0.254	2.58							Si
0.23	0.000942	0.053	0.000942	0.053	3737.52	SLD 3	3737.52	13077.02	0.254	3.5							Si
0.61	0.000942	0.053	0.000942	0.053	-142.49	SLD 1	1469.35	13077.02	0.254	8.9	-796.18	SLD 16	-1760.66	-13077.02	0.254	7.43	Si
1.23	0.000942	0.053	0.000942	0.053							-3938.68	SLD 4	-3938.68	-13077.02	0.254	3.32	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-16413	SLU 84	-16413	-9278	-63019	-18741	-18741	1	1.14	Si
0.23	0.0000134	0.000942	0	-13867	SLU 84	-13867	-9278	-63019	-18741	-18741	1	1.35	Si
0.61	0.0000134	0.000942	0	-9518	SLU 84	-9518	-9278	-63019	-18741	-18741	1	1.97	Si
1.23	0.0000101	0.000942	0	-2747	SLU 84	-2747	-9278	-63019	-14132	-14132	1	5.14	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-17199	SLV 3	-17199	-9278	-63019	-18741	-18741	1	1.09	Si
0.23	0.0000134	0.000942	0	-15059	SLV 3	-15059	-9278	-63019	-18741	-18741	1	1.24	Si
0.61	0.0000134	0.000942	0	-11447	SLV 3	-11447	-9278	-63019	-18741	-18741	1	1.64	Si
1.23	0.0000101	0.000942	0	2369	SLV 14	2369	9278	63019	14132	14132	1	5.97	Si
1.23	0.0000101	0.000942	0	-5973	SLV 3	-5973	-9278	-63019	-14132	-14132	1	2.37	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-13673	SLD 3	-13673	-9278	-63019	-18741	-18741	1	1.37	Si
0.23	0.0000134	0.000942	0	-11774	SLD 3	-11774	-9278	-63019	-18741	-18741	1	1.59	Si
0.61	0.0000134	0.000942	0	-8548	SLD 3	-8548	-9278	-63019	-18741	-18741	1	2.19	Si
1.23	0.0000101	0.000942	0	-3592	SLD 3	-3592	-9278	-63019	-14132	-14132	1	3.93	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	5340.83	21	3982.53	193396	1494000	2900935	36000000	4856.89	2	3617.58	175674	1120500			Si
0.23	2833.69	21	2833.69	137607	1494000	2064106	36000000	2570.03	2	2570.03	124803	1120500			Si
0.61	-501.9	21	-1620.33	78685	1494000	1180273	36000000	-469.34	2	-1486.71	72196	1120500			Si
1.23	-3257.89	21	-3257.89	158207	1494000	2373098	36000000	-2970.26	2	-2970.26	144239	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 52 - 52, sezione R 50x45, asta 367

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053							-725.97	SLU 81	-3378.99	-13658.02	0.143	4.04	Si
0.51	0.000942	0.053	0.000942	0.053							-7402.65	SLU 84	-9042.08	-13658.02	0.143	1.51	Si
0.8	0.000942	0.053	0.000942	0.053							-9860.48	SLU 84	-9860.48	-13658.02	0.143	1.39	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.02	0.000942	0.053	0.000942	0.053							-11109.46	SLU 84	-10635.14	-13658.02	0.143	1.28	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	2704.56	SLV 16	2704.56	13077.02	0.254	4.84	-3743.81	SLV 1	-6411.98	-13077.02	0.254	2.04	Si
0.51	0.000942	0.053	0.000942	0.053	783.01	SLV 14	1202.58	13077.02	0.254	10.87	-10742.69	SLV 3	-12717.96	-13077.02	0.254	1.03	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	863.22	SLD 16	863.22	13077.02	0.254	15.15	-1902.47	SLD 1	-4058.88	-13077.02	0.254	3.22	Si
0.51	0.000942	0.053	0.000942	0.053							-7442.34	SLD 3	-8907.56	-13077.02	0.254	1.47	Si
0.8	0.000942	0.053	0.000942	0.053							-9672.63	SLD 3	-9672.63	-13077.02	0.254	1.35	Si
1.02	0.000942	0.053	0.000942	0.053							-10925.51	SLD 3	-10417.71	-13077.02	0.254	1.26	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.51	0.0000101	0.000942	0	-10203	SLU 84	-10203	-9278	-63019	-14132	-14132	1	1.38	Si
0.8	0.0000101	0.000942	0	-6886	SLU 84	-6886	-9278	-63019	-14132	-14132	1	2.05	Si
1.02	0.0000101	0.000942	0	-4188	SLU 84	-4188	-9278	-63019	-14132	-14132	1	3.37	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.51	0.0000101	0.000942	0	-12230	SLV 3	-12230	-9278	-63019	-14132	-14132	1	1.16	Si
0.8	0.0000101	0.000942	0	382	SLV 14	382	9278	63019	14132	14132	1	37.03	Si
0.8	0.0000101	0.000942	0	-9425	SLV 3	-9425	-9278	-63019	-14132	-14132	1	1.5	Si
1.02	0.0000101	0.000942	0	1664	SLV 14	1664	9278	63019	14132	14132	1	8.49	Si
1.02	0.0000101	0.000942	0	-7059	SLV 3	-7059	-9278	-63019	-14132	-14132	1	2	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000942	0	-13279	SLD 3	-13279	-9278	-63019	-14132	-14132	1	1.06	Si
0.51	0.0000101	0.000942	0	-9106	SLD 3	-9106	-9278	-63019	-14132	-14132	1	1.55	Si
0.8	0.0000101	0.000942	0	-6623	SLD 3	-6623	-9278	-63019	-14132	-14132	1	2.13	Si
1.02	0.0000101	0.000942	0	-4567	SLD 3	-4567	-9278	-63019	-14132	-14132	1	3.09	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-547.05	18	-2497.66	121289	1494000	1819338	36000000	-519.62	2	-2297.55	111571	1120500			Si
0.51	-5452.83	21	-6654.84	523878	1494000	19823547	36000000	-4979.84	2	-6064.35	477393	1120500			Si
0.8	-7254.06	21	-7254.06	571049	1494000	21608514	36000000	-6603.11	2	-6603.11	519805	1120500			Si
1.02	-8166.08	21	-7820.86	615668	1494000	23296892	36000000	-7417.44	2	-7111.81	559851	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.51	superiore	0.349	0.00058	0.000202	21	0.349	0.00054	0.000188	6	0.349	0.00053	0.000184	2	Si
0.8	superiore	0.349	0.00063	0.00022	21	0.349	0.00061	0.000212	6	0.349	0.00058	0.000204	2	Si
1.02	superiore	0.349	0.00068	0.000237	21	0.349	0.00068	0.000239	6	0.349	0.00066	0.00023	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 57 - 61, sezione R 50x45, asta 374

Campata 3 tra i fili 61 - 52, sezione R 50x45, aste 373, 372, 371, 370, 369, 368

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1946	SLU 84	0.043	7989	5989	SLU 84	17964	Si
1.29	0.41	0.0005	1939	SLU 84	0.043	7989	5966	SLU 84	17964	Si
2.58	0.41	0.0005	1937	SLU 84	0.043	7989	5959	SLU 84	17964	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1422	SLD 2	0.119	8901	4374	SLD 2	20659	Si
1.29	0.41	0.0005	1385	SLD 4	0.119	8901	4263	SLD 4	20659	Si
2.58	0.41	0.0005	1409	SLD 4	0.119	8901	4335	SLD 4	20659	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000505	1430	SLE RA 21	39646	1494000	491608	36000000	1298	SLE QP 2	35981	1120500	Si
1.29	0.41	0.00000505	1425	SLE RA 21	39484	1494000	489601	36000000	1293	SLE QP 2	35829	1120500	Si
2.58	0.41	0.00000505	1423	SLE RA 21	39444	1494000	489109	36000000	1292	SLE QP 2	35818	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 52 - 52, sezione R 50x45, asta 367

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.05	1.1	SLU 44	ST	LT	683	-750	-51225	1	-1	19	0	0	1.1	15581	1014	15.36	Si
5.05	1.1	SLV 14	SIS	LT	-1230	-8095	-36536	-2	-12	19	0	0	1.1	11114	8188	1.36	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
374,373,372,371,370,369,368,367	5.05	1.1	SLU 84	ST	BT	2.3	233643	62616	3.73	Si
374,373,372,371,370,369,368,367	5.05	1.1	SLV 4	SIS	BT	2.3	206458	50213	4.11	Si
374,373,372,371,370,369,368,367	5.05	1.1	SLD 4	SIS	BT	2.3	226298	46154	4.9	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-864	-62616	599.96	745.63	0	-1	0.01	0.01	1.08	5.03	1496	2060	0	14430	
0	6508	-50213	-2728.82	2237.39	0	7	0.04	-0.05	0.99	4.97	1496	2060	0	14430	0.07
0	2432	-46154	-929.13	1270.99	0	3	0.03	-0.02	1.06	5	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

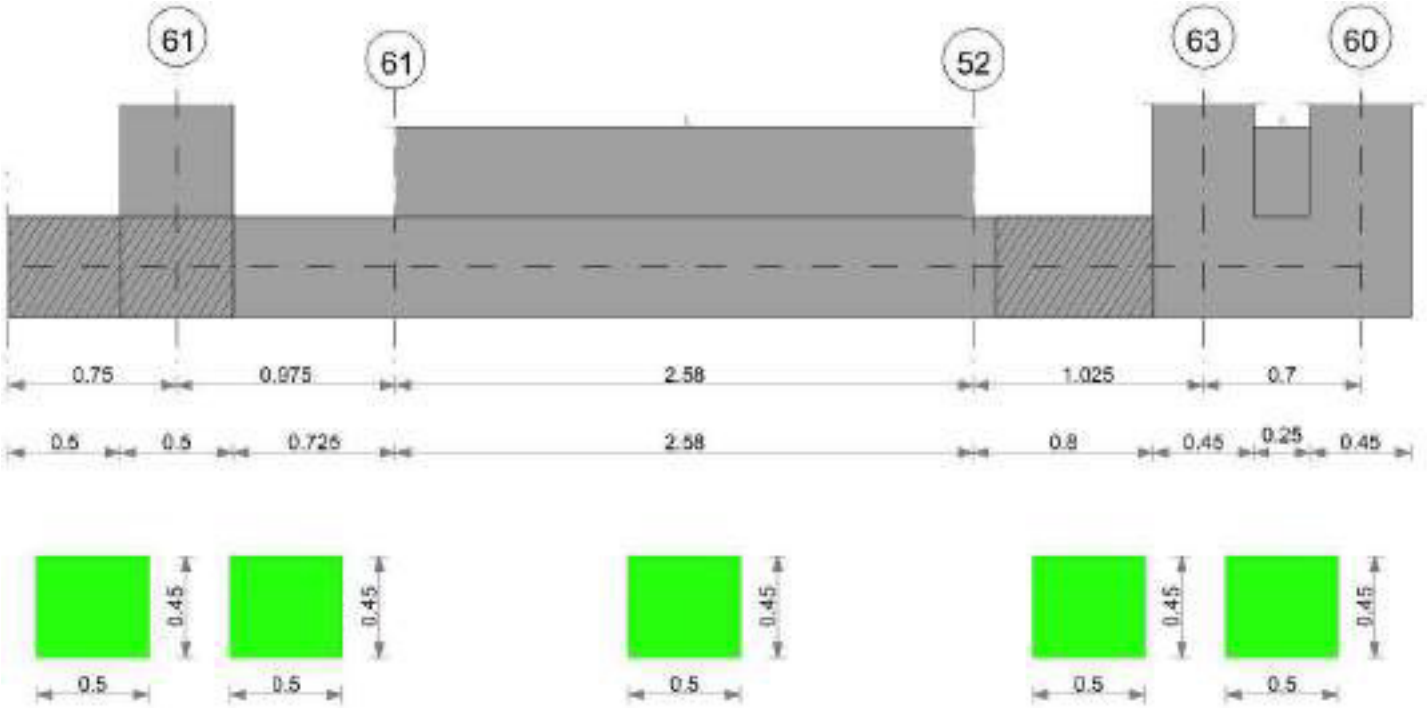
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	592	SLE RA 21	0.05	0.001	592	946	SLE RA 21	0.05	0	868	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	592	SLE RA 1	0.05	0	592	592	SLE RA 1	0.05	0	733	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	592	SLE RA 1	0.05	0	592	592	SLE RA 1	0.05	0	733	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	733	868	SLE RA 21	0.19	0	733	SLE RA 21	0.1	0.01	868	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	592	733	SLE RA 1	0.19	0	592	SLE RA 1	0.1	0	733	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	592	733	SLE RA 1	0.19	0	592	SLE RA 1	0.1	0	733	SLE RA 1	Si

CORDOLO 24

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

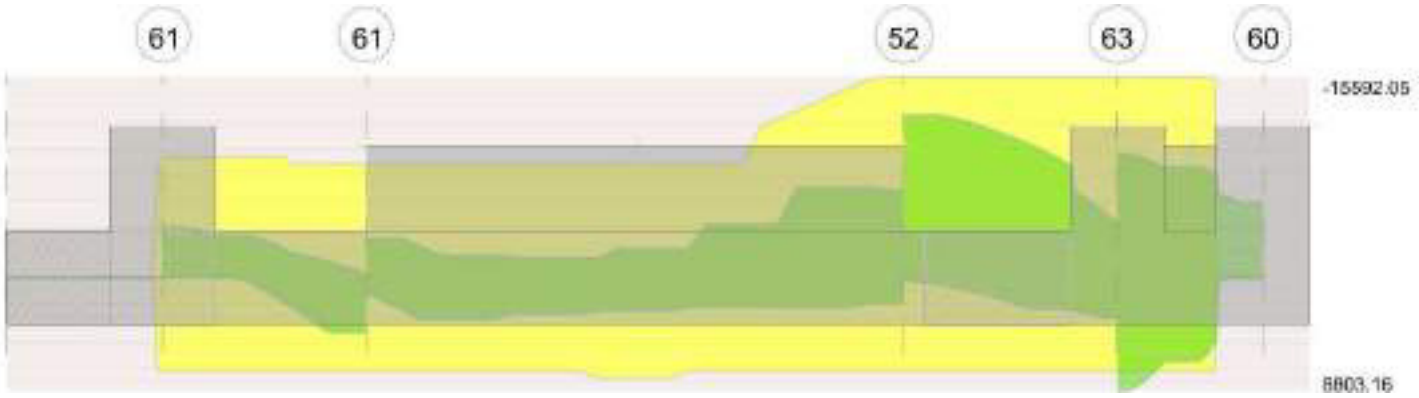
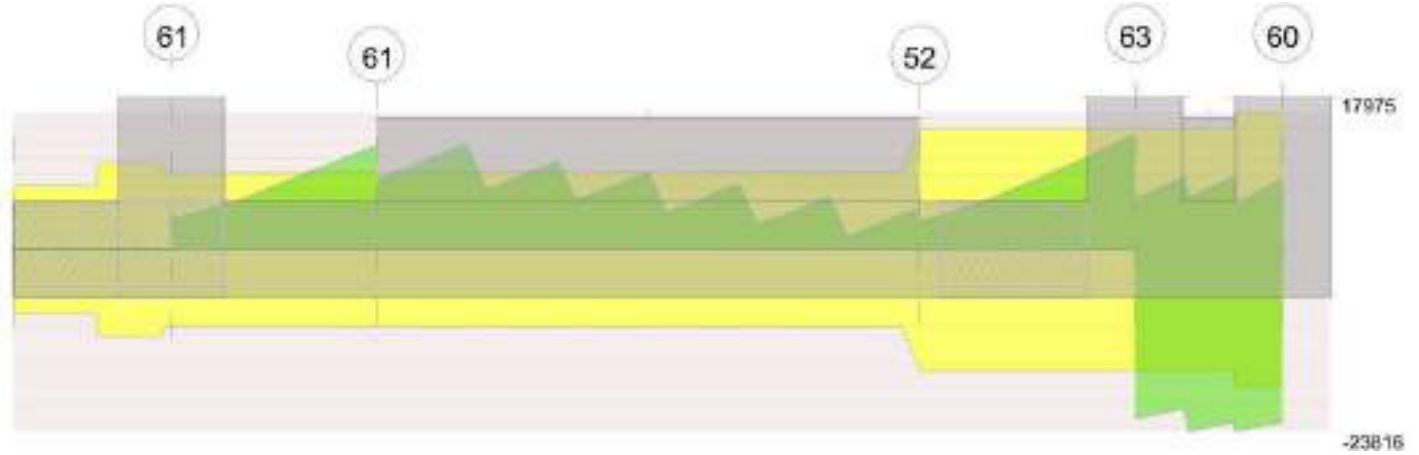


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - 61, sezione R 50x45, asta 385

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-4310.83	SLU 84	-3956.29	-9373.94	0.122	2.37	Si
0.25	0.000628	0.053	0.000509	0.052							-3257.39	SLU 84	-3257.39	-9373.94	0.122	2.88	Si
0.49	0.000628	0.053	0.000509	0.052	-1040.49	SLU 1	53.97	7773.51	0.117	144.03	-1618.73	SLU 84	-2914.6	-9373.94	0.122	3.22	Si
0.98	0.000628	0.053	0.000509	0.052	3710.55	SLU 83	3710.55	7773.51	0.117	2.09							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-3561.09	SLV 5	-3117.27	-8872.37	0.218	2.85	Si
0.25	0.000628	0.053	0.000509	0.052							-2576.33	SLV 14	-2576.33	-8872.37	0.218	3.44	Si
0.49	0.000628	0.053	0.000509	0.052	-454.83	SLV 1	1019.2	7263.39	0.196	7.13	-1760.56	SLV 16	-2375.68	-8872.37	0.218	3.73	Si
0.85	0.000628	0.053	0.000509	0.052	2774.61	SLV 1	4240.01	7263.39	0.196	1.71	-77.53	SLV 16	-1012.74	-8872.37	0.218	8.76	Si
0.98	0.000628	0.053	0.000509	0.052	4240.01	SLV 1	4240.01	7263.39	0.196	1.71	720.06	SLV 16	-354.03	-8872.37	0.218	25.06	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-3195.45	SLD 5	-2869.31	-8872.37	0.218	3.09	Si
0.25	0.000628	0.053	0.000509	0.052							-2365.12	SLD 14	-2365.12	-8872.37	0.218	3.75	Si
0.49	0.000628	0.053	0.000509	0.052	-827.16	SLD 1	441.81	7263.39	0.196	16.44	-1388.23	SLD 16	-2148.17	-8872.37	0.218	4.13	Si
0.85	0.000628	0.053	0.000509	0.052	1960.6	SLD 1	3234.99	7263.39	0.196	2.25	736.48	SLD 16	-437.34	-8872.37	0.218	20.29	Si
0.98	0.000628	0.053	0.000509	0.052	3234.99	SLD 1	3234.99	7263.39	0.196	2.25							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000628	0	2826	SLU 84	2826	8105	63019	10078	10078	1	3.57	Si
0.25	0.0000072	0.000628	0	5591	SLU 84	5591	8105	63019	10078	10078	1	1.8	Si
0.49	0.0000072	0.000628	0	8220	SLU 84	8220	8105	63019	10078	10078	1	1.23	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000628	0	3940	SLV 5	3940	8105	63019	10078	10078	1	2.56	Si
0	0.0000072	0.000628	0	-163	SLV 12	-163	-8105	-63019	-10078	-10078	1	61.78	Si
0.25	0.0000072	0.000628	0	5898	SLV 5	5898	8105	63019	10078	10078	1	1.71	Si
0.49	0.0000072	0.000628	0	7780	SLV 5	7780	8105	63019	10078	10078	1	1.3	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000628	0	2785	SLD 5	2785	8105	63019	10078	10078	1	3.62	Si
0.25	0.0000072	0.000628	0	4692	SLD 5	4692	8105	63019	10078	10078	1	2.15	Si
0.49	0.0000072	0.000628	0	6513	SLD 5	6513	8105	63019	10078	10078	1	1.55	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-3178.56	21	-2918.83	153436	1494000	2276294	36000000	-2915.98	2	-2679.01	140829	1120500			Si
0.25	-2405.02	21	-2405.02	126426	1494000	1875588	36000000	-2209.52	2	-2209.52	116149	1120500			Si
0.49	-1199.5	21	-2152.96	113176	1494000	1679015	36000000	-1107.7	2	-1979.18	104041	1120500			Si
0.98	2725.03	20	2725.03	141677	1494000	2148726	36000000	2480.03	2	2480.03	128939	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 52 - 63, sezione R 50x45, asta 378

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052							-9279.11	SLU 83	-9279.11	-16326.36	0.165	1.76	Si
0.07	0.001137	0.053	0.000509	0.052							-9064.19	SLU 83	-9279.11	-16326.36	0.165	1.76	Si
0.51	0.001137	0.053	0.000509	0.052							-6359.4	SLU 84	-7726.4	-16326.36	0.165	2.11	Si
0.8	0.001137	0.053	0.000509	0.052							-3363.35	SLU 84	-5351.74	-16326.36	0.165	3.05	Si
1.02	0.001137	0.053	0.000509	0.052							-317.14	SLU 82	-317.14	-16326.36	0.165	51.48	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052	56.43	SLV 16	204.57	7255.57	0.189	35.47	-12576.17	SLV 1	-12576.17	-15592.05	0.288	1.24	Si
0.07	0.001137	0.053	0.000509	0.052	92.48	SLV 16	335.73	7255.57	0.189	21.61	-12320.47	SLV 1	-12576.17	-15592.05	0.288	1.24	Si
0.51	0.001137	0.053	0.000509	0.052	1088.1	SLV 14	1872.84	7255.57	0.189	3.87	-9650.64	SLV 3	-10940.73	-15592.05	0.288	1.43	Si
0.8	0.001137	0.053	0.000509	0.052	2450.13	SLV 14	2450.13	7255.57	0.189	2.96	-6956.58	SLV 3	-8731.48	-15592.05	0.288	1.79	Si
1.02	0.001137	0.053	0.000509	0.052	3897.8	SLV 14	3113.25	7255.57	0.189	2.33	-4267.46	SLV 3	-4267.46	-15592.05	0.288	3.65	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052							-8961.94	SLD 1	-8961.94	-15592.05	0.288	1.74	Si
0.07	0.001137	0.053	0.000509	0.052							-8768.66	SLD 1	-8961.94	-15592.05	0.288	1.74	Si
0.51	0.001137	0.053	0.000509	0.052							-6575.72	SLD 3	-7658.16	-15592.05	0.288	2.04	Si
0.8	0.001137	0.053	0.000509	0.052							-4263.01	SLD 3	-5792.01	-15592.05	0.288	2.69	Si
1.02	0.001137	0.053	0.000509	0.052	1560.45	SLD 14	571.16	7255.57	0.189	12.7	-1930.11	SLD 3	-1930.11	-15592.05	0.288	8.08	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.001137	0	2766	SLU 83	2766	9883	63090	15875	15875	1	5.74	Si
0.51	0.0000113	0.001137	0	8687	SLU 83	8687	9883	63090	15875	15875	1	1.83	Si
0.8	0.0000113	0.001137	0	12182	SLU 83	12182	9883	63090	15875	15875	1	1.3	Si
1.02	0.0000113	0.001137	0	15034	SLU 83	15034	9883	63090	15875	15875	1	1.06	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.001137	0	3583	SLV 5	3583	9883	63090	15875	15875	1	4.43	Si
0.51	0.0000113	0.001137	0	8275	SLV 1	8275	9883	63090	15875	15875	1	1.92	Si
0.8	0.0000113	0.001137	0	11202	SLV 1	11202	9883	63090	15875	15875	1	1.42	Si
1.02	0.0000113	0.001137	0	13684	SLV 1	13684	9883	63090	15875	15875	1	1.16	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.001137	0	2626	SLD 5	2626	9883	63090	15875	15875	1	6.04	Si
0.51	0.0000113	0.001137	0	6908	SLD 1	6908	9883	63090	15875	15875	1	2.3	Si
0.8	0.0000113	0.001137	0	9511	SLD 1	9511	9883	63090	15875	15875	1	1.67	Si
1.02	0.0000113	0.001137	0	11674	SLD 1	11674	9883	63090	15875	15875	1	1.36	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-6839.31	20	-6839.31	532621	1494000	17028601	36000000	-6259.87	2	-6259.87	487496	1120500			Si
0.51	-4685.5	21	-5693.93	443423	1494000	14176805	36000000	-4281.27	2	-5207.36	405530	1120500			Si
0.8	-2475.43	21	-3942.18	201804	1494000	2857272	36000000	-2253.22	2	-3599.02	184237	1120500			Si
1.02	-227.64	19	-227.64	11653	1494000	164989	36000000	-184.83	2	-184.83	9462	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0	superiore	0.299	0.0005	0.000149	20	0.299	0.00047	0.000139	6	0.299	0.00045	0.000136	2	Si
0.07	superiore	0.299	0.0005	0.000149	20	0.299	0.00047	0.000139	6	0.299	0.00045	0.000136	2	Si
0.51	superiore	0.299	0.00041	0.000124	21	0.299	0.00039	0.000116	6	0.299	0.00038	0.000113	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 61 - 61, sezione R 50x45, asta 385

Campata 3 tra i fili 61 - 52, sezione R 50x45, aste 384, 383, 382, 381, 380, 379

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1978	SLU 84	0.03	5726	6086	SLU 84	15877	Si
1.29	0.41	0.0004	1988	SLU 84	0.03	5726	6118	SLU 84	15877	Si
2.58	0.41	0.0006	2005	SLU 84	0.048	8946	6170	SLU 84	20158	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1442	SLD 2	0.101	6396	4437	SLD 2	15877	Si
1.29	0.41	0.0004	1422	SLD 4	0.101	6396	4376	SLD 4	15877	Si
2.58	0.41	0.0006	1463	SLD 4	0.126	9959	4501	SLD 4	23182	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000036	1454	SLE RA 21	41050	1494000	509023	36000000	1319	SLE QP 2	37245	1120500	Si
1.29	0.41	0.0000036	1461	SLE RA 21	41257	1494000	511583	36000000	1325	SLE QP 2	37428	1120500	Si
2.58	0.41	0.00000567	1473	SLE RA 21	40518	1494000	502425	36000000	1338	SLE QP 2	36784	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 52 - 63, sezione R 50x45, asta 378

Campata 5 tra i fili 63 - 60, sezione R 50x45, aste 377, 376, 375

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	2312	SLU 84	0.048	8946	7114	SLU 84	20158	Si
0.23	0.41	0.0006	2405	SLU 84	0.048	8946	7399	SLU 84	20158	Si
0.35	0.41	0.0006	2385	SLV 4	0.153	8563	7563	SLU 84	20158	Si
0.48	0.41	0.0006	2490	SLV 4	0.153	8563	7735	SLU 84	20158	Si
0.7	0.41	0.0006	2699	SLV 3	0.153	8563	8306	SLV 3	20158	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1794	SLD 4	0.126	9959	5520	SLD 4	23182	Si
0.23	0.41	0.0006	1899	SLD 4	0.126	9959	5842	SLD 4	23182	Si
0.35	0.41	0.0006	1961	SLD 4	0.126	9959	6035	SLD 4	23182	Si
0.48	0.41	0.0006	2028	SLD 4	0.126	9959	6239	SLD 4	23182	Si
0.7	0.41	0.0006	2160	SLD 3	0.126	9959	6646	SLD 3	23182	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000567	1700	SLE RA 21	46746	1494000	579645	36000000	1546	SLE QP 2	42519	1120500	Si
0.23	0.41	0.00000567	1768	SLE RA 21	48629	1494000	603003	36000000	1609	SLE QP 2	44247	1120500	Si
0.35	0.41	0.00000567	1808	SLE RA 21	49709	1494000	616386	36000000	1645	SLE QP 2	45235	1120500	Si
0.48	0.41	0.00000567	1849	SLE RA 21	50840	1494000	630417	36000000	1683	SLE QP 2	46270	1120500	Si
0.7	0.41	0.00000567	1930	SLE RA 21	53083	1494000	658232	36000000	1757	SLE QP 2	48319	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.51	1.1	SLU 44	ST	LT	691	-868	-58277	1	-1	19	0	0	1.1	17727	1109	15.98	Si
5.51	1.1	SLV 14	SIS	LT	-1528	-9139	-39902	-2	-13	19	0	0	1.1	12137	9266	1.31	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
385,384,383,382,381,380,379,378,377,376,375	5.51	1.1	SLU 84	ST	BT	2.3	250493	71392	3.51	Si
385,384,383,382,381,380,379,378,377,376,375	5.51	1.1	SLV 3	SIS	BT	2.3	209935	58323	3.6	Si
385,384,383,382,381,380,379,378,377,376,375	5.51	1.1	SLD 4	SIS	BT	2.3	234663	53253	4.41	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1011	-71392	234.15	5839.12	0	-1	0.08	0	1.09	5.34	1496	2060	0	14430	
0	7721	-58323	-3649.66	9920.04	0	8	0.17	-0.06	0.97	5.16	1496	2060	0	14430	0.07
0	2685	-53253	-1375.41	6684.52	0	3	0.13	-0.03	1.05	5.25	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

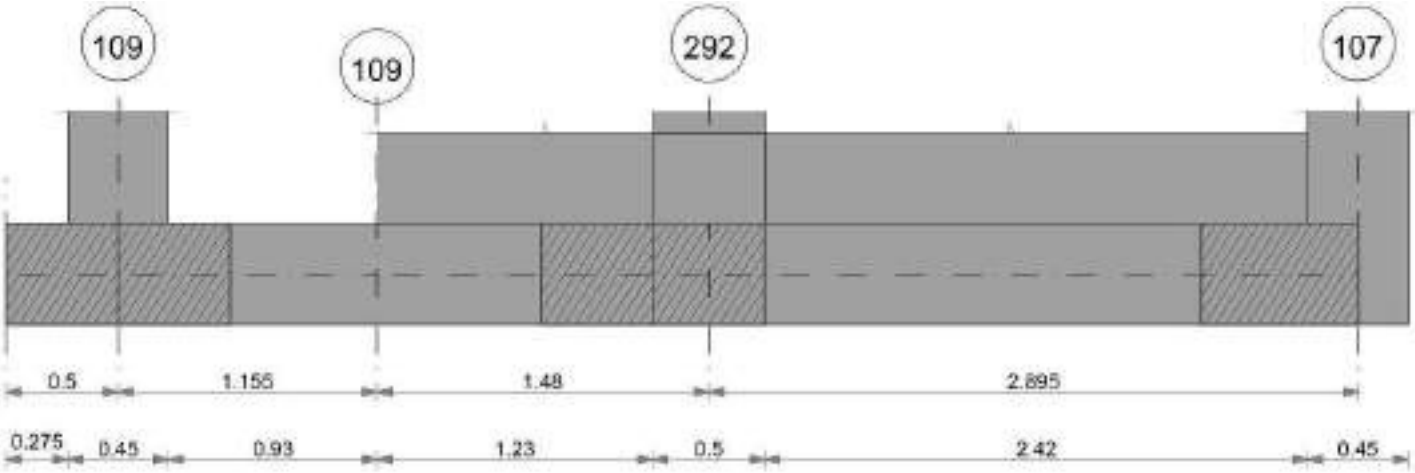
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	672	SLE RA 21	0.05	0.001	672	1015	SLE RA 21	0.05	0	735	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	672	SLE RA 1	0.05	0	672	672	SLE RA 1	0.05	0	735	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	672	SLE RA 1	0.05	0	672	672	SLE RA 1	0.05	0	735	SLE RA 1	0.0033	0	SLE RA 1	Si

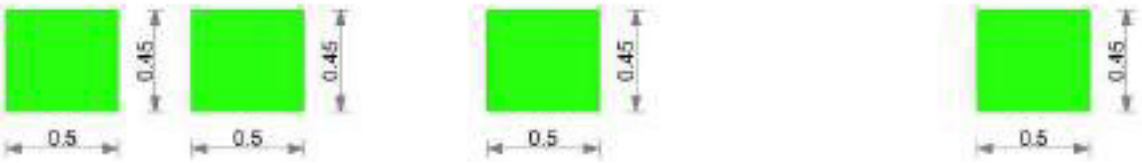
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	949	1015	SLE RA 21	0.19	0.01	735	SLE RA 21	0.1	0.01	870	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	672	735	SLE RA 1	0.19	0	672	SLE RA 1	0.1	0	735	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	672	735	SLE RA 1	0.19	0	672	SLE RA 1	0.1	0	735	SLE RA 1	Si

CORDOLO 25

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

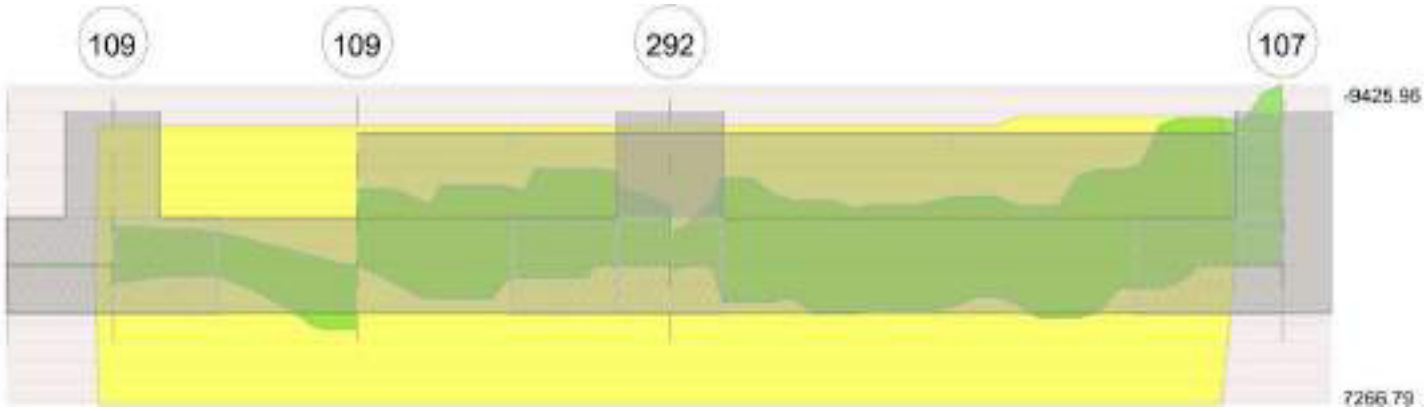
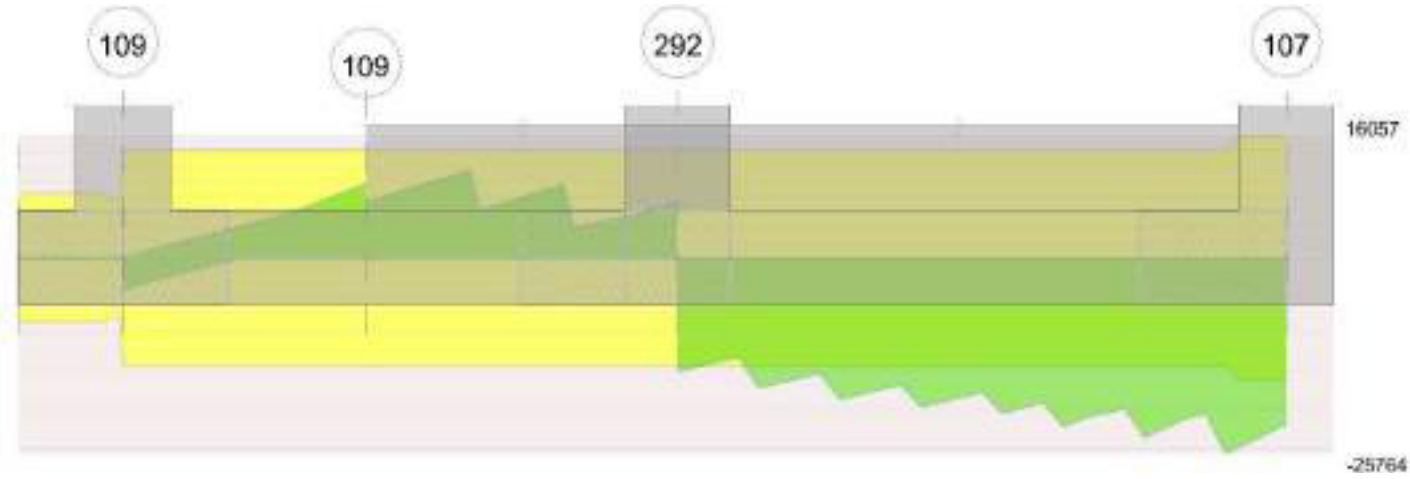


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 109 - 109, sezione R 50x45, asta 397

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-719.43	SLU 81	-719.43	-7755.45	0.113	10.78	Si
0.23	0.000509	0.052	0.000509	0.052							-1055.08	SLU 81	-1057.66	-7755.45	0.113	7.33	Si
0.58	0.000509	0.052	0.000509	0.052	-301.88	SLU 2	333.82	7755.45	0.113	23.23	-478.83	SLU 83	-939.92	-7755.45	0.113	8.25	Si
1	0.000509	0.052	0.000509	0.052	1986.13	SLU 83	3354.83	7755.45	0.113	2.31							Si
1.15	0.000509	0.052	0.000509	0.052	3354.83	SLU 83	3354.83	7755.45	0.113	2.31							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1238.8	SLV 16	824.33	7266.79	0.197	8.82	-2009.57	SLV 1	-2009.57	-7266.79	0.197	3.62	Si
0.23	0.000509	0.052	0.000509	0.052	548.82	SLV 16	548.82	7266.79	0.197	13.24	-1856.52	SLV 1	-1856.52	-7266.79	0.197	3.91	Si
0.58	0.000509	0.052	0.000509	0.052	354.4	SLV 14	866.66	7266.79	0.197	8.38	-1007.23	SLV 3	-1518.25	-7266.79	0.197	4.79	Si
1	0.000509	0.052	0.000509	0.052	2201.88	SLV 13	3346.02	7266.79	0.197	2.17	313.08	SLV 4	-297.25	-7266.79	0.197	24.45	Si
1.15	0.000509	0.052	0.000509	0.052	3346.02	SLV 13	3346.02	7266.79	0.197	2.17							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	276.62	SLD 16	146.02	7266.79	0.197	49.77	-1047.39	SLD 1	-1047.39	-7266.79	0.197	6.94	Si
0.23	0.000509	0.052	0.000509	0.052							-1147.6	SLD 1	-1147.6	-7266.79	0.197	6.33	Si
0.58	0.000509	0.052	0.000509	0.052	-38.59	SLD 14	479.59	7266.79	0.197	15.15	-614.23	SLD 3	-984.63	-7266.79	0.197	7.38	Si
1	0.000509	0.052	0.000509	0.052	1655.32	SLD 13	2648.73	7266.79	0.197	2.74							Si
1.15	0.000509	0.052	0.000509	0.052	2648.73	SLD 9	2648.73	7266.79	0.197	2.74							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-2831	SLU 78	-2831	-7764	-63178	-14201	-14201	1	5.02	Si
0.23	0.0000101	0.000509	0	-625	SLU 51	-625	-7764	-63178	-14201	-14201	1	22.74	Si
0.58	0.0000101	0.000509	0	3550	SLU 83	3550	7764	63178	14201	14201	1	4	Si
1.15	0.0000101	0.000509	0	9697	SLU 83	9697	7764	63178	14201	14201	1	1.46	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	65	SLV 1	65	7764	63178	14201	14201	1	217.25	Si
0	0.0000101	0.000509	0	-4134	SLV 16	-4134	-7764	-63178	-14201	-14201	1	3.44	Si
0.23	0.0000101	0.000509	0	1725	SLV 1	1725	7764	63178	14201	14201	1	8.23	Si
0.23	0.0000101	0.000509	0	-2449	SLV 16	-2449	-7764	-63178	-14201	-14201	1	5.8	Si
0.58	0.0000101	0.000509	0	4315	SLV 1	4315	7764	63178	14201	14201	1	3.29	Si
1.15	0.0000101	0.000509	0	8553	SLV 1	8553	7764	63178	14201	14201	1	1.66	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-2895	SLD 12	-2895	-7764	-63178	-14201	-14201	1	4.91	Si
0.23	0.0000101	0.000509	0	493	SLD 5	493	7764	63178	14201	14201	1	28.8	Si
0.23	0.0000101	0.000509	0	-1217	SLD 12	-1217	-7764	-63178	-14201	-14201	1	11.67	Si
0.58	0.0000101	0.000509	0	3075	SLD 5	3075	7764	63178	14201	14201	1	4.62	Si
1.15	0.0000101	0.000509	0	7243	SLD 5	7243	7764	63178	14201	14201	1	1.96	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-506	18	-506	26764	1494000	401464	36000000	-385.39	2	-385.39	20385	1120500			Si
0.23	-763.63	18	-767.47	40594	1494000	608912	36000000	-653.85	2	-663.38	35088	1120500			Si
0.58	-353.93	20	-686.16	36293	1494000	544400	36000000	-326.41	2	-605.91	32049	1120500			Si
1.15	2446.92	20	2446.92	129426	1494000	1941389	36000000	2150.32	2	2150.32	113738	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 109 - 109, sezione R 50x45, asta 397

Campata 3 tra i fili 109 - 292, sezione R 50x45, aste 396, 395, 394

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1844	SLU 83	0.043	8008	5674	SLU 83	18005	Si
0.74	0.41	0.0005	1785	SLU 83	0.043	8008	5490	SLU 83	18005	Si
1.23	0.41	0.0005	1768	SLU 83	0.043	8008	5440	SLU 83	18005	Si
1.48	0.41	0.0005	1771	SLU 83	0.043	8008	5449	SLU 83	18005	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1255	SLD 1	0.119	8922	3860	SLD 1	20706	Si
0.74	0.41	0.0005	1240	SLD 1	0.119	8922	3816	SLD 1	20706	Si
1.23	0.41	0.0005	1241	SLD 1	0.119	8922	3818	SLD 1	20706	Si
1.48	0.41	0.0005	1247	SLD 1	0.119	8922	3837	SLD 1	20706	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000507	1353	SLE RA 20	37497	1494000	464965	36000000	1220	SLE QP 2	33810	1120500	Si
0.74	0.41	0.00000507	1308	SLE RA 20	36256	1494000	449579	36000000	1179	SLE QP 2	32668	1120500	Si
1.23	0.41	0.00000507	1296	SLE RA 20	35919	1494000	445392	36000000	1168	SLE QP 2	32361	1120500	Si
1.48	0.41	0.00000507	1298	SLE RA 20	35979	1494000	446142	36000000	1170	SLE QP 2	32417	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 292 - 107, sezione R 50x45, aste 393, 392, 391, 390, 389, 388, 387, 386

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1771	SLU 83	0.043	8008	5449	SLU 83	18005	Si
0.25	0.41	0.0005	1784	SLU 83	0.043	8008	5488	SLU 83	18005	Si
1.45	0.41	0.0005	1933	SLU 84	0.043	8008	5947	SLU 84	18005	Si
2.67	0.41	0.0005	2193	SLU 84	0.043	8008	6746	SLU 84	18005	Si
2.9	0.41	0.0005	2283	SLU 84	0.043	8008	7022	SLU 84	18005	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1247	SLD 1	0.119	8922	3837	SLD 1	20706	Si
0.25	0.41	0.0005	1260	SLD 3	0.119	8922	3875	SLD 3	20706	Si
1.45	0.41	0.0005	1386	SLD 3	0.119	8922	4263	SLD 3	20706	Si
2.67	0.41	0.0005	1608	SLD 3	0.119	8922	4948	SLD 3	20706	Si
2.9	0.41	0.0005	1681	SLD 3	0.119	8922	5171	SLD 3	20706	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000507	1298	SLE RA 20	35979	1494000	446142	36000000	1170	SLE QP 2	32417	1120500	Si
0.25	0.41	0.00000507	1307	SLE RA 20	36231	1494000	449261	36000000	1178	SLE QP 2	32651	1120500	Si
1.45	0.41	0.00000507	1418	SLE RA 21	39284	1494000	487124	36000000	1280	SLE QP 2	35470	1120500	Si
2.67	0.41	0.00000507	1609	SLE RA 21	44597	1494000	552999	36000000	1457	SLE QP 2	40375	1120500	Si
2.9	0.41	0.00000507	1676	SLE RA 21	46435	1494000	575792	36000000	1518	SLE QP 2	42063	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
5.75	1.1	SLU 35	ST	LT	-621	146	-56931	-1	0	19	0	0	1.1	17317	638	27.16	Si
5.75	1.1	SLV 14	SIS	LT	-895	-8993	-42970	-1	-12	19	0	0	1.1	13071	9037	1.45	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
397,396,395,394,393,392,391,390,389,388,387,386	5.75	1.1	SLU 84	ST	BT	2.3	263089	70022	3.76	Si
397,396,395,394,393,392,391,390,389,388,387,386	5.75	1.1	SLV 3	SIS	LT	2.3	199639	52994	3.77	Si
397,396,395,394,393,392,391,390,389,388,387,386	5.75	1.1	SLD 3	SIS	BT	2.3	239307	50107	4.78	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	169	-70022	-592.86	3331.23	0	0	0.05	-0.01	1.08	5.66	1496	2060	0	14430	
0	9210	-52994	-4456.2	7669.91	0	10	0.14	-0.08	0.93	5.47	1496	2060	37	0	0.07
0	4000	-50107	-2129.25	4586.43	0	5	0.09	-0.04	1.02	5.57	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.13	1.13	0.93	1.16	1.27	1	0.7	0.69	0.58	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	608	SLE RA 21	0.05	0.001	608	1027	SLE RA 20	0.05	0	783	SLE RA 20	0.0033	0	SLE FR 5	Si
D	0.05	0	608	SLE RA 1	0.05	0	608	608	SLE RA 1	0.05	0	723	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	608	SLE RA 1	0.05	0	608	608	SLE RA 1	0.05	0	723	SLE RA 1	0.0033	0	SLE RA 1	Si

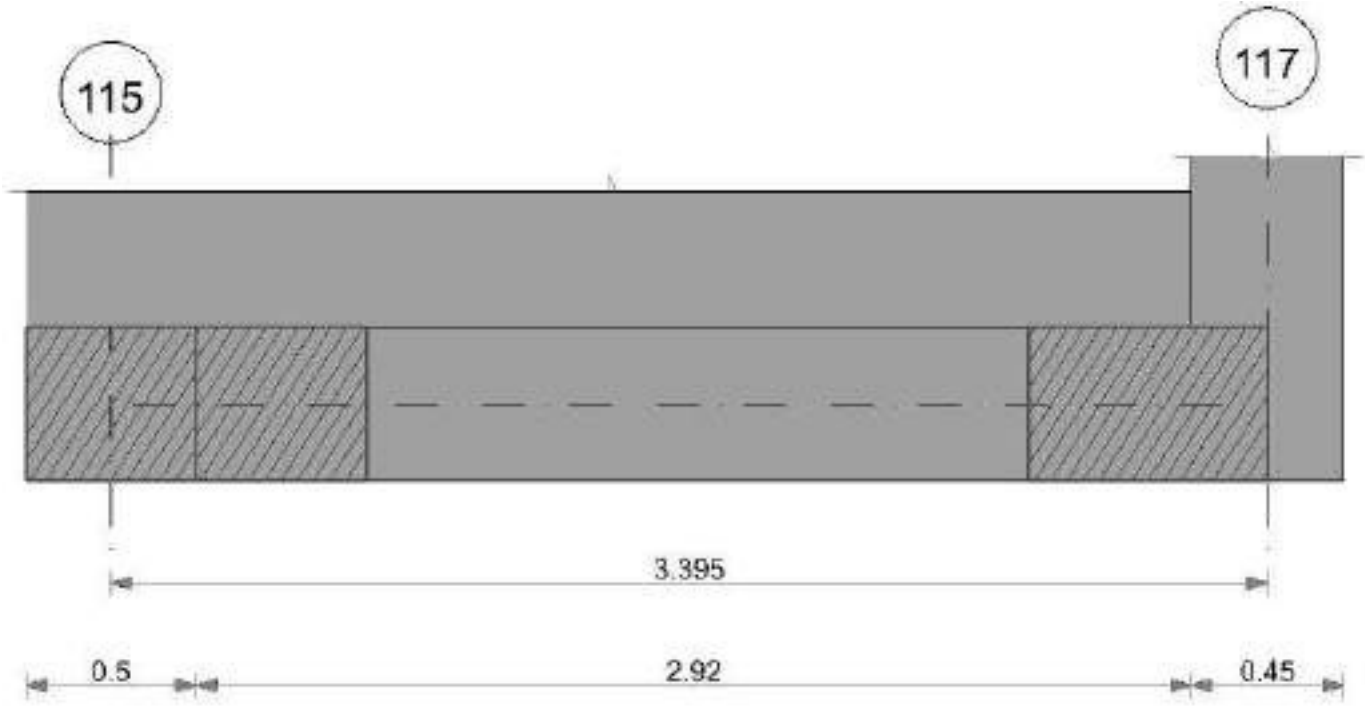
Verifiche geotecniche - Rotazioni assolute e differenziali

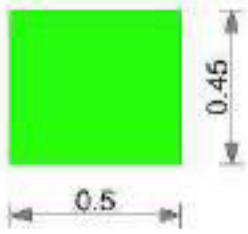
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.02	783	1027	SLE RA 20	0.19	0.01	783	SLE RA 21	0.1	0	723	SLE FR 5	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
D	0.19	0	SLE RA 1	0.19	0	608	723	SLE RA 1	0.19	0	608	SLE RA 1	0.1	0	723	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	608	723	SLE RA 1	0.19	0	608	SLE RA 1	0.1	0	723	SLE RA 1	Si

CORDOLO 26

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

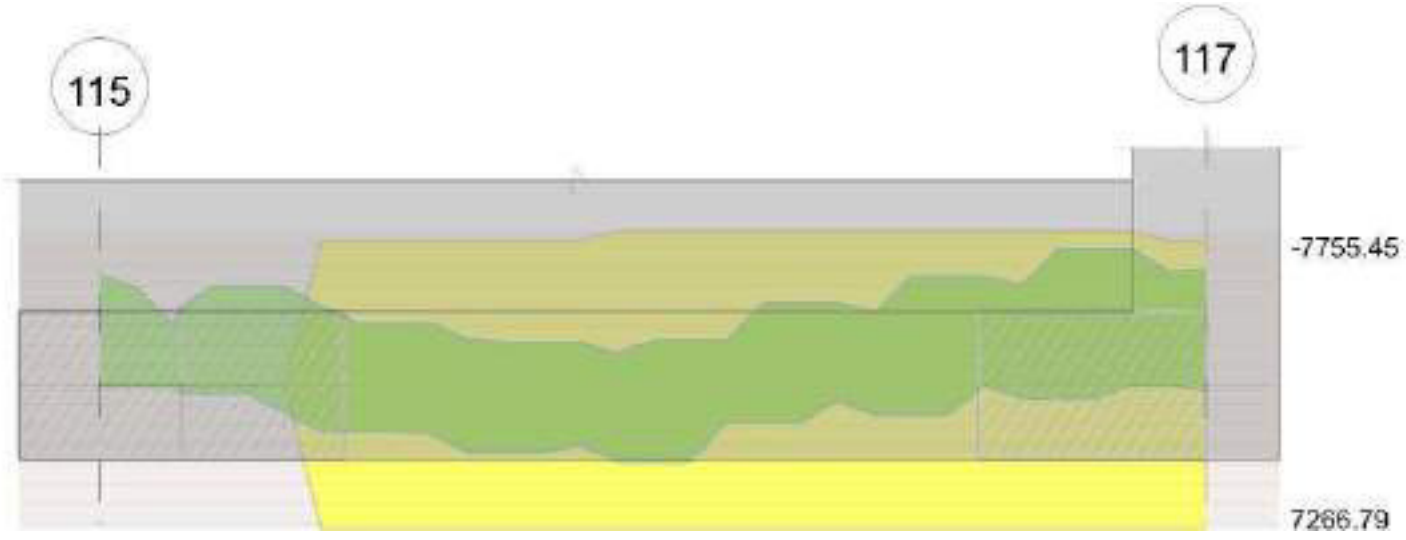


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 115 - 117, sezione R 50x45, aste 405, 404, 403, 402, 401, 400, 399, 398

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.42	0	1200	SLE RA 20	35561	1494000	0	36000000	1081	SLE QP 2	32034	1120500	Si
0.25	0.42	0	1212	SLE RA 20	35904	1494000	0	36000000	1092	SLE QP 2	32350	1120500	Si
1.7	0.42	0	1347	SLE RA 21	39901	1494000	0	36000000	1216	SLE QP 2	36023	1120500	Si
3.17	0.42	0	1568	SLE RA 21	46467	1494000	0	36000000	1420	SLE QP 2	42071	1120500	Si
3.39	0.42	0	1626	SLE RA 21	48188	1494000	0	36000000	1473	SLE QP 2	43650	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.87	1.1	SLU 35	ST	LT	-490	9	-32211	-1	0	19	0	0	1.1	9798	490	19.99	Si
3.87	1.1	SLV 14	SIS	LT	-713	-5479	-23006	-2	-13	19	0	0	1.1	6998	5525	1.27	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
405,404,403,402,401,400,399,398	3.87	1.1	SLU 84	ST	BT	2.3	177854	39660	4.48	Si
405,404,403,402,401,400,399,398	3.87	1.1	SLV 3	SIS	LT	2.3	139973	31501	4.44	Si
405,404,403,402,401,400,399,398	3.87	1.1	SLD 3	SIS	BT	2.3	163121	29064	5.61	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	3	-39660	-305.95	2097.33	0	0	0.05	-0.01	1.08	3.76	1496	2060	0	14430	
0	5487	-31501	-2667.51	2293.92	0	10	0.07	-0.08	0.93	3.72	1496	2060	37	0	0.07
0	2348	-29064	-1257.02	1809.05	0	5	0.06	-0.04	1.01	3.75	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.06	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.19	1.19	0.9	1.16	1.27	1	0.71	0.7	0.59	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

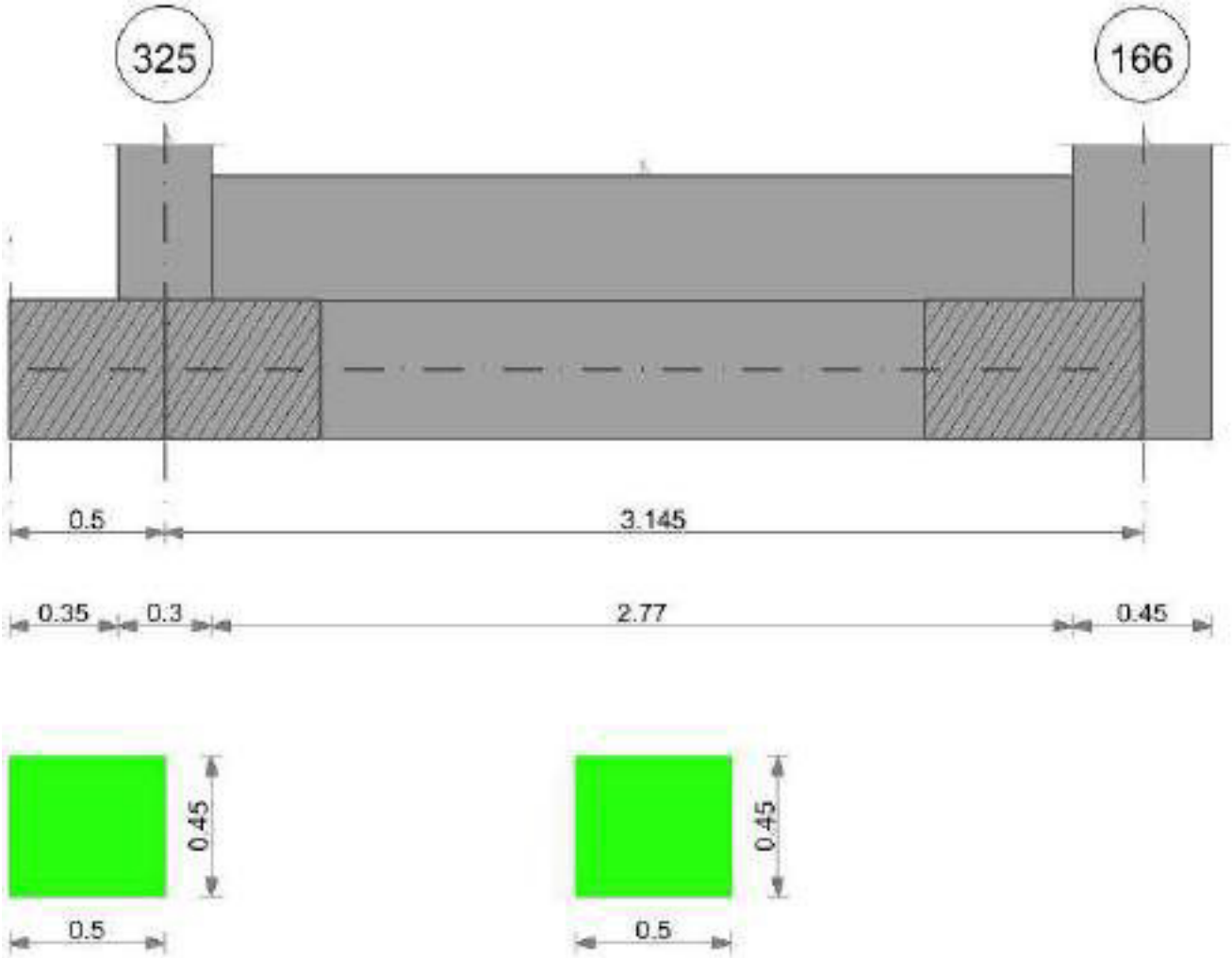
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	786	SLE RA 21	0.05	0.001	786	1029	SLE RA 20	0.05	0	786	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	786	SLE RA 1	0.05	0	786	786	SLE RA 1	0.05	0	786	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	786	SLE RA 1	0.05	0	786	786	SLE RA 1	0.05	0	786	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 20	0.19	0.02	786	1029	SLE RA 20	0.19	0	786	SLE RA 1	0.1	0	786	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	786	1029	SLE RA 1	0.19	0	786	SLE RA 1	0.1	0	786	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	786	1029	SLE RA 1	0.19	0	786	SLE RA 1	0.1	0	786	SLE RA 1	Si

CORDOLO 27

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

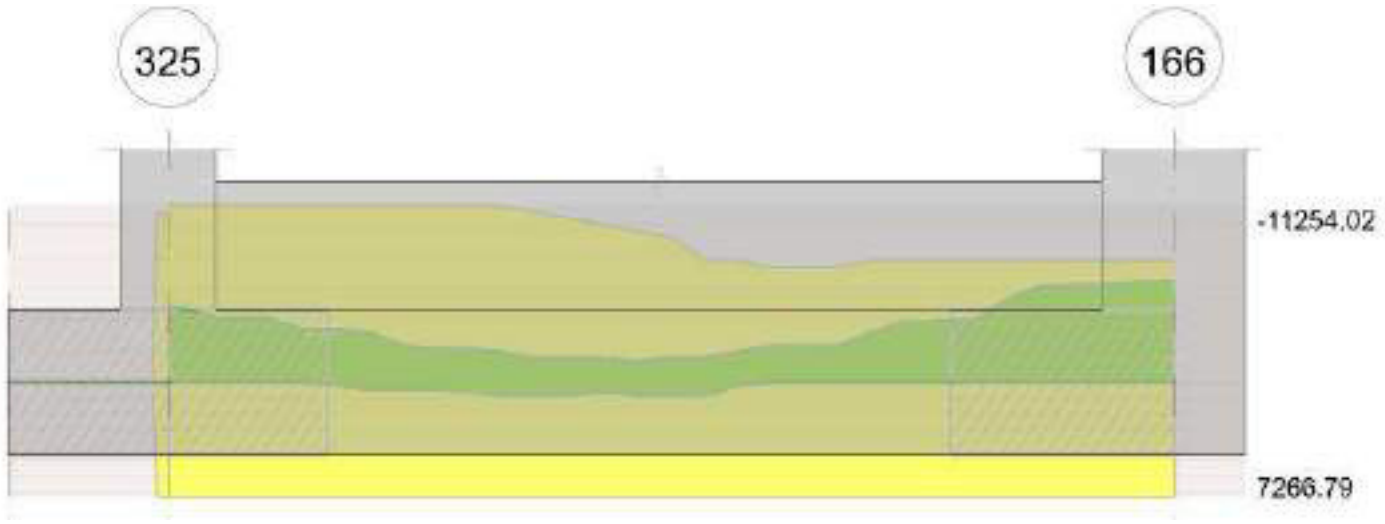
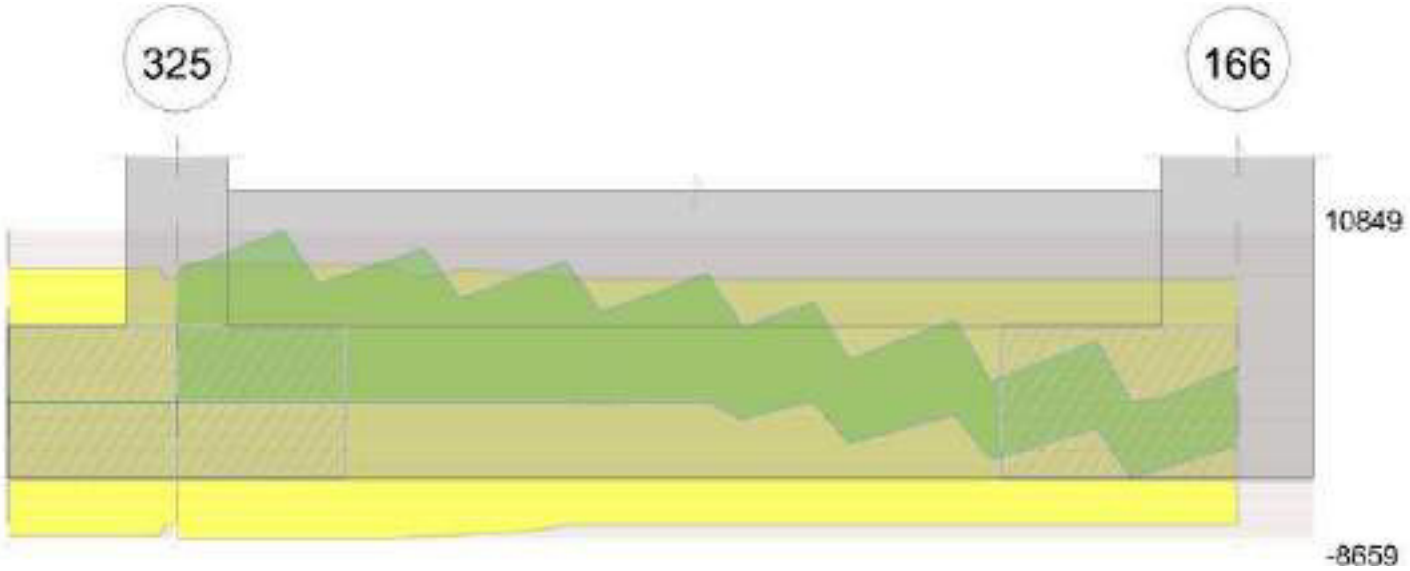


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 325 - 166, sezione R 50x45, aste 425, 424, 423, 422, 421, 420, 419, 418

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.42	0	1078	SLE RA 20	31934	1494000	0	36000000	971	SLE QP 2	28766	1120500	Si
0.15	0.42	0	1084	SLE RA 20	32126	1494000	0	36000000	977	SLE QP 2	28943	1120500	Si
1.57	0.42	0	1243	SLE RA 21	36822	1494000	0	36000000	1123	SLE QP 2	33264	1120500	Si
2.92	0.42	0	1506	SLE RA 21	44634	1494000	0	36000000	1365	SLE QP 2	40444	1120500	Si
3.14	0.42	0	1577	SLE RA 21	46712	1494000	0	36000000	1429	SLE QP 2	42350	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.37	1.1	SLU 35	ST	LT	-908	255	-29997	-2	0	19	0	0	1.1	9124	943	9.68	Si
3.37	1.1	SLV 3	SIS	LT	-31	5756	-21812	0	15	19	0	0	1.1	6635	5756	1.15	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
425,424,423,422,421,420,419,418	3.37	1.1	SLU 84	ST	BT	2.3	156232	36932	4.23	Si
425,424,423,422,421,420,419,418	3.37	1.1	SLV 3	SIS	LT	2.3	84337	21812	3.87	Si
425,424,423,422,421,420,419,418	3.37	1.1	SLD 16	SIS	BT	2.3	143110	27195	5.26	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	304	-36932	-21.76	2323	0	0	0.06	0	1.1	3.24	1496	2060	0	14430	
0	5756	-21812	-2686.83	2036.96	0	15	0.09	-0.12	0.85	3.18	1496	2060	37	0	0.07

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1998	-27195	1044.69	1886.61	0	-4	0.07	0.04	1.02	3.23	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.2	1.21	0.89	1.16	1.27	1	0.58	0.57	0.43	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.06	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

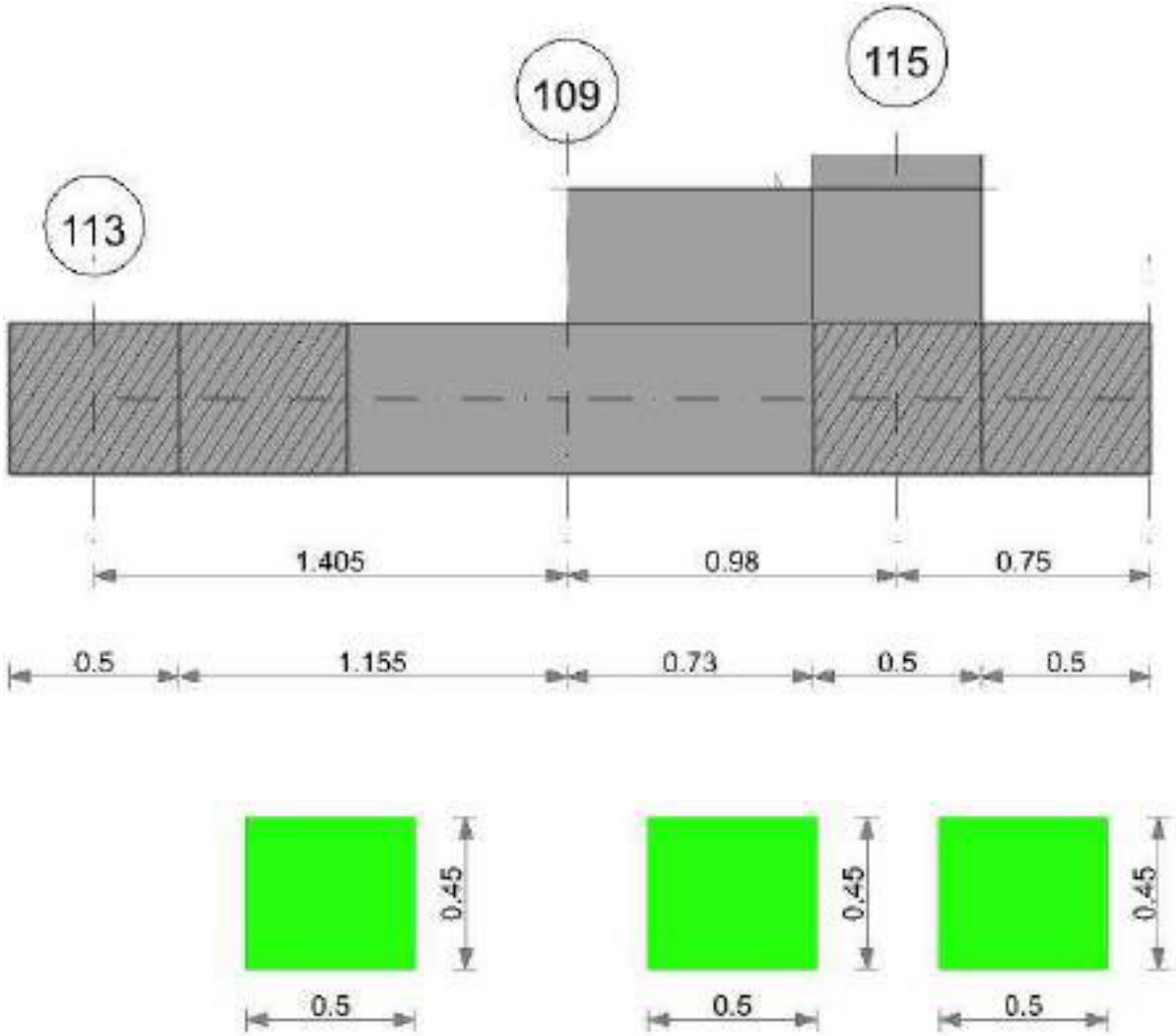
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	798	SLE RA 21	0.05	0.001	798	1042	SLE RA 20	0.05	0	798	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	798	SLE RA 1	0.05	0	798	798	SLE RA 1	0.05	0	798	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	798	SLE RA 1	0.05	0	798	798	SLE RA 1	0.05	0	798	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	798	1042	SLE RA 20	0.19	0	798	SLE RA 1	0.1	0	798	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	798	1042	SLE RA 1	0.19	0	798	SLE RA 1	0.1	0	798	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	798	1042	SLE RA 1	0.19	0	798	SLE RA 1	0.1	0	798	SLE RA 1	Si

CORDOLO 28

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

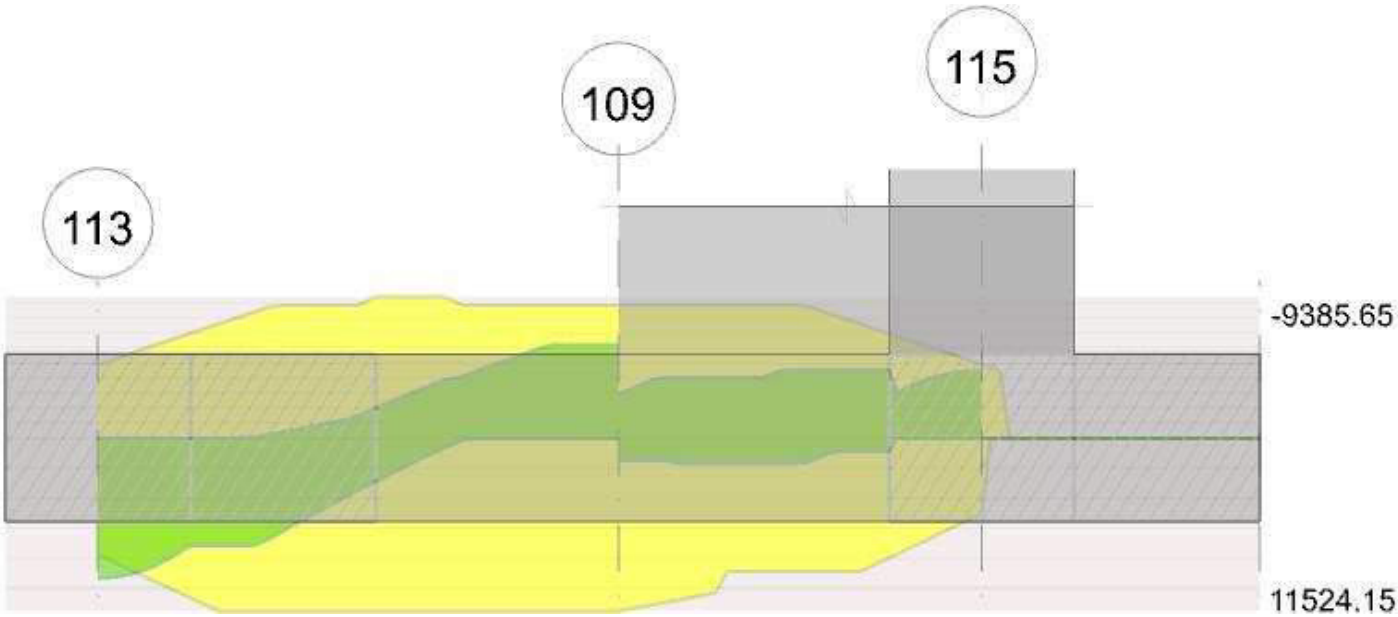
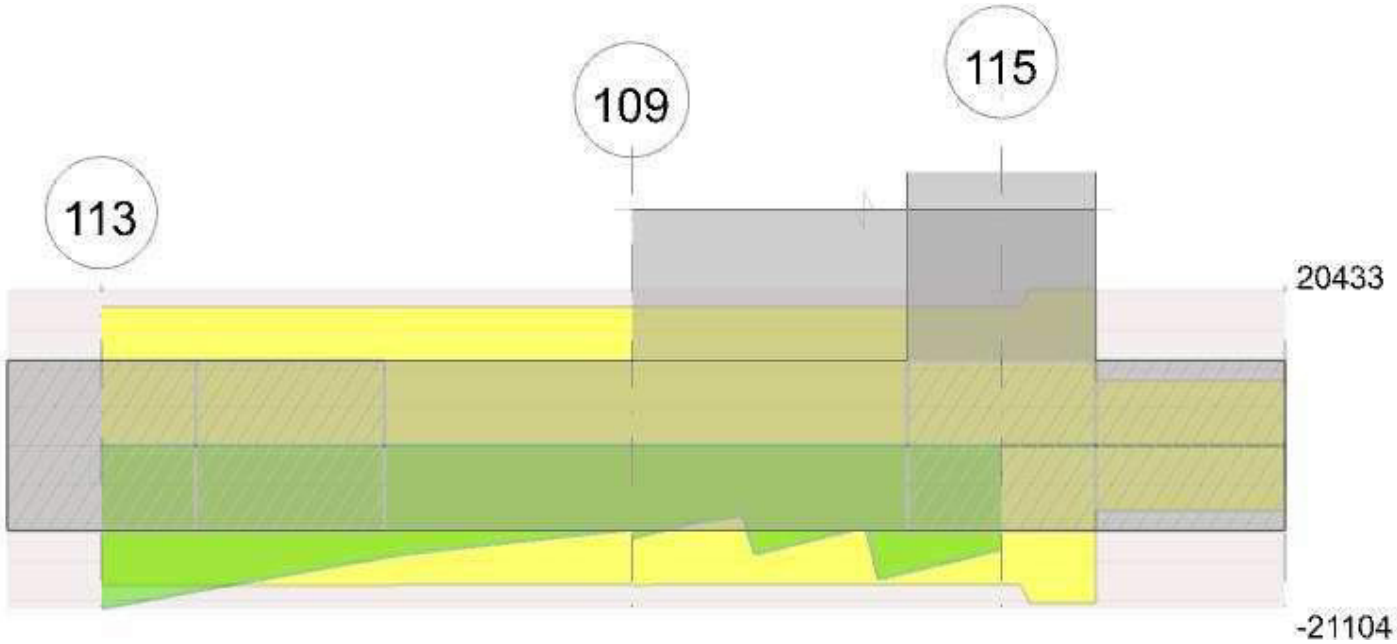


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 113 - 109, sezione R 50x45, asta 828

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.25	0.00049	0.053	0.000764	0.052	6846.12	SLU 84	6846.12	11255.56	0.133	1.64							Si
0.7	0.000628	0.053	0.000829	0.053	574.64	SLU 84	2886.74	12141.39	0.138	4.21	333.13	SLU 1	-1507.06	-9385.65	0.125	6.23	Si
1.4	0.000628	0.053	0.000829	0.053							-6308.26	SLU 84	-6308.26	-9385.65	0.125	1.49	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.25	0.00049	0.053	0.000764	0.052	7172.1	SLV 16	7172.1	10660.91	0.239	1.49							Si
0.7	0.000628	0.053	0.000829	0.053	1239.29	SLV 16	3469.96	11524.15	0.245	3.32	-505.82	SLV 1	-1455.95	-8869.16	0.213	6.09	Si
1.4	0.000628	0.053	0.000829	0.053							-6232.5	SLV 12	-6232.5	-8869.16	0.213	1.42	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000339	0.053	0.000549	0.052	8831.46	SLD 16	7498.35	7775.81	0.207	1.04							Si
0.25	0.00049	0.053	0.000764	0.052	5670.68	SLD 16	5670.68	10660.91	0.239	1.88							Si
0.7	0.000628	0.053	0.000829	0.053	738.24	SLD 16	2574.82	11524.15	0.245	4.48	-4.77	SLD 1	-1210.71	-8869.16	0.213	7.33	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.4	0.000628	0.053	0.000829	0.053							-5096.32	SLD 12	-5096.32	-8869.16	0.213	1.74	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000764	0	-21104	SLU 84	-21104	-8659	-63135	-18059	-18059	1	0.86	Si
0.7	0.0000129	0.000829	0	-14880	SLU 84	-14880	-8896	-63096	-18048	-18048	1	1.21	Si
1.4	0.0000129	0.000628	0	-9016	SLU 84	-9016	-8105	-63019	-18026	-18026	1	2	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000764	0	-18908	SLV 16	-18908	-8659	-63135	-18059	-18059	1	0.96	Si
0.25	0.0000129	0.000764	0	-17339	SLV 16	-17339	-8657	-63102	-18050	-18050	1	1.04	Si
0.7	0.0000129	0.000829	0	-14629	SLV 16	-14629	-8896	-63096	-18048	-18048	1	1.23	Si
1.4	0.0000129	0.000628	0	-10828	SLV 16	-10828	-8105	-63019	-18026	-18026	1	1.66	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000764	0	-16158	SLD 16	-16158	-8659	-63135	-18059	-18059	1	1.12	Si
0.25	0.0000129	0.000764	0	-14621	SLD 16	-14621	-8657	-63102	-18050	-18050	1	1.23	Si
0.7	0.0000129	0.000829	0	-11933	SLD 16	-11933	-8896	-63096	-18048	-18048	1	1.51	Si
1.4	0.0000129	0.000628	0	-8054	SLD 16	-8054	-8105	-63019	-18026	-18026	1	2.24	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	8067.71	21	6779.92	713518	1494000	34078331	36000000	7287.13	2	6120.4	644110	1120500			Si
0.25	5042.66	21	5042.66	456389	1494000	18447102	36000000	4547.83	2	4547.83	411604	1120500			Si
0.7	420.06	21	2124.23	108548	1494000	1597749	36000000	366.73	2	1907.27	97462	1120500			Si
1.4	-4652.97	21	-4652.97	233317	1494000	3566514	36000000	-4208.02	2	-4208.02	211005	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.25	inferiore	0.385	0.00054	0.000207	21	0.385	0.0005	0.000192	6	0.385	0.00048	0.000187	2	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 113 - 109, sezione R 50x45, asta 828

Campata 2 tra i fili 109 - 115, sezione R 50x45, aste 827, 826, 825

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1729	SLU 83	0.054	10142	5320	SLU 83	22918	Si
0.49	0.41	0.0006	1660	SLU 83	0.054	10142	5108	SLU 83	22918	Si
0.73	0.41	0.0006	1641	SLU 83	0.054	10142	5051	SLU 83	22918	Si
0.98	0.41	0.0006	1637	SLU 83	0.054	10142	5039	SLU 83	22918	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1181	SLD 1	0.134	11282	3635	SLD 1	26355	Si
0.49	0.41	0.0006	1162	SLD 1	0.134	11282	3577	SLD 1	26355	Si
0.73	0.41	0.0006	1159	SLD 1	0.134	11282	3568	SLD 1	26355	Si
0.98	0.41	0.0006	1164	SLD 1	0.134	11282	3582	SLD 1	26355	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000645	1268	SLE RA 20	34538	1494000	428275	36000000	1143	SLE QP 2	31136	1120500	Si
0.49	0.41	0.00000645	1217	SLE RA 20	33140	1494000	410939	36000000	1096	SLE QP 2	29854	1120500	Si
0.73	0.41	0.00000645	1203	SLE RA 20	32762	1494000	406253	36000000	1084	SLE QP 2	29510	1120500	Si
0.98	0.41	0.00000645	1200	SLE RA 20	32681	1494000	405248	36000000	1081	SLE QP 2	29440	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
2.63	1.1	SLU 41	ST	LT	-200	144	-23598	0	0	19	0	0	1.1	7178	246	29.12	Si
2.63	1.1	SLV 14	SIS	LT	-398	-3514	-18648	-1	-11	19	0	0	1.1	5672	3536	1.6	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
828,827,826,825	2.63	1.1	SLU 83	ST	BT	2.3	123045	28421	4.33	Si
828,827,826,825	2.63	1.1	SLV 3	SIS	LT	2.3	99499	20396	4.88	Si
828,827,826,825	2.63	1.1	SLD 1	SIS	BT	2.3	114765	19953	5.75	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-213	167	-28421	-287.46	-936.29	0	0	-0.03	-0.01	1.08	2.57	1496	2060	0	14430	
138	3724	-20396	-1788.69	84.35	0	10	0	-0.09	0.92	2.63	1496	2060	37	0	0.07
-536	1587	-19953	-847.77	-520.49	-2	5	-0.03	-0.04	1.02	2.58	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.08	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.27	1.27	0.86	1.16	1.27	1	0.7	0.7	0.58	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.08	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

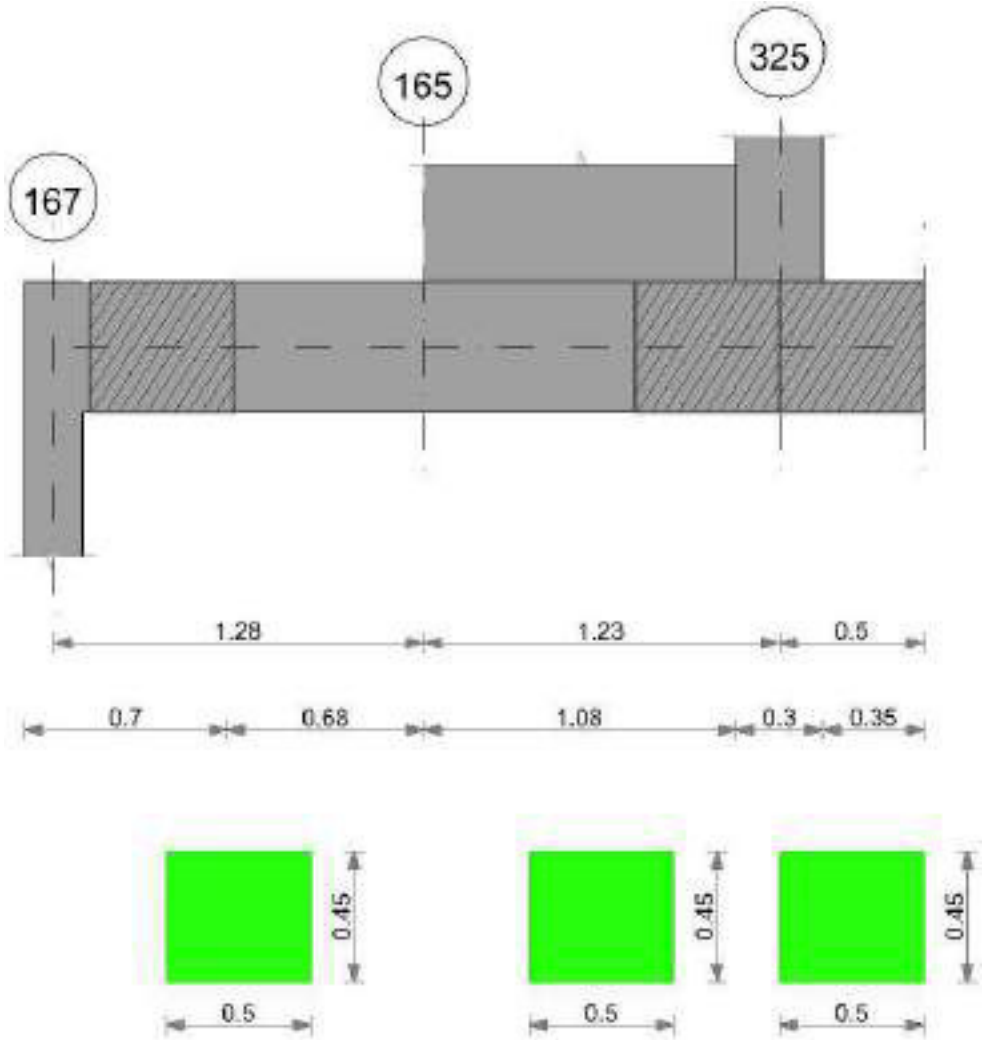
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	610	SLE RA 21	0.05	0	610	786	SLE RA 20	0.05	0	725	SLE RA 16	0.0033	0	SLE RA 1	Si
D	0.05	0	610	SLE RA 1	0.05	0	610	610	SLE RA 1	0.05	0	725	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	610	SLE RA 1	0.05	0	610	610	SLE RA 1	0.05	0	725	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	725	786	SLE RA 20	0.19	0.01	725	SLE RA 16	0.1	0	610	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	610	725	SLE RA 1	0.19	0	610	SLE RA 1	0.1	0	725	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	610	725	SLE RA 1	0.19	0	610	SLE RA 1	0.1	0	725	SLE RA 1	Si

CORDOLO 29

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

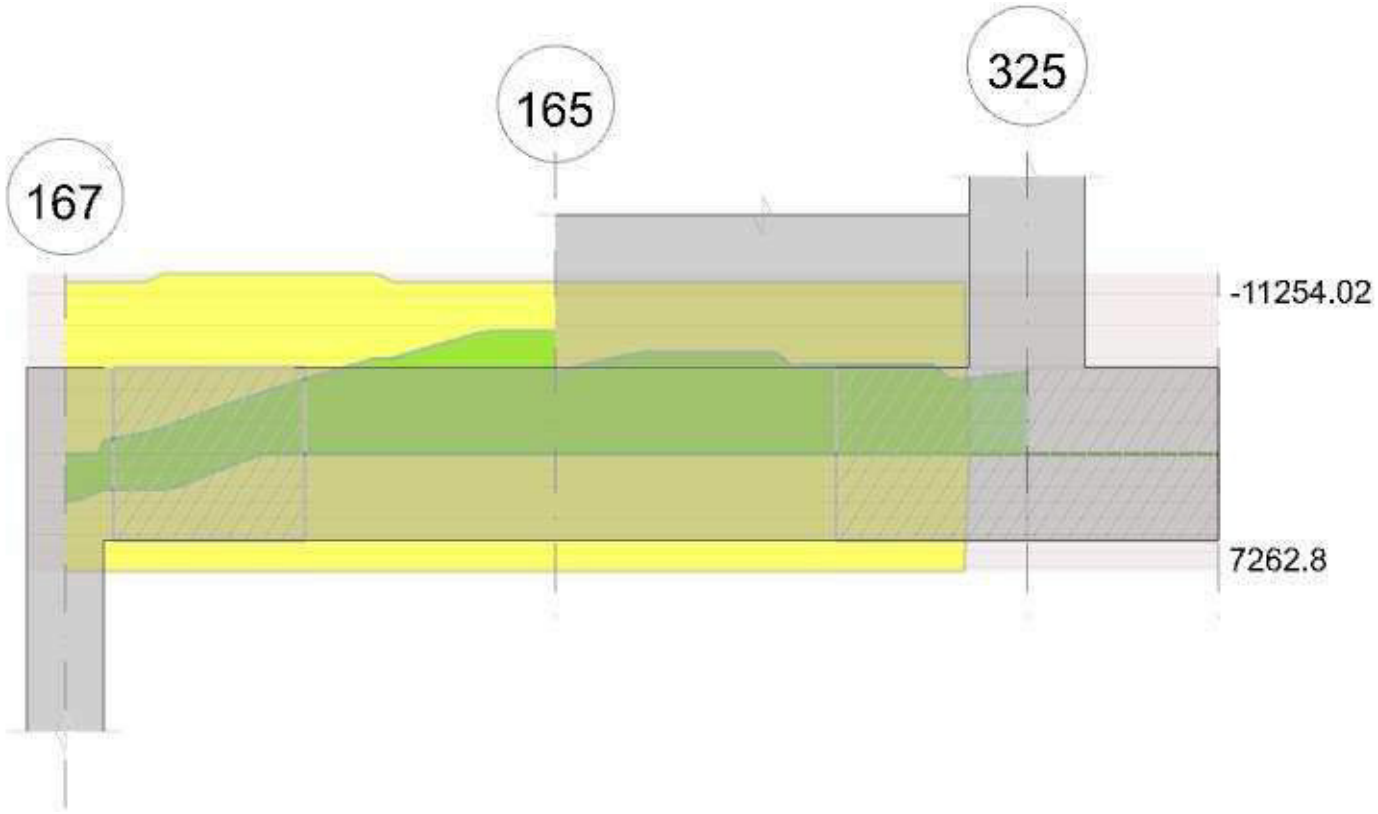
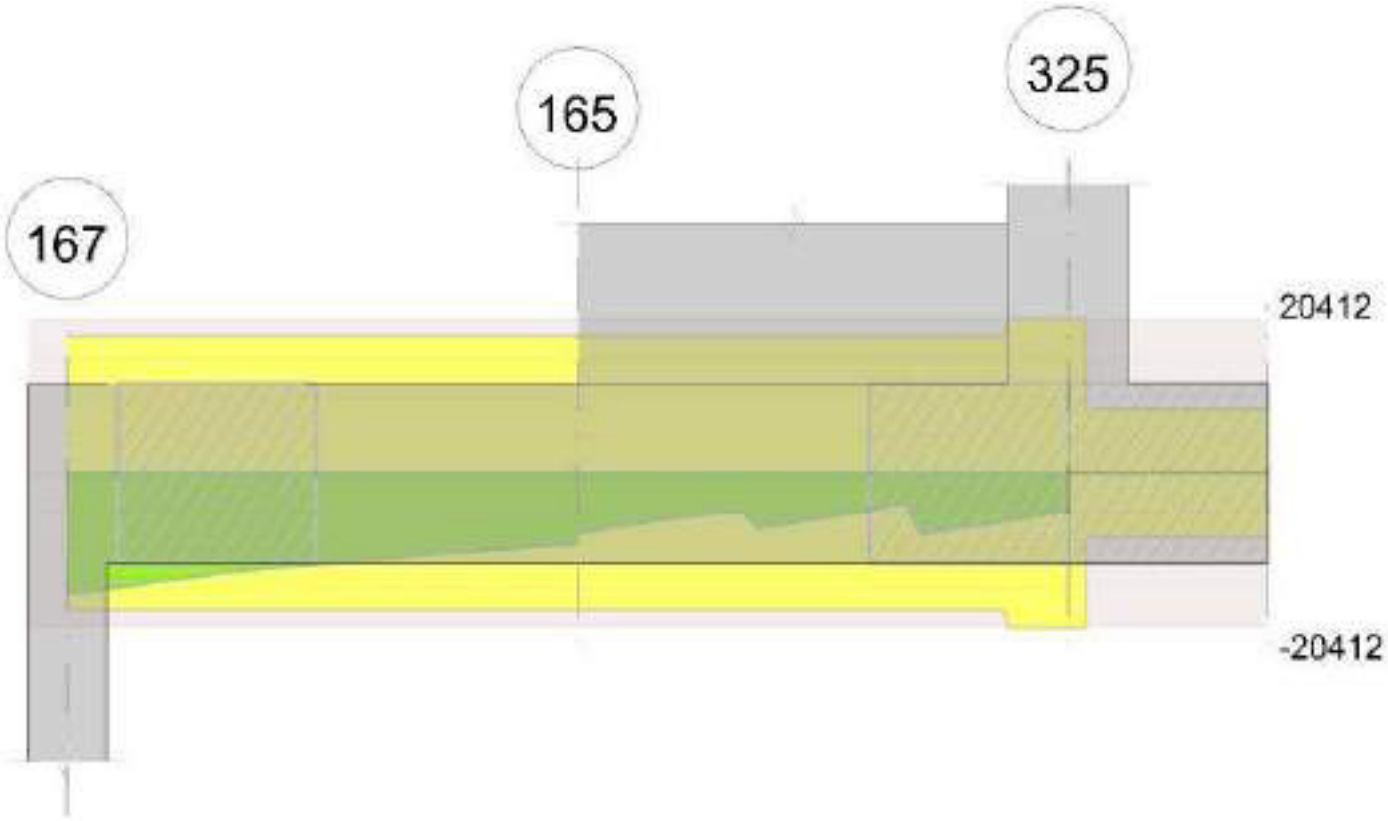


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 167 - 165, sezione R 50x45, asta 832

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	2799.92	SLU 84	2459.17	7767.92	0.117	3.16							Si
0.1	0.000763	0.052	0.000509	0.052	1696.27	SLU 84	1696.27	7767.92	0.117	4.58	926.84	SLU 1	-282.62	-11254.02	0.132	39.82	Si
0.64	0.000763	0.052	0.000509	0.052							-3394.77	SLU 84	-4770.84	-11254.02	0.132	2.36	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.11	0.000763	0.052	0.000509	0.052							-6675.26	SLU 84	-7616.86	-11254.02	0.132	1.48	Si
1.28	0.000763	0.052	0.000509	0.052							-7616.86	SLU 84	-7616.86	-11254.02	0.132	1.48	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	3231.87	SLV 8	2917.16	7262.8	0.194	2.49							Si
0.1	0.000763	0.052	0.000509	0.052	2195.15	SLV 8	2195.15	7262.8	0.194	3.31	-121.45	SLV 9	-822.77	-10716.86	0.238	13.03	Si
0.64	0.000763	0.052	0.000509	0.052							-2930.57	SLV 11	-4345.82	-10716.86	0.238	2.47	Si
1.11	0.000763	0.052	0.000509	0.052							-6497.12	SLV 7	-7652.92	-10716.86	0.238	1.4	Si
1.28	0.000763	0.052	0.000509	0.052							-7652.92	SLV 7	-7652.92	-10716.86	0.238	1.4	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	2413.3	SLD 8	2147.67	7262.8	0.194	3.38							Si
0.1	0.000763	0.052	0.000509	0.052	1545.64	SLD 8	1545.64	7262.8	0.194	4.7	528.06	SLD 9	-468.49	-10716.86	0.238	22.88	Si
0.64	0.000763	0.052	0.000509	0.052							-2602.73	SLD 11	-3736.18	-10716.86	0.238	2.87	Si
1.11	0.000763	0.052	0.000509	0.052							-5387.34	SLD 7	-6242.93	-10716.86	0.238	1.72	Si
1.28	0.000763	0.052	0.000509	0.052							-6242.93	SLD 7	-6242.93	-10716.86	0.238	1.72	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000509	0	-15993	SLU 84	-15993	-7764	-63178	-18053	-18053	1	1.13	Si
0.1	0.0000129	0.000509	0	-15258	SLU 84	-15258	-7764	-63178	-18053	-18053	1	1.18	Si
0.64	0.0000129	0.000763	0	-11451	SLU 84	-11451	-8659	-63178	-18053	-18053	1	1.58	Si
1.28	0.0000129	0.000763	0	-7260	SLU 84	-7260	-8659	-63178	-18053	-18053	1	2.49	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000509	0	-15022	SLV 7	-15022	-7764	-63178	-18053	-18053	1	1.2	Si
0.1	0.0000129	0.000509	0	-14517	SLV 7	-14517	-7764	-63178	-18053	-18053	1	1.24	Si
0.64	0.0000129	0.000763	0	-11952	SLV 7	-11952	-8659	-63178	-18053	-18053	1	1.51	Si
1.28	0.0000129	0.000763	0	-9248	SLV 7	-9248	-8659	-63178	-18053	-18053	1	1.95	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000509	0	-12574	SLD 7	-12574	-7764	-63178	-18053	-18053	1	1.44	Si
0.1	0.0000129	0.000509	0	-12074	SLD 7	-12074	-7764	-63178	-18053	-18053	1	1.5	Si
0.64	0.0000129	0.000763	0	-9509	SLD 7	-9509	-8659	-63178	-18053	-18053	1	1.9	Si
1.28	0.0000129	0.000763	0	-6740	SLD 7	-6740	-8659	-63178	-18053	-18053	1	2.68	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	2047.86	21	1796.46	91461	1494000	1405304	36000000	1771.59	2	1544.6	78638	1120500			Si
0.1	1233.63	21	1233.63	62806	1494000	965024	36000000	1036.85	2	1036.85	52788	1120500			Si
0.64	-2522.05	21	-3537.12	184464	1494000	2701208	36000000	-2345.66	2	-3257.14	169862	1120500			Si
1.28	-5636.55	21	-5636.55	507130	1494000	20506978	36000000	-5135.26	2	-5135.26	462028	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
1.11	superiore	0.375	0.0006	0.000224	21	0.375	0.00056	0.000209	6	0.375	0.00054	0.000204	2	Si
1.28	superiore	0.375	0.0006	0.000224	21	0.375	0.00056	0.000209	6	0.375	0.00054	0.000204	2	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 167 - 165, sezione R 50x45, asta 832

Campata 2 tra i fili 165 - 325, sezione R 50x45, aste 831, 830, 829

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1552	SLU 83	0.054	10132	4777	SLU 83	22892	Si
0.61	0.41	0.0006	1470	SLU 83	0.054	10132	4522	SLU 83	22892	Si
1.08	0.41	0.0006	1463	SLU 83	0.054	10132	4502	SLU 83	22892	Si
1.23	0.41	0.0006	1470	SLU 83	0.054	10132	4525	SLU 83	22892	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1093	SLD 14	0.134	11271	3362	SLD 14	26326	Si
0.61	0.41	0.0006	1061	SLD 14	0.134	11271	3264	SLD 14	26326	Si
1.08	0.41	0.0006	1065	SLD 14	0.134	11271	3276	SLD 14	26326	Si
1.23	0.41	0.0006	1071	SLD 14	0.134	11271	3294	SLD 14	26326	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000644	1139	SLE RA 20	31026	1494000	384717	36000000	1027	SLE QP 2	27970	1120500	Si
0.61	0.41	0.00000644	1077	SLE RA 20	29341	1494000	363829	36000000	970	SLE QP 2	26424	1120500	Si
1.08	0.41	0.00000644	1072	SLE RA 20	29203	1494000	362118	36000000	966	SLE QP 2	26302	1120500	Si
1.23	0.41	0.00000644	1078	SLE RA 20	29351	1494000	363950	36000000	971	SLE QP 2	26439	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
2.61	1.1	SLU 41	ST	LT	-535	248	-19598	-2	1	19	0	0	1.1	5961	590	10.1	Si
2.61	1.1	SLV 1	SIS	LT	-719	3354	-14740	-3	13	19	0	0	1.1	4484	3430	1.31	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
832,831,830,829	2.61	1.1	SLU 83	ST	BT	2.3	122435	23675	5.17	Si
832,831,830,829	2.61	1.1	SLV 1	SIS	LT	2.3	77932	14740	5.29	Si
832,831,830,829	2.61	1.1	SLD 14	SIS	BT	2.3	114793	17085	6.72	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-618	294	-23675	-74.45	-1018.87	-1	1	-0.04	0	1.09	2.52	1496	2060	0	14430	
-719	3354	-14740	-1578.69	-1152.25	-3	13	-0.08	-0.11	0.89	2.45	1496	2060	37	0	0.07
-710	-1130	-17085	598.74	-643.34	-2	-4	-0.04	0.04	1.03	2.53	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.09	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.27	1.28	0.86	1.16	1.27	1	0.64	0.63	0.49	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.08	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

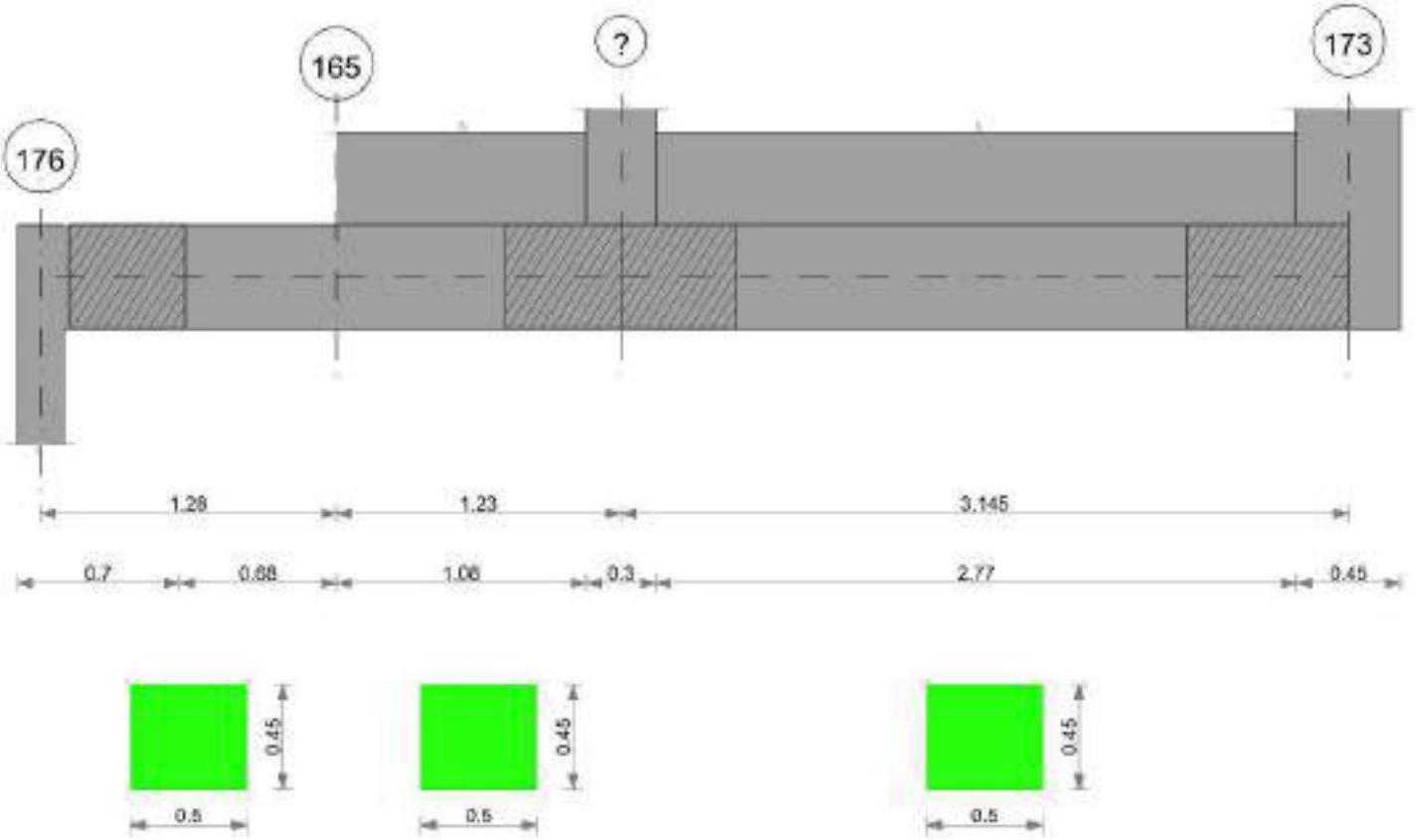
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	691	SLE RA 21	0.05	0.001	691	798	SLE RA 21	0.05	0	726	SLE RA 4	0.0033	0	SLE RA 4	Si
D	0.05	0	691	SLE RA 1	0.05	0	691	691	SLE RA 1	0.05	0	726	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	691	SLE RA 1	0.05	0	691	691	SLE RA 1	0.05	0	726	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	691	726	SLE RA 21	0.19	0	691	SLE RA 1	0.1	0.01	726	SLE RA 4	Si
D	0.19	0	SLE RA 1	0.19	0	691	726	SLE RA 1	0.19	0	691	SLE RA 1	0.1	0	726	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	691	726	SLE RA 1	0.19	0	691	SLE RA 1	0.1	0	726	SLE RA 1	Si

CORDOLO 30

Geometria



Caratteristiche dei materiali

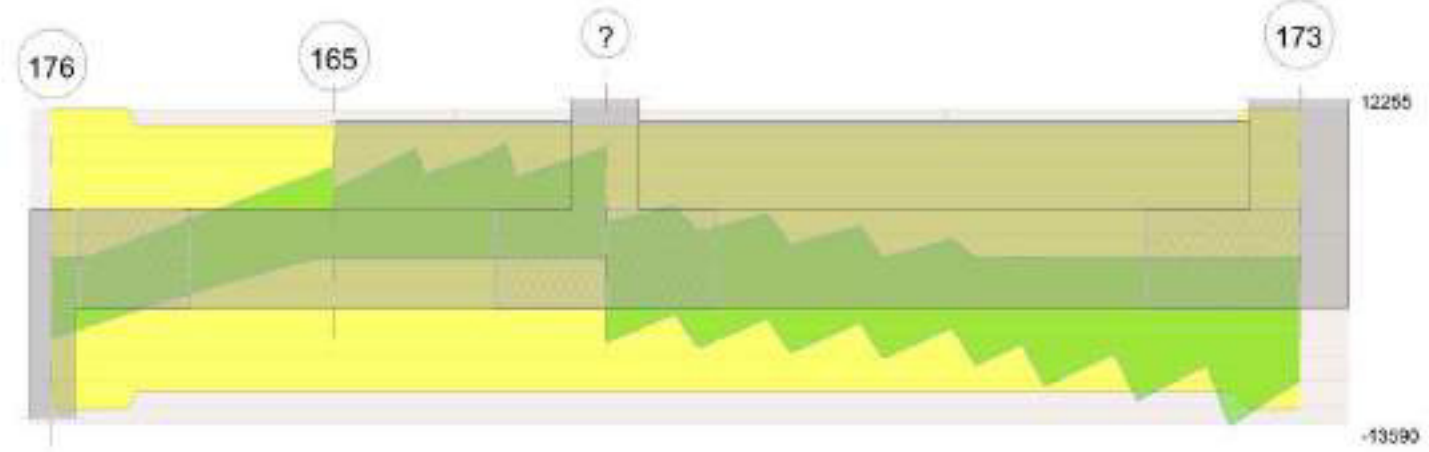
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 176 - 165, sezione R 50x45, asta 417

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-3361.17	SLU 84	-3376.88	-7755.45	0.113	2.3	Si
1.28	0.000509	0.052	0.000509	0.052							-1434.67	SLU 75	-2282.23	-7755.45	0.113	3.4	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-2880.31	SLV 11	-2952.83	-7266.79	0.197	2.46	Si
1.28	0.000509	0.052	0.000509	0.052	783.9	SLV 14	783.9	7266.79	0.197	9.27	-2920.49	SLV 3	-2939.79	-7266.79	0.197	2.47	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-2553.01	SLD 11	-2554.96	-7266.79	0.197	2.84	Si
1.28	0.000509	0.052	0.000509	0.052							-1863.2	SLD 3	-2183.99	-7266.79	0.197	3.33	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-5387	SLU 84	-5387	-8455	-71432	-12255	-12255	1	2.28	Si
0.1	0.0000077	0	0	-4414	SLU 84	-4414	-8455	-71432	-12255	-12255	1	2.78	Si
0.64	0.0000077	0	0	594	SLU 83	594	7764	63178	10839	10839	1	18.24	Si
1.28	0.0000077	0.000509	0	6071	SLU 83	6071	7764	63178	10839	10839	1	1.79	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-6525	SLV 3	-6525	-8455	-71432	-12255	-12255	1	1.88	Si
0.1	0.0000077	0	0	-5893	SLV 3	-5893	-8455	-71432	-12255	-12255	1	2.08	Si
0.64	0.0000077	0	0	3276	SLV 14	3276	7764	63178	10839	10839	1	3.31	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.64	0.0000077	0	0	-2755	SLV 3	-2755	-7764	-63178	-10839	-10839	1	3.93	Si
1.28	0.0000077	0.000509	0	7468	SLV 14	7468	7764	63178	10839	10839	1	1.45	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-4946	SLD 3	-4946	-8455	-71432	-12255	-12255	1	2.48	Si
0.1	0.0000077	0	0	-4301	SLD 3	-4301	-8455	-71432	-12255	-12255	1	2.85	Si
0.64	0.0000077	0	0	1551	SLD 14	1551	7764	63178	10839	10839	1	6.99	Si
0.64	0.0000077	0	0	-1030	SLD 3	-1030	-7764	-63178	-10839	-10839	1	10.52	Si
1.28	0.0000077	0.000509	0	5452	SLD 14	5452	7764	63178	10839	10839	1	1.99	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1471.44	20	-1471.44	-87196	1494000	0	36000000	-1303.36	2	-1303.36	-77236	1120500			Si
0.1	-1798.79	20	-2228.26	-132045	1494000	0	36000000	-1612.21	2	-2022.1	-119828	1120500			Si
0.64	-2491.23	21	-2501.21	132298	1494000	1984468	36000000	-2296.13	2	-2301.22	121719	1120500			Si
1.28	-1087.72	12	-1708.59	90373	1494000	1355597	36000000	-1068.3	2	-1625.39	85973	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 176 - 165, sezione R 50x45, asta 417

Campata 2 tra i fili 165 - ?, sezione R 50x45, aste 416, 415, 414

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1588	SLU 83	0.033	6137	4886	SLU 83	15877	Si
0.61	0.41	0.0004	1511	SLU 83	0.033	6137	4650	SLU 83	15877	Si
1.08	0.41	0.0004	1509	SLU 83	0.033	6137	4643	SLU 83	15877	Si
1.23	0.41	0.0004	1517	SLU 83	0.033	6137	4667	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1142	SLD 14	0.105	6852	3514	SLD 14	15877	Si
0.61	0.41	0.0004	1114	SLD 14	0.105	6852	3429	SLD 14	15877	Si
1.08	0.41	0.0004	1121	SLD 14	0.105	6852	3449	SLD 14	15877	Si
1.23	0.41	0.0004	1127	SLD 14	0.105	6852	3468	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000387	1165	SLE RA 20	32795	1494000	406658	36000000	1051	SLE QP 2	29572	1120500	Si
0.61	0.41	0.00000387	1108	SLE RA 20	31183	1494000	386673	36000000	998	SLE QP 2	28088	1120500	Si
1.08	0.41	0.00000387	1106	SLE RA 20	31126	1494000	385964	36000000	996	SLE QP 2	28039	1120500	Si
1.23	0.41	0.00000387	1112	SLE RA 20	31285	1494000	387934	36000000	1002	SLE QP 2	28186	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili ? - 173, sezione R 50x45, aste 413, 412, 411, 410, 409, 408, 407, 406

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1517	SLU 83	0.033	6137	4667	SLU 83	15877	Si
0.15	0.41	0.0004	1525	SLU 83	0.033	6137	4693	SLU 83	15877	Si
1.57	0.41	0.0004	1731	SLU 84	0.033	6137	5325	SLU 84	15877	Si
2.92	0.41	0.0004	2079	SLU 84	0.033	6137	6397	SLU 84	15877	Si
3.14	0.41	0.0004	2174	SLU 84	0.033	6137	6689	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1127	SLD 14	0.105	6852	3468	SLD 14	15877	Si
0.15	0.41	0.0004	1134	SLD 14	0.105	6852	3489	SLD 14	15877	Si
1.57	0.41	0.0004	1277	SLD 15	0.105	6852	3930	SLD 15	15877	Si
2.92	0.41	0.0004	1534	SLD 15	0.105	6852	4720	SLD 15	15877	Si
3.14	0.41	0.0004	1604	SLD 15	0.105	6852	4936	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000387	1112	SLE RA 20	31285	1494000	387934	36000000	1002	SLE QP 2	28186	1120500	Si
0.15	0.41	0.00000387	1118	SLE RA 20	31462	1494000	390133	36000000	1007	SLE QP 2	28350	1120500	Si
1.57	0.41	0.00000387	1269	SLE RA 21	35717	1494000	442891	36000000	1147	SLE QP 2	32271	1120500	Si
2.92	0.41	0.00000387	1526	SLE RA 21	42958	1494000	532674	36000000	1383	SLE QP 2	38930	1120500	Si
3.14	0.41	0.00000387	1596	SLE RA 21	44925	1494000	557068	36000000	1447	SLE QP 2	40734	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.98	1.1	SLU 35	ST	LT	-1522	524	-52234	-2	1	19	0	0	1.1	15888	1610	9.87	Si
5.98	1.1	SLV 3	SIS	LT	715	9432	-37340	1	14	19	0	0	1.1	11358	9459	1.2	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
417,416,415,414,413,412,411,410,409,408,407,406	5.98	1.1	SLU 84	ST	BT	2.3	275732	64359	4.28	Si
417,416,415,414,413,412,411,410,409,408,407,406	5.98	1.1	SLV 3	SIS	LT	2.3	153999	37340	4.12	Si
417,416,415,414,413,412,411,410,409,408,407,406	5.98	1.1	SLD 16	SIS	BT	2.3	253480	47420	5.35	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	628	-64359	-108.75	3532.73	0	1	0.05	0	1.1	5.87	1496	2060	0	14430	
0	9432	-37340	-4430.15	1355.99	0	14	0.04	-0.12	0.86	5.91	1496	2060	37	0	0.07
0	-3287	-47420	1712.93	3879.88	0	-4	0.08	0.04	1.03	5.82	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.11	1.11	0.94	1.16	1.27	1	0.58	0.57	0.43	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

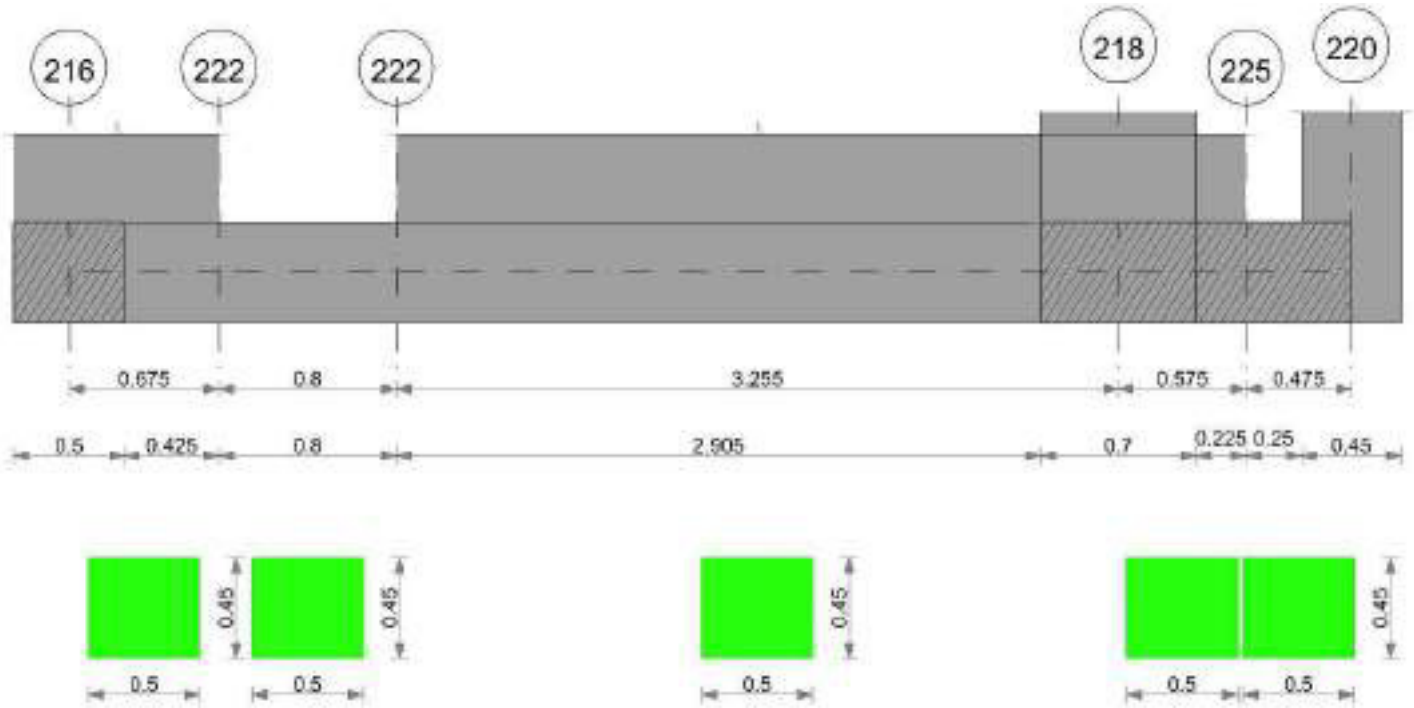
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	623	SLE RA 21	0.05	0.002	623	1044	SLE RA 20	0.05	0	728	SLE RA 7	0.0033	0	SLE RA 21	Si
D	0.05	0	623	SLE RA 1	0.05	0	623	623	SLE RA 1	0.05	0	728	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	623	SLE RA 1	0.05	0	623	623	SLE RA 1	0.05	0	728	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 20	0.19	0.03	623	728	SLE RA 21	0.19	0	623	SLE RA 1	0.1	0.01	728	SLE RA 21	Si
D	0.19	0	SLE RA 1	0.19	0	623	728	SLE RA 1	0.19	0	623	SLE RA 1	0.1	0	728	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	623	728	SLE RA 1	0.19	0	623	SLE RA 1	0.1	0	728	SLE RA 1	Si

CORDOLO 31

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

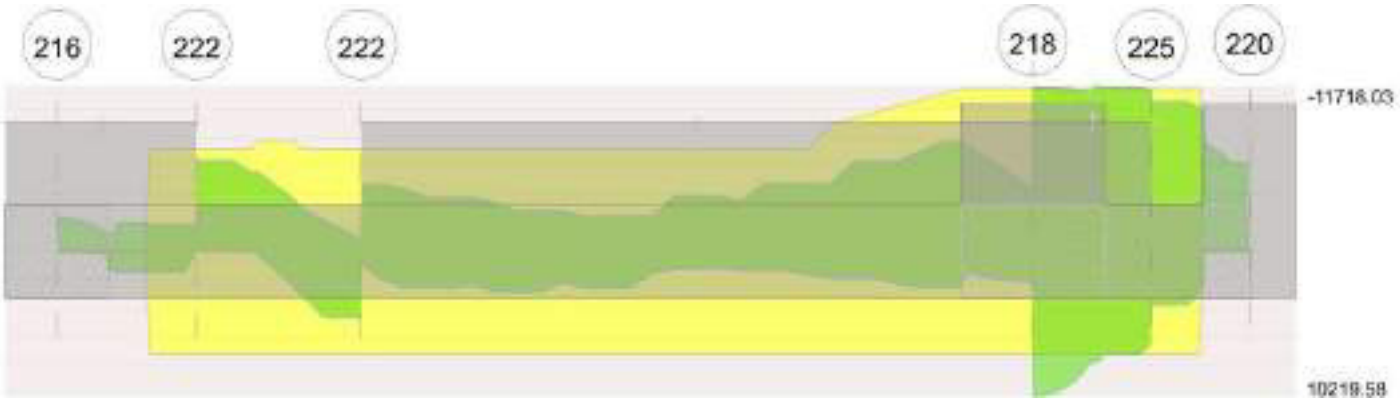
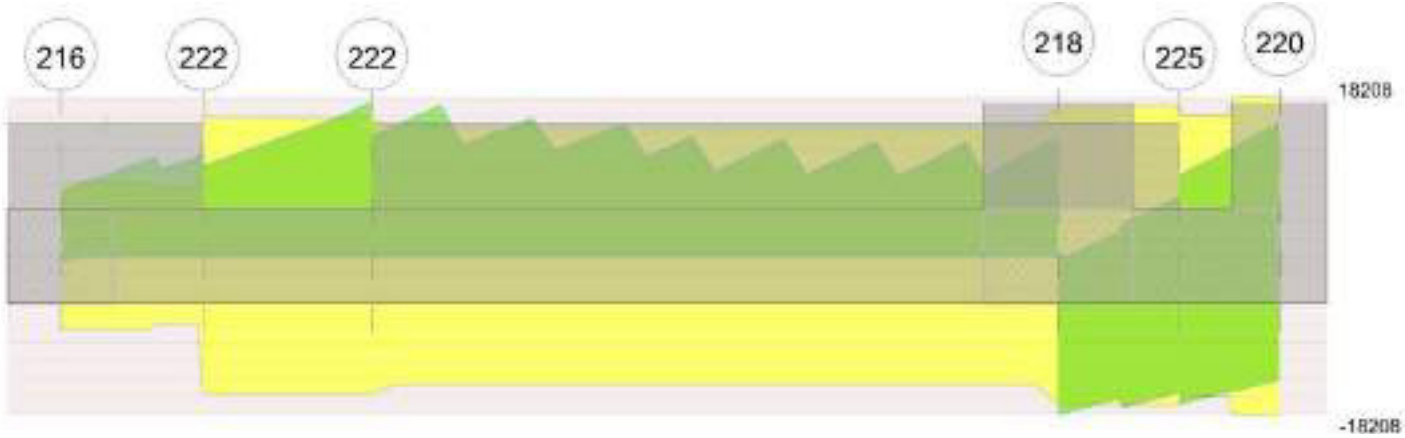


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 222 - 222, sezione R 50x45, asta 326

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-6741.24	SLU 84	-6741.24	-7755.45	0.113	1.15	Si
0.05	0.000509	0.052	0.000509	0.052							-6249.2	SLU 84	-6741.24	-7755.45	0.113	1.15	Si
0.4	0.000509	0.052	0.000509	0.052	-1457.22	SLU 1	243.22	7755.45	0.113	31.89	-2307	SLU 84	-4509.01	-7755.45	0.113	1.72	Si
0.8	0.000509	0.052	0.000509	0.052	3849.07	SLU 84	3849.07	7755.45	0.113	2.01							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-6410.8	SLV 16	-6410.8	-7266.79	0.197	1.13	Si
0.05	0.000509	0.052	0.000509	0.052							-5895.5	SLV 16	-6410.8	-7266.79	0.197	1.13	Si
0.4	0.000509	0.052	0.000509	0.052	-600.05	SLV 6	1529.26	7266.79	0.197	4.75	-2525.29	SLV 11	-4181.89	-7266.79	0.197	1.74	Si
0.8	0.000509	0.052	0.000509	0.052	4681.11	SLV 14	4681.11	7266.79	0.197	1.55	510.24	SLV 3	-913.62	-7266.79	0.197	7.95	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-5347.03	SLD 16	-5347.03	-7266.79	0.197	1.36	Si
0.05	0.000509	0.052	0.000509	0.052							-4937.47	SLD 16	-5347.03	-7266.79	0.197	1.36	Si
0.4	0.000509	0.052	0.000509	0.052	-1139.69	SLD 6	759.82	7266.79	0.197	9.56	-1985.65	SLD 11	-3534.9	-7266.79	0.197	2.06	Si
0.8	0.000509	0.052	0.000509	0.052	3505.28	SLD 10	3505.28	7266.79	0.197	2.07	1686.07	SLD 7	-71.15	-7266.79	0.197	102.14	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	8939	SLU 84	8939	7764	63178	15852	15852	1	1.77	Si
0.4	0.0000113	0.000509	0	13232	SLU 84	13232	7764	63178	15852	15852	1	1.2	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	10249	SLV 14	10249	7764	63178	15852	15852	1	1.55	Si
0.4	0.0000113	0.000509	0	13701	SLV 14	13701	7764	63178	15852	15852	1	1.16	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	7833	SLD 14	7833	7764	63178	15852	15852	1	2.02	Si
0.4	0.0000113	0.000509	0	10971	SLD 14	10971	7764	63178	15852	15852	1	1.44	Si
0.8	0.0000113	0.000509	0	14135	SLD 14	14135	7764	63178	15852	15852	1	1.12	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-4971.65	21	-4971.65	525770	1494000	26758870	36000000	-4556.4	2	-4556.4	481855	1120500			Si
0.4	-1704.54	21	-3327.24	175989	1494000	2639842	36000000	-1562.67	2	-3049.56	161302	1120500			Si
0.8	2833.52	21	2833.52	149875	1494000	2248120	36000000	2595.67	2	2595.67	137294	1120500			Si

Campata 5 tra i fili 225 - 220, sezione R 50x45, asta 315

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052							-5146.05	SLU 84	-5928.36	-12059.84	0.137	2.03	Si
0.24	0.000823	0.052	0.000509	0.052							-6088.17	SLU 84	-6116.25	-12059.84	0.137	1.97	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052	3762.55	SLV 3	3762.55	7261.11	0.193	1.93	-10610.8	SLV 14	-10610.8	-11488.1	0.247	1.08	Si
0.24	0.000823	0.052	0.000509	0.052	-48.36	SLV 3	2794.95	7261.11	0.193	2.6	-8127.88	SLV 14	-10061.57	-11488.1	0.247	1.14	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052							-6492.9	SLD 14	-6492.9	-11488.1	0.247	1.77	Si
0.24	0.000823	0.052	0.000509	0.052							-5813.08	SLD 14	-6378.11	-11488.1	0.247	1.8	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	-5616	SLU 83	-5616	-7759	-63117	-17138	-17138	1	3.05	Si
0.02	0.0000115	0	0	-5405	SLU 83	-5405	-7759	-63117	-16088	-16088	1	2.98	Si
0.24	0.0000115	0	0	-2409	SLU 83	-2409	-7759	-63117	-16088	-16088	1	6.68	Si
0.25	0.0000115	0	0	-2237	SLU 83	-2237	-8455	-71432	-18208	-18208	1	8.14	Si
0.47	0.0000115	0	0	964	SLU 84	964	8455	71432	18208	18208	1	18.88	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	9217	SLV 14	9217	7759	63117	17138	17138	1	1.86	Si
0	0.0000122	0	0	-16968	SLV 3	-16968	-7764	-63178	-17154	-17154	1	1.01	Si
0.02	0.0000115	0	0	9405	SLV 14	9405	7759	63117	16088	16088	1	1.71	Si
0.24	0.0000115	0	0	12139	SLV 14	12139	7759	63117	16088	16088	1	1.33	Si
0.24	0.0000115	0	0	-15548	SLV 3	-15548	-7759	-63117	-16088	-16088	1	1.03	Si
0.25	0.0000115	0	0	12298	SLV 14	12298	8455	71432	18208	18208	1	1.48	Si
0.25	0.0000115	0	0	-15475	SLV 3	-15475	-8455	-71432	-18208	-18208	1	1.18	Si
0.47	0.0000115	0	0	15285	SLV 14	15285	8455	71432	18208	18208	1	1.19	Si
0.47	0.0000115	0	0	-14205	SLV 3	-14205	-8455	-71432	-18208	-18208	1	1.28	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	1718	SLD 14	1718	7759	63117	17138	17138	1	9.97	Si
0	0.0000122	0	0	-9470	SLD 3	-9470	-7759	-63117	-17138	-17138	1	1.81	Si
0.02	0.0000115	0	0	1880	SLD 14	1880	7759	63117	16088	16088	1	8.56	Si
0.02	0.0000115	0	0	-9346	SLD 3	-9346	-7759	-63117	-16088	-16088	1	1.72	Si
0.24	0.0000115	0	0	4209	SLD 14	4209	7759	63117	16088	16088	1	3.82	Si
0.24	0.0000115	0	0	-7619	SLD 3	-7619	-7759	-63117	-16088	-16088	1	2.11	Si
0.25	0.0000115	0	0	4344	SLD 14	4344	8455	71432	18208	18208	1	4.19	Si
0.25	0.0000115	0	0	-7521	SLD 3	-7521	-8455	-71432	-18208	-18208	1	2.42	Si
0.47	0.0000115	0	0	6838	SLD 14	6838	8455	71432	18208	18208	1	2.66	Si
0.47	0.0000115	0	0	-5758	SLD 3	-5758	-8455	-71432	-18208	-18208	1	3.16	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-3781.11	21	-4363.56	226904	1494000	3304917	36000000	-3424.12	2	-3973.52	206622	1120500			Si
0.24	-4483.15	21	-4504.23	234219	1494000	3411457	36000000	-4088.12	2	-4108.51	213642	1120500			Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 216 - 222, sezione R 50x45, aste 328, 327

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1940	SLU 84	0.02	3468	5970	SLU 84	15877	Si
0.25	0.41	0.0002	1922	SLU 84	0.02	3468	5914	SLU 84	15877	Si
0.34	0.41	0.0002	1916	SLU 84	0.02	3468	5897	SLU 84	15877	Si
0.68	0.41	0.0006	1896	SLU 84	0.048	8921	5832	SLU 84	20101	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1424	SLD 15	0.079	3893	4381	SLD 15	15877	Si
0.25	0.41	0.0002	1407	SLD 15	0.079	3893	4331	SLD 15	15877	Si
0.34	0.41	0.0002	1402	SLD 15	0.079	3893	4315	SLD 15	15877	Si
0.68	0.41	0.0006	1383	SLD 15	0.126	9932	4257	SLD 15	23116	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000217	1427	SLE RA 21	41059	1494000	509129	36000000	1295	SLE QP 2	37267	1120500	Si
0.25	0.41	0.00000217	1413	SLE RA 21	40671	1494000	504318	36000000	1283	SLE QP 2	36919	1120500	Si
0.34	0.41	0.00000217	1409	SLE RA 21	40550	1494000	502814	36000000	1279	SLE QP 2	36811	1120500	Si

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0.68	0.41	0.00000565	1394	SLE RA 21	38337	1494000	475375	36000000	1266	SLE QP 2	34812	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 222 - 222, sezione R 50x45, asta 326

Campata 3 tra i fili 222 - 218, sezione R 50x45, aste 325, 324, 323, 322, 321, 320, 319, 318

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1916	SLU 84	0.048	8921	5896	SLU 84	20101	Si
1.63	0.41	0.0005	2019	SLU 84	0.044	8295	6212	SLU 84	18663	Si
2.91	0.41	0.0005	2165	SLU 84	0.044	8295	6661	SLU 84	18663	Si
3.26	0.41	0.0006	2241	SLU 84	0.052	9638	6894	SLU 84	21752	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1399	SLD 13	0.126	9932	4303	SLD 13	23116	Si
1.63	0.41	0.0005	1471	SLD 15	0.122	9239	4525	SLD 15	21463	Si
2.91	0.41	0.0005	1620	SLD 15	0.122	9239	4985	SLD 15	21463	Si
3.26	0.41	0.0006	1703	SLD 15	0.131	10725	5241	SLD 15	25014	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000565	1409	SLE RA 21	38758	1494000	480594	36000000	1281	SLE QP 2	35235	1120500	Si
1.63	0.41	0.00000525	1485	SLE RA 21	41059	1494000	509126	36000000	1352	SLE QP 2	37383	1120500	Si
2.91	0.41	0.00000525	1593	SLE RA 21	44028	1494000	545949	36000000	1451	SLE QP 2	40107	1120500	Si
3.26	0.41	0.00000612	1648	SLE RA 21	45073	1494000	558905	36000000	1502	SLE QP 2	41065	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 218 - 225, sezione R 50x45, aste 317, 316

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	2241	SLU 84	0.052	9638	6894	SLU 84	21752	Si
0.29	0.41	0.0006	2308	SLU 84	0.052	9638	7101	SLU 84	21752	Si
0.35	0.41	0.0006	2323	SLU 84	0.052	9638	7149	SLU 84	21752	Si
0.57	0.41	0.0006	2386	SLU 84	0.052	9638	7343	SLU 84	21752	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1703	SLD 15	0.131	10725	5241	SLD 15	25014	Si
0.29	0.41	0.0006	1780	SLD 15	0.131	10725	5476	SLD 15	25014	Si
0.35	0.41	0.0006	1799	SLD 15	0.131	10725	5536	SLD 15	25014	Si
0.57	0.41	0.0006	1878	SLD 15	0.131	10725	5779	SLD 15	25014	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000612	1648	SLE RA 21	45073	1494000	558905	36000000	1502	SLE QP 2	41065	1120500	Si
0.29	0.41	0.00000612	1698	SLE RA 21	46427	1494000	575689	36000000	1547	SLE QP 2	42301	1120500	Si
0.35	0.41	0.00000612	1709	SLE RA 21	46742	1494000	579599	36000000	1558	SLE QP 2	42588	1120500	Si
0.57	0.41	0.00000612	1756	SLE RA 21	48007	1494000	595284	36000000	1600	SLE QP 2	43738	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 5 tra i fili 225 - 220, sezione R 50x45, asta 315

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
6.25	1.1	SLU 48	ST	LT	-77	1147	-65799	0	1	19	0	0	1.1	20015	1149	17.42	Si
6.25	1.1	SLV 3	SIS	LT	865	10182	-44508	1	13	19	0	0	1.1	13538	10218	1.32	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
328,327,326,325,324,323,322,321,320,319,318,317,316,315	6.25	1.1	SLU 84	ST	BT	2.3	280065	78179	3.58	Si
328,327,326,325,324,323,322,321,320,319,318,317,316,315	6.25	1.1	SLV 15	SIS	BT	2.3	245372	64553	3.8	Si
328,327,326,325,324,323,322,321,320,319,318,317,316,315	6.25	1.1	SLD 15	SIS	BT	2.3	269344	58469	4.61	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	1262	-78179	-638.38	7950.55	0	1	0.1	-0.01	1.08	6.05	1496	2060	0	14430	
0	-7362	-64553	3209.64	12504.14	0	-7	0.19	0.05	1	5.87	1496	2060	0	14430	0.07
0	-2628	-58469	1113.84	8472.96	0	-3	0.14	0.02	1.06	5.97	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.27	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

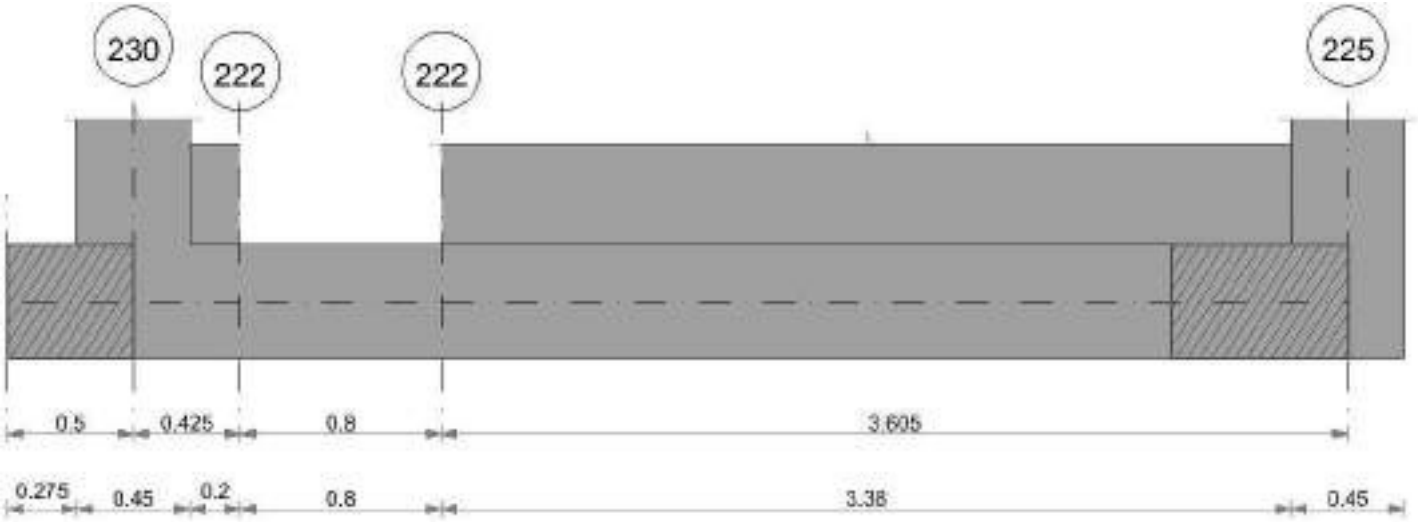
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	554	SLE RA 21	0.05	0.001	554	1055	SLE RA 21	0.05	0	718	SLE RA 7	0.0033	0	SLE RA 6	Si
D	0.05	0	554	SLE RA 1	0.05	0	554	554	SLE RA 1	0.05	0	718	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	554	SLE RA 1	0.05	0	554	554	SLE RA 1	0.05	0	718	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	554	718	SLE RA 21	0.19	0.01	736	SLE RA 20	0.1	0.01	718	SLE RA 6	Si
D	0.19	0	SLE RA 1	0.19	0	554	718	SLE RA 1	0.19	0	554	SLE RA 1	0.1	0	718	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	554	718	SLE RA 1	0.19	0	554	SLE RA 1	0.1	0	718	SLE RA 1	Si

CORDOLO 32

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

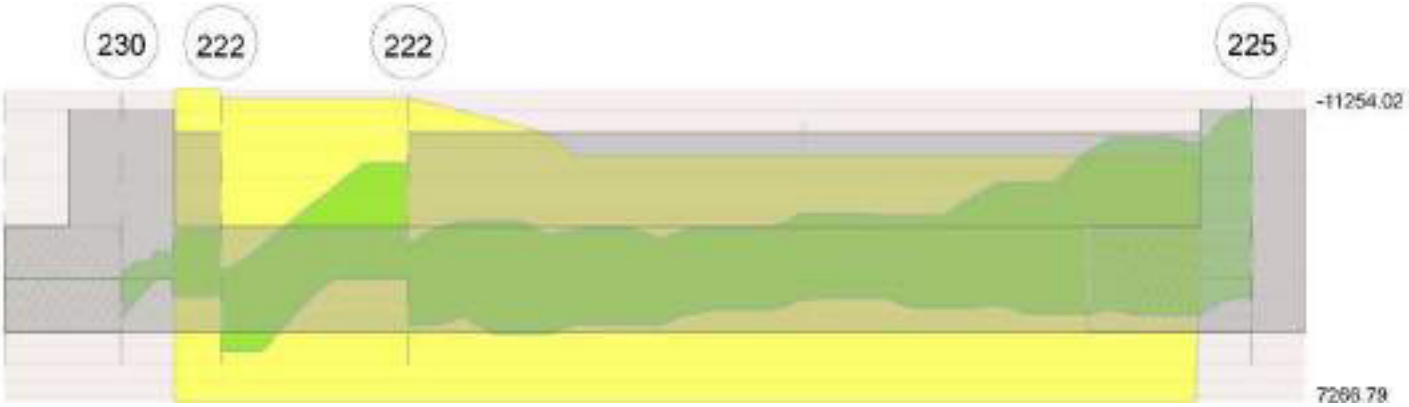
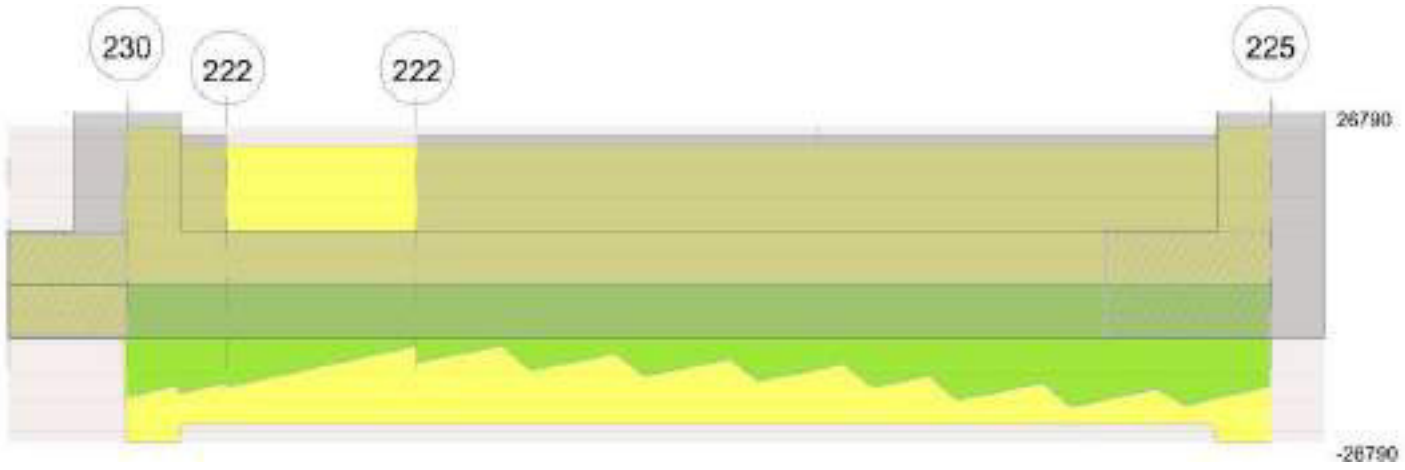


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 222 - 222, sezione R 50x45, asta 459

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	3634.77	SLU 84	3634.77	7767.92	0.117	2.14							Si
0.4	0.000763	0.052	0.000509	0.052	-1458.73	SLU 1	143.71	7767.92	0.117	54.05	-2309.24	SLU 84	-4411.26	-11254.02	0.132	2.55	Si
0.72	0.000763	0.052	0.000509	0.052							-5814.3	SLU 84	-6517.98	-11254.02	0.132	1.73	Si
0.8	0.000763	0.052	0.000509	0.052							-6517.98	SLU 84	-6517.98	-11254.02	0.132	1.73	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	4254.26	SLV 14	4254.26	7262.8	0.194	1.71	566.16	SLV 3	-497.94	-10716.86	0.238	21.52	Si
0.4	0.000763	0.052	0.000509	0.052	-601.65	SLV 6	875.48	7262.8	0.194	8.3	-2526.86	SLV 11	-4552.47	-10716.86	0.238	2.35	Si
0.72	0.000763	0.052	0.000509	0.052							-6085.99	SLV 15	-6933.01	-10716.86	0.238	1.55	Si
0.8	0.000763	0.052	0.000509	0.052							-6933.01	SLV 15	-6933.01	-10716.86	0.238	1.55	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	3197.59	SLD 14	3197.59	7262.8	0.194	2.27							Si
0.4	0.000763	0.052	0.000509	0.052	-1141.3	SLD 6	417.99	7262.8	0.194	17.38	-1987.22	SLD 11	-3660.09	-10716.86	0.238	2.93	Si
0.72	0.000763	0.052	0.000509	0.052							-4838.95	SLD 15	-5468.71	-10716.86	0.238	1.96	Si
0.8	0.000763	0.052	0.000509	0.052							-5468.71	SLD 15	-5468.71	-10716.86	0.238	1.96	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-17048	SLU 84	-17048	-7764	-63178	-23694	-23694	1	1.39	Si
0.4	0.0000169	0.000763	0	-12683	SLU 84	-12683	-8659	-63178	-23694	-23694	1	1.87	Si
0.8	0.0000169	0.000763	0	-8365	SLU 84	-8365	-8659	-63178	-23694	-23694	1	2.83	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-17325	SLV 16	-17325	-7764	-63178	-23694	-23694	1	1.37	Si
0.4	0.0000169	0.000763	0	-13783	SLV 16	-13783	-8659	-63178	-23694	-23694	1	1.72	Si
0.8	0.0000169	0.000763	0	-10322	SLV 16	-10322	-8659	-63178	-23694	-23694	1	2.3	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-13947	SLD 16	-13947	-7764	-63178	-23694	-23694	1	1.7	Si
0.4	0.0000169	0.000763	0	-10743	SLD 16	-10743	-8659	-63178	-23694	-23694	1	2.21	Si
0.8	0.0000169	0.000763	0	-7591	SLD 16	-7591	-8659	-63178	-23694	-23694	1	3.12	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	2666.33	21	2666.33	135747	1494000	2085770	36000000	2410.21	2	2410.21	122708	1120500			Si
0.4	-1706.21	21	-3251.05	169545	1494000	2482742	36000000	-1564.26	2	-2965.3	154643	1120500			Si
0.8	-4797.79	21	-4797.79	250209	1494000	3663946	36000000	-4364.57	2	-4364.57	227616	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 230 - 222, sezione R 50x45, aste 461, 460

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1971	SLU 84	0.071	13206	6064	SLU 84	30044	Si
0.21	0.41	0.0008	1955	SLU 84	0.071	13206	6015	SLU 84	30044	Si
0.23	0.41	0.0008	1954	SLU 84	0.071	13206	6012	SLU 84	30044	Si
0.42	0.41	0.0008	1941	SLU 84	0.071	13206	5972	SLU 84	30044	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1453	SLD 15	0.153	14673	4472	SLD 15	34551	Si
0.21	0.41	0.0008	1439	SLD 15	0.153	14673	4428	SLD 15	34551	Si
0.23	0.41	0.0008	1438	SLD 15	0.153	14673	4426	SLD 15	34551	Si
0.42	0.41	0.0008	1427	SLD 13	0.153	14673	4391	SLD 13	34551	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000845	1449	SLE RA 21	38498	1494000	477381	36000000	1316	SLE QP 2	34965	1120500	Si
0.21	0.41	0.00000845	1438	SLE RA 21	38184	1494000	473488	36000000	1306	SLE QP 2	34684	1120500	Si
0.23	0.41	0.00000845	1437	SLE RA 21	38168	1494000	473281	36000000	1305	SLE QP 2	34670	1120500	Si
0.42	0.41	0.00000845	1427	SLE RA 21	37916	1494000	470155	36000000	1297	SLE QP 2	34447	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 222 - 222, sezione R 50x45, asta 459

Campata 4 tra i fili 222 - 225, sezione R 50x45, aste 458, 457, 456, 455, 454, 453, 452, 451

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1903	SLU 83	0.071	13206	5856	SLU 83	30044	Si
1.8	0.41	0.0008	1975	SLU 83	0.071	13206	6076	SLU 83	30044	Si
3.38	0.41	0.0008	2123	SLU 83	0.071	13206	6534	SLU 83	30044	Si
3.6	0.41	0.0008	2169	SLU 83	0.071	13206	6673	SLU 83	30044	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1395	SLD 13	0.153	14673	4293	SLD 13	34551	Si
1.8	0.41	0.0008	1441	SLD 15	0.153	14673	4433	SLD 15	34551	Si
3.38	0.41	0.0008	1600	SLD 15	0.153	14673	4924	SLD 15	34551	Si
3.6	0.41	0.0008	1650	SLD 15	0.153	14673	5078	SLD 15	34551	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000845	1400	SLE RA 20	37179	1494000	461015	36000000	1273	SLE QP 2	33808	1120500	Si
1.8	0.41	0.00000845	1453	SLE RA 20	38585	1494000	478458	36000000	1323	SLE QP 2	35138	1120500	Si
3.38	0.41	0.00000845	1562	SLE RA 20	41497	1494000	514568	36000000	1423	SLE QP 2	37810	1120500	Si
3.6	0.41	0.00000845	1596	SLE RA 20	42386	1494000	525591	36000000	1454	SLE QP 2	38623	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.05	1.1	SLU 48	ST	LT	-29	902	-49518	0	1	19	0	0	1.1	15062	903	16.69	Si
5.05	1.1	SLV 3	SIS	LT	802	7643	-34200	1	13	19	0	0	1.1	10403	7685	1.35	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
461,460,459,458,457,456,455,454,453,452,451	5.05	1.1	SLU 83	ST	BT	2.3	232212	58682	3.96	Si
461,460,459,458,457,456,455,454,453,452,451	5.05	1.1	SLV 3	SIS	LT	2.3	149670	34200	4.38	Si
461,460,459,458,457,456,455,454,453,452,451	5.05	1.1	SLD 15	SIS	BT	2.3	226017	43446	5.2	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	999	-58682	-562.03	1561.89	0	1	0.03	-0.01	1.08	5	1496	2060	0	14430	
0	7643	-34200	-3542.43	1681.51	0	13	0.05	-0.1	0.89	4.96	1496	2060	37	0	0.07
0	-1955	-43446	811.75	1835.09	0	-3	0.04	0.02	1.06	4.97	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.14	1.14	0.93	1.16	1.27	1	0.63	0.62	0.49	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

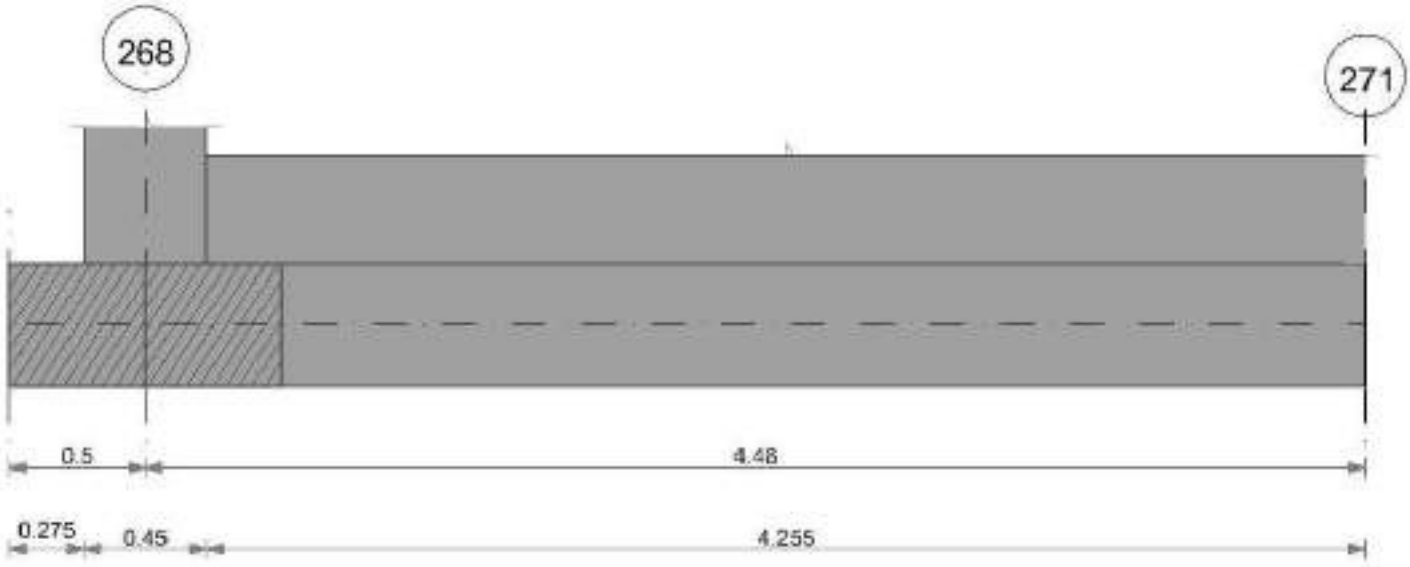
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	638	SLE RA 21	0.05	0.001	638	908	SLE RA 21	0.05	0	720	SLE RA 20	0.0033	0	SLE RA 13	Si
D	0.05	0	638	SLE RA 1	0.05	0	638	638	SLE RA 1	0.05	0	720	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	638	SLE RA 1	0.05	0	638	638	SLE RA 1	0.05	0	720	SLE RA 1	0.0033	0	SLE RA 1	Si

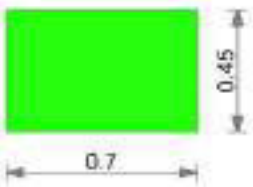
Verifiche geotecniche - Rotazioni assolute e differenziali

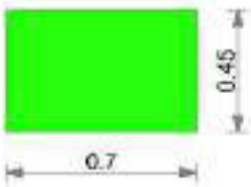
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	720	738	SLE RA 21	0.19	0.01	720	SLE RA 21	0.1	0	738	SLE RA 13	Si
D	0.19	0	SLE RA 1	0.19	0	638	720	SLE RA 1	0.19	0	638	SLE RA 1	0.1	0	720	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	638	720	SLE RA 1	0.19	0	638	SLE RA 1	0.1	0	720	SLE RA 1	Si

CORDOLO 33

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 268 - 271, sezione R 70x45, aste 606, 605, 604, 603, 602, 601, 600, 599, 598, 597, 596

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
4.48	0.41	0.0002	2425	SLV 15	0.085	2655	6258	SLV 15	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	3050	SLD 14	0.07	3073	7870	SLD 14	15877	Si
0.23	0.41	0.0002	3038	SLD 13	0.07	3073	7841	SLD 13	15877	Si
2.24	0.41	0.0002	2357	SLD 15	0.07	3073	6082	SLD 15	15877	Si
4.48	0.41	0.0002	1821	SLD 15	0.07	3073	4700	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000171	2541	SLE RA 21	73556	1494000	912097	36000000	2323	SLE QP 2	67256	1120500	Si
0.23	0.41	0.00000171	2531	SLE RA 21	73285	1494000	908738	36000000	2314	SLE QP 2	67010	1120500	Si
2.24	0.41	0.00000171	1956	SLE RA 21	56620	1494000	702086	36000000	1786	SLE QP 2	51725	1120500	Si
4.48	0.41	0.00000171	1502	SLE RA 20	43480	1494000	539149	36000000	1370	SLE QP 2	39653	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.48	1.3	SLU 39	ST	LT	-646	937	-54719	-1	1	19	0	0	1.1	16644	1138	14.63	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
606,605,604,603,602,601,600,599,598,597,596	4.48	1.3	SLU 83	ST	BT	2.3	176728	66897	2.64	Si
606,605,604,603,602,601,600,599,598,597,596	4.48	1.3	SLV 14	SIS	BT	2.3	153798	70928	2.17	Si
606,605,604,603,602,601,600,599,598,597,596	4.48	1.3	SLD 14	SIS	BT	2.3	166232	56874	2.92	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	1167	-66897	9233.25	-11520.26	0	1	-0.17	0.14	1.02	4.14	1496	2060	0	14430	
0	-4826	-70928	13237.27	-14671.07	0	-4	-0.21	0.19	0.93	4.07	1496	2060	0	14430	0.07
0	-1592	-56874	9248.98	-10744.02	0	-2	-0.19	0.16	0.97	4.1	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0	651	SLE RA 21	0.05	0	651	920	SLE RA 21	0.05	0	651	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	651	SLE RA 1	0.05	0	651	651	SLE RA 1	0.05	0	651	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	651	SLE RA 1	0.05	0	651	651	SLE RA 1	0.05	0	651	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	651	920	SLE RA 21	0.19	0	651	SLE RA 1	0.1	0	651	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	651	920	SLE RA 1	0.19	0	651	SLE RA 1	0.1	0	651	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	651	920	SLE RA 1	0.19	0	651	SLE RA 1	0.1	0	651	SLE RA 1	Si

CORDOLO 34

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

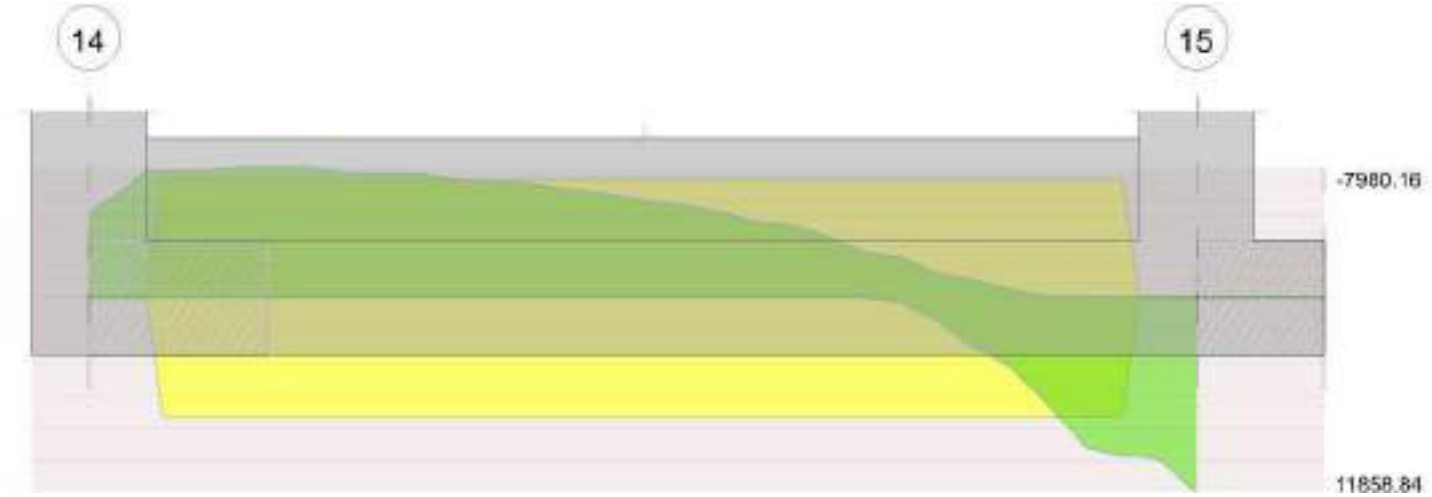


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 14 - 15, sezione R 50x45, aste 783, 782, 781, 780, 779, 778, 777, 776, 775, 774, 773

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2517	SLV 1	0.087	2741	8753	SLV 1	15877	Si
0.23	0.41	0.0002	2389	SLV 1	0.087	2741	8309	SLV 1	15877	Si
2.17	0.41	0.0002	1914	SLV 1	0.087	2741	6659	SLV 1	15877	Si
4.11	0.41	0.0002	2196	SLV 4	0.087	2741	7637	SLV 4	15877	Si
4.33	0.41	0.0002	2202	SLV 4	0.087	2741	7660	SLV 4	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1880	SLD 1	0.071	3173	6539	SLD 1	15877	Si
0.23	0.41	0.0002	1784	SLD 1	0.071	3173	6204	SLD 1	15877	Si
2.17	0.41	0.0002	1430	SLD 1	0.071	3173	4975	SLD 1	15877	Si
4.11	0.41	0.0002	1647	SLD 4	0.071	3173	5729	SLD 4	15877	Si
4.33	0.41	0.0002	1653	SLD 4	0.071	3173	5749	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1531	SLE RA 20	44282	1494000	549098	36000000	1405	SLE QP 2	40637	1120500	Si
0.23	0.41	0.00000177	1452	SLE RA 20	42001	1494000	520817	36000000	1332	SLE QP 2	38530	1120500	Si
2.17	0.41	0.00000177	1169	SLE RA 20	33828	1494000	419466	36000000	1069	SLE QP 2	30940	1120500	Si
4.11	0.41	0.00000177	1355	SLE RA 21	39192	1494000	485984	36000000	1238	SLE QP 2	35815	1120500	Si
4.33	0.41	0.00000177	1360	SLE RA 21	39358	1494000	488041	36000000	1243	SLE QP 2	35964	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.56	1.1	SLU 27	ST	LT	-81	-659	-45823	0	-1	19	0	0	1.1	13938	664	20.99	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
783,782,781,780,779,778,777,776,775,774,773	4.56	1.1	SLU 83	ST	BT	2.3	184104	61480	2.99	Si
783,782,781,780,779,778,777,776,775,774,773	4.56	1.1	SLV 1	SIS	BT	2.3	157511	68748	2.29	Si
783,782,781,780,779,778,777,776,775,774,773	4.56	1.1	SLD 1	SIS	BT	2.3	170844	53782	3.18	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-832	-61480	-4699.31	-737.73	0	-1	-0.01	-0.08	0.95	4.53	1496	2060	0	14430	
0	6028	-68748	-8831.35	-2352.92	0	5	-0.03	-0.13	0.84	4.49	1496	2060	0	14430	0.07
0	2235	-53782	-5608	-1337.47	0	2	-0.02	-0.1	0.89	4.51	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

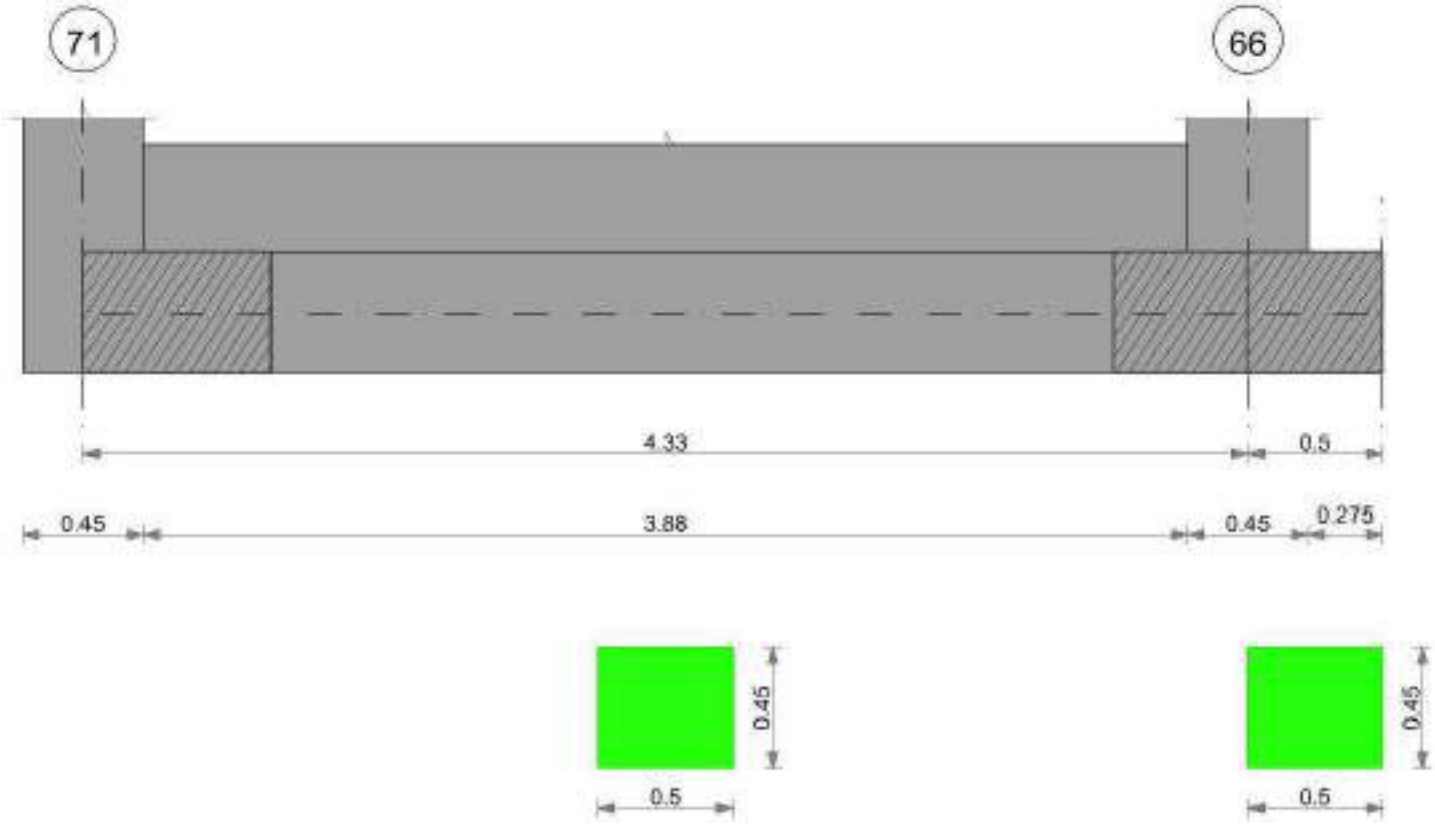
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0	578	SLE RA 21	0.05	0	578	239	SLE RA 21	0.05	0	578	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	578	SLE RA 1	0.05	0	578	578	SLE RA 1	0.05	0	578	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	578	SLE RA 1	0.05	0	578	578	SLE RA 1	0.05	0	578	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	578	239	SLE RA 21	0.19	0	578	SLE RA 1	0.1	0	578	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	578	239	SLE RA 1	0.19	0	578	SLE RA 1	0.1	0	578	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	578	239	SLE RA 1	0.19	0	578	SLE RA 1	0.1	0	578	SLE RA 1	Si

CORDOLO 35

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

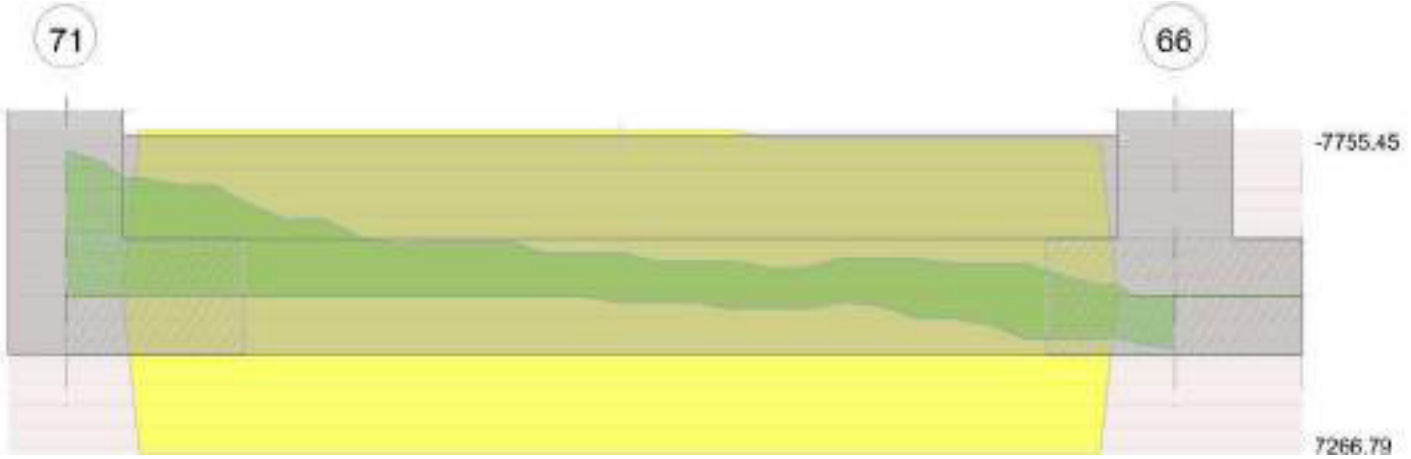
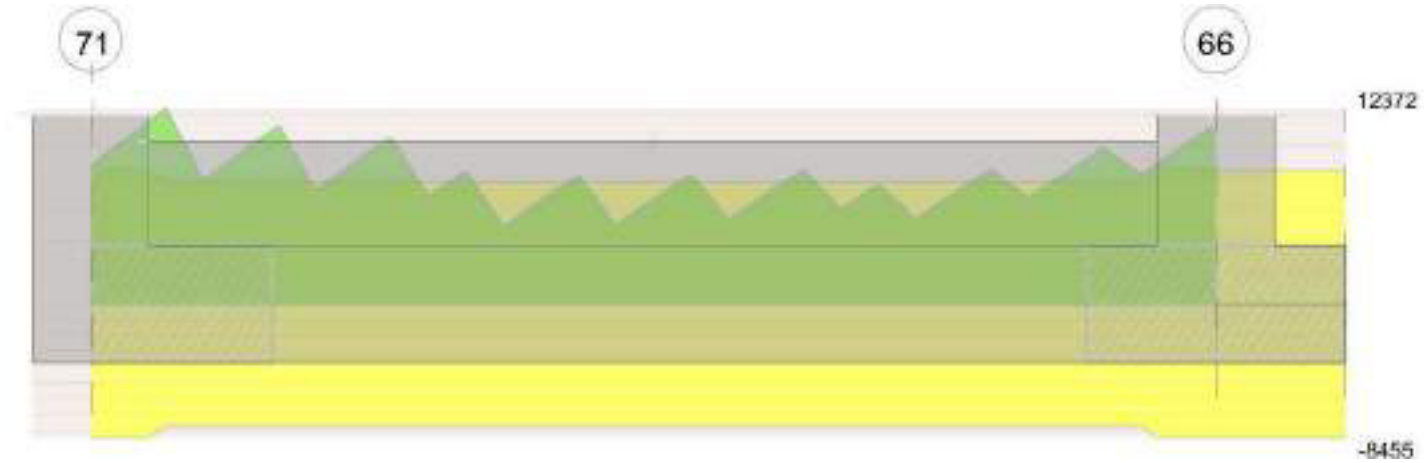


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 71 - 66, sezione R 50x45, aste 756, 755, 754, 753, 752, 751, 750, 749, 748, 747, 746

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2292	SLU 83	0.018	2820	7051	SLU 83	15877	Si
0.23	0.41	0.0002	2219	SLU 83	0.018	2820	6826	SLU 83	15877	Si
2.17	0.41	0.0002	1956	SLU 83	0.018	2820	6019	SLU 83	15877	Si
4.11	0.41	0.0002	1953	SLU 84	0.018	2820	6009	SLU 84	15877	Si
4.33	0.41	0.0002	1951	SLU 84	0.018	2820	6004	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1745	SLD 1	0.071	3173	5368	SLD 1	15877	Si
0.23	0.41	0.0002	1685	SLD 1	0.071	3173	5185	SLD 1	15877	Si
2.17	0.41	0.0002	1461	SLD 1	0.071	3173	4494	SLD 1	15877	Si
4.11	0.41	0.0002	1442	SLD 4	0.071	3173	4436	SLD 4	15877	Si
4.33	0.41	0.0002	1439	SLD 4	0.071	3173	4426	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1692	SLE RA 20	48949	1494000	606961	36000000	1547	SLE QP 2	44753	1120500	Si
0.23	0.41	0.00000177	1638	SLE RA 20	47381	1494000	587530	36000000	1497	SLE QP 2	43306	1120500	Si
2.17	0.41	0.00000177	1442	SLE RA 20	41707	1494000	517162	36000000	1314	SLE QP 2	38010	1120500	Si
4.11	0.41	0.00000177	1436	SLE RA 21	41552	1494000	515246	36000000	1304	SLE QP 2	37719	1120500	Si
4.33	0.41	0.00000177	1435	SLE RA 21	41509	1494000	514715	36000000	1302	SLE QP 2	37666	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.56	1.1	SLU 47	ST	LT	790	-560	-47704	1	-1	19	0	0	1.1	14510	968	14.99	Si
4.56	1.1	SLV 15	SIS	LT	523	-7968	-31804	1	-14	19	0	0	1.1	9674	7985	1.21	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
756,755,754,753,752,751,750,749,748,747,746	4.56	1.1	SLU 83	ST	BT	2.3	210464	57128	3.68	Si
756,755,754,753,752,751,750,749,748,747,746	4.56	1.1	SLV 2	SIS	BT	2.3	179403	47237	3.8	Si
756,755,754,753,752,751,750,749,748,747,746	4.56	1.1	SLD 2	SIS	BT	2.3	199482	42820	4.66	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-639	-57128	415.98	-1789.19	0	-1	-0.03	0.01	1.09	4.49	1496	2060	0	14430	
0	7046	-47237	-3228.8	-2349.94	0	8	-0.05	-0.07	0.96	4.46	1496	2060	0	14430	0.07
0	2749	-42820	-1212.91	-1761.95	0	4	-0.04	-0.03	1.04	4.47	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	596	SLE RA 21	0.05	0.001	596	255	SLE RA 21	0.05	0	596	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	596	SLE RA 1	0.05	0	596	596	SLE RA 1	0.05	0	596	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	596	SLE RA 1	0.05	0	596	596	SLE RA 1	0.05	0	596	SLE RA 1	0.0033	0	SLE RA 1	Si

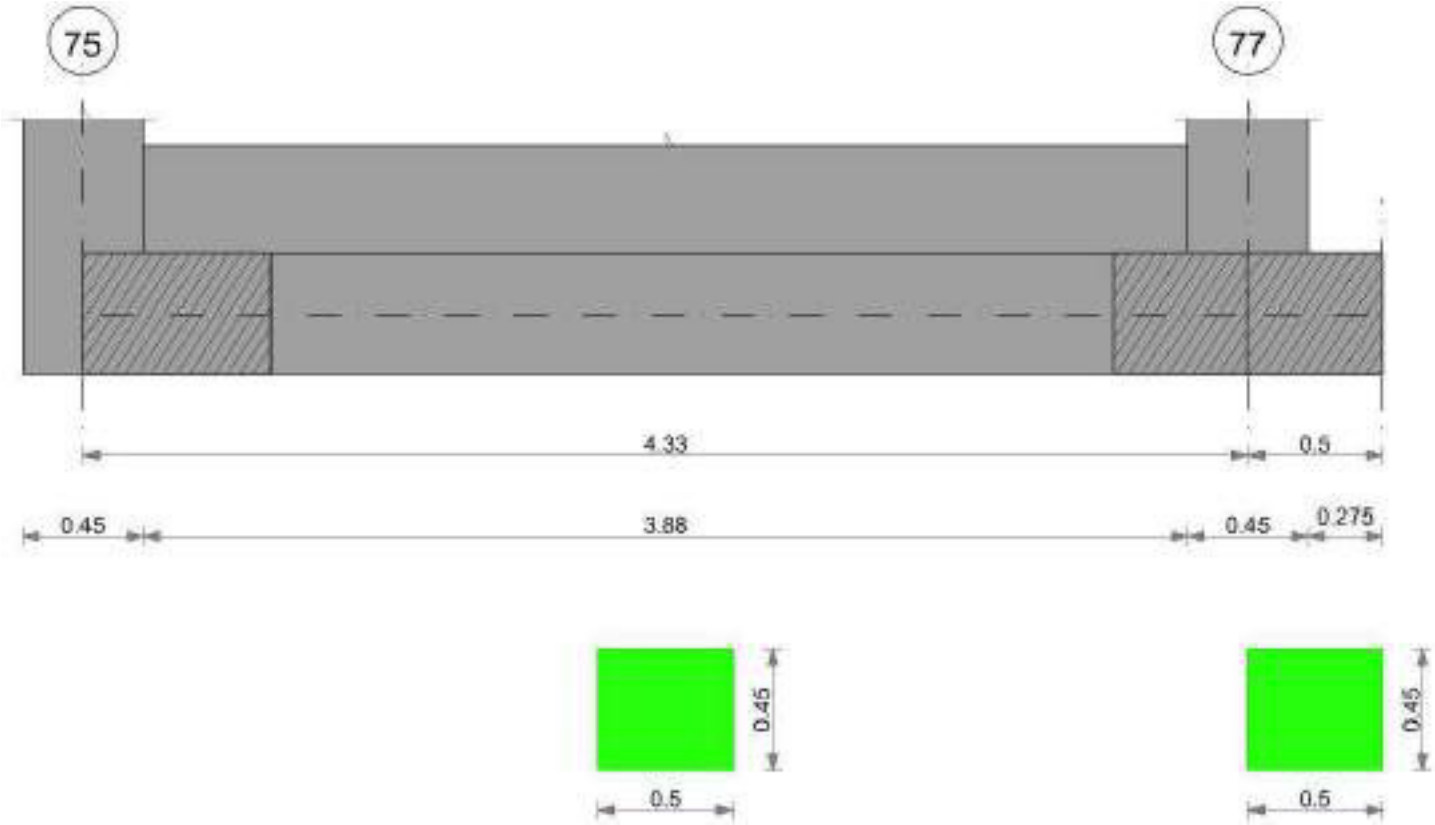
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	596	255	SLE RA 21	0.19	0	596	SLE RA 1	0.1	0	596	SLE RA 1	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
D	0.19	0	SLE RA 1	0.19	0	596	255	SLE RA 1	0.19	0	596	SLE RA 1	0.1	0	596	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	596	255	SLE RA 1	0.19	0	596	SLE RA 1	0.1	0	596	SLE RA 1	Si

CORDOLO 36

Geometria



Caratteristiche dei materiali

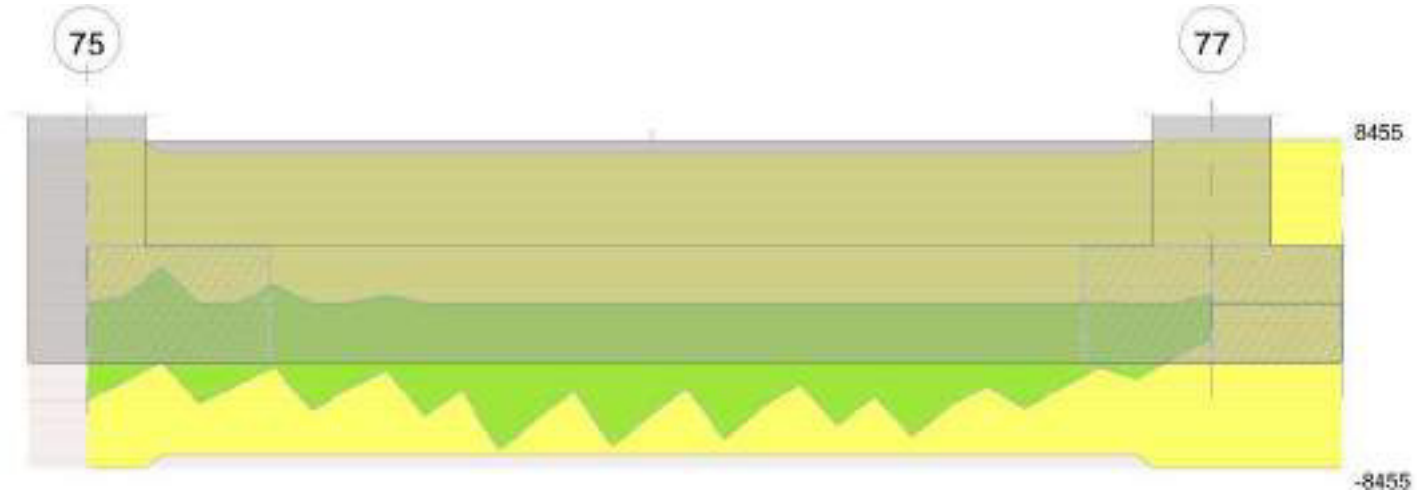
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 75 - 77, sezione R 50x45, aste 730, 729, 728, 727, 726, 725, 724, 723, 722, 721, 720

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2337	SLU 83	0.018	2820	7192	SLU 83	15877	Si
0.23	0.41	0.0002	2264	SLU 83	0.018	2820	6966	SLU 83	15877	Si
2.17	0.41	0.0002	1985	SLU 83	0.018	2820	6109	SLU 83	15877	Si
4.11	0.41	0.0002	1967	SLU 84	0.018	2820	6051	SLU 84	15877	Si
4.33	0.41	0.0002	1965	SLU 84	0.018	2820	6045	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1761	SLD 1	0.071	3173	5417	SLD 1	15877	Si
0.23	0.41	0.0002	1701	SLD 1	0.071	3173	5233	SLD 1	15877	Si
2.17	0.41	0.0002	1467	SLD 1	0.071	3173	4513	SLD 1	15877	Si
4.11	0.41	0.0002	1439	SLD 4	0.071	3173	4429	SLD 4	15877	Si
4.33	0.41	0.0002	1436	SLD 4	0.071	3173	4418	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1726	SLE RA 20	49931	1494000	619141	36000000	1578	SLE QP 2	45646	1120500	Si
0.23	0.41	0.00000177	1671	SLE RA 20	48354	1494000	599589	36000000	1527	SLE QP 2	44190	1120500	Si
2.17	0.41	0.00000177	1463	SLE RA 20	42333	1494000	524924	36000000	1333	SLE QP 2	38572	1120500	Si
4.11	0.41	0.00000177	1446	SLE RA 21	41844	1494000	518871	36000000	1312	SLE QP 2	37971	1120500	Si
4.33	0.41	0.00000177	1445	SLE RA 21	41793	1494000	518229	36000000	1310	SLE QP 2	37909	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.56	1.1	SLU 47	ST	LT	880	-560	-48226	1	-1	19	0	0	1.1	14669	1043	14.06	Si
4.56	1.1	SLV 15	SIS	LT	772	-7968	-32972	1	-14	19	0	0	1.1	10029	8006	1.25	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
730,729,728,727,726,725,724,723,722,721,720	4.56	1.1	SLU 83	ST	BT	2.3	210155	57791	3.64	Si
730,729,728,727,726,725,724,723,722,721,720	4.56	1.1	SLV 2	SIS	BT	2.3	178834	46949	3.81	Si
730,729,728,727,726,725,724,723,722,721,720	4.56	1.1	SLD 2	SIS	BT	2.3	199143	42948	4.64	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-639	-57791	415.98	-2029.14	0	-1	-0.04	0.01	1.09	4.48	1496	2060	0	14430	
0	7046	-46949	-3228.8	-2571.65	0	9	-0.05	-0.07	0.96	4.45	1496	2060	0	14430	0.07
0	2749	-42948	-1212.91	-1951.68	0	4	-0.05	-0.03	1.04	4.46	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

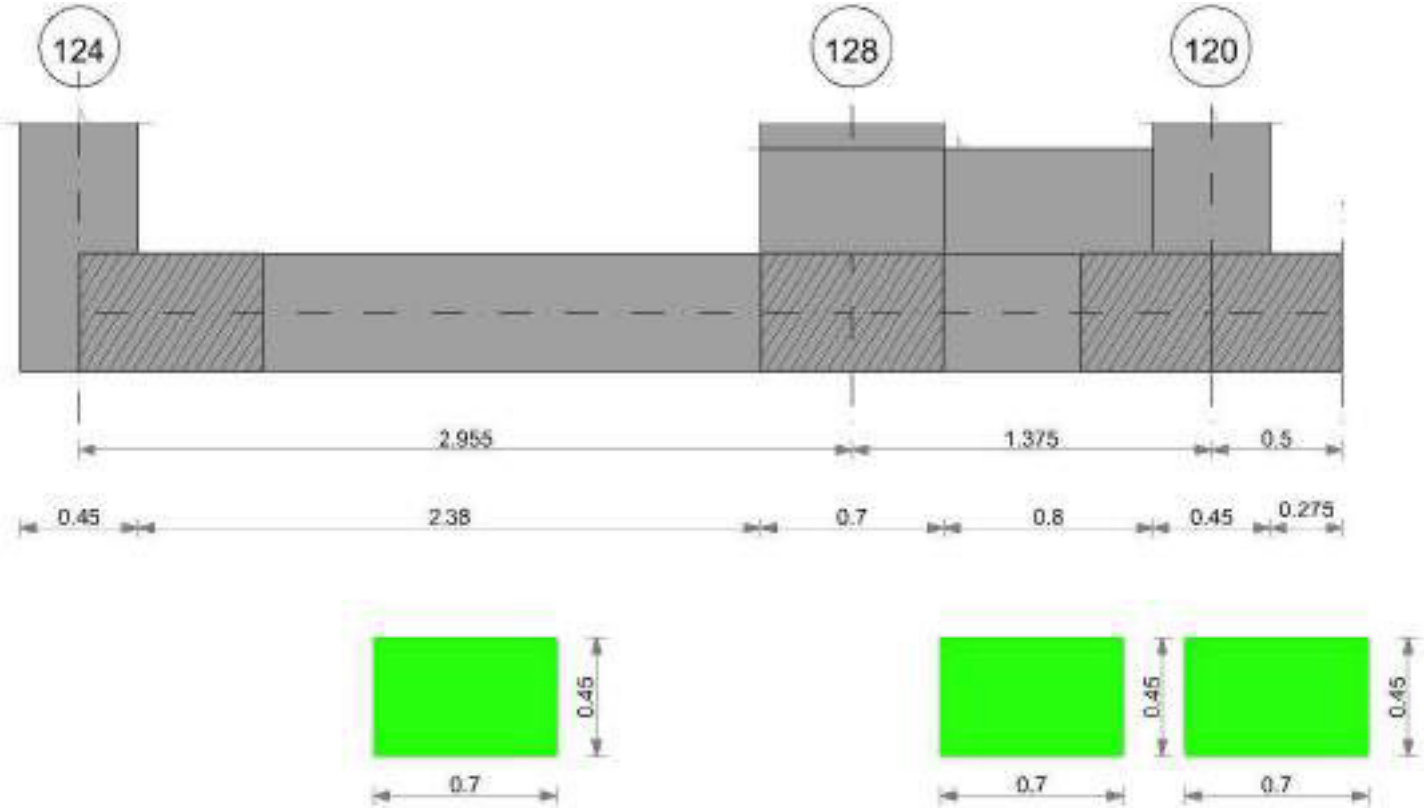
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	599	SLE RA 21	0.05	0.001	599	257	SLE RA 21	0.05	0	599	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	599	SLE RA 1	0.05	0	599	599	SLE RA 1	0.05	0	599	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	599	SLE RA 1	0.05	0	599	599	SLE RA 1	0.05	0	599	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	599	257	SLE RA 21	0.19	0	599	SLE RA 1	0.1	0	599	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	599	257	SLE RA 1	0.19	0	599	SLE RA 1	0.1	0	599	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	599	257	SLE RA 1	0.19	0	599	SLE RA 1	0.1	0	599	SLE RA 1	Si

CORDOLO 37

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

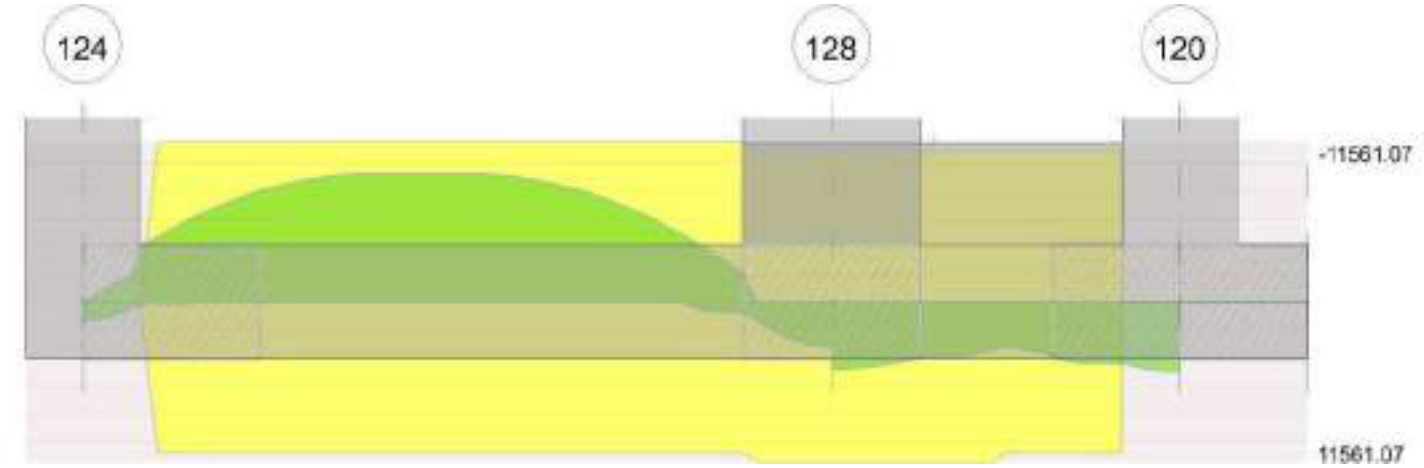
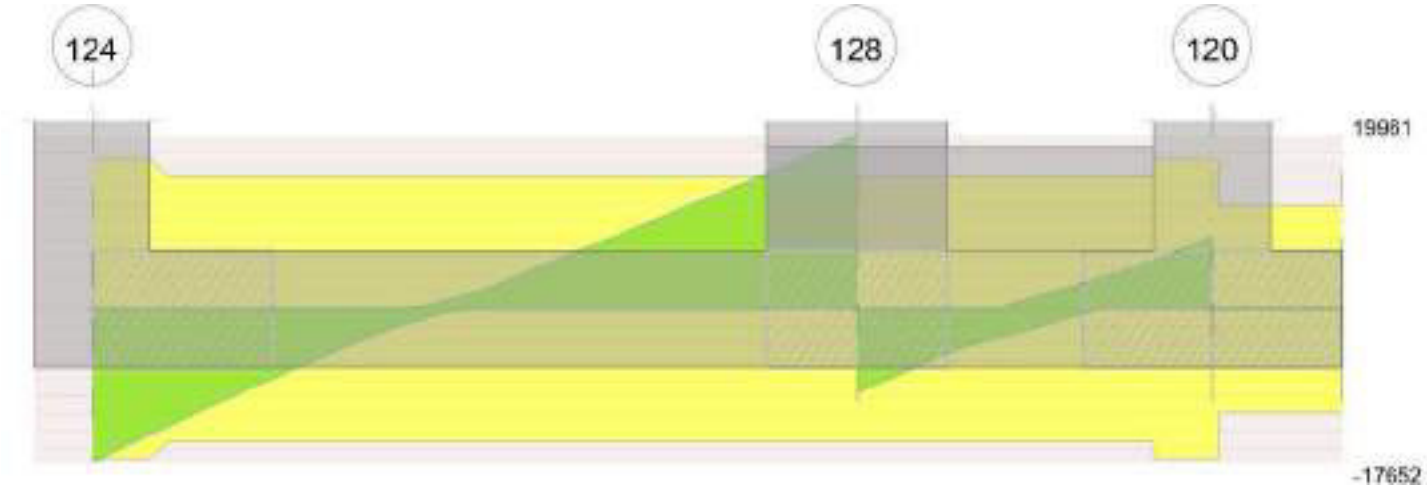


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 124 - 128, sezione R 70x45, aste 709, 708

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.48	0.000763	0.052	0.000763	0.052							-9136.52	SLU 83	-9252.83	-11561.07	0.116	1.25	Si
2.61	0.000763	0.052	0.000763	0.052	549.29	SLU 84	549.29	11561.07	0.116	21.05	288.31	SLU 1	-2021.78	-11561.07	0.116	5.72	Si
2.96	0.000763	0.052	0.000763	0.052	6750.41	SLU 84	3262.12	11561.07	0.116	3.54							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.48	0.000763	0.052	0.000763	0.052							-6729.13	SLV 5	-6888.35	-10870.29	0.203	1.58	Si
2.61	0.000763	0.052	0.000763	0.052	709.61	SLV 4	709.61	10870.29	0.203	15.32	-60.61	SLV 13	-1732.86	-10870.29	0.203	6.27	Si
2.96	0.000763	0.052	0.000763	0.052	4987.32	SLV 4	2582.61	10870.29	0.203	4.21							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.48	0.000763	0.052	0.000763	0.052							-6420.87	SLD 5	-6532.55	-10870.29	0.203	1.66	Si
2.61	0.000763	0.052	0.000763	0.052	489.58	SLD 4	489.58	10870.29	0.203	22.2	159.42	SLD 13	-1544.25	-10870.29	0.203	7.04	Si
2.96	0.000763	0.052	0.000763	0.052	4703.74	SLD 4	2333.87	10870.29	0.203	4.66							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-17652	SLU 83	-17652	-11837	-100005	-17220	-17220	1	0.98	Si
0.23	0.0000109	0	0	-14393	SLU 83	-14393	-11837	-100005	-17220	-17220	1	1.2	Si
1.48	0.0000109	0.000763	0	1776	SLU 83	1776	10870	88449	15230	15230	1	8.58	Si
2.96	0.0000109	0.000763	0	19961	SLU 83	19961	10870	88449	15230	15230	1	0.76	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-12740	SLV 13	-12740	-11837	-100005	-17220	-17220	1	1.35	Si
0.23	0.0000109	0	0	-10511	SLV 13	-10511	-11837	-100005	-17220	-17220	1	1.64	Si
1.48	0.0000109	0.000763	0	1798	SLV 2	1798	10870	88449	15230	15230	1	8.47	Si
2.61	0.0000109	0.000763	0	10854	SLV 2	10854	10870	88449	15230	15230	1	1.4	Si
2.96	0.0000109	0.000763	0	13812	SLV 2	13812	10870	88449	15230	15230	1	1.1	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-12280	SLD 13	-12280	-11837	-100005	-17220	-17220	1	1.4	Si
0.23	0.0000109	0	0	-10066	SLD 13	-10066	-11837	-100005	-17220	-17220	1	1.71	Si
1.48	0.0000109	0.000763	0	1446	SLD 2	1446	10870	88449	15230	15230	1	10.53	Si
2.61	0.0000109	0.000763	0	10605	SLD 2	10605	10870	88449	15230	15230	1	1.44	Si
2.96	0.0000109	0.000763	0	13583	SLD 2	13583	10870	88449	15230	15230	1	1.12	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1538.12	21	97.86	4142	1494000	0	36000000	1417.12	2	83.27	3525	1120500			Si
0.23	-1124.33	20	-2865.12	-121275	1494000	0	36000000	-1016.37	2	-2609.47	-110454	1120500			Si
1.48	-6753.99	20	-6840.12	499787	1494000	24602237	36000000	-6178.94	2	-6255.78	457092	1120500			Si
2.61	402.56	21	402.56	15093	1494000	226399	36000000	324.5	2	324.5	12167	1120500			Si
2.96	4982.79	21	2406.46	90226	1494000	1353392	36000000	4492.34	2	2147.85	80530	1120500			Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 124 - 128, sezione R 70x45, aste 709, 708

Campata 2 tra i fili 128 - 120, sezione R 70x45, asta 707

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	3336	SLU 84	0.031	5754	7849	SLU 84	15877	Si
0.35	0.41	0.0004	3380	SLU 84	0.031	5754	7954	SLU 84	15877	Si
0.69	0.41	0.0004	3393	SLU 84	0.031	5754	7983	SLU 84	15877	Si
1.15	0.41	0.0004	3373	SLU 84	0.031	5754	7936	SLU 84	15877	Si
1.38	0.41	0.0004	3346	SLU 84	0.031	5754	7873	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2257	SLD 12	0.101	6427	5310	SLD 12	15877	Si
0.35	0.41	0.0004	2292	SLD 11	0.101	6427	5392	SLD 11	15877	Si
0.69	0.41	0.0004	2304	SLD 11	0.101	6427	5421	SLD 11	15877	Si
1.15	0.41	0.0004	2291	SLD 11	0.101	6427	5390	SLD 11	15877	Si
1.38	0.41	0.0004	2270	SLD 11	0.101	6427	5342	SLD 11	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000362	2454	SLE RA 21	69295	1494000	859254	36000000	2217	SLE QP 2	62602	1120500	Si
0.35	0.41	0.00000362	2487	SLE RA 21	70208	1494000	870573	36000000	2246	SLE QP 2	63422	1120500	Si
0.69	0.41	0.00000362	2495	SLE RA 21	70452	1494000	873603	36000000	2254	SLE QP 2	63637	1120500	Si
1.15	0.41	0.00000362	2480	SLE RA 21	70014	1494000	868168	36000000	2240	SLE QP 2	63228	1120500	Si
1.38	0.41	0.00000362	2460	SLE RA 21	69442	1494000	861081	36000000	2221	SLE QP 2	62701	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.56	1.3	SLU 44	ST	LT	308	-445	-53951	0	0	19	0	0	1.1	16411	541	30.32	Si
4.56	1.3	SLV 15	SIS	LT	1863	-8837	-46246	2	-11	19	0	0	1.1	14067	9032	1.56	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
709,708,707	4.56	1.3	SLU 83	ST	BT	2.3	244121	65730	3.71	Si
709,708,707	4.56	1.3	SLV 15	SIS	BT	2.3	203752	46246	4.41	Si
709,708,707	4.56	1.3	SLD 13	SIS	BT	2.3	227173	45642	4.98	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-516	-65730	724.43	-580.56	0	0	-0.01	0.01	1.28	4.54	1496	2060	0	14430	
0	-8837	-46246	4348.25	866.12	0	-11	0.02	0.09	1.11	4.52	1496	2060	0	14430	0.07
0	-3797	-45642	2056.17	-796.01	0	-5	-0.02	0.05	1.21	4.52	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.06	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

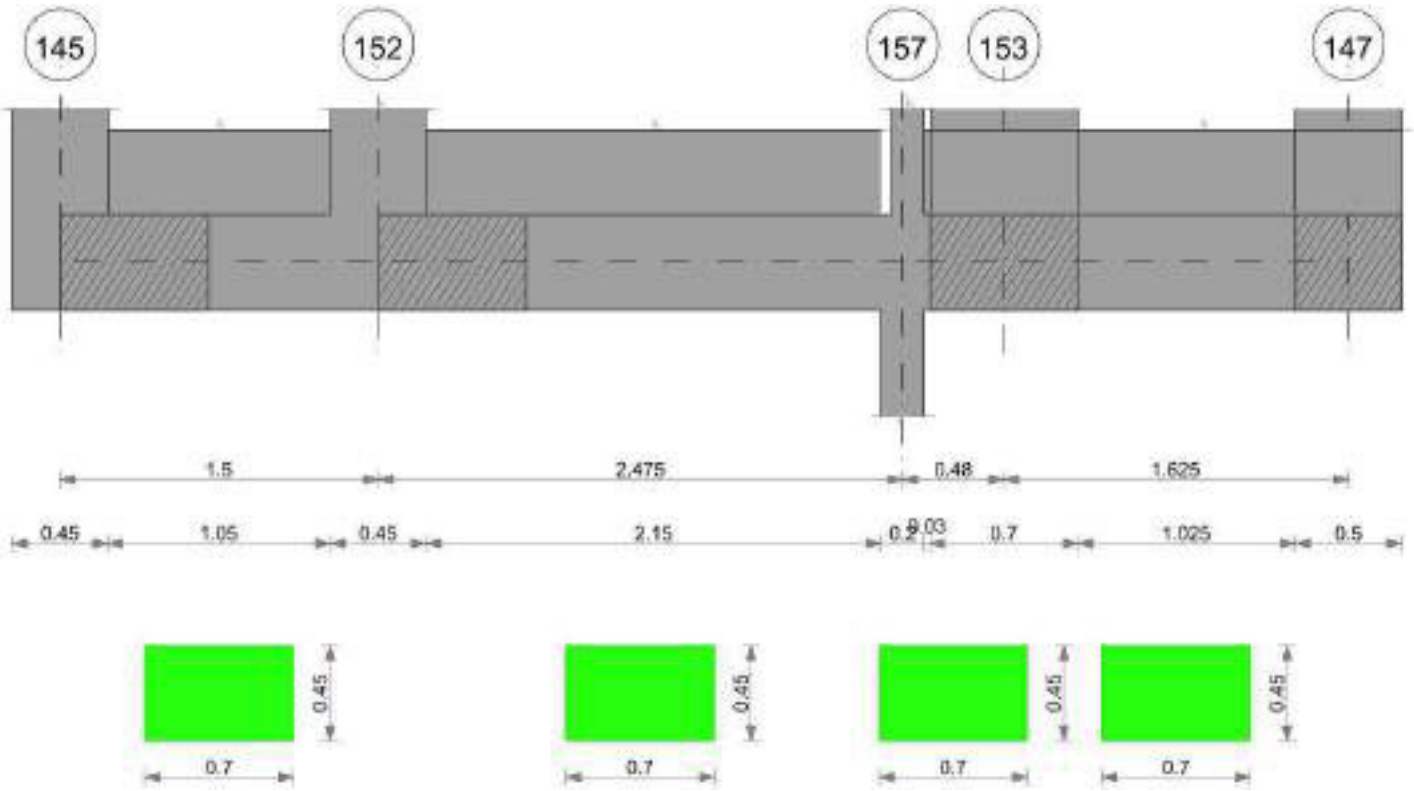
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	612	SLE RA 21	0.05	0.001	612	269	SLE RA 21	0.05	0	470	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	612	SLE RA 1	0.05	0	612	612	SLE RA 1	0.05	0	470	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	612	SLE RA 1	0.05	0	612	612	SLE RA 1	0.05	0	470	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	470	269	SLE RA 21	0.19	0	470	SLE RA 21	0.1	0	612	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	612	470	SLE RA 1	0.19	0	612	SLE RA 1	0.1	0	470	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	612	470	SLE RA 1	0.19	0	612	SLE RA 1	0.1	0	470	SLE RA 1	Si

CORDOLO 38

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

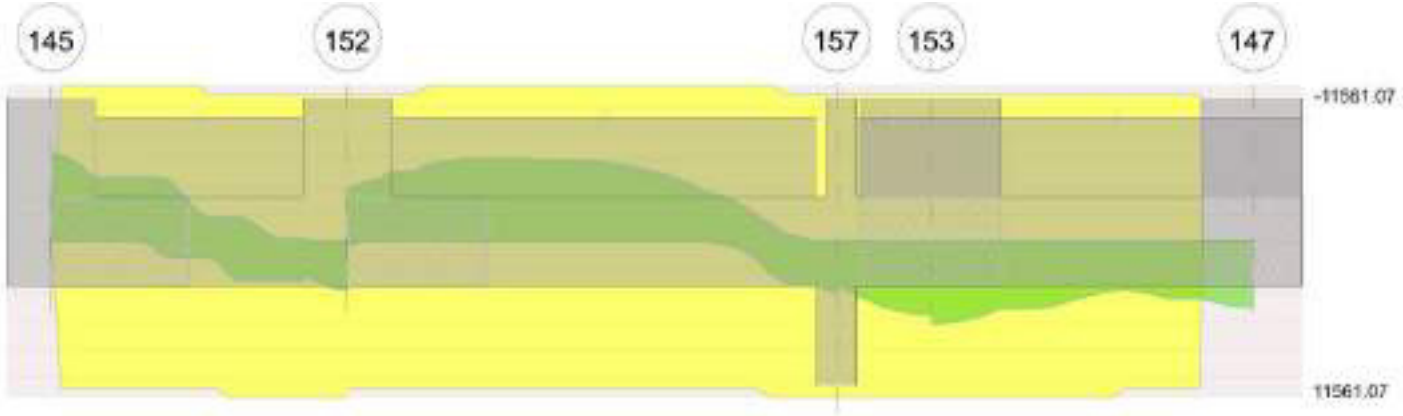


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 145 - 152, sezione R 70x45, aste 687, 686, 685, 684

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	4350	SLU 83	0.043	8001	10236	SLU 83	15877	Si
0.23	0.41	0.0005	4243	SLU 83	0.043	8001	9984	SLU 83	15877	Si
0.75	0.41	0.0005	4037	SLU 83	0.043	8001	9500	SLU 83	15877	Si
1.28	0.41	0.0005	3848	SLU 83	0.043	8001	9053	SLU 83	15877	Si
1.5	0.41	0.0005	3758	SLU 83	0.043	8001	8841	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3092	SLD 10	0.119	8913	7275	SLD 10	15877	Si
0.23	0.41	0.0005	3003	SLD 10	0.119	8913	7065	SLD 10	15877	Si
0.75	0.41	0.0005	2827	SLD 10	0.119	8913	6651	SLD 10	15877	Si
1.28	0.41	0.0005	2669	SLD 6	0.119	8913	6281	SLD 6	15877	Si
1.5	0.41	0.0005	2598	SLD 6	0.119	8913	6112	SLD 6	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	3212	SLE RA 20	89021	1494000	1103862	36000000	2924	SLE QP 2	81031	1120500	Si
0.23	0.41	0.00000506	3133	SLE RA 20	86814	1494000	1076488	36000000	2850	SLE QP 2	78988	1120500	Si
0.75	0.41	0.00000506	2979	SLE RA 20	82569	1494000	1023854	36000000	2708	SLE QP 2	75051	1120500	Si
1.28	0.41	0.00000506	2838	SLE RA 20	78655	1494000	975326	36000000	2577	SLE QP 2	71418	1120500	Si
1.5	0.41	0.00000506	2771	SLE RA 20	76800	1494000	952317	36000000	2515	SLE QP 2	69700	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 152 - 157, sezione R 70x45, aste 683, 682, 681, 680, 679, 678

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3758	SLU 83	0.043	8001	8841	SLU 83	15877	Si
0.23	0.41	0.0005	3667	SLU 83	0.043	8001	8628	SLU 83	15877	Si
1.24	0.41	0.0005	3469	SLU 83	0.043	8001	8162	SLU 83	15877	Si
2.37	0.41	0.0005	3627	SLU 84	0.043	8001	8533	SLU 84	15877	Si
2.47	0.41	0.0005	3643	SLU 84	0.043	8001	8571	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2598	SLD 6	0.119	8913	6112	SLD 6	15877	Si
0.23	0.41	0.0005	2526	SLD 6	0.119	8913	5943	SLD 6	15877	Si
1.24	0.41	0.0005	2358	SLD 2	0.119	8913	5548	SLD 2	15877	Si
2.37	0.41	0.0005	2443	SLD 2	0.119	8913	5748	SLD 2	15877	Si
2.47	0.41	0.0005	2453	SLD 2	0.119	8913	5771	SLD 2	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2771	SLE RA 20	76800	1494000	952317	36000000	2515	SLE QP 2	69700	1120500	Si
0.23	0.41	0.00000506	2704	SLE RA 20	74933	1494000	929172	36000000	2453	SLE QP 2	67971	1120500	Si
1.24	0.41	0.00000506	2556	SLE RA 20	70833	1494000	878331	36000000	2314	SLE QP 2	64131	1120500	Si
2.37	0.41	0.00000506	2671	SLE RA 21	74025	1494000	917908	36000000	2416	SLE QP 2	66964	1120500	Si
2.47	0.41	0.00000506	2683	SLE RA 21	74352	1494000	921964	36000000	2427	SLE QP 2	67257	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 157 - 153, sezione R 70x45, asta 677

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3643	SLU 84	0.043	8001	8571	SLU 84	15877	Si
0.1	0.41	0.0005	3657	SLU 84	0.043	8001	8606	SLU 84	15877	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.13	0.41	0.0005	3661	SLU 84	0.043	8001	8615	SLU 84	15877	Si
0.24	0.41	0.0005	3674	SLU 84	0.043	8001	8645	SLU 84	15877	Si
0.48	0.41	0.0005	3689	SLU 84	0.043	8001	8680	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2453	SLD 2	0.119	8913	5771	SLD 2	15877	Si
0.1	0.41	0.0005	2462	SLD 2	0.119	8913	5792	SLD 2	15877	Si
0.13	0.41	0.0005	2464	SLD 2	0.119	8913	5798	SLD 2	15877	Si
0.24	0.41	0.0005	2472	SLD 2	0.119	8913	5817	SLD 2	15877	Si
0.48	0.41	0.0005	2483	SLD 8	0.119	8913	5843	SLD 8	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2683	SLE RA 21	74352	1494000	921964	36000000	2427	SLE QP 2	67257	1120500	Si
0.1	0.41	0.00000506	2694	SLE RA 21	74648	1494000	925632	36000000	2436	SLE QP 2	67522	1120500	Si
0.13	0.41	0.00000506	2697	SLE RA 21	74729	1494000	926646	36000000	2439	SLE QP 2	67595	1120500	Si
0.24	0.41	0.00000506	2706	SLE RA 21	74989	1494000	929867	36000000	2448	SLE QP 2	67827	1120500	Si
0.48	0.41	0.00000506	2717	SLE RA 21	75286	1494000	933543	36000000	2457	SLE QP 2	68089	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 153 - 147, sezione R 70x45, aste 676, 675, 674, 673

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3689	SLU 84	0.043	8001	8680	SLU 84	15877	Si
0.35	0.41	0.0005	3675	SLU 84	0.043	8001	8648	SLU 84	15877	Si
0.81	0.41	0.0005	3614	SLU 84	0.043	8001	8503	SLU 84	15877	Si
1.37	0.41	0.0005	3489	SLU 84	0.043	8001	8210	SLU 84	15877	Si
1.62	0.41	0.0005	3418	SLU 84	0.043	8001	8043	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2483	SLD 8	0.119	8913	5843	SLD 8	15877	Si
0.35	0.41	0.0005	2483	SLD 7	0.119	8913	5842	SLD 7	15877	Si
0.81	0.41	0.0005	2457	SLD 7	0.119	8913	5781	SLD 7	15877	Si
1.37	0.41	0.0005	2392	SLD 7	0.119	8913	5629	SLD 7	15877	Si
1.62	0.41	0.0005	2352	SLD 7	0.119	8913	5534	SLD 7	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2717	SLE RA 21	75286	1494000	933543	36000000	2457	SLE QP 2	68089	1120500	Si
0.35	0.41	0.00000506	2706	SLE RA 21	74999	1494000	929983	36000000	2447	SLE QP 2	67819	1120500	Si
0.81	0.41	0.00000506	2660	SLE RA 21	73726	1494000	914207	36000000	2405	SLE QP 2	66652	1120500	Si
1.37	0.41	0.00000506	2568	SLE RA 21	71163	1494000	882419	36000000	2321	SLE QP 2	64308	1120500	Si
1.62	0.41	0.00000506	2515	SLE RA 21	69699	1494000	864271	36000000	2272	SLE QP 2	62970	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

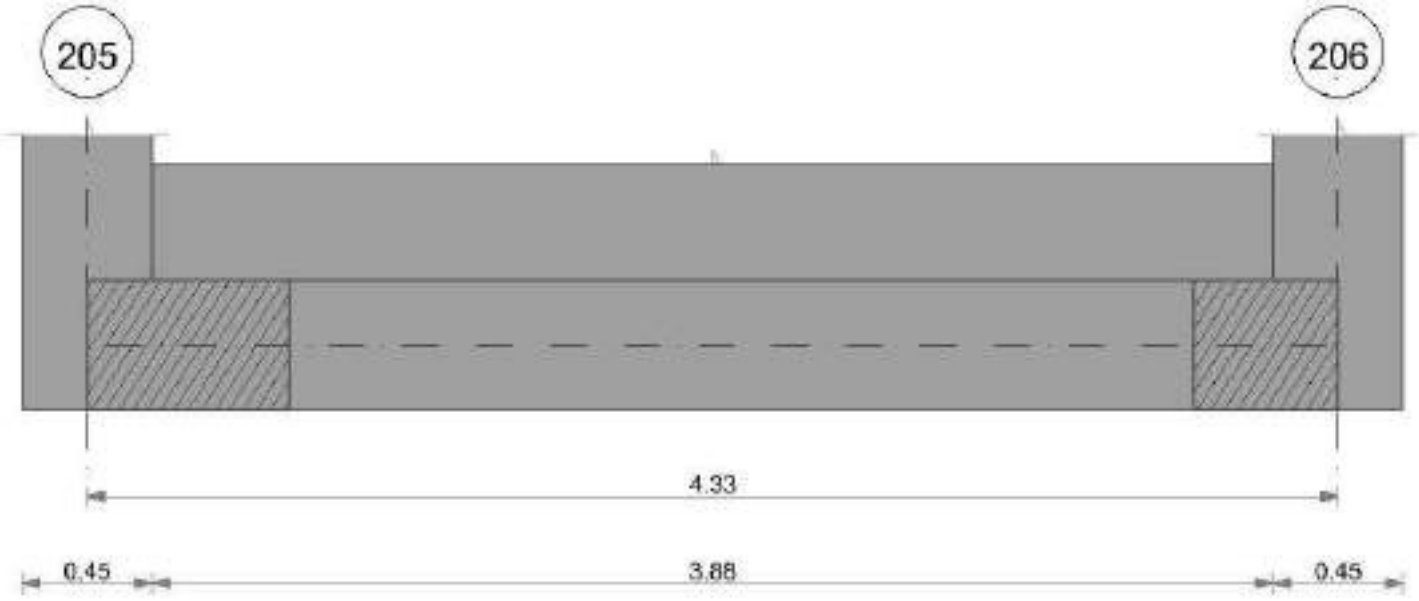
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	474	SLE RA 20	0.05	0.002	474	144	SLE RA 21	0.05	0.001	454	SLE RA 20	0.0033	0	SLE RA 2	Si
D	0.05	0	618	SLE RA 1	0.05	0	618	618	SLE RA 1	0.05	0	474	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	618	SLE RA 1	0.05	0	618	618	SLE RA 1	0.05	0	474	SLE RA 1	0.0033	0	SLE RA 1	Si

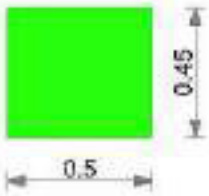
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	454	272	SLE RA 21	0.19	0.02	454	SLE RA 20	0.1	0	272	SLE RA 2	Si
D	0.19	0	SLE RA 1	0.19	0	618	474	SLE RA 1	0.19	0	618	SLE RA 1	0.1	0	474	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	618	474	SLE RA 1	0.19	0	618	SLE RA 1	0.1	0	474	SLE RA 1	Si

CORDOLO 39

Geometria





Caratteristiche dei materiali

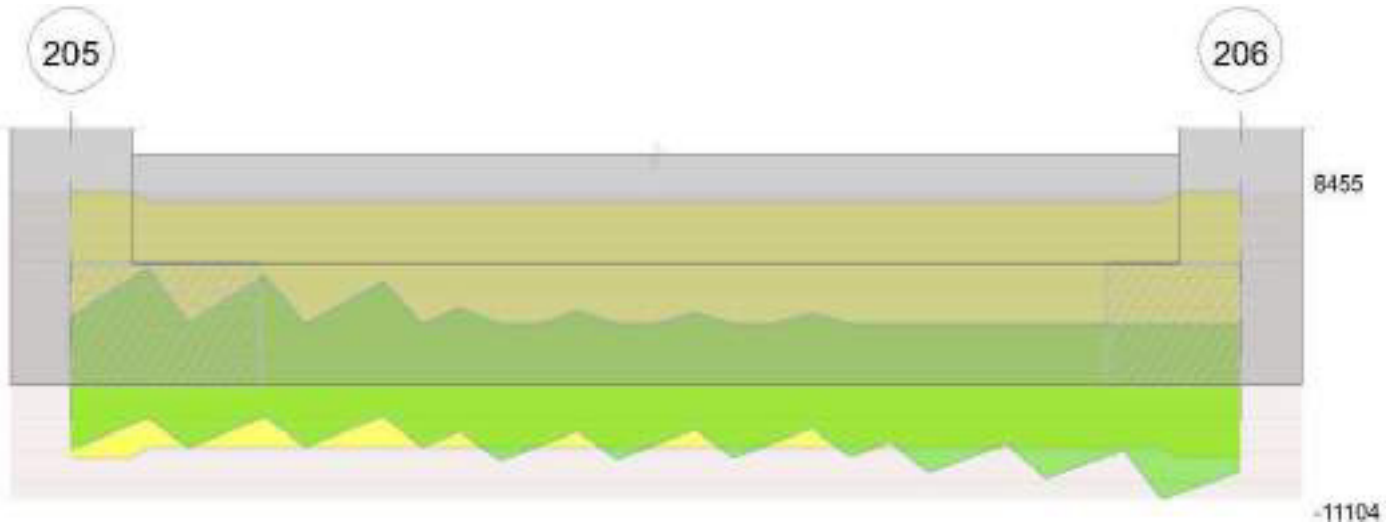
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 205 - 206, sezione R 50x45, aste 436, 435, 434, 433, 432, 431, 430, 429, 428, 427, 426

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2386	SLU 83	0.017	2687	7341	SLU 83	15877	Si
0.23	0.41	0.0002	2317	SLU 83	0.017	2687	7128	SLU 83	15877	Si
2.16	0.41	0.0002	2047	SLU 84	0.017	2687	6296	SLU 84	15877	Si
4.1	0.41	0.0002	1974	SLU 84	0.017	2687	6073	SLU 84	15877	Si
4.33	0.41	0.0002	1981	SLU 84	0.017	2687	6093	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1796	SLD 14	0.07	3025	5526	SLD 14	15877	Si
0.23	0.41	0.0002	1737	SLD 14	0.07	3025	5345	SLD 14	15877	Si
2.16	0.41	0.0002	1493	SLD 14	0.07	3025	4594	SLD 14	15877	Si
4.1	0.41	0.0002	1440	SLD 15	0.07	3025	4431	SLD 15	15877	Si
4.33	0.41	0.0002	1448	SLD 15	0.07	3025	4455	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1761	SLE RA 20	50996	1494000	632356	36000000	1607	SLE QP 2	46552	1120500	Si
0.23	0.41	0.00000168	1709	SLE RA 20	49507	1494000	613889	36000000	1560	SLE QP 2	45178	1120500	Si
2.16	0.41	0.00000168	1508	SLE RA 21	43667	1494000	541466	36000000	1372	SLE QP 2	39741	1120500	Si
4.1	0.41	0.00000168	1452	SLE RA 21	42063	1494000	521585	36000000	1318	SLE QP 2	38168	1120500	Si
4.33	0.41	0.00000168	1457	SLE RA 21	42194	1494000	523202	36000000	1321	SLE QP 2	38275	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.78	1.1	SLU 47	ST	LT	438	378	-49178	1	0	19	0	0	1.1	14959	579	25.85	Si
4.78	1.1	SLV 2	SIS	LT	-1648	7755	-34608	-3	13	19	0	0	1.1	10527	7928	1.33	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
436,435,434,433,432,431,430,429,428,427,426	4.78	1.1	SLU 84	ST	BT	2.3	220010	59041	3.73	Si
436,435,434,433,432,431,430,429,428,427,426	4.78	1.1	SLV 14	SIS	BT	2.3	189982	47515	4	Si
436,435,434,433,432,431,430,429,428,427,426	4.78	1.1	SLD 14	SIS	BT	2.3	209047	43659	4.79	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	424	-59041	-349.72	-2745.25	0	0	-0.05	-0.01	1.09	4.69	1496	2060	0	14430	
0	-6374	-47515	2855.31	-3768.1	0	-8	-0.08	0.06	0.98	4.62	1496	2060	0	14430	0.07
0	-2550	-43659	1080.63	-2728.66	0	-3	-0.06	0.02	1.05	4.65	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

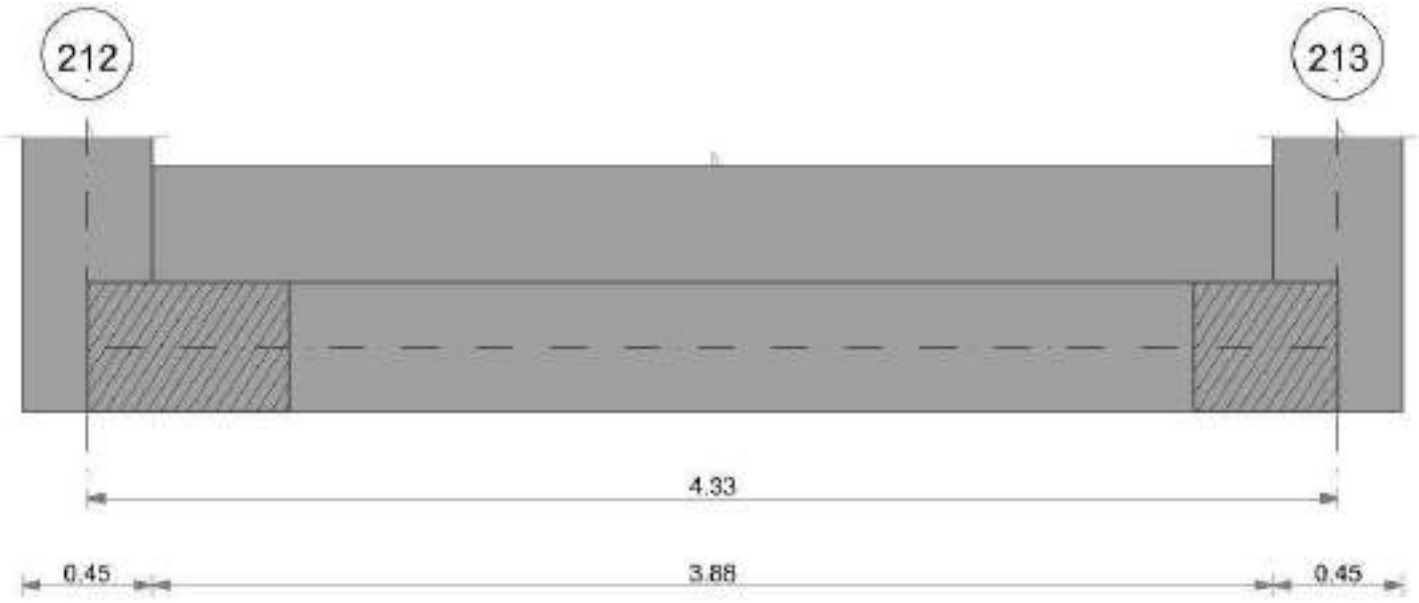
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	632	SLE RA 21	0.05	0.001	632	287	SLE RA 21	0.05	0	632	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	632	SLE RA 1	0.05	0	632	632	SLE RA 1	0.05	0	632	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	632	SLE RA 1	0.05	0	632	632	SLE RA 1	0.05	0	632	SLE RA 1	0.0033	0	SLE RA 1	Si

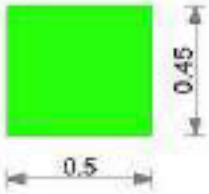
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	632	287	SLE RA 21	0.19	0	632	SLE RA 1	0.1	0	632	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	632	287	SLE RA 1	0.19	0	632	SLE RA 1	0.1	0	632	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	632	287	SLE RA 1	0.19	0	632	SLE RA 1	0.1	0	632	SLE RA 1	Si

CORDOLO 40

Geometria





Caratteristiche dei materiali

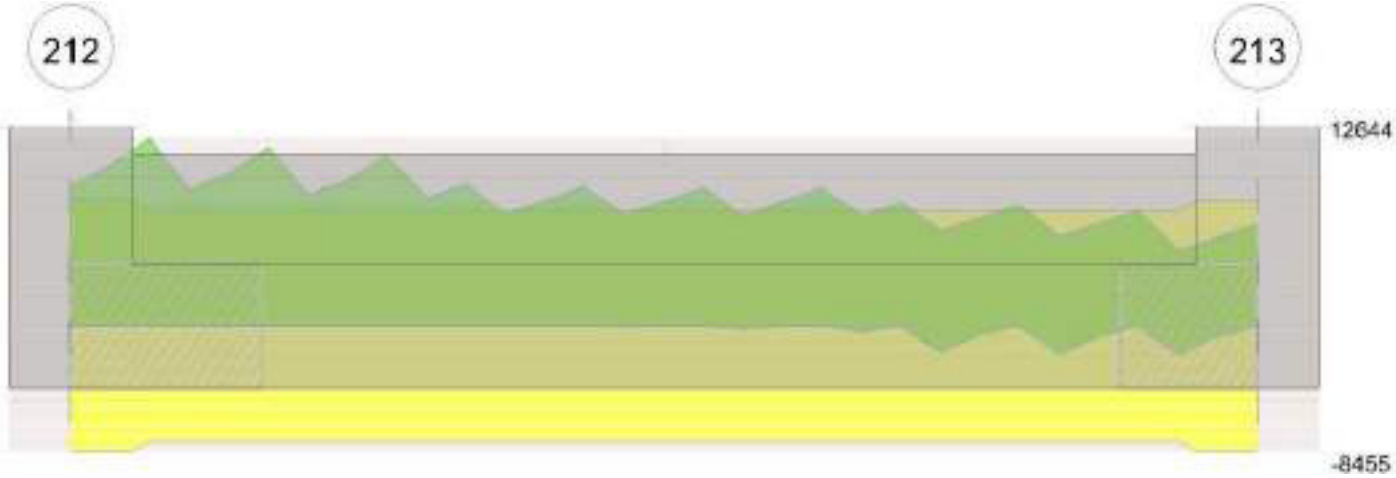
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 212 - 213, sezione R 50x45, aste 653, 652, 651, 650, 649, 648, 647, 646, 645, 644, 643

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2331	SLU 83	0.017	2687	7173	SLU 83	15877	Si
0.23	0.41	0.0002	2262	SLU 83	0.017	2687	6962	SLU 83	15877	Si
2.16	0.41	0.0002	2009	SLU 84	0.017	2687	6183	SLU 84	15877	Si
4.1	0.41	0.0002	1952	SLU 84	0.017	2687	6009	SLU 84	15877	Si
4.33	0.41	0.0002	1959	SLU 84	0.017	2687	6030	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1771	SLD 14	0.07	3025	5450	SLD 14	15877	Si
0.23	0.41	0.0002	1712	SLD 14	0.07	3025	5270	SLD 14	15877	Si
2.16	0.41	0.0002	1476	SLD 14	0.07	3025	4543	SLD 14	15877	Si
4.1	0.41	0.0002	1428	SLD 15	0.07	3025	4397	SLD 15	15877	Si
4.33	0.41	0.0002	1436	SLD 15	0.07	3025	4422	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1720	SLE RA 20	49811	1494000	617651	36000000	1570	SLE QP 2	45469	1120500	Si
0.23	0.41	0.00000168	1669	SLE RA 20	48331	1494000	599304	36000000	1523	SLE QP 2	44104	1120500	Si
2.16	0.41	0.00000168	1480	SLE RA 21	42853	1494000	531381	36000000	1347	SLE QP 2	39002	1120500	Si
4.1	0.41	0.00000168	1436	SLE RA 21	41586	1494000	515672	36000000	1303	SLE QP 2	37739	1120500	Si
4.33	0.41	0.00000168	1441	SLE RA 21	41724	1494000	517383	36000000	1307	SLE QP 2	37853	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.78	1.1	SLU 47	ST	LT	459	378	-48508	1	0	19	0	0	1.1	14755	595	24.81	Si
4.78	1.1	SLV 2	SIS	LT	-1880	7755	-33710	-3	13	19	0	0	1.1	10254	7980	1.28	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
653,652,651,650,649,648,647,646,645,644,643	4.78	1.1	SLU 84	ST	BT	2.3	220417	58222	3.79	Si
653,652,651,650,649,648,647,646,645,644,643	4.78	1.1	SLV 14	SIS	BT	2.3	190171	47431	4.01	Si
653,652,651,650,649,648,647,646,645,644,643	4.78	1.1	SLD 14	SIS	BT	2.3	209296	43307	4.83	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	424	-58222	-349.72	-2423.45	0	0	-0.04	-0.01	1.09	4.7	1496	2060	0	14430	
0	-6374	-47431	2855.31	-3625.89	0	-8	-0.08	0.06	0.98	4.63	1496	2060	0	14430	0.07
0	-2550	-43307	1080.63	-2542.17	0	-3	-0.06	0.02	1.05	4.66	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

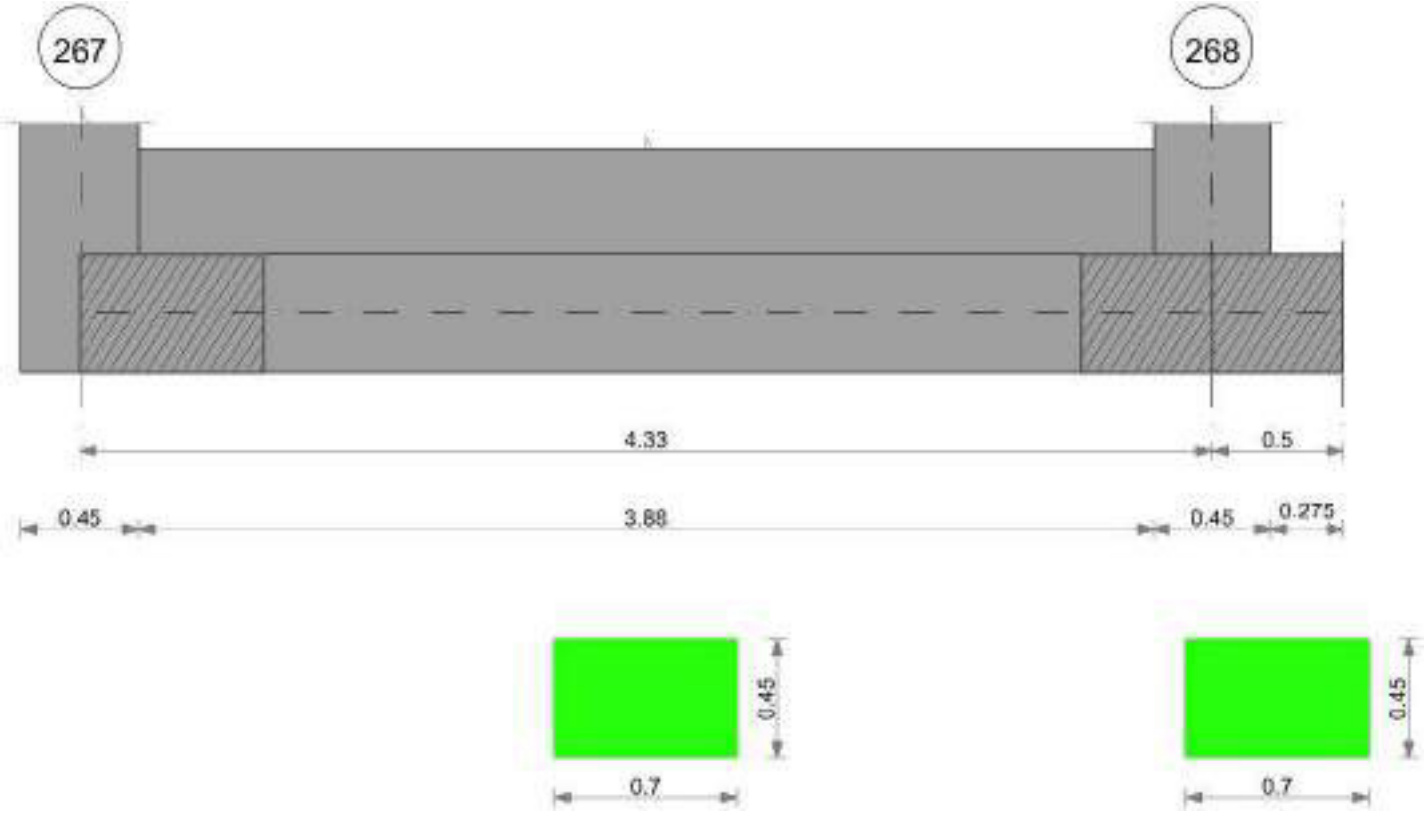
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	635	SLE RA 21	0.05	0.001	635	289	SLE RA 21	0.05	0	635	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	635	SLE RA 1	0.05	0	635	635	SLE RA 1	0.05	0	635	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	635	SLE RA 1	0.05	0	635	635	SLE RA 1	0.05	0	635	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	635	289	SLE RA 21	0.19	0	635	SLE RA 1	0.1	0	635	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	635	289	SLE RA 1	0.19	0	635	SLE RA 1	0.1	0	635	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	635	289	SLE RA 1	0.19	0	635	SLE RA 1	0.1	0	635	SLE RA 1	Si

CORDOLO 41

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

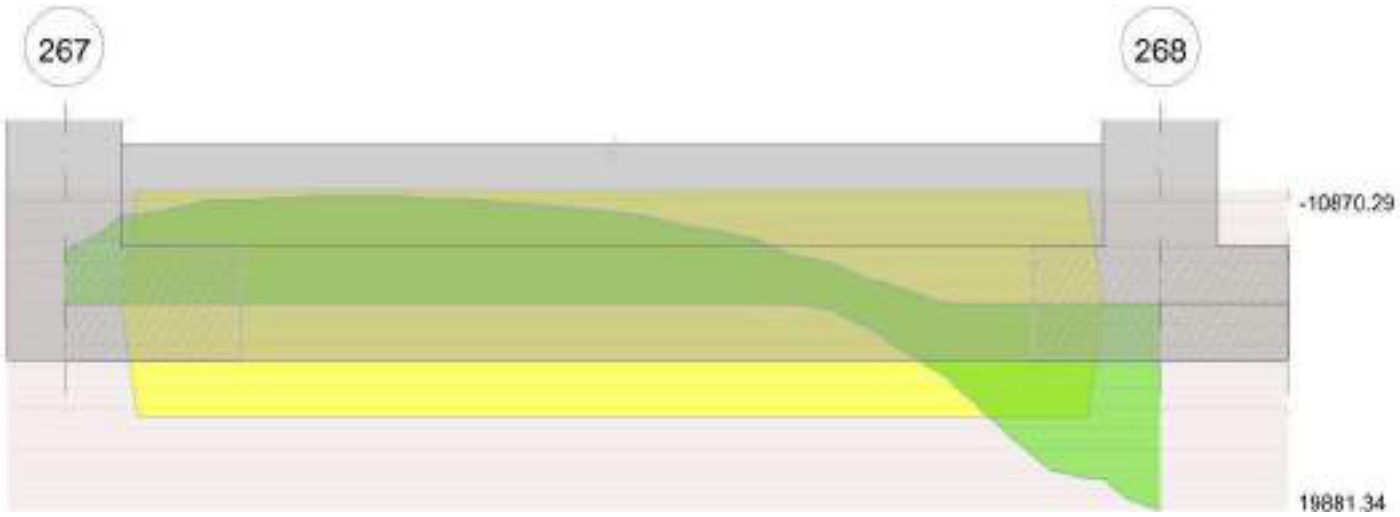
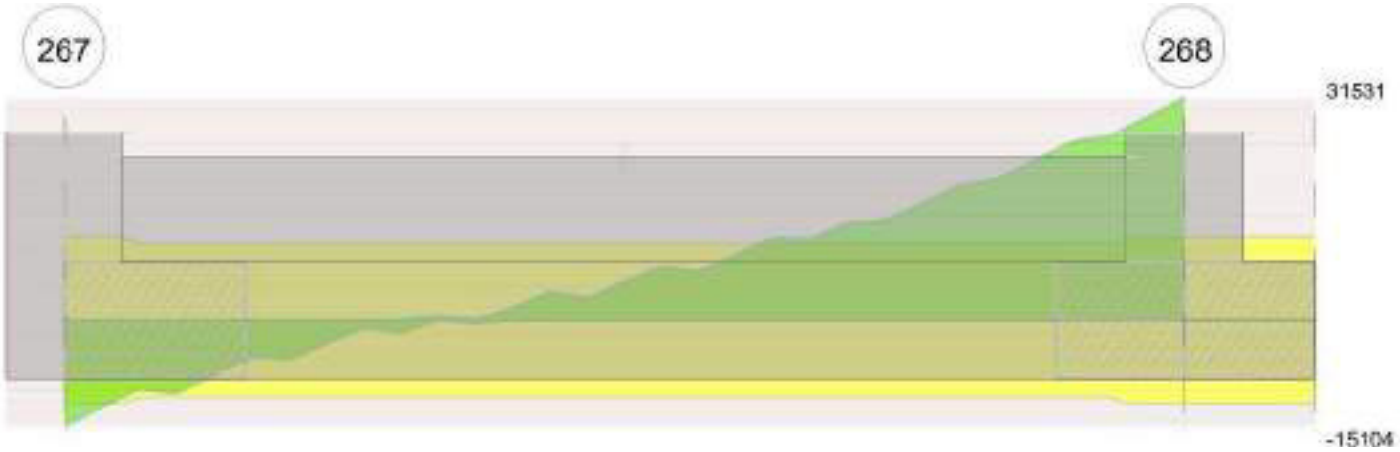


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 267 - 268, sezione R 70x45, aste 629, 628, 627, 626, 625, 624, 623, 622, 621, 620, 619

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.23	0.41	0.0002	3056	SLD 14	0.071	3173	7888	SLD 14	15877	Si
2.16	0.41	0.0002	2568	SLD 14	0.071	3173	6629	SLD 14	15877	Si
4.1	0.41	0.0002	3052	SLD 14	0.071	3173	7876	SLD 14	15877	Si
4.33	0.41	0.0002	3050	SLD 14	0.071	3173	7870	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	2602	SLE RA 20	75282	1494000	933499	36000000	2384	SLE QP 2	68982	1120500	Si
0.23	0.41	0.00000177	2485	SLE RA 20	71884	1494000	891358	36000000	2276	SLE QP 2	65848	1120500	Si
2.16	0.41	0.00000177	2115	SLE RA 21	61186	1494000	758711	36000000	1933	SLE QP 2	55934	1120500	Si
4.1	0.41	0.00000177	2542	SLE RA 21	73538	1494000	911876	36000000	2324	SLE QP 2	67238	1120500	Si
4.33	0.41	0.00000177	2541	SLE RA 21	73501	1494000	911412	36000000	2323	SLE QP 2	67206	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.55	1.3	SLU 39	ST	LT	-569	627	-59105	-1	1	19	0	0	1.1	17978	846	21.24	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
629,628,627,626,625,624,623,622,621,620,619	4.55	1.3	SLU 84	ST	BT	2.3	216060	72292	2.99	Si
629,628,627,626,625,624,623,622,621,620,619	4.55	1.3	SLV 13	SIS	BT	2.3	188802	79623	2.37	Si
629,628,627,626,625,624,623,622,621,620,619	4.55	1.3	SLD 13	SIS	BT	2.3	202795	62710	3.23	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	787	-72292	5671.72	1454.93	0	1	0.02	0.08	1.14	4.51	1496	2060	0	14430	
0	-7527	-79623	10807.59	1083.03	0	-5	0.01	0.14	1.03	4.53	1496	2060	0	14430	0.07
0	-2892	-62710	6830.77	996.88	0	-3	0.02	0.11	1.08	4.52	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

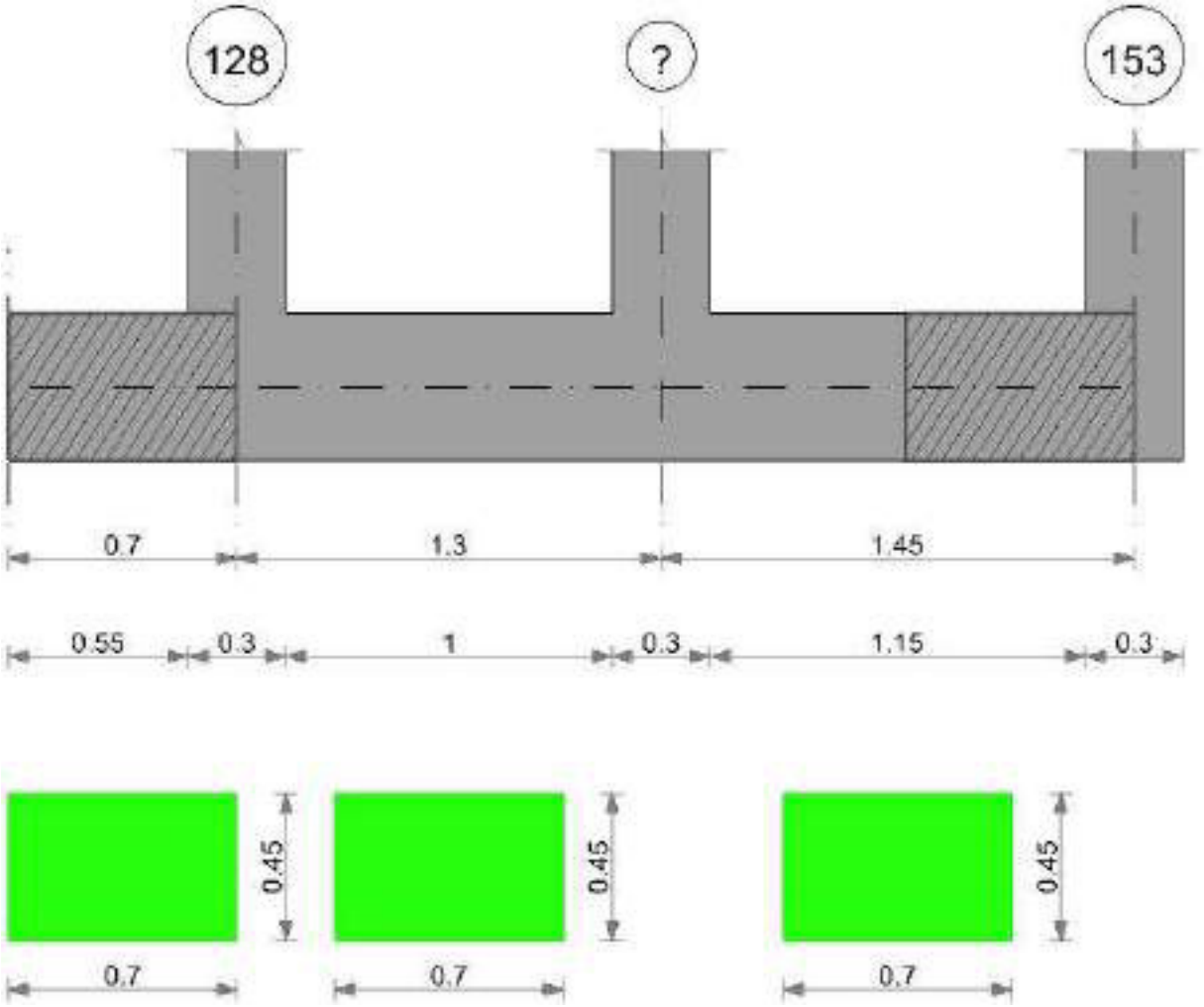
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	651	SLE RA 21	0.05	0	651	304	SLE RA 21	0.05	0	651	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	651	SLE RA 1	0.05	0	651	651	SLE RA 1	0.05	0	651	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	651	SLE RA 1	0.05	0	651	651	SLE RA 1	0.05	0	651	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	651	304	SLE RA 21	0.19	0	651	SLE RA 1	0.1	0	651	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	651	304	SLE RA 1	0.19	0	651	SLE RA 1	0.1	0	651	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	651	304	SLE RA 1	0.19	0	651	SLE RA 1	0.1	0	651	SLE RA 1	Si

CORDOLO 42

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

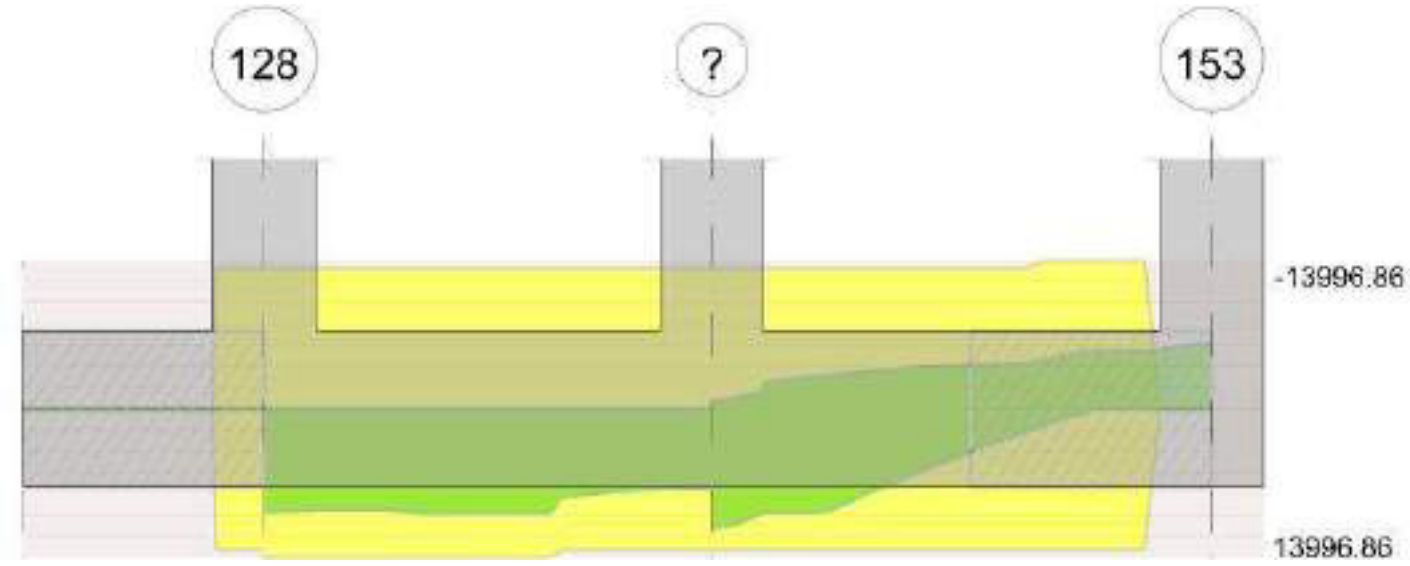
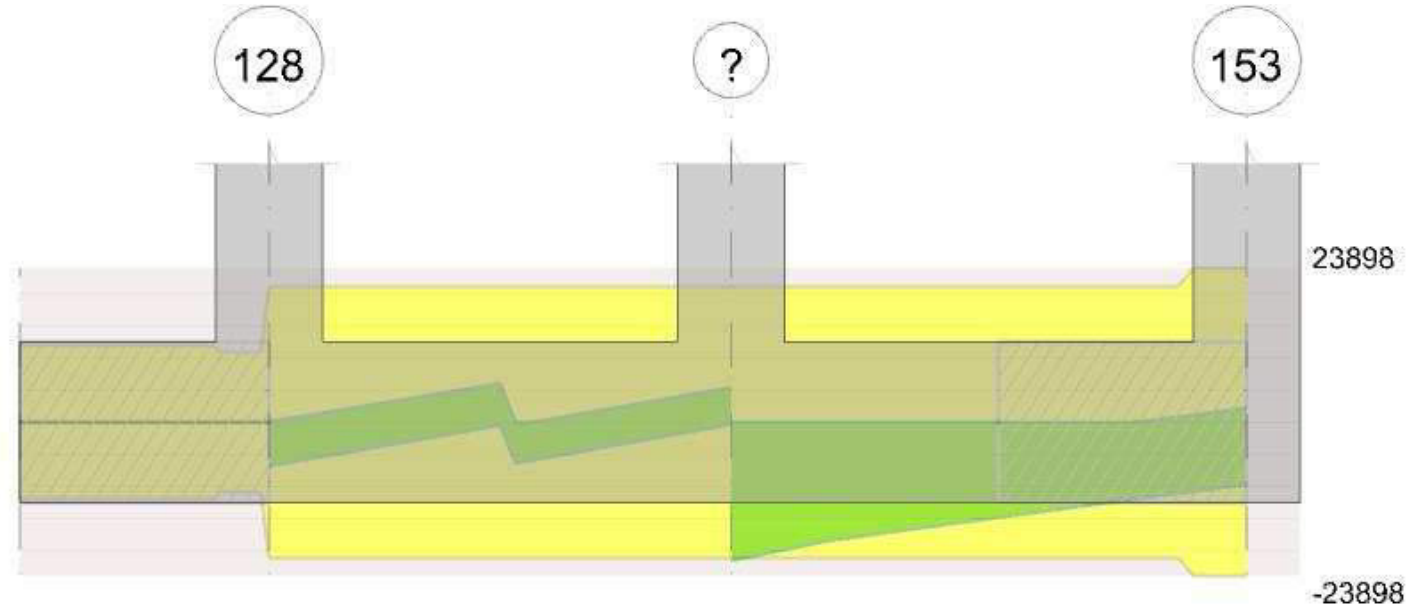


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 128 - ?, sezione R 70x45, aste 467, 468

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	10037.71	SLU 83	9682.48	13996.86	0.128	1.45							Si
0.15	0.000942	0.053	0.000942	0.053	9481.94	SLU 83	9481.94	13996.86	0.128	1.48							Si
0.52	0.000942	0.053	0.000942	0.053	9456.28	SLU 83	9912.44	13996.86	0.128	1.41							Si
0.65	0.000942	0.053	0.000942	0.053	9912.44	SLU 83	9912.44	13996.86	0.128	1.41							Si
1.15	0.000942	0.053	0.000942	0.053	7496.15	SLU 83	7496.15	13996.86	0.128	1.87							Si
1.3	0.000942	0.053	0.000942	0.053	7870.5	SLU 83	7600.99	13996.86	0.128	1.84							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	7325.13	SLV 2	7306.97	13265.61	0.222	1.82							Si
0.15	0.000942	0.053	0.000942	0.053	7411.59	SLV 2	7799.34	13265.61	0.222	1.7							Si
0.52	0.000942	0.053	0.000942	0.053	8537.1	SLV 2	9238.47	13265.61	0.222	1.44							Si
0.65	0.000942	0.053	0.000942	0.053	9238.47	SLV 2	9238.47	13265.61	0.222	1.44							Si
1.15	0.000942	0.053	0.000942	0.053	7469.78	SLV 13	7547.31	13265.61	0.222	1.76							Si
1.3	0.000942	0.053	0.000942	0.053	7664.41	SLV 13	7503.57	13265.61	0.222	1.77							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	6986.57	SLD 2	6833.89	13265.61	0.222	1.94							Si
0.15	0.000942	0.053	0.000942	0.053	6793.08	SLD 2	6841.89	13265.61	0.222	1.94							Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.52	0.000942	0.053	0.000942	0.053	7222.7	SLD 2	7683.14	13265.61	0.222	1.73							Si
0.65	0.000942	0.053	0.000942	0.053	7683.14	SLD 2	7683.14	13265.61	0.222	1.73							Si
1.15	0.000942	0.053	0.000942	0.053	6037.96	SLD 13	6053.81	13265.61	0.222	2.19							Si
1.3	0.000942	0.053	0.000942	0.053	6275.75	SLD 13	6098.06	13265.61	0.222	2.18							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-4856	SLU 77	-4856	-11611	-88226	-21083	-21083	1	4.34	Si
0.15	0.0000151	0.000942	0	-2940	SLU 69	-2940	-11611	-88226	-21083	-21083	1	7.17	Si
0.65	0.0000151	0.000942	0	4458	SLU 82	4458	11611	88226	21083	21083	1	4.73	Si
0.69	0.0000151	0.000942	0	-5305	SLU 84	-5305	-11611	-88226	-21083	-21083	1	3.97	Si
1.15	0.0000151	0.000942	0	1434	SLU 60	1434	11611	88226	21083	21083	1	14.7	Si
1.3	0.0000151	0.000942	0	3596	SLU 83	3596	11611	88226	21083	21083	1	5.86	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	53	SLV 2	53	11611	88226	21083	21083	1	400.5	Si
0	0.0000151	0.000942	0	-6805	SLV 15	-6805	-11611	-88226	-21083	-21083	1	3.1	Si
0.15	0.0000151	0.000942	0	1395	SLV 2	1395	11611	88226	21083	21083	1	15.11	Si
0.15	0.0000151	0.000942	0	-5380	SLV 15	-5380	-11611	-88226	-21083	-21083	1	3.92	Si
0.65	0.0000151	0.000942	0	6032	SLV 2	6032	11611	88226	21083	21083	1	3.5	Si
0.65	0.0000151	0.000942	0	-454	SLV 15	-454	-11611	-88226	-21083	-21083	1	46.48	Si
1.15	0.0000151	0.000942	0	3921	SLV 6	3921	11611	88226	21083	21083	1	5.38	Si
1.15	0.0000151	0.000942	0	-1835	SLV 11	-1835	-11611	-88226	-21083	-21083	1	11.49	Si
1.3	0.0000151	0.000942	0	5376	SLV 6	5376	11611	88226	21083	21083	1	3.92	Si
1.3	0.0000151	0.000942	0	-339	SLV 11	-339	-11611	-88226	-21083	-21083	1	62.2	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-4842	SLD 15	-4842	-11611	-88226	-21083	-21083	1	4.35	Si
0.15	0.0000151	0.000942	0	-3441	SLD 15	-3441	-11611	-88226	-21083	-21083	1	6.13	Si
0.65	0.0000151	0.000942	0	4176	SLD 2	4176	11611	88226	21083	21083	1	5.05	Si
1.15	0.0000151	0.000942	0	2307	SLD 6	2307	11611	88226	21083	21083	1	9.14	Si
1.15	0.0000151	0.000942	0	-221	SLD 11	-221	-11611	-88226	-21083	-21083	1	95.26	Si
1.3	0.0000151	0.000942	0	3774	SLD 6	3774	11611	88226	21083	21083	1	5.59	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	7410.74	20	7148.15	474542	1494000	21042707	36000000	6732.72	2	6479.39	430146	1120500			Si
0.15	6999.76	20	6999.76	464691	1494000	20605861	36000000	6329.94	2	6329.94	420223	1120500			Si
0.65	7315.13	20	7315.13	485627	1494000	21534248	36000000	6519.9	2	6519.9	432835	1120500			Si
1.15	5541.1	20	5541.1	202654	1494000	3039814	36000000	4960.56	2	4960.56	181422	1120500			Si
1.3	5824.01	20	5621.76	205604	1494000	3084064	36000000	5227.54	2	5038.79	184283	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0	inferiore	0.442	0.00061	0.000271	20	0.442	0.00057	0.000252	6	0.442	0.00056	0.000246	2	Si
0.15	inferiore	0.442	0.0006	0.000265	20	0.442	0.00056	0.000246	6	0.442	0.00054	0.00024	2	Si
0.52	inferiore	0.442	0.00063	0.000277	20	0.442	0.00058	0.000255	6	0.442	0.00056	0.000247	2	Si
0.65	inferiore	0.442	0.00063	0.000277	20	0.442	0.00058	0.000255	6	0.442	0.00056	0.000247	2	Si

Campata 3 tra i fili ? - 153, sezione R 70x45, asta 469

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	8543.41	SLU 83	7680.71	13996.86	0.128	1.82							Si
0.15	0.000942	0.053	0.000942	0.053	6193.97	SLU 83	6193.97	13996.86	0.128	2.26							Si
0.73	0.000942	0.053	0.000942	0.053	-729.73	SLU 1	909.17	13996.86	0.128	15.4	-1107.66	SLU 78	-2780.02	-13996.86	0.128	5.03	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	12024.1	SLV 13	11207.23	13265.61	0.222	1.18	-695.16	SLV 4	-695.16	-13265.61	0.222	19.08	Si
0.15	0.000942	0.053	0.000942	0.053	9753.81	SLV 13	9753.81	13265.61	0.222	1.36	-1572	SLV 4	-2461.13	-13265.61	0.222	5.39	Si
0.73	0.000942	0.053	0.000942	0.053	2259.14	SLV 13	4396	13265.61	0.222	3.02	-3804.05	SLV 4	-4131.74	-13265.61	0.222	3.21	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	8388.33	SLD 13	7708.09	13265.61	0.222	1.72							Si
0.15	0.000942	0.053	0.000942	0.053	6516.39	SLD 13	6516.39	13265.61	0.222	2.04							Si
0.73	0.000942	0.053	0.000942	0.053	526.08	SLD 13	2196.6	13265.61	0.222	6.04	-2070.98	SLD 4	-2862.73	-13265.61	0.222	4.63	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-21486	SLU 83	-21486	-11611	-88226	-21083	-21083	1	0.98	Si
0.15	0.0000151	0.000942	0	-19823	SLU 83	-19823	-11611	-88226	-21083	-21083	1	1.06	Si
0.73	0.0000151	0.000942	0	-13502	SLU 83	-13502	-11611	-88226	-21083	-21083	1	1.56	Si
1.3	0.0000151	0	0	-7284	SLU 83	-7284	-11837	-100005	-23898	-23898	1	3.28	Si
1.45	0.0000151	0	0	-5672	SLU 83	-5672	-11837	-100005	-23898	-23898	1	4.21	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-20536	SLV 13	-20536	-11611	-88226	-21083	-21083	1	1.03	Si
0.15	0.0000151	0.000942	0	-19379	SLV 13	-19379	-11611	-88226	-21083	-21083	1	1.09	Si
0.73	0.0000151	0.000942	0	-15006	SLV 13	-15006	-11611	-88226	-21083	-21083	1	1.41	Si
1.3	0.0000151	0	0	1094	SLV 4	1094	11837	100005	23898	23898	1	21.85	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.3	0.0000151	0	0	-10798	SLV 13	-10798	-11837	-100005	-23898	-23898	1	2.21	Si
1.45	0.0000151	0	0	2192	SLV 4	2192	11837	100005	23898	23898	1	10.9	Si
1.45	0.0000151	0	0	-9729	SLV 13	-9729	-11837	-100005	-23898	-23898	1	2.46	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-17023	SLD 13	-17023	-11611	-88226	-21083	-21083	1	1.24	Si
0.15	0.0000151	0.000942	0	-15889	SLD 13	-15889	-11611	-88226	-21083	-21083	1	1.33	Si
0.73	0.0000151	0.000942	0	-11590	SLD 13	-11590	-11611	-88226	-21083	-21083	1	1.82	Si
1.3	0.0000151	0	0	-7399	SLD 13	-7399	-11837	-100005	-23898	-23898	1	3.23	Si
1.45	0.0000151	0	0	-6322	SLD 13	-6322	-11837	-100005	-23898	-23898	1	3.78	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	6315.84	20	5678.36	207674	1494000	3115115	36000000	5664.47	2	5086.57	186031	1120500			Si
0.15	4579.66	20	4579.66	167492	1494000	2512376	36000000	4090.9	2	4090.9	149616	1120500			Si
0.73	-814.53	15	-2053.34	75097	1494000	1126451	36000000	-772.45	2	-1911.9	69924	1120500			Si
1.3	-4140.96	21	-4140.96	-175279	1494000	0	36000000	-3797.92	2	-3797.92	-160758	1120500			Si
1.45	-4686.67	20	-4544.66	-192367	1494000	0	36000000	-4288.99	2	-4161.84	-176162	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
2.9	1.3	SLU 44	ST	LT	-14	151	-33231	0	0	19	0	0	1.1	10108	152	66.55	Si
2.9	1.3	SLV 2	SIS	LT	-4336	-942	-27251	-9	-2	19	0	0	1.1	8289	4437	1.87	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
467,468,469	2.9	1.3	SLU 84	ST	BT	2.3	162651	40649	4	Si
467,468,469	2.9	1.3	SLV 11	SIS	BT	2.3	145350	28123	5.17	Si
467,468,469	2.9	1.3	SLD 11	SIS	BT	2.3	154792	27992	5.53	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-39	70	-40649	-23.46	65.88	0	0	0	0	1.3	2.9	1496	2060	0	14430	
1611	2661	-28123	-1386.81	693.74	3	5	0.02	-0.05	1.2	2.85	1496	2060	0	14430	0.07
680	1211	-27992	-637.75	328.44	1	2	0.01	-0.02	1.25	2.88	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.09	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.09	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

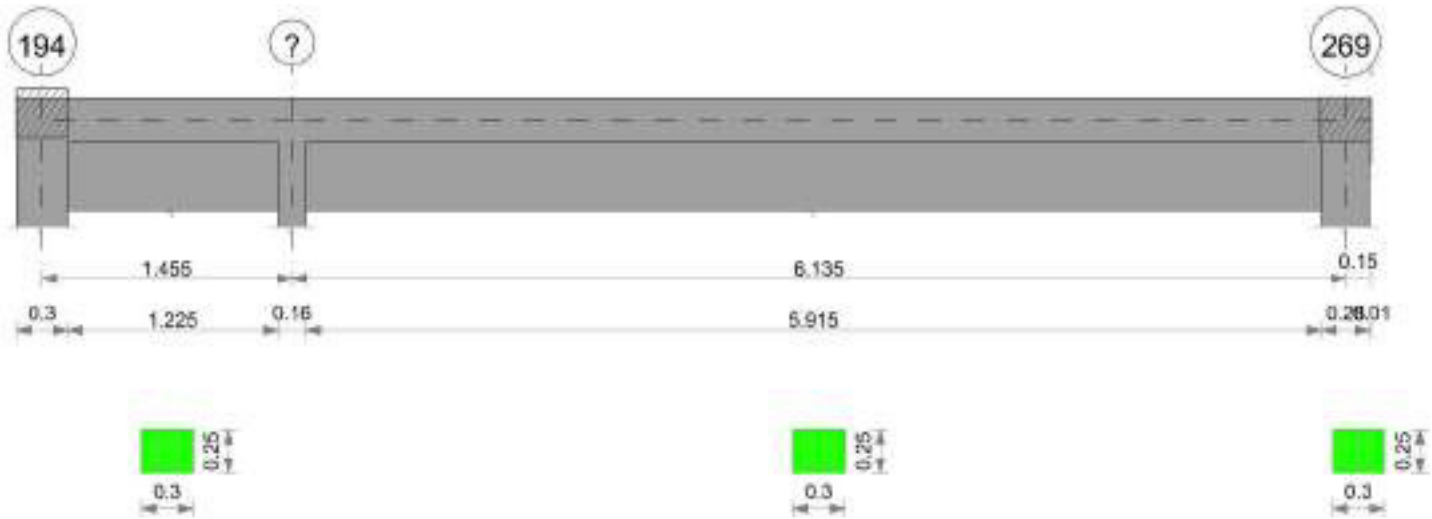
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	474	SLE RA 20	0.05	0	474	471	SLE RA 21	0.05	0	473	SLE RA 21	0.0033	0	SLE RA 21	Si
D	0.05	0	474	SLE RA 1	0.05	0	474	474	SLE RA 1	0.05	0	473	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	474	SLE RA 1	0.05	0	474	474	SLE RA 1	0.05	0	473	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	474	473	SLE RA 21	0.19	0	474	SLE RA 1	0.1	0.01	473	SLE RA 21	Si
D	0.19	0	SLE RA 1	0.19	0	474	473	SLE RA 1	0.19	0	474	SLE RA 1	0.1	0	473	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	474	473	SLE RA 1	0.19	0	474	SLE RA 1	0.1	0	473	SLE RA 1	Si

CORDOLO SOTTOTETTO 1

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

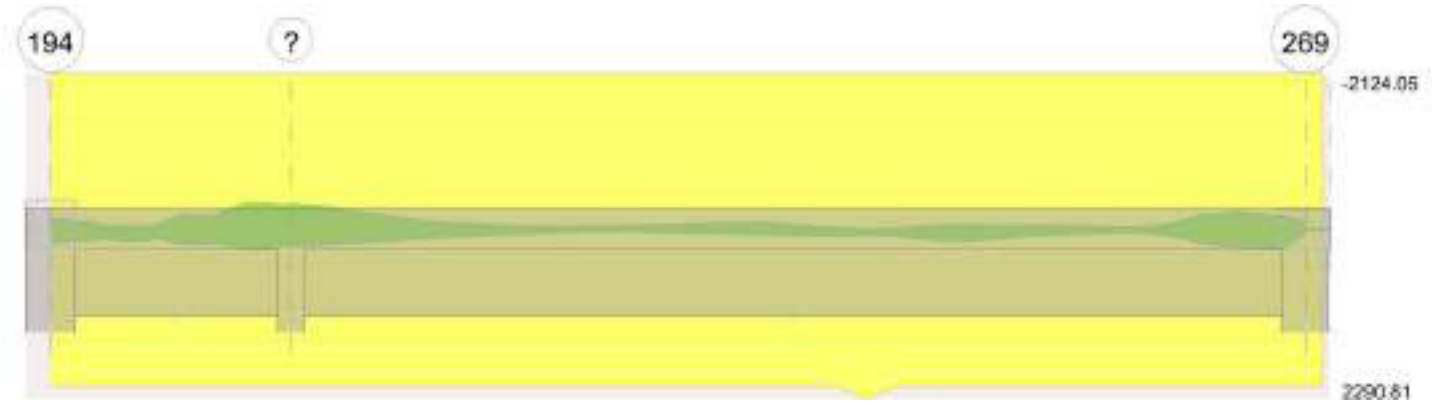


Diagramma verifica stato limite ultimo taglio

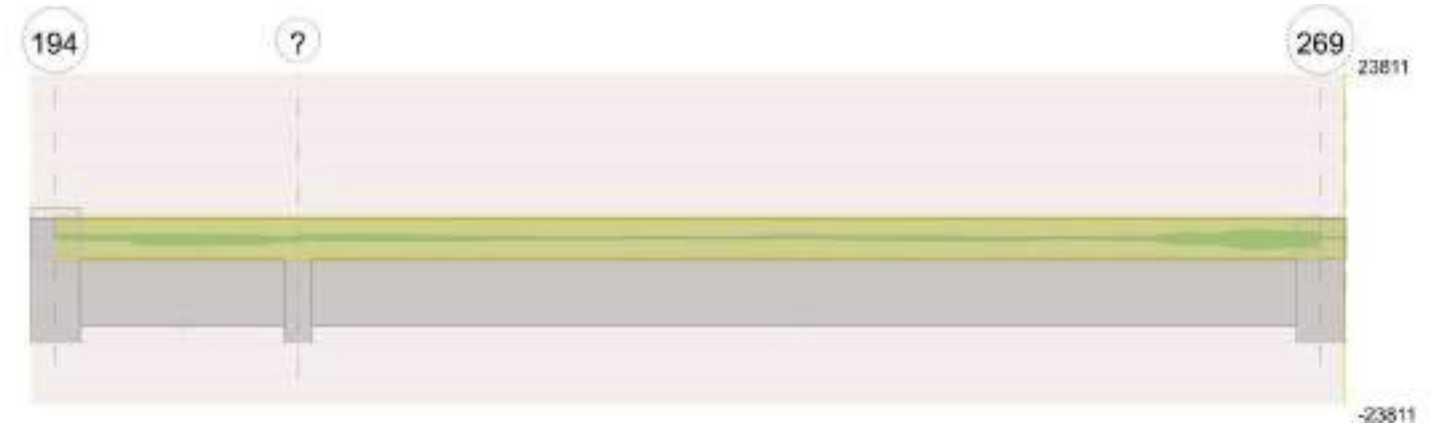
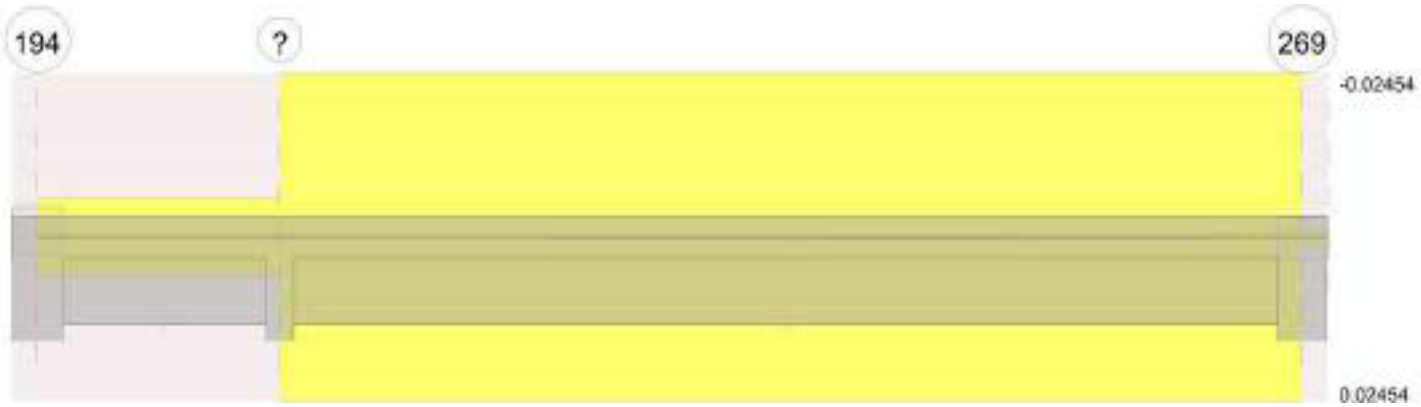


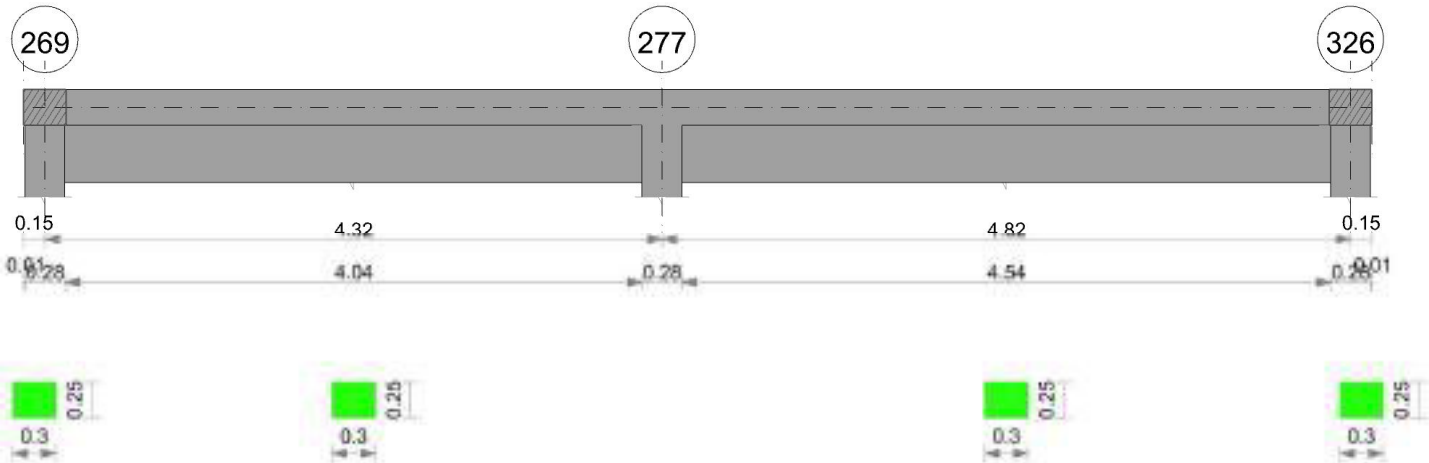
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 2

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

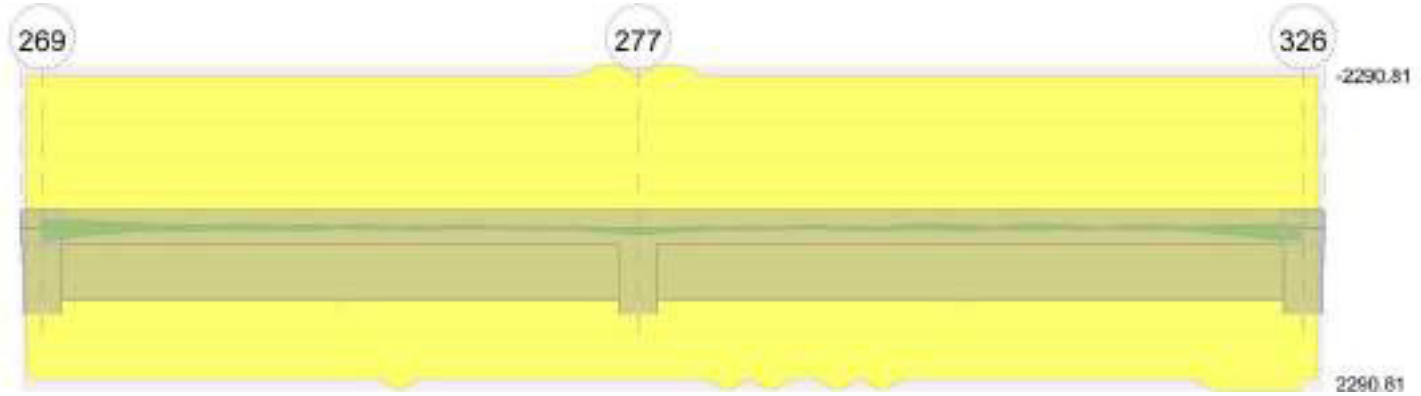


Diagramma verifica stato limite ultimo taglio

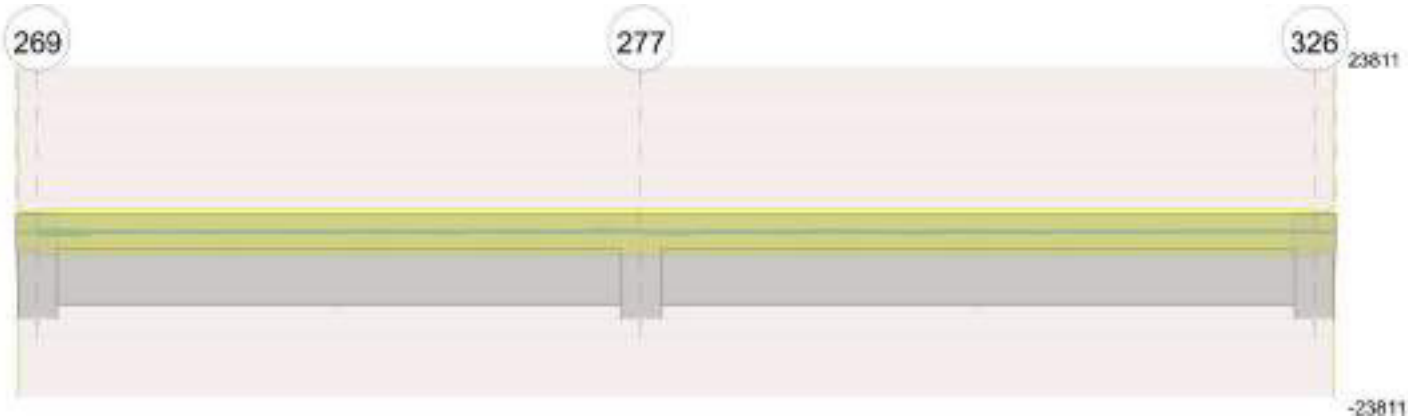
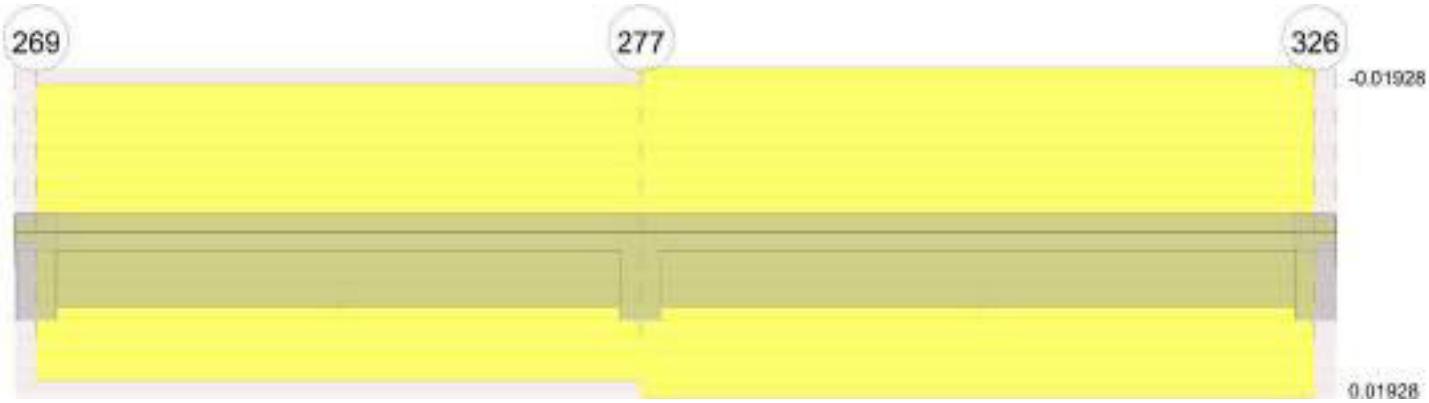


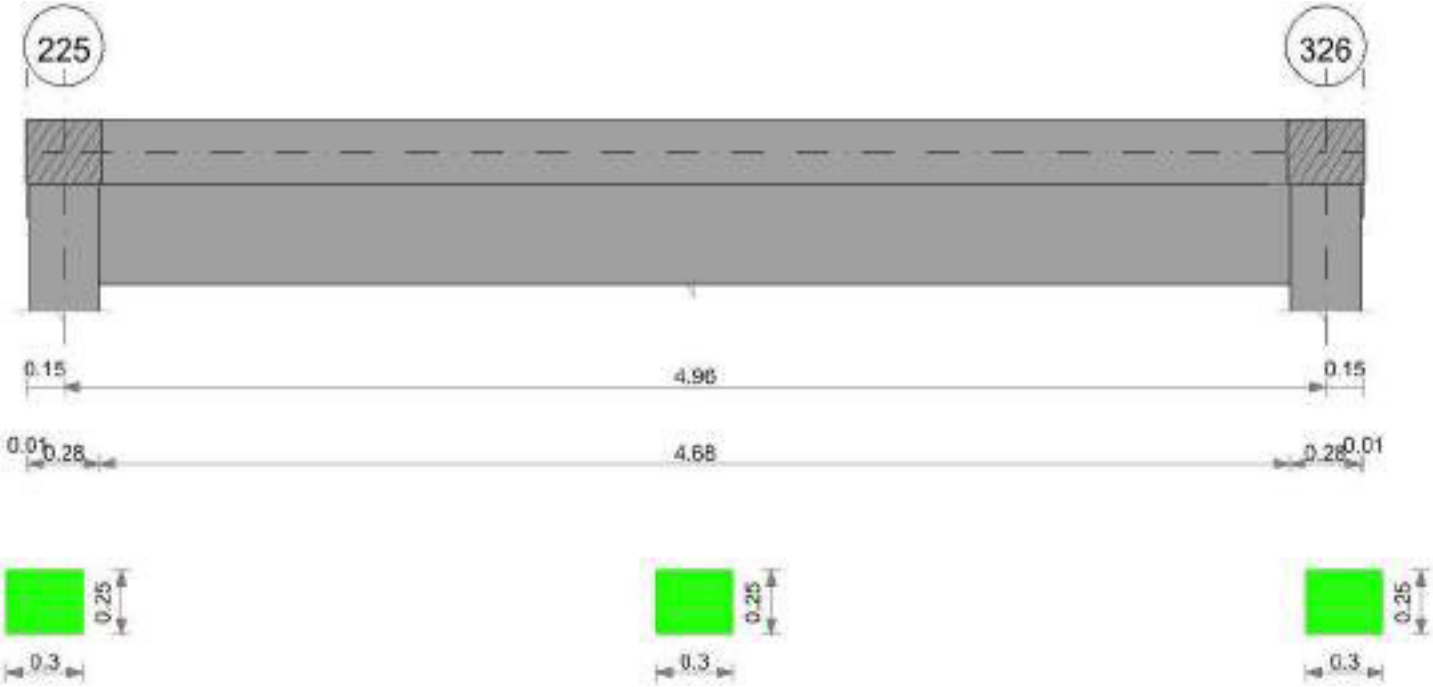
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 3

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

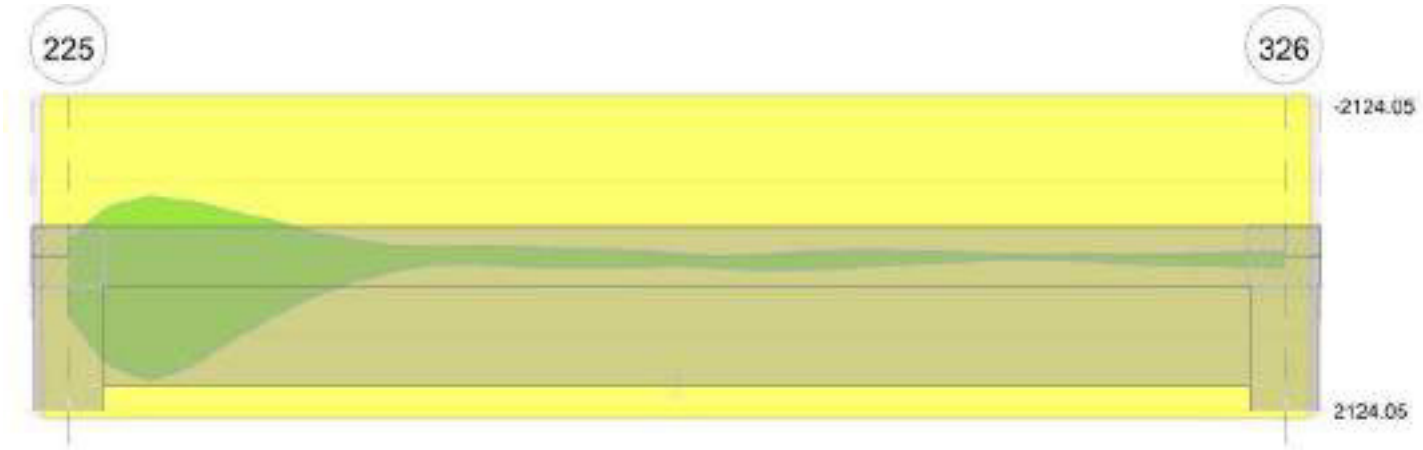


Diagramma verifica stato limite ultimo taglio

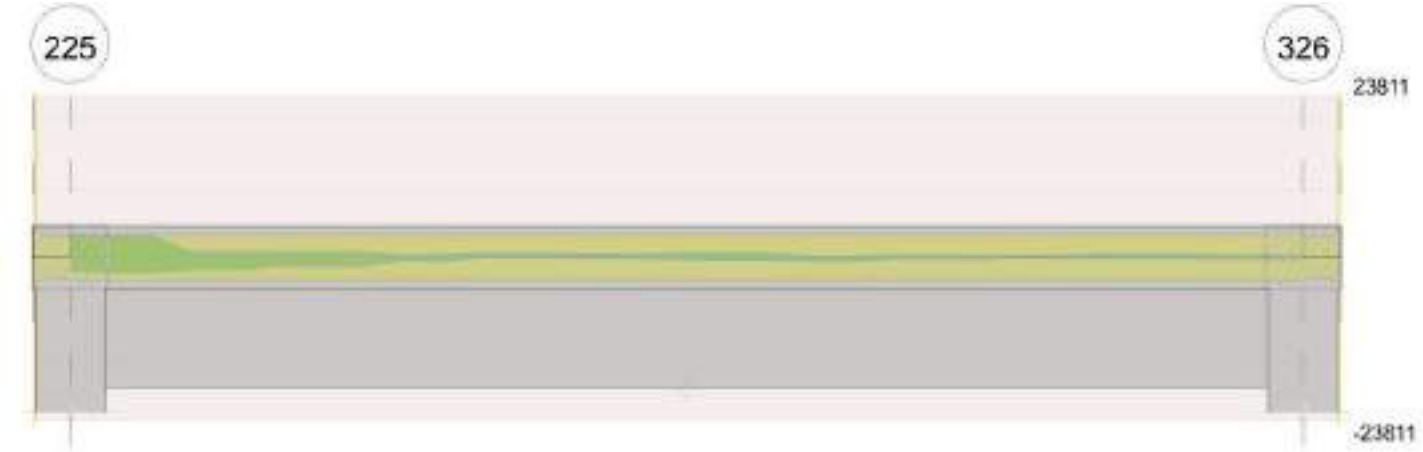
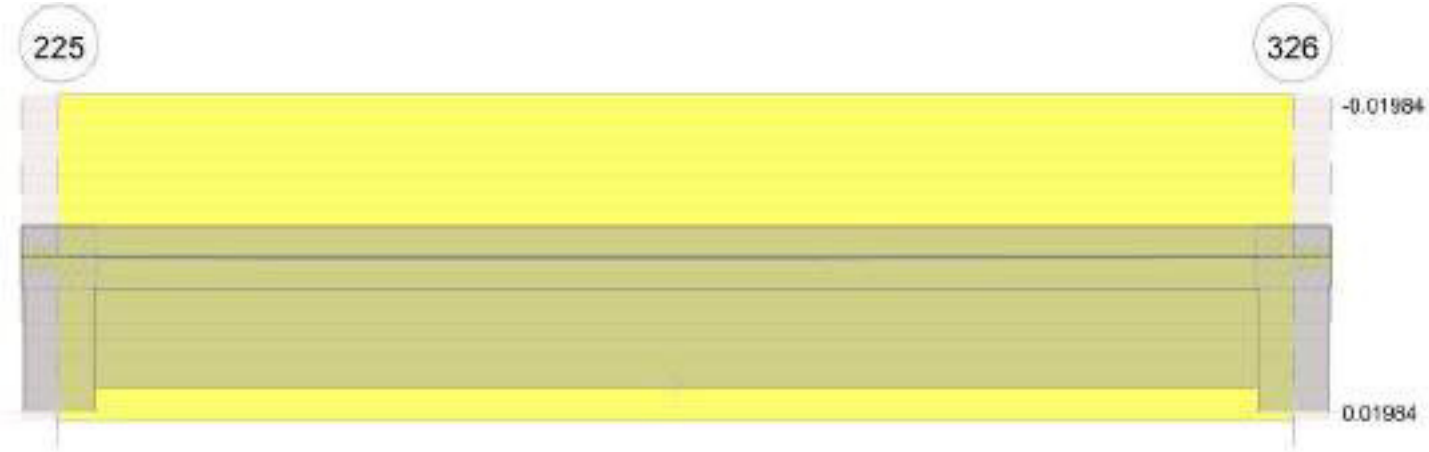


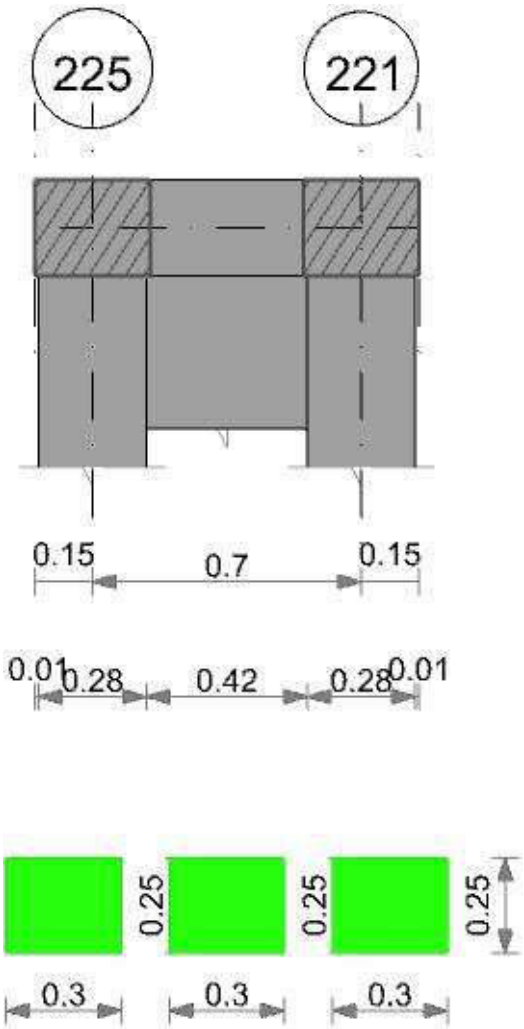
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 4

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

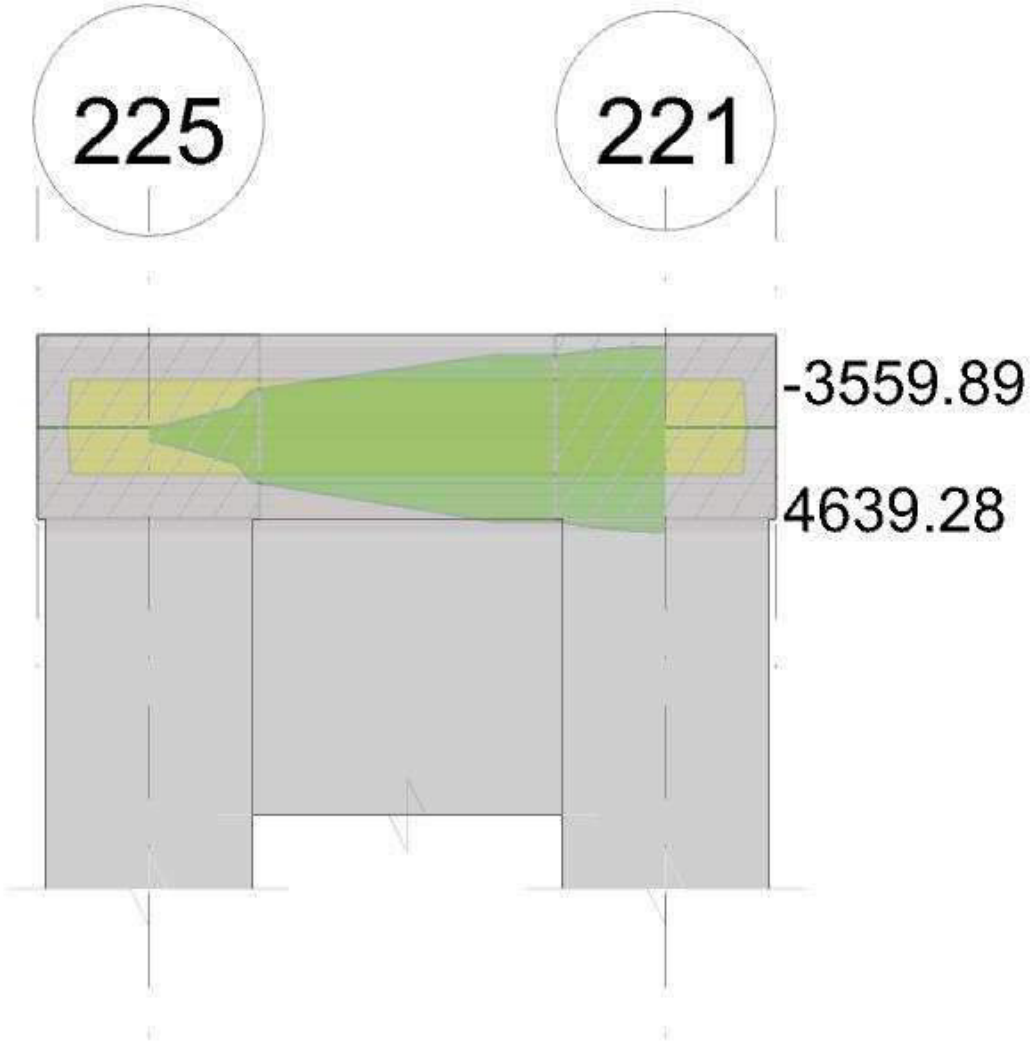


Diagramma verifica stato limite ultimo taglio

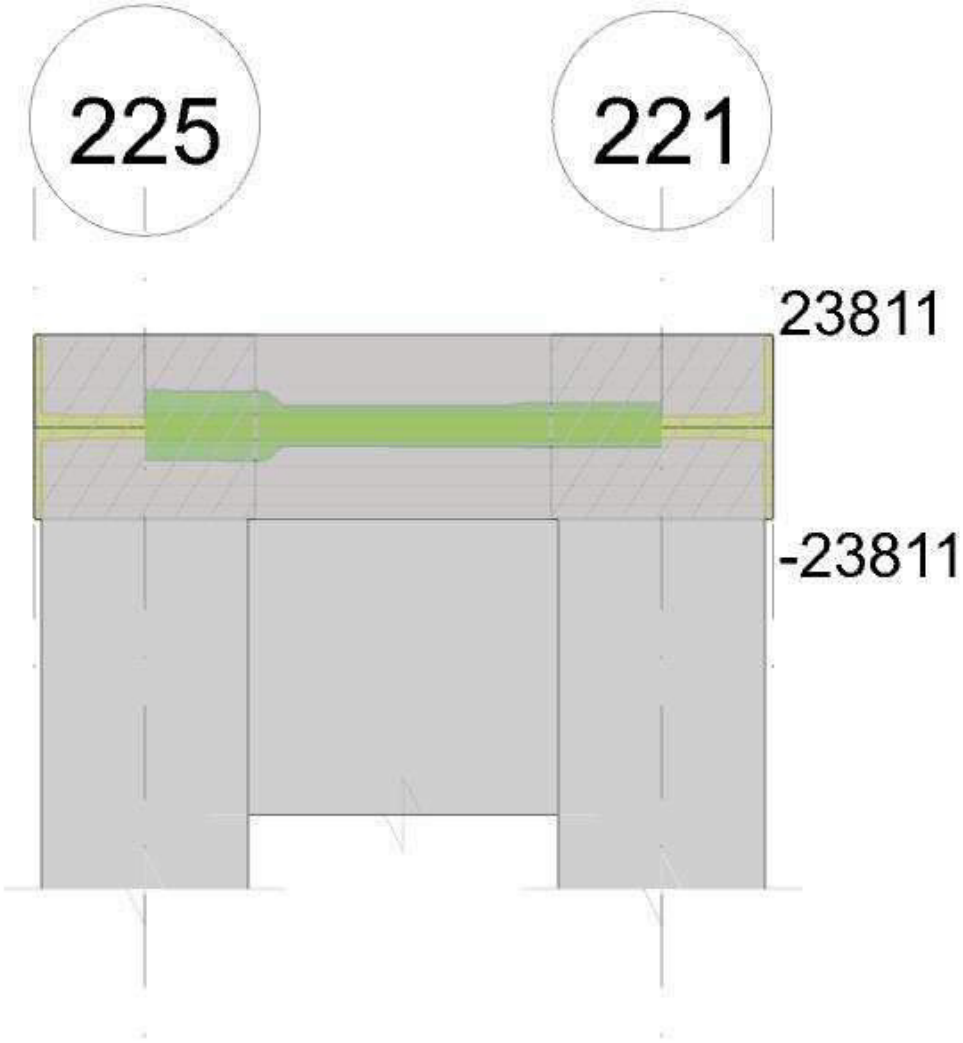
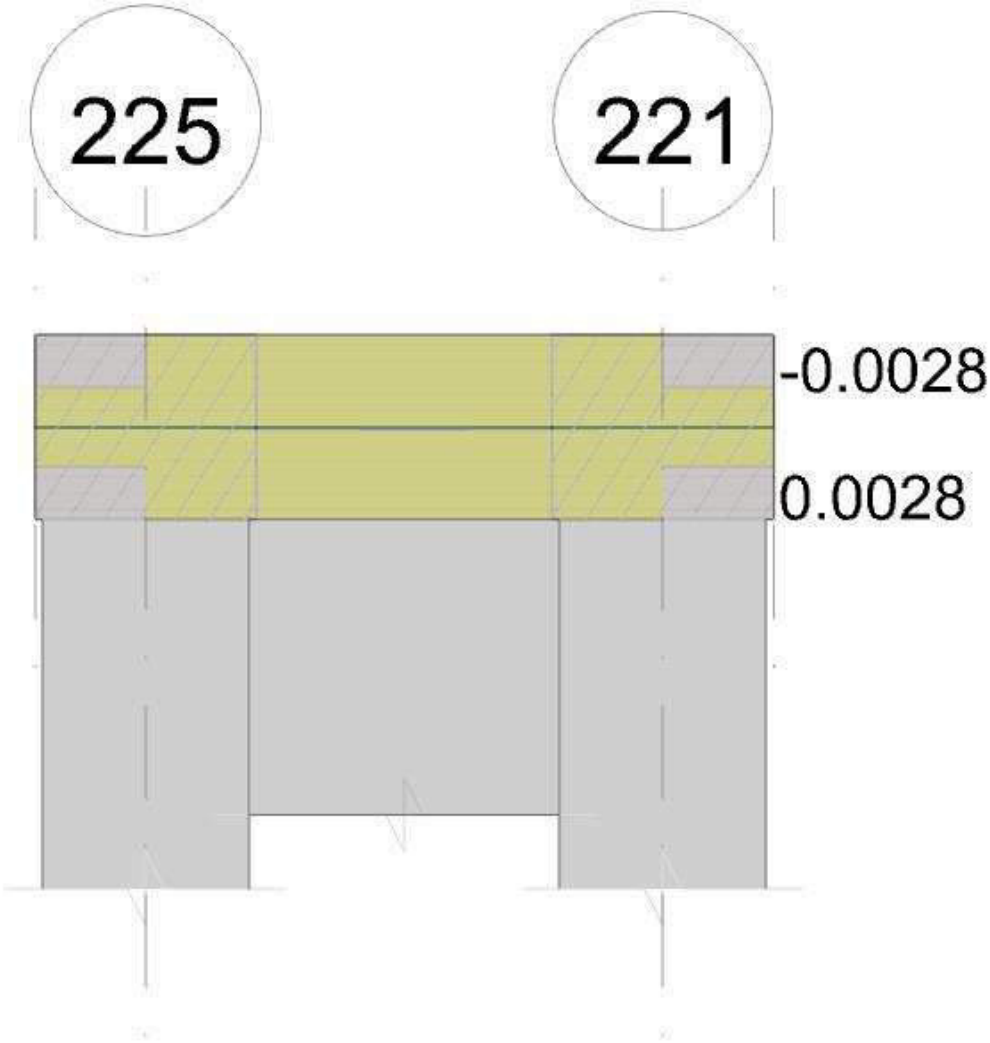


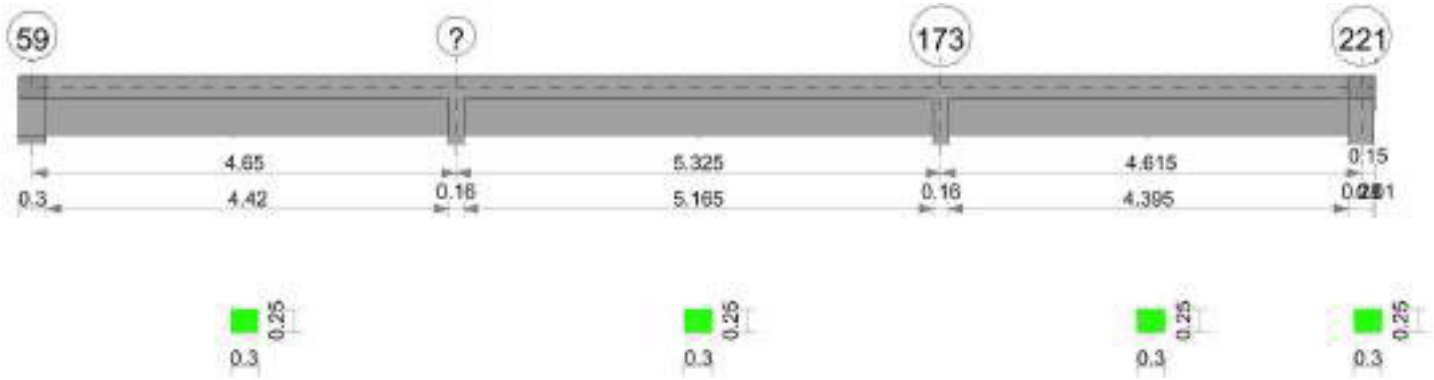
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 5

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

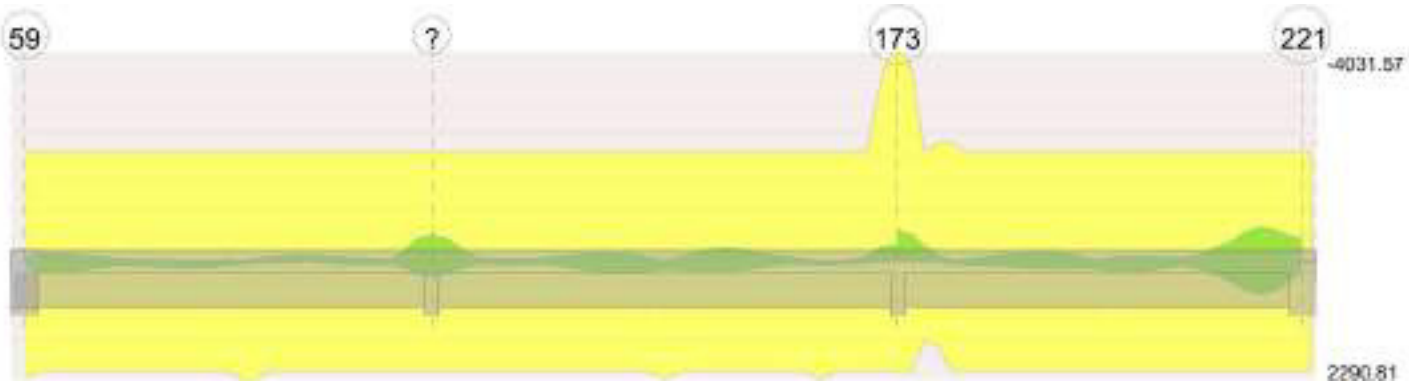
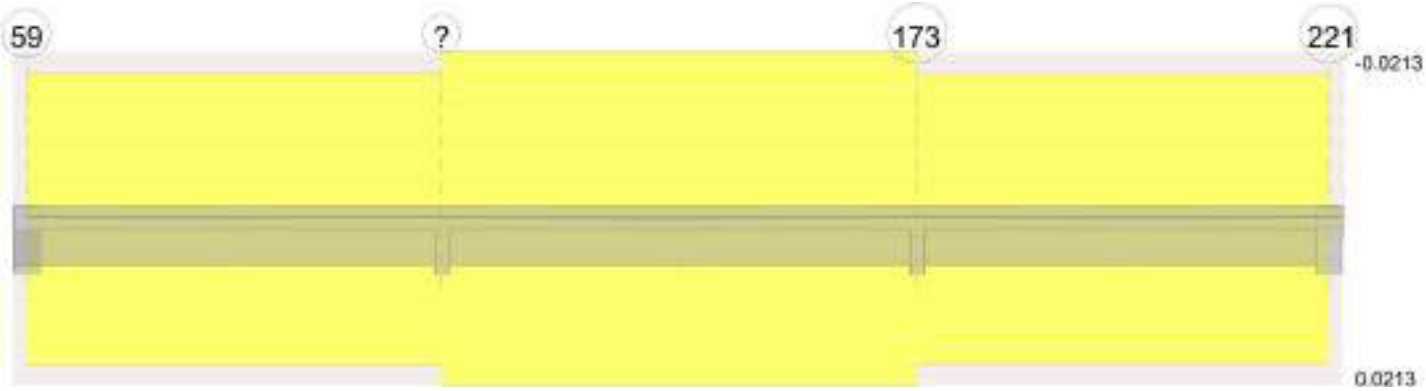


Diagramma verifica stato limite ultimo taglio

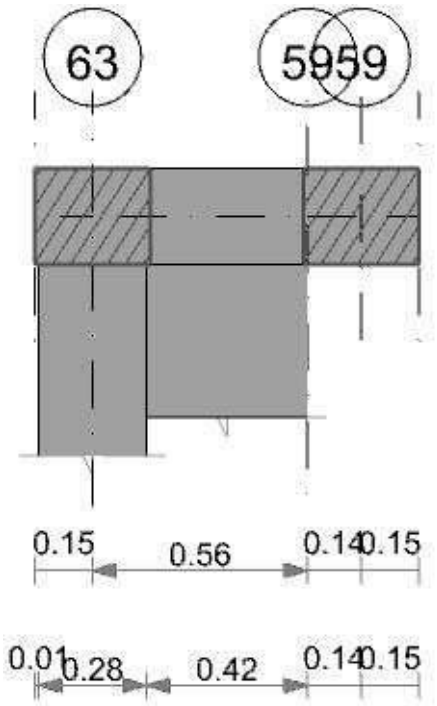
Diagramma verifica stato limite esercizio quasi permanente freccia

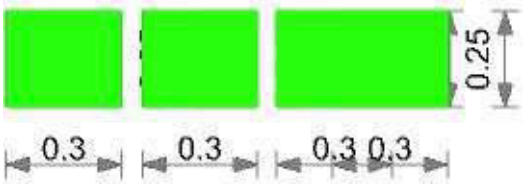


Output campate

CORDOLO SOTTOTETTO 6

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

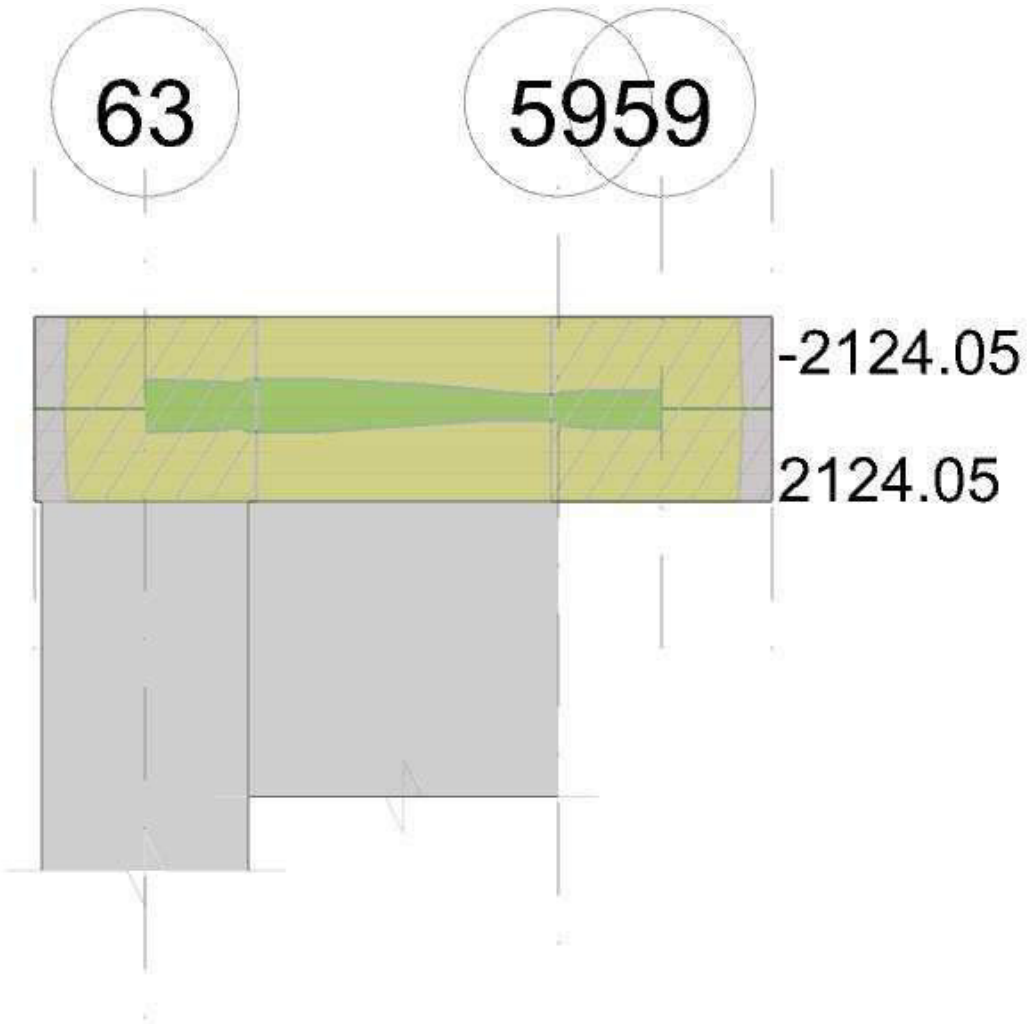


Diagramma verifica stato limite ultimo taglio

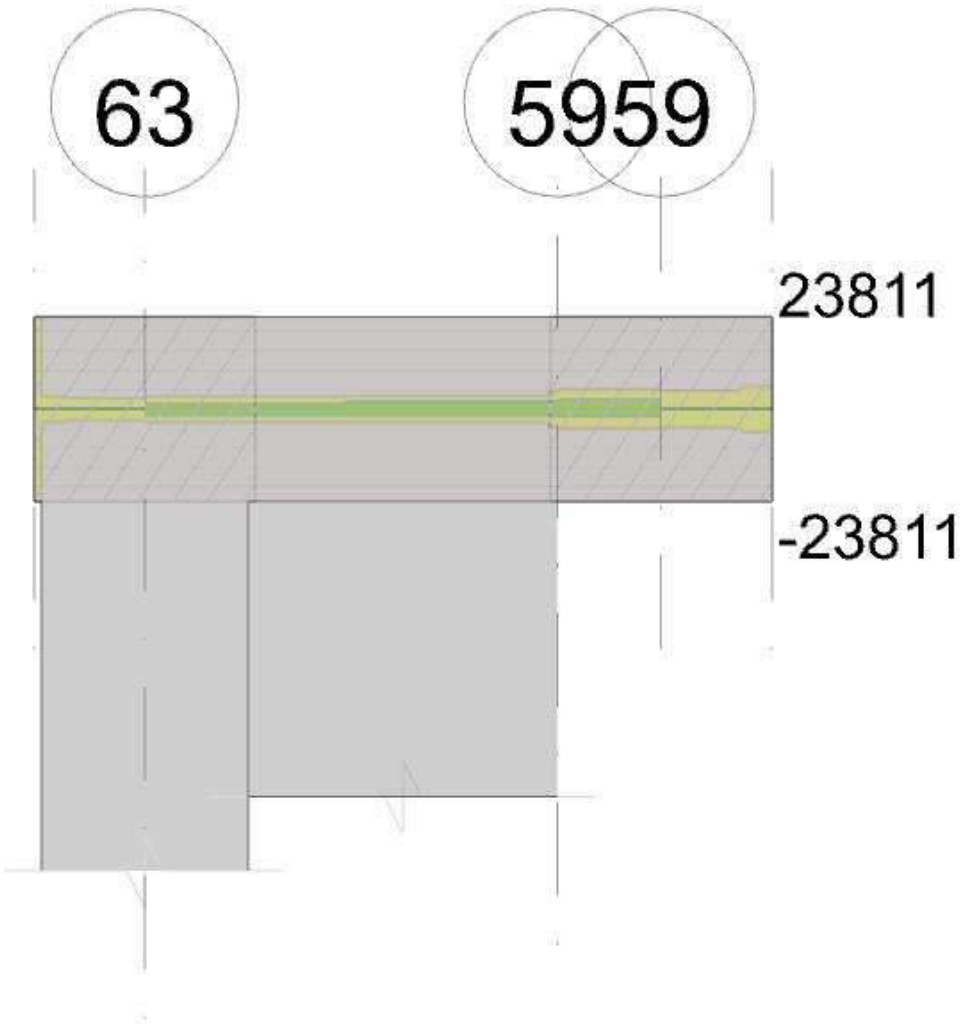
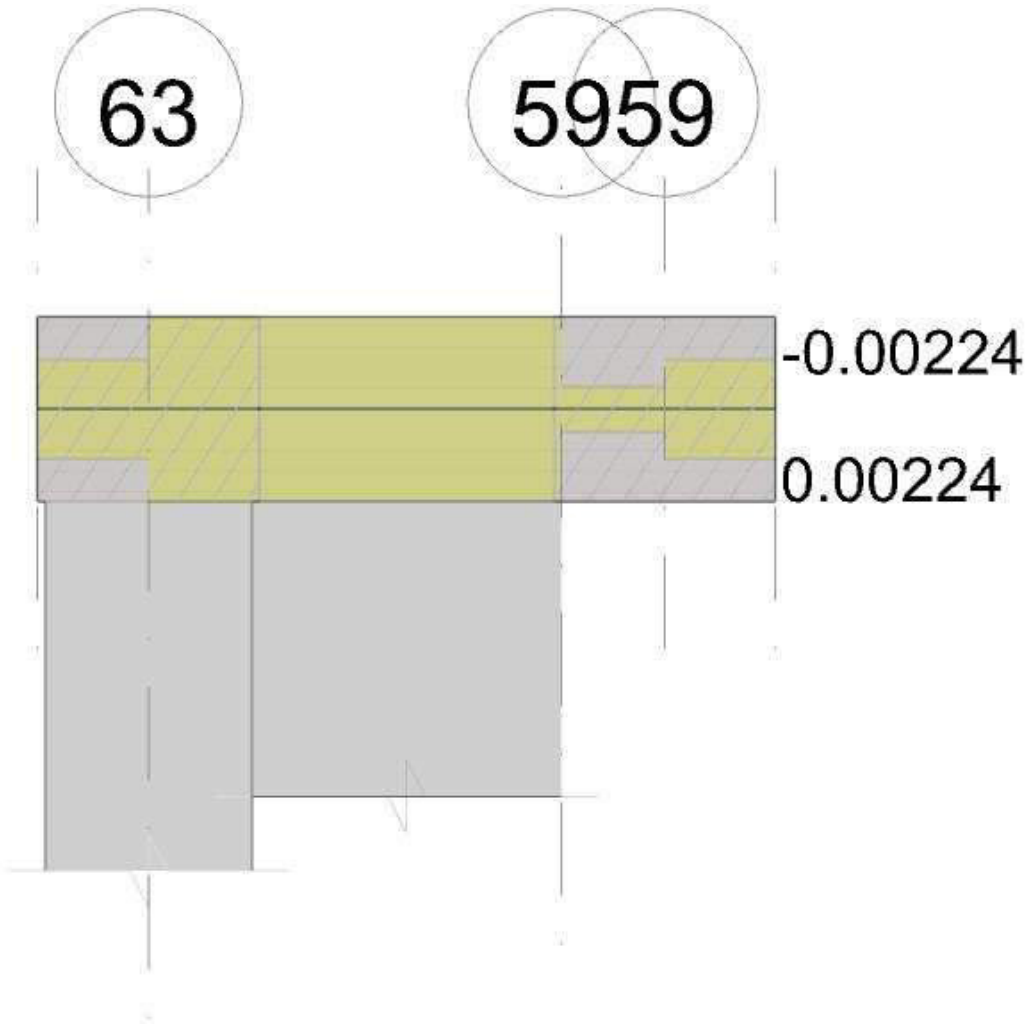


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 59 - 59, sezione R 30x25, asta 914

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	18.12	SLU 5	137.23	2290.81	0.221	16.69	-74.12	SLU 81	-74.12	-2290.81	0.221	30.91	Si
0.07	0.000308	0.05	0.000308	0.05	108.99	SLU 30	211.35	2290.81	0.221	10.84	-42.66	SLU 60	-74.12	-2290.81	0.221	30.91	Si
0.12	0.000308	0.05	0.000308	0.05	176.28	SLU 30	211.35	2290.81	0.221	10.84	-28.64	SLU 60	-56.02	-2290.81	0.221	40.89	Si
0.14	0.000308	0.05	0.000308	0.05	211.35	SLU 38	211.35	2290.81	0.221	10.84	-24.08	SLU 43	-48.7	-2290.81	0.221	47.04	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	251.44	SLV 11	366.49	2124.05	0.281	5.8	-327.53	SLV 6	-384.9	-2124.05	0.281	5.52	Si
0.06	0.000308	0.05	0.000308	0.05	319	SLV 7	440.53	2124.05	0.281	4.82	-358.67	SLV 10	-427.78	-2124.05	0.281	4.97	Si
0.07	0.000308	0.05	0.000308	0.05	338.52	SLV 7	440.53	2124.05	0.281	4.82	-369.27	SLV 10	-427.78	-2124.05	0.281	4.97	Si
0.14	0.000308	0.05	0.000308	0.05	440.53	SLV 7	440.53	2124.05	0.281	4.82	-427.78	SLV 10	-427.78	-2124.05	0.281	4.97	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	86.15	SLD 11	152.08	2124.05	0.281	13.97	-162.23	SLD 6	-170.49	-2124.05	0.281	12.46	Si
0.06	0.000308	0.05	0.000308	0.05	125.6	SLD 7	192.79	2124.05	0.281	11.02	-165.27	SLD 10	-180.04	-2124.05	0.281	11.8	Si
0.07	0.000308	0.05	0.000308	0.05	136.54	SLD 7	192.79	2124.05	0.281	11.02	-167.28	SLD 10	-180.04	-2124.05	0.281	11.8	Si
0.14	0.000308	0.05	0.000308	0.05	192.79	SLD 7	192.79	2124.05	0.281	11.02	-180.04	SLD 10	-180.04	-2124.05	0.281	11.8	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	1619	SLU 38	1619	3366	19049	5058	5058	1	3.12	Si
0.07	0.0000072	0.000308	0	1606	SLU 38	1606	3366	19049	5058	5058	1	3.15	Si
0.14	0.0000072	0.000308	0	1593	SLU 38	1593	3366	19049	5058	5058	1	3.18	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	2470	SLV 3	2470	3366	19049	5058	5058	1	2.05	Si
0	0.0000072	0.000308	0	-1809	SLV 14	-1809	-3366	-19049	-5058	-5058	1	2.8	Si
0.07	0.0000072	0.000308	0	2456	SLV 3	2456	3366	19049	5058	5058	1	2.06	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.07	0.0000072	0.000308	0	-1822	SLV 14	-1822	-3366	-19049	-5058	-5058	1	2.78	Si
0.14	0.0000072	0.000308	0	2443	SLV 3	2443	3366	19049	5058	5058	1	2.07	Si
0.14	0.0000072	0.000308	0	-1835	SLV 14	-1835	-3366	-19049	-5058	-5058	1	2.76	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	1246	SLD 3	1246	3366	19049	5058	5058	1	4.06	Si
0	0.0000072	0.000308	0	-585	SLD 14	-585	-3366	-19049	-5058	-5058	1	8.65	Si
0.07	0.0000072	0.000308	0	1232	SLD 3	1232	3366	19049	5058	5058	1	4.1	Si
0.07	0.0000072	0.000308	0	-598	SLD 14	-598	-3366	-19049	-5058	-5058	1	8.46	Si
0.14	0.0000072	0.000308	0	1219	SLD 3	1219	3366	19049	5058	5058	1	4.15	Si
0.14	0.0000072	0.000308	0	-611	SLD 14	-611	-3366	-19049	-5058	-5058	1	8.28	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-51.9	18	-51.9	14658	1494000	219866	36000000	-38.04	2	-38.04	10744	1120500			Si
0.07	60.1	9	121.69	34370	1494000	515545	36000000								Si
0.07	-21.78	18	-51.9	14658	1494000	219866	36000000	-15.37	2	-38.04	10744	1120500			Si
0.14	121.69	17	121.69	34370	1494000	515545	36000000	6.38	2	6.38	1801	1120500			Si

Verifica di apertura delle fessure

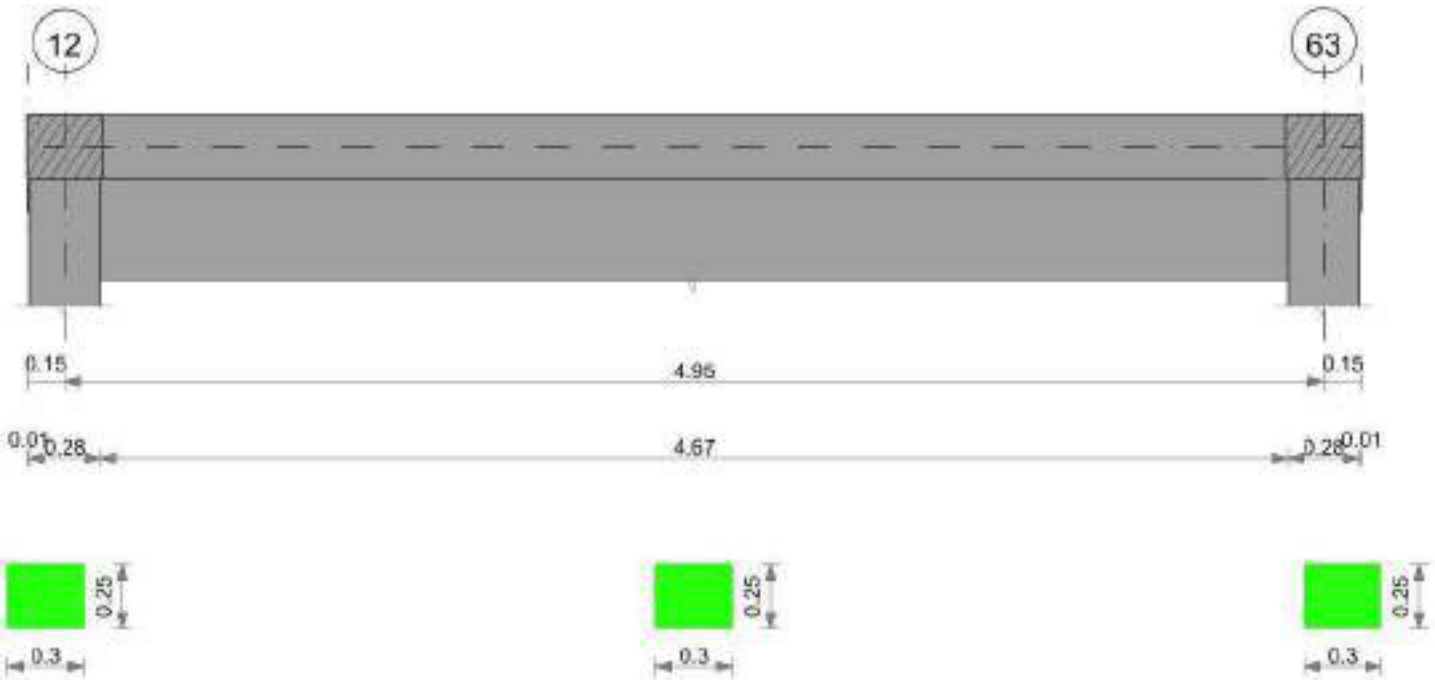
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.06	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

CORDOLO SOTTOTETTO 7

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

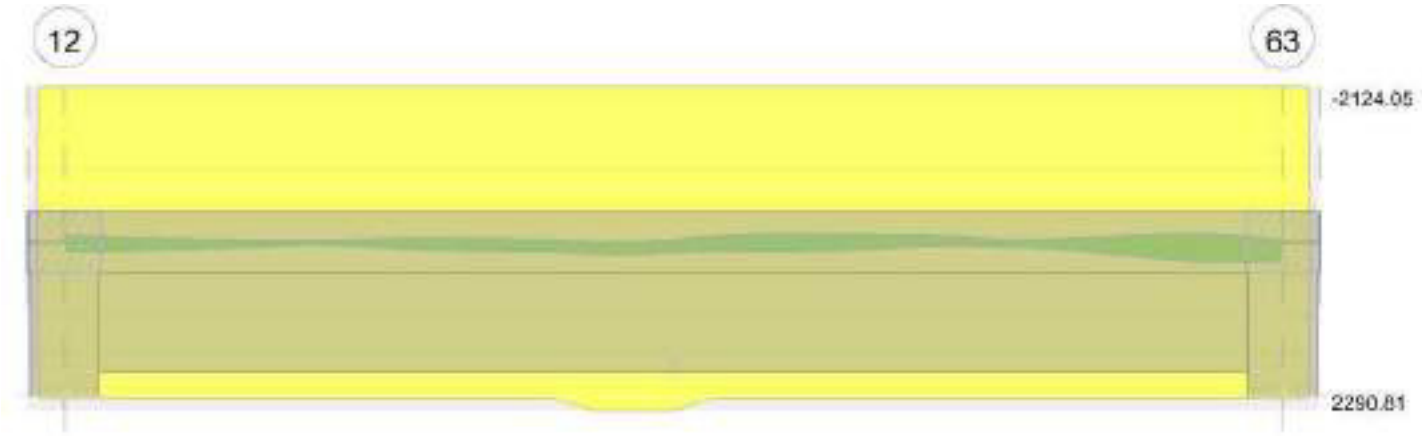


Diagramma verifica stato limite ultimo taglio

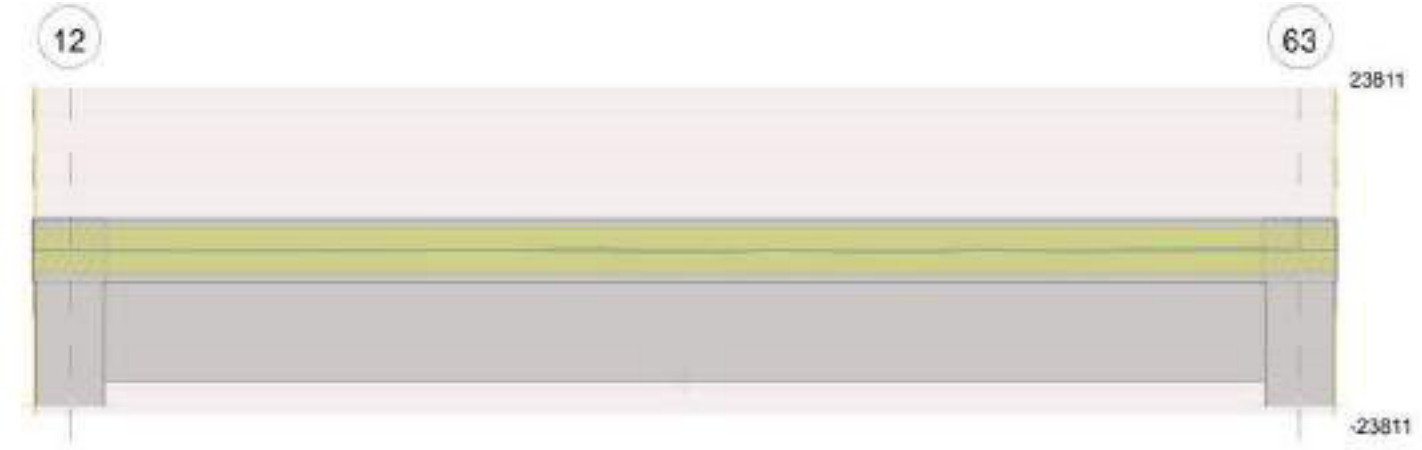
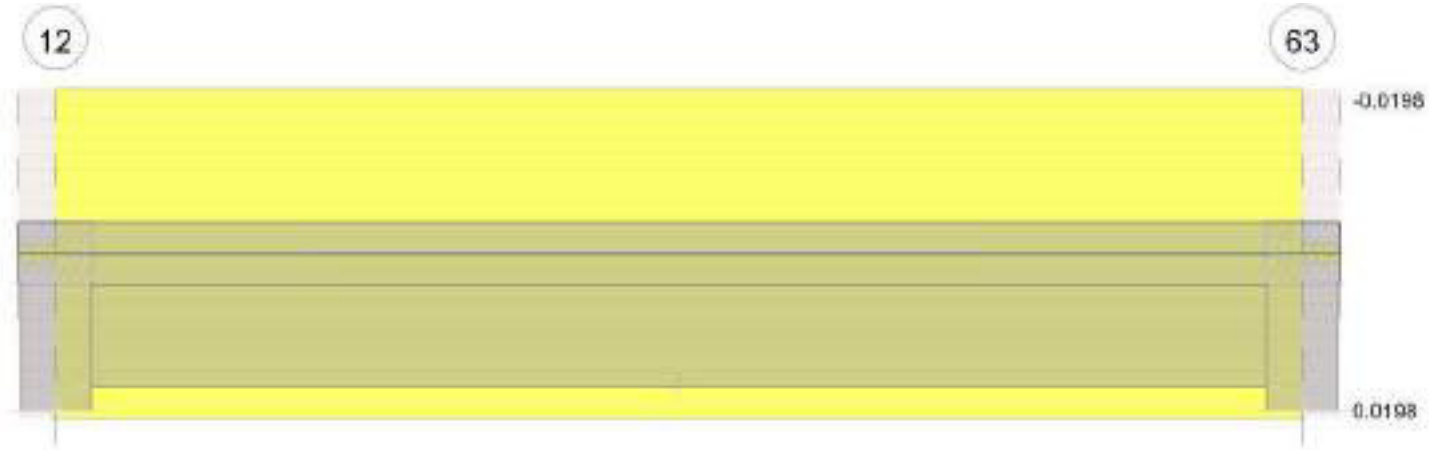


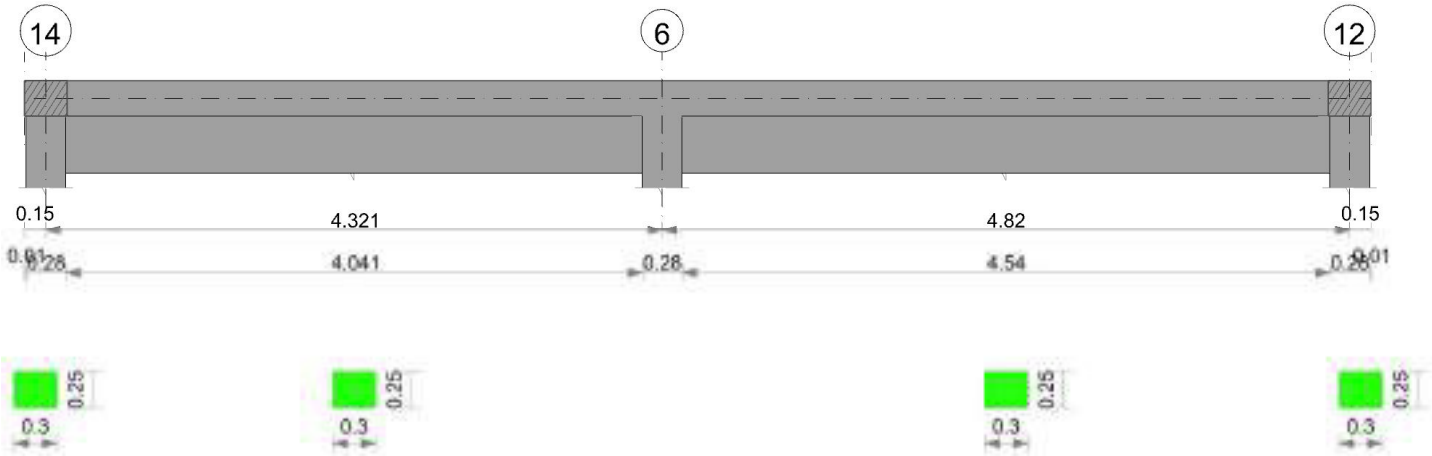
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 8

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

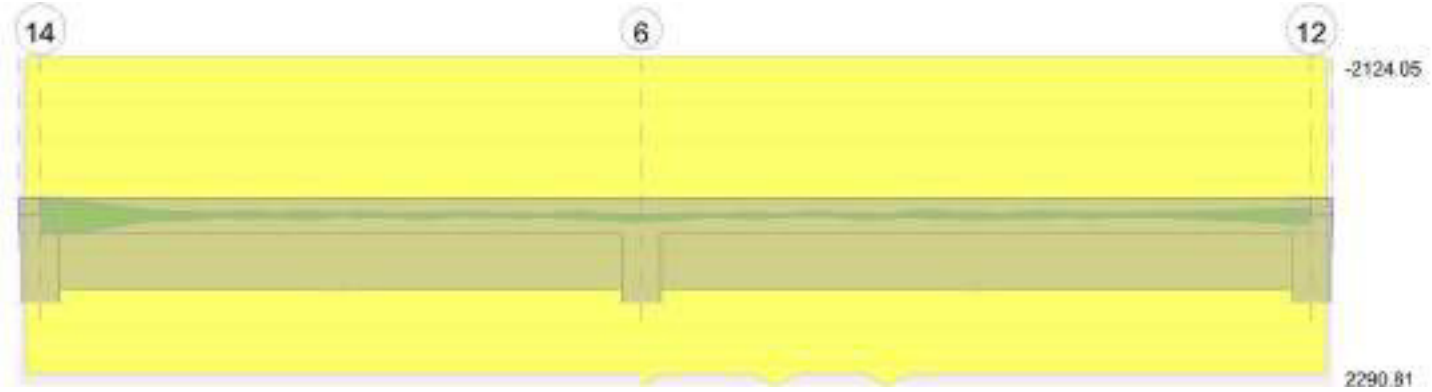


Diagramma verifica stato limite ultimo taglio

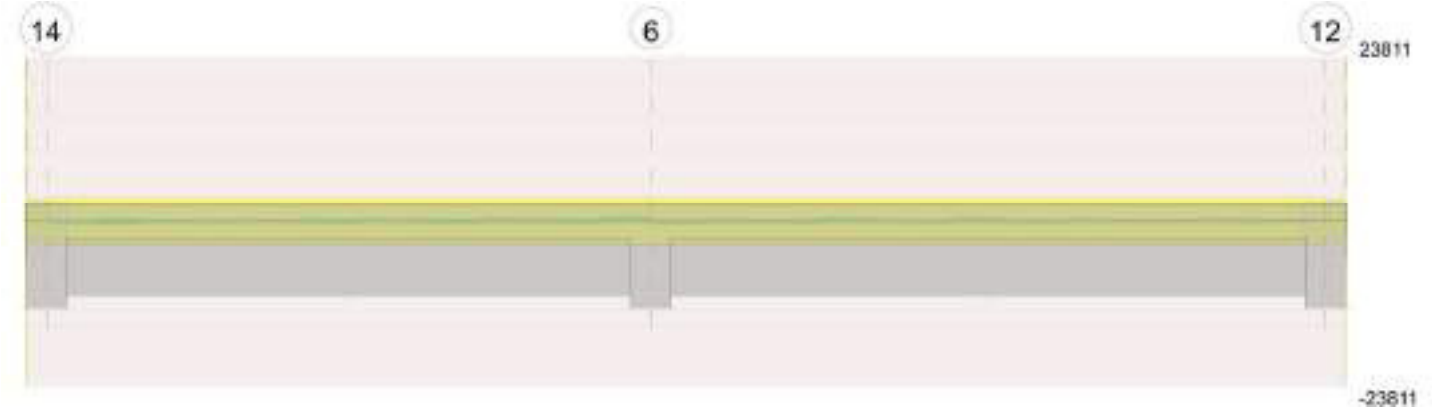
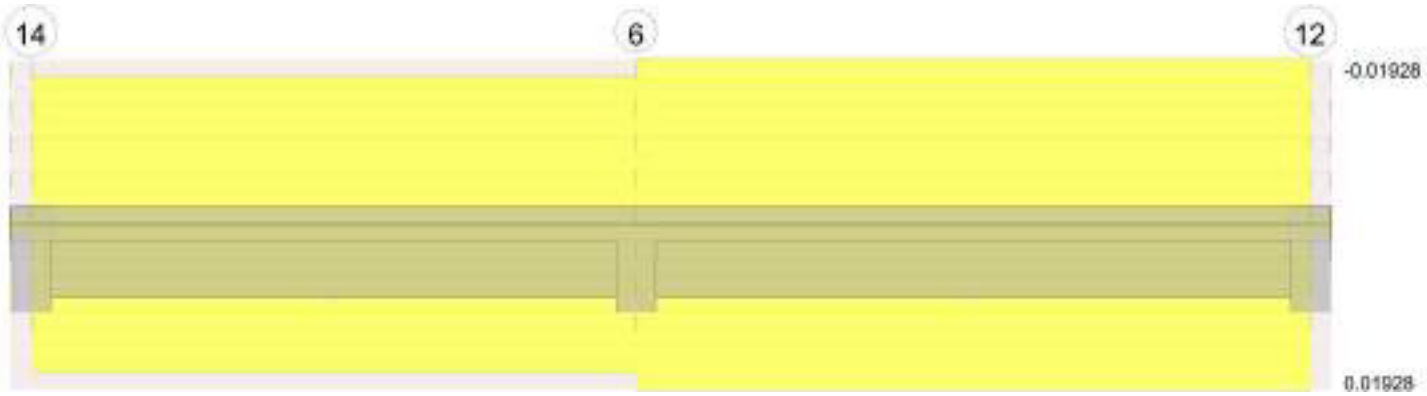


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 9

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

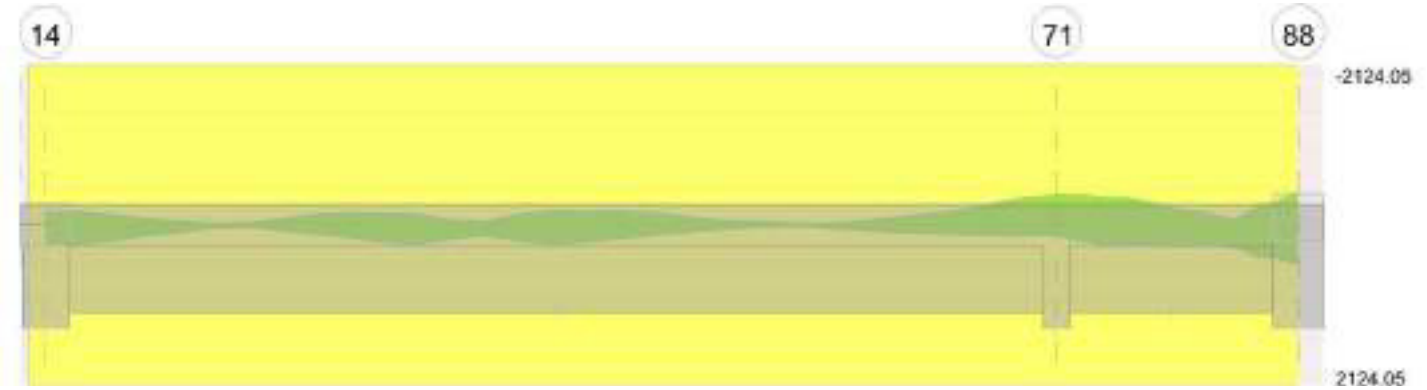


Diagramma verifica stato limite ultimo taglio

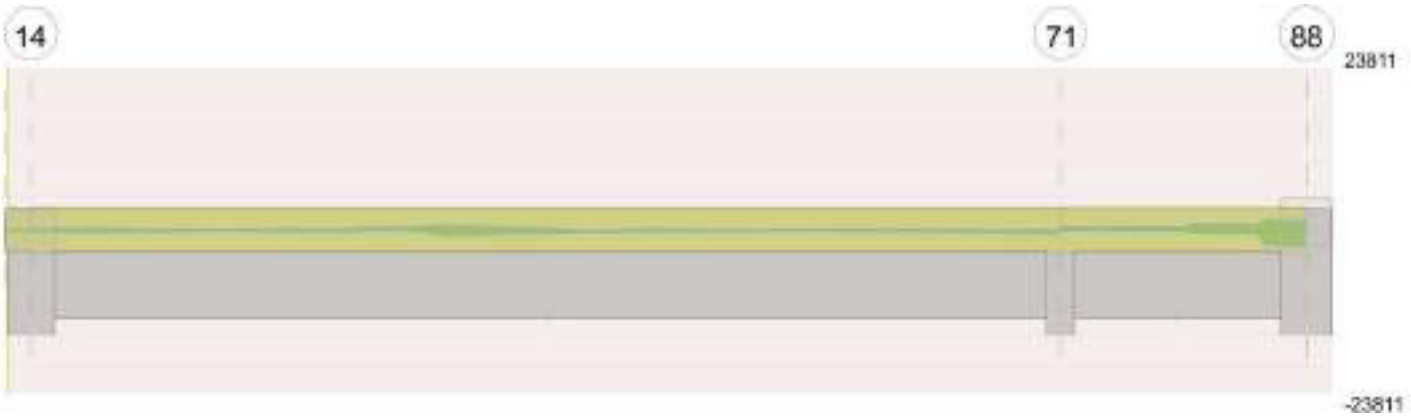
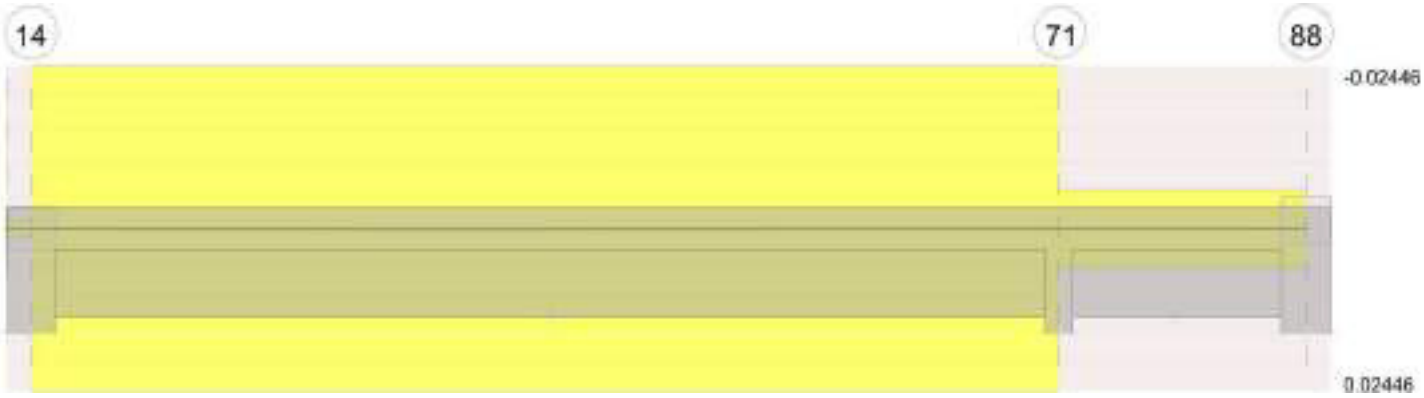


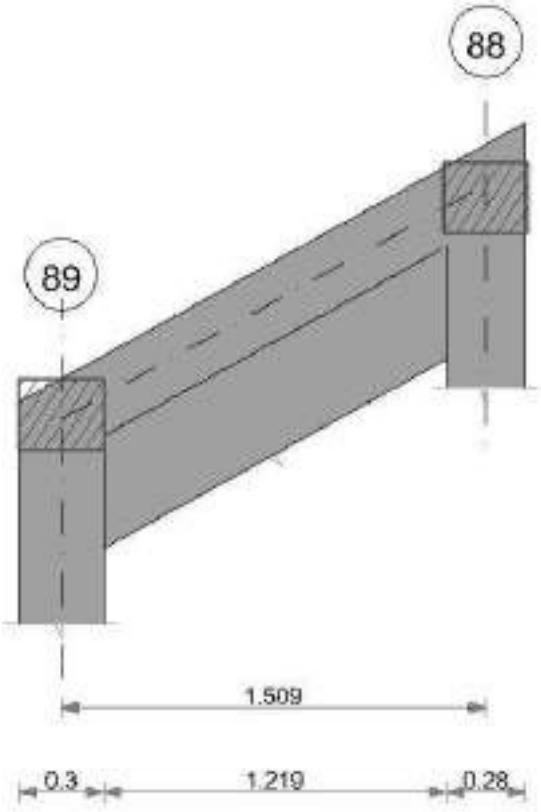
Diagramma verifica stato limite esercizio quasi permanente freccia

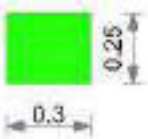


Output campate

CORDOLO SOTTOTETTO 10

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

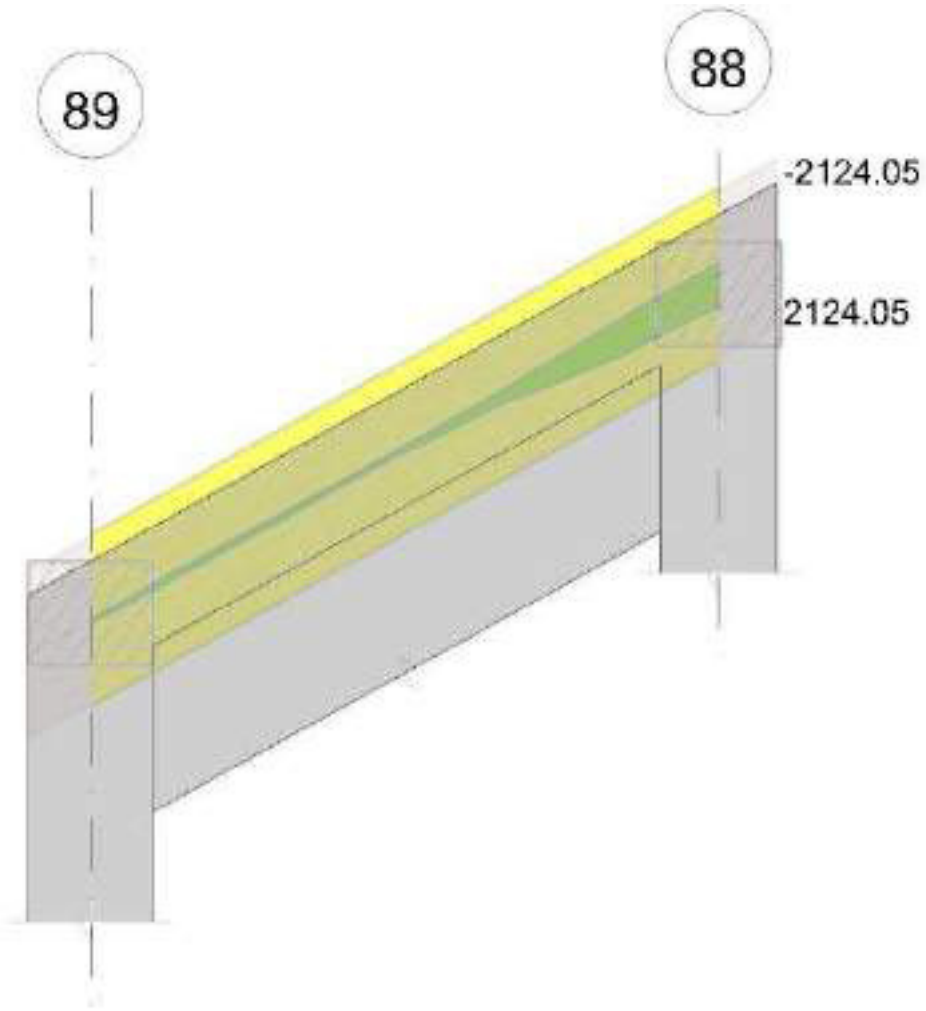


Diagramma verifica stato limite ultimo taglio

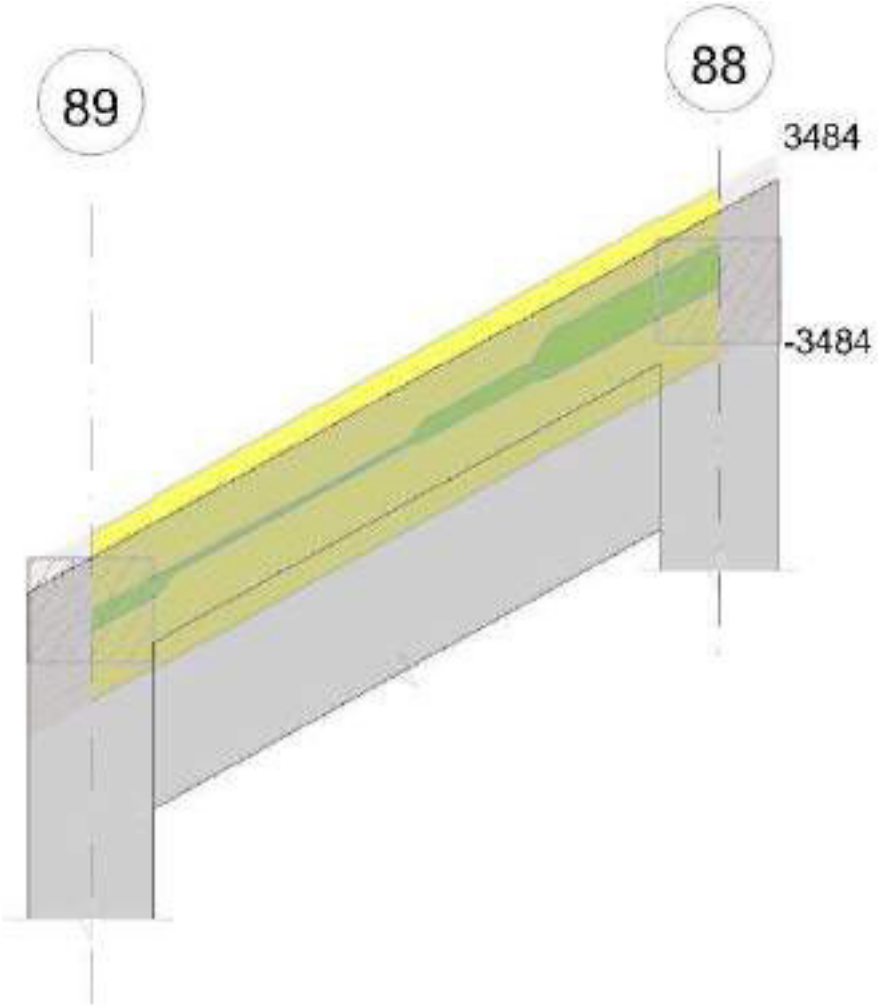
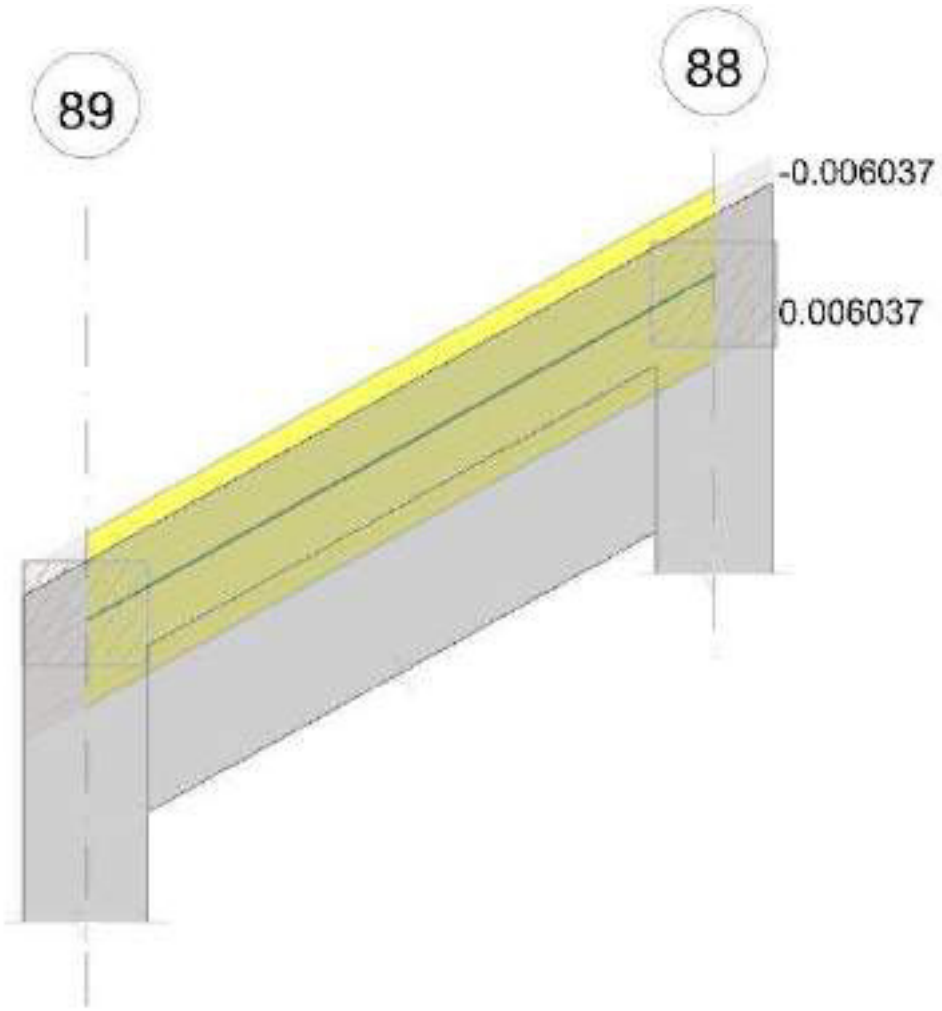


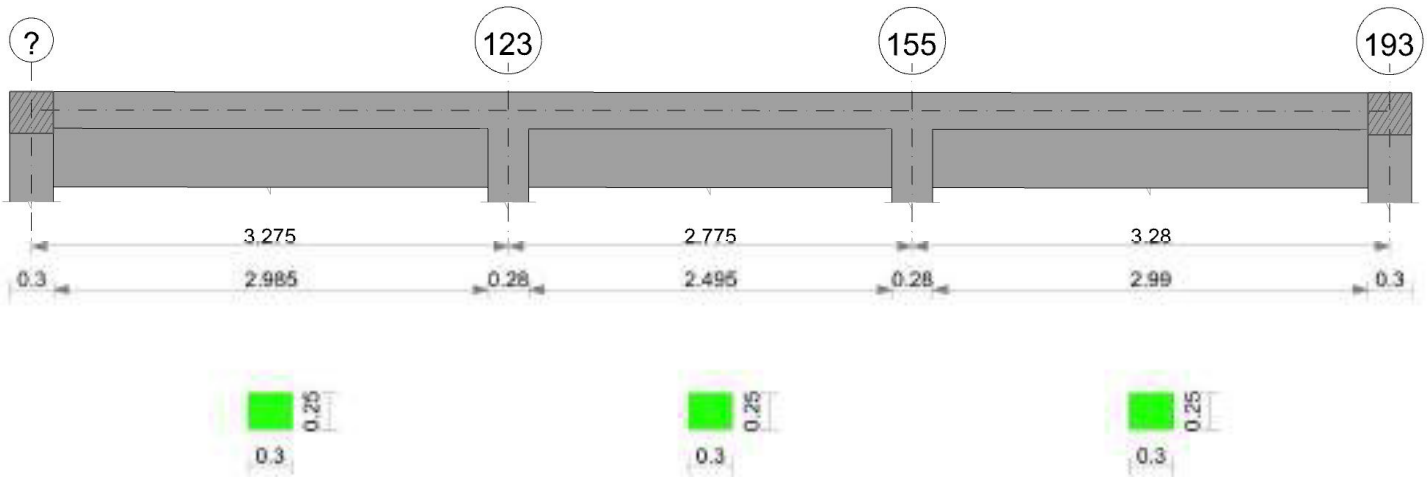
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 11

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

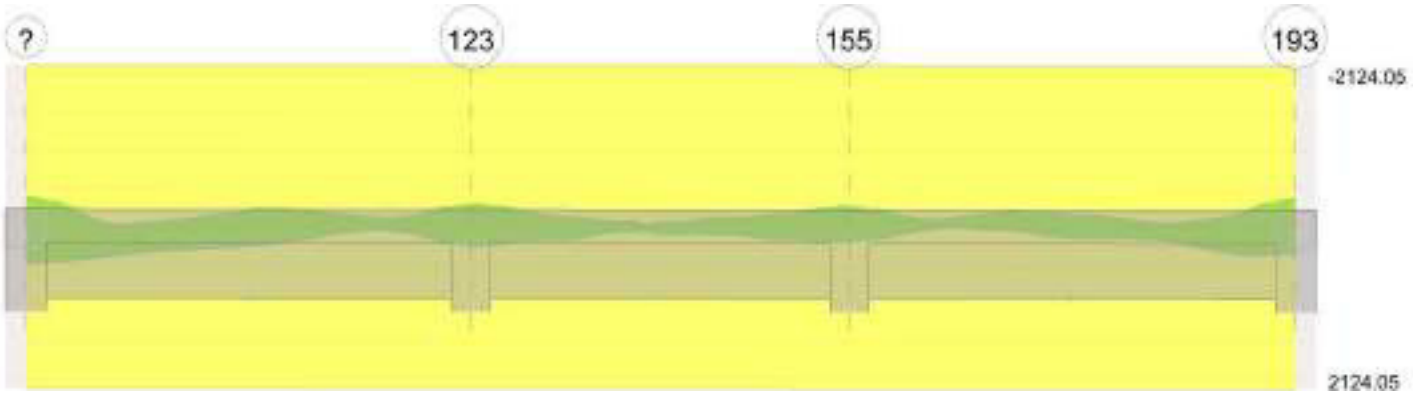


Diagramma verifica stato limite ultimo taglio

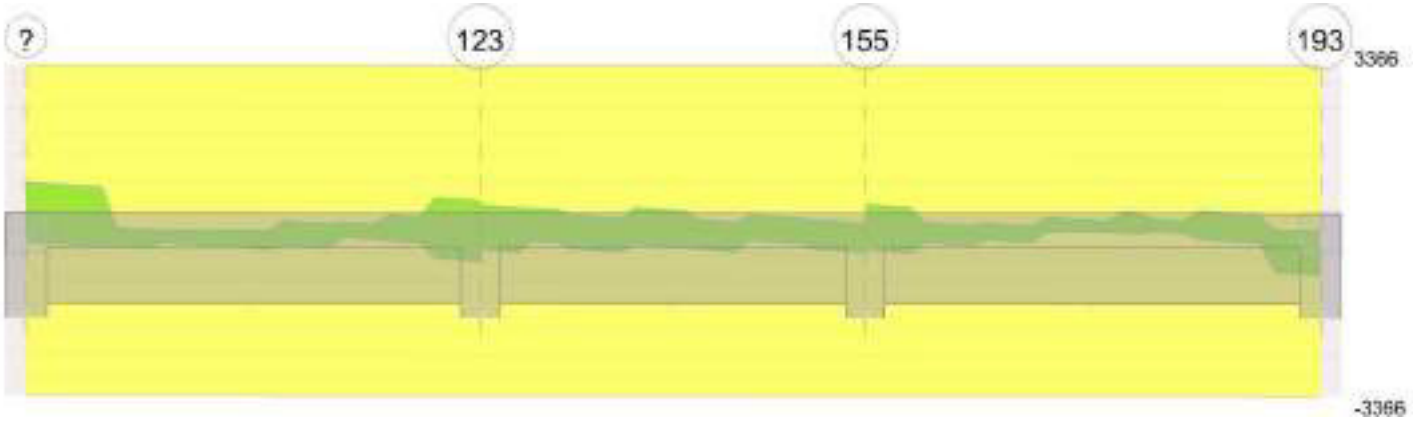
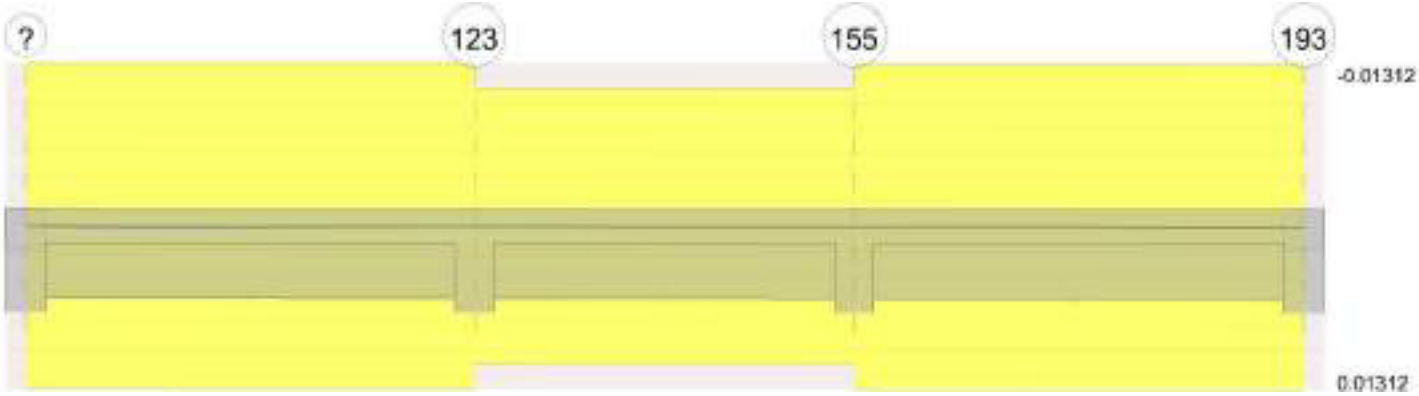


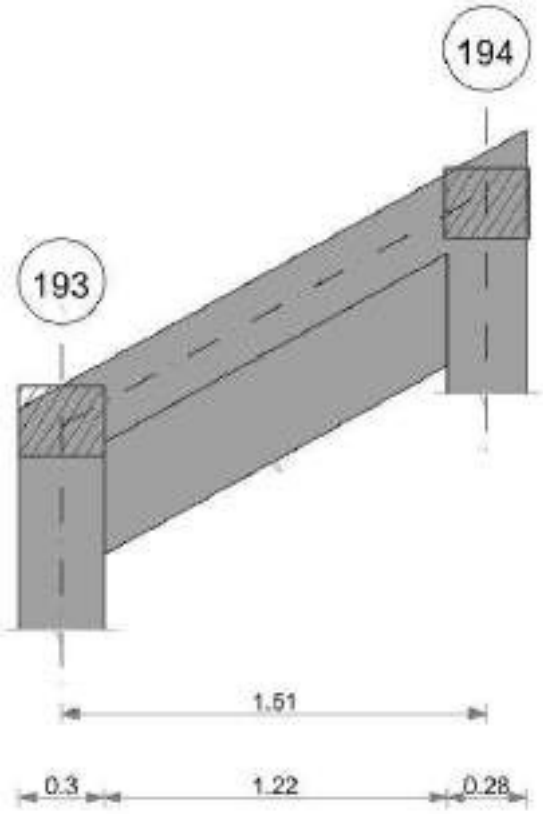
Diagramma verifica stato limite esercizio quasi permanente freccia

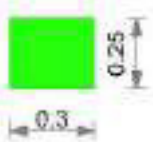


Output campate

CORDOLO SOTTOTETTO 12

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

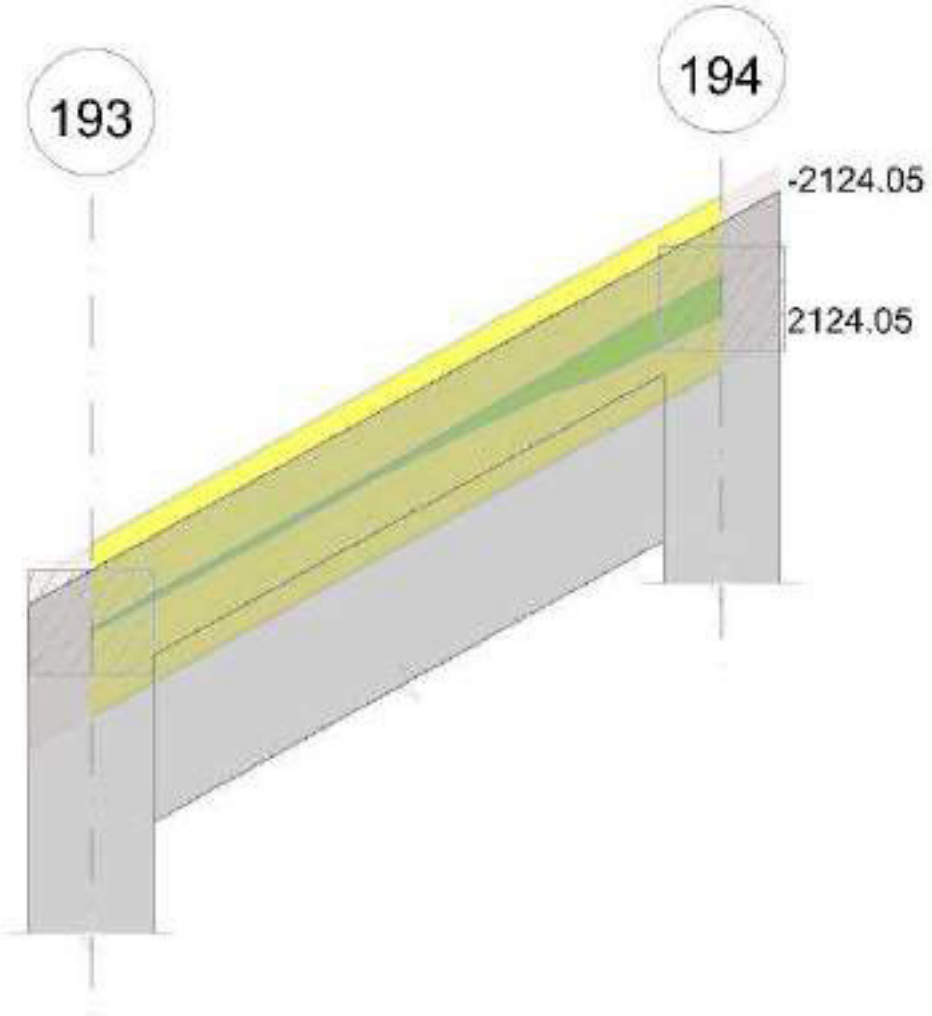


Diagramma verifica stato limite ultimo taglio

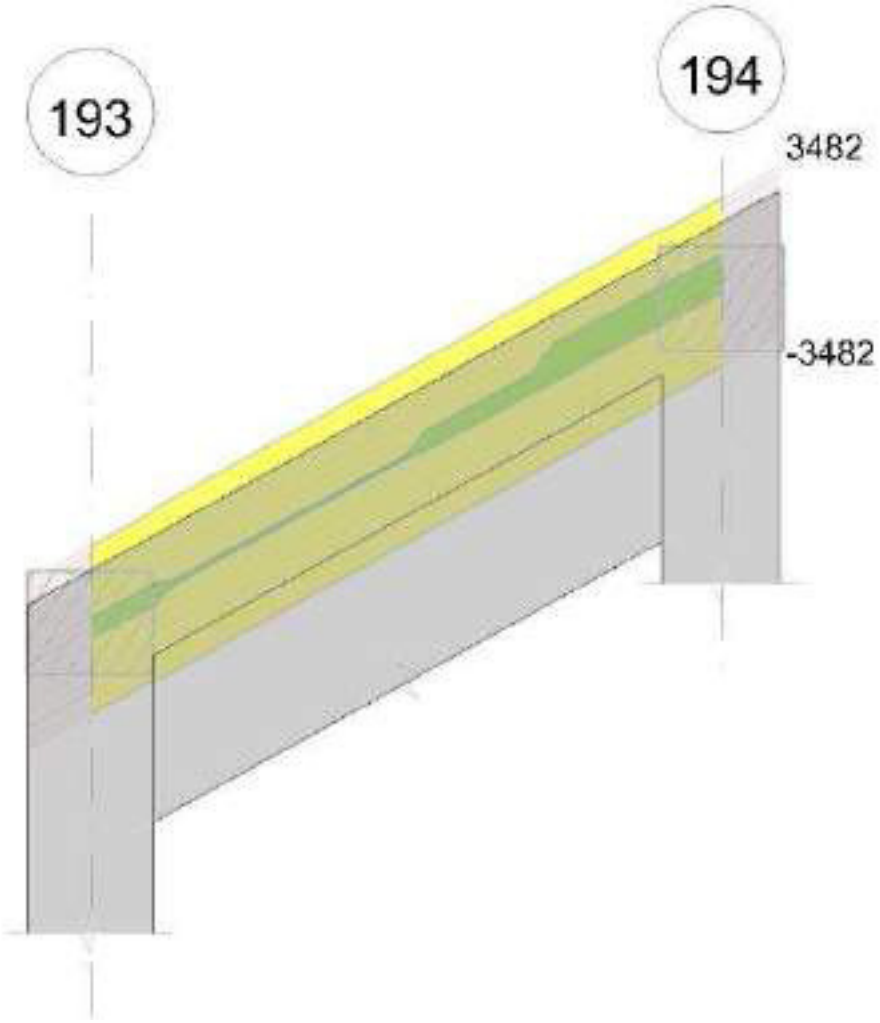
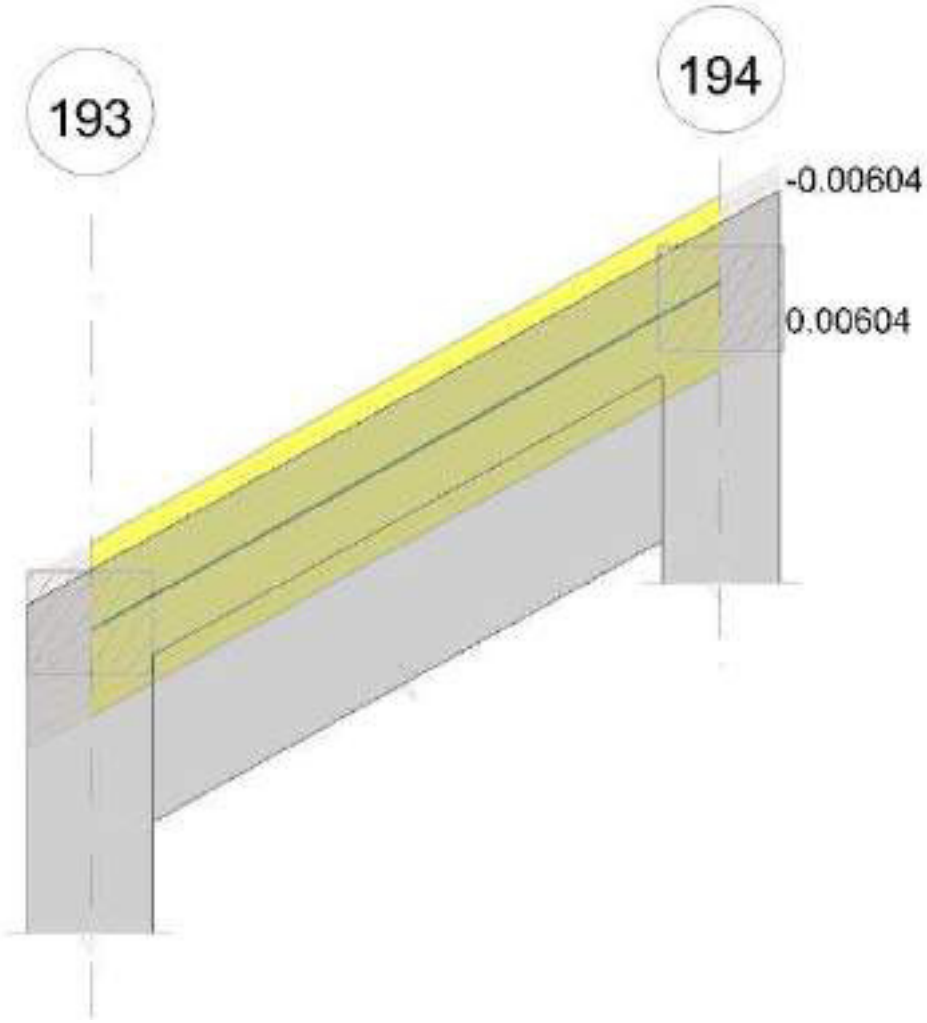


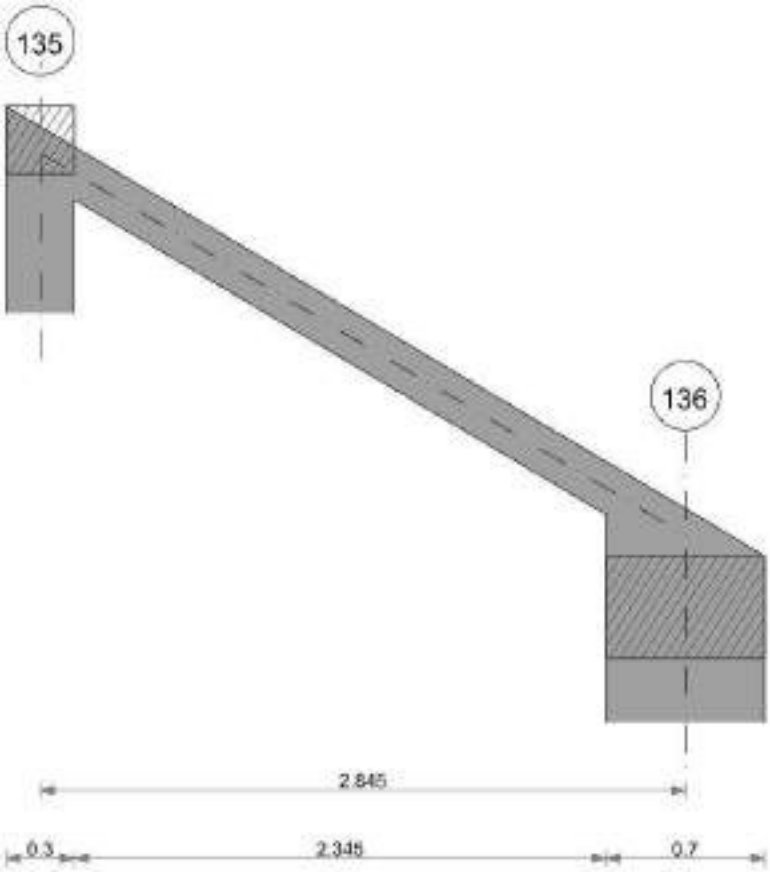
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

RAMPA SCALA

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 100x20	Rettangolare	1	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

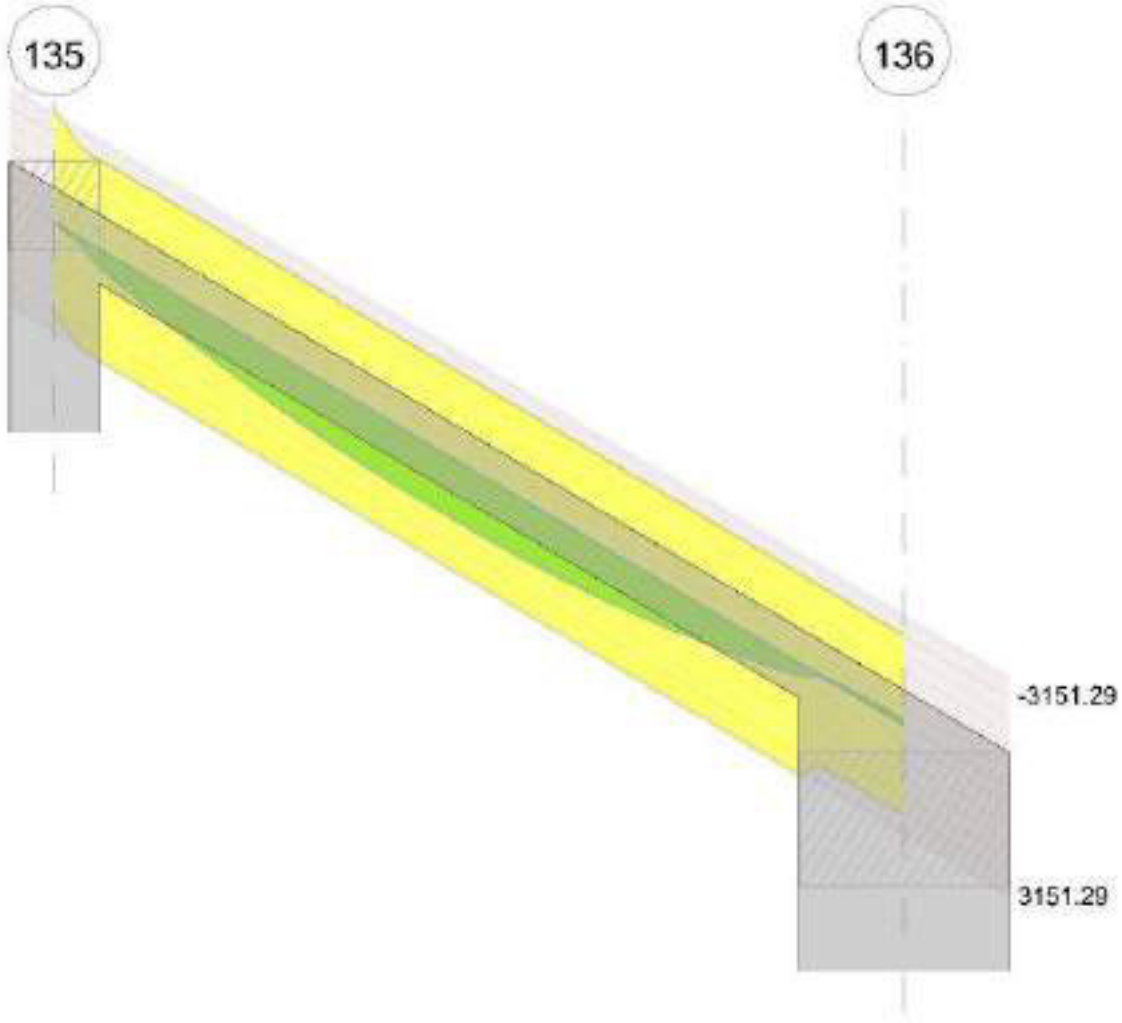


Diagramma verifica stato limite ultimo taglio

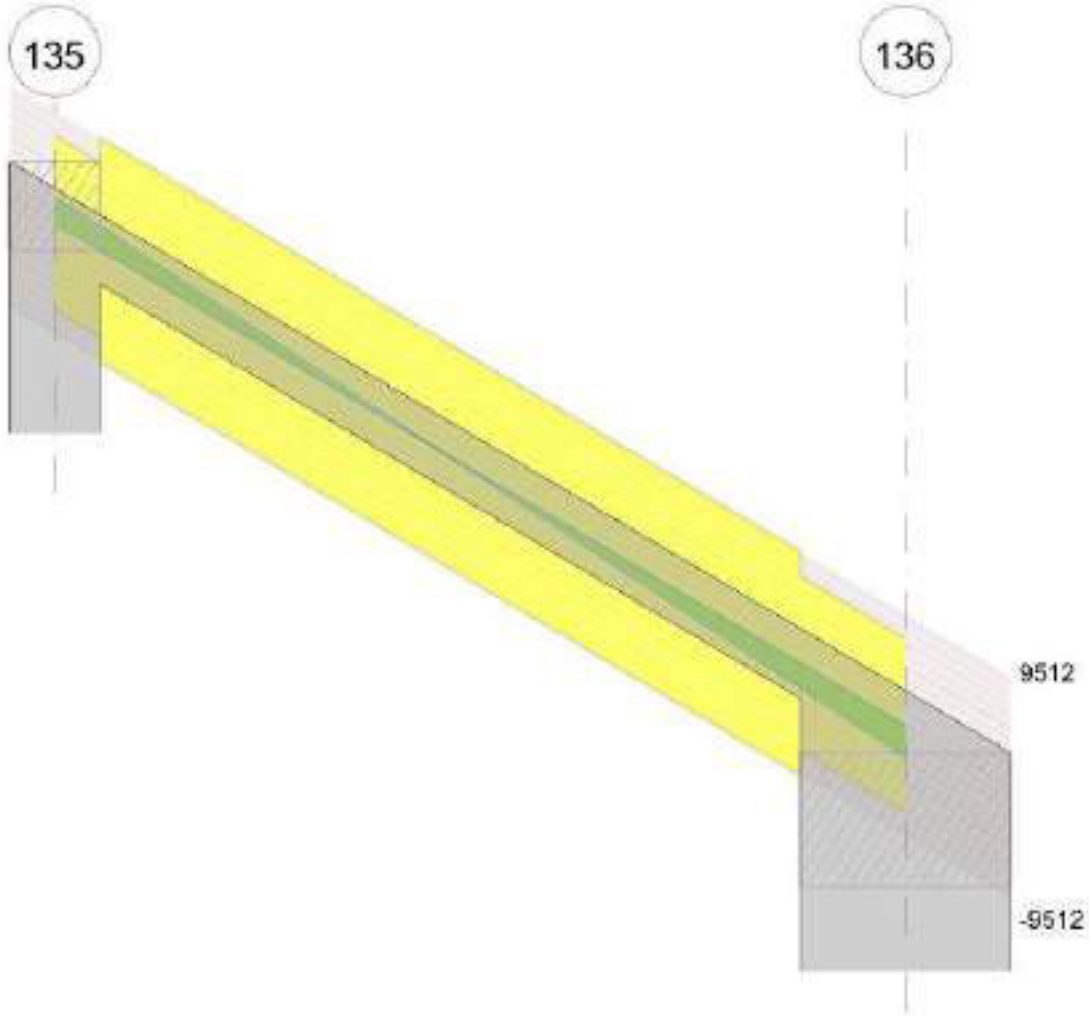
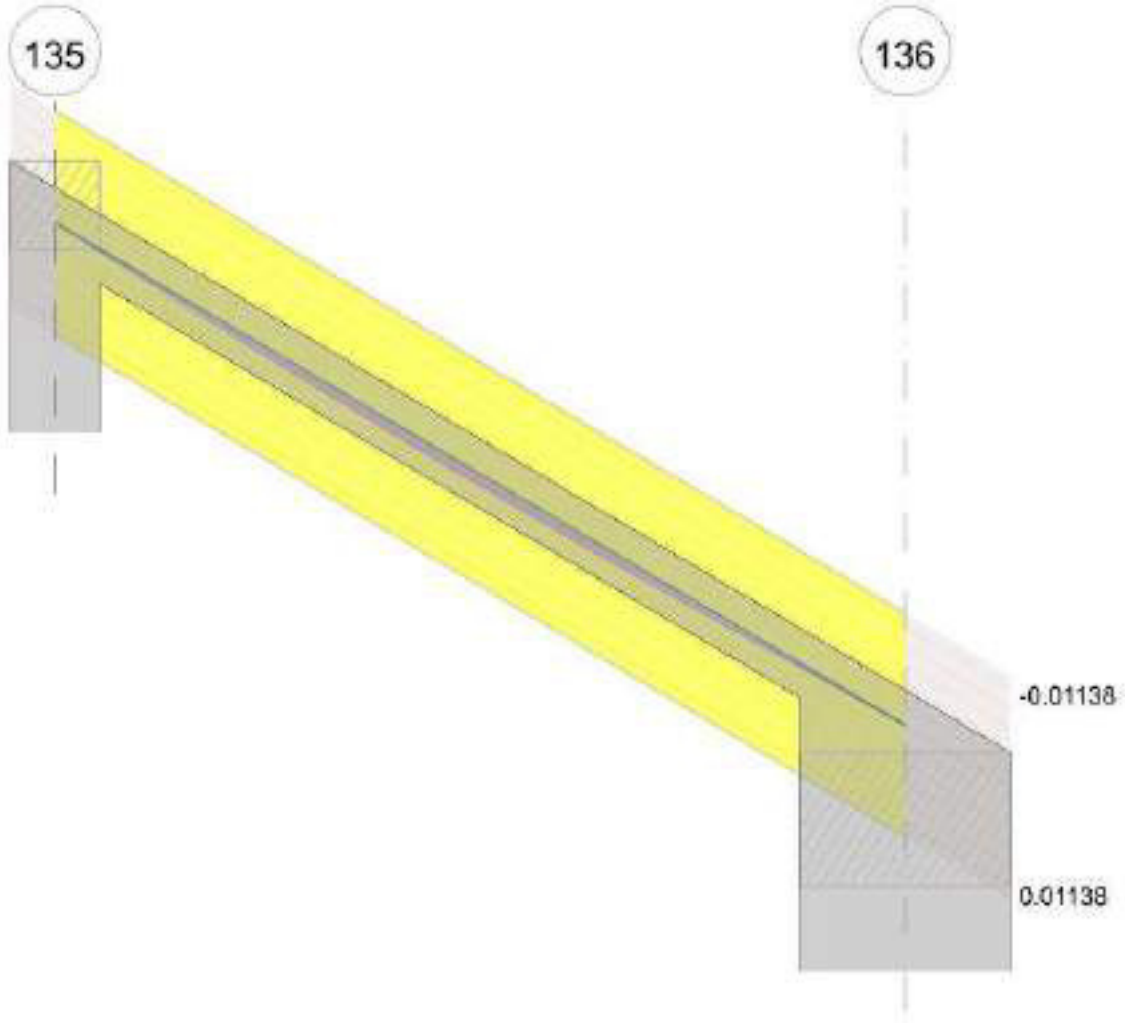


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 135 - 136, sezione R 100x20, asta 855

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000462	0.05	0.000462	0.05							-44.5	SLU 84	-44.5	-3151.29	0.213	70.81	Si
0.15	0.000462	0.05	0.000462	0.05	338.8	SLU 81	496.08	3151.29	0.213	6.35							Si
1.33	0.000462	0.05	0.000462	0.05	1713.75	SLU 82	1713.75	3151.29	0.213	1.84							Si
1.42	0.000462	0.05	0.000462	0.05	1696.62	SLU 82	1708.73	3151.29	0.213	1.84							Si
2.49	0.000462	0.05	0.000462	0.05	176.44	SLU 82	342.42	3151.29	0.213	9.2							Si
2.84	0.000462	0.05	0.000462	0.05							-845.66	SLU 83	-191.71	-3151.29	0.213	16.44	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000462	0.05	0.000462	0.05							-33.48	SLV 11	-33.48	-2533.64	0.238	75.69	Si
0.15	0.000462	0.05	0.000462	0.05	202.64	SLV 2	293.78	2533.64	0.238	8.62							Si
1.33	0.000462	0.05	0.000462	0.05	1005.47	SLV 4	1005.47	2533.64	0.238	2.52							Si
1.42	0.000462	0.05	0.000462	0.05	996.39	SLV 8	1002.71	2533.64	0.238	2.53							Si
2.49	0.000462	0.05	0.000462	0.05	124.9	SLV 8	220.6	2533.64	0.238	11.49							Si
2.84	0.000462	0.05	0.000462	0.05							-553.22	SLV 9	-168.57	-2533.64	0.238	15.03	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000462	0.05	0.000462	0.05							-29.35	SLD 11	-29.35	-2533.64	0.238	86.32	Si
0.15	0.000462	0.05	0.000462	0.05	198.57	SLD 2	289.59	2533.64	0.238	8.75							Si
1.33	0.000462	0.05	0.000462	0.05	994.86	SLD 8	994.86	2533.64	0.238	2.55							Si
1.42	0.000462	0.05	0.000462	0.05	985.02	SLD 8	991.98	2533.64	0.238	2.55							Si
2.49	0.000462	0.05	0.000462	0.05	103.21	SLD 8	199.55	2533.64	0.238	12.7							Si
2.84	0.000462	0.05	0.000462	0.05							-528.16	SLD 9	-145.5	-2533.64	0.238	17.41	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000462	0	2240	SLU 82	2240	7410	47621	0	7410	1	3.31	Si
0.15	0.000018	0.000462	0	1979	SLU 82	1979	7410	47621	9512	9512	1	4.81	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.42	0.000018	0.000462	0	-231	SLU 83	-231	-7410	-47621	-9512	-9512	1	41.15	Si
2.49	0.000018	0.000462	0	-2094	SLU 83	-2094	-7410	-47621	-9512	-9512	1	4.54	Si
2.84	0	0.000462	0	-2701	SLU 83	-2701	-7410	-47621	0	-7410	1	2.74	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000462	0	1310	SLV 8	1310	7410	47621	0	7410	1	5.66	Si
0.15	0.000018	0.000462	0	1159	SLV 8	1159	7410	47621	9512	9512	1	8.21	Si
1.42	0.000018	0.000462	0	-153	SLV 9	-153	-7410	-47621	-9512	-9512	1	62.05	Si
2.49	0.000018	0.000462	0	-1235	SLV 9	-1235	-7410	-47621	-9512	-9512	1	7.7	Si
2.84	0	0.000462	0	-1588	SLV 9	-1588	-7410	-47621	0	-7410	1	4.67	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000462	0	1302	SLD 8	1302	7410	47621	0	7410	1	5.69	Si
0.15	0.000018	0.000462	0	1151	SLD 8	1151	7410	47621	9512	9512	1	8.27	Si
1.42	0.000018	0.000462	0	-145	SLD 9	-145	-7410	-47621	-9512	-9512	1	65.42	Si
2.49	0.000018	0.000462	0	-1227	SLD 9	-1227	-7410	-47621	-9512	-9512	1	7.75	Si
2.84	0	0.000462	0	-1580	SLD 9	-1580	-7410	-47621	0	-7410	1	4.69	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-32.17	21	-32.17	4586	1494000	68797	36000000	-26.13	2	-26.13	3727	1120500			Si
0.15	244.6	18	358.16	51071	1494000	766069	36000000	195.51	2	286.45	40845	1120500			Si
1.42	1224.17	19	1233	175816	1494000	2637241	36000000	976.15	2	983.61	140255	1120500			Si
2.49	124.52	19	244.53	34868	1494000	523025	36000000	86.25	2	183.09	26108	1120500			Si
2.84	-614.28	20	-141.54	20183	1494000	302744	36000000	-508.56	2	-127.45	18173	1120500			Si

Verifica di apertura delle fessure

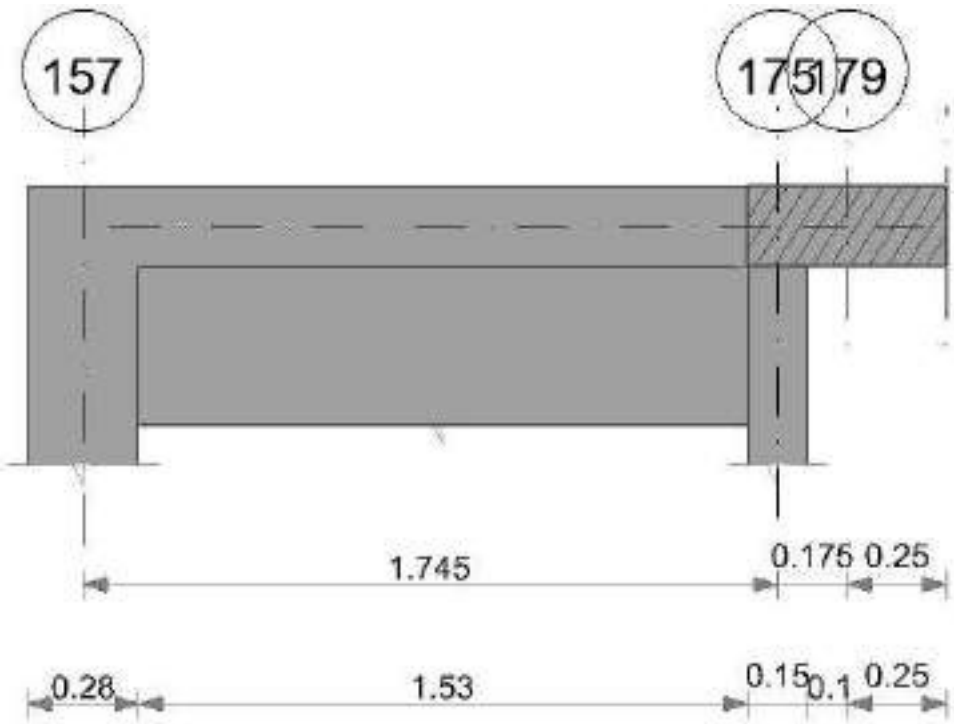
La campata non presenta apertura delle fessure

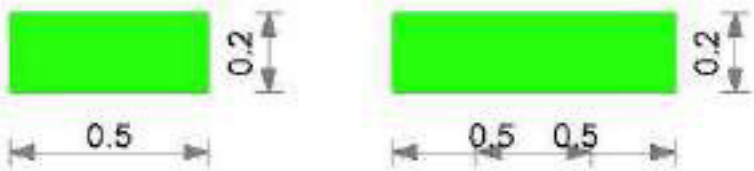
Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.15	0.0001	0.00007	0.00009	0.00007	0.00009	0.00007	0.00008	0.00007	0.00008	0.00007	0.00021	2	0.00019	2	9999	Si
1.33	0.00057	0.0004	0.00053	0.00037	0.00049	0.00041	0.00045	0.00038	0.00046	0.00041	0.00121	2	0.00108	2	2350	Si
1.42	0.00057	0.0004	0.00053	0.00037	0.00049	0.00041	0.00045	0.00037	0.00046	0.00041	0.00121	2	0.00108	2	2353	Si
2.49	0.00019	0.00013	0.00018	0.00012	0.00016	0.00013	0.00015	0.00012	0.00015	0.00013	0.0004	2	0.00036	2	7101	Si

Trave a "Primo" 157-179

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

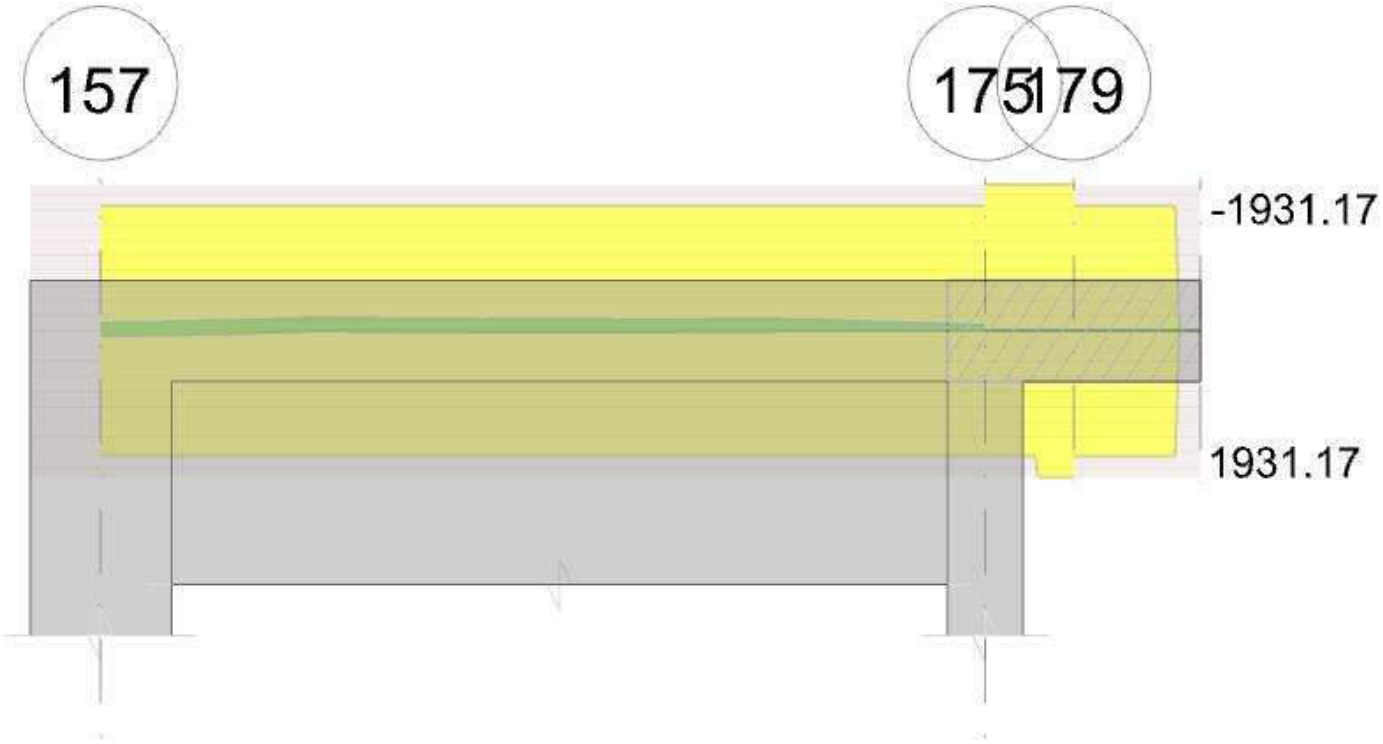
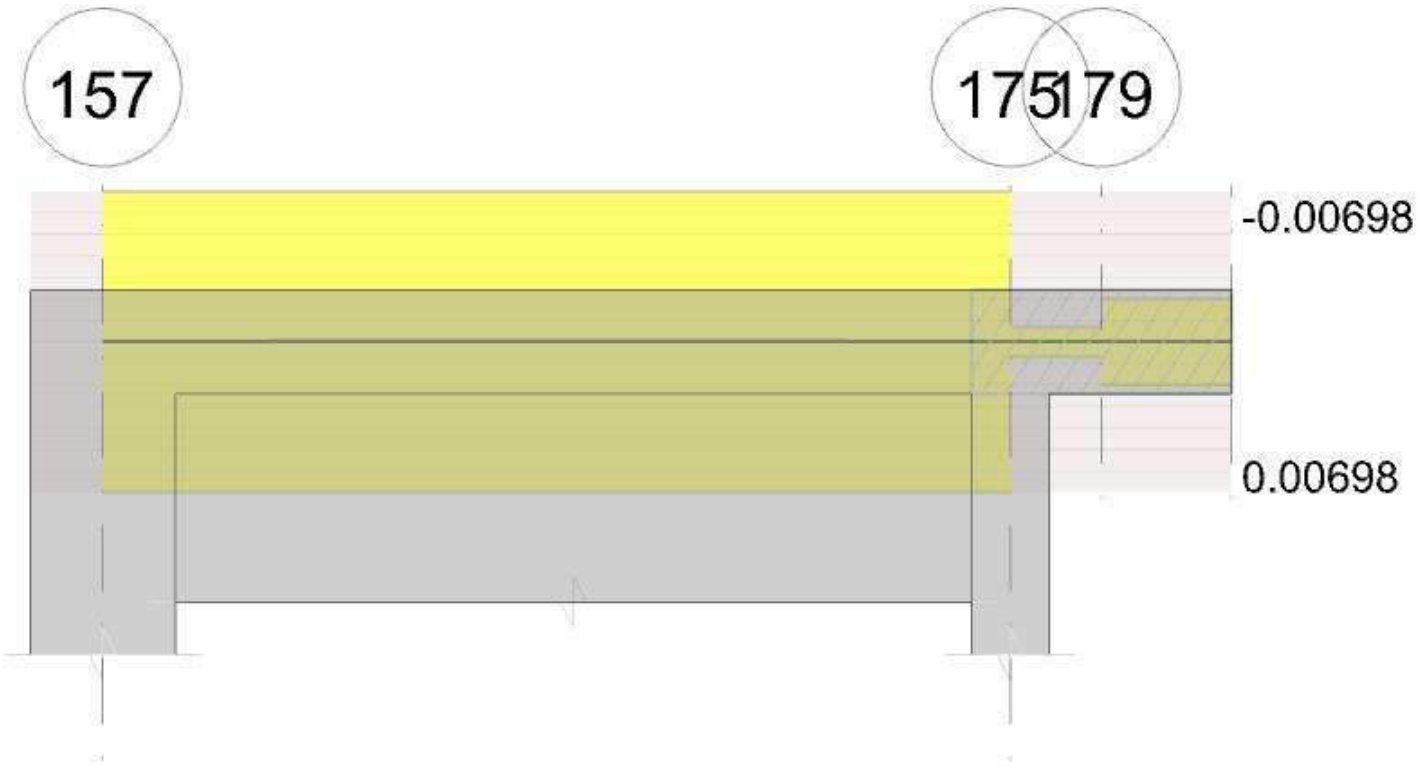


Diagramma verifica stato limite ultimo taglio

Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 2 tra i fili 175 - 179, sezione R 50x20, asta 340

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-4.96	SLU 71	-2.83	-1931.17	0.242	682.23	Si
0.08	0.000308	0.05	0.000308	0.05							-1.61	SLU 71	-1.61	-1931.17	0.242	1198.05	Si
0.09	0.000308	0.05	0.000308	0.05							-1.23	SLU 71	-1.61	-1931.17	0.242	1198.05	Si
0.18	0.000308	0.05	0.000308	0.05	0.01	SLU 61	0.01	1931.17	0.242	+∞	0.01	SLU 29	-0.72	-1931.17	0.242	2688.94	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-3.82	SLV 16	-2.18	-1648.89	0.269	757.21	Si
0.08	0.000308	0.05	0.000308	0.05							-1.24	SLV 4	-1.24	-1648.89	0.269	1329.68	Si
0.09	0.000308	0.05	0.000308	0.05							-0.95	SLV 4	-1.24	-1648.89	0.269	1329.68	Si
0.18	0.000308	0.05	0.000308	0.05	0.01	SLV 13	0.01	1648.89	0.269	+∞	0.01	SLV 4	-0.55	-1648.89	0.269	2984.59	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-3.82	SLD 14	-2.18	-1648.89	0.269	757.25	Si
0.08	0.000308	0.05	0.000308	0.05							-1.24	SLD 2	-1.24	-1648.89	0.269	1329.77	Si
0.09	0.000308	0.05	0.000308	0.05							-0.95	SLD 2	-1.24	-1648.89	0.269	1329.77	Si
0.18	0.000308	0.05	0.000308	0.05	0.01	SLD 15	0.01	1648.89	0.269	+∞	0.01	SLD 2	-0.55	-1648.89	0.269	2984.63	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	57	SLU 72	57	3906	23811	0	3906	1	68.68	Si
0.08	0.0000115	0.000308	0	32	SLU 72	32	3906	23811	6069	6069	1	186.75	Si
0.09	0.0000115	0.000308	0	28	SLU 72	28	3906	23811	6069	6069	1	213.43	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	44	SLV 16	44	3906	23811	0	3906	1	89.28	Si
0.08	0.0000115	0.000308	0	25	SLV 16	25	3906	23811	6069	6069	1	242.74	Si
0.09	0.0000115	0.000308	0	22	SLV 16	22	3906	23811	6069	6069	1	277.41	Si
0.18	0.0000115	0.000308	0	0	Ger.	0	3906	23811	6069	6069	1	1704056.14	Si
0.18	0.0000115	0.000308	0	0	Ger.	0	-3906	-23811	-6069	-6069	1	1704054.3	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	44	SLD 15	44	3906	23811	0	3906	1	89.29	Si
0.08	0.0000115	0.000308	0	25	SLD 15	25	3906	23811	6069	6069	1	242.76	Si
0.09	0.0000115	0.000308	0	22	SLD 15	22	3906	23811	6069	6069	1	277.44	Si
0.18	0.0000115	0.000308	0	0	Ger.	0	3906	23811	6069	6069	1	4013308.79	Si
0.18	0.0000115	0.000308	0	0	Ger.	0	-3906	-23811	-6069	-6069	1	4013298.62	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-3.82	8	-2.18	611	1494000	9164	36000000	-3.82	1	-2.18	611	1120500			Si
0.08	-1.24	8	-1.24	348	1494000	5218	36000000	-1.24	1	-1.24	348	1120500			Si
0.09	-0.95	8	-1.24	348	1494000	5218	36000000	-0.95	1	-1.24	348	1120500			Si
0.18	0.01	19	0.01	3	1494000	44	36000000	0.01	2	0.01	3	1120500			Si

Verifica di apertura delle fessure

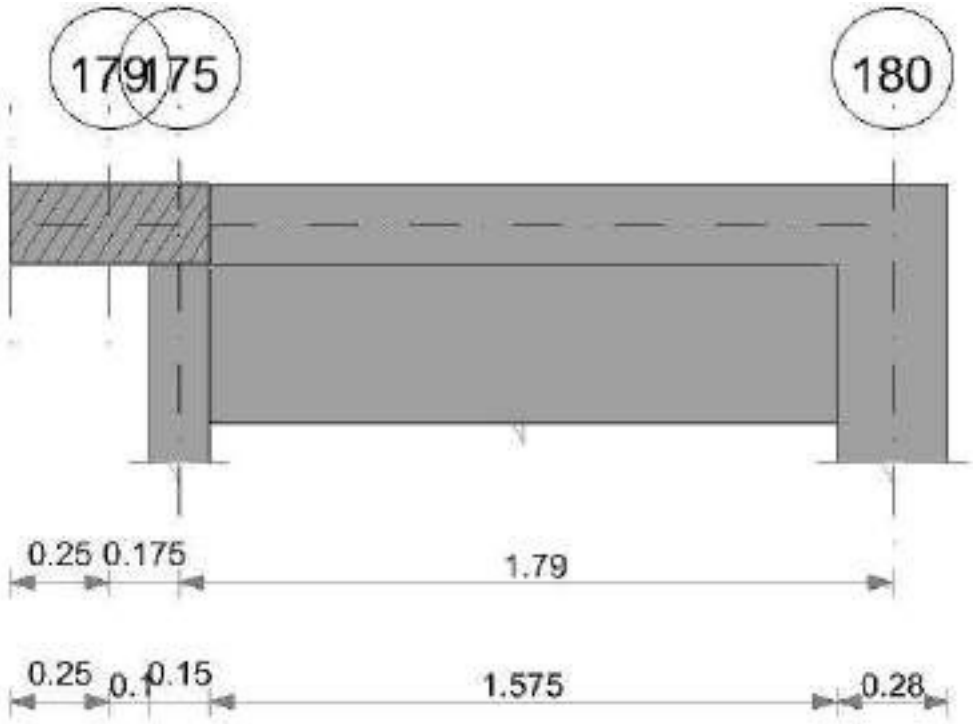
La campata non presenta apertura delle fessure

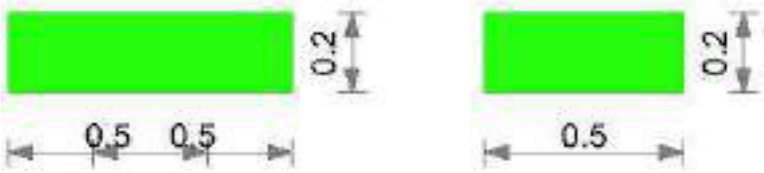
Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.06	0	0	0	0	0	0	0	0	0	0	0	2	0	2	9999	Si
0.08	0	0	0	0	0	0	0	0	0	0	0	2	0	2	9999	Si
0.09	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

Trave a "Primo" 179-176

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

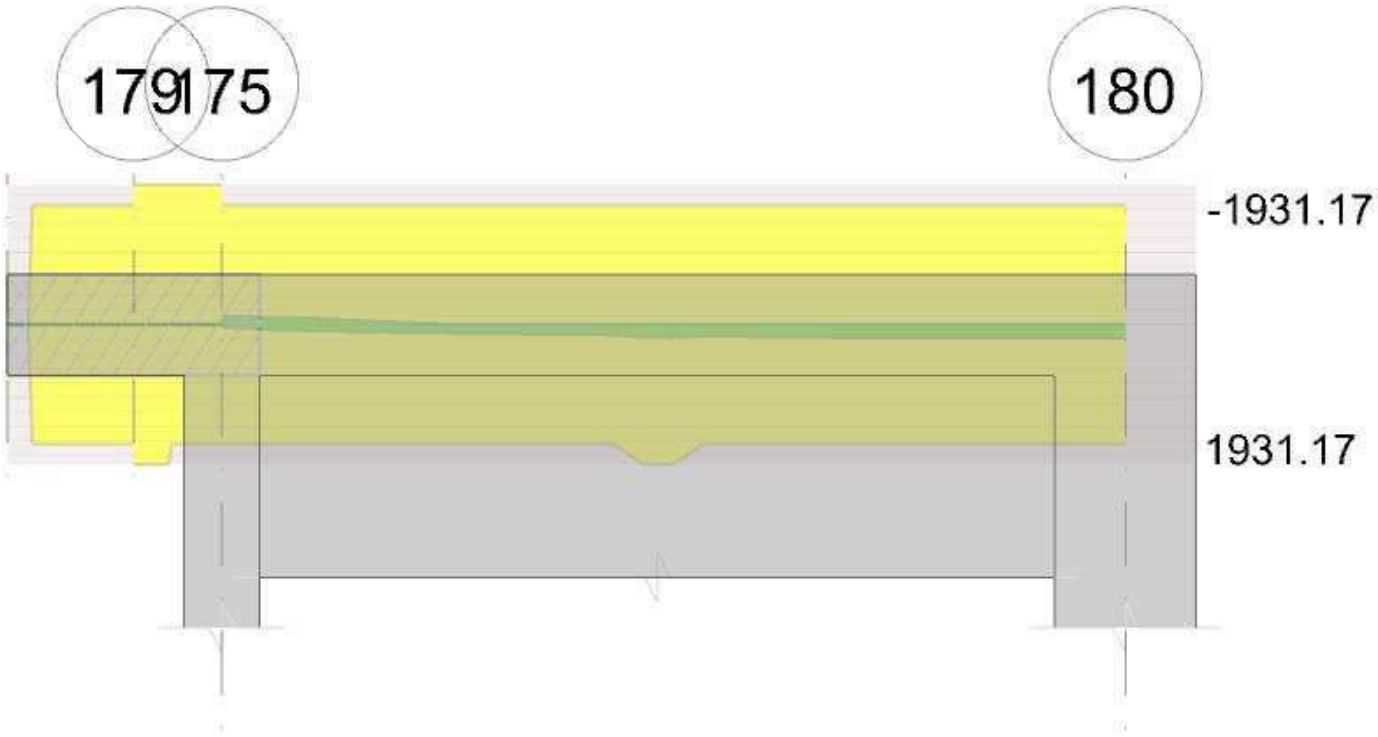


Diagramma verifica stato limite ultimo taglio

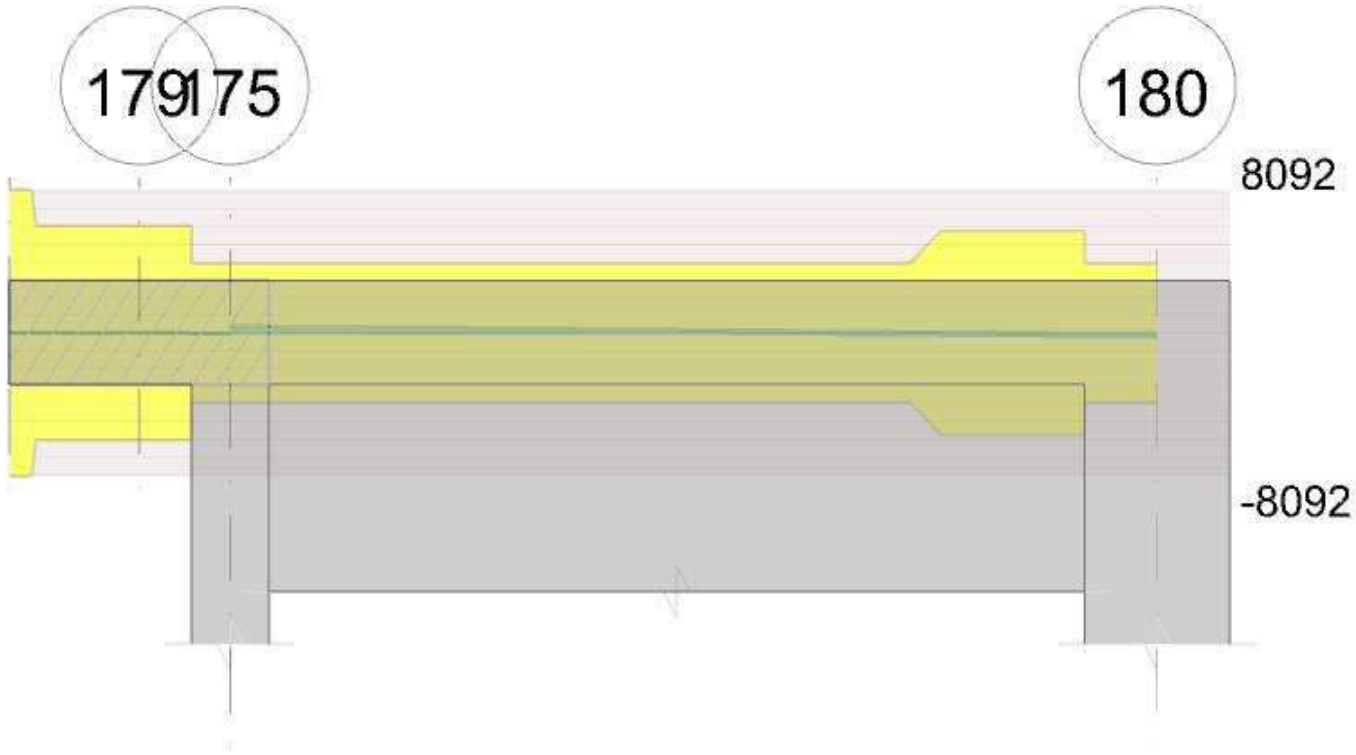
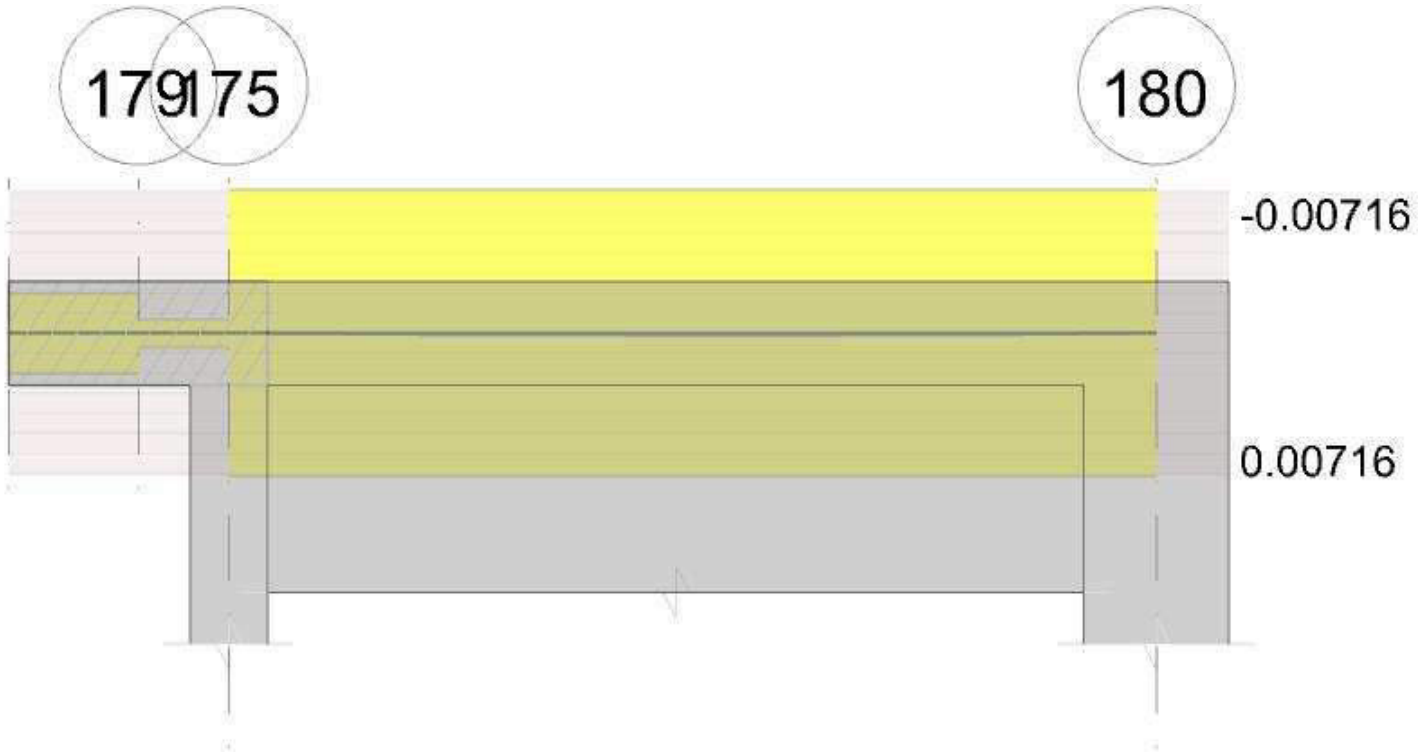


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 2 tra i fili 179 - 175, sezione R 50x20, asta 471

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	0.01	SLU 83	0.01	1931.17	0.242	+∞	0.01	SLU 2	-0.72	-1931.17	0.242	2688.94	Si
0.09	0.000308	0.05	0.000308	0.05							-1.23	SLU 51	-1.61	-1931.17	0.242	1198.05	Si
0.1	0.000308	0.05	0.000308	0.05							-1.61	SLU 51	-1.61	-1931.17	0.242	1198.05	Si
0.18	0.000308	0.05	0.000308	0.05							-4.96	SLU 49	-2.83	-1931.17	0.242	682.23	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	0.01	SLV 2	0.01	1648.89	0.269	+∞	0.01	SLV 15	-0.55	-1648.89	0.269	2984.48	Si
0.09	0.000308	0.05	0.000308	0.05							-0.95	SLV 4	-1.24	-1648.89	0.269	1329.7	Si
0.1	0.000308	0.05	0.000308	0.05							-1.24	SLV 4	-1.24	-1648.89	0.269	1329.7	Si
0.18	0.000308	0.05	0.000308	0.05							-3.82	SLV 4	-2.18	-1648.89	0.269	757.18	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	0.01	SLD 13	0.01	1648.89	0.269	+∞	0.01	SLD 4	-0.55	-1648.89	0.269	2984.58	Si
0.09	0.000308	0.05	0.000308	0.05							-0.95	SLD 4	-1.24	-1648.89	0.269	1329.76	Si
0.1	0.000308	0.05	0.000308	0.05							-1.24	SLD 4	-1.24	-1648.89	0.269	1329.76	Si
0.18	0.000308	0.05	0.000308	0.05							-3.82	SLD 4	-2.18	-1648.89	0.269	757.24	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.09	0.0000115	0.000308	0	-28	SLU 83	-28	-3906	-23811	-6069	-6069	1	213.43	Si
0.1	0.0000115	0.000308	0	-32	SLU 83	-32	-3906	-23811	-6069	-6069	1	186.75	Si
0.18	0	0.000308	0	-57	SLU 83	-57	-3906	-23811	0	-3906	1	68.68	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000115	0.000308	0	0	Ger.	0	3906	23811	6069	6069	1	1627838.13	Si
0	0.0000115	0.000308	0	0	Ger.	0	-3906	-23811	-6069	-6069	1	1627836.51	Si
0.09	0.0000115	0.000308	0	-22	SLV 4	-22	-3906	-23811	-6069	-6069	1	277.41	Si
0.1	0.0000115	0.000308	0	-25	SLV 4	-25	-3906	-23811	-6069	-6069	1	242.74	Si
0.18	0	0.000308	0	-44	SLV 4	-44	-3906	-23811	0	-3906	1	89.28	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000115	0.000308	0	0	Ger.	0	3906	23811	6069	6069	1	3833557.83	Si
0	0.0000115	0.000308	0	0	Ger.	0	-3906	-23811	-6069	-6069	1	3833548.86	Si
0.09	0.0000115	0.000308	0	-22	SLD 16	-22	-3906	-23811	-6069	-6069	1	277.43	Si
0.1	0.0000115	0.000308	0	-25	SLD 16	-25	-3906	-23811	-6069	-6069	1	242.76	Si
0.18	0	0.000308	0	-44	SLD 16	-44	-3906	-23811	0	-3906	1	89.29	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	0.01	20	0.01	3	1494000	44	36000000	0.01	2	0.01	3	1120500			Si
0.09	-0.95	9	-1.24	348	1494000	5218	36000000	-0.95	1	-1.24	348	1120500			Si
0.1	-1.24	9	-1.24	348	1494000	5218	36000000	-1.24	1	-1.24	348	1120500			Si
0.18	-3.82	7	-2.18	611	1494000	9164	36000000	-3.82	1	-2.18	611	1120500			Si

Verifica di apertura delle fessure

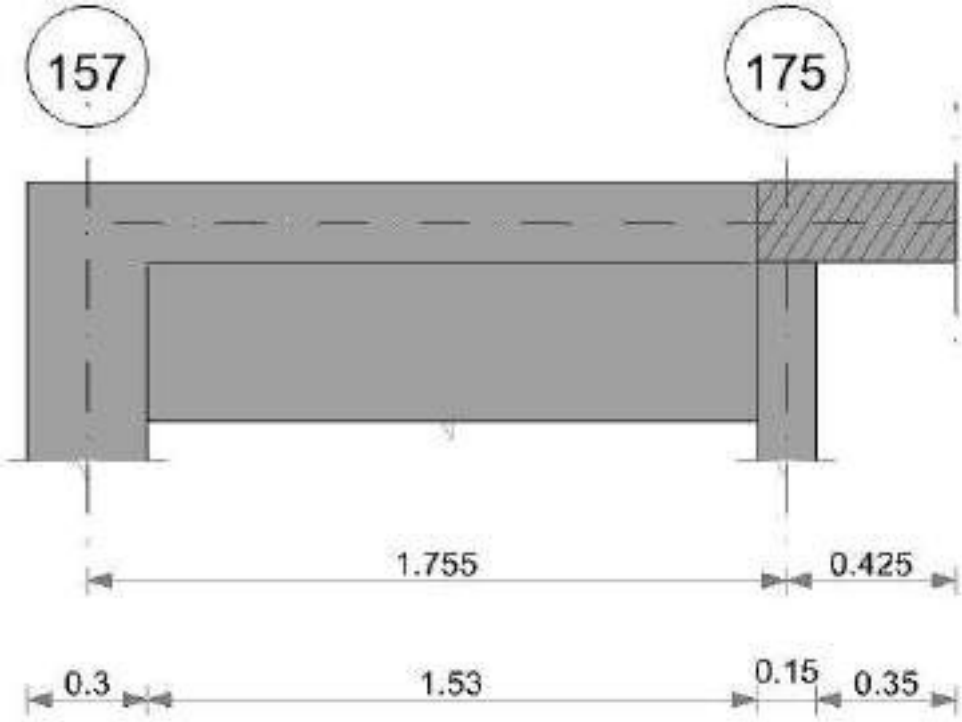
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.09	0	0	0	0	0	0	0	0	0	0	0	2	0	2	9999	Si
0.1	0	0	0	0	0	0	0	0	0	0	0	2	0	2	9999	Si
0.11	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

Trave a "Rialzato" 157-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

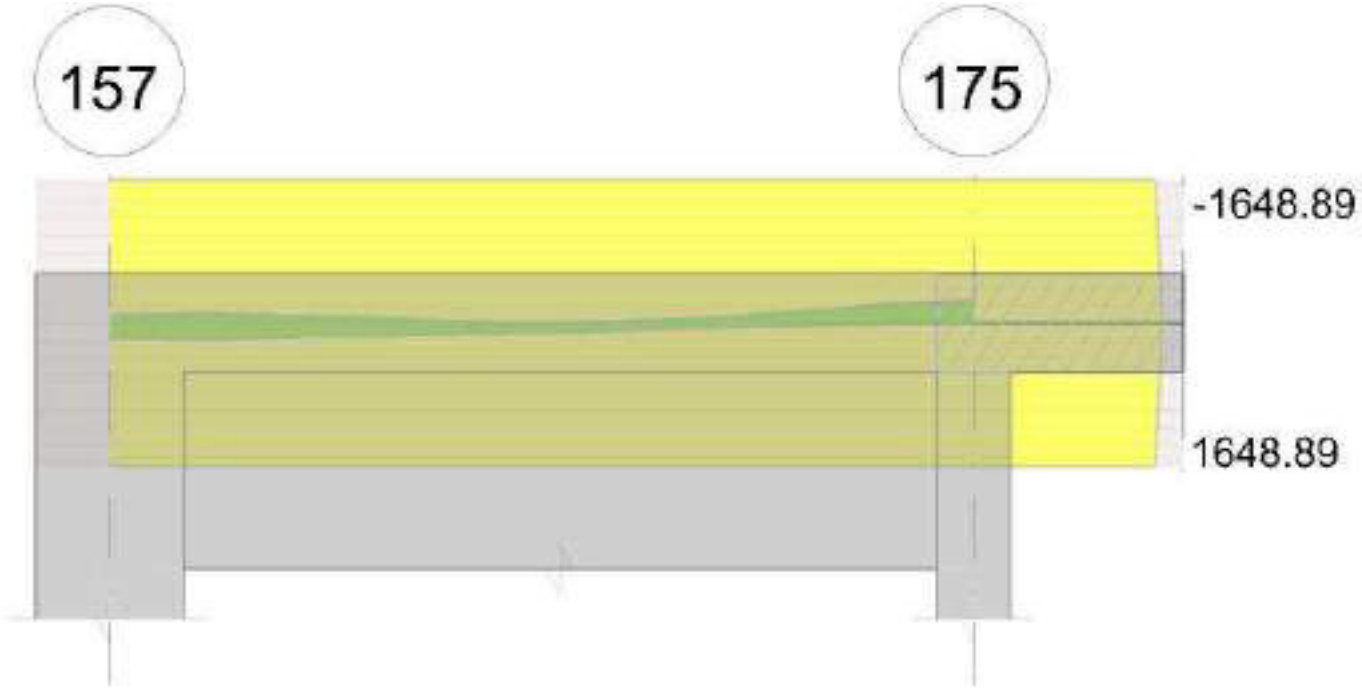


Diagramma verifica stato limite ultimo taglio

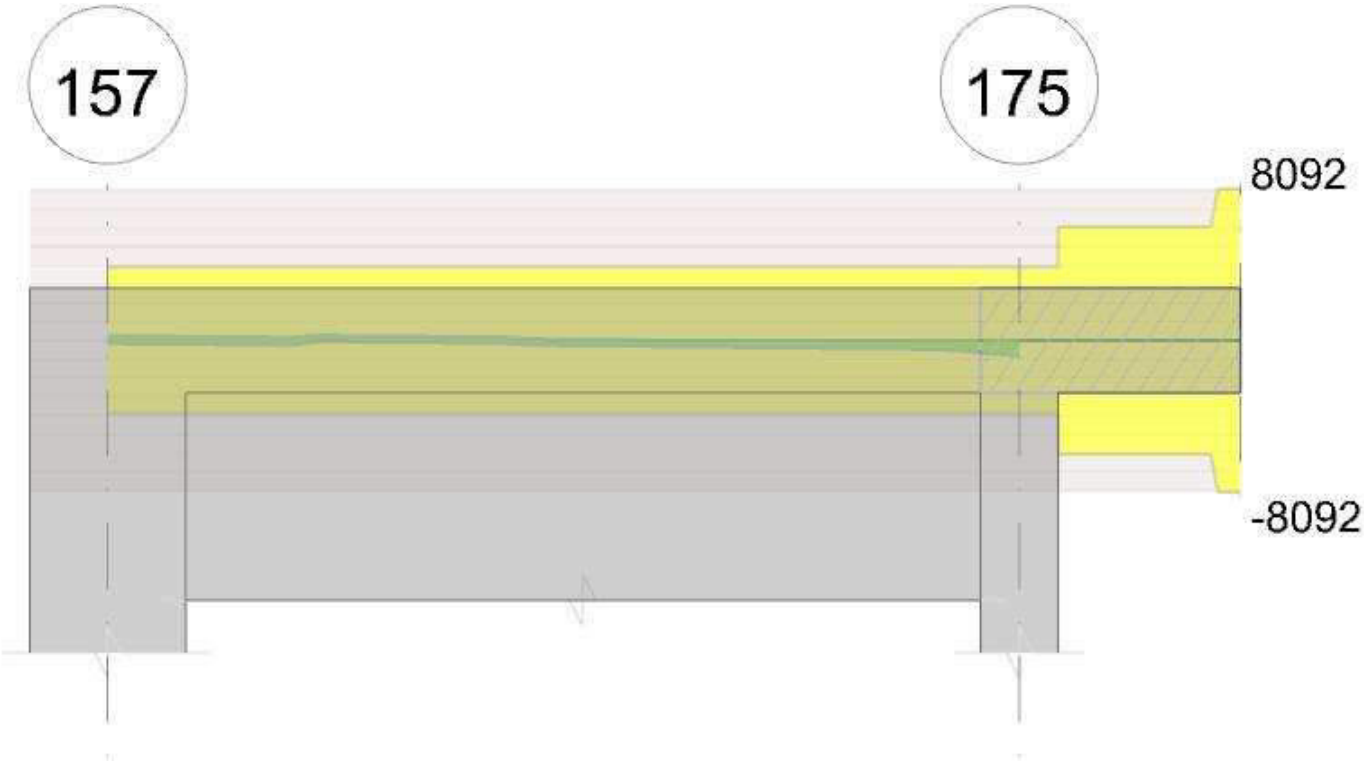
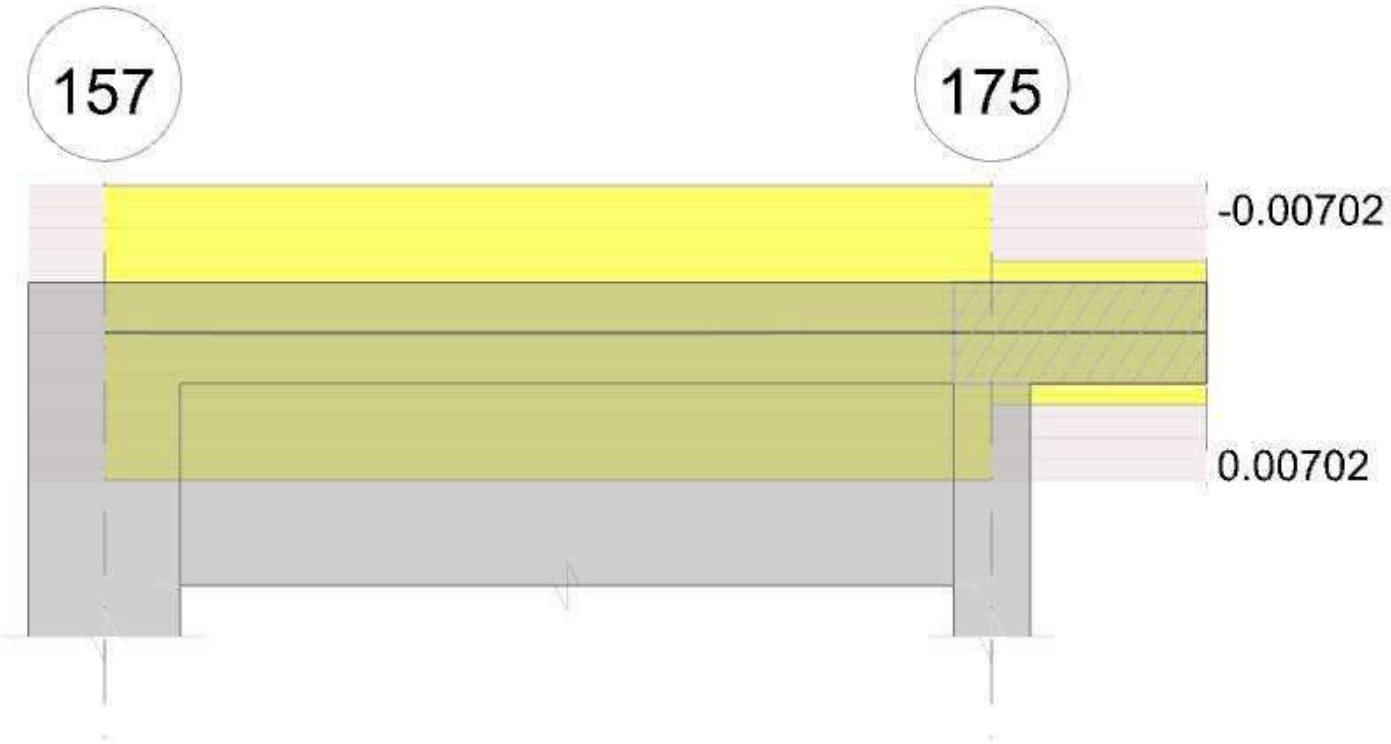


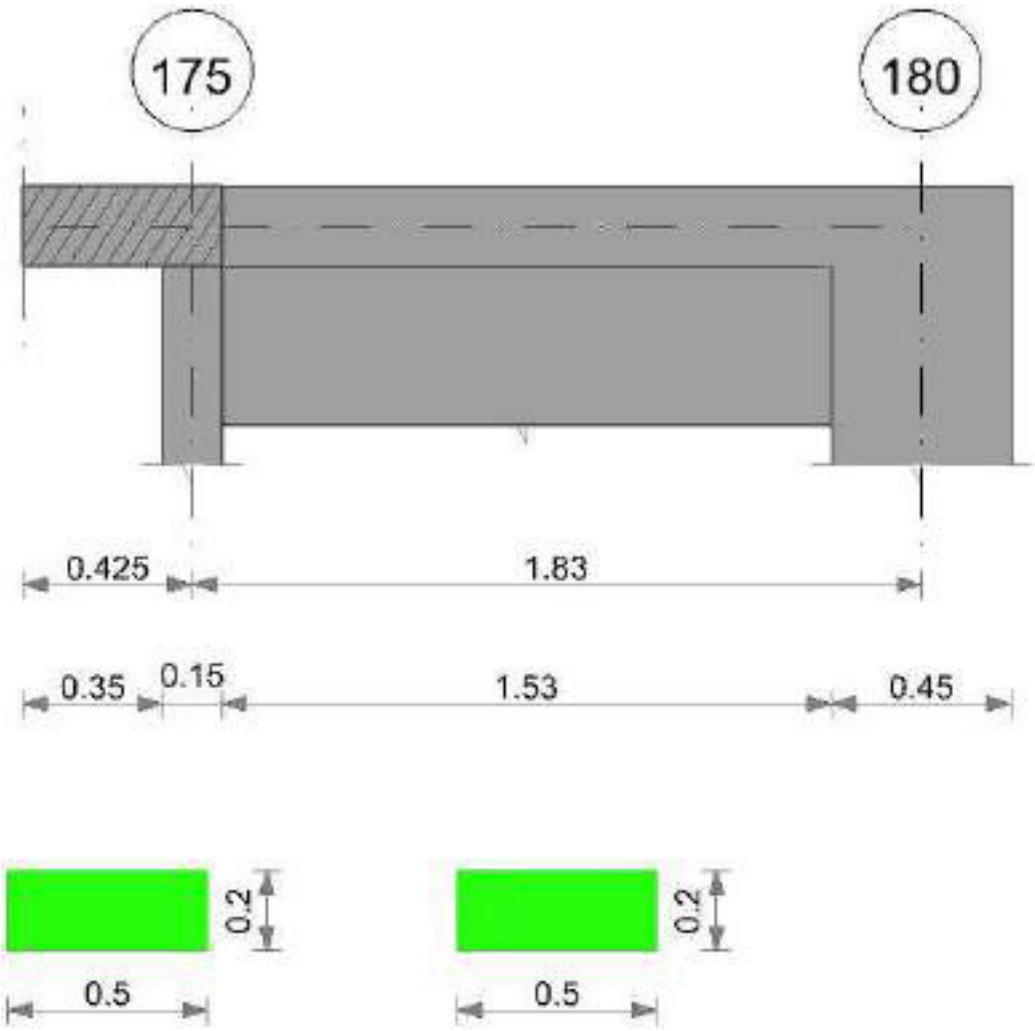
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Rialzato" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

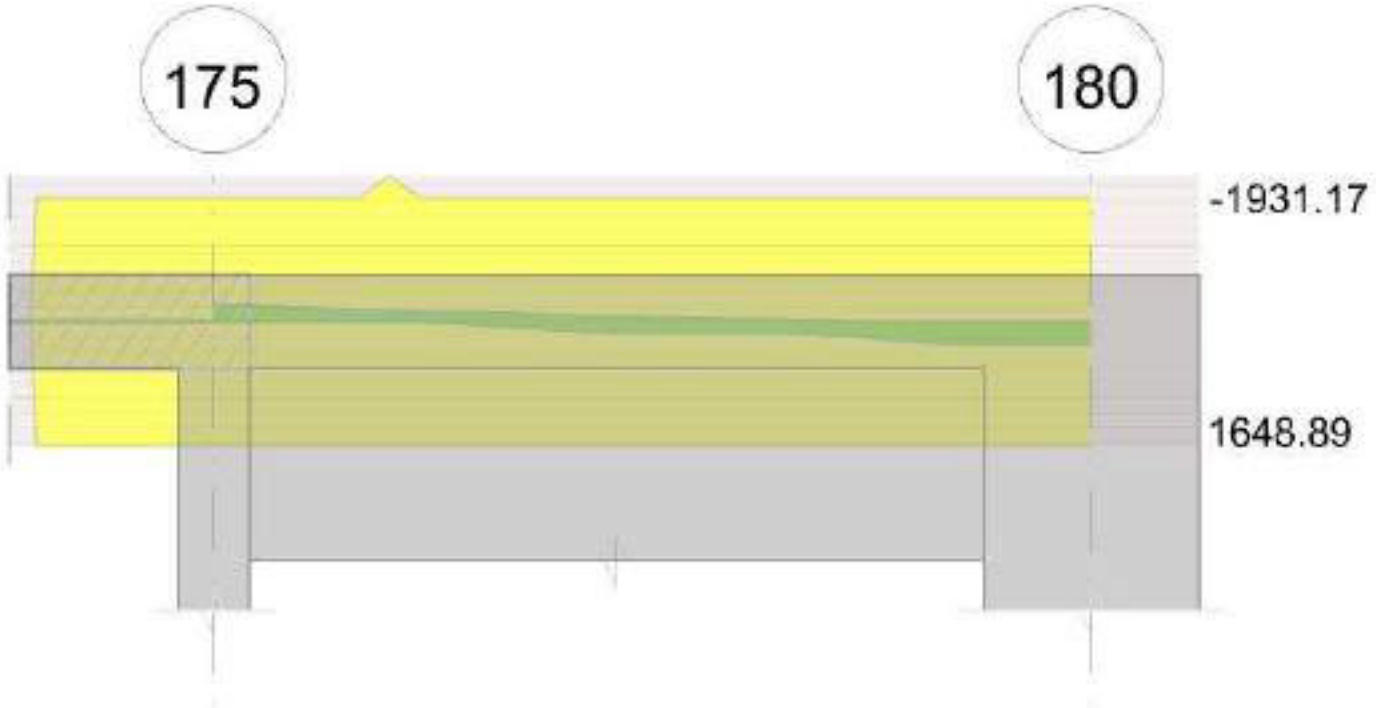


Diagramma verifica stato limite ultimo taglio

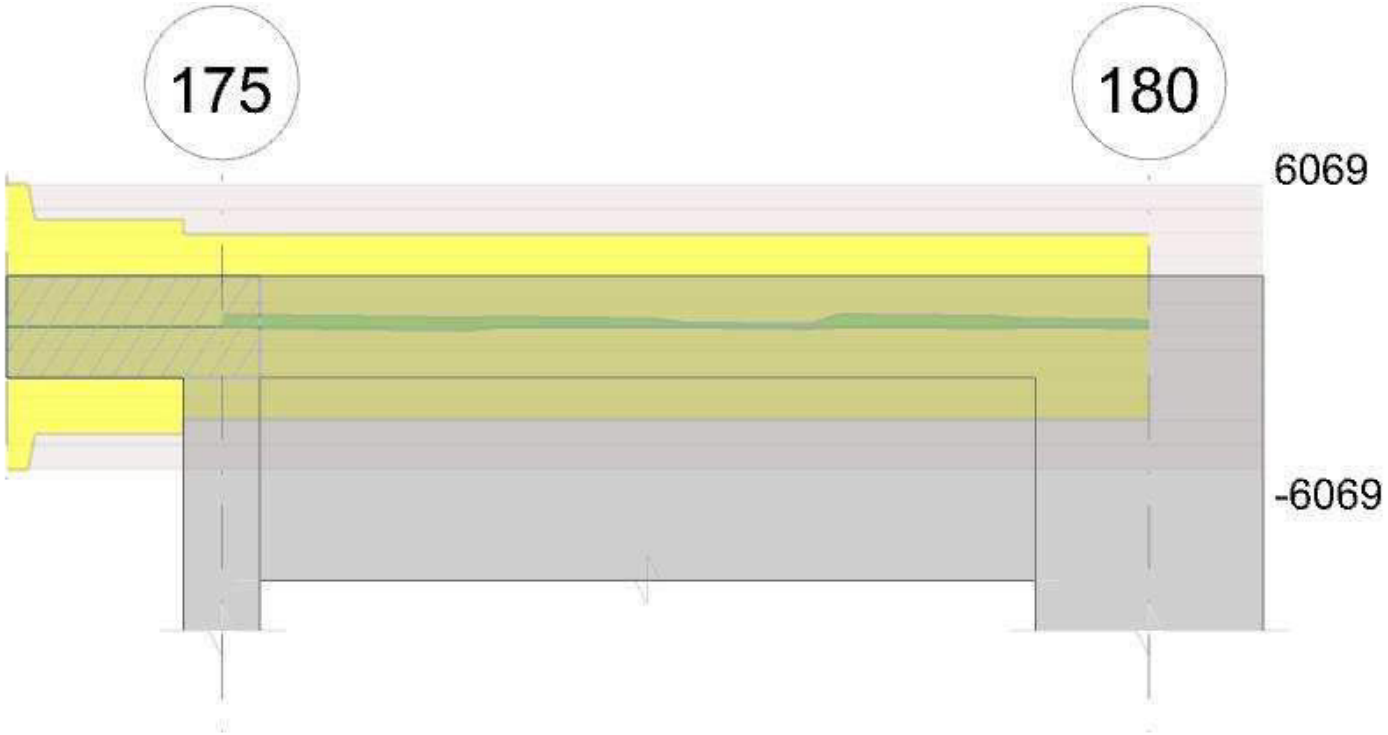
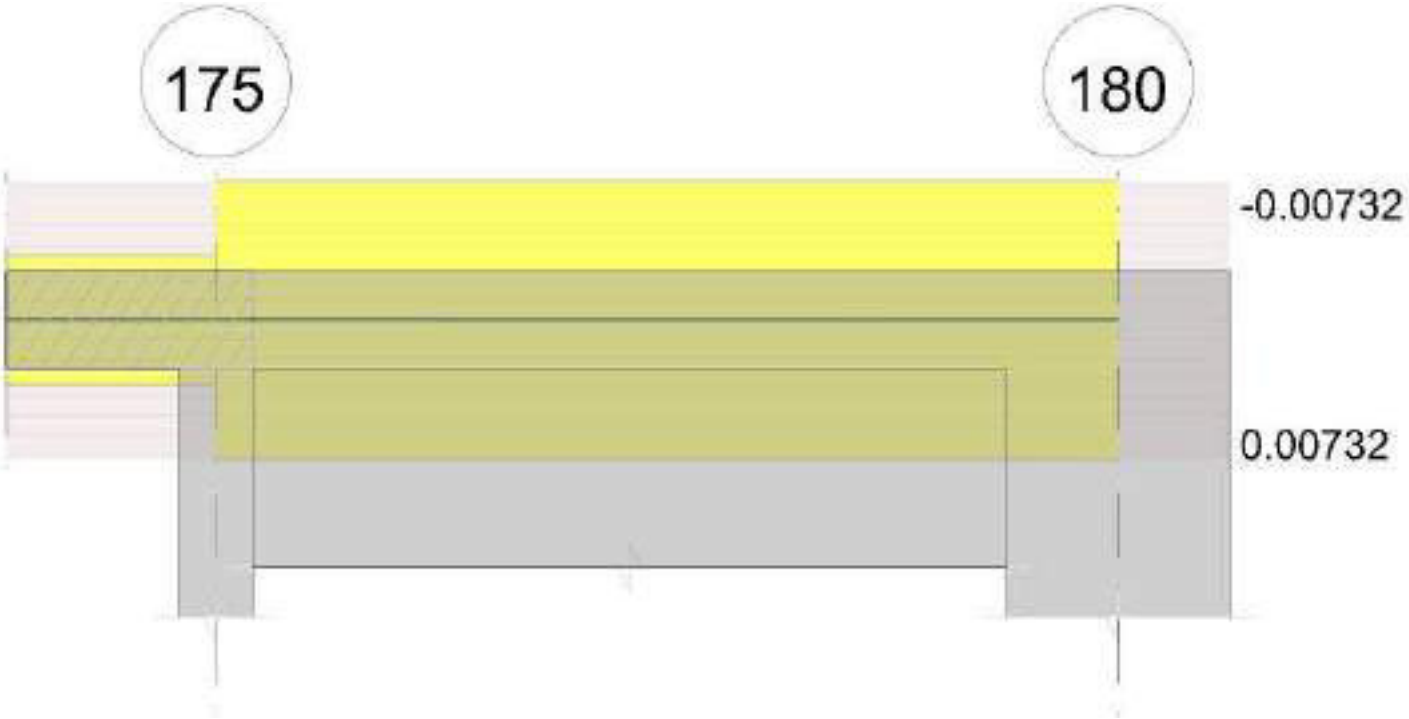


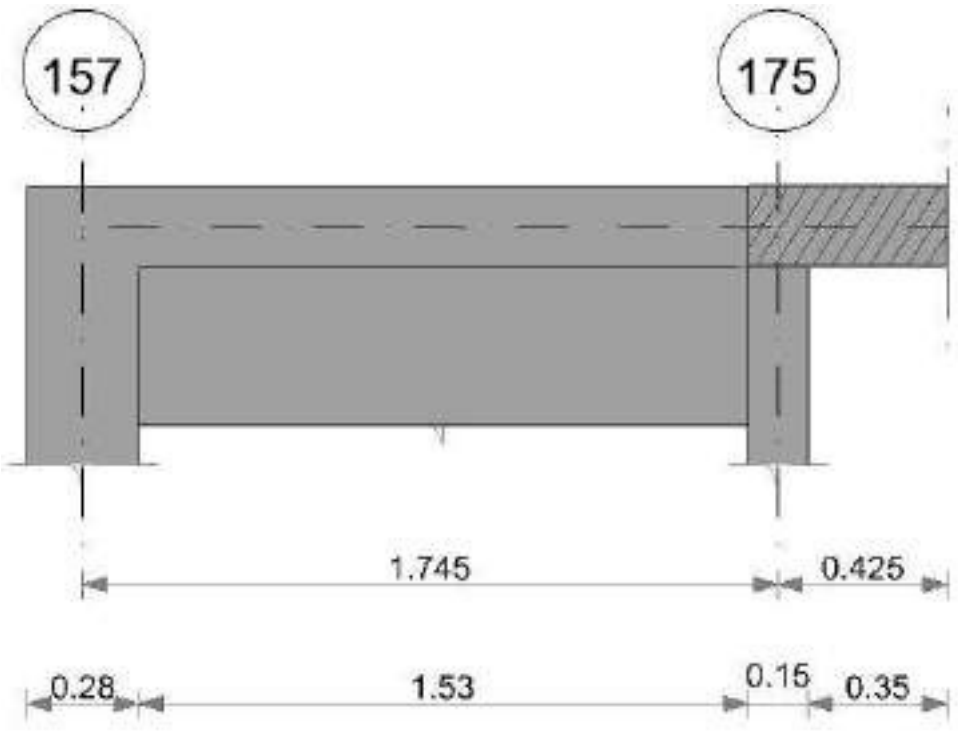
Diagramma verifica stato limite esercizio quasi permanente freccia

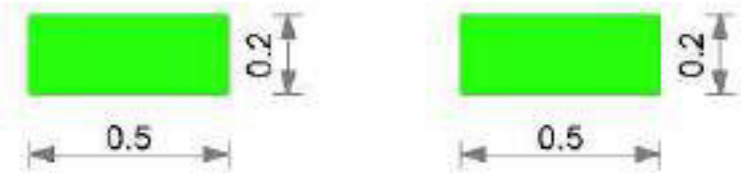


Output campate

Trave a "Secondo" 157-179

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

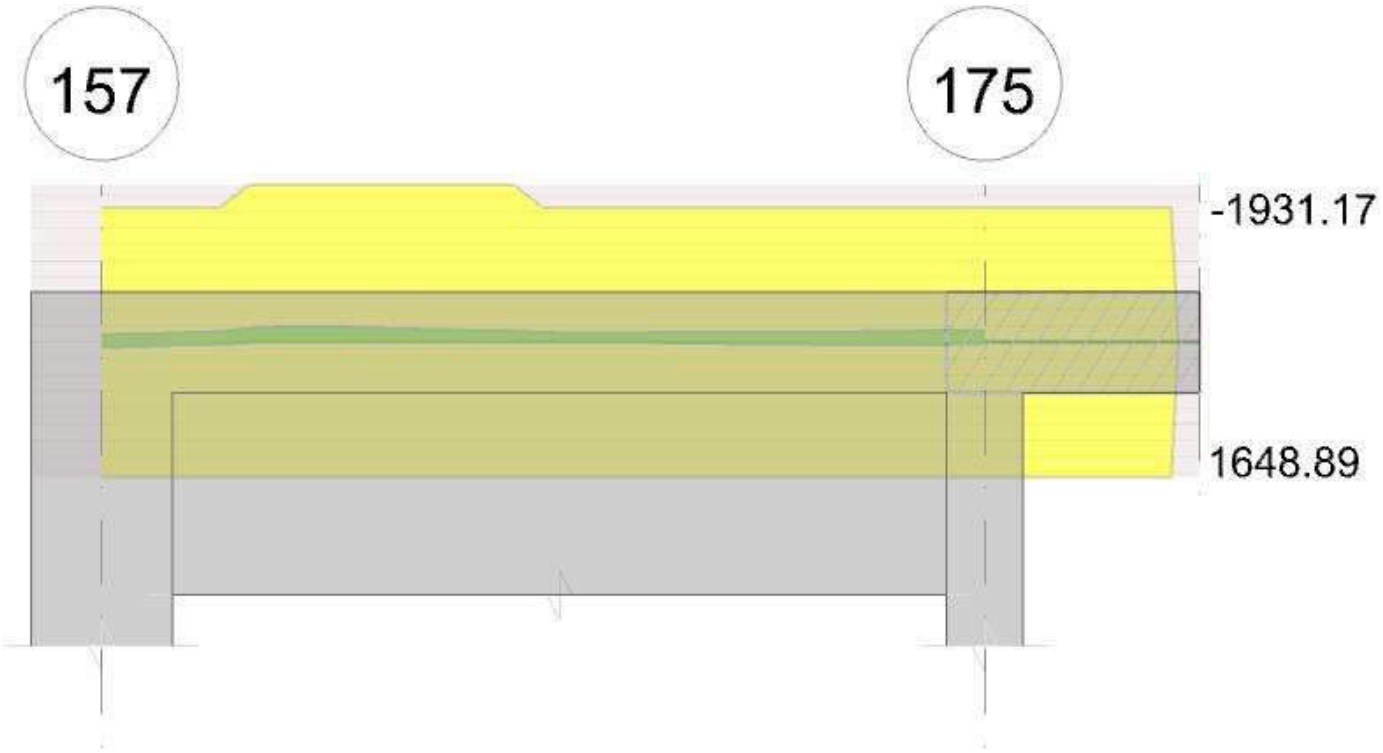
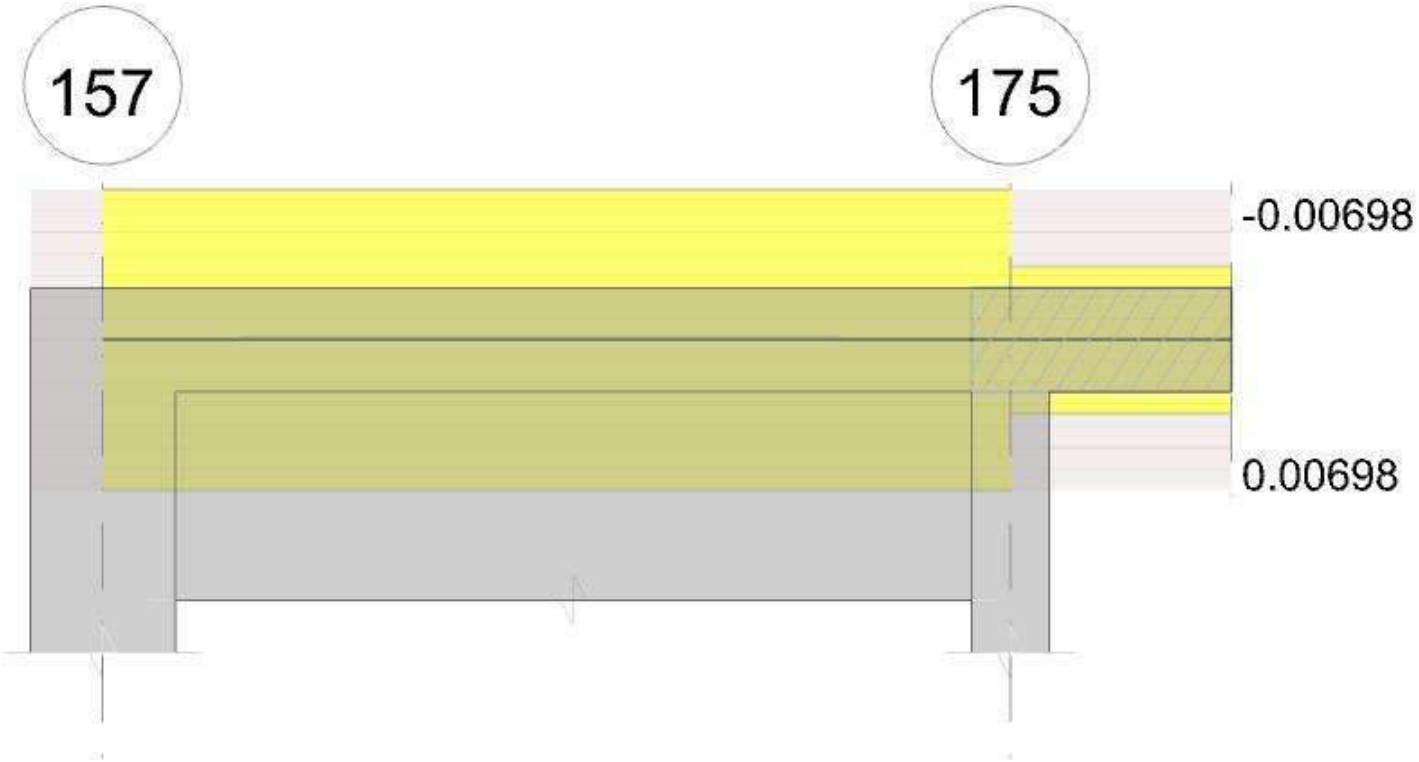


Diagramma verifica stato limite ultimo taglio

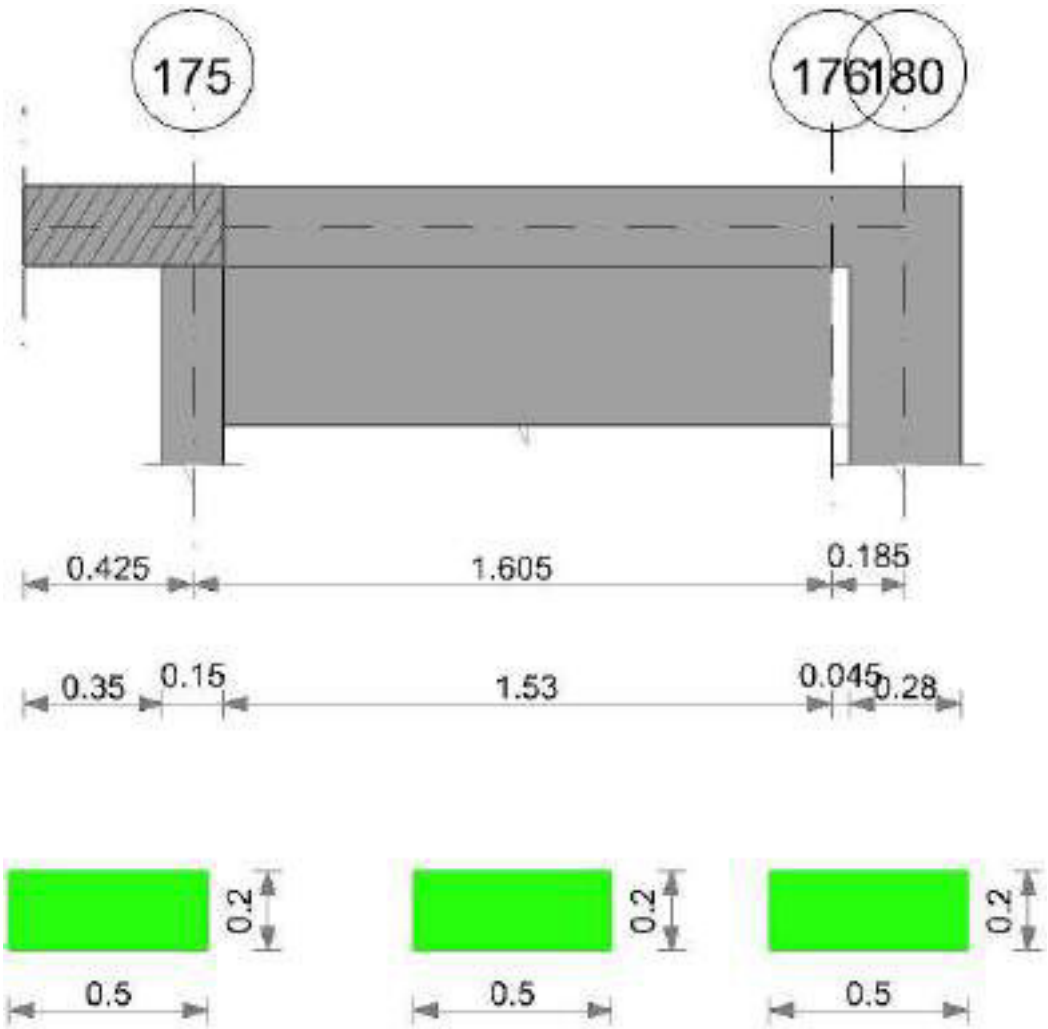
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Secondo" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

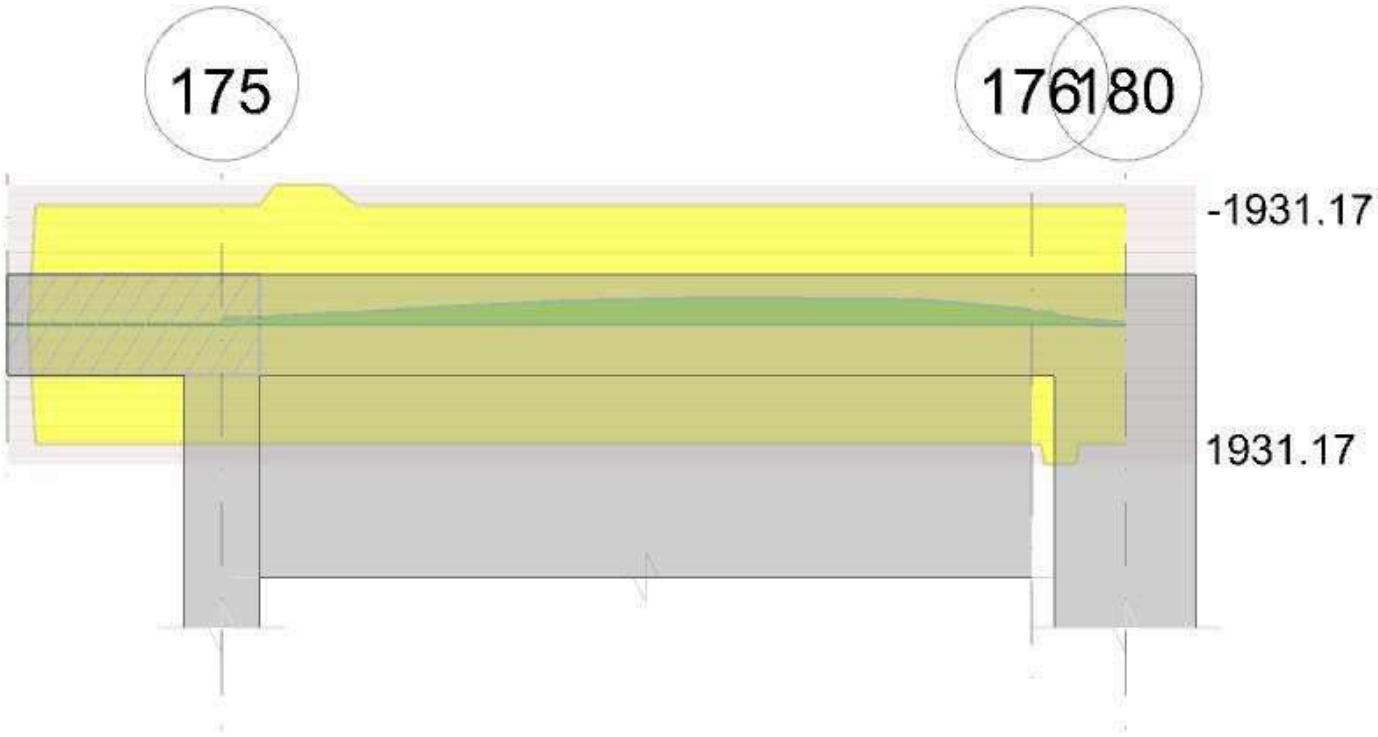


Diagramma verifica stato limite ultimo taglio

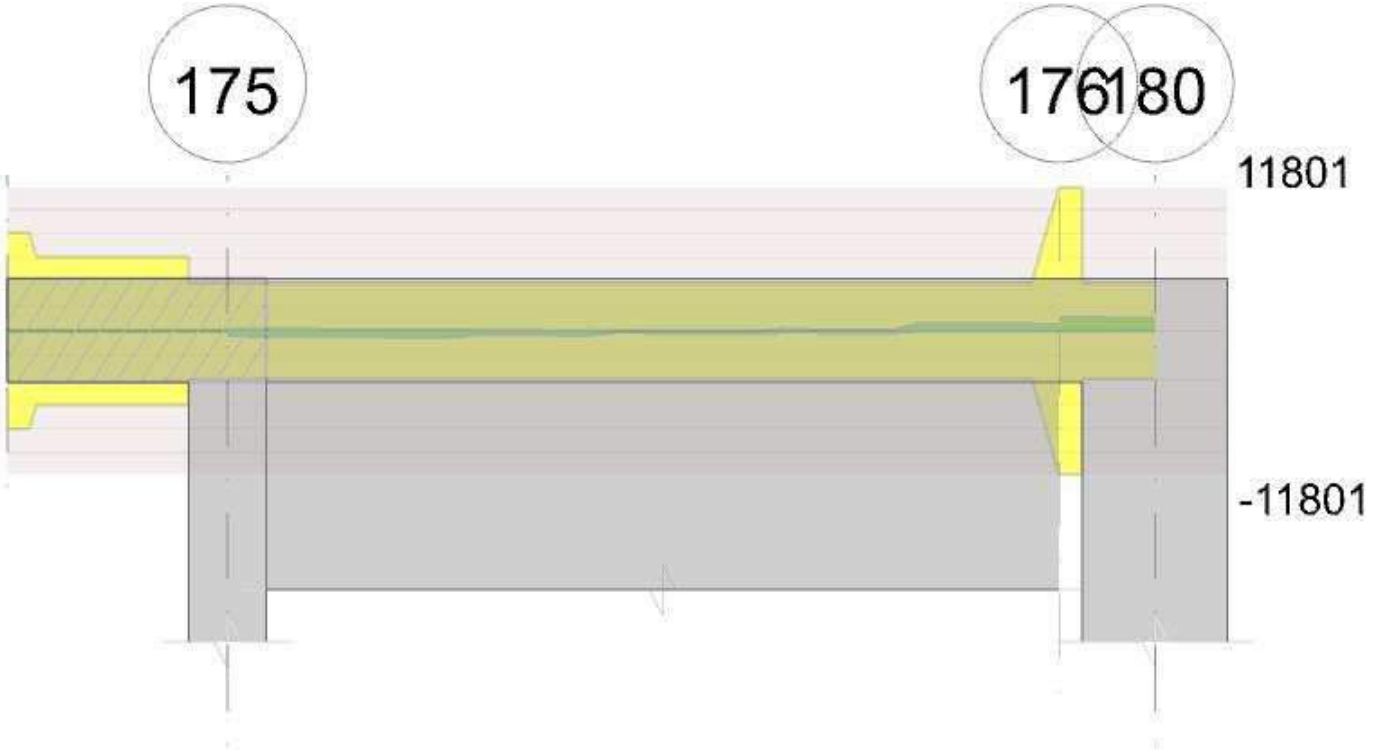
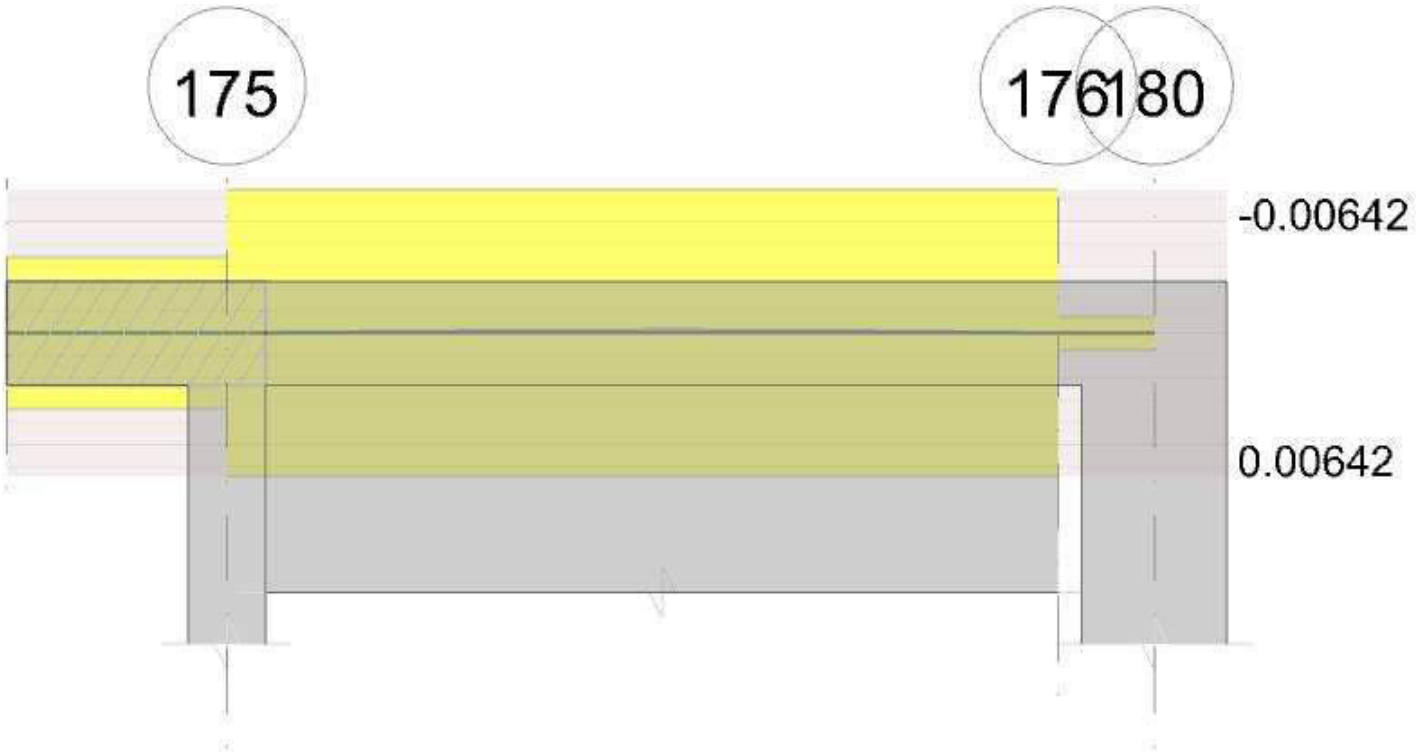


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 176 - 180, sezione R 50x20, asta 472

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-183.03	SLU 83	-183.03	-1931.17	0.242	10.55	Si
0.05	0.000308	0.05	0.000308	0.05	-70.97	SLU 2	0.23	1931.17	0.242	8376.15	-133.95	SLU 83	-183.03	-1931.17	0.242	10.55	Si
0.09	0.000308	0.05	0.000308	0.05							-82.86	SLU 83	-82.86	-1931.17	0.242	23.31	Si
0.19	0.000308	0.05	0.000308	0.05	14.52	SLU 83	14.52	1931.17	0.242	133.02							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-171.31	SLV 3	-171.31	-1648.89	0.269	9.63	Si
0.05	0.000308	0.05	0.000308	0.05							-128.91	SLV 3	-171.31	-1648.89	0.269	9.63	Si
0.09	0.000308	0.05	0.000308	0.05							-85.63	SLV 3	-85.63	-1648.89	0.269	19.26	Si
0.19	0.000308	0.05	0.000308	0.05	43.9	SLV 10	12.73	1648.89	0.269	129.52	-26.07	SLV 7	-26.07	-1648.89	0.269	63.24	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-137.46	SLD 3	-137.46	-1648.89	0.269	12	Si
0.05	0.000308	0.05	0.000308	0.05							-102.01	SLD 3	-137.46	-1648.89	0.269	12	Si
0.09	0.000308	0.05	0.000308	0.05							-65.53	SLD 3	-65.53	-1648.89	0.269	25.16	Si
0.19	0.000308	0.05	0.000308	0.05	23.87	SLD 10	20.61	1648.89	0.269	80.01	-6.04	SLD 7	-6.04	-1648.89	0.269	272.81	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	1098	SLU 83	1098	3906	23811	11801	11801	1	10.75	Si
0.05	0.0000223	0.000308	0	1083	SLU 83	1083	3906	23811	11801	11801	1	10.89	Si
0.05	0	0.000308	0	1082	SLU 83	1082	3906	23811	0	3906	1	3.61	Si
0.09	0	0.000308	0	1068	SLU 83	1068	3906	23811	0	3906	1	3.66	Si
0.19	0	0.000308	0	1038	SLU 83	1038	3906	23811	0	3906	1	3.76	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	996	SLV 1	996	3906	23811	11801	11801	1	11.85	Si
0.05	0.0000223	0.000308	0	984	SLV 1	984	3906	23811	11801	11801	1	11.99	Si
0.05	0	0.000308	0	983	SLV 1	983	3906	23811	0	3906	1	3.97	Si
0.09	0	0.000308	0	973	SLV 1	973	3906	23811	0	3906	1	4.02	Si
0.19	0	0.000308	0	949	SLV 1	949	3906	23811	0	3906	1	4.11	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	814	SLD 1	814	3906	23811	11801	11801	1	14.5	Si
0.05	0.0000223	0.000308	0	802	SLD 1	802	3906	23811	11801	11801	1	14.71	Si
0.05	0	0.000308	0	801	SLD 1	801	3906	23811	0	3906	1	4.87	Si
0.09	0	0.000308	0	791	SLD 1	791	3906	23811	0	3906	1	4.94	Si
0.19	0	0.000308	0	767	SLD 1	767	3906	23811	0	3906	1	5.09	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-131.18	20	-131.18	36804	1494000	552056	36000000	-112.22	2	-112.22	31484	1120500			Si
0.05	-95.94	20	-131.18	36804	1494000	552056	36000000	-81.97	2	-112.22	31484	1120500			Si
0.09	-59.3	20	-59.3	16636	1494000	249542	36000000	-50.58	2	-50.58	14191	1120500			Si
0.19	10.45	20	10.45	2931	1494000	43970	36000000	8.91	2	8.91	2501	1120500			Si

Verifica di apertura delle fessure

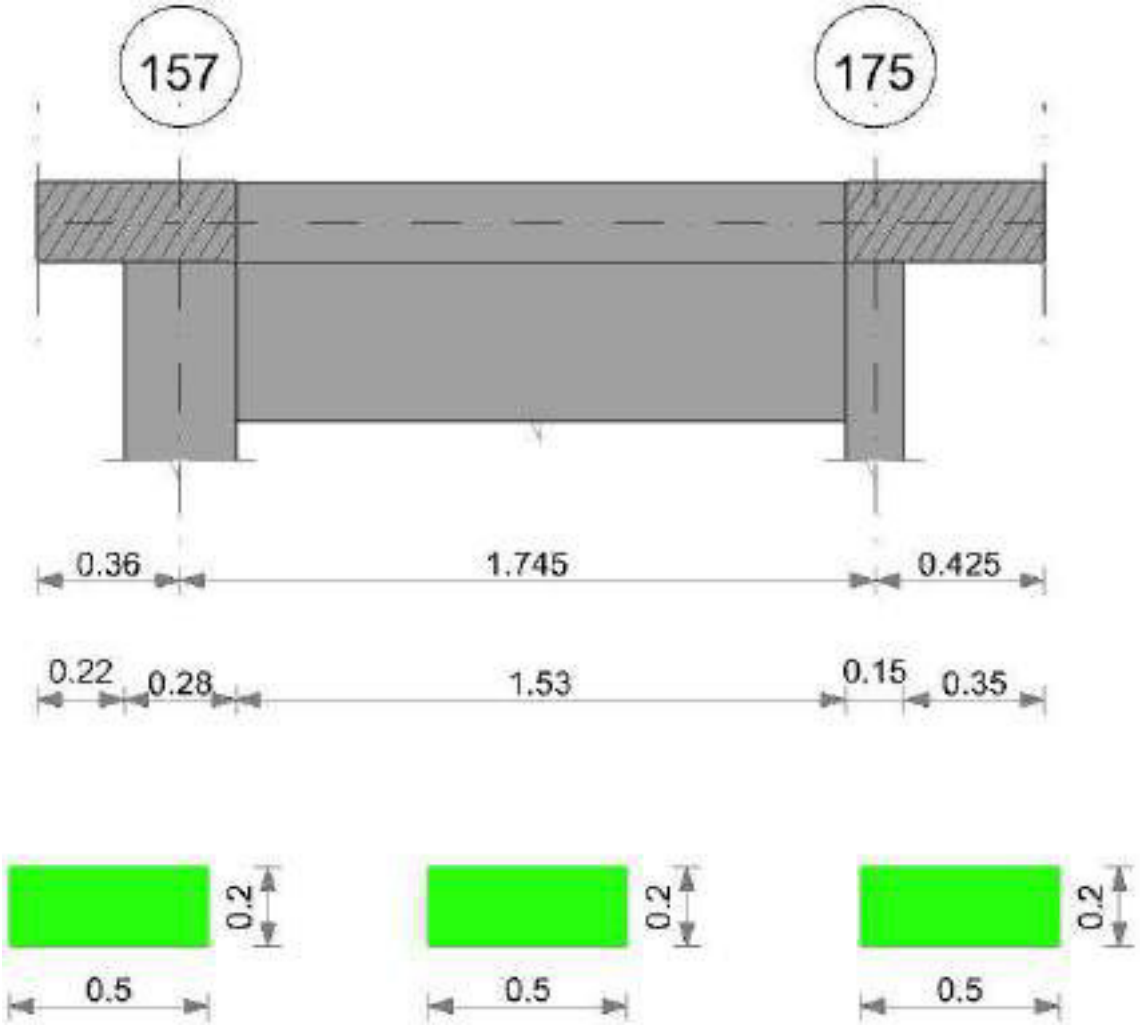
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.05	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.09	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

Trave a "Sottotetto" 146-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

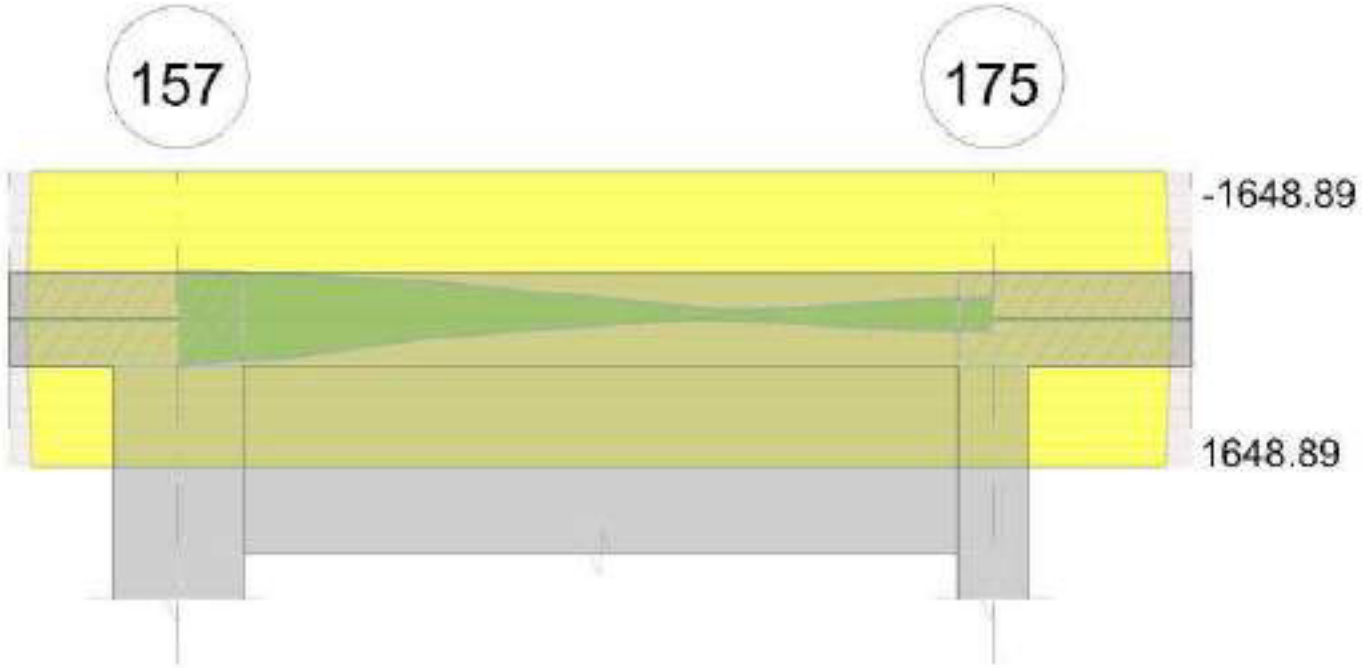


Diagramma verifica stato limite ultimo taglio

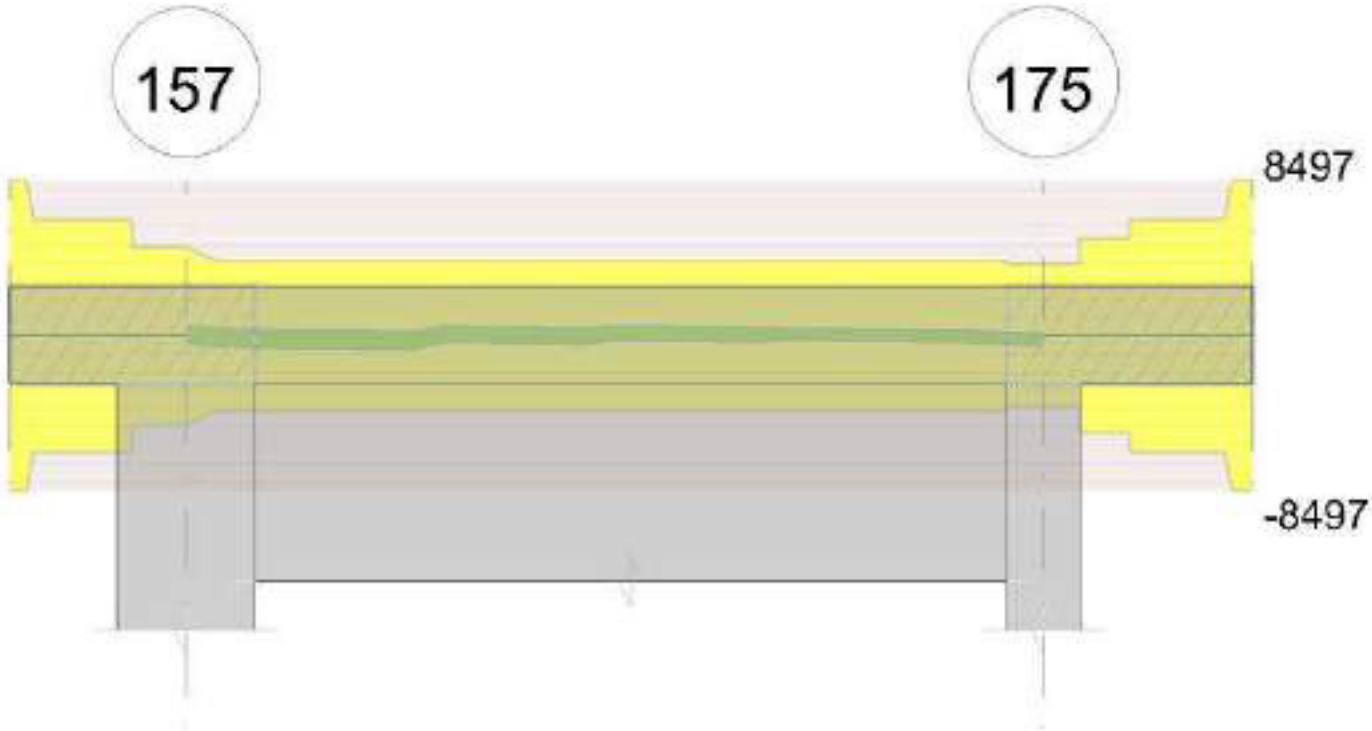
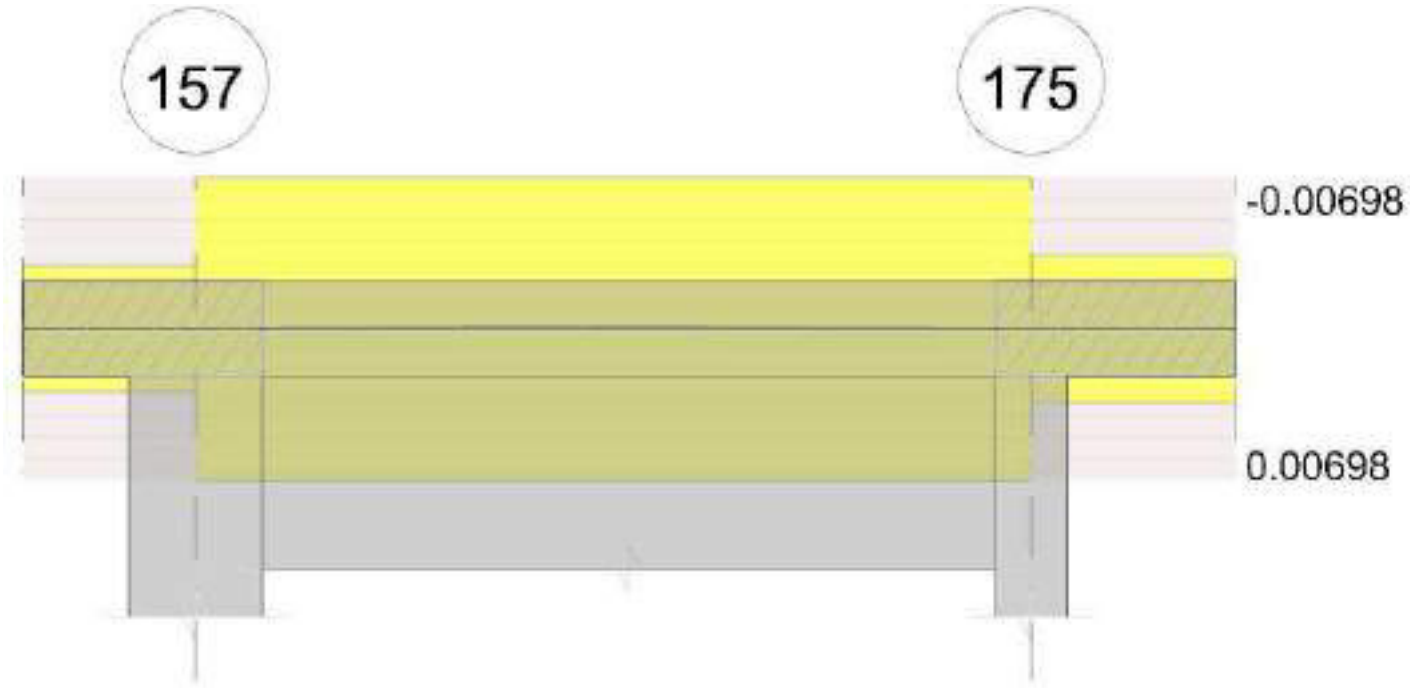


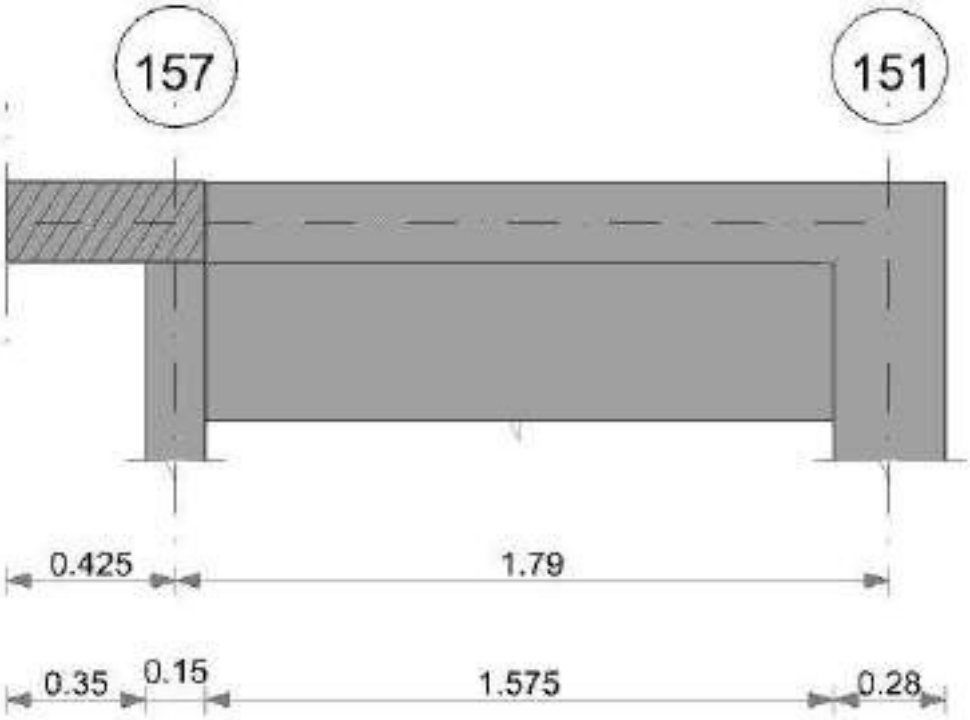
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Sottotetto" 154-151

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

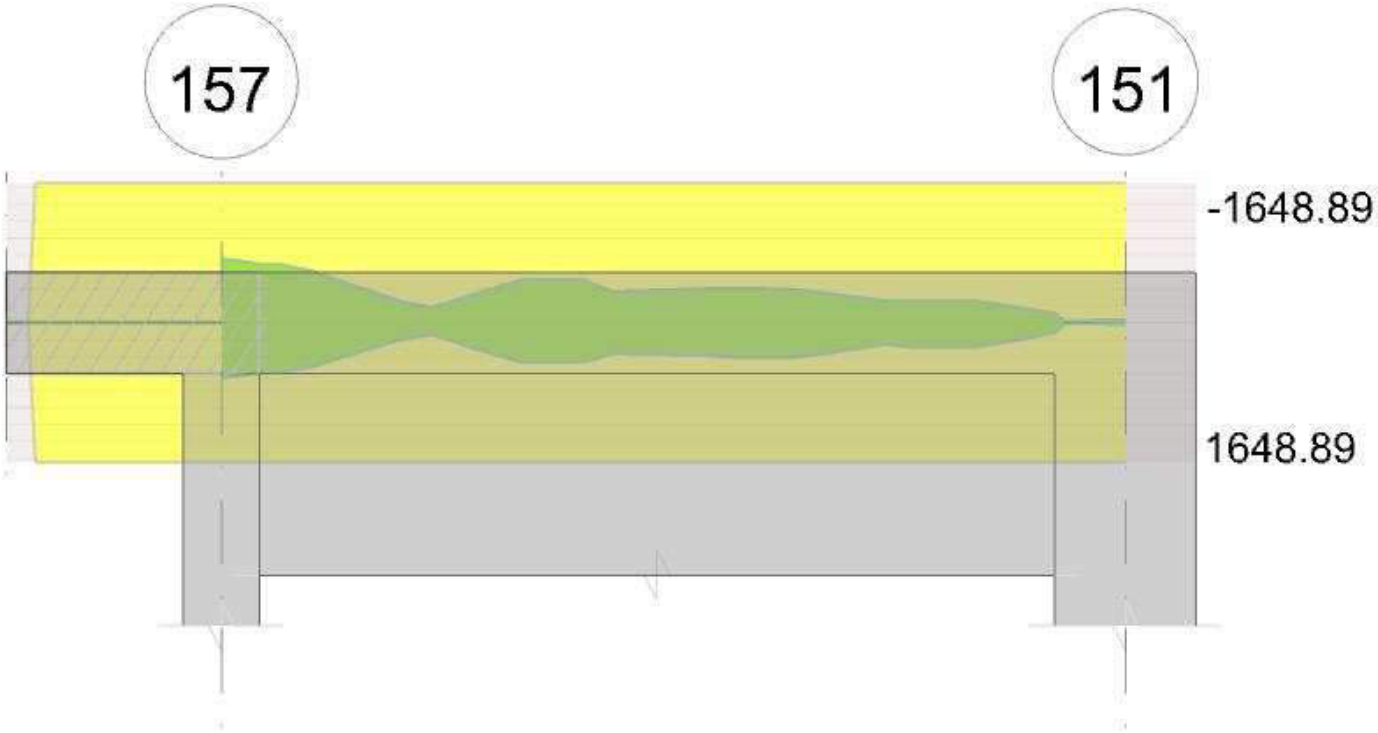


Diagramma verifica stato limite ultimo taglio

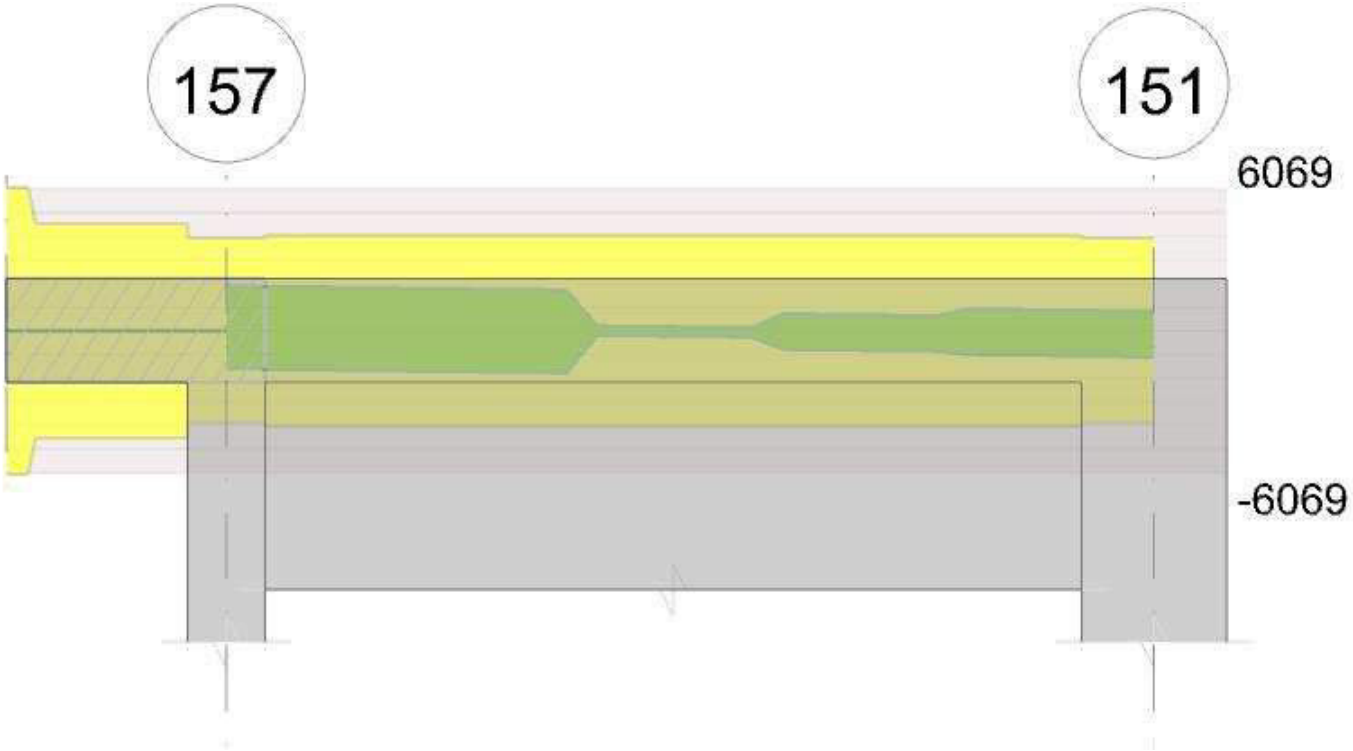
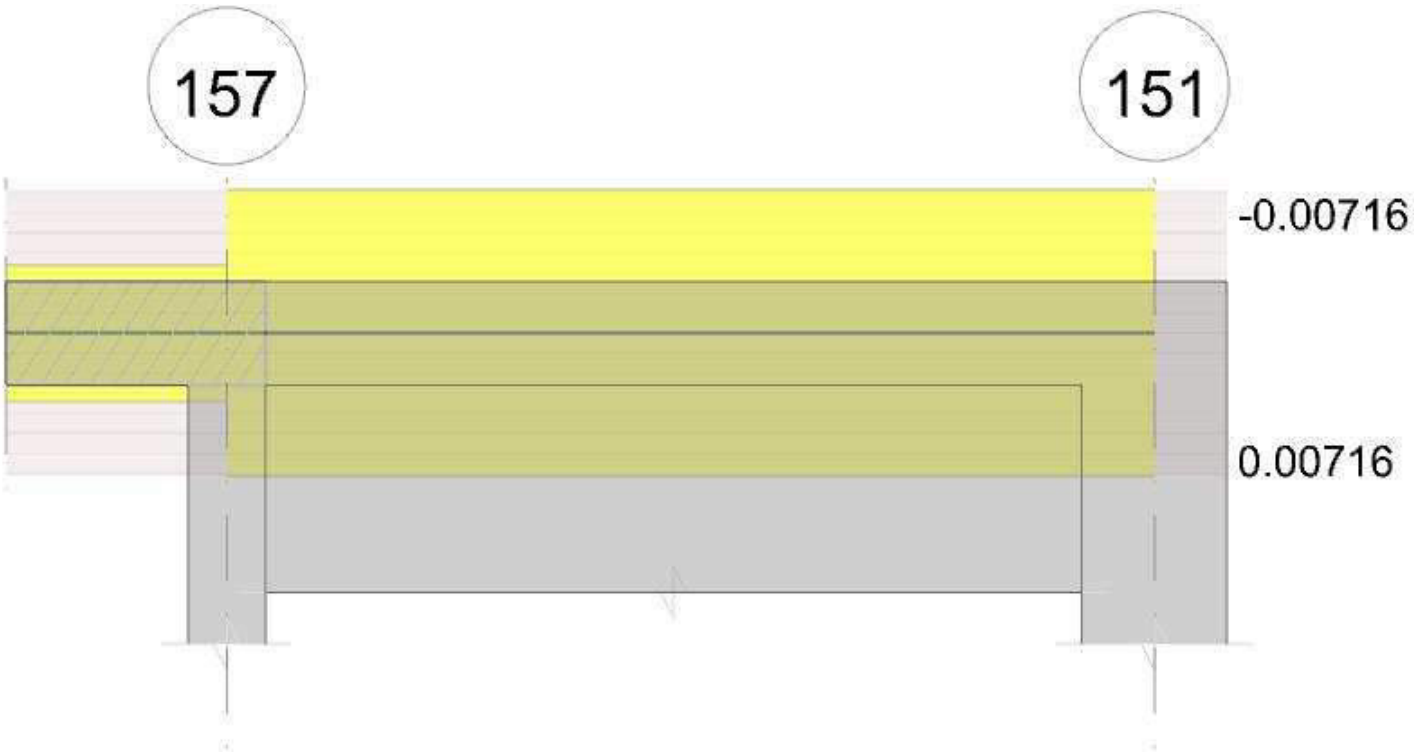


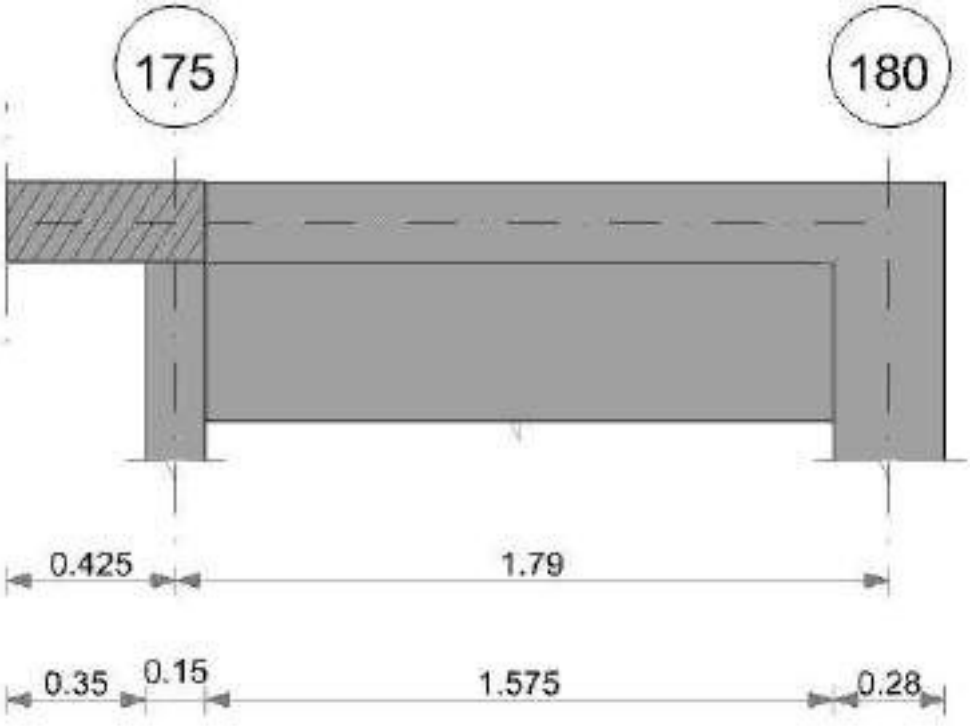
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Sottotetto" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

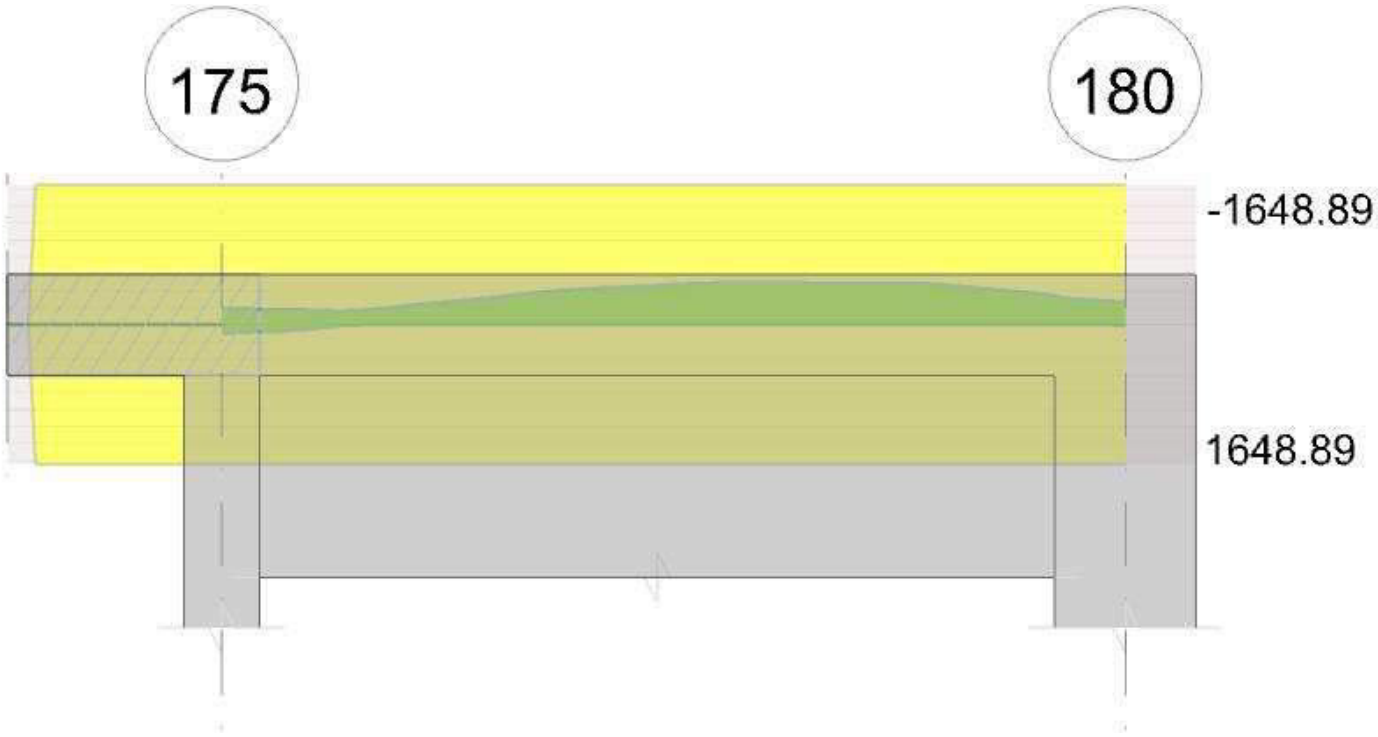


Diagramma verifica stato limite ultimo taglio

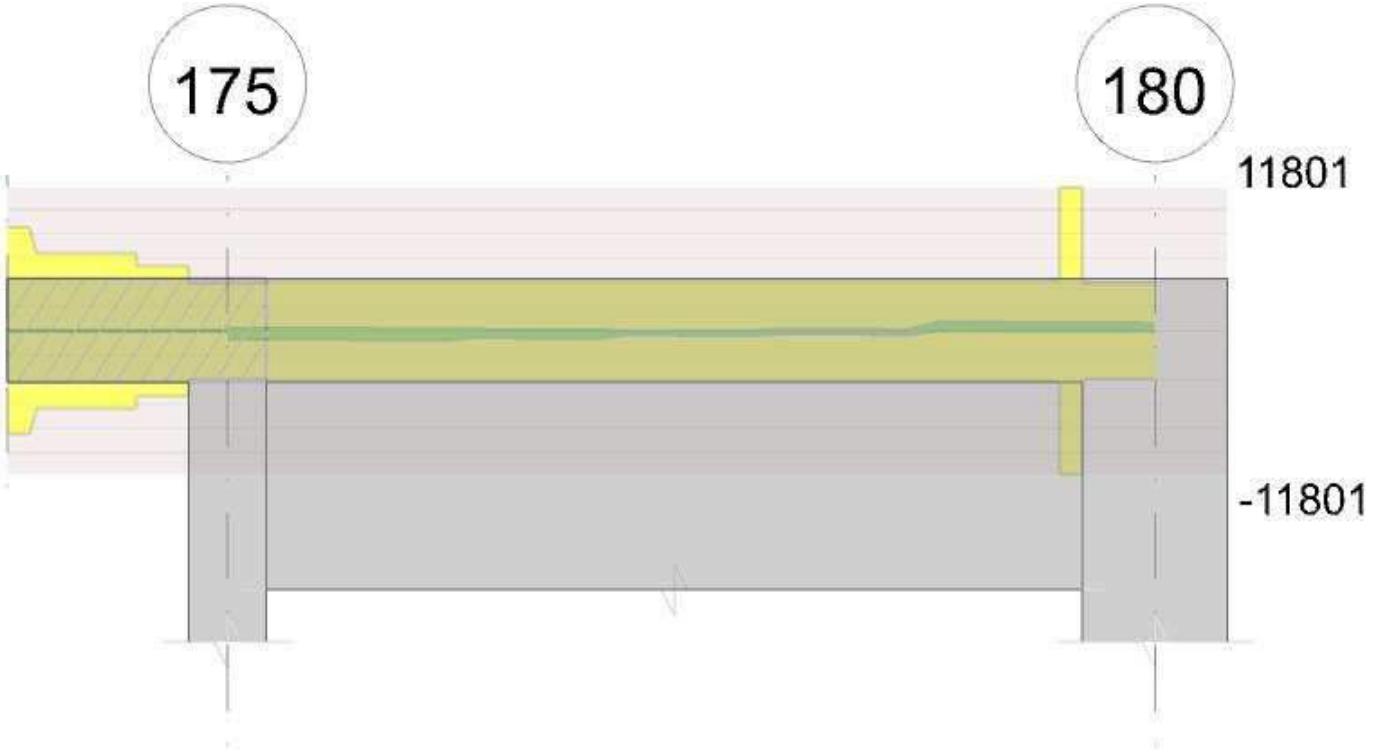
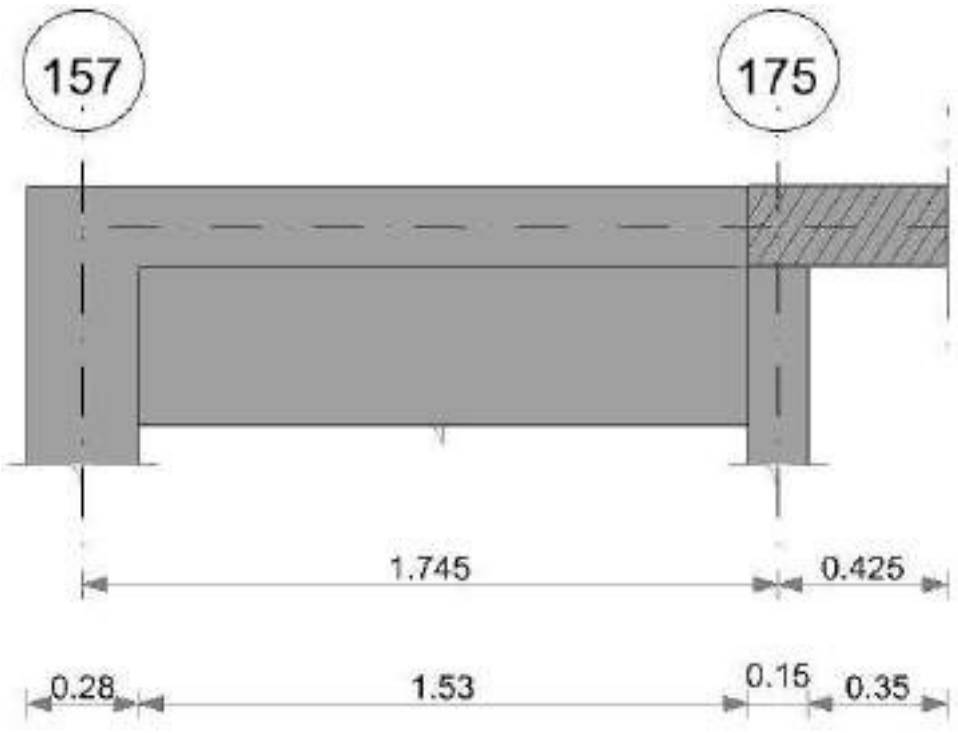


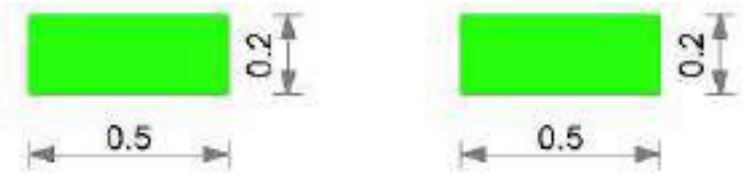
Diagramma verifica stato limite esercizio quasi permanente freccia

Output campate

Trave a "Terzo" 157-179

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

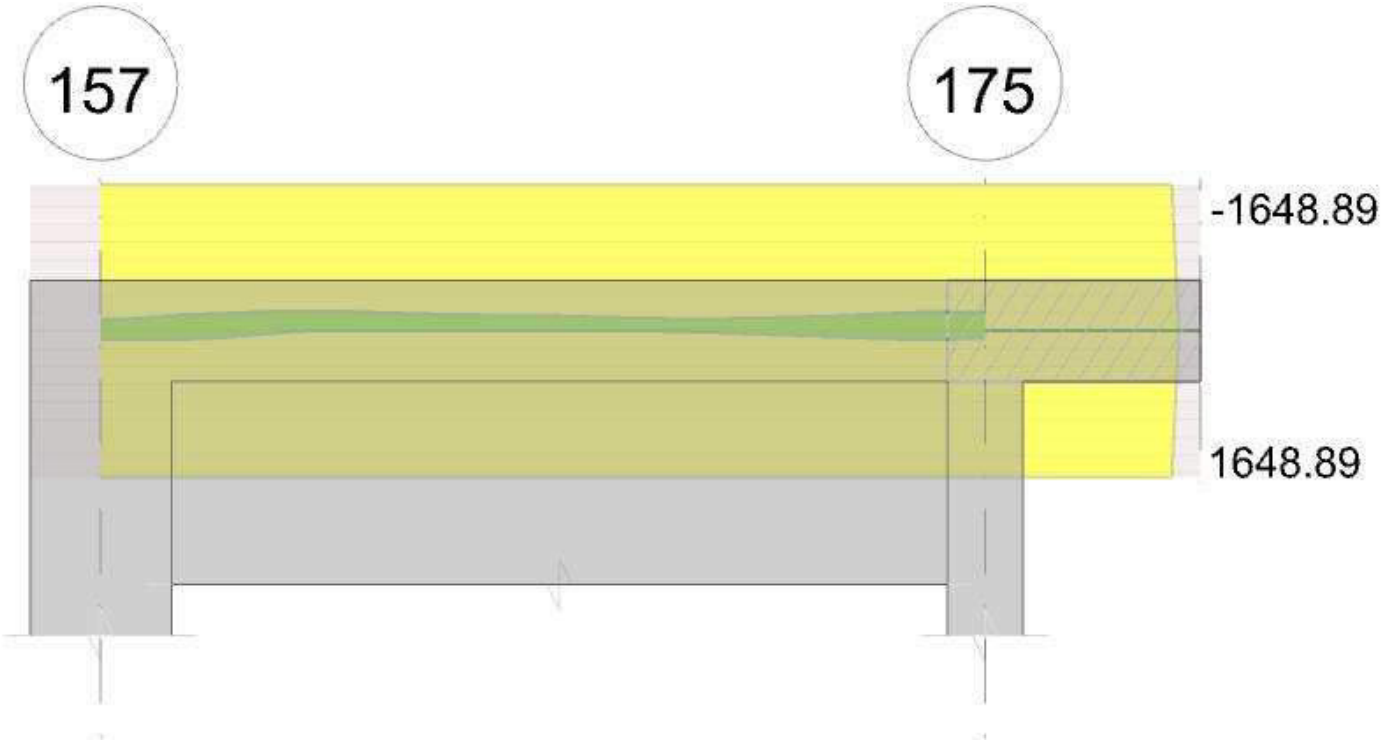
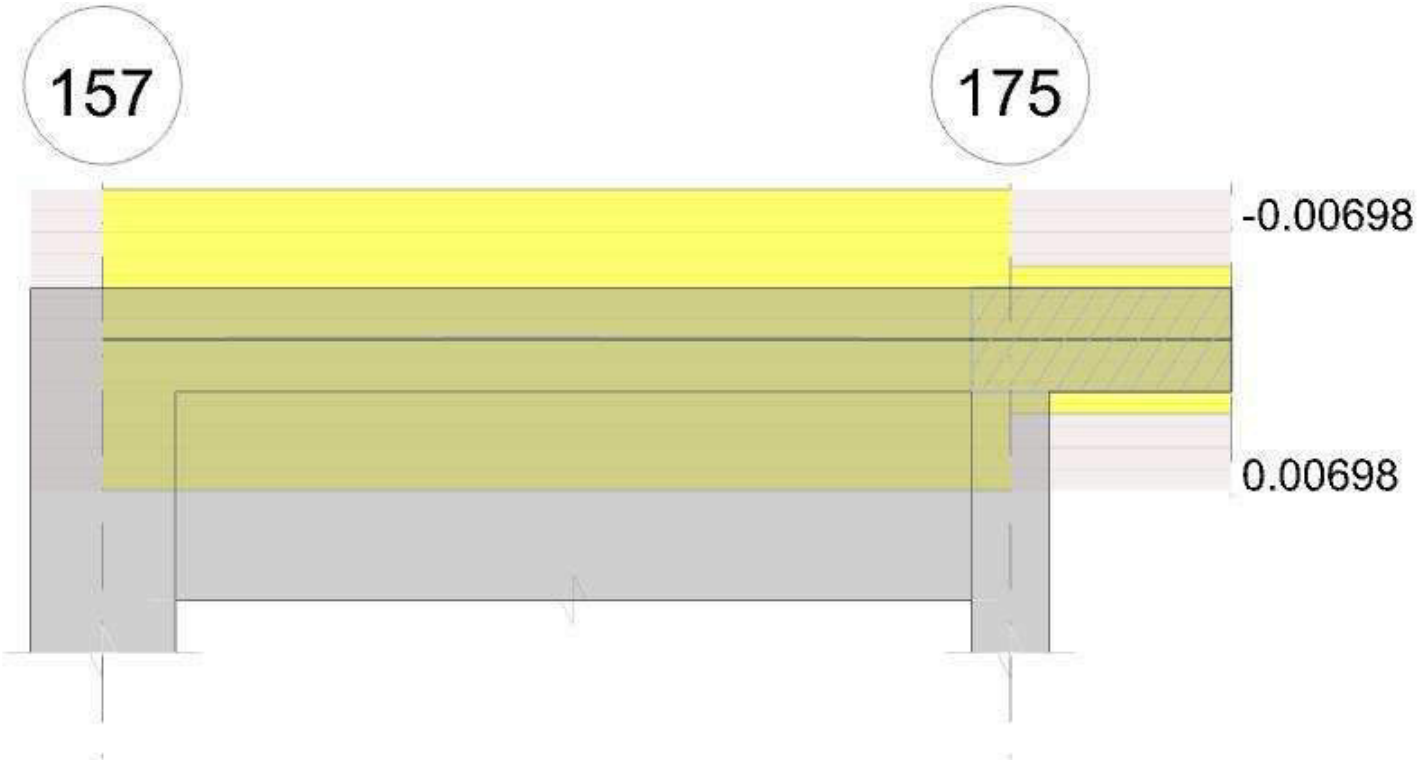


Diagramma verifica stato limite ultimo taglio

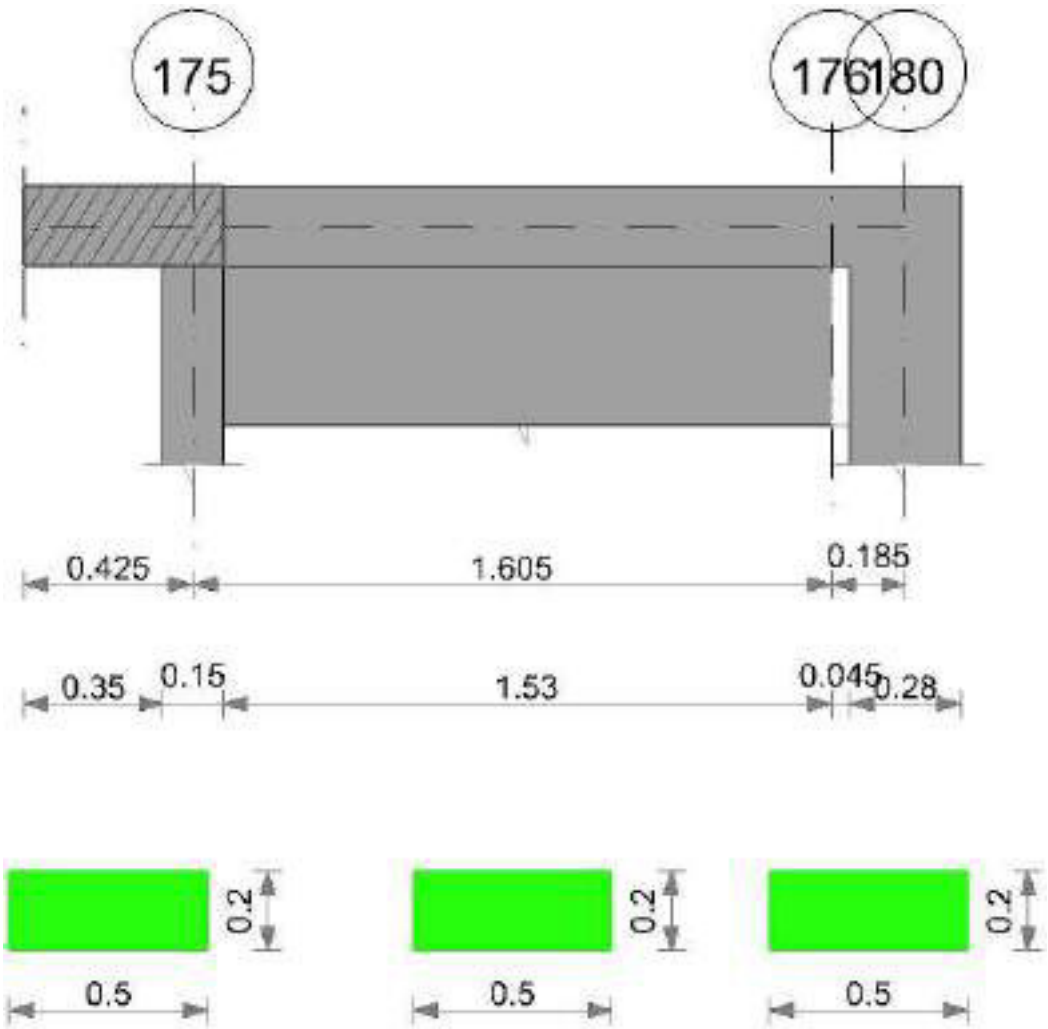
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Terzo" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

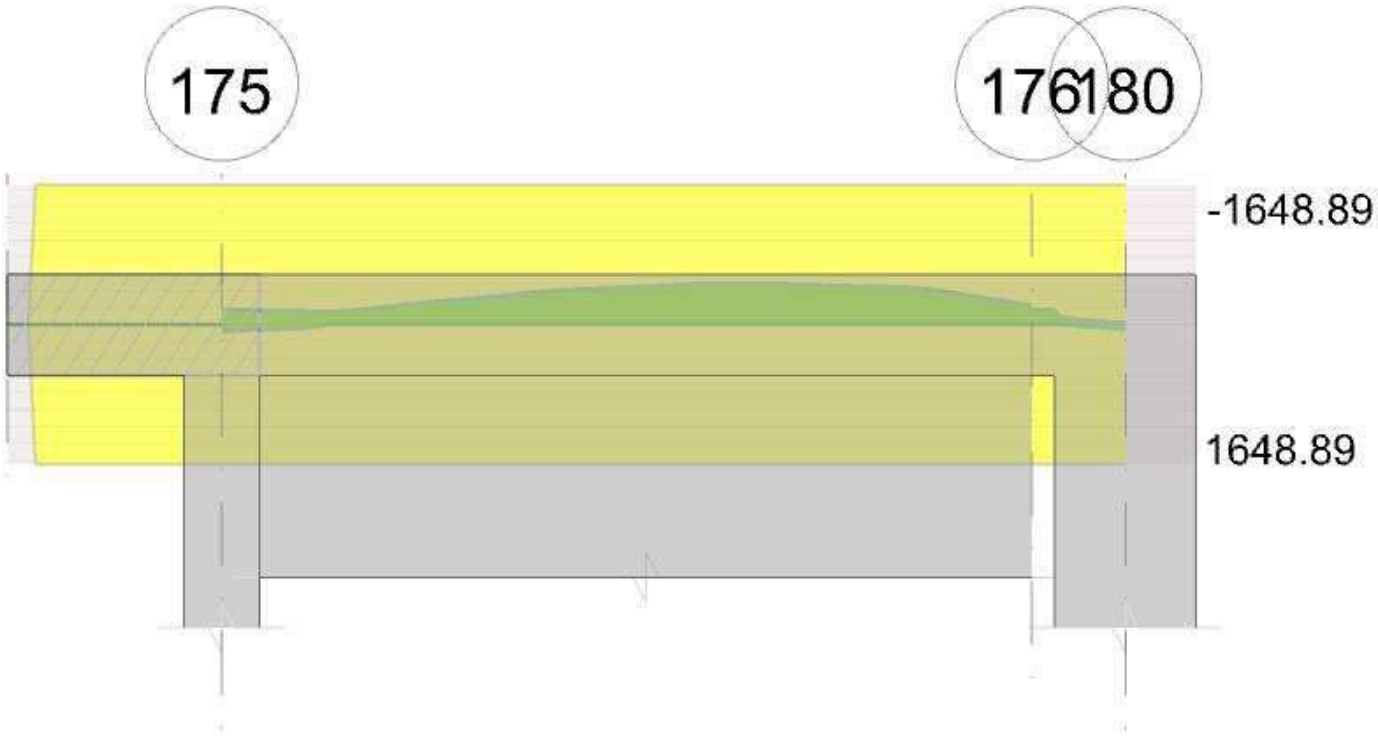


Diagramma verifica stato limite ultimo taglio

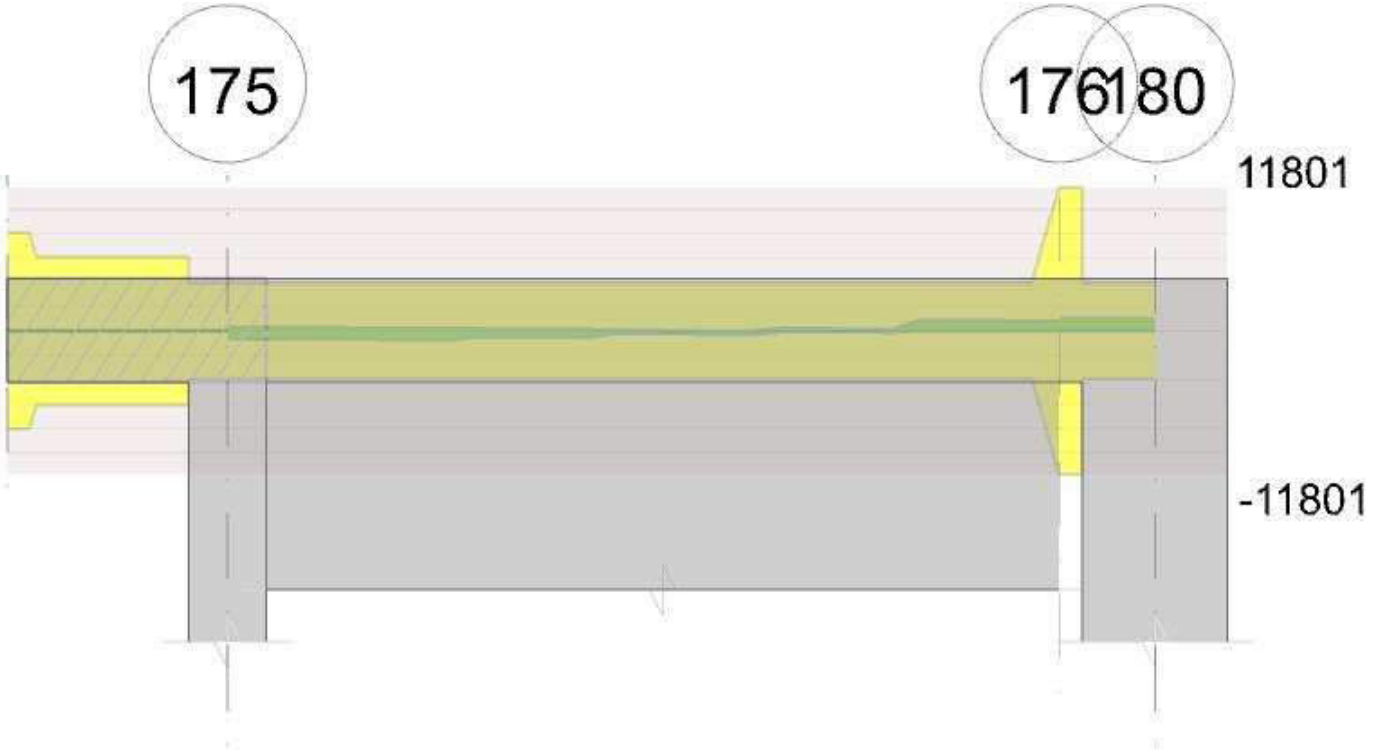
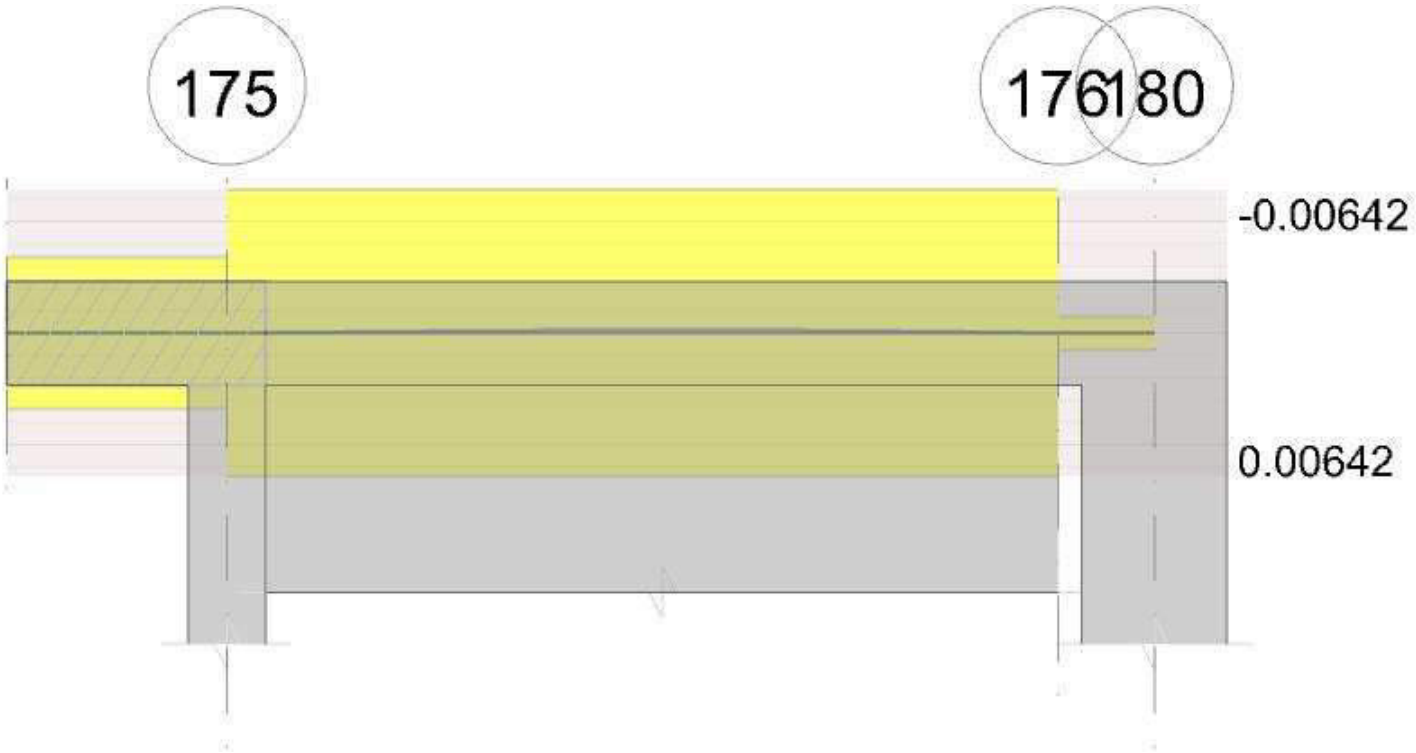


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 176 - 180, sezione R 50x20, asta 478

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-148.76	SLU 83	-148.76	-1931.17	0.242	12.98	Si
0.05	0.000308	0.05	0.000308	0.05	-56.1	SLU 2	0.23	1931.17	0.242	8376.15	-108.12	SLU 83	-148.76	-1931.17	0.242	12.98	Si
0.09	0.000308	0.05	0.000308	0.05							-65.93	SLU 83	-65.93	-1931.17	0.242	29.29	Si
0.19	0.000308	0.05	0.000308	0.05	14.11	SLU 84	14.11	1931.17	0.242	136.84							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	-5.26	SLV 15	0.42	1648.89	0.269	3939.27	-175.35	SLV 2	-175.35	-1648.89	0.269	9.4	Si
0.05	0.000308	0.05	0.000308	0.05	0.42	SLV 11	0.42	1648.89	0.269	3939.27	-131.33	SLV 6	-175.35	-1648.89	0.269	9.4	Si
0.09	0.000308	0.05	0.000308	0.05	17.2	SLV 10	17.2	1648.89	0.269	95.85	-96.76	SLV 7	-63.61	-1648.89	0.269	25.92	Si
0.19	0.000308	0.05	0.000308	0.05	58.78	SLV 10	58.78	1648.89	0.269	28.05	-41.57	SLV 7	-33.14	-1648.89	0.269	49.76	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-126.67	SLD 2	-126.67	-1648.89	0.269	13.02	Si
0.05	0.000308	0.05	0.000308	0.05							-93.65	SLD 6	-126.67	-1648.89	0.269	13.02	Si
0.09	0.000308	0.05	0.000308	0.05							-64.15	SLD 7	-52.31	-1648.89	0.269	31.52	Si
0.19	0.000308	0.05	0.000308	0.05	30.05	SLD 10	30.05	1648.89	0.269	54.86	-12.84	SLD 7	-12.19	-1648.89	0.269	135.28	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	910	SLU 83	910	3906	23811	11801	11801	1	12.96	Si
0.05	0.0000223	0.000308	0	896	SLU 83	896	3906	23811	11801	11801	1	13.17	Si
0.05	0	0.000308	0	894	SLU 83	894	3906	23811	0	3906	1	4.37	Si
0.09	0	0.000308	0	880	SLU 83	880	3906	23811	0	3906	1	4.44	Si
0.19	0	0.000308	0	850	SLU 83	850	3906	23811	0	3906	1	4.59	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	1037	SLV 2	1037	3906	23811	11801	11801	1	11.38	Si
0.05	0.0000223	0.000308	0	1026	SLV 2	1026	3906	23811	11801	11801	1	11.5	Si
0.05	0	0.000308	0	1025	SLV 2	1025	3906	23811	0	3906	1	3.81	Si
0.09	0	0.000308	0	1014	SLV 2	1014	3906	23811	0	3906	1	3.85	Si
0.19	0	0.000308	0	991	SLV 2	991	3906	23811	0	3906	1	3.94	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	763	SLD 2	763	3906	23811	11801	11801	1	15.47	Si
0.05	0.0000223	0.000308	0	752	SLD 2	752	3906	23811	11801	11801	1	15.7	Si
0.05	0	0.000308	0	751	SLD 2	751	3906	23811	0	3906	1	5.2	Si
0.09	0	0.000308	0	740	SLD 2	740	3906	23811	0	3906	1	5.28	Si
0.19	0	0.000308	0	717	SLD 2	717	3906	23811	0	3906	1	5.45	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-106.26	20	-106.26	29813	1494000	447189	36000000	-90.3	2	-90.3	25336	1120500			Si
0.05	-77.16	20	-106.26	29813	1494000	447189	36000000	-65.46	2	-90.3	25336	1120500			Si
0.09	-46.99	20	-46.99	13184	1494000	197765	36000000	-39.78	2	-39.78	11160	1120500			Si
0.19	10.14	21	10.14	2844	1494000	42660	36000000	8.61	2	8.61	2415	1120500			Si

Verifica di apertura delle fessure

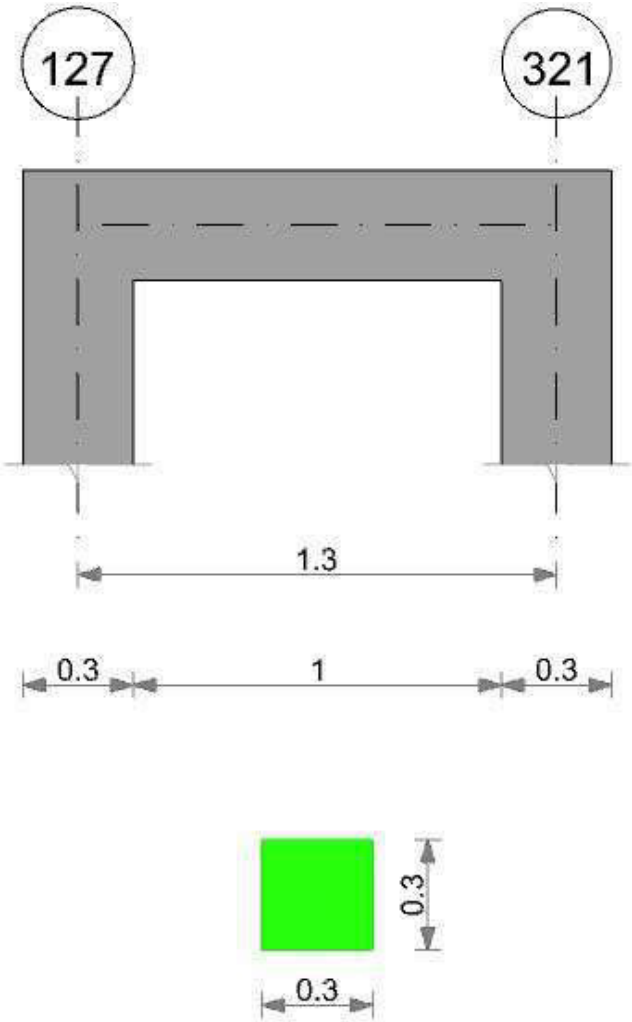
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.05	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.09	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

TRAVE PIANO TERRA

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x30	Rettangolare	0.3	0.3	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

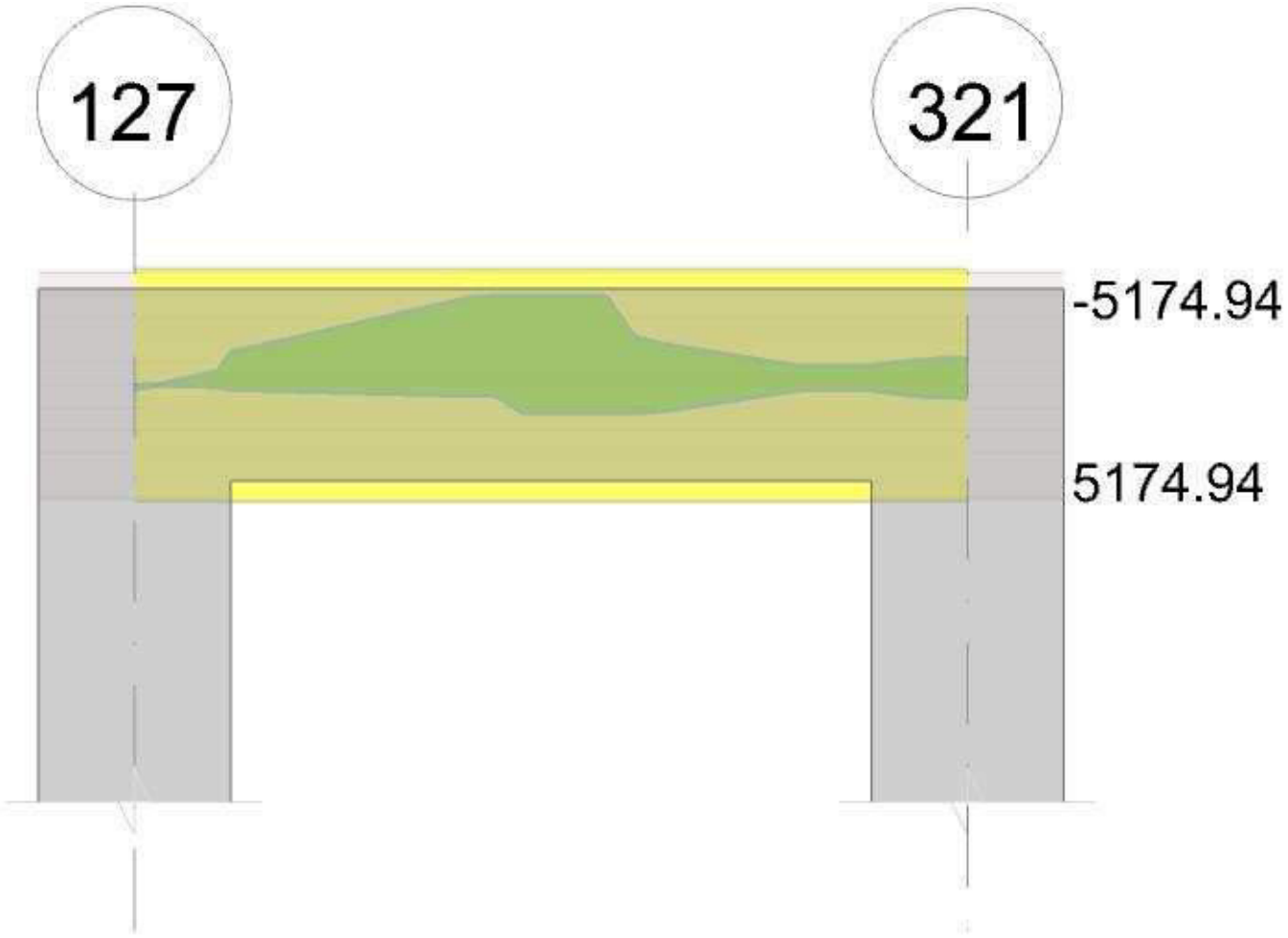


Diagramma verifica stato limite ultimo taglio

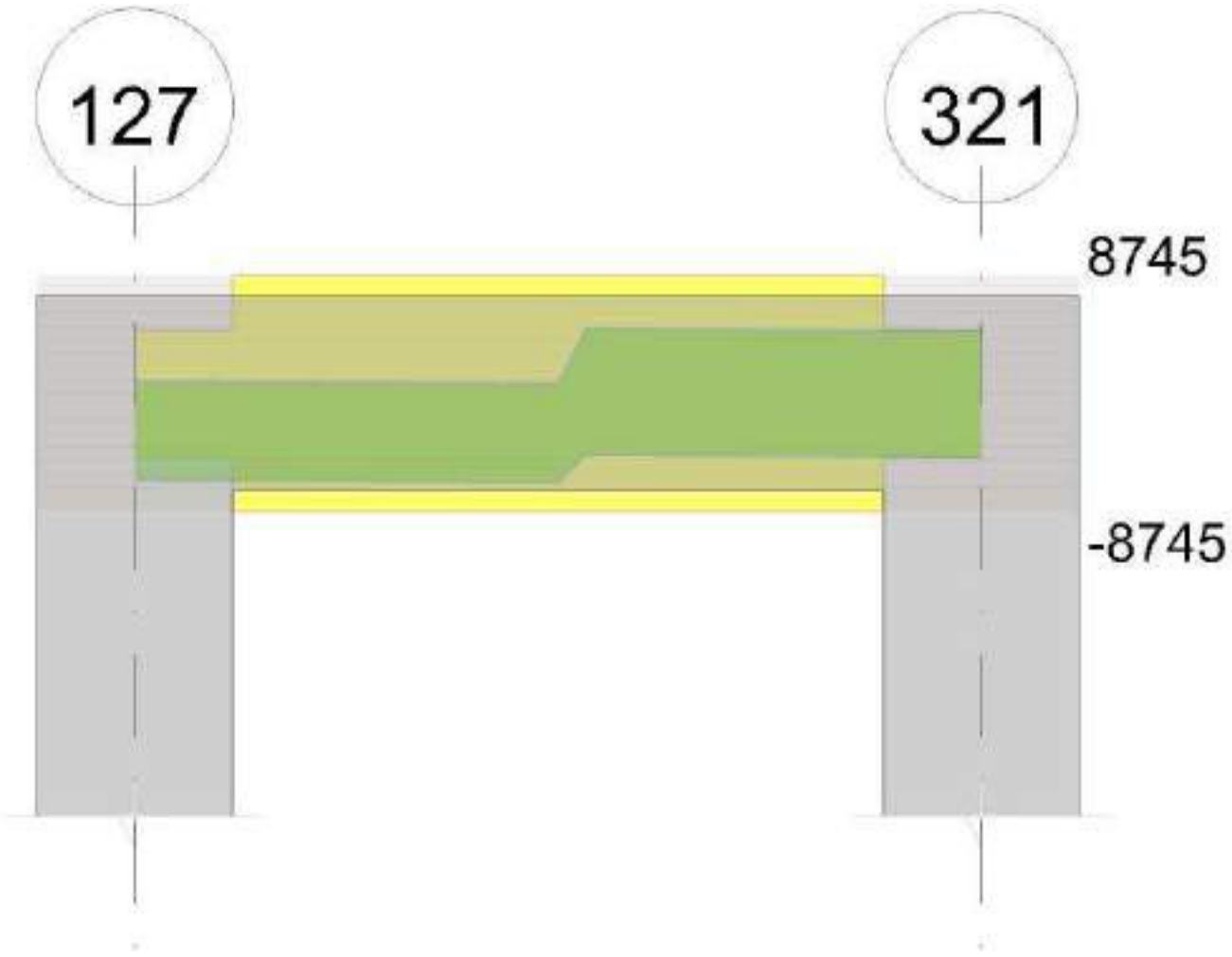
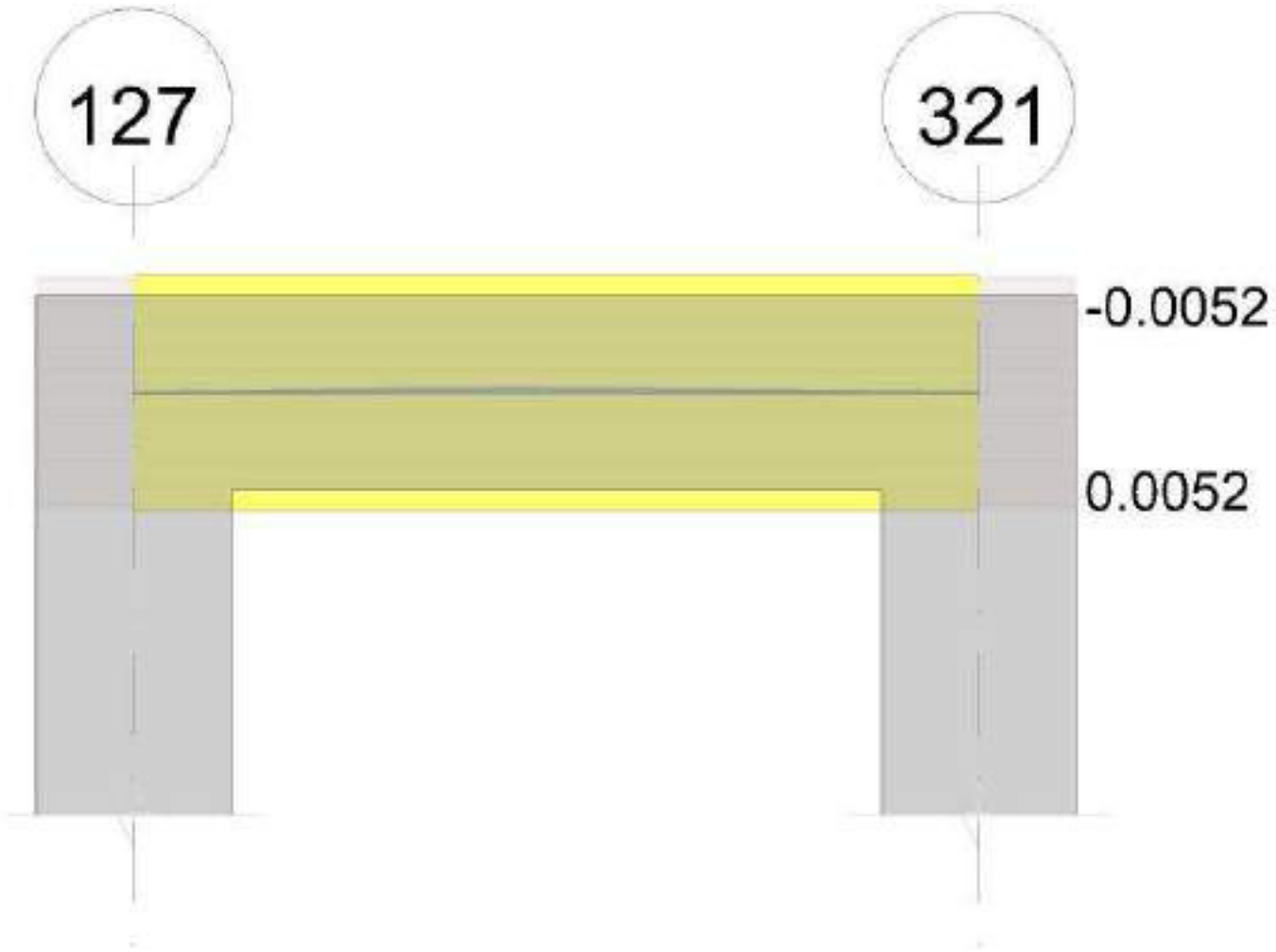


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 127 - 321, sezione R 30x30, aste 784, 785

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053	134.08	SLU 84	134.08	5357.17	0.239	39.96							Si
0.15	0.000628	0.053	0.000628	0.053							-457.75	SLU 70	-897.94	-5357.17	0.239	5.97	Si
0.56	0.000628	0.053	0.000628	0.053	-1442.88	SLU 1	64.68	5357.17	0.239	82.82	-2143.61	SLU 78	-2513.58	-5357.17	0.239	2.13	Si
0.65	0.000628	0.053	0.000628	0.053	-1687.16	SLU 1	69.44	5357.17	0.239	77.15	-2513.58	SLU 78	-2513.58	-5357.17	0.239	2.13	Si
1.15	0.000628	0.053	0.000628	0.053							-479.39	SLU 84	-479.39	-5357.17	0.239	11.17	Si
1.3	0.000628	0.053	0.000628	0.053							-535.47	SLU 84	-502.71	-5357.17	0.239	10.66	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053	202.68	SLV 15	202.68	5174.94	0.333	25.53	-18.48	SLV 2	-18.48	-5174.94	0.333	279.98	Si
0.15	0.000628	0.053	0.000628	0.053	116.6	SLV 2	209.5	5174.94	0.333	24.7	-762.07	SLV 15	-1481.18	-5174.94	0.333	3.49	Si
0.56	0.000628	0.053	0.000628	0.053	435.55	SLV 2	493.54	5174.94	0.333	10.49	-3451.94	SLV 15	-4025.03	-5174.94	0.333	1.29	Si
0.65	0.000628	0.053	0.000628	0.053	493.54	SLV 2	1267.93	5174.94	0.333	4.08	-4025.03	SLV 15	-4025.03	-5174.94	0.333	1.29	Si
1.15	0.000628	0.053	0.000628	0.053	245.98	SLV 2	245.98	5174.94	0.333	21.04	-873.67	SLV 15	-873.67	-5174.94	0.333	5.92	Si
1.3	0.000628	0.053	0.000628	0.053	927.91	SLV 2	592.05	5174.94	0.333	8.74	-1575.84	SLV 15	-1225.2	-5174.94	0.333	4.22	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053	139.66	SLD 15	139.66	5174.94	0.333	37.05							Si
0.15	0.000628	0.053	0.000628	0.053							-511.46	SLD 15	-998.99	-5174.94	0.333	5.18	Si
0.56	0.000628	0.053	0.000628	0.053							-2343.25	SLD 15	-2736.37	-5174.94	0.333	1.89	Si
0.65	0.000628	0.053	0.000628	0.053	-795.13	SLD 2	346.93	5174.94	0.333	14.92	-2736.37	SLD 15	-2736.37	-5174.94	0.333	1.89	Si
1.15	0.000628	0.053	0.000628	0.053							-553.74	SLD 15	-553.74	-5174.94	0.333	9.35	Si
1.3	0.000628	0.053	0.000628	0.053	211.67	SLD 2	72.37	5174.94	0.333	71.5	-859.6	SLD 15	-705.52	-5174.94	0.333	7.33	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000628	0	-3895	SLU 78	-3895	-4669	-23525	0	-4669	1	1.2	Si
0.13	0	0.000628	0	-3933	SLU 78	-3933	-4669	-23525	0	-4669	1	1.19	Si
0.15	0.0000101	0.000628	0	-3940	SLU 78	-3940	-4669	-23525	-8745	-8745	1	2.22	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.65	0.0000101	0.000628	0	-4300	SLU 78	-4300	-4669	-23525	-8745	-8745	1	2.03	Si
1.15	0.0000101	0.000628	0	97	SLU 44	97	4669	23525	8745	8745	1	89.7	Si
1.15	0.0000101	0.000628	0	-356	SLU 41	-356	-4669	-23525	-8745	-8745	1	24.55	Si
1.3	0	0.000628	0	36	SLU 44	36	4669	23525	0	4669	1	130.31	Si
1.3	0	0.000628	0	-470	SLU 41	-470	-4669	-23525	0	-4669	1	9.94	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000628	0	892	SLV 2	892	4669	23525	0	4669	1	5.23	Si
0	0	0.000628	0	-6390	SLV 15	-6390	-4669	-23525	0	-4669	1	0.73	Si
0.13	0	0.000628	0	863	SLV 2	863	4669	23525	0	4669	1	5.41	Si
0.13	0	0.000628	0	-6419	SLV 15	-6419	-4669	-23525	0	-4669	1	0.73	Si
0.15	0.0000101	0.000628	0	858	SLV 2	858	4669	23525	8745	8745	1	10.19	Si
0.15	0.0000101	0.000628	0	-6424	SLV 15	-6424	-4669	-23525	-8745	-8745	1	1.36	Si
0.65	0.0000101	0.000628	0	651	SLV 2	651	4669	23525	8745	8745	1	13.43	Si
0.65	0.0000101	0.000628	0	-6631	SLV 15	-6631	-4669	-23525	-8745	-8745	1	1.32	Si
1.15	0.0000101	0.000628	0	4614	SLV 2	4614	4669	23525	8745	8745	1	1.9	Si
1.15	0.0000101	0.000628	0	-4687	SLV 15	-4687	-4669	-23525	-8745	-8745	1	1.87	Si
1.3	0	0.000628	0	4552	SLV 2	4552	4669	23525	0	4669	1	1.03	Si
1.3	0	0.000628	0	-4749	SLV 15	-4749	-4669	-23525	0	-4669	1	0.98	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000628	0	-4313	SLD 15	-4313	-4669	-23525	0	-4669	1	1.08	Si
0.13	0	0.000628	0	-4342	SLD 15	-4342	-4669	-23525	0	-4669	1	1.08	Si
0.15	0.0000101	0.000628	0	-4347	SLD 15	-4347	-4669	-23525	-8745	-8745	1	2.01	Si
0.65	0.0000101	0.000628	0	-4554	SLD 15	-4554	-4669	-23525	-8745	-8745	1	1.92	Si
1.15	0.0000101	0.000628	0	1951	SLD 2	1951	4669	23525	8745	8745	1	4.48	Si
1.15	0.0000101	0.000628	0	-2024	SLD 15	-2024	-4669	-23525	-8745	-8745	1	4.32	Si
1.3	0	0.000628	0	1889	SLD 2	1889	4669	23525	0	4669	1	2.47	Si
1.3	0	0.000628	0	-2086	SLD 15	-2086	-4669	-23525	0	-4669	1	2.24	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	99.14	21	99.14	17447	1494000	261705	36000000	92.1	2	92.1	16208	1120500			Si
0.15	-340.12	7	-667.33	117439	1494000	1761580	36000000	-323.85	1	-635.84	111897	1120500			Si
0.65	-1865.55	15	-1865.55	517234	1494000	13979637	36000000	-1765.75	2	-1765.75	489565	1120500			Si
1.15	-351.1	21	-351.1	61788	1494000	926822	36000000	-313.85	2	-313.85	55232	1120500			Si
1.3	-386.01	21	-365.2	64269	1494000	964028	36000000	-323.96	2	-316.58	55712	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.56	superiore	0.261	0.00041	0.000106	15	0.261	0.0004	0.000106	5	0.261	0.0004	0.000104	2	Si
0.65	superiore	0.261	0.00041	0.000106	15	0.261	0.0004	0.000106	5	0.261	0.0004	0.000104	2	Si

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.15	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00007	1	-0.00007	1	9999	Si
0.61	-0.00008	-0.00009	-0.00008	-0.00008	-0.00008	-0.00008	-0.00008	-0.00008	-0.00008	-0.00008	-0.00021	1	-0.00021	1	6140	Si
0.65	-0.00008	-0.00008	-0.00007	-0.00008	-0.00008	-0.00008	-0.00007	-0.00008	-0.00008	-0.00008	-0.00021	1	-0.00021	1	6257	Si
1.15	-0.00002	-0.00002	-0.00002	-0.00002	-0.00002	-0.00002	-0.00002	-0.00002	-0.00002	-0.00002	-0.00006	1	-0.00006	1	9999	Si

1.3 Verifiche pareti C.A.

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

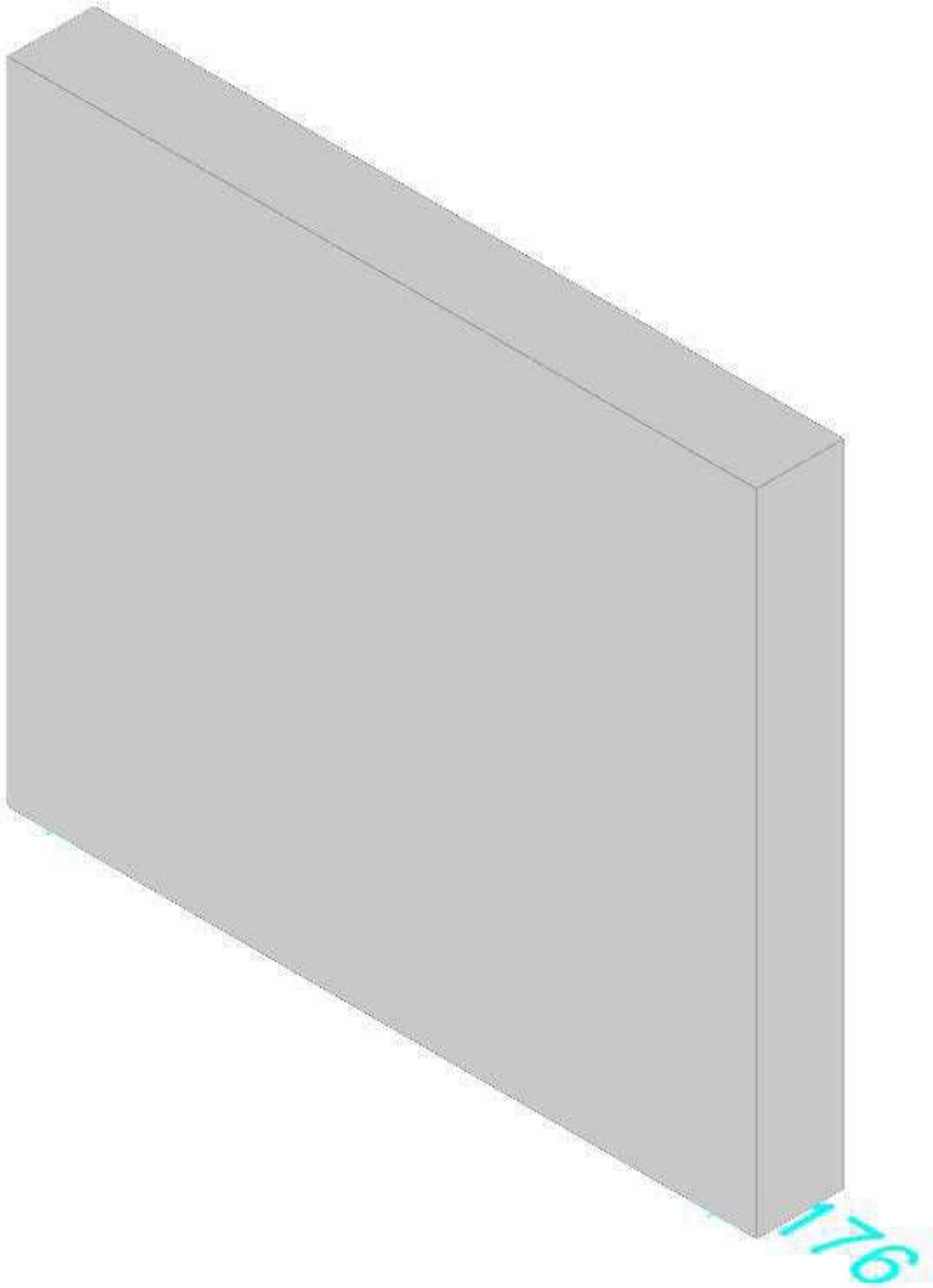
Descrizione breve: *nome sintetico assegnato al livello.*
Descrizione: *nome assegnato al livello.*
Quota: *quota superiore espressa nel sistema di riferimento assoluto. [m]*
Spessore: *spessore del livello. [m]*
Descrizione: *descrizione della sezione di verifica.*
Dir.: *direzione della sezione di verifica.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
As,sup: *area di acciaio efficace superiore. [m²]*
As,inf: *area di acciaio efficace inferiore. [m²]*
c,sup: *copriferro medio superiore. [m]*
c,inf: *copriferro medio inferiore. [m]*
Comb.: *combinazione di verifica.*
MEd: *momento agente. [daN*m]*
NEd: *sforzo normale agente, positivo se di trazione. [daN]*
MRd: *momento resistente. [daN*m]*
NRd: *sforzo normale resistente, positivo se di trazione. [daN]*
c.s.: *coefficiente di sicurezza.*
Verifica: *stato di verifica.*
d: *altezza utile. [m]*
bw: *minima larghezza anima. [m]*
Armatura a taglio: *necessità di armatura a taglio.*

Asw/s: *rapporto tra l'area dell'armatura trasversale e l'interasse tra due armature consecutive.*
VEd: *taglio agente. [daN]*
Vrd,c: *resistenza di calcolo a taglio per elementi privi di armature trasversali. [daN]*
Vrcd: *valore resistente di calcolo a taglio compressione del calcestruzzo d'anima. [daN]*
Vrsd: *valore resistente di calcolo a taglio trazione dell'armatura trasversale. [daN]*
VRd: *resistenza a taglio. [daN]*
cotg(ϑ): *cotangente dell'angolo dei puntoni rispetto all'asse.*
Asl: *area armatura longitudinale. [m²]*
Sezione fessurata: *sezione fessurata.*
σc: *tensione del calcestruzzo. [daN/m²]*
σc limite: *tensione limite del calcestruzzo. [daN/m²]*
Es/Ec: *coefficiente di omogenizzazione.*
σf: *tensione dell'armatura. [daN/m²]*
σf limite: *tensione limite dell'armatura. [daN/m²]*

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-3.08	0
L2	Fondazione	-1.58	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
576 Prosp.A	Verticale	0.5	0.2	0.00019	0.0003	0.036	0.036
122 Prosp.A	Verticale	0.875	0.2	0.000317	0.000501	0.036	0.036
575 Prosp.A	Verticale	0.5	0.2	0.000462	0.000462	0.036	0.036
571 Prosp.A	Verticale	0.5	0.2	0.000159	0.000218	0.036	0.036
104 Prosp.A	Verticale	1	0.2	0.000317	0.000501	0.036	0.036
117 Prosp.A	Verticale	0.875	0.2	0.000254	0.000349	0.036	0.036
117 Prosp.A	Orizzontale	0.6	0.2	0.000672	0.000672	0.0489	0.0489
118 Prosp.A	Orizzontale	0.9087	0.2	0.001008	0.001008	0.0486	0.0486
572 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036
574 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
576 Prosp.A	Verticale	SLV 16	139.17	8052	202.6	11722	1.4557	Si
122 Prosp.A	Verticale	SLV 16	139.17	8052	337.66	19537	2.4262	Si
575 Prosp.A	Verticale	SLV 14	-442.6	5039	-1392.23	15851	3.1456	Si
571 Prosp.A	Verticale	SLV 16	438.07	-2880	1836.13	-12072	4.1914	Si
104 Prosp.A	Verticale	SLV 7	-595.64	724	-2654.2	3224	4.4561	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
576 Prosp.A	Verticale	SLD 16	118.9	5876	228.89	11312	1.9251	Si
122 Prosp.A	Verticale	SLD 16	118.9	5876	381.49	18853	3.2085	Si
575 Prosp.A	Verticale	SLD 16	-214.24	4930	-937.64	21577	4.3767	Si
571 Prosp.A	Verticale	SLD 12	364.64	-2368	1817.24	-11801	4.9837	Si
117 Prosp.A	Verticale	SLD 16	389.93	-1827	2365.9	-11084	6.0675	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
576 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 14	3863	8399	98.57	4051	17954	0	4051	2.5	0.0001902	1.0487	Si
575 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 16	4094	7103	-324.45	4748	17954	0	4748	2.5	0.0004623	1.1596	Si
121 Prosp.A	Orizzontale	0.151	0.852	Non necessaria	0	SLV 7	6252	-1001	-150.57	8445	28379	0	8445	2.5	0.0010085	1.3508	Si
117 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLV 7	4071	-1372	475.79	5907	20014	0	5907	2.5	0.0006723	1.4509	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
122 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 7	4295	-468	-95.6	5805	19908	0	5805	2.5	0.0006723	1.3515	Si
576 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 14	2899	6500	76.11	4051	17954	0	4051	2.5	0.0001902	1.3973	Si
575 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 16	3250	5352	-207.84	4748	17954	0	4748	2.5	0.0004623	1.4607	Si
117 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 7	3218	-2431	395.66	6027	20138	0	6027	2.5	0.0006723	1.873	Si
121 Prosp.A	Orizzontale	0.151	0.852	Non necessaria	0	SLD 7	4295	-468	-95.6	8385	28317	0	8385	2.5	0.0010085	1.9522	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
571 Prosp.A	Verticale	SLE QP 2	296.32	-1791	No	-99371	1120500	15	11.276	Si
117 Prosp.A	Orizzontale	SLE QP 2	331.69	-3226	No	-96270	1120500	15	11.6392	Si
118 Prosp.A	Orizzontale	SLE QP 2	510.84	-3059	No	-88912	1120500	15	12.6024	Si
117 Prosp.A	Orizzontale	SLE RA 21	362.84	-3501	No	-105112	1494000	15	14.2134	Si
571 Prosp.A	Verticale	SLE RA 21	316.22	-1810	No	-105091	1494000	15	14.2162	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

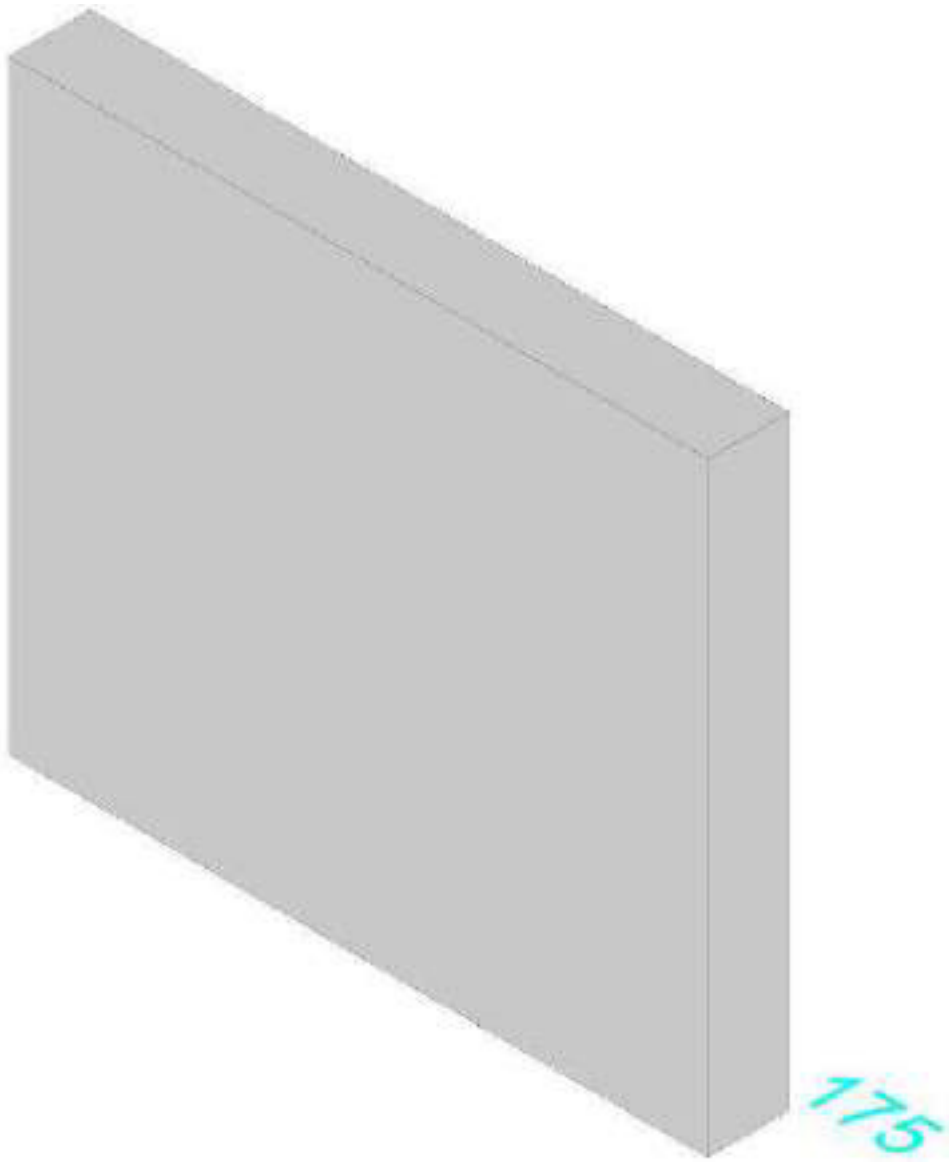
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
576 Prosp.A	Verticale	SLE RA 21	113.58	4543	No	951466	36000000	15	37.8363	Si
575 Prosp.A	Verticale	SLE RA 21	-136.49	4074	No	872491	36000000	15	41.2612	Si
572 Prosp.A	Verticale	SLE RA 21	251.71	1625	No	808330	36000000	15	44.5363	Si
574 Prosp.A	Verticale	SLE RA 21	104.8	2880	No	619113	36000000	15	58.1477	Si
571 Prosp.A	Verticale	SLE RA 21	316.22	-1810	No	599280	36000000	15	60.0721	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-3.08	0
L2	Fondazione	-1.58	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
69 Prosp.A	Verticale	0.875	0.2	0	0	0	0
87 Prosp.A	Verticale	1	0.2	0	0	0	0
19 Prosp.A	Verticale	0.5	0.2	0	0	0	0
105 Prosp.A	Verticale	0.875	0.2	0	0	0	0
447 Prosp.A	Verticale	0.5	0.2	0	0	0	0
448 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036
105 Prosp.A	Orizzontale	0.6	0.2	0.000672	0.000672	0.0489	0.0489
106 Prosp.A	Orizzontale	0.9825	0.2	0.001121	0.001121	0.0485	0.0485
107 Prosp.A	Orizzontale	1	0.2	0.001121	0.001121	0.048	0.048
451 Prosp.A	Verticale	0.5	0.2	0.000159	0.000218	0.036	0.036
71 Prosp.A	Orizzontale	1	0.2	0.001697	0.001697	0.048	0.048
90 Prosp.A	Orizzontale	0.9825	0.2	0.001131	0.001131	0.0485	0.0485
109 Prosp.A	Verticale	0.875	0.2	0.000254	0.000349	0.036	0.036
21 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
105 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLV 6	-1603	547	-107.57	5752	19853	0	5752	2.5	0.0006723	3.5884	Si
447 Prosp.A	Verticale	0.18	0.5	Non necessaria	0	SLV 2	1191	4141	-290	4446	19705	0	4446	2.5	0	3.7338	Si

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
448 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 6	1190	-4343	-203.22	5611	18506	0	5611	2.5	0.0005655	4.7159	Si
106 Prosp.A	Orizzontale	0.151	0.983	Non necessaria	0	SLV 6	-1701	-192	-106.97	9510	32607	0	9510	2.5	0.0011205	5.5894	Si
105 Prosp.A	Verticale	0.18	0.875	Non necessaria	0	SLV 6	1191	2236	-268.1	7780	34484	0	7780	2.5	0	6.5301	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
105 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 6	-1175	-404	-114.35	5797	19900	0	5797	2.5	0.0006723	4.9319	Si
447 Prosp.A	Verticale	0.18	0.5	Non necessaria	0	SLD 6	846	1189	3.2	4446	19705	0	4446	2.5	0	5.258	Si
448 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 6	846	-4121	-106.72	5584	18478	0	5584	2.5	0.0005655	6.6043	Si
106 Prosp.A	Orizzontale	0.151	0.983	Non necessaria	0	SLD 6	-1253	-1216	-132.83	9627	32727	0	9627	2.5	0.0011205	7.6838	Si
105 Prosp.A	Verticale	0.18	0.875	Non necessaria	0	SLD 6	846	1189	3.2	7780	34484	0	7780	2.5	0	9.2015	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
448 Prosp.A	Verticale	SLE QP 2	180.09	-2937	No	-69813	1120500	15	16.05	Si
105 Prosp.A	Orizzontale	SLE QP 2	-187.27	-3575	No	-66865	1120500	15	16.7576	Si
106 Prosp.A	Orizzontale	SLE QP 2	-263.47	-6424	No	-63322	1120500	15	17.6951	Si
107 Prosp.A	Orizzontale	SLE QP 2	-187.78	-7974	No	-58920	1120500	15	19.0172	Si
448 Prosp.A	Verticale	SLE RA 21	192.66	-3266	No	-75750	1494000	15	19.7229	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

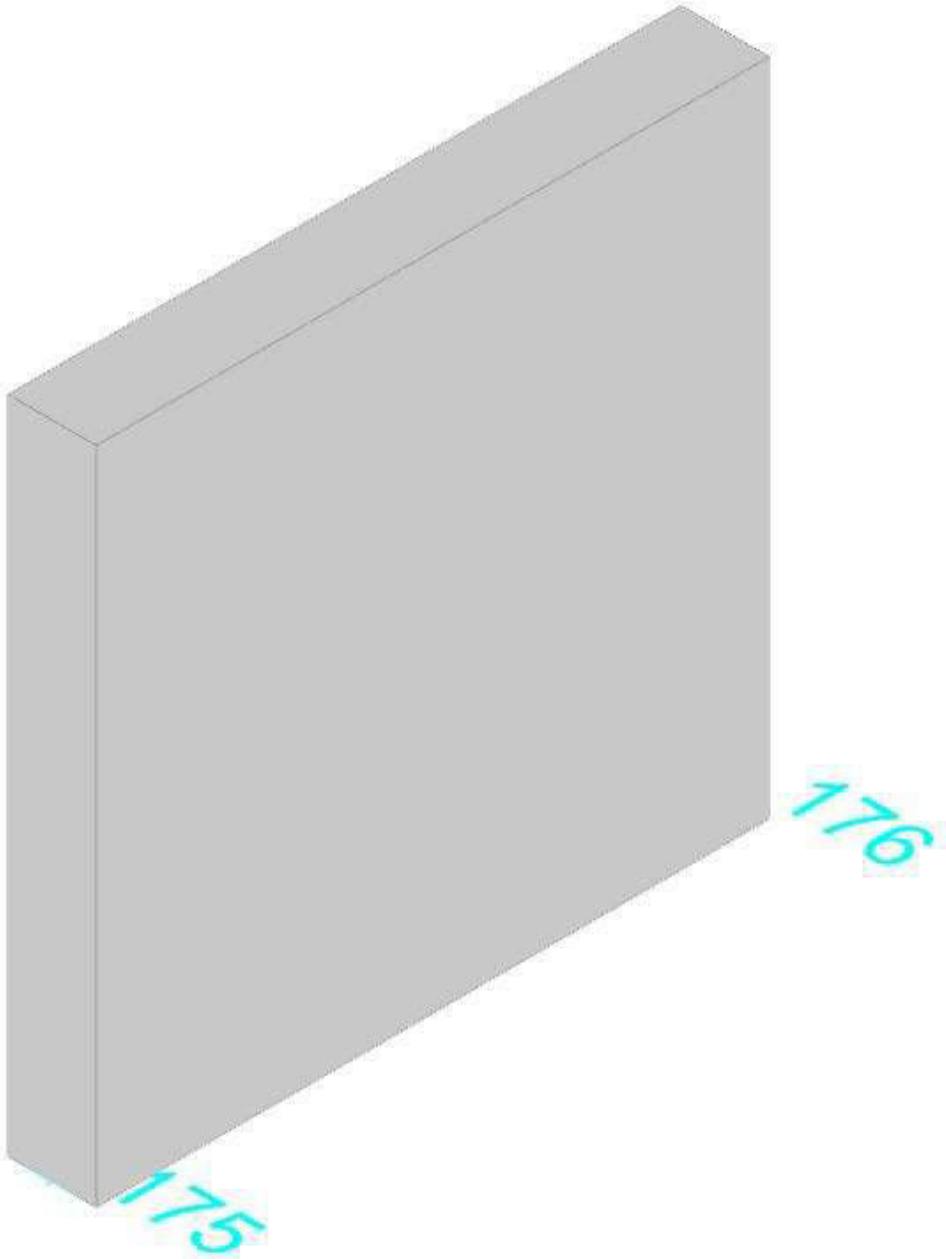
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
451 Prosp.A	Verticale	SLE RA 21	-122.88	265	No	365403	36000000	15	98.5213	Si
71 Prosp.A	Orizzontale	SLE RA 2	67.79	-6622	No	-330127	36000000	15	109.0488	Si
90 Prosp.A	Orizzontale	SLE RA 2	-51.72	-5311	No	-291576	36000000	15	123.4669	Si
109 Prosp.A	Verticale	SLE RA 21	-179.15	64	No	280304	36000000	15	128.4322	Si
21 Prosp.A	Orizzontale	SLE RA 2	70.69	-5272	No	-265340	36000000	15	135.675	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-3.08	0
L2	Fondazione	-1.58	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
98 Prosp.A	Verticale	1	0.2	0.000875	0.000875	0.036	0.036
507 Prosp.A	Verticale	0.5	0.2	0.000437	0.000437	0.036	0.036
466 Prosp.A	Verticale	0.5	0.2	0.000437	0.000437	0.036	0.036
80 Prosp.A	Verticale	0.875	0.2	0.000787	0.000787	0.036	0.036
110 Prosp.A	Verticale	0.875	0.2	0.000787	0.000787	0.036	0.036
116 Prosp.A	Orizzontale	0.746	0.2	0.000896	0.000896	0.0487	0.0487
98 Prosp.A	Orizzontale	0.746	0.2	0.000905	0.000905	0.0487	0.0487
51 Prosp.A	Orizzontale	0.746	0.2	0.000905	0.000905	0.0487	0.0487
96 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
76 Prosp.A	Orizzontale	1	0.2	0.001697	0.001697	0.048	0.048
42 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
98 Prosp.A	Verticale	SLV 7	128.85	4894	1276.93	48500	9.9104	Si
507 Prosp.A	Verticale	SLU 84	-10.73	2264	-154.8	32660	14.4229	Si
466 Prosp.A	Verticale	SLV 11	-131.86	216	-2187.28	3582	16.5881	Si
80 Prosp.A	Verticale	SLV 11	130.84	1446	2404.94	26579	18.3805	Si
110 Prosp.A	Verticale	SLV 11	-205.23	-138	-4606.05	-3086	22.4436	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
98 Prosp.A	Verticale	SLD 7	99.28	3513	1341.9	47485	13.5159	Si
507 Prosp.A	Verticale	SLD 2	-3.83	1685	-75.06	33053	19.6195	Si
466 Prosp.A	Verticale	SLD 11	-97.25	164	-2180	3682	22.4159	Si
80 Prosp.A	Verticale	SLD 11	97.99	1141	2346.74	27314	23.9485	Si
116 Prosp.A	Orizzontale	SLD 12	144.46	-6322	4196.58	-183647	29.0509	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
507 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 15	516	414	14.36	4660	17954	0	4660	2.5	0.0004373	9.0353	Si
116 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLV 11	832	1064	137.83	8233	31419	0	8233	2.5	0.0007872	9.8952	Si
98 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLV 11	840	4252	156.71	9321	35908	0	9321	2.5	0.0008747	11.0942	Si
116 Prosp.A	Orizzontale	0.151	0.746	Non necessaria	0	SLU 84	-617	-8476	169.32	8289	25715	0	8289	2.5	0.0008964	13.4366	Si
466 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 15	259	-120	-110.34	4675	17969	0	4675	2.5	0.0004373	18.0466	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
507 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 15	394	429	8.83	4660	17954	0	4660	2.5	0.0004373	11.8377	Si
116 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLD 11	655	1371	64.54	8233	31419	0	8233	2.5	0.0007872	12.5648	Si
98 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLD 11	686	3239	87.12	9321	35908	0	9321	2.5	0.0008747	13.5777	Si
116 Prosp.A	Orizzontale	0.151	0.746	Non necessaria	0	SLD 16	-475	-5414	151.11	7941	25355	0	7941	2.5	0.0008964	16.7107	Si
114 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLD 16	-420	-6277	111.25	10339	34020	0	10339	2.5	0.0011205	24.5909	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
116 Prosp.A	Orizzontale	SLE QP 2	117.35	-6190	No	-55800	1120500	15	20.0805	Si
507 Prosp.A	Verticale	SLE QP 2	39.92	-4169	No	-47168	1120500	15	23.7557	Si
116 Prosp.A	Orizzontale	SLE RA 21	127.15	-6882	No	-61457	1494000	15	24.3098	Si
98 Prosp.A	Orizzontale	SLE QP 2	76.05	-5733	No	-45874	1120500	15	24.4257	Si
51 Prosp.A	Orizzontale	SLE QP 2	-93.48	-4548	No	-42219	1120500	15	26.5401	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

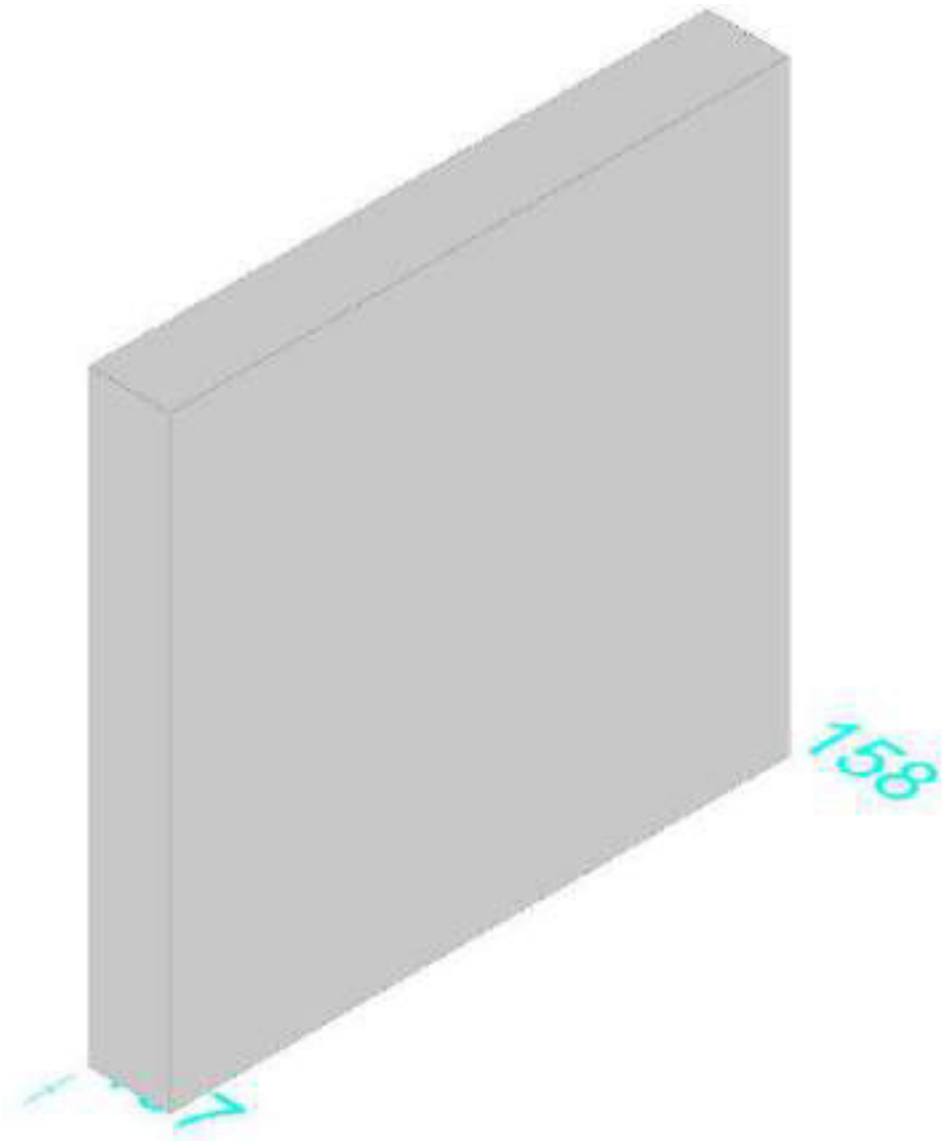
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
116 Prosp.A	Orizzontale	SLE RA 2	105.66	-5430	No	-317505	36000000	15	113.3842	Si
96 Prosp.A	Orizzontale	SLE RA 2	97.45	-6237	No	-299675	36000000	15	120.1302	Si
76 Prosp.A	Orizzontale	SLE RA 2	55.7	-5668	No	-284835	36000000	15	126.389	Si
98 Prosp.A	Orizzontale	SLE RA 2	84.52	-4547	No	-270896	36000000	15	132.8925	Si
42 Prosp.A	Orizzontale	SLE RA 2	-98.67	-5701	No	-264102	36000000	15	136.3109	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-3.08	0
L2	Fondazione	-1.58	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
490 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036
506 Prosp.A	Verticale	0.5	0.2	0.000549	0.000549	0.036	0.036
469 Prosp.A	Verticale	0.5	0.2	0.000549	0.000549	0.036	0.036
97 Prosp.A	Verticale	1	0.2	0.001099	0.001099	0.036	0.036
111 Prosp.A	Verticale	0.875	0.2	0.000989	0.000989	0.036	0.036
79 Prosp.A	Orizzontale	0.8325	0.2	0.001527	0.001527	0.0486	0.0486

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
490 Prosp.A	Verticale	SLV 2	-48.5	3580	-494.76	36525	10.2021	Si
490 Prosp.A	Verticale	SLV 2	15.58	2861	222.15	40784	14.2576	Si
506 Prosp.A	Verticale	SLV 15	188.95	-8999	2701.63	-128674	14.2984	Si
469 Prosp.A	Verticale	SLV 11	-166.3	-8023	-2677.62	-129172	16.1008	Si
469 Prosp.A	Verticale	SLU 84	141.31	-8608	2439.22	-148579	17.2615	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
490 Prosp.A	Verticale	SLD 2	51.26	1698	907.59	30074	17.7069	Si
469 Prosp.A	Verticale	SLD 7	-196.01	-5703	-3687.33	-107279	18.8123	Si
506 Prosp.A	Verticale	SLD 15	148.34	-6468	2870.57	-125162	19.3509	Si
97 Prosp.A	Verticale	SLD 7	145.24	1761	3201.63	38819	22.0444	Si
469 Prosp.A	Verticale	SLD 3	122.71	-5252	2906.8	-124410	23.6893	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
469 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 2	-1511	-3056	156.05	5404	18343	0	5404	2.5	0.0005493	3.5755	Si
111 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLV 2	1585	685	-9.16	8201	27599	0	8201	2.5	0.0010085	5.1736	Si
111 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLV 2	-1518	-3270	163.37	9285	31835	0	9285	2.5	0.0009887	6.115	Si
113 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLV 2	-1238	-2065	167.5	9858	33524	0	9858	2.5	0.0011205	7.9605	Si
506 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLU 84	577	-8600	92.02	6086	19048	0	6086	2.5	0.0005493	10.5465	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
469 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 2	-990	-4770	119.77	5615	18561	0	5615	2.5	0.0005493	5.6735	Si
111 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLD 2	1057	83	-8.46	8201	27599	0	8201	2.5	0.0010085	7.7577	Si
111 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLD 2	-990	-4770	119.77	9469	32026	0	9469	2.5	0.0009887	9.5678	Si
113 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLD 2	-849	-1699	118.57	9817	33480	0	9817	2.5	0.0011205	11.5603	Si
506 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 12	464	-7317	81.53	5928	18885	0	5928	2.5	0.0005493	12.7814	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
469 Prosp.A	Verticale	SLE QP 1	-179.81	-4895	No	-86882	1120500	15	12.8968	Si
469 Prosp.A	Verticale	SLE QP 2	98.39	-5870	No	-74948	1120500	15	14.9505	Si
506 Prosp.A	Verticale	SLE QP 2	117.98	-4569	No	-68658	1120500	15	16.32	Si
469 Prosp.A	Verticale	SLE RA 7	-182.44	-5020	No	-88615	1494000	15	16.8594	Si
469 Prosp.A	Verticale	SLE RA 21	105.15	-6383	No	-81038	1494000	15	18.4359	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
469 Prosp.A	Verticale	SLE RA 10	102.21	-6144	No	-546460	36000000	15	65.8786	Si
111 Prosp.A	Verticale	SLE RA 10	102.21	-6144	No	-311112	36000000	15	115.7138	Si
97 Prosp.A	Verticale	SLE RA 21	133.03	1491	No	255331	36000000	15	140.9932	Si
490 Prosp.A	Verticale	SLE RA 20	74.84	557	No	249847	36000000	15	144.0881	Si
79 Prosp.A	Orizzontale	SLE RA 1	-44.15	-4079	No	-237256	36000000	15	151.7351	Si

Verifiche generali

1.4 Verifiche piastre C.A.

Le unità di misura elencate nel capitolo sono in [m, daN, deg] ove non espressamente specificato.

Nodo: indice del nodo di verifica.
Dir.: direzione della sezione di verifica.
B: base della sezione rettangolare di verifica. [m]
H: altezza della sezione rettangolare di verifica. [m]
A. sup.: area barre armatura superiori. [m²]
C. sup.: distanza media delle barre superiori dal bordo superiore della sezione. [m]
A. inf.: area barre armatura inferiori. [m²]
C. inf.: distanza media delle barre inferiori dal bordo inferiore della sezione. [m]
Comb.: combinazione di verifica.
*M: momento flettente. [daN*m]*
N: sforzo normale. [daN]
*Mu: momento flettente ultimo. [daN*m]*
Nu: sforzo normale ultimo. [daN]
c.s.: coefficiente di sicurezza.
Verifica: stato di verifica.
σc: tensione nel calcestruzzo. [daN/m²]
σlim: tensione limite. [daN/m²]
Es/Ec: coefficiente di omogenizzazione.
σf: tensione nell'acciaio d'armatura. [daN/m²]
Comb.: combinazione.
Fh: componente orizzontale del carico. [daN]
Fv: componente verticale del carico. [daN]
Cnd: resistenza valutata a breve o lungo termine (BT - LT).
Ad: adesione di progetto. [daN/m²]
Phi: angolo di attrito di progetto. [deg]

RPl: resistenza passiva laterale unitaria di progetto. [daN/m²]
γR: coefficiente parziale sulla resistenza di progetto.
Rd: resistenza alla traslazione di progetto. [daN]
Ed: azione di progetto. [daN]
Rd/Ed: coefficiente di sicurezza allo scorrimento.
ID: indice della verifica di capacità portante.
Fx: componente lungo x del carico. [daN]
Fy: componente lungo y del carico. [daN]
Fz: componente verticale del carico. [daN]
*Mx: componente lungo x del momento. [daN*m]*
*My: componente lungo y del momento. [daN*m]*
ix: inclinazione del carico in x. [deg]
iy: inclinazione del carico in y. [deg]
ex: eccentricità del carico in x. [m]
ey: eccentricità del carico in y. [m]
B': larghezza efficace. [m]
L': lunghezza efficace. [m]
C: coesione di progetto. [daN/m²]
Qs: sovraccarico laterale da piano di posa. [daN/m²]
Rd: resistenza alla rottura del complesso di progetto. [daN]
Ed: azione di progetto (sforzo normale al piano di posa). [daN]
Rd/Ed: coefficiente di sicurezza alla capacità portante.
N:
Nq: fattore di capacità portante per il termine di sovraccarico.
Nc: fattore di capacità portante per il termine coesivo.
Ng: fattore di capacità portante per il termine attritivo.
S:
Sq: fattore correttivo di capacità portante per forma (shape), per il termine di sovraccarico.
Sc: fattore correttivo di capacità portante per forma (shape), per il termine coesivo.
Sg: fattore correttivo di capacità portante per forma (shape), per il termine attritivo.
D:
Dq: fattore correttivo di capacità portante per approfondimento (deep), per il termine di sovraccarico.
Dc: fattore correttivo di capacità portante per approfondimento (deep), per il termine coesivo.
Dg: fattore correttivo di capacità portante per approfondimento (deep), per il termine attritivo.
I:
Iq: fattore correttivo di capacità portante per inclinazione del carico, per il termine di sovraccarico.
Ic: fattore correttivo di capacità portante per inclinazione del carico, per il termine coesivo.
Ig: fattore correttivo di capacità portante per inclinazione del carico, per il termine attritivo.
B:
Bq: fattore correttivo di capacità portante per inclinazione della base, per il termine di sovraccarico.
Bc: fattore correttivo di capacità portante per inclinazione della base, per il termine coesivo.
Bg: fattore correttivo di capacità portante per inclinazione della base, per il termine attritivo.
G:
Gq: fattore correttivo di capacità portante per inclinazione del pendio, per il termine di sovraccarico.
Gc: fattore correttivo di capacità portante per inclinazione del pendio, per il termine coesivo.
Gg: fattore correttivo di capacità portante per inclinazione del pendio, per il termine attritivo.
P:
Pq: fattore correttivo di capacità portante per punzonamento, per il termine di sovraccarico.
Pc: fattore correttivo di capacità portante per punzonamento, per il termine coesivo.
Pg: fattore correttivo di capacità portante per punzonamento, per il termine attritivo.
E:
Eq: fattore correttivo di capacità portante per sisma (earthquake), per il termine di sovraccarico.
Ec: fattore correttivo di capacità portante per sisma (earthquake), per il termine coesivo.
Eg: fattore correttivo di capacità portante per sisma (earthquake), per il termine attritivo.
εsm: deformazione unitaria media delle barre di armatura.
Δmax: distanza massima tra le fessure. [m]
Wd: valore di calcolo di apertura delle fessure. [m]

platea 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria

Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-17.053; -4.784; -1.58), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
128	Y	0.5	0.45	0.000283	0.036	0.00052	0.047	SLU 83	-4364.53	0	-4629.12	0	1.0606	Si
177	X	0.5	0.45	0.000487	0.048	0.001071	0.048	SLU 83	-6757.14	0	-7375.83	0	1.0916	Si
128	X	0.5	0.45	0.000554	0.048	0.000622	0.048	SLU 83	-7585.32	0	-8315.92	0	1.0963	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
261	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLD 8	6076.91	0	6254.21	0	1.0292	Si
268	Y	0.5	0.45	0.000283	0.036	0.00123	0.05	SLD 5	-3895.57	0	-4131.91	0	1.0607	Si
128	Y	0.5	0.45	0.000283	0.036	0.00052	0.047	SLD 13	-3231.96	0	-4120.17	0	1.2748	Si
177	X	0.5	0.45	0.000487	0.048	0.001071	0.048	SLD 9	-4786.1	0	-6731.45	0	1.4065	Si
128	X	0.5	0.45	0.000554	0.048	0.000622	0.048	SLD 13	-5442.23	0	-7774.26	0	1.4285	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
261	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLE QP 2	5787.78	0	-623873	1120500	15	Si
261	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLE RA 21	6296.21	0	-678677	1494000	15	Si
128	X	0.5	0.45	0.000554	0.048	0.000622	0.048	SLE QP 2	-5123.33	0	-502247	1120500	15	Si
270	X	0.5	0.45	0.000622	0.048	0.000679	0.048	SLE QP 2	4782.87	0	-432424	1120500	15	Si
128	X	0.5	0.45	0.000554	0.048	0.000622	0.048	SLE RA 20	-5607.98	0	-549758	1494000	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
128	X	0.5	0.45	0.000554	0.048	0.000622	0.048	SLE RA 20	-5607.98	0	27485309	36000000	15	Si
270	X	0.5	0.45	0.000622	0.048	0.000679	0.048	SLE RA 20	5236.22	0	21087050	36000000	15	Si
128	X	0.5	0.45	0.000554	0.048	0.000622	0.048	SLE RA 20	1363.98	0	5975053	36000000	15	Si
177	X	0.5	0.45	0.000487	0.048	0.001071	0.048	SLE RA 20	-4993.88	0	3037458	36000000	15	Si

Verifiche SLE fessurazione nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	εsm	Δmax	Wd	Es/Ec	Verifica
128	X	0.5	0.45	0.000554	0.048	0.000622	0.048	SLE QP 2	-5123.33	0	0.00073	0.342	0.00025	15	Si
128	X	0.5	0.45	0.000554	0.048	0.000622	0.048	SLE FR 6	-5246.56	0	0.00075	0.342	0.000256	15	Si
270	X	0.5	0.45	0.000622	0.048	0.000679	0.048	SLE QP 2	4782.87	0	0.00056	0.295	0.000165	15	Si

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -15.5; -4; -2
Lato minore B dell'impronta: 1.5
Lato maggiore L dell'impronta: 3.1
Area dell'impronta rettangolare di calcolo: 4.7

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.22

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 44	902	-49426	LT	0	19	0	1.1	15034	902	16.66	Si
SLV 15	9369	-37553	LT	0	19	0	1.1	11423	9369	1.22	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 1.5 m
Profondità massima del bulbo di rottura considerato (per condizione non drenata): 0.75 m
Peso specifico efficace del terreno di progetto γs: 2060 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 2.94

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 83	599	720	-60879	1399.22	346.12	1	1	0.01	0.02	1.45	3.13	BT	14430	0	878	2.3	179095	60879	2.94	Si
2	SLV 2	-8455	64	-45787	1554.75	-5689.46	-10	0	-0.12	0.03	1.43	2.89	LT	0	37	878	2.3	157850	45787	3.45	Si
3	SLD 1	-3035	210	-43521	1262.39	-2198.72	-4	0	-0.05	0.03	1.44	3.04	BT	14430	0	878	2.3	171647	43521	3.94	Si

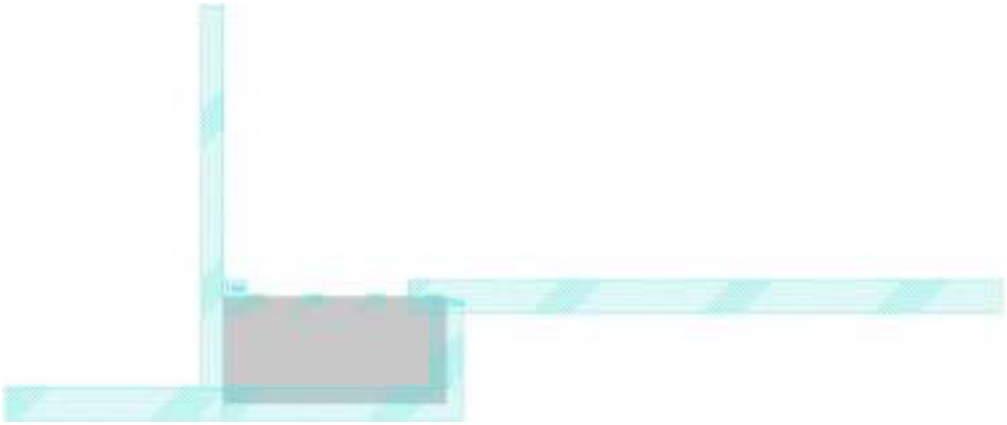
Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	1	5	0	0	0.09	0	0	0.12	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
2	43	56	66	1.37	1.38	0.8	1.07	1.12	1	0.76	0.76	0.62	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	1	5	0	0	0.09	0	0	0.12	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Platea 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-10.863; -4.784; -1.58), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
205	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLU 83	8265.01	0	9018.93	0	1.0912	Si
146	Y	0.5	0.45	0.000283	0.036	0.000283	0.036	SLV 2	3560.5	0	4108.61	0	1.1539	Si
182	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLV 2	6120.28	0	7209.27	0	1.1779	Si
227	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLU 83	6021.76	0	7834.44	0	1.301	Si
283	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLU 84	5773.39	0	7838.32	0	1.3577	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
205	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLD 2	6195.79	0	8566.94	0	1.3827	Si
182	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLD 2	5032.45	0	7209.27	0	1.4326	Si
146	Y	0.5	0.45	0.000283	0.036	0.000283	0.036	SLD 2	2792.68	0	4108.61	0	1.4712	Si
227	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLD 2	4809.1	0	7209.27	0	1.4991	Si
274	Y	0.5	0.45	0.000283	0.036	0.000283	0.036	SLD 4	2479.11	0	4108.61	0	1.6573	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
275	Y	0.5	0.45	0.000283	0.036	0.001011	0.048	SLE QP 2	4052.92	0	-213704	1120500	15	Si
283	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLE QP 2	3932.5	0	-203173	1120500	15	Si
275	Y	0.5	0.45	0.000283	0.036	0.001011	0.048	SLE RA 20	4449.74	0	-234627	1494000	15	Si

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
282	X	0.765	0.45	0.000885	0.048	0.000749	0.048	SLE QP 2	4967.55	0	-169206	1120500	15	Si
283	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLE RA 21	4274.92	0	-220864	1494000	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
275	Y	0.5	0.45	0.000283	0.036	0.001011	0.048	SLE RA 20	4449.74	0	2740975	36000000	15	Si
283	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLE RA 21	4274.92	0	2635702	36000000	15	Si
282	X	0.765	0.45	0.000885	0.048	0.000749	0.048	SLE RA 21	5398.03	0	2191149	36000000	15	Si
205	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLE RA 20	6107.82	0	2111732	36000000	15	Si
182	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLE RA 20	4658.42	0	1840673	36000000	15	Si

Verifiche SLE fessurazione nei nodi

La piastra non presenta nodi con apertura delle fessure.

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -9.3; -4; -2
Lato minore B dell'impronta: 1.5
Lato maggiore L dell'impronta: 3.1
Area dell'impronta rettangolare di calcolo: 4.7

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.29

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 47	617	-49801	LT	0	19	0	1.1	15148	617	24.54	Si
SLV 2	9203	-38982	LT	0	19	0	1.1	11857	9203	1.29	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato (per condizione non drenata): 0.75 m
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 2.96

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 83	81	534	-60678	1115.49	890.32	0	1	0.01	0.02	1.46	3.11	BT	14430	0	878	2.3	179608	60678	2.96	Si
2	SLV 14	7731	143	-46585	1325.28	5942.5	9	0	0.13	0.03	1.44	2.88	BT	14430	0	878	2.3	160958	46585	3.46	Si
3	SLD 14	3326	290	-43686	997.18	2904.35	4	0	0.07	0.02	1.45	3.01	BT	14430	0	878	2.3	171394	43686	3.92	Si

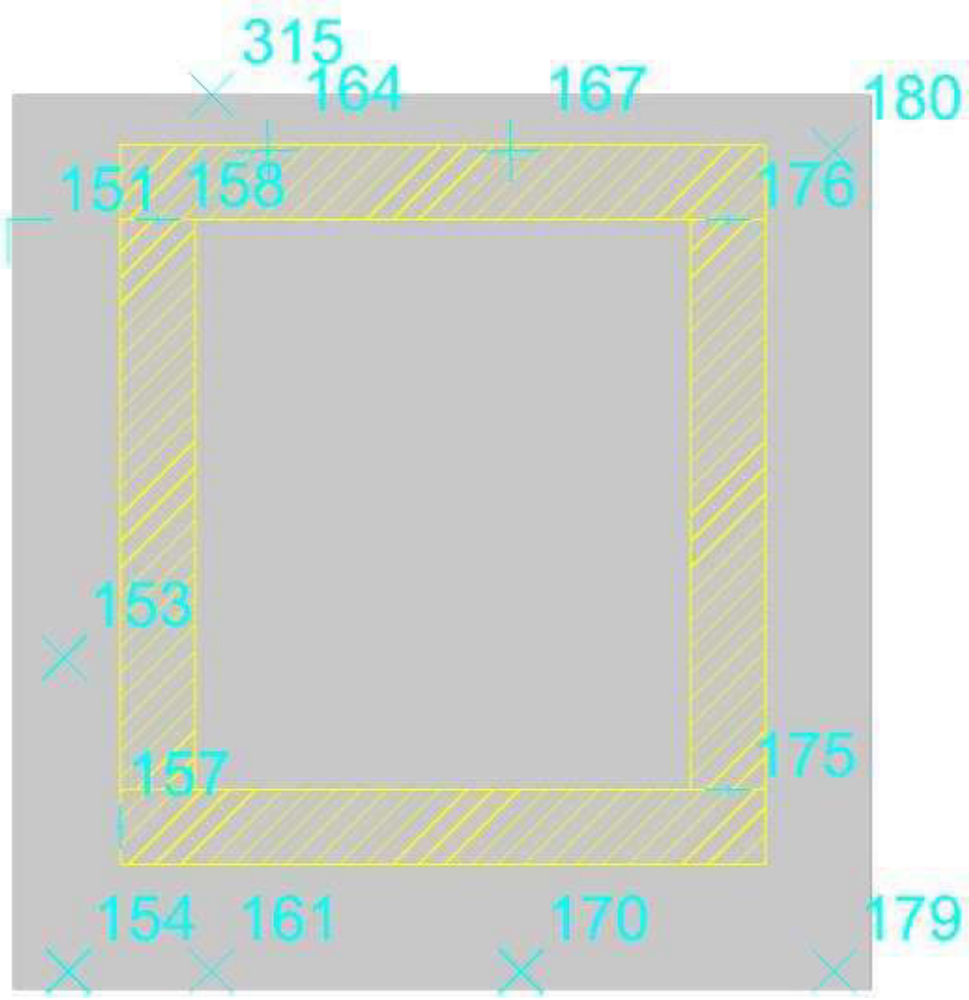
Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	1	5	0	0	0.09	0	0	0.12	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
2	1	5	0	0	0.1	0	0	0.12	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
3	1	5	0	0	0.1	0	0	0.12	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Platea a "Fondazione ascensore"

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-11.148; -1.244; -3.08), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
21	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1373.08	0	10466.55	0	7.6227	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1343.42	0	10399.81	0	7.7413	Si
20	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 83	1314.08	0	10399.8	0	7.9142	Si
38	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLU 84	1185.88	0	10159.62	0	8.5672	Si
42	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLU 84	1147.15	0	10123.8	0	8.8252	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 15	954.56	0	9465.6	0	9.9162	Si
38	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLD 11	877.06	0	8838.16	0	10.0771	Si
21	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 15	960.57	0	9822.9	0	10.2262	Si
20	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 11	901.54	0	9465.51	0	10.4992	Si
29	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLD 15	821.19	0	8733.87	0	10.6356	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
21	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	934.06	0	-54681	1120500	15	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	915.9	0	-53618	1120500	15	Si
20	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	889.22	0	-52056	1120500	15	Si
23	X	0.885	0.3	0.000894	0.048	0.001063	0.048	SLE QP 2	720.1	0	-47308	1120500	15	Si
38	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLE QP 2	805.01	0	-47117	1120500	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
21	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 21	1016.49	0	599209	36000000	15	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 21	994.98	0	586533	36000000	15	Si
38	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLE RA 21	877.74	0	580154	36000000	15	Si
20	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 20	971.57	0	572731	36000000	15	Si
42	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLE RA 21	847.99	0	560491	36000000	15	Si

Verifiche SLE fessurazione nei nodi

La piastra non presenta nodi con apertura delle fessure.

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -10; 0; -3.4
Lato minore B dell'impronta: 2.3
Lato maggiore L dell'impronta: 2.4
Area dell'impronta rettangolare di calcolo: 5.5

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 2.04

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 44	1716	-50830	LT	0	19	0	1.1	15461	1716	9.01	Si
SLV 15	6480	-43544	LT	0	19	0	1.1	13245	6480	2.04	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 2.25 m
Profondità massima del bulbo di rottura considerato (per condizione non drenata): 1.15 m
Peso specifico efficace del terreno di progetto γs: 2058 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 3.46

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 84	236	1742	-63026	1075.49	-321.76	0	2	-0.01	0.02	2.29	2.37	BT	14430	0	585	2.3	217934	63026	3.46	Si
2	SLV 2	-5991	600	-42440	1405.71	-2898.03	-8	1	-0.07	0.03	2.16	2.33	LT	0	37	585	2.3	194000	42440	4.57	Si
3	SLD 2	-2513	990	-42755	1041.08	-1347.78	-3	1	-0.03	0.02	2.24	2.35	BT	14430	0	585	2.3	210370	42755	4.92	Si

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	1	5	0	0	0.19	0	0	0.05	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
2	41	53	62	1.69	1.71	0.63	1.03	1.05	1	0.79	0.79	0.68	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	1	5	0	0	0.19	0	0	0.05	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

1.5 Verifiche aste in legno

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Area: *area inerziale nel sistema geometrico centrato nel baricentro. [m²]*
Jx: *momento d'inerzia attorno all'asse orizzontale baricentrico di definizione della sezione. [m4]*
Jy: *momento d'inerzia attorno all'asse verticale baricentrico di definizione della sezione. [m4]*
Wx: *modulo di resistenza elastico minimo relativo all'asse x. [m³]*
Wy: *modulo di resistenza elastico minimo relativo all'asse y. [m³]*

Asta 21: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.301

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(12848^2+17850^2) = 21994 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -313.3; Ty = 435.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13118/1324138)^2+87450/1410046+0.7*43804/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 238.796; My = 59.807; N = -671.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -208.8; Ty = 216.4; Mt = -49.24

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.301
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24464 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -49.24

Asta 22: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.624

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
90880/1551051+48156/1938814+0.7*18847/1938814=0.09 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 131.497; My = -25.732; N = 4653.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2219^2+9967^2) = 10211 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -54.1; Ty = 243

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -55.6; Ty = 233.9; Mt = -5.608

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2786 <= 251034 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -5.608

Asta 23: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.216

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2200^2+34443^2) = 34514 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -53.6; Ty = 839.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.216
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21468/1324138)^2+51795/1410046+0.7*25880/1410046=0.05 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -141.436; My = -35.334; N = -1099.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -56.1; Ty = 831.6; Mt = -9.279

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.216
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6808 <= 345172 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = 13.703

Asta 24: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1001^2+5057^2) = 5156 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -24.4; Ty = 123.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20427/1324138)^2+80707/1410046+0.7*32539/1410046=0.07 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -220.385; My = -44.427; N = -1045.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -23.7; Ty = 115.5; Mt = 18.284

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9084 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 18.284

Asta 25: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.604

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.604
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7221^2+24626^2) = 25663 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 176; Ty = -600.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21414/1324138)^2+79014/1410046+0.7*56253/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -215.761; My = -76.804; N = -1096.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.604
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1

0.08+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 192.5; Ty = -574.9; Mt = 40.095

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.604
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
19920 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 40.095

Asta 26: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.236

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6468^2+10114^2) = 12005 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 157.7; Ty = -246.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24476/1324138)^2+68040/1410046+0.7*58550/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 185.795; My = 79.94; N = -1253.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 157.6; Ty = -246.5; Mt = 40.911

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
20326 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 40.911

Asta 27: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.564

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1342^2+4475^2) = 4672 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -32.7; Ty = 109.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18341/1324138)^2+65204/1410046+0.7*28175/1410046=0.06 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 178.05; My = 38.468; N = -939.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -32; Ty = 147.6; Mt = 27.882

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.564
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
13852 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 27.882

Asta 28: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.276

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(865^2+26816^2) = 26830 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -21.1; Ty = 653.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(19521/1324138)^2+38079/1410046+0.7*14891/1410046=0.03 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 103.981; My = 20.332; N = -999.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -26.8; Ty = 617.1; Mt = 35.264

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.276
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17829 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 35.887

Asta 29: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1587^2+5776^2) = 5990 <= 265517 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -38.7; Ty = 140.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20117/1324138)^2+40700/1410046+0.7*13651/1410046=0.04 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = -111.138; My = -18.638; N = -1030

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -47.2; Ty = 61; Mt = 8.482

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4214 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 8.482

Asta 30: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1616^2+21731^2) = 21791 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -39.4; Ty = -529.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.313
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8006/1820690)^2+58608/1938814+0.7*24396/1938814=0.04 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 160.038; My = 33.309; N = -409.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -39.4; Ty = -529.8; Mt = -19.701

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9788 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -19.701

Asta 31: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.191

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.191
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
42106/1551051+0.7*11964/1938814+59526/1938814=0.06 <= 1 [4.4.6b] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -32.67; My = -81.272; N = 2155.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.191
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1260^2+14491^2) = 14546 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -30.7; Ty = -353.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.191
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -25.4; Ty = -351.1; Mt = -16.821

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.191
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8357 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -16.821

Asta 32: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.325

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
37898/1551051+0.7*27294/1938814+87208/1938814=0.08 <= 1 [4.4.6b] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -74.531; My = -119.067; N = 1940.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.325
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(9707^2+22988^2) = 24953 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -236.7; Ty = -560.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.325
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 6.9; Ty = -80.8; Mt = -26.907

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.325
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
13368 <= 188276 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -26.907

Asta 33: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.284

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(11270^2+22220^2) = 24915 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 274.8; Ty = -541.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(48809/1820690)^2+82473/1938814+0.7*48013/1938814=0.06 <= 1 [4.4.7a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 225.207; My = -65.554; N = -2499

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 31.6; Ty = -19.3; Mt = -58.765

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
29196 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -58.765

Asta 34: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.268

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.268
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(12243^2+25940^2) = 28684 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 298.5; Ty = -632.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.268
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

(10447/1820690)^2+0.7*23084/1938814+125580/1938814=0.07 <= 1 [4.4.7b] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 63.035; My = -171.459; N = -534.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 22.5; Ty = 212.5; Mt = -57.549

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.268
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
28592 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -57.549

Asta 35: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.287

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(14371^2+15404^2) = 21066 <= 265517 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -350.4; Ty = -375.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10460/1820690)^2+0.7*5220/1938814+72854/1938814=0.04 <= 1 [4.4.7b] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -14.255; My = 99.47; N = -535.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.35+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -119.2; Ty = -16.5; Mt = -132.975

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
66065 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -132.975

Asta 36: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3715^2+984^2) = 3843 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 90.6; Ty = 24

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(26541/1324138)^2+0.7*23953/1410046+28552/1410046=0.03 <= 1 [4.4.7b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -65.408; My = -38.983; N = -1358.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 87.9; Ty = -16.7; Mt = -44.924

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
22320 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -44.924

Asta 37: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(899^2+3107^2) = 3235 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 21.9; Ty = -75.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25236/1324138)^2+0.7*24684/1410046+30554/1410046=0.03 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -67.404; My = 41.717; N = -1292.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 32; Ty = 15.8; Mt = -8.752

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4348 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -8.752

Asta 38: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2367^2+1292^2) = 2696 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -57.7; Ty = -31.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25194/1324138)^2+0.7*24943/1410046+33797/1410046=0.04 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -68.112; My = 46.145; N = -1290

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -56.6; Ty = -28.5; Mt = 14.937

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7421 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 14.937

Asta 39: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(608^2+5091^2) = 5128 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -14.8; Ty = 124.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(26368/1324138)^2+55264/1410046+0.7*11880/1410046=0.05 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -150.908; My = -16.221; N = -1350.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -48.7; Ty = 128.3; Mt = 70.065

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
34810 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 70.065

Asta 40: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.434

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(2982^2+20073^2) = 20294 <= 265517 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Tx = -72.7; Ty = 489.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9707/993103)^2+49286/1057535+0.7*22831/1057535=0.06 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 134.585; My = -31.172; N = -497

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.434
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -22.1; Ty = -92.9; Mt = 83.166

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.434
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
41319 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 83.166

Asta 41: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.366

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.366
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7570/1551051+61458/1938814+0.7*50098/1938814=0.05 <= 1 [4.4.6a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = -167.821; My = -68.4; N = 387.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6596^2+19323^2) = 20418 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -160.8; Ty = 471.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -34.8; Ty = 235.4; Mt = 87.564

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.366
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
43504 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Mt = 87.564

Asta 42: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.434

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(310^2+13287^2) = 13291 <= 265517 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Tx = 7.6; Ty = 324

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21630/1324138)^2+58106/1410046+0.7*26852/1410046=0.05 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 158.668; My = -36.662; N = -1107.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 22.8; Ty = 155.8; Mt = 7.744

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.434
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3848 <= 251034 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 7.744

Asta 43: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.435

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(844^2+16160^2) = 16182 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 20.6; Ty = 394

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24417/1324138)^2+34005/1410046+0.7*19053/1410046=0.03 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 92.855; My = -26.014; N = -1250.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 25.4; Ty = 345.3; Mt = 17.999

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.435
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8943 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 17.999

Asta 44: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5521^2+8416^2) = 10065 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 134.6; Ty = -205.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10898/993103)^2+0.7*22232/1057535+37430/1057535=0.05 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 60.709; My = 51.105; N = -558

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 109.3; Ty = -120.9; Mt = -10.745

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8

τ,tor,d <= Ksh * fv,d
5338 <= 251034 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -10.745

Asta 45: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.18

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(3262^2+13879^2) = 14257 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -79.5; Ty = 338.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11089/993103)^2+0.7*24200/1057535+43939/1057535=0.06 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 66.083; My = 59.992; N = -567.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.18
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -113.1; Ty = -55.1; Mt = -54.666

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.18
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
27160 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -54.666

Asta 46: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.66

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(7298^2+3876^2) = 8264 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -177.9; Ty = 94.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20302/1324138)^2+0.7*19336/1410046+37656/1410046=0.04 <= 1 [4.4.7b] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 52.801; My = 51.414; N = -1039.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -112.6; Ty = 16.1; Mt = -45.688

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.66
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
22699 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -45.688

Asta 47: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.14

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(517^2+2573^2) = 2625 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -12.6; Ty = 62.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18753/1324138)^2+23922/1410046+0.7*7258/1410046=0.02 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 65.322; My = 9.909; N = -960.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -13.2; Ty = 53.4; Mt = -41.962

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.14

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
20848 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -41.962

Asta 48: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.7

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3086^2+12429^2) = 12807 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -75.2; Ty = 303

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.7
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24354/1324138)^2+57451/1410046+0.7*35850/1410046=0.06 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -156.88; My = -48.947; N = -1246.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -83.3; Ty = 265.2; Mt = -42.165

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.7
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
20949 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -42.165

Asta 49: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.902

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.902
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1211^2+9031^2) = 9111 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 29.5; Ty = -220.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24093/1324138)^2+61563/1410046+0.7*27152/1410046=0.06 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -168.109; My = -37.071; N = -1233.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.902
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 29.3; Ty = -206.9; Mt = -10.878

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.902
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4363 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -8.782

Asta 50: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.778

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5459^2+8756^2) = 10319 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 133.1; Ty = -213.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20623/1324138)^2+75278/1410046+0.7*55637/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 205.56; My = 75.963; N = -1055.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media

Tx = 135.7; Ty = -204.7; Mt = 17.02

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8456 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 17.02

Asta 51: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.338

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
124441/1088400+0.7*21685/1088400=0.13 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -191.142; My = 22.205

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.338
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1056^2+9146^2) = 9206 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -19.3; Ty = -167.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.338
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -19.3; Ty = -167.2; Mt = 6.036

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.338
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4254 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 6.036

Asta 52: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
259480/1088400+0.7*57785/1088400=0.28 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 398.561; My = -59.172

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(2225^2+18025^2) = 18162 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -40.7; Ty = -329.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -40.7; Ty = -329.6; Mt = 5.986

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6374 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.044

Asta 53: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.523

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(18818^2+35546^2) = 40220 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 344.1; Ty = -650

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13614/993103)^2+528566/1088400+0.7*95327/1088400=0.55 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 811.878; My = 97.615; N = -522.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.24+0.02+0.06 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 344.1; Ty = -650; Mt = -60.22

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
42440 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -60.22

Asta 54: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.772

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20880/870720+327777/1088400+0.7*9238/1088400=0.33 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 503.465; My = -9.46; N = 801.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3724^2+40693^2) = 40863 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -68.1; Ty = 744.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.26+0+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -84; Ty = 489.7; Mt = 64.225

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.772
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
45263 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 64.225

Asta 55: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
15397/870720+154675/1088400+0.7*73699/1088400=0.21 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 237.581; My = -75.468; N = 591.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2557^2+19100^2) = 19271 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 46.8; Ty = 349.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 50.6; Ty = 244.5; Mt = -8.306

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5915 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -8.393

Asta 56: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
16500/870720+155066/1088400+0.7*23275/1088400=0.18 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -238.181; My = 23.834; N = 633.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(950^2+10670^2) = 10713 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 17.4; Ty = 195.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 19.9; Ty = 191.8; Mt = -11.753

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
8283 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -11.753

Asta 57: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.764

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9580/870720+162628/1088400+0.7*100505/1088400=0.23 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -249.797; My = 102.917; N = 367.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8064^2+32720^2) = 33699 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 147.5; Ty = -598.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.22+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 185.4; Ty = -543.4; Mt = -72.392

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
51019 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -72.392

Asta 58: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.838

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
148640/1088400+0.7*49819/1088400=0.17 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -228.312; My = -51.015

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(117^2+13882^2) = 13882 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -2.1; Ty = 253.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.838
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.26+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 46; Ty = -116.3; Mt = 65.566

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.838
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
46208 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 65.566

Asta 59: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4591^2+31331^2) = 31666 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 83.9; Ty = -572.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10333/1324138)^2+245817/1451200+0.7*57875/1451200=0.2 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -377.574; My = -59.264; N = -396.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 65.3; Ty = -395.1; Mt = 13.83

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
9747 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 13.83

Asta 60: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7830^2+56426^2) = 56966 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 143.2; Ty = -1031.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14741/1324138)^2+801252/1451200+0.7*209868/1451200=0.65 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 1230.723; My = 214.905; N = -566.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.09 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 144.1; Ty = -1031.4; Mt = -22.598

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
12117 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -17.193

Asta 61: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.353

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(63316^2+71529^2) = 95527 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -1157.8; Ty = -1308

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(53912/1324138)^2+1084085/1451200+0.7*149375/1451200=0.82 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1665.154; My = -152.96; N = -2070.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.54+0.19+0.24 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -1157.8; Ty = -1308; Mt = -134.815

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
128697 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -182.613

Asta 62: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.154

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.154
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
35348/870720+0.7*92267/1088400+217671/1088400=0.3 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 141.723; My = -222.895; N = 1357.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d

Sqrt(14800^2+6781^2) = 16279 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -270.6; Ty = 124

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.154
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Tx = -255.2; Ty = -98.3; Mt = 9.118

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.154
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6426 <= 325259 Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mt = 9.118

Asta 63: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.767

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
63488/870720+0.7*122831/1088400+218993/1088400=0.35 <= 1 [4.4.6b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 188.668; My = -224.249; N = 2437.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(25236^2+44304^2) = 50987 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 461.5; Ty = 810.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0.02+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 461.5; Ty = 810.1; Mt = 53.657

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.767
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
37815 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 53.657

Asta 64: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.233

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
50749/1160960+162913/1451200+0.7*97660/1451200=0.2 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -250.235; My = 100.004; N = 1948.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.233
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(29600^2+9688^2) = 31145 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -541.3; Ty = -177.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0.01+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -274.2; Ty = 51.3; Mt = 43.111

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.233
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
30382 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 43.111

Asta 65: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.041

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.041
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
43423/1160960+257808/1451200+0.7*33455/1451200=0.23 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -395.992; My = -34.258; N = 1667.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1934^2+16300^2) = 16414 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -35.4; Ty = 298.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -17.5; Ty = 170.6; Mt = -25.853

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.041
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
18220 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -25.853

Asta 66: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
42890/1160960+231181/1451200+0.7*32211/1451200=0.21 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -355.093; My = -32.984; N = 1647

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(53^2+17495^2) = 17495 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 1; Ty = -319.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -2.6; Ty = -307.7; Mt = -3.349

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5550 <= 325259 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -7.875

Asta 67: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.016

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
31306/1160960+211314/1451200+0.7*64418/1451200=0.2 <= 1 [4.4.6a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 324.579; My = 65.964; N = 1202.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5259^2+49570^2) = 49848 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 96.2; Ty = -906.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.07 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 96.2; Ty = -906.4; Mt = 10.083

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7106 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 10.083

Asta 68: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.82

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10597^2+12008^2) = 16015 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 193.8; Ty = 219.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23776/1324138)^2+129039/1451200+0.7*105808/1451200=0.14 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 198.204; My = -108.347; N = -913

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 191.2; Ty = 220.3; Mt = -27.22

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.82
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
19183 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -27.22

Asta 69: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.468

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(12249^2+2938^2) = 12596 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -224; Ty = 53.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14921/1324138)^2+0.7*5222/1451200+69161/1451200=0.05 <= 1 [4.4.7b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -8.021; My = 70.821; N = -573

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -223.6; Ty = 53.9; Mt = 23.248

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.468
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16384 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Mt = 23.248

Asta 70: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.785

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
0.7*27005/1451200+79341/1451200=0.07 <= 1 (formula 4.4.5b) Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -41.48; My = 81.246

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10438^2+3577^2) = 11034 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 190.9; Ty = -65.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 190.9; Ty = -65.4; Mt = -13.893

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9791 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -13.893

Asta 71: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.503

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8362/1160960+0.7*49709/1451200+101304/1451200=0.1 <= 1 [4.4.6b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -76.352; My = 103.736; N = 321.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(17406^2+5834^2) = 18357 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -318.3; Ty = -106.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.01+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -316.9; Ty = -107; Mt = 24.436

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17222 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 24.436

Asta 72: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.816

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20368/1160960+0.7*44081/1451200+58636/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -67.708; My = -60.043; N = 782.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6356^2+3917^2) = 7466 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 116.2; Ty = 71.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 114.8; Ty = 70.5; Mt = -6.473

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.816
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8

τ,tor,d <= Ksh * fv,d
4562 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.473

Asta 73: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.472

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
50978/1596320+0.7*31388/1995400+138562/1995400=0.11 <= 1 [4.4.6b] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = -48.212; My = -141.888; N = 1957.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.472
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(24993^2+3634^2) = 25255 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -457; Ty = -66.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -67.8; Ty = 224.4; Mt = 34.158

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.472
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24073 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 34.158

Asta 74: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.715

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
57253/1596320+0.7*63069/1995400+69707/1995400=0.09 <= 1 [4.4.6b] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = -96.874; My = 71.38; N = 2198.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(15743^2+8515^2) = 17898 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 287.9; Ty = 155.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 288; Ty = 155.4; Mt = -16.581

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.715
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
11686 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -16.581

Asta 75: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.573

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
72719/1596320+0.7*13918/1995400+89764/1995400=0.1 <= 1 [4.4.6b] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = -21.378; My = 91.918; N = 2792.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.573
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11555^2+2628^2) = 11850 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -211.3; Ty = -48

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -263.7; Ty = 61.2; Mt = 5.629

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.573

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3967 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 5.629

Asta 76: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.68

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
81521/1596320+28132/1995400+0.7*26375/1995400=0.07 <= 1 [4.4.6a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 43.21; My = 27.008; N = 3130.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5931^2+4252^2) = 7298 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 108.5; Ty = -77.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -33; Ty = 101.3; Mt = 8.714

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6141 <= 325259 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = 8.714

Asta 77: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.86

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
83234/1596320+32008/1995400+0.7*16718/1995400=0.07 <= 1 [4.4.6a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 49.164; My = -17.119; N = 3196.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2416^2+8731^2) = 9059 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -44.2; Ty = -159.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -44.2; Ty = -159.6; Mt = -0.584

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
903 <= 325259 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -1.281

Asta 78: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.05

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
61208/1596320+336476/1995400+0.7*140142/1995400=0.26 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -516.827; My = 143.505; N = 2350.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8170^2+30908^2) = 31970 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -149.4; Ty = 565.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -169.6; Ty = 513.8; Mt = 56.82

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.05
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
40044 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 56.82

Asta 79: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
63972/1596320+237519/1995400+0.7*36141/1995400=0.17 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -364.829; My = 37.008; N = 2456.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(2533^2+10765^2) = 11059 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -46.3; Ty = -196.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -46.3; Ty = -196.8; Mt = 9.216

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6495 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 9.216

Asta 80: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.279

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
23704/870720+222223/1088400+0.7*94945/1088400=0.29 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 341.335; My = -97.224; N = 910.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4255^2+22110^2) = 22515 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -77.8; Ty = -404.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -77.8; Ty = -404.3; Mt = -1.975

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1516 <= 236552 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Mt = -2.151

Asta 81: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.37

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(4879^2+15410^2) = 16164 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -89.2; Ty = 281.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5114/993103)^2+300045/1088400+0.7*77100/1088400=0.33 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 460.87; My = 78.95; N = -196.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -120.5; Ty = 322; Mt = -23.995

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16910 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -23.995

Asta 82: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
111942/1451200+0.7*42145/1451200=0.1 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 171.943; My = -43.156

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1470^2+6964^2) = 7118 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 26.9; Ty = 127.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 26.9; Ty = 127.3; Mt = -6.604

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4654 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -6.604

Asta 83: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.811

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
55114/1451200+0.7*22173/1451200=0.05 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 84.655; My = -22.705

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1964^2+5181^2) = 5540 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 35.9; Ty = 94.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 33.8; Ty = 95.3; Mt = -6.326

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.811
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4458 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -6.326

Asta 84: Trave in legno a falda Falda 5 fili 230-248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.165

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
31280/1165241+90382/1456552+0.7*17249/1456552=0.1 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 68.329; My = 10.142; N = 788.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.165
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(483^2+19187^2) = 19193 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = -230.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.165

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = -230.2; Mt = 0.245

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.165
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3041 <= 316724 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -2.389

Asta 85: Trave in legno a falda Falda 5 fili 230-248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.226

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
19854/1165241+52908/1456552+0.7*3697/1456552=0.06 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 39.998; My = -2.174; N = 500.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(580^2+4582^2) = 4618 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7; Ty = 55

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -37.5; Ty = 19.8; Mt = -2.536

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3228 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = -2.536

Asta 86: Trave in legno a falda Falda 5 fili 230-248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.226

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
24491/1602207+0.7*6345/2002759+11478/2002759=0.02 <= 1 [4.4.6b] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 4.797; My = 6.749; N = 617.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(596^2+2760^2) = 2824 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7.1; Ty = 33.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -41.6; Ty = 12.1; Mt = -16.631

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
21172 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = -16.631

Asta 87: Trave in legno a falda Falda 2 fili 51-29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.121

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18539/1165241+90690/1456552+0.7*22886/1456552=0.09 <= 1 [4.4.6a] Comb: SLU, 37; Durata minima del carico nella combinazione: media
Mx = 68.561; My = -13.457; N = 467.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.121
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(618^2+18802^2) = 18812 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 7.4; Ty = -225.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.121
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 7.4; Ty = -225.6; Mt = -0.247

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.121
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2898 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = -2.276

Asta 88: Trave in legno a falda Falda 2 fili 51-29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.224

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12025/1165241+51828/1456552+0.7*4982/1456552=0.05 <= 1 [4.4.6a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 39.182; My = 2.929; N = 303

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(551^2+4583^2) = 4616 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 6.6; Ty = 55

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Tx = -53.6; Ty = 13.6; Mt = -2.089

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2660 <= 316724 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -2.089

Asta 89: Trave in legno a falda Falda 2 fili 51-29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.224

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12636/1602207+0.7*2295/2002759+34514/2002759=0.03 <= 1 [4.4.6b] Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mx = 1.735; My = -20.294; N = 318.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5527^2+1236^2) = 5664 <= 265517 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = 66.3; Ty = 14.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Tx = -64.6; Ty = 6.1; Mt = -14.749

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
18777 <= 316724 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = -14.749

Asta 90: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.386

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3070^2+74370^2) = 74434 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -56.1; Ty = 1359.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

(31643/1324138)^2+551398/1451200+0.7*120927/1451200=0.44 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 846.948; My = 123.83; N = -1215.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.15 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -56.1; Ty = 1359.9; Mt = -4.665

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.386
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4386 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -6.224

Asta 91: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.829

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15615^2+40134^2) = 43065 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -285.5; Ty = 733.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32204/1324138)^2+212595/1451200+0.7*119659/1451200=0.2 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 326.545; My = 122.531; N = -1236.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -285.8; Ty = 733.5; Mt = -9.615

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.829
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6776 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -9.615

Asta 92: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1676^2+18076^2) = 18153 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -30.6; Ty = 330.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32516/1324138)^2+349587/1451200+0.7*126142/1451200=0.3 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -536.965; My = -129.169; N = -1248.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -30.6; Ty = 330.5; Mt = -1.165

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
858 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -1.218

Asta 93: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3747^2+3400^2) = 5060 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 68.5; Ty = -62.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32614/1324138)^2+340716/1451200+0.7*143556/1451200=0.3 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -523.34; My = -147.001; N = -1252.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 68.5; Ty = -62.2; Mt = 2.076

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1463 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.076

Asta 94: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4779^2+26923^2) = 27344 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 87.4; Ty = -492.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32834/1324138)^2+311303/1451200+0.7*101600/1451200=0.26 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -478.161; My = -104.038; N = -1260.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 87.7; Ty = -492.1; Mt = 3.618

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2550 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.618

Asta 95: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15411^2+48707^2) = 51086 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 281.8; Ty = -890.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33206/1324138)^2+521541/1451200+0.7*233051/1451200=0.47 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 801.087; My = 238.644; N = -1275.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0.01+0.06 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 281.8; Ty = -890.6; Mt = 3.693

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2376 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.371

Asta 96: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.68

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15072^2+56254^2) = 58238 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -275.6; Ty = 1028.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33369/1324138)^2+566140/1451200+0.7*213666/1451200=0.49 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 869.591; My = 218.794; N = -1281.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.08 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -275.5; Ty = 1028.5; Mt = 6.615

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4979 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 7.065

Asta 97: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5455^2+29607^2) = 30106 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -99.7; Ty = 541.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33470/1324138)^2+172703/1451200+0.7*54163/1451200=0.15 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -265.271; My = -55.463; N = -1285.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -99.7; Ty = 541.4; Mt = 0.68

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1882 <= 325259 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo

Mt = 2.67

Asta 98: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1775^2+2828^2) = 3339 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -32.5; Ty = 51.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33751/1324138)^2+191046/1451200+0.7*85580/1451200=0.17 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -293.447; My = -87.634; N = -1296

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -33.1; Ty = 51.1; Mt = 4.559

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3213 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 4.559

Asta 99: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(4696^2+16197^2) = 16864 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 85.9; Ty = -296.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(34233/1324138)^2+188128/1451200+0.7*93927/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -288.965; My = -96.182; N = -1314.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 86.3; Ty = -295.7; Mt = 3.573

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2518 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 3.573

Asta 100: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.626

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(21001^2+17423^2) = 27287 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 384; Ty = -318.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33137/1324138)^2+0.7*106367/1451200+172065/1451200=0.17 <= 1 [4.4.7b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 163.38; My = 176.195; N = -1272.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.01+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 382.8; Ty = -319.8; Mt = -12.063

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8

τ,tor,d <= Ksh * fv,d
8502 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -12.063

Asta 101: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.641

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4578^2+60834^2) = 61006 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -83.7; Ty = 1112.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31038/1324138)^2+495072/1451200+0.7*105018/1451200=0.39 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 760.43; My = 107.539; N = -1191.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0+0.1 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -83.7; Ty = 1111.1; Mt = 45.578

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.641
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
32121 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 45.578

Asta 102: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3391^2+16130^2) = 16482 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -62; Ty = 294.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29809/1324138)^2+119947/1451200+0.7*22770/1451200=0.09 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -184.239; My = -23.316; N = -1144.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -62.1; Ty = 294.4; Mt = 6.478

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4565 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 6.478

Asta 103: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6673^2+26871^2) = 27687 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 122; Ty = -491.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30943/1324138)^2+149878/1451200+0.7*83840/1451200=0.14 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 230.212; My = 85.852; N = -1188.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 122.1; Ty = -490.6; Mt = -10.241

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7217 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -10.241

Asta 104: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.454

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(520^2+74527^2) = 74529 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -9.5; Ty = -1362.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31275/1324138)^2+539255/1451200+0.7*113066/1451200=0.43 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 828.295; My = 115.78; N = -1200.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0+0.15 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -10.1; Ty = -1361.6; Mt = -56.677

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
40006 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -56.765

Asta 105: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.882

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14231^2+22522^2) = 26642 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -260.2; Ty = 411.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32699/1324138)^2+0.7*136195/1451200+141351/1451200=0.16 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 209.196; My = 144.743; N = -1255.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -259.5; Ty = 412.2; Mt = 7.452

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.882
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5252 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 7.452

Asta 106: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3386^2+12931^2) = 13367 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -61.9; Ty = 236.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32926/1324138)^2+227956/1451200+0.7*103430/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -350.14; My = -105.913; N = -1264.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Tx = -62.7; Ty = 234.9; Mt = -5.995

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4225 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -5.995

Asta 107: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3011^2+10935^2) = 11342 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 55.1; Ty = -200

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32853/1324138)^2+231477/1451200+0.7*98896/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -355.548; My = -101.27; N = -1261.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = 37.1; Ty = -88.7; Mt = -2.805

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1977 <= 325259 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = -2.805

Asta 108: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9335^2+34562^2) = 35800 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 170.7; Ty = -632

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32828/1324138)^2+210390/1451200+0.7*83925/1451200=0.19 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 323.16; My = 85.939; N = -1260.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 170.7; Ty = -632; Mt = -2.553

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2883 <= 325259 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -4.091

Asta 109: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.499

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(16716^2+61278^2) = 63517 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 305.7; Ty = -1120.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32714/1324138)^2+571539/1451200+0.7*226533/1451200=0.5 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 877.883; My = 231.97; N = -1256.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.1 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 305.7; Ty = -1120.5; Mt = -8.549

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6571 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -9.324

Asta 110: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.341

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(18241^2+70168^2) = 72500 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -333.5; Ty = 1283.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32818/1324138)^2+576213/1451200+0.7*229446/1451200=0.51 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 885.064; My = 234.952; N = -1260.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.13 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -333; Ty = 1282.7; Mt = 5.149

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.341
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4876 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 6.918

Asta 111: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(12683^2+42165^2) = 44031 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -231.9; Ty = 771

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32698/1324138)^2+296223/1451200+0.7*124891/1451200=0.26 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 454.998; My = 127.889; N = -1255.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -231.9; Ty = 771; Mt = -2.8

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1974 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.802

Asta 112: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2662^2+20429^2) = 20602 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -48.7; Ty = 373.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32581/1324138)^2+313862/1451200+0.7*99486/1451200=0.26 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -482.092; My = -101.874; N = -1251.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -45.1; Ty = 369.6; Mt = -5.257

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3705 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -5.257

Asta 113: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3011^2+2160^2) = 3706 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = -55.1; Ty = -39.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32570/1324138)^2+306809/1451200+0.7*122743/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -471.259; My = -125.688; N = -1250.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -34.8; Ty = -19.6; Mt = -1.866

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1315 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -1.866

Asta 114: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3083^2+20827^2) = 21054 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 56.4; Ty = -380.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32628/1324138)^2+313514/1451200+0.7*114747/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -481.557; My = -117.501; N = -1252.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 56.4; Ty = -380.8; Mt = 0.999

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
683 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 0.969

Asta 115: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.039

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15764^2+45473^2) = 48128 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 288.3; Ty = -831.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32505/1324138)^2+441056/1451200+0.7*210335/1451200=0.41 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 677.462; My = 215.383; N = -1248.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 288.3; Ty = -831.4; Mt = 6.778

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4777 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.778

Asta 116: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.145

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
226738/1088400+0.7*38697/1088400=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -348.27; My = 39.625

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.145
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(496^2+10577^2) = 10588 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -9.1; Ty = -193.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.145
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -9.1; Ty = -193.4; Mt = -39.874

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.145
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
28101 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -39.874

Asta 117: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.29

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4472^2+33692^2) = 33988 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -81.8; Ty = -616.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7109/1324138)^2+245568/1451200+0.7*64287/1451200=0.2 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -377.192; My = 65.83; N = -273

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -62.3; Ty = -414.1; Mt = -9.769

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6885 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -9.769

Asta 118: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.28

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8267^2+54368^2) = 54993 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -151.2; Ty = -994.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

(10615/1324138)^2+859755/1451200+0.7*204800/1451200=0.69 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1320.584; My = -209.716; N = -407.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.08 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -151.2; Ty = -994.2; Mt = 29.81

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
21009 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 29.81

Asta 119: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.156

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2877^2+85470^2) = 85518 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 52.6; Ty = -1562.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(19458/1324138)^2+873510/1451200+0.7*165422/1451200=0.68 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1341.711; My = -169.393; N = -747.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.67+0+0.2 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 40.3; Ty = -1559.3; Mt = 224.495

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
158214 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 224.495

Asta 120: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.194

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
31973/1160960+188131/1451200+0.7*31443/1451200=0.17 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 288.969; My = 32.197; N = 1227.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(21962^2+73224^2) = 76447 <= 265517 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = -401.6; Ty = 1339

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.15+0.01+0.05 <= 1 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Tx = 431.1; Ty = -1066; Mt = -70.512

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
49694 <= 325259 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Mt = -70.512

Asta 121: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.929

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
38709/1160960+150069/1451200+0.7*31919/1451200=0.15 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 230.506; My = 32.685; N = 1486.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1784^2+30220^2) = 30273 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -32.6; Ty = 552.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -32.6; Ty = 552.6; Mt = -30.722

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.929
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
21651 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -30.722

Asta 122: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.282

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.282
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
22905/1160960+215789/1451200+0.7*36363/1451200=0.19 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -331.452; My = 37.236; N = 879.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(954^2+16507^2) = 16534 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 17.4; Ty = 301.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 13.7; Ty = 212.3; Mt = 19.338

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.282
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
13628 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 19.338

Asta 123: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.28

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
22498/1160960+195380/1451200+0.7*33931/1451200=0.17 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -300.103; My = 34.746; N = 863.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(882^2+18182^2) = 18204 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -16.1; Ty = -332.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Tx = 6.3; Ty = -116.7; Mt = 6.869

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4841 <= 325259 Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Mt = 6.869

Asta 124: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.562

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5397^2+19531^2) = 20263 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -98.7; Ty = -357.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(35628/1820690)^2+204250/1995400+0.7*124584/1995400=0.15 <= 1 [4.4.7a] Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mx = -313.727; My = 127.574; N = -1368.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -98.7; Ty = -357.1; Mt = -6.701

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7388 <= 325259 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = -10.483

Asta 125: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.614

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.471
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
66147/1596320+43282/1995400+0.7*7676/1995400=0.07 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 66.482; My = 7.86; N = 2540

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1865^2+9131^2) = 9320 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 34.1; Ty = 167

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 33.9; Ty = 167; Mt = 1.207

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.614
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1361 <= 325259 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo

Mt = 1.932

Asta 126: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.001

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
67765/1596320+41981/1995400+0.7*3951/1995400=0.06 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 64.483; My = -4.046; N = 2602.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2901^2+6207^2) = 6851 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -53.1; Ty = 113.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 6.4; Ty = 117.8; Mt = -6.897

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.001
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4861 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -6.897

Asta 127: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.24

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
58864/1596320+0.7*9314/1995400+31205/1995400=0.06 <= 1 [4.4.6b] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 14.306; My = -31.953; N = 2260.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(21422^2+3214^2) = 21661 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 391.7; Ty = 58.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 391.6; Ty = 58.7; Mt = -7.527

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5304 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -7.527

Asta 128: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
49569/1596320+59227/1995400+0.7*25055/1995400=0.07 <= 1 [4.4.6a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -90.973; My = 25.656; N = 1903.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3529^2+4419^2) = 5655 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -64.5; Ty = 80.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 19.1; Ty = 95.4; Mt = -6.157

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1

τ,tor,d <= Ksh * fv,d
4339 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -6.157

Asta 129: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.406

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(58577^2+15260^2) = 60532 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -1071.1; Ty = 279

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.406
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(45808/1324138)^2+0.7*96190/1451200+157030/1451200=0.16 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 147.748; My = -160.799; N = -1759

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.05+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -1071.1; Ty = 279; Mt = 14.236

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.406
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
13847 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -19.647

Asta 130: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.933

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18000/1160960+68835/1451200+0.7*41413/1451200=0.08 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -105.73; My = -42.407; N = 691.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6419^2+3111^2) = 7133 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 117.4; Ty = 56.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.933
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 42.5; Ty = -63.1; Mt = -2.467

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.933
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1739 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -2.467

Asta 131: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.214

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
11204/1596320+0.7*24880/1995400+65368/1995400=0.05 <= 1 [4.4.6b] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -38.216; My = 66.937; N = 430.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2834^2+8612^2) = 9066 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -51.8; Ty = 157.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 27.6; Ty = 75.4; Mt = -2.368

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.214

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1669 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -2.368

Asta 132: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.266

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5166^2+9930^2) = 11194 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -94.5; Ty = -181.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29850/1324138)^2+121581/1451200+0.7*70784/1451200=0.12 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 186.748; My = -72.482; N = -1146.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -93.1; Ty = -182; Mt = 13.085

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9221 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 13.085

Asta 133: Trave in legno a falda Falda 5 fili 267-272

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.24

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
40305/1602207+0.7*14831/2002759+15685/2002759=0.04 <= 1 [4.4.6b] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = 11.213; My = 9.223; N = 1015.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(2269^2+4923^2) = 5420 <= 265517 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -27.2; Ty = -59.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -27.2; Ty = -59.1; Mt = 1.8

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2292 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = 1.8

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.12
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.24/0=386843.5 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.12
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.24/0=779532.4 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.12
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.24/0=296846.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 134: Trave in legno a falda Falda 5 fili 261-273

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.234

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
351856/2002759+0.7*16817/2002759=0.18 <= 1 (formula 4.4.5a) Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 266.003; My = 9.888

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(671^2+22178^2) = 22188 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 8.1; Ty = -266.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 8.1; Ty = -266.1; Mt = -1.881

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2588 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = 2.033

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.617
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.234/0=28510.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.617
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.234/0=49792.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.617
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.234/0.0001=22691.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 135: Trave in legno a falda Falda 5 fili 255-274

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.335

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.335
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
531424/2002759+0.7*20735/2002759=0.27 <= 1 (formula 4.4.5a) Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 401.757; My = 12.192

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(388^2+20500^2) = 20504 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 4.7; Ty = 246

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 4.7; Ty = 246; Mt = -0.761

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.335
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2097 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -1.647

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.323
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.335/0.0003=7497.2 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.323
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.335/0.0002=13043.5 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.323
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite

2.335/0.0004=5973.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 136: Trave in legno a falda Falda 5 fili 244-246

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.686

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7256^2+5050^2) = 8841 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 87.1; Ty = -60.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36713/1324138)^2+133334/1456552+0.7*65359/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 100.801; My = 38.431; N = -925.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 86.2; Ty = -59.4; Mt = -6.092

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7756 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.092

Asta 137: Trave in legno a falda Falda 5 fili 238-247

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.643

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3241^2+15835^2) = 16164 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 38.9; Ty = -190

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25763/1324138)^2+130543/1456552+0.7*46420/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 98.69; My = 27.295; N = -649.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 38.9; Ty = -190; Mt = -2.331

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2972 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.334

Asta 138: Trave in legno a falda Falda 5 fili 233-249

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4321^2+14251^2) = 14892 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -51.8; Ty = -171

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(35527/1324138)^2+144325/1456552+0.7*86985/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 109.109; My = 51.147; N = -895.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media

Tx = -51.8; Ty = 168; Mt = 2.992

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3809 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 2.992

Asta 139: Trave in legno a falda Falda 5 fili 239-250

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.827

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(13380^2+6514^2) = 14882 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -160.6; Ty = 78.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(57296/1324138)^2+0.7*122220/1456552+128561/1456552=0.15 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 92.398; My = 75.594; N = -1443.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -160.6; Ty = 78.2; Mt = 4.773

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.827
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6076 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 4.773

Asta 140: Trave in legno a falda Falda 5 fili 251-280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.166

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
214107/1456552+0.7*102736/1456552=0.2 <= 1 (formula 4.4.5a) Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 161.865; My = -60.409

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.166
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4828^2+2592^2) = 5480 <= 193103 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Tx = 57.9; Ty = -31.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.166
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 57.1; Ty = -28.9; Mt = 11.172

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.166
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14222 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 11.172

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.083
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.166/0=35181.1 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.083
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.166/0=56451.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.083
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.166/0=28694 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 141: Trave in legno a falda Falda 5 fili 251-280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.441

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.441
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7346/1602207+548596/2002759+0.7*18102/2002759=0.28 <= 1 [4.4.6a] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 414.739; My = -10.644; N = 185.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(957^2+25664^2) = 25682 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -11.5; Ty = 308

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -11.5; Ty = 308; Mt = 0.246

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.441
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1784 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = 1.401

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.464
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.441/0.0003=7804.3 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.464
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.441/0.0002=13952.6 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.383
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
2.441/0.0004=6157.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Vento = 0,600 + 0,000 = 0,600

Asta 142: Trave in legno a falda Falda 5 fili 256-281

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
458729/2002759+0.7*22065/2002759=0.24 <= 1 (formula 4.4.5a) Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 346.799; My = -12.974

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1381^2+22894^2) = 22936 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -16.6; Ty = -274.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = 5.9; Ty = 260.2; Mt = -3.224

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4104 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = -3.224

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.821
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
1.642/0.0002=10175.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.821
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.642/0.0001=17796.6 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.821
Kdef = 0.6
Ufin in x = 0

Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.642/0.0002=8093.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 143: Trave in legno a falda Falda 5 fili 262-282

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.746

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
205540/2002759+0.7*16669/2002759=0.11 <= 1 (formula 4.4.5a) Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 155.388; My = -9.802

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1350^2+18597^2) = 18646 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -16.2; Ty = -223.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = 2; Ty = 202.5; Mt = -1.84

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1859 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -1.461

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.348
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.746/0=58340.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.373
Kdef = 0
Uinst var in x = 0

Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.746/0=101554.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.348
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.746/0=46462.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 144: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.882

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14575^2+30581^2) = 33876 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 266.5; Ty = 559.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(56847/1324138)^2+289486/1451200+0.7*184842/1451200=0.29 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 444.651; My = -189.278; N = -2182.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.01+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 266.5; Ty = 559.2; Mt = -12.031

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.882
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8479 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -12.031

Asta 145: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10614^2+24447^2) = 26652 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 194.1; Ty = 447

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(60371/1324138)^2+275319/1451200+0.7*152601/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -422.889; My = 156.263; N = -2318.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 194.1; Ty = 447; Mt = 9.953

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7015 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.953

Asta 146: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(657^2+10677^2) = 10697 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -12; Ty = 195.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(60426/1324138)^2+377061/1451200+0.7*127869/1451200=0.32 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -579.166; My = 130.938; N = -2320.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -19.2; Ty = 192.7; Mt = 16.641

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11728 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 16.641

Asta 147: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6166^2+1709^2) = 6398 <= 193103 Comb: SLU, 38; Durata minima del carico nella combinazione: media
Tx = -112.7; Ty = 31.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(60166/1324138)^2+369554/1451200+0.7*157220/1451200=0.33 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -567.634; My = 160.993; N = -2310.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -111.5; Ty = 26.4; Mt = 5.613

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3955 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 5.613

Asta 148: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9262^2+18769^2) = 20930 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -169.4; Ty = -343.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(61346/1324138)^2+366238/1451200+0.7*117213/1451200=0.31 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -562.542; My = 120.026; N = -2355.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -169.4; Ty = -343.2; Mt = 17.093

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12046 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 17.093

Asta 149: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.833

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9278^2+35418^2) = 36613 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -169.7; Ty = -647.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(63693/1324138)^2+165089/1451200+0.7*140020/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 253.577; My = -143.38; N = -2445.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -169.7; Ty = -647.6; Mt = 12.429

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
8060 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 11.437

Asta 150: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.513

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(82642^2+135365^2) = 158598 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1511.2; Ty = -2475.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(43653/1324138)^2+854317/1451200+0.7*405990/1451200=0.79 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1312.231; My = 415.734; N = -1676.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.32+0.22+0.45 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 1243.1; Ty = -1784.3; Mt = -80.346

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
56624 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente

Mt = -80.346

Asta 151: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.774

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(16510^2+20450^2) = 26282 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -301.9; Ty = 373.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(67846/1324138)^2+0.7*175626/1451200+195290/1451200=0.22 <= 1 [4.4.7b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 269.762; My = 199.977; N = -2605.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.01+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -301.9; Ty = 373.9; Mt = 23.315

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.774
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16431 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 23.315

Asta 152: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(3138^2+4147^2) = 5200 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -57.4; Ty = 75.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68324/1324138)^2+56848/1451200+0.7*38241/1451200=0.06 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -87.319; My = -39.159; N = -2623.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -88.7; Ty = -50.2; Mt = 7.237

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5100 <= 325259 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = 7.237

Asta 153: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.839

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3766^2+23283^2) = 23586 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 68.9; Ty = -425.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(69208/1324138)^2+164895/1451200+0.7*43094/1451200=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 253.279; My = 44.128; N = -2657.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 68.9; Ty = -425.7; Mt = -4.887

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1

τ,tor,d <= Ksh * fv,d
5580 <= 325259 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -7.917

Asta 154: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.841

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4591^2+21866^2) = 22343 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -84; Ty = 399.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(69253/1324138)^2+160155/1451200+0.7*51579/1451200=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 245.999; My = 52.817; N = -2659.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -84; Ty = 399.8; Mt = 6.228

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.841
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4477 <= 236552 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Mt = 6.353

Asta 155: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3186^2+6216^2) = 6985 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 58.3; Ty = -113.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68823/1324138)^2+51369/1451200+0.7*32584/1451200=0.05 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -78.902; My = -33.366; N = -2642.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 94.1; Ty = 24.8; Mt = -5.73

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4039 <= 325259 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = -5.73

Asta 156: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.522

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(17099^2+24905^2) = 30210 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 312.7; Ty = -455.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68063/1324138)^2+164747/1451200+0.7*151121/1451200=0.19 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 253.051; My = 154.748; N = -2613.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.01+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 310; Ty = -456.4; Mt = -24.178

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.522

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17039 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -24.178

Asta 157: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.44

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1823^2+53205^2) = 53236 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -33.3; Ty = 972.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37881/1324138)^2+705433/1451200+0.7*35420/1451200=0.5 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1083.545; My = -36.27; N = -1454.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.08 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -33.3; Ty = 972.9; Mt = 27.508

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.44
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
15405 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 21.859

Asta 158: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(12487^2+21364^2) = 24746 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 228.3; Ty = 390.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38753/1324138)^2+386494/1451200+0.7*134176/1451200=0.33 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -593.655; My = 137.396; N = -1488.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 228.3; Ty = 390.7; Mt = -15.86

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11177 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -15.86

Asta 159: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6644^2+1716^2) = 6862 <= 193103 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Tx = 121.5; Ty = -31.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38934/1324138)^2+388226/1451200+0.7*191060/1451200=0.36 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -596.315; My = 195.646; N = -1495.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = 120.1; Ty = -24.1; Mt = -11.604

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8178 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -11.604

Asta 160: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6792^2+16511^2) = 17854 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -124.2; Ty = -301.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39540/1324138)^2+388756/1451200+0.7*185615/1451200=0.36 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -597.13; My = 190.07; N = -1518.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -121.6; Ty = -301.6; Mt = -11.284

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7952 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -11.284

Asta 161: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11180^2+29299^2) = 31360 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -204.4; Ty = -535.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39834/1324138)^2+221965/1451200+0.7*120301/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -340.938; My = 123.188; N = -1529.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -204.4; Ty = -535.8; Mt = -1.393

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2064 <= 325259 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -2.929

Asta 162: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.626

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(25665^2+22989^2) = 34456 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -469.3; Ty = -420.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38651/1324138)^2+0.7*246403/1451200+269405/1451200=0.31 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 378.476; My = -275.871; N = -1484.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.02+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -469.3; Ty = -420.4; Mt = 17.968

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12663 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 17.968

Asta 163: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.772

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10956^2+18906^2) = 21852 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 200.3; Ty = 345.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(63676/1324138)^2+108958/1451200+0.7*100871/1451200=0.13 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 167.359; My = -103.292; N = -2445.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 199.6; Ty = 345.9; Mt = -23.584

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.772
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16621 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -23.584

Asta 164: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3688^2+6307^2) = 7306 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 67.4; Ty = 115.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(67224/1324138)^2+62479/1451200+0.7*43316/1451200=0.07 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -95.967; My = 44.356; N = -2581.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 67.4; Ty = 115.3; Mt = -6.765

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4768 <= 325259 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -6.765

Asta 165: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3820^2+29638^2) = 29883 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -69.8; Ty = -541.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68609/1324138)^2+217648/1451200+0.7*53398/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 334.307; My = -54.679; N = -2634.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -71.1; Ty = -538.6; Mt = 9.029

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6407 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.091

Asta 166: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4764^2+26546^2) = 26970 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 87.1; Ty = 485.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68430/1324138)^2+209690/1451200+0.7*61731/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 322.083; My = -63.213; N = -2627.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 87.1; Ty = 485.4; Mt = -9.109

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6482 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -9.198

Asta 167: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(812^2+7054^2) = 7101 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 14.9; Ty = -129

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(28858/1820690)^2+77499/1995400+0.7*39754/1995400=0.05 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -119.038; My = -40.708; N = -1108.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -63.5; Ty = 79.2; Mt = 6.133

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4322 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 6.133

Asta 168: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.525

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6843^2+25622^2) = 26520 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -125.1; Ty = -468.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(65209/1324138)^2+140920/1451200+0.7*66123/1451200=0.13 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 216.453; My = -67.71; N = -2504

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -125.1; Ty = -468.5; Mt = 25.198

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17759 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 25.198

Asta 169: Trave in legno a falda Falda 1 fili 230-229

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.517

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(76^2+27639^2) = 27640 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 0.9; Ty = 331.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30133/1324138)^2+327992/1456552+0.7*1290/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 247.962; My = 0.758; N = -759.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 0.9; Ty = 331.5; Mt = -1.825

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2335 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -1.834

Asta 170: Trave in legno a falda Falda 1 fili 216-215

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
328210/1456552+0.7*4076/1456552=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 248.127; My = 2.397

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(22^2+29263^2) = 29263 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 0.3; Ty = 351.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 0.3; Ty = 351.2; Mt = -2.802

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3572 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -2.806

Asta 171: Trave in legno a falda Falda 1 fili 206-211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.894

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1116^2+22903^2) = 22931 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 13.4; Ty = 274.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

(6800/1324138)^2+196854/1456552+0.7*17352/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 148.822; My = -10.203; N = -171.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 15.2; Ty = 256.1; Mt = 3.723

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.894
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4740 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 3.723

Asta 172: Trave in legno a falda Falda 1 fili 206-211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1255^2+8977^2) = 9064 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 15.1; Ty = -107.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6028/993103)^2+34874/1092414+0.7*755/1092414=0.03 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 26.365; My = -0.444; N = -151.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 15.1; Ty = -107.7; Mt = -4.687

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5967 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -4.687

Asta 173: Trave in legno a falda Falda 1 fili 206-211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6161^2+15610^2) = 16782 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -73.9; Ty = -187.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7311/1820690)^2+40377/2002759+0.7*17340/2002759=0.03 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -30.525; My = 10.196; N = -184.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -73.9; Ty = -187.3; Mt = -6.416

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
8168 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -6.416

Asta 174: Trave in legno a falda Falda 1 fili 200-199

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
224234/1456552+0.7*10148/1456552=0.16 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 169.521; My = -5.967

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(284^2+29582^2) = 29583 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 3.4; Ty = 355

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 3.9; Ty = 351.5; Mt = 6.217

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8060 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.331

Asta 175: Trave in legno a falda Falda 1 fili 189-188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14^2+29501^2) = 29501 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 0.2; Ty = 354

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.51
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24032/1324138)^2+257164/1456552+0.7*166/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -194.416; My = -0.097; N = -605.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -0.6; Ty = 348.6; Mt = 3.232

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4199 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.298

Asta 176: Trave in legno a falda Falda 1 fili 180-179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.51
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
280077/1456552+0.7*629/1456552=0.19 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -211.738; My = -0.37

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(455^2+28969^2) = 28973 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -5.5; Ty = 347.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6.7; Ty = 342.8; Mt = -1.599

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2098 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -1.648

Asta 177: Trave in legno a falda Falda 1 fili 167-170

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.258
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5634/1165241+244994/1456552+0.7*248/1456552=0.17 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -185.215; My = -0.146; N = 142

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(655^2+24987^2) = 24996 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 7.9; Ty = 299.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.9; Ty = 292.6; Mt = -5.688

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7391 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -5.806

Asta 178: Trave in legno a falda Falda 1 fili 315-161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.517

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1373^2+28391^2) = 28424 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 16.5; Ty = 340.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31133/1324138)^2+277830/1456552+0.7*41512/1456552=0.21 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 210.04; My = -24.409; N = -784.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 18; Ty = 330.5; Mt = -5.876

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7481 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -5.876

Asta 179: Trave in legno a falda Falda 1 fili 147-146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1636^2+27488^2) = 27537 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 19.6; Ty = 329.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(45881/1324138)^2+454278/1456552+0.7*41222/1456552=0.33 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 343.434; My = -24.238; N = -1156.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 19.5; Ty = 329; Mt = -0.346

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1163 <= 316724 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Mt = -0.913

Asta 180: Trave in legno a falda Falda 1 fili 141-140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(229^2+28652^2) = 28653 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media

Tx = 2.7; Ty = 343.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39040/1324138)^2+530939/1456552+0.7*6497/1456552=0.37 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 401.39; My = -3.82; N = -983.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 2.7; Ty = 343.8; Mt = 0.208

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
710 <= 316724 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = 0.558

Asta 181: Trave in legno a falda Falda 1 fili 132-131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1071^2+28104^2) = 28125 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -12.9; Ty = 337.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39605/1324138)^2+486845/1456552+0.7*28956/1456552=0.35 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 368.055; My = 17.026; N = -998

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -12.9; Ty = 337.3; Mt = -0.182

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d

788 <= 316724 Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mt = 0.619

Asta 182: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.894

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(285^2+30540^2) = 30541 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -3.4; Ty = 366.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(42783/1324138)^2+373257/1456552+0.7*18768/1456552=0.27 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 282.182; My = 11.036; N = -1078.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.3; Ty = 361.3; Mt = 4.142

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.894
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5273 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 4.142

Asta 183: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)

St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5057/1602207+24320/2002759+0.7*18066/2002759=0.02 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 18.386; My = -10.623; N = 127.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5691^2+5863^2) = 8171 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -68.3; Ty = -70.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -68; Ty = -70.5; Mt = -2.38

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3030 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -2.38

Asta 184: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
53996/2002759+0.7*23940/2002759=0.04 <= 1 (formula 4.4.5a) Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 40.821; My = -14.077

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(7453^2+21404^2) = 22664 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -89.4; Ty = -256.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -89.4; Ty = -256.8; Mt = -6.657

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 1.1
τ,tor,d <= Ksh * fv,d
8474 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -6.657

Asta 185: Trave in legno a falda Falda 1 fili 113-112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.342
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
199520/1456552+0.7*30/1456552=0.14 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -150.837; My = 0.018

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(517^2+25707^2) = 25712 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = 308.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -5.9; Ty = 304.5; Mt = 5.838

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7432 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 5.838

Asta 186: Trave in legno a falda Falda 1 fili 101-100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.593

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
241178/1456552+0.7*2007/1456552=0.17 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -182.331; My = 1.18

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(356^2+30562^2) = 30564 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 4.3; Ty = 366.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 5.2; Ty = 364.9; Mt = 2.353

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3016 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 2.369

Asta 187: Trave in legno a falda Falda 1 fili 93-92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(48^2+32275^2) = 32275 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -0.6; Ty = 387.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9361/1324138)^2+231351/1456552+0.7*182/1456552=0.16 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -174.901; My = -0.107; N = -235.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 0.3; Ty = 386.2; Mt = -1.946

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2550 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -2.003

Asta 188: Trave in legno a falda Falda 1 fili 85-84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(97^2+30577^2) = 30577 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -1.2; Ty = 366.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5829/1324138)^2+258733/1456552+0.7*3902/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 195.602; My = 2.294; N = -146.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -1.7; Ty = 365.4; Mt = -5.643

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7299 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -5.734

Asta 189: Trave in legno a falda Falda 1 fili 77-76

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
258204/1456552+0.7*1936/1456552=0.18 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 195.202; My = 1.138

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4^2+26873^2) = 26873 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 0; Ty = 322.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -1.3; Ty = 320.9; Mt = -4.429

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5737 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -4.506

Asta 190: Trave in legno a falda Falda 1 fili 66-65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
337421/1456552+0.7*2869/1456552=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 255.09; My = 1.687

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(268^2+29112^2) = 29113 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -3.2; Ty = 349.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1

0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -3.2; Ty = 349.1; Mt = 2.563

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3263 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.563

Asta 191: Trave in legno a falda Falda 1 fili 57-56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(136^2+32436^2) = 32436 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 1.6; Ty = 389.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14806/1324138)^2+424802/1456552+0.7*9890/1456552=0.3 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 321.15; My = -5.815; N = -373.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 1.6; Ty = 389.2; Mt = 2.964

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3823 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.003

Asta 192: Trave in legno a falda Falda 1 fili 264-263

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.37

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
65870/2002759+0.7*57747/2002759=0.05 <= 1 (formula 4.4.5a) Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 49.798; My = -33.955

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(8658^2+10134^2) = 13329 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -103.9; Ty = -121.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -103.9; Ty = -121.6; Mt = -1.617

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2059 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -1.617

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.197
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.37/0=171436.8 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.197
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.37/0=319036.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.197
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.37/0=134188.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 193: Trave in legno a falda Falda 1 fili 258-257

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.284

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7237/1602207+128345/2002759+0.7*33046/2002759=0.08 <= 1 [4.4.6a] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = -97.029; My = -19.431; N = 182.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1318^2+10498^2) = 10580 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -15.8; Ty = -126

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -15.7; Ty = -125.9; Mt = -1.134

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2010 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -1.579

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.685
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.284/0.0001=13964.4 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.685
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.284/0.0001=24306.5 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.642
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.284/0.0001=11123 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 194: Trave in legno a falda Falda 1 fili 255-252

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.197

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.318
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(67948/1324138)^2+127950/1456552+0.7*4406/1456552=0.09 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -96.73; My = -2.591; N = -1712.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(583^2+19888^2) = 19897 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -7; Ty = 238.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7.3; Ty = 238.4; Mt = -0.893

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.197
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2750 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -2.16

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.172
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
2.197/0.0004=5044.4 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.172
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.197/0.0003=8740.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.172
Kdef = 0.6

Ufin in x = 0
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
2.197/0.0005=4023.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 195: Trave in legno a falda Falda 1 fili 244-241

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.692

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5420^2+16954^2) = 17799 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -65; Ty = 203.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37122/1324138)^2+113463/1456552+0.7*51869/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 85.778; My = 30.499; N = -935.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -65; Ty = 202.9; Mt = 3.462

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4408 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.462

Asta 196: Trave in legno a falda Falda 1 fili 238-235

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.569

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(481^2+17461^2) = 17467 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 5.8; Ty = 209.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21152/1324138)^2+106128/1456552+0.7*4582/1456552=0.08 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 80.233; My = -2.695; N = -533

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 5.4; Ty = 209.5; Mt = -0.607

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.569
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
773 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -0.607

Asta 197: Trave in legno a falda Falda 1 fili 229-228

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(787^2+24692^2) = 24705 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -9.4; Ty = -296.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.048
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(40128/1324138)^2+160612/1456552+0.7*1663/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -121.423; My = 0.978; N = -1011.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -9.4; Ty = -296.3; Mt = 2.1

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2673 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.1

Asta 198: Trave in legno a falda Falda 1 fili 215-214

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(636^2+23833^2) = 23841 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -7.6; Ty = 286

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18563/1324138)^2+137085/1456552+0.7*2697/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -103.636; My = -1.586; N = -467.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7.6; Ty = 284.8; Mt = 2.571

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3273 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.571

Asta 199: Trave in legno a falda Falda 1 fili 211-205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.292

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
79790/1456552+0.7*4113/1456552=0.06 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 60.321; My = 2.418

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(257^2+14493^2) = 14495 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 3.1; Ty = 173.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 3.1; Ty = 173.9; Mt = 7.483

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.292
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9527 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 7.483

Asta 200: Trave in legno a falda Falda 1 fili 211-205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.127

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
121995/1456552+0.7*9289/1456552=0.09 <= 1 (formula 4.4.5a) Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 92.228; My = 5.462

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(546^2+22901^2) = 22907 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6.6; Ty = 274.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = 274.4; Mt = -2.935

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.127
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3737 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.935

Asta 201: Trave in legno a falda Falda 1 fili 199-198

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(724^2+30056^2) = 30065 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.7; Ty = -360.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24839/1324138)^2+286039/1456552+0.7*16821/1456552=0.2 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 216.246; My = -9.891; N = -625.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.7; Ty = -360.7; Mt = -6.186

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7876 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.186

Asta 202: Trave in legno a falda Falda 1 fili 84-83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(150^2+27301^2) = 27302 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = -327.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38809/1324138)^2+185939/1456552+0.7*3065/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 140.57; My = 1.802; N = -978

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = -327.5; Mt = 5.507

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7010 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 5.507

Asta 203: Trave in legno a falda Falda 1 fili 76-75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(229^2+22965^2) = 22966 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 2.7; Ty = 275.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

(9739/1324138)^2+126131/1456552+0.7*7417/1456552=0.09 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 95.355; My = -4.361; N = -245.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 2.7; Ty = 275.6; Mt = 4.095

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5216 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 4.097

Asta 204: Trave in legno a falda Falda 1 fili 65-64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(147^2+23724^2) = 23724 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = 284.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14878/1324138)^2+136312/1456552+0.7*2757/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -103.052; My = 1.621; N = -374.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = 283.7; Mt = -2.263

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2881 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -2.263

Asta 205: Trave in legno a falda Falda 1 fili 56-55

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(246^2+24482^2) = 24483 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 2.9; Ty = -293.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.129
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(28558/1324138)^2+173960/1456552+0.7*2006/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -131.514; My = 1.179; N = -719.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 3; Ty = -293.4; Mt = -2.841

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3617 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -2.841

Asta 206: Trave in legno a falda Falda 1 fili 46-45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(648^2+25767^2) = 25775 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 7.8; Ty = -309.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.048
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31281/1324138)^2+189747/1456552+0.7*2304/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -143.448; My = -1.355; N = -788.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.8; Ty = -309.2; Mt = 0.126

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
543 <= 316724 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -0.427

Asta 207: Trave in legno a falda Falda 1 fili 38-37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1231^2+26729^2) = 26758 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 14.8; Ty = -320.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.968
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39704/1324138)^2+194989/1456552+0.7*10549/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -147.412; My = -6.203; N = -1000.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 14.8; Ty = -320.6; Mt = 2.91

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3704 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 2.91

Asta 208: Trave in legno a falda Falda 1 fili 241-240

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1687^2+25138^2) = 25194 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -20.2; Ty = -301.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.048
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(54607/1324138)^2+184600/1456552+0.7*10761/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -139.558; My = 6.327; N = -1376.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -20.2; Ty = -301.7; Mt = -2.728

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3477 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -2.731

Asta 209: Trave in legno a falda Falda 1 fili 235-234

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1067^2+26713^2) = 26735 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -12.8; Ty = -320.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.967
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30829/1324138)^2+187218/1456552+0.7*5730/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -141.537; My = 3.369; N = -776.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -12.8; Ty = -320.5; Mt = -0.818

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1052 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -0.826

Asta 210: Trave in legno a falda Falda 1 fili 26-33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(80864/1820690)^2+212588/2002759+0.7*54441/2002759=0.13 <= 1 [4.4.7a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 160.716; My = 32.011; N = -2037.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(492^2+24300^2) = 24305 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 5.9; Ty = -291.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 5.9; Ty = -291.6; Mt = 2.24

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2852 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media

Mt = 2.24

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.129
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
2.419/0.0004=5514.8 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.21
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.419/0.0003=9558.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.129
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
2.419/0.0006=4398.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 211: Trave in legno a falda Falda 1 fili 47-46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.911

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(150^2+18085^2) = 18085 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -1.8; Ty = 217

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21474/1324138)^2+93575/1456552+0.7*3758/1456552=0.07 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 70.742; My = 2.21; N = -541.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Tx = -1.7; Ty = 216.4; Mt = 2.653

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.911
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3378 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.653

Asta 212: Trave in legno a falda Falda 1 fili 39-38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.981

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1904^2+13959^2) = 14088 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 22.9; Ty = 167.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.981
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31052/1324138)^2+60520/1456552+0.7*22391/1456552=0.05 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -45.753; My = 13.166; N = -782.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 22.4; Ty = 167.2; Mt = -0.705

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.981
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
904 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -0.71

Asta 213: Trave in legno a falda Falda 1 fili 23-22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.54

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32155/1820690)^2+200272/2002759+0.7*25226/2002759=0.11 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 151.406; My = -14.833; N = -810.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(108^2+15935^2) = 15936 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -1.3; Ty = -191.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -1.3; Ty = -191.2; Mt = 0.711

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2216 <= 316724 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = 1.741

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.719
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.54/0.0001=14932.5 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.719
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.54/0.0001=26112.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.719
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.54/0.0001=11880.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 214: Trave in legno a falda Falda 1 fili 17-16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.609

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7378/1820690)^2+104595/2002759+0.7*41550/2002759=0.07 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 79.074; My = -24.432; N = -185.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(4180^2+11466^2) = 12204 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -50.2; Ty = -137.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -4.8; Ty = -96; Mt = 0.633

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1148 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = 0.902

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.264
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.609/0=125201.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.264
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.609/0=227265.2 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.264
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.609/0=98626.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 215: Trave in legno a falda Falda 2 fili 19-11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.652

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
207478/2002759+0.7*22581/2002759=0.11 <= 1 (formula 4.4.5a) Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 156.853; My = 13.278

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3083^2+20300^2) = 20533 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 37; Ty = -243.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 37; Ty = -243.6; Mt = -1.064

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1229 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 0.965

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.283
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.652/0=184629.5 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.304
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.652/0=225154.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.283

Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.652/0=166175.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 216: Trave in legno a falda Falda 2 fili 21-10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.591

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
448402/2002759+0.7*16324/2002759=0.23 <= 1 (formula 4.4.5a) Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 338.992; My = 9.598

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(797^2+23458^2) = 23472 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 9.6; Ty = -281.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 9.6; Ty = -281.5; Mt = -2.309

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2940 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -2.309

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.796
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.591/0.0001=29412.4 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.796
Kdef = 0

Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.591/0=43422.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.796
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.591/0.0001=24642 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 217: Trave in legno a falda Falda 2 fili 32-9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7449/1602207+529618/2002759+0.7*3431/2002759=0.27 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 400.391; My = 2.017; N = 187.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(583^2+24220^2) = 24227 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7; Ty = 290.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -6.8; Ty = 290.4; Mt = -1.832

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2333 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -1.832

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.501
Kdef = 0
Uinst tot in x = 0.0001

Uinst tot in y = 0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
2.504/0.0001=17575 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.669
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
2.504/0.0001=36618.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.501
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0002
Ufin = 0.0002
Luce/Ufin > limite
2.504/0.0002=12701.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 218: Trave in legno a falda Falda 2 fili 36-31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.814

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4356^2+5933^2) = 7360 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 52.3; Ty = -71.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(52619/1324138)^2+101670/1456552+0.7*59886/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 76.862; My = 35.213; N = -1326

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 52.6; Ty = -69.8; Mt = -6.31

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8

τ,tor,d <= Ksh * fv,d
8039 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.315

Asta 219: Trave in legno a falda Falda 2 fili 44-30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.696

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1988^2+15114^2) = 15245 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 23.9; Ty = -181.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(34936/1324138)^2+117166/1456552+0.7*35551/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 88.577; My = -20.904; N = -880.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 24.1; Ty = -180.5; Mt = -3.032

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3860 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -3.032

Asta 220: Trave in legno a falda Falda 2 fili 31-8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(654^2+25026^2) = 25035 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 7.8; Ty = -300.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14581/1820690)^2+458393/2002759+0.7*8806/2002759=0.23 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 346.545; My = 5.178; N = -367.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.9; Ty = -299.9; Mt = -0.272

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
700 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = 0.55

Asta 221: Trave in legno a falda Falda 2 fili 30-7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(483^2+24440^2) = 24445 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5.8; Ty = -293.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7151/1820690)^2+230365/2002759+0.7*20306/2002759=0.12 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 174.156; My = 11.94; N = -180.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 5.7; Ty = -292.4; Mt = -0.869

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1152 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -0.905

Asta 222: Trave in legno a falda Falda 2 fili 43-28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.592

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2115^2+15916^2) = 16055 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -25.4; Ty = -191

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29124/1324138)^2+113087/1456552+0.7*30422/1456552=0.09 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 85.494; My = -17.888; N = -733.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -25.4; Ty = -191; Mt = 1.662

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2116 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 1.662

Asta 223: Trave in legno a falda Falda 2 fili 35-27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.617

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2597^2+10203^2) = 10528 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -31.2; Ty = -122.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(28649/1324138)^2+115665/1456552+0.7*42339/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 87.442; My = -24.895; N = -722

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -31.2; Ty = -122.4; Mt = 3.442

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4395 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.452

Asta 224: Trave in legno a falda Falda 2 fili 28-5

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(93^2+24482^2) = 24482 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 1.1; Ty = 293.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6907/1820690)^2+260831/2002759+0.7*11127/2002759=0.13 <= 1 [4.4.7a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 197.188; My = 6.543; N = -174.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media

Tx = 0.9; Ty = 293.8; Mt = 0.631

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1372 <= 316724 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = 1.078

Asta 225: Trave in legno a falda Falda 2 fili 27-4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
476192/2002759+0.7*14698/2002759=0.24 <= 1 (formula 4.4.5a) Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 360.001; My = 8.642

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(52^2+24274^2) = 24275 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -0.6; Ty = 291.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -1; Ty = 290.9; Mt = 0.284

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
714 <= 316724 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = 0.561

Asta 226: Trave in legno a falda Falda 2 fili 25-3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.144

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
16616/1602207+501126/2002759+0.7*22664/2002759=0.27 <= 1 [4.4.6a] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = 378.851; My = -13.327; N = 418.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(243^2+19108^2) = 19109 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = -229.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = 14; Ty = 233.1; Mt = -2.56

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3259 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -2.56

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.143
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.144/0.0003=7474.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.143
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.144/0.0002=12445 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.143
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
2.144/0.0004=6029.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 227: Trave in legno a falda Falda 2 fili 20-2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.167

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
339120/2002759+0.7*28183/2002759=0.18 <= 1 (formula 4.4.5a) Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = 256.375; My = -16.571

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1620^2+22196^2) = 22255 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -19.4; Ty = -266.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -19.4; Ty = -266.4; Mt = 2.031

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2735 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -2.148

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.545
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.167/0=48673.2 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.545
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.167/0=79951.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.545
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
1.167/0=39420.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 228: Trave in legno a falda Falda 5 fili 248-277

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.452

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12585/1165241+43196/1456552+0.7*7102/1456552=0.04 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 32.656; My = 4.176; N = 317.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(7625^2+1312^2) = 7737 <= 265517 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -91.5; Ty = -15.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -91.5; Ty = -15.7; Mt = 22.721

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
28926 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = 22.721

Asta 229: Trave in legno a falda Falda 5 fili 248-277

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.156

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
16775/1165241+139120/1456552+0.7*7017/1456552=0.11 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 105.174; My = 4.126; N = 422.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(401^2+23236^2) = 23239 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -4.8; Ty = 278.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Tx = -15.5; Ty = 89.5; Mt = 5.122

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6520 <= 316724 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = 5.122

Asta 230: Trave in legno a falda Falda 5 fili 246-275

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
489175/2002759+0.7*8996/2002759=0.25 <= 1 (formula 4.4.5a) Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 369.816; My = -5.29

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(452^2+27039^2) = 27043 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -5.4; Ty = 324.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.2; Ty = 324.4; Mt = -0.321

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
721 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -0.567

Asta 231: Trave in legno a falda Falda 5 fili 247-276

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
243567/2002759+0.7*4268/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 184.137; My = -2.509

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(243^2+27159^2) = 27160 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = 325.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = 325.9; Mt = -0.719

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1308 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -1.028

Asta 232: Trave in legno a falda Falda 5 fili 249-278

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(518^2+26395^2) = 26400 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media

Tx = -6.2; Ty = 316.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(44904/1324138)^2+161740/1456552+0.7*630/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -122.276; My = -0.37; N = -1131.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = 316.7; Mt = 1.439

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1832 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 1.439

Asta 233: Trave in legno a falda Falda 5 fili 250-279

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(465^2+26331^2) = 26335 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.6; Ty = 316

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18684/1820690)^2+446818/2002759+0.7*11127/2002759=0.23 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 337.795; My = -6.543; N = -470.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = 315.9; Mt = 0.488

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d

633 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 0.497

Asta 234: Trave in legno a falda Falda 2 fili 29-6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.457

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.457
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7854/1165241+39090/1456552+0.7*4677/1456552=0.04 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 29.552; My = -2.75; N = 197.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.457
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(8283^2+899^2) = 8332 <= 265517 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = 99.4; Ty = -10.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.457
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Tx = -97.9; Ty = -8.6; Mt = 20.371

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.457
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
25934 <= 316724 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = 20.371

Asta 235: Trave in legno a falda Falda 2 fili 29-6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.047

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)

St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7970/1165241+121541/1456552+0.7*4609/1456552=0.09 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 91.885; My = -2.71; N = 200.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(271^2+21774^2) = 21775 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 3.2; Ty = 261.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.047
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = -21.1; Ty = -78.4; Mt = 5.112

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.047
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6508 <= 316724 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = 5.112

Asta 236: Trave in legno a falda Falda 6 fili 230-231

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.738

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(902^2+36477^2) = 36488 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -10.8; Ty = 437.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20697/1324138)^2+500812/1456552+0.7*21444/1456552=0.35 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 378.614; My = 12.609; N = -521.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -11; Ty = 433.8; Mt = 0.921

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.738
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2172 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 1.706

Asta 237: Trave in legno a falda Falda 6 fili 265-266

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.416

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7073/1820690)^2+99120/2002759+0.7*46376/2002759=0.07 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 74.935; My = 27.269; N = -178.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1324^2+14200^2) = 14261 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -15.9; Ty = -170.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 63.8; Ty = -84.4; Mt = 1.408

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1792 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 1.408

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.25
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.416/0=115086.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.25
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.416/0=203858.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.25
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.416/0=91246 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 238: Trave in legno a falda Falda 6 fili 259-260

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.409

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25472/1820690)^2+201329/2002759+0.7*25623/2002759=0.11 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 152.205; My = 15.066; N = -641.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(582^2+16001^2) = 16012 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 7; Ty = -192

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 12.7; Ty = -148.3; Mt = -1.943

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2642 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = 2.075

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.657
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.409/0=33809.2 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.657
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.409/0=55445.7 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.611
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.409/0.0001=27387.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 239: Trave in legno a falda Falda 6 fili 253-254

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.528

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(79403/1324138)^2+189777/1456552+0.7*13396/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 143.471; My = 7.877; N = -2001

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(108^2+26462^2) = 26462 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.3; Ty = -317.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.3; Ty = -317.5; Mt = 1.556

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2028 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 1.593

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.18
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
2.528/0.0004=6387.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.18
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.528/0.0002=10814.3 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.18
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
2.528/0.0005=5128.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 240: Trave in legno a falda Falda 6 fili 216-217

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.738

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
372941/1456552+0.7*49992/1456552=0.28 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 281.943; My = 29.395

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1831^2+36200^2) = 36246 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -22; Ty = 434.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -21.3; Ty = 424.4; Mt = 6.569

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.738
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8363 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 6.569

Asta 241: Trave in legno a falda Falda 6 fili 206-207

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.72

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
236925/1456552+0.7*4834/1456552=0.16 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 179.116; My = 2.842

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(31^2+31283^2) = 31283 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -0.4; Ty = 375.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 2.1; Ty = 355.7; Mt = 9.971

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.72
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12693 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.971

Asta 242: Trave in legno a falda Falda 6 fili 200-201

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.991

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.991
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11121/993103)^2+159943/1092414+0.7*50757/1092414=0.18 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 120.917; My = 29.845; N = -280.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1454^2+29035^2) = 29071 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 17.5; Ty = 348.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 21.5; Ty = 332.4; Mt = 11.086

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.991
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14113 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 11.086

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.495
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
2.991/0.0008=3888.5 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.695
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
2.991/0.0005=6170.2 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.396
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
2.991/0.001=3135.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 243: Trave in legno a falda Falda 6 fili 189-190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.987

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(27623/993103)^2+140735/1092414+0.7*4457/1092414=0.13 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 106.396; My = 2.621; N = -696.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(585^2+13625^2) = 13638 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 7; Ty = -163.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 2; Ty = -215.5; Mt = 6.195

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7886 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 6.195

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.596
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.987/0.0001=13874.4 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.397
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.987/0=44982.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.596
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.987/0.0002=8970.3 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600

Variabile A = 1,000 + 0,180 = 1,180

Asta 244: Trave in legno a falda Falda 6 fili 180-181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.002

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
122980/1092414+0.7*3311/1092414=0.11 <= 1 (formula 4.4.5a) Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -92.973; My = 1.947

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.002
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(295^2+9492^2) = 9496 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -3.5; Ty = -113.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -16.7; Ty = 142; Mt = 1.806

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.002
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2300 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 1.806

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.434
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.002/0.0001=13016 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.401
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.002/0=26152.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.434
Kdef = 0.6
Ufin in x = 0

Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.002/0.0001=8473.4 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 245: Trave in legno a falda Falda 6 fili 231-232

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1045^2+34226^2) = 34242 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 12.5; Ty = -410.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(49372/1324138)^2+268051/1456552+0.7*34614/1456552=0.2 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 202.647; My = 20.353; N = -1244.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 12.5; Ty = -409.2; Mt = -0.801

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2021 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -1.587

Asta 246: Trave in legno a falda Falda 6 fili 236-237

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1730^2+34116^2) = 34160 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 20.8; Ty = -409.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.793
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(51995/1324138)^2+271160/1456552+0.7*22581/1456552=0.2 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -204.997; My = -13.278; N = -1310.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 20.5; Ty = -405.3; Mt = 3.793

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4849 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 3.809

Asta 247: Trave in legno a falda Falda 6 fili 242-243

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2050^2+33126^2) = 33189 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 24.6; Ty = -397.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(86839/1324138)^2+232484/1456552+0.7*48916/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 175.758; My = 28.762; N = -2188.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 24.6; Ty = -397.5; Mt = 4.715

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6062 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 4.762

Asta 248: Trave in legno a falda Falda 6 fili 217-218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.224

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1098^2+23660^2) = 23686 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -13.2; Ty = -283.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.667
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8435/1324138)^2+177542/1456552+0.7*9183/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -134.221; My = 5.399; N = -212.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -13.1; Ty = -283.2; Mt = 1.668

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2134 <= 230345 Comb: SLU, 38; Durata minima del carico nella combinazione: media
Mt = 1.676

Asta 249: Trave in legno a falda Falda 6 fili 207-208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.24

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
86499/1092414+0.7*39312/1092414=0.1 <= 1 (formula 4.4.5a) Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = 65.393; My = -23.115

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.239
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2546^2+12078^2) = 12343 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 30.6; Ty = -144.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 29.7; Ty = 89.2; Mt = 3.486

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.239
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4438 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.486

Asta 250: Trave in legno a falda Falda 4 fili 219-220

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.424

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
10023/1602207+167753/2002759+0.7*56447/2002759=0.11 <= 1 [4.4.6a] Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mx = 126.821; My = 33.191; N = 252.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5882^2+23118^2) = 23855 <= 265517 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = 70.6; Ty = -277.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 29.8; Ty = -14.2; Mt = -4.151

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5285 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -4.151

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.212
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.424/0=88393 > 300 Comb: SLE rara, 10

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.24
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.424/0=172057.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.212
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.424/0=64950.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Vento = 0,600 + 0,400 = 1,000

Asta 251: Trave in legno a falda Falda 4 fili 209-210

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.39

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
256428/2002759+0.7*1018/2002759=0.13 <= 1 (formula 4.4.5a) Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mx = -193.86; My = -0.598

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(728^2+14922^2) = 14940 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 8.7; Ty = -179.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 10.4; Ty = -179; Mt = -3.954

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3859 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.031

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.695
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
1.39/0.0002=8246.4 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.695
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.39/0.0001=18661.5 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.695
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.39/0.0002=6148.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 252: Trave in legno a falda Falda 4 fili 202-203

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.358

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.101
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13340/1165241+251810/1456552+0.7*1881/1456552=0.19 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -190.368; My = -1.106; N = 336.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(359^2+24156^2) = 24159 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4.3; Ty = -289.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 2.3; Ty = -282.9; Mt = -0.886

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1575 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 1.237

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.179
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0011
Uinst tot = 0.0011
Luce/Uinst,tot > limite
2.358/0.0011=2157.4 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.179
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
2.358/0.0004=5455.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.179
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0015
Ufin = 0.0015
Luce/Ufin > limite
2.358/0.0015=1575 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 253: Trave in legno a falda Falda 4 fili 191-319

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.964

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18511/1165241+392067/1456552+0.7*49449/1456552=0.31 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 296.402; My = 29.076; N = 466.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3464^2+40408^2) = 40557 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -41.6; Ty = 484.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -42.9; Ty = 484.5; Mt = -0.497

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.964
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1790 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = -1.406

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.321
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
0.964/0.0001=10902.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.386
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.964/0=29351.5 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.321
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0.0001
Ufin = 0.0001
Luce/Ufin > limite
0.964/0.0001=7921.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Vento = 0,600 + 0,000 = 0,600

Asta 254: Trave in legno a falda Falda 3 fili 101-102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.617

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
134890/1456552+0.7*15748/1456552=0.1 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 101.977; My = -9.26

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1723^2+16571^2) = 16660 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 20.7; Ty = 198.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 20.7; Ty = 198.9; Mt = -3.464

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.617
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4410 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -3.464

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.288
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.617/0=44596.9 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.268
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.617/0=29514.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.288
Kdef = 0.6
Ufin in x = 0

Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.617/0=29801.6 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 255: Trave in legno a falda Falda 3 fili 93-94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
194842/1456552+0.7*16202/1456552=0.14 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 147.301; My = -9.527

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1255^2+22837^2) = 22872 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 15.1; Ty = 274

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 15.4; Ty = 267; Mt = -4.81

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6225 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -4.89

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.766
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.642/0.0001=12426.6 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.493
Kdef = 0
Uinst var in x = 0

Uinst var in y = 0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.642/0.0001=22721 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.766
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.642/0.0002=8102.2 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 256: Trave in legno a falda Falda 3 fili 85-82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.732

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13676/1324138)^2+254562/1456552+0.7*54581/1456552=0.2 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 192.449; My = 32.094; N = -344.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2510^2+30498^2) = 30601 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -30.1; Ty = 366

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -37.4; Ty = 355; Mt = -9.376

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.732
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11937 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -9.376

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.457
Kdef = 0
Uinst tot in x = -0.0002

Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
2.732/0.0007=3842.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.639
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
2.732/0.0004=7137.4 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.457
Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
2.732/0.0009=2989 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 257: Trave in legno a falda Falda 3 fili 77-78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6529/1165241+280026/1456552+0.7*26833/1456552=0.21 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 211.7; My = 15.778; N = 164.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(984^2+33751^2) = 33765 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -11.8; Ty = 405

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -16.4; Ty = 395.3; Mt = -9.841

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.725
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12528 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -9.841

Asta 258: Trave in legno a falda Falda 3 fili 66-67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.726

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
369446/1456552+0.7*28600/1456552=0.27 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 279.301; My = -16.817

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1011^2+37312^2) = 37326 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 12.1; Ty = 447.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.7; Ty = 442.4; Mt = -6.748

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.726
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8591 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.748

Asta 259: Trave in legno a falda Falda 3 fili 57-58

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.738

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
502555/1456552+0.7*36273/1456552=0.36 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 379.931; My = -21.328

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1232^2+40971^2) = 40990 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 14.8; Ty = 491.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 14.7; Ty = 488.9; Mt = -1.48

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.738
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2061 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -1.619

Asta 260: Trave in legno a falda Falda 4 fili 95-308

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.134

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
77407/873931+241422/1092414+0.7*175292/1092414=0.42 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 182.515; My = -103.072; N = 1950.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(11749^2+24725^2) = 27374 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 141; Ty = 296.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 153.9; Ty = 401.8; Mt = -6.415

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.133
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8166 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -6.415

Asta 261: Trave in legno a falda Falda 4 fili 86-87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.535

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.352
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
47219/1165241+288279/1456552+0.7*12500/1456552=0.24 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -217.939; My = 7.35; N = 1189.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1753^2+24236^2) = 24299 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -21; Ty = 290.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -19; Ty = 287.6; Mt = 2.057

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.535
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2787 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 2.189

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.352
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0014
Uinst tot = 0.0014
Luce/Uinst,tot > limite
2.535/0.0014=1802.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.267
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006

Luce/Uinst,var > limite
2.535/0.0006=4462.5 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.352
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0019
Ufin = 0.0019
Luce/Ufin > limite
2.535/0.0019=1320.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 262: Trave in legno a falda Falda 4 fili 80-81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.577

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
245871/2002759+0.7*5602/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Mx = -185.878; My = 3.294

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(960^2+17146^2) = 17173 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -11.5; Ty = -205.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -11.5; Ty = -205.8; Mt = 4.145

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5354 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 4.206

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.789
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003

Luce/Uinst,tot > limite
1.577/0.0003=5775.1 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.789
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.577/0.0001=12875.7 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.789
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
1.577/0.0004=4321.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 263: Trave in legno a falda Falda 4 fili 69-70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.619

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
239411/2002759+0.7*56016/2002759=0.14 <= 1 (formula 4.4.5a) Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mx = 180.995; My = -32.937

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5718^2+24393^2) = 25054 <= 265517 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = -68.6; Ty = -292.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -87.4; Ty = 19.9; Mt = 7.295

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d

9287 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = 7.295

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.31
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.619/0=55993.7 > 300 Comb: SLE rara, 13

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.351
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.619/0=114797.4 > 300 Comb: SLE rara, 10

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.31
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.619/0=42375.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,400 = 1,000

Asta 264: Trave in legno a falda Falda 3 fili 48-49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.076

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(654^2+27128^2) = 27136 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7.9; Ty = 325.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31486/1324138)^2+202616/1456552+0.7*19828/1456552=0.15 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 153.178; My = 11.659; N = -793.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -7.1; Ty = 324.1; Mt = -0.816

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.076
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1051 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -0.826

Asta 265: Trave in legno a falda Falda 3 fili 40-41

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.064

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5477^2+24605^2) = 25207 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -65.7; Ty = 295.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.063
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(55109/1324138)^2+154588/1456552+0.7*59594/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -116.868; My = -35.041; N = -1388.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -65.7; Ty = 295.3; Mt = 4.519

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.063
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5781 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 4.541

Asta 266: Trave in legno a falda Falda 3 fili 32-34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(74116/1324138)^2+187269/1456552+0.7*16749/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 141.575; My = -9.849; N = -1867.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(575^2+27787^2) = 27793 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -6.9; Ty = -333.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.9; Ty = -332.7; Mt = -3.374

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4369 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -3.432

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.321
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
2.642/0.0007=4035.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.233
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.642/0.0003=7749.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.321
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0008
Ufin = 0.0008
Luce/Ufin > limite
2.642/0.0008=3125.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 267: Trave in legno a falda Falda 3 fili 21-24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.639

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(26941/1820690)^2+196664/2002759+0.7*37065/2002759=0.11 <= 1 [4.4.7a] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 148.678; My = -21.794; N = -678.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1137^2+18135^2) = 18171 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -13.6; Ty = -217.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -13.6; Ty = -217.6; Mt = -0.778

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3417 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -2.684

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.765
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.639/0.0001=15629.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.765
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.639/0.0001=31879.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.765
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.639/0.0001=11955 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 268: Trave in legno a falda Falda 3 fili 19-18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.692

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13448/1820690)^2+131378/2002759+0.7*40308/2002759=0.08 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 99.322; My = -23.701; N = -338.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(2338^2+13747^2) = 13944 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 28.1; Ty = -165

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -31.2; Ty = -106; Mt = -1.046

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1397 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -1.097

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.438
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.692/0=145922.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.392
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.692/0=202658.9 > 300 Comb: SLE rara, 10

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.438

Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.692/0=124473.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 269: Trave in legno a falda Falda 3 fili 49-50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(518^2+34714^2) = 34718 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = -416.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.881
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(47213/1324138)^2+266628/1456552+0.7*3699/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -201.571; My = 2.175; N = -1189.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = -416.6; Mt = -3.377

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4402 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -3.457

Asta 270: Trave in legno a falda Falda 3 fili 78-79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.966

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
86023/1456552+0.7*62480/1456552=0.09 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -65.034; My = -36.739

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.965
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5967^2+12953^2) = 14261 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 71.6; Ty = -155.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 51.5; Ty = 41.9; Mt = -3.439

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.965
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4378 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.439

Asta 271: Trave in legno a falda Falda 3 fili 67-68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.989

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3541^2+22378^2) = 22657 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 42.5; Ty = -268.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.398
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8745/1324138)^2+173520/1456552+0.7*37190/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -131.181; My = -21.868; N = -220.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.989

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 47; Ty = -264.6; Mt = -2.169

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3860 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -3.032

Asta 272: Trave in legno a falda Falda 3 fili 58-52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(392^2+44517^2) = 44519 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4.7; Ty = -534.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(27861/1324138)^2+630571/1456552+0.7*2797/1456552=0.43 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 476.712; My = 1.645; N = -702.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4.7; Ty = -534.2; Mt = 1.544

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2024 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 1.59

Asta 273: Trave in legno a falda Falda 3 fili 41-42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1161^2+33729^2) = 33749 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -13.9; Ty = -404.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.881
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(60820/1324138)^2+256386/1456552+0.7*15047/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -193.828; My = 8.847; N = -1532.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -13.9; Ty = -404.7; Mt = -5.649

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7254 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -5.698

Asta 274: Trave in legno a falda Falda 1 fili 92-91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(197^2+34482^2) = 34483 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 2.4; Ty = -413.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(17535/1324138)^2+331092/1456552+0.7*4184/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 250.305; My = 2.46; N = -441.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 2.4; Ty = -413.7; Mt = 2.176

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2771 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.176

Asta 275: Trave in legno a falda Falda 1 fili 100-99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(288^2+34619^2) = 34620 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 3.5; Ty = -415.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(15779/1324138)^2+334750/1456552+0.7*3973/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 253.071; My = 2.336; N = -397.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 3.5; Ty = -415.4; Mt = -2.699

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3436 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.699

Asta 276: Trave in legno a falda Falda 1 fili 112-111

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(129^2+29333^2) = 29333 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -1.5; Ty = -352

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18297/1324138)^2+252587/1456552+0.7*2293/1456552=0.17 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 190.956; My = -1.348; N = -461.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -1.5; Ty = -352; Mt = -6.442

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8201 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.442

Asta 277: Trave in legno a falda Falda 1 fili 119-124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.292

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
17928/1602207+67136/2002759+0.7*46920/2002759=0.06 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 50.755; My = 27.589; N = 451.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d

Sqrt(12264^2+25324^2) = 28137 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -147.2; Ty = 303.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -147.2; Ty = 303.9; Mt = 7.982

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.292
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
10161 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = 7.982

Asta 278: Trave in legno a falda Falda 1 fili 119-124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.128

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1398^2+21816^2) = 21861 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 16.8; Ty = -261.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31905/1324138)^2+127123/1456552+0.7*42824/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 96.105; My = 25.181; N = -804

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 16.8; Ty = -261.8; Mt = -2.533

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3225 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -2.533

Asta 279: Trave in legno a falda Falda 1 fili 131-130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(397^2+41305^2) = 41307 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.8; Ty = 495.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.21
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(47952/1324138)^2+375110/1456552+0.7*1622/1456552=0.26 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -283.583; My = -0.954; N = -1208.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -4.9; Ty = 495.6; Mt = 0.263

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
387 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 0.304

Asta 280: Trave in legno a falda Falda 1 fili 140-139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(68^2+43013^2) = 43013 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.8; Ty = 516.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.21
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)

(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(54201/1324138)^2+415672/1456552+0.7*886/1456552=0.29 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -314.248; My = 0.521; N = -1365.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.8; Ty = 516.2; Mt = -0.107

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
220 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -0.173

Asta 281: Trave in legno a falda Falda 1 fili 146-145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(551^2+39909^2) = 39913 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.6; Ty = 478.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36940/1324138)^2+356808/1456552+0.7*23921/1456552=0.26 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 269.747; My = -14.066; N = -930.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.6; Ty = 478.9; Mt = 0.105

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
350 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 0.275

Asta 282: Trave in legno a falda Falda 1 fili 161-160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(243^2+25050^2) = 25052 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = -300.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(34666/1324138)^2+166020/1456552+0.7*9365/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 125.511; My = -5.507; N = -873.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3; Ty = -299.9; Mt = 6.48

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8250 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 6.48

Asta 283: Trave in legno a falda Falda 1 fili 170-169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(328^2+30556^2) = 30558 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -3.9; Ty = -366.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14060/1324138)^2+276248/1456552+0.7*9656/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 208.843; My = -5.677; N = -354.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -3.9; Ty = -366.6; Mt = 6.192

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7883 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 6.192

Asta 284: Trave in legno a falda Falda 1 fili 188-187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(743^2+33225^2) = 33233 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.9; Ty = -398.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33637/1324138)^2+318883/1456552+0.7*16623/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 241.075; My = -9.774; N = -847.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -8.7; Ty = -398.5; Mt = -3.399

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4328 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media

Mt = -3.399

Asta 285: Trave in legno a falda Falda 1 fili 179-178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(877^2+35231^2) = 35242 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -10.5; Ty = -422.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18639/1324138)^2+348934/1456552+0.7*18229/1456552=0.25 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 263.794; My = -10.719; N = -469.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -10.5; Ty = -422.8; Mt = 1.664

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2118 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 1.664

Asta 329: Trave in legno a falda Falda 6 fili 236-233

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.778

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(802^2+27766^2) = 27778 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 9.6; Ty = -333.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(42348/1324138)^2+257011/1456552+0.7*17217/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 194.3; My = 10.124; N = -1067.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 9.2; Ty = -331.2; Mt = -3.352

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4267 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -3.352

Asta 330: Trave in legno a falda Falda 6 fili 242-239

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.832

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4561^2+28470^2) = 28833 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 54.7; Ty = -341.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(61221/1324138)^2+211454/1456552+0.7*23545/1456552=0.16 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 159.859; My = 13.844; N = -1542.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 54.7; Ty = -341.6; Mt = -10.858

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8

τ,tor,d <= Ksh * fv,d
13823 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -10.858

Asta 331: Trave in legno a falda Falda 4 fili 147-314

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(427^2+48181^2) = 48183 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.1; Ty = 578.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(40846/1324138)^2+566859/1456552+0.7*15757/1456552=0.4 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 428.545; My = -9.265; N = -1029.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.1; Ty = 578.2; Mt = -6.043

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7693 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -6.043

Asta 332: Trave in legno a falda Falda 4 fili 315-316

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(497^2+44014^2) = 44017 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6; Ty = 528.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18950/1324138)^2+626700/1456552+0.7*16510/1456552=0.44 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 473.785; My = -9.708; N = -477.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6.3; Ty = 528.1; Mt = -8.912

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11346 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -8.912

Asta 333: Trave in legno a falda Falda 4 fili 141-313

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(49^2+50201^2) = 50201 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.6; Ty = 602.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37900/1324138)^2+599952/1456552+0.7*2031/1456552=0.41 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 453.564; My = -1.194; N = -955.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.07 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.6; Ty = 602.4; Mt = -0.585

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
745 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -0.585

Asta 334: Trave in legno a falda Falda 4 fili 132-312

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(410^2+48665^2) = 48667 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -4.9; Ty = 584

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37523/1324138)^2+571323/1456552+0.7*15186/1456552=0.4 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 431.92; My = 8.93; N = -945.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -4.9; Ty = 584; Mt = 5.043

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6420 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 5.043

Asta 335: Trave in legno a falda Falda 4 fili 120-311

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(470^2+43820^2) = 43822 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5.6; Ty = 525.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25233/1324138)^2+550704/1456552+0.7*14705/1456552=0.39 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 416.332; My = 8.647; N = -635.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5.6; Ty = 525.8; Mt = 8.658

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11023 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 8.658

Asta 493: Trave in legno a falda Falda 1 fili 91-90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
318639/1456552+0.7*3457/1456552=0.22 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 240.891; My = 2.033

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(154^2+25746^2) = 25746 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -1.8; Ty = 308.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Tx = -1.8; Ty = 308.9; Mt = -0.35

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1779 <= 316724 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = -1.397

Asta 494: Trave in legno a falda Falda 1 fili 99-98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
326605/1456552+0.7*5186/1456552=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 246.913; My = 3.05

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(57^2+28345^2) = 28345 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.7; Ty = 340.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.7; Ty = 340.1; Mt = 0.134

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1755 <= 316724 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = 1.379

Asta 495: Trave in legno a falda Falda 1 fili 111-110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
248582/1456552+0.7*4309/1456552=0.17 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 187.928; My = 2.534

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(18^2+26549^2) = 26549 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.2; Ty = 318.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.1; Ty = 318.6; Mt = 0.644

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1354 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 1.063

Asta 496: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.551

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(22692^2+6593^2) = 23630 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 272.3; Ty = 79.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37371/1820690)^2+0.7*38367/2002759+139070/2002759=0.08 <= 1 [4.4.7b] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = 29.005; My = -81.773; N = -941.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.551
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -124; Ty = -153; Mt = -5.102

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.551
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6495 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -5.102

Asta 497: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.365
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
25677/1602207+0.7*37458/2002759+56936/2002759=0.06 <= 1 [4.4.6b] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 28.318; My = -33.478; N = 647

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(20302^2+1693^2) = 20373 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 243.6; Ty = 20.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = 46.4; Ty = -78.4; Mt = -3.519

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4480 <= 316724 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = -3.519

Asta 498: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34004/1602207+0.7*23687/2002759+72893/2002759=0.07 <= 1 [4.4.6b] Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mx = -17.908; My = -42.861; N = 856.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(24073^2+3231^2) = 24289 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 288.9; Ty = 38.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0.01+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 250.2; Ty = 73.3; Mt = 2.692

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4247 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -3.336

Asta 499: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
27251/1602207+0.7*29433/2002759+135577/2002759=0.09 <= 1 [4.4.6b] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = -22.251; My = 79.72; N = 686.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(30287^2+15601^2) = 34070 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 363.4; Ty = -187.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.391

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 307.6; Ty = -130.2; Mt = 5.221

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
8007 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -6.289

Asta 500: Trave in legno a falda Falda 1 fili 160-159

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1041^2+18597^2) = 18626 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 12.5; Ty = 223.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(22634/1324138)^2+160848/1456552+0.7*16081/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 121.601; My = -9.456; N = -570.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 13.3; Ty = 223.1; Mt = -1.036

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1401 <= 230345 Comb: SLU, 83; Durata minima del carico nella combinazione: media
Mt = -1.101

Asta 501: Trave in legno a falda Falda 1 fili 169-168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
271123/1456552+0.7*16379/1456552=0.19 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 204.969; My = -9.631

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(722^2+25953^2) = 25964 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 8.7; Ty = 311.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 8.7; Ty = 311.4; Mt = -0.27

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
615 <= 230345 Comb: SLU, 60; Durata minima del carico nella combinazione: media
Mt = -0.483

Asta 502: Trave in legno a falda Falda 1 fili 187-186

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(827^2+23829^2) = 23843 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.9; Ty = 285.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(17444/1324138)^2+306213/1456552+0.7*15380/1456552=0.22 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 231.497; My = -9.044; N = -439.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 10; Ty = 285.9; Mt = 0.288

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1250 <= 316724 Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Mt = 0.982

Asta 503: Trave in legno a falda Falda 1 fili 178-177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
339989/1456552+0.7*18093/1456552=0.24 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 257.032; My = -10.639

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(768^2+28815^2) = 28825 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.2; Ty = 345.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 8.5; Ty = 344.7; Mt = 0.207

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1394 <= 316724 Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mt = -1.095

Asta 504: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.922

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
38947/1160960+34984/1451200+0.7*1389/1451200=0.06 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 53.736; My = 1.423; N = 1495.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(23^2+5117^2) = 5117 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 0.4; Ty = 93.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.922
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 15; Ty = -25.8; Mt = -1.618

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.922
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1140 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -1.618

Asta 505: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.265

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.265
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
38242/1596320+20825/1995400+0.7*8323/1995400=0.04 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 31.987; My = 8.523; N = 1468.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(315^2+5405^2) = 5414 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = 98.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 14.4; Ty = 24.2; Mt = -8.253

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.265
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5816 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -8.253

Asta 506: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.308

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6350/1160960+85024/1451200+0.7*34810/1451200=0.08 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 130.597; My = -35.645; N = 243.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1975^2+7693^2) = 7942 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -36.1; Ty = -140.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -39.8; Ty = -137.6; Mt = -13.453

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9481 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -13.453

Asta 507: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.095

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
39750/1160960+90210/1451200+0.7*55707/1451200=0.12 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -138.563; My = 57.044; N = 1526.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6685^2+4163^2) = 7875 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -122.2; Ty = -76.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -122.2; Ty = -76.1; Mt = 3.999

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2818 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.999

Asta 508: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.26

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.26
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18503/1160960+0.7*64916/1451200+140989/1451200=0.14 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -99.711; My = 144.373; N = 710.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(40836^2+9586^2) = 41946 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 746.7; Ty = 175.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0.04+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 746; Ty = 174.8; Mt = -57.194

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.26
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
40308 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -57.194

Asta 509: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.958

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10164^2+7385^2) = 12564 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -185.9; Ty = 135

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.958
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5479/1324138)^2+0.7*67963/1451200+88225/1451200=0.09 <= 1 [4.4.7b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -104.391; My = -90.342; N = -210.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -184.5; Ty = 135.1; Mt = 15.435

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.958
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10878 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 15.435

Asta 510: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.358

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(25232^2+5073^2) = 25737 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 461.4; Ty = 92.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(22024/1324138)^2+0.7*44880/1451200+114516/1451200=0.1 <= 1 [4.4.7b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -68.936; My = 117.265; N = -845.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0.02+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 461.4; Ty = 92.8; Mt = -55.719

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
39268 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -55.719

Asta 511: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.86

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6917^2+10708^2) = 12748 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -126.5; Ty = -195.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(35887/1324138)^2+112739/1451200+0.7*39861/1451200=0.1 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 173.167; My = -40.818; N = -1378

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -129.4; Ty = -191.7; Mt = 41.533

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
29271 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 41.533

Asta 512: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.643

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
60089/1160960+55047/1451200+0.7*3380/1451200=0.09 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 84.552; My = 3.461; N = 2307.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1246^2+7253^2) = 7359 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -22.8; Ty = 132.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -22.8; Ty = 132.6; Mt = -0.975

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
687 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media

Mt = -0.975

Asta 513: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.36

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.36
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
59784/1160960+0.7*14336/1451200+26763/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 22.02; My = 27.405; N = 2295.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5608^2+10510^2) = 11912 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 102.5; Ty = 192.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.36
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -32.5; Ty = -150.8; Mt = 4.922

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.36
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3469 <= 325259 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = 4.922

Asta 514: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.94

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.94
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
56672/1160960+0.7*4446/1451200+48202/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -6.829; My = -49.359; N = 2176.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4346^2+4604^2) = 6331 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -79.5; Ty = 84.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -70.2; Ty = 38.1; Mt = -9.043

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.94
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6373 <= 325259 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = -9.043

Asta 515: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.288

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.288
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
44013/1160960+0.7*3743/1451200+52210/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -5.75; My = 53.463; N = 1690.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(19586^2+2029^2) = 19691 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 358.1; Ty = 37.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.01+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 346.9; Ty = 149.3; Mt = -19.507

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.288
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1

τ,tor,d <= Ksh * fv,d
13747 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -19.507

Asta 516: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.109

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34636/1160960+45205/1451200+0.7*44966/1451200=0.08 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 69.435; My = -46.045; N = 1330

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3759^2+5673^2) = 6805 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -68.7; Ty = -103.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -69.8; Ty = -102.9; Mt = 10.118

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7133 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 10.121

Asta 517: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.17

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(16309^2+1729^2) = 16401 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 298.2; Ty = -31.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(17537/1324138)^2+0.7*72356/1451200+120281/1451200=0.12 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 111.138; My = 123.168; N = -673.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0.01+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 298.2; Ty = -31.6; Mt = 35.317

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24896 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 35.325

Asta 518: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.178

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
44864/1160960+106957/1451200+0.7*54238/1451200=0.14 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -164.285; My = 55.54; N = 1722.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.178
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5068^2+4111^2) = 6526 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -92.7; Ty = -75.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -42.5; Ty = 42; Mt = -2.445

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.178

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1723 <= 325259 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -2.445

Asta 519: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.195

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3605^2+11743^2) = 12284 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -65.9; Ty = 214.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.195
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7236/1324138)^2+98138/1451200+0.7*38258/1451200=0.09 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -150.74; My = -39.176; N = -277.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -63.6; Ty = 211.2; Mt = 5.14

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.195
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3622 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 5.14

Asta 520: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.262

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1492^2+4947^2) = 5167 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 27.3; Ty = -90.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(43568/1324138)^2+74142/1451200+0.7*14109/1451200=0.06 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 113.883; My = 14.448; N = -1673

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 28.8; Ty = -87.3; Mt = -13.869

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9774 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -13.869

Asta 786: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.994

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1581^2+8197^2) = 8348 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -28.9; Ty = -149.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9624/1324138)^2+164616/1451200+0.7*18613/1451200=0.12 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 252.85; My = -19.06; N = -369.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente

Tx = -13.8; Ty = -59.1; Mt = 3.016

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2126 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 3.016

Asta 787: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
280345/1451200+0.7*140321/1451200=0.26 <= 1 (formula 4.4.5a) Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 430.61; My = -143.688

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10729^2+13689^2) = 17393 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -196.2; Ty = -250.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -225.1; Ty = -186.6; Mt = 35.827

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
25249 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 35.827

Asta 788: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.624

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
653612/1451200+0.7*178217/1451200=0.54 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 1003.948; My = -182.495

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5362^2+50076^2) = 50363 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -98; Ty = -915.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -40.8; Ty = -874.2; Mt = 31.938

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
18304 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 25.972

Asta 789: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.056

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(17441^2+65670^2) = 67947 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 318.9; Ty = 1200.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6716/1324138)^2+623522/1451200+0.7*248226/1451200=0.55 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 957.73; My = -254.183; N = -257.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0.12 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 318.9; Ty = 1200.8; Mt = 16.243

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.056
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11819 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 16.77

Asta 790: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9030^2+34774^2) = 35927 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 165.1; Ty = 635.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9003/1324138)^2+545979/1451200+0.7*185475/1451200=0.47 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -838.623; My = 189.926; N = -345.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 164.2; Ty = 632; Mt = 10.914

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7692 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 10.914

Asta 791: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2855^2+9643^2) = 10057 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 52.2; Ty = 176.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9004/1324138)^2+633070/1451200+0.7*207553/1451200=0.54 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -972.395; My = 212.534; N = -345.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 52.3; Ty = 174.2; Mt = 2.798

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1972 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.798

Asta 792: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4122^2+13625^2) = 14235 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -75.4; Ty = -249.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8994/1324138)^2+633495/1451200+0.7*209655/1451200=0.54 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -973.049; My = 214.687; N = -345.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -75.4; Ty = -249.2; Mt = -4.133

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2913 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -4.133

Asta 793: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9460^2+39798^2) = 40907 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -173; Ty = -727.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9011/1324138)^2+506431/1451200+0.7*171286/1451200=0.43 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -777.878; My = 175.397; N = -346

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -172.8; Ty = -726; Mt = -14.219

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10021 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -14.219

Asta 794: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.909

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.909
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(20166^2+69306^2) = 72181 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -368.8; Ty = -1267.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.909
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6750/1324138)^2+640290/1451200+0.7*263509/1451200=0.57 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 983.486; My = -269.833; N = -259.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.909
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0.13 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -368.8; Ty = -1267.3; Mt = -16.303

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.909
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12014 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -17.047

Asta 795: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.771

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
608006/1451200+0.7*183769/1451200=0.51 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 933.898; My = -188.179

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8048^2+41317^2) = 42094 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 147.2; Ty = 755.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 110.4; Ty = 708.6; Mt = -26.193

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.771
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
14510 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -20.589

Asta 796: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3017^2+9735^2) = 10192 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 55.2; Ty = 178

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5509/1324138)^2+237519/1451200+0.7*79739/1451200=0.2 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 364.829; My = -81.653; N = -211.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 55.1; Ty = 125.9; Mt = -31.486

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
22190 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -31.486

Asta 797: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.839

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2417^2+9905^2) = 10196 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 44.2; Ty = 181.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7297/993103)^2+130702/1088400+0.7*31834/1088400=0.14 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 200.758; My = -32.598; N = -280.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 36.3; Ty = 160.6; Mt = 4.132

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2912 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 4.132

Asta 798: Trave in legno a falda Falda 4 fili 182-318

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.93

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(495^2+20105^2) = 20111 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 5.9; Ty = -241.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1

(8298/1324138)^2+142873/1456552+0.7*5473/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 108.012; My = 3.218; N = -209.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6.6; Ty = -230.3; Mt = 11.173

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
10950 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 8.602

Asta 799: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.467

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(22^2+25667^2) = 25667 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 0.3; Ty = -308

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10741/1324138)^2+136981/1456552+0.7*2927/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 103.558; My = -1.721; N = -270.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -1.1; Ty = 84.6; Mt = 3.512

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4471 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 3.512

Asta 800: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
87971/1456552+0.7*7938/1456552=0.06 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 66.506; My = 4.668

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1706^2+3393^2) = 3798 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -20.5; Ty = -40.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Tx = -30; Ty = -44.2; Mt = 10.422

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
13269 <= 230345 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Mt = 10.422

Asta 801: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7578/1602207+33627/2002759+0.7*23711/2002759=0.03 <= 1 [4.4.6a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = -25.422; My = -13.942; N = 191

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5895^2+14366^2) = 15528 <= 265517 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -70.7; Ty = 172.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = -79.8; Ty = 164.8; Mt = -10.072

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
12823 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -10.072

Asta 802: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.612

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.393
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
154074/1456552+0.7*5964/1456552=0.11 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -116.48; My = 3.507

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(180^2+25092^2) = 25093 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -2.2; Ty = -301.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -2.2; Ty = 107.4; Mt = -3.565

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4539 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -3.565

Asta 803: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2087^2+21270^2) = 21372 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 25; Ty = -255.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8474/1324138)^2+105389/1456552+0.7*3362/1456552=0.07 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 79.674; My = -1.977; N = -213.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 25; Ty = -255.2; Mt = -8.123

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10341 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -8.123

Asta 804: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(444^2+17498^2) = 17503 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 5.3; Ty = -210

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9026/1324138)^2+37741/1456552+0.7*3813/1456552=0.03 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 28.533; My = -2.242; N = -227.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 5.3; Ty = -210; Mt = -5.83

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7422 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -5.83

Asta 805: Trave in legno a falda Falda 4 fili 103-309

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.091

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(142^2+21095^2) = 21096 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 1.7; Ty = -253.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7796/1324138)^2+139970/1456552+0.7*6253/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 105.817; My = 3.677; N = -196.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 2.1; Ty = -239.9; Mt = -11.345

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11598 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente

Mt = -9.11

Asta 806: Trave in legno a falda Falda 4 fili 319-192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.101
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9524/1165241+269407/1456552+0.7*1653/1456552=0.19 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -203.672; My = 0.972; N = 240

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(85^2+25793^2) = 25793 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1; Ty = -309.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1; Ty = -309.5; Mt = 1.517

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3297 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 2.59

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.18
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0012
Uinst tot = 0.0012
Luce/Uinst,tot > limite
2.359/0.0012=2015.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.18
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
2.359/0.0005=5203.9 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.18
Kdef = 0.6
Ufin in x = 0

Ufin in y = -0.0016
Ufin = 0.0016
Luce/Ufin > limite
2.359/0.0016=1466.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 807: Trave in legno a falda Falda 4 fili 308-96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.18
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
68340/1165241+326019/1456552+0.7*1347/1456552=0.28 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -246.47; My = -0.792; N = 1722.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3^2+24446^2) = 24446 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0; Ty = 293.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0; Ty = 293.4; Mt = -1.574

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3490 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -2.742

Asta 808: Trave in legno a falda Falda 4 fili 314-149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(479^2+33070^2) = 33074 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5.7; Ty = -396.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.708
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(55006/1324138)^2+244211/1456552+0.7*9671/1456552=0.17 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -184.624; My = -5.687; N = -1386.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 5.7; Ty = -396.8; Mt = 9.624

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12343 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 9.695

Asta 809: Trave in legno a falda Falda 4 fili 316-163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
307301/2002759+0.7*18852/2002759=0.16 <= 1 (formula 4.4.5a) Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mx = 232.32; My = 11.085

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(823^2+27455^2) = 27468 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.9; Ty = -329.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.9; Ty = -329.5; Mt = 14.453

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18532 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 14.557

Asta 810: Trave in legno a falda Falda 4 fili 313-143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(18^2+35371^2) = 35371 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.2; Ty = -424.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.629
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(53961/1324138)^2+299845/1456552+0.7*1065/1456552=0.21 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -226.682; My = -0.626; N = -1359.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.2; Ty = -424.4; Mt = 0.868

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1111 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 0.873

Asta 811: Trave in legno a falda Falda 4 fili 312-134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(401^2+33531^2) = 33533 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.8; Ty = -402.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.708
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(52511/1324138)^2+260398/1456552+0.7*8334/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -196.861; My = 4.9; N = -1323.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.8; Ty = -402.4; Mt = -8.095

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10388 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -8.16

Asta 812: Trave in legno a falda Falda 4 fili 311-122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(698^2+27729^2) = 27738 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.4; Ty = -332.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6321/1820690)^2+301898/2002759+0.7*4351/2002759=0.15 <= 1 [4.4.7a] Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mx = 228.235; My = -2.558; N = -159.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.4; Ty = -332.7; Mt = -13.898

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17826 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -14.003

Asta 813: Trave in legno a falda Falda 4 fili 318-184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7854/1602207+240034/2002759+0.7*17864/2002759=0.13 <= 1 [4.4.6a] Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mx = 181.466; My = 10.504; N = 197.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(87^2+26137^2) = 26137 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -1; Ty = 313.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0; Ty = 311.4; Mt = 4.616

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5414 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 4.253

Asta 814: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
21023/873931+47044/1092414+0.7*31304/1092414=0.09 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -35.566; My = -18.407; N = 529.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4582^2+28705^2) = 29068 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -55; Ty = -344.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -54.8; Ty = -343.7; Mt = 19.926

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
25368 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 19.926

Asta 815: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
38917/1165241+0.7*27881/1456552+33474/1456552=0.07 <= 1 [4.4.6b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 21.078; My = -19.683; N = 980.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d

Sqrt(9692^2+14697^2) = 17605 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = -116.3; Ty = -176.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -29.7; Ty = -94.2; Mt = 8.442

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
10747 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 8.442

Asta 816: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.923

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
45801/873931+259489/1092414+0.7*18015/1092414=0.3 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 196.174; My = -10.593; N = 1154.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1385^2+29917^2) = 29949 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -16.6; Ty = -359

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -16.6; Ty = -359; Mt = 9.113

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11687 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 9.18

Asta 817: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.015
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
58172/1602207+57905/2002759+0.7*44472/2002759=0.08 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = -43.776; My = 26.149; N = 1465.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(16179^2+23320^2) = 28383 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 194.2; Ty = -279.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 178.3; Ty = -250.7; Mt = -5.811

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7398 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -5.811

Asta 818: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
60090/1602207+0.7*39075/2002759+42683/2002759=0.07 <= 1 [4.4.6b] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 29.54; My = 25.098; N = 1514.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(13486^2+12746^2) = 18556 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 161.8; Ty = -152.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 145; Ty = -117.7; Mt = -3.489

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4442 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -3.489

Asta 819: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.923

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
47761/1602207+183331/2002759+0.7*62843/2002759=0.14 <= 1 [4.4.6a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 138.599; My = 36.952; N = 1203.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(791^2+20579^2) = 20594 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.5; Ty = -247

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.5; Ty = -247; Mt = -12.252

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
15701 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -12.333

Asta 820: Trave in legno a falda Falda 4 fili 309-105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
25229/1602207+204678/2002759+0.7*20820/2002759=0.13 <= 1 [4.4.6a] Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mx = 154.737; My = 12.242; N = 635.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(460^2+25727^2) = 25732 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 5.5; Ty = 308.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.8; Ty = 305.2; Mt = -4.898

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5373 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -4.22

1.6 Verifiche superelementi in legno

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Area: *area inerziale nel sistema geometrico centrato nel baricentro. [m²]*
Jx: *momento d'inerzia attorno all'asse orizzontale baricentrico di definizione della sezione. [m4]*
Jy: *momento d'inerzia attorno all'asse verticale baricentrico di definizione della sezione. [m4]*
Wx: *modulo di resistenza elastico minimo relativo all'asse x. [m³]*
Wy: *modulo di resistenza elastico minimo relativo all'asse y. [m³]*

Superelemento in legno a "Falda 1" 26-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 19.977 composto da:
asta 105: Trave in legno a falda Falda 1 fili 26-126 (L = 0.882)
asta 106: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)

asta 107: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 108: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 109: Trave in legno a falda Falda 1 fili 26-126 (L = 0.499)
asta 110: Trave in legno a falda Falda 1 fili 26-126 (L = 0.341)
asta 111: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 112: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 113: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 114: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 115: Trave in legno a falda Falda 1 fili 26-126 (L = 1.039)
asta 101: Trave in legno a falda Falda 1 fili 126-154 (L = 0.641)
asta 102: Trave in legno a falda Falda 1 fili 126-154 (L = 0.84)
asta 103: Trave in legno a falda Falda 1 fili 126-154 (L = 0.84)
asta 104: Trave in legno a falda Falda 1 fili 126-154 (L = 0.454)
asta 90: Trave in legno a falda Falda 1 fili 154-245 (L = 0.386)
asta 91: Trave in legno a falda Falda 1 fili 154-245 (L = 0.829)
asta 92: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 93: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 94: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 95: Trave in legno a falda Falda 1 fili 154-245 (L = 1)
asta 96: Trave in legno a falda Falda 1 fili 154-245 (L = 0.68)
asta 97: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 98: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 99: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 100: Trave in legno a falda Falda 1 fili 154-245 (L = 0.626)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 13.751
Kdef = 0
Uinst tot in x = -0.0017
Uinst tot in y = -0.0028
Uinst tot = 0.0028
Luce/Uinst,tot > limite
19.977/0.0028=7119.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 6.314
Kdef = 0
Uinst var in x = -0.0008
Uinst var in y = -0.0013
Uinst var = 0.0013
Luce/Uinst,var > limite
19.977/0.0013=15044.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 14.2
Kdef = 0.6
Ufin in x = -0.0023
Ufin in y = -0.0037
Ufin = 0.0037
Luce/Ufin > limite
19.977/0.0037=5376.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 39-(-2154; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.4 composto da:

asta 212: Trave in legno a falda Falda 1 fili 39-38 (L = 0.981)
asta 207: Trave in legno a falda Falda 1 fili 38-37 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.868
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0013
Uinst tot = 0.0013
Luce/Uinst,tot > limite
3.4/0.0013=2534.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.868
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
3.4/0.0008=4411 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.9
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0017
Ufin = 0.0017
Luce/Ufin > limite
3.4/0.0017=2013.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 47-(-2070; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.33 composto da:
asta 211: Trave in legno a falda Falda 1 fili 47-46 (L = 1.911)
asta 206: Trave in legno a falda Falda 1 fili 46-45 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.556
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0018
Uinst tot = 0.0018
Luce/Uinst,tot > limite
4.33/0.0018=2446.5 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.556
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
4.33/0.001=4255.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.62
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0022
Ufin = 0.0022
Luce/Ufin > limite
4.33/0.0022=1946.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 15.41 composto da:
asta 21: Trave in legno a falda Falda 1 fili 51-230 (L = 0.301)
asta 22: Trave in legno a falda Falda 1 fili 51-230 (L = 0.624)
asta 23: Trave in legno a falda Falda 1 fili 51-230 (L = 0.216)
asta 24: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 25: Trave in legno a falda Falda 1 fili 51-230 (L = 0.604)
asta 26: Trave in legno a falda Falda 1 fili 51-230 (L = 0.236)
asta 27: Trave in legno a falda Falda 1 fili 51-230 (L = 0.564)
asta 28: Trave in legno a falda Falda 1 fili 51-230 (L = 0.276)
asta 29: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 30: Trave in legno a falda Falda 1 fili 51-230 (L = 0.324)
asta 31: Trave in legno a falda Falda 1 fili 51-230 (L = 0.191)
asta 32: Trave in legno a falda Falda 1 fili 51-230 (L = 0.325)
asta 33: Trave in legno a falda Falda 1 fili 51-230 (L = 0.284)
asta 34: Trave in legno a falda Falda 1 fili 51-230 (L = 0.268)
asta 35: Trave in legno a falda Falda 1 fili 51-230 (L = 0.287)
asta 36: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 37: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 38: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 39: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 40: Trave in legno a falda Falda 1 fili 51-230 (L = 0.434)
asta 41: Trave in legno a falda Falda 1 fili 51-230 (L = 0.366)
asta 42: Trave in legno a falda Falda 1 fili 51-230 (L = 0.434)
asta 43: Trave in legno a falda Falda 1 fili 51-230 (L = 0.435)
asta 44: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 45: Trave in legno a falda Falda 1 fili 51-230 (L = 0.18)
asta 46: Trave in legno a falda Falda 1 fili 51-230 (L = 0.66)
asta 47: Trave in legno a falda Falda 1 fili 51-230 (L = 0.14)
asta 48: Trave in legno a falda Falda 1 fili 51-230 (L = 0.7)
asta 49: Trave in legno a falda Falda 1 fili 51-230 (L = 0.902)
asta 50: Trave in legno a falda Falda 1 fili 51-230 (L = 0.778)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 7.805

Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
15.41/0.0002=73085.2 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.813
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
15.41/0.0001=106960.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 8.039
Kdef = 0.6
Ufin in x = 0.0003
Ufin in y = -0.0002
Ufin = 0.0003
Luce/Ufin > limite
15.41/0.0003=59353 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 57-(-1986; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 191: Trave in legno a falda Falda 1 fili 57-56 (L = 2.516)
asta 205: Trave in legno a falda Falda 1 fili 56-55 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.242
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0015
Uinst tot = 0.0015
Luce/Uinst,tot > limite
4.935/0.0015=3389.4 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.242
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
4.935/0.0009=5780.6 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.325
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0018
Ufin = 0.0018

Luce/Ufin > limite
4.935/0.0018=2714.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 66-(-1902; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 190: Trave in legno a falda Falda 1 fili 66-65 (L = 2.516)
asta 204: Trave in legno a falda Falda 1 fili 65-64 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.645
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
4.935/0.0007=7572 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.645
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
4.935/0.0004=12063.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.809
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0008
Ufin = 0.0008
Luce/Ufin > limite
4.935/0.0008=6146.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 77-(-1818; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 189: Trave in legno a falda Falda 1 fili 77-76 (L = 2.516)
asta 203: Trave in legno a falda Falda 1 fili 76-75 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.645
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
4.935/0.0007=7370.1 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.645
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
4.935/0.0004=12412.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.647
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0008
Ufin = 0.0008
Luce/Ufin > limite
4.935/0.0008=5889 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 85-(-1734; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 188: Trave in legno a falda Falda 1 fili 85-84 (L = 2.516)
asta 202: Trave in legno a falda Falda 1 fili 84-83 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.18
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0021
Uinst tot = 0.0021
Luce/Uinst,tot > limite
4.935/0.0021=2368.9 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.919
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
4.935/0.001=4737.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.096
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0028
Ufin = 0.0028
Luce/Ufin > limite
4.935/0.0028=1792.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 93-(-1650; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 187: Trave in legno a falda Falda 1 fili 93-92 (L = 2.516)
asta 274: Trave in legno a falda Falda 1 fili 92-91 (L = 2.419)
asta 493: Trave in legno a falda Falda 1 fili 91-90 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.18
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0033
Uinst tot = 0.0033
Luce/Uinst,tot > limite
6.659/0.0033=2009.6 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.348
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0016
Uinst var = 0.0016
Luce/Uinst,var > limite
6.659/0.0016=4209 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.18
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0044
Ufin = 0.0044
Luce/Ufin > limite
6.659/0.0044=1523.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 101-(-1566; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 186: Trave in legno a falda Falda 1 fili 101-100 (L = 2.516)
asta 275: Trave in legno a falda Falda 1 fili 100-99 (L = 2.419)
asta 494: Trave in legno a falda Falda 1 fili 99-98 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.096
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0033
Uinst tot = 0.0033
Luce/Uinst,tot > limite
6.659/0.0033=2028.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.264
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0016
Uinst var = 0.0016
Luce/Uinst,var > limite
6.659/0.0016=4266.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.096
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0043
Ufin = 0.0043
Luce/Ufin > limite
6.659/0.0043=1536.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 113-(-1482; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 185: Trave in legno a falda Falda 1 fili 113-112 (L = 2.516)
asta 276: Trave in legno a falda Falda 1 fili 112-111 (L = 2.419)
asta 495: Trave in legno a falda Falda 1 fili 111-110 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.845
Kdef = 0
Uinst tot in x = 0

Uinst tot in y = -0.0022
Uinst tot = 0.0022
Luce/Uinst,tot > limite
6.659/0.0022=3075.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.929
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
6.659/0.001=6496.3 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.845
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0029
Ufin = 0.0029
Luce/Ufin > limite
6.659/0.0029=2328.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 119-(-1398; -357)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.419 composto da:
asta 277: Trave in legno a falda Falda 1 fili 119-124 (L = 0.292)
asta 278: Trave in legno a falda Falda 1 fili 119-124 (L = 2.128)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.285
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.419/0.0003=9467.5 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.285
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
2.419/0.0001=16828.3 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.223
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite

2.419/0.0003=7484.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.516 composto da:
asta 182: Trave in legno a falda Falda 1 fili 120-119 (L = 1.894)
asta 183: Trave in legno a falda Falda 1 fili 120-119 (L = 0.311)
asta 184: Trave in legno a falda Falda 1 fili 120-119 (L = 0.311)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.568
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
2.516/0.0002=12981.7 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.631
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.516/0.0002=16193.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.568
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0002
Ufin = 0.0002
Luce/Ufin > limite
2.516/0.0002=11598.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 132-(-1314; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 181: Trave in legno a falda Falda 1 fili 132-131 (L = 2.516)
asta 279: Trave in legno a falda Falda 1 fili 131-130 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.726
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0039
Uinst tot = 0.0039
Luce/Uinst,tot > limite
6.659/0.0039=1694 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.587
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0023
Uinst var = 0.0023
Luce/Uinst,var > limite
6.659/0.0023=2850.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.809
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0049
Ufin = 0.0049
Luce/Ufin > limite
6.659/0.0049=1360.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 141-(-1230; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 180: Trave in legno a falda Falda 1 fili 141-140 (L = 2.516)
asta 280: Trave in legno a falda Falda 1 fili 140-139 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.726
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0045
Uinst tot = 0.0045
Luce/Uinst,tot > limite
6.659/0.0045=1476.1 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.587
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0027
Uinst var = 0.0027
Luce/Uinst,var > limite
6.659/0.0027=2462.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.809
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0056
Ufin = 0.0056
Luce/Ufin > limite
6.659/0.0056=1188.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 147-(-1146; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 179: Trave in legno a falda Falda 1 fili 147-146 (L = 2.516)
asta 281: Trave in legno a falda Falda 1 fili 146-145 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.726
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0036
Uinst tot = 0.0036
Luce/Uinst,tot > limite
6.659/0.0036=1862.9 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.588
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0021
Uinst var = 0.0021
Luce/Uinst,var > limite
6.659/0.0021=3119.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.81
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0044
Ufin = 0.0044
Luce/Ufin > limite
6.659/0.0044=1497.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 167-(-979; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:

asta 177: Trave in legno a falda Falda 1 fili 167-170 (L = 2.516)
asta 283: Trave in legno a falda Falda 1 fili 170-169 (L = 2.419)
asta 501: Trave in legno a falda Falda 1 fili 169-168 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.845
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0027
Uinst tot = 0.0027
Luce/Uinst,tot > limite
6.659/0.0027=2436.3 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.096
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0012
Uinst var = 0.0012
Luce/Uinst,var > limite
6.659/0.0012=5654.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.845
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0037
Ufin = 0.0037
Luce/Ufin > limite
6.659/0.0037=1803.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 180-(-895; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 176: Trave in legno a falda Falda 1 fili 180-179 (L = 2.516)
asta 285: Trave in legno a falda Falda 1 fili 179-178 (L = 2.419)
asta 503: Trave in legno a falda Falda 1 fili 178-177 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.097
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0037
Uinst tot = 0.0037
Luce/Uinst,tot > limite

6.659/0.0037=1781.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.265
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0016
Uinst var = 0.0016
Luce/Uinst,var > limite
6.659/0.0016=4058.1 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.013
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.005
Ufin = 0.005
Luce/Ufin > limite
6.659/0.005=1324.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 189-(-811; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 175: Trave in legno a falda Falda 1 fili 189-188 (L = 2.516)
asta 284: Trave in legno a falda Falda 1 fili 188-187 (L = 2.419)
asta 502: Trave in legno a falda Falda 1 fili 187-186 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.097
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0035
Uinst tot = 0.0035
Luce/Uinst,tot > limite
6.659/0.0035=1906.5 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.265
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0015
Uinst var = 0.0015
Luce/Uinst,var > limite
6.659/0.0015=4374 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.013
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0047
Ufin = 0.0047
Luce/Ufin > limite
6.659/0.0047=1415.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 200-(-727; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 174: Trave in legno a falda Falda 1 fili 200-199 (L = 2.516)
asta 201: Trave in legno a falda Falda 1 fili 199-198 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.013
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0019
Uinst tot = 0.0019
Luce/Uinst,tot > limite
4.935/0.0019=2588.3 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.265
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
4.935/0.0008=5954.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.929
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0026
Ufin = 0.0026
Luce/Ufin > limite
4.935/0.0026=1915 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 206-205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 171: Trave in legno a falda Falda 1 fili 206-211 (L = 1.894)
asta 172: Trave in legno a falda Falda 1 fili 206-211 (L = 0.311)
asta 173: Trave in legno a falda Falda 1 fili 206-211 (L = 0.311)
asta 199: Trave in legno a falda Falda 1 fili 211-205 (L = 0.292)
asta 200: Trave in legno a falda Falda 1 fili 211-205 (L = 2.127)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.872
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
4.935/0.0003=14505.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.943
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
4.935/0.0002=26554.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.965
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
4.935/0.0004=11235.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 216-(-559; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.934 composto da:
asta 170: Trave in legno a falda Falda 1 fili 216-215 (L = 2.516)
asta 198: Trave in legno a falda Falda 1 fili 215-214 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.564
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
4.934/0.0008=6574.9 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.564
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite

4.934/0.0005=10378.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.728
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
4.934/0.0009=5364.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 230-(-475; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 169: Trave in legno a falda Falda 1 fili 230-229 (L = 2.517)
asta 197: Trave in legno a falda Falda 1 fili 229-228 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.242
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0014
Uinst tot = 0.0014
Luce/Uinst,tot > limite
4.935/0.0014=3465.2 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.242
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
4.935/0.0009=5803.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.326
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0018
Ufin = 0.0018
Luce/Ufin > limite
4.935/0.0018=2787.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 238-(-391; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.988 composto da:
asta 196: Trave in legno a falda Falda 1 fili 238-235 (L = 1.569)
asta 209: Trave in legno a falda Falda 1 fili 235-234 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.295
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0015
Uinst tot = 0.0015
Luce/Uinst,tot > limite
3.988/0.0015=2582.1 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.295
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
3.988/0.0009=4412 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.347
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0019
Ufin = 0.0019
Luce/Ufin > limite
3.988/0.0019=2061.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 244-(-307; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.111 composto da:
asta 195: Trave in legno a falda Falda 1 fili 244-241 (L = 0.692)
asta 208: Trave in legno a falda Falda 1 fili 241-240 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.66
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0011
Uinst tot = 0.0011

Luce/Uinst,tot > limite
3.111/0.0011=2867.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.66
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
3.111/0.0006=4938.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.683
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0014
Ufin = 0.0014
Luce/Ufin > limite
3.111/0.0014=2284.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 315-(-1062; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.66 composto da:
asta 178: Trave in legno a falda Falda 1 fili 315-161 (L = 2.517)
asta 282: Trave in legno a falda Falda 1 fili 161-160 (L = 2.419)
asta 500: Trave in legno a falda Falda 1 fili 160-159 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.242
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
6.66/0.0007=8961.6 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.323
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
6.66/0.0004=16464.3 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.677
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
6.66/0.001=6679.2 > 200
Coefficienti combinatori impiegati:

Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" (-1398; -318)-(-1398; -585)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 1.724 composto da:
asta 496: Trave in legno a falda Falda 1 fili 124-123 (L = 0.551)
asta 497: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)
asta 498: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)
asta 499: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.981
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = 0
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.724/0.0001=30738.5 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.968
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.724/0=59547.8 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.012
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = 0
Ufin = 0.0001
Luce/Ufin > limite
1.724/0.0001=23719.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.656 composto da:
asta 151: Trave in legno a falda Falda 2 fili 32-26 (L = 0.774)
asta 152: Trave in legno a falda Falda 2 fili 32-26 (L = 0.84)
asta 153: Trave in legno a falda Falda 2 fili 32-26 (L = 0.839)
asta 154: Trave in legno a falda Falda 2 fili 32-26 (L = 0.841)
asta 155: Trave in legno a falda Falda 2 fili 32-26 (L = 0.84)
asta 156: Trave in legno a falda Falda 2 fili 32-26 (L = 0.522)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.453
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
4.656/0.0004=12775.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.453
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = 0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.656/0.0003=18332.6 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.507
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0004
Ufin = 0.0004
Luce/Ufin > limite
4.656/0.0004=10861.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 35-(-2463; -67)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.12 composto da:
asta 223: Trave in legno a falda Falda 2 fili 35-27 (L = 0.617)
asta 225: Trave in legno a falda Falda 2 fili 27-4 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.868
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
3.12/0.0005=6890.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.952

Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
3.12/0.0003=11690.3 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.888
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
3.12/0.0006=5488.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 36-(-2463; 269)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.317 composto da:
asta 218: Trave in legno a falda Falda 2 fili 36-31 (L = 0.814)
asta 220: Trave in legno a falda Falda 2 fili 31-8 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.066
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
3.317/0.0003=10329.1 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.066
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
3.317/0.0002=15001.3 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.093
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
3.317/0.0004=8567.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 43-(-2463; 17)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.096 composto da:
asta 222: Trave in legno a falda Falda 2 fili 43-28 (L = 1.592)
asta 224: Trave in legno a falda Falda 2 fili 28-5 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.844
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0006
Uinst tot = 0.0006
Luce/Uinst,tot > limite
4.096/0.0006=7265.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.844
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.096/0.0003=12616 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.897
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0007
Ufin = 0.0007
Luce/Ufin > limite
4.096/0.0007=5742.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 44-(-2463; 185)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.199 composto da:
asta 219: Trave in legno a falda Falda 2 fili 44-30 (L = 1.696)
asta 221: Trave in legno a falda Falda 2 fili 30-7 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.864
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
4.199/0.0005=8582.6 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.864
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.199/0.0003=14129.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.921
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
4.199/0.0006=6853 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 51-(-2504; 101)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.073 composto da:
asta 87: Trave in legno a falda Falda 2 fili 51-29 (L = 2.121)
asta 88: Trave in legno a falda Falda 2 fili 51-29 (L = 0.224)
asta 89: Trave in legno a falda Falda 2 fili 51-29 (L = 0.224)
asta 234: Trave in legno a falda Falda 2 fili 29-6 (L = 0.457)
asta 235: Trave in legno a falda Falda 2 fili 29-6 (L = 2.047)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.131
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
5.073/0.0002=22393.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.118
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
5.073/0.0001=41028.1 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.202
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite
5.073/0.0003=17428.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 51-(-2854; -716)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.692 composto da:
asta 68: Trave in legno a falda Falda 2 fili 51-14 (L = 0.82)
asta 69: Trave in legno a falda Falda 2 fili 51-14 (L = 0.468)
asta 70: Trave in legno a falda Falda 2 fili 51-14 (L = 0.785)
asta 71: Trave in legno a falda Falda 2 fili 51-14 (L = 0.503)
asta 72: Trave in legno a falda Falda 2 fili 51-14 (L = 0.816)
asta 73: Trave in legno a falda Falda 2 fili 51-14 (L = 0.472)
asta 74: Trave in legno a falda Falda 2 fili 51-14 (L = 0.715)
asta 75: Trave in legno a falda Falda 2 fili 51-14 (L = 0.573)
asta 76: Trave in legno a falda Falda 2 fili 51-14 (L = 0.68)
asta 77: Trave in legno a falda Falda 2 fili 51-14 (L = 0.86)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.409
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
6.692/0.0004=15713.2 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.409
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
6.692/0.0002=32390.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.461
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
6.692/0.0006=11977.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 3" 32-(-1176; 346)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.588 composto da:
asta 144: Trave in legno a falda Falda 3 fili 32-307 (L = 0.882)
asta 145: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 146: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 147: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 148: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 149: Trave in legno a falda Falda 3 fili 32-307 (L = 0.833)
asta 150: Trave in legno a falda Falda 3 fili 32-307 (L = 0.513)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.814
Kdef = 0
Uinst tot in x = 0.0022
Uinst tot in y = -0.0054
Uinst tot = 0.0054
Luce/Uinst,tot > limite
5.588/0.0054=1028.9 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.842
Kdef = 0
Uinst var in x = 0.0011
Uinst var in y = -0.0023
Uinst var = 0.0023
Luce/Uinst,var > limite
5.588/0.0023=2443.6 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.899
Kdef = 0.6
Ufin in x = 0.0029
Ufin in y = -0.0075
Ufin = 0.0075
Luce/Ufin > limite
5.588/0.0075=748.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 40-(-2154; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.706 composto da:
asta 265: Trave in legno a falda Falda 3 fili 40-41 (L = 1.064)
asta 273: Trave in legno a falda Falda 3 fili 41-42 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.945
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0022
Uinst tot = 0.0022
Luce/Uinst,tot > limite
3.706/0.0022=1712.9 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.857
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0013
Uinst var = 0.0013
Luce/Uinst,var > limite
3.706/0.0013=2925.5 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.98
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0027
Ufin = 0.0027
Luce/Ufin > limite
3.706/0.0027=1368.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 48-(-2070; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.718 composto da:
asta 264: Trave in legno a falda Falda 3 fili 48-49 (L = 2.076)
asta 269: Trave in legno a falda Falda 3 fili 49-50 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.517
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0035
Uinst tot = 0.0035
Luce/Uinst,tot > limite
4.718/0.0035=1365.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.517
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0021
Uinst var = 0.0021
Luce/Uinst,var > limite
4.718/0.0021=2237.8 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.586
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0043
Ufin = 0.0043
Luce/Ufin > limite
4.718/0.0043=1105.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 57-(-1986; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.38 composto da:
asta 259: Trave in legno a falda Falda 3 fili 57-58 (L = 2.738)
asta 272: Trave in legno a falda Falda 3 fili 58-52 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.556
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0038
Uinst tot = 0.0038
Luce/Uinst,tot > limite
5.38/0.0038=1403.1 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.647
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0026
Uinst var = 0.0026
Luce/Uinst,var > limite
5.38/0.0026=2106 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.556
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0046
Ufin = 0.0046
Luce/Ufin > limite
5.38/0.0046=1168.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 66-68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.715 composto da:
asta 258: Trave in legno a falda Falda 3 fili 66-67 (L = 2.726)
asta 271: Trave in legno a falda Falda 3 fili 67-68 (L = 1.989)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.271
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0028
Uinst tot = 0.0028
Luce/Uinst,tot > limite
4.715/0.0028=1698.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.453
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0021
Uinst var = 0.0021
Luce/Uinst,var > limite
4.715/0.0021=2286.2 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.271
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0032
Ufin = 0.0032
Luce/Ufin > limite
4.715/0.0032=1469.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 77-79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.691 composto da:
asta 257: Trave in legno a falda Falda 3 fili 77-78 (L = 2.725)
asta 270: Trave in legno a falda Falda 3 fili 78-79 (L = 0.966)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.817
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0016
Uinst tot = 0.0016
Luce/Uinst,tot > limite
3.691/0.0016=2358.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.998
Kdef = 0

Uinst var in x = 0
Uinst var in y = -0.0011
Uinst var = 0.0011
Luce/Uinst,var > limite
3.691/0.0011=3284.5 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.726
Kdef = 0.6
Ufin in x = -0.0004
Ufin in y = -0.0018
Ufin = 0.0018
Luce/Ufin > limite
3.691/0.0018=2006.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" (-1961; 589)-(-1104; -347)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.159 composto da:
asta 78: Trave in legno a falda Falda 3 fili 52-109 (L = 1.05)
asta 79: Trave in legno a falda Falda 3 fili 52-109 (L = 1.324)
asta 80: Trave in legno a falda Falda 3 fili 52-109 (L = 1.279)
asta 81: Trave in legno a falda Falda 3 fili 52-109 (L = 1.37)
asta 82: Trave in legno a falda Falda 3 fili 52-109 (L = 1.324)
asta 83: Trave in legno a falda Falda 3 fili 52-109 (L = 0.811)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.791
Kdef = 0
Uinst tot in x = -0.001
Uinst tot in y = 0.0038
Uinst tot = 0.0038
Luce/Uinst,tot > limite
7.159/0.0038=1903.8 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.374
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
7.159/0.0009=7807.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.912
Kdef = 0.6
Ufin in x = -0.0016
Ufin in y = 0.0058
Ufin = 0.0058
Luce/Ufin > limite
7.159/0.0058=1229.6 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600

Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 3" (-2458; 579)-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.026 composto da:
asta 504: Trave in legno a falda Falda 3 fili 12-51 (L = 0.922)
asta 505: Trave in legno a falda Falda 3 fili 12-51 (L = 1.265)
asta 506: Trave in legno a falda Falda 3 fili 12-51 (L = 1.308)
asta 507: Trave in legno a falda Falda 3 fili 12-51 (L = 1.095)
asta 508: Trave in legno a falda Falda 3 fili 12-51 (L = 0.26)
asta 509: Trave in legno a falda Falda 3 fili 12-51 (L = 0.958)
asta 510: Trave in legno a falda Falda 3 fili 12-51 (L = 0.358)
asta 511: Trave in legno a falda Falda 3 fili 12-51 (L = 0.86)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.371
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
7.026/0.0007=10260.4 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.262
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
7.026/0.0005=14363.6 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.524
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0008
Ufin = 0.0008
Luce/Ufin > limite
7.026/0.0008=8741.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 95-96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.493 composto da:
asta 260: Trave in legno a falda Falda 4 fili 95-308 (L = 1.134)
asta 807: Trave in legno a falda Falda 4 fili 308-96 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.999
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0024
Uinst tot = 0.0024
Luce/Uinst,tot > limite
3.493/0.0024=1450.7 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.156
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
3.493/0.0007=5165.3 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.036
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0034
Ufin = 0.0034
Luce/Ufin > limite
3.493/0.0034=1031.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 103-105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.45 composto da:
asta 805: Trave in legno a falda Falda 4 fili 103-309 (L = 2.091)
asta 820: Trave in legno a falda Falda 4 fili 309-105 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.72
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.001
Uinst tot = 0.001
Luce/Uinst,tot > limite
4.45/0.001=4245.3 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.091
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0002
Uinst var = 0.0002

Luce/Uinst,var > limite
4.45/0.0002=19061 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.789
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0015
Ufin = 0.0015
Luce/Ufin > limite
4.45/0.0015=2932.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 114-(-1482; 695)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.408 composto da:
asta 802: Trave in legno a falda Falda 4 fili 114-310 (L = 2.612)
asta 803: Trave in legno a falda Falda 4 fili 114-310 (L = 0.218)
asta 804: Trave in legno a falda Falda 4 fili 114-310 (L = 0.218)
asta 817: Trave in legno a falda Falda 4 fili 310-117 (L = 0.218)
asta 818: Trave in legno a falda Falda 4 fili 310-117 (L = 0.218)
asta 819: Trave in legno a falda Falda 4 fili 310-117 (L = 1.923)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.741
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0013
Uinst tot = 0.0013
Luce/Uinst,tot > limite
5.408/0.0013=4036.6 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.393
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
5.408/0.0005=10007.7 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.828
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0019
Ufin = 0.0019
Luce/Ufin > limite
5.408/0.0019=2916.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 118-(-2445; 1167)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 8.223 composto da:
asta 58: Trave in legno a falda Falda 4 fili 118-60 (L = 0.838)
asta 59: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 60: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 61: Trave in legno a falda Falda 4 fili 118-60 (L = 0.353)
asta 62: Trave in legno a falda Falda 4 fili 118-60 (L = 0.154)
asta 63: Trave in legno a falda Falda 4 fili 118-60 (L = 0.767)
asta 64: Trave in legno a falda Falda 4 fili 118-60 (L = 0.233)
asta 65: Trave in legno a falda Falda 4 fili 118-60 (L = 1.041)
asta 66: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 67: Trave in legno a falda Falda 4 fili 118-60 (L = 1.016)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.301
Kdef = 0
Uinst tot in x = 0.0015
Uinst tot in y = 0.0056
Uinst tot = 0.0056
Luce/Uinst,tot > limite
8.223/0.0056=1470.9 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.864
Kdef = 0
Uinst var in x = -0.0003
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
8.223/0.0009=9203.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.371
Kdef = 0.6
Ufin in x = 0.0023
Ufin in y = 0.0086
Ufin = 0.0086
Luce/Ufin > limite
8.223/0.0086=953.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Superelemento in legno a "Falda 4" 171-(-978; 695)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.263 composto da:
asta 799: Trave in legno a falda Falda 4 fili 171-317 (L = 2.467)
asta 800: Trave in legno a falda Falda 4 fili 171-317 (L = 0.218)
asta 801: Trave in legno a falda Falda 4 fili 171-317 (L = 0.218)
asta 814: Trave in legno a falda Falda 4 fili 317-166 (L = 0.218)
asta 815: Trave in legno a falda Falda 4 fili 317-166 (L = 0.218)
asta 816: Trave in legno a falda Falda 4 fili 317-166 (L = 1.923)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.398
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
5.263/0.0008=6777.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.151
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
5.263/0.0003=16182.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.48
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
5.263/0.0011=4953.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 182-184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.29 composto da:
asta 798: Trave in legno a falda Falda 4 fili 182-318 (L = 1.93)
asta 813: Trave in legno a falda Falda 4 fili 318-184 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.031
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
4.29/0.0008=5312.9 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.346

Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
4.29/0.0002=19542.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.017
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
4.29/0.0011=3927.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 287-(214; 439)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 10.233 composto da:
asta 786: Trave in legno a falda Falda 4 fili 287-202 (L = 0.994)
asta 787: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 788: Trave in legno a falda Falda 4 fili 287-202 (L = 0.624)
asta 789: Trave in legno a falda Falda 4 fili 287-202 (L = 1.056)
asta 790: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 791: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 792: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 793: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 794: Trave in legno a falda Falda 4 fili 287-202 (L = 0.909)
asta 795: Trave in legno a falda Falda 4 fili 287-202 (L = 0.771)
asta 796: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 797: Trave in legno a falda Falda 4 fili 287-202 (L = 0.839)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 5.138
Kdef = 0
Uinst tot in x = 0.0045
Uinst tot in y = -0.01
Uinst tot = 0.01
Luce/Uinst,tot > limite
10.233/0.01=1019.6 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.166
Kdef = 0
Uinst var in x = 0.0018
Uinst var in y = -0.0039
Uinst var = 0.0039
Luce/Uinst,var > limite
10.233/0.0039=2654.9 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 5.283
Kdef = 0.6
Ufin in x = 0.0062

Ufin in y = -0.0138
Ufin = 0.0138
Luce/Ufin > limite
10.233/0.0138=739.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1060; 86)-(-32; 1171)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 8.118 composto da:
asta 116: Trave in legno a falda Falda 4 fili 164-221 (L = 1.145)
asta 117: Trave in legno a falda Falda 4 fili 164-221 (L = 1.29)
asta 118: Trave in legno a falda Falda 4 fili 164-221 (L = 1.28)
asta 119: Trave in legno a falda Falda 4 fili 164-221 (L = 0.156)
asta 120: Trave in legno a falda Falda 4 fili 164-221 (L = 0.194)
asta 121: Trave in legno a falda Falda 4 fili 164-221 (L = 0.929)
asta 122: Trave in legno a falda Falda 4 fili 164-221 (L = 1.282)
asta 123: Trave in legno a falda Falda 4 fili 164-221 (L = 1.28)
asta 124: Trave in legno a falda Falda 4 fili 164-221 (L = 0.562)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.501
Kdef = 0
Uinst tot in x = -0.0016
Uinst tot in y = 0.0054
Uinst tot = 0.0054
Luce/Uinst,tot > limite
8.118/0.0054=1498.6 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.501
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = 0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
8.118/0.0007=11864.7 > 300 Comb: SLE rara, 20

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.583
Kdef = 0.6
Ufin in x = -0.0024
Ufin in y = 0.0084
Ufin = 0.0084
Luce/Ufin > limite
8.118/0.0084=971.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Superelemento in legno a "Falda 4" (-1062; 88)-163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.036 composto da:
asta 332: Trave in legno a falda Falda 4 fili 315-316 (L = 3.677)
asta 809: Trave in legno a falda Falda 4 fili 316-163 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.819
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0042
Uinst tot = 0.0042
Luce/Uinst,tot > limite
6.036/0.0042=1446.1 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.574
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0024
Uinst var = 0.0024
Luce/Uinst,var > limite
6.036/0.0024=2502.6 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.819
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0052
Ufin = 0.0052
Luce/Ufin > limite
6.036/0.0052=1150.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1146; 88)-149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.036 composto da:
asta 331: Trave in legno a falda Falda 4 fili 147-314 (L = 3.677)
asta 808: Trave in legno a falda Falda 4 fili 314-149 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.819
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0076
Uinst tot = 0.0076

Luce/Uinst,tot > limite
6.036/0.0076=791 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.819
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0041
Uinst var = 0.0041
Luce/Uinst,var > limite
6.036/0.0041=1473.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.942
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0098
Ufin = 0.0098
Luce/Ufin > limite
6.036/0.0098=618.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1230; 88)-143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.037 composto da:
asta 333: Trave in legno a falda Falda 4 fili 141-313 (L = 3.677)
asta 810: Trave in legno a falda Falda 4 fili 313-143 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.942
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.009
Uinst tot = 0.009
Luce/Uinst,tot > limite
6.037/0.009=669.3 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.942
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0048
Uinst var = 0.0048
Luce/Uinst,var > limite
6.037/0.0048=1254.9 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.942
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0116
Ufin = 0.0116
Luce/Ufin > limite
6.037/0.0116=522.5 > 200
Coefficienti combinatori impiegati:

Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1314; 88)-134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.037 composto da:
asta 334: Trave in legno a falda Falda 4 fili 132-312 (L = 3.678)
asta 811: Trave in legno a falda Falda 4 fili 312-134 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.942
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0081
Uinst tot = 0.0081
Luce/Uinst,tot > limite
6.037/0.0081=746.9 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.82
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0043
Uinst var = 0.0043
Luce/Uinst,var > limite
6.037/0.0043=1405 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.942
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0104
Ufin = 0.0104
Luce/Ufin > limite
6.037/0.0104=582.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1398; 88)-122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.038 composto da:
asta 335: Trave in legno a falda Falda 4 fili 120-311 (L = 3.678)
asta 812: Trave in legno a falda Falda 4 fili 311-122 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.697
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0051
Uinst tot = 0.0051
Luce/Uinst,tot > limite
6.038/0.0051=1191.1 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.575
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0027
Uinst var = 0.0027
Luce/Uinst,var > limite
6.038/0.0027=2205.1 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.82
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0065
Ufin = 0.0065
Luce/Ufin > limite
6.038/0.0065=932.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 230-(27; 101)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.224 composto da:
asta 84: Trave in legno a falda Falda 5 fili 230-248 (L = 2.165)
asta 85: Trave in legno a falda Falda 5 fili 230-248 (L = 0.226)
asta 86: Trave in legno a falda Falda 5 fili 230-248 (L = 0.226)
asta 228: Trave in legno a falda Falda 5 fili 248-277 (L = 0.452)
asta 229: Trave in legno a falda Falda 5 fili 248-277 (L = 2.156)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.218
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
5.224/0.0003=18796.3 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.218
Kdef = 0
Uinst var in x = 0

Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
5.224/0.0001=35057.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.32
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
5.224/0.0004=14501.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5" 233-(-13; 185)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.285 composto da:
asta 138: Trave in legno a falda Falda 5 fili 233-249 (L = 1.678)
asta 232: Trave in legno a falda Falda 5 fili 249-278 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.894
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0009
Uinst tot = 0.0009
Luce/Uinst,tot > limite
4.285/0.0009=4883.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.981
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
4.285/0.0005=8886.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.95
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
4.285/0.0011=3805.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5" 238-(-13; 17)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.25 composto da:
asta 137: Trave in legno a falda Falda 5 fili 238-247 (L = 1.643)
asta 231: Trave in legno a falda Falda 5 fili 247-276 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.947
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
4.25/0.0008=5339.3 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.947
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
4.25/0.0005=9421.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.002
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
4.25/0.001=4207.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5" 239-(-13; 269)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.434 composto da:
asta 139: Trave in legno a falda Falda 5 fili 239-250 (L = 0.827)
asta 233: Trave in legno a falda Falda 5 fili 250-279 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.131
Kdef = 0

Uinst tot in x = -0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
3.434/0.0008=4240.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.131
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
3.434/0.0004=7705.1 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.158
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
3.434/0.001=3305 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 251-(-244; -533)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.657 composto da:
asta 163: Trave in legno a falda Falda 5 fili 251-245 (L = 0.772)
asta 164: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 165: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 166: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 167: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 168: Trave in legno a falda Falda 5 fili 251-245 (L = 0.525)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.452
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = 0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
4.657/0.0005=9590.9 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.452
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = 0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.657/0.0003=15173.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.506

Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = 0.0006
Ufin = 0.0006
Luce/Ufin > limite
4.657/0.0006=7935.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" (-311; -67)-(-13; -67)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.293 composto da:
asta 136: Trave in legno a falda Falda 5 fili 244-246 (L = 0.686)
asta 230: Trave in legno a falda Falda 5 fili 246-275 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.076
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
3.293/0.0007=4616.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.076
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
3.293/0.0004=8085.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.099
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
3.293/0.0009=3651.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5"-"Falda 1" 267-(-865; 473)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.818 composto da:
asta 125: Trave in legno a falda Falda 5 fili 269-230 (L = 0.614)
asta 126: Trave in legno a falda Falda 5 fili 269-230 (L = 1.001)
asta 127: Trave in legno a falda Falda 5 fili 269-230 (L = 0.24)

asta 128: Trave in legno a falda Falda 5 fili 269-230 (L = 1.143)
asta 129: Trave in legno a falda Falda 5 fili 269-230 (L = 0.406)
asta 130: Trave in legno a falda Falda 5 fili 269-230 (L = 0.933)
asta 131: Trave in legno a falda Falda 5 fili 269-230 (L = 1.214)
asta 132: Trave in legno a falda Falda 5 fili 269-230 (L = 1.266)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.995
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
6.818/0.0004=15356 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.964
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
6.818/0.0002=28145.2 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.109
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
6.818/0.0006=12150.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 6" 167-(-86; 1042)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.282 composto da:
asta 51: Trave in legno a falda Falda 6 fili 167-225 (L = 1.338)
asta 52: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 53: Trave in legno a falda Falda 6 fili 167-225 (L = 0.523)
asta 54: Trave in legno a falda Falda 6 fili 167-225 (L = 0.772)
asta 55: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 56: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 57: Trave in legno a falda Falda 6 fili 167-225 (L = 0.764)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.156
Kdef = 0
Uinst tot in x = -0.0014
Uinst tot in y = 0.0054
Uinst tot = 0.0054
Luce/Uinst,tot > limite
7.282/0.0054=1338.9 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.137
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
7.282/0.0007=9839.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.244
Kdef = 0.6
Ufin in x = -0.0022
Ufin in y = 0.0085
Ufin = 0.0085
Luce/Ufin > limite
7.282/0.0085=861.7 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 6" 206-208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.959 composto da:
asta 241: Trave in legno a falda Falda 6 fili 206-207 (L = 2.72)
asta 249: Trave in legno a falda Falda 6 fili 207-208 (L = 1.24)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.722
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0013
Uinst tot = 0.0013
Luce/Uinst,tot > limite
3.959/0.0013=2948.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.085
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0013
Uinst var = 0.0013
Luce/Uinst,var > limite
3.959/0.0013=3021.2 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.632

Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0014
Ufin = 0.0014
Luce/Ufin > limite
3.959/0.0014=2818.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 216-218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.963 composto da:
asta 240: Trave in legno a falda Falda 6 fili 216-217 (L = 2.738)
asta 248: Trave in legno a falda Falda 6 fili 217-218 (L = 2.224)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.373
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0025
Uinst tot = 0.0025
Luce/Uinst,tot > limite
4.963/0.0025=1969.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.556
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0022
Uinst var = 0.0022
Luce/Uinst,var > limite
4.963/0.0022=2236.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.282
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0027
Ufin = 0.0027
Luce/Ufin > limite
4.963/0.0027=1827.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 230-(-475; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.38 composto da:
asta 236: Trave in legno a falda Falda 6 fili 230-231 (L = 2.738)
asta 245: Trave in legno a falda Falda 6 fili 231-232 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.002
Kdef = 0
Uinst tot in x = -0.0003
Uinst tot in y = -0.0035
Uinst tot = 0.0035
Luce/Uinst,tot > limite
5.38/0.0035=1554.5 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.002
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0025
Uinst var = 0.0025
Luce/Uinst,var > limite
5.38/0.0025=2178.7 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.182
Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = -0.0041
Ufin = 0.0041
Luce/Ufin > limite
5.38/0.0041=1325.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 233-236

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.42 composto da:
asta 329: Trave in legno a falda Falda 6 fili 236-233 (L = 1.778)
asta 246: Trave in legno a falda Falda 6 fili 236-237 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.395
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.003
Uinst tot = 0.003
Luce/Uinst,tot > limite
4.42/0.003=1482.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.395
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0019
Uinst var = 0.0019

Luce/Uinst,var > limite
4.42/0.0019=2353.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.454
Kdef = 0.6
Ufin in x = -0.0006
Ufin in y = -0.0037
Ufin = 0.0037
Luce/Ufin > limite
4.42/0.0037=1211 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 239-242

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.474 composto da:
asta 330: Trave in legno a falda Falda 6 fili 242-239 (L = 0.832)
asta 247: Trave in legno a falda Falda 6 fili 242-243 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.712
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0016
Uinst tot = 0.0016
Luce/Uinst,tot > limite
3.474/0.0016=2174.9 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.712
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
3.474/0.001=3634.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.828
Kdef = 0.6
Ufin in x = -0.0009
Ufin in y = -0.002
Ufin = 0.002
Luce/Ufin > limite
3.474/0.002=1746.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" (-17; 585)-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.145 composto da:

asta 512: Trave in legno a falda Falda 6 fili 271-230 (L = 0.643)
asta 513: Trave in legno a falda Falda 6 fili 271-230 (L = 0.36)
asta 514: Trave in legno a falda Falda 6 fili 271-230 (L = 0.94)
asta 515: Trave in legno a falda Falda 6 fili 271-230 (L = 0.288)
asta 516: Trave in legno a falda Falda 6 fili 271-230 (L = 1.109)
asta 517: Trave in legno a falda Falda 6 fili 271-230 (L = 0.17)
asta 518: Trave in legno a falda Falda 6 fili 271-230 (L = 1.178)
asta 519: Trave in legno a falda Falda 6 fili 271-230 (L = 1.195)
asta 520: Trave in legno a falda Falda 6 fili 271-230 (L = 1.262)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.177
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0009
Uinst tot = 0.0009
Luce/Uinst,tot > limite
7.145/0.0009=7888.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.216
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
7.145/0.0005=13447 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.294
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
7.145/0.0011=6335.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" (-772; 346)-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.425 composto da:
asta 157: Trave in legno a falda Falda 6 fili 191-251 (L = 1.44)
asta 158: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 159: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 160: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 161: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 162: Trave in legno a falda Falda 6 fili 191-251 (L = 0.626)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.784
Kdef = 0
Uinst tot in x = 0.0022
Uinst tot in y = -0.0048
Uinst tot = 0.0048
Luce/Uinst,tot > limite
5.425/0.0048=1138 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.672
Kdef = 0
Uinst var in x = 0.0011
Uinst var in y = -0.0022
Uinst var = 0.0022
Luce/Uinst,var > limite
5.425/0.0022=2514.7 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.888
Kdef = 0.6
Ufin in x = 0.0029
Ufin in y = -0.0062
Ufin = 0.0062
Luce/Ufin > limite
5.425/0.0062=869.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

1.7 Verifica sismica globale

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Desc.: *descrizione.*
Stato limite: *(muratura) V=Taglio; PF=Pressoflessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.*
Molt.: *moltiplicatore minimo della azione sismica che produce lo stato limite.*
Comb.: *combinazione.*
PGA: *accelerazione al suolo.*
iPGA (ζE): *indicatore di rischio sismico in termini di PGA ovvero rapporto tra l'azione sismica massima sopportabile dall'elemento e l'azione sismica massima che si utilizzerebbe nel progetto nuovo (§C8.3).*
TR: *tempo di ritorno.*
(TR/TRrif)^.41: *indicatore di rischio sismico in termini di periodo di ritorno.*
fa: *fattore di accelerazione.*
Stato limite: *(muratura) V=Taglio; PF=Presso flessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.*
Coeff.s.: *coefficiente minimo prodotto dallo stato limite.*
Verifica: *stato di verifica.*
Trave: *titolo della trave.*
Pressoflessione: *dati della verifica a pressoflessione.*
Coeff.s.: *coefficiente di sicurezza a flessione.*
iTR: *indicatore di rischio sismico in termini di tempo di ritorno.*
campata: *campata di riferimento.*
dist.: *ascissa relativa all'inizio della campata. [m]*
Taglio: *dati della verifica a taglio.*
Coeff.s.: *coefficiente di sicurezza a taglio.*
Maschio: *maschio.*
Stato limite: *(maschio muratura) V=Taglio; PF=Presso flessione; PFFP=Presso flessione fuori piano; R=Ribaltamento.*
Trave: *trave di collegamento in muratura.*
Stato limite: *(trave muratura) V=Taglio; F=Flessione.*
S. L.: *stato limite di riferimento.*
TR,C: *periodo di ritorno di capacità.*
PGA,C: *accelerazione di aggancio di capacità.*
TR,Rif: *periodo di ritorno di riferimento.*
PGA,Rif: *accelerazione di aggancio di riferimento.*
Tipo rottura: *tipo di rottura che fornisce il valore minimo degli elementi considerati.*
PAM: *perdita media annua attesa.*
Classe PAM: *classe di rischio PAM.*
IS-V: *indice di sicurezza.*

Classe IS-V: classe di rischio IS-V.
λ,SLR: frequenza media annua di superamento in Stato Limite di Ricostruzione.
λ,SLC: frequenza media annua di superamento in Stato Limite di Collasso.
λ,SLV: frequenza media annua di superamento in Stato Limite di salvaguardia della Vita.
λ,SLD: frequenza media annua di superamento in Stato Limite di Danno.
λ,SLO: frequenza media annua di superamento in Stato Limite di Operatività.
λ,SLID: frequenza media annua di superamento in Stato Limite di Inizio Danno.

Verifica di elementi dotati di indicatori di rischio sismico mediante analisi con fattore q

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.) § C8.7.1

Accelerazioni e tempi di ritorno

Accelerazione di aggancio SLO (ag/g_SLO*S*ST) PGA,SLOrif = 0.081
Accelerazione di aggancio SLD (ag/g_SLD*S*ST) PGA,SLDrif = 0.101
Accelerazione di aggancio SLV (ag/g_SLV*S*ST) PGA,SLVrif = 0.244
Tr,SLOrif = 30 anni
Tr,SLDrif = 50 anni
Tr,SLVrif = 475 anni

Indicatori minimi riferiti al solo materiale muratura

Desc.	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	fa
Maschio 251	PF	0.131	SLV 15	0.0309	0.1266	3	0.1254	0.1232
Maschio 15	V	0.726	SLV 4	0.1746	0.7148	196	0.6956	0.7148
Maschio 244	PFFP	0.256	SLV 2	0.059	0.2416	14	0.2358	0.2351
Maschio 99	R	0.601	SLV 10	0.1402	0.5737	118	0.565	0.5732
Trave di accoppiamento 19	PF	0.209	SLV 3	0.049	0.2007	9	0.1967	0.1953
Trave di accoppiamento 15	V	0.156	SLV 3	0.0349	0.1428	4	0.1411	0.139

Coefficienti di sicurezza riferiti al solo materiale muratura

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 1	PF SLU	4.994	SLU 83	Si
Maschio 1	V SLU	7.975	SLU 84	Si
Maschio 1	PF	3.097	SLV 13	Si
Maschio 1	V	5.55	SLV 8	Si
Maschio 1	PFFP	9.808	SLV 16	Si
Maschio 1	R	1.873	SLV 7	Si
Maschio 2	PF SLU	3.745	SLU 78	Si
Maschio 2	V SLU	9.859	SLU 83	Si
Maschio 2	PF	1.143	SLV 13	Si
Maschio 2	V	6.673	SLV 5	Si
Maschio 2	PFFP	4.324	SLV 13	Si
Maschio 2	R	2.227	SLV 2	Si
Maschio 3	PF SLU	7.157	SLU 47	Si
Maschio 3	V SLU	4.907	SLU 78	Si
Maschio 3	PF	4.237	SLV 16	Si
Maschio 3	V	4.495	SLV 16	Si
Maschio 3	PFFP	9.409	SLV 15	Si
Maschio 3	R	1.918	SLV 6	Si
Maschio 4	PF SLU	3.513	SLU 47	Si
Maschio 4	V SLU	2.929	SLU 83	Si
Maschio 4	PF	2.369	SLV 14	Si
Maschio 4	V	2.773	SLV 14	Si
Maschio 4	PFFP	19.448	SLV 3	Si
Maschio 4	R	1.807	SLV 10	Si
Maschio 7	PF SLU	8.827	SLU 83	Si
Maschio 7	V SLU	7.206	SLU 83	Si
Maschio 7	PF	3.007	SLV 9	Si
Maschio 7	V	3.887	SLV 5	Si
Maschio 7	PFFP	46.014	SLV 15	Si
Maschio 7	R	1.087	SLV 6	Si
Maschio 9	PF SLU	9.03	SLU 81	Si
Maschio 9	V SLU	5.206	SLU 83	Si
Maschio 9	PF	3.137	SLV 15	Si
Maschio 9	V	4.421	SLV 9	Si
Maschio 9	PFFP	9.408	SLV 14	Si
Maschio 9	R	2.122	SLV 7	Si
Maschio 10	PF SLU	3.335	SLU 77	Si
Maschio 10	V SLU	2.357	SLU 83	Si
Maschio 10	PF	1.842	SLV 13	Si
Maschio 10	V	1.714	SLV 15	Si
Maschio 10	PFFP	17.037	SLV 14	Si
Maschio 10	R	1.889	SLV 7	Si
Maschio 11	PF SLU	3.953	SLU 77	Si
Maschio 11	V SLU	3.753	SLU 84	Si
Maschio 11	PF	1.91	SLV 13	Si
Maschio 11	V	1.972	SLV 4	Si
Maschio 11	PFFP	45.636	SLV 15	Si
Maschio 11	R	1.749	SLV 7	Si
Maschio 12	PF SLU	1.149	SLU 83	Si
Maschio 12	V SLU	1.687	SLU 84	Si
Maschio 12	PF	1.982	SLV 15	Si
Maschio 12	V	1.284	SLV 15	Si
Maschio 12	PFFP	65.427	SLV 8	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 12	R	1.657	SLV 9	Si
Maschio 13	PF SLU	6.4	SLU 83	Si
Maschio 13	V SLU	6.885	SLU 78	Si
Maschio 13	PF	3.731	SLV 9	Si
Maschio 13	V	3.179	SLV 8	Si
Maschio 13	PFFP	27.673	SLV 14	Si
Maschio 13	R	1.623	SLV 7	Si
Maschio 14	PF SLU	5.305	SLU 47	Si
Maschio 14	V SLU	3.175	SLU 83	Si
Maschio 14	PF	0	SLV 13	No
Maschio 14	V	2.747	SLV 14	Si
Maschio 14	PFFP	0	SLV 16	No
Maschio 14	R	1.718	SLV 7	Si
Maschio 15	PF SLU	1.596	SLU 84	Si
Maschio 15	V SLU	1.297	SLU 84	Si
Maschio 15	PF	1.968	SLV 8	Si
Maschio 15	V	0.85	SLV 4	No
Maschio 15	PFFP	15.611	SLV 13	Si
Maschio 15	R	4.017	SLV 8	Si
Maschio 16	PF SLU	3.296	SLU 84	Si
Maschio 16	V SLU	8.551	SLU 84	Si
Maschio 16	PF	1.94	SLV 15	Si
Maschio 16	V	1.916	SLV 2	Si
Maschio 16	PFFP	11.019	SLV 11	Si
Maschio 16	R	2.925	SLV 8	Si
Maschio 17	PF SLU	10.608	SLU 84	Si
Maschio 17	V SLU	2.339	SLU 83	Si
Maschio 17	PF	7.783	SLV 12	Si
Maschio 17	V	2.403	SLV 5	Si
Maschio 17	PFFP	45.104	SLV 10	Si
Maschio 17	R	1.242	SLV 11	Si
Maschio 18	PF SLU	4.188	SLU 84	Si
Maschio 18	V SLU	3.2	SLU 84	Si
Maschio 18	PF	3.759	SLV 8	Si
Maschio 18	V	1.835	SLV 8	Si
Maschio 18	PFFP	23.314	SLV 4	Si
Maschio 18	R	1.378	SLV 11	Si
Maschio 19	PF SLU	18.427	SLU 48	Si
Maschio 19	V SLU	3.487	SLU 84	Si
Maschio 19	PF	2.631	SLV 16	Si
Maschio 19	V	3.328	SLV 16	Si
Maschio 19	PFFP	32.514	SLV 16	Si
Maschio 19	R	1.433	SLV 7	Si
Maschio 20	PF SLU	9.308	SLU 83	Si
Maschio 20	V SLU	15.313	SLU 83	Si
Maschio 20	PF	1.887	SLV 14	Si
Maschio 20	V	2.556	SLV 1	Si
Maschio 20	PFFP	48.976	SLV 16	Si
Maschio 20	R	1.374	SLV 5	Si
Maschio 24	PF SLU	6.189	SLU 83	Si
Maschio 24	V SLU	7.692	SLU 83	Si
Maschio 24	PF	1.456	SLV 14	Si
Maschio 24	V	2.027	SLV 14	Si
Maschio 24	PFFP	51.742	SLV 6	Si
Maschio 24	R	1.577	SLV 9	Si
Maschio 26	PF SLU	16.717	SLU 77	Si
Maschio 26	V SLU	3.459	SLU 83	Si
Maschio 26	PF	3.141	SLV 3	Si
Maschio 26	V	3.157	SLV 2	Si
Maschio 26	PFFP	28.609	SLV 2	Si
Maschio 26	R	1.551	SLV 11	Si
Maschio 28	PF SLU	2.16	SLU 41	Si
Maschio 28	V SLU	3.988	SLU 83	Si
Maschio 28	PF	0.812	SLV 16	No
Maschio 28	V	2.83	SLV 1	Si
Maschio 28	PFFP	10.771	SLV 16	Si
Maschio 28	R	8.344	SLV 6	Si
Maschio 29	PF SLU	17.594	SLU 83	Si
Maschio 29	V SLU	4.142	SLU 83	Si
Maschio 29	PF	3.402	SLV 16	Si
Maschio 29	V	1.648	SLV 14	Si
Maschio 29	PFFP	19.895	SLV 14	Si
Maschio 29	R	1.787	SLV 7	Si
Maschio 30	PF SLU	2.862	SLU 83	Si
Maschio 30	V SLU	4.162	SLU 70	Si
Maschio 30	PF	3.272	SLV 6	Si
Maschio 30	V	2.321	SLV 11	Si
Maschio 30	PFFP	57.312	SLV 15	Si
Maschio 30	R	2.269	SLV 8	Si
Maschio 31	PF SLU	19.983	SLU 84	Si
Maschio 31	V SLU	1.746	SLU 84	Si
Maschio 31	PF	5.145	SLV 15	Si
Maschio 31	V	1.194	SLV 11	Si
Maschio 31	PFFP	210.172	SLV 13	Si
Maschio 31	R	3.215	SLV 8	Si
Maschio 32	PF SLU	1.223	SLU 84	Si
Maschio 32	V SLU	1.615	SLU 84	Si
Maschio 32	PF	1.533	SLV 12	Si
Maschio 32	V	1.934	SLV 8	Si
Maschio 32	PFFP	37.933	SLV 13	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 32	R	1.662	SLV 8	Si
Maschio 34	PF SLU	5.134	SLU 84	Si
Maschio 34	V SLU	2.064	SLU 84	Si
Maschio 34	PF	2.834	SLV 7	Si
Maschio 34	V	2.264	SLV 7	Si
Maschio 34	PFFP	27.739	SLV 14	Si
Maschio 34	R	1.042	SLV 5	Si
Maschio 36	PF SLU	15.876	SLU 83	Si
Maschio 36	V SLU	11.575	SLU 79	Si
Maschio 36	PF	4.271	SLV 14	Si
Maschio 36	V	1.784	SLV 3	Si
Maschio 36	PFFP	20.397	SLV 2	Si
Maschio 36	R	1.954	SLV 11	Si
Maschio 37	PF SLU	7.843	SLU 83	Si
Maschio 37	V SLU	3.267	SLU 83	Si
Maschio 37	PF	2.133	SLV 3	Si
Maschio 37	V	2.486	SLV 3	Si
Maschio 37	PFFP	5.769	SLV 3	Si
Maschio 37	R	2.495	SLV 12	Si
Maschio 38	PF SLU	5.279	SLU 84	Si
Maschio 38	V SLU	1.645	SLU 83	Si
Maschio 38	PF	2.654	SLV 7	Si
Maschio 38	V	2.219	SLV 10	Si
Maschio 38	PFFP	31.724	SLV 1	Si
Maschio 38	R	1.253	SLV 10	Si
Maschio 40	PF SLU	2.422	SLU 84	Si
Maschio 40	V SLU	12.296	SLU 83	Si
Maschio 40	PF	1.379	SLV 4	Si
Maschio 40	V	1.708	SLV 15	Si
Maschio 40	PFFP	12.627	SLV 1	Si
Maschio 40	R	3.135	SLV 11	Si
Maschio 41	PF SLU	1.004	SLU 84	Si
Maschio 41	V SLU	2.566	SLU 84	Si
Maschio 41	PF	0.914	SLV 7	No
Maschio 41	V	2.073	SLV 15	Si
Maschio 41	PFFP	13.886	SLV 2	Si
Maschio 41	R	4.092	SLV 12	Si
Maschio 42	PF SLU	19.768	SLU 81	Si
Maschio 42	V SLU	5.238	SLU 84	Si
Maschio 42	PF	7.745	SLV 7	Si
Maschio 42	V	3.204	SLV 11	Si
Maschio 42	PFFP	36.227	SLV 3	Si
Maschio 42	R	1.259	SLV 10	Si
Maschio 43	PF SLU	3.425	SLU 84	Si
Maschio 43	V SLU	3.596	SLU 84	Si
Maschio 43	PF	1.847	SLV 2	Si
Maschio 43	V	2.067	SLV 4	Si
Maschio 43	PFFP	66.918	SLV 13	Si
Maschio 43	R	1.467	SLV 6	Si
Maschio 44	PF SLU	3.469	SLU 84	Si
Maschio 44	V SLU	4.491	SLU 83	Si
Maschio 44	PF	1.935	SLV 2	Si
Maschio 44	V	2.401	SLV 15	Si
Maschio 44	PFFP	39.925	SLV 4	Si
Maschio 44	R	1.908	SLV 12	Si
Maschio 45	PF SLU	4.046	SLU 78	Si
Maschio 45	V SLU	3.215	SLU 84	Si
Maschio 45	PF	1.907	SLV 2	Si
Maschio 45	V	2.002	SLV 4	Si
Maschio 45	PFFP	15.414	SLV 1	Si
Maschio 45	R	1.868	SLV 12	Si
Maschio 46	PF SLU	15.188	SLU 82	Si
Maschio 46	V SLU	8.955	SLU 78	Si
Maschio 46	PF	3.804	SLV 4	Si
Maschio 46	V	6.416	SLV 6	Si
Maschio 46	PFFP	9.324	SLV 1	Si
Maschio 46	R	2.181	SLV 10	Si
Maschio 48	PF SLU	3.403	SLU 83	Si
Maschio 48	V SLU	3.962	SLU 83	Si
Maschio 48	PF	2.104	SLV 10	Si
Maschio 48	V	3.538	SLV 10	Si
Maschio 48	PFFP	37.723	SLV 4	Si
Maschio 48	R	1.061	SLV 9	Si
Maschio 50	PF SLU	8.722	SLU 81	Si
Maschio 50	V SLU	3.535	SLU 83	Si
Maschio 50	PF	3.373	SLV 1	Si
Maschio 50	V	3.082	SLV 3	Si
Maschio 50	PFFP	19.623	SLV 6	Si
Maschio 50	R	2.164	SLV 11	Si
Maschio 51	PF SLU	5.286	SLU 81	Si
Maschio 51	V SLU	3.475	SLU 78	Si
Maschio 51	PF	3.059	SLV 3	Si
Maschio 51	V	3.603	SLV 7	Si
Maschio 51	PFFP	8.92	SLV 2	Si
Maschio 51	R	2.496	SLV 9	Si
Maschio 52	PF SLU	30.001	SLU 48	Si
Maschio 52	V SLU	28.523	SLU 83	Si
Maschio 52	PF	10.179	SLV 6	Si
Maschio 52	V	5.569	SLV 10	Si
Maschio 52	PFFP	9.221	SLV 4	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 52	R	1.989	SLV 9	Si
Maschio 53	PF SLU	71.421	SLU 73	Si
Maschio 53	V SLU	21.08	SLU 83	Si
Maschio 53	PF	3.428	SLV 9	Si
Maschio 53	V	3.621	SLV 9	Si
Maschio 53	PFFP	5.792	SLV 15	Si
Maschio 53	R	0.977	SLV 5	No
Maschio 54	PF SLU	15.174	SLU 31	Si
Maschio 54	V SLU	10.508	SLU 84	Si
Maschio 54	PF	1.952	SLV 7	Si
Maschio 54	V	3.964	SLV 1	Si
Maschio 54	PFFP	2.935	SLV 12	Si
Maschio 54	R	0.686	SLV 5	No
Maschio 55	PF SLU	3.753	SLU 44	Si
Maschio 55	V SLU	4.644	SLU 84	Si
Maschio 55	PF	1.82	SLV 12	Si
Maschio 55	V	4.147	SLV 14	Si
Maschio 55	PFFP	6.148	SLV 11	Si
Maschio 55	R	0.913	SLV 6	No
Maschio 57	PF SLU	9.563	SLU 71	Si
Maschio 57	V SLU	28.858	SLU 71	Si
Maschio 57	PF	3.93	SLV 9	Si
Maschio 57	V	5.255	SLV 9	Si
Maschio 57	PFFP	12.214	SLV 15	Si
Maschio 57	R	0.608	SLV 6	No
Maschio 58	PF SLU	14.943	SLU 82	Si
Maschio 58	V SLU	9.077	SLU 83	Si
Maschio 58	PF	5.058	SLV 7	Si
Maschio 58	V	2.961	SLV 1	Si
Maschio 58	PFFP	11.688	SLV 13	Si
Maschio 58	R	0.869	SLV 10	No
Maschio 59	PF SLU	3.743	SLU 84	Si
Maschio 59	V SLU	3.145	SLU 84	Si
Maschio 59	PF	3.518	SLV 8	Si
Maschio 59	V	2.762	SLV 11	Si
Maschio 59	PFFP	13.617	SLV 8	Si
Maschio 59	R	0.685	SLV 5	No
Maschio 60	PF SLU	5.875	SLU 76	Si
Maschio 60	V SLU	12.134	SLU 76	Si
Maschio 60	PF	0.868	SLV 14	No
Maschio 60	V	4.437	SLV 14	Si
Maschio 60	PFFP	3.959	SLV 14	Si
Maschio 60	R	0.787	SLV 7	No
Maschio 61	PF SLU	12.854	SLU 81	Si
Maschio 61	V SLU	10.48	SLU 82	Si
Maschio 61	PF	2.465	SLV 14	Si
Maschio 61	V	2.402	SLV 14	Si
Maschio 61	PFFP	12.932	SLV 16	Si
Maschio 61	R	0.645	SLV 5	No
Maschio 62	PF SLU	29.363	SLU 50	Si
Maschio 62	V SLU	56.855	SLU 39	Si
Maschio 62	PF	2.28	SLV 3	Si
Maschio 62	V	2.254	SLV 3	Si
Maschio 62	PFFP	13.722	SLV 3	Si
Maschio 62	R	0.654	SLV 10	No
Maschio 63	PF SLU	16.101	SLU 44	Si
Maschio 63	V SLU	20.964	SLU 83	Si
Maschio 63	PF	0.215	SLV 3	No
Maschio 63	V	2.058	SLV 3	Si
Maschio 63	PFFP	2.777	SLV 3	Si
Maschio 63	R	0.729	SLV 10	No
Maschio 64	PF SLU	6.555	SLU 83	Si
Maschio 64	V SLU	6.151	SLU 70	Si
Maschio 64	PF	2.365	SLV 14	Si
Maschio 64	V	2.99	SLV 16	Si
Maschio 64	PFFP	10.034	SLV 13	Si
Maschio 64	R	0.669	SLV 8	No
Maschio 65	PF SLU	10.575	SLU 77	Si
Maschio 65	V SLU	39.163	SLU 72	Si
Maschio 65	PF	2.726	SLV 16	Si
Maschio 65	V	2.388	SLV 14	Si
Maschio 65	PFFP	19.037	SLV 16	Si
Maschio 65	R	0.673	SLV 5	No
Maschio 66	PF SLU	3.964	SLU 84	Si
Maschio 66	V SLU	12.97	SLU 83	Si
Maschio 66	PF	0.988	SLV 3	No
Maschio 66	V	2.712	SLV 3	Si
Maschio 66	PFFP	16.603	SLV 8	Si
Maschio 66	R	0.653	SLV 9	No
Maschio 67	PF SLU	9.699	SLU 83	Si
Maschio 67	V SLU	18.668	SLU 77	Si
Maschio 67	PF	1.776	SLV 16	Si
Maschio 67	V	2.044	SLV 1	Si
Maschio 67	PFFP	18.594	SLV 16	Si
Maschio 67	R	0.715	SLV 6	No
Maschio 68	PF SLU	2.246	SLU 83	Si
Maschio 68	V SLU	4.692	SLU 83	Si
Maschio 68	PF	0.871	SLV 2	No
Maschio 68	V	1.943	SLV 2	Si
Maschio 68	PFFP	20.226	SLV 7	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 68	R	0.57	SLV 10	No
Maschio 69	PF SLU	15.244	SLU 43	Si
Maschio 69	V SLU	12.418	SLU 50	Si
Maschio 69	PF	2.133	SLV 2	Si
Maschio 69	V	3.566	SLV 2	Si
Maschio 69	PFFP	5.875	SLV 2	Si
Maschio 69	R	0.75	SLV 11	No
Maschio 70	PF SLU	14.675	SLU 69	Si
Maschio 70	V SLU	5.74	SLU 84	Si
Maschio 70	PF	6.762	SLV 9	Si
Maschio 70	V	2.968	SLV 7	Si
Maschio 70	PFFP	25.906	SLV 15	Si
Maschio 70	R	1.535	SLV 6	Si
Maschio 71	PF SLU	2.597	SLU 84	Si
Maschio 71	V SLU	2.848	SLU 84	Si
Maschio 71	PF	3.103	SLV 11	Si
Maschio 71	V	2.699	SLV 11	Si
Maschio 71	PFFP	13.62	SLV 3	Si
Maschio 71	R	0.602	SLV 10	No
Maschio 72	PF SLU	15.699	SLU 82	Si
Maschio 72	V SLU	3.173	SLU 83	Si
Maschio 72	PF	6.222	SLV 12	Si
Maschio 72	V	3.475	SLV 14	Si
Maschio 72	PFFP	10.006	SLV 1	Si
Maschio 72	R	0.944	SLV 11	No
Maschio 75	PF SLU	11.472	SLU 84	Si
Maschio 75	V SLU	6.058	SLU 84	Si
Maschio 75	PF	4.671	SLV 16	Si
Maschio 75	V	4.966	SLV 10	Si
Maschio 75	PFFP	12.91	SLV 2	Si
Maschio 75	R	0.825	SLV 11	No
Maschio 78	PF SLU	2.52	SLU 44	Si
Maschio 78	V SLU	2.372	SLU 84	Si
Maschio 78	PF	0.967	SLV 3	No
Maschio 78	V	2.107	SLV 3	Si
Maschio 78	PFFP	7.869	SLV 16	Si
Maschio 78	R	0.785	SLV 5	No
Maschio 79	PF SLU	19.092	SLU 44	Si
Maschio 79	V SLU	20.855	SLU 42	Si
Maschio 79	PF	0.815	SLV 3	No
Maschio 79	V	3.227	SLV 3	Si
Maschio 79	PFFP	5.861	SLV 4	Si
Maschio 79	R	0.778	SLV 10	No
Maschio 80	PF SLU	184.741	SLU 73	Si
Maschio 80	V SLU	44.565	SLU 77	Si
Maschio 80	PF	4.451	SLV 6	Si
Maschio 80	V	3.927	SLV 6	Si
Maschio 80	PFFP	6.448	SLV 3	Si
Maschio 80	R	0.964	SLV 10	No
Maschio 81	PF SLU	7.083	SLU 84	Si
Maschio 81	V SLU	21.905	SLU 47	Si
Maschio 81	PF	1.616	SLV 9	Si
Maschio 81	V	5.692	SLV 8	Si
Maschio 81	PFFP	4.251	SLV 13	Si
Maschio 81	R	0.784	SLV 8	No
Maschio 82	PF SLU	7.911	SLU 84	Si
Maschio 82	V SLU	11.335	SLU 83	Si
Maschio 82	PF	1.636	SLV 12	Si
Maschio 82	V	7.288	SLV 5	Si
Maschio 82	PFFP	2.77	SLV 12	Si
Maschio 82	R	0.773	SLV 5	No
Maschio 83	PF SLU	9.254	SLU 44	Si
Maschio 83	V SLU	22.524	SLU 41	Si
Maschio 83	PF	0	SLV 8	No
Maschio 83	V	5.977	SLV 1	Si
Maschio 83	PFFP	0	SLV 12	No
Maschio 83	R	0.604	SLV 5	No
Maschio 84	PF SLU	10.573	SLU 43	Si
Maschio 84	V SLU	5.242	SLU 84	Si
Maschio 84	PF	2.505	SLV 16	Si
Maschio 84	V	3.634	SLV 14	Si
Maschio 84	PFFP	2.165	SLV 12	Si
Maschio 84	R	0.627	SLV 5	No
Maschio 86	PF SLU	25.642	SLU 50	Si
Maschio 86	V SLU	14.835	SLU 71	Si
Maschio 86	PF	4.809	SLV 12	Si
Maschio 86	V	6.47	SLV 14	Si
Maschio 86	PFFP	5.739	SLV 16	Si
Maschio 86	R	0.898	SLV 5	No
Maschio 88	PF SLU	6.501	SLU 39	Si
Maschio 88	V SLU	28.402	SLU 69	Si
Maschio 88	PF	1.385	SLV 3	Si
Maschio 88	V	4.681	SLV 1	Si
Maschio 88	PFFP	3.632	SLV 7	Si
Maschio 88	R	0.857	SLV 10	No
Maschio 89	PF SLU	11.33	SLU 60	Si
Maschio 89	V SLU	9.784	SLU 59	Si
Maschio 89	PF	6.336	SLV 5	Si
Maschio 89	V	7.721	SLV 7	Si
Maschio 89	PFFP	11.784	SLV 5	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 89	R	1.764	SLV 12	Si
Maschio 90	PF SLU	5.221	SLU 81	Si
Maschio 90	V SLU	13.473	SLU 81	Si
Maschio 90	PF	1.878	SLV 14	Si
Maschio 90	V	6.886	SLV 14	Si
Maschio 90	PFFP	4.193	SLV 14	Si
Maschio 90	R	0.983	SLV 6	No
Maschio 91	PF SLU	20.6	SLU 84	Si
Maschio 91	V SLU	11.871	SLU 82	Si
Maschio 91	PF	2.189	SLV 14	Si
Maschio 91	V	2.503	SLV 14	Si
Maschio 91	PFFP	6.894	SLV 16	Si
Maschio 91	R	0.757	SLV 5	No
Maschio 92	PF SLU	85.285	SLU 43	Si
Maschio 92	V SLU	93.276	SLU 43	Si
Maschio 92	PF	2.681	SLV 3	Si
Maschio 92	V	2.434	SLV 3	Si
Maschio 92	PFFP	9.023	SLV 3	Si
Maschio 92	R	0.723	SLV 10	No
Maschio 93	PF SLU	6.293	SLU 66	Si
Maschio 93	V SLU	21.46	SLU 43	Si
Maschio 93	PF	0.886	SLV 3	No
Maschio 93	V	2.921	SLV 3	Si
Maschio 93	PFFP	3.726	SLV 3	Si
Maschio 93	R	0.831	SLV 10	No
Maschio 94	PF SLU	11.522	SLU 50	Si
Maschio 94	V SLU	16.238	SLU 51	Si
Maschio 94	PF	3.185	SLV 13	Si
Maschio 94	V	3.806	SLV 16	Si
Maschio 94	PFFP	7.187	SLV 13	Si
Maschio 94	R	0.71	SLV 8	No
Maschio 95	PF SLU	53.862	SLU 26	Si
Maschio 95	V SLU	48.587	SLU 72	Si
Maschio 95	PF	2.219	SLV 14	Si
Maschio 95	V	2.493	SLV 16	Si
Maschio 95	PFFP	11.496	SLV 9	Si
Maschio 95	R	0.662	SLV 8	No
Maschio 96	PF SLU	12.877	SLU 61	Si
Maschio 96	V SLU	22.011	SLU 83	Si
Maschio 96	PF	0.857	SLV 16	No
Maschio 96	V	2.373	SLV 14	Si
Maschio 96	PFFP	7.387	SLV 8	Si
Maschio 96	R	0.587	SLV 5	No
Maschio 97	PF SLU	15.928	SLU 63	Si
Maschio 97	V SLU	71.537	SLU 51	Si
Maschio 97	PF	0.496	SLV 3	No
Maschio 97	V	4.434	SLV 16	Si
Maschio 97	PFFP	7.279	SLV 7	Si
Maschio 97	R	0.558	SLV 10	No
Maschio 98	PF SLU	8.752	SLU 65	Si
Maschio 98	V SLU	12.864	SLU 78	Si
Maschio 98	PF	1.491	SLV 16	Si
Maschio 98	V	3.224	SLV 3	Si
Maschio 98	PFFP	9.941	SLV 15	Si
Maschio 98	R	0.577	SLV 6	No
Maschio 99	PF SLU	6.991	SLU 44	Si
Maschio 99	V SLU	10.768	SLU 84	Si
Maschio 99	PF	0.959	SLV 3	No
Maschio 99	V	2.532	SLV 2	Si
Maschio 99	PFFP	11.927	SLV 7	Si
Maschio 99	R	0.536	SLV 10	No
Maschio 100	PF SLU	12.462	SLU 43	Si
Maschio 100	V SLU	23.84	SLU 51	Si
Maschio 100	PF	2.423	SLV 2	Si
Maschio 100	V	4.605	SLV 3	Si
Maschio 100	PFFP	5.527	SLV 3	Si
Maschio 100	R	0.759	SLV 10	No
Maschio 101	PF SLU	49.483	SLU 53	Si
Maschio 101	V SLU	4.328	SLU 51	Si
Maschio 101	PF	7.736	SLV 10	Si
Maschio 101	V	4.457	SLV 11	Si
Maschio 101	PFFP	74.753	SLV 3	Si
Maschio 101	R	3.349	SLV 14	Si
Maschio 102	PF SLU	3.082	SLU 81	Si
Maschio 102	V SLU	11.922	SLU 81	Si
Maschio 102	PF	2.415	SLV 10	Si
Maschio 102	V	11.377	SLV 10	Si
Maschio 102	PFFP	4.493	SLV 6	Si
Maschio 102	R	1.234	SLV 11	Si
Maschio 104	PF SLU	12.449	SLU 68	Si
Maschio 104	V SLU	6.004	SLU 83	Si
Maschio 104	PF	3.936	SLV 7	Si
Maschio 104	V	6.742	SLV 5	Si
Maschio 104	PFFP	5.841	SLV 2	Si
Maschio 104	R	1.291	SLV 12	Si
Maschio 106	PF SLU	8.146	SLU 77	Si
Maschio 106	V SLU	1000	SLU 1	Si
Maschio 106	PFFP	0	SLV 4	No
Maschio 106	R	1.021	SLV 5	Si
Maschio 107	PF SLU	6.489	SLU 81	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 107	V SLU	4.159	SLU 83	Si
Maschio 107	PF	2.61	SLV 3	Si
Maschio 107	V	3.378	SLV 3	Si
Maschio 107	PFFP	5.474	SLV 12	Si
Maschio 107	R	0.699	SLV 9	No
Maschio 108	PF SLU	6.087	SLU 45	Si
Maschio 108	V SLU	31.232	SLU 45	Si
Maschio 108	PF	0	SLV 7	No
Maschio 108	V	3.858	SLV 3	Si
Maschio 108	PFFP	0	SLV 7	No
Maschio 108	R	0.641	SLV 10	No
Maschio 109	PF SLU	7.375	SLU 83	Si
Maschio 109	V SLU	58.514	SLU 51	Si
Maschio 109	PF	1.844	SLV 6	Si
Maschio 109	V	4.629	SLV 11	Si
Maschio 109	PFFP	4.359	SLV 2	Si
Maschio 109	R	0.812	SLV 11	No
Maschio 110	PF SLU	7.401	SLU 76	Si
Maschio 110	V SLU	13.491	SLU 84	Si
Maschio 110	PF	2.201	SLV 7	Si
Maschio 110	V	6.069	SLV 10	Si
Maschio 110	PFFP	3.723	SLV 3	Si
Maschio 110	R	0.814	SLV 10	No
Maschio 111	PF SLU	26.761	SLU 31	Si
Maschio 111	V SLU	24.298	SLU 40	Si
Maschio 111	PF	2.099	SLV 12	Si
Maschio 111	V	1.98	SLV 11	Si
Maschio 111	PFFP	3.235	SLV 15	Si
Maschio 111	R	1.644	SLV 6	Si
Maschio 112	PF SLU	8.813	SLU 44	Si
Maschio 112	V SLU	23.811	SLU 42	Si
Maschio 112	PF	0	SLV 7	No
Maschio 112	V	6.521	SLV 7	Si
Maschio 112	PFFP	0	SLV 12	No
Maschio 112	R	0.816	SLV 5	No
Maschio 113	PF SLU	8.976	SLU 44	Si
Maschio 113	V SLU	11.968	SLU 84	Si
Maschio 113	PF	0	SLV 12	No
Maschio 113	V	6.448	SLV 16	Si
Maschio 113	PFFP	0	SLV 11	No
Maschio 113	R	0.847	SLV 5	No
Maschio 114	PF SLU	9.93	SLU 77	Si
Maschio 114	V SLU	19.914	SLU 83	Si
Maschio 114	PF	0	SLV 5	No
Maschio 114	V	3.972	SLV 6	Si
Maschio 114	PFFP	0	SLV 10	No
Maschio 114	R	0.814	SLV 8	No
Maschio 115	PF SLU	12.861	SLU 77	Si
Maschio 115	V SLU	19.6	SLU 65	Si
Maschio 115	PF	2.798	SLV 2	Si
Maschio 115	V	3.736	SLV 15	Si
Maschio 115	PFFP	2.434	SLV 9	Si
Maschio 115	R	1.006	SLV 8	Si
Maschio 116	PF SLU	5.507	SLU 78	Si
Maschio 116	V SLU	11.267	SLU 84	Si
Maschio 116	PF	0.473	SLV 13	No
Maschio 116	V	3.107	SLV 2	Si
Maschio 116	PFFP	1.991	SLV 9	Si
Maschio 116	R	1.108	SLV 8	Si
Maschio 118	PF SLU	44.971	SLU 44	Si
Maschio 118	V SLU	58.938	SLU 51	Si
Maschio 118	PF	3.833	SLV 12	Si
Maschio 118	V	6.91	SLV 12	Si
Maschio 118	PFFP	2.204	SLV 16	Si
Maschio 118	R	1.456	SLV 5	Si
Maschio 119	PF SLU	6.056	SLU 51	Si
Maschio 119	V SLU	19.444	SLU 82	Si
Maschio 119	PF	0.371	SLV 13	No
Maschio 119	V	2.213	SLV 15	Si
Maschio 119	PFFP	1.337	SLV 13	Si
Maschio 119	R	1.169	SLV 7	Si
Maschio 120	PF SLU	12.319	SLU 83	Si
Maschio 120	V SLU	20.181	SLU 81	Si
Maschio 120	PF	3.583	SLV 9	Si
Maschio 120	V	19.354	SLV 5	Si
Maschio 120	PFFP	2.784	SLV 12	Si
Maschio 120	R	1.418	SLV 5	Si
Maschio 123	PF SLU	3.436	SLU 39	Si
Maschio 123	V SLU	5.862	SLU 69	Si
Maschio 123	PF	0.64	SLV 13	No
Maschio 123	V	2.242	SLV 13	Si
Maschio 123	PFFP	2.088	SLV 2	Si
Maschio 123	R	1.124	SLV 8	Si
Maschio 125	PF SLU	69.954	SLU 31	Si
Maschio 125	V SLU	20.606	SLU 81	Si
Maschio 125	PF	1.939	SLV 7	Si
Maschio 125	V	6.397	SLV 10	Si
Maschio 125	PFFP	1.975	SLV 8	Si
Maschio 125	R	1.359	SLV 9	Si
Maschio 126	PF SLU	14.302	SLU 82	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 126	V SLU	5.599	SLU 84	Si
Maschio 126	PF	0.793	SLV 9	No
Maschio 126	V	3.372	SLV 15	Si
Maschio 126	PFFP	0	SLV 5	No
Maschio 126	R	0.917	SLV 8	No
Maschio 128	PF SLU	12.001	SLU 18	Si
Maschio 128	V SLU	26.453	SLU 50	Si
Maschio 128	PF	2.789	SLV 9	Si
Maschio 128	V	3.632	SLV 5	Si
Maschio 128	PFFP	5.442	SLV 9	Si
Maschio 128	R	2.476	SLV 12	Si
Maschio 129	PF SLU	8.873	SLU 43	Si
Maschio 129	V SLU	36.989	SLU 43	Si
Maschio 129	PF	2.498	SLV 3	Si
Maschio 129	V	11.728	SLV 14	Si
Maschio 129	PFFP	4.168	SLV 11	Si
Maschio 129	R	1.236	SLV 10	Si
Maschio 130	PF SLU	14.849	SLU 81	Si
Maschio 130	V SLU	16.346	SLU 81	Si
Maschio 130	PF	2.612	SLV 16	Si
Maschio 130	V	3.812	SLV 14	Si
Maschio 130	PFFP	4.317	SLV 16	Si
Maschio 130	R	1.097	SLV 5	Si
Maschio 131	PF SLU	60.093	SLU 35	Si
Maschio 131	V SLU	179.512	SLU 41	Si
Maschio 131	PF	2.328	SLV 3	Si
Maschio 131	V	3.455	SLV 3	Si
Maschio 131	PFFP	4.833	SLV 8	Si
Maschio 131	R	1.061	SLV 10	Si
Maschio 132	PF SLU	8.193	SLU 44	Si
Maschio 132	V SLU	42.414	SLU 44	Si
Maschio 132	PF	1.513	SLV 16	Si
Maschio 132	V	5.666	SLV 3	Si
Maschio 132	PFFP	3.9	SLV 8	Si
Maschio 132	R	1.049	SLV 5	Si
Maschio 133	PF SLU	12.703	SLU 47	Si
Maschio 133	V SLU	32.974	SLU 50	Si
Maschio 133	PF	2.768	SLV 13	Si
Maschio 133	V	5.859	SLV 14	Si
Maschio 133	PFFP	3.803	SLV 13	Si
Maschio 133	R	0.979	SLV 8	No
Maschio 134	PF SLU	31.232	SLU 26	Si
Maschio 134	V SLU	30.813	SLU 72	Si
Maschio 134	PF	1.85	SLV 16	Si
Maschio 134	V	2.979	SLV 16	Si
Maschio 134	PFFP	6.294	SLV 5	Si
Maschio 134	R	0.92	SLV 8	No
Maschio 135	PF SLU	13.287	SLU 60	Si
Maschio 135	V SLU	31.457	SLU 84	Si
Maschio 135	PF	0.297	SLV 16	No
Maschio 135	V	2.768	SLV 16	Si
Maschio 135	PFFP	2.993	SLV 11	Si
Maschio 135	R	0.737	SLV 5	No
Maschio 136	PF SLU	9.19	SLU 40	Si
Maschio 136	V SLU	33.318	SLU 42	Si
Maschio 136	PF	0	SLV 7	No
Maschio 136	V	4.166	SLV 3	Si
Maschio 136	PFFP	2.423	SLV 11	Si
Maschio 136	R	0.75	SLV 10	No
Maschio 137	PF SLU	10.279	SLU 23	Si
Maschio 137	V SLU	17.933	SLU 78	Si
Maschio 137	PF	1.32	SLV 3	Si
Maschio 137	V	4.128	SLV 3	Si
Maschio 137	PFFP	5.273	SLV 11	Si
Maschio 137	R	0.839	SLV 6	No
Maschio 138	PF SLU	6.963	SLU 44	Si
Maschio 138	V SLU	16.081	SLU 73	Si
Maschio 138	PF	0.801	SLV 3	No
Maschio 138	V	3.514	SLV 3	Si
Maschio 138	PFFP	5.848	SLV 7	Si
Maschio 138	R	0.713	SLV 10	No
Maschio 139	PF SLU	9.907	SLU 43	Si
Maschio 139	V SLU	22.439	SLU 41	Si
Maschio 139	PF	2.849	SLV 3	Si
Maschio 139	V	6.972	SLV 14	Si
Maschio 139	PFFP	3.268	SLV 3	Si
Maschio 139	R	1.075	SLV 10	Si
Maschio 140	PF SLU	14.351	SLU 82	Si
Maschio 140	V SLU	6.211	SLU 84	Si
Maschio 140	PF	1.851	SLV 9	Si
Maschio 140	V	3.917	SLV 9	Si
Maschio 140	PFFP	0	SLV 5	No
Maschio 140	R	1.029	SLV 11	Si
Maschio 141	PF SLU	25.22	SLU 43	Si
Maschio 141	V SLU	23.216	SLU 50	Si
Maschio 141	PF	4.172	SLV 10	Si
Maschio 141	V	5.355	SLV 6	Si
Maschio 141	PFFP	9.53	SLV 4	Si
Maschio 141	R	2.123	SLV 9	Si
Maschio 142	PF SLU	19.16	SLU 41	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 142	V SLU	13.405	SLU 50	Si
Maschio 142	PF	4.466	SLV 6	Si
Maschio 142	V	2.099	SLV 6	Si
Maschio 142	PFFP	31.065	SLV 4	Si
Maschio 142	R	4.751	SLV 13	Si
Maschio 144	PF SLU	24.761	SLU 45	Si
Maschio 144	V SLU	245.036	SLU 71	Si
Maschio 144	PF	2.092	SLV 6	Si
Maschio 144	V	33.661	SLV 9	Si
Maschio 144	PFFP	2.691	SLV 6	Si
Maschio 144	R	1.391	SLV 11	Si
Maschio 147	PF SLU	3.294	SLU 39	Si
Maschio 147	V SLU	5.069	SLU 70	Si
Maschio 147	PF	0.453	SLV 2	No
Maschio 147	V	1.931	SLV 2	Si
Maschio 147	PFFP	2.217	SLV 13	Si
Maschio 147	R	1.155	SLV 11	Si
Maschio 149	PF SLU	17.452	SLU 45	Si
Maschio 149	V SLU	36.35	SLU 40	Si
Maschio 149	PF	3.953	SLV 6	Si
Maschio 149	V	7.263	SLV 7	Si
Maschio 149	PFFP	3.327	SLV 4	Si
Maschio 149	R	1.574	SLV 9	Si
Maschio 150	PF SLU	3.953	SLU 70	Si
Maschio 150	V SLU	27.368	SLU 70	Si
Maschio 150	PF	0.22	SLV 2	No
Maschio 150	V	1.961	SLV 2	Si
Maschio 150	PFFP	1.187	SLV 2	Si
Maschio 150	R	0.974	SLV 8	No
Maschio 152	PF SLU	7.138	SLU 40	Si
Maschio 152	V SLU	26.929	SLU 84	Si
Maschio 152	PF	1.894	SLV 3	Si
Maschio 152	V	15.352	SLV 7	Si
Maschio 152	PFFP	0.9	SLV 1	No
Maschio 152	R	2.079	SLV 12	Si
Maschio 153	PF SLU	8.531	SLU 78	Si
Maschio 153	V SLU	3398.085	SLU 81	Si
Maschio 153	PFFP	0	SLV 16	No
Maschio 153	R	0.857	SLV 9	No
Maschio 155	PF SLU	4.4	SLU 65	Si
Maschio 155	V SLU	24.65	SLU 50	Si
Maschio 155	PF	0	SLV 2	No
Maschio 155	V	2.639	SLV 2	Si
Maschio 155	PFFP	1.427	SLV 6	Si
Maschio 155	R	1.024	SLV 11	Si
Maschio 156	PF SLU	13.033	SLU 69	Si
Maschio 156	V SLU	10.788	SLU 72	Si
Maschio 156	PF	2.781	SLV 13	Si
Maschio 156	V	3.487	SLV 2	Si
Maschio 156	PFFP	2.395	SLV 6	Si
Maschio 156	R	0.983	SLV 7	No
Maschio 157	PF SLU	10.782	SLU 41	Si
Maschio 157	V SLU	35.898	SLU 41	Si
Maschio 157	PF	0	SLV 5	No
Maschio 157	V	5.879	SLV 13	Si
Maschio 157	PFFP	0	SLV 10	No
Maschio 157	R	0.819	SLV 11	No
Maschio 158	PF SLU	8.225	SLU 43	Si
Maschio 158	V SLU	13.003	SLU 81	Si
Maschio 158	PF	2.738	SLV 3	Si
Maschio 158	V	8.306	SLV 1	Si
Maschio 158	PFFP	3.403	SLV 7	Si
Maschio 158	R	0.903	SLV 10	No
Maschio 159	PF SLU	7.919	SLU 43	Si
Maschio 159	V SLU	48.986	SLU 43	Si
Maschio 159	PF	0	SLV 7	No
Maschio 159	V	6.796	SLV 1	Si
Maschio 159	PFFP	0	SLV 8	No
Maschio 159	R	0.825	SLV 10	No
Maschio 160	PF SLU	49.482	SLU 31	Si
Maschio 160	V SLU	42.589	SLU 68	Si
Maschio 160	PF	2.287	SLV 6	Si
Maschio 160	V	2.795	SLV 8	Si
Maschio 160	PFFP	3.38	SLV 2	Si
Maschio 160	R	1.659	SLV 10	Si
Maschio 161	PF SLU	35.954	SLU 40	Si
Maschio 161	V SLU	37.749	SLU 50	Si
Maschio 161	PF	1.787	SLV 16	Si
Maschio 161	V	1.146	SLV 12	Si
Maschio 161	PFFP	1.77	SLV 7	Si
Maschio 161	R	5.313	SLV 6	Si
Maschio 162	PF SLU	2.814	SLU 37	Si
Maschio 162	V SLU	13.367	SLU 36	Si
Maschio 162	PF	0	SLV 7	No
Maschio 162	V	4.909	SLV 12	Si
Maschio 162	PFFP	0	SLV 12	No
Maschio 162	R	3.214	SLV 5	Si
Maschio 163	PF SLU	3.044	SLU 60	Si
Maschio 163	V SLU	13.397	SLU 74	Si
Maschio 163	PF	1.188	SLV 12	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 163	V	11.25	SLV 16	Si
Maschio 163	PFFP	0	SLV 11	No
Maschio 163	R	2.879	SLV 7	Si
Maschio 164	PF SLU	3.129	SLU 37	Si
Maschio 164	V SLU	11.694	SLU 77	Si
Maschio 164	PF	0	SLV 5	No
Maschio 164	V	3.593	SLV 5	Si
Maschio 164	PFFP	0	SLV 10	No
Maschio 164	R	3.33	SLV 8	Si
Maschio 165	PF SLU	21.065	SLU 38	Si
Maschio 165	V SLU	23.103	SLU 70	Si
Maschio 165	PF	4.927	SLV 2	Si
Maschio 165	V	8.969	SLV 11	Si
Maschio 165	PFFP	1.615	SLV 5	Si
Maschio 165	R	2.72	SLV 12	Si
Maschio 166	PF SLU	5.892	SLU 58	Si
Maschio 166	V SLU	12.784	SLU 77	Si
Maschio 166	PF	0.62	SLV 15	No
Maschio 166	V	5.283	SLV 2	Si
Maschio 166	PFFP	0	SLV 5	No
Maschio 166	R	2.372	SLV 6	Si
Maschio 169	PF SLU	10.842	SLU 60	Si
Maschio 169	V SLU	25.363	SLU 81	Si
Maschio 169	PF	1.668	SLV 12	Si
Maschio 169	V	3.907	SLV 5	Si
Maschio 169	PFFP	0.692	SLV 16	No
Maschio 169	R	7.252	SLV 7	Si
Maschio 170	PF SLU	9.295	SLU 41	Si
Maschio 170	V SLU	21.574	SLU 81	Si
Maschio 170	PF	2.911	SLV 9	Si
Maschio 170	V	10.713	SLV 5	Si
Maschio 170	PFFP	1.722	SLV 12	Si
Maschio 170	R	4.624	SLV 6	Si
Maschio 172	PF SLU	2.54	SLU 82	Si
Maschio 172	V SLU	20.289	SLU 74	Si
Maschio 172	PF	0.891	SLV 10	No
Maschio 172	V	3.558	SLV 9	Si
Maschio 172	PFFP	1.042	SLV 16	Si
Maschio 172	R	2.331	SLV 7	Si
Maschio 173	PF SLU	3.6	SLU 42	Si
Maschio 173	V SLU	14.762	SLU 50	Si
Maschio 173	PF	0.524	SLV 12	No
Maschio 173	V	2.141	SLV 5	Si
Maschio 173	PFFP	1.1	SLV 9	Si
Maschio 173	R	5.036	SLV 6	Si
Maschio 174	PF SLU	1.968	SLU 38	Si
Maschio 174	V SLU	48.661	SLU 36	Si
Maschio 174	PF	0	SLV 3	No
Maschio 174	V	28.826	SLV 13	Si
Maschio 174	PFFP	0	SLV 1	No
Maschio 174	R	2.809	SLV 10	Si
Maschio 175	PF SLU	6.178	SLU 39	Si
Maschio 175	V SLU	35.294	SLU 60	Si
Maschio 175	PF	1.072	SLV 4	Si
Maschio 175	V	7.766	SLV 13	Si
Maschio 175	PFFP	1.149	SLV 7	Si
Maschio 175	R	2.33	SLV 10	Si
Maschio 176	PF SLU	6.673	SLU 41	Si
Maschio 176	V SLU	42.67	SLU 79	Si
Maschio 176	PF	2.043	SLV 15	Si
Maschio 176	V	5.778	SLV 13	Si
Maschio 176	PFFP	1.63	SLV 11	Si
Maschio 176	R	3.133	SLV 6	Si
Maschio 177	PF SLU	3.427	SLU 41	Si
Maschio 177	V SLU	43.491	SLU 35	Si
Maschio 177	PF	0	SLV 13	No
Maschio 177	V	6.389	SLV 14	Si
Maschio 177	PFFP	0	SLV 16	No
Maschio 177	R	2.144	SLV 5	Si
Maschio 178	PF SLU	11.471	SLU 35	Si
Maschio 178	V SLU	29.408	SLU 42	Si
Maschio 178	PF	3.093	SLV 14	Si
Maschio 178	V	12.724	SLV 4	Si
Maschio 178	PFFP	2.277	SLV 13	Si
Maschio 178	R	2.843	SLV 5	Si
Maschio 179	PF SLU	20.784	SLU 30	Si
Maschio 179	V SLU	24.433	SLU 70	Si
Maschio 179	PF	1.224	SLV 16	Si
Maschio 179	V	3.362	SLV 16	Si
Maschio 179	PFFP	3.342	SLV 5	Si
Maschio 179	R	2.644	SLV 10	Si
Maschio 180	PF SLU	5.931	SLU 45	Si
Maschio 180	V SLU	17.155	SLU 75	Si
Maschio 180	PF	0.459	SLV 15	No
Maschio 180	V	3.606	SLV 1	Si
Maschio 180	PFFP	2.656	SLV 11	Si
Maschio 180	R	2.085	SLV 6	Si
Maschio 181	PF SLU	3.011	SLU 42	Si
Maschio 181	V SLU	31.032	SLU 84	Si
Maschio 181	PF	0	SLV 7	No

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 181	V	4.45	SLV 3	Si
Maschio 181	PFFP	1.962	SLV 11	Si
Maschio 181	R	2.841	SLV 7	Si
Maschio 182	PF SLU	4.203	SLU 40	Si
Maschio 182	V SLU	16.668	SLU 78	Si
Maschio 182	PF	0.605	SLV 3	No
Maschio 182	V	5.74	SLV 3	Si
Maschio 182	PFFP	2.555	SLV 11	Si
Maschio 182	R	2.974	SLV 10	Si
Maschio 183	PF SLU	5.733	SLU 65	Si
Maschio 183	V SLU	18.947	SLU 65	Si
Maschio 183	PF	0.567	SLV 3	No
Maschio 183	V	4.745	SLV 3	Si
Maschio 183	PFFP	3.795	SLV 7	Si
Maschio 183	R	2.551	SLV 12	Si
Maschio 184	PF SLU	7.83	SLU 35	Si
Maschio 184	V SLU	15.816	SLU 77	Si
Maschio 184	PF	3.504	SLV 14	Si
Maschio 184	V	12.902	SLV 14	Si
Maschio 184	PFFP	2.002	SLV 3	Si
Maschio 184	R	2.855	SLV 10	Si
Maschio 185	PF SLU	2.397	SLU 42	Si
Maschio 185	V SLU	18.176	SLU 50	Si
Maschio 185	PF	0	SLV 3	No
Maschio 185	V	2.559	SLV 6	Si
Maschio 185	PFFP	1.576	SLV 4	Si
Maschio 185	R	4.487	SLV 9	Si
Maschio 187	PF SLU	1.263	SLU 60	Si
Maschio 187	V SLU	17.508	SLU 82	Si
Maschio 187	PF	1.161	SLV 11	Si
Maschio 187	V	10.767	SLV 11	Si
Maschio 187	PFFP	1.629	SLV 6	Si
Maschio 187	R	1.918	SLV 11	Si
Maschio 189	PF SLU	16.51	SLU 45	Si
Maschio 189	V SLU	33.236	SLU 40	Si
Maschio 189	PF	2.236	SLV 7	Si
Maschio 189	V	5.048	SLV 7	Si
Maschio 189	PFFP	1.872	SLV 4	Si
Maschio 189	R	4.459	SLV 9	Si
Maschio 191	PF SLU	4.371	SLU 35	Si
Maschio 191	V SLU	30.652	SLU 78	Si
Maschio 191	PF	0.976	SLV 1	No
Maschio 191	V	10.232	SLV 11	Si
Maschio 191	PFFP	0	SLV 1	No
Maschio 191	R	3.15	SLV 12	Si
Maschio 194	PF SLU	1.63	SLU 61	Si
Maschio 194	V SLU	10.852	SLU 78	Si
Maschio 194	PF	0	SLV 1	No
Maschio 194	V	5.611	SLV 1	Si
Maschio 194	PFFP	0	SLV 4	No
Maschio 194	R	2.069	SLV 10	Si
Maschio 195	PF SLU	2.089	SLU 37	Si
Maschio 195	V SLU	15.705	SLU 36	Si
Maschio 195	PF	0	SLV 7	No
Maschio 195	V	5.3	SLV 11	Si
Maschio 195	PFFP	0	SLV 7	No
Maschio 195	R	3.409	SLV 10	Si
Maschio 196	PF SLU	38.166	SLU 78	Si
Maschio 196	V SLU	33.504	SLU 56	Si
Maschio 196	PF	2.067	SLV 10	Si
Maschio 196	V	1.473	SLV 10	Si
Maschio 196	PFFP	1.807	SLV 14	Si
Maschio 196	R	5.482	SLV 7	Si
Maschio 198	PF SLU	4.904	SLU 65	Si
Maschio 198	V SLU	12.487	SLU 78	Si
Maschio 198	PF	0.207	SLV 15	No
Maschio 198	V	5.844	SLV 2	Si
Maschio 198	PFFP	1.24	SLV 15	Si
Maschio 198	R	2.534	SLV 9	Si
Maschio 199	PF SLU	2.801	SLU 66	Si
Maschio 199	V SLU	6.948	SLU 70	Si
Maschio 199	PF	0.442	SLV 13	No
Maschio 199	V	3.204	SLV 13	Si
Maschio 199	PFFP	1.493	SLV 6	Si
Maschio 199	R	3.068	SLV 8	Si
Maschio 201	PF SLU	1.972	SLU 30	Si
Maschio 201	V SLU	8.544	SLU 78	Si
Maschio 201	PF	0	SLD 5	No
Maschio 201	V	3.233	SLV 11	Si
Maschio 201	PFFP	0	SLV 10	No
Maschio 201	R	4.491	SLV 12	Si
Maschio 202	PF SLU	22.012	SLU 78	Si
Maschio 202	V SLU	6.128	SLU 78	Si
Maschio 202	PF	0	SLV 5	No
Maschio 202	V	2.1	SLV 4	Si
Maschio 202	PFFP	0	SLV 10	No
Maschio 202	R	3.818	SLV 7	Si
Maschio 204	PF SLU	2.807	SLU 66	Si
Maschio 204	V SLU	6.163	SLU 77	Si
Maschio 204	PF	0.232	SLV 2	No

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 204	V	2.647	SLV 2	Si
Maschio 204	PFFP	1.071	SLV 13	Si
Maschio 204	R	3.294	SLV 7	Si
Maschio 206	PF SLU	8.462	SLU 65	Si
Maschio 206	V SLU	34.95	SLU 65	Si
Maschio 206	PF	0.419	SLV 4	No
Maschio 206	V	3.23	SLV 2	Si
Maschio 206	PFFP	1.48	SLV 2	Si
Maschio 206	R	2.639	SLV 5	Si
Maschio 207	PF SLU	4.851	SLU 64	Si
Maschio 207	V SLU	23.785	SLU 48	Si
Maschio 207	PF	0	SLV 2	No
Maschio 207	V	4.813	SLV 2	Si
Maschio 207	PFFP	0	SLV 5	No
Maschio 207	R	1.888	SLV 9	Si
Maschio 208	PF SLU	18.283	SLU 50	Si
Maschio 208	V SLU	14.253	SLU 71	Si
Maschio 208	PF	4.367	SLV 6	Si
Maschio 208	V	8.05	SLV 2	Si
Maschio 208	PFFP	1.381	SLV 6	Si
Maschio 208	R	2.714	SLV 7	Si
Maschio 209	PF SLU	3.099	SLU 38	Si
Maschio 209	V SLU	16.87	SLU 77	Si
Maschio 209	PF	0	SLV 5	No
Maschio 209	V	6.402	SLV 10	Si
Maschio 209	PFFP	0	SLV 6	No
Maschio 209	R	3.031	SLV 11	Si
Maschio 216	PF SLU	5.161	SLU 83	Si
Maschio 216	V SLU	3.257	SLU 83	Si
Maschio 216	PF	0.888	SLV 15	No
Maschio 216	V	0.755	SLV 15	No
Maschio 216	PFFP	20.138	SLV 11	Si
Maschio 216	R	6.171	SLV 10	Si
Maschio 227	PF SLU	19.235	SLU 78	Si
Maschio 227	V SLU	15.066	SLU 84	Si
Maschio 227	PF	0	SLV 13	No
Maschio 227	V	3.019	SLV 13	Si
Maschio 227	PFFP	0	SLV 5	No
Maschio 227	R	0.527	SLV 4	No
Maschio 228	PF SLU	10.517	SLU 77	Si
Maschio 228	V SLU	4.929	SLU 83	Si
Maschio 228	PF	3.501	SLV 2	Si
Maschio 228	V	2.308	SLV 15	Si
Maschio 228	PFFP	1.551	SLV 9	Si
Maschio 228	R	0.655	SLV 4	No
Maschio 229	PF SLU	3.607	SLU 71	Si
Maschio 229	V SLU	6.833	SLU 84	Si
Maschio 229	PF	0.274	SLV 13	No
Maschio 229	V	1.986	SLV 13	Si
Maschio 229	PFFP	1.632	SLV 10	Si
Maschio 229	R	0.602	SLV 4	No
Maschio 230	PF SLU	2.307	SLU 84	Si
Maschio 230	V SLU	4.272	SLU 84	Si
Maschio 230	PF	1.183	SLV 2	Si
Maschio 230	V	1.785	SLV 2	Si
Maschio 230	PFFP	1.714	SLV 2	Si
Maschio 230	R	0.562	SLV 15	No
Maschio 231	PF SLU	9.339	SLU 43	Si
Maschio 231	V SLU	9.344	SLU 84	Si
Maschio 231	PF	4.019	SLV 9	Si
Maschio 231	V	7.84	SLV 8	Si
Maschio 231	PFFP	1.88	SLV 16	Si
Maschio 231	R	1.977	SLV 1	Si
Maschio 234	PF SLU	5.295	SLU 83	Si
Maschio 234	V SLU	7.43	SLU 69	Si
Maschio 234	PF	1.147	SLV 2	Si
Maschio 234	V	2.692	SLV 15	Si
Maschio 234	PFFP	1.82	SLV 9	Si
Maschio 234	R	0.651	SLV 4	No
Maschio 239	PF SLU	15.339	SLU 44	Si
Maschio 239	V SLU	3.939	SLU 83	Si
Maschio 239	PF	0.86	SLV 9	No
Maschio 239	V	2.419	SLV 13	Si
Maschio 239	PFFP	1.129	SLV 9	Si
Maschio 239	R	0.629	SLV 4	No
Maschio 240	PF SLU	15.193	SLU 39	Si
Maschio 240	V SLU	6.753	SLU 51	Si
Maschio 240	PF	6.208	SLV 6	Si
Maschio 240	V	3.561	SLV 7	Si
Maschio 240	PFFP	7.333	SLV 2	Si
Maschio 240	R	0.604	SLV 11	No
Maschio 241	PF SLU	13.272	SLU 75	Si
Maschio 241	V SLU	4.798	SLU 75	Si
Maschio 241	PF	5.212	SLV 12	Si
Maschio 241	V	1.47	SLV 12	Si
Maschio 241	PFFP	0	SLV 1	No
Maschio 241	R	5.999	SLV 16	Si
Maschio 243	PF SLU	5.362	SLU 84	Si
Maschio 243	V SLU	12.245	SLU 84	Si
Maschio 243	PF	0	SLV 1	No

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 243	V	1.25	SLV 15	Si
Maschio 243	PFFP	0	SLV 10	No
Maschio 243	R	7.326	SLV 4	Si
Maschio 244	PF SLU	1.99	SLU 83	Si
Maschio 244	V SLU	4.979	SLU 83	Si
Maschio 244	PF	0	SLV 1	No
Maschio 244	V	1.037	SLV 15	Si
Maschio 244	PFFP	0	SLV 6	No
Maschio 244	R	7.428	SLV 15	Si
Maschio 246	PF SLU	13.247	SLU 63	Si
Maschio 246	V SLU	5.481	SLU 78	Si
Maschio 246	PF	2.62	SLV 6	Si
Maschio 246	V	2.914	SLV 2	Si
Maschio 246	PFFP	1.554	SLV 9	Si
Maschio 246	R	0.681	SLV 3	No
Maschio 248	PF SLU	10.972	SLU 81	Si
Maschio 248	V SLU	8.279	SLU 59	Si
Maschio 248	PF	6.148	SLV 6	Si
Maschio 248	V	4.821	SLV 7	Si
Maschio 248	PFFP	9.2	SLV 3	Si
Maschio 248	R	0.817	SLV 10	No
Maschio 251	PF SLU	1.148	SLU 40	Si
Maschio 251	V SLU	5.12	SLU 40	Si
Maschio 251	PF	0.213	SLV 15	No
Maschio 251	V	2.583	SLV 11	Si
Maschio 251	PFFP	0	SLV 1	No
Maschio 251	R	4.999	SLV 2	Si
Maschio 258	PF SLU	4.73	SLU 82	Si
Maschio 258	V SLU	5.854	SLU 70	Si
Maschio 258	PF	1.147	SLV 13	Si
Maschio 258	V	2.404	SLV 2	Si
Maschio 258	PFFP	1.779	SLV 2	Si
Maschio 258	R	0.662	SLV 15	No
Maschio 260	PF SLU	7.662	SLU 83	Si
Maschio 260	V SLU	14.235	SLU 51	Si
Maschio 260	PF	4.694	SLV 6	Si
Maschio 260	V	6.497	SLV 11	Si
Maschio 260	PFFP	2.438	SLV 1	Si
Maschio 260	R	1.95	SLV 13	Si
Maschio 261	PF SLU	3.443	SLU 78	Si
Maschio 261	V SLU	13.431	SLU 78	Si
Maschio 261	PF	0.279	SLV 2	No
Maschio 261	V	1.607	SLV 2	Si
Maschio 261	PFFP	1.656	SLV 13	Si
Maschio 261	R	0.534	SLV 4	No
Maschio 262	PF SLU	3.017	SLU 70	Si
Maschio 262	V SLU	5.934	SLU 84	Si
Maschio 262	PF	0.23	SLV 2	No
Maschio 262	V	1.767	SLV 2	Si
Maschio 262	PFFP	2.014	SLV 9	Si
Maschio 262	R	0.553	SLV 15	No
Maschio 263	PF SLU	8.615	SLU 78	Si
Maschio 263	V SLU	4.263	SLU 78	Si
Maschio 263	PF	2.973	SLV 2	Si
Maschio 263	V	2.06	SLV 2	Si
Maschio 263	PFFP	1.385	SLV 5	Si
Maschio 263	R	0.67	SLV 15	No
Maschio 264	PF SLU	16.157	SLU 41	Si
Maschio 264	V SLU	14.576	SLU 83	Si
Maschio 264	PF	0	SLV 2	No
Maschio 264	V	2.83	SLV 2	Si
Maschio 264	PFFP	0	SLV 1	No
Maschio 264	R	0.551	SLV 15	No

Verifica maschi in muratura

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
1	PF	1.479	SLV 13	0.352	1.442	1476	1.592	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.384	SLV 16	0.331	1.355	1202	1.463	Si
	R	1.579	SLV 3	0.362	1.483	1618	1.653	Si
2	PF	1.045	SLV 13	0.255	1.042	537	1.052	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.171	SLV 13	0.283	1.158	737	1.197	Si
	R	1.741	SLV 2	0.362	1.483	1618	1.653	Si
3	PF	1.783	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.741	SLV 15	0.362	1.483	1618	1.653	Si
	R	1.629	SLV 6	0.362	1.483	1618	1.653	Si
4	PF	2.435	SLV 3	0.362	1.483	1618	1.653	Si
	V	2.759	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.779	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.585	SLV 10	0.362	1.483	1618	1.653	Si
7	PF	3.314	SLV 9	0.362	1.483	1618	1.653	Si
	V	3.936	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.08	SLV 6	0.263	1.077	592	1.094	Si
9	PF	1.694	SLV 14	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.565	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.843	SLV 3	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
10	PF	1.974	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.4	SLV 13	0.335	1.37	1245	1.484	Si
	PFFP	3.206	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.7	SLV 7	0.362	1.483	1618	1.653	Si
11	PF	2.098	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.291	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	4.05	SLV 15	0.362	1.483	1618	1.653	Si
	R	1.598	SLV 7	0.362	1.483	1618	1.653	Si
12	PF	2.187	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.464	SLV 15	0.349	1.429	1430	1.571	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.583	SLV 9	0.362	1.483	1618	1.653	Si
13	PF	3.183	SLV 13	0.362	1.483	1618	1.653	Si
	V	3.906	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	3.58	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.565	SLV 7	0.362	1.483	1618	1.653	Si
14	PF	0.628	SLV 14	0.149	0.61	136	0.599	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.659	SLV 14	0.157	0.642	153	0.628	No
	R	1.448	SLV 3	0.345	1.414	1382	1.549	Si
15	PF	3.552	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.726	SLV 4	0.175	0.715	196	0.696	No
	PFFP	3.721	SLV 13	0.362	1.483	1618	1.653	Si
	R	2.996	SLV 7	0.362	1.483	1618	1.653	Si
16	PF	1.952	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.382	SLV 2	0.331	1.353	1196	1.46	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.33	SLV 8	0.362	1.483	1618	1.653	Si
17	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.755	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.23	SLV 11	0.298	1.22	860	1.276	Si
18	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.274	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.367	SLV 11	0.331	1.353	1196	1.46	Si
19	PF	1.657	SLV 16	0.362	1.483	1618	1.653	Si
	V	4.008	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.172	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.365	SLV 7	0.33	1.352	1191	1.458	Si
20	PF	1.89	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.286	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.327	SLV 5	0.321	1.314	1086	1.404	Si
24	PF	1.425	SLV 1	0.34	1.393	1316	1.519	Si
	V	2.209	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.515	SLV 9	0.362	1.483	1618	1.653	Si
26	PF	1.632	SLV 2	0.362	1.483	1618	1.653	Si
	V	3.756	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	2.059	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.454	SLV 11	0.351	1.438	1462	1.586	Si
28	PF	0.841	SLV 14	0.204	0.835	294	0.821	No
	V	2.937	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.546	SLV 16	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
29	PF	2.361	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.616	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	3.577	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.647	SLV 7	0.362	1.483	1618	1.653	Si
30	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.007	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.156	SLV 8	0.362	1.483	1618	1.653	Si
31	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.311	SLV 11	0.317	1.299	1045	1.382	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.881	SLV 4	0.362	1.483	1618	1.653	Si
32	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.27	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.606	SLV 8	0.362	1.483	1618	1.653	Si
34	PF	3.393	SLV 10	0.362	1.483	1618	1.653	Si
	V	3.694	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.036	SLV 5	0.253	1.035	526	1.043	Si
36	PF	2.893	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.783	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.89	SLV 11	0.362	1.483	1618	1.653	Si
37	PF	1.478	SLV 3	0.352	1.441	1473	1.59	Si
	V	2.628	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.293	SLV 3	0.311	1.271	973	1.342	Si
	R	2.162	SLV 12	0.362	1.483	1618	1.653	Si
38	PF	2.313	SLV 3	0.362	1.483	1618	1.653	Si
	V	4.039	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.237	SLV 10	0.3	1.227	874	1.284	Si
40	PF	1.534	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.646	SLV 15	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.658	SLV 11	0.362	1.483	1618	1.653	Si
41	PF	0.524	SLV 7	0.12	0.493	82	0.487	No
	V	2.788	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	3.335	SLV 2	0.362	1.483	1618	1.653	Si
	R	3.001	SLV 12	0.362	1.483	1618	1.653	Si
42	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.242	SLV 10	0.301	1.231	884	1.29	Si
43	PF	2.197	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.905	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.428	SLV 6	0.345	1.413	1379	1.548	Si
44	PF	1.72	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.868	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	3.529	SLV 4	0.362	1.483	1618	1.653	Si
	R	1.724	SLV 12	0.362	1.483	1618	1.653	Si
45	PF	1.869	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.505	SLV 4	0.358	1.466	1557	1.627	Si
	PFFP	2.933	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.654	SLV 12	0.362	1.483	1618	1.653	Si
46	PF	1.6	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.52	SLV 1	0.362	1.481	1609	1.649	Si
	R	1.83	SLV 16	0.362	1.483	1618	1.653	Si
48	PF	3.249	SLV 10	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.056	SLV 9	0.257	1.054	555	1.066	Si
50	PF	2.309	SLV 2	0.362	1.483	1618	1.653	Si
	V	3.265	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.719	SLV 11	0.362	1.483	1618	1.653	Si
51	PF	1.923	SLV 4	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.801	SLV 2	0.362	1.483	1618	1.653	Si
	R	2.008	SLV 9	0.362	1.483	1618	1.653	Si
52	PF	1.399	SLV 4	0.334	1.369	1243	1.484	Si
	V	3.599	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	1.418	SLV 4	0.339	1.387	1296	1.509	Si
	R	1.653	SLV 13	0.362	1.483	1618	1.653	Si
53	PF	1.367	SLV 13	0.327	1.34	1157	1.441	Si
	V	3.267	SLV 12	0.362	1.483	1618	1.653	Si
	PFFP	1.419	SLV 15	0.339	1.387	1298	1.51	Si
	R	0.981	SLV 5	0.239	0.978	447	0.975	No
54	PF	1.082	SLV 12	0.264	1.079	595	1.097	Si
	V	3.808	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.197	SLV 12	0.29	1.188	795	1.235	Si
	R	0.77	SLV 5	0.183	0.75	221	0.731	No
55	PF	1.473	SLV 12	0.356	1.457	1525	1.613	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.815	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.935	SLV 5	0.227	0.928	389	0.921	No
57	PF	3.334	SLV 11	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.309	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.648	SLV 6	0.152	0.621	141	0.608	No
58	PF	2.921	SLV 3	0.362	1.483	1618	1.653	Si
	V	3.375	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.888	SLV 10	0.214	0.877	335	0.867	No
59	PF	3.063	SLV 12	0.362	1.483	1618	1.653	Si
	V	3.448	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.72	SLV 5	0.17	0.696	184	0.678	No
60	PF	0.939	SLV 14	0.229	0.936	398	0.93	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.254	SLV 14	0.302	1.235	892	1.295	Si
	R	0.827	SLV 7	0.198	0.81	272	0.796	No
61	PF	2.185	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.787	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	3.663	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.689	SLV 5	0.162	0.663	165	0.648	No
62	PF	2	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.572	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.688	SLV 10	0.162	0.661	164	0.647	No
63	PF	0.803	SLV 3	0.194	0.796	259	0.78	No
	V	2.016	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.118	SLV 3	0.271	1.11	648	1.136	Si
	R	0.777	SLV 10	0.185	0.757	226	0.737	No
64	PF	1.88	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.904	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.807	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.709	SLV 8	0.167	0.685	177	0.667	No
65	PF	2.219	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.937	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.692	SLV 5	0.163	0.665	166	0.65	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
66	PF	0.986	SLV 3	0.241	0.986	457	0.984	No
	V	2.2	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	3.815	SLV 8	0.362	1.483	1618	1.653	Si
	R	0.698	SLV 9	0.164	0.673	170	0.656	No
67	PF	1.743	SLV 16	0.362	1.483	1618	1.653	Si
	V	2.074	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.751	SLV 6	0.178	0.73	206	0.71	No
68	PF	0.847	SLV 2	0.206	0.842	301	0.829	No
	V	2.181	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	3.524	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.607	SLV 9	0.141	0.578	120	0.569	No
69	PF	1.226	SLV 2	0.295	1.209	838	1.262	Si
	V	3.793	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.372	SLV 2	0.328	1.344	1170	1.447	Si
	R	0.783	SLV 11	0.186	0.763	232	0.745	No
70	PF	3.913	SLV 13	0.362	1.483	1618	1.653	Si
	V	3.595	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.525	SLV 6	0.362	1.483	1618	1.653	Si
71	PF	2.38	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.957	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.657	SLV 9	0.154	0.629	145	0.615	No
72	PF	2.658	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.73	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.95	SLV 11	0.231	0.945	408	0.94	No
75	PF	3.881	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.838	SLV 11	0.201	0.821	281	0.806	No
78	PF	0.942	SLV 3	0.229	0.939	401	0.933	No
	V	2.214	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	2.225	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.82	SLV 5	0.196	0.803	265	0.787	No
79	PF	0.951	SLV 3	0.232	0.949	413	0.944	No
	V	2.755	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.895	SLV 4	0.362	1.483	1618	1.653	Si
	R	0.837	SLV 10	0.201	0.821	281	0.806	No
80	PF	1.425	SLV 1	0.34	1.393	1316	1.519	Si
	V	3.314	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	1.469	SLV 3	0.35	1.433	1445	1.578	Si
	R	0.968	SLV 10	0.236	0.964	431	0.961	No
81	PF	1.309	SLV 9	0.317	1.297	1039	1.378	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.675	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.83	SLV 8	0.199	0.813	274	0.798	No
82	PF	1.196	SLV 12	0.29	1.187	793	1.234	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.297	SLV 12	0.314	1.285	1009	1.362	Si
	R	0.83	SLV 5	0.199	0.813	274	0.798	No
83	PF	0.782	SLV 12	0.186	0.762	231	0.744	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.77	SLV 12	0.183	0.748	220	0.729	No
	R	0.714	SLV 5	0.169	0.691	181	0.673	No
84	PF	1.202	SLV 12	0.291	1.193	804	1.241	Si
	V	3.922	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.159	SLV 12	0.281	1.152	724	1.189	Si
	R	0.715	SLV 5	0.169	0.691	181	0.673	No
86	PF	2.716	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.248	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.913	SLV 5	0.221	0.904	363	0.896	No
88	PF	1.202	SLV 3	0.29	1.187	793	1.234	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.498	SLV 7	0.362	1.481	1611	1.65	Si
	R	0.891	SLV 10	0.215	0.88	338	0.87	No
89	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.657	SLV 12	0.362	1.483	1618	1.653	Si
90	PF	1.439	SLV 14	0.343	1.406	1356	1.537	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.663	SLV 14	0.362	1.483	1618	1.653	Si
	R	0.984	SLV 6	0.24	0.982	453	0.981	No
91	PF	1.644	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.956	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.245	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.786	SLV 5	0.187	0.766	234	0.748	No
92	PF	2.149	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.71	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.753	SLV 9	0.179	0.731	207	0.711	No
93	PF	0.946	SLV 3	0.23	0.943	406	0.938	No
	V	3.101	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.405	SLV 3	0.336	1.375	1259	1.491	Si
	R	0.86	SLV 10	0.207	0.845	304	0.833	No
94	PF	1.663	SLV 13	0.362	1.483	1618	1.653	Si
	V	3.284	SLV 16	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	PFFP	1.936	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.746	SLV 8	0.177	0.723	201	0.703	No
95	PF	2.033	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.018	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.697	SLV 8	0.164	0.671	169	0.655	No
96	PF	0.925	SLV 16	0.225	0.922	383	0.916	No
	V	2.429	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.904	SLV 8	0.362	1.483	1618	1.653	Si
	R	0.659	SLV 5	0.154	0.631	147	0.618	No
97	PF	0.677	SLV 3	0.162	0.661	164	0.647	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.628	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.654	SLV 10	0.153	0.627	144	0.613	No
98	PF	1.264	SLV 16	0.304	1.244	913	1.307	Si
	V	3.117	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.193	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.637	SLV 6	0.149	0.61	136	0.599	No
99	PF	0.964	SLV 3	0.235	0.962	428	0.958	No
	V	2.695	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	3.002	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.601	SLV 10	0.14	0.574	118	0.565	No
100	PF	1.531	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.576	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.79	SLV 10	0.188	0.771	238	0.753	No
101	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.562	SLV 14	0.362	1.483	1618	1.653	Si
102	PF	1.845	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.345	SLV 6	0.362	1.483	1618	1.653	Si
	R	1.191	SLV 11	0.289	1.182	783	1.227	Si
104	PF	2.639	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.902	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.247	SLV 12	0.302	1.236	895	1.297	Si
106	PFFP	0.446	SLV 3	0.105	0.43	58	0.422	No
	R	1.018	SLV 5	0.249	1.018	500	1.021	Si
107	PF	1.87	SLV 7	0.362	1.483	1618	1.653	Si
	V	4.074	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.998	SLV 12	0.362	1.483	1618	1.653	Si
	R	0.747	SLV 9	0.177	0.725	202	0.704	No
108	PF	0.923	SLV 7	0.224	0.915	375	0.908	No
	V	3.753	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	0.969	SLV 7	0.236	0.965	432	0.962	No
	R	0.736	SLV 10	0.174	0.713	194	0.693	No
109	PF	1.425	SLV 6	0.345	1.41	1370	1.544	Si
	V	3.218	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	1.714	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.851	SLV 11	0.204	0.836	295	0.823	No
110	PF	1.494	SLV 7	0.361	1.477	1597	1.644	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.513	SLV 3	0.36	1.474	1586	1.639	Si
	R	0.857	SLV 10	0.206	0.843	302	0.831	No
111	PF	1.915	SLV 12	0.362	1.483	1618	1.653	Si
	V	1.213	SLV 11	0.294	1.203	825	1.254	Si
	PFFP	2.296	SLV 15	0.362	1.483	1618	1.653	Si
	R	1.582	SLV 6	0.362	1.483	1618	1.653	Si
112	PF	0.663	SLV 12	0.156	0.637	150	0.623	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.635	SLV 12	0.149	0.608	135	0.597	No
	R	0.874	SLV 5	0.21	0.86	318	0.848	No
113	PF	0.971	SLV 12	0.236	0.967	435	0.965	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.88	SLV 12	0.212	0.868	326	0.857	No
	R	0.889	SLV 5	0.214	0.878	336	0.868	No
114	PF	0.733	SLV 9	0.173	0.71	192	0.69	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.719	SLV 9	0.17	0.694	183	0.676	No
	R	0.871	SLV 8	0.209	0.857	316	0.846	No
115	PF	1.7	SLV 6	0.362	1.483	1618	1.653	Si
	V	3.434	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.387	SLV 9	0.335	1.373	1255	1.489	Si
	R	1.003	SLV 8	0.245	1.003	479	1.003	Si
116	PF	0.748	SLV 13	0.181	0.74	213	0.72	No
	V	2.916	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.233	SLV 9	0.299	1.222	866	1.279	Si
	R	1.08	SLV 8	0.263	1.077	592	1.094	Si
118	PF	2.541	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.22	SLV 16	0.294	1.204	826	1.255	Si
	R	1.349	SLV 5	0.326	1.336	1146	1.435	Si
119	PF	0.656	SLV 13	0.156	0.639	151	0.625	No
	V	2.08	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.055	SLV 13	0.257	1.051	551	1.063	Si
	R	1.154	SLV 7	0.28	1.147	716	1.183	Si
120	PF	2.307	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	PFFP	1.52	SLV 12	0.362	1.483	1618	1.653	Si
	R	1.311	SLV 5	0.317	1.299	1045	1.382	Si
123	PF	0.795	SLV 13	0.193	0.788	252	0.771	No
	V	2.376	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.262	SLV 2	0.304	1.242	909	1.305	Si
	R	1.093	SLV 8	0.266	1.089	613	1.11	Si
125	PF	1.374	SLV 7	0.332	1.36	1217	1.471	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.154	SLV 8	0.28	1.147	716	1.183	Si
	R	1.269	SLV 9	0.307	1.258	943	1.325	Si
126	PF	0.946	SLV 5	0.23	0.94	402	0.934	No
	V	3.802	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	0.844	SLV 5	0.203	0.829	289	0.816	No
	R	0.942	SLV 8	0.228	0.935	397	0.929	No
128	PF	2.619	SLV 9	0.362	1.483	1618	1.653	Si
	V	3.089	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	3.073	SLV 9	0.362	1.483	1618	1.653	Si
	R	2.073	SLV 12	0.362	1.483	1618	1.653	Si
129	PF	2.351	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.572	SLV 11	0.362	1.483	1618	1.653	Si
	R	1.19	SLV 10	0.289	1.181	781	1.226	Si
130	PF	1.999	SLV 16	0.362	1.483	1618	1.653	Si
	V	3.029	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.46	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.08	SLV 5	0.263	1.077	592	1.094	Si
131	PF	2.039	SLV 3	0.362	1.483	1618	1.653	Si
	V	2.512	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	2.971	SLV 8	0.362	1.483	1618	1.653	Si
	R	1.051	SLV 9	0.256	1.049	547	1.06	Si
132	PF	1.495	SLV 16	0.356	1.457	1525	1.613	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.5	SLV 8	0.362	1.483	1618	1.653	Si
	R	1.037	SLV 5	0.253	1.035	526	1.043	Si
133	PF	1.502	SLV 13	0.358	1.463	1548	1.623	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.62	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.982	SLV 8	0.239	0.98	450	0.978	No
134	PF	1.917	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.452	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	3.489	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.931	SLV 8	0.226	0.923	384	0.916	No
135	PF	0.635	SLV 16	0.151	0.619	140	0.606	No
	V	2.819	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.279	SLV 11	0.31	1.268	965	1.337	Si
	R	0.796	SLV 5	0.19	0.776	243	0.76	No
136	PF	0.388	SLV 3	0.091	0.372	41	0.366	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.155	SLV 11	0.28	1.148	717	1.184	Si
	R	0.82	SLV 10	0.196	0.803	265	0.787	No
137	PF	1.212	SLV 3	0.292	1.196	811	1.245	Si
	V	3.891	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.863	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.869	SLV 6	0.209	0.855	314	0.844	No
138	PF	0.843	SLV 3	0.205	0.837	296	0.824	No
	V	3.707	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	2.162	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.77	SLV 10	0.183	0.748	220	0.729	No
139	PF	1.565	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.447	SLV 3	0.345	1.413	1379	1.548	Si
	R	1.063	SLV 10	0.259	1.061	566	1.075	Si
140	PF	1.19	SLV 6	0.289	1.181	781	1.226	Si
	V	3.534	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	0.956	SLV 6	0.232	0.951	415	0.946	No
	R	1.02	SLV 11	0.249	1.019	502	1.023	Si
141	PF	3.765	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.98	SLV 9	0.362	1.483	1618	1.653	Si
142	PF	3.764	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.997	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.888	SLV 13	0.362	1.483	1618	1.653	Si
144	PF	1.596	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.594	SLV 6	0.362	1.483	1618	1.653	Si
	R	1.296	SLV 11	0.314	1.284	1006	1.36	Si
147	PF	0.668	SLV 2	0.159	0.652	158	0.637	No
	V	2.075	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.28	SLV 13	0.308	1.259	946	1.326	Si
	R	1.115	SLV 11	0.271	1.11	648	1.136	Si
149	PF	3.045	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.819	SLV 4	0.362	1.483	1618	1.653	Si
	R	1.522	SLV 9	0.362	1.483	1618	1.653	Si
150	PF	0.515	SLV 2	0.121	0.495	83	0.489	No
	V	2.002	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.031	SLV 2	0.251	1.029	517	1.035	Si
	R	0.978	SLV 8	0.238	0.975	444	0.973	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
152	PF	1.449	SLV 3	0.346	1.415	1385	1.551	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.952	SLV 1	0.232	0.95	415	0.946	No
	R	1.875	SLV 12	0.362	1.483	1618	1.653	Si
153	PFFP	0.462	SLV 15	0.109	0.445	64	0.44	No
	R	0.915	SLV 9	0.221	0.907	366	0.899	No
155	PF	0.628	SLV 2	0.149	0.61	136	0.599	No
	V	2.535	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.076	SLV 6	0.262	1.073	586	1.09	Si
	R	1.017	SLV 11	0.248	1.016	498	1.02	Si
156	PF	1.588	SLV 6	0.362	1.483	1618	1.653	Si
	V	3.872	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.358	SLV 6	0.329	1.345	1171	1.448	Si
	R	0.986	SLV 7	0.24	0.984	455	0.983	No
157	PF	0.773	SLV 6	0.184	0.753	223	0.733	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.729	SLV 6	0.172	0.705	189	0.685	No
	R	0.875	SLV 11	0.21	0.861	319	0.849	No
158	PF	1.856	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.716	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.926	SLV 10	0.224	0.918	378	0.911	No
159	PF	0.783	SLV 7	0.186	0.763	232	0.745	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.754	SLV 7	0.179	0.731	207	0.711	No
	R	0.877	SLV 10	0.211	0.865	323	0.854	No
160	PF	2.091	SLV 7	0.362	1.483	1618	1.653	Si
	V	1.686	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	2.46	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.615	SLV 10	0.362	1.483	1618	1.653	Si
161	PF	1.393	SLV 16	0.333	1.364	1226	1.475	Si
	V	1.012	SLV 8	0.247	1.011	491	1.014	Si
	PFFP	1.69	SLV 7	0.362	1.483	1618	1.653	Si
	R	3.896	SLV 2	0.362	1.483	1618	1.653	Si
162	PF	0.595	SLV 12	0.139	0.567	115	0.559	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.612	SLV 12	0.142	0.583	122	0.573	No
	R	2.523	SLV 5	0.362	1.483	1618	1.653	Si
163	PF	1.039	SLV 12	0.253	1.037	530	1.046	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.922	SLV 12	0.223	0.914	374	0.907	No
	R	2.295	SLV 7	0.362	1.483	1618	1.653	Si
164	PF	0.535	SLV 9	0.124	0.506	87	0.499	No
	V	4.017	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	0.624	SLV 5	0.146	0.596	128	0.584	No
	R	2.631	SLV 8	0.362	1.483	1618	1.653	Si
165	PF	1.674	SLV 5	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.314	SLV 5	0.318	1.302	1052	1.385	Si
	R	2.096	SLV 12	0.362	1.483	1618	1.653	Si
166	PF	0.724	SLV 15	0.174	0.713	194	0.693	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.738	SLV 5	0.175	0.715	196	0.696	No
	R	1.986	SLV 6	0.362	1.483	1618	1.653	Si
169	PF	1.424	SLV 16	0.34	1.392	1313	1.517	Si
	V	4.09	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	0.804	SLV 16	0.195	0.797	260	0.781	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
170	PF	2.153	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.149	SLV 12	0.279	1.142	707	1.177	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
172	PF	0.95	SLV 10	0.231	0.945	408	0.94	No
	V	3.877	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	1.029	SLV 16	0.251	1.027	514	1.033	Si
	R	1.698	SLV 7	0.362	1.483	1618	1.653	Si
173	PF	0.562	SLV 12	0.13	0.532	99	0.526	No
	V	2.19	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	1.053	SLV 9	0.257	1.051	550	1.062	Si
	R	3.57	SLV 6	0.362	1.483	1618	1.653	Si
174	PF	0.531	SLV 3	0.125	0.513	90	0.506	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.854	SLV 3	0.207	0.849	307	0.836	No
	R	2.017	SLV 10	0.362	1.483	1618	1.653	Si
175	PF	1.035	SLV 3	0.252	1.033	522	1.039	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.064	SLV 7	0.259	1.062	567	1.075	Si
	R	1.735	SLV 10	0.362	1.483	1618	1.653	Si
176	PF	1.958	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.353	SLV 11	0.327	1.34	1157	1.441	Si
	R	2.2	SLV 6	0.362	1.483	1618	1.653	Si
177	PF	0.344	SLV 16	0.081	0.332	31	0.327	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.649	SLV 16	0.155	0.633	148	0.62	No
	R	1.626	SLV 5	0.362	1.483	1618	1.653	Si
178	PF	1.672	SLV 14	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.344	SLV 13	0.322	1.318	1097	1.409	Si
	R	2.618	SLV 5	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
179	PF	1.264	SLV 16	0.304	1.244	913	1.307	Si
	V	3.575	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	2.31	SLV 5	0.362	1.483	1618	1.653	Si
	R	2.351	SLV 10	0.362	1.483	1618	1.653	Si
180	PF	0.696	SLV 15	0.167	0.682	175	0.664	No
	V	3.785	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.374	SLV 11	0.332	1.36	1217	1.471	Si
	R	2.018	SLV 6	0.362	1.483	1618	1.653	Si
181	PF	0.202	SLV 3	0.047	0.191	8	0.187	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.156	SLV 11	0.281	1.149	719	1.185	Si
	R	2.493	SLV 7	0.362	1.483	1618	1.653	Si
182	PF	0.695	SLV 3	0.167	0.682	175	0.664	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.38	SLV 11	0.334	1.366	1234	1.479	Si
	R	2.427	SLV 10	0.362	1.483	1618	1.653	Si
183	PF	0.665	SLV 3	0.159	0.65	157	0.635	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.477	SLV 7	0.362	1.483	1618	1.653	Si
	R	2.228	SLV 12	0.362	1.483	1618	1.653	Si
184	PF	2.042	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.196	SLV 3	0.289	1.182	782	1.227	Si
	R	2.569	SLV 10	0.362	1.483	1618	1.653	Si
185	PF	0.49	SLV 7	0.112	0.46	69	0.453	No
	V	2.603	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	1.413	SLV 4	0.338	1.382	1281	1.502	Si
	R	3.043	SLV 9	0.362	1.483	1618	1.653	Si
187	PF	1.686	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.091	SLV 6	0.266	1.087	610	1.108	Si
	R	1.603	SLV 11	0.362	1.483	1618	1.653	Si
189	PF	1.957	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.219	SLV 4	0.294	1.203	824	1.253	Si
	R	3.551	SLV 9	0.362	1.483	1618	1.653	Si
191	PF	0.991	SLV 1	0.242	0.991	463	0.99	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.539	SLV 1	0.127	0.52	94	0.515	No
	R	2.1	SLV 12	0.362	1.483	1618	1.653	Si
194	PF	0.165	SLV 3	0.038	0.157	5	0.155	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.484	SLV 3	0.114	0.466	71	0.459	No
	R	1.564	SLV 10	0.362	1.483	1618	1.653	Si
195	PF	0.769	SLV 7	0.183	0.748	220	0.729	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.713	SLV 7	0.168	0.689	180	0.672	No
	R	2.809	SLV 10	0.362	1.483	1618	1.653	Si
196	PF	2.071	SLV 10	0.362	1.483	1618	1.653	Si
	V	1.168	SLV 7	0.283	1.16	740	1.199	Si
	PFFP	1.743	SLV 14	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
198	PF	0.52	SLV 15	0.122	0.501	85	0.494	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.069	SLV 15	0.26	1.064	572	1.079	Si
	R	2.125	SLV 9	0.362	1.483	1618	1.653	Si
199	PF	0.632	SLV 13	0.15	0.614	138	0.602	No
	V	3.984	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.203	SLV 6	0.292	1.194	806	1.242	Si
	R	2.745	SLV 8	0.362	1.483	1618	1.653	Si
201	PF	0.413	SLV 5	0.093	0.38	43	0.373	No
	V	3.168	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	0.551	SLV 5	0.127	0.52	94	0.515	No
	R	2.488	SLV 11	0.362	1.483	1618	1.653	Si
202	PF	0.631	SLV 9	0.148	0.604	133	0.593	No
	V	2.478	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	0.541	SLV 10	0.125	0.511	89	0.503	No
	R	2.163	SLV 7	0.362	1.483	1618	1.653	Si
204	PF	0.456	SLV 2	0.107	0.439	62	0.434	No
	V	3.173	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.024	SLV 13	0.25	1.022	507	1.027	Si
	R	2.721	SLV 7	0.362	1.483	1618	1.653	Si
206	PF	0.585	SLV 4	0.139	0.567	115	0.559	No
	V	3.359	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.151	SLV 2	0.279	1.14	702	1.174	Si
	R	2.129	SLV 5	0.362	1.483	1618	1.653	Si
207	PF	0.585	SLV 2	0.139	0.567	115	0.559	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.772	SLV 10	0.184	0.753	223	0.733	No
	R	1.545	SLV 9	0.362	1.483	1618	1.653	Si
208	PF	2.424	SLV 10	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.18	SLV 6	0.286	1.172	763	1.214	Si
	R	2.153	SLV 7	0.362	1.483	1618	1.653	Si
209	PF	0.77	SLV 6	0.183	0.75	221	0.731	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.674	SLV 6	0.158	0.648	156	0.633	No
	R	2.327	SLV 11	0.362	1.483	1618	1.653	Si
216	PF	0.879	SLV 15	0.214	0.875	333	0.864	No
	V	0.816	SLV 15	0.198	0.809	271	0.794	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	PFFP	3.708	SLV 11	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
227	PF	0.761	SLV 13	0.184	0.753	223	0.733	No
	V	2.824	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	0.707	SLV 9	0.167	0.683	176	0.666	No
	R	0.627	SLV 4	0.149	0.608	135	0.597	No
228	PF	1.91	SLV 9	0.362	1.483	1618	1.653	Si
	V	2.704	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.287	SLV 9	0.312	1.275	984	1.348	Si
	R	0.686	SLV 4	0.164	0.671	169	0.655	No
229	PF	0.698	SLV 13	0.167	0.683	176	0.666	No
	V	1.967	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.34	SLV 10	0.324	1.327	1121	1.422	Si
	R	0.664	SLV 4	0.158	0.648	156	0.633	No
230	PF	1.081	SLV 15	0.263	1.075	590	1.093	Si
	V	1.967	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.354	SLV 2	0.324	1.328	1123	1.423	Si
	R	0.631	SLV 15	0.15	0.614	138	0.602	No
231	PF	2.729	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.43	SLV 16	0.341	1.398	1330	1.525	Si
	R	1.699	SLV 1	0.362	1.483	1618	1.653	Si
234	PF	1.06	SLV 2	0.258	1.056	559	1.069	Si
	V	2.318	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.46	SLV 9	0.353	1.444	1482	1.594	Si
	R	0.698	SLV 4	0.167	0.683	176	0.666	No
239	PF	0.979	SLV 9	0.238	0.976	445	0.974	No
	V	2.946	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.058	SLV 9	0.258	1.056	558	1.068	Si
	R	0.682	SLV 4	0.163	0.667	167	0.651	No
240	PF	3.891	SLV 4	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.624	SLV 11	0.146	0.596	128	0.584	No
241	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.571	SLV 12	0.362	1.483	1618	1.653	Si
	PFFP	0.471	SLV 7	0.107	0.439	62	0.434	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
243	PF	0.26	SLV 13	0.061	0.249	16	0.249	No
	V	1.235	SLV 15	0.297	1.217	855	1.273	Si
	PFFP	0.337	SLV 9	0.075	0.308	26	0.304	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
244	PF	0.291	SLV 15	0.069	0.281	21	0.278	No
	V	1.041	SLV 15	0.254	1.038	531	1.047	Si
	PFFP	0.256	SLV 2	0.059	0.242	14	0.236	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
246	PF	1.243	SLV 6	0.301	1.232	887	1.292	Si
	V	3.354	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.298	SLV 9	0.314	1.286	1011	1.363	Si
	R	0.711	SLV 3	0.171	0.699	186	0.681	No
248	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.826	SLV 9	0.198	0.809	271	0.794	No
251	PF	0.131	SLV 15	0.031	0.127	3	0.125	No
	V	3.177	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	0.467	SLV 7	0.107	0.436	61	0.431	No
	R	3.382	SLV 2	0.362	1.483	1618	1.653	Si
258	PF	1.061	SLV 13	0.258	1.057	560	1.07	Si
	V	2.035	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.414	SLV 2	0.338	1.383	1285	1.504	Si
	R	0.706	SLV 15	0.17	0.694	183	0.676	No
260	PF	4.045	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.054	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.769	SLV 13	0.362	1.483	1618	1.653	Si
261	PF	0.555	SLV 2	0.131	0.537	101	0.53	No
	V	1.6	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.304	SLV 13	0.313	1.281	999	1.356	Si
	R	0.606	SLV 4	0.144	0.589	125	0.578	No
262	PF	0.641	SLV 2	0.153	0.625	143	0.611	No
	V	1.803	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.638	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.625	SLV 15	0.148	0.606	134	0.595	No
263	PF	1.836	SLV 6	0.362	1.483	1618	1.653	Si
	V	2.408	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.194	SLV 5	0.29	1.185	789	1.231	Si
	R	0.703	SLV 15	0.169	0.691	181	0.673	No
264	PF	0.838	SLV 2	0.203	0.832	291	0.818	No
	V	2.658	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	0.756	SLV 6	0.18	0.735	210	0.716	No
	R	0.64	SLV 15	0.152	0.623	142	0.61	No

Verifica travi di collegamento in muratura

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
2	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.499	SLV 16	0.357	1.461	1538	1.619	Si
6	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.163	SLV 13	0.281	1.151	723	1.188	Si
8	F	2.734	SLV 4	0.362	1.483	1618	1.653	Si

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	0.312	SLV 4	0.073	0.298	24	0.294	No
10	F	2.292	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.112	SLV 4	0.27	1.104	638	1.129	Si
11	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.494	SLV 14	0.116	0.477	75	0.469	No
15	F	0.326	SLV 3	0.077	0.313	27	0.309	No
	V	0.156	SLV 3	0.035	0.143	4	0.141	No
16	F	1.757	SLV 16	0.362	1.483	1618	1.653	Si
	V	0.376	SLV 14	0.088	0.359	38	0.355	No
17	F	0.479	SLV 1	0.112	0.46	69	0.453	No
	V	0.493	SLV 3	0.116	0.474	74	0.467	No
19	F	0.209	SLV 3	0.049	0.201	9	0.197	No
	V	0.289	SLV 3	0.067	0.275	20	0.273	No
21	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
22	F	3.015	SLV 14	0.362	1.483	1618	1.653	Si
	V	0.5	SLV 16	0.118	0.482	78	0.477	No
24	F	3.493	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.35	SLV 3	0.082	0.337	33	0.335	No
27	F	0.854	SLV 13	0.207	0.849	307	0.836	No
	V	0.268	SLV 13	0.062	0.256	17	0.255	No
28	F	2.711	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.295	SLV 15	0.069	0.281	21	0.278	No
30	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.575	SLV 2	0.362	1.483	1618	1.653	Si
32	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.599	SLV 11	0.362	1.483	1618	1.653	Si
33	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.899	SLV 3	0.219	0.895	353	0.885	No
35	F	2.608	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.517	SLV 14	0.361	1.478	1599	1.645	Si
36	F	1.206	SLV 14	0.291	1.191	800	1.238	Si
	V	1.485	SLV 14	0.354	1.448	1494	1.6	Si
37	F	1.891	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.807	SLV 4	0.196	0.801	263	0.785	No
39	F	1.047	SLV 2	0.255	1.044	540	1.054	Si
	V	0.559	SLV 2	0.132	0.542	103	0.534	No
40	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
42	F	0.893	SLV 15	0.217	0.889	347	0.879	No
	V	0.48	SLV 2	0.113	0.463	70	0.456	No
45	F	1.933	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.255	SLV 14	0.302	1.236	895	1.297	Si
46	F	0.943	SLV 14	0.23	0.94	403	0.935	No
	V	0.735	SLV 14	0.177	0.727	203	0.706	No
47	F	0.845	SLV 14	0.205	0.84	299	0.827	No
	V	0.591	SLV 14	0.14	0.574	118	0.565	No
48	F	0.499	SLV 14	0.117	0.479	77	0.474	No
	V	0.434	SLV 14	0.102	0.417	54	0.41	No
49	F	1.061	SLV 3	0.258	1.057	560	1.07	Si
	V	0.713	SLV 3	0.171	0.701	187	0.682	No
50	F	0.54	SLV 3	0.128	0.523	95	0.517	No
	V	0.442	SLV 3	0.104	0.427	57	0.419	No
51	F	0.999	SLV 14	0.244	0.999	473	0.998	No
	V	0.286	SLV 14	0.067	0.275	20	0.273	No
52	F	1.017	SLV 3	0.248	1.016	497	1.019	Si
	V	0.311	SLV 3	0.073	0.298	24	0.294	No
53	F	0.413	SLV 14	0.098	0.399	49	0.394	No
	V	0.332	SLV 14	0.078	0.318	28	0.313	No
54	F	1.021	SLV 3	0.249	1.02	503	1.024	Si
	V	0.461	SLV 3	0.109	0.445	64	0.44	No
57	F	0.794	SLV 2	0.192	0.787	251	0.77	No
	V	0.52	SLV 2	0.122	0.501	85	0.494	No
59	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.201	SLV 11	0.362	1.483	1618	1.653	Si
60	F	3.27	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.191	SLV 14	0.044	0.181	7	0.177	No
61	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.799	SLV 14	0.193	0.792	255	0.775	No
62	F	0.958	SLV 15	0.234	0.956	422	0.953	No
	V	0.582	SLV 15	0.138	0.565	113	0.555	No
64	F	1.34	SLV 2	0.321	1.315	1087	1.404	Si
	V	0.935	SLV 15	0.228	0.932	394	0.926	No
65	F	1.264	SLV 3	0.304	1.244	913	1.307	Si
	V	1.206	SLV 3	0.291	1.191	800	1.238	Si
66	F	0.567	SLV 3	0.134	0.548	106	0.541	No
	V	0.773	SLV 3	0.187	0.766	234	0.748	No
67	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.105	SLV 13	0.268	1.097	627	1.121	Si
68	F	1.996	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.569	SLV 14	0.362	1.483	1618	1.653	Si
69	F	2.329	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.595	SLV 14	0.362	1.483	1618	1.653	Si
70	F	1.763	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.669	SLV 15	0.16	0.654	159	0.638	No
71	F	1.786	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.837	SLV 15	0.203	0.83	290	0.817	No
72	F	1.878	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.679	SLV 4	0.162	0.663	165	0.648	No
73	F	1000	SLV 1	0.362	1.483	1618	1.653	Si

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
75	F	1.586	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.533	SLV 15	0.126	0.516	91	0.508	No
77	F	2.091	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.344	SLV 14	0.322	1.318	1097	1.409	Si
78	F	1.939	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.337	SLV 14	0.321	1.312	1080	1.4	Si
79	F	0.904	SLV 14	0.22	0.9	359	0.892	No
	V	0.59	SLV 14	0.14	0.571	117	0.563	No
80	F	0.876	SLV 14	0.213	0.871	329	0.86	No
	V	0.579	SLV 14	0.137	0.56	111	0.551	No
81	F	1.168	SLV 3	0.282	1.156	732	1.194	Si
	V	0.795	SLV 3	0.193	0.788	252	0.771	No
82	F	1.403	SLV 3	0.335	1.373	1253	1.488	Si
	V	0.608	SLV 3	0.144	0.591	126	0.58	No
83	F	1.192	SLV 3	0.288	1.178	774	1.222	Si
	V	0.309	SLV 14	0.073	0.298	24	0.294	No
84	F	1.248	SLV 3	0.3	1.23	881	1.288	Si
	V	0.41	SLV 3	0.097	0.395	47	0.387	No
85	F	0.688	SLV 16	0.165	0.674	171	0.658	No
	V	0.548	SLV 16	0.129	0.53	98	0.524	No
86	F	1.068	SLV 14	0.26	1.063	570	1.078	Si
	V	1.122	SLV 3	0.272	1.113	654	1.14	Si
87	F	1.586	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.557	SLV 1	0.132	0.539	102	0.532	No
88	F	1.443	SLV 3	0.344	1.409	1367	1.542	Si
	V	0.303	SLV 3	0.071	0.292	23	0.289	No
90	F	1.352	SLV 2	0.324	1.326	1117	1.42	Si
	V	0.418	SLV 2	0.098	0.403	50	0.397	No
92	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
93	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.937	SLV 14	0.228	0.934	396	0.928	No
94	F	3.506	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.732	SLV 3	0.362	1.483	1618	1.653	Si
95	F	1.788	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.679	SLV 15	0.162	0.663	165	0.648	No
96	F	1.601	SLV 2	0.362	1.483	1618	1.653	Si
	V	0.736	SLV 4	0.177	0.727	203	0.706	No
97	F	1.519	SLV 2	0.362	1.48	1606	1.648	Si
	V	0.676	SLV 4	0.162	0.661	164	0.647	No
98	F	1.353	SLV 3	0.324	1.327	1120	1.421	Si
	V	1.014	SLV 3	0.248	1.013	493	1.015	Si
99	F	1.979	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.251	SLV 1	0.301	1.232	887	1.292	Si
100	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.614	SLV 6	0.362	1.483	1618	1.653	Si
101	F	4.034	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.033	SLV 10	0.362	1.483	1618	1.653	Si
102	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.559	SLV 10	0.362	1.483	1618	1.653	Si
103	F	2.336	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.546	SLV 15	0.362	1.483	1618	1.653	Si
104	F	2.803	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.533	SLV 15	0.362	1.483	1618	1.653	Si
105	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.554	SLV 15	0.131	0.535	100	0.528	No
106	F	2.738	SLV 15	0.362	1.483	1618	1.653	Si
	V	2.787	SLV 4	0.362	1.483	1618	1.653	Si
107	F	1.633	SLV 2	0.362	1.483	1618	1.653	Si
	V	0.834	SLV 2	0.202	0.827	287	0.813	No
108	F	2.204	SLV 2	0.362	1.483	1618	1.653	Si
	V	0.963	SLV 15	0.235	0.962	428	0.958	No
109	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
111	F	1.913	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.638	SLV 15	0.152	0.621	141	0.608	No
113	F	3.492	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.406	SLV 14	0.362	1.483	1618	1.653	Si
114	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.679	SLV 14	0.362	1.483	1618	1.653	Si
115	F	1.531	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.853	SLV 14	0.207	0.848	306	0.835	No
116	F	1.346	SLV 14	0.323	1.32	1102	1.412	Si
	V	1.065	SLV 3	0.259	1.061	566	1.075	Si
117	F	1.917	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.241	SLV 3	0.299	1.223	867	1.28	Si
118	F	1.788	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.316	SLV 3	0.316	1.292	1028	1.372	Si
119	F	1.518	SLV 1	0.361	1.479	1602	1.646	Si
	V	0.425	SLV 16	0.1	0.41	52	0.404	No
120	F	1.428	SLV 1	0.341	1.396	1324	1.522	Si
	V	0.473	SLV 1	0.111	0.454	67	0.448	No
121	F	0.778	SLV 15	0.188	0.771	238	0.753	No
	V	0.637	SLV 15	0.152	0.621	141	0.608	No
122	F	1.011	SLV 3	0.247	1.01	489	1.012	Si
	V	0.998	SLV 3	0.244	0.997	471	0.997	No
123	F	2.568	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.893	SLV 1	0.217	0.889	347	0.879	No
124	F	2.193	SLV 3	0.362	1.483	1618	1.653	Si

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	0.624	SLV 3	0.148	0.606	134	0.595	No
126	F	1.601	SLV 2	0.362	1.483	1618	1.653	Si
	V	0.464	SLV 2	0.11	0.448	65	0.442	No
128	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
129	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.319	SLV 3	0.362	1.483	1618	1.653	Si
130	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
131	F	1.686	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.857	SLV 4	0.208	0.852	310	0.839	No
132	F	2.367	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.141	SLV 15	0.276	1.131	686	1.163	Si
133	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.451	SLV 2	0.107	0.436	61	0.431	No
134	F	2.46	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.373	SLV 2	0.362	1.483	1618	1.653	Si
135	F	2.475	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.495	SLV 15	0.356	1.457	1525	1.613	Si
136	F	3.098	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.595	SLV 4	0.362	1.483	1618	1.653	Si
137	F	3.578	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.892	SLV 1	0.362	1.483	1618	1.653	Si
138	F	3.595	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.601	SLV 14	0.362	1.483	1618	1.653	Si
139	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.673	SLV 5	0.362	1.483	1618	1.653	Si
140	F	2.885	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
141	F	3.534	SLV 11	0.362	1.483	1618	1.653	Si
	V	2.271	SLV 12	0.362	1.483	1618	1.653	Si
142	F	1.868	SLV 12	0.362	1.483	1618	1.653	Si
	V	1.926	SLV 5	0.362	1.483	1618	1.653	Si
143	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.306	SLV 2	0.314	1.283	1004	1.359	Si
144	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
145	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.895	SLV 15	0.362	1.483	1618	1.653	Si
146	F	2.031	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.626	SLV 2	0.362	1.483	1618	1.653	Si
147	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
148	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
149	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
150	F	2.486	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.714	SLV 13	0.362	1.483	1618	1.653	Si
151	F	1.924	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.186	SLV 13	0.362	1.483	1618	1.653	Si
152	F	3.638	SLV 3	0.362	1.483	1618	1.653	Si
	V	2.011	SLV 3	0.362	1.483	1618	1.653	Si
153	F	3.233	SLV 3	0.362	1.483	1618	1.653	Si
	V	2.491	SLV 4	0.362	1.483	1618	1.653	Si
154	F	2.642	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.846	SLV 1	0.205	0.841	300	0.828	No
155	F	1.688	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.835	SLV 12	0.2	0.819	279	0.804	No
156	F	0.804	SLV 2	0.195	0.797	260	0.781	No
	V	0.644	SLV 15	0.153	0.627	144	0.613	No
157	F	1.139	SLV 14	0.276	1.129	682	1.16	Si
	V	1.376	SLV 3	0.329	1.348	1180	1.452	Si
158	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.155	SLV 2	0.362	1.483	1618	1.653	Si
159	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.728	SLV 3	0.362	1.483	1618	1.653	Si
160	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
161	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.119	SLV 1	0.271	1.11	649	1.137	Si
162	F	1.67	SLV 16	0.362	1.483	1618	1.653	Si
	V	2.759	SLV 1	0.362	1.483	1618	1.653	Si
163	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.697	SLV 6	0.362	1.483	1618	1.653	Si
164	F	3.046	SLV 10	0.362	1.483	1618	1.653	Si
	V	3.084	SLV 10	0.362	1.483	1618	1.653	Si
166	F	3.386	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.889	SLV 15	0.362	1.483	1618	1.653	Si
169	F	2.155	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.405	SLV 2	0.336	1.375	1259	1.491	Si
171	F	2.842	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.411	SLV 13	0.337	1.38	1276	1.5	Si
172	F	1.864	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.638	SLV 4	0.362	1.483	1618	1.653	Si
173	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.981	SLV 2	0.239	0.979	449	0.977	No
174	F	2.977	SLV 10	0.362	1.483	1618	1.653	Si
	V	3.452	SLV 11	0.362	1.483	1618	1.653	Si
175	F	1000	SLV 1	0.362	1.483	1618	1.653	Si

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	3.891	SLV 4	0.362	1.483	1618	1.653	Si
176	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.689	SLV 4	0.362	1.483	1618	1.653	Si
177	F	2.829	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.489	SLV 15	0.355	1.452	1507	1.605	Si
179	F	1.548	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.524	SLV 15	0.124	0.506	87	0.499	No
183	F	1.422	SLV 4	0.34	1.39	1307	1.514	Si
	V	0.572	SLV 4	0.136	0.555	109	0.547	No
187	F	0.718	SLV 15	0.173	0.706	190	0.687	No
	V	0.634	SLV 15	0.151	0.617	139	0.604	No
188	F	1.206	SLV 15	0.291	1.191	800	1.238	Si
	V	0.632	SLV 15	0.15	0.614	138	0.602	No
189	F	1.392	SLV 15	0.333	1.363	1224	1.474	Si
	V	0.723	SLV 15	0.174	0.711	193	0.691	No
192	F	1.183	SLV 15	0.286	1.17	759	1.212	Si
	V	0.521	SLV 15	0.123	0.503	86	0.496	No
196	F	1.379	SLV 2	0.33	1.351	1188	1.456	Si
	V	0.479	SLV 2	0.112	0.46	69	0.453	No

Periodi di ritorno e accelerazioni di aggancio per gli Stati Limite

S. L.	TR,C	PGA,C	TR,Rif	PGA,Rif	Tipo rottura
Stato limite di salvaguardia della vita	3	0.031	475	0.244	pressoflessione maschio muratura

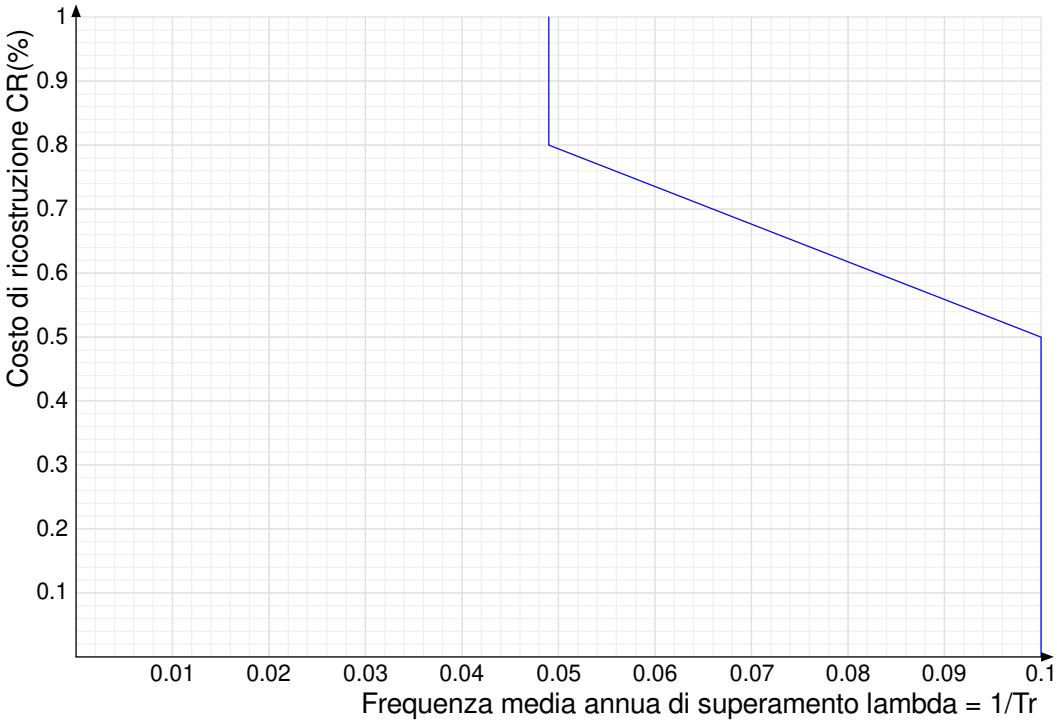
Coefficienti relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

TR,C	TR,Rif	PAM	Classe PAM	IS-V	Classe IS-V	Tipo rottura
3	475	8.215	G	12.659	F	pressoflessione maschio muratura

Coefficienti λ relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

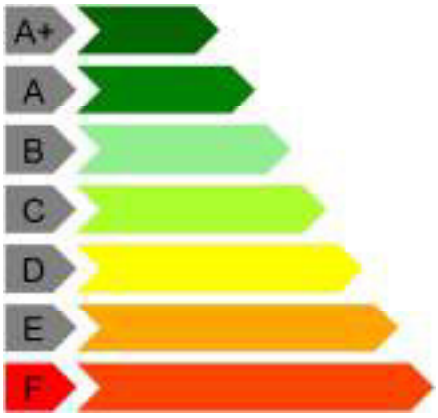
λ,SLR	λ,SLC	λ,SLV	λ,SLD	λ,SLO	λ,SLID
0.049	0.049	0.1	0.1	0.1	0.1

Andamento della curva che individua il PAM (Perdita Annuale Media Attesa)



Classe PAM

Classe IS-V



1.8 Verifiche maschi in muratura

Le unità di misura elencate nel capitolo sono in [m, daN, s] ove non espressamente specificato.

X ini.: coordinate del punto iniziale del maschio. [m]
Y ini.: coordinate del punto iniziale del maschio. [m]
X fin.: coordinate del punto finale del maschio. [m]
Y fin.: coordinate del punto finale del maschio. [m]
Quota i.: livello o falda inferiore.
Quota.s: livello o falda superiore.
l: lunghezza del maschio. [m]
Sp.: spessore. [m]
h netta: altezza netta (a filo solai). [m]
h ini.: altezza nel modello al punto iniziale. [m]
h fin.: altezza nel modello al punto finale. [m]
a: distanza tra irrigidimenti laterali. [m]
a.s.,sx: lunghezza di appoggio del solaio di sinistra. [m]
a.s.,dx: lunghezza di appoggio del solaio di destra. [m]
fb: resistenza normalizzata a compressione verticale dei blocchi. [daN/m²]
fk: resistenza caratteristica a compressione della muratura utilizzata. [daN/m²]
fvk0: resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]
fmedio: resistenza media a compressione della muratura utilizzata. [daN/m²]
τ0: resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]
fv0: resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]
μ: coefficiente di attrito [C8.7.1.17].
φ: coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.
fv,lim: valore massimo della resistenza a taglio che può essere impiegata nel calcolo. [daN/m²]
E: modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]
G: modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]
FC: fattore di confidenza della muratura.
Materiale: descrizione del materiale.
Fu Verticale: carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]
Fu Orizzontale: carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]
tfv: spessore di calcolo equivalente verticale di uno strato di rinforzo.
tfo: spessore di calcolo equivalente orizzontale di uno strato di rinforzo.

***E**: modulo di elasticità longitudinale. [daN/m²]*
***εu**: dilatazione a rottura.*
***Tipo fibra**: natura della fibra.*
***materiale**: materiale fibra del rinforzo.*
***lato applicazione**: lato di applicazione del rinforzo.*
***esposizione**: condizione di esposizione secondo CNR-DT 215 §3.2.*
***ancoraggio verticale iniziale**: grado di ancoraggio iniziale dei rinforzi verticali.*
***ancoraggio verticale finale**: grado di ancoraggio finale dei rinforzi verticali.*
***ancoraggio orizzontale iniziale**: grado di ancoraggio iniziale dei rinforzi orizzontali.*
***ancoraggio orizzontale finale**: grado di ancoraggio finale dei rinforzi orizzontali.*
***strati**: numero strati del rinforzo.*
***verifica taglio**: tipo di verifica a taglio.*
***εlim,conv / ε,CNR DT-200**: dati relativi ai parametri per il calcolo della deformazione di progetto.*
***αt**: coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a tagliosecondo CNR-DT 215 §4.1.1.*
***α**: coeffiicente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.*
***εlim,conv**: deformazione limite convenzionale del rinforzo FRCM.*
***ε,fd**: deformazione di progetto del rinforzo FRCM ovvero CRM.*
***γF,d**: fattore parziali di sicurezza per stato limite di distacco secondo CNR-DT 200 R1/2013 §3.4.1.*
***connettori**: presenza di connettori per la prevenzione del distacco del rinforzo.*
***tipo di muratura**: tipo di muratura per stato limite di distacco di estremità secondo CNR-DT 200 R1/2013 §5.3.2.*
***CRM / Fibrenet?**: dati relativi ai parametri per il calcolo secondo metodo Fibrenet? ovvero se il materiale è di tipo CRM.*
***CRM**: stabilisce se il rinforzo è di tipo CRM secondo le Linee Guida del C.S.L.P. Ottobre 2019.*
***intonaco**: materiale intonaco FRCM ovvero CRM.*
***spessore intonaco**: spessore intonaco. [m]*
***tipo blocco fibrenet**: tipo blocco muratura per verifica a tglio tipo Fibrenet.*
***Comb.**: combinazione.*
***Quota**: quota della sezione di verifica. [m]*
***M**: momento flettente nel piano. [daN*m]*
***N**: sforzo normale. [daN]*
***εm**: deformazione della muratura.*
***εm_**: deformazione elastica della muratura.*
***εmu**: deformazione ultima della muratura.*
***df**: distanza tra il lembo compresso e la fibra tesa più lontana. [m]*
***M0d**: momento resistente della sezione non rinforzata. [daN*m]*
***M1d**: momento resistente della sezione rinforzata. [daN*m]*
***MRd**: momento resistente della sezione. [daN*m]*
***c.s.**: coefficiente di sicurezza.*
***incremento > 50%**: incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
***Verifica**: stato di verifica.*
***Nmur**: aliquota di sforzo normale recepito dalla sola muratura. [daN]*
***V**: taglio nel piano. [daN]*
***df**: distanza tra lembo compresso e baricentro dell'armatura tesa. [m]*
***l'**: lunghezza della parte compressa della parete. [m]*
***σN**: tensione media nella zona compressa. [daN/m²]*
***fvd**: resistenza a taglio di calcolo. [daN/m²]*
***Vt**: resistenza a taglio della muratura non rinforzata. [daN]*
***Vt,f**: resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]*
***Vt,c**: resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]*
***Vt,c int.**: contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]*
***Vt,R**: resistenza a taglio della sezione rinforzata. [daN]*
***res. > 50%**: incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
***fd**: resistenza a compressione di calcolo. [daN/m²]*
***Sa**: accelerazione massima, adimensionalizzata rispetto a g, che l'elemento strutturale subisce durante il sisma.*
***σ0**: tensione media di compressione. [daN/m²]*
***M**: momento flettente fuori piano. [daN*m]*
***Mc**: momento di collasso per azioni perpendicolari al piano. [daN*m]*
***Coeff.s.**: coefficiente di sicurezza.*
***N top**: sforzo normale in sommità. [daN]*
***N base**: sforzo normale al piede. [daN]*
***V orto**: taglio fuori piano. [daN]*
***α0**: moltiplicatore secondo [C8.7.1.1].*
M: massa partecipante al cinematismo. [daN/(m/s²)]*
e: frazione di massa partecipante della muratura [C8.7.1.5].*
a0: accelerazione spettrale di attivazione del meccanismo [C8.7.1.8]. [m/s²]*
***aLim**: accelerazione limite [C7.2.11]. [m/s²]*
***Stato limite**: pF_SLU=Presso flessione per azioni non sismiche; V_SLU=Taglio per azioni non sismiche; PF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche; PFFP_SLV=Presso flessione fuori piano per azioni sismiche; R_SLV=Ribaltamento per azioni sismiche.*
***Sa**: accelerazione massima adimensionalizzata rispetto a quella di gravità.*
***Mu**: momento flettente ultimo. [daN*m]*
***V par**: taglio nel piano. [daN]*
***σN**: tensione media di compressione sulla parte reagente. [daN/m²]*
***Vt scorr.**: taglio ultimo per verifica a scorrimento. [daN]*
***Vt fess.diag.**: taglio ultimo per verifica a fessurazione diagonale regolare [C8.7.1.17]. [daN]*

***Vt,lim**: taglio limite [C8.7.1.18]. [daN]*
***c.s.**: coefficiente di sicurezza a taglio.*

Maschio 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.653	1.271	-24.653	-3.284	L2	L4	4.555	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-1.58	-8567.91	-56799	-0.00005	0.0004492	0.0035	4.555	100022.67	121821.95	121821.95	14.22	No	Si
SLU 83	0.62	-27624.52	-67112	-0.0000778	0.0004492	0.0035	4.555	111890.64	137959.52	137959.52	4.99	No	Si
SLU 78	-1.58	-8473.84	-55914	-0.0000492	0.0004492	0.0035	4.555	98913.89	120358.07	120358.07	14.2	No	Si
SLU 78	0.62	-27161.7	-66151	-0.0000765	0.0004492	0.0035	4.555	110866.67	136472.32	136472.32	5.02	No	Si
SLU 80	-1.58	-8422.44	-55565	-0.0000489	0.0004492	0.0035	4.555	98473.82	119782.21	119782.21	14.22	No	Si
SLU 80	0.62	-26986.39	-65647	-0.0000759	0.0004492	0.0035	4.555	110322.85	135692.23	135692.23	5.03	No	Si
SLU 77	-1.58	-8428.77	-55915	-0.0000491	0.0004492	0.0035	4.555	98916.25	120361.16	120361.16	14.28	No	Si
SLU 77	0.62	-27195.55	-66153	-0.0000766	0.0004492	0.0035	4.555	110867.92	136474.12	136474.12	5.02	No	Si
SLU 79	-1.58	-8377.37	-55567	-0.0000488	0.0004492	0.0035	4.555	98476.19	119785.31	119785.31	14.3	No	Si
SLU 79	0.62	-27020.24	-65649	-0.000076	0.0004492	0.0035	4.555	110324.11	135694.03	135694.03	5.02	No	Si
SLU 75	-1.58	-8393.92	-55317	-0.0000486	0.0004492	0.0035	4.555	98158.36	119371.19	119371.19	14.22	No	Si
SLU 75	0.62	-26863.7	-65298	-0.0000755	0.0004492	0.0035	4.555	109942.59	135150.66	135150.66	5.03	No	Si
SLU 82	-1.58	-8533.07	-56200	-0.0000495	0.0004492	0.0035	4.555	99274.4	120831.98	120831.98	14.16	No	Si
SLU 82	0.62	-27292.68	-66257	-0.0000768	0.0004492	0.0035	4.555	110980.24	136636.06	136636.06	5.01	No	Si
SLU 81	-1.58	-8487.99	-56202	-0.0000494	0.0004492	0.0035	4.555	99276.75	120835.07	120835.07	14.24	No	Si
SLU 81	0.62	-27326.53	-66258	-0.0000768	0.0004492	0.0035	4.555	110981.49	136637.87	136637.87	5	No	Si
SLU 84	-1.58	-8612.99	-56797	-0.00005	0.0004492	0.0035	4.555	100020.34	121818.86	121818.86	14.14	No	Si
SLU 84	0.62	-27590.67	-67111	-0.0000778	0.0004492	0.0035	4.555	111889.41	137957.72	137957.72	5	No	Si
SLU 74	-1.58	-8348.85	-55319	-0.0000486	0.0004492	0.0035	4.555	98160.74	119374.28	119374.28	14.3	No	Si
SLU 74	0.62	-26897.55	-65299	-0.0000756	0.0004492	0.0035	4.555	109943.86	135152.47	135152.47	5.02	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	-1.58	-2465.04	-35471	-0.0000275	0.0006738	0.0035	4.555		86807.05	86807.05	35.22		Si
SLD 10	0.62	-21167.77	-41734	-0.0000501	0.0006738	0.0035	4.555		98842.54	98842.54	4.67		Si
SLV 10	-1.58	1901.56	-30987	-0.0000237	0.0006738	0.0035	4.555		68233.7	68233.7	35.88		Si
SLV 10	0.62	-23995.16	-36910	-0.0000492	0.0006738	0.0035	4.555		89573.48	89573.48	3.73		Si
SLV 9	-1.58	2986.66	-31082	-0.0000248	0.0006738	0.0035	4.555		68424.25	68424.25	22.91		Si
SLV 9	0.62	-24642.12	-37168	-0.00005	0.0006738	0.0035	4.555		90067.74	90067.74	3.66		Si
SLV 14	-1.58	-1447.21	-12794	-0.0000103	0.0006738	0.0035	4.555		40303.79	40303.79	27.85		Si
SLV 14	0.62	-13210.53	-14140	-0.0000226	0.0006738	0.0035	4.555		43175.85	43175.85	3.27		Si
SLV 5	-1.58	1158.13	-46648	-0.0000344	0.0006738	0.0035	4.555		98701.86	98701.86	85.22		Si
SLV 5	0.62	-29100.85	-55958	-0.0000686	0.0006738	0.0035	4.555		125266.62	125266.62	4.3		Si
SLV 15	-1.58	-4199.19	-12938	-0.000013	0.0006738	0.0035	4.555		40610.83	40610.83	9.67		Si
SLV 15	0.62	-9586.09	-13875	-0.0000187	0.0006738	0.0035	4.555		42609.51	42609.51	4.44		Si
SLD 13	-1.58	-3231.31	-27766	-0.0000227	0.0006738	0.0035	4.555		71346.8	71346.8	22.08		Si
SLD 13	0.62	-16882.17	-32221	-0.0000389	0.0006738	0.0035	4.555		80337.47	80337.47	4.76		Si
SLV 6	-1.58	73.03	-46553	-0.0000333	0.0006738	0.0035	4.555		98541.56	98541.56	1349.28		Si
SLV 6	0.62	-28453.89	-55701	-0.0000678	0.0006738	0.0035	4.555		124797.22	124797.22	4.39		Si
SLV 13	-1.58	241.17	-12943	-0.0000093	0.0006738	0.0035	4.555		30673.74	30673.74	127.19		Si
SLV 13	0.62	-14217.17	-14540	-0.000024	0.0006738	0.0035	4.555		44029.9	44029.9	3.1		Si
SLD 9	-1.58	-1991.27	-35512	-0.0000271	0.0006738	0.0035	4.555		86887.07	86887.07	43.63		Si
SLD 9	0.62	-21450.24	-41846	-0.0000504	0.0006738	0.0035	4.555		99058.34	99058.34	4.62		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-1.58	-8377.37	-55567	-44454	-6371	4.555	4.555	-21687	10833	22206	95155	73663	23231	96893	No	15.21	Si
SLU 79	0.62	-27020.24	-65649	-52519	-11940	4.555	4.555	-25622	10833	22206	95155	73663	23231	96893	No	8.11	Si
SLU 75	-1.58	-8393.92	-55317	-44253	-6418	4.555	4.555	-21590	10833	22206	95155	73663	23231	96893	No	15.1	Si
SLU 75	0.62	-26863.7	-65298	-52238	-11941	4.555	4.555	-25485	10833	22206	95155	73663	23231	96893	No	8.11	Si
SLU 77	-1.58	-8428.77	-55915	-44732	-6393	4.555	4.555	-21823	10833	22206	95155	73663	23231	96893	No	15.16	Si
SLU 77	0.62	-27195.55	-66153	-52922	-11998	4.555	4.555	-25819	10833	22206	95155	73663	23231	96893	No	8.08	Si
SLU 80	-1.58	-8422.44	-55565	-44452	-6450	4.555	4.555	-21687	10833	22206	95155	73663	23231	96893	No	15.02	Si
SLU 80	0.62	-26986.39	-65647	-52518	-12007	4.555	4.555	-25622	10833	22206	95155	73663	23231	96893	No	8.07	Si
SLU 83	-1.58	-8567.91	-56799	-45439	-6431	4.555	4.555	-22168	10833	22206	95155	73663	23231	96893	No	15.07	Si
SLU 83	0.62	-27624.52	-67112	-53690	-12082	4.555	4.555	-26193	10833	22206	95155	73663	23231	96893	No	8.02	Si
SLU 84	-1.58	-8612.99	-56797	-45438	-6510	4.555	4.555	-22167	10833	22206	95155	73663	23231	96893	No	14.88	Si
SLU 84	0.62	-27590.67	-67111	-53689	-12149	4.555	4.555	-26193	10833	22206	95155	73663	23231	96893	No	7.98	Si
SLU 82	-1.58	-8533.07	-56200	-44960	-6457	4.555	4.555	-21934	10833	22206	95155	73663	23231	96893	No	15.01	Si
SLU 82	0.62	-27292.68	-66257	-53006	-12025	4.555	4.555	-25860	10833	22206	95155	73663	23231	96893	No	8.06	Si
SLU 78	-1.58	-8473.84	-55914	-44731	-6472	4.555	4.555	-21823	10833	22206	95155	73663	23231	96893	No	14.97	Si
SLU 78	0.62	-27161.7	-66151	-52921	-12065	4.555	4.555	-25818	10833	22206	95155	73663	23231	96893	No	8.03	Si
SLU 81	-1.58	-8487.99	-56202	-44962	-6377	4.555	4.555	-21935	10833	22206	95155	73663	23231	96893	No	15.19	Si
SLU 81	0.62	-27326.53	-66258	-53007	-11958	4.555	4.555	-25860	10833	22206	95155	73663	23231	96893	No	8.1	Si
SLU 76	-1.58	-8372.57	-54967	-43974	-6449	4.555	4.555	-21453	10833	22206	95155	73663	23231	96893	No	15.02	Si
SLU 76	0.62	-26665.83	-64793	-51834	-11927	4.555	4.555	-25288	10833	22206	95155	73663	23231	96893	No	8.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	-1.58	-10294.29	-64826	-51861	-10570	4.555	4.555	-25301	16250	33308	95155	110494	23231	128464		12.15	Si
SLV 3	0.62	-24448.52	-76510	-61208	-14805	4.555	4.555	-29861	16250	33308	95155	110494	23231	128464		8.68	Si
SLD 7	-1.58	-9276.47	-42149	-33719	-11365	4.555	4.555	-16450	15790	32366	95155	110494	23231	127521		11.22	Si
SLD 7	0.62	-16491.28	-48916	-39133	-14259	4.555	4.555	-19091	16250	33308	95155	110494	23231	128464		9.01	Si
SLV 12	-1.58	-12899.64	-30972	-24777	-20105	4.555	4.555	-12088	14918	30577	95155	110494	23231	125733		6.25	Si
SLV 12	0.62	-8558.21	-34692	-27753	-20931	4.555	4.555	-13540	15208	31173	95155	110494	23231	126328		6.04	Si
SLV 4	-1.58	-11982.67	-64677	-51742	-13425	4.555	4.555	-25243	16250	33308	95155	110494	23231	128464		9.57	Si
SLV 4	0.62	-23441.88	-76109	-60888	-17292	4.555	4.555	-29705	16250	33308	95155	110494	23231	128464		7.43	Si
SLV 8	-1.58	-14728.17	-46538	-37230	-21756	4.555	4.555	-18163	16133	33068	95155	110494	23231	128223		5.89	Si
SLV 8	0.62	-13016.94	-53482	-42786	-23147	4.555	4.555	-20874	16250	33308	95155	110494	23231	128464		5.55	Si
SLV 11	-1.58	-11814.54	-31067	-24854	-18270	4.555	4.555	-12125	14925	30593	95155	110494	23231	125748		6.88	Si
SLV 11	0.62	-9205.16	-34949	-27959	-19333	4.555	4.555	-13640	15228	31214	95155	110494	23231	126369		6.54	Si
SLD 11	-1.58	-8495.66	-35503	-28402	-10662	4.555	4.555	-13857	15271	31302	95155	110494	23231	126458		11.86	Si
SLD 11	0.62	-14574.38	-40918	-32735	-13313	4.555	4.555	-15970	15694	32169	95155	110494	23231	127324		9.56	Si
SLV 7	-1.58	-13643.07	-46633	-37307	-19921	4.555	4.555	-18201	16140	33083	95155	110494	23231	128238		6.44	Si
SLV 7	0.62	-13663.89	-53739	-42992	-21548	4.555	4.555	-20974	16250	33308	95155	110494	23231	128464		5.96	Si
SLD 8	-1.58	-9750.23	-42108	-33686	-12166	4.555	4.555	-16434	15787	32359	95155	110494	23231	127514		10.48	Si
SLD 8	0.62	-16208.82	-48803	-39043	-14957	4.555	4.555	-19048	16250	33308	95155	110494	23231	128464		8.59	Si
SLD 12	-1.58	-8969.42	-35461	-28369	-11463	4.555	4.555	-13840	15268	31296	95155	110494	23231	126451		11.03	Si
SLD 12	0.62	-14291.92	-40806	-32645	-14011	4.555	4.555	-15926	15685	32151	95155	110494	23231	127306		9.09	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-12227	0.24	331.3	2661.53	3837.22	3249.37	9.81	Si
SLV 15	-12642	0.24	331.3	2748.73	3935.47	3342.1	10.09	Si
SLV 14	-13116	0.24	331.3	2848.05	4047.66	3447.86	10.41	Si
SLV 13	-13531	0.24	331.3	2934.81	4145.92	3540.37	10.69	Si
SLV 12	-32761	0.24	331.3	6728.46	8649.99	7689.23	23.21	Si
SLV 11	-33028	0.24	331.3	6777.97	8712	7744.98	23.38	Si
SLV 10	-35724	0.24	331.3	7273.65	9337.86	8305.75	25.07	Si
SLV 9	-35991	0.24	331.3	7322.21	9399.52	8360.86	25.24	Si
SLV 8	-51187	0.24	331.3	9947.93	12894.18	11421.05	34.47	Si
SLV 7	-51454	0.24	331.3	9991.55	12954.64	11473.1	34.63	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-52414	-46633	-350	0.519	6194.6	0.959	7.86317	4.19835	Si
SLV 3	-73968	-64826	-390	0.398	8387.8	0.969	5.97173	3.18428	Si
SLV 8	-52289	-46538	-351	0.52	6181.9	0.959	7.87808	4.19835	Si
SLV 4	-73773	-64677	-392	0.399	8367.9	0.969	5.98373	3.18428	Si
SLV 1	-73633	-64830	-385	0.4	8353.7	0.969	5.99381	3.18428	Si
SLV 2	-73438	-64682	-387	0.4	8333.9	0.969	6.00593	3.18428	Si
SLV 5	-51299	-46648	-334	0.528	6081.2	0.958	8.00509	4.19835	Si
SLV 6	-51174	-46553	-335	0.529	6068.5	0.958	8.02062	4.19835	Si
SLV 11	-33635	-31067	-311	0.733	4287.5	0.943	11.28733	4.19835	Si
SLV 12	-33510	-30972	-312	0.735	4274.8	0.943	11.32114	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.994	SLU 83	Si
V_SLU	7.975	SLU 84	Si
PF_SLV	3.097	SLV 13	Si
V_SLV	5.55	SLV 8	Si
PFFP_SLV	9.808	SLV 16	Si
R_SLV	1.873	SLV 7	Si

Maschio 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.653	5.876	-24.653	2.271	L2	L4	3.605	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-1.58	-6831.12	-44498	-0.0000519	0.0004492	0.0035	3.605	62202.2	75523.85	75523.85	11.06	No	Si
SLU 77	0.62	-17165.12	-36187	-0.0000602	0.0004492	0.0035	3.605	53318.75	64436.7	64436.7	3.75	No	Si
SLU 72	-1.58	-6173.27	-40791	-0.0000472	0.0004492	0.0035	3.605	58395.2	70650.21	70650.21	11.44	No	Si
SLU 72	0.62	-15958.34	-32977	-0.0000551	0.0004492	0.0035	3.605	49551.55	59950.61	59950.61	3.76	No	Si
SLU 76	-1.58	-6794.09	-43780	-0.0000511	0.0004492	0.0035	3.605	61483.75	74579.1	74579.1	10.98	No	Si
SLU 76	0.62	-16992.79	-35695	-0.0000595	0.0004492	0.0035	3.605	52753.59	63749.21	63749.21	3.75	No	Si
SLU 57	-1.58	-6220.23	-40973	-0.0000474	0.0004492	0.0035	3.605	58587.71	70889.19	70889.19	11.4	No	Si
SLU 57	0.62	-15997.34	-33115	-0.0000553	0.0004492	0.0035	3.605	49718.27	60144.53	60144.53	3.76	No	Si
SLU 80	-1.58	-6829.68	-44242	-0.0000516	0.0004492	0.0035	3.605	61946.88	75186.69	75186.69	11.01	No	Si
SLU 80	0.62	-17159.07	-36081	-0.0000601	0.0004492	0.0035	3.605	53197.92	64289.27	64289.27	3.75	No	Si
SLU 84	-1.58	-7047.32	-45246	-0.000053	0.0004492	0.0035	3.605	62939.54	76506.55	76506.55	10.86	No	Si
SLU 84	0.62	-17434.23	-36903	-0.0000614	0.0004492	0.0035	3.605	54134.34	65438.41	65438.41	3.75	No	Si
SLU 75	-1.58	-6809.57	-44043	-0.0000514	0.0004492	0.0035	3.605	61747.61	74924.64	74924.64	11	No	Si
SLU 75	0.62	-17035.43	-35861	-0.0000597	0.0004492	0.0035	3.605	52945.25	63981.76	63981.76	3.76	No	Si
SLU 78	-1.58	-6873.24	-44517	-0.000052	0.0004492	0.0035	3.605	62221.18	75548.99	75548.99	10.99	No	Si
SLU 78	0.62	-17274.86	-36369	-0.0000606	0.0004492	0.0035	3.605	53527.53	64692.04	64692.04	3.74	No	Si
SLU 79	-1.58	-6787.56	-44223	-0.0000515	0.0004492	0.0035	3.605	61927.79	75161.55	75161.55	11.07	No	Si
SLU 79	0.62	-17049.33	-35898	-0.0000598	0.0004492	0.0035	3.605	52988.18	64033.92	64033.92	3.76	No	Si
SLU 70	-1.58	-6216.83	-41067	-0.0000475	0.0004492	0.0035	3.605	58686.81	71012.5	71012.5	11.42	No	Si
SLU 70	0.62	-16074.13	-33265	-0.0000556	0.0004492	0.0035	3.605	49897.44	60353.38	60353.38	3.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	-1.58	-1973.39	-37154	-0.0000365	0.0006738	0.0035	3.605		67936.01	67936.01	34.43		Si
SLV 6	0.62	-20658.88	-30921	-0.0000597	0.0006738	0.0035	3.605		58489.89	58489.89	2.83		Si
SLD 13	-1.58	-2368.16	-22350	-0.0000235	0.0006738	0.0035	3.605		45071.34	45071.34	19.03		Si
SLD 13	0.62	-11826.18	-15500	-0.0000321	0.0006738	0.0035	3.605		34005.95	34005.95	2.88		Si
SLV 5	-1.58	-1394.77	-36927	-0.0000354	0.0006738	0.0035	3.605		67607.83	67607.83	48.47		Si
SLV 5	0.62	-21242.11	-30342	-0.0000603	0.0006738	0.0035	3.605		57608.46	57608.46	2.71		Si
SLV 16	-1.58	-2675.39	-11154	-0.0000139	0.0006738	0.0035	3.605		26757.21	26757.21	10		Si
SLV 16	0.62	-5881.96	-4332	-0.0000207	0.0006738	0.0035	2.884		15125.43	15125.43	2.57		Si
SLV 15	-1.58	-1775.06	-10802	-0.0000122	0.0006738	0.0035	3.605		26161.37	26161.37	14.74		Si
SLV 15	0.62	-6789.43	-3432	-0.0000927	0.0006738	0.0035	2.884		13572.79	13572.79	2		Si
SLV 14	-1.58	-229.62	-11314	-0.0000104	0.0006738	0.0035	3.605		27027.45	27027.45	117.7		Si
SLV 14	0.62	-10761.4	-4197	-0.0002178	0.0006738	0.0035	2.884		14893.02	14893.02	1.38		Si
SLV 10	-1.58	222.61	-25285	-0.0000229	0.0006738	0.0035	3.605		43950.19	43950.19	197.43		Si
SLV 10	0.62	-18793.04	-18440	-0.0000513	0.0006738	0.0035	2.884		38816.71	38816.71	2.07		Si
SLD 9	-1.58	-2276.82	-28381	-0.0000289	0.0006738	0.0035	3.605		54619.14	54619.14	23.99		Si
SLD 9	0.62	-15192.71	-21715	-0.0000427	0.0006738	0.0035	3.605		44055.72	44055.72	2.9		Si
SLV 13	-1.58	670.7	-10962	-0.0000107	0.0006738	0.0035	3.605		20440.21	20440.21	30.48		Si
SLV 13	0.62	-11668.88	-3298	-0.0002851	0.0006738	0.0035	2.884		13338.42	13338.42	1.14		Si
SLV 9	-1.58	801.24	-25058	-0.0000236	0.0006738	0.0035	3.605		43593.41	43593.41	54.41		Si
SLV 9	0.62	-19376.26	-17862	-0.0000543	0.0006738	0.0035	2.884		37891.57	37891.57	1.96		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-1.58	-6787.56	-44223	-35378	7608	3.605	3.605	-21808	10833	17574	95155	58300	18385	76685	No	10.08	Si
SLU 79	0.62	-17049.33	-35898	-28719	5635	3.605	3.605	-17703	10694	17348	95155	58300	18385	76685	No	13.61	Si
SLU 84	-1.58	-7047.32	-45246	-36197	7652	3.605	3.605	-22313	10833	17574	95155	58300	18385	76685	No	10.02	Si
SLU 84	0.62	-17434.23	-36903	-29523	5690	3.605	3.605	-18199	10760	17455	95155	58300	18385	76685	No	13.48	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	-1.58	-6767.45	-44023	-35219	7556	3.605	3.605	-21710	10833	17574	95155	58300	18385	76685	No	10.15	Si
SLU 74	0.62	-16925.69	-35678	-28543	5597	3.605	3.605	-17595	10679	17324	95155	58300	18385	76685	No	13.7	Si
SLU 77	-1.58	-6831.12	-44498	-35599	7642	3.605	3.605	-21944	10833	17574	95155	58300	18385	76685	No	10.03	Si
SLU 77	0.62	-17165.12	-36187	-28949	5658	3.605	3.605	-17845	10713	17379	95155	58300	18385	76685	No	13.55	Si
SLU 83	-1.58	-7005.21	-45227	-36181	7778	3.605	3.605	-22303	10833	17574	95155	58300	18385	76685	No	9.86	Si
SLU 83	0.62	-17324.5	-36721	-29377	5798	3.605	3.605	-18109	10748	17436	95155	58300	18385	76685	No	13.23	Si
SLU 78	-1.58	-6873.24	-44517	-35614	7516	3.605	3.605	-21953	10833	17574	95155	58300	18385	76685	No	10.2	Si
SLU 78	0.62	-17274.86	-36369	-29095	5550	3.605	3.605	-17935	10725	17398	95155	58300	18385	76685	No	13.82	Si
SLU 81	-1.58	-6941.54	-44752	-35801	7692	3.605	3.605	-22069	10833	17574	95155	58300	18385	76685	No	9.97	Si
SLU 81	0.62	-17085.06	-36212	-28970	5737	3.605	3.605	-17858	10714	17381	95155	58300	18385	76685	No	13.37	Si
SLU 80	-1.58	-6829.68	-44242	-35393	7482	3.605	3.605	-21818	10833	17574	95155	58300	18385	76685	No	10.25	Si
SLU 80	0.62	-17159.07	-36081	-28865	5527	3.605	3.605	-17793	10706	17367	95155	58300	18385	76685	No	13.88	Si
SLU 75	-1.58	-6809.57	-44043	-35234	7430	3.605	3.605	-21719	10833	17574	95155	58300	18385	76685	No	10.32	Si
SLU 75	0.62	-17035.43	-35861	-28689	5489	3.605	3.605	-17685	10691	17344	95155	58300	18385	76685	No	13.97	Si
SLU 82	-1.58	-6983.66	-44771	-35817	7566	3.605	3.605	-22078	10833	17574	95155	58300	18385	76685	No	10.14	Si
SLU 82	0.62	-17194.8	-36395	-29116	5629	3.605	3.605	-17948	10726	17401	95155	58300	18385	76685	No	13.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	-1.58	-6649.32	-50524	-40420	9762	3.605	3.605	-24916	16250	26362	95155	87449	18385	105835		10.84	Si
SLV 1	0.62	-17888.37	-44900	-35920	7007	3.605	3.605	-22142	16250	26362	95155	87449	18385	105835		15.1	Si
SLD 6	-1.58	-3467.79	-33551	-26841	9413	3.605	3.605	-16545	15809	25646	95155	87449	18385	105835		11.24	Si
SLD 6	0.62	-15734.46	-27302	-21842	7032	3.605	3.605	-13464	15193	24646	95155	87449	18385	105835		15.05	Si
SLD 9	-1.58	-2276.82	-28381	-22705	9816	3.605	3.605	-13996	15299	24819	95155	87449	18385	105835		10.78	Si
SLD 9	0.62	-15192.71	-21715	-17372	7458	3.605	3.3086	-11720	14844	22101	95155	87449	18385	105835		14.19	Si
SLD 5	-1.58	-3215.16	-33452	-26762	9958	3.605	3.605	-16497	15799	25630	95155	87449	18385	105835		10.63	Si
SLD 5	0.62	-15989.1	-27049	-21640	7472	3.605	3.605	-13339	15168	24606	95155	87449	18385	105835		14.16	Si
SLV 10	-1.58	222.61	-25285	-20228	14273	3.605	3.605	-12469	14994	24324	95155	87449	18385	105835		7.42	Si
SLV 10	0.62	-18793.04	-18440	-14752	10990	2.884	2.3501	0	0	0	95155	69960	14708	84668		7.7	Si
SLD 10	-1.58	-2529.45	-28480	-22784	9270	3.605	3.605	-14045	15309	24835	95155	87449	18385	105835		11.42	Si
SLD 10	0.62	-14938.07	-21968	-17574	7018	3.605	3.3675	-11652	14830	22473	95155	87449	18385	105835		15.08	Si
SLV 6	-1.58	-1973.39	-37154	-29723	14611	3.605	3.605	-18322	16164	26223	95155	87449	18385	105835		7.24	Si
SLV 6	0.62	-20658.88	-30921	-24737	11026	3.605	3.4031	-16263	15753	24124	95155	87449	18385	105835		9.6	Si
SLV 5	-1.58	-1394.77	-36927	-29542	15860	3.605	3.605	-18210	16142	26186	95155	87449	18385	105835		6.67	Si
SLV 5	0.62	-21242.11	-30342	-24274	12033	3.605	3.3073	-16416	15783	23490	95155	87449	18385	105835		8.8	Si
SLV 9	-1.58	801.24	-25058	-20047	15521	3.605	3.605	-12357	14971	24287	95155	87449	18385	105835		6.82	Si
SLV 9	0.62	-19376.26	-17862	-14289	11998	2.884	2.1531	0	0	0	95155	69960	14708	84668		7.06	Si
SLV 13	-1.58	670.7	-10962	-8769	8634	3.605	3.605	-5406	13581	22032	95155	87449	18385	105835		12.26	Si
SLV 13	0.62	-11668.88	-3298	-2638	6889	2.884	0	0	0	0	95155	69960	14708	84668		12.29	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-3379	0.24	262.21	751.58	1516.1	1133.84	4.32	Si
SLV 14	-4248	0.24	262.21	942.11	1726.48	1334.3	5.09	Si
SLV 15	-4497	0.24	262.21	996.49	1786.55	1391.52	5.31	Si
SLV 16	-5366	0.24	262.21	1185.56	1995.04	1590.3	6.07	Si
SLV 9	-16297	0.24	262.21	3465.75	4586.94	4026.35	15.36	Si
SLV 10	-16855	0.24	262.21	3577.41	4717.91	4147.66	15.82	Si
SLV 11	-20024	0.24	262.21	4201.91	5460.39	4831.15	18.42	Si
SLV 12	-20582	0.24	262.21	4310.42	5591.24	4950.83	18.88	Si
SLV 5	-28354	0.24	262.21	5771.27	7399.12	6585.19	25.11	Si
SLV 6	-28913	0.24	262.21	5872.74	7528.32	6700.53	25.55	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-46926	-50877	-380	0.47	5456.3	0.963	7.09146	3.18428	Si
SLV 6	-32637	-37154	-481	0.619	4003.7	0.951	9.46646	4.19835	Si
SLV 1	-46213	-50524	-376	0.475	5383.7	0.962	7.18024	3.18428	Si
SLV 4	-45919	-50717	-249	0.48	5353.8	0.962	7.25505	3.18428	Si
SLV 5	-32178	-36927	-478	0.626	3957.1	0.95	9.57719	4.19835	Si
SLV 3	-45205	-50365	-244	0.486	5281.2	0.962	7.34813	3.18428	Si
SLV 8	-29278	-36621	-44	0.687	3662.8	0.947	10.5397	4.19835	Si
SLV 7	-28819	-36394	-41	0.695	3616.3	0.946	10.67746	4.19835	Si
SLV 10	-19490	-25285	-437	0.921	2671.9	0.931	14.38264	4.19835	Si
SLV 9	-19031	-25058	-434	0.938	2625.6	0.93	14.65907	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.745	SLU 78	Si
V_SLU	9.859	SLU 83	Si
PF_SLV	1.143	SLV 13	Si
V_SLV	6.673	SLV 5	Si
PFFP_SLV	4.324	SLV 13	Si
R_SLV	2.227	SLV 2	Si

Maschio 3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.763	5.876	-24.653	5.876	L2	L4	1.89	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	0.42	-45.77	-17525	-0.0000328	0.0003743	0.0035	1.89	13209.5	14910.77	14910.77	325.8	No	Si
SLU 44	0.82	1828.86	-16295	-0.0000412	0.0003743	0.0035	1.89	12500.91	13159.22	13159.22	7.2	No	Si
SLU 2	0.42	-22	-14020	-0.0000259	0.0003743	0.0035	1.89	11103.57	12490.39	12490.39	567.64	No	Si
SLU 2	0.82	1467.37	-13061	-0.0000326	0.0003743	0.0035	1.89	10480.61	10859.48	10859.48	7.4	No	Si
SLU 4	0.42	-79.37	-14544	-0.0000272	0.0003743	0.0035	1.89	11435.66	12862.08	12862.08	162.05	No	Si
SLU 4	0.82	1433.29	-13595	-0.0000335	0.0003743	0.0035	1.89	10830.2	11234.38	11234.38	7.84	No	Si
SLU 7	0.42	-76.23	-14832	-0.0000277	0.0003743	0.0035	1.89	11615.17	13067.03	13067.03	171.42	No	Si
SLU 7	0.82	1470.83	-13870	-0.0000342	0.0003743	0.0035	1.89	11007.71	11428.18	11428.18	7.77	No	Si
SLU 49	0.42	-99.99	-18337	-0.0000347	0.0003743	0.0035	1.89	13658.97	15441.5	15441.5	154.43	No	Si
SLU 49	0.82	1832.32	-17104	-0.0000428	0.0003743	0.0035	1.89	12970.87	13746.77	13746.77	7.5	No	Si
SLU 5	0.42	-18.86	-14307	-0.0000264	0.0003743	0.0035	1.89	11286.38	12693.82	12693.82	673.02	No	Si
SLU 5	0.82	1504.9	-13336	-0.0000334	0.0003743	0.0035	1.89	10661.33	11052.19	11052.19	7.34	No	Si
SLU 51	0.42	-106.47	-18186	-0.0000344	0.0003743	0.0035	1.89	13576.38	15343.53	15343.53	144.12	No	Si
SLU 51	0.82	1813.45	-16959	-0.0000424	0.0003743	0.0035	1.89	12887.46	13640.81	13640.81	7.52	No	Si
SLU 46	0.42	-103.13	-18050	-0.0000341	0.0003743	0.0035	1.89	13501.46	15254.83	15254.83	147.91	No	Si
SLU 46	0.82	1794.78	-16829	-0.000042	0.0003743	0.0035	1.89	12812.77	13546.56	13546.56	7.55	No	Si
SLU 47	0.42	-42.62	-17813	-0.0000333	0.0003743	0.0035	1.89	13370.3	15099.97	15099.97	354.26	No	Si
SLU 47	0.82	1866.39	-16570	-0.000042	0.0003743	0.0035	1.89	12662.22	13358.33	13358.33	7.16	No	Si
SLU 9	0.42	-82.7	-14680	-0.0000275	0.0003743	0.0035	1.89	11521.02	12959.18	12959.18	156.69	No	Si
SLU 9	0.82	1451.96	-13725	-0.0000338	0.0003743	0.0035	1.89	10914.04	11325.61	11325.61	7.8	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	0.42	-1630.7	-15728	-0.0000381	0.0005615	0.0035	1.89		14299.54	14299.54	8.77		Si
SLV 7	0.82	1457.45	-12797	-0.0000316	0.0005615	0.0035	1.89		11346.78	11346.78	7.79		Si
SLV 8	0.42	-1782.7	-16040	-0.0000396	0.0005615	0.0035	1.89		14536.17	14536.17	8.15		Si
SLV 8	0.82	1501.54	-12971	-0.0000322	0.0005615	0.0035	1.89		11486.03	11486.03	7.65		Si
SLV 12	0.42	-2442.96	-12012	-0.0000359	0.0005615	0.0035	1.89		11376.38	11376.38	4.66		Si
SLV 12	0.82	953.03	-9772	-0.000023	0.0005615	0.0035	1.89		8872.9	8872.9	9.31		Si
SLV 2	0.42	1261.05	-22973	-0.0000499	0.0005615	0.0035	1.89		18587.02	18587.02	14.74		Si
SLV 2	0.82	2203.64	-21126	-0.000052	0.0005615	0.0035	1.89		17274.15	17274.15	7.84		Si
SLV 15	0.42	-1772.08	-8072	-0.0000246	0.0005615	0.0035	1.89		8100.43	8100.43	4.57		Si
SLV 15	0.82	283.65	-8173	-0.0000163	0.0005615	0.0035	1.89		7523.69	7523.69	26.53		Si
SLV 1	0.42	1497.55	-22488	-0.0000504	0.0005615	0.0035	1.89		18241.93	18241.93	12.18		Si
SLV 1	0.82	2135.04	-20856	-0.000051	0.0005615	0.0035	1.89		17083.08	17083.08	8		Si
SLV 16	0.42	-2008.58	-8556	-0.0000269	0.0005615	0.0035	1.89		8509.78	8509.78	4.24		Si
SLV 16	0.82	352.24	-8443	-0.0000172	0.0005615	0.0035	1.89		7753.82	7753.82	22.01		Si
SLV 4	0.42	192.26	-21981	-0.0000415	0.0005615	0.0035	1.89		17881.21	17881.21	93		Si
SLV 4	0.82	2180.6	-19107	-0.0000479	0.0005615	0.0035	1.89		15851.35	15851.35	7.27		Si
SLV 3	0.42	428.77	-21497	-0.000042	0.0005615	0.0035	1.89		17537.4	17537.4	40.9		Si
SLV 3	0.82	2112	-18837	-0.000047	0.0005615	0.0035	1.89		15662.11	15662.11	7.42		Si
SLV 11	0.42	-2290.96	-11701	-0.0000344	0.0005615	0.0035	1.89		11130.47	11130.47	4.86		Si
SLV 11	0.82	908.94	-9598	-0.0000225	0.0005615	0.0035	1.89		8727.66	8727.66	9.6		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	0.42	-139.1	-20043	-17816	-5871	1.89	1.89	-20948	9737	8282	33304	25468	4820	30287	No	5.16	Si
SLU 68	0.82	1898.08	-18813	-16723	-5955	1.89	1.89	-19663	9566	8136	33304	25468	4820	30287	No	5.09	Si
SLU 82	0.42	-401.64	-23096	-20530	-5881	1.89	1.89	-24139	10163	8644	33304	25468	4820	30287	No	5.15	Si
SLU 82	0.82	1737.16	-21968	-19527	-5974	1.89	1.89	-22959	10006	8510	33304	25468	4820	30287	No	5.07	Si
SLU 75	0.42	-334.3	-22558	-20052	-5964	1.89	1.89	-23577	10088	8580	33304	25468	4820	30287	No	5.08	Si
SLU 75	0.82	1803.43	-21394	-19017	-6056	1.89	1.89	-22359	9926	8442	33304	25468	4820	30287	No	5	Si
SLU 70	0.42	-196.47	-20567	-18282	-5905	1.89	1.89	-21496	9811	8344	33304	25468	4820	30287	No	5.13	Si
SLU 70	0.82	1864	-19348	-17198	-5990	1.89	1.89	-20221	9641	8199	33304	25468	4820	30287	No	5.06	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	0.42	-331.15	-22846	-20307	-6079	1.89	1.89	-23877	10128	8614	33304	25468	4820	30287	No	4.98	Si
SLU 78	0.82	1840.97	-21669	-19261	-6172	1.89	1.89	-22647	9964	8474	33304	25468	4820	30287	No	4.91	Si
SLU 84	0.42	-398.49	-23384	-20786	-5995	1.89	1.89	-24439	10203	8678	33304	25468	4820	30287	No	5.05	Si
SLU 84	0.82	1774.69	-22243	-19771	-6089	1.89	1.89	-23247	10044	8542	33304	25468	4820	30287	No	4.97	Si
SLU 80	0.42	-337.63	-22695	-20173	-6035	1.89	1.89	-23719	10107	8596	33304	25468	4820	30287	No	5.02	Si
SLU 80	0.82	1822.1	-21523	-19132	-6127	1.89	1.89	-22495	9944	8457	33304	25468	4820	30287	No	4.94	Si
SLU 73	0.42	-276.93	-22034	-19586	-5931	1.89	1.89	-23029	10015	8518	33304	25468	4820	30287	No	5.11	Si
SLU 73	0.82	1837.51	-20859	-18541	-6021	1.89	1.89	-21801	9851	8378	33304	25468	4820	30287	No	5.03	Si
SLU 77	0.42	-431.63	-22975	-20422	-5891	1.89	1.89	-24012	10146	8629	33304	25468	4820	30287	No	5.14	Si
SLU 77	0.82	1705.25	-21840	-19413	-5984	1.89	1.89	-22825	9988	8495	33304	25468	4820	30287	No	5.06	Si
SLU 76	0.42	-273.79	-22321	-19841	-6045	1.89	1.89	-23329	10055	8552	33304	25468	4820	30287	No	5.01	Si
SLU 76	0.82	1875.04	-21134	-18786	-6137	1.89	1.89	-22088	9890	8411	33304	25468	4820	30287	No	4.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	0.42	-939.79	-9547	-8487	-7605	1.89	1.89	-9978	12412	10557	33304	38202	4820	43021		5.66	Si
SLV 14	0.82	375.29	-10462	-9299	-6357	1.89	1.89	-10934	12603	10719	33304	38202	4820	43021		6.77	Si
SLD 12	0.42	-1200.92	-13992	-12437	-6284	1.89	1.89	-14624	13341	11347	33304	38202	4820	43021		6.85	Si
SLD 12	0.82	1120.85	-12523	-11132	-6127	1.89	1.89	-13088	13034	11086	33304	38202	4820	43021		7.02	Si
SLV 13	0.42	-703.29	-9063	-8056	-6338	1.89	1.89	-9472	12311	10471	33304	38202	4820	43021		6.79	Si
SLV 13	0.82	306.69	-10192	-9059	-5089	1.89	1.89	-10652	12547	10671	33304	38202	4820	43021		8.45	Si
SLV 7	0.42	-1630.7	-15728	-13981	-5920	1.89	1.89	-16438	13704	11656	33304	38202	4820	43021		7.27	Si
SLV 7	0.82	1457.45	-12797	-11375	-6280	1.89	1.89	-13375	13092	11134	33304	38202	4820	43021		6.85	Si
SLV 16	0.42	-2008.58	-8556	-7605	-9571	1.89	1.89	-8942	12205	10380	33304	38202	4820	43021		4.49	Si
SLV 16	0.82	352.24	-8443	-7505	-8259	1.89	1.89	-8824	12181	10360	33304	38202	4820	43021		5.21	Si
SLD 16	0.42	-1007.77	-12533	-11141	-6502	1.89	1.89	-13099	13036	11088	33304	38202	4820	43021		6.62	Si
SLD 16	0.82	862.42	-11984	-10653	-5972	1.89	1.89	-12525	12922	10990	33304	38202	4820	43021		7.2	Si
SLV 15	0.42	-1772.08	-8072	-7175	-8304	1.89	1.89	-8436	12104	10294	33304	38202	4820	43021		5.18	Si
SLV 15	0.82	283.65	-8173	-7265	-6991	1.89	1.89	-8542	12125	10312	33304	38202	4820	43021		6.15	Si
SLV 12	0.42	-2442.96	-12012	-10677	-8997	1.89	1.89	-12554	12927	10995	33304	38202	4820	43021		4.78	Si
SLV 12	0.82	953.03	-9772	-8686	-8552	1.89	1.89	-10213	12459	10597	33304	38202	4820	43021		5.03	Si
SLV 11	0.42	-2290.96	-11701	-10401	-8183	1.89	1.89	-12229	12862	10940	33304	38202	4820	43021		5.26	Si
SLV 11	0.82	908.94	-9598	-8532	-7737	1.89	1.89	-10031	12423	10566	33304	38202	4820	43021		5.56	Si
SLV 8	0.42	-1782.7	-16040	-14257	-6734	1.89	1.89	-16764	13769	11711	33304	38202	4820	43021		6.39	Si
SLV 8	0.82	1501.54	-12971	-11530	-7095	1.89	1.89	-13556	13128	11165	33304	38202	4820	43021		6.06	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.24	7365	-6264	142.56	1341.38	9.41	Si
SLV 16	179667	0.24	7702	-6550	142.56	1399.52	9.82	Si
SLV 13	179667	0.24	8040	-6838	142.56	1457.61	10.22	Si
SLV 14	179667	0.24	8377	-7125	142.56	1515.18	10.63	Si
SLV 11	179667	0.24	11996	-10203	142.56	2115.26	14.84	Si
SLV 12	179667	0.24	12213	-10387	142.56	2150.14	15.08	Si
SLV 9	179667	0.24	14248	-12118	142.56	2472.1	17.34	Si
SLV 10	179667	0.24	14464	-12302	142.56	2505.76	17.58	Si
SLV 7	179667	0.24	16589	-14109	142.56	2829.74	19.85	Si
SLV 8	179667	0.24	16806	-14294	142.56	2862.12	20.08	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-20680	-13526	-351	0.53	2461.7	0.957	8.05358	4.19835	Si
SLV 5	-20512	-13344	-344	0.534	2444.6	0.957	8.11139	4.19835	Si
SLV 10	-17872	-9621	-223	0.6	2176.3	0.952	9.15946	4.19835	Si
SLV 9	-17703	-9439	-217	0.605	2159.2	0.952	9.23535	4.19835	Si
SLV 2	-19811	-18516	-562	0.539	2373.4	0.956	8.19206	3.18428	Si
SLV 1	-19549	-18233	-552	0.545	2346.7	0.955	8.28782	3.18428	Si
SLV 4	-16217	-18845	-615	0.626	2008.3	0.949	9.5878	3.18428	Si
SLV 3	-15954	-18561	-605	0.634	1981.7	0.948	9.72395	3.18428	Si
SLV 8	-8700	-14621	-526	1.011	1247.9	0.924	15.89933	4.19835	Si
SLV 7	-8532	-14439	-519	1.026	1230.9	0.923	16.15257	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.157	SLU 47	Si
V_SLU	4.907	SLU 78	Si
PF_SLV	4.237	SLV 16	Si
V_SLV	4.495	SLV 16	Si
PFFP_SLV	9.409	SLV 15	Si
R_SLV	1.918	SLV 6	Si

Maschio 4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	5.876	-21.763	5.876	L2	L4	2.145	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	0.42	-6640.35	-25729	-0.0000755	0.0003743	0.0035	2.145	20370.1	23443.62	23443.62	3.53	No	Si
SLU 44	0.82	-2834.86	-24710	-0.0000546	0.0003743	0.0035	2.145	19837.92	22776.48	22776.48	8.03	No	Si
SLU 78	0.42	-7816.03	-33518	-0.0000972	0.0003743	0.0035	2.145	23687.36	27783.68	27783.68	3.55	No	Si
SLU 78	0.82	-3224.81	-32482	-0.0000712	0.0003743	0.0035	2.145	23322.52	27302.87	27302.87	8.47	No	Si
SLU 49	0.42	-6820.2	-26902	-0.0000787	0.0003743	0.0035	2.145	20953.98	24221.43	24221.43	3.55	No	Si
SLU 49	0.82	-2863.42	-25882	-0.0000569	0.0003743	0.0035	2.145	20447.89	23544.33	23544.33	8.22	No	Si
SLU 68	0.42	-7296.39	-29482	-0.0000862	0.0003743	0.0035	2.145	22133.65	25809.71	25809.71	3.54	No	Si
SLU 68	0.82	-3116.4	-28446	-0.000063	0.0003743	0.0035	2.145	21677.55	25174.9	25174.9	8.08	No	Si
SLU 70	0.42	-7358.1	-30204	-0.000088	0.0003743	0.0035	2.145	22437.57	26223.1	26223.1	3.56	No	Si
SLU 70	0.82	-3077.22	-29168	-0.0000641	0.0003743	0.0035	2.145	21997.79	25616.29	25616.29	8.32	No	Si
SLU 47	0.42	-6758.5	-26180	-0.0000769	0.0003743	0.0035	2.145	20598.04	23741.18	23741.18	3.51	No	Si
SLU 47	0.82	-2902.6	-25161	-0.0000558	0.0003743	0.0035	2.145	20075.88	23070.21	23070.21	7.95	No	Si
SLU 65	0.42	-7178.24	-29032	-0.0000847	0.0003743	0.0035	2.145	21938.18	25532.61	25532.61	3.56	No	Si
SLU 65	0.82	-3048.67	-27996	-0.0000618	0.0003743	0.0035	2.145	21471.89	24901.27	24901.27	8.17	No	Si
SLU 76	0.42	-7754.33	-32797	-0.0000954	0.0003743	0.0035	2.145	23435.64	27447.92	27447.92	3.54	No	Si
SLU 76	0.82	-3263.99	-31761	-0.00007	0.0003743	0.0035	2.145	23054.49	26972.01	26972.01	8.26	No	Si
SLU 80	0.42	-7778.75	-33332	-0.0000966	0.0003743	0.0035	2.145	23623.44	27696.59	27696.59	3.56	No	Si
SLU 80	0.82	-3201.21	-32296	-0.0000707	0.0003743	0.0035	2.145	23254.38	27217.04	27217.04	8.5	No	Si
SLU 51	0.42	-6782.92	-26715	-0.0000781	0.0003743	0.0035	2.145	20863.14	24096.98	24096.98	3.55	No	Si
SLU 51	0.82	-2839.81	-25696	-0.0000565	0.0003743	0.0035	2.145	20352.9	23421.46	23421.46	8.25	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 15	0.42	-7338.02	-24083	-0.0000733	0.0005615	0.0035	2.145		23777.9	23777.9	3.24		Si
SLD 15	0.82	-3192.39	-23200	-0.0000523	0.0005615	0.0035	2.145		23056.41	23056.41	7.22		Si
SLV 13	0.42	-10685.77	-27043	-0.0000953	0.0005615	0.0035	2.145		26100.91	26100.91	2.44		Si
SLV 13	0.82	-4038.37	-26929	-0.0000627	0.0005615	0.0035	2.145		26012.42	26012.42	6.44		Si
SLD 14	0.42	-7956.88	-25119	-0.0000781	0.0005615	0.0035	2.145		24612.99	24612.99	3.09		Si
SLD 14	0.82	-3057.34	-24618	-0.0000541	0.0005615	0.0035	2.145		24217.51	24217.51	7.92		Si
SLV 9	0.42	-7851.75	-25463	-0.0000783	0.0005615	0.0035	2.145		24879.98	24879.98	3.17		Si
SLV 9	0.82	-1667.54	-26220	-0.0000503	0.0005615	0.0035	2.145		25464.92	25464.92	15.27		Si
SLD 16	0.42	-7661.26	-24634	-0.0000759	0.0005615	0.0035	2.145		24230.61	24230.61	3.16		Si
SLD 16	0.82	-3330.26	-23751	-0.0000539	0.0005615	0.0035	2.145		23506.84	23506.84	7.06		Si
SLV 16	0.42	-10761.41	-27228	-0.000096	0.0005615	0.0035	2.145		26244.07	26244.07	2.44		Si
SLV 16	0.82	-4986.84	-26226	-0.000066	0.0005615	0.0035	2.145		25469.38	25469.38	5.11		Si
SLV 15	0.42	-10008.52	-25943	-0.0000898	0.0005615	0.0035	2.145		25251.62	25251.62	2.52		Si
SLV 15	0.82	-4665.71	-24941	-0.0000622	0.0005615	0.0035	2.145		24473.56	24473.56	5.25		Si
SLV 10	0.42	-8335.63	-26288	-0.0000821	0.0005615	0.0035	2.145		25517.83	25517.83	3.06		Si
SLV 10	0.82	-1873.93	-27046	-0.0000527	0.0005615	0.0035	2.145		26102.87	26102.87	13.93		Si
SLV 14	0.42	-11438.66	-28328	-0.0001016	0.0005615	0.0035	2.145		27093.3	27093.3	2.37		Si
SLV 14	0.82	-4359.5	-28214	-0.0000665	0.0005615	0.0035	2.145		27006.15	27006.15	6.19		Si
SLD 13	0.42	-7633.64	-24568	-0.0000756	0.0005615	0.0035	2.145		24176.06	24176.06	3.17		Si
SLD 13	0.82	-2919.47	-24067	-0.0000525	0.0005615	0.0035	2.145		23764.83	23764.83	8.14		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	0.42	-7716.26	-34429	-30604	-11734	2.145	2.145	-31705	10833	10457	33304	28904	5470	34374	No	2.93	Si
SLU 83	0.82	-3000.94	-33393	-29683	-11734	2.145	2.145	-30751	10833	10457	33304	28904	5470	34374	No	2.93	Si
SLU 79	0.42	-7638.15	-33459	-29741	-11528	2.145	2.145	-30812	10833	10457	33304	28904	5470	34374	No	2.98	Si
SLU 79	0.82	-3005.42	-32423	-28821	-11528	2.145	2.145	-29858	10833	10457	33304	28904	5470	34374	No	2.98	Si
SLU 81	0.42	-7598.11	-33979	-30203	-11608	2.145	2.145	-31291	10833	10457	33304	28904	5470	34374	No	2.96	Si
SLU 81	0.82	-2933.21	-32943	-29282	-11608	2.145	2.145	-30337	10833	10457	33304	28904	5470	34374	No	2.96	Si
SLU 75	0.42	-7697.88	-33068	-29394	-11298	2.145	2.145	-30452	10833	10457	33304	28904	5470	34374	No	3.04	Si
SLU 75	0.82	-3157.08	-32032	-28473	-11298	2.145	2.145	-29498	10833	10457	33304	28904	5470	34374	No	3.04	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	0.42	-7816.03	-33518	-29794	-11424	2.145	2.145	-30867	10833	10457	33304	28904	5470	34374	No	3.01	Si
SLU 78	0.82	-3224.81	-32482	-28873	-11424	2.145	2.145	-29913	10833	10457	33304	28904	5470	34374	No	3.01	Si
SLU 80	0.42	-7778.75	-33332	-29628	-11390	2.145	2.145	-30695	10833	10457	33304	28904	5470	34374	No	3.02	Si
SLU 80	0.82	-3201.21	-32296	-28708	-11390	2.145	2.145	-29741	10833	10457	33304	28904	5470	34374	No	3.02	Si
SLU 77	0.42	-7675.44	-33646	-29907	-11562	2.145	2.145	-30984	10833	10457	33304	28904	5470	34374	No	2.97	Si
SLU 77	0.82	-3029.03	-32610	-28986	-11562	2.145	2.145	-30030	10833	10457	33304	28904	5470	34374	No	2.97	Si
SLU 74	0.42	-7557.28	-33195	-29507	-11436	2.145	2.145	-30569	10833	10457	33304	28904	5470	34374	No	3.01	Si
SLU 74	0.82	-2961.29	-32159	-28586	-11436	2.145	2.145	-29615	10833	10457	33304	28904	5470	34374	No	3.01	Si
SLU 82	0.42	-7738.71	-33851	-30090	-11470	2.145	2.145	-31173	10833	10457	33304	28904	5470	34374	No	3	Si
SLU 82	0.82	-3128.99	-32816	-29169	-11470	2.145	2.145	-30219	10833	10457	33304	28904	5470	34374	No	3	Si
SLU 84	0.42	-7856.86	-34302	-30491	-11596	2.145	2.145	-31588	10833	10457	33304	28904	5470	34374	No	2.96	Si
SLU 84	0.82	-3196.73	-33266	-29570	-11596	2.145	2.145	-30634	10833	10457	33304	28904	5470	34374	No	2.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	0.42	-10008.52	-25943	-23060	-14021	2.145	2.0601	-25204	15457	14330	33304	43356	5470	47634		3.4	Si
SLV 15	0.82	-4665.71	-24941	-22170	-13982	2.145	2.145	-22968	15010	14489	33304	43356	5470	47793		3.42	Si
SLD 13	0.42	-7633.64	-24568	-21838	-11564	2.145	2.145	-22624	14942	14422	33304	43356	5470	47727		4.13	Si
SLD 13	0.82	-2919.47	-24067	-21393	-11493	2.145	2.145	-22163	14849	14333	33304	43356	5470	47638		4.14	Si
SLV 14	0.42	-11438.66	-28328	-25180	-17246	2.145	2.0061	-28314	16079	14516	33304	43356	5470	47820		2.77	Si
SLV 14	0.82	-4359.5	-28214	-25079	-17086	2.145	2.145	-25982	15613	15070	33304	43356	5470	48375		2.83	Si
SLV 10	0.42	-8335.63	-26288	-23368	-14298	2.145	2.145	-24209	15258	14728	33304	43356	5470	48033		3.36	Si
SLV 10	0.82	-1873.93	-27046	-24041	-14066	2.145	2.145	-24906	15398	14863	33304	43356	5470	48167		3.42	Si
SLD 14	0.42	-7956.88	-25119	-22328	-12027	2.145	2.145	-23132	15043	14520	33304	43356	5470	47825		3.98	Si
SLD 14	0.82	-3057.34	-24618	-21883	-11956	2.145	2.145	-22671	14951	14431	33304	43356	5470	47736		3.99	Si
SLD 16	0.42	-7661.26	-24634	-21897	-11095	2.145	2.145	-22685	14954	14434	33304	43356	5470	47738		4.3	Si
SLD 16	0.82	-3330.26	-23751	-21112	-11076	2.145	2.145	-21872	14791	14277	33304	43356	5470	47581		4.3	Si
SLV 9	0.42	-7851.75	-25463	-22634	-13604	2.145	2.145	-23448	15106	14581	33304	43356	5470	47886		3.52	Si
SLV 9	0.82	-1667.54	-26220	-23307	-13373	2.145	2.145	-24146	15246	14716	33304	43356	5470	48020		3.59	Si
SLV 16	0.42	-10761.41	-27228	-24203	-15100	2.145	2.0318	-26847	15786	14433	33304	43356	5470	47738		3.16	Si
SLV 16	0.82	-4986.84	-26226	-23312	-15061	2.145	2.145	-24151	15247	14717	33304	43356	5470	48021		3.19	Si
SLV 13	0.42	-10685.77	-27043	-24038	-16167	2.145	2.0321	-26658	15748	14401	33304	43356	5470	47705		2.95	Si
SLV 13	0.82	-4038.37	-26929	-23937	-16007	2.145	2.145	-24798	15376	14842	33304	43356	5470	48146		3.01	Si
SLD 10	0.42	-6640.44	-24271	-21574	-10788	2.145	2.145	-22351	14887	14369	33304	43356	5470	47674		4.42	Si
SLD 10	0.82	-1990.16	-24144	-21461	-10687	2.145	2.145	-22234	14863	14347	33304	43356	5470	47651		4.46	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.24	16208	-15645	161.79	3146.47	19.45	Si
SLV 4	179667	0.24	17768	-17150	161.79	3409.88	21.08	Si
SLV 1	179667	0.24	18095	-17466	161.79	3464.2	21.41	Si
SLV 7	179667	0.24	18629	-17982	161.79	3552.38	21.96	Si
SLV 8	179667	0.24	19632	-18950	161.79	3715.56	22.96	Si
SLV 2	179667	0.24	19655	-18972	161.79	3719.24	22.99	Si
SLV 11	179667	0.24	22353	-21576	161.79	4144.03	25.61	Si
SLV 12	179667	0.24	23355	-22544	161.79	4296.59	26.56	Si
SLV 5	179667	0.24	24919	-24053	161.79	4528.8	27.99	Si
SLV 6	179667	0.24	25921	-25020	161.79	4674.05	28.89	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-25109	-26855	-474	0.501	2960.5	0.959	7.58634	4.19835	Si
SLV 9	-24550	-25883	-445	0.511	2903.6	0.959	7.74086	4.19835	Si
SLV 6	-22935	-23171	-201	0.548	2739.5	0.957	8.32228	4.19835	Si
SLV 5	-22377	-22199	-172	0.559	2682.7	0.956	8.50776	4.19835	Si
SLV 14	-23205	-29666	-983	0.512	2766.8	0.957	7.7835	3.18428	Si
SLV 13	-22335	-28154	-938	0.53	2678.5	0.956	8.05306	3.18428	Si
SLV 16	-19266	-28160	-1140	0.584	2366.6	0.95	8.93048	3.18428	Si
SLV 15	-18396	-26648	-1095	0.607	2278.4	0.949	9.30178	3.18428	Si
SLV 12	-11979	-21835	-996	0.848	1628.4	0.932	13.22808	4.19835	Si
SLV 11	-11420	-20863	-967	0.881	1572	0.93	13.76995	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.513	SLU 47	Si
V_SLU	2.929	SLU 83	Si
PF_SLV	2.369	SLV 14	Si
V_SLV	2.773	SLV 14	Si
PFFP_SLV	19.448	SLV 3	Si
R_SLV	1.807	SLV 10	Si

Maschio 7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	2.271	-19.618	4.851	L2	L4	2.58	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-1.58	-6396.29	-80429	-0.0002131	0.0004492	0.0035	2.58	15517.44	58104.7	58104.7	9.08	No	Si
SLU 82	0.42	3336.55	-75651	-0.0001797	0.0004492	0.0035	2.58	19526.01	56532.48	56532.48	16.94	No	Si
SLU 78	-1.58	-6439.28	-79698	-0.0002112	0.0004492	0.0035	2.58	16170.67	57993.67	57993.67	9.01	No	Si
SLU 78	0.42	3393.33	-74929	-0.0001781	0.0004492	0.0035	2.58	20077.22	56337.98	56337.98	16.6	No	Si
SLU 84	-1.58	-6477.15	-81275	-0.0002163	0.0004492	0.0035	2.58	14742.09	58233.38	58233.38	8.99	No	Si
SLU 84	0.42	3394.32	-76483	-0.0001824	0.0004492	0.0035	2.58	18872.24	56756.94	56756.94	16.72	No	Si
SLU 77	-1.58	-6558.74	-79646	-0.0002118	0.0004492	0.0035	2.58	16216.8	57985.74	57985.74	8.84	No	Si
SLU 77	0.42	3410.23	-74877	-0.000178	0.0004492	0.0035	2.58	20116.63	56323.88	56323.88	16.52	No	Si
SLU 81	-1.58	-6515.75	-80376	-0.0002137	0.0004492	0.0035	2.58	15564.62	58096.76	58096.76	8.92	No	Si
SLU 81	0.42	3353.44	-75598	-0.0001797	0.0004492	0.0035	2.58	19566.45	56518.38	56518.38	16.85	No	Si
SLU 74	-1.58	-6477.88	-78799	-0.0002087	0.0004492	0.0035	2.58	16954.51	57857.05	57857.05	8.93	No	Si
SLU 74	0.42	3352.45	-74044	-0.0001754	0.0004492	0.0035	2.58	20733.91	56099.42	56099.42	16.73	No	Si
SLU 80	-1.58	-6402.36	-79191	-0.0002094	0.0004492	0.0035	2.58	16615.23	57916.66	57916.66	9.05	No	Si
SLU 80	0.42	3382.94	-74430	-0.0001766	0.0004492	0.0035	2.58	20450.07	56203.49	56203.49	16.61	No	Si
SLU 79	-1.58	-6521.82	-79139	-0.00021	0.0004492	0.0035	2.58	16660.64	57908.72	57908.72	8.88	No	Si
SLU 79	0.42	3399.83	-74378	-0.0001766	0.0004492	0.0035	2.58	20488.77	56189.39	56189.39	16.53	No	Si
SLU 83	-1.58	-6596.6	-81223	-0.0002169	0.0004492	0.0035	2.58	14790.48	58225.45	58225.45	8.83	No	Si
SLU 83	0.42	3411.21	-76431	-0.0001823	0.0004492	0.0035	2.58	18913.87	56742.84	56742.84	16.63	No	Si
SLU 75	-1.58	-6358.42	-78851	-0.0002081	0.0004492	0.0035	2.58	16909.58	57864.99	57864.99	9.1	No	Si
SLU 75	0.42	3335.56	-74096	-0.0001754	0.0004492	0.0035	2.58	20695.69	56113.52	56113.52	16.82	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	-1.58	-17289.18	-52198	-0.0001832	0.0006738	0.0035	2.58		55084.32	55084.32	3.19		Si
SLV 10	0.42	8197.27	-48800	-0.000131	0.0006738	0.0035	2.58		49481.52	49481.52	6.04		Si
SLD 6	-1.58	-10621.98	-56088	-0.0001588	0.0006738	0.0035	2.58		57716.9	57716.9	5.43		Si
SLD 6	0.42	4875.65	-52479	-0.0001229	0.0006738	0.0035	2.58		52155.35	52155.35	10.7		Si
SLV 5	-1.58	-19149.36	-57470	-0.0002051	0.0006738	0.0035	2.58		58630.69	58630.69	3.06		Si
SLV 5	0.42	8150.43	-53819	-0.0001417	0.0006738	0.0035	2.58		53129.38	53129.38	6.52		Si
SLV 1	-1.58	-10980.27	-63939	-0.0001786	0.0006738	0.0035	2.58		62012.26	62012.26	5.65		Si
SLV 1	0.42	3918.61	-59964	-0.0001343	0.0006738	0.0035	2.58		57595.39	57595.39	14.7		Si
SLD 5	-1.58	-11026.4	-55904	-0.0001604	0.0006738	0.0035	2.58		57595.08	57595.08	5.22		Si
SLD 5	0.42	4944.22	-52294	-0.0001228	0.0006738	0.0035	2.58		52021.01	52021.01	10.52		Si
SLD 9	-1.58	-10633.67	-53480	-0.0001531	0.0006738	0.0035	2.58		55992.47	55992.47	5.27		Si
SLD 9	0.42	5034.39	-49987	-0.0001184	0.0006738	0.0035	2.58		50343.87	50343.87	10		Si
SLV 9	-1.58	-18215.47	-51776	-0.0001868	0.0006738	0.0035	2.58		54782.62	54782.62	3.01		Si
SLV 9	0.42	8354.32	-48377	-0.0001309	0.0006738	0.0035	2.58		49173.84	49173.84	5.89		Si
SLV 6	-1.58	-18223.06	-57892	-0.0002014	0.0006738	0.0035	2.58		58909.71	58909.71	3.23		Si
SLV 6	0.42	7993.39	-54243	-0.0001418	0.0006738	0.0035	2.58		53437.06	53437.06	6.69		Si
SLD 10	-1.58	-10229.24	-53664	-0.0001515	0.0006738	0.0035	2.58		56114.29	56114.29	5.49		Si
SLD 10	0.42	4965.82	-50172	-0.0001184	0.0006738	0.0035	2.58		50478.21	50478.21	10.17		Si
SLV 12	-1.58	9899.7	-52035	-0.0001463	0.0006738	0.0035	2.58		51832.24	51832.24	5.24		Si
SLV 12	0.42	-3338.79	-48551	-0.0001073	0.0006738	0.0035	2.58		52477.27	52477.27	15.72		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	-1.58	-6358.42	-78851	-57346	-5509	2.58	2.58	-74091	10833	8385	95155	27816	13158	40974	No	7.44	Si
SLU 75	0.42	3335.56	-74096	-53888	-4727	2.58	2.58	-69623	10833	8385	95155	27816	13158	40974	No	8.67	Si
SLU 78	-1.58	-6439.28	-79698	-57962	-5586	2.58	2.58	-74887	10833	8385	95155	27816	13158	40974	No	7.34	Si
SLU 78	0.42	3393.33	-74929	-54494	-4795	2.58	2.58	-70406	10833	8385	95155	27816	13158	40974	No	8.54	Si
SLU 83	-1.58	-6596.6	-81223	-59071	-5686	2.58	2.58	-76320	10833	8385	95155	27816	13158	40974	No	7.21	Si
SLU 83	0.42	3411.21	-76431	-55586	-4880	2.58	2.58	-71817	10833	8385	95155	27816	13158	40974	No	8.4	Si
SLU 77	-1.58	-6558.74	-79646	-57924	-5654	2.58	2.58	-74838	10833	8385	95155	27816	13158	40974	No	7.25	Si
SLU 77	0.42	3410.23	-74877	-54456	-4862	2.58	2.58	-70356	10833	8385	95155	27816	13158	40974	No	8.43	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-1.58	-6396.29	-80429	-58494	-5541	2.58	2.58	-75573	10833	8385	95155	27816	13158	40974	No	7.4	Si
SLU 82	0.42	3336.55	-75651	-55019	-4745	2.58	2.58	-71083	10833	8385	95155	27816	13158	40974	No	8.63	Si
SLU 84	-1.58	-6477.15	-81275	-59109	-5617	2.58	2.58	-76369	10833	8385	95155	27816	13158	40974	No	7.29	Si
SLU 84	0.42	3394.32	-76483	-55624	-4813	2.58	2.58	-71866	10833	8385	95155	27816	13158	40974	No	8.51	Si
SLU 74	-1.58	-6477.88	-78799	-57308	-5577	2.58	2.58	-74042	10833	8385	95155	27816	13158	40974	No	7.35	Si
SLU 74	0.42	3352.45	-74044	-53850	-4794	2.58	2.58	-69574	10833	8385	95155	27816	13158	40974	No	8.55	Si
SLU 79	-1.58	-6521.82	-79139	-57556	-5626	2.58	2.58	-74361	10833	8385	95155	27816	13158	40974	No	7.28	Si
SLU 79	0.42	3399.83	-74378	-54093	-4839	2.58	2.58	-69888	10833	8385	95155	27816	13158	40974	No	8.47	Si
SLU 80	-1.58	-6402.36	-79191	-57594	-5558	2.58	2.58	-74410	10833	8385	95155	27816	13158	40974	No	7.37	Si
SLU 80	0.42	3382.94	-74430	-54131	-4772	2.58	2.58	-69937	10833	8385	95155	27816	13158	40974	No	8.59	Si
SLU 81	-1.58	-6515.75	-80376	-58456	-5609	2.58	2.58	-75524	10833	8385	95155	27816	13158	40974	No	7.31	Si
SLU 81	0.42	3353.44	-75598	-54981	-4812	2.58	2.58	-71034	10833	8385	95155	27816	13158	40974	No	8.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 5	-1.58	-11026.4	-55904	-40657	-8452	2.58	2.58	-52529	16250	12577	95155	41723	13158	54881		6.49	Si
SLD 5	0.42	4944.22	-52294	-38032	-7848	2.58	2.58	-49137	16250	12577	95155	41723	13158	54881		6.99	Si
SLD 9	-1.58	-10633.67	-53480	-38895	-8343	2.58	2.58	-50251	16250	12577	95155	41723	13158	54881		6.58	Si
SLD 9	0.42	5034.39	-49987	-36354	-7797	2.58	2.58	-46969	16250	12577	95155	41723	13158	54881		7.04	Si
SLV 10	-1.58	-17289.18	-52198	-37962	-13317	2.58	2.58	-49046	16250	12577	95155	41723	13158	54881		4.12	Si
SLV 10	0.42	8197.27	-48800	-35491	-12783	2.58	2.58	-45854	16250	12577	95155	41723	13158	54881		4.29	Si
SLV 9	-1.58	-18215.47	-51776	-37655	-13859	2.58	2.58	-48650	16250	12577	95155	41723	13158	54881		3.96	Si
SLV 9	0.42	8354.32	-48377	-35183	-13318	2.58	2.58	-45456	16250	12577	95155	41723	13158	54881		4.12	Si
SLD 10	-1.58	-10229.24	-53664	-39029	-8106	2.58	2.58	-50424	16250	12577	95155	41723	13158	54881		6.77	Si
SLD 10	0.42	4965.82	-50172	-36488	-7564	2.58	2.58	-47143	16250	12577	95155	41723	13158	54881		7.26	Si
SLV 1	-1.58	-10980.27	-63939	-46501	-7754	2.58	2.58	-60078	16250	12577	95155	41723	13158	54881		7.08	Si
SLV 1	0.42	3918.61	-59964	-43610	-6960	2.58	2.58	-56344	16250	12577	95155	41723	13158	54881		7.88	Si
SLD 6	-1.58	-10621.98	-56088	-40791	-8215	2.58	2.58	-52702	16250	12577	95155	41723	13158	54881		6.68	Si
SLD 6	0.42	4875.65	-52479	-38167	-7614	2.58	2.58	-49311	16250	12577	95155	41723	13158	54881		7.21	Si
SLV 5	-1.58	-19149.36	-57470	-41796	-14119	2.58	2.58	-54000	16250	12577	95155	41723	13158	54881		3.89	Si
SLV 5	0.42	8150.43	-53819	-39141	-13444	2.58	2.58	-50570	16250	12577	95155	41723	13158	54881		4.08	Si
SLV 6	-1.58	-18223.06	-57892	-42103	-13576	2.58	2.58	-54397	16250	12577	95155	41723	13158	54881		4.04	Si
SLV 6	0.42	7993.39	-54243	-39449	-12909	2.58	2.58	-50968	16250	12577	95155	41723	13158	54881		4.25	Si
SLV 2	-1.58	-9538.99	-64595	-46978	-6909	2.58	2.58	-60695	16250	12577	95155	41723	13158	54881		7.94	Si
SLV 2	0.42	3674.25	-60623	-44089	-6128	2.58	2.58	-56963	16250	12577	95155	41723	13158	54881		8.96	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-43030	0.24	125.1	4496.67	7016.3	5756.48	46.01	Si
SLV 13	-43187	0.24	125.1	4505.91	7036.79	5771.35	46.13	Si
SLV 16	-43687	0.24	125.1	4534.95	7101.81	5818.38	46.51	Si
SLV 14	-43844	0.24	125.1	4543.97	7122.24	5833.11	46.63	Si
SLV 11	-49332	0.24	125.1	4826.52	7817.72	6322.12	50.54	Si
SLV 12	-49754	0.24	125.1	4845.61	7869.83	6357.72	50.82	Si
SLV 9	-49856	0.24	125.1	4850.13	7882.34	6366.24	50.89	Si
SLV 10	-50278	0.24	125.1	4868.75	7934.45	6401.6	51.17	Si
SLV 7	-54791	0.24	125.1	5044.33	8457.91	6751.12	53.96	Si
SLV 8	-55213	0.24	125.1	5058.54	8504.39	6781.47	54.21	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-37289	-57892	-34	0.42	4120.4	0.976	6.26343	5.75967	Si
SLV 5	-37030	-57470	-35	0.423	4093.9	0.976	6.30073	5.75967	Si
SLV 8	-34996	-57729	-89	0.442	3886.8	0.974	6.59149	5.75967	Si
SLV 7	-34737	-57307	-90	0.445	3860.3	0.974	6.63352	5.75967	Si
SLV 10	-33713	-52198	239	0.452	3756.1	0.973	6.74436	5.75967	Si
SLV 9	-33454	-51776	238	0.455	3729.7	0.973	6.78958	5.75967	Si
SLV 12	-31420	-52035	183	0.481	3522.6	0.972	7.19144	5.75967	Si
SLV 11	-31161	-51613	183	0.484	3496.2	0.972	7.24343	5.75967	Si
SLV 2	-40731	-64595	-371	0.383	4470.9	0.978	5.69235	3.72098	Si
SLV 1	-40327	-63939	-372	0.386	4429.8	0.977	5.74023	3.72098	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.827	SLU 83	Si
V_SLU	7.206	SLU 83	Si
PF_SLV	3.007	SLV 9	Si
V_SLV	3.887	SLV 5	Si
PFFP_SLV	46.014	SLV 15	Si
R_SLV	1.087	SLV 6	Si

Maschio 9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.543	-3.284	-24.653	-3.284	L2	L4	2.11	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	0.42	-2643.99	-28143	-0.0000614	0.0003743	0.0035	2.11	21047.15	24481.04	24481.04	9.26	No	Si
SLU 75	0.82	-346.25	-26974	-0.0000474	0.0003743	0.0035	2.11	20516.8	23777.52	23777.52	68.67	No	Si
SLU 74	0.42	-2647.64	-28145	-0.0000614	0.0003743	0.0035	2.11	21047.8	24481.92	24481.92	9.25	No	Si
SLU 74	0.82	-347.21	-26970	-0.0000474	0.0003743	0.0035	2.11	20515.3	23775.55	23775.55	68.48	No	Si
SLU 81	0.42	-2750.55	-28742	-0.0000631	0.0003743	0.0035	2.11	21306.98	24838.23	24838.23	9.03	No	Si
SLU 81	0.82	-428.53	-27582	-0.000049	0.0003743	0.0035	2.11	20796.56	24147.2	24147.2	56.35	No	Si
SLU 82	0.42	-2746.9	-28740	-0.000063	0.0003743	0.0035	2.11	21306.35	24837.35	24837.35	9.04	No	Si
SLU 82	0.82	-427.56	-27586	-0.000049	0.0003743	0.0035	2.11	20798.02	24149.13	24149.13	56.48	No	Si
SLU 84	0.42	-2765.88	-29089	-0.0000638	0.0003743	0.0035	2.11	21454.33	25047.05	25047.05	9.06	No	Si
SLU 84	0.82	-413.8	-27927	-0.0000495	0.0003743	0.0035	2.11	20951.6	24353.06	24353.06	58.85	No	Si
SLU 73	0.42	-2610.97	-27590	-0.0000601	0.0003743	0.0035	2.11	20799.82	24151.52	24151.52	9.25	No	Si
SLU 73	0.82	-369.55	-26436	-0.0000466	0.0003743	0.0035	2.11	20263.18	23438.51	23438.51	63.43	No	Si
SLU 77	0.42	-2666.61	-28494	-0.0000621	0.0003743	0.0035	2.11	21200.33	24689.95	24689.95	9.26	No	Si
SLU 77	0.82	-333.45	-27312	-0.000048	0.0003743	0.0035	2.11	20673.48	23984.1	23984.1	71.93	No	Si
SLU 79	0.42	-2655	-28290	-0.0000617	0.0003743	0.0035	2.11	21111.73	24568.54	24568.54	9.25	No	Si
SLU 79	0.82	-343.64	-27115	-0.0000477	0.0003743	0.0035	2.11	20582.46	23863.96	23863.96	69.45	No	Si
SLU 76	0.42	-2629.94	-27939	-0.0000609	0.0003743	0.0035	2.11	20956.57	24359.67	24359.67	9.26	No	Si
SLU 76	0.82	-355.79	-26778	-0.0000471	0.0003743	0.0035	2.11	20425.34	23657.44	23657.44	66.49	No	Si
SLU 83	0.42	-2769.52	-29091	-0.0000638	0.0003743	0.0035	2.11	21454.95	25047.94	25047.94	9.04	No	Si
SLU 83	0.82	-414.77	-27924	-0.0000495	0.0003743	0.0035	2.11	20950.17	24351.16	24351.16	58.71	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	0.42	-3368.89	-18129	-0.0000455	0.0005615	0.0035	2.11		18466.5	18466.5	5.48		Si
SLV 12	0.82	-2425.36	-17932	-0.0000406	0.0005615	0.0035	2.11		18300.63	18300.63	7.55		Si
SLD 14	0.42	-2230.38	-14988	-0.0000347	0.0005615	0.0035	2.11		15737.79	15737.79	7.06		Si
SLD 14	0.82	-186.05	-13828	-0.0000232	0.0005615	0.0035	2.11		14717.78	14717.78	79.11		Si
SLV 16	0.42	-3514.41	-10233	-0.0000327	0.0005615	0.0035	2.11		11411.66	11411.66	3.25		Si
SLV 16	0.82	-1372.85	-9170	-0.000021	0.0005615	0.0035	2.11		10408.35	10408.35	7.58		Si
SLD 15	0.42	-2636.52	-15655	-0.0000378	0.0005615	0.0035	2.11		16323.55	16323.55	6.19		Si
SLD 15	0.82	-714.95	-14608	-0.000027	0.0005615	0.0035	2.11		15404.46	15404.46	21.55		Si
SLV 14	0.42	-2787.85	-9173	-0.0000276	0.0005615	0.0035	2.11		10411.65	10411.65	3.73		Si
SLV 14	0.82	-132.74	-7641	-0.0000128	0.0005615	0.0035	2.11		8945.25	8945.25	67.39		Si
SLV 11	0.42	-3538.71	-18434	-0.0000468	0.0005615	0.0035	2.11		18723.67	18723.67	5.29		Si
SLV 11	0.82	-2457.22	-18106	-0.0000411	0.0005615	0.0035	2.11		18447.74	18447.74	7.51		Si
SLV 15	0.42	-3778.65	-10708	-0.0000347	0.0005615	0.0035	2.11		11853.17	11853.17	3.14		Si
SLV 15	0.82	-1422.42	-9441	-0.0000217	0.0005615	0.0035	2.11		10668.77	10668.77	7.5		Si
SLD 16	0.42	-2523.07	-15451	-0.0000369	0.0005615	0.0035	2.11		16144.23	16144.23	6.4		Si
SLD 16	0.82	-693.67	-14491	-0.0000267	0.0005615	0.0035	2.11		15302.79	15302.79	22.06		Si
SLV 13	0.42	-3052.09	-9648	-0.0000296	0.0005615	0.0035	2.11		10865.07	10865.07	3.56		Si
SLV 13	0.82	-182.31	-7912	-0.0000135	0.0005615	0.0035	2.11		9203.44	9203.44	50.48		Si
SLD 13	0.42	-2343.83	-15192	-0.0000356	0.0005615	0.0035	2.11		15916.62	15916.62	6.79		Si
SLD 13	0.82	-207.33	-13944	-0.0000235	0.0005615	0.0035	2.11		14823.59	14823.59	71.5		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	0.42	-2655	-28290	-25147	-6351	2.11	2.11	-26484	10476	9947	33304	28432	5380	33813	No	5.32	Si
SLU 79	0.82	-343.64	-27115	-24102	-6410	2.11	2.11	-25384	10329	9807	33304	28432	5380	33813	No	5.28	Si
SLU 81	0.42	-2750.55	-28742	-25548	-6335	2.11	2.11	-26907	10532	10000	33304	28432	5380	33813	No	5.34	Si
SLU 81	0.82	-428.53	-27582	-24518	-6394	2.11	2.11	-25822	10387	9863	33304	28432	5380	33813	No	5.29	Si
SLU 80	0.42	-2651.35	-28289	-25146	-6332	2.11	2.11	-26483	10476	9946	33304	28432	5380	33813	No	5.34	Si
SLU 80	0.82	-342.67	-27118	-24105	-6391	2.11	2.11	-25387	10329	9808	33304	28432	5380	33813	No	5.29	Si
SLU 78	0.42	-2662.97	-28492	-25326	-6402	2.11	2.11	-26673	10501	9971	33304	28432	5380	33813	No	5.28	Si
SLU 78	0.82	-332.49	-27316	-24280	-6462	2.11	2.11	-25572	10354	9831	33304	28432	5380	33813	No	5.23	Si
SLU 82	0.42	-2746.9	-28740	-25547	-6316	2.11	2.11	-26905	10532	10000	33304	28432	5380	33813	No	5.35	Si
SLU 82	0.82	-427.56	-27586	-24520	-6375	2.11	2.11	-25825	10388	9863	33304	28432	5380	33813	No	5.3	Si
SLU 83	0.42	-2769.52	-29091	-25858	-6435	2.11	2.11	-27234	10576	10042	33304	28432	5380	33813	No	5.25	Si
SLU 83	0.82	-414.77	-27924	-24822	-6495	2.11	2.11	-26142	10430	9903	33304	28432	5380	33813	No	5.21	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	0.42	-2647.64	-28145	-25017	-6321	2.11	2.11	-26348	10458	9929	33304	28432	5380	33813	No	5.35	Si
SLU 74	0.82	-347.21	-26970	-23974	-6380	2.11	2.11	-25249	10311	9790	33304	28432	5380	33813	No	5.3	Si
SLU 84	0.42	-2765.88	-29089	-25857	-6416	2.11	2.11	-27232	10575	10041	33304	28432	5380	33813	No	5.27	Si
SLU 84	0.82	-413.8	-27927	-24824	-6476	2.11	2.11	-26145	10430	9904	33304	28432	5380	33813	No	5.22	Si
SLU 75	0.42	-2643.99	-28143	-25016	-6302	2.11	2.11	-26347	10457	9929	33304	28432	5380	33813	No	5.37	Si
SLU 75	0.82	-346.25	-26974	-23977	-6361	2.11	2.11	-25252	10311	9791	33304	28432	5380	33813	No	5.32	Si
SLU 77	0.42	-2666.61	-28494	-25328	-6421	2.11	2.11	-26675	10501	9971	33304	28432	5380	33813	No	5.27	Si
SLU 77	0.82	-333.45	-27312	-24278	-6481	2.11	2.11	-25569	10354	9831	33304	28432	5380	33813	No	5.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	0.42	-55.25	-20232	-17984	-7555	2.11	2.11	-18940	14205	13487	33304	42648	5380	46792		6.19	Si
SLV 6	0.82	2053.86	-18776	-16689	-7829	2.11	2.11	-17577	13932	13229	33304	42648	5380	46533		5.94	Si
SLD 13	0.42	-2343.83	-15192	-13504	-6717	2.11	2.11	-14222	13261	12591	33304	42648	5380	45896		6.83	Si
SLD 13	0.82	-207.33	-13944	-12394	-6519	2.11	2.11	-13054	13027	12370	33304	42648	5380	45674		7.01	Si
SLV 10	0.42	-947.02	-14597	-12975	-9671	2.11	2.11	-13665	13150	12486	33304	42648	5380	45790		4.73	Si
SLV 10	0.82	1708.32	-12836	-11409	-9603	2.11	2.11	-12016	12820	12172	33304	42648	5380	45477		4.74	Si
SLD 9	0.42	-1537.19	-17425	-15489	-6943	2.11	2.11	-16312	13679	12988	33304	42648	5380	46293		6.67	Si
SLD 9	0.82	562.75	-16106	-14316	-6932	2.11	2.11	-15078	13432	12754	33304	42648	5380	46058		6.64	Si
SLV 14	0.42	-2787.85	-9173	-8154	-8757	2.11	2.11	-8588	12134	11521	33304	42648	5380	44826		5.12	Si
SLV 14	0.82	-132.74	-7641	-6792	-8246	2.11	2.11	-7153	11847	11249	33304	42648	5380	44553		5.4	Si
SLV 9	0.42	-1116.84	-14902	-13246	-10362	2.11	2.11	-13950	13207	12540	33304	42648	5380	45844		4.42	Si
SLV 9	0.82	1676.46	-13010	-11564	-10293	2.11	2.11	-12179	12852	12203	33304	42648	5380	45508		4.42	Si
SLV 5	0.42	-225.08	-20537	-18255	-8246	2.11	2.11	-19226	14262	13542	33304	42648	5380	46846		5.68	Si
SLV 5	0.82	2022	-18950	-16844	-8519	2.11	2.11	-17740	13965	13259	33304	42648	5380	46564		5.47	Si
SLD 10	0.42	-1463.04	-17291	-15370	-6642	2.11	2.11	-16188	13654	12965	33304	42648	5380	46269		6.97	Si
SLD 10	0.82	576.65	-16030	-14249	-6631	2.11	2.11	-15006	13418	12740	33304	42648	5380	46045		6.94	Si
SLV 15	0.42	-3778.65	-10708	-9518	-7096	2.11	2.1063	-10024	12422	11774	33304	42648	5380	45078		6.35	Si
SLV 15	0.82	-1422.42	-9441	-8392	-6547	2.11	2.11	-8838	12184	11569	33304	42648	5380	44873		6.85	Si
SLV 13	0.42	-3052.09	-9648	-8576	-9831	2.11	2.11	-9032	12223	11606	33304	42648	5380	44910		4.57	Si
SLV 13	0.82	-182.31	-7912	-7033	-9320	2.11	2.11	-7407	11898	11297	33304	42648	5380	44601		4.79	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.24	7087	-6729	153.47	1443.86	9.41	Si
SLV 13	179667	0.24	7438	-7063	153.47	1511.67	9.85	Si
SLV 16	179667	0.24	7628	-7243	153.47	1548.24	10.09	Si
SLV 15	179667	0.24	7979	-7576	153.47	1615.51	10.53	Si
SLV 10	179667	0.24	13575	-12889	153.47	2642.29	17.22	Si
SLV 9	179667	0.24	13800	-13103	153.47	2681.81	17.47	Si
SLV 12	179667	0.24	15377	-14600	153.47	2954.31	19.25	Si
SLV 11	179667	0.24	15602	-14814	153.47	2992.7	19.5	Si
SLV 6	179667	0.24	19622	-18631	153.47	3653.42	23.81	Si
SLV 5	179667	0.24	19848	-18845	153.47	3689.13	24.04	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-20129	-18080	-523	0.584	2447.7	0.953	8.91014	4.19835	Si
SLV 8	-20005	-17827	-518	0.587	2435	0.952	8.95812	4.19835	Si
SLV 3	-25956	-27629	-445	0.483	3040	0.961	7.30188	3.18428	Si
SLV 5	-19123	-23814	27	0.631	2345.5	0.951	9.63805	4.19835	Si
SLV 6	-18998	-23561	31	0.634	2332.8	0.951	9.68638	4.19835	Si
SLV 4	-25762	-27235	-438	0.486	3020.3	0.961	7.34958	3.18428	Si
SLV 1	-25654	-29349	-280	0.493	3009.3	0.961	7.459	3.18428	Si
SLV 2	-25460	-28955	-273	0.496	2989.6	0.96	7.50835	3.18428	Si
SLV 11	-14862	-11676	-426	0.743	1913.3	0.941	11.47815	4.19835	Si
SLV 12	-14738	-11423	-421	0.749	1900.7	0.941	11.56062	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.03	SLU 81	Si
V_SLU	5.206	SLU 83	Si
PF_SLV	3.137	SLV 15	Si
V_SLV	4.421	SLV 9	Si
PFFP_SLV	9.408	SLV 14	Si
R_SLV	2.122	SLV 7	Si

Maschio 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.313	-3.284	-21.543	-3.284	L2	L4	3.23	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	0.42	-19433.41	-53173	-0.0001051	0.0003743	0.0035	3.23	55018.18	64906.75	64906.75	3.34	No	Si
SLU 83	0.82	-11127.58	-51702	-0.0000836	0.0003743	0.0035	3.23	54326.2	63846.09	63846.09	5.74	No	Si
SLU 77	0.42	-19248.36	-52174	-0.0001032	0.0003743	0.0035	3.23	54553.24	64184.59	64184.59	3.33	No	Si
SLU 77	0.82	-11078.43	-50703	-0.0000821	0.0003743	0.0035	3.23	53829.18	63133.39	63133.39	5.7	No	Si
SLU 78	0.42	-19243.79	-52179	-0.0001032	0.0003743	0.0035	3.23	54555.54	64188.07	64188.07	3.34	No	Si
SLU 78	0.82	-11076	-50708	-0.0000821	0.0003743	0.0035	3.23	53831.64	63136.82	63136.82	5.7	No	Si
SLU 84	0.42	-19428.84	-53178	-0.0001051	0.0003743	0.0035	3.23	55020.38	64910.26	64910.26	3.34	No	Si
SLU 84	0.82	-11125.15	-51707	-0.0000836	0.0003743	0.0035	3.23	54328.56	63849.56	63849.56	5.74	No	Si
SLU 79	0.42	-19112.29	-51821	-0.0001024	0.0003743	0.0035	3.23	54383.62	63930.98	63930.98	3.35	No	Si
SLU 79	0.82	-10993.54	-50350	-0.0000815	0.0003743	0.0035	3.23	53648.22	62883.15	62883.15	5.72	No	Si
SLU 75	0.42	-18984.66	-51500	-0.0001016	0.0003743	0.0035	3.23	54227.52	63701.47	63701.47	3.36	No	Si
SLU 75	0.82	-10905.04	-50030	-0.0000808	0.0003743	0.0035	3.23	53481.84	62657.15	62657.15	5.75	No	Si
SLU 82	0.42	-19169.71	-52500	-0.0001035	0.0003743	0.0035	3.23	54707.15	64419.12	64419.12	3.36	No	Si
SLU 82	0.82	-10954.19	-51029	-0.0000823	0.0003743	0.0035	3.23	53993.55	63364.83	63364.83	5.78	No	Si
SLU 80	0.42	-19107.71	-51826	-0.0001024	0.0003743	0.0035	3.23	54385.96	63934.46	63934.46	3.35	No	Si
SLU 80	0.82	-10991.12	-50355	-0.0000815	0.0003743	0.0035	3.23	53650.72	62886.57	62886.57	5.72	No	Si
SLU 74	0.42	-18989.24	-51496	-0.0001016	0.0003743	0.0035	3.23	54225.15	63698.01	63698.01	3.35	No	Si
SLU 74	0.82	-10907.46	-50025	-0.0000808	0.0003743	0.0035	3.23	53479.31	62653.74	62653.74	5.74	No	Si
SLU 81	0.42	-19174.29	-52495	-0.0001035	0.0003743	0.0035	3.23	54704.88	64415.63	64415.63	3.36	No	Si
SLU 81	0.82	-10956.61	-51024	-0.0000823	0.0003743	0.0035	3.23	53991.13	63361.39	63361.39	5.78	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	0.42	-22867.94	-27501	-0.000083	0.0005615	0.0035	3.23		42869.44	42869.44	1.87		Si
SLV 14	0.82	-12187.99	-26261	-0.0000525	0.0005615	0.0035	3.23		41257.15	41257.15	3.39		Si
SLV 15	0.42	-21818.78	-30586	-0.00008	0.0005615	0.0035	3.23		46845.23	46845.23	2.15		Si
SLV 15	0.82	-9658.67	-29359	-0.0000509	0.0005615	0.0035	3.23		45257.24	45257.24	4.69		Si
SLV 9	0.42	-19119.61	-29193	-0.0000711	0.0005615	0.0035	3.23		45042.7	45042.7	2.36		Si
SLV 9	0.82	-13178.11	-28009	-0.0000565	0.0005615	0.0035	3.23		43519.75	43519.75	3.3		Si
SLV 16	0.42	-21139.03	-30189	-0.0000777	0.0005615	0.0035	3.23		46330.66	46330.66	2.19		Si
SLV 16	0.82	-9499.54	-28962	-0.0000501	0.0005615	0.0035	3.23		44745.46	44745.46	4.71		Si
SLV 10	0.42	-18682.74	-28938	-0.0000698	0.0005615	0.0035	3.23		44714.1	44714.1	2.39		Si
SLV 10	0.82	-13075.85	-27754	-0.000056	0.0005615	0.0035	3.23		43192.69	43192.69	3.3		Si
SLD 14	0.42	-17367.77	-32071	-0.0000699	0.0005615	0.0035	3.23		48740.83	48740.83	2.81		Si
SLD 14	0.82	-9573.62	-30896	-0.0000525	0.0005615	0.0035	3.23		47246.8	47246.8	4.94		Si
SLD 16	0.42	-16675.54	-33197	-0.0000698	0.0005615	0.0035	3.23		50127.43	50127.43	3.01		Si
SLD 16	0.82	-8487.22	-32025	-0.0000515	0.0005615	0.0035	3.23		48682.22	48682.22	5.74		Si
SLD 13	0.42	-17659.61	-32242	-0.0000707	0.0005615	0.0035	3.23		48955.6	48955.6	2.77		Si
SLD 13	0.82	-9641.93	-31066	-0.0000528	0.0005615	0.0035	3.23		47464.73	47464.73	4.92		Si
SLV 13	0.42	-23547.69	-27898	-0.0000857	0.0005615	0.0035	3.23		43377.97	43377.97	1.84		Si
SLV 13	0.82	-12347.11	-26658	-0.0000533	0.0005615	0.0035	3.23		41777.59	41777.59	3.38		Si
SLD 15	0.42	-16967.38	-33368	-0.0000706	0.0005615	0.0035	3.23		50335.42	50335.42	2.97		Si
SLD 15	0.82	-8555.54	-32195	-0.0000519	0.0005615	0.0035	3.23		48897.11	48897.11	5.72		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	0.42	-18984.66	-51500	-45778	-20244	3.23	3.23	-31495	10833	15746	33304	43524	8236	49051	No	2.42	Si
SLU 75	0.82	-10905.04	-50030	-44471	-20244	3.23	3.23	-30596	10833	15746	33304	43524	8236	49051	No	2.42	Si
SLU 79	0.42	-19112.29	-51821	-46063	-20342	3.23	3.23	-31691	10833	15746	33304	43524	8236	49051	No	2.41	Si
SLU 79	0.82	-10993.54	-50350	-44755	-20342	3.23	3.23	-30791	10833	15746	33304	43524	8236	49051	No	2.41	Si
SLU 81	0.42	-19174.29	-52495	-46662	-20589	3.23	3.23	-32103	10833	15746	33304	43524	8236	49051	No	2.38	Si
SLU 81	0.82	-10956.61	-51024	-45355	-20589	3.23	3.23	-31204	10833	15746	33304	43524	8236	49051	No	2.38	Si
SLU 74	0.42	-18989.24	-51496	-45774	-20249	3.23	3.23	-31492	10833	15746	33304	43524	8236	49051	No	2.42	Si
SLU 74	0.82	-10907.46	-50025	-44466	-20249	3.23	3.23	-30593	10833	15746	33304	43524	8236	49051	No	2.42	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	0.42	-19107.71	-51826	-46067	-20336	3.23	3.23	-31694	10833	15746	33304	43524	8236	49051	No	2.41	Si
SLU 80	0.82	-10991.12	-50355	-44760	-20336	3.23	3.23	-30794	10833	15746	33304	43524	8236	49051	No	2.41	Si
SLU 84	0.42	-19428.84	-53178	-47269	-20804	3.23	3.23	-32521	10833	15746	33304	43524	8236	49051	No	2.36	Si
SLU 84	0.82	-11125.15	-51707	-45962	-20804	3.23	3.23	-31622	10833	15746	33304	43524	8236	49051	No	2.36	Si
SLU 82	0.42	-19169.71	-52500	-46666	-20584	3.23	3.23	-32106	10833	15746	33304	43524	8236	49051	No	2.38	Si
SLU 82	0.82	-10954.19	-51029	-45359	-20584	3.23	3.23	-31207	10833	15746	33304	43524	8236	49051	No	2.38	Si
SLU 77	0.42	-19248.36	-52174	-46377	-20470	3.23	3.23	-31907	10833	15746	33304	43524	8236	49051	No	2.4	Si
SLU 77	0.82	-11078.43	-50703	-45069	-20470	3.23	3.23	-31008	10833	15746	33304	43524	8236	49051	No	2.4	Si
SLU 78	0.42	-19243.79	-52179	-46381	-20464	3.23	3.23	-31910	10833	15746	33304	43524	8236	49051	No	2.4	Si
SLU 78	0.82	-11076	-50708	-45074	-20464	3.23	3.23	-31011	10833	15746	33304	43524	8236	49051	No	2.4	Si
SLU 83	0.42	-19433.41	-53173	-47265	-20809	3.23	3.23	-32518	10833	15746	33304	43524	8236	49051	No	2.36	Si
SLU 83	0.82	-11127.58	-51702	-45958	-20809	3.23	3.23	-31619	10833	15746	33304	43524	8236	49051	No	2.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	0.42	-21818.78	-30586	-27187	-30036	3.23	2.7049	-22595	14936	18180	33304	65286	8236	51484		1.71	Si
SLV 15	0.82	-9658.67	-29359	-26097	-29824	3.23	3.23	-17955	14008	20360	33304	65286	8236	53664		1.8	Si
SLV 16	0.42	-21139.03	-30189	-26835	-28734	3.23	2.7443	-21974	14812	18292	33304	65286	8236	51596		1.8	Si
SLV 16	0.82	-9499.54	-28962	-25744	-28522	3.23	3.23	-17712	13959	20289	33304	65286	8236	53594		1.88	Si
SLD 13	0.42	-17659.61	-32242	-28659	-19997	3.23	3.2018	-19718	14360	20690	33304	65286	8236	53995		2.7	Si
SLD 13	0.82	-9641.93	-31066	-27615	-19933	3.23	3.23	-18999	14216	20664	33304	65286	8236	53968		2.71	Si
SLD 15	0.42	-16967.38	-33368	-29660	-20906	3.23	3.23	-20406	14498	21073	33304	65286	8236	54377		2.6	Si
SLD 15	0.82	-8555.54	-32195	-28618	-20816	3.23	3.23	-19689	14354	20864	33304	65286	8236	54169		2.6	Si
SLV 12	0.42	-12919.7	-37897	-33686	-21642	3.23	3.23	-23176	15052	21878	33304	65286	8236	55182		2.55	Si
SLV 12	0.82	-4114.36	-36757	-32673	-21477	3.23	3.23	-22479	14912	21675	33304	65286	8236	54980		2.56	Si
SLV 13	0.42	-23547.69	-27898	-24798	-27826	3.23	2.3128	-24122	15241	15863	33304	65286	8236	49167		1.77	Si
SLV 13	0.82	-12347.11	-26658	-23696	-27681	3.23	3.23	-16303	13677	19880	33304	65286	8236	53184		1.92	Si
SLD 16	0.42	-16675.54	-33197	-29509	-20347	3.23	3.23	-20302	14477	21042	33304	65286	8236	54347		2.67	Si
SLD 16	0.82	-8487.22	-32025	-28467	-20257	3.23	3.23	-19585	14334	20834	33304	65286	8236	54138		2.67	Si
SLD 14	0.42	-17367.77	-32071	-28508	-19438	3.23	3.2204	-19613	14339	20780	33304	65286	8236	54085		2.78	Si
SLD 14	0.82	-9573.62	-30896	-27463	-19374	3.23	3.23	-18895	14196	20633	33304	65286	8236	53938		2.78	Si
SLV 14	0.42	-22867.94	-27501	-24446	-26524	3.23	2.3504	-23389	15095	15966	33304	65286	8236	49270		1.86	Si
SLV 14	0.82	-12187.99	-26261	-23343	-26379	3.23	3.23	-16060	13629	19809	33304	65286	8236	53114		2.01	Si
SLV 11	0.42	-13356.56	-38152	-33913	-22478	3.23	3.23	-23332	15083	21923	33304	65286	8236	55228		2.46	Si
SLV 11	0.82	-4216.63	-37013	-32900	-22313	3.23	3.23	-22635	14944	21721	33304	65286	8236	55025		2.47	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.24	13417	-19502	234.93	4002.46	17.04	Si
SLV 13	179667	0.24	13687	-19894	234.93	4074.99	17.35	Si
SLV 16	179667	0.24	14060	-20436	234.93	4174.78	17.77	Si
SLV 15	179667	0.24	14330	-20828	234.93	4246.57	18.08	Si
SLV 10	179667	0.24	15911	-23127	234.93	4661.36	19.84	Si
SLV 9	179667	0.24	16084	-23379	234.93	4706.16	20.03	Si
SLV 12	179667	0.24	18053	-26240	234.93	5206.01	22.16	Si
SLV 11	179667	0.24	18226	-26492	234.93	5249.22	22.34	Si
SLV 6	179667	0.24	18650	-27107	234.93	5354.31	22.79	Si
SLV 5	179667	0.24	18823	-27359	234.93	5397.08	22.97	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-35850	-25282	-677	0.523	4258.7	0.958	7.932	4.19835	Si
SLV 8	-35709	-25036	-678	0.524	4244.4	0.958	7.95691	4.19835	Si
SLV 11	-32575	-20292	-578	0.566	3925.8	0.955	8.61106	4.19835	Si
SLV 12	-32435	-20045	-579	0.567	3911.6	0.954	8.64099	4.19835	Si
SLV 3	-36331	-32253	-638	0.518	4307.6	0.958	7.86221	3.18428	Si
SLV 4	-36113	-31869	-638	0.521	4285.4	0.958	7.90017	3.18428	Si
SLV 5	-26198	-28368	-235	0.681	3278.3	0.947	10.45121	4.19835	Si
SLV 6	-26058	-28121	-235	0.684	3264.1	0.947	10.4967	4.19835	Si
SLV 1	-33436	-33179	-505	0.556	4013.3	0.955	8.46121	3.18428	Si
SLV 2	-33217	-32795	-505	0.559	3991.1	0.955	8.50587	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.335	SLU 77	Si
V_SLU	2.357	SLU 83	Si
PF_SLV	1.842	SLV 13	Si
V_SLV	1.714	SLV 15	Si
PFFP_SLV	17.037	SLV 14	Si
R_SLV	1.889	SLV 7	Si

Maschio 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.523	-3.284	-17.313	-3.284	L2	L4	0.79	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	0.42	966.5	-24650	-0.0001581	0.0003743	0.0035	0.79	3105.42	5949.38	5949.38	6.16	No	Si
SLU 81	0.82	1381.48	-20972	-0.0001528	0.0003743	0.0035	0.79	3483.95	5526.45	5526.45	4	No	Si
SLU 84	0.42	978.78	-24932	-0.0001605	0.0003743	0.0035	0.79	3064.34	5970.86	5970.86	6.1	No	Si
SLU 84	0.82	1400.79	-21221	-0.0001552	0.0003743	0.0035	0.79	3467.63	5562.46	5562.46	3.97	No	Si
SLU 80	0.42	955.14	-24149	-0.0001543	0.0003743	0.0035	0.79	3174.39	5911.1	5911.1	6.19	No	Si
SLU 80	0.82	1376.38	-20577	-0.0001501	0.0003743	0.0035	0.79	3507.01	5469.44	5469.44	3.97	No	Si
SLU 82	0.42	968.31	-24651	-0.0001582	0.0003743	0.0035	0.79	3105.4	5949.4	5949.4	6.14	No	Si
SLU 82	0.82	1379.39	-20971	-0.0001527	0.0003743	0.0035	0.79	3483.99	5526.35	5526.35	4.01	No	Si
SLU 83	0.42	976.96	-24931	-0.0001604	0.0003743	0.0035	0.79	3064.36	5970.84	5970.84	6.11	No	Si
SLU 83	0.82	1402.89	-21222	-0.0001553	0.0003743	0.0035	0.79	3467.58	5562.56	5562.56	3.97	No	Si
SLU 75	0.42	949.92	-24033	-0.0001534	0.0003743	0.0035	0.79	3189.55	5902.25	5902.25	6.21	No	Si
SLU 75	0.82	1365.24	-20470	-0.000149	0.0003743	0.0035	0.79	3512.68	5454	5454	3.99	No	Si
SLU 77	0.42	958.57	-24314	-0.0001556	0.0003743	0.0035	0.79	3152.3	5923.7	5923.7	6.18	No	Si
SLU 77	0.82	1388.74	-20721	-0.0001515	0.0003743	0.0035	0.79	3499	5490.21	5490.21	3.95	No	Si
SLU 79	0.42	953.33	-24149	-0.0001543	0.0003743	0.0035	0.79	3174.41	5911.09	5911.09	6.2	No	Si
SLU 79	0.82	1378.48	-20578	-0.0001502	0.0003743	0.0035	0.79	3506.98	5469.54	5469.54	3.97	No	Si
SLU 78	0.42	960.39	-24314	-0.0001556	0.0003743	0.0035	0.79	3152.28	5923.71	5923.71	6.17	No	Si
SLU 78	0.82	1386.65	-20720	-0.0001514	0.0003743	0.0035	0.79	3499.04	5490.11	5490.11	3.96	No	Si
SLU 74	0.42	948.11	-24033	-0.0001533	0.0003743	0.0035	0.79	3189.57	5902.24	5902.24	6.23	No	Si
SLU 74	0.82	1367.34	-20471	-0.000149	0.0003743	0.0035	0.79	3512.64	5454.1	5454.1	3.99	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	0.42	501.7	-12252	-0.0000682	0.0005615	0.0035	0.79		4109.17	4109.17	8.19		Si
SLV 16	0.82	1775.7	-12287	-0.0001125	0.0005615	0.0035	0.79		4119.1	4119.1	2.32		Si
SLD 15	0.42	575.6	-14658	-0.0000818	0.0005615	0.0035	0.79		4781.56	4781.56	8.31		Si
SLD 15	0.82	1342.25	-13304	-0.0001019	0.0005615	0.0035	0.79		4403.12	4403.12	3.28		Si
SLV 9	0.42	-33.43	-15525	-0.0000671	0.0005615	0.0035	0.79		5216.15	5216.15	156.03		Si
SLV 9	0.82	1661.9	-12718	-0.0001102	0.0005615	0.0035	0.79		4239.44	4239.44	2.55		Si
SLV 14	0.42	154.96	-12436	-0.0000574	0.0005615	0.0035	0.79		4160.71	4160.71	26.85		Si
SLV 14	0.82	2008.13	-11838	-0.0001213	0.0005615	0.0035	0.79		3993.52	3993.52	1.99		Si
SLD 16	0.42	591.69	-14662	-0.0000824	0.0005615	0.0035	0.79		4782.83	4782.83	8.08		Si
SLD 16	0.82	1301.47	-13268	-0.0001003	0.0005615	0.0035	0.79		4393.2	4393.2	3.38		Si
SLV 10	0.42	-9.35	-15531	-0.0000663	0.0005615	0.0035	0.79		5217.84	5217.84	558.25		Si
SLV 10	0.82	1600.86	-12665	-0.0001078	0.0005615	0.0035	0.79		4224.6	4224.6	2.64		Si
SLD 14	0.42	448.86	-14736	-0.0000778	0.0005615	0.0035	0.79		4803.26	4803.26	10.7		Si
SLD 14	0.82	1398.1	-13093	-0.0001028	0.0005615	0.0035	0.79		4344.26	4344.26	3.11		Si
SLV 13	0.42	117.49	-12426	-0.0000561	0.0005615	0.0035	0.79		4157.75	4157.75	35.39		Si
SLV 13	0.82	2103.11	-11921	-0.0001264	0.0005615	0.0035	0.79		4016.61	4016.61	1.91		Si
SLD 13	0.42	432.77	-14731	-0.0000772	0.0005615	0.0035	0.79		4801.99	4801.99	11.1		Si
SLD 13	0.82	1438.88	-13129	-0.0001044	0.0005615	0.0035	0.79		4354.17	4354.17	3.03		Si
SLV 15	0.42	464.23	-12241	-0.0000669	0.0005615	0.0035	0.79		4106.21	4106.21	8.85		Si
SLV 15	0.82	1870.67	-12370	-0.0001168	0.0005615	0.0035	0.79		4142.19	4142.19	2.21		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	0.42	978.78	-24932	-19945	3910	0.79	0.79	-56105	10833	3851	95155	10645	4029	14674	No	3.75	Si
SLU 84	0.82	1400.79	-21221	-16977	185	0.79	0.79	-47755	10833	3851	95155	10645	4029	14674	No	79.35	Si
SLU 81	0.42	966.5	-24650	-19720	3877	0.79	0.79	-55472	10833	3851	95155	10645	4029	14674	No	3.78	Si
SLU 81	0.82	1381.48	-20972	-16777	196	0.79	0.79	-47194	10833	3851	95155	10645	4029	14674	No	75.02	Si
SLU 77	0.42	958.57	-24314	-19451	3726	0.79	0.79	-54715	10833	3851	95155	10645	4029	14674	No	3.94	Si
SLU 77	0.82	1388.74	-20721	-16577	101	0.79	0.79	-46629	10833	3851	95155	10645	4029	14674	No	145.78	Si
SLU 74	0.42	948.11	-24033	-19226	3704	0.79	0.79	-54083	10833	3851	95155	10645	4029	14674	No	3.96	Si
SLU 74	0.82	1367.34	-20471	-16377	122	0.79	0.79	-46067	10833	3851	95155	10645	4029	14674	No	120.46	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	0.42	968.31	-24651	-19720	3888	0.79	0.79	-55473	10833	3851	95155	10645	4029	14674	No	3.77	Si
SLU 82	0.82	1379.39	-20971	-16777	206	0.79	0.79	-47192	10833	3851	95155	10645	4029	14674	No	71.2	Si
SLU 83	0.42	976.96	-24931	-19945	3900	0.79	0.79	-56105	10833	3851	95155	10645	4029	14674	No	3.76	Si
SLU 83	0.82	1402.89	-21222	-16977	174	0.79	0.79	-47756	10833	3851	95155	10645	4029	14674	No	84.12	Si
SLU 75	0.42	949.92	-24033	-19227	3714	0.79	0.79	-54083	10833	3851	95155	10645	4029	14674	No	3.95	Si
SLU 75	0.82	1365.24	-20470	-16376	132	0.79	0.79	-46065	10833	3851	95155	10645	4029	14674	No	110.92	Si
SLU 78	0.42	960.39	-24314	-19451	3737	0.79	0.79	-54716	10833	3851	95155	10645	4029	14674	No	3.93	Si
SLU 78	0.82	1386.65	-20720	-16576	111	0.79	0.79	-46628	10833	3851	95155	10645	4029	14674	No	132.04	Si
SLU 79	0.42	953.33	-24149	-19319	3703	0.79	0.79	-54344	10833	3851	95155	10645	4029	14674	No	3.96	Si
SLU 79	0.82	1378.48	-20578	-16462	109	0.79	0.79	-46307	10833	3851	95155	10645	4029	14674	No	134.54	Si
SLU 80	0.42	955.14	-24149	-19319	3713	0.79	0.79	-54344	10833	3851	95155	10645	4029	14674	No	3.95	Si
SLU 80	0.82	1376.38	-20577	-16462	120	0.79	0.79	-46306	10833	3851	95155	10645	4029	14674	No	122.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	0.42	732.96	-18249	-14599	5249	0.79	0.79	-41066	16250	5777	95155	15968	4029	19997		3.81	Si
SLD 1	0.82	590.45	-14758	-11807	1497	0.79	0.79	-33211	16250	5777	95155	15968	4029	19997		13.35	Si
SLD 2	0.42	749.05	-18253	-14603	5450	0.79	0.79	-41076	16250	5777	95155	15968	4029	19997		3.67	Si
SLD 2	0.82	549.67	-14723	-11778	1658	0.79	0.79	-33131	16250	5777	95155	15968	4029	19997		12.06	Si
SLV 8	0.42	1358.08	-17387	-13909	6001	0.79	0.79	-39126	16250	5777	95155	15968	4029	19997		3.33	Si
SLV 8	0.82	230.02	-15308	-12247	2474	0.79	0.79	-34449	16250	5777	95155	15968	4029	19997		8.08	Si
SLV 1	0.42	822.96	-20659	-16527	8928	0.79	0.79	-46491	16250	5777	95155	15968	4029	19997		2.24	Si
SLV 1	0.82	116.22	-15739	-12591	3407	0.79	0.79	-35418	16250	5777	95155	15968	4029	19997		5.87	Si
SLV 7	0.42	1334	-17380	-13904	5700	0.79	0.79	-39111	16250	5777	95155	15968	4029	19997		3.51	Si
SLV 7	0.82	291.06	-15361	-12289	2233	0.79	0.79	-34569	16250	5777	95155	15968	4029	19997		8.96	Si
SLV 3	0.42	1169.69	-20475	-16380	9671	0.79	0.79	-46076	16250	5777	95155	15968	4029	19997		2.07	Si
SLV 3	0.82	-116.21	-16188	-12951	4081	0.79	0.79	-36429	16250	5777	95155	15968	4029	19997		4.9	Si
SLD 3	0.42	875.8	-18176	-14541	5566	0.79	0.79	-40902	16250	5777	95155	15968	4029	19997		3.59	Si
SLD 3	0.82	493.82	-14933	-11947	1785	0.79	0.79	-33605	16250	5777	95155	15968	4029	19997		11.2	Si
SLV 4	0.42	1207.17	-20485	-16388	10139	0.79	0.79	-46099	16250	5777	95155	15968	4029	19997		1.97	Si
SLV 4	0.82	-211.18	-16106	-12885	4455	0.79	0.79	-36244	16250	5777	95155	15968	4029	19997		4.49	Si
SLV 2	0.42	860.43	-20670	-16536	9396	0.79	0.79	-46514	16250	5777	95155	15968	4029	19997		2.13	Si
SLV 2	0.82	21.25	-15656	-12525	3782	0.79	0.79	-35232	16250	5777	95155	15968	4029	19997		5.29	Si
SLD 4	0.42	891.88	-18180	-14544	5767	0.79	0.79	-40912	16250	5777	95155	15968	4029	19997		3.47	Si
SLD 4	0.82	453.04	-14898	-11918	1946	0.79	0.79	-33525	16250	5777	95155	15968	4029	19997		10.27	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-12681	0.24	57.46	2186.79	3057.67	2622.23	45.64	Si
SLV 16	-12797	0.24	57.46	2200.64	3082.26	2641.45	45.97	Si
SLV 13	-13009	0.24	57.46	2225.69	3127.23	2676.46	46.58	Si
SLV 14	-13125	0.24	57.46	2239.22	3151.82	2695.52	46.91	Si
SLV 11	-14836	0.24	57.46	2425.9	3495.19	2960.55	51.52	Si
SLV 12	-14911	0.24	57.46	2433.49	3509.38	2971.44	51.71	Si
SLV 9	-15930	0.24	57.46	2532.56	3702.78	3117.67	54.26	Si
SLV 10	-16005	0.24	57.46	2539.47	3716.88	3128.17	54.44	Si
SLV 7	-16994	0.24	57.46	2626.74	3896.95	3261.85	56.77	Si
SLV 8	-17068	0.24	57.46	2633	3910.3	3271.65	56.94	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-9963	-23154	34	0.486	1163.1	0.962	7.3409	4.19835	Si
SLV 8	-9857	-23151	37	0.49	1152.3	0.961	7.40051	4.19835	Si
SLV 11	-9735	-24133	64	0.492	1139.9	0.961	7.437	4.19835	Si
SLV 12	-9628	-24131	67	0.496	1129.1	0.961	7.49893	4.19835	Si
SLV 5	-7767	-22736	-548	0.53	939.8	0.954	8.07986	4.19835	Si
SLV 6	-7660	-22733	-545	0.536	929	0.953	8.17509	4.19835	Si
SLV 9	-7539	-23716	-518	0.546	916.6	0.953	8.32809	4.19835	Si
SLV 10	-7432	-23713	-516	0.552	905.8	0.952	8.42927	4.19835	Si
SLV 3	-9491	-21865	-205	0.488	1115	0.96	7.38646	3.18428	Si
SLV 4	-9324	-21861	-200	0.495	1098.1	0.96	7.49846	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.953	SLU 77	Si
V_SLU	3.753	SLU 84	Si
PF_SLV	1.91	SLV 13	Si
V_SLV	1.972	SLV 4	Si
PFFP_SLV	45.636	SLV 15	Si
R_SLV	1.749	SLV 7	Si

Maschio 12

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.284	-14.223	-3.284	L2	L4	0.46	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.025	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-1.58	1195.42	-32176	-0.0020491	0.0003743	0.0035	0.46	0	1500.76	1500.76	1.26	No	Si
SLU 77	0.52	-1078.34	-15245	-0.000273	0.0003743	0.0035	0.46	969.93	2179.51	2179.51	2.02	No	Si
SLU 80	-1.58	1185.36	-31952	-0.0019445	0.0003743	0.0035	0.46	0	1534.83	1534.83	1.29	No	Si
SLU 80	0.52	-1070.64	-15142	-0.00027	0.0003743	0.0035	0.46	980.4	2174.26	2174.26	2.03	No	Si
SLU 74	-1.58	1182.03	-31825	-0.0018957	0.0003743	0.0035	0.46	0	1554.2	1554.2	1.31	No	Si
SLU 74	0.52	-1062.43	-15049	-0.0002671	0.0003743	0.0035	0.46	989.68	2169.51	2169.51	2.04	No	Si
SLU 78	-1.58	1194.37	-32167	-0.002043	0.0003743	0.0035	0.46	0	1502.15	1502.15	1.26	No	Si
SLU 78	0.52	-1079.84	-15255	-0.0002735	0.0003743	0.0035	0.46	968.93	2180	2180	2.02	No	Si
SLU 75	-1.58	1180.98	-31816	-0.0018907	0.0003743	0.0035	0.46	0	1555.59	1555.59	1.32	No	Si
SLU 75	0.52	-1063.93	-15059	-0.0002676	0.0003743	0.0035	0.46	988.72	2170.01	2170.01	2.04	No	Si
SLU 82	-1.58	1205.06	-32469	-0.002235	0.0003743	0.0035	0.46	0	1455.98	1455.98	1.21	No	Si
SLU 82	0.52	-1063.38	-15293	-0.0002711	0.0003743	0.0035	0.46	964.99	2181.94	2181.94	2.05	No	Si
SLU 81	-1.58	1206.11	-32478	-0.0022438	0.0003743	0.0035	0.46	0	1454.59	1454.59	1.21	No	Si
SLU 81	0.52	-1061.88	-15283	-0.0002707	0.0003743	0.0035	0.46	965.99	2181.45	2181.45	2.05	No	Si
SLU 79	-1.58	1186.4	-31961	-0.0019499	0.0003743	0.0035	0.46	0	1533.44	1533.44	1.29	No	Si
SLU 79	0.52	-1069.14	-15132	-0.0002696	0.0003743	0.0035	0.46	981.38	2173.76	2173.76	2.03	No	Si
SLU 84	-1.58	1218.45	-32819	-0.0025286	0.0003743	0.0035	0.46	0	1402.54	1402.54	1.15	No	Si
SLU 84	0.52	-1079.29	-15489	-0.0002771	0.0003743	0.0035	0.46	944.19	2191.94	2191.94	2.03	No	Si
SLU 83	-1.58	1219.5	-32828	-0.0025416	0.0003743	0.0035	0.46	0	1401.15	1401.15	1.15	No	Si
SLU 83	0.52	-1077.8	-15480	-0.0002767	0.0003743	0.0035	0.46	945.24	2191.44	2191.44	2.03	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	-1.58	408.61	-20141	-0.0002054	0.0005615	0.0035	0.46		2840.46	2840.46	6.95		Si
SLV 14	0.52	-1044.15	-13135	-0.000211	0.0005615	0.0035	0.46		2284.36	2284.36	2.19		Si
SLV 13	-1.58	416.77	-20220	-0.0002072	0.0005615	0.0035	0.46		2844.82	2844.82	6.83		Si
SLV 13	0.52	-1065.55	-13252	-0.0002149	0.0005615	0.0035	0.46		2298.56	2298.56	2.16		Si
SLV 11	-1.58	531.46	-20384	-0.0002232	0.0005615	0.0035	0.46		2853.81	2853.81	5.37		Si
SLV 11	0.52	-1150.14	-13768	-0.0002309	0.0005615	0.0035	0.46		2360.93	2360.93	2.05		Si
SLV 12	-1.58	526.22	-20333	-0.000222	0.0005615	0.0035	0.46		2851.01	2851.01	5.42		Si
SLV 12	0.52	-1136.39	-13692	-0.0002283	0.0005615	0.0035	0.46		2351.81	2351.81	2.07		Si
SLD 16	-1.58	603.77	-20996	-0.000239	0.0005615	0.0035	0.46		2887.43	2887.43	4.78		Si
SLD 16	0.52	-947.52	-12169	-0.0001903	0.0005615	0.0035	0.46		2167.51	2167.51	2.29		Si
SLD 15	-1.58	607.27	-21030	-0.0002398	0.0005615	0.0035	0.46		2889.3	2889.3	4.76		Si
SLD 15	0.52	-956.71	-12220	-0.0001919	0.0005615	0.0035	0.46		2173.61	2173.61	2.27		Si
SLV 2	-1.58	1315.55	-24682	-0.0003905	0.0005615	0.0035	0.46		2997.35	2997.35	2.28		Si
SLV 2	0.52	-268.34	-6236	-0.0000693	0.0005615	0.0035	0.46		1313.28	1313.28	4.89		Si
SLV 1	-1.58	1323.7	-24761	-0.0003933	0.0005615	0.0035	0.46		2998.52	2998.52	2.27		Si
SLV 1	0.52	-289.73	-6353	-0.0000723	0.0005615	0.0035	0.46		1333.94	1333.94	4.6		Si
SLV 15	-1.58	323.87	-19569	-0.0001893	0.0005615	0.0035	0.46		2809.03	2809.03	8.67		Si
SLV 15	0.52	-1231.68	-14614	-0.0002503	0.0005615	0.0035	0.46		2441	2441	1.98		Si
SLV 16	-1.58	315.71	-19489	-0.0001876	0.0005615	0.0035	0.46		2804.67	2804.67	8.88		Si
SLV 16	0.52	-1210.28	-14497	-0.0002461	0.0005615	0.0035	0.46		2430.65	2430.65	2.01		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	-1.58	1218.45	-32819	-25005	2823	0.46	0.46	-120798	10833	2243	95155	6199	2933	9131	No	3.23	Si
SLU 84	0.52	-1079.29	-15489	-11801	-5413	0.46	0.46	-57012	10833	2243	95155	6199	2933	9131	No	1.69	Si
SLU 78	-1.58	1194.37	-32167	-24508	2776	0.46	0.46	-118395	10833	2243	95155	6199	2933	9131	No	3.29	Si
SLU 78	0.52	-1079.84	-15255	-11623	-5338	0.46	0.46	-56149	10833	2243	95155	6199	2933	9131	No	1.71	Si
SLU 83	-1.58	1219.5	-32828	-25012	2825	0.46	0.46	-120832	10833	2243	95155	6199	2933	9131	No	3.23	Si
SLU 83	0.52	-1077.8	-15480	-11794	-5407	0.46	0.46	-56976	10833	2243	95155	6199	2933	9131	No	1.69	Si
SLU 80	-1.58	1185.36	-31952	-24345	2756	0.46	0.46	-117607	10833	2243	95155	6199	2933	9131	No	3.31	Si
SLU 80	0.52	-1070.64	-15142	-11537	-5311	0.46	0.46	-55734	10833	2243	95155	6199	2933	9131	No	1.72	Si
SLU 75	-1.58	1180.98	-31816	-24241	2745	0.46	0.46	-117106	10833	2243	95155	6199	2933	9131	No	3.33	Si
SLU 75	0.52	-1063.93	-15059	-11473	-5280	0.46	0.46	-55426	10833	2243	95155	6199	2933	9131	No	1.73	Si
SLU 79	-1.58	1186.4	-31961	-24352	2758	0.46	0.46	-117641	10833	2243	95155	6199	2933	9131	No	3.31	Si
SLU 79	0.52	-1069.14	-15132	-11530	-5306	0.46	0.46	-55698	10833	2243	95155	6199	2933	9131	No	1.72	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	-1.58	1195.42	-32176	-24515	2778	0.46	0.46	-118429	10833	2243	95155	6199	2933	9131	No	3.29	Si
SLU 77	0.52	-1078.34	-15245	-11615	-5333	0.46	0.46	-56113	10833	2243	95155	6199	2933	9131	No	1.71	Si
SLU 74	-1.58	1182.03	-31825	-24248	2747	0.46	0.46	-117140	10833	2243	95155	6199	2933	9131	No	3.32	Si
SLU 74	0.52	-1062.43	-15049	-11466	-5275	0.46	0.46	-55391	10833	2243	95155	6199	2933	9131	No	1.73	Si
SLU 82	-1.58	1205.06	-32469	-24738	2792	0.46	0.46	-119509	10833	2243	95155	6199	2933	9131	No	3.27	Si
SLU 82	0.52	-1063.38	-15293	-11652	-5355	0.46	0.46	-56289	10833	2243	95155	6199	2933	9131	No	1.71	Si
SLU 81	-1.58	1206.11	-32478	-24745	2794	0.46	0.46	-119543	10833	2243	95155	6199	2933	9131	No	3.27	Si
SLU 81	0.52	-1061.88	-15283	-11644	-5350	0.46	0.46	-56254	10833	2243	95155	6199	2933	9131	No	1.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	-1.58	647.96	-21314	-16240	1632	0.46	0.46	-78452	16250	3364	95155	9298	2933	12230		7.49	Si
SLD 13	0.52	-883.71	-11624	-8856	-5758	0.46	0.46	-42783	16250	3364	95155	9298	2933	12230		2.12	Si
SLV 14	-1.58	408.61	-20141	-15345	1223	0.46	0.46	-74132	16250	3364	95155	9298	2933	12230		10	Si
SLV 14	0.52	-1044.15	-13135	-10008	-8273	0.46	0.4515	-48346	16250	3302	95155	9298	2933	12230		1.48	Si
SLV 15	-1.58	323.87	-19569	-14909	1087	0.46	0.46	-72026	16250	3364	95155	9298	2933	12230		11.25	Si
SLV 15	0.52	-1231.68	-14614	-11135	-9524	0.46	0.4372	-53791	16250	3197	95155	9298	2933	12230		1.28	Si
SLV 11	-1.58	531.46	-20384	-15530	1433	0.46	0.46	-75026	16250	3364	95155	9298	2933	12230		8.53	Si
SLV 11	0.52	-1150.14	-13768	-10490	-7004	0.46	0.4394	-50675	16250	3213	95155	9298	2933	12230		1.75	Si
SLD 15	-1.58	607.27	-21030	-16023	1563	0.46	0.46	-77404	16250	3364	95155	9298	2933	12230		7.82	Si
SLD 15	0.52	-956.71	-12220	-9310	-6183	0.46	0.4551	-44977	16250	3328	95155	9298	2933	12230		1.98	Si
SLV 13	-1.58	416.77	-20220	-15406	1245	0.46	0.46	-74424	16250	3364	95155	9298	2933	12230		9.82	Si
SLV 13	0.52	-1065.55	-13252	-10097	-8524	0.46	0.4488	-48778	16250	3282	95155	9298	2933	12230		1.43	Si
SLV 12	-1.58	526.22	-20333	-15492	1419	0.46	0.46	-74839	16250	3364	95155	9298	2933	12230		8.62	Si
SLV 12	0.52	-1136.39	-13692	-10432	-6842	0.46	0.441	-50398	16250	3225	95155	9298	2933	12230		1.79	Si
SLV 16	-1.58	315.71	-19489	-14849	1065	0.46	0.46	-71734	16250	3364	95155	9298	2933	12230		11.49	Si
SLV 16	0.52	-1210.28	-14497	-11045	-9273	0.46	0.4395	-53359	16250	3214	95155	9298	2933	12230		1.32	Si
SLD 14	-1.58	644.45	-21280	-16214	1623	0.46	0.46	-78326	16250	3364	95155	9298	2933	12230		7.54	Si
SLD 14	0.52	-874.53	-11573	-8818	-5650	0.46	0.46	-42598	16250	3364	95155	9298	2933	12230		2.16	Si
SLD 16	-1.58	603.77	-20996	-15997	1554	0.46	0.46	-77279	16250	3364	95155	9298	2933	12230		7.87	Si
SLD 16	0.52	-947.52	-12169	-9272	-6074	0.46	0.4564	-44792	16250	3338	95155	9298	2933	12230		2.01	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-11902	0.24	33.46	1669.69	2708.4	2189.04	65.43	Si
SLV 7	-11911	0.24	33.46	1670.19	2709.95	2190.07	65.46	Si
SLV 12	-12038	0.24	33.46	1677.15	2732.01	2204.58	65.89	Si
SLV 11	-12047	0.24	33.46	1677.63	2733.57	2205.6	65.92	Si
SLV 4	-12084	0.24	33.46	1679.6	2739.96	2209.78	66.05	Si
SLV 3	-12098	0.24	33.46	1680.34	2742.37	2211.36	66.09	Si
SLV 2	-12380	0.24	33.46	1694.63	2790.76	2242.69	67.03	Si
SLV 1	-12394	0.24	33.46	1695.31	2793.17	2244.24	67.08	Si
SLV 16	-12540	0.24	33.46	1702.25	2818.11	2260.18	67.55	Si
SLV 15	-12554	0.24	33.46	1702.9	2820.38	2261.64	67.6	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-6095	-22555	-64	0.461	707.1	0.963	6.95675	4.19835	Si
SLV 10	-6031	-22504	-64	0.465	700.6	0.963	7.01471	4.19835	Si
SLV 11	-6086	-20384	-42	0.465	706.2	0.963	7.01553	4.19835	Si
SLV 12	-6021	-20333	-42	0.469	699.6	0.963	7.07417	4.19835	Si
SLV 13	-7407	-20220	-47	0.4	840.6	0.969	5.9967	3.18428	Si
SLV 15	-7404	-19569	-41	0.401	840.4	0.969	6.01099	3.18428	Si
SLV 14	-7307	-20141	-48	0.404	830.5	0.968	6.05935	3.18428	Si
SLV 16	-7304	-19489	-41	0.405	830.2	0.968	6.07385	3.18428	Si
SLV 5	-4983	-23918	-72	0.537	594	0.957	8.15684	4.19835	Si
SLV 7	-4974	-21746	-49	0.542	593.1	0.957	8.22999	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.149	SLU 83	Si
V_SLU	1.687	SLU 84	Si
PF_SLV	1.982	SLV 15	Si
V_SLV	1.284	SLV 15	Si
PFFP_SLV	65.427	SLV 8	Si
R_SLV	1.657	SLV 9	Si

Maschio 13

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.498	1.046	-18.498	-3.284	L2	L4	4.33	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-1.58	21890.41	-98636	-0.0001607	0.0004492	0.0035	4.33	80840.45	143249.11	143249.11	6.54	No	Si
SLU 80	1.39	5745.91	-51898	-0.0000676	0.0004492	0.0035	4.33	75620.36	93060.17	93060.17	16.2	No	Si
SLU 82	-1.58	22319.81	-99834	-0.0001634	0.0004492	0.0035	4.33	80190.93	144246.95	144246.95	6.46	No	Si
SLU 82	1.39	5550.94	-52227	-0.0000677	0.0004492	0.0035	4.33	75865.88	93575.55	93575.55	16.86	No	Si
SLU 79	-1.58	21999.91	-98633	-0.0001609	0.0004492	0.0035	4.33	80841.98	143246.69	143246.69	6.51	No	Si
SLU 79	1.39	5702.17	-51888	-0.0000675	0.0004492	0.0035	4.33	75613.05	93044.91	93044.91	16.32	No	Si
SLU 81	-1.58	22429.31	-99831	-0.0001636	0.0004492	0.0035	4.33	80192.55	144244.53	144244.53	6.43	No	Si
SLU 81	1.39	5507.2	-52218	-0.0000676	0.0004492	0.0035	4.33	75858.65	93560.29	93560.29	16.99	No	Si
SLU 77	-1.58	22155.55	-99231	-0.0001621	0.0004492	0.0035	4.33	80522.35	143745.31	143745.31	6.49	No	Si
SLU 77	1.39	5727.01	-52255	-0.000068	0.0004492	0.0035	4.33	75886.41	93618.92	93618.92	16.35	No	Si
SLU 75	-1.58	21798.62	-98172	-0.0001598	0.0004492	0.0035	4.33	81081.04	142863.36	142863.36	6.55	No	Si
SLU 75	1.39	5657.35	-51552	-0.000067	0.0004492	0.0035	4.33	75359.74	92519.77	92519.77	16.35	No	Si
SLU 78	-1.58	22046.05	-99234	-0.0001619	0.0004492	0.0035	4.33	80520.78	143747.73	143747.73	6.52	No	Si
SLU 78	1.39	5770.75	-52265	-0.0000681	0.0004492	0.0035	4.33	75893.63	93634.18	93634.18	16.23	No	Si
SLU 83	-1.58	22676.75	-100892	-0.0001658	0.0004492	0.0035	4.33	79584.25	145128.9	145128.9	6.4	No	Si
SLU 83	1.39	5620.6	-52931	-0.0000687	0.0004492	0.0035	4.33	76379.59	94674.7	94674.7	16.84	No	Si
SLU 84	-1.58	22567.25	-100895	-0.0001655	0.0004492	0.0035	4.33	79582.55	145131.32	145131.32	6.43	No	Si
SLU 84	1.39	5664.34	-52940	-0.0000687	0.0004492	0.0035	4.33	76386.63	94689.96	94689.96	16.72	No	Si
SLU 74	-1.58	21908.12	-98170	-0.00016	0.0004492	0.0035	4.33	81082.53	142860.94	142860.94	6.52	No	Si
SLU 74	1.39	5613.61	-51542	-0.000067	0.0004492	0.0035	4.33	75352.33	92504.51	92504.51	16.48	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 9	-1.58	21774.82	-65967	-0.0001088	0.0006738	0.0035	4.33		118824.94	118824.94	5.46		Si
SLD 9	1.39	1750.55	-34798	-0.0000403	0.0006738	0.0035	4.33		69594.05	69594.05	39.76		Si
SLD 6	-1.58	21819.88	-70421	-0.0001143	0.0006738	0.0035	4.33		125247.47	125247.47	5.74		Si
SLD 6	1.39	601.62	-35845	-0.0000397	0.0006738	0.0035	4.33		71249.13	71249.13	118.43		Si
SLV 10	-1.58	29144.41	-61985	-0.000116	0.0006738	0.0035	4.33		112534.68	112534.68	3.86		Si
SLV 10	1.39	-974.8	-33222	-0.0000374	0.0006738	0.0035	4.33		75716.34	75716.34	77.67		Si
SLV 6	-1.58	30369.73	-72614	-0.0001315	0.0006738	0.0035	4.33		127936.71	127936.71	4.21		Si
SLV 6	1.39	-3896.63	-35867	-0.0000448	0.0006738	0.0035	4.33		80298.57	80298.57	20.61		Si
SLD 10	-1.58	21295.51	-65883	-0.0001079	0.0006738	0.0035	4.33		118692.27	118692.27	5.57		Si
SLD 10	1.39	1844.63	-34717	-0.0000404	0.0006738	0.0035	4.33		69466.25	69466.25	37.66		Si
SLV 13	-1.58	18441.11	-50832	-0.000085	0.0006738	0.0035	4.33		94919.57	94919.57	5.15		Si
SLV 13	1.39	6825.88	-31252	-0.0000442	0.0006738	0.0035	4.33		63446.31	63446.31	9.29		Si
SLV 9	-1.58	30242.21	-62177	-0.000118	0.0006738	0.0035	4.33		112838.53	112838.53	3.73		Si
SLV 9	1.39	-1190.29	-33408	-0.0000379	0.0006738	0.0035	4.33		76037.4	76037.4	63.88		Si
SLD 5	-1.58	22299.18	-70505	-0.0001152	0.0006738	0.0035	4.33		125350.48	125350.48	5.62		Si
SLD 5	1.39	507.53	-35926	-0.0000397	0.0006738	0.0035	4.33		71376.93	71376.93	140.64		Si
SLV 14	-1.58	16732.98	-50533	-0.0000819	0.0006738	0.0035	4.33		94446.79	94446.79	5.64		Si
SLV 14	1.39	7161.17	-30964	-0.0000444	0.0006738	0.0035	4.33		62929.61	62929.61	8.79		Si
SLV 5	-1.58	31467.53	-72806	-0.0001336	0.0006738	0.0035	4.33		128172.65	128172.65	4.07		Si
SLV 5	1.39	-4112.12	-36053	-0.0000454	0.0006738	0.0035	4.33		80619.62	80619.62	19.61		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	-1.58	22155.55	-99231	-72168	-9843	4.33	4.33	-55557	10833	14073	95155	46683	22083	68766	No	6.99	Si
SLU 77	1.39	5727.01	-52255	-38004	-8639	4.33	4.33	-29256	10833	14073	95155	46683	22083	68766	No	7.96	Si
SLU 73	-1.58	21322.54	-96514	-70192	-9832	4.33	4.33	-54035	10833	14073	95155	46683	22083	68766	No	6.99	Si
SLU 73	1.39	5548.28	-50479	-36712	-8676	4.33	4.33	-28261	10833	14073	95155	46683	22083	68766	No	7.93	Si
SLU 76	-1.58	21569.98	-97576	-70964	-9947	4.33	4.33	-54630	10833	14073	95155	46683	22083	68766	No	6.91	Si
SLU 76	1.39	5661.68	-51191	-37230	-8773	4.33	4.33	-28661	10833	14073	95155	46683	22083	68766	No	7.84	Si
SLU 78	-1.58	22046.05	-99234	-72170	-9988	4.33	4.33	-55558	10833	14073	95155	46683	22083	68766	No	6.88	Si
SLU 78	1.39	5770.75	-52265	-38011	-8784	4.33	4.33	-29262	10833	14073	95155	46683	22083	68766	No	7.83	Si
SLU 79	-1.58	21999.91	-98633	-71733	-9821	4.33	4.33	-55222	10833	14073	95155	46683	22083	68766	No	7	Si
SLU 79	1.39	5702.17	-51888	-37737	-8628	4.33	4.33	-29051	10833	14073	95155	46683	22083	68766	No	7.97	Si
SLU 82	-1.58	22319.81	-99834	-72606	-9815	4.33	4.33	-55894	10833	14073	95155	46683	22083	68766	No	7.01	Si
SLU 82	1.39	5550.94	-52227	-37984	-8614	4.33	4.33	-29241	10833	14073	95155	46683	22083	68766	No	7.98	Si
SLU 75	-1.58	21798.62	-98172	-71398	-9873	4.33	4.33	-54964	10833	14073	95155	46683	22083	68766	No	6.97	Si
SLU 75	1.39	5657.35	-51552	-37492	-8687	4.33	4.33	-28863	10833	14073	95155	46683	22083	68766	No	7.92	Si
SLU 84	-1.58	22567.25	-100895	-73378	-9931	4.33	4.33	-56488	10833	14073	95155	46683	22083	68766	No	6.92	Si
SLU 84	1.39	5664.34	-52940	-38502	-8711	4.33	4.33	-29640	10833	14073	95155	46683	22083	68766	No	7.89	Si
SLU 57	-1.58	20016.42	-91665	-66665	-9809	4.33	4.33	-51320	10833	14073	95155	46683	22083	68766	No	7.01	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 57	1.39	5534.75	-47973	-34890	-8719	4.33	4.33	-26859	10833	14073	95155	46683	22083	68766	No	7.89	Si
SLU 80	-1.58	21890.41	-98636	-71735	-9966	4.33	4.33	-55223	10833	14073	95155	46683	22083	68766	No	6.9	Si
SLU 80	1.39	5745.91	-51898	-37744	-8774	4.33	4.33	-29056	10833	14073	95155	46683	22083	68766	No	7.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	-1.58	-262.73	-65040	-47302	-27216	4.33	4.33	-36414	16250	21109	95155	70024	22083	92107		3.38	Si
SLV 11	1.39	12144.75	-35919	-26123	-26459	4.33	4.33	-20110	16250	21109	95155	70024	22083	92107		3.48	Si
SLD 7	-1.58	8811.49	-71770	-52197	-16298	4.33	4.33	-40182	16250	21109	95155	70024	22083	92107		5.65	Si
SLD 7	1.39	6403.49	-37070	-26960	-15235	4.33	4.33	-20754	16250	21109	95155	70024	22083	92107		6.05	Si
SLV 7	-1.58	962.59	-75669	-55032	-27732	4.33	4.33	-42365	16250	21109	95155	70024	22083	92107		3.32	Si
SLV 7	1.39	9222.92	-38564	-28047	-26361	4.33	4.33	-21591	16250	21109	95155	70024	22083	92107		3.49	Si
SLV 8	-1.58	-135.21	-75476	-54892	-28970	4.33	4.33	-42257	16250	21109	95155	70024	22083	92107		3.18	Si
SLV 8	1.39	9438.41	-38379	-27912	-27607	4.33	4.33	-21487	16250	21109	95155	70024	22083	92107		3.34	Si
SLV 12	-1.58	-1360.53	-64847	-47162	-28454	4.33	4.33	-36306	16250	21109	95155	70024	22083	92107		3.24	Si
SLV 12	1.39	12360.24	-35734	-25988	-27705	4.33	4.33	-20006	16250	21109	95155	70024	22083	92107		3.32	Si
SLD 8	-1.58	8332.18	-71686	-52135	-16838	4.33	4.33	-40135	16250	21109	95155	70024	22083	92107		5.47	Si
SLD 8	1.39	6497.57	-36989	-26901	-15779	4.33	4.33	-20709	16250	21109	95155	70024	22083	92107		5.84	Si
SLV 4	-1.58	11665.89	-86822	-63143	-15324	4.33	4.33	-48609	16250	21109	95155	70024	22083	92107		6.01	Si
SLV 4	1.39	1422.24	-40534	-29480	-13420	4.33	4.33	-22694	16250	21109	95155	70024	22083	92107		6.86	Si
SLD 12	-1.58	7807.82	-67149	-48835	-16619	4.33	4.33	-37595	16250	21109	95155	70024	22083	92107		5.54	Si
SLD 12	1.39	7740.59	-35860	-26080	-15826	4.33	4.33	-20077	16250	21109	95155	70024	22083	92107		5.82	Si
SLV 5	-1.58	31467.53	-72806	-52950	13959	4.33	4.33	-40762	16250	21109	95155	70024	22083	92107		6.6	Si
SLV 5	1.39	-4112.12	-36053	-26220	14836	4.33	4.33	-20185	16250	21109	95155	70024	22083	92107		6.21	Si
SLD 11	-1.58	8287.13	-67233	-48896	-16079	4.33	4.33	-37642	16250	21109	95155	70024	22083	92107		5.73	Si
SLD 11	1.39	7646.5	-35941	-26139	-15282	4.33	4.33	-20122	16250	21109	95155	70024	22083	92107		6.03	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	-38492	0.24	209.96	4840.3	6780.01	5810.15	27.67	Si
SLV 13	-38826	0.24	209.96	4874.13	6831.97	5853.05	27.88	Si
SLV 16	-39074	0.24	209.96	4899.13	6870.52	5884.82	28.03	Si
SLV 15	-39408	0.24	209.96	4932.72	6922.49	5927.6	28.23	Si
SLV 10	-46635	0.24	209.96	5625.06	8033.52	6829.29	32.53	Si
SLV 9	-46850	0.24	209.96	5644.62	8066.37	6855.49	32.65	Si
SLV 12	-48574	0.24	209.96	5799.61	8330.38	7064.99	33.65	Si
SLV 11	-48789	0.24	209.96	5818.64	8363.25	7090.94	33.77	Si
SLV 6	-54146	0.24	209.96	6274.77	9183.82	7729.29	36.81	Si
SLV 5	-54361	0.24	209.96	6292.29	9216.71	7754.5	36.93	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-38564	-75669	571	0.62	4469.7	0.963	9.34702	5.75967	Si
SLV 8	-38379	-75476	572	0.622	4450.8	0.963	9.38638	5.75967	Si
SLV 5	-36053	-72806	603	0.655	4214.2	0.961	9.90135	5.75967	Si
SLV 6	-35867	-72614	603	0.658	4195.3	0.961	9.94599	5.75967	Si
SLV 11	-35919	-65040	318	0.664	4200.6	0.961	10.04281	5.75967	Si
SLV 12	-35734	-64847	318	0.667	4181.7	0.961	10.0883	5.75967	Si
SLV 9	-33408	-62177	349	0.705	3945.1	0.959	10.68709	5.75967	Si
SLV 10	-33222	-61985	349	0.709	3926.3	0.959	10.73914	5.75967	Si
SLV 3	-40823	-87121	878	0.584	4699.5	0.965	8.78985	3.72098	Si
SLV 4	-40534	-86822	878	0.587	4670.1	0.965	8.84425	3.72098	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.4	SLU 83	Si
V_SLU	6.885	SLU 78	Si
PF_SLV	3.731	SLV 9	Si
V_SLV	3.179	SLV 8	Si
PFFP_SLV	27.673	SLV 14	Si
R_SLV	1.623	SLV 7	Si

Maschio 14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.693	6.576	-17.768	6.576	L2	L4	1.925	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	0.42	2698.18	-17933	-0.0000486	0.0003743	0.0035	1.925	13750.95	14629.48	14629.48	5.42	No	Si
SLU 49	0.82	-444.84	-17031	-0.0000335	0.0003743	0.0035	1.925	13226.99	15022.95	15022.95	33.77	No	Si
SLU 5	0.42	2178.41	-14215	-0.0000382	0.0003743	0.0035	1.925	11476.63	11908.94	11908.94	5.47	No	Si
SLU 5	0.82	-246.39	-13521	-0.0000257	0.0003743	0.0035	1.925	11018.84	12510.8	12510.8	50.78	No	Si
SLU 65	0.42	2879.08	-19852	-0.0000535	0.0003743	0.0035	1.925	14806.45	15997.44	15997.44	5.56	No	Si
SLU 65	0.82	-455.25	-18950	-0.0000373	0.0003743	0.0035	1.925	14320.25	16314.55	16314.55	35.84	No	Si
SLU 68	0.42	2917.09	-20029	-0.0000541	0.0003743	0.0035	1.925	14899.89	16102.25	16102.25	5.52	No	Si
SLU 68	0.82	-453.53	-19127	-0.0000376	0.0003743	0.0035	1.925	14417.18	16429.28	16429.28	36.23	No	Si
SLU 47	0.42	2703.57	-17546	-0.0000478	0.0003743	0.0035	1.925	13527.9	14341.31	14341.31	5.3	No	Si
SLU 47	0.82	-348.87	-16644	-0.0000322	0.0003743	0.0035	1.925	12996.3	14760.51	14760.51	42.31	No	Si
SLU 2	0.42	2140.4	-14038	-0.0000376	0.0003743	0.0035	1.925	11360.7	11781.68	11781.68	5.5	No	Si
SLU 2	0.82	-248.11	-13344	-0.0000254	0.0003743	0.0035	1.925	10900.22	12377.33	12377.33	49.89	No	Si
SLU 44	0.42	2665.56	-17368	-0.0000472	0.0003743	0.0035	1.925	13424.86	14209.83	14209.83	5.33	No	Si
SLU 44	0.82	-350.59	-16466	-0.0000319	0.0003743	0.0035	1.925	12889.77	14635.01	14635.01	41.74	No	Si
SLU 46	0.42	2660.17	-17756	-0.000048	0.0003743	0.0035	1.925	13649.41	14497.63	14497.63	5.45	No	Si
SLU 46	0.82	-446.56	-16854	-0.0000332	0.0003743	0.0035	1.925	13121.95	14905.39	14905.39	33.38	No	Si
SLU 50	0.42	2595.73	-17625	-0.0000473	0.0003743	0.0035	1.925	13574.17	14400.66	14400.66	5.55	No	Si
SLU 50	0.82	-560.24	-16724	-0.0000336	0.0003743	0.0035	1.925	13044.15	14816.94	14816.94	26.45	No	Si
SLU 51	0.42	2683.24	-17684	-0.000048	0.0003743	0.0035	1.925	13607.85	14443.99	14443.99	5.38	No	Si
SLU 51	0.82	-432.39	-16782	-0.000033	0.0003743	0.0035	1.925	13078.97	14857.6	14857.6	34.36	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	0.42	2864.44	-6952	-0.0000286	0.0005615	0.0035	1.925		6585.68	6585.68	2.3		Si
SLV 9	0.82	-297.18	-6095	-0.0000123	0.0005615	0.0035	1.925		6660.96	6660.96	22.41		Si
SLV 14	0.42	5522.16	2169	0.2067761	0.0005615	0.0035	1.54		0	0	0		No
SLV 14	0.82	1188.89	2881	0.3572683	0.0005615	0.0035	1.54		0	0	0		No
SLD 15	0.42	3456.65	-9378	-0.000036	0.0005615	0.0035	1.925		8697.86	8697.86	2.52		Si
SLD 15	0.82	204.76	-8721	-0.0000165	0.0005615	0.0035	1.925		8130.99	8130.99	39.71		Si
SLV 10	0.42	3073.51	-6259	-0.0000301	0.0005615	0.0035	1.925		5973.34	5973.34	1.94		Si
SLV 10	0.82	-202.99	-5401	-0.0000106	0.0005615	0.0035	1.925		6043.15	6043.15	29.77		Si
SLD 16	0.42	3596.32	-8915	-0.0000364	0.0005615	0.0035	1.925		8298.97	8298.97	2.31		Si
SLD 16	0.82	267.68	-8258	-0.000016	0.0005615	0.0035	1.925		7729.26	7729.26	28.88		Si
SLV 13	0.42	5196.84	1090	0.0167038	0.0005615	0.0035	1.54		0	0	0		No
SLV 13	0.82	1042.34	1802	0.2216227	0.0005615	0.0035	1.54		0	0	0		No
SLD 14	0.42	3564.95	-7868	-0.0000352	0.0005615	0.0035	1.925		7391.75	7391.75	2.07		Si
SLD 14	0.82	207.27	-7167	-0.0000137	0.0005615	0.0035	1.925		6774.96	6774.96	32.69		Si
SLV 15	0.42	5272.48	-1330	-0.0287062	0.0005615	0.0035	1.925		1455.02	1455.02	0.28		No
SLV 15	0.82	1185.91	-722	-0.0019323	0.0005615	0.0035	1.54		881.4	881.4	0.74		No
SLD 13	0.42	3425.29	-8332	-0.0000344	0.0005615	0.0035	1.925		7793.49	7793.49	2.28		Si
SLD 13	0.82	144.35	-7630	-0.0000142	0.0005615	0.0035	1.925		7183.89	7183.89	49.77		Si
SLV 16	0.42	5597.8	-251	-0.0411306	0.0005615	0.0035	1.925		433.76	433.76	0.08		No
SLV 16	0.82	1332.47	357	0.0199062	0.0005615	0.0035	1.54		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	0.42	3122.72	-23627	-21002	9616	1.925	1.925	-24245	10177	8816	33304	25939	4909	30848	No	3.21	Si
SLU 84	0.82	-704.78	-22726	-20200	9616	1.925	1.925	-23319	10054	8709	33304	25939	4909	30848	No	3.21	Si
SLU 75	0.42	3058.47	-22786	-20254	9362	1.925	1.925	-23381	10062	8716	33304	25939	4909	30848	No	3.3	Si
SLU 75	0.82	-667.43	-21884	-19452	9362	1.925	1.925	-22456	9939	8609	33304	25939	4909	30848	No	3.3	Si
SLU 81	0.42	2997.2	-23392	-20793	9626	1.925	1.925	-24003	10145	8788	33304	25939	4909	30848	No	3.2	Si
SLU 81	0.82	-834.35	-22490	-19991	9626	1.925	1.925	-23078	10021	8681	33304	25939	4909	30848	No	3.2	Si
SLU 74	0.42	2970.96	-22727	-20202	9463	1.925	1.925	-23321	10054	8709	33304	25939	4909	30848	No	3.26	Si
SLU 74	0.82	-795.29	-21825	-19400	9463	1.925	1.925	-22396	9931	8602	33304	25939	4909	30848	No	3.26	Si
SLU 79	0.42	2994.02	-22655	-20138	9485	1.925	1.925	-23247	10044	8701	33304	25939	4909	30848	No	3.25	Si
SLU 79	0.82	-781.11	-21753	-19336	9485	1.925	1.925	-22322	9921	8594	33304	25939	4909	30848	No	3.25	Si
SLU 77	0.42	3008.97	-22905	-20360	9553	1.925	1.925	-23503	10078	8730	33304	25939	4909	30848	No	3.23	Si
SLU 77	0.82	-793.57	-22003	-19558	9553	1.925	1.925	-22578	9955	8623	33304	25939	4909	30848	No	3.23	Si
SLU 82	0.42	3084.71	-23450	-20845	9525	1.925	1.925	-24063	10153	8795	33304	25939	4909	30848	No	3.24	Si
SLU 82	0.82	-706.5	-22548	-20043	9525	1.925	1.925	-23138	10029	8688	33304	25939	4909	30848	No	3.24	Si
SLU 78	0.42	3096.48	-22963	-20411	9453	1.925	1.925	-23563	10086	8737	33304	25939	4909	30848	No	3.26	Si
SLU 78	0.82	-665.71	-22061	-19610	9453	1.925	1.925	-22637	9963	8630	33304	25939	4909	30848	No	3.26	Si
SLU 80	0.42	3081.53	-22714	-20190	9384	1.925	1.925	-23307	10052	8708	33304	25939	4909	30848	No	3.29	Si
SLU 80	0.82	-653.25	-21812	-19388	9384	1.925	1.925	-22382	9929	8601	33304	25939	4909	30848	No	3.29	Si
SLU 83	0.42	3035.21	-23569	-20950	9717	1.925	1.925	-24185	10169	8809	33304	25939	4909	30848	No	3.17	Si
SLU 83	0.82	-832.63	-22667	-20149	9717	1.925	1.925	-23260	10046	8702	33304	25939	4909	30848	No	3.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	0.42	3073.51	-6259	-5563	9767	1.925	1.4142	-6422	11701	7447	33304	38909	4909	40751		4.17	Si
SLV 10	0.82	-202.99	-5401	-4801	9451	1.925	1.925	-5542	11525	9984	33304	38909	4909	43288		4.58	Si
SLV 15	0.42	5272.48	-1330	-1182	10740	1.925	0	0	16250	0	33304	38909	4909	33304		3.1	Si
SLV 15	0.82	1185.91	-722	-642	10009	1.54	0	0	0	0	33304	31127	3927	33304		3.33	Si
SLD 15	0.42	3456.65	-9378	-8336	8375	1.925	1.7817	-9623	12341	9895	33304	38909	4909	43199		5.16	Si
SLD 15	0.82	204.76	-8721	-7752	8062	1.925	1.925	-8949	12206	10574	33304	38909	4909	43818		5.44	Si
SLV 13	0.42	5196.84	1090	969	11677	1.54	0	0	0	0	33304	31127	3927	33304		2.85	Si
SLV 13	0.82	1042.34	1802	1602	10893	1.54	1.1521	0	0	0	33304	31127	3927	33304		3.06	Si
SLV 16	0.42	5597.8	-251	-223	11187	1.925	0	0	4057	0	33304	38909	4909	33304		2.98	Si
SLV 16	0.82	1332.47	357	317	10456	1.54	0	0	0	0	33304	31127	3927	33304		3.19	Si
SLV 14	0.42	5522.16	2169	1928	12124	1.54	0	0	0	0	33304	31127	3927	33304		2.75	Si
SLV 14	0.82	1188.89	2881	2561	11340	1.54	1.6496	0	0	0	33304	31127	3927	33304		2.94	Si
SLD 16	0.42	3596.32	-8915	-7924	8567	1.925	1.6773	-9148	12246	9243	33304	38909	4909	42547		4.97	Si
SLD 16	0.82	267.68	-8258	-7340	8253	1.925	1.925	-8473	12111	10491	33304	38909	4909	43796		5.31	Si
SLV 9	0.42	2864.44	-6952	-6180	9480	1.925	1.6514	-7134	11843	8801	33304	38909	4909	42106		4.44	Si
SLV 9	0.82	-297.18	-6095	-5417	9164	1.925	1.925	-6254	11667	10107	33304	38909	4909	43411		4.74	Si
SLD 14	0.42	3564.95	-7868	-6994	8972	1.925	1.5283	-8074	12031	8274	33304	38909	4909	41579		4.63	Si
SLD 14	0.82	207.27	-7167	-6370	8637	1.925	1.925	-7354	11887	10298	33304	38909	4909	43602		5.05	Si
SLD 13	0.42	3425.29	-8332	-7406	8781	1.925	1.6542	-8549	12127	9027	33304	38909	4909	42331		4.82	Si
SLD 13	0.82	144.35	-7630	-6782	8445	1.925	1.925	-7829	11983	10380	33304	38909	4909	43684		5.17	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.24	0	4486	140.01	0	0	No, Trazione
SLV 14	179667	0.24	0	5655	140.01	0	0	No, Trazione
SLV 16	179667	0.24	0	3762	140.01	0	0	No, Trazione
SLV 15	179667	0.24	0	2592	140.01	0	0	No, Trazione
SLV 10	179667	0.24	4293	-3719	140.01	813.15	5.81	Si
SLV 9	179667	0.24	5161	-4470	140.01	971.85	6.94	Si
SLV 12	179667	0.24	11580	-10032	140.01	2085.95	14.9	Si
SLV 11	179667	0.24	12448	-10783	140.01	2228.5	15.92	Si
SLV 6	179667	0.24	15548	-13468	140.01	2721.82	19.44	Si
SLV 5	179667	0.24	16416	-14220	140.01	2855.58	20.4	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-23276	-18499	725	0.477	2732.3	0.96	7.21469	4.19835	Si
SLV 3	-29905	-28490	1553	0.369	3406.9	0.968	5.53554	3.18428	Si
SLV 8	-22678	-17706	687	0.488	2671.6	0.96	7.38874	4.19835	Si
SLV 4	-28976	-27256	1494	0.379	3312.3	0.967	5.69927	3.18428	Si
SLV 1	-27066	-26887	1820	0.388	3117.9	0.965	5.84071	3.18428	Si
SLV 2	-26136	-25653	1761	0.4	3023.3	0.964	6.03149	3.18428	Si
SLV 5	-13810	-13154	1615	0.657	1770.9	0.942	10.13582	4.19835	Si
SLV 6	-13213	-12361	1578	0.682	1710.4	0.94	10.53743	4.19835	Si
SLV 11	-14896	-8521	291	0.697	1881	0.945	10.72352	4.19835	Si
SLV 12	-14298	-7728	254	0.722	1820.4	0.943	11.12037	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.305	SLU 47	Si
V_SLU	3.175	SLU 83	Si
PF_SLV	0	SLV 13	No
V_SLV	2.747	SLV 14	Si
PFFP_SLV	0	SLV 16	No
R_SLV	1.718	SLV 7	Si

Maschio 15

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-17.053	-4.784	-17.053	-3.284	L2	L4	1.5	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-1.58	10685.08	-13572	-0.0006041	0.0003743	0.0035	1.5	0	17170.31	17170.31	1.61	No	Si
SLU 82	1.39	-2235.76	-7718	-0.0000389	0.0003743	0.0035	1.5	5138.58	14912.96	14912.96	6.67	No	Si
SLU 81	-1.58	10677.46	-13573	-0.0006021	0.0003743	0.0035	1.5	0	17170.78	17170.78	1.61	No	Si
SLU 81	1.39	-2229.27	-7716	-0.0000388	0.0003743	0.0035	1.5	5137.51	14912.13	14912.13	6.69	No	Si
SLU 79	-1.58	10518.61	-13351	-0.0005854	0.0003743	0.0035	1.5	0	17092.96	17092.96	1.63	No	Si
SLU 79	1.39	-2242.08	-7635	-0.0000388	0.0003743	0.0035	1.5	5089.84	14875.38	14875.38	6.63	No	Si
SLU 75	-1.58	10481.16	-13291	-0.0005822	0.0003743	0.0035	1.5	0	17072.08	17072.08	1.63	No	Si
SLU 75	1.39	-2239.03	-7592	-0.0000386	0.0003743	0.0035	1.5	5064.82	14856.09	14856.09	6.64	No	Si
SLU 83	-1.58	10781.58	-13711	-0.0006142	0.0003743	0.0035	1.5	0	17217.89	17217.89	1.6	No	Si
SLU 83	1.39	-2241.69	-7804	-0.0000391	0.0003743	0.0035	1.5	5188.08	14951.11	14951.11	6.67	No	Si
SLU 84	-1.58	10789.2	-13710	-0.0006161	0.0003743	0.0035	1.5	0	17217.43	17217.43	1.6	No	Si
SLU 84	1.39	-2248.18	-7805	-0.0000392	0.0003743	0.0035	1.5	5189.14	14951.93	14951.93	6.65	No	Si
SLU 77	-1.58	10577.66	-13430	-0.0005919	0.0003743	0.0035	1.5	0	17120.83	17120.83	1.62	No	Si
SLU 77	1.39	-2244.96	-7677	-0.0000389	0.0003743	0.0035	1.5	5114.55	14894.43	14894.43	6.63	No	Si
SLU 80	-1.58	10526.23	-13350	-0.0005873	0.0003743	0.0035	1.5	0	17092.49	17092.49	1.62	No	Si
SLU 80	1.39	-2248.57	-7636	-0.0000388	0.0003743	0.0035	1.5	5090.91	14876.21	14876.21	6.62	No	Si
SLU 74	-1.58	10473.54	-13293	-0.0005803	0.0003743	0.0035	1.5	0	17072.56	17072.56	1.63	No	Si
SLU 74	1.39	-2232.54	-7590	-0.0000386	0.0003743	0.0035	1.5	5063.74	14855.26	14855.26	6.65	No	Si
SLU 78	-1.58	10585.28	-13429	-0.0005937	0.0003743	0.0035	1.5	0	17120.36	17120.36	1.62	No	Si
SLU 78	1.39	-2251.45	-7679	-0.000039	0.0003743	0.0035	1.5	5115.62	14895.26	14895.26	6.62	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	-1.58	8704.33	-11982	-0.0003072	0.0005615	0.0035	1.5		18574.75	18574.75	2.13		Si
SLV 2	1.39	-2597.26	-5704	-0.0000437	0.0005615	0.0035	1.5		15385.96	15385.96	5.92		Si
SLD 7	-1.58	7988.01	-9537	-0.0003516	0.0005615	0.0035	1.5		17455.84	17455.84	2.19		Si
SLD 7	1.39	-2174.6	-5874	-0.0000351	0.0005615	0.0035	1.5		15492.18	15492.18	7.12		Si
SLV 7	-1.58	8812.18	-9891	-0.0004357	0.0005615	0.0035	1.5		17624.16	17624.16	2		Si
SLV 7	1.39	-2860.6	-6704	-0.0000472	0.0005615	0.0035	1.5		15997.9	15997.9	5.59		Si
SLV 11	-1.58	7882.75	-8314	-0.0004125	0.0005615	0.0035	1.5		16843.95	16843.95	2.14		Si
SLV 11	1.39	-2217.79	-6269	-0.000036	0.0005615	0.0035	1.5		15736.51	15736.51	7.1		Si
SLV 12	-1.58	8034	-8353	-0.0004303	0.0005615	0.0035	1.5		16864.05	16864.05	2.1		Si
SLV 12	1.39	-2351.79	-6270	-0.000038	0.0005615	0.0035	1.5		15737.21	15737.21	6.69		Si
SLD 4	-1.58	8209.17	-10393	-0.000331	0.0005615	0.0035	1.5		17858.48	17858.48	2.18		Si
SLD 4	1.39	-2309.75	-5772	-0.0000374	0.0005615	0.0035	1.5		15428.19	15428.19	6.68		Si
SLV 4	-1.58	9343.78	-11890	-0.0003853	0.0005615	0.0035	1.5		18534.12	18534.12	1.98		Si
SLV 4	1.39	-3143.97	-6401	-0.0000559	0.0005615	0.0035	1.5		15817.09	15817.09	5.03		Si
SLD 8	-1.58	8054.05	-9554	-0.0003587	0.0005615	0.0035	1.5		17464.03	17464.03	2.17		Si
SLD 8	1.39	-2233.1	-5874	-0.0000361	0.0005615	0.0035	1.5		15492.49	15492.49	6.94		Si
SLV 3	-1.58	9108.44	-11829	-0.0003603	0.0005615	0.0035	1.5		18507.27	18507.27	2.03		Si
SLV 3	1.39	-2935.48	-6399	-0.0000498	0.0005615	0.0035	1.5		15816.01	15816.01	5.39		Si
SLV 8	-1.58	8963.43	-9930	-0.0004539	0.0005615	0.0035	1.5		17642.64	17642.64	1.97		Si
SLV 8	1.39	-2994.6	-6705	-0.0000502	0.0005615	0.0035	1.5		15998.54	15998.54	5.34		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	-1.58	10577.66	-13430	-11938	8971	1.5	0	-74458	10833	0	11894	20212	3825	11894	No	1.33	Si
SLU 77	1.39	-2244.96	-7677	-6824	8454	1.5	1.3727	-11126	8428	5206	11894	20212	3825	17101	No	2.02	Si
SLU 78	-1.58	10585.28	-13429	-11937	8995	1.5	0	-74504	10833	0	11894	20212	3825	11894	No	1.32	Si
SLU 78	1.39	-2251.45	-7679	-6826	8478	1.5	1.3704	-11147	8431	5199	11894	20212	3825	17094	No	2.02	Si
SLU 84	-1.58	10789.2	-13710	-12186	9172	1.5	0	-75542	10833	0	11894	20212	3825	11894	No	1.3	Si
SLU 84	1.39	-2248.18	-7805	-6938	8652	1.5	1.3859	-11208	8439	5263	11894	20212	3825	17157	No	1.98	Si
SLU 82	-1.58	10685.08	-13572	-12064	9105	1.5	0	-75012	10833	0	11894	20212	3825	11894	No	1.31	Si
SLU 82	1.39	-2235.76	-7718	-6861	8593	1.5	1.381	-11121	8427	5237	11894	20212	3825	17132	No	1.99	Si
SLU 81	-1.58	10677.46	-13573	-12065	9081	1.5	0	-74968	10833	0	11894	20212	3825	11894	No	1.31	Si
SLU 81	1.39	-2229.27	-7716	-6859	8569	1.5	1.3833	-11100	8425	5244	11894	20212	3825	17139	No	2	Si
SLU 83	-1.58	10781.58	-13711	-12188	9148	1.5	0	-75498	10833	0	11894	20212	3825	11894	No	1.3	Si
SLU 83	1.39	-2241.69	-7804	-6936	8627	1.5	1.3882	-11187	8436	5270	11894	20212	3825	17164	No	1.99	Si
SLU 75	-1.58	10481.16	-13291	-11815	8928	1.5	0	-73960	10833	0	11894	20212	3825	11894	No	1.33	Si
SLU 75	1.39	-2239.03	-7592	-6748	8420	1.5	1.3652	-11061	8419	5172	11894	20212	3825	17067	No	2.03	Si
SLU 79	-1.58	10518.61	-13351	-11867	8930	1.5	0	-74151	10833	0	11894	20212	3825	11894	No	1.33	Si
SLU 79	1.39	-2242.08	-7635	-6786	8418	1.5	1.369	-11094	8424	5189	11894	20212	3825	17084	No	2.03	Si
SLU 76	-1.58	10427.19	-13211	-11743	8904	1.5	0	-73681	10833	0	11894	20212	3825	11894	No	1.34	Si
SLU 76	1.39	-2240.48	-7551	-6712	8400	1.5	1.3598	-11043	8417	5151	11894	20212	3825	17045	No	2.03	Si
SLU 80	-1.58	10526.23	-13350	-11866	8955	1.5	0	-74197	10833	0	11894	20212	3825	11894	No	1.33	Si
SLU 80	1.39	-2248.57	-7636	-6788	8442	1.5	1.3666	-11115	8427	5182	11894	20212	3825	17077	No	2.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	-1.58	9343.78	-11890	-10569	13985	1.5	0	-70021	16250	0	11894	30319	3825	11894		0.85	No
SLV 4	1.39	-3143.97	-6401	-5690	13910	1.5	0.7765	-15904	13624	4761	11894	30319	3825	16655		1.2	Si
SLV 1	-1.58	8469	-11921	-10597	11146	1.5	0.1188	-60173	16250	869	11894	30319	3825	12763		1.15	Si
SLV 1	1.39	-2388.77	-5703	-5069	12038	1.5	0.9933	-11310	12685	5670	11894	30319	3825	17565		1.46	Si
SLD 8	-1.58	8054.05	-9554	-8493	8685	1.5	0	-62356	16250	0	11894	30319	3825	11894		1.37	Si
SLD 8	1.39	-2233.1	-5874	-5221	7709	1.5	1.1095	-10473	12514	6248	11894	30319	3825	18142		2.35	Si
SLV 2	-1.58	8704.33	-11982	-10651	12042	1.5	0.0707	-62754	16250	517	11894	30319	3825	12411		1.03	Si
SLV 2	1.39	-2597.26	-5704	-5071	12943	1.5	0.8841	-12613	12952	5153	11894	30319	3825	17047		1.32	Si
SLD 4	-1.58	8209.17	-10393	-9238	9624	1.5	0	-62074	16250	0	11894	30319	3825	11894		1.24	Si
SLD 4	1.39	-2309.75	-5772	-5130	9359	1.5	1.0494	-10861	12593	5947	11894	30319	3825	17841		1.91	Si
SLD 2	-1.58	7930.07	-10433	-9274	8782	1.5	0	-58940	16250	0	11894	30319	3825	11894		1.35	Si
SLD 2	1.39	-2087	-5498	-4887	8945	1.5	1.1113	-9785	12376	6189	11894	30319	3825	18084		2.02	Si
SLV 3	-1.58	9108.44	-11829	-10515	13090	1.5	0	-67736	16250	0	11894	30319	3825	11894		0.91	No
SLV 3	1.39	-2935.48	-6399	-5688	13004	1.5	0.8738	-14310	13294	5227	11894	30319	3825	17122		1.32	Si
SLD 3	-1.58	8108.13	-10366	-9215	9240	1.5	0	-61077	16250	0	11894	30319	3825	11894		1.29	Si
SLD 3	1.39	-2220.24	-5771	-5130	8970	1.5	1.0958	-10414	12502	6165	11894	30319	3825	18059		2.01	Si
SLV 7	-1.58	8812.18	-9891	-8792	11174	1.5	0	-68559	16250	0	11894	30319	3825	11894		1.06	Si
SLV 7	1.39	-2860.6	-6704	-5959	9418	1.5	0.9699	-13613	13148	5739	11894	30319	3825	17633		1.87	Si
SLV 8	-1.58	8963.43	-9930	-8827	11750	1.5	0	-69746	16250	0	11894	30319	3825	11894		1.01	Si
SLV 8	1.39	-2994.6	-6705	-5960	9999	1.5	0.9102	-14450	13319	5456	11894	30319	3825	17350		1.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.24	12187	-8226	109.1	1703.14	15.61	Si
SLV 14	179667	0.24	12267	-8280	109.1	1713.35	15.7	Si
SLV 15	179667	0.24	12409	-8376	109.1	1731.51	15.87	Si
SLV 16	179667	0.24	12489	-8430	109.1	1741.68	15.96	Si
SLV 9	179667	0.24	14270	-9632	109.1	1964.71	18.01	Si
SLV 10	179667	0.24	14321	-9667	109.1	1971.06	18.07	Si
SLV 11	179667	0.24	15012	-10133	109.1	2055.82	18.84	Si
SLV 12	179667	0.24	15063	-10168	109.1	2062.1	18.9	Si
SLV 5	179667	0.24	16266	-10979	109.1	2207.25	20.23	Si
SLV 6	179667	0.24	16317	-11014	109.1	2213.39	20.29	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-6705	-9930	-94	1.071	970.3	0.923	16.863	4.19835	Si
SLV 7	-6704	-9891	-95	1.071	970.2	0.923	16.86385	4.19835	Si
SLV 12	-6270	-8353	25	1.133	926.6	0.92	17.89688	4.19835	Si
SLV 11	-6269	-8314	24	1.133	926.5	0.92	17.90084	4.19835	Si
SLV 4	-6401	-11890	-209	1.094	939.7	0.921	17.25982	3.18428	Si
SLV 3	-6399	-11829	-210	1.094	939.6	0.921	17.26128	3.18428	Si
SLV 6	-4383	-10239	-25	1.455	738.4	0.906	23.33628	4.19835	Si
SLV 5	-4382	-10199	-26	1.456	738.3	0.906	23.33866	4.19835	Si
SLV 2	-5704	-11982	-188	1.191	869.9	0.916	18.88886	3.18428	Si
SLV 1	-5703	-11921	-189	1.191	869.8	0.916	18.89085	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.596	SLU 84	Si
V_SLU	1.297	SLU 84	Si
PF_SLV	1.968	SLV 8	Si
V_SLV	0.85	SLV 4	No
PFFP_SLV	15.611	SLV 13	Si
R_SLV	4.017	SLV 8	Si

Maschio 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-17.053	-4.784	L2	L4	3.29	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	-1.58	-5545.86	-18842	-0.0000305	0.0003743	0.0035	3.29	27120.2	30898.83	30898.83	5.57	No	Si
SLU 79	1.39	-11211.88	-23818	-0.0000474	0.0003743	0.0035	3.29	32989.17	37364.06	37364.06	3.33	No	Si
SLU 78	-1.58	-5566.05	-18946	-0.0000306	0.0003743	0.0035	3.29	27248.7	31040.82	31040.82	5.58	No	Si
SLU 78	1.39	-11389.31	-23994	-0.0000479	0.0003743	0.0035	3.29	33187.18	37585.54	37585.54	3.3	No	Si
SLU 83	-1.58	-5613.17	-19309	-0.0000311	0.0003743	0.0035	3.29	27694.5	31533.24	31533.24	5.62	No	Si
SLU 83	1.39	-11564.35	-24474	-0.0000488	0.0003743	0.0035	3.29	33722.5	38183.07	38183.07	3.3	No	Si
SLU 82	-1.58	-5553.83	-19089	-0.0000308	0.0003743	0.0035	3.29	27424.07	31235.22	31235.22	5.62	No	Si
SLU 82	1.39	-11360.48	-24191	-0.0000481	0.0003743	0.0035	3.29	33407.95	37832.19	37832.19	3.33	No	Si
SLU 75	-1.58	-5508.11	-18737	-0.0000303	0.0003743	0.0035	3.29	26991.2	30756.67	30756.67	5.58	No	Si
SLU 75	1.39	-11153.65	-23683	-0.0000471	0.0003743	0.0035	3.29	32836.85	37193.52	37193.52	3.33	No	Si
SLU 80	-1.58	-5544.46	-18830	-0.0000305	0.0003743	0.0035	3.29	27105.56	30882.67	30882.67	5.57	No	Si
SLU 80	1.39	-11243.67	-23847	-0.0000474	0.0003743	0.0035	3.29	33021.91	37400.7	37400.7	3.33	No	Si
SLU 84	-1.58	-5611.77	-19297	-0.0000311	0.0003743	0.0035	3.29	27679.97	31517.29	31517.29	5.62	No	Si
SLU 84	1.39	-11596.13	-24503	-0.0000489	0.0003743	0.0035	3.29	33754.83	38219.1	38219.1	3.3	No	Si
SLU 77	-1.58	-5567.46	-18958	-0.0000306	0.0003743	0.0035	3.29	27263.32	31057	31057	5.58	No	Si
SLU 77	1.39	-11357.52	-23965	-0.0000478	0.0003743	0.0035	3.29	33154.53	37549.04	37549.04	3.31	No	Si
SLU 42	-1.58	-4628.41	-16109	-0.0000257	0.0003743	0.0035	3.29	23667.84	27216.94	27216.94	5.88	No	Si
SLU 42	1.39	-10013.26	-20707	-0.0000414	0.0003743	0.0035	3.29	29383.71	33371.01	33371.01	3.33	No	Si
SLU 36	-1.58	-4582.7	-15758	-0.0000252	0.0003743	0.0035	3.29	23212.12	26727.32	26727.32	5.83	No	Si
SLU 36	1.39	-9806.43	-20198	-0.0000404	0.0003743	0.0035	3.29	28773.91	32714.91	32714.91	3.34	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	-1.58	-1432.04	-15850	-0.0000191	0.0005615	0.0035	3.29		27460.49	27460.49	19.18		Si
SLV 5	1.39	-9684.93	-12038	-0.0000326	0.0005615	0.0035	3.29		21768.41	21768.41	2.25		Si
SLV 16	-1.58	-9803.57	-10515	-0.0000336	0.0005615	0.0035	2.632		19506.73	19506.73	1.99		Si
SLV 16	1.39	-863.73	-16001	-0.0000181	0.0005615	0.0035	3.29		27676.35	27676.35	32.04		Si
SLV 4	-1.58	1696.92	-14302	-0.0000179	0.0005615	0.0035	3.29		22866.12	22866.12	13.48		Si
SLV 4	1.39	-14209.22	-19647	-0.0000491	0.0005615	0.0035	3.29		32905.17	32905.17	2.32		Si
SLV 3	-1.58	1377.4	-14389	-0.0000174	0.0005615	0.0035	3.29		22994.14	22994.14	16.69		Si
SLV 3	1.39	-13470.92	-19414	-0.0000469	0.0005615	0.0035	3.29		32568.21	32568.21	2.42		Si
SLV 6	-1.58	-1226.68	-15794	-0.0000186	0.0005615	0.0035	3.29		27381.59	27381.59	22.32		Si
SLV 6	1.39	-10159.43	-12188	-0.0000342	0.0005615	0.0035	3.29		21992.01	21992.01	2.16		Si
SLV 2	-1.58	2231.68	-15596	-0.0000203	0.0005615	0.0035	3.29		24773.09	24773.09	11.1		Si
SLV 2	1.39	-14556.77	-16812	-0.0000497	0.0005615	0.0035	3.29		28833.21	28833.21	1.98		Si
SLV 13	-1.58	-9588.33	-11895	-0.0000322	0.0005615	0.0035	3.29		21555.85	21555.85	2.25		Si
SLV 13	1.39	-472.99	-12933	-0.0000142	0.0005615	0.0035	3.29		23105.37	23105.37	48.85		Si
SLV 14	-1.58	-9268.81	-11809	-0.0000312	0.0005615	0.0035	3.29		21427.43	21427.43	2.31		Si
SLV 14	1.39	-1211.29	-13167	-0.0000158	0.0005615	0.0035	3.29		23454.49	23454.49	19.36		Si
SLV 15	-1.58	-10123.1	-10602	-0.000035	0.0005615	0.0035	2.632		19634.53	19634.53	1.94		Si
SLV 15	1.39	-125.44	-15768	-0.0000165	0.0005615	0.0035	3.29		27343.99	27343.99	217.98		Si
SLV 1	-1.58	1912.16	-15682	-0.0000198	0.0005615	0.0035	3.29		24899.19	24899.19	13.02		Si
SLV 1	1.39	-13818.48	-16579	-0.000047	0.0005615	0.0035	3.29		28499.83	28499.83	2.06		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	-1.58	-5509.52	-18749	-16666	4993	3.29	3.29	-11257	8445	12503	33304	44333	8389	45808	No	9.17	Si
SLU 74	1.39	-11121.86	-23653	-21025	3753	3.29	3.29	-14201	8838	13085	33304	44333	8389	46389	No	12.36	Si
SLU 84	-1.58	-5611.77	-19297	-17153	5365	3.29	3.29	-11586	8489	12568	33304	44333	8389	45873	No	8.55	Si
SLU 84	1.39	-11596.13	-24503	-21780	4201	3.29	3.29	-14711	8906	13185	33304	44333	8389	46490	No	11.07	Si
SLU 83	-1.58	-5613.17	-19309	-17164	5339	3.29	3.29	-11593	8490	12570	33304	44333	8389	45874	No	8.59	Si
SLU 83	1.39	-11564.35	-24474	-21754	4164	3.29	3.29	-14694	8904	13182	33304	44333	8389	46486	No	11.16	Si
SLU 81	-1.58	-5555.23	-19100	-16978	5244	3.29	3.29	-11468	8473	12545	33304	44333	8389	45849	No	8.74	Si
SLU 81	1.39	-11328.69	-24162	-21478	4077	3.29	3.29	-14507	8879	13145	33304	44333	8389	46449	No	11.39	Si
SLU 77	-1.58	-5567.46	-18958	-16851	5088	3.29	3.29	-11382	8462	12528	33304	44333	8389	45832	No	9.01	Si
SLU 77	1.39	-11357.52	-23965	-21302	3839	3.29	3.29	-14388	8863	13122	33304	44333	8389	46426	No	12.09	Si
SLU 80	-1.58	-5544.46	-18830	-16738	5033	3.29	3.29	-11305	8452	12513	33304	44333	8389	45817	No	9.1	Si
SLU 80	1.39	-11243.67	-23847	-21197	3786	3.29	3.29	-14318	8853	13108	33304	44333	8389	46412	No	12.26	Si
SLU 82	-1.58	-5553.83	-19089	-16968	5270	3.29	3.29	-11461	8473	12544	33304	44333	8389	45848	No	8.7	Si
SLU 82	1.39	-11360.48	-24191	-21503	4114	3.29	3.29	-14524	8881	13148	33304	44333	8389	46453	No	11.29	Si
SLU 78	-1.58	-5566.05	-18946	-16841	5114	3.29	3.29	-11375	8461	12527	33304	44333	8389	45831	No	8.96	Si
SLU 78	1.39	-11389.31	-23994	-21328	3876	3.29	3.29	-14406	8865	13125	33304	44333	8389	46429	No	11.98	Si
SLU 79	-1.58	-5545.86	-18842	-16748	5007	3.29	3.29	-11313	8453	12514	33304	44333	8389	45819	No	9.15	Si
SLU 79	1.39	-11211.88	-23818	-21171	3749	3.29	3.29	-14300	8851	13104	33304	44333	8389	46408	No	12.38	Si
SLU 75	-1.58	-5508.11	-18737	-16655	5019	3.29	3.29	-11250	8444	12502	33304	44333	8389	45806	No	9.13	Si
SLU 75	1.39	-11153.65	-23683	-21051	3790	3.29	3.29	-14219	8840	13088	33304	44333	8389	46392	No	12.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	-1.58	1377.4	-14389	-12790	16719	3.29	3.29	-8639	12144	17980	33304	66499	8389	51284		3.07	Si
SLV 3	1.39	-13470.92	-19414	-17257	22101	3.29	2.8533	-13529	13122	16849	33304	66499	8389	50154		2.27	Si
SLV 1	-1.58	1912.16	-15682	-13939	16987	3.29	3.29	-9415	12300	18210	33304	66499	8389	51514		3.03	Si
SLV 1	1.39	-13818.48	-16579	-14737	22443	3.29	2.4345	-13540	13125	14379	33304	66499	8389	47683		2.12	Si
SLV 16	-1.58	-9803.57	-10515	-9347	-10757	2.632	2.1381	0	0	0	33304	53199	6712	33304		3.1	Si
SLV 16	1.39	-863.73	-16001	-14224	-18243	3.29	3.29	-9607	12338	18267	33304	66499	8389	51571		2.83	Si
SLD 2	-1.58	-1305.8	-14168	-12594	9741	3.29	3.29	-8506	12118	17941	33304	66499	8389	51245		5.26	Si
SLD 2	1.39	-10397.04	-16513	-14678	11739	3.29	3.0461	-10759	12568	17228	33304	66499	8389	50533		4.3	Si
SLV 4	-1.58	1696.92	-14302	-12713	18364	3.29	3.29	-8587	12134	17965	33304	66499	8389	51269		2.79	Si
SLV 4	1.39	-14209.22	-19647	-17464	24327	3.29	2.7653	-14131	13243	16479	33304	66499	8389	49784		2.05	Si
SLV 15	-1.58	-10123.1	-10602	-9424	-12402	2.632	2.0704	0	0	0	33304	53199	6712	33304		2.69	Si
SLV 15	1.39	-125.44	-15768	-14016	-20469	3.29	3.29	-9467	12310	18225	33304	66499	8389	51529		2.52	Si
SLV 13	-1.58	-9588.33	-11895	-10573	-12135	3.29	2.5167	-9372	12291	13920	33304	66499	8389	47225		3.89	Si
SLV 13	1.39	-472.99	-12933	-11496	-20127	3.29	3.29	-7765	11970	17721	33304	66499	8389	51025		2.54	Si
SLV 14	-1.58	-9268.81	-11809	-10497	-10490	3.29	2.5802	-9076	12232	14203	33304	66499	8389	47507		4.53	Si
SLV 14	1.39	-1211.29	-13167	-11704	-17901	3.29	3.29	-7905	11998	17763	33304	66499	8389	51067		2.85	Si
SLD 4	-1.58	-1536.53	-13610	-12097	9635	3.29	3.29	-8171	12051	17841	33304	66499	8389	51146		5.31	Si
SLD 4	1.39	-10305.83	-17727	-15758	11603	3.29	3.191	-10644	12545	18014	33304	66499	8389	51319		4.42	Si
SLV 2	-1.58	2231.68	-15596	-13863	18631	3.29	3.29	-9364	12289	18194	33304	66499	8389	51499		2.76	Si
SLV 2	1.39	-14556.77	-16812	-14944	24669	3.29	2.3375	-14305	13278	13967	33304	66499	8389	47271		1.92	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.24	8375	-12399	239.3	2636.85	11.02	Si
SLV 12	179667	0.24	8380	-12406	239.3	2638.22	11.02	Si
SLV 7	179667	0.24	8486	-12564	239.3	2669.77	11.16	Si
SLV 8	179667	0.24	8491	-12571	239.3	2671.13	11.16	Si
SLV 15	179667	0.24	8766	-12978	239.3	2752.51	11.5	Si
SLV 16	179667	0.24	8773	-12989	239.3	2754.62	11.51	Si
SLV 3	179667	0.24	9136	-13526	239.3	2861.38	11.96	Si
SLV 4	179667	0.24	9144	-13537	239.3	2863.48	11.97	Si
SLV 13	179667	0.24	9214	-13641	239.3	2883.99	12.05	Si
SLV 14	179667	0.24	9221	-13651	239.3	2886.09	12.06	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-21636	-11483	-419	0.793	2827.6	0.939	12.2803	4.19835	Si
SLV 7	-21486	-11539	-415	0.798	2812.4	0.938	12.35192	4.19835	Si
SLV 12	-20543	-10347	-306	0.83	2716.9	0.937	12.87582	4.19835	Si
SLV 11	-20393	-10403	-302	0.835	2701.7	0.936	12.95459	4.19835	Si
SLV 4	-19647	-14302	-630	0.845	2626.3	0.935	13.13268	3.18428	Si
SLV 3	-19414	-14389	-623	0.853	2602.7	0.934	13.26319	3.18428	Si
SLV 6	-12188	-15794	-641	1.199	1875.6	0.915	19.04125	4.19835	Si
SLV 5	-12038	-15850	-637	1.21	1860.7	0.915	19.22288	4.19835	Si
SLV 2	-16812	-15596	-696	0.946	2340.1	0.928	14.81541	3.18428	Si
SLV 1	-16579	-15682	-690	0.957	2316.6	0.928	14.98446	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.296	SLU 84	Si
V_SLU	8.551	SLU 84	Si
PF_SLV	1.94	SLV 15	Si
V_SLV	1.916	SLV 2	Si
PFFP_SLV	11.019	SLV 11	Si
R_SLV	2.925	SLV 8	Si

Maschio 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	2.201	-15.058	6.576	L2	L4	4.375	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-1.58	-574.66	-134726	-0.0001706	0.0004492	0.0035	4.375	47128.09	166801.06	166801.06	290.26	No	Si
SLU 80	0.62	-13340.84	-89237	-0.0001283	0.0004492	0.0035	4.375	86585.54	143586.69	143586.69	10.76	No	Si
SLU 78	-1.58	-544.35	-135632	-0.000172	0.0004492	0.0035	4.375	45768.19	167021.38	167021.38	306.83	No	Si
SLU 78	0.62	-13387.4	-89841	-0.0001292	0.0004492	0.0035	4.375	86431.2	144063.54	144063.54	10.76	No	Si
SLU 75	-1.58	-581.65	-134391	-0.0001701	0.0004492	0.0035	4.375	47624.45	166719.73	166719.73	286.63	No	Si
SLU 75	0.62	-13264.96	-88989	-0.0001278	0.0004492	0.0035	4.375	86645.92	143391.2	143391.2	10.81	No	Si
SLU 76	-1.58	-536.89	-133454	-0.0001685	0.0004492	0.0035	4.375	48998.01	166492	166492	310.1	No	Si
SLU 76	0.62	-13327.21	-88306	-0.000127	0.0004492	0.0035	4.375	86803.57	142852.78	142852.78	10.72	No	Si
SLU 73	-1.58	-574.19	-132213	-0.0001666	0.0004492	0.0035	4.375	50780.53	166190.35	166190.35	289.44	No	Si
SLU 73	0.62	-13204.77	-87453	-0.0001256	0.0004492	0.0035	4.375	86982.56	142180.45	142180.45	10.77	No	Si
SLU 77	-1.58	-656.95	-135678	-0.0001723	0.0004492	0.0035	4.375	45698.94	167032.5	167032.5	254.26	No	Si
SLU 77	0.62	-13224.17	-89958	-0.0001291	0.0004492	0.0035	4.375	86400.16	144155.89	144155.89	10.9	No	Si
SLU 82	-1.58	-855.74	-137742	-0.000176	0.0004492	0.0035	4.375	42516.51	167534.12	167534.12	195.78	No	Si
SLU 82	0.62	-13664.76	-91774	-0.0001325	0.0004492	0.0035	4.375	85871.18	145587.17	145587.17	10.65	No	Si
SLU 83	-1.58	-931.04	-139029	-0.0001783	0.0004492	0.0035	4.375	40473.38	167846.89	167846.89	180.28	No	Si
SLU 83	0.62	-13623.97	-92744	-0.0001338	0.0004492	0.0035	4.375	85551.71	146351.86	146351.86	10.74	No	Si
SLU 84	-1.58	-818.44	-138983	-0.0001779	0.0004492	0.0035	4.375	40546.8	167835.77	167835.77	205.07	No	Si
SLU 84	0.62	-13787.2	-92627	-0.0001339	0.0004492	0.0035	4.375	85591.66	146259.5	146259.5	10.61	No	Si
SLU 81	-1.58	-968.33	-137788	-0.0001763	0.0004492	0.0035	4.375	42444.63	167545.24	167545.24	173.02	No	Si
SLU 81	0.62	-13501.53	-91891	-0.0001323	0.0004492	0.0035	4.375	85833.96	145679.52	145679.52	10.79	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	-1.58	-19928.66	-96085	-0.0001419	0.0006738	0.0035	4.375		167376.78	167376.78	8.4		Si
SLV 5	0.62	-5236.56	-57715	-0.0000711	0.0006738	0.0035	4.375		117111.01	117111.01	22.36		Si
SLV 6	-1.58	-19379.77	-95596	-0.0001403	0.0006738	0.0035	4.375		166836.78	166836.78	8.61		Si
SLV 6	0.62	-5395.74	-57612	-0.0000712	0.0006738	0.0035	4.375		116950.29	116950.29	21.67		Si
SLV 10	-1.58	-20093.89	-90137	-0.0001346	0.0006738	0.0035	4.375		160655.33	160655.33	8		Si
SLV 10	0.62	-8257.73	-58277	-0.0000765	0.0006738	0.0035	4.375		117939.58	117939.58	14.28		Si
SLV 12	-1.58	19366.37	-89611	-0.0001327	0.0006738	0.0035	4.375		150735.99	150735.99	7.78		Si
SLV 12	0.62	-12869.29	-63474	-0.0000899	0.0006738	0.0035	4.375		125605.62	125605.62	9.76		Si
SLV 7	-1.58	19531.6	-95558	-0.0001405	0.0006738	0.0035	4.375		158096.37	158096.37	8.09		Si
SLV 7	0.62	-9848.12	-62913	-0.0000844	0.0006738	0.0035	4.375		124777.05	124777.05	12.67		Si
SLV 11	-1.58	18817.48	-90100	-0.0001323	0.0006738	0.0035	4.375		151340.94	151340.94	8.04		Si
SLV 11	0.62	-12710.11	-63577	-0.0000898	0.0006738	0.0035	4.375		125757.3	125757.3	9.89		Si
SLV 8	-1.58	20080.5	-95070	-0.0001408	0.0006738	0.0035	4.375		157491.42	157491.42	7.84		Si
SLV 8	0.62	-10007.3	-62810	-0.0000846	0.0006738	0.0035	4.375		124625.37	124625.37	12.45		Si
SLV 15	-1.58	4020.66	-84051	-0.0001002	0.0006738	0.0035	4.375		143855.72	143855.72	35.78		Si
SLV 15	0.62	-14390.8	-62562	-0.0000912	0.0006738	0.0035	4.375		124259.97	124259.97	8.63		Si
SLV 16	-1.58	4874.72	-83290	-0.0001007	0.0006738	0.0035	4.375		142914.45	142914.45	29.32		Si
SLV 16	0.62	-14638.49	-62402	-0.0000914	0.0006738	0.0035	4.375		124023.96	124023.96	8.47		Si
SLV 9	-1.58	-20642.78	-90626	-0.0001361	0.0006738	0.0035	4.375		161240.59	161240.59	7.81		Si
SLV 9	0.62	-8098.55	-58380	-0.0000763	0.0006738	0.0035	4.375		118091.26	118091.26	14.58		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	-1.58	-581.65	-134391	-97739	-24850	4.375	4.375	-74468	10833	14219	95155	47168	22312	69480	No	2.8	Si
SLU 75	0.62	-13264.96	-88989	-64719	-28957	4.375	4.375	-49310	10833	14219	95155	47168	22312	69480	No	2.4	Si
SLU 82	-1.58	-855.74	-137742	-100176	-25185	4.375	4.375	-76324	10833	14219	95155	47168	22312	69480	No	2.76	Si
SLU 82	0.62	-13664.76	-91774	-66745	-29357	4.375	4.375	-50853	10833	14219	95155	47168	22312	69480	No	2.37	Si
SLU 81	-1.58	-968.33	-137788	-100209	-25255	4.375	4.375	-76350	10833	14219	95155	47168	22312	69480	No	2.75	Si
SLU 81	0.62	-13501.53	-91891	-66830	-29431	4.375	4.375	-50918	10833	14219	95155	47168	22312	69480	No	2.36	Si
SLU 74	-1.58	-694.24	-134437	-97772	-24920	4.375	4.375	-74493	10833	14219	95155	47168	22312	69480	No	2.79	Si
SLU 74	0.62	-13101.73	-89106	-64804	-29031	4.375	4.375	-49375	10833	14219	95155	47168	22312	69480	No	2.39	Si
SLU 84	-1.58	-818.44	-138983	-101079	-25404	4.375	4.375	-77012	10833	14219	95155	47168	22312	69480	No	2.73	Si
SLU 84	0.62	-13787.2	-92627	-67365	-29628	4.375	4.375	-51326	10833	14219	95155	47168	22312	69480	No	2.35	Si
SLU 78	-1.58	-544.35	-135632	-98642	-25069	4.375	4.375	-75156	10833	14219	95155	47168	22312	69480	No	2.77	Si
SLU 78	0.62	-13387.4	-89841	-65339	-29228	4.375	4.375	-49782	10833	14219	95155	47168	22312	69480	No	2.38	Si
SLU 77	-1.58	-656.95	-135678	-98675	-25139	4.375	4.375	-75181	10833	14219	95155	47168	22312	69480	No	2.76	Si
SLU 77	0.62	-13224.17	-89958	-65424	-29302	4.375	4.375	-49847	10833	14219	95155	47168	22312	69480	No	2.37	Si
SLU 80	-1.58	-574.66	-134726	-97982	-24865	4.375	4.375	-74653	10833	14219	95155	47168	22312	69480	No	2.79	Si
SLU 80	0.62	-13340.84	-89237	-64899	-28989	4.375	4.375	-49447	10833	14219	95155	47168	22312	69480	No	2.4	Si
SLU 83	-1.58	-931.04	-139029	-101112	-25475	4.375	4.375	-77038	10833	14219	95155	47168	22312	69480	No	2.73	Si
SLU 83	0.62	-13623.97	-92744	-67450	-29702	4.375	4.375	-51391	10833	14219	95155	47168	22312	69480	No	2.34	Si
SLU 79	-1.58	-687.26	-134772	-98016	-24935	4.375	4.375	-74679	10833	14219	95155	47168	22312	69480	No	2.79	Si
SLU 79	0.62	-13177.61	-89354	-64984	-29062	4.375	4.375	-49512	10833	14219	95155	47168	22312	69480	No	2.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	-1.58	7255.13	-101487	-73808	-25255	4.375	4.375	-56235	16250	21328	95155	70752	22312	93064		3.69	Si
SLV 4	0.62	-5098.52	-60187	-43772	-28487	4.375	4.375	-33350	16250	21328	95155	70752	22312	93064		3.27	Si
SLV 5	-1.58	-19928.66	-96085	-69880	-37667	4.375	4.375	-53242	16250	21328	95155	70752	22312	93064		2.47	Si
SLV 5	0.62	-5236.56	-57715	-41975	-38724	4.375	4.375	-31981	16250	21328	95155	70752	22312	93064		2.4	Si
SLV 2	-1.58	-4582.95	-101644	-73923	-34733	4.375	4.375	-56322	16250	21328	95155	70752	22312	93064		2.68	Si
SLV 2	0.62	-3715.05	-58628	-42638	-36935	4.375	4.375	-32486	16250	21328	95155	70752	22312	93064		2.52	Si
SLV 10	-1.58	-20093.89	-90137	-65554	-29050	4.375	4.375	-49946	16250	21328	95155	70752	22312	93064		3.2	Si
SLV 10	0.62	-8257.73	-58277	-42383	-30256	4.375	4.375	-32292	16250	21328	95155	70752	22312	93064		3.08	Si
SLV 9	-1.58	-20642.78	-90626	-65910	-29839	4.375	4.375	-50217	16250	21328	95155	70752	22312	93064		3.12	Si
SLV 9	0.62	-8098.55	-58380	-42458	-30997	4.375	4.375	-32349	16250	21328	95155	70752	22312	93064		3	Si
SLD 5	-1.58	-8926.05	-94198	-68507	-26372	4.375	4.375	-52196	16250	21328	95155	70752	22312	93064		3.53	Si
SLD 5	0.62	-7363.21	-59327	-43147	-28420	4.375	4.375	-32874	16250	21328	95155	70752	22312	93064		3.27	Si
SLV 6	-1.58	-19379.77	-95596	-69524	-36878	4.375	4.375	-52971	16250	21328	95155	70752	22312	93064		2.52	Si
SLV 6	0.62	-5395.74	-57612	-41900	-37983	4.375	4.375	-31924	16250	21328	95155	70752	22312	93064		2.45	Si
SLV 3	-1.58	6401.07	-102247	-74362	-26482	4.375	4.375	-56656	16250	21328	95155	70752	22312	93064		3.51	Si
SLV 3	0.62	-4850.83	-60347	-43889	-29640	4.375	4.375	-33439	16250	21328	95155	70752	22312	93064		3.14	Si
SLV 1	-1.58	-5437.01	-102405	-74476	-35960	4.375	4.375	-56744	16250	21328	95155	70752	22312	93064		2.59	Si
SLV 1	0.62	-3467.36	-58788	-42755	-38088	4.375	4.375	-32575	16250	21328	95155	70752	22312	93064		2.44	Si
SLD 6	-1.58	-8686.4	-93984	-68352	-26028	4.375	4.375	-52078	16250	21328	95155	70752	22312	93064		3.58	Si
SLD 6	0.62	-7432.71	-59282	-43114	-28097	4.375	4.375	-32849	16250	21328	95155	70752	22312	93064		3.31	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 10	-71057	0.24	212.14	7510.15	11626.79	9568.47	45.1	Si
SLV 9	-71279	0.24	212.14	7523.75	11657.36	9590.56	45.21	Si
SLV 14	-71334	0.24	212.14	7527.11	11664.92	9596.02	45.23	Si
SLV 13	-71679	0.24	212.14	7548.13	11712.49	9630.31	45.4	Si
SLV 6	-71698	0.24	212.14	7549.23	11715.01	9632.12	45.4	Si
SLV 5	-71920	0.24	212.14	7562.66	11745.58	9654.12	45.51	Si
SLV 16	-72265	0.24	212.14	7583.41	11793.11	9688.26	45.67	Si
SLV 15	-72611	0.24	212.14	7604.03	11838.26	9721.14	45.82	Si
SLV 2	-73470	0.24	212.14	7654.65	11950.39	9802.52	46.21	Si
SLV 1	-73816	0.24	212.14	7674.75	11995.49	9835.12	46.36	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-53336	-90100	421	0.479	5979	0.972	7.15587	5.75967	Si
SLV 12	-53245	-89611	421	0.479	5969.8	0.972	7.16646	5.75967	Si
SLV 7	-51821	-95558	376	0.491	5824.8	0.971	7.34865	5.75967	Si
SLV 8	-51731	-95070	376	0.492	5815.6	0.971	7.35985	5.75967	Si
SLV 9	-50084	-90626	359	0.506	5647.9	0.97	7.57371	5.75967	Si
SLV 10	-49994	-90137	358	0.506	5638.7	0.97	7.58568	5.75967	Si
SLV 5	-48570	-96085	313	0.52	5493.7	0.97	7.79129	5.75967	Si
SLV 6	-48479	-95596	313	0.521	5484.5	0.969	7.80401	5.75967	Si
SLV 15	-53990	-84051	453	0.473	6045.6	0.972	7.07283	3.72098	Si
SLV 16	-53849	-83290	452	0.474	6031.3	0.972	7.08891	3.72098	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.608	SLU 84	Si
V_SLU	2.339	SLU 83	Si
PF_SLV	7.783	SLV 12	Si
V_SLV	2.403	SLV 5	Si
PFFP_SLV	45.104	SLV 10	Si
R_SLV	1.242	SLV 11	Si

Maschio 18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.763	1.046	L2	L4	5.83	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-1.58	38593.84	-82224	-0.0001204	0.0003743	0.0035	5.83	129007.58	161905.33	161905.33	4.2	No	Si
SLU 78	1.39	12545.58	-91663	-0.0001026	0.0003743	0.0035	5.83	129653.63	171805.38	171805.38	13.69	No	Si
SLU 84	-1.58	39126.93	-83771	-0.0001229	0.0003743	0.0035	5.83	129313.42	163855.77	163855.77	4.19	No	Si
SLU 84	1.39	13218.09	-93572	-0.0001056	0.0003743	0.0035	5.83	129429.6	172992.28	172992.28	13.09	No	Si
SLU 82	-1.58	38680.38	-82855	-0.0001213	0.0003743	0.0035	5.83	129141.88	162699.29	162699.29	4.21	No	Si
SLU 82	1.39	13198.31	-92343	-0.0001041	0.0003743	0.0035	5.83	129587.51	172265.09	172265.09	13.05	No	Si
SLU 81	-1.58	38615.33	-82863	-0.0001212	0.0003743	0.0035	5.83	129143.47	162709.21	162709.21	4.21	No	Si
SLU 81	1.39	13249.87	-92342	-0.0001042	0.0003743	0.0035	5.83	129587.6	172264.62	172264.62	13	No	Si
SLU 83	-1.58	39061.88	-83779	-0.0001229	0.0003743	0.0035	5.83	129314.77	163865.75	163865.75	4.2	No	Si
SLU 83	1.39	13269.66	-93571	-0.0001057	0.0003743	0.0035	5.83	129429.72	172991.8	172991.8	13.04	No	Si
SLU 79	-1.58	38218.29	-81665	-0.0001193	0.0003743	0.0035	5.83	128878.01	161206.07	161206.07	4.22	No	Si
SLU 79	1.39	12553.24	-90869	-0.0001017	0.0003743	0.0035	5.83	129711.66	171238.99	171238.99	13.64	No	Si
SLU 77	-1.58	38528.79	-82232	-0.0001203	0.0003743	0.0035	5.83	129009.33	161915.23	161915.23	4.2	No	Si
SLU 77	1.39	12597.15	-91662	-0.0001026	0.0003743	0.0035	5.83	129653.7	171804.81	171804.81	13.64	No	Si
SLU 75	-1.58	38147.29	-81308	-0.0001188	0.0003743	0.0035	5.83	128789.63	160759.24	160759.24	4.21	No	Si
SLU 75	1.39	12525.8	-90434	-0.0001011	0.0003743	0.0035	5.83	129734.71	170920	170920	13.65	No	Si
SLU 74	-1.58	38082.24	-81316	-0.0001187	0.0003743	0.0035	5.83	128791.63	160769.08	160769.08	4.22	No	Si
SLU 74	1.39	12577.36	-90433	-0.0001012	0.0003743	0.0035	5.83	129734.74	170919.4	170919.4	13.59	No	Si
SLU 80	-1.58	38283.34	-81658	-0.0001194	0.0003743	0.0035	5.83	128876.11	161196.21	161196.21	4.21	No	Si
SLU 80	1.39	12501.68	-90870	-0.0001016	0.0003743	0.0035	5.83	129711.61	171239.58	171239.58	13.7	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	-1.58	35811.78	-54608	-0.0000821	0.0005615	0.0035	5.83		135409.22	135409.22	3.78		Si
SLV 7	1.39	399.04	-62081	-0.0000557	0.0005615	0.0035	5.83		150023.61	150023.61	375.96		Si
SLD 12	-1.58	31020.41	-57321	-0.0000802	0.0005615	0.0035	5.83		141577.91	141577.91	4.56		Si
SLD 12	1.39	4106.11	-62723	-0.0000598	0.0005615	0.0035	5.83		151115.82	151115.82	36.8		Si
SLD 11	-1.58	30966.64	-57383	-0.0000802	0.0005615	0.0035	5.83		141701.1	141701.1	4.58		Si
SLD 11	1.39	4310.33	-62751	-0.00006	0.0005615	0.0035	5.83		151162.95	151162.95	35.07		Si
SLD 7	-1.58	30650.29	-55729	-0.0000783	0.0005615	0.0035	5.83		137979.45	137979.45	4.5		Si
SLD 7	1.39	4943.99	-61954	-0.0000599	0.0005615	0.0035	5.83		149808.48	149808.48	30.3		Si
SLV 4	-1.58	28295.8	-49961	-0.0000705	0.0005615	0.0035	5.83		124844.23	124844.23	4.41		Si
SLV 4	1.39	7961.08	-58988	-0.0000599	0.0005615	0.0035	5.83		144774.67	144774.67	18.19		Si
SLV 11	-1.58	36566.31	-58484	-0.0000867	0.0005615	0.0035	5.83		143846.85	143846.85	3.93		Si
SLV 11	1.39	-1087.34	-63945	-0.0000581	0.0005615	0.0035	5.83		162736.89	162736.89	149.67		Si
SLV 12	-1.58	36689.48	-58344	-0.0000867	0.0005615	0.0035	5.83		143580.5	143580.5	3.91		Si
SLV 12	1.39	-1555.07	-63882	-0.0000585	0.0005615	0.0035	5.83		162617.32	162617.32	104.57		Si
SLD 8	-1.58	30704.07	-55668	-0.0000783	0.0005615	0.0035	5.83		137838.77	137838.77	4.49		Si
SLD 8	1.39	4739.77	-61927	-0.0000596	0.0005615	0.0035	5.83		149761.46	149761.46	31.6		Si
SLV 3	-1.58	28104.15	-50179	-0.0000705	0.0005615	0.0035	5.83		125337.59	125337.59	4.46		Si
SLV 3	1.39	8688.85	-59087	-0.0000607	0.0005615	0.0035	5.83		144941.42	144941.42	16.68		Si
SLV 8	-1.58	35934.95	-54467	-0.0000821	0.0005615	0.0035	5.83		135088.11	135088.11	3.76		Si
SLV 8	1.39	-68.69	-62018	-0.0000553	0.0005615	0.0035	5.83		159115.07	159115.07	2316.49		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	-1.58	37880.17	-80736	-67989	12696	5.83	5.83	-38873	10833	18947	33304	52373	14866	52252	No	4.12	Si
SLU 76	1.39	12447.51	-89641	-75487	16103	5.83	5.83	-43160	10833	18947	33304	52373	14866	52252	No	3.24	Si
SLU 78	-1.58	38593.84	-82224	-69241	12862	5.83	5.83	-39589	10833	18947	33304	52373	14866	52252	No	4.06	Si
SLU 78	1.39	12545.58	-91663	-77190	16243	5.83	5.83	-44134	10833	18947	33304	52373	14866	52252	No	3.22	Si
SLU 81	-1.58	38615.33	-82863	-69780	12482	5.83	5.83	-39897	10833	18947	33304	52373	14866	52252	No	4.19	Si
SLU 81	1.39	13249.87	-92342	-77762	16045	5.83	5.83	-44461	10833	18947	33304	52373	14866	52252	No	3.26	Si
SLU 82	-1.58	38680.38	-82855	-69773	12579	5.83	5.83	-39893	10833	18947	33304	52373	14866	52252	No	4.15	Si
SLU 82	1.39	13198.31	-92343	-77763	16170	5.83	5.83	-44461	10833	18947	33304	52373	14866	52252	No	3.23	Si
SLU 83	-1.58	39061.88	-83779	-70551	12640	5.83	5.83	-40338	10833	18947	33304	52373	14866	52252	No	4.13	Si
SLU 83	1.39	13269.66	-93571	-78797	16205	5.83	5.83	-45053	10833	18947	33304	52373	14866	52252	No	3.22	Si
SLU 75	-1.58	38147.29	-81308	-68470	12703	5.83	5.83	-39148	10833	18947	33304	52373	14866	52252	No	4.11	Si
SLU 75	1.39	12525.8	-90434	-76155	16083	5.83	5.83	-43542	10833	18947	33304	52373	14866	52252	No	3.25	Si
SLU 84	-1.58	39126.93	-83771	-70544	12737	5.83	5.83	-40334	10833	18947	33304	52373	14866	52252	No	4.1	Si
SLU 84	1.39	13218.09	-93572	-78798	16330	5.83	5.83	-45053	10833	18947	33304	52373	14866	52252	No	3.2	Si
SLU 80	-1.58	38283.34	-81658	-68764	12790	5.83	5.83	-39316	10833	18947	33304	52373	14866	52252	No	4.09	Si
SLU 80	1.39	12501.68	-90870	-76522	16180	5.83	5.83	-43752	10833	18947	33304	52373	14866	52252	No	3.23	Si
SLU 77	-1.58	38528.79	-82232	-69248	12765	5.83	5.83	-39593	10833	18947	33304	52373	14866	52252	No	4.09	Si
SLU 77	1.39	12597.15	-91662	-77189	16118	5.83	5.83	-44133	10833	18947	33304	52373	14866	52252	No	3.24	Si
SLU 79	-1.58	38218.29	-81665	-68771	12693	5.83	5.83	-39320	10833	18947	33304	52373	14866	52252	No	4.12	Si
SLU 79	1.39	12553.24	-90869	-76521	16056	5.83	5.83	-43751	10833	18947	33304	52373	14866	52252	No	3.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 12	-1.58	31020.41	-57321	-48271	15159	5.83	5.83	-27599	15936	27873	33304	78559	14866	61177		4.04	Si
SLD 12	1.39	4106.11	-62723	-52819	18948	5.83	5.83	-30200	16250	28421	33304	78559	14866	61726		3.26	Si
SLD 7	-1.58	30650.29	-55729	-46930	16701	5.83	5.83	-26832	15783	27605	33304	78559	14866	60909		3.65	Si
SLD 7	1.39	4943.99	-61954	-52172	21197	5.83	5.83	-29830	16250	28421	33304	78559	14866	61726		2.91	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	-1.58	36689.48	-58344	-49131	22579	5.83	5.83	-28091	16035	28045	33304	78559	14866	61349		2.72	Si
SLV 12	1.39	-1555.07	-63882	-53795	28153	5.83	5.83	-30758	16250	28421	33304	78559	14866	61726		2.19	Si
SLV 4	-1.58	28295.8	-49961	-42072	20385	5.83	5.83	-24055	15228	26633	33304	78559	14866	59938		2.94	Si
SLV 4	1.39	7961.08	-58988	-49675	26669	5.83	5.83	-28402	16097	28154	33304	78559	14866	61458		2.3	Si
SLV 11	-1.58	36566.31	-58484	-49250	22348	5.83	5.83	-28159	16048	28069	33304	78559	14866	61373		2.75	Si
SLV 11	1.39	-1087.34	-63945	-53849	27934	5.83	5.83	-30788	16250	28421	33304	78559	14866	61726		2.21	Si
SLD 11	-1.58	30966.64	-57383	-48322	15058	5.83	5.83	-27628	15942	27883	33304	78559	14866	61188		4.06	Si
SLD 11	1.39	4310.33	-62751	-52843	18853	5.83	5.83	-30213	16250	28421	33304	78559	14866	61726		3.27	Si
SLD 8	-1.58	30704.07	-55668	-46878	16802	5.83	5.83	-26803	15777	27594	33304	78559	14866	60899		3.62	Si
SLD 8	1.39	4739.77	-61927	-52149	21293	5.83	5.83	-29816	16250	28421	33304	78559	14866	61726		2.9	Si
SLV 8	-1.58	35934.95	-54467	-45867	26425	5.83	5.83	-26225	15662	27392	33304	78559	14866	60697		2.3	Si
SLV 8	1.39	-68.69	-62018	-52225	33638	5.83	5.83	-29860	16250	28421	33304	78559	14866	61726		1.83	Si
SLV 7	-1.58	35811.78	-54608	-45985	26194	5.83	5.83	-26292	15675	27416	33304	78559	14866	60720		2.32	Si
SLV 7	1.39	399.04	-62081	-52279	33419	5.83	5.83	-29891	16250	28421	33304	78559	14866	61726		1.85	Si
SLV 3	-1.58	28104.15	-50179	-42256	20025	5.83	5.83	-24160	15249	26670	33304	78559	14866	59974		3	Si
SLV 3	1.39	8688.85	-59087	-49758	26327	5.83	5.83	-28449	16106	28170	33304	78559	14866	61475		2.34	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.24	31702	-55448	282.69	6590.59	23.31	Si
SLV 2	179667	0.24	31783	-55588	282.69	6602.88	23.36	Si
SLV 3	179667	0.24	31943	-55869	282.69	6627.45	23.44	Si
SLV 1	179667	0.24	32024	-56009	282.69	6639.68	23.49	Si
SLV 8	179667	0.24	34003	-59471	282.69	6934.48	24.53	Si
SLV 7	179667	0.24	34158	-59742	282.69	6956.97	24.61	Si
SLV 6	179667	0.24	34271	-59939	282.69	6973.27	24.67	Si
SLV 5	179667	0.24	34425	-60210	282.69	6995.62	24.75	Si
SLV 12	179667	0.24	36018	-62996	282.69	7220.78	25.54	Si
SLV 11	179667	0.24	36173	-63267	282.69	7242.2	25.62	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-63945	-58484	-132	0.529	7241.6	0.969	7.93579	5.75967	Si
SLV 12	-63882	-58344	-134	0.53	7235.2	0.969	7.9423	5.75967	Si
SLV 7	-62081	-54608	-442	0.538	7051.8	0.968	8.07305	5.75967	Si
SLV 8	-62018	-54467	-444	0.538	7045.4	0.968	8.07989	5.75967	Si
SLV 9	-61555	-58640	-356	0.543	6998.3	0.968	8.15253	5.75967	Si
SLV 10	-61491	-58500	-358	0.544	6991.8	0.968	8.1595	5.75967	Si
SLV 5	-59691	-54764	-666	0.553	6808.5	0.967	8.30147	5.75967	Si
SLV 6	-59627	-54624	-668	0.553	6802	0.967	8.30879	5.75967	Si
SLV 15	-65301	-63100	151	0.52	7379.7	0.97	7.7883	3.72098	Si
SLV 16	-65202	-62881	149	0.52	7369.6	0.97	7.79905	3.72098	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.188	SLU 84	Si
V_SLU	3.2	SLU 84	Si
PF_SLV	3.759	SLV 8	Si
V_SLV	1.835	SLV 8	Si
PFFP_SLV	23.314	SLV 4	Si
R_SLV	1.378	SLV 11	Si

Maschio 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.638	1.046	-24.653	1.046	L2	L4	5.015	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	-1.58	-6156.38	-133344	-0.0000992	0.0004492	0.0035	5.015	172672.11	243899.38	243899.38	39.62	No	Si
SLU 50	0.52	9944.02	-92401	-0.0000712	0.0004492	0.0035	5.015	154055.78	183606.61	183606.61	18.46	No	Si
SLU 69	-1.58	-7195.26	-147916	-0.000112	0.0004492	0.0035	5.015	171941.63	257465.46	257465.46	35.78	No	Si
SLU 69	0.52	10650.54	-104144	-0.0000806	0.0004492	0.0035	5.015	162513.12	199986.46	199986.46	18.78	No	Si
SLU 49	-1.58	-6195.79	-134339	-0.0001	0.0004492	0.0035	5.015	172745.11	244826.2	244826.2	39.51	No	Si
SLU 49	0.52	10016.84	-93140	-0.0000718	0.0004492	0.0035	5.015	154662.03	184637.55	184637.55	18.43	No	Si
SLU 44	-1.58	-6043.8	-130108	-0.0000965	0.0004492	0.0035	5.015	172310.31	240886.73	240886.73	39.86	No	Si
SLU 44	0.52	9639.12	-89970	-0.0000691	0.0004492	0.0035	5.015	151991.24	180215.06	180215.06	18.7	No	Si
SLU 45	-1.58	-6149.57	-132705	-0.0000987	0.0004492	0.0035	5.015	172615.8	243304.86	243304.86	39.56	No	Si
SLU 45	0.52	9870.69	-91933	-0.0000708	0.0004492	0.0035	5.015	153666.71	182953.75	182953.75	18.54	No	Si
SLU 43	-1.58	-6052.96	-130093	-0.0000965	0.0004492	0.0035	5.015	172308.24	240873.09	240873.09	39.79	No	Si
SLU 43	0.52	9644.84	-89977	-0.0000691	0.0004492	0.0035	5.015	151998.04	180225.95	180225.95	18.69	No	Si
SLU 46	-1.58	-6144.08	-132714	-0.0000987	0.0004492	0.0035	5.015	172616.62	243313.05	243313.05	39.6	No	Si
SLU 46	0.52	9867.25	-91928	-0.0000708	0.0004492	0.0035	5.015	153662.8	182947.22	182947.22	18.54	No	Si
SLU 47	-1.58	-6095.51	-131733	-0.0000979	0.0004492	0.0035	5.015	172515.84	242399.88	242399.88	39.77	No	Si
SLU 47	0.52	9788.71	-91181	-0.0000702	0.0004492	0.0035	5.015	153033.63	181905.4	181905.4	18.58	No	Si
SLU 48	-1.58	-6201.29	-134331	-0.0001	0.0004492	0.0035	5.015	172744.54	244818.01	244818.01	39.48	No	Si
SLU 48	0.52	10020.28	-93145	-0.0000718	0.0004492	0.0035	5.015	154665.84	184644.08	184644.08	18.43	No	Si
SLU 51	-1.58	-6150.89	-133353	-0.0000992	0.0004492	0.0035	5.015	172672.83	243907.57	243907.57	39.65	No	Si
SLU 51	0.52	9940.59	-92396	-0.0000712	0.0004492	0.0035	5.015	154051.9	183600.08	183600.08	18.47	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	-1.58	-60012.33	-65719	-0.0000921	0.0006738	0.0035	5.015		159792.56	159792.56	2.66		Si
SLV 14	0.52	-8468.52	-44894	-0.0000357	0.0006738	0.0035	5.015		117411.49	117411.49	13.86		Si
SLV 15	-1.58	-60272.49	-65432	-0.0000921	0.0006738	0.0035	5.015		159245.92	159245.92	2.64		Si
SLV 15	0.52	-9479.16	-46232	-0.0000374	0.0006738	0.0035	5.015		120245.08	120245.08	12.69		Si
SLV 4	-1.58	48654.82	-157281	-0.0001515	0.0006738	0.0035	5.015		293866.93	293866.93	6.04		Si
SLV 4	0.52	23925.91	-111824	-0.000095	0.0006738	0.0035	5.015		229376.5	229376.5	9.59		Si
SLD 15	-1.58	-28903.21	-91774	-0.0000847	0.0006738	0.0035	5.015		207786.11	207786.11	7.19		Si
SLD 15	0.52	473.84	-64680	-0.0000425	0.0006738	0.0035	5.015		144618.71	144618.71	305.2		Si
SLV 2	-1.58	49231.02	-157476	-0.0001522	0.0006738	0.0035	5.015		294143.56	294143.56	5.97		Si
SLV 2	0.52	25323.04	-110707	-0.0000953	0.0006738	0.0035	5.015		227791.72	227791.72	9		Si
SLV 3	-1.58	48970.85	-157190	-0.0001517	0.0006738	0.0035	5.015		293736.59	293736.59	6		Si
SLV 3	0.52	24312.4	-112045	-0.0000954	0.0006738	0.0035	5.015		229690.27	229690.27	9.45		Si
SLV 16	-1.58	-60588.53	-65524	-0.0000925	0.0006738	0.0035	5.015		159420.99	159420.99	2.63		Si
SLV 16	0.52	-9865.65	-46011	-0.0000375	0.0006738	0.0035	5.015		119776.78	119776.78	12.14		Si
SLV 1	-1.58	49547.05	-157384	-0.0001524	0.0006738	0.0035	5.015		294013.22	294013.22	5.93		Si
SLV 1	0.52	25709.52	-110928	-0.0000958	0.0006738	0.0035	5.015		228105.49	228105.49	8.87		Si
SLD 16	-1.58	-29038.89	-91813	-0.0000848	0.0006738	0.0035	5.015		207852.92	207852.92	7.16		Si
SLD 16	0.52	307.91	-64585	-0.0000423	0.0006738	0.0035	5.015		144444.81	144444.81	469.11		Si
SLV 13	-1.58	-59696.29	-65627	-0.0000917	0.0006738	0.0035	5.015		159617.49	159617.49	2.67		Si
SLV 13	0.52	-8082.04	-45115	-0.0000355	0.0006738	0.0035	5.015		117879.79	117879.79	14.59		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-1.58	-8265.03	-160643	-128514	-28876	5.015	5.015	-56947	10833	24448	95155	81102	25576	106678	No	3.69	Si
SLU 79	0.52	11122.13	-114645	-91716	-30172	5.015	5.015	-40641	10833	24448	95155	81102	25576	106678	No	3.54	Si
SLU 78	-1.58	-8304.44	-161638	-129311	-29061	5.015	5.015	-57300	10833	24448	95155	81102	25576	106678	No	3.67	Si
SLU 78	0.52	11194.96	-115384	-92307	-30374	5.015	5.015	-40903	10833	24448	95155	81102	25576	106678	No	3.51	Si
SLU 75	-1.58	-8252.73	-160013	-128011	-28723	5.015	5.015	-56723	10833	24448	95155	81102	25576	106678	No	3.71	Si
SLU 75	0.52	11045.37	-114172	-91338	-30019	5.015	5.015	-40473	10833	24448	95155	81102	25576	106678	No	3.55	Si
SLU 77	-1.58	-8309.94	-161630	-129304	-29057	5.015	5.015	-57296	10833	24448	95155	81102	25576	106678	No	3.67	Si
SLU 77	0.52	11198.39	-115389	-92311	-30367	5.015	5.015	-40904	10833	24448	95155	81102	25576	106678	No	3.51	Si
SLU 83	-1.58	-8691.04	-164895	-131916	-29262	5.015	5.015	-58454	10833	24448	95155	81102	25576	106678	No	3.65	Si
SLU 83	0.52	11207.34	-118252	-94602	-30586	5.015	5.015	-41919	10833	24448	95155	81102	25576	106678	No	3.49	Si
SLU 80	-1.58	-8259.54	-160652	-128521	-28880	5.015	5.015	-56950	10833	24448	95155	81102	25576	106678	No	3.69	Si
SLU 80	0.52	11118.7	-114640	-91712	-30179	5.015	5.015	-40639	10833	24448	95155	81102	25576	106678	No	3.53	Si
SLU 81	-1.58	-8639.32	-163270	-130616	-28924	5.015	5.015	-57878	10833	24448	95155	81102	25576	106678	No	3.69	Si
SLU 81	0.52	11057.75	-117040	-93632	-30231	5.015	5.015	-41490	10833	24448	95155	81102	25576	106678	No	3.53	Si
SLU 82	-1.58	-8633.83	-163279	-130623	-28927	5.015	5.015	-57881	10833	24448	95155	81102	25576	106678	No	3.69	Si
SLU 82	0.52	11054.31	-117036	-93629	-30238	5.015	5.015	-41488	10833	24448	95155	81102	25576	106678	No	3.53	Si
SLU 84	-1.58	-8685.54	-164904	-131923	-29265	5.015	5.015	-58457	10833	24448	95155	81102	25576	106678	No	3.65	Si
SLU 84	0.52	11203.9	-118248	-94598	-30593	5.015	5.015	-41918	10833	24448	95155	81102	25576	106678	No	3.49	Si
SLU 74	-1.58	-8258.22	-160004	-128003	-28720	5.015	5.015	-56720	10833	24448	95155	81102	25576	106678	No	3.71	Si
SLU 74	0.52	11048.8	-114177	-91341	-30012	5.015	5.015	-40475	10833	24448	95155	81102	25576	106678	No	3.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	-1.58	-59696.29	-65627	-52502	-38770	5.015	4.7936	-24599	16250	35053	95155	121653	25576	130209		3.36	Si
SLV 13	0.52	-8082.04	-45115	-36092	-33912	5.015	5.015	-15993	15699	35428	95155	121653	25576	130583		3.85	Si
SLD 15	-1.58	-28903.21	-91774	-73419	-28257	5.015	5.015	-32533	16250	36672	95155	121653	25576	131827		4.67	Si
SLD 15	0.52	473.84	-64680	-51744	-26951	5.015	5.015	-22929	16250	36672	95155	121653	25576	131827		4.89	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	-1.58	-28668.31	-91865	-73492	-28287	5.015	5.015	-32565	16250	36672	95155	121653	25576	131827		4.66	Si
SLD 13	0.52	1076.09	-64211	-51369	-26725	5.015	5.015	-22762	16250	36672	95155	121653	25576	131827		4.93	Si
SLV 12	-1.58	-22969.12	-97395	-77916	-25985	5.015	5.015	-34526	16250	36672	95155	121653	25576	131827		5.07	Si
SLV 12	0.52	400.47	-70388	-56311	-26249	5.015	5.015	-24952	16250	36672	95155	121653	25576	131827		5.02	Si
SLV 15	-1.58	-60272.49	-65432	-52346	-38701	5.015	4.7591	-24704	16250	34801	95155	121653	25576	129956		3.36	Si
SLV 15	0.52	-9479.16	-46232	-36986	-34441	5.015	5.015	-16389	15778	35607	95155	121653	25576	130762		3.8	Si
SLD 14	-1.58	-28803.99	-91904	-73524	-28428	5.015	5.015	-32579	16250	36672	95155	121653	25576	131827		4.64	Si
SLD 14	0.52	910.16	-64116	-51293	-26872	5.015	5.015	-22729	16250	36672	95155	121653	25576	131827		4.91	Si
SLV 10	-1.58	-21048.46	-98045	-78436	-26216	5.015	5.015	-34756	16250	36672	95155	121653	25576	131827		5.03	Si
SLV 10	0.52	5057.55	-66665	-53332	-24489	5.015	5.015	-23632	16250	36672	95155	121653	25576	131827		5.38	Si
SLV 14	-1.58	-60012.33	-65719	-52575	-39098	5.015	4.783	-24689	16250	34976	95155	121653	25576	130131		3.33	Si
SLV 14	0.52	-8468.52	-44894	-35915	-34256	5.015	5.015	-15915	15683	35392	95155	121653	25576	130548		3.81	Si
SLV 16	-1.58	-60588.53	-65524	-52419	-39029	5.015	4.7485	-24794	16250	34723	95155	121653	25576	129878		3.33	Si
SLV 16	0.52	-9865.65	-46011	-36809	-34784	5.015	5.015	-16311	15762	35571	95155	121653	25576	130726		3.76	Si
SLD 16	-1.58	-29038.89	-91813	-73451	-28397	5.015	5.015	-32547	16250	36672	95155	121653	25576	131827		4.64	Si
SLD 16	0.52	307.91	-64585	-51668	-27098	5.015	5.015	-22895	16250	36672	95155	121653	25576	131827		4.86	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-52763	0.24	364.76	10357.2	13362.36	11859.78	32.51	Si
SLV 15	-52917	0.24	364.76	10383.01	13397.59	11890.3	32.6	Si
SLV 14	-53402	0.24	364.76	10464.21	13508.69	11986.45	32.86	Si
SLV 13	-53556	0.24	364.76	10489.92	13543.93	12016.92	32.94	Si
SLV 12	-81742	0.24	364.76	14757.21	19784.02	17270.61	47.35	Si
SLV 11	-81841	0.24	364.76	14770.68	19804.67	17287.67	47.39	Si
SLV 10	-83875	0.24	364.76	15044.95	20228.93	17636.94	48.35	Si
SLV 9	-83974	0.24	364.76	15058.19	20249.58	17653.89	48.4	Si
SLV 8	-107198	0.24	364.76	17868.43	24831.96	21350.2	58.53	Si
SLV 7	-107297	0.24	364.76	17879.16	24850.48	21364.82	58.57	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-81743	-124863	-75	0.401	9265.9	0.969	6.01497	4.19835	Si
SLV 8	-81591	-124922	-72	0.402	9250.5	0.969	6.02416	4.19835	Si
SLV 5	-71933	-125513	-2217	0.414	8267.4	0.966	6.23884	4.19835	Si
SLV 6	-71782	-125572	-2215	0.415	8252	0.965	6.24966	4.19835	Si
SLV 3	-96328	-157190	-1141	0.344	10751	0.973	5.1421	3.18428	Si
SLV 4	-96092	-157281	-1137	0.345	10727.1	0.973	5.15226	3.18428	Si
SLV 1	-93385	-157384	-1784	0.346	10451.3	0.972	5.1681	3.18428	Si
SLV 2	-93149	-157476	-1780	0.346	10427.4	0.972	5.17863	3.18428	Si
SLV 11	-66334	-97336	197	0.469	7697.7	0.963	7.07072	4.19835	Si
SLV 12	-66183	-97395	199	0.469	7682.2	0.963	7.08308	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.427	SLU 48	Si
V_SLU	3.487	SLU 84	Si
PF_SLV	2.631	SLV 16	Si
V_SLV	3.328	SLV 16	Si
PFFP_SLV	32.514	SLV 16	Si
R_SLV	1.433	SLV 7	Si

Maschio 20

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.046	-18.838	1.046	L2	L4	3.875	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	-1.58	-11582.99	-110929	-0.0001203	0.0004492	0.0035	3.875	103027.27	151125.58	151125.58	13.05	No	Si
SLU 75	0.52	-15573.18	-106143	-0.0001216	0.0004492	0.0035	3.875	103201.72	147607.41	147607.41	9.48	No	Si
SLU 78	-1.58	-11738.42	-112073	-0.0001218	0.0004492	0.0035	3.875	102923.92	151966.2	151966.2	12.95	No	Si
SLU 78	0.52	-15758.83	-107319	-0.0001232	0.0004492	0.0035	3.875	103197.47	148471.59	148471.59	9.42	No	Si
SLU 81	-1.58	-11720.82	-113294	-0.0001231	0.0004492	0.0035	3.875	102787.33	152863.64	152863.64	13.04	No	Si
SLU 81	0.52	-15969.92	-108733	-0.0001251	0.0004492	0.0035	3.875	103159.05	149511.23	149511.23	9.36	No	Si
SLU 74	-1.58	-11601.92	-110917	-0.0001203	0.0004492	0.0035	3.875	103028.25	151116.6	151116.6	13.03	No	Si
SLU 74	0.52	-15584.65	-106168	-0.0001216	0.0004492	0.0035	3.875	103201.89	147625.47	147625.47	9.47	No	Si
SLU 79	-1.58	-11700.1	-111316	-0.0001209	0.0004492	0.0035	3.875	102994.98	151409.91	151409.91	12.94	No	Si
SLU 79	0.52	-15615.08	-106564	-0.0001221	0.0004492	0.0035	3.875	103203.09	147916.55	147916.55	9.47	No	Si
SLU 82	-1.58	-11701.89	-113306	-0.0001231	0.0004492	0.0035	3.875	102785.82	152872.63	152872.63	13.06	No	Si
SLU 82	0.52	-15958.45	-108709	-0.000125	0.0004492	0.0035	3.875	103160.03	149493.17	149493.17	9.37	No	Si
SLU 83	-1.58	-11876.25	-114438	-0.0001246	0.0004492	0.0035	3.875	102634.79	153704.26	153704.26	12.94	No	Si
SLU 83	0.52	-16155.57	-109909	-0.0001267	0.0004492	0.0035	3.875	103099.42	150375.41	150375.41	9.31	No	Si
SLU 84	-1.58	-11857.32	-114450	-0.0001246	0.0004492	0.0035	3.875	102633.03	153713.25	153713.25	12.96	No	Si
SLU 84	0.52	-16144.1	-109884	-0.0001266	0.0004492	0.0035	3.875	103100.92	150357.35	150357.35	9.31	No	Si
SLU 77	-1.58	-11757.35	-112061	-0.0001218	0.0004492	0.0035	3.875	102925.15	151957.21	151957.21	12.92	No	Si
SLU 77	0.52	-15770.3	-107343	-0.0001232	0.0004492	0.0035	3.875	103197.11	148489.65	148489.65	9.42	No	Si
SLU 80	-1.58	-11681.17	-111328	-0.0001209	0.0004492	0.0035	3.875	102993.91	151418.9	151418.9	12.96	No	Si
SLU 80	0.52	-15603.61	-106539	-0.0001221	0.0004492	0.0035	3.875	103203.09	147898.5	147898.5	9.48	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	-1.58	45973.56	-81521	-0.000136	0.0006738	0.0035	3.875		130921.86	130921.86	2.85		Si
SLV 1	0.52	-35535.96	-80841	-0.0001202	0.0006738	0.0035	3.875		136685.48	136685.48	3.85		Si
SLD 14	-1.58	-32759.39	-74500	-0.00011	0.0006738	0.0035	3.875		128476.89	128476.89	3.92		Si
SLD 14	0.52	851.89	-70225	-0.0000612	0.0006738	0.0035	3.875		114992.66	114992.66	134.99		Si
SLD 13	-1.58	-32638.76	-74407	-0.0001098	0.0006738	0.0035	3.875		128354.2	128354.2	3.93		Si
SLD 13	0.52	650.24	-70336	-0.000061	0.0006738	0.0035	3.875		115148.34	115148.34	177.09		Si
SLV 4	-1.58	49390.76	-82874	-0.0001424	0.0006738	0.0035	3.875		132830.39	132830.39	2.69		Si
SLV 4	0.52	-37082.81	-78707	-0.0001203	0.0006738	0.0035	3.875		134021.4	134021.4	3.61		Si
SLV 14	-1.58	-65831.91	-71258	-0.0001643	0.0006738	0.0035	3.875		124204.44	124204.44	1.89		Si
SLV 14	0.52	16248.93	-66725	-0.0000794	0.0006738	0.0035	3.875		110056.04	110056.04	6.77		Si
SLV 2	-1.58	45692.59	-81738	-0.0001358	0.0006738	0.0035	3.875		131227.67	131227.67	2.87		Si
SLV 2	0.52	-35066.29	-80583	-0.0001192	0.0006738	0.0035	3.875		136367.37	136367.37	3.89		Si
SLV 15	-1.58	-61852.78	-72178	-0.0001544	0.0006738	0.0035	3.875		125416.39	125416.39	2.03		Si
SLV 15	0.52	13762.74	-65106	-0.0000745	0.0006738	0.0035	3.875		107772.57	107772.57	7.83		Si
SLV 3	-1.58	49671.73	-82657	-0.0001426	0.0006738	0.0035	3.875		132524.59	132524.59	2.67		Si
SLV 3	0.52	-37552.48	-78964	-0.0001212	0.0006738	0.0035	3.875		134360.25	134360.25	3.58		Si
SLV 13	-1.58	-65550.94	-71041	-0.0001635	0.0006738	0.0035	3.875		123918.67	123918.67	1.89		Si
SLV 13	0.52	15779.26	-66982	-0.000079	0.0006738	0.0035	3.875		110418.65	110418.65	7		Si
SLV 16	-1.58	-62133.74	-72394	-0.0001551	0.0006738	0.0035	3.875		125702.16	125702.16	2.02		Si
SLV 16	0.52	14232.41	-64849	-0.0000749	0.0006738	0.0035	3.875		107409.96	107409.96	7.55		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	-1.58	-11582.99	-110929	-88744	4991	3.875	3.875	-50892	10833	18891	95155	62666	19762	82429	No	16.52	Si
SLU 75	0.52	-15573.18	-106143	-84914	5048	3.875	3.875	-48696	10833	18891	95155	62666	19762	82429	No	16.33	Si
SLU 78	-1.58	-11738.42	-112073	-89658	5029	3.875	3.875	-51417	10833	18891	95155	62666	19762	82429	No	16.39	Si
SLU 78	0.52	-15758.83	-107319	-85855	5087	3.875	3.875	-49236	10833	18891	95155	62666	19762	82429	No	16.2	Si
SLU 81	-1.58	-11720.82	-113294	-90635	5286	3.875	3.875	-51977	10833	18891	95155	62666	19762	82429	No	15.59	Si
SLU 81	0.52	-15969.92	-108733	-86986	5344	3.875	3.875	-49885	10833	18891	95155	62666	19762	82429	No	15.43	Si
SLU 82	-1.58	-11701.89	-113306	-90645	5261	3.875	3.875	-51983	10833	18891	95155	62666	19762	82429	No	15.67	Si
SLU 82	0.52	-15958.45	-108709	-86967	5319	3.875	3.875	-49873	10833	18891	95155	62666	19762	82429	No	15.5	Si
SLU 63	-1.58	-10461.55	-104900	-83920	5000	3.875	3.875	-48126	10833	18891	95155	62666	19762	82429	No	16.49	Si
SLU 63	0.52	-14983.93	-99792	-79834	5054	3.875	3.875	-45783	10833	18891	95155	62666	19762	82429	No	16.31	Si
SLU 62	-1.58	-10480.48	-104887	-83910	5024	3.875	3.875	-48120	10833	18891	95155	62666	19762	82429	No	16.41	Si
SLU 62	0.52	-14995.4	-99817	-79853	5078	3.875	3.875	-45794	10833	18891	95155	62666	19762	82429	No	16.23	Si
SLU 74	-1.58	-11601.92	-110917	-88734	5015	3.875	3.875	-50887	10833	18891	95155	62666	19762	82429	No	16.44	Si
SLU 74	0.52	-15584.65	-106168	-84934	5072	3.875	3.875	-48708	10833	18891	95155	62666	19762	82429	No	16.25	Si
SLU 84	-1.58	-11857.32	-114450	-91560	5300	3.875	3.875	-52507	10833	18891	95155	62666	19762	82429	No	15.55	Si
SLU 84	0.52	-16144.1	-109884	-87907	5359	3.875	3.875	-50413	10833	18891	95155	62666	19762	82429	No	15.38	Si
SLU 83	-1.58	-11876.25	-114438	-91550	5324	3.875	3.875	-52502	10833	18891	95155	62666	19762	82429	No	15.48	Si
SLU 83	0.52	-16155.57	-109909	-87927	5383	3.875	3.875	-50424	10833	18891	95155	62666	19762	82429	No	15.31	Si
SLU 77	-1.58	-11757.35	-112061	-89649	5054	3.875	3.875	-51411	10833	18891	95155	62666	19762	82429	No	16.31	Si
SLU 77	0.52	-15770.3	-107343	-85875	5112	3.875	3.875	-49247	10833	18891	95155	62666	19762	82429	No	16.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	-1.58	49390.76	-82874	-66299	43056	3.875	3.875	-38021	16250	28336	95155	93999	19762	113762		2.64	Si
SLV 4	0.52	-37082.81	-78707	-62966	42763	3.875	3.875	-36109	16250	28336	95155	93999	19762	113762		2.66	Si
SLV 2	-1.58	45692.59	-81738	-65390	43790	3.875	3.875	-37500	16250	28336	95155	93999	19762	113762		2.6	Si
SLV 2	0.52	-35066.29	-80583	-64467	43467	3.875	3.875	-36970	16250	28336	95155	93999	19762	113762		2.62	Si
SLD 2	-1.58	14858.62	-79012	-63210	20585	3.875	3.875	-36249	16250	28336	95155	93999	19762	113762		5.53	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	0.52	-21089.14	-76176	-60941	20469	3.875	3.875	-34948	16250	28336	95155	93999	19762	113762		5.56	Si
SLD 1	-1.58	14979.25	-78919	-63135	20893	3.875	3.875	-36207	16250	28336	95155	93999	19762	113762		5.44	Si
SLD 1	0.52	-21290.78	-76286	-61029	20778	3.875	3.875	-34999	16250	28336	95155	93999	19762	113762		5.48	Si
SLV 14	-1.58	-65831.91	-71258	-57006	-37226	3.875	3.0409	-42492	16250	22237	95155	93999	19762	113762		3.06	Si
SLV 14	0.52	16248.93	-66725	-53380	-36855	3.875	3.875	-30612	16250	28336	95155	93999	19762	113762		3.09	Si
SLV 1	-1.58	45973.56	-81521	-65217	44508	3.875	3.875	-37400	16250	28336	95155	93999	19762	113762		2.56	Si
SLV 1	0.52	-35535.96	-80841	-64672	44186	3.875	3.875	-37088	16250	28336	95155	93999	19762	113762		2.57	Si
SLV 16	-1.58	-62133.74	-72394	-57916	-37960	3.875	3.2377	-40191	16250	23676	95155	93999	19762	113762		3	Si
SLV 16	0.52	14232.41	-64849	-51879	-37558	3.875	3.875	-29751	16250	28336	95155	93999	19762	113762		3.03	Si
SLV 15	-1.58	-61852.78	-72178	-57742	-37242	3.875	3.2416	-40025	16250	23705	95155	93999	19762	113762		3.05	Si
SLV 15	0.52	13762.74	-65106	-52085	-36839	3.875	3.875	-29869	16250	28336	95155	93999	19762	113762		3.09	Si
SLV 3	-1.58	49671.73	-82657	-66126	43774	3.875	3.875	-37922	16250	28336	95155	93999	19762	113762		2.6	Si
SLV 3	0.52	-37552.48	-78964	-63171	43482	3.875	3.875	-36227	16250	28336	95155	93999	19762	113762		2.62	Si
SLV 13	-1.58	-65550.94	-71041	-56833	-36508	3.875	3.0443	-42311	16250	22262	95155	93999	19762	113762		3.12	Si
SLV 13	0.52	15779.26	-66982	-53586	-36135	3.875	3.875	-30730	16250	28336	95155	93999	19762	113762		3.15	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-65860	0.24	281.84	11764.81	15842.61	13803.71	48.98	Si
SLV 15	-66002	0.24	281.84	11783.62	15872.28	13827.95	49.06	Si
SLV 14	-67889	0.24	281.84	12030.25	16265.47	14147.86	50.2	Si
SLV 13	-68031	0.24	281.84	12048.66	16295.15	14171.9	50.28	Si
SLV 12	-68446	0.24	281.84	12102.1	16381.57	14241.83	50.53	Si
SLV 11	-68537	0.24	281.84	12113.87	16400.64	14257.25	50.59	Si
SLV 8	-72669	0.24	281.84	12632.77	17227.84	14930.31	52.97	Si
SLV 7	-72760	0.24	281.84	12643.99	17245.93	14944.96	53.03	Si
SLV 10	-75208	0.24	281.84	12939.74	17729.66	15334.7	54.41	Si
SLV 9	-75300	0.24	281.84	12950.63	17747.74	15349.19	54.46	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-60474	-76566	-2025	0.384	6886.1	0.968	5.77007	4.19835	Si
SLV 6	-60262	-76705	-2021	0.385	6864.5	0.968	5.78665	4.19835	Si
SLV 9	-54531	-73422	-1821	0.419	6281.2	0.965	6.30529	4.19835	Si
SLV 10	-54319	-73561	-1818	0.42	6259.6	0.965	6.32557	4.19835	Si
SLV 7	-54565	-80354	-717	0.437	6284.6	0.965	6.58319	4.19835	Si
SLV 8	-54353	-80493	-713	0.438	6263	0.965	6.60449	4.19835	Si
SLV 1	-65398	-81521	-1805	0.366	7387.4	0.97	5.48004	3.18428	Si
SLV 2	-65068	-81738	-1799	0.367	7353.8	0.97	5.50262	3.18428	Si
SLV 11	-48622	-77210	-514	0.481	5679.9	0.962	7.27322	4.19835	Si
SLV 12	-48410	-77349	-510	0.483	5658.4	0.961	7.29982	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.308	SLU 83	Si
V_SLU	15.313	SLU 83	Si
PF_SLV	1.887	SLV 14	Si
V_SLV	2.556	SLV 1	Si
PFFP_SLV	48.976	SLV 16	Si
R_SLV	1.374	SLV 5	Si

Maschio 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.428	1.046	-9.398	1.046	L2	L4	1.97	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 63	-1.58	-4190.12	-58923	-0.0001334	0.0004492	0.0035	1.9703	26475.85	39920.85	39920.85	9.53	No	Si
SLU 63	0.52	5897.64	-53788	-0.000133	0.0004492	0.0035	1.9703	26680.18	36924.07	36924.07	6.26	No	Si
SLU 77	-1.58	-4101.42	-62842	-0.0001417	0.0004492	0.0035	1.9703	25997.21	40915.67	40915.67	9.98	No	Si
SLU 77	0.52	6108.58	-57662	-0.000143	0.0004492	0.0035	1.9703	26570.42	38377.96	38377.96	6.28	No	Si
SLU 61	-1.58	-4178.32	-58259	-0.0001319	0.0004492	0.0035	1.9703	26529.31	39752.16	39752.16	9.51	No	Si
SLU 61	0.52	5816.35	-53133	-0.000131	0.0004492	0.0035	1.9703	26671.76	36678.39	36678.39	6.31	No	Si
SLU 84	-1.58	-4223.12	-64343	-0.0001459	0.0004492	0.0035	1.9703	25739.88	41296.73	41296.73	9.78	No	Si
SLU 84	0.52	6285.48	-59134	-0.0001476	0.0004492	0.0035	1.9703	26457.18	38930.23	38930.23	6.19	No	Si
SLU 60	-1.58	-4183.58	-58250	-0.0001319	0.0004492	0.0035	1.9703	26529.95	39749.65	39749.65	9.5	No	Si
SLU 60	0.52	5820.38	-53124	-0.000131	0.0004492	0.0035	1.9703	26671.59	36675.09	36675.09	6.3	No	Si
SLU 83	-1.58	-4228.38	-64335	-0.0001459	0.0004492	0.0035	1.9703	25741.48	41294.53	41294.53	9.77	No	Si
SLU 83	0.52	6289.5	-59125	-0.0001476	0.0004492	0.0035	1.9703	26457.97	38926.93	38926.93	6.19	No	Si
SLU 82	-1.58	-4211.33	-63679	-0.0001443	0.0004492	0.0035	1.9703	25858.85	41128.05	41128.05	9.77	No	Si
SLU 82	0.52	6204.19	-58479	-0.0001455	0.0004492	0.0035	1.9703	26512.42	38684.56	38684.56	6.24	No	Si
SLU 62	-1.58	-4195.37	-58914	-0.0001334	0.0004492	0.0035	1.9703	26476.59	39918.65	39918.65	9.51	No	Si
SLU 62	0.52	5901.67	-53779	-0.000133	0.0004492	0.0035	1.9703	26680.12	36920.76	36920.76	6.26	No	Si
SLU 81	-1.58	-4216.58	-63670	-0.0001443	0.0004492	0.0035	1.9703	25860.35	41125.85	41125.85	9.75	No	Si
SLU 81	0.52	6208.21	-58471	-0.0001455	0.0004492	0.0035	1.9703	26513.11	38681.25	38681.25	6.23	No	Si
SLU 78	-1.58	-4096.17	-62851	-0.0001416	0.0004492	0.0035	1.9703	25995.84	40917.87	40917.87	9.99	No	Si
SLU 78	0.52	6104.55	-57671	-0.000143	0.0004492	0.0035	1.9703	26569.86	38381.27	38381.27	6.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	-1.58	-26007.91	-47683	-0.0002721	0.0006738	0.0035	1.5762		39343.64	39343.64	1.51		Si
SLV 16	0.52	18754.08	-44125	-0.0001869	0.0006738	0.0035	1.9703		35547.53	35547.53	1.9		Si
SLV 4	-1.58	20525.43	-39096	-0.0002038	0.0006738	0.0035	1.9703		32158.21	32158.21	1.57		Si
SLV 4	0.52	-10673.51	-36987	-0.0001205	0.0006738	0.0035	1.9703		32579.42	32579.42	3.05		Si
SLV 1	-1.58	20204.92	-38158	-0.0002004	0.0006738	0.0035	1.9703		31486.34	31486.34	1.56		Si
SLV 1	0.52	-10563.47	-33923	-0.000114	0.0006738	0.0035	1.9703		30482.41	30482.41	2.89		Si
SLD 13	-1.58	-12909.54	-44552	-0.000148	0.0006738	0.0035	1.9703		37477	37477	2.9		Si
SLD 13	0.52	10405.77	-39889	-0.0001246	0.0006738	0.0035	1.9703		32725.64	32725.64	3.14		Si
SLV 13	-1.58	-26328.41	-46744	-0.0002793	0.0006738	0.0035	1.5762		38788.46	38788.46	1.47		Si
SLV 13	0.52	18864.12	-41061	-0.0001851	0.0006738	0.0035	1.9703		33563.91	33563.91	1.78		Si
SLD 14	-1.58	-13027.12	-44509	-0.0001486	0.0006738	0.0035	1.9703		37450.27	37450.27	2.87		Si
SLD 14	0.52	10526.76	-39839	-0.0001252	0.0006738	0.0035	1.9703		32689.72	32689.72	3.11		Si
SLV 15	-1.58	-25734.04	-47782	-0.0002677	0.0006738	0.0035	1.9703		39401.9	39401.9	1.53		Si
SLV 15	0.52	18472.26	-44242	-0.0001846	0.0006738	0.0035	1.9703		35612.3	35612.3	1.93		Si
SLV 3	-1.58	20799.29	-39195	-0.0002073	0.0006738	0.0035	1.9703		32228.71	32228.71	1.55		Si
SLV 3	0.52	-10955.33	-37104	-0.0001223	0.0006738	0.0035	1.9703		32658.06	32658.06	2.98		Si
SLV 2	-1.58	19931.06	-38059	-0.0001969	0.0006738	0.0035	1.9703		31415.84	31415.84	1.58		Si
SLV 2	0.52	-10281.65	-33806	-0.0001123	0.0006738	0.0035	1.9703		30399.02	30399.02	2.96		Si
SLV 14	-1.58	-26602.28	-46646	-0.0002844	0.0006738	0.0035	1.5762		38730.21	38730.21	1.46		Si
SLV 14	0.52	19145.94	-40944	-0.0001878	0.0006738	0.0035	1.9703		33480.25	33480.25	1.75		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-1.58	-4211.33	-63679	-50943	-5130	1.9703	1.9703	-57457	10833	9605	95155	31863	10048	41912	No	8.17	Si
SLU 82	0.52	6204.19	-58479	-46784	-5396	1.9703	1.9703	-52766	10833	9605	95155	31863	10048	41912	No	7.77	Si
SLU 83	-1.58	-4228.38	-64335	-51468	-5181	1.9703	1.9703	-58049	10833	9605	95155	31863	10048	41912	No	8.09	Si
SLU 83	0.52	6289.5	-59125	-47300	-5449	1.9703	1.9703	-53348	10833	9605	95155	31863	10048	41912	No	7.69	Si
SLU 77	-1.58	-4101.42	-62842	-50274	-5026	1.9703	1.9703	-56702	10833	9605	95155	31863	10048	41912	No	8.34	Si
SLU 77	0.52	6108.58	-57662	-46130	-5290	1.9703	1.9703	-52028	10833	9605	95155	31863	10048	41912	No	7.92	Si
SLU 75	-1.58	-4084.37	-62186	-49749	-4975	1.9703	1.9703	-56110	10833	9605	95155	31863	10048	41912	No	8.42	Si
SLU 75	0.52	6023.26	-57016	-45613	-5236	1.9703	1.9703	-51446	10833	9605	95155	31863	10048	41912	No	8	Si
SLU 74	-1.58	-4089.63	-62178	-49742	-4980	1.9703	1.9703	-56102	10833	9605	95155	31863	10048	41912	No	8.42	Si
SLU 74	0.52	6027.28	-57008	-45606	-5241	1.9703	1.9703	-51438	10833	9605	95155	31863	10048	41912	No	8	Si
SLU 79	-1.58	-4063.73	-62435	-49948	-4982	1.9703	1.9703	-56335	10833	9605	95155	31863	10048	41912	No	8.41	Si
SLU 79	0.52	6057.21	-57262	-45809	-5244	1.9703	1.9703	-51667	10833	9605	95155	31863	10048	41912	No	7.99	Si
SLU 80	-1.58	-4058.48	-62444	-49955	-4978	1.9703	1.9703	-56343	10833	9605	95155	31863	10048	41912	No	8.42	Si
SLU 80	0.52	6053.19	-57271	-45816	-5240	1.9703	1.9703	-51675	10833	9605	95155	31863	10048	41912	No	8	Si
SLU 84	-1.58	-4223.12	-64343	-51475	-5176	1.9703	1.9703	-58057	10833	9605	95155	31863	10048	41912	No	8.1	Si
SLU 84	0.52	6285.48	-59134	-47307	-5445	1.9703	1.9703	-53356	10833	9605	95155	31863	10048	41912	No	7.7	Si
SLU 78	-1.58	-4096.17	-62851	-50281	-5021	1.9703	1.9703	-56710	10833	9605	95155	31863	10048	41912	No	8.35	Si
SLU 78	0.52	6104.55	-57671	-46137	-5285	1.9703	1.9703	-52036	10833	9605	95155	31863	10048	41912	No	7.93	Si
SLU 81	-1.58	-4216.58	-63670	-50936	-5135	1.9703	1.9703	-57449	10833	9605	95155	31863	10048	41912	No	8.16	Si
SLU 81	0.52	6208.21	-58471	-46777	-5400	1.9703	1.9703	-52758	10833	9605	95155	31863	10048	41912	No	7.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	-1.58	-12909.54	-44552	-35641	-11607	1.9703	1.9703	-40199	16250	14408	95155	47795	10048	57843		4.98	Si
SLD 13	0.52	10405.77	-39889	-31912	-11536	1.9703	1.9703	-35992	16250	14408	95155	47795	10048	57843		5.01	Si
SLV 2	-1.58	19931.06	-38059	-30447	14764	1.9703	1.3844	-34340	16250	10123	95155	47795	10048	57843		3.92	Si
SLV 2	0.52	-10281.65	-33806	-27045	14803	1.9703	1.9703	-30503	16250	14408	95155	47795	10048	57843		3.91	Si
SLV 1	-1.58	20204.92	-38158	-30526	15036	1.9703	1.3669	-34429	16250	9995	95155	47795	10048	57843		3.85	Si
SLV 1	0.52	-10563.47	-33923	-27138	15074	1.9703	1.9703	-30608	16250	14408	95155	47795	10048	57843		3.84	Si
SLV 14	-1.58	-26602.28	-46646	-37317	-22825	1.5762	1.2445	0	0	0	95155	38236	8039	46275		2.03	Si
SLV 14	0.52	19145.94	-40944	-32755	-22416	1.9703	1.5526	-36943	16250	11353	95155	47795	10048	57843		2.58	Si
SLV 13	-1.58	-26328.41	-46744	-37396	-22553	1.5762	1.2657	0	0	0	95155	38236	8039	46275		2.05	Si
SLV 13	0.52	18864.12	-41061	-32849	-22144	1.9703	1.5772	-37049	16250	11533	95155	47795	10048	57843		2.61	Si
SLV 4	-1.58	20525.43	-39096	-31277	15673	1.9703	1.3805	-35276	16250	10095	95155	47795	10048	57843		3.69	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	0.52	-10673.51	-36987	-29589	14903	1.9703	1.9703	-33373	16250	14408	95155	47795	10048	57843		3.88	Si
SLV 3	-1.58	20799.29	-39195	-31356	15945	1.9703	1.3635	-35365	16250	9970	95155	47795	10048	57843		3.63	Si
SLV 3	0.52	-10955.33	-37104	-29683	15175	1.9703	1.9703	-33478	16250	14408	95155	47795	10048	57843		3.81	Si
SLV 16	-1.58	-26007.91	-47683	-38147	-21917	1.5762	1.3191	0	0	0	95155	38236	8039	46275		2.11	Si
SLV 16	0.52	18754.08	-44125	-35300	-22315	1.9703	1.6804	-39814	16250	12288	95155	47795	10048	57843		2.59	Si
SLV 15	-1.58	-25734.04	-47782	-38226	-21644	1.9703	1.3397	-65619	16250	9797	95155	47795	10048	57843		2.67	Si
SLV 15	0.52	18472.26	-44242	-35394	-22043	1.9703	1.7029	-39919	16250	12452	95155	47795	10048	57843		2.62	Si
SLD 14	-1.58	-13027.12	-44509	-35607	-11723	1.9703	1.9703	-40160	16250	14408	95155	47795	10048	57843		4.93	Si
SLD 14	0.52	10526.76	-39839	-31871	-11653	1.9703	1.9703	-35947	16250	14408	95155	47795	10048	57843		4.96	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-35821	0.24	143.31	6283.11	8547.01	7415.06	51.74	Si
SLV 2	-35857	0.24	143.31	6287.57	8554.03	7420.8	51.78	Si
SLV 5	-35894	0.24	143.31	6292.31	8561.48	7426.89	51.82	Si
SLV 1	-35970	0.24	143.31	6301.87	8576.54	7439.21	51.91	Si
SLV 10	-37701	0.24	143.31	6514.74	8918.77	7716.75	53.85	Si
SLV 9	-37774	0.24	143.31	6523.56	8933.23	7728.4	53.93	Si
SLV 4	-37785	0.24	143.31	6524.79	8935.25	7730.02	53.94	Si
SLV 3	-37898	0.24	143.31	6538.47	8957.76	7748.12	54.07	Si
SLV 14	-42124	0.24	143.31	7021	9767	8394	58.57	Si
SLV 13	-42238	0.24	143.31	7033.32	9788.27	8410.8	58.69	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-24843	-42511	-1383	0.438	2900.3	0.962	6.62173	4.19835	Si
SLV 10	-24838	-42448	-1385	0.438	2899.7	0.962	6.622	4.19835	Si
SLV 11	-26962	-45969	-392	0.446	3115.9	0.964	6.7198	4.19835	Si
SLV 12	-26957	-45906	-394	0.446	3115.3	0.964	6.72007	4.19835	Si
SLV 13	-30000	-46744	-1274	0.384	3425.1	0.967	5.76785	3.18428	Si
SLV 14	-29992	-46646	-1276	0.384	3424.3	0.967	5.76798	3.18428	Si
SLV 15	-30636	-47782	-976	0.387	3489.8	0.968	5.81069	3.18428	Si
SLV 16	-30628	-47683	-979	0.387	3489	0.968	5.81083	3.18428	Si
SLV 5	-21059	-39935	-1180	0.505	2515.5	0.957	7.67952	4.19835	Si
SLV 6	-21054	-39872	-1181	0.505	2515	0.957	7.68009	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.189	SLU 83	Si
V_SLU	7.692	SLU 83	Si
PF_SLV	1.456	SLV 14	Si
V_SLV	2.027	SLV 14	Si
PFFP_SLV	51.742	SLV 6	Si
R_SLV	1.577	SLV 9	Si

Maschio 26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	1.046	-5.088	1.046	L2	L4	4.965	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-1.58	-15769.48	-165132	-0.000137	0.0004492	0.0035	4.965	161973.66	264735.64	264735.64	16.79	No	Si
SLU 83	0.52	9836.51	-117998	-0.0000917	0.0004492	0.0035	4.965	166316.63	216613.26	216613.26	22.02	No	Si
SLU 75	-1.58	-15487.08	-160306	-0.0001324	0.0004492	0.0035	4.965	164275.02	261809.92	261809.92	16.91	No	Si
SLU 75	0.52	9207.18	-113896	-0.0000879	0.0004492	0.0035	4.965	164783.24	210940.14	210940.14	22.91	No	Si
SLU 81	-1.58	-15545.21	-163524	-0.0001353	0.0004492	0.0035	4.965	162787.59	263760.71	263760.71	16.97	No	Si
SLU 81	0.52	9804.42	-116811	-0.0000907	0.0004492	0.0035	4.965	165904.34	214971.45	214971.45	21.93	No	Si
SLU 74	-1.58	-15494.73	-160285	-0.0001324	0.0004492	0.0035	4.965	164284.19	261797.07	261797.07	16.9	No	Si
SLU 74	0.52	9180.34	-113876	-0.0000878	0.0004492	0.0035	4.965	164775.19	210913.07	210913.07	22.97	No	Si
SLU 77	-1.58	-15719	-161893	-0.0001341	0.0004492	0.0035	4.965	163565	262771.99	262771.99	16.72	No	Si
SLU 77	0.52	9212.43	-115063	-0.0000888	0.0004492	0.0035	4.965	165250.85	212554.88	212554.88	23.07	No	Si
SLU 82	-1.58	-15537.56	-163545	-0.0001354	0.0004492	0.0035	4.965	162777.16	263773.57	263773.57	16.98	No	Si
SLU 82	0.52	9831.26	-116831	-0.0000907	0.0004492	0.0035	4.965	165911.34	214998.53	214998.53	21.87	No	Si
SLU 79	-1.58	-15601.53	-160897	-0.0001331	0.0004492	0.0035	4.965	164015.9	262168.28	262168.28	16.8	No	Si
SLU 79	0.52	9140.56	-114305	-0.0000881	0.0004492	0.0035	4.965	164950.06	211506.44	211506.44	23.14	No	Si
SLU 80	-1.58	-15593.88	-160918	-0.0001331	0.0004492	0.0035	4.965	164006.48	262181.14	262181.14	16.81	No	Si
SLU 80	0.52	9167.4	-114325	-0.0000882	0.0004492	0.0035	4.965	164957.96	211533.52	211533.52	23.07	No	Si
SLU 84	-1.58	-15761.83	-165153	-0.000137	0.0004492	0.0035	4.965	161962.61	264748.5	264748.5	16.8	No	Si
SLU 84	0.52	9863.35	-118018	-0.0000917	0.0004492	0.0035	4.965	166323.21	216640.34	216640.34	21.96	No	Si
SLU 78	-1.58	-15711.35	-161914	-0.0001341	0.0004492	0.0035	4.965	163555.2	262784.85	262784.85	16.73	No	Si
SLU 78	0.52	9239.27	-115083	-0.0000888	0.0004492	0.0035	4.965	165258.48	212581.95	212581.95	23.01	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	-1.58	45588.99	-65326	-0.0000809	0.0006738	0.0035	4.965		144042.63	144042.63	3.16		Si
SLV 4	0.52	1506.04	-45924	-0.0000312	0.0006738	0.0035	4.965		106998.43	106998.43	71.05		Si
SLV 2	-1.58	44459.41	-63613	-0.0000787	0.0006738	0.0035	4.965		140933.44	140933.44	3.17		Si
SLV 2	0.52	-4507.81	-40405	-0.0000299	0.0006738	0.0035	4.965		106791.07	106791.07	23.69		Si
SLV 16	-1.58	-66818.9	-159669	-0.0001728	0.0006738	0.0035	4.965		302247.91	302247.91	4.52		Si
SLV 16	0.52	15817.28	-115683	-0.0000919	0.0006738	0.0035	4.965		231775.05	231775.05	14.65		Si
SLD 14	-1.58	-35324.62	-131501	-0.0001211	0.0006738	0.0035	4.965		267014.07	267014.07	7.56		Si
SLD 14	0.52	7541.6	-91841	-0.0000677	0.0006738	0.0035	4.965		192176.72	192176.72	25.48		Si
SLV 15	-1.58	-66411.89	-159905	-0.0001726	0.0006738	0.0035	4.965		302475.93	302475.93	4.55		Si
SLV 15	0.52	16315.27	-115981	-0.0000926	0.0006738	0.0035	4.965		232193.22	232193.22	14.23		Si
SLD 13	-1.58	-35149.88	-131602	-0.000121	0.0006738	0.0035	4.965		267151.63	267151.63	7.6		Si
SLD 13	0.52	7755.41	-91969	-0.000068	0.0006738	0.0035	4.965		192408.45	192408.45	24.81		Si
SLV 13	-1.58	-67541.46	-158192	-0.0001722	0.0006738	0.0035	4.965		300822.27	300822.27	4.45		Si
SLV 13	0.52	10301.41	-110462	-0.0000834	0.0006738	0.0035	4.965		224431.79	224431.79	21.79		Si
SLV 1	-1.58	44866.42	-63849	-0.0000792	0.0006738	0.0035	4.965		141362.15	141362.15	3.15		Si
SLV 1	0.52	-4009.82	-40703	-0.0000297	0.0006738	0.0035	4.965		107413.79	107413.79	26.79		Si
SLV 3	-1.58	45996	-65562	-0.0000814	0.0006738	0.0035	4.965		144471.34	144471.34	3.14		Si
SLV 3	0.52	2004.03	-46222	-0.0000318	0.0006738	0.0035	4.965		107620.35	107620.35	53.7		Si
SLV 14	-1.58	-67948.47	-157956	-0.0001724	0.0006738	0.0035	4.965		300594.26	300594.26	4.42		Si
SLV 14	0.52	9803.42	-110165	-0.0000827	0.0006738	0.0035	4.965		224013.62	224013.62	22.85		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	-1.58	-15494.73	-160285	-128228	29605	4.965	4.965	-57392	10833	24204	95155	80293	25322	105615	No	3.57	Si
SLU 74	0.52	9180.34	-113876	-91101	30113	4.965	4.965	-40775	10833	24204	95155	80293	25322	105615	No	3.51	Si
SLU 83	-1.58	-15769.48	-165132	-132105	30010	4.965	4.965	-59127	10833	24204	95155	80293	25322	105615	No	3.52	Si
SLU 83	0.52	9836.51	-117998	-94399	30532	4.965	4.965	-42251	10833	24204	95155	80293	25322	105615	No	3.46	Si
SLU 84	-1.58	-15761.83	-165153	-132122	30003	4.965	4.965	-59135	10833	24204	95155	80293	25322	105615	No	3.52	Si
SLU 84	0.52	9863.35	-118018	-94414	30524	4.965	4.965	-42258	10833	24204	95155	80293	25322	105615	No	3.46	Si
SLU 79	-1.58	-15601.53	-160897	-128718	29788	4.965	4.965	-57611	10833	24204	95155	80293	25322	105615	No	3.55	Si
SLU 79	0.52	9140.56	-114305	-91444	30298	4.965	4.965	-40928	10833	24204	95155	80293	25322	105615	No	3.49	Si
SLU 82	-1.58	-15537.56	-163545	-130836	29631	4.965	4.965	-58559	10833	24204	95155	80293	25322	105615	No	3.56	Si
SLU 82	0.52	9831.26	-116831	-93464	30147	4.965	4.965	-41833	10833	24204	95155	80293	25322	105615	No	3.5	Si
SLU 80	-1.58	-15593.88	-160918	-128735	29780	4.965	4.965	-57619	10833	24204	95155	80293	25322	105615	No	3.55	Si
SLU 80	0.52	9167.4	-114325	-91460	30291	4.965	4.965	-40935	10833	24204	95155	80293	25322	105615	No	3.49	Si
SLU 81	-1.58	-15545.21	-163524	-130819	29639	4.965	4.965	-58552	10833	24204	95155	80293	25322	105615	No	3.56	Si
SLU 81	0.52	9804.42	-116811	-93449	30154	4.965	4.965	-41826	10833	24204	95155	80293	25322	105615	No	3.5	Si
SLU 75	-1.58	-15487.08	-160306	-128245	29597	4.965	4.965	-57399	10833	24204	95155	80293	25322	105615	No	3.57	Si
SLU 75	0.52	9207.18	-113896	-91117	30105	4.965	4.965	-40782	10833	24204	95155	80293	25322	105615	No	3.51	Si
SLU 78	-1.58	-15711.35	-161914	-129531	29969	4.965	4.965	-57975	10833	24204	95155	80293	25322	105615	No	3.52	Si
SLU 78	0.52	9239.27	-115083	-92066	30483	4.965	4.965	-41207	10833	24204	95155	80293	25322	105615	No	3.46	Si
SLU 77	-1.58	-15719	-161893	-129514	29976	4.965	4.965	-57968	10833	24204	95155	80293	25322	105615	No	3.52	Si
SLU 77	0.52	9212.43	-115063	-92051	30490	4.965	4.965	-41200	10833	24204	95155	80293	25322	105615	No	3.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	-1.58	13197.41	-91916	-73533	28183	4.965	4.965	-32912	16250	36307	95155	120440	25322	131462		4.66	Si
SLD 4	0.52	4052.05	-64417	-51534	28033	4.965	4.965	-23065	16250	36307	95155	120440	25322	131462		4.69	Si
SLD 2	-1.58	12701.03	-91172	-72937	29686	4.965	4.965	-32645	16250	36307	95155	120440	25322	131462		4.43	Si
SLD 2	0.52	1435.72	-62035	-49628	29926	4.965	4.965	-22212	16250	36307	95155	120440	25322	131462		4.39	Si
SLV 3	-1.58	45996	-65562	-52450	37341	4.965	4.965	-23475	16250	36307	95155	120440	25322	131462		3.52	Si
SLV 3	0.52	2004.03	-46222	-36977	36525	4.965	4.965	-16550	15810	35324	95155	120440	25322	130479		3.57	Si
SLV 6	-1.58	3871.53	-94677	-75742	32486	4.965	4.965	-33900	16250	36307	95155	120440	25322	131462		4.05	Si
SLV 6	0.52	-6426.08	-58436	-46749	34130	4.965	4.965	-20924	16250	36307	95155	120440	25322	131462		3.85	Si
SLV 4	-1.58	45588.99	-65326	-52261	37456	4.965	4.965	-23391	16250	36307	95155	120440	25322	131462		3.51	Si
SLV 4	0.52	1506.04	-45924	-36739	36641	4.965	4.965	-16444	15789	35276	95155	120440	25322	130431		3.56	Si
SLV 5	-1.58	4133.11	-94829	-75863	32412	4.965	4.965	-33955	16250	36307	95155	120440	25322	131462		4.06	Si
SLV 5	0.52	-6106.03	-58627	-46901	34056	4.965	4.965	-20992	16250	36307	95155	120440	25322	131462		3.86	Si
SLD 3	-1.58	13372.15	-92017	-73614	28133	4.965	4.965	-32948	16250	36307	95155	120440	25322	131462		4.67	Si
SLD 3	0.52	4265.85	-64545	-51636	27983	4.965	4.965	-23111	16250	36307	95155	120440	25322	131462		4.7	Si
SLD 1	-1.58	12875.78	-91273	-73018	29637	4.965	4.965	-32681	16250	36307	95155	120440	25322	131462		4.44	Si
SLD 1	0.52	1649.53	-62163	-49730	29876	4.965	4.965	-22258	16250	36307	95155	120440	25322	131462		4.4	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	-1.58	44459.41	-63613	-50890	40944	4.965	4.965	-22777	16250	36307	95155	120440	25322	131462		3.21	Si
SLV 2	0.52	-4507.81	-40405	-32324	41032	4.965	4.965	-14468	15394	34393	95155	120440	25322	129548		3.16	Si
SLV 1	-1.58	44866.42	-63849	-51079	40829	4.965	4.965	-22862	16250	36307	95155	120440	25322	131462		3.22	Si
SLV 1	0.52	-4009.82	-40703	-32562	40916	4.965	4.965	-14574	15415	34441	95155	120440	25322	129596		3.17	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-45182	0.24	361.12	9044.26	11618.3	10331.28	28.61	Si
SLV 1	-45465	0.24	361.12	9093.87	11683.74	10388.81	28.77	Si
SLV 4	-49277	0.24	361.12	9753.1	12561.07	11157.08	30.9	Si
SLV 3	-49560	0.24	361.12	9801.44	12626.12	11213.78	31.05	Si
SLV 6	-67368	0.24	361.12	12664.08	16639.81	14651.95	40.57	Si
SLV 5	-67550	0.24	361.12	12691.54	16680.02	14685.78	40.67	Si
SLV 8	-81018	0.24	361.12	14622.43	19613.4	17117.91	47.4	Si
SLV 7	-81200	0.24	361.12	14647.16	19651.36	17149.26	47.49	Si
SLV 10	-90436	0.24	361.12	15854.25	21562.53	18708.39	51.81	Si
SLV 9	-90618	0.24	361.12	15877.1	21598.52	18737.81	51.89	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-72303	-128841	-403	0.433	8295.6	0.966	6.50976	4.19835	Si
SLV 12	-72211	-128689	-401	0.433	8286.2	0.966	6.51671	4.19835	Si
SLV 15	-81009	-159905	-1326	0.386	9181.8	0.969	5.79426	3.18428	Si
SLV 16	-80866	-159669	-1323	0.387	9167.2	0.969	5.80276	3.18428	Si
SLV 7	-59528	-100538	-75	0.507	6995.8	0.96	7.67812	4.19835	Si
SLV 8	-59436	-100386	-73	0.508	6986.5	0.96	7.68817	4.19835	Si
SLV 9	-54521	-123132	-1946	0.512	6486.7	0.957	7.7735	4.19835	Si
SLV 10	-54429	-122980	-1944	0.513	6477.3	0.957	7.78455	4.19835	Si
SLV 13	-75674	-158192	-1789	0.401	8638.7	0.967	6.02483	3.18428	Si
SLV 14	-75531	-157956	-1786	0.402	8624.1	0.967	6.03431	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.717	SLU 77	Si
V_SLU	3.459	SLU 83	Si
PF_SLV	3.141	SLV 3	Si
V_SLV	3.157	SLV 2	Si
PFFP_SLV	28.609	SLV 2	Si
R_SLV	1.551	SLV 11	Si

Maschio 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.958	3.431	-9.728	3.431	L2	L4	4.23	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	-1.58	19769.63	-43999	-0.000084	0.0004492	0.0035	4.23	66652.02	78612.65	78612.65	3.98	No	Si
SLU 81	0.52	19524.79	-21063	-0.0000566	0.0004492	0.0035	4.23	38496.08	42570.39	42570.39	2.18	No	Si
SLU 42	-1.58	17106.51	-37032	-0.0000706	0.0004492	0.0035	4.23	59616.45	67952.04	67952.04	3.97	No	Si
SLU 42	0.52	17041.41	-17884	-0.0000488	0.0004492	0.0035	4.23	33461.66	36827.09	36827.09	2.16	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 36	-1.58	16541.42	-36109	-0.0000684	0.0004492	0.0035	4.23	58585.25	66540.05	66540.05	4.02	No	Si
SLU 36	0.52	16426.94	-17386	-0.000047	0.0004492	0.0035	4.23	32649.09	35909.29	35909.29	2.19	No	Si
SLU 41	-1.58	17100.48	-37051	-0.0000706	0.0004492	0.0035	4.23	59638.03	67981.94	67981.94	3.98	No	Si
SLU 41	0.52	17060.15	-17899	-0.0000489	0.0004492	0.0035	4.23	33486.8	36855.62	36855.62	2.16	No	Si
SLU 82	-1.58	19775.67	-43980	-0.000084	0.0004492	0.0035	4.23	66634.13	78582.75	78582.75	3.97	No	Si
SLU 82	0.52	19506.05	-21047	-0.0000565	0.0004492	0.0035	4.23	38472.27	42542.89	42542.89	2.18	No	Si
SLU 84	-1.58	19972.6	-44341	-0.0000848	0.0004492	0.0035	4.23	66963.1	79135.67	79135.67	3.96	No	Si
SLU 84	0.52	19727.01	-21237	-0.0000572	0.0004492	0.0035	4.23	38763.8	42880.07	42880.07	2.17	No	Si
SLU 40	-1.58	16909.58	-36670	-0.0000698	0.0004492	0.0035	4.23	59215.41	67399.12	67399.12	3.99	No	Si
SLU 40	0.52	16820.45	-17694	-0.0000482	0.0004492	0.0035	4.23	33152.79	36477.33	36477.33	2.17	No	Si
SLU 83	-1.58	19966.57	-44361	-0.0000849	0.0004492	0.0035	4.23	66980.79	79165.57	79165.57	3.96	No	Si
SLU 83	0.52	19745.75	-21252	-0.0000572	0.0004492	0.0035	4.23	38787.53	42907.57	42907.57	2.17	No	Si
SLU 39	-1.58	16903.54	-36690	-0.0000698	0.0004492	0.0035	4.23	59237.19	67429.03	67429.03	3.99	No	Si
SLU 39	0.52	16839.19	-17710	-0.0000482	0.0004492	0.0035	4.23	33178.01	36505.85	36505.85	2.17	No	Si
SLU 35	-1.58	16535.39	-36128	-0.0000685	0.0004492	0.0035	4.23	58607.33	66569.95	66569.95	4.03	No	Si
SLU 35	0.52	16445.67	-17402	-0.0000471	0.0004492	0.0035	4.23	32674.44	35937.81	35937.81	2.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	-1.58	48080.83	-18750	-0.0095547	0.0006738	0.0035	4.23		39114.8	39114.8	0.81		No
SLV 14	0.52	21274.83	-10444	-0.0004088	0.0006738	0.0035	4.23		23069.24	23069.24	1.08		Si
SLV 13	-1.58	47727.1	-18938	-0.0091235	0.0006738	0.0035	4.23		39467.17	39467.17	0.83		No
SLV 13	0.52	21089.86	-10458	-0.0003463	0.0006738	0.0035	4.23		23096.8	23096.8	1.1		Si
SLV 9	-1.58	23929.31	-27170	-0.0000697	0.0006738	0.0035	4.23		54628.78	54628.78	2.28		Si
SLV 9	0.52	16887.85	-14074	-0.0000481	0.0006738	0.0035	4.23		30168.48	30168.48	1.79		Si
SLV 10	-1.58	24156.65	-27050	-0.0000701	0.0006738	0.0035	4.23		54413.31	54413.31	2.25		Si
SLV 10	0.52	17006.73	-14065	-0.0000486	0.0006738	0.0035	4.23		30151.04	30151.04	1.77		Si
SLV 15	-1.58	47359.63	-18749	-0.0090919	0.0006738	0.0035	4.23		39114.11	39114.11	0.83		No
SLV 15	0.52	19973.78	-9847	-0.0003529	0.0006738	0.0035	4.23		21895.81	21895.81	1.1		Si
SLD 13	-1.58	27858.87	-25427	-0.0000794	0.0006738	0.0035	4.23		51471.89	51471.89	1.85		Si
SLD 13	0.52	16328.55	-12676	-0.0000479	0.0006738	0.0035	4.23		27461.42	27461.42	1.68		Si
SLD 14	-1.58	28010.74	-25346	-0.00008	0.0006738	0.0035	4.23		51325.5	51325.5	1.83		Si
SLD 14	0.52	16407.97	-12670	-0.0000483	0.0006738	0.0035	4.23		27449.59	27449.59	1.67		Si
SLD 16	-1.58	27855.72	-25261	-0.0000795	0.0006738	0.0035	4.23		51170.54	51170.54	1.84		Si
SLD 16	0.52	15921.19	-12403	-0.0000466	0.0006738	0.0035	4.23		26924.53	26924.53	1.69		Si
SLV 16	-1.58	47713.35	-18561	-0.0095229	0.0006738	0.0035	4.23		38761.75	38761.75	0.81		No
SLV 16	0.52	20158.75	-9833	-0.0004199	0.0006738	0.0035	4.23		21867.9	21867.9	1.08		Si
SLD 15	-1.58	27703.86	-25342	-0.000079	0.0006738	0.0035	4.23		51316.93	51316.93	1.85		Si
SLD 15	0.52	15841.77	-12409	-0.0000462	0.0006738	0.0035	4.23		26936.36	26936.36	1.7		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-1.58	19242.33	-43220	-31433	-16296	4.23	4.23	-24770	10833	13748	95155	45605	21573	67178	No	4.12	Si
SLU 79	0.52	19004.98	-20648	-15017	-16246	4.23	3.5837	-11834	9911	10656	95155	45605	21573	67178	No	4.13	Si
SLU 74	-1.58	19204.54	-43077	-31328	-16207	4.23	4.23	-24687	10833	13748	95155	45605	21573	67178	No	4.14	Si
SLU 74	0.52	18910.31	-20565	-14957	-16159	4.23	3.5864	-11786	9905	10657	95155	45605	21573	67178	No	4.16	Si
SLU 77	-1.58	19401.48	-43438	-31591	-16392	4.23	4.23	-24895	10833	13748	95155	45605	21573	67178	No	4.1	Si
SLU 77	0.52	19131.27	-20755	-15094	-16343	4.23	3.5797	-11895	9919	10652	95155	45605	21573	67178	No	4.11	Si
SLU 81	-1.58	19769.63	-43999	-32000	-16659	4.23	4.23	-25216	10833	13748	95155	45605	21573	67178	No	4.03	Si
SLU 81	0.52	19524.79	-21063	-15318	-16610	4.23	3.564	-12071	9943	10631	95155	45605	21573	67178	No	4.04	Si
SLU 84	-1.58	19972.6	-44341	-32248	-16828	4.23	4.23	-25412	10833	13748	95155	45605	21573	67178	No	3.99	Si
SLU 84	0.52	19727.01	-21237	-15445	-16778	4.23	3.5583	-12171	9956	10628	95155	45605	21573	67178	No	4	Si
SLU 78	-1.58	19407.51	-43418	-31577	-16376	4.23	4.23	-24883	10833	13748	95155	45605	21573	67178	No	4.1	Si
SLU 78	0.52	19112.53	-20739	-15083	-16327	4.23	3.5803	-11886	9918	10653	95155	45605	21573	67178	No	4.11	Si
SLU 82	-1.58	19775.67	-43980	-31985	-16643	4.23	4.23	-25205	10833	13748	95155	45605	21573	67178	No	4.04	Si
SLU 82	0.52	19506.05	-21047	-15307	-16595	4.23	3.5647	-12062	9942	10632	95155	45605	21573	67178	No	4.05	Si
SLU 83	-1.58	19966.57	-44361	-32262	-16844	4.23	4.23	-25424	10833	13748	95155	45605	21573	67178	No	3.99	Si
SLU 83	0.52	19745.75	-21252	-15456	-16794	4.23	3.5576	-12180	9957	10627	95155	45605	21573	67178	No	4	Si
SLU 75	-1.58	19210.58	-43057	-31314	-16192	4.23	4.23	-24676	10833	13748	95155	45605	21573	67178	No	4.15	Si
SLU 75	0.52	18891.57	-20550	-14945	-16143	4.23	3.5871	-11777	9904	10658	95155	45605	21573	67178	No	4.16	Si
SLU 80	-1.58	19248.37	-43200	-31419	-16280	4.23	4.23	-24758	10833	13748	95155	45605	21573	67178	No	4.13	Si
SLU 80	0.52	18986.24	-20633	-15006	-16231	4.23	3.5844	-11825	9910	10656	95155	45605	21573	67178	No	4.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	-1.58	-1814.45	-35229	-25621	-19915	4.23	4.23	-20190	16250	20621	95155	68407	21573	89980		4.52	Si
SLD 1	0.52	9507	-16192	-11776	-19642	4.23	4.23	-9280	14356	18218	95155	68407	21573	89980		4.58	Si
SLV 3	-1.58	-22039.56	-41740	-30356	-30954	4.23	4.23	-23922	16250	20621	95155	68407	21573	89980		2.91	Si
SLV 3	0.52	4153.36	-18152	-13201	-31002	4.23	4.23	-10403	14581	18503	95155	68407	21573	89980		2.9	Si
SLV 5	-1.58	3109.56	-34068	-24776	-18595	4.23	4.23	-19524	16250	20621	95155	68407	21573	89980		4.84	Si
SLV 5	0.52	12141.73	-16565	-12048	-17430	4.23	4.1461	-9494	14399	17910	95155	68407	21573	89980		5.16	Si
SLV 2	-1.58	-21318.35	-41740	-30357	-31541	4.23	4.23	-23922	16250	20621	95155	68407	21573	89980		2.85	Si
SLV 2	0.52	5454.41	-18748	-13635	-30952	4.23	4.23	-10745	14649	18590	95155	68407	21573	89980		2.91	Si
SLD 3	-1.58	-1969.46	-35144	-25559	-19550	4.23	4.23	-20141	16250	20621	95155	68407	21573	89980		4.6	Si
SLD 3	0.52	9020.22	-15925	-11582	-19551	4.23	4.23	-9127	14325	18179	95155	68407	21573	89980		4.6	Si
SLV 4	-1.58	-21685.83	-41552	-30220	-30699	4.23	4.23	-23814	16250	20621	95155	68407	21573	89980		2.93	Si
SLV 4	0.52	4338.33	-18138	-13191	-30746	4.23	4.23	-10395	14579	18501	95155	68407	21573	89980		2.93	Si
SLD 2	-1.58	-1662.58	-35148	-25562	-19805	4.23	4.23	-20144	16250	20621	95155	68407	21573	89980		4.54	Si
SLD 2	0.52	9586.42	-16186	-11771	-19533	4.23	4.23	-9276	14355	18217	95155	68407	21573	89980		4.61	Si
SLV 6	-1.58	3336.89	-33947	-24689	-18431	4.23	4.23	-19455	16250	20621	95155	68407	21573	89980		4.88	Si
SLV 6	0.52	12260.61	-16556	-12041	-17266	4.23	4.1234	-9489	14398	17810	95155	68407	21573	89980		5.21	Si
SLV 1	-1.58	-21672.08	-41928	-30493	-31796	4.23	4.23	-24029	16250	20621	95155	68407	21573	89980		2.83	Si
SLV 1	0.52	5269.44	-18762	-13645	-31208	4.23	4.23	-10753	14651	18592	95155	68407	21573	89980		2.88	Si
SLD 4	-1.58	-1817.6	-35063	-25500	-19440	4.23	4.23	-20095	16250	20621	95155	68407	21573	89980		4.63	Si
SLD 4	0.52	9099.64	-15919	-11577	-19441	4.23	4.23	-9123	14325	18178	95155	68407	21573	89980		4.63	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-12580	0.24	205.11	1784.96	2633.7	2209.33	10.77	Si
SLV 15	-12633	0.24	205.11	1791.96	2642.22	2217.09	10.81	Si
SLV 14	-13060	0.24	205.11	1849.04	2711.84	2280.44	11.12	Si
SLV 13	-13113	0.24	205.11	1856.01	2720.36	2288.18	11.16	Si
SLV 12	-16196	0.24	205.11	2260.26	3221.69	2740.97	13.36	Si
SLV 11	-16230	0.24	205.11	2264.6	3227.12	2745.86	13.39	Si
SLV 10	-17797	0.24	205.11	2465.23	3479.56	2972.4	14.49	Si
SLV 9	-17830	0.24	205.11	2469.51	3484.97	2977.24	14.52	Si
SLV 8	-19768	0.24	205.11	2713.15	3796.89	3255.02	15.87	Si
SLV 7	-19801	0.24	205.11	2717.34	3802.31	3259.82	15.89	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-4547	-33947	940	2.946	1029.2	0.891	48.05848	5.75967	Si
SLV 5	-4537	-34068	940	2.95	1028.2	0.891	48.12274	5.75967	Si
SLV 10	-4027	-27050	895	3.155	980.4	0.89	51.54917	5.75967	Si
SLV 9	-4017	-27170	895	3.16	979.4	0.89	51.62225	5.75967	Si
SLV 8	-3813	-33319	-869	3.252	960.5	0.889	53.14201	5.75967	Si
SLV 7	-3802	-33440	-869	3.256	959.6	0.889	53.21897	5.75967	Si
SLV 12	-3292	-26422	-914	3.494	913	0.889	57.12522	5.75967	Si
SLV 11	-3282	-26543	-914	3.499	912.1	0.889	57.2131	5.75967	Si
SLV 2	-4900	-41740	359	2.893	1062.6	0.892	47.12937	3.72098	Si
SLV 1	-4884	-41928	359	2.899	1061.1	0.892	47.22379	3.72098	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.16	SLU 41	Si
V_SLU	3.988	SLU 83	Si
PF_SLV	0.812	SLV 16	No
V_SLV	2.83	SLV 1	Si
PFFP_SLV	10.771	SLV 16	Si
R_SLV	8.344	SLV 6	Si

Maschio 29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.768	6.576	-12.888	6.576	L2	L4	3.88	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	0.42	987.34	-61605	-0.0000593	0.0003743	0.0035	3.88	78095.47	89494.09	89494.09	90.64	No	Si
SLU 82	0.82	-5246.97	-65287	-0.0000699	0.0003743	0.0035	3.88	80139.2	94893.41	94893.41	18.09	No	Si
SLU 78	0.42	988.63	-60853	-0.0000585	0.0003743	0.0035	3.88	77641.52	88763.02	88763.02	89.78	No	Si
SLU 78	0.82	-5150.66	-64538	-0.0000689	0.0003743	0.0035	3.88	79747.44	94233.5	94233.5	18.3	No	Si
SLU 79	0.42	865.57	-60189	-0.0000577	0.0003743	0.0035	3.88	77230.13	88010.38	88010.38	101.68	No	Si
SLU 79	0.82	-5236.54	-63813	-0.0000683	0.0003743	0.0035	3.88	79356.66	93598.87	93598.87	17.87	No	Si
SLU 81	0.42	872.25	-61485	-0.000059	0.0003743	0.0035	3.88	78023.48	89379.56	89379.56	102.47	No	Si
SLU 81	0.82	-5380.89	-65149	-0.0000699	0.0003743	0.0035	3.88	80068.17	94771.9	94771.9	17.61	No	Si
SLU 74	0.42	876.55	-60071	-0.0000576	0.0003743	0.0035	3.88	77156.51	87871.43	87871.43	100.25	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	0.82	-5242.98	-63685	-0.0000681	0.0003743	0.0035	3.88	79286.47	93487.21	93487.21	17.83	No	Si
SLU 83	0.42	869.23	-62146	-0.0000597	0.0003743	0.0035	3.88	78414.13	89991.47	89991.47	103.53	No	Si
SLU 83	0.82	-5422.49	-65864	-0.0000708	0.0003743	0.0035	3.88	80433.01	95405.24	95405.24	17.59	No	Si
SLU 62	0.42	869.6	-56047	-0.0000534	0.0003743	0.0035	3.88	74449.27	83147.72	83147.72	95.62	No	Si
SLU 62	0.82	-4910.32	-59387	-0.0000631	0.0003743	0.0035	3.88	76721.04	89804.27	89804.27	18.29	No	Si
SLU 75	0.42	991.65	-60192	-0.0000579	0.0003743	0.0035	3.88	77232.21	88014.31	88014.31	88.76	No	Si
SLU 75	0.82	-5109.06	-63823	-0.0000681	0.0003743	0.0035	3.88	79361.89	93607.22	93607.22	18.32	No	Si
SLU 84	0.42	984.32	-62267	-0.00006	0.0003743	0.0035	3.88	78484.38	90082.26	90082.26	91.52	No	Si
SLU 84	0.82	-5288.57	-66002	-0.0000707	0.0003743	0.0035	3.88	80501.89	95527.47	95527.47	18.06	No	Si
SLU 77	0.42	873.53	-60733	-0.0000582	0.0003743	0.0035	3.88	77567.56	88641.95	88641.95	101.48	No	Si
SLU 77	0.82	-5284.58	-64400	-0.000069	0.0003743	0.0035	3.88	79674.16	94112.77	94112.77	17.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	0.42	-15492.13	-47010	-0.0000644	0.0005615	0.0035	3.88		82696.97	82696.97	5.34		Si
SLV 2	0.82	-11066.14	-51456	-0.0000623	0.0005615	0.0035	3.88		88935.76	88935.76	8.04		Si
SLD 16	0.42	7946.27	-38272	-0.0000452	0.0005615	0.0035	3.88		65407.45	65407.45	8.23		Si
SLD 16	0.82	-276.78	-39818	-0.0000359	0.0005615	0.0035	3.88		72237.73	72237.73	260.99		Si
SLV 15	0.42	16831.77	-34964	-0.0000547	0.0005615	0.0035	3.88		60678.73	60678.73	3.61		Si
SLV 15	0.82	3876.47	-35429	-0.0000369	0.0005615	0.0035	3.88		61341.53	61341.53	15.82		Si
SLV 13	0.42	14597.07	-32040	-0.0000488	0.0005615	0.0035	3.88		56529.97	56529.97	3.87		Si
SLV 13	0.82	2640.14	-32761	-0.0000327	0.0005615	0.0035	3.88		57551.39	57551.39	21.8		Si
SLV 4	0.42	-13257.42	-49934	-0.000064	0.0005615	0.0035	3.88		86789.82	86789.82	6.55		Si
SLV 4	0.82	-9829.81	-54124	-0.0000631	0.0005615	0.0035	3.88		92493.81	92493.81	9.41		Si
SLV 16	0.42	17697.85	-34627	-0.0000556	0.0005615	0.0035	3.88		60199.58	60199.58	3.4		Si
SLV 16	0.82	4167.6	-34968	-0.0000368	0.0005615	0.0035	3.88		60685.42	60685.42	14.56		Si
SLV 1	0.42	-16358.2	-47347	-0.000066	0.0005615	0.0035	3.88		83166.37	83166.37	5.08		Si
SLV 1	0.82	-11357.26	-51917	-0.0000632	0.0005615	0.0035	3.88		89571.84	89571.84	7.89		Si
SLV 14	0.42	15463.14	-31703	-0.0000497	0.0005615	0.0035	3.88		56053.81	56053.81	3.62		Si
SLV 14	0.82	2931.27	-32301	-0.0000327	0.0005615	0.0035	3.88		56899.06	56899.06	19.41		Si
SLV 12	0.42	9315.93	-43455	-0.0000521	0.0005615	0.0035	3.88		72884.4	72884.4	7.82		Si
SLV 12	0.82	658.88	-44867	-0.0000411	0.0005615	0.0035	3.88		74935.98	74935.98	113.73		Si
SLV 3	0.42	-14123.5	-50271	-0.0000656	0.0005615	0.0035	3.88		87263.58	87263.58	6.18		Si
SLV 3	0.82	-10120.93	-54584	-0.000064	0.0005615	0.0035	3.88		93101.27	93101.27	9.2		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	0.42	991.65	-60192	-53504	12102	3.88	3.88	-30644	10833	18915	33304	52283	9894	52219	No	4.31	Si
SLU 75	0.82	-5109.06	-63823	-56731	12179	3.88	3.88	-32492	10833	18915	33304	52283	9894	52219	No	4.29	Si
SLU 80	0.42	980.66	-60309	-53608	12052	3.88	3.88	-30704	10833	18915	33304	52283	9894	52219	No	4.33	Si
SLU 80	0.82	-5102.63	-63951	-56845	12129	3.88	3.88	-32557	10833	18915	33304	52283	9894	52219	No	4.31	Si
SLU 79	0.42	865.57	-60189	-53501	12109	3.88	3.88	-30642	10833	18915	33304	52283	9894	52219	No	4.31	Si
SLU 79	0.82	-5236.54	-63813	-56723	12186	3.88	3.88	-32487	10833	18915	33304	52283	9894	52219	No	4.29	Si
SLU 84	0.42	984.32	-62267	-55348	12471	3.88	3.88	-31700	10833	18915	33304	52283	9894	52219	No	4.19	Si
SLU 84	0.82	-5288.57	-66002	-58668	12550	3.88	3.88	-33602	10833	18915	33304	52283	9894	52219	No	4.16	Si
SLU 82	0.42	987.34	-61605	-54760	12407	3.88	3.88	-31363	10833	18915	33304	52283	9894	52219	No	4.21	Si
SLU 82	0.82	-5246.97	-65287	-58033	12484	3.88	3.88	-33237	10833	18915	33304	52283	9894	52219	No	4.18	Si
SLU 78	0.42	988.63	-60853	-54092	12167	3.88	3.88	-30980	10833	18915	33304	52283	9894	52219	No	4.29	Si
SLU 78	0.82	-5150.66	-64538	-57367	12245	3.88	3.88	-32856	10833	18915	33304	52283	9894	52219	No	4.26	Si
SLU 81	0.42	872.25	-61485	-54653	12463	3.88	3.88	-31302	10833	18915	33304	52283	9894	52219	No	4.19	Si
SLU 81	0.82	-5380.89	-65149	-57910	12541	3.88	3.88	-33167	10833	18915	33304	52283	9894	52219	No	4.16	Si
SLU 77	0.42	873.53	-60733	-53985	12224	3.88	3.88	-30919	10833	18915	33304	52283	9894	52219	No	4.27	Si
SLU 77	0.82	-5284.58	-64400	-57245	12302	3.88	3.88	-32786	10833	18915	33304	52283	9894	52219	No	4.24	Si
SLU 83	0.42	869.23	-62146	-55241	12528	3.88	3.88	-31639	10833	18915	33304	52283	9894	52219	No	4.17	Si
SLU 83	0.82	-5422.49	-65864	-58546	12607	3.88	3.88	-33532	10833	18915	33304	52283	9894	52219	No	4.14	Si
SLU 74	0.42	876.55	-60071	-53397	12159	3.88	3.88	-30582	10833	18915	33304	52283	9894	52219	No	4.29	Si
SLU 74	0.82	-5242.98	-63685	-56609	12236	3.88	3.88	-32422	10833	18915	33304	52283	9894	52219	No	4.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	0.42	1866.91	-33710	-29964	19099	3.88	3.88	-17162	13849	24180	33304	78424	9894	57485		3.01	Si
SLV 10	0.82	-3462.22	-35975	-31978	18981	3.88	3.88	-18315	14080	24583	33304	78424	9894	57887		3.05	Si
SLV 15	0.42	16831.77	-34964	-31079	31481	3.88	3.88	-17800	13977	24403	33304	78424	9894	57708		1.83	Si
SLV 15	0.82	3876.47	-35429	-31492	31237	3.88	3.88	-18037	14024	24486	33304	78424	9894	57790		1.85	Si
SLD 14	0.42	6980.27	-37013	-32900	19652	3.88	3.88	-18843	14185	24768	33304	78424	9894	58072		2.96	Si
SLD 14	0.82	-807.34	-38673	-34376	19558	3.88	3.88	-19688	14354	25063	33304	78424	9894	58367		2.98	Si
SLV 13	0.42	14597.07	-32040	-28480	33153	3.88	3.88	-16312	13679	23883	33304	78424	9894	57188		1.72	Si
SLV 13	0.82	2640.14	-32761	-29121	32864	3.88	3.88	-16679	13752	24012	33304	78424	9894	57316		1.74	Si
SLD 15	0.42	7574.44	-38417	-34148	18278	3.88	3.88	-19558	14328	25017	33304	78424	9894	58321		3.19	Si
SLD 15	0.82	-401.77	-40016	-35570	18203	3.88	3.88	-20372	14491	25301	33304	78424	9894	58606		3.22	Si
SLV 14	0.42	15463.14	-31703	-28181	34661	3.88	3.88	-16140	13645	23824	33304	78424	9894	57128		1.65	Si
SLV 14	0.82	2931.27	-32301	-28712	34373	3.88	3.88	-16444	13706	23930	33304	78424	9894	57234		1.67	Si
SLD 16	0.42	7946.27	-38272	-34020	18926	3.88	3.88	-19484	14314	24991	33304	78424	9894	58296		3.08	Si
SLD 16	0.82	-276.78	-39818	-35394	18850	3.88	3.88	-20271	14471	25266	33304	78424	9894	58571		3.11	Si
SLD 13	0.42	6608.44	-37157	-33029	19004	3.88	3.88	-18917	14200	24793	33304	78424	9894	58098		3.06	Si
SLD 13	0.82	-932.33	-38871	-34552	18910	3.88	3.88	-19789	14374	25098	33304	78424	9894	58402		3.09	Si
SLV 16	0.42	17697.85	-34627	-30779	32989	3.88	3.88	-17629	13942	24343	33304	78424	9894	57648		1.75	Si
SLV 16	0.82	4167.6	-34968	-31083	32745	3.88	3.88	-17802	13977	24404	33304	78424	9894	57708		1.76	Si
SLV 9	0.42	1310.29	-33926	-30157	18129	3.88	3.88	-17272	13871	24219	33304	78424	9894	57523		3.17	Si
SLV 9	0.82	-3649.32	-36271	-32241	18012	3.88	3.88	-18466	14110	24636	33304	78424	9894	57940		3.22	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.24	15960	-27866	282.21	5614.58	19.9	Si
SLV 13	179667	0.24	16137	-28174	282.21	5669.4	20.09	Si
SLV 10	179667	0.24	17092	-29843	282.21	5963.24	21.13	Si
SLV 9	179667	0.24	17206	-30042	282.21	5997.83	21.25	Si
SLV 16	179667	0.24	17583	-30699	282.21	6112.07	21.66	Si
SLV 15	179667	0.24	17759	-31008	282.21	6165.42	21.85	Si
SLV 6	179667	0.24	19659	-34325	282.21	6728.88	23.84	Si
SLV 5	179667	0.24	19773	-34523	282.21	6761.97	23.96	Si
SLV 12	179667	0.24	22502	-39288	282.21	7537.33	26.71	Si
SLV 11	179667	0.24	22615	-39486	282.21	7568.76	26.82	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-47315	-31392	302	0.496	5547.9	0.961	7.50327	4.19835	Si
SLV 8	-47025	-31272	291	0.499	5518.5	0.961	7.54353	4.19835	Si
SLV 11	-43953	-28350	272	0.526	5206	0.958	7.97138	4.19835	Si
SLV 12	-43663	-28229	261	0.529	5176.6	0.958	8.01743	4.19835	Si
SLV 5	-37346	-27402	2987	0.532	4534.5	0.953	8.11078	4.19835	Si
SLV 6	-37056	-27281	2976	0.535	4505.1	0.953	8.16532	4.19835	Si
SLV 9	-33984	-24359	2957	0.572	4193.1	0.95	8.75833	4.19835	Si
SLV 10	-33694	-24239	2947	0.576	4163.7	0.949	8.82289	4.19835	Si
SLV 3	-47828	-33579	1279	0.473	5600.2	0.961	7.15696	3.18428	Si
SLV 4	-47378	-33391	1263	0.477	5554.3	0.961	7.21607	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.594	SLU 83	Si
V_SLU	4.142	SLU 83	Si
PF_SLV	3.402	SLV 16	Si
V_SLV	1.648	SLV 14	Si
PFFP_SLV	19.895	SLV 14	Si
R_SLV	1.787	SLV 7	Si

Maschio 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	-1.476	L2	L3	3.308	0.3	1.98	1.98	1.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	-1.58	-20097.16	-59144	-0.0001794	0.0003743	0.0035	3.3082	40567.88	59018.38	59018.38	2.94	No	Si
SLU 74	0.4	181.52	-56739	-0.0000989	0.0003743	0.0035	3.3082	41152.1	56845.18	56845.18	313.17	No	Si
SLU 75	-1.58	-20078.93	-59134	-0.0001793	0.0003743	0.0035	3.3082	40570.7	59015.95	59015.95	2.94	No	Si
SLU 75	0.4	169.91	-56744	-0.0000989	0.0003743	0.0035	3.3082	41151.01	56847	56847	334.58	No	Si
SLU 77	-1.58	-20307.5	-59793	-0.000182	0.0003743	0.0035	3.3082	40377.92	59177.64	59177.64	2.91	No	Si
SLU 77	0.4	169.42	-57477	-0.0001004	0.0003743	0.0035	3.3082	40992.86	57096.79	57096.79	337	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-1.58	-20289.26	-59783	-0.0001819	0.0003743	0.0035	3.3082	40380.95	59175.16	59175.16	2.92	No	Si
SLU 78	0.4	157.81	-57483	-0.0001004	0.0003743	0.0035	3.3082	40991.64	57098.63	57098.63	361.81	No	Si
SLU 80	-1.58	-20153.55	-59398	-0.0001803	0.0003743	0.0035	3.3082	40495.25	59080.26	59080.26	2.93	No	Si
SLU 80	0.4	168.22	-57056	-0.0000996	0.0003743	0.0035	3.3082	41085.84	56953.04	56953.04	338.57	No	Si
SLU 82	-1.58	-20555.74	-60355	-0.0001845	0.0003743	0.0035	3.3082	40202.11	59318.3	59318.3	2.89	No	Si
SLU 82	0.4	371.63	-57964	-0.0001022	0.0003743	0.0035	3.3082	40878.23	57263.79	57263.79	154.09	No	Si
SLU 84	-1.58	-20766.07	-61003	-0.0001872	0.0003743	0.0035	3.3082	39986.43	59483.56	59483.56	2.86	No	Si
SLU 84	0.4	359.54	-58702	-0.0001037	0.0003743	0.0035	3.3082	40689.37	57519.3	57519.3	159.98	No	Si
SLU 83	-1.58	-20784.31	-61013	-0.0001873	0.0003743	0.0035	3.3082	39983	59486.13	59486.13	2.86	No	Si
SLU 83	0.4	371.15	-58697	-0.0001037	0.0003743	0.0035	3.3082	40690.81	57517.43	57517.43	154.97	No	Si
SLU 79	-1.58	-20171.79	-59408	-0.0001804	0.0003743	0.0035	3.3082	40492.35	59082.71	59082.71	2.93	No	Si
SLU 79	0.4	179.83	-57051	-0.0000996	0.0003743	0.0035	3.3082	41086.99	56951.21	56951.21	316.7	No	Si
SLU 81	-1.58	-20573.98	-60365	-0.0001846	0.0003743	0.0035	3.3082	40198.89	59320.82	59320.82	2.88	No	Si
SLU 81	0.4	383.24	-57958	-0.0001022	0.0003743	0.0035	3.3082	40879.54	57261.94	57261.94	149.42	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	-1.58	-17157.41	-43684	-0.0001224	0.0005615	0.0035	3.3082		59992.62	59992.62	3.5		Si
SLV 10	0.4	2177.47	-37237	-0.0000651	0.0005615	0.0035	3.3082		50214.07	50214.07	23.06		Si
SLD 6	-1.58	-16132.55	-43233	-0.0001183	0.0005615	0.0035	3.3082		59563.66	59563.66	3.69		Si
SLD 6	0.4	473.59	-39598	-0.000064	0.0005615	0.0035	3.3082		52544.76	52544.76	110.95		Si
SLV 9	-1.58	-17006.02	-43372	-0.0001213	0.0005615	0.0035	3.3082		59701.06	59701.06	3.51		Si
SLV 9	0.4	2290.39	-36814	-0.0000647	0.0005615	0.0035	3.3082		49799.42	49799.42	21.74		Si
SLD 2	-1.58	-15797.81	-43304	-0.0001174	0.0005615	0.0035	3.3082		59634.04	59634.04	3.77		Si
SLD 2	0.4	-607.58	-41359	-0.0000674	0.0005615	0.0035	3.3082		57685.76	57685.76	94.94		Si
SLD 1	-1.58	-15696.68	-43095	-0.0001167	0.0005615	0.0035	3.3082		59427.85	59427.85	3.79		Si
SLD 1	0.4	-532.14	-41077	-0.0000667	0.0005615	0.0035	3.3082		57402.21	57402.21	107.87		Si
SLV 2	-1.58	-18272.12	-46152	-0.0001306	0.0005615	0.0035	3.3082		62288.11	62288.11	3.41		Si
SLV 2	0.4	-1374.7	-44516	-0.0000752	0.0005615	0.0035	3.3082		60761.44	60761.44	44.2		Si
SLV 6	-1.58	-18964.76	-45909	-0.0001324	0.0005615	0.0035	3.3082		62060	62060	3.27		Si
SLV 6	0.4	1118.44	-40416	-0.0000673	0.0005615	0.0035	3.3082		53358.54	53358.54	47.71		Si
SLV 5	-1.58	-18813.37	-45597	-0.0001313	0.0005615	0.0035	3.3082		61767.77	61767.77	3.28		Si
SLV 5	0.4	1231.36	-39993	-0.000067	0.0005615	0.0035	3.3082		52937.69	52937.69	42.99		Si
SLD 5	-1.58	-16066.45	-43096	-0.0001179	0.0005615	0.0035	3.3082		59428.8	59428.8	3.7		Si
SLD 5	0.4	522.89	-39413	-0.0000639	0.0005615	0.0035	3.3082		52361.61	52361.61	100.14		Si
SLV 1	-1.58	-18036.57	-45666	-0.000129	0.0005615	0.0035	3.3082		61832.88	61832.88	3.43		Si
SLV 1	0.4	-1199	-43858	-0.0000735	0.0005615	0.0035	3.3082		60153.06	60153.06	50.17		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	-1.58	-20307.5	-59793	-50352	629	3.3082	3.3082	-50734	10833	10752	21410	29719	8436	32162	No	51.17	Si
SLU 77	0.4	169.42	-57477	-48402	7596	3.3082	3.3082	-48769	10833	10752	21410	29719	8436	32162	No	4.23	Si
SLU 72	-1.58	-18233.56	-54137	-45589	1290	3.3082	3.3082	-45935	10833	10752	21410	29719	8436	32162	No	24.92	Si
SLU 72	0.4	-249.98	-51493	-43362	7694	3.3082	3.3082	-43691	10833	10752	21410	29719	8436	32162	No	4.18	Si
SLU 68	-1.58	-18011.07	-53482	-45038	1281	3.3082	3.3082	-45379	10833	10752	21410	29719	8436	32162	No	25.11	Si
SLU 68	0.4	-245.63	-50758	-42743	7595	3.3082	3.3082	-43068	10833	10752	21410	29719	8436	32162	No	4.23	Si
SLU 80	-1.58	-20153.55	-59398	-50019	703	3.3082	3.3082	-50399	10833	10752	21410	29719	8436	32162	No	45.74	Si
SLU 80	0.4	168.22	-57056	-48047	7620	3.3082	3.3082	-48412	10833	10752	21410	29719	8436	32162	No	4.22	Si
SLU 70	-1.58	-18369.27	-54522	-45914	1272	3.3082	3.3082	-46262	10833	10752	21410	29719	8436	32162	No	25.28	Si
SLU 70	0.4	-260.38	-51919	-43721	7727	3.3082	3.3082	-44053	10833	10752	21410	29719	8436	32162	No	4.16	Si
SLU 78	-1.58	-20289.26	-59783	-50343	685	3.3082	3.3082	-50725	10833	10752	21410	29719	8436	32162	No	46.97	Si
SLU 78	0.4	157.81	-57483	-48407	7653	3.3082	3.3082	-48774	10833	10752	21410	29719	8436	32162	No	4.2	Si
SLU 71	-1.58	-18251.79	-54147	-45598	1234	3.3082	3.3082	-45944	10833	10752	21410	29719	8436	32162	No	26.06	Si
SLU 71	0.4	-238.37	-51487	-43358	7637	3.3082	3.3082	-43687	10833	10752	21410	29719	8436	32162	No	4.21	Si
SLU 67	-1.58	-18158.94	-53874	-45368	1225	3.3082	3.3082	-45712	10833	10752	21410	29719	8436	32162	No	26.26	Si
SLU 67	0.4	-248.29	-51181	-43099	7590	3.3082	3.3082	-43426	10833	10752	21410	29719	8436	32162	No	4.24	Si
SLU 69	-1.58	-18387.51	-54532	-45922	1216	3.3082	3.3082	-46271	10833	10752	21410	29719	8436	32162	No	26.45	Si
SLU 69	0.4	-248.77	-51914	-43717	7670	3.3082	3.3082	-44049	10833	10752	21410	29719	8436	32162	No	4.19	Si
SLU 79	-1.58	-20171.79	-59408	-50027	647	3.3082	3.3082	-50407	10833	10752	21410	29719	8436	32162	No	49.71	Si
SLU 79	0.4	179.83	-57051	-48043	7563	3.3082	3.3082	-48408	10833	10752	21410	29719	8436	32162	No	4.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	-1.58	-10689.67	-38627	-32528	10166	3.3082	3.3082	-32775	16250	16128	21410	44578	8436	37538		3.69	Si
SLV 7	0.4	-2272.08	-40775	-34337	14837	3.3082	3.3082	-34597	16250	16128	21410	44578	8436	37538		2.53	Si
SLV 6	-1.58	-18964.76	-45909	-38660	-10212	3.3082	3.3082	-38954	16250	16128	21410	44578	8436	37538		3.68	Si
SLV 6	0.4	1118.44	-40416	-34035	-5114	3.3082	3.3082	-34293	16250	16128	21410	44578	8436	37538		7.34	Si
SLV 16	-1.58	-9810.51	-36645	-30859	6164	3.3082	3.3082	-31093	16250	16128	21410	44578	8436	37538		6.09	Si
SLV 16	0.4	1104.39	-34154	-28761	10651	3.3082	3.3082	-28979	16213	16090	21410	44578	8436	37500		3.52	Si
SLV 5	-1.58	-18813.37	-45597	-38397	-10093	3.3082	3.3082	-38689	16250	16128	21410	44578	8436	37538		3.72	Si
SLV 5	0.4	1231.36	-39993	-33679	-5012	3.3082	3.3082	-33934	16250	16128	21410	44578	8436	37538		7.49	Si
SLD 12	-1.58	-11780.63	-39215	-33023	5482	3.3082	3.3082	-33274	16250	16128	21410	44578	8436	37538		6.85	Si
SLD 12	0.4	-617.5	-38598	-32504	10167	3.3082	3.3082	-32751	16250	16128	21410	44578	8436	37538		3.69	Si
SLV 11	-1.58	-8882.32	-36402	-30655	11662	3.3082	3.3082	-30887	16250	16128	21410	44578	8436	37538		3.22	Si
SLV 11	0.4	-1213.05	-37596	-31660	16172	3.3082	3.3082	-31900	16250	16128	21410	44578	8436	37538		2.32	Si
SLD 11	-1.58	-11714.54	-39079	-32908	5534	3.3082	3.3082	-33158	16250	16128	21410	44578	8436	37538		6.78	Si
SLD 11	0.4	-568.2	-38414	-32349	10212	3.3082	3.3082	-32594	16250	16128	21410	44578	8436	37538		3.68	Si
SLV 8	-1.58	-10841.06	-38939	-32791	10048	3.3082	3.3082	-33040	16250	16128	21410	44578	8436	37538		3.74	Si
SLV 8	0.4	-2385	-41197	-34693	14735	3.3082	3.3082	-34956	16250	16128	21410	44578	8436	37538		2.55	Si
SLV 15	-1.58	-9574.96	-36159	-30450	6349	3.3082	3.3082	-30681	16250	16128	21410	44578	8436	37538		5.91	Si
SLV 15	0.4	1280.09	-33496	-28207	10810	3.3082	3.3082	-28421	16101	15980	21410	44578	8436	37390		3.46	Si
SLV 12	-1.58	-9033.71	-36715	-30917	11543	3.3082	3.3082	-31152	16250	16128	21410	44578	8436	37538		3.25	Si
SLV 12	0.4	-1325.97	-38018	-32016	16070	3.3082	3.3082	-32258	16250	16128	21410	44578	8436	37538		2.34	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.24	35874	-35604	71.3	4086.05	57.31	Si
SLV 13	179667	0.24	36269	-35996	71.3	4117.07	57.75	Si
SLV 16	179667	0.24	36499	-36224	71.3	4134.98	58	Si
SLV 14	179667	0.24	36894	-36616	71.3	4165.51	58.43	Si
SLV 11	179667	0.24	39206	-38910	71.3	4338.19	60.85	Si
SLV 12	179667	0.24	39607	-39309	71.3	4367.11	61.25	Si
SLV 9	179667	0.24	40522	-40217	71.3	4431.85	62.16	Si
SLV 10	179667	0.24	40924	-40615	71.3	4459.75	62.55	Si
SLV 7	179667	0.24	42361	-42042	71.3	4557.01	63.92	Si
SLV 8	179667	0.24	42762	-42440	71.3	4583.46	64.29	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.59 Wa = 0.05 Ta = 0.0218

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-41197	-38939	-5	0.511	4471.9	0.981	7.57673	3.33986	Si
SLV 7	-40775	-38627	-4	0.516	4428.8	0.98	7.64259	3.33986	Si
SLV 6	-40416	-45909	6	0.519	4392.2	0.98	7.69853	3.33986	Si
SLV 5	-39993	-45597	7	0.524	4349.2	0.98	7.76624	3.33986	Si
SLV 12	-38018	-36715	-61	0.545	4148	0.979	8.0836	3.33986	Si
SLV 11	-37596	-36402	-60	0.55	4104.9	0.979	8.16042	3.33986	Si
SLV 10	-37237	-43684	-49	0.554	4068.4	0.979	8.23057	3.33986	Si
SLV 9	-36814	-43372	-48	0.56	4025.3	0.979	8.31062	3.33986	Si
SLV 4	-44750	-44061	63	0.477	4833.9	0.982	7.05521	2.79992	Si
SLV 2	-44516	-46152	67	0.479	4810	0.982	7.0848	2.79992	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.862	SLU 83	Si
V_SLU	4.162	SLU 70	Si
PF_SLV	3.272	SLV 6	Si
V_SLV	2.321	SLV 11	Si
PFFP_SLV	57.312	SLV 15	Si
R_SLV	2.269	SLV 8	Si

Maschio 31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	-1.476	L3	L4	3.308	0.3	0.99	0.99	0.99			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	0.4	214.08	-56603	-0.0000988	0.0003743	0.0035	3.3082	41179.44	56799.17	56799.17	265.31	No	Si
SLU 83	1.39	-2914.11	-57142	-0.0001095	0.0003743	0.0035	3.3082	41067.36	58547.09	58547.09	20.09	No	Si
SLU 77	0.4	202.75	-55555	-0.0000966	0.0003743	0.0035	3.3082	41370.18	56446.62	56446.62	278.41	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	1.39	-2855.51	-56073	-0.000107	0.0003743	0.0035	3.3082	41280.36	58307.95	58307.95	20.42	No	Si
SLU 75	0.4	224.8	-54825	-0.0000952	0.0003743	0.0035	3.3082	41481.77	56203.85	56203.85	250.02	No	Si
SLU 75	1.39	-2820.07	-55300	-0.0001052	0.0003743	0.0035	3.3082	41411.15	58091.68	58091.68	20.6	No	Si
SLU 82	0.4	236.13	-55873	-0.0000973	0.0003743	0.0035	3.3082	41316.09	56553.11	56553.11	239.5	No	Si
SLU 82	1.39	-2878.68	-56369	-0.0001077	0.0003743	0.0035	3.3082	41225.23	58373.18	58373.18	20.28	No	Si
SLU 80	0.4	233.62	-55127	-0.0000958	0.0003743	0.0035	3.3082	41437.67	56304.12	56304.12	241.01	No	Si
SLU 80	1.39	-2838.16	-55620	-0.000106	0.0003743	0.0035	3.3082	41359.31	58209.28	58209.28	20.51	No	Si
SLU 84	0.4	217.98	-56605	-0.0000988	0.0003743	0.0035	3.3082	41179.07	56799.8	56799.8	260.57	No	Si
SLU 84	1.39	-2929.97	-57151	-0.0001096	0.0003743	0.0035	3.3082	41065.39	58549.16	58549.16	19.98	No	Si
SLU 78	0.4	206.65	-55557	-0.0000966	0.0003743	0.0035	3.3082	41369.87	56447.24	56447.24	273.15	No	Si
SLU 78	1.39	-2871.36	-56082	-0.0001071	0.0003743	0.0035	3.3082	41278.71	58309.95	58309.95	20.31	No	Si
SLU 79	0.4	229.72	-55125	-0.0000958	0.0003743	0.0035	3.3082	41437.95	56303.5	56303.5	245.1	No	Si
SLU 79	1.39	-2822.3	-55611	-0.0001059	0.0003743	0.0035	3.3082	41360.83	58207.32	58207.32	20.62	No	Si
SLU 76	0.4	254.37	-54396	-0.0000944	0.0003743	0.0035	3.3082	41539.11	56062.49	56062.49	220.4	No	Si
SLU 76	1.39	-2797.44	-54844	-0.0001042	0.0003743	0.0035	3.3082	41479.06	57905.83	57905.83	20.7	No	Si
SLU 81	0.4	232.23	-55871	-0.0000973	0.0003743	0.0035	3.3082	41316.42	56552.49	56552.49	243.52	No	Si
SLU 81	1.39	-2862.82	-56360	-0.0001076	0.0003743	0.0035	3.3082	41226.96	58371.17	58371.17	20.39	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	0.4	-2041.63	-43071	-0.0000747	0.0005615	0.0035	3.3082		59404.01	59404.01	29.1		Si
SLV 2	1.39	6309.6	-40110	-0.0000824	0.0005615	0.0035	3.3082		53053.33	53053.33	8.41		Si
SLV 16	0.4	2391.48	-33042	-0.0000587	0.0005615	0.0035	3.3082		46126.78	46126.78	19.29		Si
SLV 16	1.39	-9824.24	-36002	-0.0000858	0.0005615	0.0035	3.3082		52128.43	52128.43	5.31		Si
SLV 11	0.4	1793.63	-36082	-0.000062	0.0005615	0.0035	3.3082		49080.91	49080.91	27.36		Si
SLV 11	1.39	-7268.57	-38883	-0.0000832	0.0005615	0.0035	3.3082		55200.63	55200.63	7.59		Si
SLV 15	0.4	2568.33	-32452	-0.0000582	0.0005615	0.0035	3.3082		45548.99	45548.99	17.73		Si
SLV 15	1.39	-10066.35	-35682	-0.000086	0.0005615	0.0035	3.3082		51788.38	51788.38	5.14		Si
SLD 15	0.4	1251.24	-35494	-0.0000594	0.0005615	0.0035	3.3082		48506.71	48506.71	38.77		Si
SLD 15	1.39	-5392.38	-36959	-0.0000742	0.0005615	0.0035	3.3082		53150.75	53150.75	9.86		Si
SLV 13	0.4	2035.26	-32443	-0.0000566	0.0005615	0.0035	3.3082		45537.74	45537.74	22.37		Si
SLV 13	1.39	-8159.33	-34558	-0.0000783	0.0005615	0.0035	3.3082		50577.83	50577.83	6.2		Si
SLV 14	0.4	1858.41	-33033	-0.0000571	0.0005615	0.0035	3.3082		46117.88	46117.88	24.82		Si
SLV 14	1.39	-7917.22	-34877	-0.0000781	0.0005615	0.0035	3.3082		50929.45	50929.45	6.43		Si
SLV 1	0.4	-1864.78	-42481	-0.0000731	0.0005615	0.0035	3.3082		58816.12	58816.12	31.54		Si
SLV 1	1.39	6067.49	-39790	-0.0000811	0.0005615	0.0035	3.3082		52735.25	52735.25	8.69		Si
SLV 12	0.4	1679.97	-36461	-0.0000623	0.0005615	0.0035	3.3082		49452.36	49452.36	29.44		Si
SLV 12	1.39	-7112.97	-39089	-0.0000831	0.0005615	0.0035	3.3082		55414.47	55414.47	7.79		Si
SLD 16	0.4	1175.32	-35748	-0.0000596	0.0005615	0.0035	3.3082		48754.09	48754.09	41.48		Si
SLD 16	1.39	-5288.43	-37097	-0.0000741	0.0005615	0.0035	3.3082		53298.23	53298.23	10.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	0.4	236.13	-55873	-47051	8995	3.3082	3.3082	-47408	10833	10752	9516	29719	8436	20267	No	2.25	Si
SLU 82	1.39	-2878.68	-56369	-47468	11484	3.3082	3.3082	-47829	10833	10752	9516	29719	8436	20267	No	1.76	Si
SLU 76	0.4	254.37	-54396	-45807	8934	3.3082	3.3082	-46155	10833	10752	9516	29719	8436	20267	No	2.27	Si
SLU 76	1.39	-2797.44	-54844	-46184	11355	3.3082	3.3082	-46535	10833	10752	9516	29719	8436	20267	No	1.78	Si
SLU 84	0.4	217.98	-56605	-47667	9086	3.3082	3.3082	-48029	10833	10752	9516	29719	8436	20267	No	2.23	Si
SLU 84	1.39	-2929.97	-57151	-48127	11608	3.3082	3.3082	-48493	10833	10752	9516	29719	8436	20267	No	1.75	Si
SLU 75	0.4	224.8	-54825	-46168	8897	3.3082	3.3082	-46518	10833	10752	9516	29719	8436	20267	No	2.28	Si
SLU 75	1.39	-2820.07	-55300	-46568	11338	3.3082	3.3082	-46921	10833	10752	9516	29719	8436	20267	No	1.79	Si
SLU 83	0.4	214.08	-56603	-47666	9022	3.3082	3.3082	-48028	10833	10752	9516	29719	8436	20267	No	2.25	Si
SLU 83	1.39	-2914.11	-57142	-48120	11544	3.3082	3.3082	-48485	10833	10752	9516	29719	8436	20267	No	1.76	Si
SLU 80	0.4	233.62	-55127	-46423	8982	3.3082	3.3082	-46775	10833	10752	9516	29719	8436	20267	No	2.26	Si
SLU 80	1.39	-2838.16	-55620	-46838	11436	3.3082	3.3082	-47194	10833	10752	9516	29719	8436	20267	No	1.77	Si
SLU 77	0.4	202.75	-55555	-46783	8925	3.3082	3.3082	-47138	10833	10752	9516	29719	8436	20267	No	2.27	Si
SLU 77	1.39	-2855.51	-56073	-47219	11397	3.3082	3.3082	-47578	10833	10752	9516	29719	8436	20267	No	1.78	Si
SLU 81	0.4	232.23	-55871	-47049	8932	3.3082	3.3082	-47406	10833	10752	9516	29719	8436	20267	No	2.27	Si
SLU 81	1.39	-2862.82	-56360	-47461	11420	3.3082	3.3082	-47821	10833	10752	9516	29719	8436	20267	No	1.77	Si
SLU 78	0.4	206.65	-55557	-46785	8988	3.3082	3.3082	-47140	10833	10752	9516	29719	8436	20267	No	2.25	Si
SLU 78	1.39	-2871.36	-56082	-47227	11462	3.3082	3.3082	-47585	10833	10752	9516	29719	8436	20267	No	1.77	Si
SLU 79	0.4	229.72	-55125	-46421	8919	3.3082	3.3082	-46773	10833	10752	9516	29719	8436	20267	No	2.27	Si
SLU 79	1.39	-2822.3	-55611	-46830	11371	3.3082	3.3082	-47186	10833	10752	9516	29719	8436	20267	No	1.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	0.4	1793.63	-36082	-30385	19934	3.3082	3.3082	-30615	16250	16128	9516	44578	8436	25643		1.29	Si
SLV 11	1.39	-7268.57	-38883	-32744	21478	3.3082	3.3082	-32992	16250	16128	9516	44578	8436	25643		1.19	Si
SLV 8	0.4	509.96	-39472	-33240	15471	3.3082	3.3082	-33492	16250	16128	9516	44578	8436	25643		1.66	Si
SLV 8	1.39	-2844.92	-40658	-34239	17443	3.3082	3.3082	-34498	16250	16128	9516	44578	8436	25643		1.47	Si
SLD 15	0.4	1251.24	-35494	-29890	11014	3.3082	3.3082	-30117	16250	16128	9516	44578	8436	25643		2.33	Si
SLD 15	1.39	-5392.38	-36959	-31124	12394	3.3082	3.3082	-31360	16250	16128	9516	44578	8436	25643		2.07	Si
SLV 12	0.4	1679.97	-36461	-30704	19742	3.3082	3.3082	-30937	16250	16128	9516	44578	8436	25643		1.3	Si
SLV 12	1.39	-7112.97	-39089	-32917	21295	3.3082	3.3082	-33167	16250	16128	9516	44578	8436	25643		1.2	Si
SLV 16	0.4	2391.48	-33042	-27825	16771	3.3082	3.3082	-28036	16024	15903	9516	44578	8436	25419		1.52	Si
SLV 16	1.39	-9824.24	-36002	-30318	17776	3.3082	3.3082	-30548	16250	16128	9516	44578	8436	25643		1.44	Si
SLD 12	0.4	877.7	-37217	-31341	12269	3.3082	3.3082	-31579	16250	16128	9516	44578	8436	25643		2.09	Si
SLD 12	1.39	-4166.26	-38448	-32377	13890	3.3082	3.3082	-32623	16250	16128	9516	44578	8436	25643		1.85	Si
SLV 15	0.4	2568.33	-32452	-27328	17070	3.3082	3.3082	-27535	15924	15804	9516	44578	8436	25319		1.48	Si
SLV 15	1.39	-10066.35	-35682	-30048	18060	3.3082	3.3082	-30276	16250	16128	9516	44578	8436	25643		1.42	Si
SLD 11	0.4	927.32	-37052	-31201	12353	3.3082	3.3082	-31438	16250	16128	9516	44578	8436	25643		2.08	Si
SLD 11	1.39	-4234.19	-38358	-32302	13970	3.3082	3.3082	-32547	16250	16128	9516	44578	8436	25643		1.84	Si
SLV 7	0.4	623.62	-39093	-32921	15663	3.3082	3.3082	-33170	16250	16128	9516	44578	8436	25643		1.64	Si
SLV 7	1.39	-3000.52	-40453	-34066	17626	3.3082	3.3082	-34324	16250	16128	9516	44578	8436	25643		1.45	Si
SLD 7	0.4	427.42	-38339	-32285	10530	3.3082	3.3082	-32530	16250	16128	9516	44578	8436	25643		2.44	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 7	1.39	-2410.8	-39031	-32868	12326	3.3082	3.3082	-33117	16250	16128	9516	44578	8436	25643		2.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.895 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.26	35213	-34948	19.19	4033.44	210.17	Si
SLV 14	179667	0.26	35560	-35293	19.19	4061.2	211.62	Si
SLV 15	179667	0.26	35572	-35304	19.19	4062.13	211.67	Si
SLV 16	179667	0.26	35920	-35649	19.19	4089.65	213.1	Si
SLV 9	179667	0.26	36790	-36513	19.19	4157.51	216.64	Si
SLV 10	179667	0.26	37013	-36734	19.19	4174.69	217.53	Si
SLV 11	179667	0.26	37987	-37701	19.19	4248.48	221.38	Si
SLV 12	179667	0.26	38210	-37923	19.19	4265.14	222.25	Si
SLV 5	179667	0.26	38447	-38158	19.19	4282.7	223.16	Si
SLV 6	179667	0.26	38671	-38379	19.19	4299.16	224.02	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.895 Wa = 0.05 Ta = 0.0055

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-40658	-39472	9	0.602	4280.3	0.99	8.83787	2.74901	Si
SLV 7	-40453	-39093	9	0.604	4259.3	0.99	8.87103	2.74901	Si
SLV 12	-39089	-36461	233	0.614	4120.3	0.989	9.01875	2.74901	Si
SLV 4	-41234	-43080	-223	0.591	4339	0.99	8.67144	2.63854	Si
SLV 11	-38883	-36082	233	0.616	4099.3	0.989	9.05418	2.74901	Si
SLV 3	-40915	-42490	-222	0.594	4306.4	0.99	8.7217	2.63854	Si
SLV 2	-40110	-43071	-197	0.603	4224.3	0.99	8.85999	2.63854	Si
SLV 1	-39790	-42481	-197	0.607	4191.7	0.989	8.91315	2.63854	Si
SLV 6	-36909	-39442	94	0.644	3898.1	0.989	9.47004	2.74901	Si
SLV 5	-36703	-39062	95	0.647	3877.2	0.989	9.51005	2.74901	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.983	SLU 84	Si
V_SLU	1.746	SLU 84	Si
PF_SLV	5.145	SLV 15	Si
V_SLV	1.194	SLV 11	Si
PFFP_SLV	210.172	SLV 13	Si
R_SLV	3.215	SLV 8	Si

Maschio 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-1.476	-11.013	-0.354	L2	Z medio 90 cm	1.122	0.3	2.475	1.98	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-1.58	5590.53	-23840	-0.0004436	0.0003743	0.0035	1.1218	4067.45	6928.99	6928.99	1.24	No	Si
SLU 82	0.4	619.21	-20840	-0.0001281	0.0003743	0.0035	1.1218	4579.13	6728.33	6728.33	10.87	No	Si
SLU 78	-1.58	5559.9	-23690	-0.0004341	0.0003743	0.0035	1.1218	4100.17	6931.88	6931.88	1.25	No	Si
SLU 78	0.4	614.01	-20574	-0.0001261	0.0003743	0.0035	1.1218	4610.24	6696.64	6696.64	10.91	No	Si
SLU 81	-1.58	5585.02	-23835	-0.0004423	0.0003743	0.0035	1.1218	4068.67	6929.1	6929.1	1.24	No	Si
SLU 81	0.4	620.34	-20837	-0.0001281	0.0003743	0.0035	1.1218	4579.45	6728.01	6728.01	10.85	No	Si
SLU 75	-1.58	5489.66	-23351	-0.0004146	0.0003743	0.0035	1.1218	4171.06	6938.49	6938.49	1.26	No	Si
SLU 75	0.4	608.17	-20309	-0.0001242	0.0003743	0.0035	1.1218	4638.98	6665.34	6665.34	10.96	No	Si
SLU 77	-1.58	5554.39	-23684	-0.0004329	0.0003743	0.0035	1.1218	4101.36	6931.99	6931.99	1.25	No	Si
SLU 77	0.4	615.13	-20572	-0.0001261	0.0003743	0.0035	1.1218	4610.54	6696.33	6696.33	10.89	No	Si
SLU 80	-1.58	5524.99	-23556	-0.0004247	0.0003743	0.0035	1.1218	4128.5	6934.46	6934.46	1.26	No	Si
SLU 80	0.4	609.33	-20429	-0.000125	0.0003743	0.0035	1.1218	4626.21	6679.52	6679.52	10.96	No	Si
SLU 79	-1.58	5519.48	-23551	-0.0004235	0.0003743	0.0035	1.1218	4129.66	6934.57	6934.57	1.26	No	Si
SLU 79	0.4	610.46	-20427	-0.000125	0.0003743	0.0035	1.1218	4626.5	6679.21	6679.21	10.94	No	Si
SLU 74	-1.58	5484.15	-23345	-0.0004135	0.0003743	0.0035	1.1218	4172.18	6938.6	6938.6	1.27	No	Si
SLU 74	0.4	609.3	-20306	-0.0001242	0.0003743	0.0035	1.1218	4639.26	6665.03	6665.03	10.94	No	Si
SLU 84	-1.58	5660.78	-24179	-0.0004677	0.0003743	0.0035	1.1218	3991.14	6922.61	6922.61	1.22	No	Si
SLU 84	0.4	625.05	-21105	-0.0001301	0.0003743	0.0035	1.1218	4545.79	6760.24	6760.24	10.82	No	Si
SLU 83	-1.58	5655.27	-24174	-0.0004662	0.0003743	0.0035	1.1218	3992.41	6922.71	6922.71	1.22	No	Si
SLU 83	0.4	626.17	-21102	-0.0001301	0.0003743	0.0035	1.1218	4546.13	6759.92	6759.92	10.8	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	-1.58	4741.14	-17298	-0.0002381	0.0005615	0.0035	1.1218		7361.71	7361.71	1.55		Si
SLV 8	0.4	174.26	-14614	-0.0000731	0.0005615	0.0035	1.1218		6444.22	6444.22	36.98		Si
SLD 7	-1.58	4215.94	-16603	-0.0002081	0.0005615	0.0035	1.1218		7130.16	7130.16	1.69		Si
SLD 7	0.4	316.12	-14188	-0.0000747	0.0005615	0.0035	1.1218		6299.57	6299.57	19.93		Si
SLV 15	-1.58	3855.05	-14894	-0.0001862	0.0005615	0.0035	1.1218		6539.82	6539.82	1.7		Si
SLV 15	0.4	478.91	-12900	-0.0000724	0.0005615	0.0035	1.1218		5867.05	5867.05	12.25		Si
SLD 8	-1.58	4219.75	-16615	-0.0002083	0.0005615	0.0035	1.1218		7134.35	7134.35	1.69		Si
SLD 8	0.4	314.98	-14192	-0.0000747	0.0005615	0.0035	1.1218		6301.09	6301.09	20.01		Si
SLV 12	-1.58	4616.97	-16456	-0.0002302	0.0005615	0.0035	1.1218		7079.09	7079.09	1.53		Si
SLV 12	0.4	244.1	-13965	-0.0000717	0.0005615	0.0035	1.1218		6224.21	6224.21	25.5		Si
SLV 16	-1.58	3868.6	-14937	-0.000187	0.0005615	0.0035	1.1218		6554.5	6554.5	1.69		Si
SLV 16	0.4	474.84	-12916	-0.0000724	0.0005615	0.0035	1.1218		5872.39	5872.39	12.37		Si
SLD 12	-1.58	4166.4	-16255	-0.0002048	0.0005615	0.0035	1.1218		7009.15	7009.15	1.68		Si
SLD 12	0.4	344.87	-13915	-0.000074	0.0005615	0.0035	1.1218		6207.43	6207.43	18		Si
SLV 11	-1.58	4608.26	-16429	-0.0002296	0.0005615	0.0035	1.1218		7069.5	7069.5	1.53		Si
SLV 11	0.4	246.72	-13955	-0.0000717	0.0005615	0.0035	1.1218		6220.74	6220.74	25.21		Si
SLV 7	-1.58	4732.43	-17270	-0.0002376	0.0005615	0.0035	1.1218		7353.66	7353.66	1.55		Si
SLV 7	0.4	176.88	-14603	-0.0000732	0.0005615	0.0035	1.1218		6440.72	6440.72	36.41		Si
SLD 11	-1.58	4162.59	-16243	-0.0002045	0.0005615	0.0035	1.1218		7004.98	7004.98	1.68		Si
SLD 11	0.4	346.01	-13911	-0.000074	0.0005615	0.0035	1.1218		6205.92	6205.92	17.94		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	-1.58	5484.15	-23345	-19659	7796	1.1218	0.9779	-58417	10833	3178	26168	10077	2860	12938	No	1.66	Si
SLU 74	0.4	609.3	-20306	-17100	3151	1.1218	1.1218	-50813	10833	3646	26168	10077	2860	12938	No	4.11	Si
SLU 79	-1.58	5519.48	-23551	-19832	7845	1.1218	0.9796	-58932	10833	3184	26168	10077	2860	12938	No	1.65	Si
SLU 79	0.4	610.46	-20427	-17202	3174	1.1218	1.1218	-51115	10833	3646	26168	10077	2860	12938	No	4.08	Si
SLU 82	-1.58	5590.53	-23840	-20076	7908	1.1218	0.9791	-59656	10833	3182	26168	10077	2860	12938	No	1.64	Si
SLU 82	0.4	619.21	-20840	-17549	3199	1.1218	1.1218	-52148	10833	3646	26168	10077	2860	12938	No	4.04	Si
SLU 77	-1.58	5554.39	-23684	-19944	7899	1.1218	0.9791	-59265	10833	3182	26168	10077	2860	12938	No	1.64	Si
SLU 77	0.4	615.13	-20572	-17323	3196	1.1218	1.1218	-51477	10833	3646	26168	10077	2860	12938	No	4.05	Si
SLU 84	-1.58	5660.78	-24179	-20361	8011	1.1218	0.9803	-60504	10833	3186	26168	10077	2860	12938	No	1.61	Si
SLU 84	0.4	625.05	-21105	-17773	3245	1.1218	1.1218	-52812	10833	3646	26168	10077	2860	12938	No	3.99	Si
SLU 75	-1.58	5489.66	-23351	-19664	7818	1.1218	0.9774	-58431	10833	3176	26168	10077	2860	12938	No	1.65	Si
SLU 75	0.4	608.17	-20309	-17102	3174	1.1218	1.1218	-50820	10833	3646	26168	10077	2860	12938	No	4.08	Si
SLU 78	-1.58	5559.9	-23690	-19949	7921	1.1218	0.9786	-59279	10833	3180	26168	10077	2860	12938	No	1.63	Si
SLU 78	0.4	614.01	-20574	-17326	3220	1.1218	1.1218	-51483	10833	3646	26168	10077	2860	12938	No	4.02	Si
SLU 81	-1.58	5585.02	-23835	-20071	7885	1.1218	0.9797	-59642	10833	3184	26168	10077	2860	12938	No	1.64	Si
SLU 81	0.4	620.34	-20837	-17547	3175	1.1218	1.1218	-52142	10833	3646	26168	10077	2860	12938	No	4.07	Si
SLU 80	-1.58	5524.99	-23556	-19837	7867	1.1218	0.979	-58946	10833	3182	26168	10077	2860	12938	No	1.64	Si
SLU 80	0.4	609.33	-20429	-17204	3198	1.1218	1.1218	-51121	10833	3646	26168	10077	2860	12938	No	4.05	Si
SLU 83	-1.58	5655.27	-24174	-20357	7989	1.1218	0.9808	-60490	10833	3188	26168	10077	2860	12938	No	1.62	Si
SLU 83	0.4	626.17	-21102	-17770	3221	1.1218	1.1218	-52805	10833	3646	26168	10077	2860	12938	No	4.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 7	-1.58	4215.94	-16603	-13981	7146	1.1218	0.9209	-41545	16250	4489	26168	15116	2860	17976		2.52	Si
SLD 7	0.4	316.12	-14188	-11948	4062	1.1218	1.1218	-35502	16250	5469	26168	15116	2860	17976		4.43	Si
SLV 8	-1.58	4741.14	-17298	-14566	9293	1.1218	0.8604	-43284	16250	4194	26168	15116	2860	17976		1.93	Si
SLV 8	0.4	174.26	-14614	-12306	6354	1.1218	1.1218	-36568	16250	5469	26168	15116	2860	17976		2.83	Si
SLV 12	-1.58	4616.97	-16456	-13858	9018	1.1218	0.841	-41179	16250	4100	26168	15116	2860	17976		1.99	Si
SLV 12	0.4	244.1	-13965	-11760	6266	1.1218	1.1218	-34945	16250	5469	26168	15116	2860	17976		2.87	Si
SLD 11	-1.58	4162.59	-16243	-13678	7028	1.1218	0.9138	-40645	16250	4455	26168	15116	2860	17976		2.56	Si
SLD 11	0.4	346.01	-13911	-11714	4023	1.1218	1.1218	-34809	16250	5469	26168	15116	2860	17976		4.47	Si
SLD 12	-1.58	4166.4	-16255	-13688	7036	1.1218	0.9137	-40675	16250	4454	26168	15116	2860	17976		2.55	Si
SLD 12	0.4	344.87	-13915	-11718	4007	1.1218	1.1218	-34820	16250	5469	26168	15116	2860	17976		4.49	Si
SLV 7	-1.58	4732.43	-17270	-14543	9274	1.1218	0.8606	-43215	16250	4195	26168	15116	2860	17976		1.94	Si
SLV 7	0.4	176.88	-14603	-12297	6392	1.1218	1.1218	-36542	16250	5469	26168	15116	2860	17976		2.81	Si
SLD 8	-1.58	4219.75	-16615	-13991	7154	1.1218	0.9207	-41575	16250	4489	26168	15116	2860	17976		2.51	Si
SLD 8	0.4	314.98	-14192	-11951	4045	1.1218	1.1218	-35513	16250	5469	26168	15116	2860	17976		4.44	Si
SLV 4	-1.58	4282.48	-17742	-14940	7044	1.1218	0.9585	-44396	16250	4673	26168	15116	2860	17976		2.55	Si
SLV 4	0.4	242.02	-15078	-12697	3571	1.1218	1.1218	-37730	16250	5469	26168	15116	2860	17976		5.03	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	-1.58	4268.93	-17699	-14904	7014	1.1218	0.9591	-44288	16250	4675	26168	15116	2860	17976		2.56	Si
SLV 3	0.4	246.1	-15062	-12684	3630	1.1218	1.1218	-37690	16250	5469	26168	15116	2860	17976		4.95	Si
SLV 11	-1.58	4608.26	-16429	-13835	8999	1.1218	0.8411	-41110	16250	4101	26168	15116	2860	17976		2	Si
SLV 11	0.4	246.72	-13955	-11751	6304	1.1218	1.1218	-34919	16250	5469	26168	15116	2860	17976		2.85	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.24	37683	-12681	37.77	1432.84	37.93	Si
SLV 14	179667	0.24	37730	-12697	37.77	1434.03	37.96	Si
SLV 15	179667	0.24	38413	-12927	37.77	1451.32	38.42	Si
SLV 16	179667	0.24	38459	-12943	37.77	1452.49	38.45	Si
SLV 9	179667	0.24	39262	-13213	37.77	1472.38	38.98	Si
SLV 10	179667	0.24	39292	-13223	37.77	1473.12	39	Si
SLV 5	179667	0.24	41337	-13911	37.77	1521.86	40.29	Si
SLV 6	179667	0.24	41367	-13921	37.77	1522.56	40.31	Si
SLV 11	179667	0.24	41694	-14031	37.77	1530.07	40.51	Si
SLV 12	179667	0.24	41724	-14041	37.77	1530.76	40.52	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.59 Wa = 0.05 Ta = 0.0341

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-14614	-17298	-92	0.468	1605.2	0.977	6.95535	4.18517	Si
SLV 7	-14603	-17270	-92	0.468	1604.2	0.977	6.95953	4.18517	Si
SLV 12	-13965	-16456	-17	0.491	1539.2	0.976	7.30462	4.18517	Si
SLV 11	-13955	-16429	-17	0.491	1538.1	0.976	7.30923	4.18517	Si
SLV 6	-13770	-15739	17	0.497	1519.3	0.976	7.3932	4.18517	Si
SLV 5	-13760	-15712	17	0.497	1518.3	0.976	7.39789	4.18517	Si
SLV 10	-13121	-14898	91	0.512	1453.2	0.975	7.6246	4.18517	Si
SLV 9	-13111	-14870	91	0.512	1452.2	0.975	7.62968	4.18517	Si
SLV 4	-15078	-17742	-141	0.453	1652.5	0.978	6.72723	3.13327	Si
SLV 3	-15062	-17699	-141	0.453	1650.9	0.978	6.7333	3.13327	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.223	SLU 84	Si
V_SLU	1.615	SLU 84	Si
PF_SLV	1.533	SLV 12	Si
V_SLV	1.934	SLV 8	Si
PFFP_SLV	37.933	SLV 13	Si
R_SLV	1.662	SLV 8	Si

Maschio 34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-0.354	-11.013	1.046	L2	L4	1.4	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-1.58	1907.57	-22131	-0.0001266	0.0003743	0.0035	1.4	7473.95	9957.9	9957.9	5.22	No	Si
SLU 80	1.39	-684.54	-27088	-0.0001281	0.0003743	0.0035	1.4	6949.9	10785.48	10785.48	15.76	No	Si
SLU 79	-1.58	1896.19	-22120	-0.0001263	0.0003743	0.0035	1.4	7474.22	9956.5	9956.5	5.25	No	Si
SLU 79	1.39	-680.62	-27094	-0.000128	0.0003743	0.0035	1.4	6948.71	10786.32	10786.32	15.85	No	Si
SLU 82	-1.58	1925.46	-22528	-0.000129	0.0003743	0.0035	1.4	7461.61	10008.17	10008.17	5.2	No	Si
SLU 82	1.39	-764.19	-27667	-0.000133	0.0003743	0.0035	1.4	6836.17	10863.36	10863.36	14.22	No	Si
SLU 75	-1.58	1895.34	-22059	-0.0001259	0.0003743	0.0035	1.4	7475.63	9948.89	9948.89	5.25	No	Si
SLU 75	1.39	-680.6	-26962	-0.0001273	0.0003743	0.0035	1.4	6973.19	10768.87	10768.87	15.82	No	Si
SLU 81	-1.58	1914.09	-22517	-0.0001288	0.0003743	0.0035	1.4	7462.03	10006.75	10006.75	5.23	No	Si
SLU 81	1.39	-760.27	-27674	-0.0001329	0.0003743	0.0035	1.4	6834.86	10864.23	10864.23	14.29	No	Si
SLU 78	-1.58	1925.07	-22288	-0.0001278	0.0003743	0.0035	1.4	7469.69	9977.68	9977.68	5.18	No	Si
SLU 78	1.39	-687.34	-27299	-0.0001293	0.0003743	0.0035	1.4	6909.73	10813.56	10813.56	15.73	No	Si
SLU 76	-1.58	1885.42	-21910	-0.000125	0.0003743	0.0035	1.4	7478.58	9930.19	9930.19	5.27	No	Si
SLU 76	1.39	-680.41	-26747	-0.0001262	0.0003743	0.0035	1.4	7011.77	10740.77	10740.77	15.79	No	Si
SLU 84	-1.58	1955.19	-22756	-0.0001309	0.0003743	0.0035	1.4	7452.17	10037.42	10037.42	5.13	No	Si
SLU 84	1.39	-770.93	-28004	-0.000135	0.0003743	0.0035	1.4	6764.93	10892.22	10892.22	14.13	No	Si
SLU 77	-1.58	1913.7	-22277	-0.0001275	0.0003743	0.0035	1.4	7470.02	9976.27	9976.27	5.21	No	Si
SLU 77	1.39	-683.42	-27305	-0.0001293	0.0003743	0.0035	1.4	6908.5	10814.41	10814.41	15.82	No	Si
SLU 83	-1.58	1943.81	-22745	-0.0001306	0.0003743	0.0035	1.4	7452.67	10035.99	10035.99	5.16	No	Si
SLU 83	1.39	-767.01	-28011	-0.000135	0.0003743	0.0035	1.4	6763.55	10892.64	10892.64	14.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 8	-1.58	2204.48	-16183	-0.0000973	0.0005615	0.0035	1.4		9201.7	9201.7	4.17		Si
SLD 8	1.39	-683.07	-18279	-0.0000803	0.0005615	0.0035	1.4		10584.33	10584.33	15.5		Si
SLV 3	-1.58	2525.77	-17239	-0.0001074	0.0005615	0.0035	1.4		9629.63	9629.63	3.81		Si
SLV 3	1.39	-352.05	-21749	-0.0000891	0.0005615	0.0035	1.4		11764.85	11764.85	33.42		Si
SLD 7	-1.58	2224.46	-16187	-0.0000977	0.0005615	0.0035	1.4		9203.15	9203.15	4.14		Si
SLD 7	1.39	-684.44	-18284	-0.0000803	0.0005615	0.0035	1.4		10586.18	10586.18	15.47		Si
SLV 12	-1.58	2986.35	-16420	-0.0001118	0.0005615	0.0035	1.4		9297.21	9297.21	3.11		Si
SLV 12	1.39	-1196.03	-15937	-0.0000793	0.0005615	0.0035	1.4		9582.59	9582.59	8.01		Si
SLV 11	-1.58	3032.12	-16428	-0.0001126	0.0005615	0.0035	1.4		9300.54	9300.54	3.07		Si
SLV 11	1.39	-1199.17	-15947	-0.0000794	0.0005615	0.0035	1.4		9587.09	9587.09	7.99		Si
SLD 11	-1.58	2064.22	-15814	-0.0000934	0.0005615	0.0035	1.4		9052.88	9052.88	4.39		Si
SLD 11	1.39	-752.71	-17320	-0.0000775	0.0005615	0.0035	1.4		10187.65	10187.65	13.53		Si
SLV 4	-1.58	2454.56	-17226	-0.0001061	0.0005615	0.0035	1.4		9624.4	9624.4	3.92		Si
SLV 4	1.39	-347.16	-21733	-0.0000889	0.0005615	0.0035	1.4		11759.61	11759.61	33.87		Si
SLV 8	-1.58	3361.22	-17293	-0.0001221	0.0005615	0.0035	1.4		9651.45	9651.45	2.87		Si
SLV 8	1.39	-1035.52	-18192	-0.0000859	0.0005615	0.0035	1.4		10548.1	10548.1	10.19		Si
SLV 7	-1.58	3406.99	-17301	-0.000123	0.0005615	0.0035	1.4		9654.82	9654.82	2.83		Si
SLV 7	1.39	-1038.66	-18202	-0.000086	0.0005615	0.0035	1.4		10552.35	10552.35	10.16		Si
SLD 12	-1.58	2044.24	-15810	-0.000093	0.0005615	0.0035	1.4		9051.43	9051.43	4.43		Si
SLD 12	1.39	-751.34	-17316	-0.0000775	0.0005615	0.0035	1.4		10185.77	10185.77	13.56		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	-1.58	1914.09	-22517	-18961	7703	1.4	1.4	-45146	10833	4550	33304	12577	3570	16147	No	2.1	Si
SLU 81	1.39	-760.27	-27674	-23304	3495	1.4	1.4	-55486	10833	4550	33304	12577	3570	16147	No	4.62	Si
SLU 83	-1.58	1943.81	-22745	-19154	7795	1.4	1.4	-45605	10833	4550	33304	12577	3570	16147	No	2.07	Si
SLU 83	1.39	-767.01	-28011	-23588	3528	1.4	1.4	-56161	10833	4550	33304	12577	3570	16147	No	4.58	Si
SLU 84	-1.58	1955.19	-22756	-19163	7822	1.4	1.4	-45627	10833	4550	33304	12577	3570	16147	No	2.06	Si
SLU 84	1.39	-770.93	-28004	-23582	3552	1.4	1.4	-56149	10833	4550	33304	12577	3570	16147	No	4.55	Si
SLU 77	-1.58	1913.7	-22277	-18759	7662	1.4	1.4	-44665	10833	4550	33304	12577	3570	16147	No	2.11	Si
SLU 77	1.39	-683.42	-27305	-22994	3410	1.4	1.4	-54747	10833	4550	33304	12577	3570	16147	No	4.73	Si
SLU 80	-1.58	1907.57	-22131	-18636	7625	1.4	1.4	-44372	10833	4550	33304	12577	3570	16147	No	2.12	Si
SLU 80	1.39	-684.54	-27088	-22811	3413	1.4	1.4	-54311	10833	4550	33304	12577	3570	16147	No	4.73	Si
SLU 79	-1.58	1896.19	-22120	-18627	7598	1.4	1.4	-44350	10833	4550	33304	12577	3570	16147	No	2.13	Si
SLU 79	1.39	-680.62	-27094	-22816	3388	1.4	1.4	-54324	10833	4550	33304	12577	3570	16147	No	4.77	Si
SLU 74	-1.58	1883.97	-22048	-18567	7570	1.4	1.4	-44206	10833	4550	33304	12577	3570	16147	No	2.13	Si
SLU 74	1.39	-676.68	-26968	-22710	3378	1.4	1.4	-54072	10833	4550	33304	12577	3570	16147	No	4.78	Si
SLU 75	-1.58	1895.34	-22059	-18576	7597	1.4	1.4	-44229	10833	4550	33304	12577	3570	16147	No	2.13	Si
SLU 75	1.39	-680.6	-26962	-22705	3402	1.4	1.4	-54059	10833	4550	33304	12577	3570	16147	No	4.75	Si
SLU 78	-1.58	1925.07	-22288	-18769	7689	1.4	1.4	-44687	10833	4550	33304	12577	3570	16147	No	2.1	Si
SLU 78	1.39	-687.34	-27299	-22989	3434	1.4	1.4	-54735	10833	4550	33304	12577	3570	16147	No	4.7	Si
SLU 82	-1.58	1925.46	-22528	-18971	7730	1.4	1.4	-45168	10833	4550	33304	12577	3570	16147	No	2.09	Si
SLU 82	1.39	-764.19	-27667	-23299	3520	1.4	1.4	-55473	10833	4550	33304	12577	3570	16147	No	4.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	-1.58	3032.12	-16428	-13834	9656	1.4	1.4	-32938	16250	6825	33304	18865	3570	22435		2.32	Si
SLV 11	1.39	-1199.17	-15947	-13429	6832	1.4	1.4	-31974	16250	6825	33304	18865	3570	22435		3.28	Si
SLV 7	-1.58	3406.99	-17301	-14569	9909	1.4	1.4	-34688	16250	6825	33304	18865	3570	22435		2.26	Si
SLV 7	1.39	-1038.66	-18202	-15328	6390	1.4	1.4	-36495	16250	6825	33304	18865	3570	22435		3.51	Si
SLV 8	-1.58	3361.22	-17293	-14562	9831	1.4	1.4	-34672	16250	6825	33304	18865	3570	22435		2.28	Si
SLV 8	1.39	-1035.52	-18192	-15319	6338	1.4	1.4	-36474	16250	6825	33304	18865	3570	22435		3.54	Si
SLD 7	-1.58	2224.46	-16187	-13631	7310	1.4	1.4	-32454	16250	6825	33304	18865	3570	22435		3.07	Si
SLD 7	1.39	-684.44	-18284	-15397	4129	1.4	1.4	-36659	16250	6825	33304	18865	3570	22435		5.43	Si
SLV 4	-1.58	2454.56	-17226	-14506	6964	1.4	1.4	-34539	16250	6825	33304	18865	3570	22435		3.22	Si
SLV 4	1.39	-347.16	-21733	-18302	2834	1.4	1.4	-43576	16250	6825	33304	18865	3570	22435		7.92	Si
SLD 11	-1.58	2064.22	-15814	-13317	7202	1.4	1.4	-31706	16250	6825	33304	18865	3570	22435		3.12	Si
SLD 11	1.39	-752.71	-17320	-14585	4319	1.4	1.4	-34727	16250	6825	33304	18865	3570	22435		5.19	Si
SLD 12	-1.58	2044.24	-15810	-13314	7168	1.4	1.4	-31699	16250	6825	33304	18865	3570	22435		3.13	Si
SLD 12	1.39	-751.34	-17316	-14581	4296	1.4	1.4	-34718	16250	6825	33304	18865	3570	22435		5.22	Si
SLV 3	-1.58	2525.77	-17239	-14517	7086	1.4	1.4	-34564	16250	6825	33304	18865	3570	22435		3.17	Si
SLV 3	1.39	-352.05	-21749	-18315	2915	1.4	1.4	-43608	16250	6825	33304	18865	3570	22435		7.7	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	-1.58	2986.35	-16420	-13827	9578	1.4	1.4	-32922	16250	6825	33304	18865	3570	22435		2.34	Si
SLV 12	1.39	-1196.03	-15937	-13421	6780	1.4	1.4	-31954	16250	6825	33304	18865	3570	22435		3.31	Si
SLD 8	-1.58	2204.48	-16183	-13628	7276	1.4	1.4	-32447	16250	6825	33304	18865	3570	22435		3.08	Si
SLD 8	1.39	-683.07	-18279	-15393	4107	1.4	1.4	-36650	16250	6825	33304	18865	3570	22435		5.46	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.24	40780	-17128	67.89	1883.1	27.74	Si
SLV 13	179667	0.24	40853	-17158	67.89	1885.24	27.77	Si
SLV 16	179667	0.24	41150	-17283	67.89	1893.92	27.9	Si
SLV 15	179667	0.24	41223	-17314	67.89	1896.04	27.93	Si
SLV 10	179667	0.24	42870	-18005	67.89	1942.65	28.62	Si
SLV 9	179667	0.24	42917	-18025	67.89	1943.95	28.64	Si
SLV 12	179667	0.24	44105	-18524	67.89	1976.16	29.11	Si
SLV 11	179667	0.24	44152	-18544	67.89	1977.41	29.13	Si
SLV 6	179667	0.24	45021	-18909	67.89	2000.18	29.46	Si
SLV 5	179667	0.24	45068	-18929	67.89	2001.39	29.48	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-20814	-14209	188	0.403	2294.9	0.976	5.9993	5.75967	Si
SLV 6	-20804	-14200	188	0.403	2293.8	0.976	6.00179	5.75967	Si
SLV 9	-18560	-13336	287	0.438	2065.2	0.974	6.54166	5.75967	Si
SLV 10	-18549	-13328	287	0.439	2064.2	0.974	6.54473	5.75967	Si
SLV 7	-18202	-17301	-192	0.45	2028.8	0.973	6.72533	5.75967	Si
SLV 8	-18192	-17293	-192	0.451	2027.8	0.973	6.72864	5.75967	Si
SLV 11	-15947	-16428	-93	0.509	1799.2	0.97	7.62611	5.75967	Si
SLV 12	-15937	-16420	-92	0.509	1798.2	0.97	7.63043	5.75967	Si
SLV 1	-22533	-16311	-62	0.383	2470	0.978	5.68797	3.72098	Si
SLV 2	-22517	-16299	-62	0.383	2468.4	0.978	5.69145	3.72098	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.134	SLU 84	Si
V_SLU	2.064	SLU 84	Si
PF_SLV	2.834	SLV 7	Si
V_SLV	2.264	SLV 7	Si
PFFP_SLV	27.739	SLV 14	Si
R_SLV	1.042	SLV 5	Si

Maschio 36

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.888	6.576	-8.008	6.576	L2	L4	3.88	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	0.42	2715.7	-58678	-0.000059	0.0003743	0.0035	3.88	76258.92	86226.32	86226.32	31.75	No	Si
SLU 83	0.82	5676.97	-62328	-0.0000674	0.0003743	0.0035	3.88	78519.83	90128.26	90128.26	15.88	No	Si
SLU 81	0.42	2673.39	-57962	-0.0000582	0.0003743	0.0035	3.88	75781.68	85385.7	85385.7	31.94	No	Si
SLU 81	0.82	5598.35	-61563	-0.0000665	0.0003743	0.0035	3.88	78070.28	89454.08	89454.08	15.98	No	Si
SLU 69	0.42	2253.51	-51843	-0.0000513	0.0003743	0.0035	3.88	71243.51	78281.95	78281.95	34.74	No	Si
SLU 69	0.82	5101.84	-55074	-0.0000589	0.0003743	0.0035	3.88	73741.73	82013.65	82013.65	16.08	No	Si
SLU 79	0.42	2597.52	-56989	-0.000057	0.0003743	0.0035	3.88	75114.24	84245.91	84245.91	32.43	No	Si
SLU 79	0.82	5547.91	-60534	-0.0000653	0.0003743	0.0035	3.88	77445.18	88419.92	88419.92	15.94	No	Si
SLU 77	0.42	2627.98	-57454	-0.0000576	0.0003743	0.0035	3.88	75435.74	84789.91	84789.91	32.26	No	Si
SLU 77	0.82	5586.44	-61044	-0.0000659	0.0003743	0.0035	3.88	77757.58	88951.91	88951.91	15.92	No	Si
SLU 56	0.42	2271.36	-51668	-0.0000511	0.0003743	0.0035	3.88	71101.4	78080.95	78080.95	34.38	No	Si
SLU 56	0.82	5060.55	-54879	-0.0000587	0.0003743	0.0035	3.88	73597.42	81786.91	81786.91	16.16	No	Si
SLU 58	0.42	2240.9	-51203	-0.0000506	0.0003743	0.0035	3.88	70721.14	77548.48	77548.48	34.61	No	Si
SLU 58	0.82	5022.02	-54370	-0.0000581	0.0003743	0.0035	3.88	73216.46	81195.44	81195.44	16.17	No	Si
SLU 66	0.42	2211.2	-51128	-0.0000505	0.0003743	0.0035	3.88	70659.54	77462.94	77462.94	35.03	No	Si
SLU 66	0.82	5023.21	-54310	-0.000058	0.0003743	0.0035	3.88	73171.11	81125.71	81125.71	16.15	No	Si
SLU 74	0.42	2585.67	-56738	-0.0000568	0.0003743	0.0035	3.88	74939.38	83953.81	83953.81	32.47	No	Si
SLU 74	0.82	5507.81	-60279	-0.000065	0.0003743	0.0035	3.88	77286.6	88117.37	88117.37	16	No	Si
SLU 71	0.42	2223.05	-51378	-0.0000508	0.0003743	0.0035	3.88	70865.03	77749.06	77749.06	34.97	No	Si
SLU 71	0.82	5063.31	-54565	-0.0000583	0.0003743	0.0035	3.88	73362.94	81421.67	81421.67	16.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	0.42	-12246.81	-35424	-0.0000486	0.0005615	0.0035	3.88		65543.54	65543.54	5.35		Si
SLV 4	0.82	972.05	-37520	-0.0000347	0.0005615	0.0035	3.88		64329.78	64329.78	66.18		Si
SLV 13	0.42	15593.94	-42080	-0.0000597	0.0005615	0.0035	3.88		70892.46	70892.46	4.55		Si
SLV 13	0.82	6621.5	-44774	-0.0000495	0.0005615	0.0035	3.88		74800.77	74800.77	11.3		Si
SLD 14	0.42	8036.92	-40124	-0.0000471	0.0005615	0.0035	3.88		68068.85	68068.85	8.47		Si
SLD 14	0.82	5105.98	-42667	-0.0000453	0.0005615	0.0035	3.88		71741.89	71741.89	14.05		Si
SLV 3	0.42	-13222.64	-35507	-0.0000501	0.0005615	0.0035	3.88		65671.83	65671.83	4.97		Si
SLV 3	0.82	733.21	-37560	-0.0000344	0.0005615	0.0035	3.88		64387.01	64387.01	87.82		Si
SLV 1	0.42	-12380.18	-31963	-0.0000456	0.0005615	0.0035	3.88		60204.79	60204.79	4.86		Si
SLV 1	0.82	1841.09	-34340	-0.000033	0.0005615	0.0035	3.88		59792.28	59792.28	32.48		Si
SLV 15	0.42	14751.47	-45624	-0.000062	0.0005615	0.0035	3.88		76038.7	76038.7	5.15		Si
SLV 15	0.82	5513.61	-47994	-0.000051	0.0005615	0.0035	3.88		79502.69	79502.69	14.42		Si
SLV 16	0.42	15727.3	-45541	-0.0000633	0.0005615	0.0035	3.88		75918.13	75918.13	4.83		Si
SLV 16	0.82	5752.45	-47954	-0.0000513	0.0005615	0.0035	3.88		79444.15	79444.15	13.81		Si
SLV 10	0.42	7587.36	-34337	-0.0000411	0.0005615	0.0035	3.88		59787.84	59787.84	7.88		Si
SLV 10	0.82	6437.06	-37333	-0.0000422	0.0005615	0.0035	3.88		64061.34	64061.34	9.95		Si
SLV 14	0.42	16569.76	-41998	-0.0000611	0.0005615	0.0035	3.88		70772.85	70772.85	4.27		Si
SLV 14	0.82	6860.33	-44734	-0.0000498	0.0005615	0.0035	3.88		74742.63	74742.63	10.89		Si
SLV 2	0.42	-11404.35	-31880	-0.0000441	0.0005615	0.0035	3.88		60077.94	60077.94	5.27		Si
SLV 2	0.82	2079.93	-34301	-0.0000333	0.0005615	0.0035	3.88		59735.48	59735.48	28.72		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 66	0.42	2211.2	-51128	-45447	-4358	3.88	3.88	-26029	10415	18185	33304	52283	9894	51489	No	11.81	Si
SLU 66	0.82	5023.21	-54310	-48275	-4297	3.88	3.88	-27649	10631	18562	33304	52283	9894	51866	No	12.07	Si
SLU 78	0.42	2540.5	-57592	-51193	-4422	3.88	3.88	-29320	10833	18915	33304	52283	9894	52219	No	11.81	Si
SLU 78	0.82	5471.7	-61207	-54406	-4355	3.88	3.88	-31160	10833	18915	33304	52283	9894	52219	No	11.99	Si
SLU 81	0.42	2673.39	-57962	-51522	-4414	3.88	3.88	-29509	10833	18915	33304	52283	9894	52219	No	11.83	Si
SLU 81	0.82	5598.35	-61563	-54723	-4347	3.88	3.88	-31342	10833	18915	33304	52283	9894	52219	No	12.01	Si
SLU 71	0.42	2223.05	-51378	-45669	-4427	3.88	3.88	-26157	10432	18214	33304	52283	9894	51519	No	11.64	Si
SLU 71	0.82	5063.31	-54565	-48502	-4365	3.88	3.88	-27779	10648	18592	33304	52283	9894	51896	No	11.89	Si
SLU 77	0.42	2627.98	-57454	-51070	-4504	3.88	3.88	-29250	10833	18915	33304	52283	9894	52219	No	11.59	Si
SLU 77	0.82	5586.44	-61044	-54261	-4437	3.88	3.88	-31077	10833	18915	33304	52283	9894	52219	No	11.77	Si
SLU 79	0.42	2597.52	-56989	-50657	-4508	3.88	3.88	-29013	10813	18879	33304	52283	9894	52184	No	11.58	Si
SLU 79	0.82	5547.91	-60534	-53808	-4441	3.88	3.88	-30818	10833	18915	33304	52283	9894	52219	No	11.76	Si
SLU 83	0.42	2715.7	-58678	-52158	-4479	3.88	3.88	-29873	10833	18915	33304	52283	9894	52219	No	11.66	Si
SLU 83	0.82	5676.97	-62328	-55402	-4411	3.88	3.88	-31731	10833	18915	33304	52283	9894	52219	No	11.84	Si
SLU 74	0.42	2585.67	-56738	-50434	-4440	3.88	3.88	-28886	10796	18850	33304	52283	9894	52154	No	11.75	Si
SLU 74	0.82	5507.81	-60279	-53581	-4373	3.88	3.88	-30688	10833	18915	33304	52283	9894	52219	No	11.94	Si
SLU 80	0.42	2510.04	-57127	-50779	-4426	3.88	3.88	-29083	10822	18896	33304	52283	9894	52200	No	11.79	Si
SLU 80	0.82	5433.17	-60697	-53953	-4359	3.88	3.88	-30901	10833	18915	33304	52283	9894	52219	No	11.98	Si
SLU 69	0.42	2253.51	-51843	-46083	-4423	3.88	3.88	-26393	10464	18269	33304	52283	9894	51574	No	11.66	Si
SLU 69	0.82	5101.84	-55074	-48955	-4360	3.88	3.88	-28038	10683	18652	33304	52283	9894	51957	No	11.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	0.42	15727.3	-45541	-40481	24602	3.88	3.88	-23185	15054	26284	33304	78425	9894	59588		2.42	Si
SLV 16	0.82	5752.45	-47954	-42626	24214	3.88	3.88	-24413	15299	26713	33304	78425	9894	60017		2.48	Si
SLV 13	0.42	15593.94	-42080	-37405	23970	3.88	3.88	-21423	14701	25668	33304	78425	9894	58973		2.46	Si
SLV 13	0.82	6621.5	-44774	-39799	23962	3.88	3.88	-22795	14976	26147	33304	78425	9894	59452		2.48	Si
SLV 14	0.42	16569.76	-41998	-37331	25835	3.88	3.88	-21381	14693	25654	33304	78425	9894	58958		2.28	Si
SLV 14	0.82	6860.33	-44734	-39764	25828	3.88	3.88	-22774	14972	26140	33304	78425	9894	59445		2.3	Si
SLV 4	0.42	-12246.81	-35424	-31488	-30532	3.88	3.88	-18034	14024	24485	33304	78425	9894	57789		1.89	Si
SLV 4	0.82	972.05	-37520	-33352	-30432	3.88	3.88	-19102	14237	24858	33304	78425	9894	58162		1.91	Si
SLV 2	0.42	-11404.35	-31880	-28338	-29299	3.88	3.88	-16230	13663	23855	33304	78425	9894	57159		1.95	Si
SLV 2	0.82	2079.93	-34301	-30489	-28818	3.88	3.88	-17462	13909	24285	33304	78425	9894	57590		2	Si
SLV 3	0.42	-13222.64	-35507	-31561	-32397	3.88	3.88	-18076	14032	24500	33304	78425	9894	57804		1.78	Si
SLV 3	0.82	733.21	-37560	-33387	-32298	3.88	3.88	-19122	14241	24865	33304	78425	9894	58169		1.8	Si
SLD 3	0.42	-4689.8	-37380	-33227	-15725	3.88	3.88	-19030	14223	24833	33304	78425	9894	58137		3.7	Si
SLD 3	0.82	2487.56	-39627	-35224	-15656	3.88	3.88	-20174	14452	25232	33304	78425	9894	58537		3.74	Si
SLV 1	0.42	-12380.18	-31963	-28412	-31165	3.88	3.88	-16272	13671	23870	33304	78425	9894	57174		1.83	Si
SLV 1	0.82	1841.09	-34340	-30525	-30684	3.88	3.88	-17483	13913	24292	33304	78425	9894	57597		1.88	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	0.42	14751.47	-45624	-40555	22737	3.88	3.88	-23227	15062	26298	33304	78425	9894	59603		2.62	Si
SLV 15	0.82	5513.61	-47994	-42661	22348	3.88	3.88	-24434	15303	26720	33304	78425	9894	60024		2.69	Si
SLD 1	0.42	-4329.88	-35857	-31873	-15201	3.88	3.88	-18255	14068	24562	33304	78425	9894	57866		3.81	Si
SLD 1	0.82	2964.34	-38247	-33997	-14967	3.88	3.88	-19471	14311	24987	33304	78425	9894	58291		3.89	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.24	16417	-28665	282.21	5756.22	20.4	Si
SLV 1	179667	0.24	16484	-28782	282.21	5776.89	20.47	Si
SLV 6	179667	0.24	16523	-28849	282.21	5788.69	20.51	Si
SLV 5	179667	0.24	16566	-28924	282.21	5801.95	20.56	Si
SLV 4	179667	0.24	18148	-31686	282.21	6282.23	22.26	Si
SLV 3	179667	0.24	18215	-31804	282.21	6302.3	22.33	Si
SLV 10	179667	0.24	18333	-32010	282.21	6337.67	22.46	Si
SLV 9	179667	0.24	18377	-32085	282.21	6350.53	22.5	Si
SLV 8	179667	0.24	22292	-38921	282.21	7478.99	26.5	Si
SLV 7	179667	0.24	22335	-38996	282.21	7490.97	26.54	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-41025	-31450	949	0.54	4908.4	0.956	8.20339	4.19835	Si
SLV 12	-41021	-31328	949	0.54	4907.9	0.956	8.20393	4.19835	Si
SLV 9	-36800	-25793	2467	0.55	4479.1	0.952	8.39803	4.19835	Si
SLV 10	-36796	-25671	2468	0.55	4478.7	0.952	8.39864	4.19835	Si
SLV 7	-38423	-28737	825	0.571	4644	0.954	8.69306	4.19835	Si
SLV 8	-38419	-28615	825	0.571	4643.5	0.954	8.69369	4.19835	Si
SLV 5	-34199	-23080	2343	0.585	4214.9	0.95	8.95605	4.19835	Si
SLV 6	-34194	-22958	2344	0.585	4214.5	0.95	8.95678	4.19835	Si
SLV 15	-42583	-32669	1625	0.51	5066.7	0.957	7.74351	3.18428	Si
SLV 16	-42576	-32480	1625	0.51	5066	0.957	7.74425	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.876	SLU 83	Si
V_SLU	11.575	SLU 79	Si
PF_SLV	4.271	SLV 14	Si
V_SLV	1.784	SLV 3	Si
PFFP_SLV	20.397	SLV 2	Si
R_SLV	1.954	SLV 11	Si

Maschio 37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.008	6.576	-4.858	6.576	L2	L4	2.15	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	0.42	-1121.44	-25974	-0.0000484	0.0003743	0.0035	2.15	20559.47	23671.97	23671.97	21.11	No	Si
SLU 74	0.82	2710.38	-24723	-0.0000539	0.0003743	0.0035	2.15	19906.39	21474.71	21474.71	7.92	No	Si
SLU 77	0.42	-1130.14	-26266	-0.000049	0.0003743	0.0035	2.15	20706.64	23865.42	23865.42	21.12	No	Si
SLU 77	0.82	2735.77	-25011	-0.0000545	0.0003743	0.0035	2.15	20060.01	21658.47	21658.47	7.92	No	Si
SLU 81	0.42	-1117.66	-26568	-0.0000495	0.0003743	0.0035	2.15	20857.27	24066.75	24066.75	21.53	No	Si
SLU 81	0.82	2783.8	-25310	-0.0000553	0.0003743	0.0035	2.15	20217.25	21849.3	21849.3	7.85	No	Si
SLU 58	0.42	-1088.65	-23386	-0.0000436	0.0003743	0.0035	2.15	19171.25	21921.92	21921.92	20.14	No	Si
SLU 58	0.82	2437.15	-22160	-0.0000479	0.0003743	0.0035	2.15	18462.49	19861.62	19861.62	8.15	No	Si
SLU 62	0.42	-1090.52	-24210	-0.0000451	0.0003743	0.0035	2.15	19628.85	22509.64	22509.64	20.64	No	Si
SLU 62	0.82	2530.8	-22975	-0.0000498	0.0003743	0.0035	2.15	18937.47	20371.24	20371.24	8.05	No	Si
SLU 60	0.42	-1081.81	-23918	-0.0000445	0.0003743	0.0035	2.15	19468.6	22301.87	22301.87	20.62	No	Si
SLU 60	0.82	2505.41	-22686	-0.0000492	0.0003743	0.0035	2.15	18771.03	20190.49	20190.49	8.06	No	Si
SLU 56	0.42	-1094.29	-23616	-0.0000441	0.0003743	0.0035	2.15	19300.49	22085.78	22085.78	20.18	No	Si
SLU 56	0.82	2457.38	-22387	-0.0000484	0.0003743	0.0035	2.15	18596.66	20003.67	20003.67	8.14	No	Si
SLU 83	0.42	-1126.37	-26860	-0.00005	0.0003743	0.0035	2.15	21000.66	24261.65	24261.65	21.54	No	Si
SLU 83	0.82	2809.19	-25599	-0.000056	0.0003743	0.0035	2.15	20367.17	22033.25	22033.25	7.84	No	Si
SLU 69	0.42	-1105.47	-23664	-0.0000442	0.0003743	0.0035	2.15	19327.34	22120.07	22120.07	20.01	No	Si
SLU 69	0.82	2457.99	-22435	-0.0000485	0.0003743	0.0035	2.15	18624.45	20033.28	20033.28	8.15	No	Si
SLU 79	0.42	-1124.5	-26036	-0.0000485	0.0003743	0.0035	2.15	20590.7	23712.76	23712.76	21.09	No	Si
SLU 79	0.82	2715.54	-24783	-0.000054	0.0003743	0.0035	2.15	19938.89	21513.36	21513.36	7.92	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	0.42	-4040.14	-14922	-0.000042	0.0005615	0.0035	2.15		15996.16	15996.16	3.96		Si
SLV 8	0.82	-291.55	-15220	-0.0000255	0.0005615	0.0035	2.15		16262.73	16262.73	55.78		Si
SLV 2	0.42	-3602.95	-10184	-0.0000321	0.0005615	0.0035	2.15		11587.25	11587.25	3.22		Si
SLV 2	0.82	2408.57	-8664	-0.0000243	0.0005615	0.0035	2.15		9115.69	9115.69	3.78		Si
SLV 3	0.42	-5190.08	-9645	-0.0000411	0.0005615	0.0035	2.15		11072.76	11072.76	2.13		Si
SLV 3	0.82	1229.19	-8883	-0.0000194	0.0005615	0.0035	2.15		9328.99	9328.99	7.59		Si
SLV 9	0.42	2376.54	-20555	-0.0000438	0.0005615	0.0035	2.15		19506.5	19506.5	8.21		Si
SLV 9	0.82	4000.17	-18375	-0.0000476	0.0005615	0.0035	2.15		17746.11	17746.11	4.44		Si
SLV 7	0.42	-4203.82	-14783	-0.0000425	0.0005615	0.0035	2.15		15872.09	15872.09	3.78		Si
SLV 7	0.82	-236.72	-15069	-0.000025	0.0005615	0.0035	2.15		16127.87	16127.87	68.13		Si
SLV 1	0.42	-3857.62	-9968	-0.000033	0.0005615	0.0035	2.15		11381.47	11381.47	2.95		Si
SLV 1	0.82	2493.88	-8430	-0.0000243	0.0005615	0.0035	2.15		8886.56	8886.56	3.56		Si
SLV 5	0.42	237.72	-15861	-0.0000263	0.0005615	0.0035	2.15		15734.87	15734.87	66.19		Si
SLV 5	0.82	3978.91	-13561	-0.0000394	0.0005615	0.0035	2.15		13763.66	13763.66	3.46		Si
SLV 6	0.42	401.39	-16000	-0.0000273	0.0005615	0.0035	2.15		15845.42	15845.42	39.48		Si
SLV 6	0.82	3924.08	-13711	-0.0000394	0.0005615	0.0035	2.15		13902.99	13902.99	3.54		Si
SLV 4	0.42	-4935.41	-9861	-0.0000392	0.0005615	0.0035	2.15		11279.15	11279.15	2.29		Si
SLV 4	0.82	1143.88	-9117	-0.0000194	0.0005615	0.0035	2.15		9558.1	9558.1	8.36		Si
SLV 10	0.42	2540.22	-20694	-0.0000448	0.0005615	0.0035	2.15		19619.15	19619.15	7.72		Si
SLV 10	0.82	3945.34	-18526	-0.0000476	0.0005615	0.0035	2.15		17867.25	17867.25	4.53		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	0.42	-1276.44	-26034	-23141	-10125	2.15	2.15	-23919	10134	9804	33304	28971	5483	34454	No	3.4	Si
SLU 75	0.82	2504.08	-24788	-22034	-10004	2.15	2.15	-22774	9981	9657	33304	28971	5483	34454	No	3.44	Si
SLU 82	0.42	-1272.67	-26628	-23669	-10314	2.15	2.15	-24464	10206	9875	33304	28971	5483	34454	No	3.34	Si
SLU 82	0.82	2577.5	-25376	-22556	-10190	2.15	2.15	-23314	10053	9726	33304	28971	5483	34454	No	3.38	Si
SLU 81	0.42	-1117.66	-26568	-23616	-10454	2.15	2.15	-24409	10199	9868	33304	28971	5483	34454	No	3.3	Si
SLU 81	0.82	2783.8	-25310	-22498	-10330	2.15	2.15	-23254	10045	9718	33304	28971	5483	34454	No	3.34	Si
SLU 78	0.42	-1285.15	-26325	-23400	-10217	2.15	2.15	-24186	10169	9839	33304	28971	5483	34454	No	3.37	Si
SLU 78	0.82	2529.47	-25077	-22290	-10095	2.15	2.15	-23039	10016	9691	33304	28971	5483	34454	No	3.41	Si
SLU 80	0.42	-1279.5	-26095	-23196	-10148	2.15	2.15	-23975	10141	9812	33304	28971	5483	34454	No	3.4	Si
SLU 80	0.82	2509.24	-24849	-22088	-10026	2.15	2.15	-22830	9988	9664	33304	28971	5483	34454	No	3.44	Si
SLU 83	0.42	-1126.37	-26860	-23875	-10546	2.15	2.15	-24677	10235	9902	33304	28971	5483	34454	No	3.27	Si
SLU 83	0.82	2809.19	-25599	-22755	-10421	2.15	2.15	-23519	10080	9753	33304	28971	5483	34454	No	3.31	Si
SLU 74	0.42	-1121.44	-25974	-23088	-10265	2.15	2.15	-23864	10126	9797	33304	28971	5483	34454	No	3.36	Si
SLU 74	0.82	2710.38	-24723	-21976	-10144	2.15	2.15	-22714	9973	9649	33304	28971	5483	34454	No	3.4	Si
SLU 77	0.42	-1130.14	-26266	-23347	-10357	2.15	2.15	-24132	10162	9832	33304	28971	5483	34454	No	3.33	Si
SLU 77	0.82	2735.77	-25011	-22232	-10235	2.15	2.15	-22979	10008	9683	33304	28971	5483	34454	No	3.37	Si
SLU 84	0.42	-1281.37	-26919	-23928	-10406	2.15	2.15	-24732	10242	9909	33304	28971	5483	34454	No	3.31	Si
SLU 84	0.82	2602.89	-25664	-22813	-10281	2.15	2.15	-23579	10088	9760	33304	28971	5483	34454	No	3.35	Si
SLU 79	0.42	-1124.5	-26036	-23143	-10288	2.15	2.15	-23920	10134	9804	33304	28971	5483	34454	No	3.35	Si
SLU 79	0.82	2715.54	-24783	-22030	-10167	2.15	2.15	-22770	9980	9656	33304	28971	5483	34454	No	3.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	0.42	-4040.14	-14922	-13264	-11785	2.15	2.15	-13710	13159	12731	33304	43457	5483	46035		3.91	Si
SLV 8	0.82	-291.55	-15220	-13529	-11779	2.15	2.15	-13983	13213	12784	33304	43457	5483	46088		3.91	Si
SLV 1	0.42	-3857.62	-9968	-8861	-15789	2.15	2.0641	-9583	12333	11455	33304	43457	5483	44760		2.83	Si
SLV 1	0.82	2493.88	-8430	-7493	-15689	2.15	2.15	-7745	11966	11577	33304	43457	5483	44881		2.86	Si
SLV 3	0.42	-5190.08	-9645	-8574	-17127	2.15	1.6107	-11896	12796	9275	33304	43457	5483	42579		2.49	Si
SLV 3	0.82	1229.19	-8883	-7896	-17074	2.15	2.15	-8161	12049	11657	33304	43457	5483	44962		2.63	Si
SLV 7	0.42	-4203.82	-14783	-13141	-12352	2.15	2.15	-13582	13133	12706	33304	43457	5483	46011		3.73	Si
SLV 7	0.82	-236.72	-15069	-13395	-12351	2.15	2.15	-13845	13186	12757	33304	43457	5483	46061		3.73	Si
SLD 1	0.42	-2125.94	-14422	-12819	-10865	2.15	2.15	-13250	13067	12642	33304	43457	5483	45946		4.23	Si
SLD 1	0.82	2126.71	-13224	-11755	-10774	2.15	2.15	-12149	12847	12429	33304	43457	5483	45733		4.24	Si
SLV 4	0.42	-4935.41	-9861	-8766	-16245	2.15	1.7235	-11362	12689	9842	33304	43457	5483	43146		2.66	Si
SLV 4	0.82	1143.88	-9117	-8104	-16184	2.15	2.15	-8376	12092	11699	33304	43457	5483	45003		2.78	Si
SLD 4	0.42	-2587.59	-14377	-12779	-11061	2.15	2.15	-13209	13058	12634	33304	43457	5483	45938		4.15	Si
SLD 4	0.82	1548.14	-13520	-12018	-10987	2.15	2.15	-12421	12901	12482	33304	43457	5483	45786		4.17	Si
SLD 3	0.42	-2696.93	-14284	-12697	-11440	2.15	2.15	-13123	13041	12618	33304	43457	5483	45922		4.01	Si
SLD 3	0.82	1584.76	-13419	-11928	-11370	2.15	2.15	-12329	12882	12464	33304	43457	5483	45768		4.03	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	0.42	-2016.6	-14514	-12902	-10486	2.15	2.15	-13335	13084	12658	33304	43457	5483	45963		4.38	Si
SLD 2	0.82	2090.08	-13324	-11844	-10392	2.15	2.15	-12242	12865	12447	33304	43457	5483	45751		4.4	Si
SLV 2	0.42	-3602.95	-10184	-9053	-14907	2.15	2.15	-9357	12288	11889	33304	43457	5483	45193		3.03	Si
SLV 2	0.82	2408.57	-8664	-7702	-14798	2.15	2.15	-7960	12009	11618	33304	43457	5483	44923		3.04	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.24	4263	-4125	156.38	902.12	5.77	Si
SLV 4	179667	0.24	4773	-4618	156.38	1006.59	6.44	Si
SLV 1	179667	0.24	4899	-4740	156.38	1032.32	6.6	Si
SLV 2	179667	0.24	5410	-5234	156.38	1135.87	7.26	Si
SLV 7	179667	0.24	11156	-10794	156.38	2251.16	14.4	Si
SLV 8	179667	0.24	11484	-11111	156.38	2311.95	14.78	Si
SLV 5	179667	0.24	13277	-12846	156.38	2639	16.88	Si
SLV 6	179667	0.24	13605	-13163	156.38	2697.81	17.25	Si
SLV 11	179667	0.24	17623	-17050	156.38	3393.58	21.7	Si
SLV 12	179667	0.24	17951	-17367	156.38	3448.32	22.05	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-17471	-19903	-104	0.682	2185.5	0.947	10.47481	4.19835	Si
SLV 11	-17426	-19191	-102	0.684	2180.9	0.947	10.49881	4.19835	Si
SLV 10	-16043	-23196	192	0.724	2040.7	0.944	11.15481	4.19835	Si
SLV 9	-15998	-22485	194	0.726	2036.1	0.943	11.17867	4.19835	Si
SLV 16	-21269	-33576	-50	0.588	2571	0.954	8.96048	3.18428	Si
SLV 15	-21198	-32469	-47	0.59	2563.9	0.954	8.98708	3.18428	Si
SLV 14	-20840	-34564	39	0.598	2527.5	0.953	9.11735	3.18428	Si
SLV 13	-20769	-33457	42	0.599	2520.3	0.953	9.14031	3.18428	Si
SLV 8	-13799	-9340	-63	0.821	1813.3	0.938	12.72401	4.19835	Si
SLV 7	-13753	-8629	-60	0.823	1808.7	0.938	12.76014	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.843	SLU 83	Si
V_SLU	3.267	SLU 83	Si
PF_SLV	2.133	SLV 3	Si
V_SLV	2.486	SLV 3	Si
PFFP_SLV	5.769	SLV 3	Si
R_SLV	2.495	SLV 12	Si

Maschio 38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	2.201	-9.728	6.576	L2	L4	4.375	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-1.58	28439.76	-105213	-0.0001815	0.0004492	0.0035	4.375	79158.89	150900.78	150900.78	5.31	No	Si
SLU 82	0.62	12740.26	-77294	-0.0001108	0.0004492	0.0035	4.375	87588.88	125938.26	125938.26	9.89	No	Si
SLU 78	-1.58	28339.65	-103751	-0.000179	0.0004492	0.0035	4.375	80128.11	149672.32	149672.32	5.28	No	Si
SLU 78	0.62	12994.94	-75835	-0.0001093	0.0004492	0.0035	4.375	87444.74	124162.96	124162.96	9.55	No	Si
SLU 76	-1.58	27850.21	-102092	-0.0001753	0.0004492	0.0035	4.375	81157.38	148278.19	148278.19	5.32	No	Si
SLU 76	0.62	12503.82	-74461	-0.0001067	0.0004492	0.0035	4.375	87255.94	122491.48	122491.48	9.8	No	Si
SLU 75	-1.58	28032.85	-102747	-0.0001767	0.0004492	0.0035	4.375	80760.09	148828.47	148828.47	5.31	No	Si
SLU 75	0.62	12750.63	-75010	-0.0001078	0.0004492	0.0035	4.375	87337.55	123159.35	123159.35	9.66	No	Si
SLU 80	-1.58	28093.79	-103127	-0.0001775	0.0004492	0.0035	4.375	80523.92	149148.14	149148.14	5.31	No	Si
SLU 80	0.62	12854.87	-75393	-0.0001085	0.0004492	0.0035	4.375	87389.62	123625.25	123625.25	9.62	No	Si
SLU 81	-1.58	28344.94	-105260	-0.0001814	0.0004492	0.0035	4.375	79127.05	150939.92	150939.92	5.33	No	Si
SLU 81	0.62	12900.37	-77454	-0.0001113	0.0004492	0.0035	4.375	87601.19	126133.5	126133.5	9.78	No	Si
SLU 77	-1.58	28244.83	-103798	-0.0001789	0.0004492	0.0035	4.375	80098.12	149711.47	149711.47	5.3	No	Si
SLU 77	0.62	13155.05	-75995	-0.0001098	0.0004492	0.0035	4.375	87463.43	124358.19	124358.19	9.45	No	Si
SLU 83	-1.58	28651.73	-106264	-0.0001837	0.0004492	0.0035	4.375	78426.2	151783.77	151783.77	5.3	No	Si
SLU 83	0.62	13144.68	-78279	-0.0001129	0.0004492	0.0035	4.375	87653.37	127137.11	127137.11	9.67	No	Si
SLU 84	-1.58	28746.56	-106218	-0.0001838	0.0004492	0.0035	4.375	78459.32	151744.63	151744.63	5.28	No	Si
SLU 84	0.62	12984.57	-78119	-0.0001124	0.0004492	0.0035	4.375	87644.67	126941.87	126941.87	9.78	No	Si
SLU 79	-1.58	27998.97	-103174	-0.0001774	0.0004492	0.0035	4.375	80494.73	149187.28	149187.28	5.33	No	Si
SLU 79	0.62	13014.97	-75553	-0.000109	0.0004492	0.0035	4.375	87410.25	123820.48	123820.48	9.51	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	-1.58	33155.21	-52133	-0.0001086	0.0006738	0.0035	4.375		98147.47	98147.47	2.96		Si
SLV 4	0.62	6344.88	-41857	-0.0000547	0.0006738	0.0035	4.375		81769.78	81769.78	12.89		Si
SLV 11	-1.58	39061.46	-74818	-0.0001467	0.0006738	0.0035	4.375		132430.14	132430.14	3.39		Si
SLV 11	0.62	12383.97	-54292	-0.0000783	0.0006738	0.0035	4.375		101588.48	101588.48	8.2		Si
SLV 3	-1.58	34803.82	-51729	-0.0001107	0.0006738	0.0035	4.375		97503.74	97503.74	2.8		Si
SLV 3	0.62	6444	-41676	-0.0000547	0.0006738	0.0035	4.375		81480.34	81480.34	12.64		Si
SLD 3	-1.58	26144.8	-62852	-0.0001104	0.0006738	0.0035	4.375		115232.83	115232.83	4.41		Si
SLD 3	0.62	7948.85	-47161	-0.0000632	0.0006738	0.0035	4.375		90222.59	90222.59	11.35		Si
SLV 8	-1.58	42823.52	-63877	-0.0001389	0.0006738	0.0035	4.375		116867.21	116867.21	2.73		Si
SLV 8	0.62	10349.21	-48746	-0.0000687	0.0006738	0.0035	4.375		92749.11	92749.11	8.96		Si
SLD 8	-1.58	29757.37	-68017	-0.0001227	0.0006738	0.0035	4.375		123465.92	123465.92	4.15		Si
SLD 8	0.62	9600.79	-50112	-0.0000691	0.0006738	0.0035	4.375		94925.95	94925.95	9.89		Si
SLV 7	-1.58	43883.05	-63618	-0.0001403	0.0006738	0.0035	4.375		116453.49	116453.49	2.65		Si
SLV 7	0.62	10412.91	-48629	-0.0000687	0.0006738	0.0035	4.375		92563.09	92563.09	8.89		Si
SLV 12	-1.58	38001.93	-75078	-0.0001453	0.0006738	0.0035	4.375		132751.36	132751.36	3.49		Si
SLV 12	0.62	12320.26	-54408	-0.0000784	0.0006738	0.0035	4.375		101774.5	101774.5	8.26		Si
SLV 1	-1.58	21947.56	-52801	-0.0000916	0.0006738	0.0035	4.375		99211.98	99211.98	4.52		Si
SLV 1	0.62	4997.95	-41406	-0.0000521	0.0006738	0.0035	4.375		81050.55	81050.55	16.22		Si
SLD 7	-1.58	30219.97	-67904	-0.0001233	0.0006738	0.0035	4.375		123285.29	123285.29	4.08		Si
SLD 7	0.62	9628.6	-50061	-0.0000691	0.0006738	0.0035	4.375		94844.74	94844.74	9.85		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-1.58	28651.73	-106264	-77283	-32336	4.375	4.375	-58882	10833	14219	95155	47168	22312	69480	No	2.15	Si
SLU 83	0.62	13144.68	-78279	-56930	-42225	4.375	4.375	-43375	10833	14219	95155	47168	22312	69480	No	1.65	Si
SLU 75	-1.58	28032.85	-102747	-74725	-31563	4.375	4.375	-56933	10833	14219	95155	47168	22312	69480	No	2.2	Si
SLU 75	0.62	12750.63	-75010	-54553	-41177	4.375	4.375	-41564	10833	14219	95155	47168	22312	69480	No	1.69	Si
SLU 74	-1.58	27938.03	-102793	-74759	-31601	4.375	4.375	-56959	10833	14219	95155	47168	22312	69480	No	2.2	Si
SLU 74	0.62	12910.74	-75170	-54669	-41207	4.375	4.375	-41653	10833	14219	95155	47168	22312	69480	No	1.69	Si
SLU 82	-1.58	28439.76	-105213	-76519	-31935	4.375	4.375	-58300	10833	14219	95155	47168	22312	69480	No	2.18	Si
SLU 82	0.62	12740.26	-77294	-56214	-41727	4.375	4.375	-42829	10833	14219	95155	47168	22312	69480	No	1.67	Si
SLU 81	-1.58	28344.94	-105260	-76553	-31974	4.375	4.375	-58326	10833	14219	95155	47168	22312	69480	No	2.17	Si
SLU 81	0.62	12900.37	-77454	-56330	-41757	4.375	4.375	-42918	10833	14219	95155	47168	22312	69480	No	1.66	Si
SLU 78	-1.58	28339.65	-103751	-75455	-31924	4.375	4.375	-57490	10833	14219	95155	47168	22312	69480	No	2.18	Si
SLU 78	0.62	12994.94	-75835	-55153	-41645	4.375	4.375	-42021	10833	14219	95155	47168	22312	69480	No	1.67	Si
SLU 79	-1.58	27998.97	-103174	-75035	-31712	4.375	4.375	-57170	10833	14219	95155	47168	22312	69480	No	2.19	Si
SLU 79	0.62	13014.97	-75553	-54948	-41343	4.375	4.375	-41865	10833	14219	95155	47168	22312	69480	No	1.68	Si
SLU 84	-1.58	28746.56	-106218	-77249	-32297	4.375	4.375	-58857	10833	14219	95155	47168	22312	69480	No	2.15	Si
SLU 84	0.62	12984.57	-78119	-56814	-42194	4.375	4.375	-43287	10833	14219	95155	47168	22312	69480	No	1.65	Si
SLU 80	-1.58	28093.79	-103127	-75001	-31673	4.375	4.375	-57144	10833	14219	95155	47168	22312	69480	No	2.19	Si
SLU 80	0.62	12854.87	-75393	-54831	-41312	4.375	4.375	-41776	10833	14219	95155	47168	22312	69480	No	1.68	Si
SLU 77	-1.58	28244.83	-103798	-75489	-31963	4.375	4.375	-57516	10833	14219	95155	47168	22312	69480	No	2.17	Si
SLU 77	0.62	13155.05	-75995	-55269	-41675	4.375	4.375	-42110	10833	14219	95155	47168	22312	69480	No	1.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	-1.58	5875.6	-90136	-65553	-31913	4.375	4.375	-49945	16250	21328	95155	70752	22312	93064		2.92	Si
SLV 13	0.62	11568.14	-60281	-43841	-36710	4.375	4.375	-33403	16250	21328	95155	70752	22312	93064		2.54	Si
SLD 9	-1.58	9273.44	-74251	-54001	-29559	4.375	4.375	-41143	16250	21328	95155	70752	22312	93064		3.15	Si
SLD 9	0.62	8312.23	-52027	-37838	-34362	4.375	4.375	-28829	16250	21328	95155	70752	22312	93064		2.71	Si
SLV 5	-1.58	1028.88	-67190	-48866	-35694	4.375	4.375	-37231	16250	21328	95155	70752	22312	93064		2.61	Si
SLV 5	0.62	5592.75	-47730	-34713	-38612	4.375	4.375	-26448	16250	21328	95155	70752	22312	93064		2.41	Si
SLV 9	-1.58	-3792.71	-78391	-57012	-39057	4.375	4.375	-43437	16250	21328	95155	70752	22312	93064		2.38	Si
SLV 9	0.62	7563.81	-53393	-38831	-41497	4.375	4.375	-29586	16250	21328	95155	70752	22312	93064		2.24	Si
SLD 5	-1.58	11339.5	-69475	-50527	-28138	4.375	4.375	-38497	16250	21328	95155	70752	22312	93064		3.31	Si
SLD 5	0.62	7503.62	-49670	-36124	-33170	4.375	4.375	-27523	16250	21328	95155	70752	22312	93064		2.81	Si
SLV 10	-1.58	-4852.24	-78650	-57200	-39692	4.375	4.375	-43581	16250	21328	95155	70752	22312	93064		2.34	Si
SLV 10	0.62	7500.11	-53510	-38916	-41941	4.375	4.375	-29650	16250	21328	95155	70752	22312	93064		2.22	Si
SLV 14	-1.58	4226.99	-90539	-65847	-32901	4.375	4.375	-50169	16250	21328	95155	70752	22312	93064		2.83	Si
SLV 14	0.62	11469.02	-60463	-43973	-37401	4.375	4.375	-33503	16250	21328	95155	70752	22312	93064		2.49	Si
SLD 10	-1.58	8810.84	-74364	-54083	-29837	4.375	4.375	-41206	16250	21328	95155	70752	22312	93064		3.12	Si
SLD 10	0.62	8284.41	-52078	-37875	-34555	4.375	4.375	-28857	16250	21328	95155	70752	22312	93064		2.69	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	-1.58	-30.65	-67450	-49055	-36329	4.375	4.375	-37375	16250	21328	95155	70752	22312	93064		2.56	Si
SLV 6	0.62	5529.05	-47847	-34798	-39056	4.375	4.375	-26513	16250	21328	95155	70752	22312	93064		2.38	Si
SLD 6	-1.58	10876.9	-69588	-50610	-28415	4.375	4.375	-38560	16250	21328	95155	70752	22312	93064		3.28	Si
SLD 6	0.62	7475.8	-49721	-36161	-33364	4.375	4.375	-27551	16250	21328	95155	70752	22312	93064		2.79	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-45751	0.24	212.14	5557.48	7902.55	6730.01	31.72	Si
SLV 2	-45911	0.24	212.14	5572.33	7927.03	6749.68	31.82	Si
SLV 3	-46121	0.24	212.14	5591.76	7959.15	6775.46	31.94	Si
SLV 4	-46281	0.24	212.14	5606.54	7983.63	6795.09	32.03	Si
SLV 5	-53467	0.24	212.14	6237.5	9084.2	7660.85	36.11	Si
SLV 6	-53570	0.24	212.14	6246.06	9099.95	7673.01	36.17	Si
SLV 7	-54700	0.24	212.14	6339.27	9273.11	7806.19	36.8	Si
SLV 8	-54803	0.24	212.14	6347.67	9288.86	7818.26	36.85	Si
SLV 9	-60426	0.24	212.14	6787.14	10120.57	8453.86	39.85	Si
SLV 10	-60529	0.24	212.14	6794.8	10135.59	8465.2	39.9	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-51955	-78650	811	0.482	5838.4	0.971	7.21496	5.75967	Si
SLV 9	-51828	-78391	808	0.483	5825.5	0.971	7.23104	5.75967	Si
SLV 12	-51718	-75078	627	0.487	5814.3	0.971	7.29315	5.75967	Si
SLV 11	-51591	-74818	625	0.488	5801.3	0.971	7.30948	5.75967	Si
SLV 6	-47230	-67450	578	0.527	5357.3	0.969	7.90477	5.75967	Si
SLV 5	-47102	-67190	575	0.528	5344.3	0.969	7.92417	5.75967	Si
SLV 8	-46993	-63877	395	0.533	5333.2	0.969	7.99381	5.75967	Si
SLV 7	-46865	-63618	392	0.534	5320.2	0.969	8.01353	5.75967	Si
SLV 14	-57421	-90539	1019	0.44	6395	0.974	6.56845	3.72098	Si
SLV 16	-57350	-89468	964	0.441	6387.8	0.974	6.58891	3.72098	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.279	SLU 84	Si
V_SLU	1.645	SLU 83	Si
PF_SLV	2.654	SLV 7	Si
V_SLV	2.219	SLV 10	Si
PFFP_SLV	31.724	SLV 1	Si
R_SLV	1.253	SLV 10	Si

Maschio 40

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-4.784	-11.013	-4.784	L2	L4	3.29	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	-1.58	14071.56	-23747	-0.0000532	0.0003743	0.0035	3.29	32909.96	34125.58	34125.58	2.43	No	Si
SLU 79	1.39	12170.5	-25676	-0.0000515	0.0003743	0.0035	3.29	35042.17	36491.25	36491.25	3	No	Si
SLU 80	-1.58	14074.88	-23736	-0.0000532	0.0003743	0.0035	3.29	32897.34	34111.92	34111.92	2.42	No	Si
SLU 80	1.39	12177.97	-25697	-0.0000515	0.0003743	0.0035	3.29	35065.06	36517.29	36517.29	3	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	-1.58	14393.18	-24348	-0.0000546	0.0003743	0.0035	3.29	33582.68	34859.36	34859.36	2.42	No	Si
SLU 84	1.39	12532.72	-26394	-0.000053	0.0003743	0.0035	3.29	35814.9	37378.58	37378.58	2.98	No	Si
SLU 83	-1.58	14389.86	-24359	-0.0000546	0.0003743	0.0035	3.29	33595.15	34873.07	34873.07	2.42	No	Si
SLU 83	1.39	12525.25	-26372	-0.000053	0.0003743	0.0035	3.29	35792.33	37352.43	37352.43	2.98	No	Si
SLU 82	-1.58	14249.31	-24088	-0.000054	0.0003743	0.0035	3.29	33292.98	34541.98	34541.98	2.42	No	Si
SLU 82	1.39	12259.58	-26042	-0.0000521	0.0003743	0.0035	3.29	35438	36943.7	36943.7	3.01	No	Si
SLU 75	-1.58	14010.83	-23623	-0.0000529	0.0003743	0.0035	3.29	32769.22	33973.47	33973.47	2.42	No	Si
SLU 75	1.39	12048.89	-25494	-0.000051	0.0003743	0.0035	3.29	34844.43	36266.84	36266.84	3.01	No	Si
SLU 76	-1.58	13933.22	-23469	-0.0000526	0.0003743	0.0035	3.29	32595.72	33786.62	33786.62	2.42	No	Si
SLU 76	1.39	11909.81	-25360	-0.0000506	0.0003743	0.0035	3.29	34698.17	36101.54	36101.54	3.03	No	Si
SLU 77	-1.58	14151.38	-23893	-0.0000535	0.0003743	0.0035	3.29	33074.15	34303.64	34303.64	2.42	No	Si
SLU 77	1.39	12314.56	-25824	-0.0000519	0.0003743	0.0035	3.29	35202.72	36674.24	36674.24	2.98	No	Si
SLU 78	-1.58	14154.7	-23882	-0.0000535	0.0003743	0.0035	3.29	33061.56	34289.96	34289.96	2.42	No	Si
SLU 78	1.39	12322.02	-25845	-0.000052	0.0003743	0.0035	3.29	35225.53	36700.3	36700.3	2.98	No	Si
SLU 81	-1.58	14246	-24100	-0.000054	0.0003743	0.0035	3.29	33305.51	34555.67	34555.67	2.43	No	Si
SLU 81	1.39	12252.11	-26021	-0.000052	0.0003743	0.0035	3.29	35415.27	36917.6	36917.6	3.01	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	-1.58	14990.16	-14493	-0.0000549	0.0005615	0.0035	3.29		23148.19	23148.19	1.54		Si
SLV 1	1.39	-629.7	-14432	-0.0000161	0.0005615	0.0035	3.29		25351.45	25351.45	40.26		Si
SLV 16	-1.58	4699.1	-18493	-0.0000281	0.0005615	0.0035	3.29		28983.12	28983.12	6.17		Si
SLV 16	1.39	16544.14	-20646	-0.0000567	0.0005615	0.0035	3.29		32050.53	32050.53	1.94		Si
SLD 4	-1.58	12126.94	-15002	-0.000041	0.0005615	0.0035	3.29		23897.22	23897.22	1.97		Si
SLD 4	1.39	5004.34	-16617	-0.0000267	0.0005615	0.0035	3.29		26264.35	26264.35	5.25		Si
SLV 8	-1.58	11219.12	-12802	-0.000038	0.0005615	0.0035	3.29		20626.45	20626.45	1.84		Si
SLV 8	1.39	9299.54	-18434	-0.0000368	0.0005615	0.0035	3.29		28898.83	28898.83	3.11		Si
SLD 3	-1.58	11958.35	-14874	-0.0000405	0.0005615	0.0035	3.29		23708.51	23708.51	1.98		Si
SLD 3	1.39	5267.73	-16685	-0.0000272	0.0005615	0.0035	3.29		26363.56	26363.56	5		Si
SLV 15	-1.58	4306.42	-18195	-0.000027	0.0005615	0.0035	3.29		28557.03	28557.03	6.63		Si
SLV 15	1.39	17157.62	-20804	-0.0000588	0.0005615	0.0035	3.29		32274.52	32274.52	1.88		Si
SLV 2	-1.58	15382.84	-14791	-0.0000566	0.0005615	0.0035	3.29		23587.34	23587.34	1.53		Si
SLV 2	1.39	-1243.18	-14273	-0.000017	0.0005615	0.0035	3.29		25113.28	25113.28	20.2		Si
SLV 3	-1.58	14795.16	-12714	-0.0000614	0.0005615	0.0035	3.29		20495.59	20495.59	1.39		Si
SLV 3	1.39	1686.39	-15479	-0.0000191	0.0005615	0.0035	3.29		24601.24	24601.24	14.59		Si
SLV 4	-1.58	15187.84	-13012	-0.0000634	0.0005615	0.0035	3.29		20941.67	20941.67	1.38		Si
SLV 4	1.39	1072.91	-15320	-0.0000178	0.0005615	0.0035	3.29		24367.23	24367.23	22.71		Si
SLV 7	-1.58	10966.75	-12610	-0.0000371	0.0005615	0.0035	3.29		20339.66	20339.66	1.85		Si
SLV 7	1.39	9693.82	-18536	-0.0000377	0.0005615	0.0035	3.29		29044.34	29044.34	3		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-1.58	14154.7	-23882	-21229	-109	3.29	3.1569	-14339	8856	12581	33304	44333	8389	45886	No	419.85	Si
SLU 78	1.39	12322.02	-25845	-22974	-3563	3.29	3.29	-15517	9013	13344	33304	44333	8389	46649	No	13.09	Si
SLU 79	-1.58	14071.56	-23747	-21109	-90	3.29	3.1573	-14258	8845	12568	33304	44333	8389	45872	No	508.78	Si
SLU 79	1.39	12170.5	-25676	-22823	-3513	3.29	3.29	-15416	9000	13324	33304	44333	8389	46629	No	13.27	Si
SLU 83	-1.58	14389.86	-24359	-21653	-287	3.29	3.1628	-14625	8894	12659	33304	44333	8389	45963	No	160.28	Si
SLU 83	1.39	12525.25	-26372	-23442	-3799	3.29	3.29	-15834	9056	13407	33304	44333	8389	46711	No	12.3	Si
SLU 82	-1.58	14249.31	-24088	-21412	-223	3.29	3.1604	-14463	8873	12619	33304	44333	8389	45923	No	205.74	Si
SLU 82	1.39	12259.58	-26042	-23149	-3654	3.29	3.29	-15636	9029	13368	33304	44333	8389	46672	No	12.77	Si
SLU 80	-1.58	14074.88	-23736	-21099	-77	3.29	3.1561	-14251	8845	12561	33304	44333	8389	45866	No	592.82	Si
SLU 80	1.39	12177.97	-25697	-22842	-3485	3.29	3.29	-15428	9002	13327	33304	44333	8389	46631	No	13.38	Si
SLU 84	-1.58	14393.18	-24348	-21643	-274	3.29	3.1616	-14618	8894	12653	33304	44333	8389	45957	No	167.74	Si
SLU 84	1.39	12532.72	-26394	-23461	-3771	3.29	3.29	-15847	9057	13409	33304	44333	8389	46714	No	12.39	Si
SLU 74	-1.58	14007.52	-23634	-21008	-71	3.29	3.1569	-14190	8836	12553	33304	44333	8389	45857	No	643.09	Si
SLU 74	1.39	12041.42	-25473	-22643	-3475	3.29	3.29	-15294	8984	13300	33304	44333	8389	46605	No	13.41	Si
SLU 77	-1.58	14151.38	-23893	-21239	-122	3.29	3.1582	-14346	8857	12588	33304	44333	8389	45892	No	375.9	Si
SLU 77	1.39	12314.56	-25824	-22955	-3591	3.29	3.29	-15505	9012	13342	33304	44333	8389	46646	No	12.99	Si
SLU 81	-1.58	14246	-24100	-21422	-236	3.29	3.1616	-14469	8874	12625	33304	44333	8389	45929	No	194.62	Si
SLU 81	1.39	12252.11	-26021	-23130	-3682	3.29	3.29	-15623	9028	13365	33304	44333	8389	46670	No	12.67	Si
SLU 41	-1.58	11990.86	-20350	-18089	-435	3.29	3.1673	-12218	8574	12220	33304	44333	8389	45524	No	104.73	Si
SLU 41	1.39	10802.09	-22275	-19800	-3436	3.29	3.29	-13374	8728	12921	33304	44333	8389	46226	No	13.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	-1.58	4501.43	-19974	-17755	-14259	3.29	3.29	-11992	12815	18973	33304	66499	8389	52277		3.67	Si
SLV 13	1.39	14841.53	-19757	-17562	-26246	3.29	2.6814	-11862	12789	15432	33304	66499	8389	48736		1.86	Si
SLV 15	-1.58	4306.42	-18195	-16173	-15240	3.29	3.29	-10924	12601	18656	33304	66499	8389	51961		3.41	Si
SLV 15	1.39	17157.62	-20804	-18493	-27875	3.29	2.4608	-12491	12915	14302	33304	66499	8389	47606		1.71	Si
SLV 1	-1.58	14990.16	-14493	-12883	14376	3.29	1.8321	-8702	12157	10023	33304	66499	8389	43327		3.01	Si
SLV 1	1.39	-629.7	-14432	-12828	21601	3.29	3.29	-8665	12150	17988	33304	66499	8389	51292		2.37	Si
SLV 16	-1.58	4699.1	-18493	-16438	-13789	3.29	3.29	-11103	12637	18709	33304	66499	8389	52014		3.77	Si
SLV 16	1.39	16544.14	-20646	-18352	-25582	3.29	2.531	-12396	12896	14688	33304	66499	8389	47992		1.88	Si
SLV 4	-1.58	15187.84	-13012	-11566	14845	3.29	1.4334	-7813	11979	7727	33304	66499	8389	41031		2.76	Si
SLV 4	1.39	1072.91	-15320	-13618	22265	3.29	3.29	-9198	12256	18145	33304	66499	8389	51450		2.31	Si
SLD 15	-1.58	7477.76	-17213	-15300	-6348	3.29	3.29	-10334	12484	18482	33304	66499	8389	51786		8.16	Si
SLD 15	1.39	11872.81	-18963	-16856	-13044	3.29	3.0567	-11385	12694	17460	33304	66499	8389	50765		3.89	Si
SLV 3	-1.58	14795.16	-12714	-11301	13395	3.29	1.444	-7634	11943	7761	33304	66499	8389	41065		3.07	Si
SLV 3	1.39	1686.39	-15479	-13759	19972	3.29	3.29	-9293	12275	18174	33304	66499	8389	51478		2.58	Si
SLV 14	-1.58	4894.1	-20272	-18020	-12808	3.29	3.29	-12171	12851	19026	33304	66499	8389	52330		4.09	Si
SLV 14	1.39	14228.05	-19599	-17421	-23953	3.29	2.7571	-11767	12770	15844	33304	66499	8389	49148		2.05	Si
SLV 11	-1.58	7820.13	-14254	-12670	-6104	3.29	3.2891	-8558	12128	17951	33304	66499	8389	51255		8.4	Si
SLV 11	1.39	14335.19	-20133	-17896	-12619	3.29	2.799	-12088	12834	16165	33304	66499	8389	49470		3.92	Si
SLV 2	-1.58	15382.84	-14791	-13148	15827	3.29	1.815	-8881	12193	9959	33304	66499	8389	43263		2.73	Si
SLV 2	1.39	-1243.18	-14273	-12687	23894	3.29	3.29	-8570	12131	17959	33304	66499	8389	51264		2.15	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.24	9685	-14338	239.3	3021.49	12.63	Si
SLV 3	179667	0.24	9704	-14367	239.3	3027.19	12.65	Si
SLV 2	179667	0.24	9774	-14470	239.3	3047.42	12.73	Si
SLV 4	179667	0.24	9793	-14499	239.3	3053.11	12.76	Si
SLV 5	179667	0.24	10277	-15215	239.3	3192.94	13.34	Si
SLV 6	179667	0.24	10334	-15300	239.3	3209.46	13.41	Si
SLV 7	179667	0.24	10342	-15311	239.3	3211.77	13.42	Si
SLV 8	179667	0.24	10399	-15396	239.3	3228.28	13.49	Si
SLV 9	179667	0.24	10790	-15975	239.3	3340.39	13.96	Si
SLV 10	179667	0.24	10848	-16060	239.3	3356.78	14.03	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-20133	-14254	-188	0.847	2675.5	0.936	13.16222	4.19835	Si
SLV 12	-20032	-14446	-183	0.851	2665.2	0.936	13.21944	4.19835	Si
SLV 7	-18536	-12610	-133	0.905	2514	0.932	14.10232	4.19835	Si
SLV 8	-18434	-12802	-128	0.909	2503.7	0.932	14.1682	4.19835	Si
SLV 9	-16644	-20185	-916	0.943	2323.1	0.928	14.76635	4.19835	Si
SLV 10	-16542	-20376	-911	0.947	2312.9	0.928	14.84191	4.19835	Si
SLV 5	-15046	-18540	-861	1.019	2162.3	0.924	16.02528	4.19835	Si
SLV 6	-14944	-18732	-856	1.024	2152	0.924	16.11449	4.19835	Si
SLV 15	-20804	-18195	-509	0.814	2743.3	0.937	12.61853	3.18428	Si
SLV 16	-20646	-18493	-501	0.819	2727.3	0.937	12.7016	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.422	SLU 84	Si
V_SLU	12.296	SLU 83	Si
PF_SLV	1.379	SLV 4	Si
V_SLV	1.708	SLV 15	Si
PFFP_SLV	12.627	SLV 1	Si
R_SLV	3.135	SLV 11	Si

Maschio 41

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-3.284	-7.723	-4.784	L2	L4	1.5	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-1.58	-9134.86	-13361	-0.0020198	0.0003743	0.0035	1.2	8072.82	9171.86	9171.86	1	No	Si
SLU 83	1.39	1579.37	-7476	-0.0000318	0.0003743	0.0035	1.5001	4997.08	5190.77	5190.77	3.29	No	Si
SLU 76	-1.58	-8833.76	-12873	-0.0018241	0.0003743	0.0035	1.2	7846.62	8909.37	8909.37	1.01	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	1.39	1598.03	-7222	-0.0000313	0.0003743	0.0035	1.5001	4847.73	5050.79	5050.79	3.16	No	Si
SLU 75	-1.58	-8879.08	-12951	-0.0018457	0.0003743	0.0035	1.2	7883.19	8952.15	8952.15	1.01	No	Si
SLU 75	1.39	1594.16	-7263	-0.0000314	0.0003743	0.0035	1.5001	4872.02	5073.43	5073.43	3.18	No	Si
SLU 78	-1.58	-8967.58	-13085	-0.0019154	0.0003743	0.0035	1.2	7945.41	9025.12	9025.12	1.01	No	Si
SLU 78	1.39	1600.7	-7346	-0.0000317	0.0003743	0.0035	1.5001	4920.81	5119.06	5119.06	3.2	No	Si
SLU 82	-1.58	-9048.49	-13225	-0.0019556	0.0003743	0.0035	1.2	8010.35	9101.51	9101.51	1.01	No	Si
SLU 82	1.39	1573.53	-7395	-0.0000315	0.0003743	0.0035	1.5001	4949.84	5146.3	5146.3	3.27	No	Si
SLU 77	-1.58	-8965.45	-13087	-0.0019061	0.0003743	0.0035	1.2	7946.46	9026.36	9026.36	1.01	No	Si
SLU 77	1.39	1600.01	-7344	-0.0000316	0.0003743	0.0035	1.5001	4919.49	5117.82	5117.82	3.2	No	Si
SLU 84	-1.58	-9136.99	-13359	-0.0020294	0.0003743	0.0035	1.2	8071.78	9170.69	9170.69	1	No	Si
SLU 84	1.39	1580.07	-7478	-0.0000318	0.0003743	0.0035	1.5001	4998.39	5192.01	5192.01	3.29	No	Si
SLU 80	-1.58	-8920.84	-13008	-0.0018867	0.0003743	0.0035	1.2	7909.77	8983.3	8983.3	1.01	No	Si
SLU 80	1.39	1604.1	-7304	-0.0000316	0.0003743	0.0035	1.5001	4895.72	5095.57	5095.57	3.18	No	Si
SLU 81	-1.58	-9046.36	-13227	-0.0019462	0.0003743	0.0035	1.2	8011.4	9102.69	9102.69	1.01	No	Si
SLU 81	1.39	1572.84	-7393	-0.0000315	0.0003743	0.0035	1.5001	4948.52	5145.06	5145.06	3.27	No	Si
SLU 79	-1.58	-8918.71	-13010	-0.0018774	0.0003743	0.0035	1.2	7910.83	8984.54	8984.54	1.01	No	Si
SLU 79	1.39	1603.41	-7301	-0.0000316	0.0003743	0.0035	1.5001	4894.39	5094.33	5094.33	3.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-1.58	-5075.93	-6408	-0.0006942	0.0005615	0.0035	1.2		5174	5174	1.02		Si
SLV 3	1.39	444.72	-4949	-0.0000152	0.0005615	0.0035	1.5001		3688.47	3688.47	8.29		Si
SLD 7	-1.58	-6591.53	-8723	-0.0008222	0.0005615	0.0035	1.2		6709.59	6709.59	1.02		Si
SLD 7	1.39	1685.44	-5523	-0.0000281	0.0005615	0.0035	1.5001		4084.32	4084.32	2.42		Si
SLV 15	-1.58	-8373.86	-11728	-0.0008592	0.0005615	0.0035	1.2		8614.39	8614.39	1.03		Si
SLV 15	1.39	3168.95	-5937	-0.0000639	0.0005615	0.0035	1.5001		4368.01	4368.01	1.38		Si
SLD 11	-1.58	-7013.93	-9405	-0.0008432	0.0005615	0.0035	1.2		7156.88	7156.88	1.02		Si
SLD 11	1.39	2034.96	-5649	-0.000033	0.0005615	0.0035	1.5001		4170.71	4170.71	2.05		Si
SLV 12	-1.58	-7879.61	-9876	-0.00166	0.0005615	0.0035	1.2		7453.93	7453.93	0.95		No
SLV 12	1.39	3013.15	-6543	-0.0000522	0.0005615	0.0035	1.5001		4778.57	4778.57	1.59		Si
SLD 12	-1.58	-6950.29	-9398	-0.0007733	0.0005615	0.0035	1.2		7152.57	7152.57	1.03		Si
SLD 12	1.39	1967.26	-5662	-0.000032	0.0005615	0.0035	1.5001		4179.72	4179.72	2.12		Si
SLD 8	-1.58	-6527.89	-8716	-0.0007551	0.0005615	0.0035	1.2		6705.12	6705.12	1.03		Si
SLD 8	1.39	1617.74	-5536	-0.0000274	0.0005615	0.0035	1.5001		4093.32	4093.32	2.53		Si
SLV 11	-1.58	-8025.39	-9891	-0.001874	0.0005615	0.0035	1.2		7463.77	7463.77	0.93		No
SLV 11	1.39	3168.2	-6513	-0.0000573	0.0005615	0.0035	1.5001		4758.25	4758.25	1.5		Si
SLV 7	-1.58	-7036.01	-8295	-0.0017331	0.0005615	0.0035	1.2		6429.8	6429.8	0.91		No
SLV 7	1.39	2350.93	-6216	-0.0000382	0.0005615	0.0035	1.5001		4557.45	4557.45	1.94		Si
SLV 8	-1.58	-6890.23	-8280	-0.0015385	0.0005615	0.0035	1.2		6419.6	6419.6	0.93		No
SLV 8	1.39	2195.88	-6246	-0.0000357	0.0005615	0.0035	1.5001		4577.76	4577.76	2.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-1.58	-9048.49	-13225	-11756	-7435	1.2	0.1975	0	0	0	33304	16171	3060	19231	No	2.59	Si
SLU 82	1.39	1573.53	-7395	-6574	-6553	1.5001	1.5001	-9738	8243	5564	33304	20213	3825	24038	No	3.67	Si
SLU 78	-1.58	-8967.58	-13085	-11631	-7367	1.2	0.194	0	0	0	33304	16171	3060	19231	No	2.61	Si
SLU 78	1.39	1600.7	-7346	-6530	-6491	1.5001	1.5001	-9673	8234	5558	33304	20213	3825	24038	No	3.7	Si
SLU 83	-1.58	-9134.86	-13361	-11876	-7493	1.2	0.199	0	0	0	33304	16171	3060	19231	No	2.57	Si
SLU 83	1.39	1579.37	-7476	-6645	-6600	1.5001	1.5001	-9844	8257	5574	33304	20213	3825	24038	No	3.64	Si
SLU 81	-1.58	-9046.36	-13227	-11758	-7434	1.2	0.1983	0	0	0	33304	16171	3060	19231	No	2.59	Si
SLU 81	1.39	1572.84	-7393	-6572	-6552	1.5001	1.5001	-9735	8242	5564	33304	20213	3825	24038	No	3.67	Si
SLU 75	-1.58	-8879.08	-12951	-11512	-7308	1.2	0.1933	0	0	0	33304	16171	3060	19231	No	2.63	Si
SLU 75	1.39	1594.16	-7263	-6456	-6443	1.5001	1.5001	-9565	8220	5549	33304	20213	3825	24038	No	3.73	Si
SLU 74	-1.58	-8876.95	-12953	-11514	-7307	1.2	0.1942	0	0	0	33304	16171	3060	19231	No	2.63	Si
SLU 74	1.39	1593.47	-7261	-6454	-6442	1.5001	1.5001	-9562	8219	5548	33304	20213	3825	24038	No	3.73	Si
SLU 84	-1.58	-9136.99	-13359	-11874	-7494	1.2	0.1981	0	0	0	33304	16171	3060	19231	No	2.57	Si
SLU 84	1.39	1580.07	-7478	-6647	-6601	1.5001	1.5001	-9847	8257	5574	33304	20213	3825	24038	No	3.64	Si
SLU 80	-1.58	-8920.84	-13008	-11563	-7346	1.2	0.1927	0	0	0	33304	16171	3060	19231	No	2.62	Si
SLU 80	1.39	1604.1	-7304	-6492	-6476	1.5001	1.5001	-9617	8227	5553	33304	20213	3825	24038	No	3.71	Si
SLU 77	-1.58	-8965.45	-13087	-11633	-7366	1.2	0.1949	0	0	0	33304	16171	3060	19231	No	2.61	Si
SLU 77	1.39	1600.01	-7344	-6528	-6490	1.5001	1.5001	-9670	8234	5558	33304	20213	3825	24038	No	3.7	Si
SLU 79	-1.58	-8918.71	-13010	-11565	-7345	1.2	0.1936	0	0	0	33304	16171	3060	19231	No	2.62	Si
SLU 79	1.39	1603.41	-7301	-6490	-6475	1.5001	1.5001	-9614	8226	5553	33304	20213	3825	24038	No	3.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	-1.58	-8025.39	-9891	-8792	-10670	1.2	0	0	0	0	33304	24256	3060	27316		2.56	Si
SLV 11	1.39	3168.2	-6513	-5789	-8611	1.5001	0.7907	-8576	12132	4317	33304	30320	3825	34145		3.97	Si
SLD 15	-1.58	-7158.1	-10190	-9058	-8652	1.2	0.1428	0	0	0	33304	24256	3060	27316		3.16	Si
SLD 15	1.39	2063.82	-5430	-4827	-7953	1.5001	1.1098	-7150	11847	5916	33304	30320	3825	34145		4.29	Si
SLV 16	-1.58	-8147.03	-11704	-10404	-12273	1.2	0.1618	0	0	0	33304	24256	3060	27316		2.23	Si
SLV 16	1.39	2927.7	-5984	-5319	-11510	1.5001	0.7824	-7880	11993	4222	33304	30320	3825	34145		2.97	Si
SLV 15	-1.58	-8373.86	-11728	-10425	-13177	1.2	0.1081	0	0	0	33304	24256	3060	27316		2.07	Si
SLV 15	1.39	3168.95	-5937	-5278	-12414	1.5001	0.6489	-7819	11980	3498	33304	30320	3825	34145		2.75	Si
SLD 16	-1.58	-7060.72	-10180	-9049	-8264	1.2	0.1693	0	0	0	33304	24256	3060	27316		3.31	Si
SLD 16	1.39	1960.24	-5450	-4844	-7565	1.5001	1.171	-7177	11852	6246	33304	30320	3825	34145		4.51	Si
SLV 13	-1.58	-7648.43	-11703	-10403	-11283	1.2	0.2894	0	0	0	33304	24256	3060	27316		2.42	Si
SLV 13	1.39	2315.38	-5155	-4582	-11452	1.5001	0.9026	-6788	11774	4782	33304	30320	3825	34145		2.98	Si
SLD 11	-1.58	-7013.93	-9405	-8360	-7589	1.2	0.0128	0	0	0	33304	24256	3060	27316		3.6	Si
SLD 11	1.39	2034.96	-5649	-5021	-6337	1.5001	1.1694	-7438	11904	6264	33304	30320	3825	34145		5.39	Si
SLD 13	-1.58	-6844.81	-10180	-9049	-7838	1.2	0.2329	0	0	0	33304	24256	3060	27316		3.48	Si
SLD 13	1.39	1723.66	-5119	-4551	-7552	1.5001	1.24	-6741	11765	6565	33304	30320	3825	34145		4.52	Si
SLV 14	-1.58	-7421.6	-11679	-10381	-10379	1.2	0.3436	0	0	0	33304	24256	3060	27316		2.63	Si
SLV 14	1.39	2074.13	-5202	-4624	-10548	1.5001	1.0538	-6849	11787	5589	33304	30320	3825	34145		3.24	Si
SLV 12	-1.58	-7879.61	-9876	-8779	-10090	1.2	0	0	0	0	33304	24256	3060	27316		2.71	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	1.39	3013.15	-6543	-5816	-8029	1.5001	0.8685	-8616	12140	4744	33304	30320	3825	34145		4.25	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.24	10729	-7242	109.11	1514.98	13.89	Si
SLV 1	179667	0.24	10747	-7255	109.11	1517.4	13.91	Si
SLV 4	179667	0.24	11182	-7548	109.11	1574	14.43	Si
SLV 3	179667	0.24	11201	-7561	109.11	1576.4	14.45	Si
SLV 6	179667	0.24	12522	-8453	109.11	1745.93	16	Si
SLV 5	179667	0.24	12534	-8461	109.11	1747.44	16.02	Si
SLV 8	179667	0.24	14034	-9473	109.11	1935.65	17.74	Si
SLV 7	179667	0.24	14046	-9481	109.11	1937.12	17.75	Si
SLV 10	179667	0.24	14510	-9795	109.11	1994.44	18.28	Si
SLV 9	179667	0.24	14522	-9803	109.11	1995.91	18.29	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-6543	-9876	-99	1.09	954	0.922	17.1788	4.19835	Si
SLV 11	-6513	-9891	-98	1.093	951	0.922	17.24103	4.19835	Si
SLV 8	-6246	-8280	-1	1.139	924.2	0.92	17.99631	4.19835	Si
SLV 7	-6216	-8295	-1	1.143	921.2	0.92	18.06408	4.19835	Si
SLV 16	-5984	-11704	-195	1.15	897.9	0.918	18.20321	3.18428	Si
SLV 15	-5937	-11728	-194	1.157	893.3	0.918	18.31379	3.18428	Si
SLV 10	-3934	-9791	-46	1.56	694.1	0.903	25.11474	4.19835	Si
SLV 9	-3904	-9807	-45	1.568	691.1	0.902	25.24885	4.19835	Si
SLV 6	-3637	-8195	52	1.64	664.9	0.9	26.47122	4.19835	Si
SLV 5	-3607	-8210	53	1.648	662	0.9	26.61696	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.004	SLU 84	Si
V_SLU	2.566	SLU 84	Si
PF_SLV	0.914	SLV 7	No
V_SLV	2.073	SLV 15	Si
PFFP_SLV	13.886	SLV 2	Si
R_SLV	4.092	SLV 12	Si

Maschio 42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	1.046	-6.268	-3.284	L2	L4	4.33	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-1.58	52.34	-115880	-0.0001426	0.0004492	0.0035	4.3299	67713.58	154189.09	154189.09	2945.91	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	1.39	-6482.47	-73790	-0.0000965	0.0004492	0.0035	4.3299	85482.61	128472.66	128472.66	19.82	No	Si
SLU 40	-1.58	76.07	-95787	-0.0001141	0.0004492	0.0035	4.3299	82224.85	140873.76	140873.76	1851.83	No	Si
SLU 40	1.39	-5595.81	-61412	-0.0000791	0.0004492	0.0035	4.3299	81512.09	114217.25	114217.25	20.41	No	Si
SLU 74	-1.58	-49.7	-112626	-0.0001379	0.0004492	0.0035	4.3299	70810.99	156172.1	156172.1	3142.41	No	Si
SLU 74	1.39	-6155.31	-71626	-0.0000931	0.0004492	0.0035	4.3299	85089.94	126169.83	126169.83	20.5	No	Si
SLU 42	-1.58	55.86	-96997	-0.0001158	0.0004492	0.0035	4.3299	81662.56	141881.71	141881.71	2539.76	No	Si
SLU 42	1.39	-5628.73	-62333	-0.0000803	0.0004492	0.0035	4.3299	81951.32	115382.95	115382.95	20.5	No	Si
SLU 84	-1.58	0.83	-115892	-0.0001425	0.0004492	0.0035	4.3299	67701.4	154194.68	154194.68	186159.12	No	Si
SLU 84	1.39	-6442.73	-73792	-0.0000964	0.0004492	0.0035	4.3299	85482.94	128474.94	128474.94	19.94	No	Si
SLU 39	-1.58	127.58	-95775	-0.0001142	0.0004492	0.0035	4.3299	82230.33	140863.59	140863.59	1104.08	No	Si
SLU 39	1.39	-5635.55	-61410	-0.0000792	0.0004492	0.0035	4.3299	81511.04	114214.53	114214.53	20.27	No	Si
SLU 41	-1.58	107.38	-96985	-0.0001158	0.0004492	0.0035	4.3299	81668.43	141871.54	141871.54	1321.26	No	Si
SLU 41	1.39	-5668.47	-62331	-0.0000804	0.0004492	0.0035	4.3299	81950.32	115380.24	115380.24	20.35	No	Si
SLU 82	-1.58	21.04	-114682	-0.0001408	0.0004492	0.0035	4.3299	68887.49	153641.15	153641.15	7303.36	No	Si
SLU 82	1.39	-6409.8	-72871	-0.0000952	0.0004492	0.0035	4.3299	85331.53	127495.15	127495.15	19.89	No	Si
SLU 77	-1.58	-69.91	-113836	-0.0001397	0.0004492	0.0035	4.3299	69692.79	156794.2	156794.2	2242.9	No	Si
SLU 77	1.39	-6188.24	-72547	-0.0000943	0.0004492	0.0035	4.3299	85272.62	127149.63	127149.63	20.55	No	Si
SLU 81	-1.58	72.55	-114670	-0.0001409	0.0004492	0.0035	4.3299	68899.25	153635.56	153635.56	2117.68	No	Si
SLU 81	1.39	-6449.54	-72869	-0.0000952	0.0004492	0.0035	4.3299	85331.15	127492.87	127492.87	19.77	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	-1.58	-13058.07	-83114	-0.0001155	0.0006738	0.0035	4.3299		150275.26	150275.26	11.51		Si
SLV 11	1.39	3467.66	-48991	-0.000059	0.0006738	0.0035	4.3299		92010.02	92010.02	26.53		Si
SLV 9	-1.58	16596.29	-81339	-0.0001193	0.0006738	0.0035	4.3299		138635.5	138635.5	8.35		Si
SLV 9	1.39	-11720.66	-52129	-0.0000758	0.0006738	0.0035	4.3299		107098.34	107098.34	9.14		Si
SLV 3	-1.58	-14135.54	-66209	-0.0000965	0.0006738	0.0035	4.3299		128053.61	128053.61	9.06		Si
SLV 3	1.39	-1354.86	-44073	-0.0000501	0.0006738	0.0035	4.3299		94179.53	94179.53	69.51		Si
SLV 14	-1.58	13857.8	-91063	-0.0001269	0.0006738	0.0035	4.3299		150561.32	150561.32	10.86		Si
SLV 14	1.39	-6796.91	-54741	-0.000071	0.0006738	0.0035	4.3299		111142.35	111142.35	16.35		Si
SLV 5	-1.58	11476.02	-73862	-0.0001014	0.0006738	0.0035	4.3299		129464.88	129464.88	11.28		Si
SLV 5	1.39	-11507.32	-49406	-0.0000723	0.0006738	0.0035	4.3299		102882.44	102882.44	8.94		Si
SLV 8	-1.58	-16874.02	-75933	-0.000113	0.0006738	0.0035	4.3299		141170.14	141170.14	8.37		Si
SLV 8	1.39	3568.89	-46685	-0.0000566	0.0006738	0.0035	4.3299		88368.28	88368.28	24.76		Si
SLV 7	-1.58	-18178.34	-75636	-0.0001148	0.0006738	0.0035	4.3299		140792.75	140792.75	7.75		Si
SLV 7	1.39	3681	-46268	-0.0000563	0.0006738	0.0035	4.3299		87709.05	87709.05	23.83		Si
SLV 4	-1.58	-12106.07	-66671	-0.0000937	0.0006738	0.0035	4.3299		128683.33	128683.33	10.63		Si
SLV 4	1.39	-1529.29	-44722	-0.0000511	0.0006738	0.0035	4.3299		95244.78	95244.78	62.28		Si
SLV 6	-1.58	12780.34	-74158	-0.0001039	0.0006738	0.0035	4.3299		129828.77	129828.77	10.16		Si
SLV 6	1.39	-11619.43	-49823	-0.0000729	0.0006738	0.0035	4.3299		103528.63	103528.63	8.91		Si
SLV 10	-1.58	17900.6	-81636	-0.0001219	0.0006738	0.0035	4.3299		138999.39	138999.39	7.77		Si
SLV 10	1.39	-11832.76	-52546	-0.0000765	0.0006738	0.0035	4.3299		107744.53	107744.53	9.11		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	-1.58	72.55	-114670	-83396	-12888	4.3299	4.3299	-64201	10833	14072	95155	46682	22083	68765	No	5.34	Si
SLU 81	1.39	-6449.54	-72869	-52996	-11818	4.3299	4.3299	-40798	10833	14072	95155	46682	22083	68765	No	5.82	Si
SLU 83	-1.58	52.34	-115880	-84276	-13051	4.3299	4.3299	-64879	10833	14072	95155	46682	22083	68765	No	5.27	Si
SLU 83	1.39	-6482.47	-73790	-53665	-11964	4.3299	4.3299	-41313	10833	14072	95155	46682	22083	68765	No	5.75	Si
SLU 78	-1.58	-121.42	-113848	-82799	-13123	4.3299	4.3299	-63741	10833	14072	95155	46682	22083	68765	No	5.24	Si
SLU 78	1.39	-6148.5	-72549	-52763	-12048	4.3299	4.3299	-40619	10833	14072	95155	46682	22083	68765	No	5.71	Si
SLU 79	-1.58	-72.51	-113099	-82254	-12985	4.3299	4.3299	-63322	10833	14072	95155	46682	22083	68765	No	5.3	Si
SLU 79	1.39	-6138.94	-71969	-52341	-11921	4.3299	4.3299	-40294	10833	14072	95155	46682	22083	68765	No	5.77	Si
SLU 80	-1.58	-124.02	-113111	-82263	-13061	4.3299	4.3299	-63329	10833	14072	95155	46682	22083	68765	No	5.26	Si
SLU 80	1.39	-6099.2	-71971	-52342	-11997	4.3299	4.3299	-40295	10833	14072	95155	46682	22083	68765	No	5.73	Si
SLU 84	-1.58	0.83	-115892	-84285	-13127	4.3299	4.3299	-64885	10833	14072	95155	46682	22083	68765	No	5.24	Si
SLU 84	1.39	-6442.73	-73792	-53667	-12041	4.3299	4.3299	-41315	10833	14072	95155	46682	22083	68765	No	5.71	Si
SLU 82	-1.58	21.04	-114682	-83405	-12965	4.3299	4.3299	-64208	10833	14072	95155	46682	22083	68765	No	5.3	Si
SLU 82	1.39	-6409.8	-72871	-52997	-11894	4.3299	4.3299	-40799	10833	14072	95155	46682	22083	68765	No	5.78	Si
SLU 75	-1.58	-101.21	-112638	-81919	-12960	4.3299	4.3299	-63064	10833	14072	95155	46682	22083	68765	No	5.31	Si
SLU 75	1.39	-6115.57	-71628	-52093	-11902	4.3299	4.3299	-40103	10833	14072	95155	46682	22083	68765	No	5.78	Si
SLU 77	-1.58	-69.91	-113836	-82790	-13046	4.3299	4.3299	-63734	10833	14072	95155	46682	22083	68765	No	5.27	Si
SLU 77	1.39	-6188.24	-72547	-52761	-11971	4.3299	4.3299	-40617	10833	14072	95155	46682	22083	68765	No	5.74	Si
SLU 76	-1.58	-138.15	-111909	-81388	-12950	4.3299	4.3299	-62656	10833	14072	95155	46682	22083	68765	No	5.31	Si
SLU 76	1.39	-6039.78	-71051	-51674	-11902	4.3299	4.3299	-39780	10833	14072	95155	46682	22083	68765	No	5.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 12	-1.58	-5290.42	-80701	-58692	-17386	4.3299	4.3299	-45183	16250	21108	95155	70023	22083	92106		5.3	Si
SLD 12	1.39	-791.74	-49406	-35932	-16554	4.3299	4.3299	-27661	16250	21108	95155	70023	22083	92106		5.56	Si
SLV 12	-1.58	-11753.76	-83410	-60662	-27614	4.3299	4.3299	-46700	16250	21108	95155	70023	22083	92106		3.34	Si
SLV 12	1.39	3355.56	-49408	-35933	-26627	4.3299	4.3299	-27663	16250	21108	95155	70023	22083	92106		3.46	Si
SLD 7	-1.58	-8046.2	-77378	-56275	-16919	4.3299	4.3299	-43322	16250	21108	95155	70023	22083	92106		5.44	Si
SLD 7	1.39	-651.14	-48061	-34953	-16051	4.3299	4.3299	-26908	16250	21108	95155	70023	22083	92106		5.74	Si
SLV 11	-1.58	-13058.07	-83114	-60446	-28751	4.3299	4.3299	-46534	16250	21108	95155	70023	22083	92106		3.2	Si
SLV 11	1.39	3467.66	-48991	-35630	-27763	4.3299	4.3299	-27429	16250	21108	95155	70023	22083	92106		3.32	Si
SLV 15	-1.58	2932.02	-91134	-66279	-19311	4.3299	4.3299	-51024	16250	21108	95155	70023	22083	92106		4.77	Si
SLV 15	1.39	-2065.98	-53150	-38655	-18627	4.3299	4.3299	-29758	16250	21108	95155	70023	22083	92106		4.94	Si
SLV 8	-1.58	-16874.02	-75933	-55224	-25358	4.3299	4.3299	-42513	16250	21108	95155	70023	22083	92106		3.63	Si
SLV 8	1.39	3568.89	-46685	-33953	-24290	4.3299	4.3299	-26138	16250	21108	95155	70023	22083	92106		3.79	Si
SLV 16	-1.58	4961.49	-91595	-66615	-17543	4.3299	4.3299	-51282	16250	21108	95155	70023	22083	92106		5.25	Si
SLV 16	1.39	-2240.41	-53799	-39127	-16859	4.3299	4.3299	-30121	16250	21108	95155	70023	22083	92106		5.46	Si
SLD 11	-1.58	-5859.9	-80571	-58597	-17882	4.3299	4.3299	-45110	16250	21108	95155	70023	22083	92106		5.15	Si
SLD 11	1.39	-742.79	-49224	-35799	-17050	4.3299	4.3299	-27559	16250	21108	95155	70023	22083	92106		5.4	Si
SLV 7	-1.58	-18178.34	-75636	-55008	-26495	4.3299	4.3299	-42347	16250	21108	95155	70023	22083	92106		3.48	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	1.39	3681	-46268	-33649	-25426	4.3299	4.3299	-25904	16250	21108	95155	70023	22083	92106		3.62	Si
SLD 8	-1.58	-7476.72	-77507	-56369	-16422	4.3299	4.3299	-43395	16250	21108	95155	70023	22083	92106		5.61	Si
SLD 8	1.39	-700.08	-48243	-35086	-15555	4.3299	4.3299	-27010	16250	21108	95155	70023	22083	92106		5.92	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-53100	0.24	209.96	6188.5	9023.5	7606	36.23	Si
SLV 1	-53413	0.24	209.96	6214.5	9071.55	7643.03	36.4	Si
SLV 4	-53693	0.24	209.96	6237.6	9114.44	7676.02	36.56	Si
SLV 2	-54007	0.24	209.96	6263.36	9162.5	7712.93	36.74	Si
SLV 7	-59198	0.24	209.96	6671.79	9932.52	8302.15	39.54	Si
SLV 8	-59580	0.24	209.96	6700.46	9988.22	8344.34	39.74	Si
SLV 5	-60244	0.24	209.96	6749.93	10085.21	8417.57	40.09	Si
SLV 6	-60625	0.24	209.96	6778.1	10140.92	8459.51	40.29	Si
SLV 11	-64648	0.24	209.96	7064.03	10728.76	8896.39	42.37	Si
SLV 12	-65030	0.24	209.96	7090.08	10782.68	8936.38	42.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-52546	-81636	-159	0.485	5893	0.972	7.25296	5.75967	Si
SLV 9	-52129	-81339	-159	0.488	5850.5	0.972	7.30315	5.75967	Si
SLV 6	-49823	-74158	-8	0.51	5615.7	0.97	7.63769	5.75967	Si
SLV 5	-49406	-73862	-8	0.514	5573.2	0.97	7.69364	5.75967	Si
SLV 12	-49408	-83410	0	0.514	5573.4	0.97	7.69554	5.75967	Si
SLV 11	-48991	-83114	0	0.517	5530.9	0.97	7.75245	5.75967	Si
SLV 8	-46685	-75933	151	0.536	5296.2	0.969	8.03905	5.75967	Si
SLV 7	-46268	-75636	151	0.54	5253.7	0.969	8.10215	5.75967	Si
SLV 14	-54741	-91063	-280	0.467	6116.5	0.973	6.96998	3.72098	Si
SLV 13	-54091	-90601	-280	0.471	6050.3	0.972	7.04208	3.72098	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.768	SLU 81	Si
V_SLU	5.238	SLU 84	Si
PF_SLV	7.745	SLV 7	Si
V_SLV	3.204	SLV 11	Si
PFFP_SLV	36.227	SLV 3	Si
R_SLV	1.259	SLV 10	Si

Maschio 43

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-3.284	-10.553	-3.284	L2	L4	0.46	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	-1.58	-357.54	-28591	-0.000678	0.0003743	0.0035	0.46	0	1520.26	1520.26	4.25	No	Si
SLU 84	0.47	-583.97	-13836	-0.0001869	0.0003743	0.0035	0.46	1093.07	1999.91	1999.91	3.42	No	Si
SLU 75	-1.58	-348.78	-27696	-0.0005494	0.0003743	0.0035	0.46	0	1632.28	1632.28	4.68	No	Si
SLU 75	0.47	-563.85	-13377	-0.0001786	0.0003743	0.0035	0.46	1123.8	1976.59	1976.59	3.51	No	Si
SLU 81	-1.58	-353.97	-28290	-0.0006319	0.0003743	0.0035	0.46	0	1557.95	1557.95	4.4	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	0.47	-577.74	-13672	-0.0001841	0.0003743	0.0035	0.46	1104.54	1991.6	1991.6	3.45	No	Si
SLU 78	-1.58	-351.73	-28004	-0.0005912	0.0003743	0.0035	0.46	0	1593.79	1593.79	4.53	No	Si
SLU 78	0.47	-569.46	-13537	-0.0001813	0.0003743	0.0035	0.46	1113.62	1984.71	1984.71	3.49	No	Si
SLU 83	-1.58	-356.92	-28597	-0.0006783	0.0003743	0.0035	0.46	0	1519.45	1519.45	4.26	No	Si
SLU 83	0.47	-583.35	-13832	-0.0001868	0.0003743	0.0035	0.46	1093.33	1999.72	1999.72	3.43	No	Si
SLU 82	-1.58	-354.6	-28283	-0.0006316	0.0003743	0.0035	0.46	0	1558.76	1558.76	4.4	No	Si
SLU 82	0.47	-578.35	-13676	-0.0001842	0.0003743	0.0035	0.46	1104.29	1991.79	1991.79	3.44	No	Si
SLU 79	-1.58	-349.79	-27824	-0.0005663	0.0003743	0.0035	0.46	0	1616.31	1616.31	4.62	No	Si
SLU 79	0.47	-566.02	-13441	-0.0001797	0.0003743	0.0035	0.46	1119.79	1979.85	1979.85	3.5	No	Si
SLU 74	-1.58	-348.16	-27703	-0.0005497	0.0003743	0.0035	0.46	0	1631.47	1631.47	4.69	No	Si
SLU 74	0.47	-563.23	-13373	-0.0001785	0.0003743	0.0035	0.46	1124.03	1976.41	1976.41	3.51	No	Si
SLU 80	-1.58	-350.41	-27817	-0.000566	0.0003743	0.0035	0.46	0	1617.12	1617.12	4.61	No	Si
SLU 80	0.47	-566.64	-13445	-0.0001798	0.0003743	0.0035	0.46	1119.55	1980.04	1980.04	3.49	No	Si
SLU 77	-1.58	-351.1	-28010	-0.0005915	0.0003743	0.0035	0.46	0	1592.98	1592.98	4.54	No	Si
SLU 77	0.47	-568.85	-13533	-0.0001811	0.0003743	0.0035	0.46	1113.87	1984.52	1984.52	3.49	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	-1.58	-442.7	-18262	-0.0001965	0.0005615	0.0035	0.46		2649.14	2649.14	5.98		Si
SLD 3	0.47	-659.47	-9890	-0.0001418	0.0005615	0.0035	0.46		1852.8	1852.8	2.81		Si
SLV 3	-1.58	-704.84	-16960	-0.0002154	0.0005615	0.0035	0.46		2578.52	2578.52	3.66		Si
SLV 3	0.47	-1023.86	-10797	-0.0001953	0.0005615	0.0035	0.46		1962.32	1962.32	1.92		Si
SLV 2	-1.58	-635.58	-17846	-0.0002162	0.0005615	0.0035	0.46		2626.57	2626.57	4.13		Si
SLV 2	0.47	-1059.48	-10751	-0.0002009	0.0005615	0.0035	0.46		1956.76	1956.76	1.85		Si
SLV 8	-1.58	-483.89	-17544	-0.0001943	0.0005615	0.0035	0.46		2610.2	2610.2	5.39		Si
SLV 8	0.47	-612.18	-10035	-0.000138	0.0005615	0.0035	0.46		1870.25	1870.25	3.06		Si
SLD 4	-1.58	-441.54	-18334	-0.0001971	0.0005615	0.0035	0.46		2653.03	2653.03	6.01		Si
SLD 4	0.47	-678.32	-9949	-0.0001443	0.0005615	0.0035	0.46		1859.87	1859.87	2.74		Si
SLD 2	-1.58	-412.55	-18648	-0.0001967	0.0005615	0.0035	0.46		2670.09	2670.09	6.47		Si
SLD 2	0.47	-675.1	-9877	-0.0001433	0.0005615	0.0035	0.46		1851.23	1851.23	2.74		Si
SLV 6	-1.58	-262	-19940	-0.000191	0.0005615	0.0035	0.46		2740.17	2740.17	10.46		Si
SLV 6	0.47	-584.58	-9427	-0.0001443	0.0005615	0.0035	0.46		1796.79	1796.79	3.07		Si
SLV 4	-1.58	-702.15	-17127	-0.0002169	0.0005615	0.0035	0.46		2587.58	2587.58	3.69		Si
SLV 4	0.47	-1067.76	-10934	-0.0002033	0.0005615	0.0035	0.46		1978.8	1978.8	1.85		Si
SLV 1	-1.58	-638.27	-17679	-0.0002147	0.0005615	0.0035	0.46		2617.51	2617.51	4.1		Si
SLV 1	0.47	-1015.58	-10615	-0.0001929	0.0005615	0.0035	0.46		1940.28	1940.28	1.91		Si
SLD 1	-1.58	-413.71	-18576	-0.0001961	0.0005615	0.0035	0.46		2666.2	2666.2	6.44		Si
SLD 1	0.47	-656.25	-9819	-0.0001408	0.0005615	0.0035	0.46		1844.16	1844.16	2.81		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-1.58	-350.41	-27817	-22254	696	0.46	0.46	-107507	10833	2242	95155	6198	2346	8544	No	12.28	Si
SLU 80	0.47	-566.64	-13445	-10756	-2296	0.46	0.46	-51961	10833	2242	95155	6198	2346	8544	No	3.72	Si
SLU 79	-1.58	-349.79	-27824	-22259	698	0.46	0.46	-107532	10833	2242	95155	6198	2346	8544	No	12.25	Si
SLU 79	0.47	-566.02	-13441	-10753	-2292	0.46	0.46	-51947	10833	2242	95155	6198	2346	8544	No	3.73	Si
SLU 84	-1.58	-357.54	-28591	-22873	718	0.46	0.46	-110496	10833	2242	95155	6198	2346	8544	No	11.9	Si
SLU 84	0.47	-583.97	-13836	-11069	-2376	0.46	0.46	-53472	10833	2242	95155	6198	2346	8544	No	3.6	Si
SLU 82	-1.58	-354.6	-28283	-22627	710	0.46	0.46	-109308	10833	2242	95155	6198	2346	8544	No	12.04	Si
SLU 82	0.47	-578.35	-13676	-10941	-2358	0.46	0.46	-52855	10833	2242	95155	6198	2346	8544	No	3.62	Si
SLU 74	-1.58	-348.16	-27703	-22162	695	0.46	0.46	-107064	10833	2242	95155	6198	2346	8544	No	12.29	Si
SLU 74	0.47	-563.23	-13373	-10699	-2282	0.46	0.46	-51685	10833	2242	95155	6198	2346	8544	No	3.74	Si
SLU 77	-1.58	-351.1	-28010	-22408	704	0.46	0.46	-108252	10833	2242	95155	6198	2346	8544	No	12.14	Si
SLU 77	0.47	-568.85	-13533	-10827	-2300	0.46	0.46	-52302	10833	2242	95155	6198	2346	8544	No	3.71	Si
SLU 81	-1.58	-353.97	-28290	-22632	711	0.46	0.46	-109333	10833	2242	95155	6198	2346	8544	No	12.01	Si
SLU 81	0.47	-577.74	-13672	-10938	-2354	0.46	0.46	-52841	10833	2242	95155	6198	2346	8544	No	3.63	Si
SLU 78	-1.58	-351.73	-28004	-22403	702	0.46	0.46	-108227	10833	2242	95155	6198	2346	8544	No	12.17	Si
SLU 78	0.47	-569.46	-13537	-10830	-2304	0.46	0.46	-52316	10833	2242	95155	6198	2346	8544	No	3.71	Si
SLU 75	-1.58	-348.78	-27696	-22157	694	0.46	0.46	-107039	10833	2242	95155	6198	2346	8544	No	12.32	Si
SLU 75	0.47	-563.85	-13377	-10702	-2285	0.46	0.46	-51699	10833	2242	95155	6198	2346	8544	No	3.74	Si
SLU 83	-1.58	-356.92	-28597	-22878	720	0.46	0.46	-110521	10833	2242	95155	6198	2346	8544	No	11.87	Si
SLU 83	0.47	-583.35	-13832	-11066	-2372	0.46	0.46	-53458	10833	2242	95155	6198	2346	8544	No	3.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	-1.58	-412.55	-18648	-14919	214	0.46	0.46	-72070	16250	3364	95155	9298	2346	11644		54.33	Si
SLD 2	0.47	-675.1	-9877	-7902	-2924	0.46	0.46	-38174	16250	3364	95155	9298	2346	11644		3.98	Si
SLV 8	-1.58	-483.89	-17544	-14035	-69	0.46	0.46	-67803	16250	3364	95155	9298	2346	11644		168.8	Si
SLV 8	0.47	-612.18	-10035	-8028	-4194	0.46	0.46	-38783	16250	3364	95155	9298	2346	11644		2.78	Si
SLV 2	-1.58	-635.58	-17846	-14277	-144	0.46	0.46	-68969	16250	3364	95155	9298	2346	11644		80.99	Si
SLV 2	0.47	-1059.48	-10751	-8601	-4730	0.46	0.3944	-41551	16250	2884	95155	9298	2346	11644		2.46	Si
SLD 4	-1.58	-441.54	-18334	-14667	128	0.46	0.46	-70854	16250	3364	95155	9298	2346	11644		91.17	Si
SLD 4	0.47	-678.32	-9949	-7959	-3298	0.46	0.46	-38450	16250	3364	95155	9298	2346	11644		3.53	Si
SLV 3	-1.58	-704.84	-16960	-13568	-359	0.46	0.46	-65545	16250	3364	95155	9298	2346	11644		32.47	Si
SLV 3	0.47	-1023.86	-10797	-8638	-5430	0.46	0.4055	-41729	16250	2965	95155	9298	2346	11644		2.14	Si
SLD 3	-1.58	-442.7	-18262	-14609	122	0.46	0.46	-70577	16250	3364	95155	9298	2346	11644		95.72	Si
SLD 3	0.47	-659.47	-9890	-7912	-3210	0.46	0.46	-38224	16250	3364	95155	9298	2346	11644		3.63	Si
SLV 7	-1.58	-485.62	-17437	-13949	-78	0.46	0.46	-67388	16250	3364	95155	9298	2346	11644		149.15	Si
SLV 7	0.47	-583.97	-9947	-7958	-4063	0.46	0.46	-38444	16250	3364	95155	9298	2346	11644		2.87	Si
SLV 4	-1.58	-702.15	-17127	-13701	-344	0.46	0.46	-66191	16250	3364	95155	9298	2346	11644		33.8	Si
SLV 4	0.47	-1067.76	-10934	-8747	-5634	0.46	0.397	-42256	16250	2903	95155	9298	2346	11644		2.07	Si
SLD 1	-1.58	-413.71	-18576	-14861	208	0.46	0.46	-71793	16250	3364	95155	9298	2346	11644		55.91	Si
SLD 1	0.47	-656.25	-9819	-7855	-2837	0.46	0.46	-37947	16250	3364	95155	9298	2346	11644		4.1	Si
SLV 1	-1.58	-638.27	-17679	-14143	-158	0.46	0.46	-68324	16250	3364	95155	9298	2346	11644		73.74	Si
SLV 1	0.47	-1015.58	-10615	-8492	-4526	0.46	0.403	-41024	16250	2947	95155	9298	2346	11644		2.57	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-13064	0.24	33.46	1724.68	2753.17	2238.93	66.92	Si
SLV 14	-13183	0.24	33.46	1729.24	2769.51	2249.37	67.23	Si
SLV 15	-13191	0.24	33.46	1729.52	2770.57	2250.05	67.25	Si
SLV 16	-13311	0.24	33.46	1733.87	2786.9	2260.39	67.56	Si
SLV 9	-13498	0.24	33.46	1740.28	2812.55	2276.41	68.04	Si
SLV 10	-13575	0.24	33.46	1742.75	2822.96	2282.86	68.23	Si
SLV 11	-13922	0.24	33.46	1752.92	2869.69	2311.31	69.08	Si
SLV 5	-13979	0.24	33.46	1754.43	2876.9	2315.66	69.21	Si
SLV 12	-13998	0.24	33.46	1754.94	2879.35	2317.15	69.26	Si
SLV 6	-14056	0.24	33.46	1756.38	2886.48	2321.43	69.38	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-6851	-19940	154	0.41	784.1	0.967	6.1574	4.19835	Si
SLV 5	-6765	-19833	153	0.414	775.3	0.966	6.22225	4.19835	Si
SLV 8	-6804	-17544	139	0.414	779.3	0.966	6.22296	4.19835	Si
SLV 7	-6718	-17437	137	0.418	770.5	0.966	6.28905	4.19835	Si
SLV 10	-5994	-21042	130	0.457	696.9	0.963	6.89768	4.19835	Si
SLV 12	-5947	-18646	114	0.462	692.1	0.963	6.97767	4.19835	Si
SLV 9	-5908	-20935	128	0.462	688.1	0.962	6.98163	4.19835	Si
SLV 11	-5861	-18539	113	0.468	683.3	0.962	7.06337	4.19835	Si
SLV 2	-7859	-17846	178	0.367	886.7	0.97	5.494	3.18428	Si
SLV 4	-7845	-17127	173	0.368	885.2	0.97	5.51003	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.425	SLU 84	Si
V_SLU	3.596	SLU 84	Si
PF_SLV	1.847	SLV 2	Si
V_SLV	2.067	SLV 4	Si
PFFP_SLV	66.918	SLV 13	Si
R_SLV	1.467	SLV 6	Si

Maschio 44

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.253	-3.284	-7.463	-3.284	L2	L4	0.79	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	0.42	1529.11	-19957	-0.0001527	0.0003743	0.0035	0.79	3536.39	5379.86	5379.86	3.52	No	Si
SLU 79	0.82	283.38	-19583	-0.0000995	0.0003743	0.0035	0.79	3550.03	5325.91	5325.91	18.79	No	Si
SLU 83	0.42	1577.14	-20601	-0.0001589	0.0003743	0.0035	0.79	3505.72	5472.89	5472.89	3.47	No	Si
SLU 83	0.82	280.51	-20227	-0.0001028	0.0003743	0.0035	0.79	3524.6	5418.94	5418.94	19.32	No	Si
SLU 75	0.42	1522.27	-19863	-0.0001518	0.0003743	0.0035	0.79	3540.11	5366.27	5366.27	3.53	No	Si
SLU 75	0.82	282.61	-19489	-0.0000989	0.0003743	0.0035	0.79	3552.98	5312.33	5312.33	18.8	No	Si
SLU 78	0.42	1538.59	-20100	-0.000154	0.0003743	0.0035	0.79	3530.35	5400.55	5400.55	3.51	No	Si
SLU 78	0.82	287.93	-19727	-0.0001004	0.0003743	0.0035	0.79	3545.16	5346.61	5346.61	18.57	No	Si
SLU 82	0.42	1561.27	-20366	-0.0001567	0.0003743	0.0035	0.79	3517.97	5438.9	5438.9	3.48	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	0.82	276.01	-19992	-0.0001014	0.0003743	0.0035	0.79	3534.94	5384.96	5384.96	19.51	No	Si
SLU 80	0.42	1529.57	-19959	-0.0001528	0.0003743	0.0035	0.79	3536.3	5380.16	5380.16	3.52	No	Si
SLU 80	0.82	284.2	-19585	-0.0000995	0.0003743	0.0035	0.79	3549.96	5326.21	5326.21	18.74	No	Si
SLU 81	0.42	1560.81	-20364	-0.0001567	0.0003743	0.0035	0.79	3518.07	5438.61	5438.61	3.48	No	Si
SLU 81	0.82	275.18	-19990	-0.0001013	0.0003743	0.0035	0.79	3535.03	5384.66	5384.66	19.57	No	Si
SLU 74	0.42	1521.81	-19861	-0.0001518	0.0003743	0.0035	0.79	3540.19	5365.97	5365.97	3.53	No	Si
SLU 74	0.82	281.78	-19487	-0.0000989	0.0003743	0.0035	0.79	3553.05	5312.03	5312.03	18.85	No	Si
SLU 77	0.42	1538.13	-20098	-0.000154	0.0003743	0.0035	0.79	3530.44	5400.25	5400.25	3.51	No	Si
SLU 77	0.82	287.1	-19725	-0.0001004	0.0003743	0.0035	0.79	3545.23	5346.31	5346.31	18.62	No	Si
SLU 84	0.42	1577.59	-20603	-0.0001589	0.0003743	0.0035	0.79	3505.6	5473.18	5473.18	3.47	No	Si
SLU 84	0.82	281.33	-20230	-0.0001029	0.0003743	0.0035	0.79	3524.51	5419.24	5419.24	19.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	0.42	1839.51	-16598	-0.0001359	0.0005615	0.0035	0.79		5259.63	5259.63	2.86		Si
SLV 16	0.82	-1374.69	-16131	-0.0001169	0.0005615	0.0035	0.79		5366.47	5366.47	3.9		Si
SLV 4	0.42	512.39	-10814	-0.0000621	0.0005615	0.0035	0.79		3707.24	3707.24	7.24		Si
SLV 4	0.82	1821.84	-10520	-0.0001085	0.0005615	0.0035	0.79		3625.05	3625.05	1.99		Si
SLV 15	0.42	1881.96	-16468	-0.0001368	0.0005615	0.0035	0.79		5231.74	5231.74	2.78		Si
SLV 15	0.82	-1493.88	-16002	-0.0001205	0.0005615	0.0035	0.79		5335.15	5335.15	3.57		Si
SLV 8	0.42	1326.14	-12948	-0.0000996	0.0005615	0.0035	0.79		4303.61	4303.61	3.25		Si
SLV 8	0.82	609.17	-12376	-0.0000724	0.0005615	0.0035	0.79		4143.76	4143.76	6.8		Si
SLV 12	0.42	1724.28	-14683	-0.0001221	0.0005615	0.0035	0.79		4788.55	4788.55	2.78		Si
SLV 12	0.82	-349.79	-14059	-0.0000713	0.0005615	0.0035	0.79		4845.62	4845.62	13.85		Si
SLV 3	0.42	554.84	-10684	-0.000063	0.0005615	0.0035	0.79		3671.05	3671.05	6.62		Si
SLV 3	0.82	1702.65	-10390	-0.0001023	0.0005615	0.0035	0.79		3588.87	3588.87	2.11		Si
SLV 2	0.42	219.52	-10700	-0.0000519	0.0005615	0.0035	0.79		3675.46	3675.46	16.74		Si
SLV 2	0.82	1884.07	-10592	-0.0001119	0.0005615	0.0035	0.79		3645.36	3645.36	1.93		Si
SLV 7	0.42	1353.43	-12864	-0.0001001	0.0005615	0.0035	0.79		4280.35	4280.35	3.16		Si
SLV 7	0.82	532.56	-12293	-0.0000695	0.0005615	0.0035	0.79		4120.51	4120.51	7.74		Si
SLV 1	0.42	261.97	-10571	-0.0000527	0.0005615	0.0035	0.79		3639.27	3639.27	13.89		Si
SLV 1	0.82	1764.88	-10463	-0.0001055	0.0005615	0.0035	0.79		3609.17	3609.17	2.04		Si
SLV 11	0.42	1751.56	-14600	-0.0001226	0.0005615	0.0035	0.79		4765.29	4765.29	2.72		Si
SLV 11	0.82	-426.4	-13976	-0.0000735	0.0005615	0.0035	0.79		4823.55	4823.55	11.31		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	0.42	1577.14	-20601	-16481	3268	0.79	0.79	-46359	10833	3851	95155	10645	4029	14674	No	4.49	Si
SLU 83	0.82	280.51	-20227	-16182	3268	0.79	0.79	-45519	10833	3851	95155	10645	4029	14674	No	4.49	Si
SLU 82	0.42	1561.27	-20366	-16293	3239	0.79	0.79	-45830	10833	3851	95155	10645	4029	14674	No	4.53	Si
SLU 82	0.82	276.01	-19992	-15994	3239	0.79	0.79	-44989	10833	3851	95155	10645	4029	14674	No	4.53	Si
SLU 81	0.42	1560.81	-20364	-16291	3240	0.79	0.79	-45825	10833	3851	95155	10645	4029	14674	No	4.53	Si
SLU 81	0.82	275.18	-19990	-15992	3240	0.79	0.79	-44985	10833	3851	95155	10645	4029	14674	No	4.53	Si
SLU 79	0.42	1529.11	-19957	-15966	3140	0.79	0.79	-44910	10833	3851	95155	10645	4029	14674	No	4.67	Si
SLU 79	0.82	283.38	-19583	-15667	3140	0.79	0.79	-44070	10833	3851	95155	10645	4029	14674	No	4.67	Si
SLU 80	0.42	1529.57	-19959	-15967	3139	0.79	0.79	-44915	10833	3851	95155	10645	4029	14674	No	4.67	Si
SLU 80	0.82	284.2	-19585	-15668	3139	0.79	0.79	-44074	10833	3851	95155	10645	4029	14674	No	4.67	Si
SLU 78	0.42	1538.59	-20100	-16080	3153	0.79	0.79	-45232	10833	3851	95155	10645	4029	14674	No	4.65	Si
SLU 78	0.82	287.93	-19727	-15781	3153	0.79	0.79	-44392	10833	3851	95155	10645	4029	14674	No	4.65	Si
SLU 84	0.42	1577.59	-20603	-16482	3267	0.79	0.79	-46364	10833	3851	95155	10645	4029	14674	No	4.49	Si
SLU 84	0.82	281.33	-20230	-16184	3267	0.79	0.79	-45524	10833	3851	95155	10645	4029	14674	No	4.49	Si
SLU 75	0.42	1522.27	-19863	-15890	3125	0.79	0.79	-44698	10833	3851	95155	10645	4029	14674	No	4.7	Si
SLU 75	0.82	282.61	-19489	-15591	3125	0.79	0.79	-43858	10833	3851	95155	10645	4029	14674	No	4.7	Si
SLU 74	0.42	1521.81	-19861	-15889	3126	0.79	0.79	-44694	10833	3851	95155	10645	4029	14674	No	4.69	Si
SLU 74	0.82	281.78	-19487	-15590	3126	0.79	0.79	-43853	10833	3851	95155	10645	4029	14674	No	4.69	Si
SLU 77	0.42	1538.13	-20098	-16078	3154	0.79	0.79	-45228	10833	3851	95155	10645	4029	14674	No	4.65	Si
SLU 77	0.82	287.1	-19725	-15780	3154	0.79	0.79	-44387	10833	3851	95155	10645	4029	14674	No	4.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	0.42	1839.51	-16598	-13278	7926	0.79	0.79	-37351	16250	5777	95155	15968	4029	19997		2.52	Si
SLV 16	0.82	-1374.69	-16131	-12905	7748	0.79	0.79	-36300	16250	5777	95155	15968	4029	19997		2.58	Si
SLV 13	0.42	1589.1	-16355	-13084	7706	0.79	0.79	-36804	16250	5777	95155	15968	4029	19997		2.59	Si
SLV 13	0.82	-1431.65	-16074	-12859	7939	0.79	0.79	-36173	16250	5777	95155	15968	4029	19997		2.52	Si
SLV 14	0.42	1546.64	-16484	-13187	7302	0.79	0.79	-37095	16250	5777	95155	15968	4029	19997		2.74	Si
SLV 14	0.82	-1312.46	-16204	-12963	7535	0.79	0.79	-36464	16250	5777	95155	15968	4029	19997		2.65	Si
SLV 11	0.42	1751.56	-14600	-11680	5026	0.79	0.79	-32854	16250	5777	95155	15968	4029	19997		3.98	Si
SLV 11	0.82	-426.4	-13976	-11181	4349	0.79	0.79	-31451	16250	5777	95155	15968	4029	19997		4.6	Si
SLD 14	0.42	1265.41	-14826	-11861	4356	0.79	0.79	-33364	16250	5777	95155	15968	4029	19997		4.59	Si
SLD 14	0.82	-448.97	-14539	-11632	4455	0.79	0.79	-32719	16250	5777	95155	15968	4029	19997		4.49	Si
SLD 13	0.42	1283.64	-14770	-11816	4529	0.79	0.79	-33239	16250	5777	95155	15968	4029	19997		4.41	Si
SLD 13	0.82	-500.14	-14484	-11587	4628	0.79	0.79	-32594	16250	5777	95155	15968	4029	19997		4.32	Si
SLD 15	0.42	1403.01	-14814	-11851	4796	0.79	0.79	-33336	16250	5777	95155	15968	4029	19997		4.17	Si
SLD 15	0.82	-526.25	-14454	-11563	4719	0.79	0.79	-32526	16250	5777	95155	15968	4029	19997		4.24	Si
SLV 12	0.42	1724.28	-14683	-11746	4766	0.79	0.79	-33042	16250	5777	95155	15968	4029	19997		4.2	Si
SLV 12	0.82	-349.79	-14059	-11247	4089	0.79	0.79	-31638	16250	5777	95155	15968	4029	19997		4.89	Si
SLD 16	0.42	1384.78	-14869	-11895	4623	0.79	0.79	-33461	16250	5777	95155	15968	4029	19997		4.33	Si
SLD 16	0.82	-475.07	-14509	-11608	4545	0.79	0.79	-32651	16250	5777	95155	15968	4029	19997		4.4	Si
SLV 15	0.42	1881.96	-16468	-13175	8330	0.79	0.79	-37060	16250	5777	95155	15968	4029	19997		2.4	Si
SLV 15	0.82	-1493.88	-16002	-12801	8152	0.79	0.79	-36009	16250	5777	95155	15968	4029	19997		2.45	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-10781	0.24	57.46	1944.04	2644.11	2294.08	39.92	Si
SLV 3	-10814	0.24	57.46	1948.51	2651.53	2300.02	40.03	Si
SLV 2	-10953	0.24	57.46	1967.22	2682.79	2325.01	40.46	Si
SLV 1	-10986	0.24	57.46	1971.64	2690.21	2330.92	40.57	Si
SLV 8	-13249	0.24	57.46	2253.49	3177.95	2715.72	47.26	Si
SLV 7	-13270	0.24	57.46	2255.92	3182.32	2719.12	47.32	Si
SLV 6	-13821	0.24	57.46	2318.08	3292.92	2805.5	48.83	Si
SLV 5	-13842	0.24	57.46	2320.42	3297.15	2808.79	48.88	Si
SLV 12	-15530	0.24	57.46	2494.73	3627.18	3060.96	53.27	Si
SLV 11	-15551	0.24	57.46	2496.77	3631.19	3063.98	53.32	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-8948	-19502	-30	0.528	1059.9	0.958	8.01182	4.19835	Si
SLV 8	-8691	-20431	-96	0.534	1033.7	0.957	8.09878	4.19835	Si
SLV 11	-8804	-19433	-31	0.535	1045.2	0.958	8.11587	4.19835	Si
SLV 7	-8546	-20362	-97	0.54	1019.1	0.957	8.2071	4.19835	Si
SLV 10	-7200	-19216	528	0.564	882.2	0.951	8.62289	4.19835	Si
SLV 9	-7056	-19147	527	0.573	867.6	0.95	8.76603	4.19835	Si
SLV 6	-6942	-20145	462	0.589	856.1	0.95	9.00762	4.19835	Si
SLV 5	-6798	-20076	461	0.598	841.4	0.949	9.1631	4.19835	Si
SLV 16	-8677	-18337	243	0.519	1032.3	0.957	7.87644	3.18428	Si
SLV 14	-8152	-18251	411	0.526	979	0.955	8.00239	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.469	SLU 84	Si
V_SLU	4.491	SLU 83	Si
PF_SLV	1.935	SLV 2	Si
V_SLV	2.401	SLV 15	Si
PFFP_SLV	39.925	SLV 4	Si
R_SLV	1.908	SLV 12	Si

Maschio 45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.463	-3.284	-3.233	-3.284	L2	L4	3.23	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	0.42	-15409.86	-49737	-0.0000908	0.0003743	0.0035	3.23	53328.09	62451.62	62451.62	4.05	No	Si
SLU 84	0.82	-9311.86	-48273	-0.0000749	0.0003743	0.0035	3.23	52529.57	61431.3	61431.3	6.6	No	Si
SLU 82	0.42	-15210.74	-49131	-0.0000895	0.0003743	0.0035	3.23	53003.15	62027.23	62027.23	4.08	No	Si
SLU 82	0.82	-9179.25	-47667	-0.0000738	0.0003743	0.0035	3.23	52185.26	61013.55	61013.55	6.65	No	Si
SLU 83	0.42	-15396.1	-49723	-0.0000908	0.0003743	0.0035	3.23	53320.55	62441.62	62441.62	4.06	No	Si
SLU 83	0.82	-9310.83	-48259	-0.0000749	0.0003743	0.0035	3.23	52521.57	61421.46	61421.46	6.6	No	Si
SLU 80	0.42	-15136.38	-48338	-0.0000883	0.0003743	0.0035	3.23	52566.09	61476.35	61476.35	4.06	No	Si
SLU 80	0.82	-9143.58	-46874	-0.0000727	0.0003743	0.0035	3.23	51722.86	60471.35	60471.35	6.61	No	Si
SLU 81	0.42	-15196.98	-49117	-0.0000895	0.0003743	0.0035	3.23	52995.42	62017.29	62017.29	4.08	No	Si
SLU 81	0.82	-9178.22	-47653	-0.0000738	0.0003743	0.0035	3.23	52177.07	61003.76	61003.76	6.65	No	Si
SLU 74	0.42	-15043.64	-48074	-0.0000877	0.0003743	0.0035	3.23	52417.53	61293.98	61293.98	4.07	No	Si
SLU 74	0.82	-9094.1	-46610	-0.0000723	0.0003743	0.0035	3.23	51565.86	60291.87	60291.87	6.63	No	Si
SLU 77	0.42	-15242.76	-48681	-0.000089	0.0003743	0.0035	3.23	52756.45	61713.59	61713.59	4.05	No	Si
SLU 77	0.82	-9226.72	-47216	-0.0000734	0.0003743	0.0035	3.23	51924.16	60704.84	60704.84	6.58	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	0.42	-15057.4	-48089	-0.0000878	0.0003743	0.0035	3.23	52425.58	61303.81	61303.81	4.07	No	Si
SLU 75	0.82	-9095.13	-46624	-0.0000723	0.0003743	0.0035	3.23	51574.37	60301.54	60301.54	6.63	No	Si
SLU 78	0.42	-15256.52	-48695	-0.0000891	0.0003743	0.0035	3.23	52764.31	61723.48	61723.48	4.05	No	Si
SLU 78	0.82	-9227.74	-47231	-0.0000734	0.0003743	0.0035	3.23	51932.48	60714.57	60714.57	6.58	No	Si
SLU 79	0.42	-15122.62	-48324	-0.0000883	0.0003743	0.0035	3.23	52558.11	61466.5	61466.5	4.06	No	Si
SLU 79	0.82	-9142.55	-46860	-0.0000727	0.0003743	0.0035	3.23	51714.43	60461.65	60461.65	6.61	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 2	0.42	-14828.06	-29550	-0.0000617	0.0005615	0.0035	3.23		45503.25	45503.25	3.07		Si
SLD 2	0.82	-8715.93	-28260	-0.0000477	0.0005615	0.0035	3.23		43842.14	43842.14	5.03		Si
SLV 5	0.42	-16951.74	-26433	-0.0000631	0.0005615	0.0035	3.23		41482.8	41482.8	2.45		Si
SLV 5	0.82	-13206.49	-25002	-0.0000531	0.0005615	0.0035	3.23		39573.57	39573.57	3		Si
SLV 2	0.42	-20690.67	-24923	-0.0000746	0.0005615	0.0035	3.23		39465.33	39465.33	1.91		Si
SLV 2	0.82	-12033.83	-23391	-0.0000489	0.0005615	0.0035	3.23		37392.94	37392.94	3.11		Si
SLV 3	0.42	-17489.72	-26778	-0.0000648	0.0005615	0.0035	3.23		41934.21	41934.21	2.4		Si
SLV 3	0.82	-8351.69	-25367	-0.0000437	0.0005615	0.0035	3.23		40068.91	40068.91	4.8		Si
SLV 1	0.42	-19951.54	-24270	-0.0000717	0.0005615	0.0035	3.23		38580.47	38580.47	1.93		Si
SLV 1	0.82	-11825.45	-22738	-0.0000478	0.0005615	0.0035	3.23		36513.24	36513.24	3.09		Si
SLV 4	0.42	-18228.85	-27431	-0.0000673	0.0005615	0.0035	3.23		42779.07	42779.07	2.35		Si
SLV 4	0.82	-8560.07	-26020	-0.0000449	0.0005615	0.0035	3.23		40939.28	40939.28	4.78		Si
SLD 1	0.42	-14510.73	-29269	-0.0000607	0.0005615	0.0035	3.23		45141.19	45141.19	3.11		Si
SLD 1	0.82	-8626.47	-27980	-0.0000472	0.0005615	0.0035	3.23		43482.42	43482.42	5.04		Si
SLD 4	0.42	-13831.83	-30581	-0.0000608	0.0005615	0.0035	3.23		46839.04	46839.04	3.39		Si
SLD 4	0.82	-7297.78	-29341	-0.000046	0.0005615	0.0035	3.23		45233.61	45233.61	6.2		Si
SLD 3	0.42	-13514.5	-30301	-0.0000599	0.0005615	0.0035	3.23		46475.56	46475.56	3.44		Si
SLD 3	0.82	-7208.32	-29061	-0.0000455	0.0005615	0.0035	3.23		44872.04	44872.04	6.23		Si
SLV 6	0.42	-17426.77	-26853	-0.0000647	0.0005615	0.0035	3.23		42031.77	42031.77	2.41		Si
SLV 6	0.82	-13340.41	-25422	-0.0000539	0.0005615	0.0035	3.23		40143.59	40143.59	3.01		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	0.42	-15196.98	-49117	-43659	-15060	3.23	3.23	-30037	10833	15746	33304	43524	8236	49051	No	3.26	Si
SLU 81	0.82	-9178.22	-47653	-42358	-15060	3.23	3.23	-29142	10830	15741	33304	43524	8236	49046	No	3.26	Si
SLU 75	0.42	-15057.4	-48089	-42745	-14919	3.23	3.23	-29409	10833	15746	33304	43524	8236	49051	No	3.29	Si
SLU 75	0.82	-9095.13	-46624	-41444	-14919	3.23	3.23	-28513	10746	15620	33304	43524	8236	48924	No	3.28	Si
SLU 84	0.42	-15409.86	-49737	-44211	-15258	3.23	3.23	-30417	10833	15746	33304	43524	8236	49051	No	3.21	Si
SLU 84	0.82	-9311.86	-48273	-42910	-15258	3.23	3.23	-29522	10833	15746	33304	43524	8236	49051	No	3.21	Si
SLU 82	0.42	-15210.74	-49131	-43672	-15092	3.23	3.23	-30046	10833	15746	33304	43524	8236	49051	No	3.25	Si
SLU 82	0.82	-9179.25	-47667	-42371	-15092	3.23	3.23	-29151	10831	15743	33304	43524	8236	49047	No	3.25	Si
SLU 83	0.42	-15396.1	-49723	-44198	-15226	3.23	3.23	-30408	10833	15746	33304	43524	8236	49051	No	3.22	Si
SLU 83	0.82	-9310.83	-48259	-42897	-15226	3.23	3.23	-29513	10833	15746	33304	43524	8236	49051	No	3.22	Si
SLU 78	0.42	-15256.52	-48695	-43284	-15085	3.23	3.23	-29779	10833	15746	33304	43524	8236	49051	No	3.25	Si
SLU 78	0.82	-9227.74	-47231	-41983	-15085	3.23	3.23	-28884	10796	15691	33304	43524	8236	48996	No	3.25	Si
SLU 80	0.42	-15136.38	-48338	-42967	-14995	3.23	3.23	-29561	10833	15746	33304	43524	8236	49051	No	3.27	Si
SLU 80	0.82	-9143.58	-46874	-41666	-14995	3.23	3.23	-28666	10767	15649	33304	43524	8236	48954	No	3.26	Si
SLU 77	0.42	-15242.76	-48681	-43272	-15053	3.23	3.23	-29771	10833	15746	33304	43524	8236	49051	No	3.26	Si
SLU 77	0.82	-9226.72	-47216	-41970	-15053	3.23	3.23	-28875	10794	15690	33304	43524	8236	48994	No	3.25	Si
SLU 79	0.42	-15122.62	-48324	-42955	-14963	3.23	3.23	-29553	10833	15746	33304	43524	8236	49051	No	3.28	Si
SLU 79	0.82	-9142.55	-46860	-41653	-14963	3.23	3.23	-28657	10765	15648	33304	43524	8236	48952	No	3.27	Si
SLU 74	0.42	-15043.64	-48074	-42733	-14887	3.23	3.23	-29400	10833	15746	33304	43524	8236	49051	No	3.29	Si
SLU 74	0.82	-9094.1	-46610	-41431	-14887	3.23	3.23	-28504	10745	15618	33304	43524	8236	48922	No	3.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	0.42	-13514.5	-30301	-26934	-16430	3.23	3.23	-18530	14123	20527	33304	65286	8236	53832		3.28	Si
SLD 3	0.82	-7208.32	-29061	-25832	-16346	3.23	3.23	-17772	13971	20307	33304	65286	8236	53611		3.28	Si
SLV 7	0.42	-8745.69	-34794	-30928	-18632	3.23	3.23	-21278	14672	21326	33304	65286	8236	54630		2.93	Si
SLV 7	0.82	-1627.29	-33765	-30013	-18443	3.23	3.23	-20649	14546	21143	33304	65286	8236	54448		2.95	Si
SLV 4	0.42	-18228.85	-27431	-24383	-25765	3.23	2.8514	-19144	14245	18279	33304	65286	8236	51583		2	Si
SLV 4	0.82	-8560.07	-26020	-23129	-25575	3.23	3.23	-15912	13599	19766	33304	65286	8236	53071		2.08	Si
SLV 3	0.42	-17489.72	-26778	-23803	-24439	3.23	2.8856	-18470	14111	18323	33304	65286	8236	51627		2.11	Si
SLV 3	0.82	-8351.69	-25367	-22548	-24248	3.23	3.23	-15513	13519	19650	33304	65286	8236	52955		2.18	Si
SLV 8	0.42	-9220.72	-35213	-31301	-19485	3.23	3.23	-21535	14724	21401	33304	65286	8236	54705		2.81	Si
SLV 8	0.82	-1761.22	-34184	-30386	-19296	3.23	3.23	-20905	14598	21218	33304	65286	8236	54522		2.83	Si
SLD 2	0.42	-14828.06	-29550	-26266	-15845	3.23	3.23	-18071	14031	20394	33304	65286	8236	53698		3.39	Si
SLD 2	0.82	-8715.93	-28260	-25120	-15798	3.23	3.23	-17282	13873	20165	33304	65286	8236	53469		3.38	Si
SLD 1	0.42	-14510.73	-29269	-26017	-15275	3.23	3.23	-17900	13997	20344	33304	65286	8236	53648		3.51	Si
SLD 1	0.82	-8626.47	-27980	-24871	-15228	3.23	3.23	-17111	13839	20115	33304	65286	8236	53419		3.51	Si
SLD 4	0.42	-13831.83	-30581	-27183	-16999	3.23	3.23	-18702	14157	20577	33304	65286	8236	53882		3.17	Si
SLD 4	0.82	-7297.78	-29341	-26081	-16916	3.23	3.23	-17943	14005	20357	33304	65286	8236	53661		3.17	Si
SLV 2	0.42	-20690.67	-24923	-22153	-23004	3.23	2.3544	-21133	14644	15515	33304	65286	8236	48819		2.12	Si
SLV 2	0.82	-12033.83	-23391	-20792	-22901	3.23	3.23	-14305	13278	19299	33304	65286	8236	52603		2.3	Si
SLV 1	0.42	-19951.54	-24270	-21573	-21677	3.23	2.3788	-20361	14489	15510	33304	65286	8236	48814		2.25	Si
SLV 1	0.82	-11825.45	-22738	-20212	-21574	3.23	3.23	-13906	13198	19183	33304	65286	8236	52487		2.43	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.24	12018	-17469	234.93	3621.11	15.41	Si
SLV 2	179667	0.24	12435	-18074	234.93	3735.59	15.9	Si
SLV 3	179667	0.24	12787	-18585	234.93	3831.57	16.31	Si
SLV 4	179667	0.24	13203	-19191	234.93	3944.68	16.79	Si
SLV 5	179667	0.24	14359	-20871	234.93	4254.43	18.11	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.24	14627	-21260	234.93	4325.4	18.41	Si
SLV 7	179667	0.24	16920	-24593	234.93	4920.45	20.94	Si
SLV 9	179667	0.24	17070	-24811	234.93	4958.55	21.11	Si
SLV 8	179667	0.24	17188	-24983	234.93	4988.49	21.23	Si
SLV 10	179667	0.24	17338	-25201	234.93	5026.41	21.4	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-36150	-23435	776	0.517	4289.1	0.958	7.84135	4.19835	Si
SLV 11	-35829	-23073	776	0.52	4256.5	0.958	7.89803	4.19835	Si
SLV 8	-32324	-18293	618	0.568	3900.3	0.954	8.64841	4.19835	Si
SLV 7	-32004	-17930	617	0.572	3867.7	0.954	8.71879	4.19835	Si
SLV 16	-36683	-31354	683	0.513	4343.4	0.958	7.78456	3.18428	Si
SLV 15	-36184	-30790	682	0.519	4292.7	0.958	7.87122	3.18428	Si
SLV 10	-24668	-28629	-20	0.721	3123.1	0.944	11.09066	4.19835	Si
SLV 9	-24347	-28267	-21	0.728	3090.6	0.944	11.20896	4.19835	Si
SLV 14	-33239	-32912	444	0.56	3993.2	0.955	8.52683	3.18428	Si
SLV 13	-32740	-32348	443	0.567	3942.5	0.955	8.63236	3.18428	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.046	SLU 78	Si
V_SLU	3.215	SLU 84	Si
PF_SLV	1.907	SLV 2	Si
V_SLV	2.002	SLV 4	Si
PFFP_SLV	15.414	SLV 1	Si
R_SLV	1.868	SLV 12	Si

Maschio 46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.233	-3.284	-0.123	-3.284	L2	L4	2.11	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	0.42	-1641.07	-29187	-0.0000582	0.0003743	0.0035	2.11	21495.18	25105.78	25105.78	15.3	No	Si
SLU 83	0.82	-126.76	-28275	-0.0000487	0.0003743	0.0035	2.11	21105.23	24559.68	24559.68	193.74	No	Si
SLU 41	0.42	-1432.78	-24705	-0.0000488	0.0003743	0.0035	2.11	19403.02	22321.73	22321.73	15.58	No	Si
SLU 41	0.82	-181.41	-24019	-0.0000412	0.0003743	0.0035	2.11	19044.2	21884.79	21884.79	120.64	No	Si
SLU 40	0.42	-1430.7	-24351	-0.0000481	0.0003743	0.0035	2.11	19218.98	22096.33	22096.33	15.44	No	Si
SLU 40	0.82	-203	-23668	-0.0000407	0.0003743	0.0035	2.11	18856.39	21638.44	21638.44	106.59	No	Si
SLU 42	0.42	-1436.35	-24717	-0.0000488	0.0003743	0.0035	2.11	19408.89	22329	22329	15.55	No	Si
SLU 42	0.82	-181.4	-24030	-0.0000413	0.0003743	0.0035	2.11	19049.52	21891.6	21891.6	120.68	No	Si
SLU 81	0.42	-1635.43	-28821	-0.0000574	0.0003743	0.0035	2.11	21340.94	24885.95	24885.95	15.22	No	Si
SLU 81	0.82	-148.37	-27914	-0.0000481	0.0003743	0.0035	2.11	20945.58	24345.06	24345.06	164.09	No	Si
SLU 39	0.42	-1427.13	-24340	-0.0000481	0.0003743	0.0035	2.11	19213.02	22089.1	22089.1	15.48	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	0.82	-203.01	-23658	-0.0000407	0.0003743	0.0035	2.11	18850.99	21631.43	21631.43	106.55	No	Si
SLU 82	0.42	-1639	-28833	-0.0000575	0.0003743	0.0035	2.11	21345.79	24892.78	24892.78	15.19	No	Si
SLU 82	0.82	-148.36	-27924	-0.0000482	0.0003743	0.0035	2.11	20950.05	24351	24351	164.14	No	Si
SLU 76	0.42	-1555.46	-28089	-0.0000557	0.0003743	0.0035	2.11	21023.12	24448.69	24448.69	15.72	No	Si
SLU 76	0.82	-64.53	-27161	-0.0000463	0.0003743	0.0035	2.11	20603.97	23892.31	23892.31	370.23	No	Si
SLU 84	0.42	-1644.64	-29198	-0.0000582	0.0003743	0.0035	2.11	21499.94	25112.65	25112.65	15.27	No	Si
SLU 84	0.82	-126.75	-28285	-0.0000487	0.0003743	0.0035	2.11	21109.61	24565.65	24565.65	193.81	No	Si
SLU 73	0.42	-1549.81	-27723	-0.0000549	0.0003743	0.0035	2.11	20860.12	24231.7	24231.7	15.64	No	Si
SLU 73	0.82	-86.14	-26800	-0.0000458	0.0003743	0.0035	2.11	20435.54	23670.81	23670.81	274.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	0.42	-2592.14	-8739	-0.0000259	0.0005615	0.0035	2.11		9994.62	9994.62	3.86		Si
SLV 3	0.82	-1041.38	-7779	-0.0000172	0.0005615	0.0035	2.11		9076.91	9076.91	8.72		Si
SLV 6	0.42	-244.4	-15469	-0.0000262	0.0005615	0.0035	2.11		16160.12	16160.12	66.12		Si
SLV 6	0.82	1590.52	-14293	-0.0000306	0.0005615	0.0035	2.11		14115.01	14115.01	8.87		Si
SLV 4	0.42	-2807.66	-9453	-0.0000281	0.0005615	0.0035	2.11		10680.12	10680.12	3.8		Si
SLV 4	0.82	-1030.81	-8299	-0.000018	0.0005615	0.0035	2.11		9573.63	9573.63	9.29		Si
SLV 2	0.42	-2057.32	-8838	-0.0000236	0.0005615	0.0035	2.11		10089.46	10089.46	4.9		Si
SLV 2	0.82	5.4	-7526	-0.0000121	0.0005615	0.0035	2.11		7837.24	7837.24	1452.34		Si
SLV 5	0.42	-105.9	-15010	-0.0000248	0.0005615	0.0035	2.11		15757.35	15757.35	148.8		Si
SLV 5	0.82	1583.72	-13958	-0.00003	0.0005615	0.0035	2.11		13835.28	13835.28	8.74		Si
SLD 4	0.42	-1788.69	-15196	-0.000033	0.0005615	0.0035	2.11		15919.83	15919.83	8.9		Si
SLD 4	0.82	-417.87	-14289	-0.0000251	0.0005615	0.0035	2.11		15126.44	15126.44	36.2		Si
SLV 7	0.42	-2607.03	-17060	-0.00004	0.0005615	0.0035	2.11		17558.64	17558.64	6.74		Si
SLV 7	0.82	-1870.3	-16538	-0.0000356	0.0005615	0.0035	2.11		17102.61	17102.61	9.14		Si
SLV 1	0.42	-1841.8	-8124	-0.0000215	0.0005615	0.0035	2.11		9406.3	9406.3	5.11		Si
SLV 1	0.82	-5.18	-7005	-0.0000112	0.0005615	0.0035	2.11		8340.8	8340.8	1611.2		Si
SLD 3	0.42	-1696.17	-14889	-0.000032	0.0005615	0.0035	2.11		15651.09	15651.09	9.23		Si
SLD 3	0.82	-422.41	-14066	-0.0000247	0.0005615	0.0035	2.11		14931.55	14931.55	35.35		Si
SLV 8	0.42	-2745.54	-17518	-0.0000415	0.0005615	0.0035	2.11		17949.41	17949.41	6.54		Si
SLV 8	0.82	-1863.51	-16872	-0.0000362	0.0005615	0.0035	2.11		17398.13	17398.13	9.34		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	0.42	-1349.56	-26041	-23148	-3661	2.11	2.11	-24379	10195	9680	33304	28432	5381	33813	No	9.24	Si
SLU 70	0.82	111.75	-25074	-22288	-3688	2.11	2.11	-23474	10074	9566	33304	28432	5381	33813	No	9.17	Si
SLU 78	0.42	-1563.21	-28647	-25464	-3747	2.11	2.11	-26819	10520	9989	33304	28432	5381	33813	No	9.02	Si
SLU 78	0.82	-33.42	-27712	-24633	-3776	2.11	2.11	-25943	10404	9878	33304	28432	5381	33813	No	8.96	Si
SLU 77	0.42	-1559.64	-28636	-25454	-3734	2.11	2.11	-26808	10519	9988	33304	28432	5381	33813	No	9.06	Si
SLU 77	0.82	-33.43	-27702	-24624	-3763	2.11	2.11	-25934	10402	9877	33304	28432	5381	33813	No	8.99	Si
SLU 74	0.42	-1553.99	-28270	-25129	-3655	2.11	2.11	-26466	10473	9944	33304	28432	5381	33813	No	9.25	Si
SLU 74	0.82	-55.03	-27341	-24303	-3684	2.11	2.11	-25596	10357	9834	33304	28432	5381	33813	No	9.18	Si
SLU 80	0.42	-1558.72	-28447	-25286	-3700	2.11	2.11	-26631	10495	9965	33304	28432	5381	33813	No	9.14	Si
SLU 80	0.82	-42.94	-27516	-24459	-3729	2.11	2.11	-25760	10379	9855	33304	28432	5381	33813	No	9.07	Si
SLU 84	0.42	-1644.64	-29198	-25954	-3658	2.11	2.11	-27334	10589	10054	33304	28432	5381	33813	No	9.24	Si
SLU 84	0.82	-126.75	-28285	-25143	-3688	2.11	2.11	-26480	10475	9946	33304	28432	5381	33813	No	9.17	Si
SLU 79	0.42	-1555.15	-28435	-25276	-3688	2.11	2.11	-26620	10494	9964	33304	28432	5381	33813	No	9.17	Si
SLU 79	0.82	-42.95	-27506	-24450	-3717	2.11	2.11	-25750	10378	9854	33304	28432	5381	33813	No	9.1	Si
SLU 83	0.42	-1641.07	-29187	-25944	-3645	2.11	2.11	-27324	10588	10053	33304	28432	5381	33813	No	9.28	Si
SLU 83	0.82	-126.76	-28275	-25134	-3675	2.11	2.11	-26470	10474	9945	33304	28432	5381	33813	No	9.2	Si
SLU 75	0.42	-1557.56	-28282	-25139	-3668	2.11	2.11	-26476	10475	9946	33304	28432	5381	33813	No	9.22	Si
SLU 75	0.82	-55.02	-27351	-24312	-3697	2.11	2.11	-25605	10358	9835	33304	28432	5381	33813	No	9.15	Si
SLU 69	0.42	-1345.99	-26030	-23137	-3648	2.11	2.11	-24368	10194	9679	33304	28432	5381	33813	No	9.27	Si
SLU 69	0.82	111.74	-25064	-22279	-3675	2.11	2.11	-23464	10073	9564	33304	28432	5381	33813	No	9.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	0.42	-1841.8	-8124	-7222	-5697	2.11	2.11	-7606	11938	11335	33304	42648	5381	44639		7.84	Si
SLV 1	0.82	-5.18	-7005	-6227	-5590	2.11	2.11	-6558	11728	11136	33304	42648	5381	44440		7.95	Si
SLD 2	0.42	-1487.31	-14929	-13270	-4377	2.11	2.11	-13976	13212	12545	33304	42648	5381	45849		10.47	Si
SLD 2	0.82	-4.03	-13959	-12408	-4339	2.11	2.11	-13068	13030	12372	33304	42648	5381	45677		10.53	Si
SLD 5	0.42	-673.27	-17557	-15606	-4148	2.11	2.11	-16436	13704	13012	33304	42648	5381	46316		11.17	Si
SLD 5	0.82	639.78	-16700	-14845	-4205	2.11	2.11	-15634	13543	12860	33304	42648	5381	46164		10.98	Si
SLD 6	0.42	-733.74	-17757	-15784	-4449	2.11	2.11	-16623	13741	13047	33304	42648	5381	46352		10.42	Si
SLD 6	0.82	642.75	-16846	-14974	-4506	2.11	2.11	-15771	13571	12885	33304	42648	5381	46190		10.25	Si
SLV 6	0.42	-244.4	-15469	-13750	-7009	2.11	2.11	-14482	13313	12641	33304	42648	5381	45945		6.56	Si
SLV 6	0.82	1590.52	-14293	-12705	-7128	2.11	2.11	-13380	13093	12432	33304	42648	5381	45736		6.42	Si
SLV 2	0.42	-2057.32	-8838	-7856	-6772	2.11	2.11	-8274	12071	11462	33304	42648	5381	44766		6.61	Si
SLV 2	0.82	5.4	-7526	-6689	-6665	2.11	2.11	-7045	11826	11228	33304	42648	5381	44533		6.68	Si
SLV 10	0.42	526.18	-21877	-19446	-5424	2.11	2.11	-20480	14513	13780	33304	42648	5381	47084		8.68	Si
SLV 10	0.82	1914.61	-20947	-18619	-5647	2.11	2.11	-19609	14339	13614	33304	42648	5381	46919		8.31	Si
SLV 4	0.42	-2807.66	-9453	-8402	-4820	2.11	2.11	-8849	12187	11571	33304	42648	5381	44875		9.31	Si
SLV 4	0.82	-1030.81	-8299	-7377	-4622	2.11	2.11	-7769	11971	11366	33304	42648	5381	44670		9.67	Si
SLV 5	0.42	-105.9	-15010	-13343	-6318	2.11	2.11	-14052	13227	12559	33304	42648	5381	45863		7.26	Si
SLV 5	0.82	1583.72	-13958	-12407	-6438	2.11	2.11	-13067	13030	12372	33304	42648	5381	45676		7.1	Si
SLV 9	0.42	664.69	-21418	-19039	-4733	2.11	2.11	-20051	14427	13698	33304	42648	5381	47003		9.93	Si
SLV 9	0.82	1907.81	-20612	-18322	-4956	2.11	2.11	-19296	14276	13555	33304	42648	5381	46859		9.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.24	7021	-6666	153.47	1431	9.32	Si
SLV 3	179667	0.24	7341	-6971	153.47	1493.02	9.73	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.24	7609	-7225	153.47	1544.59	10.06	Si
SLV 4	179667	0.24	7930	-7529	153.47	1606.08	10.47	Si
SLV 5	179667	0.24	14389	-13662	153.47	2784.33	18.14	Si
SLV 6	179667	0.24	14767	-14021	153.47	2849.65	18.57	Si
SLV 7	179667	0.24	15457	-14676	153.47	2967.93	19.34	Si
SLV 8	179667	0.24	15835	-15035	153.47	3032.12	19.76	Si
SLV 9	179667	0.24	20934	-19877	153.47	3859.25	25.15	Si
SLV 10	179667	0.24	21312	-20236	153.47	3917.65	25.53	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-20329	-25551	-49	0.6	2467.9	0.953	9.15492	4.19835	Si
SLV 9	-20028	-25187	-54	0.607	2437.4	0.952	9.26318	4.19835	Si
SLV 12	-18589	-18419	552	0.62	2291.3	0.95	9.48242	4.19835	Si
SLV 14	-26316	-30965	324	0.482	3076.6	0.961	7.28509	3.18428	Si
SLV 11	-18289	-18056	547	0.628	2260.8	0.949	9.61223	4.19835	Si
SLV 16	-25794	-28826	505	0.483	3023.5	0.961	7.30662	3.18428	Si
SLV 13	-25848	-30400	317	0.489	3029	0.961	7.39465	3.18428	Si
SLV 15	-25326	-28260	497	0.49	2975.9	0.96	7.41865	3.18428	Si
SLV 6	-14747	-18857	-188	0.762	1901.6	0.941	11.763	4.19835	Si
SLV 5	-14446	-18493	-193	0.774	1871.1	0.94	11.95623	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.188	SLU 82	Si
V_SLU	8.955	SLU 78	Si
PF_SLV	3.804	SLV 4	Si
V_SLV	6.416	SLV 6	Si
PFFP_SLV	9.324	SLV 1	Si
R_SLV	2.181	SLV 10	Si

Maschio 48

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	2.271	-5.158	6.101	L2	L4	3.83	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-1.58	-33546.6	-87457	-0.0002041	0.0004492	0.0035	3.83	63149.63	116303.87	116303.87	3.47	No	Si
SLU 80	0.52	-2178.88	-81765	-0.0001147	0.0004492	0.0035	3.83	65388.11	112398.48	112398.48	51.59	No	Si
SLU 83	-1.58	-34476.06	-89614	-0.0002108	0.0004492	0.0035	3.83	62070.37	117317.21	117317.21	3.4	No	Si
SLU 83	0.52	-2244.59	-83922	-0.0001182	0.0004492	0.0035	3.83	64643.86	113911.99	113911.99	50.75	No	Si
SLU 84	-1.58	-34347.66	-89672	-0.0002106	0.0004492	0.0035	3.83	62039.61	117344.44	117344.44	3.42	No	Si
SLU 84	0.52	-2231.76	-83980	-0.0001182	0.0004492	0.0035	3.83	64622.11	113952.67	113952.67	51.06	No	Si
SLU 81	-1.58	-34142.58	-88739	-0.0002082	0.0004492	0.0035	3.83	62523.42	116906.2	116906.2	3.42	No	Si
SLU 81	0.52	-2231.65	-83047	-0.0001168	0.0004492	0.0035	3.83	64961.03	113298.11	113298.11	50.77	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-1.58	-34014.18	-88797	-0.000208	0.0004492	0.0035	3.83	62494.05	116933.43	116933.43	3.44	No	Si
SLU 82	0.52	-2218.81	-83105	-0.0001168	0.0004492	0.0035	3.83	64940.66	113338.78	113338.78	51.08	No	Si
SLU 74	-1.58	-33552.91	-87030	-0.0002032	0.0004492	0.0035	3.83	63348.16	116092.91	116092.91	3.46	No	Si
SLU 74	0.52	-2157.42	-81338	-0.000114	0.0004492	0.0035	3.83	65520.34	112098.96	112098.96	51.96	No	Si
SLU 79	-1.58	-33674.99	-87399	-0.0002043	0.0004492	0.0035	3.83	63176.88	116276.63	116276.63	3.45	No	Si
SLU 79	0.52	-2191.71	-81707	-0.0001146	0.0004492	0.0035	3.83	65406.36	112357.81	112357.81	51.26	No	Si
SLU 78	-1.58	-33758	-87963	-0.0002056	0.0004492	0.0035	3.83	62907.85	116541.57	116541.57	3.45	No	Si
SLU 78	0.52	-2157.53	-82271	-0.0001154	0.0004492	0.0035	3.83	65224.92	112753.52	112753.52	52.26	No	Si
SLU 75	-1.58	-33424.51	-87088	-0.000203	0.0004492	0.0035	3.83	63321.49	116130.56	116130.56	3.47	No	Si
SLU 75	0.52	-2144.59	-81396	-0.000114	0.0004492	0.0035	3.83	65502.68	112139.64	112139.64	52.29	No	Si
SLU 77	-1.58	-33886.39	-87905	-0.0002059	0.0004492	0.0035	3.83	62935.9	116514.34	116514.34	3.44	No	Si
SLU 77	0.52	-2170.36	-82213	-0.0001153	0.0004492	0.0035	3.83	65243.97	112712.84	112712.84	51.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	-1.58	-45827.97	-68622	-0.0001871	0.0006738	0.0035	3.83		111809.87	111809.87	2.44		Si
SLV 13	0.52	-2219.46	-64375	-0.0000858	0.0006738	0.0035	3.83		106948.05	106948.05	48.19		Si
SLV 10	-1.58	-49589.03	-62216	-0.0001895	0.0006738	0.0035	3.83		104319.6	104319.6	2.1		Si
SLV 10	0.52	-486.23	-58431	-0.0000743	0.0006738	0.0035	3.83		99711.26	99711.26	205.07		Si
SLV 9	-1.58	-47615.2	-62830	-0.0001843	0.0006738	0.0035	3.83		105066.87	105066.87	2.21		Si
SLV 9	0.52	-342.84	-59045	-0.0000748	0.0006738	0.0035	3.83		100458.53	100458.53	293.02		Si
SLV 5	-1.58	-36853.29	-58315	-0.0001512	0.0006738	0.0035	3.83		99570.04	99570.04	2.7		Si
SLV 5	0.52	400.12	-54560	-0.000069	0.0006738	0.0035	3.83		87655.77	87655.77	219.08		Si
SLD 9	-1.58	-34011.38	-61661	-0.0001499	0.0006738	0.0035	3.83		103642.81	103642.81	3.05		Si
SLD 9	0.52	-1000.39	-57526	-0.0000741	0.0006738	0.0035	3.83		98609.1	98609.1	98.57		Si
SLV 6	-1.58	-38827.13	-57702	-0.0001548	0.0006738	0.0035	3.83		98822.77	98822.77	2.55		Si
SLV 6	0.52	256.72	-53947	-0.0000679	0.0006738	0.0035	3.83		86801.51	86801.51	338.11		Si
SLV 14	-1.58	-48899.19	-67667	-0.0001938	0.0006738	0.0035	3.83		110723.74	110723.74	2.26		Si
SLV 14	0.52	-2442.58	-63420	-0.000085	0.0006738	0.0035	3.83		105785.32	105785.32	43.31		Si
SLV 16	-1.58	-37075.68	-67970	-0.0001661	0.0006738	0.0035	3.83		111068.44	111068.44	3		Si
SLV 16	0.52	-3342.33	-63358	-0.0000868	0.0006738	0.0035	3.83		105709.54	105709.54	31.63		Si
SLD 14	-1.58	-34401.06	-63698	-0.0001538	0.0006738	0.0035	3.83		106123.74	106123.74	3.08		Si
SLD 14	0.52	-1865.77	-59363	-0.0000784	0.0006738	0.0035	3.83		100845.43	100845.43	54.05		Si
SLD 10	-1.58	-34873.18	-61393	-0.0001514	0.0006738	0.0035	3.83		103316.55	103316.55	2.96		Si
SLD 10	0.52	-1063	-57258	-0.0000739	0.0006738	0.0035	3.83		98271.29	98271.29	92.45		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-1.58	-33674.99	-87399	-63563	-14998	3.83	3.83	-55320	10833	12447	95155	41292	19533	60825	No	4.06	Si
SLU 79	0.52	-2191.71	-81707	-59423	-14998	3.83	3.83	-51717	10833	12447	95155	41292	19533	60825	No	4.06	Si
SLU 81	-1.58	-34142.58	-88739	-64538	-15201	3.83	3.83	-56169	10833	12447	95155	41292	19533	60825	No	4	Si
SLU 81	0.52	-2231.65	-83047	-60398	-15201	3.83	3.83	-52565	10833	12447	95155	41292	19533	60825	No	4	Si
SLU 74	-1.58	-33552.91	-87030	-63295	-14956	3.83	3.83	-55087	10833	12447	95155	41292	19533	60825	No	4.07	Si
SLU 74	0.52	-2157.42	-81338	-59155	-14956	3.83	3.83	-51484	10833	12447	95155	41292	19533	60825	No	4.07	Si
SLU 80	-1.58	-33546.6	-87457	-63605	-14943	3.83	3.83	-55357	10833	12447	95155	41292	19533	60825	No	4.07	Si
SLU 80	0.52	-2178.88	-81765	-59465	-14943	3.83	3.83	-51754	10833	12447	95155	41292	19533	60825	No	4.07	Si
SLU 75	-1.58	-33424.51	-87088	-63337	-14901	3.83	3.83	-55123	10833	12447	95155	41292	19533	60825	No	4.08	Si
SLU 75	0.52	-2144.59	-81396	-59197	-14901	3.83	3.83	-51520	10833	12447	95155	41292	19533	60825	No	4.08	Si
SLU 77	-1.58	-33886.39	-87905	-63931	-15109	3.83	3.83	-55641	10833	12447	95155	41292	19533	60825	No	4.03	Si
SLU 77	0.52	-2170.36	-82213	-59791	-15109	3.83	3.83	-52037	10833	12447	95155	41292	19533	60825	No	4.03	Si
SLU 84	-1.58	-34347.66	-89672	-65216	-15299	3.83	3.83	-56759	10833	12447	95155	41292	19533	60825	No	3.98	Si
SLU 84	0.52	-2231.76	-83980	-61076	-15299	3.83	3.83	-53156	10833	12447	95155	41292	19533	60825	No	3.98	Si
SLU 83	-1.58	-34476.06	-89614	-65174	-15354	3.83	3.83	-56722	10833	12447	95155	41292	19533	60825	No	3.96	Si
SLU 83	0.52	-2244.59	-83922	-61034	-15354	3.83	3.83	-53119	10833	12447	95155	41292	19533	60825	No	3.96	Si
SLU 82	-1.58	-34014.18	-88797	-64580	-15146	3.83	3.83	-56205	10833	12447	95155	41292	19533	60825	No	4.02	Si
SLU 82	0.52	-2218.81	-83105	-60440	-15146	3.83	3.83	-52602	10833	12447	95155	41292	19533	60825	No	4.02	Si
SLU 78	-1.58	-33758	-87963	-63973	-15054	3.83	3.83	-55677	10833	12447	95155	41292	19533	60825	No	4.04	Si
SLU 78	0.52	-2157.53	-82271	-59833	-15054	3.83	3.83	-52074	10833	12447	95155	41292	19533	60825	No	4.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	-1.58	-38827.13	-57702	-41965	-18097	3.83	3.7263	-38249	16250	18166	95155	61938	19533	81471		4.5	Si
SLV 6	0.52	256.72	-53947	-39234	-18012	3.83	3.83	-34146	16250	18671	95155	61938	19533	81471		4.52	Si
SLV 10	-1.58	-49589.03	-62216	-45248	-22942	3.83	3.3539	-46025	16250	16350	95155	61938	19533	81471		3.55	Si
SLV 10	0.52	-486.23	-58431	-42495	-23025	3.83	3.83	-36985	16250	18671	95155	61938	19533	81471		3.54	Si
SLD 14	-1.58	-34401.06	-63698	-46326	-15480	3.83	3.83	-40319	16250	18671	95155	61938	19533	81471		5.26	Si
SLD 14	0.52	-1865.77	-59363	-43173	-15594	3.83	3.83	-37574	16250	18671	95155	61938	19533	81471		5.22	Si
SLD 10	-1.58	-34873.18	-61393	-44649	-15913	3.83	3.83	-38859	16250	18671	95155	61938	19533	81471		5.12	Si
SLD 10	0.52	-1063	-57258	-41642	-15953	3.83	3.83	-36242	16250	18671	95155	61938	19533	81471		5.11	Si
SLV 16	-1.58	-37075.68	-67970	-49433	-16336	3.83	3.83	-43022	16250	18671	95155	61938	19533	81471		4.99	Si
SLV 16	0.52	-3342.33	-63358	-46079	-16616	3.83	3.83	-40103	16250	18671	95155	61938	19533	81471		4.9	Si
SLV 5	-1.58	-36853.29	-58315	-42411	-17225	3.83	3.83	-36911	16250	18671	95155	61938	19533	81471		4.73	Si
SLV 5	0.52	400.12	-54560	-39680	-17140	3.83	3.83	-34535	16250	18671	95155	61938	19533	81471		4.75	Si
SLD 9	-1.58	-34011.38	-61661	-44844	-15533	3.83	3.83	-39029	16250	18671	95155	61938	19533	81471		5.25	Si
SLD 9	0.52	-1000.39	-57526	-41837	-15572	3.83	3.83	-36412	16250	18671	95155	61938	19533	81471		5.23	Si
SLV 14	-1.58	-48899.19	-67667	-49212	-22105	3.83	3.5771	-46964	16250	17438	95155	61938	19533	81471		3.69	Si
SLV 14	0.52	-2442.58	-63420	-46124	-22385	3.83	3.83	-40143	16250	18671	95155	61938	19533	81471		3.64	Si
SLV 9	-1.58	-47615.2	-62830	-45695	-22070	3.83	3.4715	-44876	16250	16923	95155	61938	19533	81471		3.69	Si
SLV 9	0.52	-342.84	-59045	-42942	-22153	3.83	3.83	-37373	16250	18671	95155	61938	19533	81471		3.68	Si
SLV 13	-1.58	-45827.97	-68622	-49907	-20749	3.83	3.7415	-45494	16250	18240	95155	61938	19533	81471		3.93	Si
SLV 13	0.52	-2219.46	-64375	-46818	-21029	3.83	3.83	-40747	16250	18671	95155	61938	19533	81471		3.87	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-49377	0.24	185.71	5669.9	8341.48	7005.69	37.72	Si
SLV 2	-49385	0.24	185.71	5670.57	8342.72	7006.64	37.73	Si
SLV 3	-50332	0.24	185.71	5745.33	8481.78	7113.55	38.3	Si
SLV 1	-50340	0.24	185.71	5745.99	8483.02	7114.5	38.31	Si
SLV 8	-54726	0.24	185.71	6075.63	9125.07	7600.35	40.92	Si
SLV 6	-54754	0.24	185.71	6077.65	9129.18	7603.41	40.94	Si
SLV 7	-55339	0.24	185.71	6119.57	9214.75	7667.16	41.28	Si
SLV 5	-55367	0.24	185.71	6121.57	9218.86	7670.21	41.3	Si
SLV 12	-59173	0.24	185.71	6381.9	9759.58	8070.74	43.46	Si
SLV 10	-59201	0.24	185.71	6383.75	9763.44	8073.6	43.47	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-56422	-62830	249	0.411	6225.2	0.976	6.11261	5.75967	Si
SLV 10	-55902	-62216	250	0.414	6172.3	0.976	6.16065	5.75967	Si
SLV 11	-52834	-63841	41	0.437	5859.8	0.975	6.52114	5.75967	Si
SLV 12	-52315	-63227	43	0.441	5806.9	0.974	6.57628	5.75967	Si
SLV 5	-51371	-58315	-158	0.446	5710.8	0.974	6.64858	5.75967	Si
SLV 6	-50852	-57702	-156	0.449	5657.9	0.974	6.70738	5.75967	Si
SLV 7	-47784	-59326	-365	0.469	5345.4	0.972	7.01563	5.75967	Si
SLV 8	-47265	-58712	-363	0.474	5292.5	0.972	7.08259	5.75967	Si
SLV 13	-61203	-68622	650	0.378	6712.3	0.978	5.61147	3.72098	Si
SLV 14	-60395	-67667	652	0.382	6629.9	0.977	5.67432	3.72098	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.403	SLU 83	Si
V_SLU	3.962	SLU 83	Si
PF_SLV	2.104	SLV 10	Si
V_SLV	3.538	SLV 10	Si
PFFP_SLV	37.723	SLV 4	Si
R_SLV	1.061	SLV 9	Si

Maschio 50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.093	5.876	-3.013	5.876	L2	L4	2.08	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 62	0.42	-1398.62	-22827	-0.000046	0.0003743	0.0035	2.08	18053.38	20562.97	20562.97	14.7	No	Si
SLU 62	0.82	2135.32	-21892	-0.000048	0.0003743	0.0035	2.08	17537.08	18987.9	18987.9	8.89	No	Si
SLU 79	0.42	-1467.57	-24579	-0.0000496	0.0003743	0.0035	2.08	18969	21709.64	21709.64	14.79	No	Si
SLU 79	0.82	2228.81	-23644	-0.0000518	0.0003743	0.0035	2.08	18488.47	20013.58	20013.58	8.98	No	Si
SLU 83	0.42	-1433.23	-25453	-0.000051	0.0003743	0.0035	2.08	19400.67	22273.39	22273.39	15.54	No	Si
SLU 83	0.82	2341.16	-24518	-0.000054	0.0003743	0.0035	2.08	18937.98	20531.06	20531.06	8.77	No	Si
SLU 77	0.42	-1483.5	-24735	-0.0000499	0.0003743	0.0035	2.08	19046.98	21811.91	21811.91	14.7	No	Si
SLU 77	0.82	2230.16	-23799	-0.0000521	0.0003743	0.0035	2.08	18569.62	20105.32	20105.32	9.02	No	Si
SLU 81	0.42	-1406.9	-25186	-0.0000504	0.0003743	0.0035	2.08	19270.41	22103.14	22103.14	15.71	No	Si
SLU 81	0.82	2335.74	-24251	-0.0000535	0.0003743	0.0035	2.08	18802.26	20372.37	20372.37	8.72	No	Si
SLU 53	0.42	-1422.56	-21842	-0.0000443	0.0003743	0.0035	2.08	17508.73	19885.73	19885.73	13.98	No	Si
SLU 53	0.82	2018.92	-20906	-0.0000456	0.0003743	0.0035	2.08	16972.3	18290.67	18290.67	9.06	No	Si
SLU 58	0.42	-1432.96	-21954	-0.0000445	0.0003743	0.0035	2.08	17571.62	19964.22	19964.22	13.93	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	0.82	2022.98	-21018	-0.0000458	0.0003743	0.0035	2.08	17037.48	18381.11	18381.11	9.09	No	Si
SLU 74	0.42	-1457.17	-24468	-0.0000493	0.0003743	0.0035	2.08	18912.52	21636.12	21636.12	14.85	No	Si
SLU 74	0.82	2224.75	-23532	-0.0000515	0.0003743	0.0035	2.08	18429.71	19947.6	19947.6	8.97	No	Si
SLU 18	0.42	-1058.57	-18924	-0.0000371	0.0003743	0.0035	2.08	15772.67	17809.35	17809.35	16.82	No	Si
SLU 18	0.82	1783.26	-18205	-0.0000395	0.0003743	0.0035	2.08	15315.91	16135.36	16135.36	9.05	No	Si
SLU 60	0.42	-1372.29	-22560	-0.0000453	0.0003743	0.0035	2.08	17907.8	20384.93	20384.93	14.85	No	Si
SLU 60	0.82	2129.91	-21625	-0.0000475	0.0003743	0.0035	2.08	17386.04	18832.79	18832.79	8.84	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	0.42	-2097.49	-12786	-0.000031	0.0005615	0.0035	2.08		13415.35	13415.35	6.4		Si
SLV 1	0.82	3423.6	-11643	-0.0000354	0.0005615	0.0035	2.08		11548.78	11548.78	3.37		Si
SLV 11	0.42	-3221.8	-18707	-0.0000467	0.0005615	0.0035	2.08		18510.91	18510.91	5.75		Si
SLV 11	0.82	582.96	-20051	-0.0000361	0.0005615	0.0035	2.08		18477.09	18477.09	31.7		Si
SLV 2	0.42	-1843.61	-12421	-0.0000291	0.0005615	0.0035	2.08		13084.25	13084.25	7.1		Si
SLV 2	0.82	3240.02	-11279	-0.0000339	0.0005615	0.0035	2.08		11216.91	11216.91	3.46		Si
SLD 1	0.42	-1518.09	-14984	-0.0000319	0.0005615	0.0035	2.08		15344.66	15344.66	10.11		Si
SLD 1	0.82	2339.84	-14084	-0.0000344	0.0005615	0.0035	2.08		13736.33	13736.33	5.87		Si
SLV 6	0.42	1042.14	-14556	-0.0000289	0.0005615	0.0035	2.08		14151.43	14151.43	13.58		Si
SLV 6	0.82	2473.13	-11772	-0.0000311	0.0005615	0.0035	2.08		11666.76	11666.76	4.72		Si
SLV 8	0.42	-4044.9	-16204	-0.0000463	0.0005615	0.0035	2.08		16405.65	16405.65	4.06		Si
SLV 8	0.82	1455.66	-17678	-0.0000363	0.0005615	0.0035	2.08		16681.39	16681.39	11.46		Si
SLV 5	0.42	878.98	-14790	-0.0000285	0.0005615	0.0035	2.08		14355.81	14355.81	16.33		Si
SLV 5	0.82	2591.12	-12006	-0.000032	0.0005615	0.0035	2.08		11879.91	11879.91	4.58		Si
SLV 3	0.42	-3623.6	-13280	-0.0000392	0.0005615	0.0035	2.08		13857.67	13857.67	3.82		Si
SLV 3	0.82	3118.36	-13415	-0.000037	0.0005615	0.0035	2.08		13141.72	13141.72	4.21		Si
SLV 4	0.42	-3369.72	-12916	-0.0000373	0.0005615	0.0035	2.08		13533.48	13533.48	4.02		Si
SLV 4	0.82	2934.78	-13050	-0.0000355	0.0005615	0.0035	2.08		12816.82	12816.82	4.37		Si
SLV 7	0.42	-4208.06	-16438	-0.0000475	0.0005615	0.0035	2.08		16604.83	16604.83	3.95		Si
SLV 7	0.82	1573.65	-17912	-0.0000372	0.0005615	0.0035	2.08		16857.66	16857.66	10.71		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	0.42	-1483.5	-24735	-21987	-9276	2.08	2.08	-23490	10076	9431	33304	28028	5304	33332	No	3.59	Si
SLU 77	0.82	2230.16	-23799	-21155	-9276	2.08	2.08	-22602	9958	9321	33304	28028	5304	33332	No	3.59	Si
SLU 81	0.42	-1406.9	-25186	-22388	-9348	2.08	2.08	-23919	10134	9485	33304	28028	5304	33332	No	3.57	Si
SLU 81	0.82	2335.74	-24251	-21556	-9348	2.08	2.08	-23030	10015	9374	33304	28028	5304	33332	No	3.57	Si
SLU 84	0.42	-1583.02	-25293	-22483	-9266	2.08	2.08	-24021	10147	9498	33304	28028	5304	33332	No	3.6	Si
SLU 84	0.82	2126.73	-24358	-21652	-9266	2.08	2.08	-23132	10029	9387	33304	28028	5304	33332	No	3.6	Si
SLU 83	0.42	-1433.23	-25453	-22625	-9428	2.08	2.08	-24172	10167	9517	33304	28028	5304	33332	No	3.54	Si
SLU 83	0.82	2341.16	-24518	-21794	-9428	2.08	2.08	-23284	10049	9406	33304	28028	5304	33332	No	3.54	Si
SLU 78	0.42	-1633.29	-24575	-21844	-9114	2.08	2.08	-23338	10056	9413	33304	28028	5304	33332	No	3.66	Si
SLU 78	0.82	2015.74	-23639	-21013	-9114	2.08	2.08	-22450	9938	9302	33304	28028	5304	33332	No	3.66	Si
SLU 75	0.42	-1606.96	-24308	-21607	-9035	2.08	2.08	-23084	10022	9381	33304	28028	5304	33332	No	3.69	Si
SLU 75	0.82	2010.32	-23372	-20775	-9035	2.08	2.08	-22196	9904	9270	33304	28028	5304	33332	No	3.69	Si
SLU 80	0.42	-1617.36	-24419	-21706	-9071	2.08	2.08	-23191	10037	9394	33304	28028	5304	33332	No	3.67	Si
SLU 80	0.82	2014.39	-23484	-20875	-9071	2.08	2.08	-22302	9918	9283	33304	28028	5304	33332	No	3.67	Si
SLU 82	0.42	-1556.69	-25026	-22245	-9187	2.08	2.08	-23767	10113	9466	33304	28028	5304	33332	No	3.63	Si
SLU 82	0.82	2121.32	-24091	-21414	-9187	2.08	2.08	-22878	9995	9355	33304	28028	5304	33332	No	3.63	Si
SLU 74	0.42	-1457.17	-24468	-21749	-9197	2.08	2.08	-23236	10043	9400	33304	28028	5304	33332	No	3.62	Si
SLU 74	0.82	2224.75	-23532	-20917	-9197	2.08	2.08	-22348	9924	9289	33304	28028	5304	33332	No	3.62	Si
SLU 79	0.42	-1467.57	-24579	-21848	-9233	2.08	2.08	-23343	10057	9413	33304	28028	5304	33332	No	3.61	Si
SLU 79	0.82	2228.81	-23644	-21017	-9233	2.08	2.08	-22454	9938	9302	33304	28028	5304	33332	No	3.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	0.42	-2063.99	-15042	-13371	-9571	2.08	2.08	-14285	13274	12424	33304	42042	5304	45728		4.78	Si
SLD 4	0.82	2127.88	-14690	-13058	-9365	2.08	2.08	-13951	13207	12362	33304	42042	5304	45666		4.88	Si
SLV 1	0.42	-2097.49	-12786	-11365	-13754	2.08	2.08	-12142	12845	12023	33304	42042	5304	45327		3.3	Si
SLV 1	0.82	3423.6	-11643	-10349	-13986	2.08	2.08	-11057	12628	11820	33304	42042	5304	45124		3.23	Si
SLV 8	0.42	-4044.9	-16204	-14404	-9969	2.08	2.08	-15389	13494	12631	33304	42042	5304	45935		4.61	Si
SLV 8	0.82	1455.66	-17678	-15714	-8750	2.08	2.08	-16789	13774	12893	33304	42042	5304	46197		5.28	Si
SLV 4	0.42	-3369.72	-12916	-11481	-13641	2.08	2.08	-12266	12870	12046	33304	42042	5304	45350		3.32	Si
SLV 4	0.82	2934.78	-13050	-11600	-13163	2.08	2.08	-12394	12895	12070	33304	42042	5304	45374		3.45	Si
SLV 3	0.42	-3623.6	-13280	-11804	-14734	2.08	2.08	-12612	12939	12111	33304	42042	5304	45415		3.08	Si
SLV 3	0.82	3118.36	-13415	-11924	-14257	2.08	2.08	-12739	12965	12135	33304	42042	5304	45439		3.19	Si
SLD 1	0.42	-1518.09	-14984	-13319	-9619	2.08	2.08	-14230	13263	12414	33304	42042	5304	45718		4.75	Si
SLD 1	0.82	2339.84	-14084	-12519	-9720	2.08	2.08	-13375	13092	12254	33304	42042	5304	45558		4.69	Si
SLD 3	0.42	-2172.99	-15198	-13510	-10041	2.08	2.08	-14434	13303	12452	33304	42042	5304	45756		4.56	Si
SLD 3	0.82	2206.7	-14847	-13197	-9834	2.08	2.08	-14100	13237	12389	33304	42042	5304	45694		4.65	Si
SLV 7	0.42	-4208.06	-16438	-14612	-10672	2.08	2.08	-15611	13539	12672	33304	42042	5304	45977		4.31	Si
SLV 7	0.82	1573.65	-17912	-15922	-9453	2.08	2.08	-17011	13819	12934	33304	42042	5304	46239		4.89	Si
SLD 2	0.42	-1409.09	-14828	-13180	-9150	2.08	2.08	-14082	13233	12386	33304	42042	5304	45690		4.99	Si
SLD 2	0.82	2261.03	-13928	-12380	-9250	2.08	2.08	-13227	13062	12226	33304	42042	5304	45530		4.92	Si
SLV 2	0.42	-1843.61	-12421	-11041	-12660	2.08	2.08	-11796	12776	11958	33304	42042	5304	45262		3.58	Si
SLV 2	0.82	3240.02	-11279	-10025	-12892	2.08	2.08	-10711	12559	11755	33304	42042	5304	45059		3.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.24	15713	-14708	151.29	2968.73	19.62	Si
SLV 5	179667	0.24	16194	-15157	151.29	3048.71	20.15	Si
SLV 10	179667	0.24	16349	-15302	151.29	3074.46	20.32	Si
SLV 2	179667	0.24	16607	-15544	151.29	3117.09	20.6	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.24	16829	-15752	151.29	3153.6	20.85	Si
SLV 1	179667	0.24	17354	-16243	151.29	3239.42	21.41	Si
SLV 4	179667	0.24	18123	-16963	151.29	3363.71	22.23	Si
SLV 14	179667	0.24	18725	-17527	151.29	3459.98	22.87	Si
SLV 3	179667	0.24	18870	-17662	151.29	3482.92	23.02	Si
SLV 13	179667	0.24	19472	-18226	151.29	3577.95	23.65	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-18697	-22536	-882	0.594	2296.4	0.951	9.08578	4.19835	Si
SLV 12	-18652	-21671	-881	0.595	2291.9	0.95	9.10381	4.19835	Si
SLV 7	-16138	-23736	-834	0.668	2036.7	0.945	10.27219	4.19835	Si
SLV 8	-16093	-22872	-833	0.669	2032.3	0.945	10.2957	4.19835	Si
SLV 15	-18141	-21110	-301	0.636	2240.1	0.949	9.74032	3.18428	Si
SLV 16	-18073	-19764	-299	0.638	2233.1	0.949	9.77146	3.18428	Si
SLV 13	-15096	-20882	245	0.736	1931.2	0.943	11.35635	3.18428	Si
SLV 14	-15028	-19536	247	0.739	1924.2	0.942	11.39707	3.18428	Si
SLV 9	-8546	-21775	938	1.066	1270	0.919	16.84195	4.19835	Si
SLV 10	-8502	-20910	939	1.069	1265.5	0.919	16.90713	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.722	SLU 81	Si
V_SLU	3.535	SLU 83	Si
PF_SLV	3.373	SLV 1	Si
V_SLV	3.082	SLV 3	Si
PFFP_SLV	19.623	SLV 6	Si
R_SLV	2.164	SLV 11	Si

Maschio 51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.013	5.876	-0.123	5.876	L2	L4	1.89	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	0.42	-3090.51	-20165	-0.0000569	0.0003743	0.0035	1.89	14618.31	16604	16604	5.37	No	Si
SLU 79	0.82	-150.29	-18852	-0.000036	0.0003743	0.0035	1.89	13936.75	15769.98	15769.98	104.93	No	Si
SLU 77	0.42	-3103.97	-20306	-0.0000573	0.0003743	0.0035	1.89	14689.26	16692.7	16692.7	5.38	No	Si
SLU 77	0.82	-141.07	-18984	-0.0000362	0.0003743	0.0035	1.89	14006.89	15853.41	15853.41	112.38	No	Si
SLU 60	0.42	-2875.48	-18543	-0.0000522	0.0003743	0.0035	1.89	13770.69	15574.36	15574.36	5.42	No	Si
SLU 60	0.82	-131.41	-17271	-0.0000328	0.0003743	0.0035	1.89	13065.69	14738.91	14738.91	112.16	No	Si
SLU 81	0.42	-3193.76	-20609	-0.0000585	0.0003743	0.0035	1.89	14840.25	16882.17	16882.17	5.29	No	Si
SLU 81	0.82	-247.39	-19338	-0.0000375	0.0003743	0.0035	1.89	14193.34	16078.2	16078.2	64.99	No	Si
SLU 82	0.42	-3087	-20445	-0.0000575	0.0003743	0.0035	1.89	14758.73	16779.75	16779.75	5.44	No	Si
SLU 82	0.82	-107.66	-19138	-0.0000363	0.0003743	0.0035	1.89	14088.1	15950.78	15950.78	148.15	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	0.42	-2730.62	-17572	-0.0000493	0.0003743	0.0035	1.89	13235.5	14941.32	14941.32	5.47	No	Si
SLU 39	0.82	-302.24	-16604	-0.0000325	0.0003743	0.0035	1.89	12681.86	14288.07	14288.07	47.27	No	Si
SLU 74	0.42	-3079.88	-20075	-0.0000566	0.0003743	0.0035	1.89	14572.76	16547.19	16547.19	5.37	No	Si
SLU 74	0.82	-154.14	-18768	-0.0000358	0.0003743	0.0035	1.89	13891.78	15716.8	15716.8	101.96	No	Si
SLU 84	0.42	-3111.09	-20676	-0.0000581	0.0003743	0.0035	1.89	14873.37	16922.81	16922.81	5.44	No	Si
SLU 84	0.82	-94.59	-19354	-0.0000366	0.0003743	0.0035	1.89	14201.46	16088.09	16088.09	170.07	No	Si
SLU 62	0.42	-2899.58	-18774	-0.0000528	0.0003743	0.0035	1.89	13894.92	15720.5	15720.5	5.42	No	Si
SLU 62	0.82	-118.34	-17487	-0.0000331	0.0003743	0.0035	1.89	13187.85	14885.36	14885.36	125.78	No	Si
SLU 83	0.42	-3217.85	-20840	-0.0000591	0.0003743	0.0035	1.89	14954.06	17019.48	17019.48	5.29	No	Si
SLU 83	0.82	-234.32	-19554	-0.0000379	0.0003743	0.0035	1.89	14305.75	16215.9	16215.9	69.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	0.42	-2367.36	-11399	-0.0000343	0.0005615	0.0035	1.89		10881.7	10881.7	4.6		Si
SLD 3	0.82	149.25	-10293	-0.0000194	0.0005615	0.0035	1.89		9308.23	9308.23	62.37		Si
SLD 2	0.42	-2229.77	-11255	-0.0000332	0.0005615	0.0035	1.89		10761.73	10761.73	4.83		Si
SLD 2	0.82	-370.37	-10661	-0.0000213	0.0005615	0.0035	1.89		10265.92	10265.92	27.72		Si
SLV 3	0.42	-2724.93	-8351	-0.0000306	0.0005615	0.0035	1.89		8336.56	8336.56	3.06		Si
SLV 3	0.82	388.74	-7101	-0.0000149	0.0005615	0.0035	1.89		6604.94	6604.94	16.99		Si
SLV 1	0.42	-2653.88	-8714	-0.0000309	0.0005615	0.0035	1.89		8642.91	8642.91	3.26		Si
SLV 1	0.82	-734	-8406	-0.0000193	0.0005615	0.0035	1.89		8382.99	8382.99	11.42		Si
SLV 8	0.42	-2277.69	-11200	-0.0000334	0.0005615	0.0035	1.89		10715.18	10715.18	4.7		Si
SLV 8	0.82	1756.69	-8812	-0.0000259	0.0005615	0.0035	1.89		8068.9	8068.9	4.59		Si
SLD 1	0.42	-2336.49	-11557	-0.0000344	0.0005615	0.0035	1.89		11013.46	11013.46	4.71		Si
SLD 1	0.82	-332.44	-10856	-0.0000215	0.0005615	0.0035	1.89		10428.49	10428.49	31.37		Si
SLV 2	0.42	-2405.3	-8011	-0.0000282	0.0005615	0.0035	1.89		8048.79	8048.79	3.35		Si
SLV 2	0.82	-822.36	-7951	-0.0000189	0.0005615	0.0035	1.89		7997.88	7997.88	9.73		Si
SLV 7	0.42	-2437.45	-11651	-0.0000352	0.0005615	0.0035	1.89		11091.49	11091.49	4.55		Si
SLV 7	0.82	1813.47	-9105	-0.0000268	0.0005615	0.0035	1.89		8314.8	8314.8	4.59		Si
SLD 4	0.42	-2260.64	-11097	-0.0000331	0.0005615	0.0035	1.89		10629.74	10629.74	4.7		Si
SLD 4	0.82	111.31	-10097	-0.0000188	0.0005615	0.0035	1.89		9145.17	9145.17	82.16		Si
SLV 4	0.42	-2476.35	-7648	-0.0000279	0.0005615	0.0035	1.89		7737.49	7737.49	3.12		Si
SLV 4	0.82	300.38	-6646	-0.0000136	0.0005615	0.0035	1.89		6210.35	6210.35	20.67		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	0.42	-3103.97	-20306	-18050	-8466	1.89	1.89	-21223	9774	8313	33304	25468	4820	30287	No	3.58	Si
SLU 77	0.82	-141.07	-18984	-16875	-8547	1.89	1.89	-19841	9590	8156	33304	25468	4820	30287	No	3.54	Si
SLU 80	0.42	-2983.74	-20001	-17779	-8556	1.89	1.89	-20904	9732	8277	33304	25468	4820	30287	No	3.54	Si
SLU 80	0.82	-10.56	-18652	-16580	-8637	1.89	1.89	-19494	9544	8117	33304	25468	4820	30287	No	3.51	Si
SLU 82	0.42	-3087	-20445	-18173	-8472	1.89	1.89	-21368	9793	8329	33304	25468	4820	30287	No	3.57	Si
SLU 82	0.82	-107.66	-19138	-17011	-8554	1.89	1.89	-20002	9611	8174	33304	25468	4820	30287	No	3.54	Si
SLU 78	0.42	-2997.21	-20142	-17904	-8634	1.89	1.89	-21051	9751	8293	33304	25468	4820	30287	No	3.51	Si
SLU 78	0.82	-1.35	-18784	-16697	-8715	1.89	1.89	-19632	9562	8132	33304	25468	4820	30287	No	3.48	Si
SLU 73	0.42	-2864.38	-19430	-17271	-8413	1.89	1.89	-20307	9652	8209	33304	25468	4820	30287	No	3.6	Si
SLU 73	0.82	56.45	-18086	-16077	-8492	1.89	1.89	-18903	9465	8050	33304	25468	4820	30287	No	3.57	Si
SLU 75	0.42	-2973.12	-19911	-17699	-8506	1.89	1.89	-20810	9719	8266	33304	25468	4820	30287	No	3.56	Si
SLU 75	0.82	-14.42	-18568	-16505	-8587	1.89	1.89	-19406	9532	8107	33304	25468	4820	30287	No	3.53	Si
SLU 76	0.42	-2888.47	-19661	-17476	-8540	1.89	1.89	-20548	9684	8236	33304	25468	4820	30287	No	3.55	Si
SLU 76	0.82	69.52	-18302	-16269	-8620	1.89	1.89	-19129	9495	8075	33304	25468	4820	30287	No	3.51	Si
SLU 79	0.42	-3090.51	-20165	-17925	-8388	1.89	1.89	-21075	9754	8296	33304	25468	4820	30287	No	3.61	Si
SLU 79	0.82	-150.29	-18852	-16758	-8468	1.89	1.89	-19703	9572	8141	33304	25468	4820	30287	No	3.58	Si
SLU 83	0.42	-3217.85	-20840	-18525	-8432	1.89	1.89	-21781	9849	8376	33304	25468	4820	30287	No	3.59	Si
SLU 83	0.82	-234.32	-19554	-17381	-8514	1.89	1.89	-20437	9669	8224	33304	25468	4820	30287	No	3.56	Si
SLU 84	0.42	-3111.09	-20676	-18379	-8600	1.89	1.89	-21609	9826	8357	33304	25468	4820	30287	No	3.52	Si
SLU 84	0.82	-94.59	-19354	-17203	-8682	1.89	1.89	-20227	9641	8200	33304	25468	4820	30287	No	3.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 11	0.42	-2126.04	-14221	-12641	-7826	1.89	1.89	-14863	13389	11388	33304	38202	4820	43021		5.5	Si
SLD 11	0.82	809.16	-12466	-11081	-8074	1.89	1.89	-13029	13022	11076	33304	38202	4820	43021		5.33	Si
SLV 4	0.42	-2476.35	-7648	-6798	-9417	1.89	1.8636	-7993	12015	10077	33304	38202	4820	43021		4.57	Si
SLV 4	0.82	300.38	-6646	-5907	-8009	1.89	1.89	-6946	11806	10041	33304	38202	4820	43021		5.37	Si
SLD 7	0.42	-2245.51	-12809	-11386	-8536	1.89	1.89	-13388	13094	11137	33304	38202	4820	43021		5.04	Si
SLD 7	0.82	760.92	-11144	-9906	-8407	1.89	1.89	-11647	12746	10841	33304	38202	4820	43021		5.12	Si
SLV 12	0.42	-1998.29	-14499	-12888	-9362	1.89	1.89	-15154	13447	11437	33304	38202	4820	43021		4.6	Si
SLV 12	0.82	1868.67	-11905	-10582	-9863	1.89	1.89	-12442	12905	10976	33304	38202	4820	43021		4.36	Si
SLV 8	0.42	-2277.69	-11200	-9955	-11023	1.89	1.89	-11705	12758	10850	33304	38202	4820	43021		3.9	Si
SLV 8	0.82	1756.69	-8812	-7833	-10645	1.89	1.89	-9210	12259	10426	33304	38202	4820	43021		4.04	Si
SLD 3	0.42	-2367.36	-11399	-10133	-8051	1.89	1.89	-11914	12799	10886	33304	38202	4820	43021		5.34	Si
SLD 3	0.82	149.25	-10293	-9149	-7479	1.89	1.89	-10757	12568	10689	33304	38202	4820	43021		5.75	Si
SLV 3	0.42	-2724.93	-8351	-7423	-10844	1.89	1.8561	-8728	12162	10159	33304	38202	4820	43021		3.97	Si
SLV 3	0.82	388.74	-7101	-6312	-9437	1.89	1.89	-7421	11901	10122	33304	38202	4820	43021		4.56	Si
SLV 11	0.42	-2158.05	-14951	-13290	-10279	1.89	1.89	-15626	13542	11517	33304	38202	4820	43021		4.19	Si
SLV 11	0.82	1925.46	-12197	-10842	-10781	1.89	1.89	-12748	12966	11028	33304	38202	4820	43021		3.99	Si
SLV 7	0.42	-2437.45	-11651	-10357	-11940	1.89	1.89	-12177	12852	10931	33304	38202	4820	43021		3.6	Si
SLV 7	0.82	1813.47	-9105	-8093	-11562	1.89	1.89	-9516	12320	10478	33304	38202	4820	43021		3.72	Si
SLD 8	0.42	-2175.76	-12612	-11211	-8136	1.89	1.89	-13181	13053	11102	33304	38202	4820	43021		5.29	Si
SLD 8	0.82	736.13	-11016	-9792	-8006	1.89	1.89	-11514	12719	10818	33304	38202	4820	43021		5.37	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.095 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.24	6702	-5700	137.47	1226.23	8.92	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.24	6988	-5944	137.47	1276.1	9.28	Si
SLV 1	179667	0.24	7265	-6179	137.47	1324.12	9.63	Si
SLV 3	179667	0.24	7551	-6422	137.47	1373.6	9.99	Si
SLV 6	179667	0.24	10883	-9256	137.47	1934.17	14.07	Si
SLV 5	179667	0.24	11245	-9564	137.47	1993.38	14.5	Si
SLV 8	179667	0.24	11837	-10068	137.47	2089.62	15.2	Si
SLV 7	179667	0.24	12199	-10375	137.47	2147.98	15.63	Si
SLV 10	179667	0.24	14667	-12474	137.47	2537.09	18.46	Si
SLV 9	179667	0.24	15028	-12782	137.47	2592.87	18.86	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-14489	-11350	639	0.681	1833	0.945	10.48079	4.19835	Si
SLV 10	-14224	-11107	626	0.692	1806.1	0.944	10.65133	4.19835	Si
SLV 5	-11643	-7857	569	0.81	1544.7	0.936	12.57832	4.19835	Si
SLV 13	-16293	-16607	543	0.628	2016	0.949	9.61119	3.18428	Si
SLV 6	-11377	-7614	555	0.825	1517.9	0.935	12.82822	4.19835	Si
SLV 14	-15880	-16229	521	0.641	1974.1	0.948	9.83111	3.18428	Si
SLV 15	-14929	-17563	387	0.68	1877.6	0.946	10.45596	3.18428	Si
SLV 16	-14517	-17184	365	0.697	1835.8	0.945	10.71594	3.18428	Si
SLV 11	-9944	-14535	118	0.949	1373.2	0.93	14.8382	4.19835	Si
SLV 12	-9679	-14291	104	0.97	1346.4	0.928	15.17726	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.286	SLU 81	Si
V_SLU	3.475	SLU 78	Si
PF_SLV	3.059	SLV 3	Si
V_SLV	3.603	SLV 7	Si
PFFP_SLV	8.92	SLV 2	Si
R_SLV	2.496	SLV 9	Si

Maschio 52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	6.101	-0.123	-3.284	L2	L4	9.385	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	-1.58	12531.87	-90150	-0.0000344	0.0004492	0.0035	9.3849	349122.53	377207.12	377207.12	30.1	No	Si
SLU 58	1.39	6183.66	-108830	-0.0000398	0.0004492	0.0035	9.3849	402978.34	441067.8	441067.8	71.33	No	Si
SLU 49	-1.58	11717.44	-83116	-0.0000317	0.0004492	0.0035	9.3849	327199.75	353161.89	353161.89	30.14	No	Si
SLU 49	1.39	5503.09	-99759	-0.0000363	0.0004492	0.0035	9.3849	377620.21	410058.99	410058.99	74.51	No	Si
SLU 50	-1.58	11673.8	-82480	-0.0000314	0.0004492	0.0035	9.3849	325171.29	350985.74	350985.74	30.07	No	Si
SLU 50	1.39	6314.13	-98488	-0.000036	0.0004492	0.0035	9.3849	373947.43	405713.94	405713.94	64.25	No	Si
SLU 57	-1.58	12575.5	-90786	-0.0000346	0.0004492	0.0035	9.3849	351062.19	379383.27	379383.27	30.17	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 57	1.39	5372.62	-110101	-0.00004	0.0004492	0.0035	9.3849	406412.07	445412.85	445412.85	82.9	No	Si
SLU 51	-1.58	11621.23	-82494	-0.0000314	0.0004492	0.0035	9.3849	325216.5	351034.16	351034.16	30.21	No	Si
SLU 51	1.39	5536.58	-98729	-0.0000359	0.0004492	0.0035	9.3849	374644.36	406535.77	406535.77	73.43	No	Si
SLU 48	-1.58	11770.01	-83102	-0.0000317	0.0004492	0.0035	9.3849	327154.7	353113.48	353113.48	30	No	Si
SLU 48	1.39	6280.65	-99519	-0.0000364	0.0004492	0.0035	9.3849	376927.79	409237.16	409237.16	65.16	No	Si
SLU 45	-1.58	11567.53	-82056	-0.0000312	0.0004492	0.0035	9.3849	323817.33	349537.59	349537.59	30.22	No	Si
SLU 45	1.39	6135.27	-97773	-0.0000357	0.0004492	0.0035	9.3849	371867.2	403268.24	403268.24	65.73	No	Si
SLU 56	-1.58	12628.07	-90772	-0.0000347	0.0004492	0.0035	9.3849	351019.12	379334.86	379334.86	30.04	No	Si
SLU 56	1.39	6150.17	-109860	-0.0000401	0.0004492	0.0035	9.3849	405764.86	444591.02	444591.02	72.29	No	Si
SLU 53	-1.58	12425.59	-89726	-0.0000342	0.0004492	0.0035	9.3849	347827.66	375758.97	375758.97	30.24	No	Si
SLU 53	1.39	6004.79	-108115	-0.0000395	0.0004492	0.0035	9.3849	401032.66	438622.1	438622.1	73.05	No	Si
SLU 59	-1.58	12479.29	-90164	-0.0000344	0.0004492	0.0035	9.3849	349165.76	377255.54	377255.54	30.23	No	Si
SLU 59	1.39	5406.1	-109070	-0.0000397	0.0004492	0.0035	9.3849	403630.05	441889.63	441889.63	81.74	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	-1.58	18780.19	-74579	-0.0000299	0.0006738	0.0035	9.3849		333346.56	333346.56	17.75		Si
SLD 10	1.39	-2444.11	-89697	-0.0000315	0.0006738	0.0035	9.3849		435136.71	435136.71	178.03		Si
SLV 9	-1.58	27699.32	-83020	-0.0000349	0.0006738	0.0035	9.3849		367298.14	367298.14	13.26		Si
SLV 9	1.39	-10852.67	-100108	-0.0000372	0.0006738	0.0035	9.3849		475595.14	475595.14	43.82		Si
SLV 6	-1.58	25079.66	-55671	-0.0000247	0.0006738	0.0035	9.3849		255290.8	255290.8	10.18		Si
SLV 6	1.39	-15410.93	-64160	-0.0000255	0.0006738	0.0035	9.3849		332668.55	332668.55	21.59		Si
SLV 11	-1.58	-6439.54	-80934	-0.0000294	0.0006738	0.0035	9.3849		400493.83	400493.83	62.19		Si
SLV 11	1.39	24485.37	-100022	-0.0000402	0.0006738	0.0035	9.3849		432974.29	432974.29	17.68		Si
SLV 7	-1.58	-12399.58	-53593	-0.0000211	0.0006738	0.0035	9.3849		288769.6	288769.6	23.29		Si
SLV 7	1.39	20062.85	-64207	-0.0000265	0.0006738	0.0035	9.3849		290896.47	290896.47	14.5		Si
SLD 6	-1.58	16243.38	-62902	-0.0000252	0.0006738	0.0035	9.3849		285466.22	285466.22	17.57		Si
SLD 6	1.39	-4267.12	-74412	-0.0000266	0.0006738	0.0035	9.3849		374708.17	374708.17	87.81		Si
SLV 10	-1.58	31039.7	-83013	-0.0000356	0.0006738	0.0035	9.3849		367272.16	367272.16	11.83		Si
SLV 10	1.39	-10988.42	-99976	-0.0000371	0.0006738	0.0035	9.3849		475098.23	475098.23	43.24		Si
SLV 2	-1.58	7106.24	-23041	-0.0000094	0.0006738	0.0035	9.3849		113794.14	113794.14	16.01		Si
SLV 2	1.39	-8239.95	-22308	-0.0000094	0.0006738	0.0035	9.3849		154213.5	154213.5	18.72		Si
SLV 5	-1.58	21739.27	-55678	-0.0000239	0.0006738	0.0035	9.3849		255318.09	255318.09	11.74		Si
SLV 5	1.39	-15275.19	-64292	-0.0000255	0.0006738	0.0035	9.3849		333218.56	333218.56	21.81		Si
SLV 8	-1.58	-9059.2	-53586	-0.0000204	0.0006738	0.0035	9.3849		288742.44	288742.44	31.87		Si
SLV 8	1.39	19927.11	-64074	-0.0000264	0.0006738	0.0035	9.3849		290352.71	290352.71	14.57		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	-1.58	13384.5	-100185	-80148	3170	9.3849	9.3849	-18978	10833	45752	95155	151772	47863	140907	No	44.45	Si
SLU 84	1.39	5097.66	-122790	-98232	4879	9.3849	9.3849	-23260	10833	45752	95155	151772	47863	140907	No	28.88	Si
SLU 82	-1.58	13182.02	-99139	-79311	3180	9.3849	9.3849	-18780	10833	45752	95155	151772	47863	140907	No	44.31	Si
SLU 82	1.39	4952.28	-121044	-96835	4867	9.3849	9.3849	-22929	10833	45752	95155	151772	47863	140907	No	28.95	Si
SLU 79	-1.58	13271.81	-97930	-78344	3007	9.3849	9.3849	-18551	10807	45639	95155	151772	47863	140795	No	46.82	Si
SLU 79	1.39	6076.52	-119863	-95891	4674	9.3849	9.3849	-22706	10833	45752	95155	151772	47863	140907	No	30.15	Si
SLU 83	-1.58	13437.07	-100171	-80137	3242	9.3849	9.3849	-18975	10833	45752	95155	151772	47863	140907	No	43.47	Si
SLU 83	1.39	5875.22	-122549	-98039	4940	9.3849	9.3849	-23214	10833	45752	95155	151772	47863	140907	No	28.52	Si
SLU 81	-1.58	13234.59	-99125	-79300	3252	9.3849	9.3849	-18777	10833	45752	95155	151772	47863	140907	No	43.33	Si
SLU 81	1.39	5729.84	-120803	-96643	4928	9.3849	9.3849	-22884	10833	45752	95155	151772	47863	140907	No	28.6	Si
SLU 77	-1.58	13368.01	-98552	-78842	3046	9.3849	9.3849	-18669	10822	45706	95155	151772	47863	140861	No	46.25	Si
SLU 77	1.39	6043.03	-120894	-96715	4726	9.3849	9.3849	-22901	10833	45752	95155	151772	47863	140907	No	29.81	Si
SLU 78	-1.58	13315.44	-98566	-78853	2974	9.3849	9.3849	-18671	10823	45707	95155	151772	47863	140862	No	47.37	Si
SLU 78	1.39	5265.48	-121134	-96907	4666	9.3849	9.3849	-22946	10833	45752	95155	151772	47863	140907	No	30.2	Si
SLU 75	-1.58	13112.96	-97520	-78016	2984	9.3849	9.3849	-18473	10796	45596	95155	151772	47863	140751	No	47.17	Si
SLU 75	1.39	5120.1	-119388	-95511	4653	9.3849	9.3849	-22616	10833	45752	95155	151772	47863	140907	No	30.28	Si
SLU 74	-1.58	13165.53	-97506	-78005	3056	9.3849	9.3849	-18470	10796	45594	95155	151772	47863	140749	No	46.06	Si
SLU 74	1.39	5897.65	-119148	-95318	4714	9.3849	9.3849	-22570	10833	45752	95155	151772	47863	140907	No	29.89	Si
SLU 80	-1.58	13219.24	-97944	-78355	2935	9.3849	9.3849	-18553	10807	45641	95155	151772	47863	140796	No	47.97	Si
SLU 80	1.39	5298.96	-120104	-96083	4613	9.3849	9.3849	-22751	10833	45752	95155	151772	47863	140907	No	30.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	-1.58	-3099.16	-80928	-64742	-20656	9.3849	9.3849	-15330	15566	65739	95155	227658	47863	160894		7.79	Si
SLV 12	1.39	24349.63	-99890	-79912	-17847	9.3849	9.3849	-18922	16250	68627	95155	227658	47863	163783		9.18	Si
SLV 7	-1.58	-12399.58	-53593	-42874	-25009	9.3849	9.3849	-10152	14530	61365	95155	227658	47863	156520		6.26	Si
SLV 7	1.39	20062.85	-64207	-51365	-22888	9.3849	9.3849	-12163	14933	63063	95155	227658	47863	158219		6.91	Si
SLV 11	-1.58	-6439.54	-80934	-64747	-24220	9.3849	9.3849	-15331	15566	65740	95155	227658	47863	160895		6.64	Si
SLV 11	1.39	24485.37	-100022	-80018	-21394	9.3849	9.3849	-18947	16250	68627	95155	227658	47863	163783		7.66	Si
SLV 8	-1.58	-9059.2	-53586	-42869	-21446	9.3849	9.3849	-10151	14530	61364	95155	227658	47863	156519		7.3	Si
SLV 8	1.39	19927.11	-64074	-51259	-19341	9.3849	9.3849	-12138	14928	63042	95155	227658	47863	158197		8.18	Si
SLV 10	-1.58	31039.7	-83013	-66410	28951	9.3849	9.3849	-15725	15645	66072	95155	227658	47863	161228		5.57	Si
SLV 10	1.39	-10988.42	-99976	-79980	29142	9.3849	9.3849	-18938	16250	68627	95155	227658	47863	163783		5.62	Si
SLD 10	-1.58	18780.19	-74579	-59663	13779	9.3849	9.3849	-14127	15325	64723	95155	227658	47863	159878		11.6	Si
SLD 10	1.39	-2444.11	-89697	-71757	14535	9.3849	9.3849	-16991	15898	67142	95155	227658	47863	162297		11.17	Si
SLV 14	-1.58	26973.05	-114180	-91344	13501	9.3849	9.3849	-21629	16250	68627	95155	227658	47863	163783		12.13	Si
SLV 14	1.39	6501.77	-141694	-113355	15425	9.3849	9.3849	-26841	16250	68627	95155	227658	47863	163783		10.62	Si
SLV 6	-1.58	25079.66	-55671	-44537	28161	9.3849	9.3849	-10546	14609	61698	95155	227658	47863	156853		5.57	Si
SLV 6	1.39	-15410.93	-64160	-51328	27648	9.3849	9.3849	-12154	14931	63056	95155	227658	47863	158211		5.72	Si
SLV 5	-1.58	21739.27	-55678	-44542	24598	9.3849	9.3849	-10547	14609	61699	95155	227658	47863	156854		6.38	Si
SLV 5	1.39	-15275.19	-64292	-51434	24101	9.3849	9.3849	-12179	14936	63077	95155	227658	47863	158232		6.57	Si
SLV 9	-1.58	27699.32	-83020	-66416	25388	9.3849	9.3849	-15726	15645	66073	95155	227658	47863	161229		6.35	Si
SLV 9	1.39	-10852.67	-100108	-80086	25595	9.3849	9.3849	-18963	16250	68627	95155	227658	47863	163783		6.4	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.095 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-23443	0.24	682.61	5114.83	7473.9	6294.37	9.22	Si
SLV 2	-23488	0.24	682.61	5124.45	7484.76	6304.6	9.24	Si
SLV 3	-23514	0.24	682.61	5129.88	7490.88	6310.38	9.24	Si
SLV 1	-23559	0.24	682.61	5139.5	7501.74	6320.62	9.26	Si
SLV 8	-61264	0.24	682.61	12693.39	16338.35	14515.87	21.27	Si
SLV 7	-61310	0.24	682.61	12702.05	16348.97	14525.51	21.28	Si
SLV 6	-61416	0.24	682.61	12722.11	16373.55	14547.83	21.31	Si
SLV 5	-61461	0.24	682.61	12730.77	16384.17	14557.47	21.33	Si
SLV 12	-93717	0.24	682.61	18533.29	23806.41	21169.85	31.01	Si
SLV 11	-93763	0.24	682.61	18541.09	23816.88	21178.99	31.03	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.095 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-100108	-83020	782	0.55	11961.5	0.956	8.35174	4.19835	Si
SLV 10	-99976	-83013	781	0.55	11948	0.956	8.36091	4.19835	Si
SLV 13	-141900	-114190	344	0.423	16212.9	0.967	6.36063	3.18428	Si
SLV 14	-141694	-114180	342	0.424	16191.9	0.967	6.36816	3.18428	Si
SLV 15	-141874	-113565	75	0.425	16210.3	0.967	6.38791	3.18428	Si
SLV 16	-141668	-113554	73	0.426	16189.3	0.967	6.39548	3.18428	Si
SLV 11	-100022	-80934	-114	0.556	11952.8	0.956	8.44878	4.19835	Si
SLV 12	-99890	-80928	-115	0.557	11939.3	0.956	8.45765	4.19835	Si
SLV 5	-64292	-55678	889	0.773	8326.3	0.94	11.94445	4.19835	Si
SLV 6	-64160	-55671	888	0.774	8312.9	0.94	11.96471	4.19835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	30.001	SLU 48	Si
V_SLU	28.523	SLU 83	Si
PF_SLV	10.179	SLV 6	Si
V_SLV	5.569	SLV 10	Si
PFFP_SLV	9.221	SLV 4	Si
R_SLV	1.989	SLV 9	Si

Maschio 53

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.284	-24.633	5.876	L4	L5	9.16	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	1.39	-4193.4	-100997	-0.0000583	0.0004492	0.0035	9.16	313491.84	426602.94	426602.94	101.73	No	Si
SLU 52	4.82	-4811.17	-78873	-0.0000454	0.0004492	0.0035	9.16	270322.45	357025.34	357025.34	74.21	No	Si
SLU 82	1.39	-5442.35	-115130	-0.0000673	0.0004492	0.0035	9.16	333580.85	467127.18	467127.18	85.83	No	Si
SLU 82	4.82	-5454.73	-90747	-0.0000527	0.0004492	0.0035	9.16	295269.33	395143.15	395143.15	72.44	No	Si
SLU 40	1.39	-4419.65	-96808	-0.0000559	0.0004492	0.0035	9.16	306416.66	413905.49	413905.49	93.65	No	Si
SLU 40	4.82	-4798.63	-76617	-0.0000441	0.0004492	0.0035	9.16	265115.83	349556.62	349556.62	72.85	No	Si
SLU 76	1.39	-4666.8	-112857	-0.0000656	0.0004492	0.0035	9.16	330744.53	460764.91	460764.91	98.73	No	Si
SLU 76	4.82	-5176.39	-89079	-0.0000516	0.0004492	0.0035	9.16	292015.29	389983.13	389983.13	75.34	No	Si
SLU 61	1.39	-4910.56	-104934	-0.0000609	0.0004492	0.0035	9.16	319675.49	437944.35	437944.35	89.18	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 61	4.82	-4876.41	-82176	-0.0000474	0.0004492	0.0035	9.16	277675.11	367957.35	367957.35	75.46	No	Si
SLU 73	1.39	-4725.19	-111192	-0.0000646	0.0004492	0.0035	9.16	328570.64	455969.13	455969.13	96.5	No	Si
SLU 73	4.82	-5389.48	-87444	-0.0000507	0.0004492	0.0035	9.16	288744.01	384920.95	384920.95	71.42	No	Si
SLU 31	1.39	-3702.5	-92871	-0.0000532	0.0004492	0.0035	9.16	299297.75	401717.74	401717.74	108.5	No	Si
SLU 31	4.82	-4733.39	-73314	-0.0000422	0.0004492	0.0035	9.16	257226.56	338624.6	338624.6	71.54	No	Si
SLU 81	1.39	-6224.23	-114893	-0.0000675	0.0004492	0.0035	9.16	333292.47	466496.28	466496.28	74.95	No	Si
SLU 81	4.82	-5096.3	-90702	-0.0000525	0.0004492	0.0035	9.16	295183.39	395005.19	395005.19	77.51	No	Si
SLU 10	1.39	-3170.71	-82675	-0.000047	0.0004492	0.0035	9.16	278758.93	369610.03	369610.03	116.57	No	Si
SLU 10	4.82	-4155.08	-64744	-0.0000371	0.0004492	0.0035	9.16	235265.31	308970.25	308970.25	74.36	No	Si
SLU 19	1.39	-3887.87	-86613	-0.0000496	0.0004492	0.0035	9.16	287051.27	382347.88	382347.88	98.34	No	Si
SLU 19	4.82	-4220.32	-68046	-0.000039	0.0004492	0.0035	9.16	243981.93	320612.07	320612.07	75.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	1.39	491.96	-20083	-0.0000109	0.0006738	0.0035	9.16		96711.4	96711.4	196.58		Si
SLV 13	4.82	28636.4	-29765	-0.0000261	0.0006738	0.0035	9.16		137726.46	137726.46	4.81		Si
SLV 6	1.39	8253.91	-98244	-0.000057	0.0006738	0.0035	9.16		390667.48	390667.48	47.33		Si
SLV 6	4.82	62087.93	-74948	-0.0000637	0.0006738	0.0035	9.16		312741.95	312741.95	5.04		Si
SLV 9	1.39	8269.89	-62709	-0.000037	0.0006738	0.0035	9.16		269573.6	269573.6	32.6		Si
SLV 9	4.82	70232.97	-55247	-0.0000553	0.0006738	0.0035	9.16		240786.31	240786.31	3.43		Si
SLV 8	1.39	-16868.44	-94027	-0.0000578	0.0006738	0.0035	9.16		422334.24	422334.24	25.04		Si
SLV 8	4.82	-76664.84	-67882	-0.000065	0.0006738	0.0035	9.16		329096.4	329096.4	4.29		Si
SLV 10	1.39	9390.93	-63056	-0.0000376	0.0006738	0.0035	9.16		270890.68	270890.68	28.85		Si
SLV 10	4.82	67379.7	-55220	-0.0000543	0.0006738	0.0035	9.16		240681.74	240681.74	3.57		Si
SLV 12	1.39	-15731.42	-58839	-0.0000375	0.0006738	0.0035	9.16		294891.85	294891.85	18.75		Si
SLV 12	4.82	-71373.07	-48154	-0.0000517	0.0006738	0.0035	9.16		253710	253710	3.55		Si
SLV 7	1.39	-17989.47	-93680	-0.000058	0.0006738	0.0035	9.16		421132.61	421132.61	23.41		Si
SLV 7	4.82	-73811.57	-67909	-0.0000639	0.0006738	0.0035	9.16		329193.81	329193.81	4.46		Si
SLV 11	1.39	-16852.45	-58492	-0.0000377	0.0006738	0.0035	9.16		293554.15	293554.15	17.42		Si
SLV 11	4.82	-68519.8	-48181	-0.0000507	0.0006738	0.0035	9.16		253812.64	253812.64	3.7		Si
SLV 5	1.39	7132.87	-97897	-0.0000564	0.0006738	0.0035	9.16		389506.51	389506.51	54.61		Si
SLV 5	4.82	64941.2	-74974	-0.0000647	0.0006738	0.0035	9.16		312831.03	312831.03	4.82		Si
SLV 14	1.39	2236.25	-20623	-0.0000118	0.0006738	0.0035	9.16		99033.74	99033.74	44.29		Si
SLV 14	4.82	24196.81	-29724	-0.0000245	0.0006738	0.0035	9.16		137552.8	137552.8	5.68		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.39	-5243.05	-113663	-81085	-5971	9.16	9.16	-31614	10833	27785	108749	92173	46716	136534	No	22.87	Si
SLU 75	4.82	-5007.72	-89977	-64187	-4812	9.16	9.16	-25026	10833	27785	108749	92173	46716	136534	No	28.38	Si
SLU 74	1.39	-6024.93	-113427	-80916	-6190	9.16	9.16	-31549	10833	27785	108749	92173	46716	136534	No	22.06	Si
SLU 74	4.82	-4649.28	-89932	-64155	-5089	9.16	9.16	-25014	10833	27785	108749	92173	46716	136534	No	26.83	Si
SLU 83	1.39	-6165.83	-116558	-83150	-6477	9.16	9.16	-32420	10833	27785	108749	92173	46716	136534	No	21.08	Si
SLU 83	4.82	-4883.2	-92337	-65871	-5351	9.16	9.16	-25683	10833	27785	108749	92173	46716	136534	No	25.52	Si
SLU 80	1.39	-5129.65	-114365	-81585	-6061	9.16	9.16	-31809	10833	27785	108749	92173	46716	136534	No	22.53	Si
SLU 80	4.82	-4724.34	-90685	-64693	-4895	9.16	9.16	-25223	10833	27785	108749	92173	46716	136534	No	27.89	Si
SLU 78	1.39	-5184.66	-115328	-82273	-6107	9.16	9.16	-32078	10833	27785	108749	92173	46716	136534	No	22.36	Si
SLU 78	4.82	-4794.62	-91612	-65354	-4931	9.16	9.16	-25481	10833	27785	108749	92173	46716	136534	No	27.69	Si
SLU 84	1.39	-5383.95	-116795	-83319	-6257	9.16	9.16	-32485	10833	27785	108749	92173	46716	136534	No	21.82	Si
SLU 84	4.82	-5241.63	-92382	-65903	-5073	9.16	9.16	-25695	10833	27785	108749	92173	46716	136534	No	26.91	Si
SLU 79	1.39	-5911.53	-114128	-81416	-6280	9.16	9.16	-31744	10833	27785	108749	92173	46716	136534	No	21.74	Si
SLU 79	4.82	-4365.91	-90641	-64661	-5173	9.16	9.16	-25211	10833	27785	108749	92173	46716	136534	No	26.39	Si
SLU 81	1.39	-6224.23	-114893	-81962	-6341	9.16	9.16	-31957	10833	27785	108749	92173	46716	136534	No	21.53	Si
SLU 81	4.82	-5096.3	-90702	-64705	-5231	9.16	9.16	-25228	10833	27785	108749	92173	46716	136534	No	26.1	Si
SLU 82	1.39	-5442.35	-115130	-82131	-6121	9.16	9.16	-32022	10833	27785	108749	92173	46716	136534	No	22.3	Si
SLU 82	4.82	-5454.73	-90747	-64736	-4953	9.16	9.16	-25240	10833	27785	108749	92173	46716	136534	No	27.56	Si
SLU 77	1.39	-5966.54	-115092	-82104	-6326	9.16	9.16	-32012	10833	27785	108749	92173	46716	136534	No	21.58	Si
SLU 77	4.82	-4436.19	-91568	-65322	-5209	9.16	9.16	-25469	10833	27785	108749	92173	46716	136534	No	26.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	1.39	-16868.44	-94027	-67077	33311	9.16	9.16	-26153	16250	41678	108749	138259	46716	150427		4.52	Si
SLV 8	4.82	-76664.84	-67882	-48425	28288	9.16	9.16	-18881	16250	41678	108749	138259	46716	150427		5.32	Si
SLV 10	1.39	9390.93	-63056	-44982	-37328	9.16	9.16	-17538	16008	41056	108749	138259	46716	149805		4.01	Si
SLV 10	4.82	67379.7	-55220	-39393	-30782	9.16	9.16	-15359	15572	39939	108749	138259	46716	148687		4.83	Si
SLV 12	1.39	-15731.42	-58839	-41974	30481	9.16	9.16	-16366	15773	40455	108749	138259	46716	149204		4.89	Si
SLV 12	4.82	-71373.07	-48154	-34352	24372	9.16	9.16	-13394	15179	38930	108749	138259	46716	147679		6.06	Si
SLV 5	1.39	7132.87	-97897	-69837	-38524	9.16	9.16	-27229	16250	41678	108749	138259	46716	150427		3.9	Si
SLV 5	4.82	64941.2	-74974	-53485	-30882	9.16	9.16	-20853	16250	41678	108749	138259	46716	150427		4.87	Si
SLV 6	1.39	8253.91	-98244	-70085	-34497	9.16	9.16	-27326	16250	41678	108749	138259	46716	150427		4.36	Si
SLV 6	4.82	62087.93	-74948	-53466	-26866	9.16	9.16	-20846	16250	41678	108749	138259	46716	150427		5.6	Si
SLV 11	1.39	-16852.45	-58492	-41727	26454	9.16	9.16	-16269	15754	40405	108749	138259	46716	149154		5.64	Si
SLV 11	4.82	-68519.8	-48181	-34371	20356	9.16	9.16	-13401	15180	38934	108749	138259	46716	147683		7.25	Si
SLD 9	1.39	1208.45	-71674	-51131	-20429	9.16	9.16	-19936	16250	41678	108749	138259	46716	150427		7.36	Si
SLD 9	4.82	29095.07	-58909	-42024	-17088	9.16	9.16	-16385	15777	40465	108749	138259	46716	149214		8.73	Si
SLV 9	1.39	8269.89	-62709	-44735	-41355	9.16	9.16	-17442	15988	41007	108749	138259	46716	149756		3.62	Si
SLV 9	4.82	70232.97	-55247	-39412	-34798	9.16	9.16	-15366	15573	39942	108749	138259	46716	148691		4.27	Si
SLV 7	1.39	-17989.47	-93680	-66829	29284	9.16	9.16	-26056	16250	41678	108749	138259	46716	150427		5.14	Si
SLV 7	4.82	-73811.57	-67909	-48444	24272	9.16	9.16	-18888	16250	41678	108749	138259	46716	150427		6.2	Si
SLV 13	1.39	491.96	-20083	-14327	-22044	9.16	9.16	-5586	13617	34925	108749	138259	46716	143674		6.52	Si
SLV 13	4.82	28636.4	-29765	-21234	-21179	9.16	9.16	-8279	14156	36307	108749	138259	46716	145056		6.85	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-24925	0.31	716.73	3304.42	4998.34	4151.38	5.79	Si
SLV 16	-25111	0.31	716.73	3327.74	5026.8	4177.27	5.83	Si
SLV 13	-28074	0.31	716.73	3695.67	5479.38	4587.52	6.4	Si
SLV 14	-28261	0.31	716.73	3718.63	5507.86	4613.25	6.44	Si
SLV 11	-51855	0.31	716.73	6458.93	9048.47	7753.7	10.82	Si
SLV 12	-51975	0.31	716.73	6471.99	9066.26	7769.13	10.84	Si
SLV 9	-62355	0.31	716.73	7571.68	10601.92	9086.8	12.68	Si
SLV 10	-62474	0.31	716.73	7584	10619.59	9101.8	12.7	Si
SLV 7	-78060	0.31	716.73	9113.69	12908.61	11011.15	15.36	Si
SLV 8	-78180	0.31	716.73	9124.89	12926.14	11025.51	15.38	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-74974	-97897	-675	0.657	8873.5	0.959	9.96515	10.19501	No
SLV 6	-74948	-98244	-674	0.657	8870.8	0.959	9.96834	10.19501	No
SLV 7	-67909	-93680	-190	0.721	8155.2	0.955	10.97023	10.19501	Si
SLV 8	-67882	-94027	-190	0.721	8152.5	0.955	10.9741	10.19501	Si
SLV 9	-55247	-62709	194	0.857	6869.3	0.948	13.14455	10.19501	Si
SLV 10	-55220	-63056	194	0.858	6866.6	0.948	13.14998	10.19501	Si
SLV 11	-48181	-58492	678	0.952	6152.7	0.943	14.66908	10.19501	Si
SLV 12	-48154	-58839	678	0.952	6150	0.943	14.67597	10.19501	Si
SLV 1	-95525	-137377	-1519	0.527	10964.2	0.966	7.92456	5.43686	Si
SLV 2	-95483	-137917	-1518	0.527	10959.9	0.966	7.92768	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	71.421	SLU 73	Si
V_SLU	21.08	SLU 83	Si
PF_SLV	3.428	SLV 9	Si
V_SLV	3.621	SLV 9	Si
PFFP_SLV	5.792	SLV 15	Si
R_SLV	0.977	SLV 5	No

Maschio 54

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.763	5.826	-24.633	5.826	L4	L5	1.87	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	2.29	717.62	-15822	-0.000055	0.0003743	0.0035	1.87	10402.72	11636.67	11636.67	16.22	No	Si
SLU 42	4.19	-436.1	-16398	-0.000054	0.0003743	0.0035	1.87	10615.7	12819.72	12819.72	29.4	No	Si
SLU 40	2.29	710.56	-15493	-0.0000538	0.0003743	0.0035	1.87	10275.59	11451.35	11451.35	16.12	No	Si
SLU 40	4.19	-422.04	-16030	-0.0000527	0.0003743	0.0035	1.87	10481.08	12649.87	12649.87	29.97	No	Si
SLU 10	2.29	611.01	-13132	-0.0000451	0.0003743	0.0035	1.87	9253.48	10157.33	10157.33	16.62	No	Si
SLU 10	4.19	-190.03	-13087	-0.0000408	0.0003743	0.0035	1.87	9232.44	10965.61	10965.61	57.7	No	Si
SLU 13	2.29	618.06	-13461	-0.0000462	0.0003743	0.0035	1.87	9407.89	10334.65	10334.65	16.72	No	Si
SLU 13	4.19	-204.09	-13455	-0.0000421	0.0003743	0.0035	1.87	9405.01	11186.25	11186.25	54.81	No	Si
SLU 31	2.29	727	-14739	-0.0000515	0.0003743	0.0035	1.87	9970.46	11031.28	11031.28	15.17	No	Si
SLU 31	4.19	-337.89	-15124	-0.0000488	0.0003743	0.0035	1.87	10128.85	12163.62	12163.62	36	No	Si
SLU 36	2.29	677.32	-15684	-0.0000541	0.0003743	0.0035	1.87	10349.88	11559	11559	17.07	No	Si
SLU 36	4.19	-386.68	-16101	-0.0000525	0.0003743	0.0035	1.87	10507.31	12683.66	12683.66	32.8	No	Si
SLU 33	2.29	670.26	-15354	-0.000053	0.0003743	0.0035	1.87	10221.16	11373.85	11373.85	16.97	No	Si
SLU 33	4.19	-372.62	-15733	-0.0000512	0.0003743	0.0035	1.87	10368.87	12501.99	12501.99	33.55	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	2.29	777.8	-17782	-0.0000622	0.0003743	0.0035	1.87	11080.08	12762.74	12762.74	16.41	No	Si
SLU 73	4.19	-306.43	-17821	-0.0000575	0.0003743	0.0035	1.87	11092.08	13407.29	13407.29	43.75	No	Si
SLU 34	2.29	734.05	-15068	-0.0000527	0.0003743	0.0035	1.87	10106.3	11214.08	11214.08	15.28	No	Si
SLU 34	4.19	-351.95	-15491	-0.0000502	0.0003743	0.0035	1.87	10275.16	12372.76	12372.76	35.15	No	Si
SLU 76	2.29	784.85	-18112	-0.0000634	0.0003743	0.0035	1.87	11180.74	12956.53	12956.53	16.51	No	Si
SLU 76	4.19	-320.48	-18188	-0.0000588	0.0003743	0.0035	1.87	11203.61	13564.35	13564.35	42.32	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	2.29	-3625.93	-12084	-0.0000698	0.0005615	0.0035	1.87		10872.33	10872.33	3		Si
SLV 13	4.19	1178.06	-9509	-0.0000384	0.0005615	0.0035	1.87		8205.19	8205.19	6.97		Si
SLV 1	2.29	3830.03	-17076	-0.0000881	0.0005615	0.0035	1.87		13542.39	13542.39	3.54		Si
SLV 1	4.19	-1752.7	-21589	-0.0000822	0.0005615	0.0035	1.87		17056.33	17056.33	9.73		Si
SLV 15	2.29	-2696.89	-8129	-0.0000486	0.0005615	0.0035	1.87		7865.25	7865.25	2.92		Si
SLV 15	4.19	1135.04	-3899	-0.0000214	0.0005615	0.0035	1.87		3692.83	3692.83	3.25		Si
SLV 4	2.29	4369.92	-13634	-0.0000822	0.0005615	0.0035	1.87		11062.23	11062.23	2.53		Si
SLV 4	4.19	-1483.52	-15403	-0.0000595	0.0005615	0.0035	1.87		13202.14	13202.14	8.9		Si
SLV 8	2.29	2913.74	-7181	-0.000049	0.0005615	0.0035	1.87		6442.06	6442.06	2.21		Si
SLV 8	4.19	-563.72	-4732	-0.0000186	0.0005615	0.0035	1.87		5077.44	5077.44	9.01		Si
SLV 14	2.29	-4015.08	-12597	-0.0000753	0.0005615	0.0035	1.87		11247.67	11247.67	2.8		Si
SLV 14	4.19	1490.25	-8933	-0.0000396	0.0005615	0.0035	1.87		7816.16	7816.16	5.24		Si
SLV 16	2.29	-3086.04	-8642	-0.0000542	0.0005615	0.0035	1.87		8273.16	8273.16	2.68		Si
SLV 16	4.19	1447.23	-3322	-0.0000235	0.0005615	0.0035	1.87		3191.89	3191.89	2.21		Si
SLV 3	2.29	4759.06	-13121	-0.0000851	0.0005615	0.0035	1.87		10700.14	10700.14	2.25		Si
SLV 3	4.19	-1795.72	-15979	-0.0000644	0.0005615	0.0035	1.87		13581.72	13581.72	7.56		Si
SLV 12	2.29	676.95	-5684	-0.0000224	0.0005615	0.0035	1.87		5209.79	5209.79	7.7		Si
SLV 12	4.19	315.51	-1108	-0.0000059	0.0005615	0.0035	1.87		1216.64	1216.64	3.86		Si
SLV 7	2.29	3163.84	-6852	-0.0000524	0.0005615	0.0035	1.87		6174.28	6174.28	1.95		Si
SLV 7	4.19	-764.36	-5102	-0.0000215	0.0005615	0.0035	1.87		5395.24	5395.24	7.06		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	2.29	761.36	-18536	-15435	1820	1.87	1.87	-29479	10833	5672	38062	15679	4768	20447	No	11.23	Si
SLU 82	4.19	-390.58	-18727	-15595	1916	1.87	1.87	-29784	10833	5672	38062	15679	4768	20447	No	10.67	Si
SLU 42	2.29	717.62	-15822	-13175	1752	1.87	1.87	-25163	10300	5393	38062	15679	4768	20447	No	11.67	Si
SLU 42	4.19	-436.1	-16398	-13655	1835	1.87	1.87	-26079	10422	5457	38062	15679	4768	20447	No	11.14	Si
SLU 80	2.29	720.01	-18567	-15461	1713	1.87	1.87	-29529	10833	5672	38062	15679	4768	20447	No	11.94	Si
SLU 80	4.19	-349.11	-18627	-15511	1808	1.87	1.87	-29625	10833	5672	38062	15679	4768	20447	No	11.31	Si
SLU 78	2.29	728.11	-18727	-15595	1725	1.87	1.87	-29784	10833	5672	38062	15679	4768	20447	No	11.86	Si
SLU 78	4.19	-355.21	-18798	-15653	1820	1.87	1.87	-29896	10833	5672	38062	15679	4768	20447	No	11.23	Si
SLU 83	2.29	660.57	-19055	-15867	1768	1.87	1.87	-30304	10833	5672	38062	15679	4768	20447	No	11.57	Si
SLU 83	4.19	-426.49	-19202	-15990	1856	1.87	1.87	-30538	10833	5672	38062	15679	4768	20447	No	11.01	Si
SLU 76	2.29	784.85	-18112	-15082	1738	1.87	1.87	-28805	10785	5647	38062	15679	4768	20447	No	11.77	Si
SLU 76	4.19	-320.48	-18188	-15146	1837	1.87	1.87	-28927	10801	5656	38062	15679	4768	20447	No	11.13	Si
SLU 40	2.29	710.56	-15493	-12901	1723	1.87	1.87	-24639	10230	5356	38062	15679	4768	20447	No	11.86	Si
SLU 40	4.19	-422.04	-16030	-13349	1805	1.87	1.87	-25494	10344	5416	38062	15679	4768	20447	No	11.33	Si
SLU 84	2.29	768.41	-18866	-15710	1849	1.87	1.87	-30004	10833	5672	38062	15679	4768	20447	No	11.06	Si
SLU 84	4.19	-404.64	-19095	-15901	1946	1.87	1.87	-30368	10833	5672	38062	15679	4768	20447	No	10.51	Si
SLU 73	2.29	777.8	-17782	-14807	1709	1.87	1.87	-28280	10715	5610	38062	15679	4768	20447	No	11.96	Si
SLU 73	4.19	-306.43	-17821	-14840	1807	1.87	1.87	-28342	10723	5615	38062	15679	4768	20447	No	11.32	Si
SLU 81	2.29	653.52	-18725	-15593	1739	1.87	1.87	-29780	10833	5672	38062	15679	4768	20447	No	11.76	Si
SLU 81	4.19	-412.43	-18834	-15684	1826	1.87	1.87	-29954	10833	5672	38062	15679	4768	20447	No	11.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	2.29	3440.88	-17589	-14647	6231	1.87	1.87	-27974	16011	8383	38062	23518	4768	28287		4.54	Si
SLV 2	4.19	-1440.5	-21013	-17498	5769	1.87	1.87	-33419	16250	8508	38062	23518	4768	28287		4.9	Si
SLV 3	2.29	4759.06	-13121	-10926	5829	1.87	1.7169	-20868	14590	7014	38062	23518	4768	28287		4.85	Si
SLV 3	4.19	-1795.72	-15979	-13306	5108	1.87	1.87	-25413	15499	8115	38062	23518	4768	28287		5.54	Si
SLV 6	2.29	-183.06	-20364	-16958	4359	1.87	1.87	-32387	16250	8508	38062	23518	4768	28287		6.49	Si
SLV 6	4.19	-420.33	-23433	-19513	4653	1.87	1.87	-37268	16250	8508	38062	23518	4768	28287		6.08	Si
SLV 1	2.29	3830.03	-17076	-14220	7136	1.87	1.87	-27158	15848	8298	38062	23518	4768	28287		3.96	Si
SLV 1	4.19	-1752.7	-21589	-17978	6674	1.87	1.87	-34335	16250	8508	38062	23518	4768	28287		4.24	Si
SLV 14	2.29	-4015.08	-12597	-10490	-3939	1.87	1.8488	-20034	14424	7466	38062	23518	4768	28287		7.18	Si
SLV 14	4.19	1490.25	-8933	-7438	-3099	1.87	1.87	-14206	13258	6942	38062	23518	4768	28287		9.13	Si
SLV 5	2.29	67.04	-20035	-16683	4941	1.87	1.87	-31863	16250	8508	38062	23518	4768	28287		5.73	Si
SLV 5	4.19	-620.97	-23804	-19822	5234	1.87	1.87	-37857	16250	8508	38062	23518	4768	28287		5.4	Si
SLV 16	2.29	-3086.04	-8642	-7197	-5246	1.87	1.7337	-14923	13401	6506	38062	23518	4768	28287		5.39	Si
SLV 16	4.19	1447.23	-3322	-2767	-4665	1.87	1.4982	-5284	11473	4813	38062	23518	4768	28287		6.06	Si
SLD 1	2.29	1845.98	-14686	-12229	3594	1.87	1.87	-23356	15088	7900	38062	23518	4768	28287		7.87	Si
SLD 1	4.19	-836.3	-16400	-13656	3429	1.87	1.87	-26082	15633	8185	38062	23518	4768	28287		8.25	Si
SLV 4	2.29	4369.92	-13634	-11354	4924	1.87	1.8434	-21684	14753	7615	38062	23518	4768	28287		5.75	Si
SLV 4	4.19	-1483.52	-15403	-12826	4204	1.87	1.87	-24496	15316	8019	38062	23518	4768	28287		6.73	Si
SLV 15	2.29	-2696.89	-8129	-6769	-4341	1.87	1.8097	-12929	13002	6589	38062	23518	4768	28287		6.52	Si
SLV 15	4.19	1135.04	-3899	-3246	-3760	1.87	1.87	-6200	11657	6103	38062	23518	4768	28287		7.52	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.31	6101	-3195	146.32	429.38	2.93	Si
SLV 11	179667	0.31	6141	-3216	146.32	432.07	2.95	Si
SLV 8	179667	0.31	10897	-5705	146.32	741.77	5.07	Si
SLV 7	179667	0.31	10937	-5726	146.32	744.27	5.09	Si
SLV 16	179667	0.31	11781	-6168	146.32	796.97	5.45	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.31	11843	-6201	146.32	800.81	5.47	Si
SLV 14	179667	0.31	21454	-11233	146.32	1351.73	9.24	Si
SLV 13	179667	0.31	21516	-11266	146.32	1354.99	9.26	Si
SLV 4	179667	0.31	27766	-14538	146.32	1665.26	11.38	Si
SLV 3	179667	0.31	27827	-14570	146.32	1668.15	11.4	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-21591	-13106	-699	0.466	2451.1	0.969	6.99426	10.19501	No
SLV 6	-21356	-13287	-699	0.471	2427.1	0.968	7.06181	10.19501	No
SLV 9	-19094	-10524	-508	0.527	2196.9	0.965	7.92921	10.19501	No
SLV 10	-18859	-10705	-508	0.532	2172.9	0.965	8.0163	10.19501	No
SLV 1	-18243	-15017	-498	0.548	2110.3	0.964	8.2612	5.43686	Si
SLV 2	-17877	-15297	-498	0.557	2073	0.963	8.41017	5.43686	Si
SLV 3	-12821	-14115	-136	0.764	1558.9	0.953	11.64843	5.43686	Si
SLV 4	-12454	-14396	-136	0.782	1521.7	0.952	11.94856	5.43686	Si
SLV 13	-9920	-6410	137	0.945	1264.6	0.943	14.56264	5.43686	Si
SLV 14	-9553	-6691	137	0.975	1227.4	0.942	15.04361	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.174	SLU 31	Si
V_SLU	10.508	SLU 84	Si
PF_SLV	1.952	SLV 7	Si
V_SLV	3.964	SLV 1	Si
PFFP_SLV	2.935	SLV 12	Si
R_SLV	0.686	SLV 5	No

Maschio 55

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.683	5.826	-21.763	5.826	L4	L5	2.08	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	2.29	-4408.88	-19841	-0.0000918	0.0003743	0.0035	2.08	13730.19	16613.62	16613.62	3.77	No	Si
SLU 65	4.19	3408.11	-17820	-0.0000767	0.0003743	0.0035	2.08	12963.21	14534.23	14534.23	4.26	No	Si
SLU 68	2.29	-4465.1	-20278	-0.0000938	0.0003743	0.0035	2.08	13877.12	16819.76	16819.76	3.77	No	Si
SLU 68	4.19	3452.73	-18267	-0.0000785	0.0003743	0.0035	2.08	13145.42	14813.39	14813.39	4.29	No	Si
SLU 49	2.29	-4198.17	-18895	-0.0000869	0.0003743	0.0035	2.08	13388.97	16177.98	16177.98	3.85	No	Si
SLU 49	4.19	3232.86	-16866	-0.0000722	0.0003743	0.0035	2.08	12551.34	13947.04	13947.04	4.31	No	Si
SLU 76	2.29	-4669.55	-22196	-0.0001021	0.0003743	0.0035	2.08	14442.91	17761.65	17761.65	3.8	No	Si
SLU 76	4.19	3729.61	-20241	-0.0000872	0.0003743	0.0035	2.08	13864.89	16066.17	16066.17	4.31	No	Si
SLU 73	2.29	-4613.34	-21759	-0.0001001	0.0003743	0.0035	2.08	14325.37	17541.8	17541.8	3.8	No	Si
SLU 73	4.19	3684.99	-19793	-0.0000854	0.0003743	0.0035	2.08	13713.67	15778.03	15778.03	4.28	No	Si
SLU 44	2.29	-4160.78	-17724	-0.0000827	0.0003743	0.0035	2.08	12923.21	15613.61	15613.61	3.75	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	4.19	3114.86	-15675	-0.0000675	0.0003743	0.0035	2.08	11992.63	13229.16	13229.16	4.25	No	Si
SLU 51	2.29	-4174.81	-18706	-0.0000861	0.0003743	0.0035	2.08	13317.29	16093.01	16093.01	3.85	No	Si
SLU 51	4.19	3215.48	-16673	-0.0000714	0.0003743	0.0035	2.08	12464.36	13829.86	13829.86	4.3	No	Si
SLU 55	2.29	-4421.45	-20078	-0.0000927	0.0003743	0.0035	2.08	13810.8	16725.16	16725.16	3.78	No	Si
SLU 55	4.19	3436.36	-18096	-0.0000778	0.0003743	0.0035	2.08	13076.46	14706.18	14706.18	4.28	No	Si
SLU 52	2.29	-4365.23	-19641	-0.0000908	0.0003743	0.0035	2.08	13660.82	16520.48	16520.48	3.78	No	Si
SLU 52	4.19	3391.75	-17648	-0.000076	0.0003743	0.0035	2.08	12891.56	14427.93	14427.93	4.25	No	Si
SLU 47	2.29	-4217	-18161	-0.0000846	0.0003743	0.0035	2.08	13102.58	15850.12	15850.12	3.76	No	Si
SLU 47	4.19	3159.48	-16123	-0.0000693	0.0003743	0.0035	2.08	12208.52	13497.25	13497.25	4.27	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	2.29	-6547.6	-13003	-0.0000903	0.0005615	0.0035	2.08		13107.72	13107.72	2		Si
SLV 15	4.19	4557.9	-12122	-0.0000668	0.0005615	0.0035	2.08		11354.75	11354.75	2.49		Si
SLV 11	2.29	-4563.31	-8016	-0.0000621	0.0005615	0.0035	2.08		8835.1	8835.1	1.94		Si
SLV 11	4.19	1349.2	-7891	-0.0000304	0.0005615	0.0035	2.08		7875.98	7875.98	5.84		Si
SLV 16	2.29	-7136.36	-13277	-0.0000991	0.0005615	0.0035	2.08		13328.09	13328.09	1.87		Si
SLV 16	4.19	4984.82	-12452	-0.0000715	0.0005615	0.0035	2.08		11604.26	11604.26	2.33		Si
SLD 12	2.29	-3955.36	-12325	-0.0000625	0.0005615	0.0035	2.08		12556.68	12556.68	3.17		Si
SLD 12	4.19	2189.63	-11392	-0.0000462	0.0005615	0.0035	2.08		10805.57	10805.57	4.93		Si
SLV 14	2.29	-6835.93	-17712	-0.0001018	0.0005615	0.0035	2.08		16768.81	16768.81	2.45		Si
SLV 14	4.19	6175.42	-16070	-0.0000914	0.0005615	0.0035	2.08		14393.09	14393.09	2.33		Si
SLD 16	2.29	-4888.81	-14553	-0.0000762	0.0005615	0.0035	2.08		14361.45	14361.45	2.94		Si
SLD 16	4.19	3645.02	-13307	-0.0000628	0.0005615	0.0035	2.08		12255.08	12255.08	3.36		Si
SLD 15	2.29	-4636.04	-14436	-0.0000738	0.0005615	0.0035	2.08		14267.05	14267.05	3.08		Si
SLD 15	4.19	3461.73	-13166	-0.000061	0.0005615	0.0035	2.08		12147.01	12147.01	3.51		Si
SLV 13	2.29	-6247.18	-17438	-0.0000957	0.0005615	0.0035	2.08		16569.2	16569.2	2.65		Si
SLV 13	4.19	5748.5	-15740	-0.0000867	0.0005615	0.0035	2.08		14134.88	14134.88	2.46		Si
SLV 12	2.29	-4941.7	-8192	-0.0000687	0.0005615	0.0035	1.664		8994.09	8994.09	1.82		Si
SLV 12	4.19	1623.57	-8103	-0.000033	0.0005615	0.0035	2.08		8067.95	8067.95	4.97		Si
SLV 10	2.29	-3940.29	-22975	-0.0000936	0.0005615	0.0035	2.08		20428.63	20428.63	5.18		Si
SLV 10	4.19	5592.25	-20163	-0.0000985	0.0005615	0.0035	2.08		17642.02	17642.02	3.15		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	2.29	-4669.55	-22196	-18483	-4843	2.08	2.08	-31735	10833	6309	38062	17440	5304	22744	No	4.7	Si
SLU 76	4.19	3729.61	-20241	-16855	-4797	2.08	2.08	-28940	10803	6292	38062	17440	5304	22744	No	4.74	Si
SLU 77	2.29	-4503.12	-23093	-19230	-4761	2.08	2.08	-33018	10833	6309	38062	17440	5304	22744	No	4.78	Si
SLU 77	4.19	3820.07	-21138	-17602	-4791	2.08	2.08	-30223	10833	6309	38062	17440	5304	22744	No	4.75	Si
SLU 78	2.29	-4650.72	-22930	-19094	-4860	2.08	2.08	-32785	10833	6309	38062	17440	5304	22744	No	4.68	Si
SLU 78	4.19	3802.99	-20984	-17473	-4844	2.08	2.08	-30002	10833	6309	38062	17440	5304	22744	No	4.69	Si
SLU 75	2.29	-4594.51	-22493	-18730	-4801	2.08	2.08	-32160	10833	6309	38062	17440	5304	22744	No	4.74	Si
SLU 75	4.19	3758.37	-20536	-17101	-4785	2.08	2.08	-29362	10833	6309	38062	17440	5304	22744	No	4.75	Si
SLU 82	2.29	-4602.55	-22690	-18894	-4839	2.08	2.08	-32441	10833	6309	38062	17440	5304	22744	No	4.7	Si
SLU 82	4.19	3815.04	-20742	-17272	-4825	2.08	2.08	-29656	10833	6309	38062	17440	5304	22744	No	4.71	Si
SLU 84	2.29	-4658.77	-23126	-19258	-4898	2.08	2.08	-33066	10833	6309	38062	17440	5304	22744	No	4.64	Si
SLU 84	4.19	3859.66	-21189	-17645	-4884	2.08	2.08	-30296	10833	6309	38062	17440	5304	22744	No	4.66	Si
SLU 73	2.29	-4613.34	-21759	-18119	-4784	2.08	2.08	-31110	10833	6309	38062	17440	5304	22744	No	4.75	Si
SLU 73	4.19	3684.99	-19793	-16482	-4738	2.08	2.08	-28300	10718	6242	38062	17440	5304	22744	No	4.8	Si
SLU 83	2.29	-4511.17	-23290	-19394	-4799	2.08	2.08	-33299	10833	6309	38062	17440	5304	22744	No	4.74	Si
SLU 83	4.19	3876.74	-21344	-17773	-4830	2.08	2.08	-30517	10833	6309	38062	17440	5304	22744	No	4.71	Si
SLU 80	2.29	-4627.36	-22741	-18937	-4836	2.08	2.08	-32515	10833	6309	38062	17440	5304	22744	No	4.7	Si
SLU 80	4.19	3785.62	-20791	-17313	-4821	2.08	2.08	-29727	10833	6309	38062	17440	5304	22744	No	4.72	Si
SLU 81	2.29	-4454.95	-22853	-19030	-4740	2.08	2.08	-32675	10833	6309	38062	17440	5304	22744	No	4.8	Si
SLU 81	4.19	3832.12	-20896	-17400	-4771	2.08	2.08	-29877	10833	6309	38062	17440	5304	22744	No	4.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	2.29	-6547.6	-13003	-10828	-6312	2.08	1.6094	-24316	15280	6886	38062	26160	5304	31464		4.98	Si
SLV 15	4.19	4557.9	-12122	-10094	-5744	2.08	1.992	-17332	13883	7743	38062	26160	5304	31464		5.48	Si
SLV 14	2.29	-6835.93	-17712	-14749	-7587	2.08	1.9622	-27231	15863	8715	38062	26160	5304	31464		4.15	Si
SLV 14	4.19	6175.42	-16070	-13382	-7251	2.08	1.9672	-22976	15012	8269	38062	26160	5304	31464		4.34	Si
SLD 16	2.29	-4888.81	-14553	-12119	-4856	2.08	2.08	-20808	14578	8490	38062	26160	5304	31464		6.48	Si
SLD 16	4.19	3645.02	-13307	-11081	-4622	2.08	2.08	-19027	14222	8283	38062	26160	5304	31464		6.81	Si
SLV 13	2.29	-6247.18	-17438	-14521	-7019	2.08	2.0453	-24933	15403	8821	38062	26160	5304	31464		4.48	Si
SLV 13	4.19	5748.5	-15740	-13107	-6687	2.08	2.0244	-22505	14918	8456	38062	26160	5304	31464		4.7	Si
SLD 14	2.29	-4757.11	-16498	-13738	-5162	2.08	2.08	-23589	15134	8814	38062	26160	5304	31464		6.1	Si
SLD 14	4.19	4170.52	-14905	-12412	-5030	2.08	2.08	-21311	14679	8549	38062	26160	5304	31464		6.26	Si
SLV 9	2.29	-3561.9	-22799	-18985	-5425	2.08	2.08	-32598	16250	9464	38062	26160	5304	31464		5.8	Si
SLV 9	4.19	5317.87	-19951	-16614	-5698	2.08	2.08	-28526	16122	9389	38062	26160	5304	31464		5.52	Si
SLV 10	2.29	-3940.29	-22975	-19132	-5790	2.08	2.08	-32850	16250	9464	38062	26160	5304	31464		5.43	Si
SLV 10	4.19	5592.25	-20163	-16790	-6060	2.08	2.08	-28829	16183	9425	38062	26160	5304	31464		5.19	Si
SLD 15	2.29	-4636.04	-14436	-12021	-4612	2.08	2.08	-20640	14545	8471	38062	26160	5304	31464		6.82	Si
SLD 15	4.19	3461.73	-13166	-10963	-4380	2.08	2.08	-18824	14182	8259	38062	26160	5304	31464		7.18	Si
SLD 13	2.29	-4504.34	-16381	-13641	-4918	2.08	2.08	-23421	15101	8795	38062	26160	5304	31464		6.4	Si
SLD 13	4.19	3987.23	-14764	-12294	-4788	2.08	2.08	-21109	14638	8526	38062	26160	5304	31464		6.57	Si
SLV 16	2.29	-7136.36	-13277	-11056	-6879	2.08	1.5075	-26552	15728	6639	38062	26160	5304	31464		4.57	Si
SLV 16	4.19	4984.82	-12452	-10369	-6307	2.08	1.919	-17803	13977	7510	38062	26160	5304	31464		4.99	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.31	13458	-7838	162.75	1000.65	6.15	Si
SLV 7	179667	0.31	13536	-7884	162.75	1005.87	6.18	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.31	13781	-8026	162.75	1022.28	6.28	Si
SLV 8	179667	0.31	13859	-8072	162.75	1027.46	6.31	Si
SLV 15	179667	0.31	21500	-12522	162.75	1506.25	9.25	Si
SLV 3	179667	0.31	21759	-12673	162.75	1521.39	9.35	Si
SLV 16	179667	0.31	22002	-12814	162.75	1535.54	9.43	Si
SLV 4	179667	0.31	22261	-12965	162.75	1550.53	9.53	Si
SLV 13	179667	0.31	28548	-16626	162.75	1892.57	11.63	Si
SLV 1	179667	0.31	28807	-16777	162.75	1905.75	11.71	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-16959	-20425	-1014	0.614	2008.3	0.958	9.30343	10.19501	No
SLV 5	-16955	-19967	-1014	0.614	2007.9	0.958	9.30526	10.19501	No
SLV 10	-15876	-22469	-775	0.662	1898.1	0.956	10.06334	10.19501	No
SLV 9	-15872	-22011	-775	0.662	1897.7	0.956	10.06547	10.19501	No
SLV 2	-14627	-14076	-694	0.714	1771.2	0.954	10.88812	5.43686	Si
SLV 1	-14620	-13364	-694	0.715	1770.6	0.954	10.89204	5.43686	Si
SLV 8	-6679	-8734	695	1.346	966.6	0.923	21.19198	10.19501	Si
SLV 7	-6675	-8276	695	1.346	966.2	0.923	21.20317	10.19501	Si
SLV 12	-5596	-10777	934	1.505	858	0.916	23.88071	10.19501	Si
SLV 11	-5591	-10320	933	1.506	857.6	0.916	23.89517	10.19501	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.753	SLU 44	Si
V_SLU	4.644	SLU 84	Si
PF_SLV	1.82	SLV 12	Si
V_SLV	4.147	SLV 14	Si
PFFP_SLV	6.148	SLV 11	Si
R_SLV	0.913	SLV 6	No

Maschio 57

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L4	L5	4.82	0.16	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 72	1.39	-6256.41	-63984	-0.0001306	0.0004492	0.0035	4.82	49497.15	121079.18	121079.18	19.35	No	Si
SLU 72	4.82	10004.77	-50853	-0.0001129	0.0004492	0.0035	4.82	56417	95800.88	95800.88	9.58	No	Si
SLU 50	1.39	-5657.43	-58127	-0.000117	0.0004492	0.0035	4.82	53673.08	115481.35	115481.35	20.41	No	Si
SLU 50	4.82	9333.58	-45995	-0.0001015	0.0004492	0.0035	4.82	56742.09	89264.54	89264.54	9.56	No	Si
SLU 71	1.39	-6272.44	-63913	-0.0001305	0.0004492	0.0035	4.82	49558.13	121020.22	121020.22	19.29	No	Si
SLU 71	4.82	10014.97	-50830	-0.0001128	0.0004492	0.0035	4.82	56421.36	95770.13	95770.13	9.56	No	Si
SLU 59	1.39	-6146.04	-63435	-0.0001292	0.0004492	0.0035	4.82	49962.85	120622.43	120622.43	19.63	No	Si
SLU 59	4.82	9915.24	-50385	-0.0001117	0.0004492	0.0035	4.82	56500.82	95171.38	95171.38	9.6	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	1.39	-6777.07	-69150	-0.0001431	0.0004492	0.0035	4.82	44356.99	125379.9	125379.9	18.5	No	Si
SLU 79	4.82	10606.83	-55196	-0.0001232	0.0004492	0.0035	4.82	55104.15	101646.23	101646.23	9.58	No	Si
SLU 58	1.39	-6162.06	-63364	-0.0001291	0.0004492	0.0035	4.82	50021.84	120563.47	120563.47	19.57	No	Si
SLU 58	4.82	9925.44	-50362	-0.0001117	0.0004492	0.0035	4.82	56504.63	95140.63	95140.63	9.59	No	Si
SLU 69	1.39	-6334.74	-64478	-0.0001319	0.0004492	0.0035	4.82	49064.73	121490.37	121490.37	19.18	No	Si
SLU 69	4.82	10039.33	-51325	-0.0001139	0.0004492	0.0035	4.82	56320.88	96437.33	96437.33	9.61	No	Si
SLU 80	1.39	-6761.05	-69221	-0.0001432	0.0004492	0.0035	4.82	44277.03	125438.86	125438.86	18.55	No	Si
SLU 80	4.82	10596.63	-55219	-0.0001233	0.0004492	0.0035	4.82	55094.69	101676.98	101676.98	9.6	No	Si
SLU 51	1.39	-5641.4	-58198	-0.0001171	0.0004492	0.0035	4.82	53633.06	115565.69	115565.69	20.49	No	Si
SLU 51	4.82	9323.38	-46018	-0.0001016	0.0004492	0.0035	4.82	56743.39	89295.29	89295.29	9.58	No	Si
SLU 48	1.39	-5719.73	-58692	-0.0001183	0.0004492	0.0035	4.82	53346.82	116153.85	116153.85	20.31	No	Si
SLU 48	4.82	9357.94	-46491	-0.0001026	0.0004492	0.0035	4.82	56764.21	89931.74	89931.74	9.61	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	1.39	-4946.99	-38654	-0.0000753	0.0006738	0.0035	4.82		92078.05	92078.05	18.61		Si
SLV 13	4.82	14889.36	-36055	-0.0000924	0.0006738	0.0035	4.82		75784.71	75784.71	5.09		Si
SLV 14	1.39	-5340.61	-39380	-0.0000775	0.0006738	0.0035	4.82		93331.95	93331.95	17.48		Si
SLV 14	4.82	14970.83	-36421	-0.0000932	0.0006738	0.0035	4.82		76425.05	76425.05	5.1		Si
SLV 10	1.39	-2190.93	-45714	-0.0000818	0.0006738	0.0035	4.82		103830.53	103830.53	47.39		Si
SLV 10	4.82	22712.72	-43864	-0.0001242	0.0006738	0.0035	4.82		89474.88	89474.88	3.94		Si
SLV 9	1.39	-1937.95	-45247	-0.0000804	0.0006738	0.0035	4.82		103072.18	103072.18	53.19		Si
SLV 9	4.82	22660.37	-43629	-0.0001237	0.0006738	0.0035	4.82		89063.34	89063.34	3.93		Si
SLD 10	1.39	-3594.87	-46990	-0.0000872	0.0006738	0.0035	4.82		105903.18	105903.18	29.46		Si
SLD 10	4.82	14134.01	-40541	-0.0000989	0.0006738	0.0035	4.82		83648.99	83648.99	5.92		Si
SLV 5	1.39	-1144.65	-50641	-0.0000883	0.0006738	0.0035	4.82		111539.33	111539.33	97.44		Si
SLV 5	4.82	20713.33	-45878	-0.0001235	0.0006738	0.0035	4.82		93006.63	93006.63	4.49		Si
SLD 6	1.39	-3274.27	-49257	-0.0000906	0.0006738	0.0035	4.82		109431.69	109431.69	33.42		Si
SLD 6	4.82	13305.16	-41498	-0.0000988	0.0006738	0.0035	4.82		85326.61	85326.61	6.41		Si
SLD 5	1.39	-3163.82	-49053	-0.00009	0.0006738	0.0035	4.82		109121.32	109121.32	34.49		Si
SLD 5	4.82	13282.3	-41395	-0.0000986	0.0006738	0.0035	4.82		85146.93	85146.93	6.41		Si
SLD 9	1.39	-3484.42	-46786	-0.0000866	0.0006738	0.0035	4.82		105572.07	105572.07	30.3		Si
SLD 9	4.82	14111.15	-40438	-0.0000987	0.0006738	0.0035	4.82		83469.31	83469.31	5.92		Si
SLV 6	1.39	-1397.63	-51108	-0.0000897	0.0006738	0.0035	4.82		112250.18	112250.18	80.31		Si
SLV 6	4.82	20765.69	-46113	-0.0001241	0.0006738	0.0035	4.82		93418.18	93418.18	4.5		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	1.39	-6334.74	-64478	-37858	-1803	4.82	4.82	-49090	10833	8355	108749	27715	24582	52297	No	29.01	Si
SLU 69	4.82	10039.33	-51325	-30136	-77	4.82	4.82	-39077	10833	8355	108749	27715	24582	52297	No	683.29	Si
SLU 50	1.39	-5657.43	-58127	-34130	-1777	4.82	4.82	-44255	10833	8355	108749	27715	24582	52297	No	29.43	Si
SLU 50	4.82	9333.58	-45995	-27006	-233	4.82	4.82	-35019	10833	8355	108749	27715	24582	52297	No	224.07	Si
SLU 51	1.39	-5641.4	-58198	-34171	-1734	4.82	4.82	-44309	10833	8355	108749	27715	24582	52297	No	30.15	Si
SLU 51	4.82	9323.38	-46018	-27020	-192	4.82	4.82	-35036	10833	8355	108749	27715	24582	52297	No	272.21	Si
SLU 48	1.39	-5719.73	-58692	-34461	-1767	4.82	4.82	-44685	10833	8355	108749	27715	24582	52297	No	29.59	Si
SLU 48	4.82	9357.94	-46491	-27298	-209	4.82	4.82	-35396	10833	8355	108749	27715	24582	52297	No	250.69	Si
SLU 66	1.39	-6276.72	-63533	-37304	-1728	4.82	4.82	-48371	10833	8355	108749	27715	24582	52297	No	30.27	Si
SLU 66	4.82	9821.03	-50421	-29605	-27	4.82	4.82	-38388	10833	8355	108749	27715	24582	52297	No	1937.92	Si
SLU 70	1.39	-6318.72	-64548	-37900	-1760	4.82	4.82	-49144	10833	8355	108749	27715	24582	52297	No	29.71	Si
SLU 70	4.82	10029.14	-51348	-30149	-35	4.82	4.82	-39094	10833	8355	108749	27715	24582	52297	No	1483.11	Si
SLU 72	1.39	-6256.41	-63984	-37568	-1770	4.82	4.82	-48714	10833	8355	108749	27715	24582	52297	No	29.55	Si
SLU 72	4.82	10004.77	-50853	-29858	-60	4.82	4.82	-38717	10833	8355	108749	27715	24582	52297	No	871	Si
SLU 45	1.39	-5661.71	-57747	-33906	-1693	4.82	4.82	-43966	10833	8355	108749	27715	24582	52297	No	30.9	Si
SLU 45	4.82	9139.64	-45587	-26766	-159	4.82	4.82	-34708	10833	8355	108749	27715	24582	52297	No	328.79	Si
SLU 49	1.39	-5703.71	-58763	-34503	-1725	4.82	4.82	-44739	10833	8355	108749	27715	24582	52297	No	30.32	Si
SLU 49	4.82	9347.75	-46514	-27311	-167	4.82	4.82	-35414	10833	8355	108749	27715	24582	52297	No	312.53	Si
SLU 71	1.39	-6272.44	-63913	-37527	-1812	4.82	4.82	-48660	10833	8355	108749	27715	24582	52297	No	28.86	Si
SLU 71	4.82	10014.97	-50830	-29845	-101	4.82	4.82	-38699	10833	8355	108749	27715	24582	52297	No	516.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.39	-4946.99	-38654	-22696	-8948	4.82	4.82	-29429	16250	12532	108749	41572	24582	66154		7.39	Si
SLV 13	4.82	14889.36	-36055	-21170	-6829	4.82	4.82	-27451	16250	12532	108749	41572	24582	66154		9.69	Si
SLV 10	1.39	-2190.93	-45714	-26841	-12506	4.82	4.82	-34804	16250	12532	108749	41572	24582	66154		5.29	Si
SLV 10	4.82	22712.72	-43864	-25755	-8581	4.82	4.82	-33396	16250	12532	108749	41572	24582	66154		7.71	Si
SLV 6	1.39	-1397.63	-51108	-30008	-9696	4.82	4.82	-38911	16250	12532	108749	41572	24582	66154		6.82	Si
SLV 6	4.82	20765.69	-46113	-27075	-5794	4.82	4.82	-35108	16250	12532	108749	41572	24582	66154		11.42	Si
SLV 14	1.39	-5340.61	-39380	-23122	-8821	4.82	4.82	-29982	16250	12532	108749	41572	24582	66154		7.5	Si
SLV 14	4.82	14970.83	-36421	-21385	-6715	4.82	4.82	-27729	16250	12532	108749	41572	24582	66154		9.85	Si
SLV 5	1.39	-1144.65	-50641	-29734	-9778	4.82	4.82	-38556	16250	12532	108749	41572	24582	66154		6.77	Si
SLV 5	4.82	20713.33	-45878	-26938	-5867	4.82	4.82	-34930	16250	12532	108749	41572	24582	66154		11.28	Si
SLV 7	1.39	-7298.48	-50155	-29449	10054	4.82	4.82	-38186	16250	12532	108749	41572	24582	66154		6.58	Si
SLV 7	4.82	-7938.08	-31923	-18744	8695	4.82	4.82	-24304	16250	12532	108749	41572	24582	66154		7.61	Si
SLV 8	1.39	-7551.46	-50622	-29723	10136	4.82	4.82	-38541	16250	12532	108749	41572	24582	66154		6.53	Si
SLV 8	4.82	-7885.72	-32157	-18881	8768	4.82	4.82	-24483	16250	12532	108749	41572	24582	66154		7.55	Si
SLV 11	1.39	-8091.78	-44761	-26282	7244	4.82	4.82	-34079	16250	12532	108749	41572	24582	66154		9.13	Si
SLV 11	4.82	-5991.05	-29673	-17423	5908	4.82	4.82	-22592	16250	12532	108749	41572	24582	66154		11.2	Si
SLV 12	1.39	-8344.76	-45228	-26556	7326	4.82	4.82	-34435	16250	12532	108749	41572	24582	66154		9.03	Si
SLV 12	4.82	-5938.69	-29908	-17561	5981	4.82	4.82	-22771	16250	12532	108749	41572	24582	66154		11.06	Si
SLV 9	1.39	-1937.95	-45247	-26567	-12588	4.82	4.82	-34449	16250	12532	108749	41572	24582	66154		5.26	Si
SLV 9	4.82	22660.37	-43629	-25617	-8654	4.82	4.82	-33217	16250	12532	108749	41572	24582	66154		7.64	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-34002	0.31	228.04	2065.82	3504.63	2785.22	12.21	Si
SLV 16	-34492	0.31	228.04	2086.03	3548.39	2817.21	12.35	Si
SLV 13	-36230	0.31	228.04	2155.47	3702.3	2928.88	12.84	Si
SLV 14	-36720	0.31	228.04	2174.44	3745.58	2960.01	12.98	Si
SLV 11	-37984	0.31	228.04	2222.11	3857.26	3039.69	13.33	Si
SLV 12	-38299	0.31	228.04	2233.71	3883.95	3058.83	13.41	Si
SLV 7	-43548	0.31	228.04	2410.5	4329.37	3369.93	14.78	Si
SLV 8	-43863	0.31	228.04	2420.11	4356.12	3388.12	14.86	Si
SLV 9	-45408	0.31	228.04	2465.64	4487.4	3476.52	15.25	Si
SLV 10	-45723	0.31	228.04	2474.59	4514.18	3494.39	15.32	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.03 Ta = 0.1228

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-46113	-51108	-304	0.576	5067.7	0.977	8.574	14.10995	No
SLV 5	-45878	-50641	-304	0.579	5043.8	0.977	8.6149	14.10995	No
SLV 10	-43864	-45714	239	0.605	4838.6	0.976	9.00442	14.10995	No
SLV 9	-43629	-45247	239	0.608	4814.7	0.976	9.04965	14.10995	No
SLV 8	-32157	-50622	-220	0.802	3646.4	0.969	12.03672	14.10995	No
SLV 7	-31923	-50155	-220	0.808	3622.5	0.969	12.11904	14.10995	No
SLV 12	-29908	-45228	324	0.854	3417.4	0.967	12.82792	14.10995	No
SLV 11	-29673	-44761	324	0.86	3393.5	0.967	12.9222	14.10995	No
SLV 2	-43918	-57361	-908	0.59	4844.1	0.976	8.77898	9.37835	No
SLV 1	-43552	-56634	-908	0.594	4806.8	0.976	8.84757	9.37835	No

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.563	SLU 71	Si
V_SLU	28.858	SLU 71	Si
PF_SLV	3.93	SLV 9	Si
V_SLV	5.255	SLV 9	Si
PFFP_SLV	12.214	SLV 15	Si
R_SLV	0.608	SLV 6	No

Maschio 58

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	1.006	-15.033	6.526	L4	L5	5.52	0.16	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	1.39	1878.44	-66984	-0.0001072	0.0004492	0.0035	5.52	70122.53	139103.28	139103.28	74.05	No	Si
SLU 84	4.82	-7517.01	-42685	-0.0000764	0.0004492	0.0035	5.52	71211.66	114177.14	114177.14	15.19	No	Si
SLU 81	1.39	2104.85	-66227	-0.0001063	0.0004492	0.0035	5.52	70612.31	137938.97	137938.97	65.53	No	Si
SLU 81	4.82	-7513	-41841	-0.000075	0.0004492	0.0035	5.52	70707.28	112605.88	112605.88	14.99	No	Si
SLU 39	1.39	1992.42	-55452	-0.0000877	0.0004492	0.0035	5.52	74404.97	121368.5	121368.5	60.92	No	Si
SLU 39	4.82	-6595.94	-35150	-0.0000627	0.0004492	0.0035	5.52	65414.52	99876.97	99876.97	15.14	No	Si
SLU 73	1.39	1488.42	-63766	-0.0001009	0.0004492	0.0035	5.52	72001.67	134154.84	134154.84	90.13	No	Si
SLU 73	4.82	-7149.18	-40367	-0.000072	0.0004492	0.0035	5.52	69738.17	109858.98	109858.98	15.37	No	Si
SLU 41	1.39	1961.94	-56345	-0.0000891	0.0004492	0.0035	5.52	74316.26	122742.87	122742.87	62.56	No	Si
SLU 41	4.82	-6577.77	-35997	-0.0000641	0.0004492	0.0035	5.52	66211.92	101566.85	101566.85	15.44	No	Si
SLU 82	1.39	1908.92	-66090	-0.0001057	0.0004492	0.0035	5.52	70697.56	137728.91	137728.91	72.15	No	Si
SLU 82	4.82	-7535.19	-41837	-0.0000751	0.0004492	0.0035	5.52	70704.3	112596.91	112596.91	14.94	No	Si
SLU 40	1.39	1796.49	-55315	-0.0000871	0.0004492	0.0035	5.52	74414.93	121158.44	121158.44	67.44	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	4.82	-6618.13	-35145	-0.0000628	0.0004492	0.0035	5.52	65409.89	99867.38	99867.38	15.09	No	Si
SLU 83	1.39	2074.37	-67121	-0.0001078	0.0004492	0.0035	5.52	70031.04	139313.34	139313.34	67.16	No	Si
SLU 83	4.82	-7494.83	-42689	-0.0000764	0.0004492	0.0035	5.52	71214.43	114186.11	114186.11	15.24	No	Si
SLU 42	1.39	1766.01	-56209	-0.0000886	0.0004492	0.0035	5.52	74332.46	122532.81	122532.81	69.38	No	Si
SLU 42	4.82	-6599.95	-35993	-0.0000641	0.0004492	0.0035	5.52	66207.5	101557.26	101557.26	15.39	No	Si
SLU 31	1.39	1375.99	-52991	-0.0000825	0.0004492	0.0035	5.52	74438.13	117584.37	117584.37	85.45	No	Si
SLU 31	4.82	-6232.12	-33676	-0.0000598	0.0004492	0.0035	5.52	63940.86	96939.48	96939.48	15.55	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	1.39	5092.53	-46916	-0.0000771	0.0006738	0.0035	5.52		110645.45	110645.45	21.73		Si
SLV 7	4.82	-14055.51	-21002	-0.0000522	0.0006738	0.0035	5.52		71092.96	71092.96	5.06		Si
SLV 4	1.39	7668.38	-45919	-0.0000798	0.0006738	0.0035	5.52		108644.99	108644.99	14.17		Si
SLV 4	4.82	-9062.7	-18947	-0.0000413	0.0006738	0.0035	5.52		66322.47	66322.47	7.32		Si
SLD 12	1.39	1224.01	-46094	-0.0000694	0.0006738	0.0035	5.52		108997.41	108997.41	89.05		Si
SLD 12	4.82	-8396.8	-27472	-0.0000529	0.0006738	0.0035	5.52		85952.16	85952.16	10.24		Si
SLD 8	1.39	2741.11	-46072	-0.0000719	0.0006738	0.0035	5.52		108951.74	108951.74	39.75		Si
SLD 8	4.82	-8862.62	-25348	-0.0000504	0.0006738	0.0035	5.52		81176.95	81176.95	9.16		Si
SLD 7	1.39	2760.19	-46097	-0.0000719	0.0006738	0.0035	5.52		109003.15	109003.15	39.49		Si
SLD 7	4.82	-8889.78	-25273	-0.0000504	0.0006738	0.0035	5.52		81001.46	81001.46	9.11		Si
SLV 11	1.39	1479.61	-46869	-0.000071	0.0006738	0.0035	5.52		110550.56	110550.56	74.72		Si
SLV 11	4.82	-13034.31	-25965	-0.0000581	0.0006738	0.0035	5.52		82607.87	82607.87	6.34		Si
SLV 8	1.39	5048.82	-46857	-0.0000769	0.0006738	0.0035	5.52		110527.72	110527.72	21.89		Si
SLV 8	4.82	-13993.31	-21176	-0.0000524	0.0006738	0.0035	5.52		71494.91	71494.91	5.11		Si
SLD 11	1.39	1243.09	-46120	-0.0000694	0.0006738	0.0035	5.52		109048.81	109048.81	87.72		Si
SLD 11	4.82	-8423.95	-27396	-0.0000528	0.0006738	0.0035	5.52		85785.58	85785.58	10.18		Si
SLV 3	1.39	7736.39	-46010	-0.0000801	0.0006738	0.0035	5.52		108828.17	108828.17	14.07		Si
SLV 3	4.82	-9159.48	-18677	-0.000041	0.0006738	0.0035	5.52		65670.74	65670.74	7.17		Si
SLV 12	1.39	1435.91	-46810	-0.0000708	0.0006738	0.0035	5.52		110432.83	110432.83	76.91		Si
SLV 12	4.82	-12972.12	-26138	-0.0000582	0.0006738	0.0035	5.52		83009.83	83009.83	6.4		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.39	1764.52	-66398	-38986	-6472	5.52	5.52	-44141	10833	9568	108749	31740	28152	59892	No	9.25	Si
SLU 77	4.82	-7175.87	-42513	-24962	-4118	5.52	5.52	-28263	10833	9568	108749	31740	28152	59892	No	14.55	Si
SLU 78	1.39	1568.59	-66261	-38905	-6226	5.52	5.52	-44051	10833	9568	108749	31740	28152	59892	No	9.62	Si
SLU 78	4.82	-7198.05	-42508	-24959	-3975	5.52	5.52	-28260	10833	9568	108749	31740	28152	59892	No	15.07	Si
SLU 75	1.39	1599.07	-65367	-38381	-6224	5.52	5.52	-43456	10833	9568	108749	31740	28152	59892	No	9.62	Si
SLU 75	4.82	-7216.23	-41660	-24461	-4004	5.52	5.52	-27696	10833	9568	108749	31740	28152	59892	No	14.96	Si
SLU 81	1.39	2104.85	-66227	-38885	-6596	5.52	5.52	-44028	10833	9568	108749	31740	28152	59892	No	9.08	Si
SLU 81	4.82	-7513	-41841	-24567	-4231	5.52	5.52	-27816	10833	9568	108749	31740	28152	59892	No	14.16	Si
SLU 79	1.39	1754.01	-65781	-38624	-6380	5.52	5.52	-43732	10833	9568	108749	31740	28152	59892	No	9.39	Si
SLU 79	4.82	-7075.85	-42071	-24702	-4046	5.52	5.52	-27969	10833	9568	108749	31740	28152	59892	No	14.8	Si
SLU 83	1.39	2074.37	-67121	-39410	-6598	5.52	5.52	-44622	10833	9568	108749	31740	28152	59892	No	9.08	Si
SLU 83	4.82	-7494.83	-42689	-25065	-4203	5.52	5.52	-28380	10833	9568	108749	31740	28152	59892	No	14.25	Si
SLU 82	1.39	1908.92	-66090	-38805	-6350	5.52	5.52	-43937	10833	9568	108749	31740	28152	59892	No	9.43	Si
SLU 82	4.82	-7535.19	-41837	-24565	-4089	5.52	5.52	-27813	10833	9568	108749	31740	28152	59892	No	14.65	Si
SLU 84	1.39	1878.44	-66984	-39330	-6352	5.52	5.52	-44531	10833	9568	108749	31740	28152	59892	No	9.43	Si
SLU 84	4.82	-7517.01	-42685	-25063	-4061	5.52	5.52	-28377	10833	9568	108749	31740	28152	59892	No	14.75	Si
SLU 74	1.39	1795	-65504	-38461	-6470	5.52	5.52	-43547	10833	9568	108749	31740	28152	59892	No	9.26	Si
SLU 74	4.82	-7194.04	-41665	-24464	-4146	5.52	5.52	-27699	10833	9568	108749	31740	28152	59892	No	14.45	Si
SLU 80	1.39	1558.08	-65645	-38544	-6133	5.52	5.52	-43641	10833	9568	108749	31740	28152	59892	No	9.77	Si
SLU 80	4.82	-7098.04	-42067	-24700	-3904	5.52	5.52	-27966	10833	9568	108749	31740	28152	59892	No	15.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	1.39	6379.23	-45172	-26523	-25585	5.52	5.52	-30031	16250	14352	108749	47610	28152	75762		2.96	Si
SLV 1	4.82	-3926.86	-21688	-12734	-22790	5.52	5.52	-14418	15384	13587	108749	47610	28152	75762		3.32	Si
SLV 6	1.39	524.95	-44064	-25873	-20478	5.52	5.52	-29294	16250	14352	108749	47610	28152	75762		3.7	Si
SLV 6	4.82	3448.73	-31211	-18326	-16550	5.52	5.52	-20749	16250	14352	108749	47610	28152	75762		4.58	Si
SLV 3	1.39	7736.39	-46010	-27015	-18909	5.52	5.52	-30588	16250	14352	108749	47610	28152	75762		4.01	Si
SLV 3	4.82	-9159.48	-18677	-10966	-17422	5.52	5.52	-12417	14983	13233	108749	47610	28152	75762		4.35	Si
SLV 2	1.39	6311.22	-45081	-26469	-24641	5.52	5.52	-29970	16250	14352	108749	47610	28152	75762		3.07	Si
SLV 2	4.82	-3830.09	-21957	-12892	-21864	5.52	5.52	-14597	15419	13618	108749	47610	28152	75762		3.47	Si
SLD 2	1.39	3219.24	-45220	-26551	-13033	5.52	5.52	-30063	16250	14352	108749	47610	28152	75762		5.81	Si
SLD 2	4.82	-4393.24	-25772	-15132	-10923	5.52	5.52	-17133	15927	14066	108749	47610	28152	75762		6.94	Si
SLD 1	1.39	3248.43	-45259	-26574	-13438	5.52	5.52	-30089	16250	14352	108749	47610	28152	75762		5.64	Si
SLD 1	4.82	-4434.79	-25656	-15064	-11320	5.52	5.52	-17056	15911	14053	108749	47610	28152	75762		6.69	Si
SLV 5	1.39	568.66	-44123	-25907	-21085	5.52	5.52	-29333	16250	14352	108749	47610	28152	75762		3.59	Si
SLV 5	4.82	3386.54	-31038	-18224	-17145	5.52	5.52	-20634	16250	14352	108749	47610	28152	75762		4.42	Si
SLV 4	1.39	7668.38	-45919	-26961	-17965	5.52	5.52	-30527	16250	14352	108749	47610	28152	75762		4.22	Si
SLV 4	4.82	-9062.7	-18947	-11125	-16495	5.52	5.52	-12596	15019	13265	108749	47610	28152	75762		4.59	Si
SLV 15	1.39	-4306.65	-45852	-26922	15719	5.52	5.52	-30483	16250	14352	108749	47610	28152	75762		4.82	Si
SLV 15	4.82	-5755.49	-35219	-20679	16130	5.52	5.52	-23414	16250	14352	108749	47610	28152	75762		4.7	Si
SLV 16	1.39	-4374.66	-45761	-26869	16663	5.52	5.52	-30422	16250	14352	108749	47610	28152	75762		4.55	Si
SLV 16	4.82	-5658.72	-35489	-20837	17057	5.52	5.52	-23593	16250	14352	108749	47610	28152	75762		4.44	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-36845	0.31	261.16	2276.7	3828.32	3052.51	11.69	Si
SLV 15	-36848	0.31	261.16	2276.83	3828.58	3052.7	11.69	Si
SLV 14	-36905	0.31	261.16	2279.3	3833.65	3056.48	11.7	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-36908	0.31	261.16	2279.43	3833.91	3056.67	11.7	Si
SLV 9	-37212	0.31	261.16	2292.61	3861.02	3076.81	11.78	Si
SLV 11	-37222	0.31	261.16	2293.03	3861.9	3077.47	11.78	Si
SLV 10	-37250	0.31	261.16	2294.27	3864.45	3079.36	11.79	Si
SLV 12	-37260	0.31	261.16	2294.69	3865.33	3080.01	11.79	Si
SLV 5	-37520	0.31	261.16	2305.87	3888.5	3097.18	11.86	Si
SLV 7	-37530	0.31	261.16	2306.29	3889.38	3097.84	11.86	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.03 Ta = 0.1228

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-36174	-44017	183	0.817	4109.4	0.968	12.26534	14.10995	No
SLV 9	-36000	-44076	183	0.821	4091.7	0.968	12.32041	14.10995	No
SLV 6	-31211	-44064	-410	0.927	3604.3	0.964	13.96609	14.10995	No
SLV 5	-31038	-44123	-410	0.931	3586.6	0.964	14.03809	14.10995	No
SLV 12	-26138	-46810	454	1.084	3088.2	0.959	16.42754	14.10995	Si
SLV 11	-25965	-46869	454	1.09	3070.6	0.959	16.52848	14.10995	Si
SLV 14	-38499	-44923	970	0.753	4346.1	0.97	11.28805	9.37835	Si
SLV 13	-38230	-45014	970	0.758	4318.7	0.97	11.36237	9.37835	Si
SLV 16	-35489	-45761	1051	0.809	4039.6	0.968	12.14438	9.37835	Si
SLV 15	-35219	-45852	1051	0.814	4012.2	0.968	12.231	9.37835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.943	SLU 82	Si
V_SLU	9.077	SLU 83	Si
PF_SLV	5.058	SLV 7	Si
V_SLV	2.961	SLV 1	Si
PFFP_SLV	11.688	SLV 13	Si
R_SLV	0.869	SLV 10	No

Maschio 59

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-0.354	-13.778	1.006	L4	L5	1.36	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	1.39	2490.06	-26589	-0.0001886	0.0003743	0.0035	1.36	5680.52	9643.21	9643.21	3.87	No	Si
SLU 74	4.82	-679.46	-20185	-0.0001043	0.0003743	0.0035	1.36	6579.67	9034.37	9034.37	13.3	No	Si
SLU 81	1.39	2532.9	-27112	-0.0001937	0.0003743	0.0035	1.36	5543.54	9623.41	9623.41	3.8	No	Si
SLU 81	4.82	-759.32	-20635	-0.0001085	0.0003743	0.0035	1.36	6563.5	9114.97	9114.97	12	No	Si
SLU 83	1.39	2564.16	-27451	-0.0001971	0.0003743	0.0035	1.36	5449.77	9610.86	9610.86	3.75	No	Si
SLU 83	4.82	-762.47	-20940	-0.0001103	0.0003743	0.0035	1.36	6548.51	9161.94	9161.94	12.02	No	Si
SLU 77	1.39	2521.33	-26928	-0.000192	0.0003743	0.0035	1.36	5592.97	9630.35	9630.35	3.82	No	Si
SLU 77	4.82	-682.61	-20490	-0.000106	0.0003743	0.0035	1.36	6569.48	9090.51	9090.51	13.32	No	Si
SLU 82	1.39	2536.56	-27105	-0.0001937	0.0003743	0.0035	1.36	5545.43	9623.67	9623.67	3.79	No	Si
SLU 82	4.82	-765.95	-20619	-0.0001086	0.0003743	0.0035	1.36	6564.2	9112.32	9112.32	11.9	No	Si
SLU 79	1.39	2504.02	-26700	-0.0001898	0.0003743	0.0035	1.36	5652.36	9638.99	9638.99	3.85	No	Si
SLU 79	4.82	-681.92	-20263	-0.0001048	0.0003743	0.0035	1.36	6577.36	9049.42	9049.42	13.27	No	Si
SLU 84	1.39	2567.82	-27444	-0.0001972	0.0003743	0.0035	1.36	5451.75	9611.11	9611.11	3.74	No	Si
SLU 84	4.82	-769.11	-20923	-0.0001103	0.0003743	0.0035	1.36	6549.39	9159.61	9159.61	11.91	No	Si
SLU 78	1.39	2524.99	-26921	-0.000192	0.0003743	0.0035	1.36	5594.82	9630.61	9630.61	3.81	No	Si
SLU 78	4.82	-689.25	-20474	-0.0001061	0.0003743	0.0035	1.36	6570.1	9087.7	9087.7	13.18	No	Si
SLU 80	1.39	2507.68	-26693	-0.0001898	0.0003743	0.0035	1.36	5654.16	9639.25	9639.25	3.84	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	4.82	-688.56	-20247	-0.0001048	0.0003743	0.0035	1.36	6577.86	9046.36	9046.36	13.14	No	Si
SLU 75	1.39	2493.72	-26582	-0.0001886	0.0003743	0.0035	1.36	5682.29	9643.48	9643.48	3.87	No	Si
SLU 75	4.82	-686.1	-20169	-0.0001043	0.0003743	0.0035	1.36	6580.11	9030.37	9030.37	13.16	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 7	1.39	2143.17	-18056	-0.000117	0.0005615	0.0035	1.36		9478.54	9478.54	4.42		Si
SLD 7	4.82	-808.88	-12376	-0.0000651	0.0005615	0.0035	1.36		7561.4	7561.4	9.35		Si
SLV 2	1.39	2342.77	-20596	-0.0001336	0.0005615	0.0035	1.36		10471.75	10471.75	4.47		Si
SLV 2	4.82	231.84	-14323	-0.0000629	0.0005615	0.0035	1.36		7982.73	7982.73	34.43		Si
SLV 3	1.39	2756.68	-20014	-0.0001391	0.0005615	0.0035	1.36		10284.57	10284.57	3.73		Si
SLV 3	4.82	-352.18	-12712	-0.0000581	0.0005615	0.0035	1.36		7721.01	7721.01	21.92		Si
SLV 12	1.39	2171.38	-16523	-0.0001101	0.0005615	0.0035	1.36		8856.16	8856.16	4.08		Si
SLV 12	4.82	-1514.51	-10857	-0.0000715	0.0005615	0.0035	1.36		6827.73	6827.73	4.51		Si
SLV 8	1.39	2657.32	-17740	-0.0001257	0.0005615	0.0035	1.36		9349.21	9349.21	3.52		Si
SLV 8	4.82	-1295.65	-10808	-0.0000672	0.0005615	0.0035	1.36		6803.16	6803.16	5.25		Si
SLD 8	1.39	2141.01	-18032	-0.0001168	0.0005615	0.0035	1.36		9468.4	9468.4	4.42		Si
SLD 8	4.82	-809.83	-12364	-0.0000651	0.0005615	0.0035	1.36		7555.85	7555.85	9.33		Si
SLV 1	1.39	2350.47	-20684	-0.0001342	0.0005615	0.0035	1.36		10495.67	10495.67	4.47		Si
SLV 1	4.82	235.25	-14364	-0.0000631	0.0005615	0.0035	1.36		7998.8	7998.8	34		Si
SLV 4	1.39	2748.97	-19926	-0.0001385	0.0005615	0.0035	1.36		10251.29	10251.29	3.73		Si
SLV 4	4.82	-355.58	-12671	-0.000058	0.0005615	0.0035	1.36		7702.31	7702.31	21.66		Si
SLV 7	1.39	2662.27	-17797	-0.000126	0.0005615	0.0035	1.36		9372.34	9372.34	3.52		Si
SLV 7	4.82	-1293.46	-10834	-0.0000673	0.0005615	0.0035	1.36		6816.41	6816.41	5.27		Si
SLV 11	1.39	2176.33	-16579	-0.0001105	0.0005615	0.0035	1.36		8878.92	8878.92	4.08		Si
SLV 11	4.82	-1512.32	-10883	-0.0000716	0.0005615	0.0035	1.36		6840.96	6840.96	4.52		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	1.39	2564.16	-27451	-22859	4705	1.36	1.36	-60028	10833	4125	38062	11403	3468	14871	No	3.16	Si
SLU 83	4.82	-762.47	-20940	-17437	2489	1.36	1.36	-45789	10833	4125	38062	11403	3468	14871	No	5.97	Si
SLU 81	1.39	2532.9	-27112	-22577	4644	1.36	1.36	-59288	10833	4125	38062	11403	3468	14871	No	3.2	Si
SLU 81	4.82	-759.32	-20635	-17183	2472	1.36	1.36	-45123	10833	4125	38062	11403	3468	14871	No	6.02	Si
SLU 79	1.39	2504.02	-26700	-22233	4607	1.36	1.36	-58386	10833	4125	38062	11403	3468	14871	No	3.23	Si
SLU 79	4.82	-681.92	-20263	-16874	2428	1.36	1.36	-44311	10833	4125	38062	11403	3468	14871	No	6.12	Si
SLU 80	1.39	2507.68	-26693	-22228	4630	1.36	1.36	-58371	10833	4125	38062	11403	3468	14871	No	3.21	Si
SLU 80	4.82	-688.56	-20247	-16860	2458	1.36	1.36	-44276	10833	4125	38062	11403	3468	14871	No	6.05	Si
SLU 84	1.39	2567.82	-27444	-22853	4728	1.36	1.36	-60013	10833	4125	38062	11403	3468	14871	No	3.15	Si
SLU 84	4.82	-769.11	-20923	-17423	2519	1.36	1.36	-45754	10833	4125	38062	11403	3468	14871	No	5.9	Si
SLU 77	1.39	2521.33	-26928	-22423	4625	1.36	1.36	-58884	10833	4125	38062	11403	3468	14871	No	3.22	Si
SLU 77	4.82	-682.61	-20490	-17062	2430	1.36	1.36	-44806	10833	4125	38062	11403	3468	14871	No	6.12	Si
SLU 82	1.39	2536.56	-27105	-22571	4666	1.36	1.36	-59273	10833	4125	38062	11403	3468	14871	No	3.19	Si
SLU 82	4.82	-765.95	-20619	-17169	2502	1.36	1.36	-45088	10833	4125	38062	11403	3468	14871	No	5.94	Si
SLU 63	1.39	2408	-25111	-20910	4600	1.36	1.36	-54912	10833	4125	38062	11403	3468	14871	No	3.23	Si
SLU 63	4.82	-767.6	-19046	-15860	2652	1.36	1.36	-41649	10833	4125	38062	11403	3468	14871	No	5.61	Si
SLU 75	1.39	2493.72	-26582	-22136	4586	1.36	1.36	-58129	10833	4125	38062	11403	3468	14871	No	3.24	Si
SLU 75	4.82	-686.1	-20169	-16795	2443	1.36	1.36	-44105	10833	4125	38062	11403	3468	14871	No	6.09	Si
SLU 78	1.39	2524.99	-26921	-22417	4648	1.36	1.36	-58869	10833	4125	38062	11403	3468	14871	No	3.2	Si
SLU 78	4.82	-689.25	-20474	-17049	2459	1.36	1.36	-44771	10833	4125	38062	11403	3468	14871	No	6.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 11	1.39	1935.56	-17535	-14602	5092	1.36	1.36	-38345	16250	6188	38062	17104	3468	20572		4.04	Si
SLD 11	4.82	-902.34	-12396	-10322	3442	1.36	1.36	-27107	15838	6031	38062	17104	3468	20572		5.98	Si
SLV 15	1.39	1136.86	-15956	-13287	5498	1.36	1.36	-34892	16250	6188	38062	17104	3468	20572		3.74	Si
SLV 15	4.82	-1081.73	-12875	-10721	2156	1.36	1.36	-28155	16048	6111	38062	17104	3468	20572		9.54	Si
SLV 8	1.39	2657.32	-17740	-14772	6793	1.36	1.36	-38793	16250	6188	38062	17104	3468	20572		3.03	Si
SLV 8	4.82	-1295.65	-10808	-9000	6039	1.36	1.36	-23634	15143	5767	38062	17104	3468	20572		3.41	Si
SLD 8	1.39	2141.01	-18032	-15015	4812	1.36	1.36	-39430	16250	6188	38062	17104	3468	20572		4.28	Si
SLD 8	4.82	-809.83	-12364	-10296	3653	1.36	1.36	-27037	15824	6026	38062	17104	3468	20572		5.63	Si
SLV 7	1.39	2662.27	-17797	-14820	6794	1.36	1.36	-38917	16250	6188	38062	17104	3468	20572		3.03	Si
SLV 7	4.82	-1293.46	-10834	-9022	6039	1.36	1.36	-23692	15155	5771	38062	17104	3468	20572		3.41	Si
SLV 16	1.39	1129.16	-15868	-13213	5497	1.36	1.36	-34699	16250	6188	38062	17104	3468	20572		3.74	Si
SLV 16	4.82	-1085.13	-12834	-10687	2156	1.36	1.36	-28065	16030	6104	38062	17104	3468	20572		9.54	Si
SLV 12	1.39	2171.38	-16523	-13759	7449	1.36	1.36	-36131	16250	6188	38062	17104	3468	20572		2.76	Si
SLV 12	4.82	-1514.51	-10857	-9041	5541	1.36	1.36	-23741	15165	5775	38062	17104	3468	20572		3.71	Si
SLD 7	1.39	2143.17	-18056	-15036	4812	1.36	1.36	-39484	16250	6188	38062	17104	3468	20572		4.28	Si
SLD 7	4.82	-808.88	-12376	-10305	3653	1.36	1.36	-27063	15829	6028	38062	17104	3468	20572		5.63	Si
SLV 11	1.39	2176.33	-16579	-13806	7449	1.36	1.36	-36255	16250	6188	38062	17104	3468	20572		2.76	Si
SLV 11	4.82	-1512.32	-10883	-9063	5541	1.36	1.36	-23799	15176	5779	38062	17104	3468	20572		3.71	Si
SLD 12	1.39	1933.4	-17511	-14581	5092	1.36	1.36	-38291	16250	6188	38062	17104	3468	20572		4.04	Si
SLD 12	4.82	-903.29	-12385	-10313	3442	1.36	1.36	-27082	15833	6029	38062	17104	3468	20572		5.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.31	36568	-13925	108.89	1482.71	13.62	Si
SLV 7	179667	0.31	36679	-13967	108.89	1485.78	13.64	Si
SLV 4	179667	0.31	37075	-14118	108.89	1496.7	13.75	Si
SLV 3	179667	0.31	37247	-14184	108.89	1501.42	13.79	Si
SLV 12	179667	0.31	39870	-15182	108.89	1570.63	14.42	Si
SLV 11	179667	0.31	39980	-15225	108.89	1573.44	14.45	Si
SLV 2	179667	0.31	40837	-15551	108.89	1594.95	14.65	Si
SLV 1	179667	0.31	41010	-15617	108.89	1599.21	14.69	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.31	48080	-18309	108.89	1756.26	16.13	Si
SLV 15	179667	0.31	48252	-18375	108.89	1759.65	16.16	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-16342	-20029	-243	0.466	1847.7	0.97	6.98124	10.19501	No
SLV 6	-16315	-19973	-243	0.466	1845	0.97	6.99121	10.19501	No
SLV 9	-16391	-18812	-5	0.478	1852.6	0.97	7.16622	10.19501	No
SLV 10	-16364	-18755	-5	0.479	1850	0.97	7.17644	10.19501	No
SLV 11	-10883	-16579	245	0.658	1292.2	0.958	9.98376	10.19501	No
SLV 12	-10857	-16523	245	0.659	1289.5	0.958	10.00501	10.19501	No
SLV 7	-10834	-17797	6	0.68	1287.2	0.958	10.32447	10.19501	Si
SLV 8	-10808	-17740	6	0.682	1284.6	0.958	10.34659	10.19501	Si
SLV 13	-14528	-16626	361	0.507	1663	0.967	7.62939	5.43686	Si
SLV 1	-14364	-20684	-434	0.508	1646.4	0.966	7.63474	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.743	SLU 84	Si
V_SLU	3.145	SLU 84	Si
PF_SLV	3.518	SLV 8	Si
V_SLV	2.762	SLV 11	Si
PFFP_SLV	13.617	SLV 8	Si
R_SLV	0.685	SLV 5	No

Maschio 60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.693	6.526	-17.768	6.526	L4	L5	1.925	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	2.29	2819.28	-26243	-0.0001112	0.0003743	0.0035	1.925	13179.52	16915.92	16915.92	6	No	Si
SLU 75	4.19	-297.65	-23671	-0.0000751	0.0003743	0.0035	1.925	12955.71	16600.74	16600.74	55.77	No	Si
SLU 65	2.29	2590.74	-22629	-0.0000951	0.0003743	0.0035	1.925	12798.88	15464.1	15464.1	5.97	No	Si
SLU 65	4.19	-363.37	-20048	-0.0000635	0.0003743	0.0035	1.925	12246.57	15078.76	15078.76	41.5	No	Si
SLU 52	2.29	2581.83	-22682	-0.0000952	0.0003743	0.0035	1.925	12807.81	15484.73	15484.73	6	No	Si
SLU 52	4.19	-346.58	-20134	-0.0000636	0.0003743	0.0035	1.925	12268.85	15116.28	15116.28	43.62	No	Si
SLU 76	2.29	2858.93	-25946	-0.0001105	0.0003743	0.0035	1.925	13165.53	16795.07	16795.07	5.87	No	Si
SLU 76	4.19	-283.99	-23368	-0.0000739	0.0003743	0.0035	1.925	12914.05	16516.59	16516.59	58.16	No	Si
SLU 73	2.29	2842.65	-25729	-0.0001095	0.0003743	0.0035	1.925	13153.34	16705.85	16705.85	5.88	No	Si
SLU 73	4.19	-298.97	-23151	-0.0000733	0.0003743	0.0035	1.925	12882.16	16456.89	16456.89	55.05	No	Si
SLU 68	2.29	2607.02	-22846	-0.0000961	0.0003743	0.0035	1.925	12834.69	15548.48	15548.48	5.96	No	Si
SLU 68	4.19	-348.39	-20265	-0.000064	0.0003743	0.0035	1.925	12302.13	15173.38	15173.38	43.55	No	Si
SLU 82	2.29	2883.49	-27042	-0.0001151	0.0003743	0.0035	1.925	13201.82	17244.93	17244.93	5.98	No	Si
SLU 82	4.19	-281.83	-24471	-0.0000778	0.0003743	0.0035	1.925	13050.12	16828.11	16828.11	59.71	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 55	2.29	2598.11	-22899	-0.0000962	0.0003743	0.0035	1.925	12843.21	15569.2	15569.2	5.99	No	Si
SLU 55	4.19	-331.6	-20352	-0.0000642	0.0003743	0.0035	1.925	12323.76	15211.21	15211.21	45.87	No	Si
SLU 78	2.29	2835.56	-26460	-0.0001122	0.0003743	0.0035	1.925	13187.8	17004.83	17004.83	6	No	Si
SLU 78	4.19	-282.67	-23889	-0.0000757	0.0003743	0.0035	1.925	12983.63	16661.84	16661.84	58.94	No	Si
SLU 84	2.29	2899.77	-27259	-0.0001161	0.0003743	0.0035	1.925	13204.02	17330.98	17330.98	5.98	No	Si
SLU 84	4.19	-266.84	-24688	-0.0000784	0.0003743	0.0035	1.925	13071.94	16891.36	16891.36	63.3	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	2.29	5721.24	-8072	-0.0001215	0.0005615	0.0035	1.925		7374.69	7374.69	1.29		Si
SLV 15	4.19	-2378.82	-5114	-0.0000368	0.0005615	0.0035	1.925		5696.11	5696.11	2.39		Si
SLV 14	2.29	6697.77	-6211	-0.0091993	0.0005615	0.0035	1.925		5812.47	5812.47	0.87		No
SLV 14	4.19	-2899.59	-3190	-0.0001481	0.0005615	0.0035	1.54		4004.85	4004.85	1.38		Si
SLD 13	2.29	3800.2	-13001	-0.0000712	0.0005615	0.0035	1.925		10965.97	10965.97	2.89		Si
SLD 13	4.19	-1308.79	-10602	-0.0000414	0.0005615	0.0035	1.925		10217.85	10217.85	7.81		Si
SLV 13	2.29	6371.12	-6863	-0.0026571	0.0005615	0.0035	1.925		6366.5	6366.5	1		No
SLV 13	4.19	-2672.28	-3887	-0.0000508	0.0005615	0.0035	1.54		4625.17	4625.17	1.73		Si
SLD 14	2.29	3940.44	-12721	-0.0000716	0.0005615	0.0035	1.925		10764.83	10764.83	2.73		Si
SLD 14	4.19	-1406.38	-10303	-0.0000414	0.0005615	0.0035	1.925		9987.35	9987.35	7.1		Si
SLV 9	2.29	4155.92	-12651	-0.0000734	0.0005615	0.0035	1.925		10714.37	10714.37	2.58		Si
SLV 9	4.19	-1412.01	-10362	-0.0000416	0.0005615	0.0035	1.925		10032.3	10032.3	7.1		Si
SLV 16	2.29	6047.9	-7420	-0.000206	0.0005615	0.0035	1.925		6833.57	6833.57	1.13		Si
SLV 16	4.19	-2606.13	-4417	-0.0000425	0.0005615	0.0035	1.54		5087.12	5087.12	1.95		Si
SLD 16	2.29	3657.88	-13243	-0.0000706	0.0005615	0.0035	1.925		11140.09	11140.09	3.05		Si
SLD 16	4.19	-1279.83	-10834	-0.0000418	0.0005615	0.0035	1.925		10396.95	10396.95	8.12		Si
SLD 15	2.29	3517.64	-13523	-0.0000702	0.0005615	0.0035	1.925		11342.32	11342.32	3.22		Si
SLD 15	4.19	-1182.24	-11133	-0.0000418	0.0005615	0.0035	1.925		10629.16	10629.16	8.99		Si
SLV 10	2.29	4365.86	-12232	-0.0000743	0.0005615	0.0035	1.925		10414.6	10414.6	2.39		Si
SLV 10	4.19	-1558.1	-9914	-0.0000416	0.0005615	0.0035	1.925		9688.77	9688.77	6.22		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	2.29	2782.8	-27018	-22498	1684	1.925	1.925	-41740	10833	5839	38062	16140	4909	21049	No	12.5	Si
SLU 81	4.19	-297.52	-24456	-20364	1661	1.925	1.925	-37782	10833	5839	38062	16140	4909	21049	No	12.67	Si
SLU 76	2.29	2858.93	-25946	-21606	1682	1.925	1.925	-40085	10833	5839	38062	16140	4909	21049	No	12.52	Si
SLU 76	4.19	-283.99	-23368	-19459	1735	1.925	1.925	-36102	10833	5839	38062	16140	4909	21049	No	12.13	Si
SLU 80	2.29	2808.09	-26147	-21773	1666	1.925	1.925	-40395	10833	5839	38062	16140	4909	21049	No	12.63	Si
SLU 80	4.19	-279.46	-23576	-19632	1690	1.925	1.925	-36423	10833	5839	38062	16140	4909	21049	No	12.46	Si
SLU 73	2.29	2842.65	-25729	-21425	1681	1.925	1.925	-39749	10833	5839	38062	16140	4909	21049	No	12.52	Si
SLU 73	4.19	-298.97	-23151	-19278	1734	1.925	1.925	-35766	10833	5839	38062	16140	4909	21049	No	12.14	Si
SLU 77	2.29	2734.88	-26436	-22014	1658	1.925	1.925	-40841	10833	5839	38062	16140	4909	21049	No	12.69	Si
SLU 77	4.19	-298.36	-23874	-19880	1637	1.925	1.925	-36883	10833	5839	38062	16140	4909	21049	No	12.86	Si
SLU 82	2.29	2883.49	-27042	-22518	1708	1.925	1.925	-41777	10833	5839	38062	16140	4909	21049	No	12.32	Si
SLU 82	4.19	-281.83	-24471	-20377	1729	1.925	1.925	-37805	10833	5839	38062	16140	4909	21049	No	12.17	Si
SLU 84	2.29	2899.77	-27259	-22699	1709	1.925	1.925	-42113	10833	5839	38062	16140	4909	21049	No	12.32	Si
SLU 84	4.19	-266.84	-24688	-20558	1730	1.925	1.925	-38141	10833	5839	38062	16140	4909	21049	No	12.17	Si
SLU 83	2.29	2799.08	-27235	-22679	1685	1.925	1.925	-42076	10833	5839	38062	16140	4909	21049	No	12.5	Si
SLU 83	4.19	-282.53	-24673	-20546	1662	1.925	1.925	-38118	10833	5839	38062	16140	4909	21049	No	12.67	Si
SLU 75	2.29	2819.28	-26243	-21853	1682	1.925	1.925	-40543	10833	5839	38062	16140	4909	21049	No	12.51	Si
SLU 75	4.19	-297.65	-23671	-19711	1705	1.925	1.925	-36570	10833	5839	38062	16140	4909	21049	No	12.35	Si
SLU 78	2.29	2835.56	-26460	-22033	1682	1.925	1.925	-40878	10833	5839	38062	16140	4909	21049	No	12.51	Si
SLU 78	4.19	-282.67	-23889	-19893	1705	1.925	1.925	-36906	10833	5839	38062	16140	4909	21049	No	12.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	2.29	-2940.87	-28973	-24126	-3441	1.925	1.925	-44761	16250	8759	38062	24210	4909	29119		8.46	Si
SLV 3	4.19	2316.21	-28061	-23367	-2899	1.925	1.925	-43352	16250	8759	38062	24210	4909	29119		10.04	Si
SLV 15	2.29	5721.24	-8072	-6722	4819	1.925	0.7612	-12471	12911	2752	38062	24210	4909	29119		6.04	Si
SLV 15	4.19	-2378.82	-5114	-4258	4301	1.925	1.492	-10237	12464	5207	38062	24210	4909	29119		6.77	Si
SLV 4	2.29	-2614.22	-28321	-23583	-3129	1.925	1.925	-43754	16250	8759	38062	24210	4909	29119		9.31	Si
SLV 4	4.19	2088.9	-27365	-22787	-2584	1.925	1.925	-42276	16250	8759	38062	24210	4909	29119		11.27	Si
SLV 10	2.29	4365.86	-12232	-10186	3676	1.925	1.8167	-18897	14196	7221	38062	24210	4909	29119		7.92	Si
SLV 10	4.19	-1558.1	-9914	-8256	3414	1.925	1.925	-15317	13480	7266	38062	24210	4909	29119		8.53	Si
SLV 16	2.29	6047.9	-7420	-6179	5130	1.925	0.4423	-51407	16250	2012	38062	24210	4909	29119		5.68	Si
SLV 16	4.19	-2606.13	-4417	-3678	4616	1.54	1.1176	0	0	0	38062	19368	3927	23295		5.05	Si
SLV 9	2.29	4155.92	-12651	-10535	3475	1.925	1.902	-19545	14326	7629	38062	24210	4909	29119		8.38	Si
SLV 9	4.19	-1412.01	-10362	-8628	3211	1.925	1.925	-16008	13618	7340	38062	24210	4909	29119		9.07	Si
SLD 14	2.29	3940.44	-12721	-10593	3172	1.925	1.925	-19654	14347	7733	38062	24210	4909	29119		9.18	Si
SLD 14	4.19	-1406.38	-10303	-8580	2919	1.925	1.925	-15918	13600	7331	38062	24210	4909	29119		9.97	Si
SLV 13	2.29	6371.12	-6863	-5715	5507	1.925	0.1025	-152884	16250	467	38062	24210	4909	29119		5.29	Si
SLV 13	4.19	-2672.28	-3887	-3236	4935	1.54	0.8248	0	0	0	38062	19368	3927	23295		4.72	Si
SLV 14	2.29	6697.77	-6211	-5172	5819	1.925	0	-201530	16250	0	38062	24210	4909	29119		5	Si
SLV 14	4.19	-2899.59	-3190	-2656	5250	1.54	0.1607	0	0	0	38062	19368	3927	23295		4.44	Si
SLD 13	2.29	3800.2	-13001	-10826	3039	1.925	1.925	-20086	14434	7780	38062	24210	4909	29119		9.58	Si
SLD 13	4.19	-1308.79	-10602	-8829	2784	1.925	1.925	-16380	13693	7380	38062	24210	4909	29119		10.46	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.31	8359	-4506	150.62	596.27	3.96	Si
SLV 13	179667	0.31	9607	-5178	150.62	679.33	4.51	Si
SLV 16	179667	0.31	11092	-5979	150.62	776.24	5.15	Si
SLV 15	179667	0.31	12340	-6651	150.62	855.93	5.68	Si
SLV 10	179667	0.31	19963	-10760	150.62	1309.48	8.69	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.31	20765	-11192	150.62	1353.85	8.99	Si
SLV 12	179667	0.31	29073	-15670	150.62	1776.21	11.79	Si
SLV 11	179667	0.31	29875	-16103	150.62	1813.35	12.04	Si
SLV 6	179667	0.31	32451	-17491	150.62	1928.4	12.8	Si
SLV 5	179667	0.31	33252	-17923	150.62	1962.87	13.03	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-18677	-22746	-882	0.532	2161.9	0.964	8.02763	10.19501	No
SLV 8	-18380	-22241	-882	0.54	2131.7	0.963	8.14139	10.19501	No
SLV 5	-15720	-15818	855	0.618	1861.2	0.959	9.36295	10.19501	No
SLV 6	-15424	-15313	855	0.628	1831	0.958	9.52086	10.19501	No
SLV 11	-13472	-15014	-846	0.704	1632.6	0.953	10.72953	10.19501	Si
SLV 12	-13175	-14510	-845	0.717	1602.4	0.953	10.94066	10.19501	Si
SLV 3	-23798	-29481	-316	0.456	2683.2	0.97	6.82534	5.43686	Si
SLV 4	-23336	-28696	-316	0.463	2636.2	0.97	6.94371	5.43686	Si
SLV 9	-10515	-8086	892	0.861	1332.5	0.944	13.25177	10.19501	Si
SLV 1	-22911	-27403	205	0.475	2592.9	0.969	7.12483	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.875	SLU 76	Si
V_SLU	12.134	SLU 76	Si
PF_SLV	0.868	SLV 14	No
V_SLV	4.437	SLV 14	Si
PFFP_SLV	3.959	SLV 14	Si
R_SLV	0.787	SLV 7	No

Maschio 61

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.768	6.526	-12.888	6.526	L4	L5	3.88	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	2.29	2683.81	-70234	-0.0001214	0.0003743	0.0035	3.88	49734.93	76505.27	76505.27	28.51	No	Si
SLU 81	4.19	-6081.28	-71081	-0.0001331	0.0003743	0.0035	3.88	49278.94	78171.33	78171.33	12.85	No	Si
SLU 78	2.29	2682.38	-69538	-0.00012	0.0003743	0.0035	3.88	50090.87	76229.12	76229.12	28.42	No	Si
SLU 78	4.19	-5807	-70020	-0.00013	0.0003743	0.0035	3.88	49846.45	77810.38	77810.38	13.4	No	Si
SLU 74	2.29	2601.17	-68642	-0.0001179	0.0003743	0.0035	3.88	50524.36	75876.94	75876.94	29.17	No	Si
SLU 74	4.19	-5868.89	-69248	-0.0001286	0.0003743	0.0035	3.88	50234.44	77553.92	77553.92	13.21	No	Si
SLU 77	2.29	2578.49	-69454	-0.0001195	0.0003743	0.0035	3.88	50132.97	76195.72	76195.72	29.55	No	Si
SLU 77	4.19	-5850.85	-70033	-0.0001302	0.0003743	0.0035	3.88	49839.64	77814.8	77814.8	13.3	No	Si
SLU 82	2.29	2787.7	-70319	-0.0001219	0.0003743	0.0035	3.88	49690.51	76539	76539	27.46	No	Si
SLU 82	4.19	-6037.42	-71067	-0.0001329	0.0003743	0.0035	3.88	49286.24	78166.78	78166.78	12.95	No	Si
SLU 83	2.29	2661.13	-71046	-0.000123	0.0003743	0.0035	3.88	49298.19	76830.52	76830.52	28.87	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	4.19	-6063.24	-71866	-0.0001347	0.0003743	0.0035	3.88	48833.66	78444.62	78444.62	12.94	No	Si
SLU 79	2.29	2540.04	-68741	-0.0001179	0.0003743	0.0035	3.88	50477.59	75915.88	75915.88	29.89	No	Si
SLU 79	4.19	-5769.56	-69247	-0.0001283	0.0003743	0.0035	3.88	50235.01	77553.53	77553.53	13.44	No	Si
SLU 84	2.29	2765.02	-71130	-0.0001235	0.0003743	0.0035	3.88	49251.37	76864.58	76864.58	27.8	No	Si
SLU 84	4.19	-6019.38	-71852	-0.0001346	0.0003743	0.0035	3.88	48841.33	78439.98	78439.98	13.03	No	Si
SLU 75	2.29	2705.06	-68726	-0.0001184	0.0003743	0.0035	3.88	50484.67	75910	75910	28.06	No	Si
SLU 75	4.19	-5825.04	-69235	-0.0001284	0.0003743	0.0035	3.88	50240.89	77549.58	77549.58	13.31	No	Si
SLU 73	2.29	2758.56	-67259	-0.0001156	0.0003743	0.0035	3.88	51137.94	75341.42	75341.42	27.31	No	Si
SLU 73	4.19	-5732.54	-67654	-0.0001249	0.0003743	0.0035	3.88	50969.22	77040.8	77040.8	13.44	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2.29	26600.17	-41458	-0.000122	0.0005615	0.0035	3.88		65569.04	65569.04	2.46		Si
SLV 14	4.19	-16251.58	-33013	-0.0000837	0.0005615	0.0035	3.88		58662.96	58662.96	3.61		Si
SLV 9	2.29	15260.33	-48940	-0.0001073	0.0005615	0.0035	3.88		74148.77	74148.77	4.86		Si
SLV 9	4.19	-9554.66	-45820	-0.0000886	0.0005615	0.0035	3.88		74954.03	74954.03	7.84		Si
SLV 15	2.29	20501.56	-39436	-0.000104	0.0005615	0.0035	3.88		63294.22	63294.22	3.09		Si
SLV 15	4.19	-13724.72	-31973	-0.0000762	0.0005615	0.0035	3.88		57215.07	57215.07	4.17		Si
SLV 2	2.29	-16833.04	-53584	-0.000119	0.0005615	0.0035	3.88		83021.76	83021.76	4.93		Si
SLV 2	4.19	5678.21	-60964	-0.0001042	0.0005615	0.0035	3.88		86885.35	86885.35	15.3		Si
SLV 3	2.29	-22931.65	-51561	-0.0001305	0.0005615	0.0035	3.88		81290.87	81290.87	3.54		Si
SLV 3	4.19	8205.07	-59924	-0.0001086	0.0005615	0.0035	3.88		86066.14	86066.14	10.49		Si
SLV 10	2.29	16312.05	-48656	-0.0001094	0.0005615	0.0035	3.88		73818.32	73818.32	4.53		Si
SLV 10	4.19	-10191.37	-45235	-0.0000891	0.0005615	0.0035	3.88		74248.26	74248.26	7.29		Si
SLV 16	2.29	22138	-38994	-0.0001072	0.0005615	0.0035	3.88		62800.59	62800.59	2.84		Si
SLV 16	4.19	-14715.41	-31062	-0.0000771	0.0005615	0.0035	3.88		55908.95	55908.95	3.8		Si
SLV 13	2.29	24963.73	-41900	-0.0001188	0.0005615	0.0035	3.88		66068.34	66068.34	2.65		Si
SLV 13	4.19	-15260.89	-33924	-0.0000828	0.0005615	0.0035	3.88		59880.23	59880.23	3.92		Si
SLV 1	2.29	-18469.48	-54025	-0.0001238	0.0005615	0.0035	3.88		83392.94	83392.94	4.52		Si
SLV 1	4.19	6668.9	-61875	-0.0001081	0.0005615	0.0035	3.88		87606.17	87606.17	13.14		Si
SLV 4	2.29	-21295.21	-51120	-0.0001257	0.0005615	0.0035	3.88		80842.1	80842.1	3.8		Si
SLV 4	4.19	7214.38	-59013	-0.0001047	0.0005615	0.0035	3.88		85351.51	85351.51	11.83		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	2.29	2682.38	-69538	-57905	3902	3.88	3.88	-53300	10833	11769	38062	32532	9894	42426	No	10.87	Si
SLU 78	4.19	-5807	-70020	-58306	3826	3.88	3.88	-53669	10833	11769	38062	32532	9894	42426	No	11.09	Si
SLU 74	2.29	2601.17	-68642	-57159	3876	3.88	3.88	-52613	10833	11769	38062	32532	9894	42426	No	10.95	Si
SLU 74	4.19	-5868.89	-69248	-57664	3803	3.88	3.88	-53078	10833	11769	38062	32532	9894	42426	No	11.16	Si
SLU 82	2.29	2787.7	-70319	-58555	4048	3.88	3.88	-53898	10833	11769	38062	32532	9894	42426	No	10.48	Si
SLU 82	4.19	-6037.42	-71067	-59179	3973	3.88	3.88	-54472	10833	11769	38062	32532	9894	42426	No	10.68	Si
SLU 83	2.29	2661.13	-71046	-59161	3987	3.88	3.88	-54456	10833	11769	38062	32532	9894	42426	No	10.64	Si
SLU 83	4.19	-6063.24	-71866	-59844	3912	3.88	3.88	-55084	10833	11769	38062	32532	9894	42426	No	10.85	Si
SLU 81	2.29	2683.81	-70234	-58485	4005	3.88	3.88	-53834	10833	11769	38062	32532	9894	42426	No	10.59	Si
SLU 81	4.19	-6081.28	-71081	-59190	3931	3.88	3.88	-54483	10833	11769	38062	32532	9894	42426	No	10.79	Si
SLU 84	2.29	2765.02	-71130	-59231	4031	3.88	3.88	-54521	10833	11769	38062	32532	9894	42426	No	10.53	Si
SLU 84	4.19	-6019.38	-71852	-59833	3954	3.88	3.88	-55074	10833	11769	38062	32532	9894	42426	No	10.73	Si
SLU 77	2.29	2578.49	-69454	-57835	3859	3.88	3.88	-53235	10833	11769	38062	32532	9894	42426	No	11	Si
SLU 77	4.19	-5850.85	-70033	-58317	3784	3.88	3.88	-53679	10833	11769	38062	32532	9894	42426	No	11.21	Si
SLU 73	2.29	2758.56	-67259	-56007	3910	3.88	3.88	-51553	10833	11769	38062	32532	9894	42426	No	10.85	Si
SLU 73	4.19	-5732.54	-67654	-56337	3838	3.88	3.88	-51856	10833	11769	38062	32532	9894	42426	No	11.05	Si
SLU 75	2.29	2705.06	-68726	-57229	3919	3.88	3.88	-52678	10833	11769	38062	32532	9894	42426	No	10.82	Si
SLU 75	4.19	-5825.04	-69235	-57653	3845	3.88	3.88	-53067	10833	11769	38062	32532	9894	42426	No	11.03	Si
SLU 76	2.29	2735.87	-68071	-56683	3893	3.88	3.88	-52175	10833	11769	38062	32532	9894	42426	No	10.9	Si
SLU 76	4.19	-5714.5	-68439	-56991	3819	3.88	3.88	-52458	10833	11769	38062	32532	9894	42426	No	11.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	2.29	26600.17	-41458	-34523	23196	3.88	3.88	-31777	16250	17654	38062	48797	9894	55716		2.4	Si
SLV 14	4.19	-16251.58	-33013	-27490	22458	3.88	3.88	-25304	15477	16815	38062	48797	9894	54877		2.44	Si
SLV 10	2.29	16312.05	-48656	-40516	13265	3.88	3.88	-37294	16250	17654	38062	48797	9894	55716		4.2	Si
SLV 10	4.19	-10191.37	-45235	-37668	12582	3.88	3.88	-34672	16250	17654	38062	48797	9894	55716		4.43	Si
SLV 4	2.29	-21295.21	-51120	-42568	-16380	3.88	3.88	-39183	16250	17654	38062	48797	9894	55716		3.4	Si
SLV 4	4.19	7214.38	-59013	-49141	-15745	3.88	3.88	-45233	16250	17654	38062	48797	9894	55716		3.54	Si
SLV 3	2.29	-22931.65	-51561	-42936	-17817	3.88	3.88	-39521	16250	17654	38062	48797	9894	55716		3.13	Si
SLV 3	4.19	8205.07	-59924	-49900	-17180	3.88	3.88	-45931	16250	17654	38062	48797	9894	55716		3.24	Si
SLV 15	2.29	20501.56	-39436	-32839	19005	3.88	3.88	-30227	16250	17654	38062	48797	9894	55716		2.93	Si
SLV 15	4.19	-13724.72	-31973	-26624	18550	3.88	3.88	-24507	15318	16642	38062	48797	9894	54704		2.95	Si
SLV 1	2.29	-18469.48	-54025	-44988	-15063	3.88	3.88	-41410	16250	17654	38062	48797	9894	55716		3.7	Si
SLV 1	4.19	6668.9	-61875	-51524	-14707	3.88	3.88	-47427	16250	17654	38062	48797	9894	55716		3.79	Si
SLV 2	2.29	-16833.04	-53584	-44620	-13626	3.88	3.88	-41071	16250	17654	38062	48797	9894	55716		4.09	Si
SLV 2	4.19	5678.21	-60964	-50766	-13272	3.88	3.88	-46728	16250	17654	38062	48797	9894	55716		4.2	Si
SLV 13	2.29	24963.73	-41900	-34891	21759	3.88	3.88	-32116	16250	17654	38062	48797	9894	55716		2.56	Si
SLV 13	4.19	-15260.89	-33924	-28249	21023	3.88	3.88	-26002	15617	16966	38062	48797	9894	55029		2.62	Si
SLV 16	2.29	22138	-38994	-32471	20442	3.88	3.88	-29889	16250	17654	38062	48797	9894	55716		2.73	Si
SLV 16	4.19	-14715.41	-31062	-25866	19985	3.88	3.88	-23809	15178	16490	38062	48797	9894	54552		2.73	Si
SLV 9	2.29	15260.33	-48940	-40753	12341	3.88	3.88	-37512	16250	17654	38062	48797	9894	55716		4.51	Si
SLV 9	4.19	-9554.66	-45820	-38155	11660	3.88	3.88	-35121	16250	17654	38062	48797	9894	55716		4.78	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.31	32900	-35743	303.59	3925.98	12.93	Si
SLV 15	179667	0.31	33460	-36351	303.59	3974.08	13.09	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.31	34580	-37568	303.59	4068.6	13.4	Si
SLV 13	179667	0.31	35140	-38176	303.59	4114.83	13.55	Si
SLV 12	179667	0.31	36878	-40065	303.59	4254.56	14.01	Si
SLV 11	179667	0.31	37238	-40455	303.59	4282.69	14.11	Si
SLV 8	179667	0.31	41882	-45501	303.59	4623.14	15.23	Si
SLV 7	179667	0.31	42242	-45892	303.59	4647.69	15.31	Si
SLV 10	179667	0.31	42479	-46149	303.59	4663.74	15.36	Si
SLV 9	179667	0.31	42838	-46539	303.59	4687.86	15.44	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-48239	-47423	1368	0.439	5435.9	0.971	6.57962	10.19501	No
SLV 6	-47745	-47096	1369	0.443	5385.5	0.97	6.63893	10.19501	No
SLV 9	-40705	-42821	1356	0.508	4668.9	0.966	7.63963	10.19501	No
SLV 10	-40211	-42493	1357	0.513	4618.6	0.966	7.72184	10.19501	No
SLV 7	-40059	-42125	-1400	0.514	4603.2	0.966	7.73241	10.19501	No
SLV 8	-39565	-41797	-1399	0.519	4552.9	0.965	7.81747	10.19501	No
SLV 11	-32525	-37523	-1412	0.613	3836.7	0.959	9.28187	10.19501	No
SLV 12	-32031	-37195	-1412	0.621	3786.4	0.959	9.40797	10.19501	No
SLV 1	-54303	-51029	413	0.414	6053.4	0.973	6.18183	5.43686	Si
SLV 2	-53534	-50519	414	0.419	5975.1	0.973	6.25901	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.854	SLU 81	Si
V_SLU	10.48	SLU 82	Si
PF_SLV	2.465	SLV 14	Si
V_SLV	2.402	SLV 14	Si
PFFP_SLV	12.932	SLV 16	Si
R_SLV	0.645	SLV 5	No

Maschio 62

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.888	6.526	-8.008	6.526	L4	L5	3.88	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	2.29	834.84	-57978	-0.0000925	0.0003743	0.0035	3.88	53519.26	71994.91	71994.91	86.24	No	Si
SLU 58	4.19	2454.51	-62948	-0.0001062	0.0003743	0.0035	3.88	52619.83	73733.57	73733.57	30.04	No	Si
SLU 45	2.29	582.05	-51021	-0.0000793	0.0003743	0.0035	3.88	53323	67141.57	67141.57	115.35	No	Si
SLU 45	4.19	2359.65	-54845	-0.0000907	0.0003743	0.0035	3.88	53640.99	70358.18	70358.18	29.82	No	Si
SLU 71	2.29	815.33	-58244	-0.0000929	0.0003743	0.0035	3.88	53493.01	72085.06	72085.06	88.41	No	Si
SLU 71	4.19	2502.76	-62958	-0.0001064	0.0003743	0.0035	3.88	52617.18	73737.14	73737.14	29.46	No	Si
SLU 50	2.29	595.71	-51304	-0.0000798	0.0003743	0.0035	3.88	53364.01	67374.85	67374.85	113.1	No	Si
SLU 50	4.19	2398.08	-54919	-0.000091	0.0003743	0.0035	3.88	53642.09	70415.16	70415.16	29.36	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	2.29	515.3	-49513	-0.0000765	0.0003743	0.0035	3.88	53056.45	65905.95	65905.95	127.9	No	Si
SLU 43	4.19	2324.47	-53204	-0.0000877	0.0003743	0.0035	3.88	53567.36	68963.01	68963.01	29.67	No	Si
SLU 66	2.29	801.67	-57962	-0.0000923	0.0003743	0.0035	3.88	53520.73	71989.63	71989.63	89.8	No	Si
SLU 66	4.19	2464.32	-62883	-0.0001061	0.0003743	0.0035	3.88	52637.03	73710.24	73710.24	29.91	No	Si
SLU 79	2.29	1054.46	-64919	-0.0001062	0.0003743	0.0035	3.88	52023.17	74457.2	74457.2	70.61	No	Si
SLU 79	4.19	2559.19	-70986	-0.0001226	0.0003743	0.0035	3.88	49331.1	76806.49	76806.49	30.01	No	Si
SLU 48	2.29	622.25	-51917	-0.000081	0.0003743	0.0035	3.88	53443.46	67883.92	67883.92	109.09	No	Si
SLU 48	4.19	2396.45	-55703	-0.0000924	0.0003743	0.0035	3.88	53641.89	71007.41	71007.41	29.63	No	Si
SLU 64	2.29	734.92	-56454	-0.0000894	0.0003743	0.0035	3.88	53621.49	71486.32	71486.32	97.27	No	Si
SLU 64	4.19	2429.15	-61243	-0.0001029	0.0003743	0.0035	3.88	53026.09	73123.12	73123.12	30.1	No	Si
SLU 69	2.29	841.87	-58858	-0.0000941	0.0003743	0.0035	3.88	53423.16	72293.73	72293.73	85.87	No	Si
SLU 69	4.19	2501.12	-63741	-0.0001079	0.0003743	0.0035	3.88	52396.11	74022.44	74022.44	29.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	2.29	18096.12	-48698	-0.0001138	0.0005615	0.0035	3.88		73866.77	73866.77	4.08		Si
SLV 10	4.19	-5771.74	-53685	-0.0000923	0.0005615	0.0035	3.88		83106.45	83106.45	14.4		Si
SLV 3	2.29	-28749.04	-38197	-0.0001231	0.0005615	0.0035	3.88		65559.51	65559.51	2.28		Si
SLV 3	4.19	18687.25	-40609	-0.0001017	0.0005615	0.0035	3.88		64611.3	64611.3	3.46		Si
SLV 1	2.29	-23227.49	-40311	-0.0001119	0.0005615	0.0035	3.88		68249.44	68249.44	2.94		Si
SLV 1	4.19	17130.81	-43192	-0.0001022	0.0005615	0.0035	3.88		67535.63	67535.63	3.94		Si
SLV 15	2.29	22437	-47301	-0.0001219	0.0005615	0.0035	3.88		72246.34	72246.34	3.22		Si
SLV 15	4.19	-12093.3	-51951	-0.0001047	0.0005615	0.0035	3.88		81661.5	81661.5	6.75		Si
SLV 14	2.29	29919.8	-49418	-0.0001441	0.0005615	0.0035	3.88		74707.08	74707.08	2.5		Si
SLV 14	4.19	-14963.86	-54664	-0.0001163	0.0005615	0.0035	3.88		83933.03	83933.03	5.61		Si
SLV 4	2.29	-26787.79	-38199	-0.0001174	0.0005615	0.0035	3.88		65562.78	65562.78	2.45		Si
SLV 4	4.19	17373.13	-40740	-0.0000987	0.0005615	0.0035	3.88		64758.73	64758.73	3.73		Si
SLV 7	2.29	-16925.36	-38917	-0.0000947	0.0005615	0.0035	3.88		66471.91	66471.91	3.93		Si
SLV 7	4.19	9495.13	-41589	-0.0000816	0.0005615	0.0035	3.88		65716.5	65716.5	6.92		Si
SLV 2	2.29	-21266.24	-40313	-0.0001073	0.0005615	0.0035	3.88		68252.75	68252.75	3.21		Si
SLV 2	4.19	15816.69	-43323	-0.0000993	0.0005615	0.0035	3.88		67684.82	67684.82	4.28		Si
SLV 16	2.29	24398.24	-47304	-0.0001267	0.0005615	0.0035	3.88		72249.33	72249.33	2.96		Si
SLV 16	4.19	-13407.42	-52082	-0.0001081	0.0005615	0.0035	3.88		81769.82	81769.82	6.1		Si
SLV 13	2.29	27958.55	-49416	-0.0001392	0.0005615	0.0035	3.88		74704.06	74704.06	2.67		Si
SLV 13	4.19	-13649.74	-54533	-0.0001128	0.0005615	0.0035	3.88		83822.13	83822.13	6.14		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	2.29	1023.61	-66091	-55035	720	3.88	3.88	-50658	10833	11769	38062	32532	9894	42426	No	58.92	Si
SLU 82	4.19	2450.96	-72731	-60564	692	3.88	3.88	-55748	10833	11769	38062	32532	9894	42426	No	61.35	Si
SLU 84	2.29	1063.81	-66986	-55781	718	3.88	3.88	-51344	10833	11769	38062	32532	9894	42426	No	59.1	Si
SLU 84	4.19	2487.76	-73589	-61278	688	3.88	3.88	-56405	10833	11769	38062	32532	9894	42426	No	61.65	Si
SLU 39	2.29	1015.54	-56393	-46959	746	3.88	3.88	-43225	10833	11769	38062	32532	9894	42426	No	56.86	Si
SLU 39	4.19	2000.96	-62554	-52089	723	3.88	3.88	-47947	10833	11769	38062	32532	9894	42426	No	58.64	Si
SLU 40	2.29	962.62	-56496	-47045	740	3.88	3.88	-43303	10833	11769	38062	32532	9894	42426	No	57.33	Si
SLU 40	4.19	1942.15	-62573	-52106	716	3.88	3.88	-47962	10833	11769	38062	32532	9894	42426	No	59.24	Si
SLU 32	2.29	979.8	-55041	-45834	667	3.88	3.88	-42188	10833	11769	38062	32532	9894	42426	No	63.59	Si
SLU 32	4.19	2011.95	-60754	-50591	644	3.88	3.88	-46567	10833	11769	38062	32532	9894	42426	No	65.91	Si
SLU 83	2.29	1116.74	-66884	-55695	724	3.88	3.88	-51266	10833	11769	38062	32532	9894	42426	No	58.59	Si
SLU 83	4.19	2546.57	-73569	-61262	695	3.88	3.88	-56390	10833	11769	38062	32532	9894	42426	No	61.01	Si
SLU 41	2.29	1055.75	-57288	-47705	744	3.88	3.88	-43911	10833	11769	38062	32532	9894	42426	No	57.02	Si
SLU 41	4.19	2037.76	-63411	-52804	720	3.88	3.88	-48604	10833	11769	38062	32532	9894	42426	No	58.92	Si
SLU 42	2.29	1002.82	-57391	-47790	738	3.88	3.88	-43990	10833	11769	38062	32532	9894	42426	No	57.5	Si
SLU 42	4.19	1978.95	-63431	-52820	713	3.88	3.88	-48619	10833	11769	38062	32532	9894	42426	No	59.53	Si
SLU 81	2.29	1076.53	-65988	-54949	726	3.88	3.88	-50579	10833	11769	38062	32532	9894	42426	No	58.41	Si
SLU 81	4.19	2509.77	-72712	-60548	699	3.88	3.88	-55733	10833	11769	38062	32532	9894	42426	No	60.71	Si
SLU 35	2.29	1020.01	-55937	-46579	665	3.88	3.88	-42875	10833	11769	38062	32532	9894	42426	No	63.8	Si
SLU 35	4.19	2048.75	-61612	-51305	640	3.88	3.88	-47225	10833	11769	38062	32532	9894	42426	No	66.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	2.29	24398.24	-47304	-39391	21442	3.88	3.88	-36258	16250	17654	38062	48797	9894	55716		2.6	Si
SLV 16	4.19	-13407.42	-52082	-43369	21162	3.88	3.88	-39920	16250	17654	38062	48797	9894	55716		2.63	Si
SLV 7	2.29	-16925.36	-38917	-32407	-12228	3.88	3.88	-29830	16250	17654	38062	48797	9894	55716		4.56	Si
SLV 7	4.19	9495.13	-41589	-34632	-10675	3.88	3.88	-31877	16250	17654	38062	48797	9894	55716		5.22	Si
SLV 3	2.29	-28749.04	-38197	-31807	-24082	3.88	3.562	-32454	16250	16207	38062	48797	9894	54269		2.25	Si
SLV 3	4.19	18687.25	-40609	-33816	-23019	3.88	3.88	-31127	16250	17654	38062	48797	9894	55716		2.42	Si
SLV 2	2.29	-21266.24	-40313	-33569	-19101	3.88	3.88	-30900	16250	17654	38062	48797	9894	55716		2.92	Si
SLV 2	4.19	15816.69	-43323	-36076	-18861	3.88	3.88	-33207	16250	17654	38062	48797	9894	55716		2.95	Si
SLV 14	2.29	29919.8	-49418	-41151	24683	3.88	3.88	-37878	16250	17654	38062	48797	9894	55716		2.26	Si
SLV 14	4.19	-14963.86	-54664	-45520	23581	3.88	3.88	-41900	16250	17654	38062	48797	9894	55716		2.36	Si
SLV 15	2.29	22437	-47301	-39388	19702	3.88	3.88	-36256	16250	17654	38062	48797	9894	55716		2.83	Si
SLV 15	4.19	-12093.3	-51951	-43260	19423	3.88	3.88	-39820	16250	17654	38062	48797	9894	55716		2.87	Si
SLV 10	2.29	18096.12	-48698	-40551	12829	3.88	3.88	-37326	16250	17654	38062	48797	9894	55716		4.34	Si
SLV 10	4.19	-5771.74	-53685	-44704	11237	3.88	3.88	-41149	16250	17654	38062	48797	9894	55716		4.96	Si
SLV 13	2.29	27958.55	-49416	-41149	22943	3.88	3.88	-37876	16250	17654	38062	48797	9894	55716		2.43	Si
SLV 13	4.19	-13649.74	-54533	-45411	21841	3.88	3.88	-41799	16250	17654	38062	48797	9894	55716		2.55	Si
SLV 4	2.29	-26787.79	-38199	-31809	-22343	3.88	3.7162	-31083	16250	16909	38062	48797	9894	54971		2.46	Si
SLV 4	4.19	17373.13	-40740	-33925	-21280	3.88	3.88	-31227	16250	17654	38062	48797	9894	55716		2.62	Si
SLV 1	2.29	-23227.49	-40311	-33567	-20841	3.88	3.88	-30898	16250	17654	38062	48797	9894	55716		2.67	Si
SLV 1	4.19	17130.81	-43192	-35967	-20601	3.88	3.88	-33106	16250	17654	38062	48797	9894	55716		2.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.31	35767	-38858	303.59	4165.97	13.72	Si
SLV 4	179667	0.31	35813	-38907	303.59	4169.62	13.73	Si
SLV 7	179667	0.31	36942	-40133	303.59	4259.54	14.03	Si
SLV 8	179667	0.31	36971	-40165	303.59	4261.82	14.04	Si
SLV 1	179667	0.31	37523	-40765	303.59	4304.88	14.18	Si
SLV 2	179667	0.31	37569	-40814	303.59	4308.36	14.19	Si
SLV 11	179667	0.31	39697	-43127	303.59	4468.33	14.72	Si
SLV 12	179667	0.31	39726	-43159	303.59	4470.44	14.73	Si
SLV 5	179667	0.31	42795	-46492	303.59	4684.98	15.43	Si
SLV 6	179667	0.31	42824	-46524	303.59	4686.91	15.44	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-47492	-43292	1384	0.445	5359.8	0.97	6.66548	10.19501	No
SLV 9	-47410	-43260	1384	0.446	5351.5	0.97	6.67548	10.19501	No
SLV 6	-44406	-39682	1405	0.471	5045.6	0.968	7.06249	10.19501	No
SLV 5	-44324	-39650	1405	0.471	5037.3	0.968	7.07385	10.19501	No
SLV 12	-39523	-39437	-1460	0.518	4548.6	0.965	7.80345	10.19501	No
SLV 11	-39441	-39405	-1460	0.519	4540.3	0.965	7.81774	10.19501	No
SLV 8	-36437	-35827	-1438	0.556	4234.6	0.963	8.38957	10.19501	No
SLV 7	-36356	-35794	-1438	0.557	4226.3	0.963	8.40625	10.19501	No
SLV 14	-48326	-46164	363	0.458	5444.7	0.971	6.8605	5.43686	Si
SLV 13	-48198	-46114	364	0.459	5431.7	0.97	6.87631	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	29.363	SLU 50	Si
V_SLU	56.855	SLU 39	Si
PF_SLV	2.28	SLV 3	Si
V_SLV	2.254	SLV 3	Si
PFFP_SLV	13.722	SLV 3	Si
R_SLV	0.654	SLV 10	No

Maschio 63

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.008	6.526	-5.093	6.526	L4	L5	1.915	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 5	2.29	-755.01	-16501	-0.000056	0.0003743	0.0035	1.915	11024.42	13433.17	13433.17	17.79	No	Si
SLU 5	4.19	390.34	-16318	-0.0000518	0.0003743	0.0035	1.915	10954.19	12266.01	12266.01	31.42	No	Si
SLU 52	2.29	-966.08	-22853	-0.0000796	0.0003743	0.0035	1.915	12721.92	16244.12	16244.12	16.81	No	Si
SLU 52	4.19	438.97	-22865	-0.0000742	0.0003743	0.0035	1.915	12723.78	15440.87	15440.87	35.18	No	Si
SLU 47	2.29	-921.39	-20329	-0.0000704	0.0003743	0.0035	1.915	12216.87	15097	15097	16.39	No	Si
SLU 47	4.19	539.1	-19954	-0.0000653	0.0003743	0.0035	1.915	12122.73	14333.2	14333.2	26.59	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	2.29	-929.22	-20016	-0.0000694	0.0003743	0.0035	1.915	12138.5	14961.29	14961.29	16.1	No	Si
SLU 44	4.19	544.64	-19601	-0.0000642	0.0003743	0.0035	1.915	12029.59	14174.39	14174.39	26.03	No	Si
SLU 73	2.29	-991.71	-25736	-0.0000903	0.0003743	0.0035	1.915	13025.46	17072.45	17072.45	17.22	No	Si
SLU 73	4.19	348.57	-26136	-0.0000849	0.0003743	0.0035	1.915	13044.57	16754.58	16754.58	48.07	No	Si
SLU 65	2.29	-954.86	-22898	-0.0000797	0.0003743	0.0035	1.915	12728.97	16261.39	16261.39	17.03	No	Si
SLU 65	4.19	454.25	-22872	-0.0000744	0.0003743	0.0035	1.915	12724.94	15443.75	15443.75	34	No	Si
SLU 76	2.29	-983.88	-26049	-0.0000914	0.0003743	0.0035	1.915	13040.9	17168.18	17168.18	17.45	No	Si
SLU 76	4.19	343.03	-26489	-0.0000861	0.0003743	0.0035	1.915	13056.75	16898.75	16898.75	49.26	No	Si
SLU 68	2.29	-947.02	-23212	-0.0000807	0.0003743	0.0035	1.915	12775.62	16346.15	16346.15	17.26	No	Si
SLU 68	4.19	448.71	-23226	-0.0000756	0.0003743	0.0035	1.915	12777.55	15581.59	15581.59	34.73	No	Si
SLU 55	2.29	-958.24	-23167	-0.0000807	0.0003743	0.0035	1.915	12769.07	16333.78	16333.78	17.05	No	Si
SLU 55	4.19	433.42	-23218	-0.0000754	0.0003743	0.0035	1.915	12776.49	15578.68	15578.68	35.94	No	Si
SLU 2	2.29	-762.85	-16188	-0.000055	0.0003743	0.0035	1.915	10903.94	13256.45	13256.45	17.38	No	Si
SLU 2	4.19	395.88	-15964	-0.0000508	0.0003743	0.0035	1.915	10816	12063.1	12063.1	30.47	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	2.29	4782.53	-22854	-0.0001134	0.0005615	0.0035	1.915		17319.76	17319.76	3.62		Si
SLV 15	4.19	-3492.93	-31182	-0.0001295	0.0005615	0.0035	1.915		22281.17	22281.17	6.38		Si
SLV 1	2.29	-6476.46	-12398	-0.0001076	0.0005615	0.0035	1.915		11526.73	11526.73	1.78		Si
SLV 1	4.19	4558.07	-3287	-0.0121595	0.0005615	0.0035	1.915		3226.38	3226.38	0.71		No
SLV 2	2.29	-5986	-12522	-0.0000979	0.0005615	0.0035	1.915		11617.84	11617.84	1.94		Si
SLV 2	4.19	4166.02	-4273	-0.0019864	0.0005615	0.0035	1.915		4103.73	4103.73	0.99		No
SLV 13	2.29	6177.69	-22976	-0.0001278	0.0005615	0.0035	1.915		17389.43	17389.43	2.81		Si
SLV 13	4.19	-3918.67	-33535	-0.0001425	0.0005615	0.0035	1.915		23329.05	23329.05	5.95		Si
SLV 8	2.29	-4667.52	-15938	-0.0000892	0.0005615	0.0035	1.915		14064.01	14064.01	3.01		Si
SLV 8	4.19	2191.63	-9587	-0.0000466	0.0005615	0.0035	1.915		8494.85	8494.85	3.88		Si
SLV 4	2.29	-7381.16	-12400	-0.0001316	0.0005615	0.0035	1.532		11528.37	11528.37	1.56		Si
SLV 4	4.19	4591.75	-1921	-0.0214633	0.0005615	0.0035	1.915		1985.1	1985.1	0.43		No
SLV 14	2.29	6668.14	-23101	-0.0001331	0.0005615	0.0035	1.915		17460.46	17460.46	2.62		Si
SLV 14	4.19	-4310.72	-34521	-0.0001503	0.0005615	0.0035	1.915		23633.61	23633.61	5.48		Si
SLV 3	2.29	-7871.62	-12275	-0.0001514	0.0005615	0.0035	1.532		11437.42	11437.42	1.45		Si
SLV 3	4.19	4983.81	-934	-0.0318358	0.0005615	0.0035	1.915		1070.3	1070.3	0.21		No
SLV 7	2.29	-4982.73	-15857	-0.000092	0.0005615	0.0035	1.915		14007.28	14007.28	2.81		Si
SLV 7	4.19	2443.6	-8953	-0.0000469	0.0005615	0.0035	1.915		8038.66	8038.66	3.29		Si
SLV 16	2.29	5272.98	-22979	-0.0001187	0.0005615	0.0035	1.915		17390.72	17390.72	3.3		Si
SLV 16	4.19	-3884.99	-32169	-0.0001372	0.0005615	0.0035	1.915		22724.21	22724.21	5.85		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	2.29	-808	-26194	-21812	877	1.915	1.915	-40679	10833	5809	38062	16056	4883	20940	No	23.87	Si
SLU 74	4.19	340.85	-26714	-22245	913	1.915	1.915	-41486	10833	5809	38062	16056	4883	20940	No	22.94	Si
SLU 81	2.29	-828.54	-26818	-22332	934	1.915	1.915	-41647	10833	5809	38062	16056	4883	20940	No	22.42	Si
SLU 81	4.19	299.96	-27431	-22843	972	1.915	1.915	-42600	10833	5809	38062	16056	4883	20940	No	21.55	Si
SLU 79	2.29	-797.08	-26229	-21841	882	1.915	1.915	-40733	10833	5809	38062	16056	4883	20940	No	23.74	Si
SLU 79	4.19	334.17	-26739	-22266	917	1.915	1.915	-41525	10833	5809	38062	16056	4883	20940	No	22.84	Si
SLU 39	2.29	-662.17	-22990	-19144	918	1.915	1.915	-35703	10833	5809	38062	16056	4883	20940	No	22.81	Si
SLU 39	4.19	151.2	-23795	-19814	954	1.915	1.915	-36953	10833	5809	38062	16056	4883	20940	No	21.95	Si
SLU 42	2.29	-761.71	-23384	-19472	900	1.915	1.915	-36315	10833	5809	38062	16056	4883	20940	No	23.27	Si
SLU 42	4.19	147.65	-24210	-20160	902	1.915	1.915	-37598	10833	5809	38062	16056	4883	20940	No	23.22	Si
SLU 83	2.29	-820.71	-27131	-22593	961	1.915	1.915	-42134	10833	5809	38062	16056	4883	20940	No	21.8	Si
SLU 83	4.19	294.42	-27785	-23137	999	1.915	1.915	-43149	10833	5809	38062	16056	4883	20940	No	20.96	Si
SLU 84	2.29	-928.09	-27212	-22660	916	1.915	1.915	-42259	10833	5809	38062	16056	4883	20940	No	22.87	Si
SLU 84	4.19	296.41	-27847	-23188	920	1.915	1.915	-43245	10833	5809	38062	16056	4883	20940	No	22.77	Si
SLU 77	2.29	-800.16	-26508	-22073	904	1.915	1.915	-41166	10833	5809	38062	16056	4883	20940	No	23.16	Si
SLU 77	4.19	335.3	-27067	-22539	940	1.915	1.915	-42034	10833	5809	38062	16056	4883	20940	No	22.28	Si
SLU 41	2.29	-654.33	-23304	-19405	945	1.915	1.915	-36190	10833	5809	38062	16056	4883	20940	No	22.16	Si
SLU 41	4.19	145.66	-24148	-20108	981	1.915	1.915	-37501	10833	5809	38062	16056	4883	20940	No	21.35	Si
SLU 35	2.29	-633.79	-22680	-18886	888	1.915	1.915	-35221	10833	5809	38062	16056	4883	20940	No	23.58	Si
SLU 35	4.19	186.54	-23430	-19511	922	1.915	1.915	-36387	10833	5809	38062	16056	4883	20940	No	22.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	2.29	-6476.46	-12398	-10324	-9237	1.915	1.3054	-28662	16150	5903	38062	24085	4883	28968		3.14	Si
SLV 1	4.19	4558.07	-3287	-2737	-9688	1.915	0	-164105	16250	0	38062	24085	4883	28968		2.99	Si
SLV 13	2.29	6177.69	-22976	-19133	11317	1.915	1.915	-35682	16250	8713	38062	24085	4883	28968		2.56	Si
SLV 13	4.19	-3918.67	-33535	-27925	11026	1.915	1.915	-52078	16250	8713	38062	24085	4883	28968		2.63	Si
SLV 2	2.29	-5986	-12522	-10428	-8360	1.915	1.4385	-26241	15665	6310	38062	24085	4883	28968		3.46	Si
SLV 2	4.19	4166.02	-4273	-3559	-8776	1.915	0	-143813	16250	0	38062	24085	4883	28968		3.3	Si
SLV 3	2.29	-7871.62	-12275	-10222	-11262	1.532	0.9488	0	0	0	38062	19268	3907	23174		2.06	Si
SLV 3	4.19	4983.81	-934	-778	-10965	1.915	0	0	16250	0	38062	24085	4883	28968		2.64	Si
SLV 9	2.29	3464.04	-19439	-16187	6642	1.915	1.915	-30188	16250	8713	38062	24085	4883	28968		4.36	Si
SLV 9	4.19	-1518.54	-25869	-21541	5429	1.915	1.915	-40173	16250	8713	38062	24085	4883	28968		5.34	Si
SLV 16	2.29	5272.98	-22979	-19135	10169	1.915	1.915	-35685	16250	8713	38062	24085	4883	28968		2.85	Si
SLV 16	4.19	-3884.99	-32169	-26787	10660	1.915	1.915	-49957	16250	8713	38062	24085	4883	28968		2.72	Si
SLV 14	2.29	6668.14	-23101	-19237	12194	1.915	1.915	-35875	16250	8713	38062	24085	4883	28968		2.38	Si
SLV 14	4.19	-4310.72	-34521	-28746	11938	1.915	1.915	-53611	16250	8713	38062	24085	4883	28968		2.43	Si
SLV 4	2.29	-7381.16	-12400	-10326	-10385	1.532	1.0868	0	0	0	38062	19268	3907	23174		2.23	Si
SLV 4	4.19	4591.75	-1921	-1600	-10053	1.915	0	0	16250	0	38062	24085	4883	28968		2.88	Si
SLV 10	2.29	3779.25	-19519	-16254	7206	1.915	1.915	-30312	16250	8713	38062	24085	4883	28968		4.02	Si
SLV 10	4.19	-1770.51	-26503	-22069	6015	1.915	1.915	-41158	16250	8713	38062	24085	4883	28968		4.82	Si
SLV 15	2.29	4782.53	-22854	-19031	9292	1.915	1.915	-35492	16250	8713	38062	24085	4883	28968		3.12	Si
SLV 15	4.19	-3492.93	-31182	-25966	9748	1.915	1.915	-48425	16250	8713	38062	24085	4883	28968		2.97	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.31	5761	-3089	149.84	416.19	2.78	Si
SLV 4	179667	0.31	7604	-4077	149.84	542.38	3.62	Si
SLV 1	179667	0.31	9012	-4832	149.84	636.58	4.25	Si
SLV 2	179667	0.31	10854	-5820	149.84	756.88	5.05	Si
SLV 7	179667	0.31	21220	-11378	149.84	1371.61	9.15	Si
SLV 8	179667	0.31	22404	-12013	149.84	1435.1	9.58	Si
SLV 5	179667	0.31	32054	-17187	149.84	1901.2	12.69	Si
SLV 6	179667	0.31	33238	-17822	149.84	1952.08	13.03	Si
SLV 11	179667	0.31	37438	-20074	149.84	2121.46	14.16	Si
SLV 12	179667	0.31	38622	-20709	149.84	2166.07	14.46	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-20929	-13589	569	0.495	2389.7	0.967	7.43682	10.19501	No
SLV 9	-20552	-13493	569	0.503	2351.3	0.967	7.55674	10.19501	No
SLV 12	-16529	-15595	-458	0.611	1942	0.96	9.24599	10.19501	No
SLV 11	-16151	-15499	-458	0.623	1903.6	0.96	9.43564	10.19501	No
SLV 6	-14821	-10908	468	0.669	1768.3	0.957	10.16824	10.19501	No
SLV 5	-14444	-10812	467	0.684	1730	0.956	10.40147	10.19501	Si
SLV 14	-26620	-17445	328	0.412	2969.2	0.973	6.15316	5.43686	Si
SLV 13	-26033	-17296	328	0.42	2909.4	0.973	6.27419	5.43686	Si
SLV 16	-25299	-18047	20	0.442	2834.7	0.972	6.60342	5.43686	Si
SLV 15	-24713	-17898	20	0.451	2775	0.971	6.74093	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.101	SLU 44	Si
V_SLU	20.964	SLU 83	Si
PF_SLV	0.215	SLV 3	No
V_SLV	2.058	SLV 3	Si
PFFP_SLV	2.777	SLV 3	Si
R_SLV	0.729	SLV 10	No

Maschio 64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.443	1.006	-24.633	1.006	L4	L5	5.19	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	1.39	-27805.31	-90011	-0.00013	0.0004492	0.0035	5.19	115171.8	183503.78	183503.78	6.6	No	Si
SLU 78	3.49	-18809.97	-81051	-0.000107	0.0004492	0.0035	5.19	114320.49	172532.76	172532.76	9.17	No	Si
SLU 77	1.39	-27837.45	-90027	-0.0001301	0.0004492	0.0035	5.19	115171.25	183517.95	183517.95	6.59	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	3.49	-18821.21	-81028	-0.000107	0.0004492	0.0035	5.19	114315.46	172504.31	172504.31	9.17	No	Si
SLU 83	1.39	-28136.8	-91030	-0.0001318	0.0004492	0.0035	5.19	115119.99	184449.28	184449.28	6.56	No	Si
SLU 83	3.49	-19238.98	-82369	-0.0001091	0.0004492	0.0035	5.19	114592.93	174219.28	174219.28	9.06	No	Si
SLU 84	1.39	-28104.66	-91015	-0.0001317	0.0004492	0.0035	5.19	115120.99	184435.11	184435.11	6.56	No	Si
SLU 84	3.49	-19227.74	-82391	-0.0001092	0.0004492	0.0035	5.19	114597.09	174247.73	174247.73	9.06	No	Si
SLU 75	1.39	-27424.2	-88815	-0.000128	0.0004492	0.0035	5.19	115193.9	182394.02	182394.02	6.65	No	Si
SLU 75	3.49	-18576.2	-79921	-0.0001054	0.0004492	0.0035	5.19	114046.63	171023.67	171023.67	9.21	No	Si
SLU 82	1.39	-27723.55	-89819	-0.0001297	0.0004492	0.0035	5.19	115178.18	183325.35	183325.35	6.61	No	Si
SLU 82	3.49	-18993.98	-81261	-0.0001075	0.0004492	0.0035	5.19	114367.47	172802.44	172802.44	9.1	No	Si
SLU 81	1.39	-27755.68	-89834	-0.0001297	0.0004492	0.0035	5.19	115177.71	183339.52	183339.52	6.61	No	Si
SLU 81	3.49	-19005.21	-81239	-0.0001075	0.0004492	0.0035	5.19	114362.57	172773.99	172773.99	9.09	No	Si
SLU 80	1.39	-27593.36	-89270	-0.0001288	0.0004492	0.0035	5.19	115190.42	182816.01	182816.01	6.63	No	Si
SLU 80	3.49	-18597.43	-80288	-0.0001058	0.0004492	0.0035	5.19	114139.59	171536.94	171536.94	9.22	No	Si
SLU 79	1.39	-27625.5	-89286	-0.0001289	0.0004492	0.0035	5.19	115190.2	182830.18	182830.18	6.62	No	Si
SLU 79	3.49	-18608.67	-80266	-0.0001058	0.0004492	0.0035	5.19	114134.07	171505.81	171505.81	9.22	No	Si
SLU 74	1.39	-27456.34	-88831	-0.0001281	0.0004492	0.0035	5.19	115193.88	182408.19	182408.19	6.64	No	Si
SLU 74	3.49	-18587.44	-79899	-0.0001054	0.0004492	0.0035	5.19	114040.86	170992.54	170992.54	9.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	1.39	-31462.05	-53623	-0.0000887	0.0006738	0.0035	5.19		135926.27	135926.27	4.32		Si
SLD 13	3.49	-9705.75	-41950	-0.0000514	0.0006738	0.0035	5.19		112520.72	112520.72	11.59		Si
SLV 14	1.39	-47876.31	-42291	-0.0000989	0.0006738	0.0035	5.19		113229.41	113229.41	2.37		Si
SLV 14	3.49	-5694.06	-25166	-0.0000302	0.0006738	0.0035	5.19		76265.42	76265.42	13.39		Si
SLD 14	1.39	-31412.66	-53497	-0.0000885	0.0006738	0.0035	5.19		135677.57	135677.57	4.32		Si
SLD 14	3.49	-9615.37	-42032	-0.0000513	0.0006738	0.0035	5.19		112692.07	112692.07	11.72		Si
SLD 16	1.39	-29274.42	-53990	-0.0000865	0.0006738	0.0035	5.19		136648.82	136648.82	4.67		Si
SLD 16	3.49	-8316.92	-43940	-0.0000518	0.0006738	0.0035	5.19		116655.48	116655.48	14.03		Si
SLV 13	1.39	-47991.34	-42585	-0.0000992	0.0006738	0.0035	5.19		113841.06	113841.06	2.37		Si
SLV 13	3.49	-5904.56	-24974	-0.0000303	0.0006738	0.0035	5.19		75824.05	75824.05	12.84		Si
SLV 16	1.39	-42965.86	-43495	-0.0000922	0.0006738	0.0035	5.19		115731.55	115731.55	2.69		Si
SLV 16	3.49	-2624.78	-29604	-0.0000311	0.0006738	0.0035	5.19		86134.36	86134.36	32.82		Si
SLV 15	1.39	-43080.88	-43790	-0.0000926	0.0006738	0.0035	5.19		116343.2	116343.2	2.7		Si
SLV 15	3.49	-2835.28	-29412	-0.0000312	0.0006738	0.0035	5.19		85714.12	85714.12	30.23		Si
SLV 9	1.39	-35234.38	-54300	-0.0000939	0.0006738	0.0035	5.19		137259.57	137259.57	3.9		Si
SLV 9	3.49	-15254.96	-38971	-0.0000547	0.0006738	0.0035	5.19		106330.26	106330.26	6.97		Si
SLD 15	1.39	-29323.8	-54116	-0.0000867	0.0006738	0.0035	5.19		136897.52	136897.52	4.67		Si
SLD 15	3.49	-8407.29	-43857	-0.0000518	0.0006738	0.0035	5.19		116484.13	116484.13	13.86		Si
SLV 10	1.39	-35160.46	-54111	-0.0000936	0.0006738	0.0035	5.19		136887.28	136887.28	3.89		Si
SLV 10	3.49	-15119.68	-39094	-0.0000547	0.0006738	0.0035	5.19		106586.77	106586.77	7.05		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 67	1.39	-25341.91	-81953	-58463	-12625	5.19	5.19	-40231	10833	15743	108749	52224	26469	78693	No	6.23	Si
SLU 67	3.49	-16560.01	-72378	-51633	-11432	5.19	5.19	-35531	10833	15743	108749	52224	26469	78693	No	6.88	Si
SLU 70	1.39	-25723.02	-83149	-59317	-12794	5.19	5.19	-40818	10833	15743	108749	52224	26469	78693	No	6.15	Si
SLU 70	3.49	-16793.77	-73508	-52439	-11584	5.19	5.19	-36085	10833	15743	108749	52224	26469	78693	No	6.79	Si
SLU 68	1.39	-25108.53	-81202	-57927	-12606	5.19	5.19	-39862	10833	15743	108749	52224	26469	78693	No	6.24	Si
SLU 68	3.49	-16339.97	-71630	-51099	-11424	5.19	5.19	-35163	10833	15743	108749	52224	26469	78693	No	6.89	Si
SLU 78	1.39	-27805.31	-90011	-64212	-12644	5.19	5.19	-44187	10833	15743	108749	52224	26469	78693	No	6.22	Si
SLU 78	3.49	-18809.97	-81051	-57820	-11320	5.19	5.19	-39788	10833	15743	108749	52224	26469	78693	No	6.95	Si
SLU 72	1.39	-25511.07	-82408	-58788	-12764	5.19	5.19	-40454	10833	15743	108749	52224	26469	78693	No	6.17	Si
SLU 72	3.49	-16581.23	-72745	-51894	-11564	5.19	5.19	-35710	10833	15743	108749	52224	26469	78693	No	6.81	Si
SLU 66	1.39	-25374.05	-81968	-58474	-12607	5.19	5.19	-40238	10833	15743	108749	52224	26469	78693	No	6.24	Si
SLU 66	3.49	-16571.25	-72356	-51617	-11415	5.19	5.19	-35520	10833	15743	108749	52224	26469	78693	No	6.89	Si
SLU 69	1.39	-25755.16	-83165	-59328	-12777	5.19	5.19	-40825	10833	15743	108749	52224	26469	78693	No	6.16	Si
SLU 69	3.49	-16805.01	-73486	-52423	-11566	5.19	5.19	-36074	10833	15743	108749	52224	26469	78693	No	6.8	Si
SLU 71	1.39	-25543.2	-82423	-58799	-12746	5.19	5.19	-40462	10833	15743	108749	52224	26469	78693	No	6.17	Si
SLU 71	3.49	-16592.47	-72723	-51879	-11547	5.19	5.19	-35700	10833	15743	108749	52224	26469	78693	No	6.82	Si
SLU 77	1.39	-27837.45	-90027	-64223	-12626	5.19	5.19	-44194	10833	15743	108749	52224	26469	78693	No	6.23	Si
SLU 77	3.49	-18821.21	-81028	-57804	-11303	5.19	5.19	-39777	10833	15743	108749	52224	26469	78693	No	6.96	Si
SLU 80	1.39	-27593.36	-89270	-63683	-12613	5.19	5.19	-43823	10833	15743	108749	52224	26469	78693	No	6.24	Si
SLU 80	3.49	-18597.43	-80288	-57275	-11301	5.19	5.19	-39413	10833	15743	108749	52224	26469	78693	No	6.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.39	-47991.34	-42585	-30379	-33446	5.19	4.4042	-24920	16250	20039	108749	78337	26469	104806		3.13	Si
SLV 13	3.49	-5904.56	-24974	-17816	-32422	5.19	5.19	-12260	14952	21728	108749	78337	26469	104806		3.23	Si
SLV 16	1.39	-42965.86	-43495	-31028	-35057	5.19	4.8215	-23214	16250	21938	108749	78337	26469	104806		2.99	Si
SLV 16	3.49	-2624.78	-29604	-21118	-33658	5.19	5.19	-14532	15406	22389	108749	78337	26469	104806		3.11	Si
SLD 16	1.39	-29274.42	-53990	-38515	-20390	5.19	5.19	-26504	16250	23615	108749	78337	26469	104806		5.14	Si
SLD 16	3.49	-8316.92	-43940	-31346	-19281	5.19	5.19	-21570	16250	23615	108749	78337	26469	104806		5.44	Si
SLV 14	1.39	-47876.31	-42291	-30169	-33531	5.19	4.3888	-24833	16250	19969	108749	78337	26469	104806		3.13	Si
SLV 14	3.49	-5694.06	-25166	-17953	-32511	5.19	5.19	-12354	14971	21756	108749	78337	26469	104806		3.22	Si
SLV 11	1.39	-18866.2	-58314	-41600	-19402	5.19	5.19	-28627	16250	23615	108749	78337	26469	104806		5.4	Si
SLV 11	3.49	-5024.04	-53763	-38353	-17776	5.19	5.19	-26392	16250	23615	108749	78337	26469	104806		5.9	Si
SLD 15	1.39	-29323.8	-54116	-38605	-20353	5.19	5.19	-26566	16250	23615	108749	78337	26469	104806		5.15	Si
SLD 15	3.49	-8407.29	-43857	-31287	-19243	5.19	5.19	-21530	16250	23615	108749	78337	26469	104806		5.45	Si
SLV 15	1.39	-43080.88	-43790	-31238	-34971	5.19	4.8335	-23315	16250	21993	108749	78337	26469	104806		3	Si
SLV 15	3.49	-2835.28	-29412	-20981	-33569	5.19	5.19	-14438	15388	22361	108749	78337	26469	104806		3.12	Si
SLD 14	1.39	-31412.66	-53497	-38163	-19736	5.19	5.19	-26261	16250	23615	108749	78337	26469	104806		5.31	Si
SLD 14	3.49	-9615.37	-42032	-29985	-18781	5.19	5.19	-20634	16250	23615	108749	78337	26469	104806		5.58	Si
SLV 12	1.39	-18792.27	-58125	-41465	-19457	5.19	5.19	-28534	16250	23615	108749	78337	26469	104806		5.39	Si
SLV 12	3.49	-4888.76	-53886	-38441	-17833	5.19	5.19	-26453	16250	23615	108749	78337	26469	104806		5.88	Si
SLD 13	1.39	-31462.05	-53623	-38253	-19699	5.19	5.19	-26323	16250	23615	108749	78337	26469	104806		5.32	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	3.49	-9705.75	-41950	-29926	-18743	5.19	5.19	-20593	16250	23615	108749	78337	26469	104806		5.59	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-27572	0.31	415.54	3460.48	4878.67	4169.58	10.03	Si
SLV 14	-27690	0.31	415.54	3473.6	4896.4	4185	10.07	Si
SLV 15	-32514	0.31	415.54	3996.25	5612.95	4804.6	11.56	Si
SLV 16	-32632	0.31	415.54	4008.76	5630.37	4819.56	11.6	Si
SLV 9	-39295	0.31	415.54	4689.68	6613.3	5651.49	13.6	Si
SLV 10	-39371	0.31	415.54	4697.18	6624.51	5660.84	13.62	Si
SLV 5	-54267	0.31	415.54	6049.44	8784.41	7416.93	17.85	Si
SLV 6	-54343	0.31	415.54	6055.75	8795.35	7425.55	17.87	Si
SLV 11	-55768	0.31	415.54	6172.72	9000.34	7586.53	18.26	Si
SLV 12	-55844	0.31	415.54	6178.9	9011.28	7595.09	18.28	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-64060	-69416	928	0.455	7223.8	0.97	6.81849	10.19501	No
SLV 7	-63770	-69605	929	0.457	7194.2	0.97	6.84553	10.19501	No
SLV 12	-53562	-58125	1408	0.522	6155.1	0.966	7.85583	10.19501	No
SLV 11	-53271	-58314	1409	0.524	6125.5	0.965	7.89331	10.19501	No
SLV 6	-50131	-65402	-1589	0.549	5805.9	0.964	8.2771	10.19501	No
SLV 5	-49840	-65591	-1588	0.552	5776.3	0.964	8.31981	10.19501	No
SLV 10	-39632	-54111	-1109	0.681	4738.2	0.956	10.34311	10.19501	Si
SLV 9	-39342	-54300	-1108	0.685	4708.6	0.956	10.41057	10.19501	Si
SLV 4	-71514	-81131	-513	0.42	7982.8	0.973	6.27443	5.43686	Si
SLV 3	-71062	-81425	-511	0.422	7936.8	0.973	6.30956	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.555	SLU 83	Si
V_SLU	6.151	SLU 70	Si
PF_SLV	2.365	SLV 14	Si
V_SLV	2.99	SLV 16	Si
PFFP_SLV	10.034	SLV 13	Si
R_SLV	0.669	SLV 8	No

Maschio 65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.006	-18.643	1.006	L4	L5	3.68	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	1.39	-9047.67	-69634	-0.0001268	0.0004492	0.0035	3.68	57262.28	95678.06	95678.06	10.57	No	Si
SLU 77	3.49	-1888.55	-69793	-0.0001075	0.0004492	0.0035	3.68	57230.8	95786.29	95786.29	50.72	No	Si
SLU 72	1.39	-8550.21	-62612	-0.0001133	0.0004492	0.0035	3.68	57913.24	90905.97	90905.97	10.63	No	Si
SLU 72	3.49	-1480.33	-62265	-0.000094	0.0004492	0.0035	3.68	57908.04	90670.41	90670.41	61.25	No	Si
SLU 74	1.39	-8899.49	-68760	-0.0001248	0.0004492	0.0035	3.68	57421.8	95084.2	95084.2	10.68	No	Si
SLU 74	3.49	-1862.87	-68844	-0.0001058	0.0004492	0.0035	3.68	57407.39	95141.47	95141.47	51.07	No	Si
SLU 70	1.39	-8621.94	-63225	-0.0001145	0.0004492	0.0035	3.68	57913.82	91323.07	91323.07	10.59	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 70	3.49	-1531.75	-62926	-0.0000952	0.0004492	0.0035	3.68	57914.91	91119.93	91119.93	59.49	No	Si
SLU 78	1.39	-9038.86	-69595	-0.0001267	0.0004492	0.0035	3.68	57269.74	95652.03	95652.03	10.58	No	Si
SLU 78	3.49	-1905.02	-69788	-0.0001075	0.0004492	0.0035	3.68	57231.86	95782.68	95782.68	50.28	No	Si
SLU 69	1.39	-8630.76	-63264	-0.0001146	0.0004492	0.0035	3.68	57913.49	91349.09	91349.09	10.58	No	Si
SLU 69	3.49	-1515.28	-62932	-0.0000951	0.0004492	0.0035	3.68	57914.91	91123.55	91123.55	60.14	No	Si
SLU 79	1.39	-8975.93	-69020	-0.0001255	0.0004492	0.0035	3.68	57376.66	95260.95	95260.95	10.61	No	Si
SLU 79	3.49	-1837.13	-69131	-0.0001062	0.0004492	0.0035	3.68	57356.69	95336.77	95336.77	51.89	No	Si
SLU 71	1.39	-8559.02	-62650	-0.0001134	0.0004492	0.0035	3.68	57913.6	90931.99	90931.99	10.62	No	Si
SLU 71	3.49	-1463.86	-62270	-0.0000939	0.0004492	0.0035	3.68	57908.15	90674.02	90674.02	61.94	No	Si
SLU 75	1.39	-8890.67	-68721	-0.0001247	0.0004492	0.0035	3.68	57428.28	95058.18	95058.18	10.69	No	Si
SLU 75	3.49	-1879.35	-68839	-0.0001058	0.0004492	0.0035	3.68	57408.31	95137.86	95137.86	50.62	No	Si
SLU 80	1.39	-8967.12	-68982	-0.0001254	0.0004492	0.0035	3.68	57383.43	95234.93	95234.93	10.62	No	Si
SLU 80	3.49	-1853.61	-69126	-0.0001063	0.0004492	0.0035	3.68	57357.65	95333.15	95333.15	51.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	1.39	-24006.93	-36202	-0.0001056	0.0006738	0.0035	3.68		65439.07	65439.07	2.73		Si
SLV 16	3.49	20656.08	-42791	-0.0001074	0.0006738	0.0035	3.68		67561.82	67561.82	3.27		Si
SLV 4	1.39	11878.49	-53279	-0.0001024	0.0006738	0.0035	3.68		81632.02	81632.02	6.87		Si
SLV 4	3.49	-26902.46	-49103	-0.0001324	0.0006738	0.0035	3.68		82468.95	82468.95	3.07		Si
SLV 14	1.39	-24515.22	-40827	-0.0001137	0.0006738	0.0035	3.68		71766.75	71766.75	2.93		Si
SLV 14	3.49	24435.51	-44503	-0.0001192	0.0006738	0.0035	3.68		69858.51	69858.51	2.86		Si
SLV 1	1.39	11447.43	-58272	-0.000109	0.0006738	0.0035	3.68		87501.48	87501.48	7.64		Si
SLV 1	3.49	-23136.53	-50990	-0.0001262	0.0006738	0.0035	3.68		84830.52	84830.52	3.67		Si
SLV 7	1.39	-24.98	-42208	-0.0000579	0.0006738	0.0035	3.68		73601.01	73601.01	2946.85		Si
SLV 7	3.49	-14677.4	-45040	-0.0000966	0.0006738	0.0035	3.68		77361.51	77361.51	5.27		Si
SLV 15	1.39	-23929.71	-36570	-0.0001059	0.0006738	0.0035	3.68		65955.53	65955.53	2.76		Si
SLV 15	3.49	20642.58	-42966	-0.0001077	0.0006738	0.0035	3.68		67796.37	67796.37	3.28		Si
SLV 8	1.39	-74.61	-41972	-0.0000577	0.0006738	0.0035	3.68		73287.15	73287.15	982.28		Si
SLV 8	3.49	-14668.73	-44928	-0.0000964	0.0006738	0.0035	3.68		77212.29	77212.29	5.26		Si
SLV 13	1.39	-24438	-41195	-0.000114	0.0006738	0.0035	3.68		72255.11	72255.11	2.96		Si
SLV 13	3.49	24422.01	-44678	-0.0001194	0.0006738	0.0035	3.68		70093.05	70093.05	2.87		Si
SLV 2	1.39	11370.2	-57904	-0.0001082	0.0006738	0.0035	3.68		87117.9	87117.9	7.66		Si
SLV 2	3.49	-23123.03	-50815	-0.0001259	0.0006738	0.0035	3.68		84611.7	84611.7	3.66		Si
SLV 3	1.39	11955.71	-53647	-0.0001031	0.0006738	0.0035	3.68		82125.34	82125.34	6.87		Si
SLV 3	3.49	-26915.96	-49278	-0.0001328	0.0006738	0.0035	3.68		82687.78	82687.78	3.07		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 67	1.39	-8473.76	-62352	-44480	-1371	3.68	3.68	-43168	10833	11163	108749	37030	18768	55798	No	40.71	Si
SLU 67	3.49	-1506.07	-61978	-44213	-1141	3.68	3.68	-42909	10833	11163	108749	37030	18768	55798	No	48.91	Si
SLU 66	1.39	-8482.58	-62390	-44507	-1348	3.68	3.68	-43194	10833	11163	108749	37030	18768	55798	No	41.39	Si
SLU 66	3.49	-1489.6	-61983	-44217	-1118	3.68	3.68	-42913	10833	11163	108749	37030	18768	55798	No	49.89	Si
SLU 72	1.39	-8550.21	-62612	-44666	-1425	3.68	3.68	-43348	10833	11163	108749	37030	18768	55798	No	39.16	Si
SLU 72	3.49	-1480.33	-62265	-44418	-1193	3.68	3.68	-43108	10833	11163	108749	37030	18768	55798	No	46.75	Si
SLU 65	1.39	-8247.96	-60838	-43401	-1363	3.68	3.68	-42120	10833	11163	108749	37030	18768	55798	No	40.93	Si
SLU 65	3.49	-1439.97	-60364	-43062	-1139	3.68	3.68	-41792	10833	11163	108749	37030	18768	55798	No	48.99	Si
SLU 68	1.39	-8396.15	-61712	-44024	-1402	3.68	3.68	-42725	10833	11163	108749	37030	18768	55798	No	39.81	Si
SLU 68	3.49	-1465.64	-61313	-43739	-1174	3.68	3.68	-42449	10833	11163	108749	37030	18768	55798	No	47.54	Si
SLU 64	1.39	-8262.65	-60902	-43446	-1325	3.68	3.68	-42164	10833	11163	108749	37030	18768	55798	No	42.11	Si
SLU 64	3.49	-1412.51	-60373	-43068	-1102	3.68	3.68	-41798	10833	11163	108749	37030	18768	55798	No	50.64	Si
SLU 69	1.39	-8630.76	-63264	-45131	-1386	3.68	3.68	-43799	10833	11163	108749	37030	18768	55798	No	40.25	Si
SLU 69	3.49	-1515.28	-62932	-44894	-1153	3.68	3.68	-43570	10833	11163	108749	37030	18768	55798	No	48.39	Si
SLU 70	1.39	-8621.94	-63225	-45103	-1409	3.68	3.68	-43773	10833	11163	108749	37030	18768	55798	No	39.6	Si
SLU 70	3.49	-1531.75	-62926	-44890	-1175	3.68	3.68	-43566	10833	11163	108749	37030	18768	55798	No	47.47	Si
SLU 30	1.39	-7082.75	-51777	-36936	-1249	3.68	3.68	-35847	10833	11163	108749	37030	18768	55798	No	44.68	Si
SLU 30	3.49	-1048.56	-51732	-36904	-1060	3.68	3.68	-35815	10833	11163	108749	37030	18768	55798	No	52.66	Si
SLU 71	1.39	-8559.02	-62650	-44693	-1402	3.68	3.68	-43374	10833	11163	108749	37030	18768	55798	No	39.8	Si
SLU 71	3.49	-1463.86	-62270	-44422	-1171	3.68	3.68	-43112	10833	11163	108749	37030	18768	55798	No	47.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	1.39	11370.2	-57904	-41307	27015	3.68	3.68	-40088	16250	16744	108749	55545	18768	74313		2.75	Si
SLV 2	3.49	-23123.03	-50815	-36250	26854	3.68	3.68	-35181	16250	16744	108749	55545	18768	74313		2.77	Si
SLV 15	1.39	-23929.71	-36570	-26088	-28779	3.68	3.5569	-26523	16250	16184	108749	55545	18768	74313		2.58	Si
SLV 15	3.49	20642.58	-42966	-30651	-28272	3.68	3.68	-29746	16250	16744	108749	55545	18768	74313		2.63	Si
SLD 13	1.39	-14036.43	-44657	-31857	-13679	3.68	3.68	-30917	16250	16744	108749	55545	18768	74313		5.43	Si
SLD 13	3.49	9740.12	-45944	-32775	-12994	3.68	3.68	-31808	16250	16744	108749	55545	18768	74313		5.72	Si
SLV 16	1.39	-24006.93	-36202	-25826	-29074	3.68	3.5306	-26438	16250	16064	108749	55545	18768	74313		2.56	Si
SLV 16	3.49	20656.08	-42791	-30526	-28565	3.68	3.68	-29625	16250	16744	108749	55545	18768	74313		2.6	Si
SLV 4	1.39	11878.49	-53279	-38008	29061	3.68	3.68	-36887	16250	16744	108749	55545	18768	74313		2.56	Si
SLV 4	3.49	-26902.46	-49103	-35029	28035	3.68	3.68	-33995	16250	16744	108749	55545	18768	74313		2.65	Si
SLV 14	1.39	-24515.22	-40827	-29125	-31120	3.68	3.68	-28266	16250	16744	108749	55545	18768	74313		2.39	Si
SLV 14	3.49	24435.51	-44503	-31747	-29745	3.68	3.68	-30811	16250	16744	108749	55545	18768	74313		2.5	Si
SLV 13	1.39	-24438	-41195	-29387	-30824	3.68	3.68	-28520	16250	16744	108749	55545	18768	74313		2.41	Si
SLV 13	3.49	24422.01	-44678	-31872	-29453	3.68	3.68	-30932	16250	16744	108749	55545	18768	74313		2.52	Si
SLD 14	1.39	-14069.58	-44499	-31745	-13806	3.68	3.68	-30808	16250	16744	108749	55545	18768	74313		5.38	Si
SLD 14	3.49	9745.91	-45869	-32722	-13120	3.68	3.68	-31756	16250	16744	108749	55545	18768	74313		5.66	Si
SLV 1	1.39	11447.43	-58272	-41570	27311	3.68	3.68	-40343	16250	16744	108749	55545	18768	74313		2.72	Si
SLV 1	3.49	-23136.53	-50990	-36375	27147	3.68	3.68	-35302	16250	16744	108749	55545	18768	74313		2.74	Si
SLV 3	1.39	11955.71	-53647	-38270	29357	3.68	3.68	-37141	16250	16744	108749	55545	18768	74313		2.53	Si
SLV 3	3.49	-26915.96	-49278	-35154	28327	3.68	3.68	-34116	16250	16744	108749	55545	18768	74313		2.62	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-41619	0.31	294.64	4542.61	6675.41	5609.01	19.04	Si
SLV 15	-41842	0.31	294.64	4560.04	6707.5	5633.77	19.12	Si
SLV 12	-42632	0.31	294.64	4621.12	6821.06	5721.09	19.42	Si
SLV 11	-42775	0.31	294.64	4632.11	6841.69	5736.9	19.47	Si
SLV 14	-43449	0.31	294.64	4683.38	6938.65	5811.02	19.72	Si
SLV 13	-43672	0.31	294.64	4700.2	6970.75	5835.48	19.81	Si
SLV 8	-45295	0.31	294.64	4820.38	7204.33	6012.35	20.41	Si
SLV 7	-45438	0.31	294.64	4830.8	7224.96	6027.88	20.46	Si
SLV 10	-48730	0.31	294.64	5061.88	7680.9	6371.39	21.62	Si
SLV 9	-48874	0.31	294.64	5071.58	7700.64	6386.11	21.67	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-43916	-57625	-1181	0.457	4968.7	0.969	6.8568	10.19501	No
SLV 6	-43870	-57388	-1181	0.458	4964	0.969	6.8631	10.19501	No
SLV 7	-43703	-42208	1038	0.462	4947	0.969	6.9317	10.19501	No
SLV 8	-43656	-41972	1038	0.463	4942.3	0.969	6.93829	10.19501	No
SLV 11	-39888	-37085	1161	0.497	4558.7	0.967	7.4672	10.19501	No
SLV 9	-40101	-52502	-1057	0.497	4580.3	0.967	7.46839	10.19501	No
SLV 12	-39842	-36849	1161	0.497	4553.9	0.967	7.47498	10.19501	No
SLV 10	-40055	-52265	-1058	0.497	4575.6	0.967	7.47595	10.19501	No
SLV 1	-48305	-58272	-548	0.434	5415.6	0.972	6.49287	5.43686	Si
SLV 2	-48233	-57904	-548	0.435	5408.2	0.972	6.5013	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.575	SLU 77	Si
V_SLU	39.163	SLU 72	Si
PF_SLV	2.726	SLV 16	Si
V_SLV	2.388	SLV 14	Si
PFFP_SLV	19.037	SLV 16	Si
R_SLV	0.673	SLV 5	No

Maschio 66

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-14.163	1.006	L4	L5	1.9	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	1.39	6513.77	-40757	-0.0001889	0.0004492	0.0035	1.9	14442.38	26177.19	26177.19	4.02	No	Si
SLU 77	3.89	-627.62	-29874	-0.0000892	0.0004492	0.0035	1.9	15337.46	22967.2	22967.2	36.59	No	Si
SLU 62	1.39	6313.7	-37953	-0.0001756	0.0004492	0.0035	1.9	15004.11	25156.43	25156.43	3.98	No	Si
SLU 62	3.89	-672.65	-27560	-0.0000825	0.0004492	0.0035	1.9	15081.39	21807.64	21807.64	32.42	No	Si
SLU 60	1.39	6239.81	-37436	-0.0001728	0.0004492	0.0035	1.9	15082.55	24968.31	24968.31	4	No	Si
SLU 60	3.89	-673.8	-27160	-0.0000813	0.0004492	0.0035	1.9	15021.26	21591.61	21591.61	32.04	No	Si
SLU 81	1.39	6584.55	-40955	-0.0001905	0.0004492	0.0035	1.9	14394.15	26249.1	26249.1	3.99	No	Si
SLU 81	3.89	-707.38	-30189	-0.0000909	0.0004492	0.0035	1.9	15360.18	23124.08	23124.08	32.69	No	Si
SLU 84	1.39	6668.57	-41465	-0.0001935	0.0004492	0.0035	1.9	14264.23	26434.89	26434.89	3.96	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	3.89	-710.41	-30560	-0.0000921	0.0004492	0.0035	1.9	15383.23	23300.06	23300.06	32.8	No	Si
SLU 61	1.39	6249.93	-37430	-0.0001729	0.0004492	0.0035	1.9	15083.47	24965.98	24965.98	3.99	No	Si
SLU 61	3.89	-677.99	-27130	-0.0000812	0.0004492	0.0035	1.9	15016.67	21575.77	21575.77	31.82	No	Si
SLU 83	1.39	6658.45	-41471	-0.0001934	0.0004492	0.0035	1.9	14262.56	26437.22	26437.22	3.97	No	Si
SLU 83	3.89	-706.23	-30589	-0.0000921	0.0004492	0.0035	1.9	15384.88	23311.02	23311.02	33.01	No	Si
SLU 78	1.39	6523.9	-40751	-0.0001889	0.0004492	0.0035	1.9	14443.92	26174.87	26174.87	4.01	No	Si
SLU 78	3.89	-631.8	-29845	-0.0000891	0.0004492	0.0035	1.9	15335.19	22952.58	22952.58	36.33	No	Si
SLU 82	1.39	6594.68	-40948	-0.0001905	0.0004492	0.0035	1.9	14395.72	26246.77	26246.77	3.98	No	Si
SLU 82	3.89	-711.57	-30160	-0.0000909	0.0004492	0.0035	1.9	15358.18	23109.46	23109.46	32.48	No	Si
SLU 63	1.39	6323.82	-37946	-0.0001757	0.0004492	0.0035	1.9	15005.13	25154.1	25154.1	3.98	No	Si
SLU 63	3.89	-676.83	-27530	-0.0000824	0.0004492	0.0035	1.9	15077.14	21791.8	21791.8	32.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	1.39	-10427.46	-31752	-0.000184	0.0006738	0.0035	1.9		25704.75	25704.75	2.47		Si
SLV 14	3.89	9631.26	-15643	-0.0001668	0.0006738	0.0035	1.9		13581.8	13581.8	1.41		Si
SLV 2	1.39	17193.25	-25248	-0.0003866	0.0006738	0.0035	1.9		20201.08	20201.08	1.17		Si
SLV 2	3.89	-10361.09	-27794	-0.0001722	0.0006738	0.0035	1.9		23345.63	23345.63	2.25		Si
SLV 13	1.39	-10370.63	-31801	-0.0001836	0.0006738	0.0035	1.9		25733.3	25733.3	2.48		Si
SLV 13	3.89	9622.14	-15707	-0.0001658	0.0006738	0.0035	1.9		13626.1	13626.1	1.42		Si
SLV 16	1.39	-8301.38	-30175	-0.0001582	0.0006738	0.0035	1.9		24784.1	24784.1	2.99		Si
SLV 16	3.89	9595.68	-11895	-0.0003278	0.0006738	0.0035	1.9		10765.9	10765.9	1.12		Si
SLV 3	1.39	19376.16	-23720	-0.0037441	0.0006738	0.0035	1.9		19148	19148	0.99		No
SLV 3	3.89	-10405.79	-24110	-0.0001656	0.0006738	0.0035	1.9		20993.59	20993.59	2.02		Si
SLV 1	1.39	17250.08	-25297	-0.0003895	0.0006738	0.0035	1.9		20234.77	20234.77	1.17		Si
SLV 1	3.89	-10370.21	-27858	-0.0001725	0.0006738	0.0035	1.9		23385.59	23385.59	2.26		Si
SLV 15	1.39	-8244.55	-30224	-0.0001578	0.0006738	0.0035	1.9		24812.65	24812.65	3.01		Si
SLV 15	3.89	9586.56	-11959	-0.0003158	0.0006738	0.0035	1.9		10817.22	10817.22	1.13		Si
SLV 8	1.39	12142.66	-24116	-0.000196	0.0006738	0.0035	1.9		19421.06	19421.06	1.6		Si
SLV 8	3.89	-3442.48	-15432	-0.00007	0.0006738	0.0035	1.9		14851.38	14851.38	4.31		Si
SLV 4	1.39	19319.33	-23671	-0.0035738	0.0006738	0.0035	1.9		19114.3	19114.3	0.99		No
SLV 4	3.89	-10396.67	-24046	-0.0001654	0.0006738	0.0035	1.9		20951.21	20951.21	2.02		Si
SLV 7	1.39	12179.18	-24148	-0.0001968	0.0006738	0.0035	1.9		19442.72	19442.72	1.6		Si
SLV 7	3.89	-3448.34	-15473	-0.0000702	0.0006738	0.0035	1.9		14883.31	14883.31	4.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	1.39	6460.96	-40410	-28828	571	1.9	1.9	-54187	10833	5763	108749	19119	9690	28809	No	50.48	Si
SLU 79	3.89	-626.28	-29577	-21099	2097	1.9	1.9	-39660	10833	5763	108749	19119	9690	28809	No	13.74	Si
SLU 83	1.39	6658.45	-41471	-29585	657	1.9	1.9	-55610	10833	5763	108749	19119	9690	28809	No	43.84	Si
SLU 83	3.89	-706.23	-30589	-21821	2221	1.9	1.9	-41018	10833	5763	108749	19119	9690	28809	No	12.97	Si
SLU 77	1.39	6513.77	-40757	-29075	575	1.9	1.9	-54653	10833	5763	108749	19119	9690	28809	No	50.1	Si
SLU 77	3.89	-627.62	-29874	-21312	2119	1.9	1.9	-40060	10833	5763	108749	19119	9690	28809	No	13.6	Si
SLU 75	1.39	6450	-40234	-28702	586	1.9	1.9	-53951	10833	5763	108749	19119	9690	28809	No	49.19	Si
SLU 75	3.89	-632.96	-29445	-21005	2094	1.9	1.9	-39484	10833	5763	108749	19119	9690	28809	No	13.76	Si
SLU 81	1.39	6584.55	-40955	-29216	664	1.9	1.9	-54917	10833	5763	108749	19119	9690	28809	No	43.41	Si
SLU 81	3.89	-707.38	-30189	-21536	2202	1.9	1.9	-40481	10833	5763	108749	19119	9690	28809	No	13.08	Si
SLU 82	1.39	6594.68	-40948	-29211	668	1.9	1.9	-54909	10833	5763	108749	19119	9690	28809	No	43.14	Si
SLU 82	3.89	-711.57	-30160	-21515	2196	1.9	1.9	-40442	10833	5763	108749	19119	9690	28809	No	13.12	Si
SLU 78	1.39	6523.9	-40751	-29071	579	1.9	1.9	-54644	10833	5763	108749	19119	9690	28809	No	49.75	Si
SLU 78	3.89	-631.8	-29845	-21291	2113	1.9	1.9	-40020	10833	5763	108749	19119	9690	28809	No	13.63	Si
SLU 84	1.39	6668.57	-41465	-29580	661	1.9	1.9	-55602	10833	5763	108749	19119	9690	28809	No	43.58	Si
SLU 84	3.89	-710.41	-30560	-21801	2215	1.9	1.9	-40978	10833	5763	108749	19119	9690	28809	No	13	Si
SLU 80	1.39	6471.09	-40404	-28823	575	1.9	1.9	-54179	10833	5763	108749	19119	9690	28809	No	50.12	Si
SLU 80	3.89	-630.47	-29547	-21078	2092	1.9	1.9	-39621	10833	5763	108749	19119	9690	28809	No	13.77	Si
SLU 74	1.39	6439.88	-40240	-28706	582	1.9	1.9	-53960	10833	5763	108749	19119	9690	28809	No	49.53	Si
SLU 74	3.89	-628.77	-29474	-21026	2099	1.9	1.9	-39523	10833	5763	108749	19119	9690	28809	No	13.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	1.39	-10427.46	-31752	-22651	-13404	1.9	1.8648	-42577	16250	8485	108749	28678	9690	38368		2.86	Si
SLV 14	3.89	9631.26	-15643	-11159	-7687	1.9	1.0029	-20976	16250	4563	108749	28678	9690	38368		4.99	Si
SLV 1	1.39	17250.08	-25297	-18046	13140	1.9	0.8043	-33922	16250	3660	108749	28678	9690	38368		2.92	Si
SLV 1	3.89	-10370.21	-27858	-19873	11352	1.9	1.7332	-41813	16250	7886	108749	28678	9690	38368		3.38	Si
SLD 4	1.39	10825.75	-25994	-18543	6247	1.9	1.6006	-34856	16250	7283	108749	28678	9690	38368		6.14	Si
SLD 4	3.89	-4664.38	-21637	-15435	5208	1.9	1.9	-29014	16250	8645	108749	28678	9690	38368		7.37	Si
SLV 2	1.39	17193.25	-25248	-18011	13111	1.9	0.8071	-33856	16250	3672	108749	28678	9690	38368		2.93	Si
SLV 2	3.89	-10361.09	-27794	-19827	11319	1.9	1.7316	-41754	16250	7879	108749	28678	9690	38368		3.39	Si
SLD 3	1.39	10850.15	-26015	-18558	6259	1.9	1.5988	-34884	16250	7274	108749	28678	9690	38368		6.13	Si
SLD 3	3.89	-4668.29	-21664	-15455	5222	1.9	1.9	-29051	16250	8645	108749	28678	9690	38368		7.35	Si
SLV 4	1.39	19319.33	-23671	-16886	14119	1.9	0.4015	-198396	16250	1827	108749	28678	9690	38368		2.72	Si
SLV 4	3.89	-10396.67	-24046	-17154	10374	1.9	1.5529	-40234	16250	7066	108749	28678	9690	38368		3.7	Si
SLV 13	1.39	-10370.63	-31801	-22686	-13375	1.9	1.8717	-42643	16250	8516	108749	28678	9690	38368		2.87	Si
SLV 13	3.89	9622.14	-15707	-11205	-7654	1.9	1.0122	-21062	16250	4606	108749	28678	9690	38368		5.01	Si
SLV 3	1.39	19376.16	-23720	-16921	14148	1.9	0.3994	-199774	16250	1817	108749	28678	9690	38368		2.71	Si
SLV 3	3.89	-10405.79	-24110	-17199	10407	1.9	1.5552	-40283	16250	7076	108749	28678	9690	38368		3.69	Si
SLV 15	1.39	-8244.55	-30224	-21561	-12367	1.9	1.9	-40528	16250	8645	108749	28678	9690	38368		3.1	Si
SLV 15	3.89	9586.56	-11959	-8532	-8599	1.9	0.4452	-71154	16250	2026	108749	28678	9690	38368		4.46	Si
SLV 16	1.39	-8301.38	-30175	-21526	-12396	1.9	1.9	-40462	16250	8645	108749	28678	9690	38368		3.1	Si
SLV 16	3.89	9595.68	-11895	-8486	-8632	1.9	0.4299	-73385	16250	1956	108749	28678	9690	38368		4.44	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-18259	0.31	152.12	2077.55	2973.82	2525.68	16.6	Si
SLV 7	-18300	0.31	152.12	2081.13	2979.7	2530.41	16.63	Si
SLV 12	-18304	0.31	152.12	2081.48	2980.28	2530.88	16.64	Si
SLV 11	-18344	0.31	152.12	2085.05	2986.17	2535.61	16.67	Si
SLV 4	-21675	0.31	152.12	2359.93	3465.52	2912.72	19.15	Si
SLV 3	-21738	0.31	152.12	2364.86	3474.64	2919.75	19.19	Si
SLV 16	-21824	0.31	152.12	2371.52	3486.98	2929.25	19.26	Si
SLV 15	-21888	0.31	152.12	2376.43	3496.1	2936.27	19.3	Si
SLV 2	-24657	0.31	152.12	2579.08	3888.18	3233.63	21.26	Si
SLV 1	-24721	0.31	152.12	2583.47	3896.96	3240.22	21.3	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-24223	-31356	-293	0.445	2723.1	0.971	6.65504	10.19501	No
SLV 10	-24203	-31324	-293	0.445	2721	0.971	6.65997	10.19501	No
SLV 5	-23653	-29404	-229	0.456	2665	0.971	6.83305	10.19501	No
SLV 6	-23632	-29373	-229	0.457	2662.9	0.971	6.83824	10.19501	No
SLV 11	-14378	-26099	230	0.697	1721.3	0.956	10.5929	10.19501	Si
SLV 12	-14357	-26067	230	0.698	1719.2	0.956	10.60625	10.19501	Si
SLV 7	-13808	-24148	294	0.717	1663.3	0.955	10.91387	10.19501	Si
SLV 8	-13787	-24116	294	0.718	1661.3	0.955	10.92818	10.19501	Si
SLV 13	-21448	-31801	-184	0.498	2440.6	0.968	7.47582	5.43686	Si
SLV 14	-21416	-31752	-184	0.499	2437.3	0.968	7.4856	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.964	SLU 84	Si
V_SLU	12.97	SLU 83	Si
PF_SLV	0.988	SLV 3	No
V_SLV	2.712	SLV 3	Si
PFFP_SLV	16.603	SLV 8	Si
R_SLV	0.653	SLV 9	No

Maschio 67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-11.143	1.006	L4	L5	3.68	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	1.39	9213.54	-67436	-0.0001234	0.0004492	0.0035	3.68	57621.03	90051.65	90051.65	9.77	No	Si
SLU 75	3.89	2873.78	-59255	-0.0000927	0.0004492	0.0035	3.68	57715.35	82300.31	82300.31	28.64	No	Si
SLU 83	1.39	9449.16	-69687	-0.000128	0.0004492	0.0035	3.68	57251.81	91647.69	91647.69	9.7	No	Si
SLU 83	3.89	3114.61	-61518	-0.000097	0.0004492	0.0035	3.68	57884.97	84620.98	84620.98	27.17	No	Si
SLU 74	1.39	9218.26	-67439	-0.0001234	0.0004492	0.0035	3.68	57620.6	90054.01	90054.01	9.77	No	Si
SLU 74	3.89	2880.96	-59281	-0.0000928	0.0004492	0.0035	3.68	57718.2	82327.4	82327.4	28.58	No	Si
SLU 78	1.39	9308.65	-68292	-0.0001251	0.0004492	0.0035	3.68	57498.07	90658.64	90658.64	9.74	No	Si
SLU 78	3.89	2903.98	-60073	-0.0000941	0.0004492	0.0035	3.68	57793.91	83138.9	83138.9	28.63	No	Si
SLU 77	1.39	9313.37	-68295	-0.0001251	0.0004492	0.0035	3.68	57497.55	90661	90661	9.73	No	Si
SLU 77	3.89	2911.16	-60099	-0.0000942	0.0004492	0.0035	3.68	57796.12	83165.98	83165.98	28.57	No	Si
SLU 80	1.39	9236.55	-67723	-0.0001239	0.0004492	0.0035	3.68	57582.2	90255.16	90255.16	9.77	No	Si
SLU 80	3.89	2907.67	-59504	-0.0000932	0.0004492	0.0035	3.68	57741.39	82556.15	82556.15	28.39	No	Si
SLU 84	1.39	9444.44	-69684	-0.0001279	0.0004492	0.0035	3.68	57252.47	91645.33	91645.33	9.7	No	Si
SLU 84	3.89	3107.43	-61491	-0.000097	0.0004492	0.0035	3.68	57883.85	84593.89	84593.89	27.22	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	1.39	9354.05	-68831	-0.0001262	0.0004492	0.0035	3.68	57409.69	91040.7	91040.7	9.73	No	Si
SLU 81	3.89	3084.41	-60700	-0.0000956	0.0004492	0.0035	3.68	57840.94	83782.39	83782.39	27.16	No	Si
SLU 82	1.39	9349.33	-68828	-0.0001262	0.0004492	0.0035	3.68	57410.26	91038.34	91038.34	9.74	No	Si
SLU 82	3.89	3077.23	-60674	-0.0000956	0.0004492	0.0035	3.68	57839.2	83755.31	83755.31	27.22	No	Si
SLU 79	1.39	9241.27	-67726	-0.0001239	0.0004492	0.0035	3.68	57581.73	90257.51	90257.51	9.77	No	Si
SLU 79	3.89	2914.85	-59531	-0.0000933	0.0004492	0.0035	3.68	57744.04	82583.24	82583.24	28.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	1.39	-17195.98	-47495	-0.0001064	0.0006738	0.0035	3.68		80456.21	80456.21	4.68		Si
SLV 14	3.89	35405.2	-41030	-0.0001479	0.0006738	0.0035	3.68		65199.53	65199.53	1.84		Si
SLV 16	1.39	-20000.06	-50090	-0.0001172	0.0006738	0.0035	3.68		83704.59	83704.59	4.19		Si
SLV 16	3.89	34016.05	-37451	-0.000141	0.0006738	0.0035	3.68		60398.78	60398.78	1.78		Si
SLV 4	1.39	29858.16	-44890	-0.0001334	0.0006738	0.0035	3.68		70377.56	70377.56	2.36		Si
SLV 4	3.89	-31406.78	-38925	-0.0001314	0.0006738	0.0035	3.68		69240.96	69240.96	2.2		Si
SLV 2	1.39	32662.24	-42294	-0.0001388	0.0006738	0.0035	3.68		66895.81	66895.81	2.05		Si
SLV 2	3.89	-30017.63	-42504	-0.0001307	0.0006738	0.0035	3.68		73993.44	73993.44	2.46		Si
SLV 1	1.39	32819.27	-42399	-0.0001394	0.0006738	0.0035	3.68		67036.02	67036.02	2.04		Si
SLV 1	3.89	-30093.61	-42529	-0.000131	0.0006738	0.0035	3.68		74027.26	74027.26	2.46		Si
SLV 5	1.39	18612.26	-41172	-0.0001001	0.0006738	0.0035	3.68		65390.79	65390.79	3.51		Si
SLV 5	3.89	-5561.37	-46184	-0.0000766	0.0006738	0.0035	3.68		78815.32	78815.32	14.17		Si
SLV 6	1.39	18511.34	-41105	-0.0000997	0.0006738	0.0035	3.68		65300.68	65300.68	3.53		Si
SLV 6	3.89	-5512.54	-46167	-0.0000765	0.0006738	0.0035	3.68		78794.84	78794.84	14.29		Si
SLV 3	1.39	30015.19	-44994	-0.000134	0.0006738	0.0035	3.68		70517.77	70517.77	2.35		Si
SLV 3	3.89	-31482.76	-38951	-0.0001317	0.0006738	0.0035	3.68		69274.79	69274.79	2.2		Si
SLV 15	1.39	-19843.03	-50195	-0.0001169	0.0006738	0.0035	3.68		83835.4	83835.4	4.22		Si
SLV 15	3.89	33940.06	-37477	-0.0001407	0.0006738	0.0035	3.68		60432.95	60432.95	1.78		Si
SLV 13	1.39	-17038.95	-47599	-0.0001061	0.0006738	0.0035	3.68		80587.02	80587.02	4.73		Si
SLV 13	3.89	35329.21	-41055	-0.0001476	0.0006738	0.0035	3.68		65233.7	65233.7	1.85		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.39	9213.54	-67436	-48107	2952	3.68	3.68	-46688	10833	11163	108749	37030	18768	55798	No	18.9	Si
SLU 75	3.89	2873.78	-59255	-42271	1354	3.68	3.68	-41024	10833	11163	108749	37030	18768	55798	No	41.22	Si
SLU 81	1.39	9354.05	-68831	-49102	2945	3.68	3.68	-47654	10833	11163	108749	37030	18768	55798	No	18.95	Si
SLU 81	3.89	3084.41	-60700	-43302	1368	3.68	3.68	-42024	10833	11163	108749	37030	18768	55798	No	40.78	Si
SLU 74	1.39	9218.26	-67439	-48110	2966	3.68	3.68	-46690	10833	11163	108749	37030	18768	55798	No	18.81	Si
SLU 74	3.89	2880.96	-59281	-42290	1369	3.68	3.68	-41042	10833	11163	108749	37030	18768	55798	No	40.75	Si
SLU 80	1.39	9236.55	-67723	-48312	2932	3.68	3.68	-46887	10833	11163	108749	37030	18768	55798	No	19.03	Si
SLU 80	3.89	2907.67	-59504	-42449	1322	3.68	3.68	-41197	10833	11163	108749	37030	18768	55798	No	42.22	Si
SLU 78	1.39	9308.65	-68292	-48718	2975	3.68	3.68	-47281	10833	11163	108749	37030	18768	55798	No	18.76	Si
SLU 78	3.89	2903.98	-60073	-42854	1355	3.68	3.68	-41590	10833	11163	108749	37030	18768	55798	No	41.18	Si
SLU 83	1.39	9449.16	-69687	-49713	2968	3.68	3.68	-48247	10833	11163	108749	37030	18768	55798	No	18.8	Si
SLU 83	3.89	3114.61	-61518	-43885	1370	3.68	3.68	-42590	10833	11163	108749	37030	18768	55798	No	40.74	Si
SLU 82	1.39	9349.33	-68828	-49100	2931	3.68	3.68	-47651	10833	11163	108749	37030	18768	55798	No	19.04	Si
SLU 82	3.89	3077.23	-60674	-43283	1353	3.68	3.68	-42006	10833	11163	108749	37030	18768	55798	No	41.25	Si
SLU 77	1.39	9313.37	-68295	-48720	2989	3.68	3.68	-47283	10833	11163	108749	37030	18768	55798	No	18.67	Si
SLU 77	3.89	2911.16	-60099	-42873	1371	3.68	3.68	-41608	10833	11163	108749	37030	18768	55798	No	40.71	Si
SLU 84	1.39	9444.44	-69684	-49711	2954	3.68	3.68	-48244	10833	11163	108749	37030	18768	55798	No	18.89	Si
SLU 84	3.89	3107.43	-61491	-43866	1354	3.68	3.68	-42572	10833	11163	108749	37030	18768	55798	No	41.2	Si
SLU 79	1.39	9241.27	-67726	-48314	2946	3.68	3.68	-46889	10833	11163	108749	37030	18768	55798	No	18.94	Si
SLU 79	3.89	2914.85	-59531	-42468	1337	3.68	3.68	-41215	10833	11163	108749	37030	18768	55798	No	41.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	1.39	-17195.98	-47495	-33882	-31136	3.68	3.68	-32882	16250	16744	108749	55545	18768	74313		2.39	Si
SLV 14	3.89	35405.2	-41030	-29270	-25813	3.68	2.9313	-28406	16250	13337	108749	55545	18768	74313		2.88	Si
SLV 1	1.39	32819.27	-42399	-30246	36358	3.68	3.1978	-29354	16250	14550	108749	55545	18768	74313		2.04	Si
SLV 1	3.89	-30093.61	-42529	-30339	29096	3.68	3.3972	-32396	16250	15457	108749	55545	18768	74313		2.55	Si
SLV 3	1.39	30015.19	-44994	-32098	35132	3.68	3.5187	-31151	16250	16010	108749	55545	18768	74313		2.12	Si
SLV 3	3.89	-31482.76	-38951	-27786	27489	3.68	3.0952	-32563	16250	14083	108749	55545	18768	74313		2.7	Si
SLV 15	1.39	-19843.03	-50195	-35808	-32271	3.68	3.68	-34751	16250	16744	108749	55545	18768	74313		2.3	Si
SLV 15	3.89	33940.06	-37477	-26735	-27367	3.68	2.8031	-25946	16250	12754	108749	55545	18768	74313		2.72	Si
SLV 13	1.39	-17038.95	-47599	-33956	-31045	3.68	3.68	-32954	16250	16744	108749	55545	18768	74313		2.39	Si
SLV 13	3.89	35329.21	-41055	-29288	-25760	3.68	2.9384	-28424	16250	13370	108749	55545	18768	74313		2.88	Si
SLD 1	1.39	17696.7	-44600	-31817	16682	3.68	3.68	-30878	16250	16744	108749	55545	18768	74313		4.45	Si
SLD 1	3.89	-11724.94	-41096	-29317	12915	3.68	3.68	-28452	16250	16744	108749	55545	18768	74313		5.75	Si
SLV 4	1.39	29858.16	-44890	-32023	35041	3.68	3.5246	-31078	16250	16037	108749	55545	18768	74313		2.12	Si
SLV 4	3.89	-31406.78	-38925	-27768	27436	3.68	3.0995	-32496	16250	14103	108749	55545	18768	74313		2.71	Si
SLD 2	1.39	17629.29	-44555	-31785	16642	3.68	3.68	-30847	16250	16744	108749	55545	18768	74313		4.47	Si
SLD 2	3.89	-11692.32	-41085	-29309	12892	3.68	3.68	-28445	16250	16744	108749	55545	18768	74313		5.76	Si
SLV 16	1.39	-20000.06	-50090	-35733	-32362	3.68	3.68	-34679	16250	16744	108749	55545	18768	74313		2.3	Si
SLV 16	3.89	34016.05	-37451	-26717	-27420	3.68	2.7952	-25929	16250	12718	108749	55545	18768	74313		2.71	Si
SLV 2	1.39	32662.24	-42294	-30172	36266	3.68	3.2032	-29281	16250	14575	108749	55545	18768	74313		2.05	Si
SLV 2	3.89	-30017.63	-42504	-30321	29043	3.68	3.4013	-32336	16250	15476	108749	55545	18768	74313		2.56	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-40448	0.31	294.64	4449.93	6507.01	5478.47	18.59	Si
SLV 15	-40524	0.31	294.64	4455.96	6517.85	5486.91	18.62	Si
SLV 14	-41145	0.31	294.64	4505.28	6607.13	5556.21	18.86	Si
SLV 13	-41220	0.31	294.64	4511.23	6617.97	5564.6	18.89	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-41628	0.31	294.64	4543.31	6676.69	5610	19.04	Si
SLV 11	-41677	0.31	294.64	4547.1	6683.66	5615.38	19.06	Si
SLV 8	-43324	0.31	294.64	4673.91	6920.65	5797.28	19.68	Si
SLV 7	-43372	0.31	294.64	4677.58	6927.62	5802.6	19.69	Si
SLV 10	-43948	0.31	294.64	4720.95	7010.54	5865.75	19.91	Si
SLV 9	-43997	0.31	294.64	4724.57	7017.51	5871.04	19.93	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-41942	-41105	-732	0.486	4767.7	0.968	7.2882	10.19501	No
SLV 5	-41906	-41172	-732	0.486	4764	0.968	7.29376	10.19501	No
SLV 10	-40116	-42665	-865	0.501	4581.8	0.967	7.53268	10.19501	No
SLV 9	-40079	-42733	-865	0.502	4578.1	0.967	7.53869	10.19501	No
SLV 8	-27887	-49756	825	0.684	3337.9	0.956	10.39404	10.19501	Si
SLV 7	-27851	-49824	825	0.685	3334.2	0.956	10.40605	10.19501	Si
SLV 12	-26061	-51317	691	0.728	3152.3	0.954	11.10062	10.19501	Si
SLV 11	-26025	-51384	691	0.729	3148.6	0.954	11.11432	10.19501	Si
SLV 2	-39164	-42294	-31	0.531	4484.9	0.966	7.9899	5.43686	Si
SLV 1	-39107	-42399	-31	0.532	4479.1	0.966	8.00012	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.699	SLU 83	Si
V_SLU	18.668	SLU 77	Si
PF_SLV	1.776	SLV 16	Si
V_SLV	2.044	SLV 1	Si
PFFP_SLV	18.594	SLV 16	Si
R_SLV	0.715	SLV 6	No

Maschio 68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L4	L5	1.55	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	1.39	8020.49	-35143	-0.0002658	0.0004492	0.0035	1.55	9186.42	18016.99	18016.99	2.25	No	Si
SLU 84	3.49	-778.11	-38809	-0.0001544	0.0004492	0.0035	1.55	8065.57	19186.11	19186.11	24.66	No	Si
SLU 83	1.39	8023.28	-35144	-0.0002659	0.0004492	0.0035	1.55	9186.26	18017.18	18017.18	2.25	No	Si
SLU 83	3.49	-777.51	-38822	-0.0001545	0.0004492	0.0035	1.55	8060.85	19188.69	19188.69	24.68	No	Si
SLU 77	1.39	7917.35	-34640	-0.0002608	0.0004492	0.0035	1.55	9309.53	17862.06	17862.06	2.26	No	Si
SLU 77	3.49	-834.41	-38109	-0.0001523	0.0004492	0.0035	1.55	8309.79	19048.61	19048.61	22.83	No	Si
SLU 81	1.39	7926.4	-34689	-0.0002613	0.0004492	0.0035	1.55	9297.81	17877.22	17877.22	2.26	No	Si
SLU 81	3.49	-772.35	-38315	-0.0001521	0.0004492	0.0035	1.55	8239.42	19089.07	19089.07	24.72	No	Si
SLU 80	1.39	7858.07	-34339	-0.0002579	0.0004492	0.0035	1.55	9379.78	17769.21	17769.21	2.26	No	Si
SLU 80	3.49	-840.3	-37750	-0.0001507	0.0004492	0.0035	1.55	8429.73	18977.95	18977.95	22.58	No	Si
SLU 74	1.39	7820.47	-34186	-0.0002563	0.0004492	0.0035	1.55	9414.41	17722.09	17722.09	2.27	No	Si
SLU 74	3.49	-829.25	-37602	-0.0001499	0.0004492	0.0035	1.55	8477.8	18948.98	18948.98	22.85	No	Si
SLU 78	1.39	7914.56	-34640	-0.0002608	0.0004492	0.0035	1.55	9309.68	17861.86	17861.86	2.26	No	Si
SLU 78	3.49	-835.01	-38096	-0.0001522	0.0004492	0.0035	1.55	8314.24	19046.03	19046.03	22.81	No	Si
SLU 82	1.39	7923.61	-34689	-0.0002612	0.0004492	0.0035	1.55	9297.97	17877.02	17877.02	2.26	No	Si
SLU 82	3.49	-772.94	-38302	-0.0001521	0.0004492	0.0035	1.55	8243.94	19086.49	19086.49	24.69	No	Si
SLU 75	1.39	7817.68	-34185	-0.0002562	0.0004492	0.0035	1.55	9414.55	17721.9	17721.9	2.27	No	Si
SLU 75	3.49	-829.84	-37589	-0.0001498	0.0004492	0.0035	1.55	8482.05	18946.4	18946.4	22.83	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	1.39	7860.86	-34339	-0.000258	0.0004492	0.0035	1.55	9379.63	17769.4	17769.4	2.26	No	Si
SLU 79	3.49	-839.7	-37763	-0.0001508	0.0004492	0.0035	1.55	8425.42	18980.53	18980.53	22.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	1.39	8306.73	-21164	-0.0002015	0.0006738	0.0035	1.55		13804.02	13804.02	1.66		Si
SLD 4	3.49	-4601.52	-23181	-0.0001396	0.0006738	0.0035	1.55		15884.39	15884.39	3.45		Si
SLV 6	1.39	10075.23	-21690	-0.000265	0.0006738	0.0035	1.55		14106.37	14106.37	1.4		Si
SLV 6	3.49	-3234.44	-29799	-0.0001457	0.0006738	0.0035	1.55		18930.79	18930.79	5.85		Si
SLD 2	1.39	8929.24	-21113	-0.0002211	0.0006738	0.0035	1.55		13774.45	13774.45	1.54		Si
SLD 2	3.49	-4550.61	-24567	-0.0001442	0.0006738	0.0035	1.55		16571.75	16571.75	3.64		Si
SLV 2	1.39	13586.59	-17742	-0.0109858	0.0006738	0.0035	1.55		11835.95	11835.95	0.87		No
SLV 2	3.49	-9721.88	-23036	-0.0002441	0.0006738	0.0035	1.24		15812.51	15812.51	1.63		Si
SLV 4	1.39	12151.45	-17856	-0.0043145	0.0006738	0.0035	1.55		11901.32	11901.32	0.98		No
SLV 4	3.49	-9836.44	-19830	-0.0002698	0.0006738	0.0035	1.24		14156.37	14156.37	1.44		Si
SLV 3	1.39	12091.63	-17858	-0.0039758	0.0006738	0.0035	1.55		11902.24	11902.24	0.98		No
SLV 3	3.49	-9808.27	-19585	-0.0002713	0.0006738	0.0035	1.24		14026.69	14026.69	1.43		Si
SLD 1	1.39	8903.56	-21113	-0.0002202	0.0006738	0.0035	1.55		13774.85	13774.85	1.55		Si
SLD 1	3.49	-4538.52	-24462	-0.0001436	0.0006738	0.0035	1.55		16522.34	16522.34	3.64		Si
SLV 5	1.39	10036.79	-21691	-0.0002632	0.0006738	0.0035	1.55		14106.97	14106.97	1.41		Si
SLV 5	3.49	-3216.34	-29642	-0.0001449	0.0006738	0.0035	1.55		18862.47	18862.47	5.86		Si
SLV 1	1.39	13526.77	-17744	-0.0106862	0.0006738	0.0035	1.55		11836.87	11836.87	0.88		No
SLV 1	3.49	-9693.72	-22792	-0.0002437	0.0006738	0.0035	1.24		15690.62	15690.62	1.62		Si
SLD 3	1.39	8281.05	-21165	-0.0002008	0.0006738	0.0035	1.55		13804.42	13804.42	1.67		Si
SLD 3	3.49	-4589.43	-23076	-0.000139	0.0006738	0.0035	1.55		15832.06	15832.06	3.45		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.39	7917.35	-34640	-24711	4941	1.55	1.55	-56939	10833	4702	108749	15597	7905	23502	No	4.76	Si
SLU 77	3.49	-834.41	-38109	-27186	4938	1.55	1.55	-62641	10833	4702	108749	15597	7905	23502	No	4.76	Si
SLU 75	1.39	7817.68	-34185	-24387	4884	1.55	1.55	-56191	10833	4702	108749	15597	7905	23502	No	4.81	Si
SLU 75	3.49	-829.84	-37589	-26815	4881	1.55	1.55	-61786	10833	4702	108749	15597	7905	23502	No	4.81	Si
SLU 74	1.39	7820.47	-34186	-24387	4889	1.55	1.55	-56192	10833	4702	108749	15597	7905	23502	No	4.81	Si
SLU 74	3.49	-829.25	-37602	-26825	4886	1.55	1.55	-61808	10833	4702	108749	15597	7905	23502	No	4.81	Si
SLU 78	1.39	7914.56	-34640	-24711	4936	1.55	1.55	-56938	10833	4702	108749	15597	7905	23502	No	4.76	Si
SLU 78	3.49	-835.01	-38096	-27177	4933	1.55	1.55	-62619	10833	4702	108749	15597	7905	23502	No	4.76	Si
SLU 84	1.39	8020.49	-35143	-25070	5004	1.55	1.55	-57765	10833	4702	108749	15597	7905	23502	No	4.7	Si
SLU 84	3.49	-778.11	-38809	-27685	5001	1.55	1.55	-63791	10833	4702	108749	15597	7905	23502	No	4.7	Si
SLU 80	1.39	7858.07	-34339	-24496	4907	1.55	1.55	-56444	10833	4702	108749	15597	7905	23502	No	4.79	Si
SLU 80	3.49	-840.3	-37750	-26930	4904	1.55	1.55	-62050	10833	4702	108749	15597	7905	23502	No	4.79	Si
SLU 79	1.39	7860.86	-34339	-24497	4912	1.55	1.55	-56445	10833	4702	108749	15597	7905	23502	No	4.78	Si
SLU 79	3.49	-839.7	-37763	-26939	4909	1.55	1.55	-62072	10833	4702	108749	15597	7905	23502	No	4.79	Si
SLU 82	1.39	7923.61	-34689	-24746	4953	1.55	1.55	-57019	10833	4702	108749	15597	7905	23502	No	4.75	Si
SLU 82	3.49	-772.94	-38302	-27324	4950	1.55	1.55	-62958	10833	4702	108749	15597	7905	23502	No	4.75	Si
SLU 81	1.39	7926.4	-34689	-24747	4957	1.55	1.55	-57020	10833	4702	108749	15597	7905	23502	No	4.74	Si
SLU 81	3.49	-772.35	-38315	-27333	4955	1.55	1.55	-62979	10833	4702	108749	15597	7905	23502	No	4.74	Si
SLU 83	1.39	8023.28	-35144	-25071	5009	1.55	1.55	-57766	10833	4702	108749	15597	7905	23502	No	4.69	Si
SLU 83	3.49	-777.51	-38822	-27695	5006	1.55	1.55	-63812	10833	4702	108749	15597	7905	23502	No	4.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	1.39	8903.56	-21113	-15062	7614	1.55	1.0599	-34705	16250	4823	108749	23395	7905	31300		4.11	Si
SLD 1	3.49	-4538.52	-24462	-17450	7420	1.55	1.55	-40208	16250	7052	108749	23395	7905	31300		4.22	Si
SLV 3	1.39	12091.63	-17858	-12739	11973	1.55	0.2937	-201633	16250	1336	108749	23395	7905	31300		2.61	Si
SLV 3	3.49	-9808.27	-19585	-13972	11932	1.24	0.8226	0	0	0	108749	18716	6324	25040		2.1	Si
SLD 2	1.39	8929.24	-21113	-15061	7664	1.55	1.0562	-34703	16250	4806	108749	23395	7905	31300		4.08	Si
SLD 2	3.49	-4550.61	-24567	-17525	7470	1.55	1.55	-40381	16250	7052	108749	23395	7905	31300		4.19	Si
SLV 6	1.39	10075.23	-21690	-15473	8304	1.55	0.9315	-35652	16250	4238	108749	23395	7905	31300		3.77	Si
SLV 6	3.49	-3234.44	-29799	-21258	7553	1.55	1.55	-48982	16250	7052	108749	23395	7905	31300		4.14	Si
SLV 5	1.39	10036.79	-21691	-15474	8229	1.55	0.9368	-35654	16250	4263	108749	23395	7905	31300		3.8	Si
SLV 5	3.49	-3216.34	-29642	-21146	7479	1.55	1.55	-48723	16250	7052	108749	23395	7905	31300		4.19	Si
SLV 2	1.39	13586.59	-17742	-12657	13334	1.55	0.0277	-339085	16250	126	108749	23395	7905	31300		2.35	Si
SLV 2	3.49	-9721.88	-23036	-16434	12887	1.24	1.0589	0	0	0	108749	18716	6324	25040		1.94	Si
SLD 3	1.39	8281.05	-21165	-15098	7072	1.55	1.1512	-34789	16250	5238	108749	23395	7905	31300		4.43	Si
SLD 3	3.49	-4589.43	-23076	-16462	7054	1.55	1.55	-37930	16250	7052	108749	23395	7905	31300		4.44	Si
SLV 4	1.39	12151.45	-17856	-12738	12090	1.55	0.2834	-205817	16250	1290	108749	23395	7905	31300		2.59	Si
SLV 4	3.49	-9836.44	-19830	-14146	12049	1.24	0.8369	0	0	0	108749	18716	6324	25040		2.08	Si
SLV 1	1.39	13526.77	-17744	-12658	13217	1.55	0.038	-333152	16250	173	108749	23395	7905	31300		2.37	Si
SLV 1	3.49	-9693.72	-22792	-16259	12770	1.24	1.049	0	0	0	108749	18716	6324	25040		1.96	Si
SLD 4	1.39	8306.73	-21164	-15098	7122	1.55	1.1475	-34788	16250	5221	108749	23395	7905	31300		4.39	Si
SLD 4	3.49	-4601.52	-23181	-16537	7104	1.55	1.55	-38103	16250	7052	108749	23395	7905	31300		4.41	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-18844	0.31	124.1	2013.17	3007.1	2510.13	20.23	Si
SLV 8	-18965	0.31	124.1	2022.06	3024.53	2523.29	20.33	Si
SLV 3	-19068	0.31	124.1	2029.56	3039.32	2534.44	20.42	Si
SLV 4	-19256	0.31	124.1	2043.23	3066.41	2554.82	20.59	Si
SLV 11	-21520	0.31	124.1	2197.7	3378.5	2788.1	22.47	Si
SLV 12	-21641	0.31	124.1	2205.45	3395.18	2800.31	22.56	Si
SLV 1	-21964	0.31	124.1	2225.9	3439.73	2832.82	22.83	Si
SLV 2	-22153	0.31	124.1	2237.65	3465.68	2851.66	22.98	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-27987	0.31	124.1	2539.62	4200.27	3369.94	27.15	Si
SLV 16	-28176	0.31	124.1	2547.37	4222.27	3384.82	27.27	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-23289	-25187	-161	0.39	2580.8	0.975	5.81412	10.19501	No
SLV 9	-23278	-25188	-163	0.39	2579.7	0.975	5.81507	10.19501	No
SLV 6	-20849	-21690	-192	0.427	2332.3	0.972	6.38149	10.19501	No
SLV 5	-20839	-21691	-195	0.427	2331.2	0.972	6.38283	10.19501	No
SLV 12	-18108	-25566	174	0.482	2053.1	0.969	7.23534	10.19501	No
SLV 11	-18097	-25567	172	0.483	2052.1	0.969	7.24074	10.19501	No
SLV 8	-15668	-22069	142	0.548	1804.8	0.965	8.24682	10.19501	No
SLV 7	-15658	-22070	140	0.548	1803.8	0.965	8.25366	10.19501	No
SLV 14	-24324	-29399	-6	0.382	2686.2	0.976	5.68849	5.43686	Si
SLV 13	-24308	-29400	-9	0.382	2684.6	0.976	5.68983	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.246	SLU 83	Si
V_SLU	4.692	SLU 83	Si
PF_SLV	0.871	SLV 2	No
V_SLV	1.943	SLV 2	Si
PFFP_SLV	20.226	SLV 7	Si
R_SLV	0.57	SLV 10	No

Maschio 69

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L4	L5	3.98	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 64	1.39	5289.84	-51017	-0.0000778	0.0004492	0.0035	3.98	63486.39	81667.29	81667.29	15.44	No	Si
SLU 64	3.49	-1949.77	-44329	-0.0000613	0.0004492	0.0035	3.98	59496.27	80795.49	80795.49	41.44	No	Si
SLU 50	1.39	5093.35	-47773	-0.0000727	0.0004492	0.0035	3.98	61714.1	78030.35	78030.35	15.32	No	Si
SLU 50	3.49	-2117.48	-40665	-0.0000566	0.0004492	0.0035	3.98	56756.67	75979.06	75979.06	35.88	No	Si
SLU 51	1.39	5092.51	-47777	-0.0000727	0.0004492	0.0035	3.98	61717	78035.82	78035.82	15.32	No	Si
SLU 51	3.49	-2116.4	-40672	-0.0000566	0.0004492	0.0035	3.98	56762.25	75988.49	75988.49	35.9	No	Si
SLU 45	1.39	5077.26	-47505	-0.0000723	0.0004492	0.0035	3.98	61554.35	77730.68	77730.68	15.31	No	Si
SLU 45	3.49	-2077.65	-40428	-0.0000562	0.0004492	0.0035	3.98	56565.33	75657.16	75657.16	36.41	No	Si
SLU 43	1.39	5005.27	-46265	-0.0000704	0.0004492	0.0035	3.98	60786.06	76299.04	76299.04	15.24	No	Si
SLU 43	3.49	-2052.38	-39173	-0.0000544	0.0004492	0.0035	3.98	55528.34	73958.55	73958.55	36.04	No	Si
SLU 47	1.39	5047.9	-47027	-0.0000716	0.0004492	0.0035	3.98	61263.39	77194.66	77194.66	15.29	No	Si
SLU 47	3.49	-2083.13	-39931	-0.0000555	0.0004492	0.0035	3.98	56160.19	74984.53	74984.53	36	No	Si
SLU 49	1.39	5120.45	-48264	-0.0000735	0.0004492	0.0035	3.98	62002.18	78580.96	78580.96	15.35	No	Si
SLU 49	3.49	-2109.12	-41181	-0.0000573	0.0004492	0.0035	3.98	57165.75	76676.85	76676.85	36.35	No	Si
SLU 46	1.39	5076.41	-47510	-0.0000723	0.0004492	0.0035	3.98	61557.28	77736.15	77736.15	15.31	No	Si
SLU 46	3.49	-2076.57	-40435	-0.0000562	0.0004492	0.0035	3.98	56570.96	75666.59	75666.59	36.44	No	Si
SLU 48	1.39	5121.3	-48259	-0.0000735	0.0004492	0.0035	3.98	61999.35	78575.49	78575.49	15.34	No	Si
SLU 48	3.49	-2110.2	-41174	-0.0000573	0.0004492	0.0035	3.98	57160.27	76667.41	76667.41	36.33	No	Si
SLU 44	1.39	5003.86	-46273	-0.0000704	0.0004492	0.0035	3.98	60791.25	76310.82	76310.82	15.25	No	Si
SLU 44	3.49	-2050.58	-39185	-0.0000544	0.0004492	0.0035	3.98	55538.15	73974.27	73974.27	36.07	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	1.39	18009.78	-44503	-0.0000924	0.0006738	0.0035	3.98		76417.53	76417.53	4.24		Si
SLV 8	3.49	245.34	-37785	-0.000048	0.0006738	0.0035	3.98		66586.39	66586.39	271.4		Si
SLV 6	1.39	-1597.13	-26095	-0.0000355	0.0006738	0.0035	3.98		56253.22	56253.22	35.22		Si
SLV 6	3.49	-8535.21	-17182	-0.0000374	0.0006738	0.0035	3.98		41022.78	41022.78	4.81		Si
SLV 2	1.39	14863.2	-22919	-0.000057	0.0006738	0.0035	3.98		43714.05	43714.05	2.94		Si
SLV 2	3.49	-11843.3	-8418	-0.0000476	0.0006738	0.0035	3.184		25267.09	25267.09	2.13		Si
SLV 1	1.39	14756.35	-23018	-0.0000569	0.0006738	0.0035	3.98		43883.48	43883.48	2.97		Si
SLV 1	3.49	-11968.98	-8684	-0.0000468	0.0006738	0.0035	3.184		25756.45	25756.45	2.15		Si
SLD 3	1.39	11148.11	-34784	-0.0000655	0.0006738	0.0035	3.98		62194.95	62194.95	5.58		Si
SLD 3	3.49	-4817.74	-26052	-0.0000417	0.0006738	0.0035	3.98		56181.65	56181.65	11.66		Si
SLV 4	1.39	20745.27	-28442	-0.0000761	0.0006738	0.0035	3.98		52915.18	52915.18	2.55		Si
SLV 4	3.49	-9209.13	-14599	-0.0000354	0.0006738	0.0035	3.98		36467.66	36467.66	3.96		Si
SLV 7	1.39	17941.11	-44567	-0.0000924	0.0006738	0.0035	3.98		76510.35	76510.35	4.26		Si
SLV 7	3.49	164.57	-37955	-0.0000481	0.0006738	0.0035	3.98		66836.17	66836.17	406.13		Si
SLD 4	1.39	11193.99	-34741	-0.0000655	0.0006738	0.0035	3.98		62132.95	62132.95	5.55		Si
SLD 4	3.49	-4763.78	-25938	-0.0000414	0.0006738	0.0035	3.98		55990.17	55990.17	11.75		Si
SLV 3	1.39	20638.43	-28541	-0.000076	0.0006738	0.0035	3.98		53059.6	53059.6	2.57		Si
SLV 3	3.49	-9334.81	-14865	-0.000036	0.0006738	0.0035	3.98		36935.97	36935.97	3.96		Si
SLV 5	1.39	-1665.8	-26158	-0.0000358	0.0006738	0.0035	3.98		56359.74	56359.74	33.83		Si
SLV 5	3.49	-8615.99	-17353	-0.0000378	0.0006738	0.0035	3.98		41323.76	41323.76	4.8		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	1.39	5121.3	-48259	-34427	4852	3.98	3.98	-30893	10833	12073	108749	40049	20298	60347	No	12.44	Si
SLU 48	3.49	-2110.2	-41174	-29372	4418	3.98	3.98	-26357	10833	12073	108749	40049	20298	60347	No	13.66	Si
SLU 43	1.39	5005.27	-46265	-33005	4762	3.98	3.98	-29616	10833	12073	108749	40049	20298	60347	No	12.67	Si
SLU 43	3.49	-2052.38	-39173	-27945	4348	3.98	3.98	-25076	10833	12073	108749	40049	20298	60347	No	13.88	Si
SLU 71	1.39	5377.92	-52524	-37470	4481	3.98	3.98	-33623	10833	12073	108749	40049	20298	60347	No	13.47	Si
SLU 71	3.49	-2014.87	-45821	-32687	4004	3.98	3.98	-29332	10833	12073	108749	40049	20298	60347	No	15.07	Si
SLU 51	1.39	5092.51	-47777	-34083	4857	3.98	3.98	-30584	10833	12073	108749	40049	20298	60347	No	12.43	Si
SLU 51	3.49	-2116.4	-40672	-29015	4428	3.98	3.98	-26036	10833	12073	108749	40049	20298	60347	No	13.63	Si
SLU 50	1.39	5093.35	-47773	-34080	4860	3.98	3.98	-30581	10833	12073	108749	40049	20298	60347	No	12.42	Si
SLU 50	3.49	-2117.48	-40665	-29010	4431	3.98	3.98	-26032	10833	12073	108749	40049	20298	60347	No	13.62	Si
SLU 45	1.39	5077.26	-47505	-33889	4803	3.98	3.98	-30410	10833	12073	108749	40049	20298	60347	No	12.56	Si
SLU 45	3.49	-2077.65	-40428	-28840	4377	3.98	3.98	-25879	10833	12073	108749	40049	20298	60347	No	13.79	Si
SLU 47	1.39	5047.9	-47027	-33548	4806	3.98	3.98	-30104	10833	12073	108749	40049	20298	60347	No	12.56	Si
SLU 47	3.49	-2083.13	-39931	-28486	4385	3.98	3.98	-25561	10833	12073	108749	40049	20298	60347	No	13.76	Si
SLU 49	1.39	5120.45	-48264	-34430	4849	3.98	3.98	-30896	10833	12073	108749	40049	20298	60347	No	12.45	Si
SLU 49	3.49	-2109.12	-41181	-29377	4415	3.98	3.98	-26361	10833	12073	108749	40049	20298	60347	No	13.67	Si
SLU 44	1.39	5003.86	-46273	-33010	4757	3.98	3.98	-29622	10833	12073	108749	40049	20298	60347	No	12.68	Si
SLU 44	3.49	-2050.58	-39185	-27954	4343	3.98	3.98	-25084	10833	12073	108749	40049	20298	60347	No	13.89	Si
SLU 46	1.39	5076.41	-47510	-33893	4800	3.98	3.98	-30413	10833	12073	108749	40049	20298	60347	No	12.57	Si
SLU 46	3.49	-2076.57	-40435	-28845	4374	3.98	3.98	-25884	10833	12073	108749	40049	20298	60347	No	13.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	1.39	14863.2	-22919	-16350	19054	3.98	3.98	-14672	15434	17200	108749	60073	20298	80371		4.22	Si
SLV 2	3.49	-11843.3	-8418	-6005	18033	3.184	1.7494	0	0	0	108749	48059	16238	64297		3.57	Si
SLV 16	1.39	-6622.79	-55872	-39858	-12344	3.98	3.98	-35766	16250	18109	108749	60073	20298	80371		6.51	Si
SLV 16	3.49	9087.25	-60106	-42878	-12039	3.98	3.98	-38476	16250	18109	108749	60073	20298	80371		6.68	Si
SLV 13	1.39	-12611.71	-50449	-35989	-13251	3.98	3.98	-32294	16250	18109	108749	60073	20298	80371		6.07	Si
SLV 13	3.49	6327.4	-54191	-38659	-13259	3.98	3.98	-34690	16250	18109	108749	60073	20298	80371		6.06	Si
SLV 14	1.39	-12504.86	-50350	-35918	-13103	3.98	3.98	-32231	16250	18109	108749	60073	20298	80371		6.13	Si
SLV 14	3.49	6453.08	-53925	-38469	-13109	3.98	3.98	-34520	16250	18109	108749	60073	20298	80371		6.13	Si
SLV 4	1.39	20745.27	-28442	-20290	19813	3.98	3.7818	-18207	16141	17092	108749	60073	20298	80371		4.06	Si
SLV 4	3.49	-9209.13	-14599	-10415	19103	3.98	3.98	-9345	14369	16013	108749	60073	20298	80371		4.21	Si
SLV 1	1.39	14756.35	-23018	-16421	18906	3.98	3.98	-14735	15447	17214	108749	60073	20298	80371		4.25	Si
SLV 1	3.49	-11968.98	-8684	-6195	17884	3.184	1.8351	0	0	0	108749	48059	16238	64297		3.6	Si
SLV 3	1.39	20638.43	-28541	-20360	19665	3.98	3.8006	-18270	16154	17191	108749	60073	20298	80371		4.09	Si
SLV 3	3.49	-9334.81	-14865	-10604	18954	3.98	3.98	-9515	14403	16051	108749	60073	20298	80371		4.24	Si
SLV 15	1.39	-6729.64	-55971	-39928	-12492	3.98	3.98	-35829	16250	18109	108749	60073	20298	80371		6.43	Si
SLV 15	3.49	8961.57	-60372	-43068	-12189	3.98	3.98	-38647	16250	18109	108749	60073	20298	80371		6.59	Si
SLD 3	1.39	11148.11	-34784	-24814	10279	3.98	3.98	-22266	16250	18109	108749	60073	20298	80371		7.82	Si
SLD 3	3.49	-4817.74	-26052	-18585	9769	3.98	3.98	-16677	15835	17647	108749	60073	20298	80371		8.23	Si
SLD 4	1.39	11193.99	-34741	-24784	10342	3.98	3.98	-22239	16250	18109	108749	60073	20298	80371		7.77	Si
SLD 4	3.49	-4763.78	-25938	-18504	9833	3.98	3.98	-16604	15821	17631	108749	60073	20298	80371		8.17	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-11299	0.31	318.66	1494.31	2250.19	1872.25	5.88	Si
SLV 1	-11523	0.31	318.66	1522.26	2284.63	1903.44	5.97	Si
SLV 4	-17661	0.31	318.66	2258.71	3218.85	2738.78	8.59	Si
SLV 3	-17885	0.31	318.66	2284.7	3252.92	2768.81	8.69	Si
SLV 6	-18246	0.31	318.66	2326.25	3307.6	2816.92	8.84	Si
SLV 5	-18391	0.31	318.66	2342.85	3329.48	2836.16	8.9	Si
SLV 10	-30529	0.31	318.66	3635.17	5135.34	4385.26	13.76	Si
SLV 9	-30673	0.31	318.66	3649.34	5156.41	4402.88	13.82	Si
SLV 8	-39453	0.31	318.66	4456.48	6430.33	5443.41	17.08	Si
SLV 7	-39597	0.31	318.66	4468.88	6451.09	5459.98	17.13	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-42886	-52796	813	0.509	4904.4	0.967	7.64963	10.19501	No
SLV 12	-42696	-52732	814	0.511	4885.1	0.967	7.67941	10.19501	No
SLV 9	-35691	-34387	-1376	0.581	4172.3	0.961	8.77541	10.19501	No
SLV 10	-35501	-34324	-1376	0.583	4152.9	0.961	8.81707	10.19501	No
SLV 7	-34535	-44567	1232	0.601	4054.7	0.96	9.09069	10.19501	No
SLV 8	-34344	-44503	1233	0.604	4035.3	0.96	9.13476	10.19501	No
SLV 5	-27340	-26158	-957	0.741	3323.3	0.953	11.29736	10.19501	Si
SLV 6	-27149	-26095	-957	0.745	3304	0.952	11.36707	10.19501	Si
SLV 15	-50164	-55971	-442	0.452	5645.4	0.971	6.77006	5.43686	Si
SLV 16	-49867	-55872	-441	0.455	5615.2	0.971	6.80561	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.244	SLU 43	Si
V_SLU	12.418	SLU 50	Si
PF_SLV	2.133	SLV 2	Si
V_SLV	3.566	SLV 2	Si
PFFP_SLV	5.875	SLV 2	Si
R_SLV	0.75	SLV 11	No

Maschio 70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	-0.354	L4	Z medio 397 cm	2.96	0.28	2.58	1.73	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	1.39	1285.5	-49657	-0.0001097	0.0003743	0.0035	2.96	30243.02	43435.75	43435.75	33.79	No	Si
SLU 77	3.12	2830.81	-45960	-0.0001076	0.0003743	0.0035	2.96	30971.72	42345.61	42345.61	14.96	No	Si
SLU 64	1.39	1414.68	-43311	-0.0000945	0.0003743	0.0035	2.96	31198.88	41606.56	41606.56	29.41	No	Si
SLU 64	3.12	2649.26	-39500	-0.0000909	0.0003743	0.0035	2.96	31093.96	39479.96	39479.96	14.9	No	Si
SLU 67	1.39	1438.82	-44395	-0.0000972	0.0003743	0.0035	2.96	31135.68	41904.76	41904.76	29.12	No	Si
SLU 67	3.12	2710.94	-40586	-0.0000938	0.0003743	0.0035	2.96	31175.76	40184.32	40184.32	14.82	No	Si
SLU 66	1.39	1436.35	-44394	-0.0000972	0.0003743	0.0035	2.96	31135.7	41904.66	41904.66	29.17	No	Si
SLU 66	3.12	2727.55	-40588	-0.0000938	0.0003743	0.0035	2.96	31175.83	40185.19	40185.19	14.73	No	Si
SLU 70	1.39	1458.48	-45079	-0.000099	0.0003743	0.0035	2.96	31074.5	42096.17	42096.17	28.86	No	Si
SLU 70	3.12	2750.49	-41269	-0.0000956	0.0003743	0.0035	2.96	31206.01	40605.31	40605.31	14.76	No	Si
SLU 71	1.39	1454.01	-44680	-0.000098	0.0003743	0.0035	2.96	31112.16	41984.33	41984.33	28.87	No	Si
SLU 71	3.12	2728.36	-40866	-0.0000945	0.0003743	0.0035	2.96	31190.13	40359.18	40359.18	14.79	No	Si
SLU 69	1.39	1456.01	-45079	-0.000099	0.0003743	0.0035	2.96	31074.54	42096.07	42096.07	28.91	No	Si
SLU 69	3.12	2767.11	-41271	-0.0000957	0.0003743	0.0035	2.96	31206.05	40606.14	40606.14	14.67	No	Si
SLU 78	1.39	1287.98	-49658	-0.0001097	0.0003743	0.0035	2.96	30242.93	43435.86	43435.86	33.72	No	Si
SLU 78	3.12	2814.19	-45958	-0.0001075	0.0003743	0.0035	2.96	30971.9	42345.22	42345.22	15.05	No	Si
SLU 68	1.39	1438.47	-43996	-0.0000962	0.0003743	0.0035	2.96	31163.71	41794.43	41794.43	29.05	No	Si
SLU 68	3.12	2661.12	-40181	-0.0000926	0.0003743	0.0035	2.96	31150.07	39920.97	39920.97	15	No	Si
SLU 72	1.39	1456.48	-44681	-0.000098	0.0003743	0.0035	2.96	31112.13	41984.42	41984.42	28.83	No	Si
SLU 72	3.12	2711.75	-40865	-0.0000944	0.0003743	0.0035	2.96	31190.07	40358.33	40358.33	14.88	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 5	1.39	987.96	-34627	-0.0000695	0.0005615	0.0035	2.96		40747.61	40747.61	41.24		Si
SLD 5	3.12	3313.13	-30945	-0.0000712	0.0005615	0.0035	2.96		37515.3	37515.3	11.32		Si
SLV 6	1.39	844.4	-36080	-0.0000719	0.0005615	0.0035	2.96		42042.96	42042.96	49.79		Si
SLV 6	3.12	4976.8	-31186	-0.0000783	0.0005615	0.0035	2.96		37725.58	37725.58	7.58		Si
SLD 9	1.39	483.35	-32666	-0.0000635	0.0005615	0.0035	2.96		39018.2	39018.2	80.72		Si
SLD 9	3.12	3555.9	-30881	-0.000072	0.0005615	0.0035	2.96		37459.71	37459.71	10.53		Si
SLD 6	1.39	938.38	-34709	-0.0000694	0.0005615	0.0035	2.96		40820.68	40820.68	43.5		Si
SLD 6	3.12	3311.61	-30988	-0.0000713	0.0005615	0.0035	2.96		37553.21	37553.21	11.34		Si
SLV 14	1.39	-1244.88	-26201	-0.0000536	0.0005615	0.0035	2.96		35240.6	35240.6	28.31		Si
SLV 14	3.12	3910.12	-30742	-0.0000731	0.0005615	0.0035	2.96		37339.04	37339.04	9.55		Si
SLV 5	1.39	957.96	-35892	-0.0000719	0.0005615	0.0035	2.96		41874.29	41874.29	43.71		Si
SLV 5	3.12	4980.26	-31086	-0.0000781	0.0005615	0.0035	2.96		37638.67	37638.67	7.56		Si
SLV 10	1.39	-334.58	-31497	-0.0000605	0.0005615	0.0035	2.96		40497.37	40497.37	121.04		Si
SLV 10	3.12	5544.04	-31039	-0.0000803	0.0005615	0.0035	2.96		37597.98	37597.98	6.78		Si
SLV 13	1.39	-1068.18	-25907	-0.0000523	0.0005615	0.0035	2.96		34942.29	34942.29	32.71		Si
SLV 13	3.12	3915.51	-30587	-0.0000728	0.0005615	0.0035	2.96		37204.18	37204.18	9.5		Si
SLV 9	1.39	-221.03	-31309	-0.0000597	0.0005615	0.0035	2.96		40314.87	40314.87	182.4		Si
SLV 9	3.12	5547.51	-30940	-0.0000801	0.0005615	0.0035	2.96		37511.14	37511.14	6.76		Si
SLD 10	1.39	433.77	-32749	-0.0000634	0.0005615	0.0035	2.96		39090.43	39090.43	90.12		Si
SLD 10	3.12	3554.39	-30924	-0.0000721	0.0005615	0.0035	2.96		37497.6	37497.6	10.55		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.39	1193.24	-50536	-42082	3684	2.96	2.96	-50775	10833	8979	28547	24818	7548	32366	No	8.79	Si
SLU 84	3.12	2763.2	-46880	-39038	5639	2.96	2.96	-47102	10833	8979	28547	24818	7548	32366	No	5.74	Si
SLU 75	1.39	1268.31	-48973	-40780	3724	2.96	2.96	-49204	10833	8979	28547	24818	7548	32366	No	8.69	Si
SLU 75	3.12	2774.64	-45275	-37701	5524	2.96	2.96	-45489	10833	8979	28547	24818	7548	32366	No	5.86	Si
SLU 63	1.39	1110.59	-46293	-38549	3762	2.96	2.96	-46512	10833	8979	28547	24818	7548	32366	No	8.6	Si
SLU 63	3.12	2434.96	-42866	-35695	5536	2.96	2.96	-43068	10833	8979	28547	24818	7548	32366	No	5.85	Si
SLU 79	1.39	1283.5	-49258	-41018	3751	2.96	2.96	-49491	10833	8979	28547	24818	7548	32366	No	8.63	Si
SLU 79	3.12	2792.06	-45555	-37934	5552	2.96	2.96	-45770	10833	8979	28547	24818	7548	32366	No	5.83	Si
SLU 77	1.39	1285.5	-49657	-41350	3730	2.96	2.96	-49892	10833	8979	28547	24818	7548	32366	No	8.68	Si
SLU 77	3.12	2830.81	-45960	-38271	5540	2.96	2.96	-46177	10833	8979	28547	24818	7548	32366	No	5.84	Si
SLU 83	1.39	1190.76	-50536	-42082	3632	2.96	2.96	-50774	10833	8979	28547	24818	7548	32366	No	8.91	Si
SLU 83	3.12	2779.81	-46882	-39039	5587	2.96	2.96	-47103	10833	8979	28547	24818	7548	32366	No	5.79	Si
SLU 76	1.39	1267.96	-48574	-40448	3780	2.96	2.96	-48804	10833	8979	28547	24818	7548	32366	No	8.56	Si
SLU 76	3.12	2724.82	-44870	-37364	5570	2.96	2.96	-45082	10833	8979	28547	24818	7548	32366	No	5.81	Si
SLU 82	1.39	1173.57	-49851	-41512	3627	2.96	2.96	-50087	10833	8979	28547	24818	7548	32366	No	8.92	Si
SLU 82	3.12	2723.64	-46197	-38469	5571	2.96	2.96	-46416	10833	8979	28547	24818	7548	32366	No	5.81	Si
SLU 80	1.39	1285.98	-49259	-41018	3803	2.96	2.96	-49491	10833	8979	28547	24818	7548	32366	No	8.51	Si
SLU 80	3.12	2775.45	-45554	-37933	5604	2.96	2.96	-45769	10833	8979	28547	24818	7548	32366	No	5.78	Si
SLU 78	1.39	1287.98	-49658	-41351	3781	2.96	2.96	-49892	10833	8979	28547	24818	7548	32366	No	8.56	Si
SLU 78	3.12	2814.19	-45958	-38270	5592	2.96	2.96	-46175	10833	8979	28547	24818	7548	32366	No	5.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	1.39	-221.03	-31309	-26071	-7943	2.96	2.96	-31457	16250	13468	28547	37227	7548	42015		5.29	Si
SLV 9	3.12	5547.51	-30940	-25764	-6030	2.96	2.96	-31086	16250	13468	28547	37227	7548	42015		6.97	Si
SLV 8	1.39	2263.7	-36074	-30040	13711	2.96	2.96	-36245	16250	13468	28547	37227	7548	42015		3.06	Si
SLV 8	3.12	-1579.6	-30745	-25602	14087	2.96	2.96	-30890	16250	13468	28547	37227	7548	42015		2.98	Si
SLV 4	1.39	3110.86	-41476	-34537	7937	2.96	2.96	-41672	16250	13468	28547	37227	7548	42015		5.29	Si
SLV 4	3.12	52.39	-31098	-25896	9162	2.96	2.96	-31245	16250	13468	28547	37227	7548	42015		4.59	Si
SLV 3	1.39	3287.55	-41182	-34293	8027	2.96	2.96	-41377	16250	13468	28547	37227	7548	42015		5.23	Si
SLV 3	3.12	57.78	-30943	-25766	9269	2.96	2.96	-31089	16250	13468	28547	37227	7548	42015		4.53	Si
SLV 10	1.39	-334.58	-31497	-26228	-8001	2.96	2.96	-31646	16250	13468	28547	37227	7548	42015		5.25	Si
SLV 10	3.12	5544.04	-31039	-25847	-6098	2.96	2.96	-31186	16250	13468	28547	37227	7548	42015		6.89	Si
SLV 11	1.39	1198.28	-31303	-26066	12554	2.96	2.96	-31451	16250	13468	28547	37227	7548	42015		3.35	Si
SLV 11	3.12	-1008.89	-30498	-25396	12733	2.96	2.96	-30643	16250	13468	28547	37227	7548	42015		3.3	Si
SLD 7	1.39	1608.9	-34634	-28840	7680	2.96	2.96	-34798	16250	13468	28547	37227	7548	42015		5.47	Si
SLD 7	3.12	413.51	-30760	-25614	8487	2.96	2.96	-30906	16250	13468	28547	37227	7548	42015		4.95	Si
SLV 7	1.39	2377.26	-35886	-29883	13769	2.96	2.96	-36055	16250	13468	28547	37227	7548	42015		3.05	Si
SLV 7	3.12	-1576.14	-30645	-25518	14156	2.96	2.96	-30790	16250	13468	28547	37227	7548	42015		2.97	Si
SLD 8	1.39	1559.32	-34717	-28909	7655	2.96	2.96	-34881	16250	13468	28547	37227	7548	42015		5.49	Si
SLD 8	3.12	412	-30804	-25651	8457	2.96	2.96	-30949	16250	13468	28547	37227	7548	42015		4.97	Si
SLV 12	1.39	1084.72	-31491	-26223	12496	2.96	2.96	-31640	16250	13468	28547	37227	7548	42015		3.36	Si
SLV 12	3.12	-1012.36	-30598	-25480	12664	2.96	2.96	-30743	16250	13468	28547	37227	7548	42015		3.32	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.255 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.29	37348	-30954	126.37	3273.74	25.91	Si
SLV 13	179667	0.29	37535	-31109	126.37	3284.84	25.99	Si
SLV 16	179667	0.29	37623	-31182	126.37	3289.97	26.03	Si
SLV 14	179667	0.29	37810	-31337	126.37	3300.99	26.12	Si
SLV 11	179667	0.29	38575	-31971	126.37	3345.34	26.47	Si
SLV 12	179667	0.29	38752	-32117	126.37	3355.46	26.55	Si
SLV 9	179667	0.29	39201	-32489	126.37	3380.96	26.75	Si
SLV 10	179667	0.29	39377	-32636	126.37	3390.91	26.83	Si
SLV 7	179667	0.29	39772	-32963	126.37	3413	27.01	Si
SLV 8	179667	0.29	39949	-33110	126.37	3422.8	27.09	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.255 Wa = 0.05 Ta = 0.0397

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-31186	-36080	3	0.559	3476.2	0.973	8.35362	5.44151	Si
SLV 10	-31039	-31497	-36	0.561	3461.3	0.973	8.37296	5.44151	Si
SLV 5	-31086	-35892	2	0.561	3466	0.973	8.37729	5.44151	Si
SLV 9	-30940	-31309	-37	0.562	3451.1	0.973	8.39631	5.44151	Si
SLV 8	-30745	-36074	-32	0.565	3431.3	0.973	8.44505	5.44151	Si
SLV 12	-30598	-31491	-71	0.567	3416.3	0.973	8.4624	5.44151	Si
SLV 7	-30645	-35886	-33	0.567	3421.1	0.973	8.46885	5.44151	Si
SLV 11	-30498	-31303	-72	0.568	3406.2	0.973	8.48636	5.44151	Si
SLV 2	-31230	-41477	37	0.558	3480.7	0.973	8.32815	3.8585	Si
SLV 4	-31098	-41476	26	0.56	3467.2	0.973	8.36387	3.8585	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.675	SLU 69	Si
V_SLU	5.74	SLU 84	Si
PF_SLV	6.762	SLV 9	Si
V_SLV	2.968	SLV 7	Si
PFFP_SLV	25.906	SLV 15	Si
R_SLV	1.535	SLV 6	Si

Maschio 71

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-0.354	-11.003	1.006	L4	L5	1.36	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	1.39	3560.89	-28503	-0.0002349	0.0003743	0.0035	1.36	5132.68	9573.09	9573.09	2.69	No	Si
SLU 80	4.82	-230.42	-21153	-0.0000997	0.0003743	0.0035	1.36	6536.08	9185.32	9185.32	39.86	No	Si
SLU 83	1.39	3672.15	-29319	-0.0002459	0.0003743	0.0035	1.36	4860.04	9545.12	9545.12	2.6	No	Si
SLU 83	4.82	-298.43	-21835	-0.0001049	0.0003743	0.0035	1.36	6485.61	9258.7	9258.7	31.02	No	Si
SLU 84	1.39	3674.91	-29313	-0.0002459	0.0003743	0.0035	1.36	4861.94	9545.3	9545.3	2.6	No	Si
SLU 84	4.82	-304.1	-21813	-0.0001049	0.0003743	0.0035	1.36	6487.47	9256.3	9256.3	30.44	No	Si
SLU 79	1.39	3558.14	-28508	-0.0002348	0.0003743	0.0035	1.36	5130.93	9572.9	9572.9	2.69	No	Si
SLU 79	4.82	-224.75	-21175	-0.0000997	0.0003743	0.0035	1.36	6534.73	9187.59	9187.59	40.88	No	Si
SLU 75	1.39	3544.69	-28370	-0.0002332	0.0003743	0.0035	1.36	5174.88	9577.75	9577.75	2.7	No	Si
SLU 75	4.82	-232.82	-21036	-0.0000991	0.0003743	0.0035	1.36	6543.08	9173.17	9173.17	39.4	No	Si
SLU 82	1.39	3632.85	-28951	-0.0002412	0.0003743	0.0035	1.36	4985.77	9557.58	9557.58	2.63	No	Si
SLU 82	4.82	-308.81	-21481	-0.0001032	0.0003743	0.0035	1.36	6513.85	9220.09	9220.09	29.86	No	Si
SLU 74	1.39	3541.94	-28376	-0.0002332	0.0003743	0.0035	1.36	5173.16	9577.56	9577.56	2.7	No	Si
SLU 74	4.82	-227.15	-21058	-0.0000991	0.0003743	0.0035	1.36	6541.81	9175.42	9175.42	40.39	No	Si
SLU 77	1.39	3584	-28738	-0.0002377	0.0003743	0.0035	1.36	5056.65	9564.92	9564.92	2.67	No	Si
SLU 77	4.82	-222.44	-21390	-0.0001008	0.0003743	0.0035	1.36	6520.36	9210.42	9210.42	41.41	No	Si
SLU 81	1.39	3630.1	-28957	-0.0002412	0.0003743	0.0035	1.36	4983.93	9557.39	9557.39	2.63	No	Si
SLU 81	4.82	-303.15	-21503	-0.0001032	0.0003743	0.0035	1.36	6512.25	9222.43	9222.43	30.42	No	Si
SLU 78	1.39	3586.75	-28732	-0.0002378	0.0003743	0.0035	1.36	5058.45	9565.11	9565.11	2.67	No	Si
SLU 78	4.82	-228.1	-21369	-0.0001008	0.0003743	0.0035	1.36	6521.88	9208.1	9208.1	40.37	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	1.39	3257.95	-19692	-0.0001477	0.0005615	0.0035	1.36		10155.17	10155.17	3.12		Si
SLV 7	4.82	-764.22	-9017	-0.0000498	0.0005615	0.0035	1.36		5887.29	5887.29	7.7		Si
SLV 4	1.39	3145.91	-23298	-0.0001645	0.0005615	0.0035	1.36		11215.27	11215.27	3.57		Si
SLV 4	4.82	-21.1	-10502	-0.0000426	0.0005615	0.0035	1.36		6648.84	6648.84	315.1		Si
SLD 8	1.39	2786.55	-19553	-0.0001374	0.0005615	0.0035	1.36		10097.26	10097.26	3.62		Si
SLD 8	4.82	-397.57	-11959	-0.0000557	0.0005615	0.0035	1.36		7361.29	7361.29	18.52		Si
SLV 11	1.39	2943.69	-17211	-0.0001288	0.0005615	0.0035	1.36		9134.14	9134.14	3.1		Si
SLV 11	4.82	-948.45	-10461	-0.0000593	0.0005615	0.0035	1.36		6628.17	6628.17	6.99		Si
SLV 8	1.39	3243.79	-19674	-0.0001473	0.0005615	0.0035	1.36		10147.53	10147.53	3.13		Si
SLV 8	4.82	-761.19	-9033	-0.0000498	0.0005615	0.0035	1.36		5895.57	5895.57	7.75		Si
SLD 12	1.39	2652.56	-18493	-0.0001293	0.0005615	0.0035	1.36		9657.85	9657.85	3.64		Si
SLD 12	4.82	-476.48	-12575	-0.0000598	0.0005615	0.0035	1.36		7657.5	7657.5	16.07		Si
SLV 3	1.39	3167.95	-23327	-0.0001651	0.0005615	0.0035	1.36		11223.21	11223.21	3.54		Si
SLV 3	4.82	-25.82	-10477	-0.0000426	0.0005615	0.0035	1.36		6636.57	6636.57	257.05		Si
SLD 11	1.39	2658.74	-18501	-0.0001295	0.0005615	0.0035	1.36		9661.15	9661.15	3.63		Si
SLD 11	4.82	-477.8	-12568	-0.0000598	0.0005615	0.0035	1.36		7654.19	7654.19	16.02		Si
SLD 7	1.39	2792.73	-19561	-0.0001375	0.0005615	0.0035	1.36		10100.59	10100.59	3.62		Si
SLD 7	4.82	-398.89	-11952	-0.0000557	0.0005615	0.0035	1.36		7358.02	7358.02	18.45		Si
SLV 12	1.39	2929.52	-17193	-0.0001284	0.0005615	0.0035	1.36		9126.71	9126.71	3.12		Si
SLV 12	4.82	-945.42	-10476	-0.0000593	0.0005615	0.0035	1.36		6636.05	6636.05	7.02		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	1.39	3672.15	-29319	-24414	5204	1.36	1.36	-64113	10833	4125	38062	11403	3468	14871	No	2.86	Si
SLU 83	4.82	-298.43	-21835	-18182	2110	1.36	1.36	-47748	10833	4125	38062	11403	3468	14871	No	7.05	Si
SLU 63	1.39	3399.66	-26781	-22301	5030	1.36	1.36	-58563	10833	4125	38062	11403	3468	14871	No	2.96	Si
SLU 63	4.82	-319.95	-19944	-16608	2272	1.36	1.36	-43612	10833	4125	38062	11403	3468	14871	No	6.55	Si
SLU 79	1.39	3558.14	-28508	-23739	5046	1.36	1.36	-62341	10833	4125	38062	11403	3468	14871	No	2.95	Si
SLU 79	4.82	-224.75	-21175	-17632	2030	1.36	1.36	-46303	10833	4125	38062	11403	3468	14871	No	7.33	Si
SLU 82	1.39	3632.85	-28951	-24108	5157	1.36	1.36	-63309	10833	4125	38062	11403	3468	14871	No	2.88	Si
SLU 82	4.82	-308.81	-21481	-17887	2117	1.36	1.36	-46973	10833	4125	38062	11403	3468	14871	No	7.02	Si
SLU 78	1.39	3586.75	-28732	-23926	5091	1.36	1.36	-62830	10833	4125	38062	11403	3468	14871	No	2.92	Si
SLU 78	4.82	-228.1	-21369	-17794	2058	1.36	1.36	-46728	10833	4125	38062	11403	3468	14871	No	7.23	Si
SLU 77	1.39	3584	-28738	-23930	5073	1.36	1.36	-62842	10833	4125	38062	11403	3468	14871	No	2.93	Si
SLU 77	4.82	-222.44	-21390	-17812	2035	1.36	1.36	-46775	10833	4125	38062	11403	3468	14871	No	7.31	Si
SLU 80	1.39	3560.89	-28503	-23735	5064	1.36	1.36	-62329	10833	4125	38062	11403	3468	14871	No	2.94	Si
SLU 80	4.82	-230.42	-21153	-17614	2054	1.36	1.36	-46256	10833	4125	38062	11403	3468	14871	No	7.24	Si
SLU 84	1.39	3674.91	-29313	-24410	5222	1.36	1.36	-64101	10833	4125	38062	11403	3468	14871	No	2.85	Si
SLU 84	4.82	-304.1	-21813	-18164	2133	1.36	1.36	-47700	10833	4125	38062	11403	3468	14871	No	6.97	Si
SLU 81	1.39	3630.1	-28957	-24113	5139	1.36	1.36	-63321	10833	4125	38062	11403	3468	14871	No	2.89	Si
SLU 81	4.82	-303.15	-21503	-17905	2094	1.36	1.36	-47020	10833	4125	38062	11403	3468	14871	No	7.1	Si
SLU 75	1.39	3544.69	-28370	-23624	5026	1.36	1.36	-62038	10833	4125	38062	11403	3468	14871	No	2.96	Si
SLU 75	4.82	-232.82	-21036	-17517	2042	1.36	1.36	-46001	10833	4125	38062	11403	3468	14871	No	7.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	1.39	2786.55	-19553	-16282	4848	1.36	1.36	-42758	16250	6188	38062	17104	3468	20572		4.24	Si
SLD 8	4.82	-397.57	-11959	-9958	2622	1.36	1.36	-26151	15647	5958	38062	17104	3468	20572		7.85	Si
SLV 12	1.39	2929.52	-17193	-14317	7591	1.36	1.36	-37597	16250	6188	38062	17104	3468	20572		2.71	Si
SLV 12	4.82	-945.42	-10476	-8724	4941	1.36	1.36	-22909	14999	5711	38062	17104	3468	20572		4.16	Si
SLV 7	1.39	3257.95	-19692	-16398	6590	1.36	1.36	-43061	16250	6188	38062	17104	3468	20572		3.12	Si
SLV 7	4.82	-764.22	-9017	-7509	4124	1.36	1.36	-19718	14360	5468	38062	17104	3468	20572		4.99	Si
SLV 15	1.39	2120.39	-15058	-12539	6316	1.36	1.36	-32927	16250	6188	38062	17104	3468	20572		3.26	Si
SLV 15	4.82	-639.93	-15290	-12732	3828	1.36	1.36	-33434	16250	6188	38062	17104	3468	20572		5.37	Si
SLV 16	1.39	2098.35	-15029	-12515	6266	1.36	1.36	-32865	16250	6188	38062	17104	3468	20572		3.28	Si
SLV 16	4.82	-635.21	-15314	-12752	3774	1.36	1.36	-33488	16250	6188	38062	17104	3468	20572		5.45	Si
SLV 11	1.39	2943.69	-17211	-14332	7623	1.36	1.36	-37637	16250	6188	38062	17104	3468	20572		2.7	Si
SLV 11	4.82	-948.45	-10461	-8711	4976	1.36	1.36	-22875	14992	5709	38062	17104	3468	20572		4.13	Si
SLV 8	1.39	3243.79	-19674	-16383	6558	1.36	1.36	-43021	16250	6188	38062	17104	3468	20572		3.14	Si
SLV 8	4.82	-761.19	-9033	-7522	4089	1.36	1.36	-19752	14367	5471	38062	17104	3468	20572		5.03	Si
SLD 7	1.39	2792.73	-19561	-16289	4862	1.36	1.36	-42775	16250	6188	38062	17104	3468	20572		4.23	Si
SLD 7	4.82	-398.89	-11952	-9953	2637	1.36	1.36	-26136	15644	5957	38062	17104	3468	20572		7.8	Si
SLD 12	1.39	2652.56	-18493	-15399	5290	1.36	1.36	-40438	16250	6188	38062	17104	3468	20572		3.89	Si
SLD 12	4.82	-476.48	-12575	-10471	2986	1.36	1.36	-27498	15916	6061	38062	17104	3468	20572		6.89	Si
SLD 11	1.39	2658.74	-18501	-15406	5304	1.36	1.36	-40456	16250	6188	38062	17104	3468	20572		3.88	Si
SLD 11	4.82	-477.8	-12568	-10465	3002	1.36	1.36	-27483	15913	6060	38062	17104	3468	20572		6.85	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.31	36582	-13930	108.89	1483.09	13.62	Si
SLV 4	179667	0.31	36594	-13935	108.89	1483.43	13.62	Si
SLV 7	179667	0.31	37465	-14267	108.89	1507.34	13.84	Si
SLV 8	179667	0.31	37472	-14270	108.89	1507.55	13.84	Si
SLV 1	179667	0.31	40370	-15373	108.89	1583.28	14.54	Si
SLV 2	179667	0.31	40382	-15377	108.89	1583.58	14.54	Si
SLV 11	179667	0.31	42007	-15996	108.89	1623.49	14.91	Si
SLV 12	179667	0.31	42015	-15999	108.89	1623.68	14.91	Si
SLV 5	179667	0.31	50091	-19075	108.89	1794.55	16.48	Si
SLV 6	179667	0.31	50099	-19078	108.89	1794.69	16.48	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-19473	-19294	38	0.411	2166.5	0.974	6.13763	10.19501	No
SLV 9	-19458	-19312	38	0.412	2164.9	0.974	6.14196	10.19501	No
SLV 6	-18030	-21775	-206	0.43	2019.5	0.972	6.43443	10.19501	No
SLV 5	-18014	-21793	-206	0.431	2017.9	0.972	6.4393	10.19501	No
SLV 12	-10476	-17193	141	0.688	1250.9	0.957	10.45941	10.19501	Si
SLV 11	-10461	-17211	141	0.689	1249.3	0.957	10.47322	10.19501	Si
SLV 14	-18013	-15659	358	0.423	2017.8	0.972	6.32126	5.43686	Si
SLV 13	-17989	-15688	358	0.423	2015.3	0.972	6.32876	5.43686	Si
SLV 8	-9033	-19674	-102	0.784	1104.2	0.952	11.97157	10.19501	Si
SLV 7	-9017	-19692	-103	0.785	1102.6	0.951	11.98974	10.19501	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.597	SLU 84	Si
V_SLU	2.848	SLU 84	Si
PF_SLV	3.103	SLV 11	Si
V_SLV	2.699	SLV 11	Si
PFFP_SLV	13.62	SLV 3	Si
R_SLV	0.602	SLV 10	No

Maschio 72

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.526	L4	L5	3.35	0.16	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	1.39	-2589.02	-51789	-0.0001511	0.0004492	0.0035	3.35	18151.09	62731.35	62731.35	24.23	No	Si
SLU 83	4.82	-2555.95	-24935	-0.0000728	0.0004492	0.0035	3.35	25864.63	40793.19	40793.19	15.96	No	Si
SLU 81	1.39	-2548.23	-50970	-0.0001483	0.0004492	0.0035	3.35	18931.13	62258.28	62258.28	24.43	No	Si
SLU 81	4.82	-2518.4	-24104	-0.0000704	0.0004492	0.0035	3.35	25514.88	39847.74	39847.74	15.82	No	Si
SLU 84	1.39	-2662.02	-51614	-0.000151	0.0004492	0.0035	3.35	18320.64	62630.27	62630.27	23.53	No	Si
SLU 84	4.82	-2576.32	-24942	-0.0000729	0.0004492	0.0035	3.35	25867.22	40800.55	40800.55	15.84	No	Si
SLU 52	1.39	-2535.49	-44545	-0.0001283	0.0004492	0.0035	3.35	23864.34	58544.74	58544.74	23.09	No	Si
SLU 52	4.82	-2300.1	-21352	-0.0000622	0.0004492	0.0035	3.35	24104.78	36644.07	36644.07	15.93	No	Si
SLU 73	1.39	-2666.99	-49049	-0.0001429	0.0004492	0.0035	3.35	20627.58	61147.83	61147.83	22.93	No	Si
SLU 73	4.82	-2490.22	-23529	-0.0000688	0.0004492	0.0035	3.35	25252.25	39193.67	39193.67	15.74	No	Si
SLU 75	1.39	-2662.23	-50373	-0.000147	0.0004492	0.0035	3.35	19478.89	61912.98	61912.98	23.26	No	Si
SLU 75	4.82	-2532.57	-24441	-0.0000714	0.0004492	0.0035	3.35	25661.01	40231.25	40231.25	15.89	No	Si
SLU 61	1.39	-2489.72	-46292	-0.0001334	0.0004492	0.0035	3.35	22732.4	59554.11	59554.11	23.92	No	Si
SLU 61	4.82	-2348.66	-21934	-0.0000639	0.0004492	0.0035	3.35	24435.02	37350.6	37350.6	15.9	No	Si
SLU 76	1.39	-2707.78	-49867	-0.0001457	0.0004492	0.0035	3.35	19927.96	61620.9	61620.9	22.76	No	Si
SLU 76	4.82	-2527.76	-24360	-0.0000712	0.0004492	0.0035	3.35	25626.44	40139.13	40139.13	15.88	No	Si
SLU 82	1.39	-2621.22	-50795	-0.0001481	0.0004492	0.0035	3.35	19093.37	62157.2	62157.2	23.71	No	Si
SLU 82	4.82	-2538.77	-24111	-0.0000706	0.0004492	0.0035	3.35	25517.74	39855.1	39855.1	15.7	No	Si
SLU 74	1.39	-2589.24	-50548	-0.0001472	0.0004492	0.0035	3.35	19320.44	62014.06	62014.06	23.95	No	Si
SLU 74	4.82	-2512.2	-24435	-0.0000713	0.0004492	0.0035	3.35	25658.26	40223.89	40223.89	16.01	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	1.39	-5145.19	-45651	-0.0001383	0.0006738	0.0035	3.35		64116.77	64116.77	12.46		Si
SLV 16	4.82	-4551.47	-20193	-0.0000681	0.0006738	0.0035	3.35		36187.28	36187.28	7.95		Si
SLV 6	1.39	-2221.41	-33471	-0.0000916	0.0006738	0.0035	3.35		52066.47	52066.47	23.44		Si
SLV 6	4.82	2198.04	-13993	-0.0000424	0.0006738	0.0035	3.35		22626.06	22626.06	10.29		Si
SLV 15	1.39	-5000.35	-45438	-0.000137	0.0006738	0.0035	3.35		63921.55	63921.55	12.78		Si
SLV 15	4.82	-4547.69	-20195	-0.0000681	0.0006738	0.0035	3.35		36189.57	36189.57	7.96		Si
SLV 12	1.39	-1723.22	-36917	-0.0000983	0.0006738	0.0035	3.35		55711.57	55711.57	32.33		Si
SLV 12	4.82	-5755.59	-19909	-0.0000727	0.0006738	0.0035	3.35		35814.06	35814.06	6.22		Si
SLD 12	1.39	-1783.28	-35833	-0.0000957	0.0006738	0.0035	3.35		54564.2	54564.2	30.6		Si
SLD 12	4.82	-3503.5	-18234	-0.0000585	0.0006738	0.0035	3.35		33568.01	33568.01	9.58		Si
SLV 8	1.39	401	-30389	-0.0000753	0.0006738	0.0035	3.35		43142.44	43142.44	107.59		Si
SLV 8	4.82	-4714.51	-18357	-0.0000642	0.0006738	0.0035	3.35		33732.61	33732.61	7.16		Si
SLV 11	1.39	-1630.13	-36780	-0.0000975	0.0006738	0.0035	3.35		55566.73	55566.73	34.09		Si
SLV 11	4.82	-5753.17	-19911	-0.0000727	0.0006738	0.0035	3.35		35815.61	35815.61	6.23		Si
SLV 7	1.39	494.09	-30252	-0.0000753	0.0006738	0.0035	3.35		42974.3	42974.3	86.98		Si
SLV 7	4.82	-4712.09	-18358	-0.0000642	0.0006738	0.0035	3.35		33734.16	33734.16	7.16		Si
SLV 5	1.39	-2128.33	-33334	-0.0000908	0.0006738	0.0035	3.35		51921.64	51921.64	24.4		Si
SLV 5	4.82	2200.46	-13994	-0.0000424	0.0006738	0.0035	3.35		22627.7	22627.7	10.28		Si
SLD 11	1.39	-1742.64	-35773	-0.0000954	0.0006738	0.0035	3.35		54500.96	54500.96	31.28		Si
SLD 11	4.82	-3502.44	-18235	-0.0000585	0.0006738	0.0035	3.35		33568.69	33568.69	9.58		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	1.39	-2626.92	-50977	-29932	-10940	3.35	3.35	-55843	10833	5807	108749	19262	17085	36347	No	3.32	Si
SLU 79	4.82	-2531.37	-25181	-14785	-10163	3.35	3.35	-27584	10833	5807	108749	19262	17085	36347	No	3.58	Si
SLU 83	1.39	-2589.02	-51789	-30408	-11455	3.35	3.35	-56731	10833	5807	108749	19262	17085	36347	No	3.17	Si
SLU 83	4.82	-2555.95	-24935	-14641	-10655	3.35	3.35	-27315	10833	5807	108749	19262	17085	36347	No	3.41	Si
SLU 77	1.39	-2630.03	-51366	-30160	-11089	3.35	3.35	-56268	10833	5807	108749	19262	17085	36347	No	3.28	Si
SLU 77	4.82	-2549.75	-25266	-14835	-10305	3.35	3.35	-27677	10833	5807	108749	19262	17085	36347	No	3.53	Si
SLU 78	1.39	-2703.03	-51191	-30057	-10940	3.35	3.35	-56077	10833	5807	108749	19262	17085	36347	No	3.32	Si
SLU 78	4.82	-2570.12	-25273	-14839	-10262	3.35	3.35	-27685	10833	5807	108749	19262	17085	36347	No	3.54	Si
SLU 75	1.39	-2662.23	-50373	-29577	-10937	3.35	3.35	-55180	10833	5807	108749	19262	17085	36347	No	3.32	Si
SLU 75	4.82	-2532.57	-24441	-14351	-10269	3.35	3.35	-26774	10833	5807	108749	19262	17085	36347	No	3.54	Si
SLU 74	1.39	-2589.24	-50548	-29679	-11086	3.35	3.35	-55372	10833	5807	108749	19262	17085	36347	No	3.28	Si
SLU 74	4.82	-2512.2	-24435	-14347	-10313	3.35	3.35	-26767	10833	5807	108749	19262	17085	36347	No	3.52	Si
SLU 81	1.39	-2548.23	-50970	-29927	-11452	3.35	3.35	-55835	10833	5807	108749	19262	17085	36347	No	3.17	Si
SLU 81	4.82	-2518.4	-24104	-14153	-10663	3.35	3.35	-26405	10833	5807	108749	19262	17085	36347	No	3.41	Si
SLU 84	1.39	-2662.02	-51614	-30305	-11305	3.35	3.35	-56540	10833	5807	108749	19262	17085	36347	No	3.22	Si
SLU 84	4.82	-2576.32	-24942	-14645	-10612	3.35	3.35	-27322	10833	5807	108749	19262	17085	36347	No	3.43	Si
SLU 80	1.39	-2699.91	-50802	-29829	-10791	3.35	3.35	-55651	10833	5807	108749	19262	17085	36347	No	3.37	Si
SLU 80	4.82	-2551.74	-25187	-14789	-10119	3.35	3.35	-27591	10833	5807	108749	19262	17085	36347	No	3.59	Si
SLU 82	1.39	-2621.22	-50795	-29825	-11302	3.35	3.35	-55643	10833	5807	108749	19262	17085	36347	No	3.22	Si
SLU 82	4.82	-2538.77	-24111	-14157	-10620	3.35	3.35	-26412	10833	5807	108749	19262	17085	36347	No	3.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	1.39	-2221.41	-33471	-19653	-10204	3.35	3.35	-36666	16250	8710	108749	28894	17085	45979		4.51	Si
SLV 6	4.82	2198.04	-13993	-8216	-8362	3.35	3.35	-15328	15566	8343	108749	28894	17085	45979		5.5	Si
SLV 16	1.39	-5145.19	-45651	-26804	-10896	3.35	3.35	-50008	16250	8710	108749	28894	17085	45979		4.22	Si
SLV 16	4.82	-4551.47	-20193	-11856	-10374	3.35	3.35	-22120	16250	8710	108749	28894	17085	45979		4.43	Si
SLV 13	1.39	-5787.08	-46363	-27222	-13084	3.35	3.35	-50787	16250	8710	108749	28894	17085	45979		3.51	Si
SLV 13	4.82	-2473.93	-18886	-11089	-11697	3.35	3.35	-20688	16250	8710	108749	28894	17085	45979		3.93	Si
SLV 10	1.39	-4345.63	-40000	-23486	-12847	3.35	3.35	-43817	16250	8710	108749	28894	17085	45979		3.58	Si
SLV 10	4.82	1156.96	-15545	-9128	-10747	3.35	3.35	-17029	15906	8526	108749	28894	17085	45979		4.28	Si
SLV 9	1.39	-4252.54	-39863	-23406	-12752	3.35	3.35	-43667	16250	8710	108749	28894	17085	45979		3.61	Si
SLV 9	4.82	1159.38	-15547	-9128	-10654	3.35	3.35	-17030	15906	8526	108749	28894	17085	45979		4.32	Si
SLV 14	1.39	-5931.91	-46576	-27347	-13231	3.35	3.35	-51021	16250	8710	108749	28894	17085	45979		3.48	Si
SLV 14	4.82	-2477.7	-18884	-11088	-11843	3.35	3.35	-20686	16250	8710	108749	28894	17085	45979		3.88	Si
SLV 5	1.39	-2128.33	-33334	-19572	-10110	3.35	3.35	-36516	16250	8710	108749	28894	17085	45979		4.55	Si
SLV 5	4.82	2200.46	-13994	-8217	-8268	3.35	3.35	-15330	15566	8343	108749	28894	17085	45979		5.56	Si
SLD 13	1.39	-3460.08	-39693	-23306	-9852	3.35	3.35	-43481	16250	8710	108749	28894	17085	45979		4.67	Si
SLD 13	4.82	-1986.82	-17717	-10403	-8946	3.35	3.35	-19408	16250	8710	108749	28894	17085	45979		5.14	Si
SLV 15	1.39	-5000.35	-45438	-26679	-10749	3.35	3.35	-49774	16250	8710	108749	28894	17085	45979		4.28	Si
SLV 15	4.82	-4547.69	-20195	-11857	-10228	3.35	3.35	-22122	16250	8710	108749	28894	17085	45979		4.5	Si
SLD 14	1.39	-3522.27	-39785	-23360	-9915	3.35	3.35	-43582	16250	8710	108749	28894	17085	45979		4.64	Si
SLD 14	4.82	-1988.44	-17716	-10402	-9008	3.35	3.35	-19407	16250	8710	108749	28894	17085	45979		5.1	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-18392	0.31	158.49	1195.88	1975.9	1585.89	10.01	Si
SLV 2	-18509	0.31	158.49	1201.76	1986.37	1594.06	10.06	Si
SLV 3	-18624	0.31	158.49	1207.44	1996.53	1601.99	10.11	Si
SLV 4	-18741	0.31	158.49	1213.28	2007	1610.14	10.16	Si
SLV 5	-23269	0.31	158.49	1420.59	2410.3	1915.44	12.09	Si
SLV 6	-23344	0.31	158.49	1423.77	2417.05	1920.41	12.12	Si
SLV 7	-24042	0.31	158.49	1452.66	2479.27	1965.97	12.4	Si
SLV 8	-24118	0.31	158.49	1455.74	2486.02	1970.88	12.44	Si
SLV 9	-27663	0.31	158.49	1589.88	2796.66	2193.27	13.84	Si
SLV 10	-27739	0.31	158.49	1592.52	2803.08	2197.8	13.87	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.03 Ta = 0.1228

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-19911	-36780	268	0.885	2286	0.966	13.32119	14.10995	No
SLV 12	-19909	-36917	268	0.885	2285.9	0.966	13.32193	14.10995	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-18358	-30252	-215	0.955	2128	0.963	14.40237	14.10995	Si
SLV 8	-18357	-30389	-215	0.955	2127.9	0.963	14.40318	14.10995	Si
SLV 9	-15547	-39863	240	1.106	1842	0.958	16.76565	14.10995	Si
SLV 10	-15545	-40000	240	1.106	1841.9	0.958	16.76682	14.10995	Si
SLV 5	-13994	-33334	-243	1.213	1684.2	0.955	18.45855	14.10995	Si
SLV 6	-13993	-33471	-243	1.213	1684.1	0.955	18.45991	14.10995	Si
SLV 15	-20195	-45438	821	0.849	2314.9	0.966	12.76626	9.37835	Si
SLV 16	-20193	-45651	821	0.849	2314.7	0.966	12.76735	9.37835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.699	SLU 82	Si
V_SLU	3.173	SLU 83	Si
PF_SLV	6.222	SLV 12	Si
V_SLV	3.475	SLV 14	Si
PFFP_SLV	10.006	SLV 1	Si
R_SLV	0.944	SLV 11	No

Maschio 75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	2.046	-5.163	5.686	L4	L5	3.64	0.16	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	1.39	4720.43	-57493	-0.0001627	0.0004492	0.0035	3.64	20099.51	71076.87	71076.87	15.06	No	Si
SLU 78	3.49	-5576.99	-42621	-0.0001238	0.0004492	0.0035	3.64	31111.03	64552.04	64552.04	11.57	No	Si
SLU 81	1.39	4843.02	-57236	-0.0001625	0.0004492	0.0035	3.64	20385.18	70896.76	70896.76	14.64	No	Si
SLU 81	3.49	-5547.12	-42314	-0.0001228	0.0004492	0.0035	3.64	31219.12	64273.13	64273.13	11.59	No	Si
SLU 76	1.39	4678.72	-56400	-0.0001592	0.0004492	0.0035	3.64	21293.96	70309.06	70309.06	15.03	No	Si
SLU 76	3.49	-5484.3	-41729	-0.0001209	0.0004492	0.0035	3.64	31412.09	63740.71	63740.71	11.62	No	Si
SLU 82	1.39	4881.29	-57307	-0.0001629	0.0004492	0.0035	3.64	20306.48	70946.59	70946.59	14.53	No	Si
SLU 82	3.49	-5590.34	-42354	-0.0001231	0.0004492	0.0035	3.64	31205.6	64308.72	64308.72	11.5	No	Si
SLU 75	1.39	4688.46	-56757	-0.0001604	0.0004492	0.0035	3.64	20910.17	70560.09	70560.09	15.05	No	Si
SLU 75	3.49	-5513.93	-42017	-0.0001218	0.0004492	0.0035	3.64	31319.38	64002.57	64002.57	11.61	No	Si
SLU 84	1.39	4913.27	-58043	-0.0001653	0.0004492	0.0035	3.64	19475.12	71463.36	71463.36	14.54	No	Si
SLU 84	3.49	-5653.4	-42958	-0.000125	0.0004492	0.0035	3.64	30986.84	64858.19	64858.19	11.47	No	Si
SLU 83	1.39	4875	-57972	-0.0001649	0.0004492	0.0035	3.64	19556.48	71413.54	71413.54	14.65	No	Si
SLU 83	3.49	-5610.18	-42919	-0.0001247	0.0004492	0.0035	3.64	31001.57	64822.61	64822.61	11.55	No	Si
SLU 73	1.39	4646.74	-55664	-0.0001569	0.0004492	0.0035	3.64	22063.5	69792.29	69792.29	15.02	No	Si
SLU 73	3.49	-5421.24	-41124	-0.000119	0.0004492	0.0035	3.64	31592.83	63191.23	63191.23	11.66	No	Si
SLU 80	1.39	4685.18	-57088	-0.0001613	0.0004492	0.0035	3.64	20548.83	70792.62	70792.62	15.11	No	Si
SLU 80	3.49	-5518.54	-42307	-0.0001226	0.0004492	0.0035	3.64	31221.65	64266.46	64266.46	11.65	No	Si
SLU 77	1.39	4682.17	-57422	-0.0001623	0.0004492	0.0035	3.64	20178.88	71027.04	71027.04	15.17	No	Si
SLU 77	3.49	-5533.76	-42582	-0.0001235	0.0004492	0.0035	3.64	31125.09	64516.46	64516.46	11.66	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	1.39	99.66	-43940	-0.0000999	0.0006738	0.0035	3.64		63760.28	63760.28	639.76		Si
SLV 15	3.49	-11846.81	-32721	-0.0001189	0.0006738	0.0035	3.64		56827.11	56827.11	4.8		Si
SLV 12	1.39	1572.51	-40615	-0.0000977	0.0006738	0.0035	3.64		60327.93	60327.93	38.36		Si
SLV 12	3.49	-11142.14	-32801	-0.0001163	0.0006738	0.0035	3.64		56924.92	56924.92	5.11		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	1.39	471	-43890	-0.0001012	0.0006738	0.0035	3.64		63709.22	63709.22	135.26		Si
SLV 13	3.49	-8612.24	-30843	-0.0001016	0.0006738	0.0035	3.64		54498.71	54498.71	6.33		Si
SLV 8	1.39	3331.95	-38483	-0.0000994	0.0006738	0.0035	3.64		58121.33	58121.33	17.44		Si
SLV 8	3.49	-7256.96	-31663	-0.0000983	0.0006738	0.0035	3.64		55522.92	55522.92	7.65		Si
SLV 14	1.39	292.51	-42800	-0.0000979	0.0006738	0.0035	3.64		62583.94	62583.94	213.95		Si
SLV 14	3.49	-8678.45	-29887	-0.0000995	0.0006738	0.0035	3.64		53247.79	53247.79	6.14		Si
SLV 11	1.39	1687.22	-41315	-0.0000998	0.0006738	0.0035	3.64		61051.14	61051.14	36.18		Si
SLV 11	3.49	-11099.59	-33415	-0.0001177	0.0006738	0.0035	3.64		57682.17	57682.17	5.2		Si
SLV 16	1.39	-78.82	-42850	-0.0000971	0.0006738	0.0035	3.64		68584.71	68584.71	870.13		Si
SLV 16	3.49	-11913.02	-31766	-0.0001168	0.0006738	0.0035	3.64		55648.86	55648.86	4.67		Si
SLD 12	1.39	2467.84	-40156	-0.0001001	0.0006738	0.0035	3.64		59854.1	59854.1	24.25		Si
SLD 12	3.49	-6994.9	-30895	-0.0000954	0.0006738	0.0035	3.64		54566.55	54566.55	7.8		Si
SLD 15	1.39	1894.05	-41539	-0.0001012	0.0006738	0.0035	3.64		61281.54	61281.54	32.35		Si
SLD 15	3.49	-7219.33	-30805	-0.0000961	0.0006738	0.0035	3.64		54448.38	54448.38	7.54		Si
SLD 16	1.39	1817.42	-41071	-0.0000997	0.0006738	0.0035	3.64		60798.42	60798.42	33.45		Si
SLD 16	3.49	-7247.76	-30394	-0.0000952	0.0006738	0.0035	3.64		53911.33	53911.33	7.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.39	4682.17	-57422	-33715	-6154	3.64	3.64	-57891	10833	6309	108749	20930	18564	39494	No	6.42	Si
SLU 77	3.49	-5533.76	-42582	-25002	-6411	3.64	3.64	-42930	10833	6309	108749	20930	18564	39494	No	6.16	Si
SLU 78	1.39	4720.43	-57493	-33757	-6115	3.64	3.64	-57962	10833	6309	108749	20930	18564	39494	No	6.46	Si
SLU 78	3.49	-5576.99	-42621	-25025	-6427	3.64	3.64	-42969	10833	6309	108749	20930	18564	39494	No	6.14	Si
SLU 79	1.39	4646.92	-57017	-33478	-6117	3.64	3.64	-57483	10833	6309	108749	20930	18564	39494	No	6.46	Si
SLU 79	3.49	-5475.31	-42268	-24818	-6357	3.64	3.64	-42613	10833	6309	108749	20930	18564	39494	No	6.21	Si
SLU 84	1.39	4913.27	-58043	-34080	-6191	3.64	3.64	-58517	10833	6309	108749	20930	18564	39494	No	6.38	Si
SLU 84	3.49	-5653.4	-42958	-25223	-6520	3.64	3.64	-43309	10833	6309	108749	20930	18564	39494	No	6.06	Si
SLU 82	1.39	4881.29	-57307	-33648	-6114	3.64	3.64	-57775	10833	6309	108749	20930	18564	39494	No	6.46	Si
SLU 82	3.49	-5590.34	-42354	-24868	-6440	3.64	3.64	-42700	10833	6309	108749	20930	18564	39494	No	6.13	Si
SLU 81	1.39	4843.02	-57236	-33607	-6152	3.64	3.64	-57704	10833	6309	108749	20930	18564	39494	No	6.42	Si
SLU 81	3.49	-5547.12	-42314	-24845	-6424	3.64	3.64	-42660	10833	6309	108749	20930	18564	39494	No	6.15	Si
SLU 80	1.39	4685.18	-57088	-33520	-6078	3.64	3.64	-57554	10833	6309	108749	20930	18564	39494	No	6.5	Si
SLU 80	3.49	-5518.54	-42307	-24841	-6373	3.64	3.64	-42653	10833	6309	108749	20930	18564	39494	No	6.2	Si
SLU 83	1.39	4875	-57972	-34039	-6229	3.64	3.64	-58445	10833	6309	108749	20930	18564	39494	No	6.34	Si
SLU 83	3.49	-5610.18	-42919	-25200	-6504	3.64	3.64	-43269	10833	6309	108749	20930	18564	39494	No	6.07	Si
SLU 75	1.39	4688.46	-56757	-33325	-6038	3.64	3.64	-57220	10833	6309	108749	20930	18564	39494	No	6.54	Si
SLU 75	3.49	-5513.93	-42017	-24670	-6348	3.64	3.64	-42360	10833	6309	108749	20930	18564	39494	No	6.22	Si
SLU 74	1.39	4650.19	-56686	-33284	-6077	3.64	3.64	-57149	10833	6309	108749	20930	18564	39494	No	6.5	Si
SLU 74	3.49	-5470.71	-41978	-24647	-6332	3.64	3.64	-42320	10833	6309	108749	20930	18564	39494	No	6.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.39	471	-43890	-25770	-2564	3.64	3.64	-44249	16250	9464	108749	31395	18564	49959		19.49	Si
SLV 13	3.49	-8612.24	-30843	-18110	-9490	3.64	3.64	-31095	16250	9464	108749	31395	18564	49959		5.26	Si
SLV 9	1.39	2925.01	-41151	-24162	-8005	3.64	3.64	-41487	16250	9464	108749	31395	18564	49959		6.24	Si
SLV 9	3.49	-317.69	-27154	-15944	-9777	3.64	3.64	-27376	16250	9464	108749	31395	18564	49959		5.11	Si
SLV 14	1.39	292.51	-42800	-25130	-2340	3.64	3.64	-43150	16250	9464	108749	31395	18564	49959		21.35	Si
SLV 14	3.49	-8678.45	-29887	-17549	-9931	3.64	3.64	-30131	16250	9464	108749	31395	18564	49959		5.03	Si
SLV 6	1.39	4569.74	-38318	-22499	-9782	3.64	3.64	-38631	16250	9464	108749	31395	18564	49959		5.11	Si
SLV 6	3.49	3524.94	-25403	-14915	-7646	3.64	3.64	-25610	16250	9464	108749	31395	18564	49959		6.53	Si
SLV 16	1.39	-78.82	-42850	-25159	437	3.64	3.64	-43200	16250	9464	108749	31395	18564	49959		114.21	Si
SLV 16	3.49	-11913.02	-31766	-18651	-7338	3.64	3.64	-32025	16250	9464	108749	31395	18564	49959		6.81	Si
SLV 10	1.39	2810.3	-40450	-23751	-7861	3.64	3.64	-40780	16250	9464	108749	31395	18564	49959		6.36	Si
SLV 10	3.49	-360.24	-26540	-15583	-10061	3.64	3.64	-26757	16250	9464	108749	31395	18564	49959		4.97	Si
SLV 2	1.39	6157.3	-35694	-20958	-8744	3.64	3.64	-35986	16250	9464	108749	31395	18564	49959		5.71	Si
SLV 2	3.49	4272.16	-26096	-15323	-1883	3.64	3.64	-26309	16250	9464	108749	31395	18564	49959		26.54	Si
SLV 5	1.39	4684.45	-39019	-22910	-9926	3.64	3.64	-39337	16250	9464	108749	31395	18564	49959		5.03	Si
SLV 5	3.49	3567.5	-26017	-15276	-7362	3.64	3.64	-26229	16250	9464	108749	31395	18564	49959		6.79	Si
SLV 15	1.39	99.66	-43940	-25799	213	3.64	3.64	-44298	16250	9464	108749	31395	18564	49959		234.27	Si
SLV 15	3.49	-11846.81	-32721	-19213	-6897	3.64	3.64	-32989	16250	9464	108749	31395	18564	49959		7.24	Si
SLV 1	1.39	6335.78	-36784	-21598	-8968	3.64	3.64	-37084	16250	9464	108749	31395	18564	49959		5.57	Si
SLV 1	3.49	4338.37	-27052	-15884	-1441	3.64	3.64	-27273	16250	9464	108749	31395	18564	49959		34.66	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-27519	0.31	172.21	1633.96	2812.66	2223.31	12.91	Si
SLV 6	-27691	0.31	172.21	1640.61	2828.04	2234.33	12.97	Si
SLV 5	-28320	0.31	172.21	1664.52	2884	2274.26	13.21	Si
SLV 1	-28497	0.31	172.21	1671.15	2899.68	2285.41	13.27	Si
SLV 4	-29027	0.31	172.21	1690.7	2945.44	2318.07	13.46	Si
SLV 10	-29197	0.31	172.21	1696.89	2959.88	2328.38	13.52	Si
SLV 9	-29826	0.31	172.21	1719.37	3013.23	2366.3	13.74	Si
SLV 3	-30006	0.31	172.21	1725.68	3028.45	2377.07	13.8	Si
SLV 14	-32539	0.31	172.21	1809.61	3243.67	2526.64	14.67	Si
SLV 8	-32719	0.31	172.21	1815.18	3258.91	2537.05	14.73	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.03 Ta = 0.1228

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-25235	-41315	129	0.776	2850.4	0.97	11.63447	14.10995	No
SLV 7	-24908	-39184	-252	0.781	2817.1	0.97	11.70763	14.10995	No
SLV 12	-24837	-40615	129	0.788	2809.9	0.969	11.80813	14.10995	No
SLV 8	-24510	-38483	-252	0.793	2776.6	0.969	11.88449	14.10995	No
SLV 9	-21087	-41151	237	0.908	2428.2	0.965	13.67691	14.10995	No
SLV 10	-20689	-40450	237	0.924	2387.7	0.965	13.92074	14.10995	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-20761	-39019	-144	0.925	2395	0.965	13.93832	14.10995	No
SLV 6	-20363	-38318	-144	0.941	2354.5	0.964	14.19052	14.10995	Si
SLV 15	-24275	-43940	612	0.786	2752.7	0.969	11.78467	9.37835	Si
SLV 16	-23655	-42850	612	0.804	2689.6	0.968	12.07147	9.37835	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.472	SLU 84	Si
V_SLU	6.058	SLU 84	Si
PF_SLV	4.671	SLV 16	Si
V_SLV	4.966	SLV 10	Si
PFFP_SLV	12.91	SLV 2	Si
R_SLV	0.825	SLV 11	No

Maschio 78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.013	5.826	-5.093	5.826	L4	L5	2.08	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	2.29	5506.23	-16745	-0.0000911	0.0003743	0.0035	2.08	12496.86	13873.51	13873.51	2.52	No	Si
SLU 44	4.19	-2818.45	-19962	-0.0000785	0.0003743	0.0035	2.08	13771.14	16669.96	16669.96	5.91	No	Si
SLU 51	2.29	5559.18	-17572	-0.0000943	0.0003743	0.0035	2.08	12859.14	14380.63	14380.63	2.59	No	Si
SLU 51	4.19	-2928.69	-20925	-0.0000825	0.0003743	0.0035	2.08	14082.16	17130.63	17130.63	5.85	No	Si
SLU 68	2.29	5901.58	-19060	-0.0001023	0.0003743	0.0035	2.08	13450.56	15311.12	15311.12	2.59	No	Si
SLU 68	4.19	-3180.1	-22924	-0.0000913	0.0003743	0.0035	2.08	14623.64	18134.9	18134.9	5.7	No	Si
SLU 47	2.29	5575.51	-17091	-0.0000928	0.0003743	0.0035	2.08	12651.2	14084.49	14084.49	2.53	No	Si
SLU 47	4.19	-2860.91	-20391	-0.0000802	0.0003743	0.0035	2.08	13913.52	16873.02	16873.02	5.9	No	Si
SLU 55	2.29	5868.46	-18799	-0.0001011	0.0003743	0.0035	2.08	13352.12	15145.93	15145.93	2.58	No	Si
SLU 55	4.19	-3213.53	-22712	-0.0000909	0.0003743	0.0035	2.08	14572.81	18025.2	18025.2	5.61	No	Si
SLU 54	2.29	5811.12	-19097	-0.0001016	0.0003743	0.0035	2.08	13463.97	15334	15334	2.64	No	Si
SLU 54	4.19	-3272.79	-23035	-0.0000925	0.0003743	0.0035	2.08	14649.39	18192.13	18192.13	5.56	No	Si
SLU 46	2.29	5518.18	-17389	-0.0000933	0.0003743	0.0035	2.08	12780.9	14267.52	14267.52	2.59	No	Si
SLU 46	4.19	-2920.17	-20713	-0.0000818	0.0003743	0.0035	2.08	14016.35	17027.7	17027.7	5.83	No	Si
SLU 49	2.29	5587.46	-17735	-0.000095	0.0003743	0.0035	2.08	12927.44	14481.11	14481.11	2.59	No	Si
SLU 49	4.19	-2962.63	-21142	-0.0000835	0.0003743	0.0035	2.08	14147.44	17236.03	17236.03	5.82	No	Si
SLU 65	2.29	5832.3	-18715	-0.0001005	0.0003743	0.0035	2.08	13320.1	15093.23	15093.23	2.59	No	Si
SLU 65	4.19	-3137.64	-22496	-0.0000895	0.0003743	0.0035	2.08	14519.35	17914.09	17914.09	5.71	No	Si
SLU 52	2.29	5799.18	-18453	-0.0000993	0.0003743	0.0035	2.08	13218.48	14929.11	14929.11	2.57	No	Si
SLU 52	4.19	-3171.07	-22284	-0.0000891	0.0003743	0.0035	2.08	14465.33	17805.88	17805.88	5.62	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	2.29	8975.24	-15815	-0.0001286	0.0005615	0.0035	2.08		14192.93	14192.93	1.58		Si
SLD 4	4.19	-3679.24	-18974	-0.0000795	0.0005615	0.0035	2.08		17697.57	17697.57	4.81		Si
SLV 4	2.29	15191.78	-17321	-0.0007729	0.0005615	0.0035	2.08		15380	15380	1.01		Si
SLV 4	4.19	-5259.12	-20833	-0.0000979	0.0005615	0.0035	2.08		18994.95	18994.95	3.61		Si
SLV 2	2.29	12938.47	-19022	-0.000219	0.0005615	0.0035	2.08		16739.33	16739.33	1.29		Si
SLV 2	4.19	-4312.21	-22741	-0.0000959	0.0005615	0.0035	2.08		20274.65	20274.65	4.7		Si
SLD 3	2.29	9558.4	-16148	-0.0001397	0.0005615	0.0035	2.08		14454.4	14454.4	1.51		Si
SLD 3	4.19	-3902.52	-19410	-0.0000826	0.0005615	0.0035	2.08		18010.12	18010.12	4.61		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2.29	-7882.52	-11325	-0.0001259	0.0005615	0.0035	1.664		11710.54	11710.54	1.49		Si
SLV 14	4.19	793.44	-13384	-0.000041	0.0005615	0.0035	2.08		12313.19	12313.19	15.52		Si
SLV 1	2.29	14296.78	-19799	-0.0002696	0.0005615	0.0035	2.08		17364.7	17364.7	1.21		Si
SLV 1	4.19	-4832.28	-23755	-0.0001033	0.0005615	0.0035	2.08		20941.04	20941.04	4.33		Si
SLV 3	2.29	16550.08	-18099	-0.0059308	0.0005615	0.0035	2.08		15998.8	15998.8	0.97		No
SLV 3	4.19	-5779.18	-21847	-0.0001053	0.0005615	0.0035	2.08		19691.16	19691.16	3.41		Si
SLD 7	2.29	7482.73	-14082	-0.0001043	0.0005615	0.0035	2.08		12848.37	12848.37	1.72		Si
SLD 7	4.19	-3583.97	-16956	-0.0000728	0.0005615	0.0035	2.08		16217.84	16217.84	4.53		Si
SLV 7	2.29	11648.92	-13283	-0.0003963	0.0005615	0.0035	2.08		12235.89	12235.89	1.05		Si
SLV 7	4.19	-5004.01	-16164	-0.0000818	0.0005615	0.0035	2.08		15605.44	15605.44	3.12		Si
SLV 8	2.29	10775.95	-12783	-0.0002846	0.0005615	0.0035	2.08		11855.35	11855.35	1.1		Si
SLV 8	4.19	-4669.77	-15512	-0.0000772	0.0005615	0.0035	2.08		15102.07	15102.07	3.23		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	2.29	6049.77	-21453	-17864	9303	2.08	2.08	-30673	10833	6309	38062	17439	5304	22743	No	2.44	Si
SLU 79	4.19	-3638.49	-25940	-21601	9303	2.08	2.08	-37089	10833	6309	38062	17439	5304	22743	No	2.44	Si
SLU 84	2.29	6234.46	-21635	-18016	9588	2.08	2.08	-30935	10833	6309	38062	17439	5304	22743	No	2.37	Si
SLU 84	4.19	-3709.17	-26347	-21940	9555	2.08	2.08	-37671	10833	6309	38062	17439	5304	22743	No	2.38	Si
SLU 78	2.29	6206.47	-21412	-17830	9461	2.08	2.08	-30615	10833	6309	38062	17439	5304	22743	No	2.4	Si
SLU 78	4.19	-3634.43	-25997	-21648	9426	2.08	2.08	-37171	10833	6309	38062	17439	5304	22743	No	2.41	Si
SLU 77	2.29	6078.05	-21615	-17999	9367	2.08	2.08	-30906	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 77	4.19	-3672.42	-26156	-21781	9367	2.08	2.08	-37398	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 80	2.29	6178.19	-21249	-17695	9397	2.08	2.08	-30382	10833	6309	38062	17439	5304	22743	No	2.42	Si
SLU 80	4.19	-3600.5	-25781	-21468	9361	2.08	2.08	-36862	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 83	2.29	6106.04	-21839	-18186	9494	2.08	2.08	-31226	10833	6309	38062	17439	5304	22743	No	2.4	Si
SLU 83	4.19	-3747.16	-26506	-22072	9497	2.08	2.08	-37899	10833	6309	38062	17439	5304	22743	No	2.39	Si
SLU 81	2.29	6036.76	-21493	-17898	9387	2.08	2.08	-30731	10833	6309	38062	17439	5304	22743	No	2.42	Si
SLU 81	4.19	-3704.7	-26078	-21715	9389	2.08	2.08	-37286	10833	6309	38062	17439	5304	22743	No	2.42	Si
SLU 76	2.29	6194.53	-20768	-17294	9352	2.08	2.08	-29694	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 76	4.19	-3532.72	-25246	-21023	9293	2.08	2.08	-36097	10833	6309	38062	17439	5304	22743	No	2.45	Si
SLU 82	2.29	6165.18	-21290	-17728	9481	2.08	2.08	-30440	10833	6309	38062	17439	5304	22743	No	2.4	Si
SLU 82	4.19	-3666.71	-25919	-21583	9448	2.08	2.08	-37059	10833	6309	38062	17439	5304	22743	No	2.41	Si
SLU 75	2.29	6137.19	-21066	-17542	9353	2.08	2.08	-30120	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 75	4.19	-3591.98	-25568	-21291	9318	2.08	2.08	-36558	10833	6309	38062	17439	5304	22743	No	2.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	2.29	16550.08	-18099	-15071	14933	2.08	0.3767	-178993	16250	1714	38062	26159	5304	31463		2.11	Si
SLV 3	4.19	-5779.18	-21847	-18192	14358	2.08	2.08	-31237	16250	9464	38062	26159	5304	31463		2.19	Si
SLD 2	2.29	8000.43	-16553	-13784	9367	2.08	1.67	-23668	15150	7084	38062	26159	5304	31463		3.36	Si
SLD 2	4.19	-3264.7	-19815	-16500	9093	2.08	2.08	-28331	16083	9367	38062	26159	5304	31463		3.46	Si
SLD 1	2.29	8583.59	-16887	-14062	9857	2.08	1.5951	-24145	15246	6809	38062	26159	5304	31463		3.19	Si
SLD 1	4.19	-3487.98	-20250	-16862	9569	2.08	2.08	-28953	16207	9439	38062	26159	5304	31463		3.29	Si
SLV 2	2.29	12938.47	-19022	-15840	13220	2.08	1.0794	-27197	15856	4792	38062	26159	5304	31463		2.38	Si
SLV 2	4.19	-4312.21	-22741	-18937	12578	2.08	2.08	-32515	16250	9464	38062	26159	5304	31463		2.5	Si
SLV 4	2.29	15191.78	-17321	-14424	13793	2.08	0.4888	-122196	16250	2224	38062	26159	5304	31463		2.28	Si
SLV 4	4.19	-5259.12	-20833	-17348	13249	2.08	2.08	-29787	16250	9464	38062	26159	5304	31463		2.37	Si
SLV 7	2.29	11648.92	-13283	-11061	10096	2.08	0.489	-86157	16250	2225	38062	26159	5304	31463		3.12	Si
SLV 7	4.19	-5004.01	-16164	-13460	10064	2.08	2.08	-23112	15039	8759	38062	26159	5304	31463		3.13	Si
SLD 4	2.29	8975.24	-15815	-13169	9618	2.08	1.4174	-22612	14939	5929	38062	26159	5304	31463		3.27	Si
SLD 4	4.19	-3679.24	-18974	-15800	9383	2.08	2.08	-27130	15843	9227	38062	26159	5304	31463		3.35	Si
SLV 1	2.29	14296.78	-19799	-16487	14359	2.08	0.9537	-28309	16078	4293	38062	26159	5304	31463		2.19	Si
SLV 1	4.19	-4832.28	-23755	-19781	13686	2.08	2.08	-33965	16250	9464	38062	26159	5304	31463		2.3	Si
SLV 8	2.29	10775.95	-12783	-10645	9364	2.08	0.591	-67226	16250	2689	38062	26159	5304	31463		3.36	Si
SLV 8	4.19	-4669.77	-15512	-12917	9352	2.08	2.08	-22180	14853	8650	38062	26159	5304	31463		3.36	Si
SLD 3	2.29	9558.4	-16148	-13447	10108	2.08	1.3442	-23089	15034	5659	38062	26159	5304	31463		3.11	Si
SLD 3	4.19	-3902.52	-19410	-16163	9859	2.08	2.08	-27752	15967	9299	38062	26159	5304	31463		3.19	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.31	17776	-10352	162.75	1280.64	7.87	Si
SLV 15	179667	0.31	19385	-11290	162.75	1379.96	8.48	Si
SLV 14	179667	0.31	20395	-11878	162.75	1440.85	8.85	Si
SLV 12	179667	0.31	21065	-12268	162.75	1480.62	9.1	Si
SLV 13	179667	0.31	22005	-12816	162.75	1535.67	9.44	Si
SLV 11	179667	0.31	22100	-12871	162.75	1541.14	9.47	Si
SLV 8	179667	0.31	26258	-15292	162.75	1772.81	10.89	Si
SLV 7	179667	0.31	27292	-15895	162.75	1827.59	11.23	Si
SLV 10	179667	0.31	29797	-17354	162.75	1955.5	12.02	Si
SLV 9	179667	0.31	30832	-17956	162.75	2006.36	12.33	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-21270	-14875	-439	0.531	2446.8	0.965	8.00081	10.19501	No
SLV 6	-20857	-14966	-440	0.54	2404.8	0.965	8.13971	10.19501	No
SLV 9	-19755	-18965	-390	0.568	2292.7	0.963	8.57335	10.19501	No
SLV 10	-19342	-19057	-391	0.578	2250.6	0.963	8.73402	10.19501	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-13239	-7528	404	0.796	1630.3	0.95	12.17442	10.19501	Si
SLV 8	-12826	-7619	403	0.817	1588.3	0.949	12.51695	10.19501	Si
SLV 11	-11724	-11618	453	0.877	1476.6	0.946	13.47632	10.19501	Si
SLV 12	-11311	-11709	452	0.903	1434.7	0.944	13.90252	10.19501	Si
SLV 1	-20342	-7507	-201	0.563	2352.3	0.964	8.4836	5.43686	Si
SLV 2	-19699	-7648	-203	0.578	2286.9	0.963	8.72659	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.52	SLU 44	Si
V_SLU	2.372	SLU 84	Si
PF_SLV	0.967	SLV 3	No
V_SLV	2.107	SLV 3	Si
PFFP_SLV	7.869	SLV 16	Si
R_SLV	0.785	SLV 5	No

Maschio 79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.013	5.826	L4	L5	1.88	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	2.29	258.97	-14561	-0.0000459	0.0003743	0.0035	1.88	9968.57	11008.36	11008.36	42.51	No	Si
SLU 49	4.19	-571.37	-13696	-0.0000462	0.0003743	0.0035	1.88	9584.4	11404.2	11404.2	19.96	No	Si
SLU 44	2.29	160.68	-13682	-0.0000422	0.0003743	0.0035	1.88	9578.07	10527.85	10527.85	65.52	No	Si
SLU 44	4.19	-569.65	-12823	-0.0000434	0.0003743	0.0035	1.88	9169.81	10875.44	10875.44	19.09	No	Si
SLU 45	2.29	397.49	-14471	-0.000047	0.0003743	0.0035	1.88	9930.16	10959.16	10959.16	27.57	No	Si
SLU 45	4.19	-559.17	-13475	-0.0000454	0.0003743	0.0035	1.88	9481.91	11269.47	11269.47	20.15	No	Si
SLU 50	2.29	394.72	-14581	-0.0000473	0.0003743	0.0035	1.88	9977.38	11019.7	11019.7	27.92	No	Si
SLU 50	4.19	-554.42	-13610	-0.0000458	0.0003743	0.0035	1.88	9544.65	11351.58	11351.58	20.47	No	Si
SLU 48	2.29	398.35	-14757	-0.000048	0.0003743	0.0035	1.88	10052.23	11117.1	11117.1	27.91	No	Si
SLU 48	4.19	-560.56	-13790	-0.0000464	0.0003743	0.0035	1.88	9627.43	11461.72	11461.72	20.45	No	Si
SLU 43	2.29	392.99	-14010	-0.0000455	0.0003743	0.0035	1.88	9726.84	10705.95	10705.95	27.24	No	Si
SLU 43	4.19	-551.64	-12980	-0.0000438	0.0003743	0.0035	1.88	9246.16	10970.93	10970.93	19.89	No	Si
SLU 46	2.29	258.1	-14275	-0.000045	0.0003743	0.0035	1.88	9844.53	10851.08	10851.08	42.04	No	Si
SLU 46	4.19	-569.98	-13381	-0.0000452	0.0003743	0.0035	1.88	9437.84	11212.49	11212.49	19.67	No	Si
SLU 2	2.29	57.05	-10879	-0.0000324	0.0003743	0.0035	1.88	8150.56	8767.61	8767.61	153.68	No	Si
SLU 2	4.19	-417.87	-10353	-0.0000342	0.0003743	0.0035	1.88	7852.22	9249.23	9249.23	22.13	No	Si
SLU 47	2.29	161.54	-13968	-0.0000431	0.0003743	0.0035	1.88	9708.05	10683.14	10683.14	66.13	No	Si
SLU 47	4.19	-571.04	-13138	-0.0000444	0.0003743	0.0035	1.88	9322.53	11065.98	11065.98	19.38	No	Si
SLU 51	2.29	255.33	-14385	-0.0000453	0.0003743	0.0035	1.88	9892.5	10911.37	10911.37	42.73	No	Si
SLU 51	4.19	-565.22	-13516	-0.0000456	0.0003743	0.0035	1.88	9501.03	11294.36	11294.36	19.98	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	2.29	5090.12	-9807	-0.0000866	0.0005615	0.0035	1.88		8464.5	8464.5	1.66		Si
SLV 4	4.19	-2537.78	-2239	-0.0003695	0.0005615	0.0035	1.504		2935.56	2935.56	1.16		Si
SLV 16	2.29	-3894.1	-13309	-0.0000757	0.0005615	0.0035	1.88		11827.72	11827.72	3.04		Si
SLV 16	4.19	1907.75	-16874	-0.0000679	0.0005615	0.0035	1.88		13470.71	13470.71	7.06		Si
SLV 13	2.29	-4561.67	-14395	-0.0000858	0.0005615	0.0035	1.88		12586.56	12586.56	2.76		Si
SLV 13	4.19	1838.59	-20999	-0.0000805	0.0005615	0.0035	1.88		15893.73	15893.73	8.64		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	2.29	-3268.56	-13070	-0.0000689	0.0005615	0.0035	1.88		11658.54	11658.54	3.57		Si
SLV 10	4.19	1076.56	-21822	-0.0000756	0.0005615	0.0035	1.88		16350.84	16350.84	15.19		Si
SLV 8	2.29	3450.28	-10690	-0.0000632	0.0005615	0.0035	1.88		9070.07	9070.07	2.63		Si
SLV 8	4.19	-1493	-1783	-0.0000567	0.0005615	0.0035	1.504		2527.2	2527.2	1.69		Si
SLV 14	2.29	-5101.17	-13708	-0.0000898	0.0005615	0.0035	1.88		12106.21	12106.21	2.37		Si
SLV 14	4.19	2278.52	-21569	-0.0000868	0.0005615	0.0035	1.88		16209.8	16209.8	7.11		Si
SLV 3	2.29	5629.62	-10494	-0.0000975	0.0005615	0.0035	1.88		8934.82	8934.82	1.59		Si
SLV 3	4.19	-2977.71	-1670	-0.000877	0.0005615	0.0035	1.504		2425.54	2425.54	0.81		No
SLV 7	2.29	3797.01	-11132	-0.0000681	0.0005615	0.0035	1.88		9374.79	9374.79	2.47		Si
SLV 7	4.19	-1775.74	-1417	-0.0003014	0.0005615	0.0035	1.504		2197.53	2197.53	1.24		Si
SLV 2	2.29	3883.04	-10205	-0.0000667	0.0005615	0.0035	1.88		8737.14	8737.14	2.25		Si
SLV 2	4.19	-2167	-6934	-0.0000396	0.0005615	0.0035	1.88		6949.5	6949.5	3.21		Si
SLV 1	2.29	4422.55	-10892	-0.0000751	0.0005615	0.0035	1.88		9209.4	9209.4	2.08		Si
SLV 1	4.19	-2606.94	-6365	-0.0000431	0.0005615	0.0035	1.88		6475.53	6475.53	2.48		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 31	2.29	-30.93	-14009	-11666	-887	1.88	1.88	-22161	9899	5211	38062	15763	4794	20557	No	23.16	Si
SLU 31	4.19	-241.93	-14236	-11855	-944	1.88	1.88	-22520	9947	5236	38062	15763	4794	20557	No	21.77	Si
SLU 36	2.29	67.36	-14887	-12397	-835	1.88	1.88	-23550	10084	5309	38062	15763	4794	20557	No	24.63	Si
SLU 36	4.19	-243.65	-15109	-12582	-886	1.88	1.88	-23901	10131	5333	38062	15763	4794	20557	No	23.2	Si
SLU 76	2.29	73.56	-17098	-14238	-863	1.88	1.88	-27047	10551	5554	38062	15763	4794	20557	No	23.81	Si
SLU 76	4.19	-395.1	-17021	-14174	-928	1.88	1.88	-26925	10534	5545	38062	15763	4794	20557	No	22.14	Si
SLU 34	2.29	-30.07	-14295	-11903	-900	1.88	1.88	-22613	9959	5243	38062	15763	4794	20557	No	22.83	Si
SLU 34	4.19	-243.32	-14551	-12117	-958	1.88	1.88	-23018	10014	5271	38062	15763	4794	20557	No	21.46	Si
SLU 38	2.29	63.72	-14711	-12250	-838	1.88	1.88	-23272	10047	5289	38062	15763	4794	20557	No	24.53	Si
SLU 38	4.19	-237.51	-14929	-12432	-889	1.88	1.88	-23616	10093	5313	38062	15763	4794	20557	No	23.13	Si
SLU 82	2.29	148.93	-17587	-14645	-884	1.88	1.88	-27820	10654	5608	38062	15763	4794	20557	No	23.26	Si
SLU 82	4.19	-350.89	-17578	-14638	-943	1.88	1.88	-27807	10652	5607	38062	15763	4794	20557	No	21.81	Si
SLU 84	2.29	149.8	-17872	-14883	-897	1.88	1.88	-28272	10714	5640	38062	15763	4794	20557	No	22.93	Si
SLU 84	4.19	-352.28	-17893	-14900	-956	1.88	1.88	-28305	10718	5642	38062	15763	4794	20557	No	21.5	Si
SLU 40	2.29	45.31	-14783	-12310	-921	1.88	1.88	-23386	10063	5297	38062	15763	4794	20557	No	22.32	Si
SLU 40	4.19	-199.11	-15109	-12581	-972	1.88	1.88	-23900	10131	5333	38062	15763	4794	20557	No	21.15	Si
SLU 42	2.29	46.17	-15069	-12548	-934	1.88	1.88	-23837	10123	5329	38062	15763	4794	20557	No	22.02	Si
SLU 42	4.19	-200.5	-15424	-12843	-986	1.88	1.88	-24398	10198	5368	38062	15763	4794	20557	No	20.85	Si
SLU 73	2.29	72.69	-16813	-14000	-850	1.88	1.88	-26596	10491	5522	38062	15763	4794	20557	No	24.18	Si
SLU 73	4.19	-393.71	-16706	-13911	-915	1.88	1.88	-26427	10468	5510	38062	15763	4794	20557	No	22.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	2.29	-3894.1	-13309	-11083	-6229	1.88	1.88	-21054	14627	7700	38062	23644	4794	28438		4.57	Si
SLV 16	4.19	1907.75	-16874	-14051	-5616	1.88	1.88	-26693	15755	8294	38062	23644	4794	28438		5.06	Si
SLV 10	2.29	-3268.56	-13070	-10884	-6356	1.88	1.88	-20675	14552	7660	38062	23644	4794	28438		4.47	Si
SLV 10	4.19	1076.56	-21822	-18171	-6048	1.88	1.88	-34520	16250	8554	38062	23644	4794	28438		4.7	Si
SLV 8	2.29	3450.28	-10690	-8902	4969	1.88	1.8518	-16911	13799	7155	38062	23644	4794	28438		5.72	Si
SLV 8	4.19	-1493	-1783	-1485	4596	1.504	0.3078	0	0	0	38062	18916	3835	22751		4.95	Si
SLV 4	2.29	5090.12	-9807	-8166	6672	1.88	1.2629	-15513	13519	4781	38062	23644	4794	28438		4.26	Si
SLV 4	4.19	-2537.78	-2239	-1865	5913	1.504	0	0	0	0	38062	18916	3835	22751		3.85	Si
SLV 1	2.29	4422.55	-10892	-9070	5573	1.88	1.602	-17230	13863	6218	38062	23644	4794	28438		5.1	Si
SLV 1	4.19	-2606.94	-6365	-5300	4894	1.88	1.5912	-11962	12809	5707	38062	23644	4794	28438		5.81	Si
SLV 9	2.29	-2921.83	-13511	-11251	-5626	1.88	1.88	-21374	14691	7734	38062	23644	4794	28438		5.06	Si
SLV 9	4.19	793.82	-21456	-17867	-5318	1.88	1.88	-33941	16250	8554	38062	23644	4794	28438		5.35	Si
SLV 7	2.29	3797.01	-11132	-9269	5700	1.88	1.7967	-17609	13938	7012	38062	23644	4794	28438		4.99	Si
SLV 7	4.19	-1775.74	-1417	-1180	5326	1.504	0	0	0	0	38062	18916	3835	22751		4.27	Si
SLV 14	2.29	-5101.17	-13708	-11415	-8466	1.88	1.7036	-24189	15254	7277	38062	23644	4794	28438		3.36	Si
SLV 14	4.19	2278.52	-21569	-17961	-7772	1.88	1.88	-34119	16250	8554	38062	23644	4794	28438		3.66	Si
SLV 3	2.29	5629.62	-10494	-8738	7809	1.88	1.2106	-16600	13737	4656	38062	23644	4794	28438		3.64	Si
SLV 3	4.19	-2977.71	-1670	-1391	7050	1.504	0	0	0	0	38062	18916	3835	22751		3.23	Si
SLV 13	2.29	-4561.67	-14395	-11987	-7329	1.88	1.8693	-22771	14971	7836	38062	23644	4794	28438		3.88	Si
SLV 13	4.19	1838.59	-20999	-17486	-6635	1.88	1.88	-33219	16250	8554	38062	23644	4794	28438		4.29	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.31	12766	-6720	147.1	862.17	5.86	Si
SLV 3	179667	0.31	13125	-6909	147.1	884.13	6.01	Si
SLV 8	179667	0.31	14064	-7403	147.1	941.03	6.4	Si
SLV 7	179667	0.31	14295	-7525	147.1	954.87	6.49	Si
SLV 2	179667	0.31	16451	-8660	147.1	1081.8	7.35	Si
SLV 1	179667	0.31	16810	-8849	147.1	1102.49	7.49	Si
SLV 12	179667	0.31	18807	-9900	147.1	1215.34	8.26	Si
SLV 11	179667	0.31	19038	-10022	147.1	1228.12	8.35	Si
SLV 6	179667	0.31	26348	-13870	147.1	1606.77	10.92	Si
SLV 5	179667	0.31	26579	-13991	147.1	1617.88	11	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-19324	-9650	-447	0.527	2221.6	0.965	7.92926	10.19501	No
SLV 9	-19116	-9972	-447	0.532	2200.4	0.965	8.00482	10.19501	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-16371	-7463	-300	0.615	1921.2	0.961	9.29916	10.19501	No
SLV 5	-16163	-7784	-301	0.621	1900.1	0.96	9.40419	10.19501	No
SLV 14	-17854	-12783	-354	0.568	2072.1	0.963	8.57312	5.43686	Si
SLV 13	-17530	-13284	-355	0.577	2039.1	0.963	8.71191	5.43686	Si
SLV 16	-13593	-13357	-128	0.731	1638.7	0.954	11.12603	5.43686	Si
SLV 15	-13269	-13858	-129	0.746	1605.8	0.954	11.36343	5.43686	Si
SLV 12	-5118	-11565	306	1.571	781.6	0.916	24.92308	10.19501	Si
SLV 11	-4910	-11887	306	1.62	760.8	0.915	25.74308	10.19501	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.092	SLU 44	Si
V_SLU	20.855	SLU 42	Si
PF_SLV	0.815	SLV 3	No
V_SLV	3.227	SLV 3	Si
PFFP_SLV	5.861	SLV 4	Si
R_SLV	0.778	SLV 10	No

Maschio 80

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.284	-0.133	5.826	L4	L5	9.11	0.28	3.43	3.43	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	1.39	898.58	-109886	-0.0000627	0.0004492	0.0035	9.1099	324058.62	410746.52	410746.52	457.11	No	Si
SLU 68	4.82	-1930.15	-83580	-0.0000474	0.0004492	0.0035	9.1099	278613.72	370344.51	370344.51	191.87	No	Si
SLU 2	1.39	744.88	-77751	-0.0000435	0.0004492	0.0035	9.1099	265806.37	306330.1	306330.1	411.25	No	Si
SLU 2	4.82	-1491.07	-58572	-0.0000327	0.0004492	0.0035	9.1099	216656.65	285545.9	285545.9	191.5	No	Si
SLU 65	1.39	944.33	-108101	-0.0000616	0.0004492	0.0035	9.1099	321614.48	406206.18	406206.18	430.15	No	Si
SLU 65	4.82	-1958.44	-81878	-0.0000464	0.0004492	0.0035	9.1099	274975.7	364745.78	364745.78	186.24	No	Si
SLU 55	1.39	932.36	-109091	-0.0000622	0.0004492	0.0035	9.1099	322980.86	408723.07	408723.07	438.38	No	Si
SLU 55	4.82	-1929.39	-82694	-0.0000468	0.0004492	0.0035	9.1099	276731.25	367431.21	367431.21	190.44	No	Si
SLU 73	1.39	1542.62	-118176	-0.000068	0.0004492	0.0035	9.1099	334187.53	431829.45	431829.45	279.93	No	Si
SLU 73	4.82	-2109.22	-89765	-0.0000511	0.0004492	0.0035	9.1099	291117.04	389659.29	389659.29	184.74	No	Si
SLU 31	1.39	1907.66	-98695	-0.0000563	0.0004492	0.0035	9.1099	307197.76	375343.05	375343.05	196.76	No	Si
SLU 31	4.82	-1793.4	-75233	-0.0000424	0.0004492	0.0035	9.1099	259965.37	342893.23	342893.23	191.2	No	Si
SLU 44	1.39	379.83	-97232	-0.0000549	0.0004492	0.0035	9.1099	304721.42	370519.29	370519.29	975.48	No	Si
SLU 44	4.82	-1806.89	-73105	-0.0000412	0.0004492	0.0035	9.1099	254885.21	335894.61	335894.61	185.9	No	Si
SLU 76	1.39	1496.86	-119961	-0.0000691	0.0004492	0.0035	9.1099	336106.03	436369.78	436369.78	291.52	No	Si
SLU 76	4.82	-2080.94	-91468	-0.0000521	0.0004492	0.0035	9.1099	294362.57	394893.1	394893.1	189.77	No	Si
SLU 52	1.39	978.12	-107306	-0.0000611	0.0004492	0.0035	9.1099	320495.21	403715.03	403715.03	412.75	No	Si
SLU 52	4.82	-1957.68	-80992	-0.0000459	0.0004492	0.0035	9.1099	273049.14	361832.48	361832.48	184.83	No	Si
SLU 10	1.39	1343.16	-87826	-0.0000496	0.0004492	0.0035	9.1099	287316.31	339525.85	339525.85	252.78	No	Si
SLU 10	4.82	-1641.86	-66460	-0.0000373	0.0004492	0.0035	9.1099	238170.87	313174.27	313174.27	190.74	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	1.39	6453.01	-25057	-0.0000158	0.0006738	0.0035	9.1099		117164.02	117164.02	18.16		Si
SLV 1	4.82	16362.03	-29458	-0.0000217	0.0006738	0.0035	9.1099		135585.29	135585.29	8.29		Si
SLV 7	1.39	-9007.59	-64966	-0.0000387	0.0006738	0.0035	9.1099		316594.96	316594.96	35.15		Si
SLV 7	4.82	-54144.78	-50324	-0.0000471	0.0006738	0.0035	9.1099		260614.1	260614.1	4.81		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	1.39	-10106.15	-64865	-0.0000391	0.0006738	0.0035	9.1099		316228.85	316228.85	31.29		Si
SLV 8	4.82	-51296.44	-50478	-0.0000461	0.0006738	0.0035	9.1099		261203.69	261203.69	5.09		Si
SLV 10	1.39	8528.7	-101715	-0.0000595	0.0006738	0.0035	9.1099		399714.74	399714.74	46.87		Si
SLV 10	4.82	51520.15	-76132	-0.0000609	0.0006738	0.0035	9.1099		314550.33	314550.33	6.11		Si
SLV 11	1.39	-10682.4	-100134	-0.0000594	0.0006738	0.0035	9.1099		440524.78	440524.78	41.24		Si
SLV 11	4.82	-56604.13	-70965	-0.0000598	0.0006738	0.0035	9.1099		338406.55	338406.55	5.98		Si
SLV 9	1.39	9627.26	-101816	-0.0000599	0.0006738	0.0035	9.1099		400049.98	400049.98	41.55		Si
SLV 9	4.82	48671.81	-75979	-0.0000597	0.0006738	0.0035	9.1099		314038.02	314038.02	6.45		Si
SLV 12	1.39	-11780.96	-100034	-0.0000597	0.0006738	0.0035	9.1099		440198.04	440198.04	37.37		Si
SLV 12	4.82	-53755.78	-71119	-0.0000588	0.0006738	0.0035	9.1099		338966.06	338966.06	6.31		Si
SLV 2	1.39	4743.7	-24900	-0.0000151	0.0006738	0.0035	9.1099		116500.45	116500.45	24.56		Si
SLV 2	4.82	20793.95	-29697	-0.0000234	0.0006738	0.0035	9.1099		136583.67	136583.67	6.57		Si
SLV 5	1.39	11302.07	-66647	-0.0000405	0.0006738	0.0035	9.1099		282766.21	282766.21	25.02		Si
SLV 5	4.82	51131.16	-55337	-0.0000488	0.0006738	0.0035	9.1099		239665.18	239665.18	4.69		Si
SLV 6	1.39	10203.51	-66547	-0.00004	0.0006738	0.0035	9.1099		282385.94	282385.94	27.68		Si
SLV 6	4.82	53979.5	-55491	-0.0000499	0.0006738	0.0035	9.1099		240260.54	240260.54	4.45		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.39	1060.59	-120854	-86214	-2958	9.1099	9.1099	-33799	10833	27633	108749	91669	46461	136382	No	46.11	Si
SLU 75	4.82	-1893.98	-92408	-65922	-2130	9.1099	9.1099	-25844	10833	27633	108749	91669	46461	136382	No	64.03	Si
SLU 81	1.39	482.48	-122098	-87102	-2970	9.1099	9.1099	-34147	10833	27633	108749	91669	46461	136382	No	45.92	Si
SLU 81	4.82	-1908.71	-93041	-66373	-2202	9.1099	9.1099	-26021	10833	27633	108749	91669	46461	136382	No	61.95	Si
SLU 78	1.39	1014.83	-122639	-87488	-3030	9.1099	9.1099	-34298	10833	27633	108749	91669	46461	136382	No	45.02	Si
SLU 78	4.82	-1865.7	-94111	-67136	-2190	9.1099	9.1099	-26320	10833	27633	108749	91669	46461	136382	No	62.27	Si
SLU 84	1.39	1226.65	-124120	-88544	-3011	9.1099	9.1099	-34713	10833	27633	108749	91669	46461	136382	No	45.29	Si
SLU 84	4.82	-2039.51	-94806	-67632	-2167	9.1099	9.1099	-26514	10833	27633	108749	91669	46461	136382	No	62.93	Si
SLU 80	1.39	924.48	-121588	-86738	-3027	9.1099	9.1099	-34004	10833	27633	108749	91669	46461	136382	No	45.06	Si
SLU 80	4.82	-1946.6	-93128	-66436	-2194	9.1099	9.1099	-26045	10833	27633	108749	91669	46461	136382	No	62.15	Si
SLU 83	1.39	436.72	-123883	-88375	-3042	9.1099	9.1099	-34646	10833	27633	108749	91669	46461	136382	No	44.84	Si
SLU 83	4.82	-1880.42	-94744	-67588	-2262	9.1099	9.1099	-26497	10833	27633	108749	91669	46461	136382	No	60.29	Si
SLU 79	1.39	134.55	-121351	-86569	-3057	9.1099	9.1099	-33938	10833	27633	108749	91669	46461	136382	No	44.61	Si
SLU 79	4.82	-1787.52	-93066	-66391	-2289	9.1099	9.1099	-26028	10833	27633	108749	91669	46461	136382	No	59.58	Si
SLU 74	1.39	270.66	-120617	-86045	-2989	9.1099	9.1099	-33733	10833	27633	108749	91669	46461	136382	No	45.63	Si
SLU 74	4.82	-1734.9	-92345	-65877	-2225	9.1099	9.1099	-25826	10833	27633	108749	91669	46461	136382	No	61.3	Si
SLU 77	1.39	224.9	-122402	-87319	-3060	9.1099	9.1099	-34232	10833	27633	108749	91669	46461	136382	No	44.56	Si
SLU 77	4.82	-1706.62	-94048	-67092	-2285	9.1099	9.1099	-26302	10833	27633	108749	91669	46461	136382	No	59.68	Si
SLU 82	1.39	1272.4	-122335	-87271	-2939	9.1099	9.1099	-34213	10833	27633	108749	91669	46461	136382	No	46.4	Si
SLU 82	4.82	-2067.79	-93104	-66418	-2107	9.1099	9.1099	-26038	10833	27633	108749	91669	46461	136382	No	64.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	1.39	-10106.15	-64865	-46273	29552	9.1099	9.1099	-18141	16128	41139	108749	137503	46461	149888		5.07	Si
SLV 8	4.82	-51296.44	-50478	-36009	26019	9.1099	9.1099	-14117	15323	39087	108749	137503	46461	147835		5.68	Si
SLD 10	1.39	3768.6	-91151	-65025	-18031	9.1099	9.1099	-25492	16250	41450	108749	137503	46461	150199		8.33	Si
SLD 10	4.82	22089.18	-68747	-49042	-15694	9.1099	9.1099	-19226	16250	41450	108749	137503	46461	150199		9.57	Si
SLV 9	1.39	9627.26	-101816	-72633	-33737	9.1099	9.1099	-28475	16250	41450	108749	137503	46461	150199		4.45	Si
SLV 9	4.82	48671.81	-75979	-54201	-29138	9.1099	9.1099	-21249	16250	41450	108749	137503	46461	150199		5.15	Si
SLV 5	1.39	11302.07	-66647	-47545	-33728	9.1099	9.1099	-18639	16228	41394	108749	137503	46461	150143		4.45	Si
SLV 5	4.82	51131.16	-55337	-39476	-29410	9.1099	9.1099	-15476	15595	39780	108749	137503	46461	148529		5.05	Si
SLV 10	1.39	8528.7	-101715	-72561	-38236	9.1099	9.1099	-28447	16250	41450	108749	137503	46461	150199		3.93	Si
SLV 10	4.82	51520.15	-76132	-54311	-33621	9.1099	9.1099	-21292	16250	41450	108749	137503	46461	150199		4.47	Si
SLD 6	1.39	4424.31	-76140	-54317	-18031	9.1099	9.1099	-21294	16250	41450	108749	137503	46461	150199		8.33	Si
SLD 6	4.82	23123.69	-59928	-42751	-15809	9.1099	9.1099	-16760	15852	40435	108749	137503	46461	149184		9.44	Si
SLV 11	1.39	-10682.4	-100134	-71433	34040	9.1099	9.1099	-28005	16250	41450	108749	137503	46461	150199		4.41	Si
SLV 11	4.82	-56604.13	-70965	-50625	30776	9.1099	9.1099	-19847	16250	41450	108749	137503	46461	150199		4.88	Si
SLV 6	1.39	10203.51	-66547	-47473	-38226	9.1099	9.1099	-18611	16222	41379	108749	137503	46461	150128		3.93	Si
SLV 6	4.82	53979.5	-55491	-39586	-33894	9.1099	9.1099	-15519	15604	39802	108749	137503	46461	148551		4.38	Si
SLV 7	1.39	-9007.59	-64966	-46345	34050	9.1099	9.1099	-18169	16134	41154	108749	137503	46461	149903		4.4	Si
SLV 7	4.82	-54144.78	-50324	-35900	30503	9.1099	9.1099	-14074	15315	39065	108749	137503	46461	147814		4.85	Si
SLV 12	1.39	-11780.96	-100034	-71362	29542	9.1099	9.1099	-27976	16250	41450	108749	137503	46461	150199		5.08	Si
SLV 12	4.82	-53755.78	-71119	-50735	26292	9.1099	9.1099	-19890	16250	41450	108749	137503	46461	150199		5.71	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.105 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-28144	0.31	712.82	3702.98	5488.99	4595.98	6.45	Si
SLV 4	-28215	0.31	712.82	3711.66	5499.77	4605.71	6.46	Si
SLV 1	-28987	0.31	712.82	3806.55	5617.66	4712.11	6.61	Si
SLV 2	-29057	0.31	712.82	3815.19	5628.41	4721.8	6.62	Si
SLV 7	-59452	0.31	712.82	7264.83	10171.11	8717.97	12.23	Si
SLV 8	-59497	0.31	712.82	7269.56	10177.79	8723.68	12.24	Si
SLV 5	-62261	0.31	712.82	7555.73	10585.43	9070.58	12.72	Si
SLV 6	-62306	0.31	712.82	7560.38	10592.12	9076.25	12.73	Si
SLV 11	-87119	0.31	712.82	9923.88	14218.26	12071.07	16.93	Si
SLV 12	-87165	0.31	712.82	9927.86	14224.78	12076.32	16.94	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-76132	-101715	449	0.648	8984.5	0.959	9.824	10.19501	No
SLV 9	-75979	-101816	449	0.65	8968.8	0.959	9.84152	10.19501	No
SLV 12	-71119	-100034	394	0.688	8474.7	0.957	10.44278	10.19501	Si
SLV 11	-70965	-100134	394	0.689	8459.1	0.957	10.4627	10.19501	Si
SLV 6	-55491	-66547	-403	0.847	6887.2	0.948	12.98063	10.19501	Si
SLV 5	-55337	-66647	-403	0.849	6871.6	0.948	13.01215	10.19501	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-50478	-64865	-458	0.915	6378.6	0.945	14.08034	10.19501	Si
SLV 7	-50324	-64966	-458	0.918	6363	0.945	14.1177	10.19501	Si
SLV 14	-98502	-142129	1424	0.511	11260.4	0.967	7.68832	5.43686	Si
SLV 13	-98263	-142286	1424	0.513	11236.1	0.967	7.70477	5.43686	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	184.741	SLU 73	Si
V_SLU	44.565	SLU 77	Si
PF_SLV	4.451	SLV 6	Si
V_SLV	3.927	SLV 6	Si
PFFP_SLV	6.448	SLV 3	Si
R_SLV	0.964	SLV 10	No

Maschio 81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	1.266	L5	L6	4.581	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	4.82	11848.35	-50509	-0.0000849	0.0003743	0.0035	4.5807	70938.15	84352.95	84352.95	7.12	No	Si
SLU 82	6.92	8227.78	-42447	-0.0000668	0.0003743	0.0035	4.5807	65617.95	75047.81	75047.81	9.12	No	Si
SLU 79	4.82	11726.87	-50256	-0.0000843	0.0003743	0.0035	4.5807	70805.97	84117.86	84117.86	7.17	No	Si
SLU 79	6.92	8465.9	-42530	-0.0000673	0.0003743	0.0035	4.5807	65684.44	75167.22	75167.22	8.88	No	Si
SLU 74	4.82	11675.87	-49927	-0.0000837	0.0003743	0.0035	4.5807	70630.51	83812.54	83812.54	7.18	No	Si
SLU 74	6.92	8399.12	-42172	-0.0000667	0.0003743	0.0035	4.5807	65395.63	74652.24	74652.24	8.89	No	Si
SLU 84	4.82	12021.03	-51359	-0.0000865	0.0003743	0.0035	4.5807	71366.58	85148.12	85148.12	7.08	No	Si
SLU 84	6.92	8391.13	-43299	-0.0000683	0.0003743	0.0035	4.5807	66287.64	76274.73	76274.73	9.09	No	Si
SLU 77	4.82	11848.55	-50777	-0.0000853	0.0003743	0.0035	4.5807	71076.3	84603.62	84603.62	7.14	No	Si
SLU 77	6.92	8562.48	-43023	-0.0000682	0.0003743	0.0035	4.5807	66073.56	75876.53	75876.53	8.86	No	Si
SLU 80	4.82	11742.38	-50346	-0.0000845	0.0003743	0.0035	4.5807	70853.56	84201.99	84201.99	7.17	No	Si
SLU 80	6.92	8340.58	-42605	-0.0000672	0.0003743	0.0035	4.5807	65743.85	75274.34	75274.34	9.03	No	Si
SLU 75	4.82	11691.38	-50017	-0.0000839	0.0003743	0.0035	4.5807	70679.14	83896.43	83896.43	7.18	No	Si
SLU 75	6.92	8273.8	-42246	-0.0000666	0.0003743	0.0035	4.5807	65455.97	74759.06	74759.06	9.04	No	Si
SLU 83	4.82	12005.53	-51269	-0.0000863	0.0003743	0.0035	4.5807	71322.2	85063.23	85063.23	7.09	No	Si
SLU 83	6.92	8516.45	-43224	-0.0000684	0.0003743	0.0035	4.5807	66230.05	76167.03	76167.03	8.94	No	Si
SLU 81	4.82	11832.85	-50418	-0.0000847	0.0003743	0.0035	4.5807	70891.07	84268.7	84268.7	7.12	No	Si
SLU 81	6.92	8353.1	-42373	-0.0000669	0.0003743	0.0035	4.5807	65558.13	74940.82	74940.82	8.97	No	Si
SLU 78	4.82	11864.06	-50868	-0.0000855	0.0003743	0.0035	4.5807	71122.24	84688.14	84688.14	7.14	No	Si
SLU 78	6.92	8437.15	-43098	-0.0000681	0.0003743	0.0035	4.5807	66131.68	75984.06	75984.06	9.01	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	4.82	4092.07	-11762	-0.0000199	0.0005615	0.0035	4.5807		26703.67	26703.67	6.53		Si
SLV 13	6.92	13987.15	-14624	-0.0000393	0.0005615	0.0035	4.5807		32595.85	32595.85	2.33		Si
SLV 14	4.82	4881.27	-12724	-0.0000222	0.0005615	0.0035	4.5807		28698.48	28698.48	5.88		Si
SLV 14	6.92	12011.99	-14996	-0.000036	0.0005615	0.0035	4.5807		33352.59	33352.59	2.78		Si
SLD 6	4.82	11551.01	-32508	-0.0000571	0.0005615	0.0035	4.5807		64760.44	64760.44	5.61		Si
SLD 6	6.92	11382.11	-25914	-0.0000485	0.0005615	0.0035	4.5807		53379.48	53379.48	4.69		Si
SLD 5	4.82	11329.56	-32238	-0.0000564	0.0005615	0.0035	4.5807		64288.08	64288.08	5.67		Si
SLD 5	6.92	11936.35	-25809	-0.0000492	0.0005615	0.0035	4.5807		53201.77	53201.77	4.46		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	4.82	12357.21	-18501	-0.0000408	0.0005615	0.0035	4.5807		40362.36	40362.36	3.27		Si
SLV 9	6.92	21357.63	-15569	-0.0000618	0.0005615	0.0035	4.5807		34508.14	34508.14	1.62		Si
SLV 10	4.82	12864.42	-19119	-0.0000423	0.0005615	0.0035	4.5807		41575.24	41575.24	3.23		Si
SLV 10	6.92	20088.21	-15808	-0.0000563	0.0005615	0.0035	4.5807		34990.09	34990.09	1.74		Si
SLD 10	4.82	10157.38	-27628	-0.0000487	0.0005615	0.0035	4.5807		56307.47	56307.47	5.54		Si
SLD 10	6.92	12135.29	-23083	-0.0000461	0.0005615	0.0035	4.5807		48592.34	48592.34	4		Si
SLD 9	4.82	9935.93	-27358	-0.000048	0.0005615	0.0035	4.5807		55844.88	55844.88	5.62		Si
SLD 9	6.92	12689.53	-22979	-0.0000469	0.0005615	0.0035	4.5807		48416.84	48416.84	3.82		Si
SLV 6	4.82	16098.23	-30554	-0.0000619	0.0005615	0.0035	4.5807		61354.73	61354.73	3.81		Si
SLV 6	6.92	18328.11	-22423	-0.0000552	0.0005615	0.0035	4.5807		47484.28	47484.28	2.59		Si
SLV 5	4.82	15591.02	-29935	-0.0000603	0.0005615	0.0035	4.5807		60282.82	60282.82	3.87		Si
SLV 5	6.92	19597.53	-22184	-0.0000573	0.0005615	0.0035	4.5807		47083.53	47083.53	2.4		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	4.82	9607.57	-41161	-34275	2129	4.5807	4.5807	-26723	10507	13477	40441	38407	11681	50088	No	23.53	Si
SLU 50	6.92	7313.44	-34843	-29015	2111	4.5807	4.5807	-22622	9961	12776	40441	38407	11681	50088	No	23.73	Si
SLU 47	4.82	9460.73	-40461	-33692	2287	4.5807	4.5807	-26269	10447	13399	40441	38407	11681	50088	No	21.9	Si
SLU 47	6.92	6941.21	-34116	-28409	2269	4.5807	4.5807	-22149	9898	12695	40441	38407	11681	50088	No	22.08	Si
SLU 46	4.82	9572.07	-40922	-34076	2181	4.5807	4.5807	-26568	10487	13451	40441	38407	11681	50088	No	22.97	Si
SLU 46	6.92	7121.33	-34559	-28778	2163	4.5807	4.5807	-22437	9936	12744	40441	38407	11681	50088	No	23.16	Si
SLU 44	4.82	9288.05	-39610	-32984	2251	4.5807	4.5807	-25716	10373	13305	40441	38407	11681	50088	No	22.26	Si
SLU 44	6.92	6777.86	-33265	-27700	2233	4.5807	4.5807	-21597	9824	12600	40441	38407	11681	50088	No	22.43	Si
SLU 49	4.82	9744.75	-41773	-34785	2217	4.5807	4.5807	-27120	10560	13545	40441	38407	11681	50088	No	22.59	Si
SLU 49	6.92	7284.69	-35411	-29487	2199	4.5807	4.5807	-22990	10010	12839	40441	38407	11681	50088	No	22.78	Si
SLU 55	4.82	10513.85	-44809	-37313	1966	4.5807	4.5807	-29092	10823	13882	40441	38407	11681	50088	No	25.47	Si
SLU 55	6.92	7440.31	-37722	-31412	1946	4.5807	4.5807	-24491	10210	13095	40441	38407	11681	50088	No	25.74	Si
SLU 48	4.82	9729.25	-41682	-34709	2101	4.5807	4.5807	-27061	10553	13535	40441	38407	11681	50088	No	23.84	Si
SLU 48	6.92	7410.01	-35336	-29425	2082	4.5807	4.5807	-22941	10003	12830	40441	38407	11681	50088	No	24.05	Si
SLU 43	4.82	9262.21	-39459	-32858	2057	4.5807	4.5807	-25618	10360	13288	40441	38407	11681	50088	No	24.35	Si
SLU 43	6.92	6986.73	-33140	-27596	2039	4.5807	4.5807	-21516	9813	12587	40441	38407	11681	50088	No	24.56	Si
SLU 51	4.82	9623.07	-41251	-34350	2245	4.5807	4.5807	-26782	10515	13487	40441	38407	11681	50088	No	22.31	Si
SLU 51	6.92	7188.11	-34918	-29077	2227	4.5807	4.5807	-22670	9967	12784	40441	38407	11681	50088	No	22.49	Si
SLU 45	4.82	9556.57	-40832	-34001	2065	4.5807	4.5807	-26509	10479	13440	40441	38407	11681	50088	No	24.26	Si
SLU 45	6.92	7246.66	-34485	-28716	2047	4.5807	4.5807	-22389	9930	12736	40441	38407	11681	50088	No	24.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	4.82	11930.9	-56646	-47170	9103	4.5807	4.5807	-36776	16250	20842	40441	57610	11681	61283		6.73	Si
SLV 4	6.92	-2235.15	-42906	-35729	8604	4.5807	4.5807	-27856	15988	20506	40441	57610	11681	60947		7.08	Si
SLV 13	4.82	4092.07	-11762	-9794	-6550	4.5807	4.5807	-7636	11944	15319	40441	57610	11681	55760		8.51	Si
SLV 13	6.92	13987.15	-14624	-12177	-6083	4.5807	4.0017	-9494	12316	13799	40441	57610	11681	54240		8.92	Si
SLV 9	4.82	12357.21	-18501	-15406	-8214	4.5807	4.5807	-12011	12819	16442	40441	57610	11681	56883		6.93	Si
SLV 9	6.92	21357.63	-15569	-12965	-5442	4.5807	2.7558	-10108	12438	9598	40441	57610	11681	50039		9.2	Si
SLV 3	4.82	11141.7	-55684	-46369	6320	4.5807	4.5807	-36152	16250	20842	40441	57610	11681	61283		9.7	Si
SLV 3	6.92	-259.98	-42534	-35419	5819	4.5807	4.5807	-27615	15940	20444	40441	57610	11681	60885		10.46	Si
SLV 12	4.82	431.95	-38473	-32037	8224	4.5807	4.5807	-24978	15412	19768	40441	57610	11681	60209		7.32	Si
SLV 12	6.92	-7845.52	-35346	-29433	5188	4.5807	4.5807	-22948	15006	19247	40441	57610	11681	59688		11.5	Si
SLV 10	4.82	12864.42	-19119	-15921	-6425	4.5807	4.5807	-12413	12899	16545	40441	57610	11681	56986		8.87	Si
SLV 10	6.92	20088.21	-15808	-13164	-3652	4.5807	3.0589	-10263	12469	10680	40441	57610	11681	51121		14	Si
SLV 2	4.82	15660.64	-50840	-42335	4708	4.5807	4.5807	-33007	16250	20842	40441	57610	11681	61283		13.02	Si
SLV 2	6.92	6144.97	-37045	-30848	5952	4.5807	4.5807	-24051	15227	19530	40441	57610	11681	59971		10.08	Si
SLV 8	4.82	3665.76	-49907	-41558	10767	4.5807	4.5807	-32402	16250	20842	40441	57610	11681	61283		5.69	Si
SLV 8	6.92	-9605.62	-41961	-34941	7963	4.5807	4.5807	-27243	15865	20349	40441	57610	11681	60790		7.63	Si
SLV 7	4.82	3158.55	-49289	-41044	8978	4.5807	4.5807	-32000	16250	20842	40441	57610	11681	61283		6.83	Si
SLV 7	6.92	-8336.21	-41722	-34742	6173	4.5807	4.5807	-27087	15834	20309	40441	57610	11681	60750		9.84	Si
SLV 11	4.82	-75.26	-37854	-31522	6435	4.5807	4.5807	-24576	15332	19665	40441	57610	11681	60106		9.34	Si
SLV 11	6.92	-6576.1	-35107	-29234	3398	4.5807	4.5807	-22793	14975	19207	40441	57610	11681	59648		17.55	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.38	11977	-15362	466.28	1982.06	4.25	Si
SLV 14	179667	0.38	12268	-15735	466.28	2025.89	4.34	Si
SLV 9	179667	0.38	12795	-16411	466.28	2105.09	4.51	Si
SLV 10	179667	0.38	12982	-16651	466.28	2132.93	4.57	Si
SLV 15	179667	0.38	16521	-21189	466.28	2645.6	5.67	Si
SLV 16	179667	0.38	16811	-21562	466.28	2686.33	5.76	Si
SLV 5	179667	0.38	17995	-23080	466.28	2850.52	6.11	Si
SLV 6	179667	0.38	18181	-23320	466.28	2876.08	6.17	Si
SLV 11	179667	0.38	27939	-35835	466.28	4099.04	8.79	Si
SLV 12	179667	0.38	28125	-36074	466.28	4120.23	8.84	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-37390	-49907	-341	0.656	4443.4	0.958	9.95759	12.69956	No
SLV 7	-37007	-49289	-341	0.662	4404.4	0.957	10.04822	12.69956	No
SLV 12	-32904	-38473	189	0.735	3987.5	0.953	11.20549	12.69956	No
SLV 11	-32521	-37854	188	0.742	3948.6	0.953	11.32141	12.69956	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-35025	-56646	-910	0.679	4203	0.955	10.32569	6.60165	Si
SLV 3	-34429	-55684	-911	0.689	4142.5	0.955	10.48233	6.60165	Si
SLV 6	-15377	-30554	-203	1.361	2213	0.924	21.41757	12.69956	Si
SLV 5	-14994	-29935	-203	1.388	2174.5	0.923	21.85957	12.69956	Si
SLV 2	-28422	-50840	-869	0.81	3532.3	0.948	12.41709	6.60165	Si
SLV 1	-27826	-49878	-869	0.824	3471.9	0.947	12.64794	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.083	SLU 84	Si
V_SLU	21.905	SLU 47	Si
PF_SLV	1.616	SLV 9	Si
V_SLV	5.692	SLV 8	Si
PFFP_SLV	4.251	SLV 13	Si
R_SLV	0.784	SLV 8	No

Maschio 82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	2.066	-24.633	5.826	L5	L6	3.76	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	4.82	-7101.01	-38037	-0.0000764	0.0003743	0.0035	3.7599	46132.25	56739.66	56739.66	7.99	No	Si
SLU 73	6.92	-3404.32	-30968	-0.0000549	0.0003743	0.0035	3.7599	41398.65	50305.06	50305.06	14.78	No	Si
SLU 77	4.82	-7317.16	-40100	-0.0000807	0.0003743	0.0035	3.7599	47183.34	58445.8	58445.8	7.99	No	Si
SLU 77	6.92	-3353.85	-32962	-0.000058	0.0003743	0.0035	3.7599	42911.38	52483.48	52483.48	15.65	No	Si
SLU 82	4.82	-7305.74	-39417	-0.0000794	0.0003743	0.0035	3.7599	46852.07	57873.49	57873.49	7.92	No	Si
SLU 82	6.92	-3550.25	-32162	-0.0000572	0.0003743	0.0035	3.7599	42321.27	51601.42	51601.42	14.53	No	Si
SLU 83	4.82	-7379.99	-40258	-0.0000811	0.0003743	0.0035	3.7599	47257.49	58579.01	58579.01	7.94	No	Si
SLU 83	6.92	-3483.38	-32972	-0.0000584	0.0003743	0.0035	3.7599	42918.29	52494.06	52494.06	15.07	No	Si
SLU 80	4.82	-7274.59	-39643	-0.0000797	0.0003743	0.0035	3.7599	46963.29	58061.67	58061.67	7.98	No	Si
SLU 80	6.92	-3379.99	-32513	-0.0000574	0.0003743	0.0035	3.7599	42582.48	51986.39	51986.39	15.38	No	Si
SLU 84	4.82	-7398.8	-40202	-0.0000811	0.0003743	0.0035	3.7599	47231.26	58531.65	58531.65	7.91	No	Si
SLU 84	6.92	-3565.44	-32916	-0.0000585	0.0003743	0.0035	3.7599	42877.79	52432.05	52432.05	14.71	No	Si
SLU 75	4.82	-7242.9	-39260	-0.000079	0.0003743	0.0035	3.7599	46773.27	57742.47	57742.47	7.97	No	Si
SLU 75	6.92	-3420.72	-32153	-0.0000569	0.0003743	0.0035	3.7599	42314.09	51590.96	51590.96	15.08	No	Si
SLU 81	4.82	-7286.93	-39473	-0.0000795	0.0003743	0.0035	3.7599	46879.84	57920.12	57920.12	7.95	No	Si
SLU 81	6.92	-3468.19	-32218	-0.0000571	0.0003743	0.0035	3.7599	42363.25	51662.72	51662.72	14.9	No	Si
SLU 76	4.82	-7194.07	-38821	-0.0000781	0.0003743	0.0035	3.7599	46549.42	57380	57380	7.98	No	Si
SLU 76	6.92	-3419.51	-31722	-0.0000561	0.0003743	0.0035	3.7599	41986.73	51120.36	51120.36	14.95	No	Si
SLU 78	4.82	-7335.96	-40044	-0.0000806	0.0003743	0.0035	3.7599	47156.8	58398.59	58398.59	7.96	No	Si
SLU 78	6.92	-3435.91	-32906	-0.0000582	0.0003743	0.0035	3.7599	42870.86	52421.47	52421.47	15.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 8	4.82	-6666.11	-22614	-0.0000482	0.0005615	0.0035	3.7599		41975.12	41975.12	6.3		Si
SLD 8	6.92	-7070.67	-17871	-0.0000419	0.0005615	0.0035	3.7599		34710.88	34710.88	4.91		Si
SLD 7	4.82	-6961.68	-22889	-0.0000493	0.0005615	0.0035	3.7599		42394.33	42394.33	6.09		Si
SLD 7	6.92	-6617.26	-17903	-0.0000409	0.0005615	0.0035	3.7599		34760.66	34760.66	5.25		Si
SLV 4	4.82	-6441.41	-34083	-0.0000655	0.0005615	0.0035	3.7599		57952.48	57952.48	9		Si
SLV 4	6.92	-10339.11	-27553	-0.0000646	0.0005615	0.0035	3.7599		49153.8	49153.8	4.75		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	4.82	-3681.4	-19986	-0.0000372	0.0005615	0.0035	3.7599		38011.87	38011.87	10.33		Si
SLV 13	6.92	5951.55	-16270	-0.0000369	0.0005615	0.0035	3.7599		28915.04	28915.04	4.86		Si
SLV 16	4.82	-4859.28	-11173	-0.0000269	0.0005615	0.0035	3.7599		23876.62	23876.62	4.91		Si
SLV 16	6.92	-1195.14	-9079	-0.0000155	0.0005615	0.0035	3.7599		20289.33	20289.33	16.98		Si
SLV 8	4.82	-8678.96	-17102	-0.0000445	0.0005615	0.0035	3.7599		33496.68	33496.68	3.86		Si
SLV 8	6.92	-13302.74	-12849	-0.0000551	0.0005615	0.0035	3.7599		26628.44	26628.44	2		Si
SLV 12	4.82	-8204.32	-10229	-0.0000339	0.0005615	0.0035	3.7599		22256.5	22256.5	2.71		Si
SLV 12	6.92	-10559.55	-7307	-0.0000604	0.0005615	0.0035	3.008		17274.89	17274.89	1.64		Si
SLV 11	4.82	-8881.3	-10860	-0.0000365	0.0005615	0.0035	3.7599		23340.81	23340.81	2.63		Si
SLV 11	6.92	-9521.08	-7378	-0.0000448	0.0005615	0.0035	3.008		17399.12	17399.12	1.83		Si
SLV 7	4.82	-9355.94	-17733	-0.000047	0.0005615	0.0035	3.7599		34491.11	34491.11	3.69		Si
SLV 7	6.92	-12264.27	-12921	-0.0000501	0.0005615	0.0035	3.7599		26746.25	26746.25	2.18		Si
SLV 15	4.82	-5912.63	-12154	-0.0000307	0.0005615	0.0035	3.7599		25495.12	25495.12	4.31		Si
SLV 15	6.92	420.68	-9191	-0.0000139	0.0005615	0.0035	3.7599		17171.83	17171.83	40.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	4.82	-7224.1	-39316	-32739	-3460	3.7599	3.7599	-31097	10833	11405	40441	31525	9588	41113	No	11.88	Si
SLU 74	6.92	-3338.66	-32209	-26821	-3462	3.7599	3.7599	-25476	10341	10887	40441	31525	9588	41113	No	11.88	Si
SLU 75	4.82	-7242.9	-39260	-32692	-3445	3.7599	3.7599	-31053	10833	11405	40441	31525	9588	41113	No	11.94	Si
SLU 75	6.92	-3420.72	-32153	-26774	-3403	3.7599	3.7599	-25432	10335	10881	40441	31525	9588	41113	No	12.08	Si
SLU 82	4.82	-7305.74	-39417	-32823	-3545	3.7599	3.7599	-31178	10833	11405	40441	31525	9588	41113	No	11.6	Si
SLU 82	6.92	-3550.25	-32162	-26782	-3504	3.7599	3.7599	-25439	10336	10882	40441	31525	9588	41113	No	11.73	Si
SLU 80	4.82	-7274.59	-39643	-33011	-3500	3.7599	3.7599	-31356	10833	11405	40441	31525	9588	41113	No	11.75	Si
SLU 80	6.92	-3379.99	-32513	-27074	-3458	3.7599	3.7599	-25716	10373	10921	40441	31525	9588	41113	No	11.89	Si
SLU 83	4.82	-7379.99	-40258	-33523	-3625	3.7599	3.7599	-31842	10833	11405	40441	31525	9588	41113	No	11.34	Si
SLU 83	6.92	-3483.38	-32972	-27456	-3627	3.7599	3.7599	-26079	10422	10972	40441	31525	9588	41113	No	11.34	Si
SLU 84	4.82	-7398.8	-40202	-33476	-3610	3.7599	3.7599	-31798	10833	11405	40441	31525	9588	41113	No	11.39	Si
SLU 84	6.92	-3565.44	-32916	-27410	-3568	3.7599	3.7599	-26035	10416	10966	40441	31525	9588	41113	No	11.52	Si
SLU 79	4.82	-7255.78	-39699	-33058	-3515	3.7599	3.7599	-31400	10833	11405	40441	31525	9588	41113	No	11.7	Si
SLU 79	6.92	-3297.93	-32569	-27120	-3517	3.7599	3.7599	-25761	10379	10927	40441	31525	9588	41113	No	11.69	Si
SLU 77	4.82	-7317.16	-40100	-33392	-3525	3.7599	3.7599	-31718	10833	11405	40441	31525	9588	41113	No	11.66	Si
SLU 77	6.92	-3353.85	-32962	-27448	-3526	3.7599	3.7599	-26072	10421	10971	40441	31525	9588	41113	No	11.66	Si
SLU 78	4.82	-7335.96	-40044	-33345	-3509	3.7599	3.7599	-31673	10833	11405	40441	31525	9588	41113	No	11.72	Si
SLU 78	6.92	-3435.91	-32906	-27402	-3467	3.7599	3.7599	-26028	10415	10965	40441	31525	9588	41113	No	11.86	Si
SLU 81	4.82	-7286.93	-39473	-32870	-3561	3.7599	3.7599	-31222	10833	11405	40441	31525	9588	41113	No	11.55	Si
SLU 81	6.92	-3468.19	-32218	-26829	-3562	3.7599	3.7599	-25483	10342	10888	40441	31525	9588	41113	No	11.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 5	4.82	-3659.76	-34396	-28642	-4715	3.7599	3.7599	-27206	15858	16695	40441	47288	9588	56876		12.06	Si
SLD 5	6.92	1510.66	-28323	-23585	-3732	3.7599	3.7599	-22403	14897	15684	40441	47288	9588	56125		15.04	Si
SLD 10	4.82	-3161.13	-31180	-25964	-4101	3.7599	3.7599	-24662	15349	16159	40441	47288	9588	56600		13.8	Si
SLD 10	6.92	2229.71	-25920	-21584	-3118	3.7599	3.7599	-20502	14517	15283	40441	47288	9588	55724		17.87	Si
SLV 1	4.82	-5263.53	-42896	-35720	-4921	3.7599	3.7599	-33929	16250	17108	40441	47288	9588	56876		11.56	Si
SLV 1	6.92	-3192.41	-34744	-28932	-4256	3.7599	3.7599	-27481	15913	16753	40441	47288	9588	56876		13.36	Si
SLD 9	4.82	-3456.71	-31455	-26193	-4676	3.7599	3.7599	-24880	15393	16205	40441	47288	9588	56646		12.12	Si
SLD 9	6.92	2683.11	-25951	-21610	-3693	3.7599	3.7599	-20527	14522	15289	40441	47288	9588	55729		15.09	Si
SLV 5	4.82	-1918.49	-43839	-36506	-7804	3.7599	3.7599	-34675	16250	17108	40441	47288	9588	56876		7.29	Si
SLV 5	6.92	6171.99	-36516	-30408	-5590	3.7599	3.7599	-28883	16193	17048	40441	47288	9588	56876		10.17	Si
SLV 13	4.82	-3681.4	-19986	-16642	-4617	3.7599	3.7599	-15808	13578	14295	40441	47288	9588	54736		11.86	Si
SLV 13	6.92	5951.55	-16270	-13548	-3955	3.7599	3.7599	-12869	12990	13676	40441	47288	9588	54117		13.68	Si
SLV 6	4.82	-1241.51	-43209	-35981	-6487	3.7599	3.7599	-34177	16250	17108	40441	47288	9588	56876		8.77	Si
SLV 6	6.92	5133.53	-36444	-30348	-4274	3.7599	3.7599	-28826	16182	17036	40441	47288	9588	56876		13.31	Si
SLV 10	4.82	-766.88	-36336	-30258	-6396	3.7599	3.7599	-28741	16165	17018	40441	47288	9588	56876		8.89	Si
SLV 10	6.92	7876.72	-30902	-25733	-4184	3.7599	3.7599	-24442	15305	16113	40441	47288	9588	56554		13.52	Si
SLV 9	4.82	-1443.85	-36966	-30782	-7713	3.7599	3.7599	-29239	16250	17108	40441	47288	9588	56876		7.37	Si
SLV 9	6.92	8915.18	-30974	-25793	-5500	3.7599	3.7599	-24499	15317	16125	40441	47288	9588	56566		10.28	Si
SLD 6	4.82	-3364.19	-34121	-28413	-4140	3.7599	3.7599	-26988	15814	16649	40441	47288	9588	56876		13.74	Si
SLD 6	6.92	1057.25	-28292	-23559	-3157	3.7599	3.7599	-22378	14892	15678	40441	47288	9588	56119		17.78	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.38	7569	-7969	382.73	1060.31	2.77	Si
SLV 11	179667	0.38	7637	-8041	382.73	1069.38	2.79	Si
SLV 16	179667	0.38	9242	-9730	382.73	1279.72	3.34	Si
SLV 15	179667	0.38	9348	-9842	382.73	1293.49	3.38	Si
SLV 8	179667	0.38	12843	-13521	382.73	1733.7	4.53	Si
SLV 7	179667	0.38	12911	-13593	382.73	1742.08	4.55	Si
SLV 14	179667	0.38	15966	-16808	382.73	2107.16	5.51	Si
SLV 13	179667	0.38	16072	-16920	382.73	2119.54	5.54	Si
SLV 4	179667	0.38	26821	-28236	382.73	3258.83	8.51	Si
SLV 3	179667	0.38	26927	-28348	382.73	3268.99	8.54	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-30801	-43839	-532	0.647	3658.4	0.958	9.81395	12.69956	No
SLV 6	-30538	-43209	-532	0.651	3631.7	0.958	9.88827	12.69956	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-27706	-36966	248	0.716	3343.8	0.954	10.91167	12.69956	No
SLV 10	-27443	-36336	248	0.722	3317.1	0.954	11.00351	12.69956	No
SLV 1	-26234	-42896	-1346	0.713	3194.3	0.952	10.88071	6.60165	Si
SLV 2	-25825	-41915	-1346	0.722	3152.8	0.952	11.03116	6.60165	Si
SLV 3	-19161	-35064	-1263	0.928	2476.8	0.941	14.34312	6.60165	Si
SLV 4	-18752	-34083	-1264	0.945	2435.4	0.94	14.61045	6.60165	Si
SLV 13	-15917	-19986	1254	1.079	2148.6	0.933	16.79731	6.60165	Si
SLV 7	-7227	-17733	-257	2.028	1278.5	0.903	32.65099	12.69956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.911	SLU 84	Si
V_SLU	11.335	SLU 83	Si
PF_SLV	1.636	SLV 12	Si
V_SLV	7.288	SLV 5	Si
PFFP_SLV	2.77	SLV 12	Si
R_SLV	0.773	SLV 5	No

Maschio 83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.713	5.826	-24.633	5.826	L5	L6	1.92	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	5.72	-1250.87	-13438	-0.0000507	0.0003743	0.0035	1.92	9733.29	11661.81	11661.81	9.32	No	Si
SLU 45	7.52	-197.19	-11996	-0.0000363	0.0003743	0.0035	1.92	8991.84	10729.72	10729.72	54.41	No	Si
SLU 46	5.72	-1246.86	-13340	-0.0000503	0.0003743	0.0035	1.92	9684.98	11598.58	11598.58	9.3	No	Si
SLU 46	7.52	-187.29	-11892	-0.0000359	0.0003743	0.0035	1.92	8935.52	10659.75	10659.75	56.91	No	Si
SLU 72	5.72	-1225.93	-14765	-0.0000547	0.0003743	0.0035	1.92	10350.7	12472.54	12472.54	10.17	No	Si
SLU 72	7.52	-411.55	-13739	-0.0000437	0.0003743	0.0035	1.92	9878.38	11852.35	11852.35	28.8	No	Si
SLU 48	5.72	-1276.56	-13841	-0.0000522	0.0003743	0.0035	1.92	9927.09	11916.54	11916.54	9.33	No	Si
SLU 48	7.52	-228.35	-12428	-0.000038	0.0003743	0.0035	1.92	9221.84	11011.2	11011.2	48.22	No	Si
SLU 51	5.72	-1262.17	-13562	-0.0000512	0.0003743	0.0035	1.92	9793.53	11740.8	11740.8	9.3	No	Si
SLU 51	7.52	-208.61	-12135	-0.0000369	0.0003743	0.0035	1.92	9066.66	10822.73	10822.73	51.88	No	Si
SLU 49	5.72	-1272.56	-13742	-0.0000519	0.0003743	0.0035	1.92	9880.18	11854.72	11854.72	9.32	No	Si
SLU 49	7.52	-218.45	-12324	-0.0000375	0.0003743	0.0035	1.92	9167.11	10945.03	10945.03	50.1	No	Si
SLU 47	5.72	-1233.81	-13094	-0.0000494	0.0003743	0.0035	1.92	9562.99	11439.4	11439.4	9.27	No	Si
SLU 47	7.52	-170.86	-11633	-0.000035	0.0003743	0.0035	1.92	8793.99	10484.01	10484.01	61.36	No	Si
SLU 43	5.72	-1214.79	-12856	-0.0000485	0.0003743	0.0035	1.92	9442.7	11285.2	11285.2	9.29	No	Si
SLU 43	7.52	-156.2	-11374	-0.0000341	0.0003743	0.0035	1.92	8649.77	10305.73	10305.73	65.98	No	Si
SLU 50	5.72	-1266.18	-13661	-0.0000516	0.0003743	0.0035	1.92	9841.07	11803.26	11803.26	9.32	No	Si
SLU 50	7.52	-218.51	-12239	-0.0000373	0.0003743	0.0035	1.92	9122.08	10891.09	10891.09	49.84	No	Si
SLU 44	5.72	-1208.12	-12692	-0.0000479	0.0003743	0.0035	1.92	9358.65	11179.57	11179.57	9.25	No	Si
SLU 44	7.52	-139.7	-11200	-0.0000334	0.0003743	0.0035	1.92	8551.91	10186.94	10186.94	72.92	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	5.72	-3125.7	-12597	-0.000064	0.0005615	0.0035	1.92		11705.7	11705.7	3.74		Si
SLV 14	7.52	2621.78	-9198	-0.0000491	0.0005615	0.0035	1.92		8248.08	8248.08	3.15		Si
SLV 12	5.72	-1542.93	661	0.0558626	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	7.52	191.15	2863	0.2251811	0.0005615	0.0035	1.536		0	0	0		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	5.72	983.75	-8846	-0.0000335	0.0005615	0.0035	1.92		7980.81	7980.81	8.11		Si
SLV 4	7.52	-2811.39	-9762	-0.0000525	0.0005615	0.0035	1.92		9541.79	9541.79	3.39		Si
SLV 7	5.72	-100.23	-321	-0.0000017	0.0005615	0.0035	1.92		1363.24	1363.24	13.6		Si
SLV 7	7.52	-1610.56	-68	-0.0007574	0.0005615	0.0035	1.536		1124.83	1124.83	0.7		No
SLV 15	5.72	-2732.66	-6203	-0.0000429	0.0005615	0.0035	1.92		6617.76	6617.76	2.42		Si
SLV 15	7.52	1983	-3440	-0.000032	0.0005615	0.0035	1.92		3372.99	3372.99	1.7		Si
SLV 13	5.72	-2777.99	-12797	-0.0000614	0.0005615	0.0035	1.92		11852.94	11852.94	4.27		Si
SLV 13	7.52	2236.3	-10295	-0.0000489	0.0005615	0.0035	1.92		9015.72	9015.72	4.03		Si
SLV 8	5.72	-323.7	-192	-0.0000613	0.0005615	0.0035	1.536		1242.38	1242.38	3.84		Si
SLV 8	7.52	-1362.81	637	0.0536926	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	5.72	-1319.46	532	0.0450597	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	7.52	-56.59	2158	0.1709093	0.0005615	0.0035	1.536		0	0	0		No
SLV 3	5.72	1331.46	-9046	-0.0000371	0.0005615	0.0035	1.92		8134.14	8134.14	6.11		Si
SLV 3	7.52	-3196.87	-10859	-0.0000593	0.0005615	0.0035	1.92		10387.3	10387.3	3.25		Si
SLV 16	5.72	-3080.37	-6002	-0.0000484	0.0005615	0.0035	1.92		6451.18	6451.18	2.09		Si
SLV 16	7.52	2368.49	-2342	-0.0010053	0.0005615	0.0035	1.92		2378.67	2378.67	1		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	5.72	-823.24	-13070	-10884	919	1.92	1.92	-20245	9644	5184	40441	16098	4896	20994	No	22.84	Si
SLU 42	7.52	-677.27	-13095	-10905	927	1.92	1.92	-20284	9649	5187	40441	16098	4896	20994	No	22.66	Si
SLU 37	5.72	-879.07	-13164	-10962	789	1.92	1.92	-20391	9663	5195	40441	16098	4896	20994	No	26.62	Si
SLU 37	7.52	-634.51	-13035	-10854	783	1.92	1.92	-20190	9636	5181	40441	16098	4896	20994	No	26.82	Si
SLU 81	5.72	-1091.44	-15416	-12837	792	1.92	1.92	-23878	10128	5445	40441	16098	4896	20994	No	26.5	Si
SLU 81	7.52	-638.55	-14969	-12464	785	1.92	1.92	-23186	10036	5395	40441	16098	4896	20994	No	26.73	Si
SLU 41	5.72	-827.24	-13169	-10966	932	1.92	1.92	-20398	9664	5195	40441	16098	4896	20994	No	22.52	Si
SLU 41	7.52	-687.17	-13199	-10991	926	1.92	1.92	-20445	9670	5199	40441	16098	4896	20994	No	22.67	Si
SLU 84	5.72	-1113.13	-15720	-13090	798	1.92	1.92	-24349	10191	5479	40441	16098	4896	20994	No	26.29	Si
SLU 84	7.52	-659.8	-15297	-12738	805	1.92	1.92	-23695	10104	5432	40441	16098	4896	20994	No	26.08	Si
SLU 83	5.72	-1117.14	-15818	-13172	811	1.92	1.92	-24502	10211	5490	40441	16098	4896	20994	No	25.87	Si
SLU 83	7.52	-669.7	-15401	-12825	805	1.92	1.92	-23856	10125	5443	40441	16098	4896	20994	No	26.1	Si
SLU 35	5.72	-889.45	-13344	-11112	793	1.92	1.92	-20670	9700	5215	40441	16098	4896	20994	No	26.47	Si
SLU 35	7.52	-644.34	-13224	-11012	787	1.92	1.92	-20483	9676	5202	40441	16098	4896	20994	No	26.66	Si
SLU 39	5.72	-801.55	-12766	-10631	913	1.92	1.92	-19775	9581	5151	40441	16098	4896	20994	No	23	Si
SLU 39	7.52	-656.02	-12767	-10631	907	1.92	1.92	-19775	9581	5151	40441	16098	4896	20994	No	23.14	Si
SLU 40	5.72	-797.54	-12668	-10549	900	1.92	1.92	-19622	9561	5140	40441	16098	4896	20994	No	23.33	Si
SLU 40	7.52	-646.12	-12663	-10544	907	1.92	1.92	-19614	9560	5139	40441	16098	4896	20994	No	23.13	Si
SLU 36	5.72	-885.45	-13246	-11030	780	1.92	1.92	-20517	9680	5204	40441	16098	4896	20994	No	26.91	Si
SLU 36	7.52	-634.44	-13120	-10925	788	1.92	1.92	-20322	9654	5190	40441	16098	4896	20994	No	26.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	5.72	36.48	-12931	-10768	2204	1.92	1.92	-20030	14423	7754	40441	24147	4896	29043		13.18	Si
SLD 1	7.52	-1421.21	-13364	-11129	1983	1.92	1.92	-20701	14557	7826	40441	24147	4896	29043		14.65	Si
SLV 15	5.72	-2732.66	-6203	-5165	-3531	1.92	1.5582	-11902	12797	5584	40441	24147	4896	29043		8.23	Si
SLV 15	7.52	1983	-3440	-2864	-3025	1.92	1.1504	-5328	11482	3698	40441	24147	4896	29043		9.6	Si
SLV 13	5.72	-2777.99	-12797	-10657	-3524	1.92	1.92	-19823	14381	7731	40441	24147	4896	29043		8.24	Si
SLV 13	7.52	2236.3	-10295	-8573	-2675	1.92	1.92	-15946	13606	7314	40441	24147	4896	29043		10.86	Si
SLD 3	5.72	57.18	-10016	-8340	2202	1.92	1.92	-15514	13520	7268	40441	24147	4896	29043		13.19	Si
SLD 3	7.52	-1533.46	-10336	-8607	1832	1.92	1.92	-16011	13619	7321	40441	24147	4896	29043		15.85	Si
SLV 16	5.72	-3080.37	-6002	-4998	-4416	1.92	1.3404	-13399	13097	4915	40441	24147	4896	29043		6.58	Si
SLV 16	7.52	2368.49	-2342	-1950	-3911	1.92	0	-117621	16250	0	40441	24147	4896	29043		7.43	Si
SLV 4	5.72	983.75	-8846	-7366	3967	1.92	1.92	-13702	13157	7073	40441	24147	4896	29043		7.32	Si
SLV 4	7.52	-2811.39	-9762	-8129	3108	1.92	1.92	-15121	13441	7226	40441	24147	4896	29043		9.34	Si
SLV 2	5.72	938.42	-15441	-12858	3974	1.92	1.92	-23917	15200	8171	40441	24147	4896	29043		7.31	Si
SLV 2	7.52	-2558.09	-16617	-13837	3459	1.92	1.92	-25740	15565	8367	40441	24147	4896	29043		8.4	Si
SLV 1	5.72	1286.13	-15641	-13024	4859	1.92	1.92	-24227	15262	8205	40441	24147	4896	29043		5.98	Si
SLV 1	7.52	-2943.57	-17714	-14751	4345	1.92	1.92	-27439	15904	8550	40441	24147	4896	29043		6.68	Si
SLV 3	5.72	1331.46	-9046	-7533	4852	1.92	1.92	-14012	13219	7106	40441	24147	4896	29043		5.99	Si
SLV 3	7.52	-3196.87	-10859	-9043	3994	1.92	1.92	-16820	13781	7408	40441	24147	4896	29043		7.27	Si
SLV 14	5.72	-3125.7	-12597	-10490	-4409	1.92	1.92	-19513	14319	7698	40441	24147	4896	29043		6.59	Si
SLV 14	7.52	2621.78	-9198	-7659	-3560	1.92	1.92	-14247	13266	7132	40441	24147	4896	29043		8.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.38	0	-311	195.44	0	0	No, e>t/2
SLV 12	179667	0.38	0	1752	195.44	0	0	No, Trazione
SLV 11	179667	0.38	0	1271	195.44	0	0	No, Trazione
SLV 8	179667	0.38	0	171	195.44	0	0	No, Trazione
SLV 16	179667	0.38	7803	-4195	195.44	557.28	2.85	Si
SLV 15	179667	0.38	9198	-4945	195.44	650.55	3.33	Si
SLV 4	179667	0.38	17611	-9467	195.44	1172.58	6	Si
SLV 3	179667	0.38	19005	-10217	195.44	1252.38	6.41	Si
SLV 14	179667	0.38	20441	-10989	195.44	1332.56	6.82	Si
SLV 13	179667	0.38	21836	-11739	195.44	1408.46	7.21	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-20334	-20424	-493	0.51	2336.6	0.966	7.67419	12.69956	No
SLV 6	-19758	-20181	-494	0.522	2278.1	0.965	7.87012	12.69956	No
SLV 9	-18948	-18321	-319	0.55	2195.6	0.964	8.29364	12.69956	No
SLV 10	-18372	-18078	-319	0.564	2137.1	0.963	8.52178	12.69956	No
SLV 1	-14772	-16351	-409	0.674	1770.9	0.956	10.24423	6.60165	Si
SLV 2	-13877	-15973	-410	0.71	1680	0.954	10.82132	6.60165	Si
SLV 13	-10151	-9343	172	0.941	1301.9	0.942	14.51253	6.60165	Si
SLV 14	-9257	-8965	171	1.014	1211.3	0.938	15.70889	6.60165	Si
SLV 3	-8481	-10700	-163	1.089	1132.9	0.935	16.93447	6.60165	Si
SLV 4	-7586	-10322	-164	1.19	1042.5	0.93	18.59551	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.254	SLU 44	Si
V_SLU	22.524	SLU 41	Si
PF_SLV	0	SLV 8	No
V_SLV	5.977	SLV 1	Si
PFFP_SLV	0	SLV 12	No
R_SLV	0.604	SLV 5	No

Maschio 84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.683	5.826	-21.813	5.826	L5	L6	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	5.72	-593.82	-14648	-0.0000427	0.0003743	0.0035	2.13	11836.9	14173.09	14173.09	23.87	No	Si
SLU 43	7.52	1317.31	-16220	-0.0000527	0.0003743	0.0035	2.13	12659.95	13927.57	13927.57	10.57	No	Si
SLU 45	5.72	-572.57	-15400	-0.0000447	0.0003743	0.0035	2.13	12241.68	14702.48	14702.48	25.68	No	Si
SLU 45	7.52	1337.83	-17064	-0.0000554	0.0003743	0.0035	2.13	13066.25	14471.98	14471.98	10.82	No	Si
SLU 50	5.72	-563.09	-15712	-0.0000455	0.0003743	0.0035	2.13	12403.56	14908.64	14908.64	26.48	No	Si
SLU 50	7.52	1347.54	-17436	-0.0000565	0.0003743	0.0035	2.13	13237.49	14714.74	14714.74	10.92	No	Si
SLU 51	5.72	-567.51	-15589	-0.0000452	0.0003743	0.0035	2.13	12340.3	14827.35	14827.35	26.13	No	Si
SLU 51	7.52	1336.41	-17326	-0.0000561	0.0003743	0.0035	2.13	13187.16	14642.5	14642.5	10.96	No	Si
SLU 47	5.72	-585.82	-14976	-0.0000436	0.0003743	0.0035	2.13	12015.65	14411.2	14411.2	24.6	No	Si
SLU 47	7.52	1313.87	-16644	-0.0000539	0.0003743	0.0035	2.13	12867.15	14199.97	14199.97	10.81	No	Si
SLU 61	5.72	-596.66	-16283	-0.0000474	0.0003743	0.0035	2.13	12691.35	15290.95	15290.95	25.63	No	Si
SLU 61	7.52	1402.26	-18430	-0.0000599	0.0003743	0.0035	2.13	13670.77	15370.55	15370.55	10.96	No	Si
SLU 44	5.72	-601.19	-14444	-0.0000422	0.0003743	0.0035	2.13	11723.55	14025.67	14025.67	23.33	No	Si
SLU 44	7.52	1298.75	-16036	-0.0000521	0.0003743	0.0035	2.13	12567.96	13809.87	13809.87	10.63	No	Si
SLU 46	5.72	-576.99	-15278	-0.0000444	0.0003743	0.0035	2.13	12177.07	14621.67	14621.67	25.34	No	Si
SLU 46	7.52	1326.7	-16954	-0.000055	0.0003743	0.0035	2.13	13014.47	14400.22	14400.22	10.85	No	Si
SLU 52	5.72	-600.08	-15674	-0.0000457	0.0003743	0.0035	2.13	12384.06	14883.48	14883.48	24.8	No	Si
SLU 52	7.52	1366.01	-17660	-0.0000573	0.0003743	0.0035	2.13	13338.12	14861.51	14861.51	10.88	No	Si
SLU 60	5.72	-592.24	-16406	-0.0000477	0.0003743	0.0035	2.13	12751.63	15373.78	15373.78	25.96	No	Si
SLU 60	7.52	1413.39	-18541	-0.0000603	0.0003743	0.0035	2.13	13716.82	15443.89	15443.89	10.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	5.72	-1475.86	-11921	-0.0000409	0.0005615	0.0035	2.13		12681.29	12681.29	8.59		Si
SLD 14	7.52	2451.02	-14981	-0.0000564	0.0005615	0.0035	2.13		13899.96	13899.96	5.67		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	5.72	-1466.63	-9662	-0.0000349	0.0005615	0.0035	2.13		10699.91	10699.91	7.3		Si
SLD 16	7.52	2300.4	-12255	-0.0000479	0.0005615	0.0035	2.13		11691.24	11691.24	5.08		Si
SLV 15	5.72	-2446.33	-6485	-0.0000336	0.0005615	0.0035	2.13		7782.4	7782.4	3.18		Si
SLV 15	7.52	3520.97	-10239	-0.0000513	0.0005615	0.0035	2.13		10093.09	10093.09	2.87		Si
SLV 16	5.72	-2834.68	-5963	-0.0000361	0.0005615	0.0035	2.13		7279.7	7279.7	2.57		Si
SLV 16	7.52	3955.43	-10001	-0.0000541	0.0005615	0.0035	2.13		9906.52	9906.52	2.5		Si
SLD 15	5.72	-1299.9	-9886	-0.0000343	0.0005615	0.0035	2.13		10900.74	10900.74	8.39		Si
SLD 15	7.52	2113.87	-12357	-0.0000468	0.0005615	0.0035	2.13		11773	11773	5.57		Si
SLV 3	5.72	1964.43	-13907	-0.0000499	0.0005615	0.0035	2.13		13023.01	13023.01	6.63		Si
SLV 3	7.52	-2160.56	-11864	-0.0000458	0.0005615	0.0035	2.13		12632.97	12632.97	5.85		Si
SLV 14	5.72	-2854.47	-11070	-0.0000487	0.0005615	0.0035	2.13		11955.4	11955.4	4.19		Si
SLV 14	7.52	4295.69	-16167	-0.0000735	0.0005615	0.0035	2.13		14878.05	14878.05	3.46		Si
SLV 12	5.72	-1198.45	-2694	-0.0000153	0.0005615	0.0035	2.13		4076.44	4076.44	3.4		Si
SLV 12	7.52	1492.31	-3419	-0.0000192	0.0005615	0.0035	2.13		3770.51	3770.51	2.53		Si
SLV 11	5.72	-948.86	-3031	-0.0000141	0.0005615	0.0035	2.13		4414.54	4414.54	4.65		Si
SLV 11	7.52	1213.08	-3572	-0.0000173	0.0005615	0.0035	2.13		3922.97	3922.97	3.23		Si
SLV 13	5.72	-2466.11	-11593	-0.0000473	0.0005615	0.0035	2.13		12401.93	12401.93	5.03		Si
SLV 13	7.52	3861.23	-16405	-0.0000709	0.0005615	0.0035	2.13		15075.53	15075.53	3.9		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	5.72	-555.03	-18090	-15064	-4326	2.13	2.13	-25258	10312	6150	40441	17859	5432	23291	No	5.38	Si
SLU 75	7.52	1457.72	-20534	-17099	-4330	2.13	2.13	-28670	10767	6422	40441	17859	5432	23291	No	5.38	Si
SLU 81	5.72	-571.4	-17988	-14979	-4386	2.13	2.13	-25115	10293	6139	40441	17859	5432	23291	No	5.31	Si
SLU 81	7.52	1477.16	-20496	-17068	-4391	2.13	2.13	-28617	10760	6417	40441	17859	5432	23291	No	5.3	Si
SLU 82	5.72	-575.81	-17865	-14877	-4391	2.13	2.13	-24944	10270	6125	40441	17859	5432	23291	No	5.3	Si
SLU 82	7.52	1466.03	-20386	-16975	-4395	2.13	2.13	-28463	10740	6405	40441	17859	5432	23291	No	5.3	Si
SLU 74	5.72	-550.61	-18213	-15166	-4321	2.13	2.13	-25429	10335	6164	40441	17859	5432	23291	No	5.39	Si
SLU 74	7.52	1468.86	-20644	-17191	-4327	2.13	2.13	-28824	10788	6434	40441	17859	5432	23291	No	5.38	Si
SLU 84	5.72	-560.45	-18397	-15320	-4439	2.13	2.13	-25687	10369	6184	40441	17859	5432	23291	No	5.25	Si
SLU 84	7.52	1481.14	-20994	-17482	-4443	2.13	2.13	-29312	10833	6461	40441	17859	5432	23291	No	5.24	Si
SLU 79	5.72	-541.14	-18525	-15426	-4359	2.13	2.13	-25865	10393	6198	40441	17859	5432	23291	No	5.34	Si
SLU 79	7.52	1478.57	-21017	-17501	-4365	2.13	2.13	-29344	10833	6461	40441	17859	5432	23291	No	5.34	Si
SLU 83	5.72	-556.03	-18520	-15422	-4434	2.13	2.13	-25858	10392	6198	40441	17859	5432	23291	No	5.25	Si
SLU 83	7.52	1492.28	-21105	-17574	-4439	2.13	2.13	-29467	10833	6461	40441	17859	5432	23291	No	5.25	Si
SLU 77	5.72	-535.25	-18745	-15609	-4369	2.13	2.13	-26172	10434	6223	40441	17859	5432	23291	No	5.33	Si
SLU 77	7.52	1483.97	-21253	-17697	-4375	2.13	2.13	-29673	10833	6461	40441	17859	5432	23291	No	5.32	Si
SLU 80	5.72	-545.56	-18402	-15324	-4365	2.13	2.13	-25693	10370	6185	40441	17859	5432	23291	No	5.34	Si
SLU 80	7.52	1467.43	-20906	-17409	-4369	2.13	2.13	-29189	10833	6461	40441	17859	5432	23291	No	5.33	Si
SLU 78	5.72	-539.67	-18622	-15507	-4374	2.13	2.13	-26001	10411	6209	40441	17859	5432	23291	No	5.32	Si
SLU 78	7.52	1472.84	-21142	-17605	-4378	2.13	2.13	-29519	10833	6461	40441	17859	5432	23291	No	5.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	5.72	-1014.81	-20056	-16701	-5985	2.13	2.13	-28003	16017	9553	40441	26789	5432	32220		5.38	Si
SLV 9	7.52	2347.29	-24124	-20089	-5822	2.13	2.13	-33683	16250	9692	40441	26789	5432	32220		5.53	Si
SLV 13	5.72	-2466.11	-11593	-9654	-8231	2.13	2.13	-16187	13654	8143	40441	26789	5432	32220		3.91	Si
SLV 13	7.52	3861.23	-16405	-13660	-7573	2.13	2.13	-22904	14998	8945	40441	26789	5432	32220		4.25	Si
SLV 16	5.72	-2834.68	-5963	-4965	-7899	2.13	1.7688	-10071	12431	6157	40441	26789	5432	32220		4.08	Si
SLV 16	7.52	3955.43	-10001	-8328	-7219	2.13	2.0085	-13964	13209	7429	40441	26789	5432	32220		4.46	Si
SLD 14	5.72	-1475.86	-11921	-9926	-5561	2.13	2.13	-16644	13745	8198	40441	26789	5432	32220		5.79	Si
SLD 14	7.52	2451.02	-14981	-12475	-5283	2.13	2.13	-20917	14600	8708	40441	26789	5432	32220		6.1	Si
SLD 13	5.72	-1309.12	-12145	-10113	-5288	2.13	2.13	-16957	13808	8235	40441	26789	5432	32220		6.09	Si
SLD 13	7.52	2264.49	-15083	-12560	-5010	2.13	2.13	-21059	14629	8725	40441	26789	5432	32220		6.43	Si
SLV 10	5.72	-1264.4	-19720	-16421	-6394	2.13	2.13	-27534	15923	9497	40441	26789	5432	32220		5.04	Si
SLV 10	7.52	2626.51	-23971	-19961	-6231	2.13	2.13	-33469	16250	9692	40441	26789	5432	32220		5.17	Si
SLD 15	5.72	-1299.9	-9886	-8232	-4862	2.13	2.13	-13803	13177	7859	40441	26789	5432	32220		6.63	Si
SLD 15	7.52	2113.87	-12357	-10290	-4575	2.13	2.13	-17253	13867	8271	40441	26789	5432	32220		7.04	Si
SLV 15	5.72	-2446.33	-6485	-5401	-7263	2.13	2.0634	-9387	12294	7103	40441	26789	5432	32220		4.44	Si
SLV 15	7.52	3520.97	-10239	-8526	-6584	2.13	2.13	-14296	13276	7918	40441	26789	5432	32220		4.89	Si
SLV 14	5.72	-2854.47	-11070	-9218	-8867	2.13	2.13	-15456	13508	8056	40441	26789	5432	32220		3.63	Si
SLV 14	7.52	4295.69	-16167	-13462	-8208	2.13	2.13	-22572	14931	8905	40441	26789	5432	32220		3.93	Si
SLD 16	5.72	-1466.63	-9662	-8045	-5135	2.13	2.13	-13490	13115	7822	40441	26789	5432	32220		6.27	Si
SLD 16	7.52	2300.4	-12255	-10205	-4848	2.13	2.13	-17111	13839	8254	40441	26789	5432	32220		6.65	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.38	5846	-3487	216.82	469.47	2.17	Si
SLV 11	179667	0.38	6222	-3711	216.82	498.38	2.3	Si
SLV 8	179667	0.38	7527	-4489	216.82	597.53	2.76	Si
SLV 7	179667	0.38	7903	-4714	216.82	625.74	2.89	Si
SLV 16	179667	0.38	15244	-9091	216.82	1145.76	5.28	Si
SLV 15	179667	0.38	15829	-9440	216.82	1184.66	5.46	Si
SLV 4	179667	0.38	20847	-12433	216.82	1503.03	6.93	Si
SLV 3	179667	0.38	21432	-12782	216.82	1538.35	7.1	Si
SLV 14	179667	0.38	25069	-14951	216.82	1749.59	8.07	Si
SLV 13	179667	0.38	25654	-15300	216.82	1782.2	8.22	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-21785	-17382	-463	0.529	2513.6	0.965	7.96652	12.69956	No
SLV 6	-21477	-17329	-463	0.535	2482.3	0.964	8.06706	12.69956	No
SLV 9	-20411	-16013	-565	0.554	2373.8	0.963	8.36841	12.69956	No
SLV 10	-20103	-15961	-565	0.562	2342.5	0.962	8.48122	12.69956	No
SLV 1	-17191	-14908	21	0.67	2046.3	0.957	10.16653	6.60165	Si
SLV 2	-16712	-14827	21	0.686	1997.6	0.956	10.42309	6.60165	Si
SLV 13	-12611	-10346	-317	0.848	1581.1	0.946	13.02542	6.60165	Si
SLV 14	-12132	-10265	-317	0.876	1532.5	0.945	13.47059	6.60165	Si
SLV 3	-11805	-11407	335	0.894	1499.4	0.944	13.77269	6.60165	Si
SLV 4	-11326	-11326	335	0.925	1450.9	0.942	14.27416	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.573	SLU 43	Si
V_SLU	5.242	SLU 84	Si
PF_SLV	2.505	SLV 16	Si
V_SLV	3.634	SLV 14	Si
PFFP_SLV	2.165	SLV 12	Si
R_SLV	0.627	SLV 5	No

Maschio 86

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L5	L6	4.82	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	4.82	3308.36	-42703	-0.000081	0.0004492	0.0035	4.82	56276.14	84833.43	84833.43	25.64	No	Si
SLU 50	8.34	932.68	-25229	-0.0000441	0.0004492	0.0035	4.82	44523.36	54665.48	54665.48	58.61	No	Si
SLU 57	4.82	3478.56	-47124	-0.0000899	0.0004492	0.0035	4.82	56774.18	90783.1	90783.1	26.1	No	Si
SLU 57	8.34	656.16	-27835	-0.000048	0.0004492	0.0035	4.82	47266.65	59186.32	59186.32	90.2	No	Si
SLU 71	4.82	3493.3	-47108	-0.0000899	0.0004492	0.0035	4.82	56774.18	90761.4	90761.4	25.98	No	Si
SLU 71	8.34	896.34	-27943	-0.0000487	0.0004492	0.0035	4.82	47372.57	59373.19	59373.19	66.24	No	Si
SLU 48	4.82	3303.07	-43177	-0.0000819	0.0004492	0.0035	4.82	56377.43	85471.61	85471.61	25.88	No	Si
SLU 48	8.34	896.66	-25626	-0.0000447	0.0004492	0.0035	4.82	44963.27	55353.51	55353.51	61.73	No	Si
SLU 59	4.82	3483.85	-46650	-0.000089	0.0004492	0.0035	4.82	56768.63	90144.91	90144.91	25.88	No	Si
SLU 59	8.34	692.18	-27438	-0.0000474	0.0004492	0.0035	4.82	46871.55	58498.28	58498.28	84.51	No	Si
SLU 51	4.82	3278.36	-42713	-0.000081	0.0004492	0.0035	4.82	56278.46	84847.25	84847.25	25.88	No	Si
SLU 51	8.34	826.21	-25195	-0.0000438	0.0004492	0.0035	4.82	44485.19	54606.37	54606.37	66.09	No	Si
SLU 58	4.82	3513.84	-46639	-0.000089	0.0004492	0.0035	4.82	56768.38	90131.1	90131.1	25.65	No	Si
SLU 58	8.34	798.64	-27472	-0.0000477	0.0004492	0.0035	4.82	46905.81	58557.39	58557.39	73.32	No	Si
SLU 62	4.82	3495.91	-47465	-0.0000905	0.0004492	0.0035	4.82	56771.06	91241.76	91241.76	26.1	No	Si
SLU 62	8.34	571.32	-27696	-0.0000476	0.0004492	0.0035	4.82	47129.41	58945.74	58945.74	103.18	No	Si
SLU 79	4.82	3698.78	-51044	-0.000098	0.0004492	0.0035	4.82	56379.39	96059.07	96059.07	25.97	No	Si
SLU 79	8.34	762.31	-30186	-0.0000524	0.0004492	0.0035	4.82	49443.71	63265.11	63265.11	82.99	No	Si
SLU 56	4.82	3508.55	-47114	-0.0000899	0.0004492	0.0035	4.82	56774.18	90769.28	90769.28	25.87	No	Si
SLU 56	8.34	762.62	-27869	-0.0000483	0.0004492	0.0035	4.82	47300.22	59245.43	59245.43	77.69	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	4.82	12308.11	-40018	-0.0000939	0.0006738	0.0035	4.82		82731.77	82731.77	6.72		Si
SLV 9	8.34	9666.98	-22279	-0.0000568	0.0006738	0.0035	4.82		51122.83	51122.83	5.29		Si
SLD 5	4.82	6892.46	-38175	-0.0000787	0.0006738	0.0035	4.82		79501.39	79501.39	11.53		Si
SLD 5	8.34	4886.82	-22729	-0.0000475	0.0006738	0.0035	4.82		52023	52023	10.65		Si
SLV 11	4.82	-7270.45	-27803	-0.0000613	0.0006738	0.0035	4.82		72489.76	72489.76	9.97		Si
SLV 11	8.34	-9296.91	-15222	-0.000044	0.0006738	0.0035	4.82		47350.82	47350.82	5.09		Si
SLV 7	4.82	-7184.81	-29938	-0.0000648	0.0006738	0.0035	4.82		76501.91	76501.91	10.65		Si
SLV 7	8.34	-8381.68	-18663	-0.0000479	0.0006738	0.0035	4.82		54454.37	54454.37	6.5		Si
SLV 16	4.82	-567.75	-29818	-0.0000505	0.0006738	0.0035	4.82		76283.37	76283.37	134.36		Si
SLV 16	8.34	-4353.09	-13505	-0.0000309	0.0006738	0.0035	4.82		43690.97	43690.97	10.04		Si
SLV 6	4.82	12354.71	-42332	-0.0000982	0.0006738	0.0035	4.82		86788.53	86788.53	7.02		Si
SLV 6	8.34	10092.56	-25587	-0.0000635	0.0006738	0.0035	4.82		57430.88	57430.88	5.69		Si
SLV 5	4.82	12393.75	-42152	-0.000098	0.0006738	0.0035	4.82		86473.62	86473.62	6.98		Si
SLV 5	8.34	10582.21	-25720	-0.0000647	0.0006738	0.0035	4.82		57664.91	57664.91	5.45		Si
SLV 10	4.82	12269.07	-40197	-0.0000941	0.0006738	0.0035	4.82		83046.68	83046.68	6.77		Si
SLV 10	8.34	9177.33	-22145	-0.0000556	0.0006738	0.0035	4.82		50855.24	50855.24	5.54		Si
SLV 12	4.82	-7309.48	-27983	-0.0000617	0.0006738	0.0035	4.82		72836.27	72836.27	9.96		Si
SLV 12	8.34	-9786.56	-15088	-0.0000448	0.0006738	0.0035	4.82		47066.15	47066.15	4.81		Si
SLV 8	4.82	-7223.84	-30117	-0.0000652	0.0006738	0.0035	4.82		76830.16	76830.16	10.64		Si
SLV 8	8.34	-8871.33	-18530	-0.0000487	0.0006738	0.0035	4.82		54183.27	54183.27	6.11		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	4.82	3278.36	-42713	-25079	-3419	4.82	4.82	-32520	10833	8355	115546	27715	24582	52297	No	15.3	Si
SLU 51	8.34	826.21	-25195	-14794	-3427	4.82	4.82	-19182	10833	8355	115546	27715	24582	52297	No	15.26	Si
SLU 69	4.82	3488.01	-47582	-27938	-3424	4.82	4.82	-36227	10833	8355	115546	27715	24582	52297	No	15.27	Si
SLU 69	8.34	860.32	-28339	-16639	-3506	4.82	4.82	-21576	10833	8355	115546	27715	24582	52297	No	14.91	Si
SLU 70	4.82	3458.01	-47592	-27944	-3438	4.82	4.82	-36235	10833	8355	115546	27715	24582	52297	No	15.21	Si
SLU 70	8.34	753.86	-28305	-16619	-3456	4.82	4.82	-21550	10833	8355	115546	27715	24582	52297	No	15.13	Si
SLU 66	4.82	3382	-46720	-27432	-3292	4.82	4.82	-35571	10833	8355	115546	27715	24582	52297	No	15.89	Si
SLU 66	8.34	690.44	-27602	-16206	-3373	4.82	4.82	-21015	10833	8355	115546	27715	24582	52297	No	15.5	Si
SLU 71	4.82	3493.3	-47108	-27660	-3444	4.82	4.82	-35866	10833	8355	115546	27715	24582	52297	No	15.19	Si
SLU 71	8.34	896.34	-27943	-16407	-3525	4.82	4.82	-21274	10833	8355	115546	27715	24582	52297	No	14.83	Si
SLU 68	4.82	3337.29	-46263	-27164	-3335	4.82	4.82	-35223	10833	8355	115546	27715	24582	52297	No	15.68	Si
SLU 68	8.34	549.02	-27148	-15940	-3308	4.82	4.82	-20669	10833	8355	115546	27715	24582	52297	No	15.81	Si
SLU 48	4.82	3303.07	-43177	-25352	-3385	4.82	4.82	-32873	10833	8355	115546	27715	24582	52297	No	15.45	Si
SLU 48	8.34	896.66	-25626	-15046	-3459	4.82	4.82	-19510	10833	8355	115546	27715	24582	52297	No	15.12	Si
SLU 72	4.82	3463.3	-47118	-27666	-3458	4.82	4.82	-35873	10833	8355	115546	27715	24582	52297	No	15.12	Si
SLU 72	8.34	789.88	-27908	-16387	-3475	4.82	4.82	-21248	10833	8355	115546	27715	24582	52297	No	15.05	Si
SLU 49	4.82	3273.07	-43187	-25358	-3399	4.82	4.82	-32881	10833	8355	115546	27715	24582	52297	No	15.39	Si
SLU 49	8.34	790.19	-25592	-15026	-3409	4.82	4.82	-19484	10833	8355	115546	27715	24582	52297	No	15.34	Si
SLU 50	4.82	3308.36	-42703	-25073	-3404	4.82	4.82	-32512	10833	8355	115546	27715	24582	52297	No	15.36	Si
SLU 50	8.34	932.68	-25229	-14814	-3478	4.82	4.82	-19208	10833	8355	115546	27715	24582	52297	No	15.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	4.82	12393.75	-42152	-24750	-6271	4.82	4.82	-32093	16250	12532	115546	41573	24582	66155		10.55	Si
SLV 5	8.34	10582.21	-25720	-15102	-2306	4.82	4.82	-19582	16250	12532	115546	41573	24582	66155		28.69	Si
SLV 16	4.82	-567.75	-29818	-17508	-6778	4.82	4.82	-22702	16250	12532	115546	41573	24582	66155		9.76	Si
SLV 16	8.34	-4353.09	-13505	-7930	-7960	4.82	4.82	-10282	14556	11226	115546	41573	24582	66155		8.31	Si
SLV 9	4.82	12308.11	-40018	-23497	-9915	4.82	4.82	-30468	16250	12532	115546	41573	24582	66155		6.67	Si
SLV 9	8.34	9666.98	-22279	-13081	-5892	4.82	4.82	-16962	15892	12256	115546	41573	24582	66155		11.23	Si
SLV 14	4.82	5305.81	-33482	-19659	-10225	4.82	4.82	-25492	16250	12532	115546	41573	24582	66155		6.47	Si
SLV 14	8.34	1336.08	-15623	-9173	-8974	4.82	4.82	-11894	14879	11475	115546	41573	24582	66155		7.37	Si
SLV 13	4.82	5366.55	-33203	-19495	-10127	4.82	4.82	-25279	16250	12532	115546	41573	24582	66155		6.53	Si
SLV 13	8.34	2097.97	-15830	-9295	-8876	4.82	4.82	-12052	14910	11499	115546	41573	24582	66155		7.45	Si
SLV 6	4.82	12354.71	-42332	-24855	-6334	4.82	4.82	-32229	16250	12532	115546	41573	24582	66155		10.44	Si
SLV 6	8.34	10092.56	-25587	-15023	-2369	4.82	4.82	-19481	16250	12532	115546	41573	24582	66155		27.93	Si
SLV 15	4.82	-507.02	-29538	-17344	-6680	4.82	4.82	-22489	16250	12532	115546	41573	24582	66155		9.9	Si
SLV 15	8.34	-3591.2	-13713	-8052	-7862	4.82	4.82	-10441	14588	11250	115546	41573	24582	66155		8.41	Si
SLD 13	4.82	3791.71	-34300	-20140	-5711	4.82	4.82	-26115	16250	12532	115546	41573	24582	66155		11.58	Si
SLD 13	8.34	1163.06	-18465	-10842	-5195	4.82	4.82	-14058	15312	11808	115546	41573	24582	66155		12.74	Si
SLD 14	4.82	3765.63	-34420	-20210	-5753	4.82	4.82	-26206	16250	12532	115546	41573	24582	66155		11.5	Si
SLD 14	8.34	835.96	-18376	-10789	-5237	4.82	4.82	-13990	15298	11798	115546	41573	24582	66155		12.63	Si
SLV 10	4.82	12269.07	-40197	-23602	-9978	4.82	4.82	-30604	16250	12532	115546	41573	24582	66155		6.63	Si
SLV 10	8.34	9177.33	-22145	-13003	-5955	4.82	4.82	-16860	15872	12241	115546	41573	24582	66155		11.11	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-18574	0.38	296.66	1290.67	2114.51	1702.59	5.74	Si
SLV 15	-18603	0.38	296.66	1292.37	2117.16	1704.77	5.75	Si
SLV 12	-20549	0.38	296.66	1404.92	2295.81	1850.37	6.24	Si
SLV 11	-20567	0.38	296.66	1405.97	2297.52	1851.75	6.24	Si
SLV 14	-21053	0.38	296.66	1433.39	2342.14	1887.77	6.36	Si
SLV 13	-21082	0.38	296.66	1435.01	2344.77	1889.89	6.37	Si
SLV 8	-24716	0.38	296.66	1631.54	2675.92	2153.73	7.26	Si
SLV 7	-24735	0.38	296.66	1632.5	2677.62	2155.06	7.26	Si
SLV 10	-28812	0.38	296.66	1835.13	3041.71	2438.42	8.22	Si
SLV 9	-28831	0.38	296.66	1836.01	3043.36	2439.69	8.22	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-25720	-42152	-163	0.98	3001.1	0.962	14.81018	16.48959	No
SLV 6	-25587	-42332	-163	0.985	2987.5	0.962	14.88147	16.48959	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-22279	-40018	198	1.112	2651	0.957	16.88228	16.48959	Si
SLV 10	-22145	-40197	198	1.118	2637.5	0.957	16.9756	16.48959	Si
SLV 1	-27303	-40317	-597	0.915	3162.1	0.964	13.79476	11.6797	Si
SLV 2	-27095	-40596	-597	0.921	3141	0.963	13.8925	11.6797	Si
SLV 7	-18663	-29938	-198	1.299	2283.7	0.951	19.84082	16.48959	Si
SLV 8	-18530	-30117	-198	1.307	2270.1	0.951	19.97019	16.48959	Si
SLV 3	-25186	-36653	-607	0.983	2946.7	0.961	14.85717	11.6797	Si
SLV 4	-24978	-36932	-607	0.99	2925.6	0.961	14.97098	11.6797	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	25.642	SLU 50	Si
V_SLU	14.835	SLU 71	Si
PF_SLV	4.809	SLV 12	Si
V_SLV	6.47	SLV 14	Si
PFFP_SLV	5.739	SLV 16	Si
R_SLV	0.898	SLV 5	No

Maschio 88

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	1.006	-15.033	6.526	L5	L6	5.52	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	4.82	-15161.63	-37184	-0.0000807	0.0004492	0.0035	5.52	67265.84	103926.19	103926.19	6.85	No	Si
SLU 73	8.34	-3434.27	-27191	-0.0000451	0.0004492	0.0035	5.52	56137.49	83569.7	83569.7	24.33	No	Si
SLU 41	4.82	-14256.54	-32791	-0.000072	0.0004492	0.0035	5.52	63003.12	95176.61	95176.61	6.68	No	Si
SLU 41	8.34	-3198.71	-24434	-0.0000405	0.0004492	0.0035	5.52	52168.15	77718.69	77718.69	24.3	No	Si
SLU 74	4.82	-15562.17	-38402	-0.0000834	0.0004492	0.0035	5.52	68273.31	106196.84	106196.84	6.82	No	Si
SLU 74	8.34	-3321.92	-28497	-0.0000469	0.0004492	0.0035	5.52	57882.3	86341.74	86341.74	25.99	No	Si
SLU 40	4.82	-14205.65	-31940	-0.0000705	0.0004492	0.0035	5.52	62062.94	93480.2	93480.2	6.58	No	Si
SLU 40	8.34	-3393.32	-23512	-0.0000395	0.0004492	0.0035	5.52	50754.51	75681.57	75681.57	22.3	No	Si
SLU 83	4.82	-16191.63	-39185	-0.0000858	0.0004492	0.0035	5.52	68880.12	107654.71	107654.71	6.65	No	Si
SLU 83	8.34	-3474.94	-28987	-0.0000479	0.0004492	0.0035	5.52	58514.96	87382.68	87382.68	25.15	No	Si
SLU 84	4.82	-16034.11	-39234	-0.0000856	0.0004492	0.0035	5.52	68917.66	107747.43	107747.43	6.72	No	Si
SLU 84	8.34	-3539.7	-28991	-0.0000048	0.0004492	0.0035	5.52	58519.85	87390.8	87390.8	24.69	No	Si
SLU 81	4.82	-16298.27	-38284	-0.0000844	0.0004492	0.0035	5.52	68178.5	105975.64	105975.64	6.5	No	Si
SLU 81	8.34	-3604.78	-28062	-0.0000467	0.0004492	0.0035	5.52	57310.95	85418.61	85418.61	23.7	No	Si
SLU 82	4.82	-16140.74	-38333	-0.0000843	0.0004492	0.0035	5.52	68218.33	106068.36	106068.36	6.57	No	Si
SLU 82	8.34	-3669.54	-28066	-0.0000468	0.0004492	0.0035	5.52	57316.01	85426.73	85426.73	23.28	No	Si
SLU 39	4.82	-14363.18	-31890	-0.0000707	0.0004492	0.0035	5.52	62006.84	93381.05	93381.05	6.5	No	Si
SLU 39	8.34	-3328.55	-23508	-0.0000393	0.0004492	0.0035	5.52	50748.55	75672.96	75672.96	22.73	No	Si
SLU 42	4.82	-14099.02	-32841	-0.0000718	0.0004492	0.0035	5.52	63056.93	95275.77	95275.77	6.76	No	Si
SLU 42	8.34	-3263.48	-24437	-0.0000406	0.0004492	0.0035	5.52	52173.92	77726.8	77726.8	23.82	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	4.82	-18018.68	-22817	-0.0000613	0.0006738	0.0035	5.52		75302.54	75302.54	4.18		Si
SLV 12	8.34	-17217.06	-11807	-0.0000478	0.0006738	0.0035	5.52		48919.59	48919.59	2.84		Si
SLV 2	4.82	-24173.31	-15827	-0.0000685	0.0006738	0.0035	5.52		58722.7	58722.7	2.43		Si
SLV 2	8.34	-637.79	-15855	-0.0000235	0.0006738	0.0035	5.52		58789.69	58789.69	92.18		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	4.82	-29006.28	-14839	-0.0000988	0.0006738	0.0035	4.416		56313.49	56313.49	1.94		Si
SLV 8	8.34	-19164.83	-7939	-0.0001037	0.0006738	0.0035	4.416		39160.53	39160.53	2.04		Si
SLV 4	4.82	-32242.72	-11116	-0.0003127	0.0006738	0.0035	4.416		47196.05	47196.05	1.46		Si
SLV 4	8.34	-10255.25	-10131	-0.0000303	0.0006738	0.0035	5.52		44717.21	44717.21	4.36		Si
SLD 3	4.82	-20158.59	-19718	-0.0000603	0.0006738	0.0035	5.52		68112.79	68112.79	3.38		Si
SLD 3	8.34	-5563.41	-15316	-0.0000304	0.0006738	0.0035	5.52		57475.27	57475.27	10.33		Si
SLV 1	4.82	-25114.28	-15342	-0.0000729	0.0006738	0.0035	4.416		57538.01	57538.01	2.29		Si
SLV 1	8.34	-422.91	-15710	-0.0000229	0.0006738	0.0035	5.52		58435.55	58435.55	138.17		Si
SLV 7	4.82	-29611.03	-14527	-0.0001077	0.0006738	0.0035	4.416		55552.11	55552.11	1.88		Si
SLV 7	8.34	-19026.73	-7846	-0.0001045	0.0006738	0.0035	4.416		38922.55	38922.55	2.05		Si
SLV 11	4.82	-18623.43	-22504	-0.0000618	0.0006738	0.0035	5.52		74577.97	74577.97	4		Si
SLV 11	8.34	-17078.97	-11714	-0.0000474	0.0006738	0.0035	5.52		48691.99	48691.99	2.85		Si
SLD 4	4.82	-19754.6	-19927	-0.0000599	0.0006738	0.0035	5.52		68596.81	68596.81	3.47		Si
SLD 4	8.34	-5655.67	-15378	-0.0000307	0.0006738	0.0035	5.52		57627.31	57627.31	10.19		Si
SLV 3	4.82	-33183.69	-10630	-0.0003729	0.0006738	0.0035	4.416		45973.72	45973.72	1.39		Si
SLV 3	8.34	-10040.37	-9985	-0.0000297	0.0006738	0.0035	5.52		44351.82	44351.82	4.42		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 66	4.82	-13522.6	-35643	-20928	-2038	5.52	5.52	-23695	10833	9568	115546	31740	28152	59892	No	29.39	Si
SLU 66	8.34	-2672.2	-26449	-15530	-2083	5.52	5.52	-17584	10678	9431	115546	31740	28152	59892	No	28.76	Si
SLU 64	4.82	-13384.59	-34341	-20164	-1989	5.52	5.52	-22830	10833	9568	115546	31740	28152	59892	No	30.1	Si
SLU 64	8.34	-2676.61	-25137	-14759	-2033	5.52	5.52	-16711	10561	9328	115546	31740	28152	59892	No	29.46	Si
SLU 71	4.82	-13171.32	-36143	-21222	-2040	5.52	5.52	-24028	10833	9568	115546	31740	28152	59892	No	29.36	Si
SLU 71	8.34	-2416.93	-26988	-15846	-2085	5.52	5.52	-17941	10726	9473	115546	31740	28152	59892	No	28.72	Si
SLU 72	4.82	-13013.8	-36193	-21251	-1941	5.52	5.52	-24061	10833	9568	115546	31740	28152	59892	No	30.86	Si
SLU 72	8.34	-2481.69	-26991	-15848	-1986	5.52	5.52	-17944	10726	9473	115546	31740	28152	59892	No	30.16	Si
SLU 74	4.82	-15562.17	-38402	-22548	-1871	5.52	5.52	-25530	10833	9568	115546	31740	28152	59892	No	32.01	Si
SLU 74	8.34	-3321.92	-28497	-16732	-1924	5.52	5.52	-18945	10833	9568	115546	31740	28152	59892	No	31.14	Si
SLU 69	4.82	-13415.96	-36544	-21457	-2063	5.52	5.52	-24294	10833	9568	115546	31740	28152	59892	No	29.03	Si
SLU 69	8.34	-2542.36	-27375	-16073	-2109	5.52	5.52	-18199	10760	9503	115546	31740	28152	59892	No	28.4	Si
SLU 67	4.82	-13365.08	-35693	-20957	-1939	5.52	5.52	-23729	10833	9568	115546	31740	28152	59892	No	30.89	Si
SLU 67	8.34	-2736.97	-26453	-15532	-1983	5.52	5.52	-17586	10678	9431	115546	31740	28152	59892	No	30.2	Si
SLU 70	4.82	-13258.44	-36593	-21486	-1964	5.52	5.52	-24328	10833	9568	115546	31740	28152	59892	No	30.49	Si
SLU 70	8.34	-2607.12	-27378	-16075	-2010	5.52	5.52	-18201	10760	9503	115546	31740	28152	59892	No	29.8	Si
SLU 77	4.82	-15455.54	-39303	-23077	-1897	5.52	5.52	-26129	10833	9568	115546	31740	28152	59892	No	31.58	Si
SLU 77	8.34	-3192.08	-29422	-17276	-1950	5.52	5.52	-19560	10833	9568	115546	31740	28152	59892	No	30.72	Si
SLU 79	4.82	-15210.89	-38903	-22842	-1873	5.52	5.52	-25863	10833	9568	115546	31740	28152	59892	No	31.97	Si
SLU 79	8.34	-3066.65	-29035	-17048	-1926	5.52	5.52	-19303	10833	9568	115546	31740	28152	59892	No	31.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	4.82	-33183.69	-10630	-6241	-10338	4.416	0	0	0	0	115546	38088	22522	60610		5.86	Si
SLV 3	8.34	-10040.37	-9985	-5863	-10701	5.52	5.2635	-6983	13897	11703	115546	47610	28152	75762		7.08	Si
SLV 6	4.82	-2108.24	-30544	-17934	-8563	5.52	5.52	-20306	16250	14352	115546	47610	28152	75762		8.85	Si
SLV 6	8.34	12893.35	-27020	-15865	-6718	5.52	5.52	-17963	16093	14213	115546	47610	28152	75762		11.28	Si
SLV 13	4.82	11511.04	-41933	-24621	6883	5.52	5.52	-27877	16250	14352	115546	47610	28152	75762		11.01	Si
SLV 13	8.34	6069.63	-28603	-16794	7177	5.52	5.52	-19015	16250	14352	115546	47610	28152	75762		10.56	Si
SLV 15	4.82	3441.63	-37221	-21855	9493	5.52	5.52	-24745	16250	14352	115546	47610	28152	75762		7.98	Si
SLV 15	8.34	-3547.82	-22879	-13433	8698	5.52	5.52	-15210	15542	13727	115546	47610	28152	75762		8.71	Si
SLV 5	4.82	-2712.99	-30232	-17751	-8946	5.52	5.52	-20098	16250	14352	115546	47610	28152	75762		8.47	Si
SLV 5	8.34	13031.45	-26927	-15810	-7101	5.52	5.52	-17901	16080	14202	115546	47610	28152	75762		10.67	Si
SLV 4	4.82	-32242.72	-11116	-6527	-9743	4.416	0	0	0	0	115546	38088	22522	60610		6.22	Si
SLV 4	8.34	-10255.25	-10131	-5948	-10106	5.52	5.2431	-7113	13923	11680	115546	47610	28152	75762		7.5	Si
SLV 16	4.82	4382.61	-37707	-22140	10088	5.52	5.52	-25068	16250	14352	115546	47610	28152	75762		7.51	Si
SLV 16	8.34	-3762.7	-23024	-13519	9293	5.52	5.52	-15306	15561	13744	115546	47610	28152	75762		8.15	Si
SLV 2	4.82	-24173.31	-15827	-9293	-12353	5.52	3.6981	-15797	15661	9267	115546	47610	28152	75762		6.13	Si
SLV 2	8.34	-637.79	-15855	-9309	-11627	5.52	5.52	-10540	14608	12902	115546	47610	28152	75762		6.52	Si
SLV 1	4.82	-25114.28	-15342	-9008	-12948	4.416	3.369	0	0	0	115546	38088	22522	60610		4.68	Si
SLV 1	8.34	-422.91	-15710	-9224	-12222	5.52	5.52	-10444	14589	12885	115546	47610	28152	75762		6.2	Si
SLV 14	4.82	12452.02	-42419	-24906	7479	5.52	5.52	-28200	16250	14352	115546	47610	28152	75762		10.13	Si
SLV 14	8.34	5854.76	-28748	-16880	7772	5.52	5.52	-19112	16250	14352	115546	47610	28152	75762		9.75	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-12115	0.38	339.75	896.66	1571.42	1234.04	3.63	Si
SLV 8	-12304	0.38	339.75	909.47	1589.33	1249.4	3.68	Si
SLV 3	-13993	0.38	339.75	1022.64	1749.32	1385.98	4.08	Si
SLV 4	-14286	0.38	339.75	1042.02	1777.14	1409.58	4.15	Si
SLV 11	-16142	0.38	339.75	1162.57	1951.53	1557.05	4.58	Si
SLV 12	-16330	0.38	339.75	1174.64	1969.22	1571.93	4.63	Si
SLV 1	-19674	0.38	339.75	1382.6	2277.81	1830.21	5.39	Si
SLV 2	-19967	0.38	339.75	1400.33	2304.63	1852.48	5.45	Si
SLV 15	-27415	0.38	339.75	1821.78	2985.34	2403.56	7.07	Si
SLV 16	-27709	0.38	339.75	1837.26	3012.1	2424.68	7.14	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-30888	-38522	283	0.937	3582.6	0.963	14.13111	16.48959	No
SLV 9	-30794	-38209	283	0.939	3573.1	0.963	14.17073	16.48959	No
SLV 6	-27020	-30544	-279	1.055	3189.2	0.959	15.98961	16.48959	No
SLV 5	-26927	-30232	-279	1.059	3179.7	0.959	16.04059	16.48959	No
SLV 14	-28748	-42419	934	0.978	3364.9	0.961	14.78802	11.6797	Si
SLV 13	-28603	-41933	934	0.982	3350.2	0.961	14.85723	11.6797	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-23024	-37707	930	1.19	2783	0.954	18.12899	11.6797	Si
SLV 15	-22879	-37221	930	1.197	2768.2	0.954	18.23374	11.6797	Si
SLV 12	-11807	-22817	270	2.132	1646.5	0.928	33.37833	16.48959	Si
SLV 11	-11714	-22504	270	2.145	1637.1	0.928	33.60257	16.48959	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.501	SLU 39	Si
V_SLU	28.402	SLU 69	Si
PF_SLV	1.385	SLV 3	Si
V_SLV	4.681	SLV 1	Si
PFFP_SLV	3.632	SLV 7	Si
R_SLV	0.857	SLV 10	No

Maschio 89

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.385	-13.778	-0.354	Z medio 569 cm	L6	3.031	0.28	2.649	1.777	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	6.56	2961.29	-28836	-0.0000658	0.0003743	0.0035	3.0314	29122.08	33552.23	33552.23	11.33	No	Si
SLU 60	8.34	1137.85	-23883	-0.0000485	0.0003743	0.0035	3.0314	26194.54	28963.3	28963.3	25.45	No	Si
SLU 63	6.56	2966.68	-29488	-0.0000673	0.0003743	0.0035	3.0314	29443.16	34175.87	34175.87	11.52	No	Si
SLU 63	8.34	1082.49	-24510	-0.0000496	0.0003743	0.0035	3.0314	26612.81	29530.18	29530.18	27.28	No	Si
SLU 61	6.56	2946.6	-28845	-0.0000658	0.0003743	0.0035	3.0314	29126.6	33560.79	33560.79	11.39	No	Si
SLU 61	8.34	1105.85	-23892	-0.0000484	0.0003743	0.0035	3.0314	26200.86	28971.7	28971.7	26.2	No	Si
SLU 81	6.56	3084.21	-31803	-0.0000727	0.0003743	0.0035	3.0314	30463.28	36011.94	36011.94	11.68	No	Si
SLU 81	8.34	1267.13	-26410	-0.0000541	0.0003743	0.0035	3.0314	27795.37	31273.97	31273.97	24.68	No	Si
SLU 20	6.56	2535.33	-24460	-0.0000551	0.0003743	0.0035	3.0314	26579.78	29484.55	29484.55	11.63	No	Si
SLU 20	8.34	1080.18	-20451	-0.0000415	0.0003743	0.0035	3.0314	23661.83	25937.22	25937.22	24.01	No	Si
SLU 62	6.56	2981.37	-29479	-0.0000673	0.0003743	0.0035	3.0314	29438.83	34167.23	34167.23	11.46	No	Si
SLU 62	8.34	1114.49	-24501	-0.0000497	0.0003743	0.0035	3.0314	26606.69	29521.71	29521.71	26.49	No	Si
SLU 18	6.56	2515.25	-23817	-0.0000537	0.0003743	0.0035	3.0314	26149.87	28904.11	28904.11	11.49	No	Si
SLU 18	8.34	1103.54	-19834	-0.0000404	0.0003743	0.0035	3.0314	23161.91	25405.57	25405.57	23.02	No	Si
SLU 19	6.56	2500.56	-23826	-0.0000536	0.0003743	0.0035	3.0314	26155.97	28912.18	28912.18	11.56	No	Si
SLU 19	8.34	1071.54	-19843	-0.0000403	0.0003743	0.0035	3.0314	23169.56	25413.57	25413.57	23.72	No	Si
SLU 83	6.56	3104.29	-32446	-0.0000742	0.0003743	0.0035	3.0314	30713.16	36393.23	36393.23	11.72	No	Si
SLU 83	8.34	1243.76	-27027	-0.0000553	0.0003743	0.0035	3.0314	28152.75	31847.42	31847.42	25.61	No	Si
SLU 21	6.56	2520.63	-24469	-0.000055	0.0003743	0.0035	3.0314	26585.68	29492.7	29492.7	11.7	No	Si
SLU 21	8.34	1048.18	-20461	-0.0000414	0.0003743	0.0035	3.0314	23669.28	25945.28	25945.28	24.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	6.56	3930.06	-20730	-0.0000515	0.0005615	0.0035	3.0314		27473.42	27473.42	6.99		Si
SLV 10	8.34	3450.16	-17328	-0.0000433	0.0005615	0.0035	3.0314		23627.45	23627.45	6.85		Si
SLV 9	6.56	3993.13	-20660	-0.0000516	0.0005615	0.0035	3.0314		27393.6	27393.6	6.86		Si
SLV 9	8.34	3458.2	-17290	-0.0000432	0.0005615	0.0035	3.0314		23585.35	23585.35	6.82		Si
SLV 12	6.56	445.72	-22792	-0.0000427	0.0005615	0.0035	3.0314		29845.88	29845.88	66.96		Si
SLV 12	8.34	-2642.33	-19131	-0.0000438	0.0005615	0.0035	3.0314		28254.75	28254.75	10.69		Si
SLV 13	6.56	3676.46	-21404	-0.0000518	0.0005615	0.0035	3.0314		28245.91	28245.91	7.68		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	8.34	1189.49	-18877	-0.000038	0.0005615	0.0035	3.0314		25367.71	25367.71	21.33		Si
SLD 10	6.56	2758.8	-21273	-0.0000482	0.0005615	0.0035	3.0314		28095.42	28095.42	10.18		Si
SLD 10	8.34	1781.45	-17581	-0.0000378	0.0005615	0.0035	3.0314		23910.95	23910.95	13.42		Si
SLD 9	6.56	2786.34	-21242	-0.0000483	0.0005615	0.0035	3.0314		28060.45	28060.45	10.07		Si
SLD 9	8.34	1784.96	-17565	-0.0000377	0.0005615	0.0035	3.0314		23892.54	23892.54	13.39		Si
SLV 5	6.56	3234.28	-20624	-0.0000487	0.0005615	0.0035	3.0314		27352.49	27352.49	8.46		Si
SLV 5	8.34	3576.99	-16463	-0.0000421	0.0005615	0.0035	3.0314		22662.73	22662.73	6.34		Si
SLV 14	6.56	3578.33	-21513	-0.0000517	0.0005615	0.0035	3.0314		28370.68	28370.68	7.93		Si
SLV 14	8.34	1176.97	-18935	-0.0000381	0.0005615	0.0035	3.0314		25433.9	25433.9	21.61		Si
SLV 11	6.56	508.78	-22722	-0.0000428	0.0005615	0.0035	3.0314		29765.01	29765.01	58.5		Si
SLV 11	8.34	-2634.28	-19093	-0.0000437	0.0005615	0.0035	3.0314		28211.23	28211.23	10.71		Si
SLV 6	6.56	3171.21	-20694	-0.0000486	0.0005615	0.0035	3.0314		27432.29	27432.29	8.65		Si
SLV 6	8.34	3568.95	-16500	-0.0000422	0.0005615	0.0035	3.0314		22704.6	22704.6	6.36		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 55	6.56	2690.49	-28385	-23637	3347	3.0314	3.0314	-27848	10657	9046	28547	25416	7730	33146	No	9.9	Si
SLU 55	8.34	808.72	-23482	-19554	2638	3.0314	3.0314	-23037	10016	8501	28547	25416	7730	33146	No	12.57	Si
SLU 49	6.56	2127.94	-26873	-22377	3319	3.0314	3.0314	-26364	10460	8878	28547	25416	7730	33146	No	9.99	Si
SLU 49	8.34	268.8	-22102	-18404	2964	3.0314	3.0314	-21683	9836	8348	28547	25416	7730	33146	No	11.18	Si
SLU 57	6.56	2749.52	-29460	-24532	3328	3.0314	3.0314	-28902	10798	9165	28547	25416	7730	33146	No	9.96	Si
SLU 57	8.34	857.8	-24515	-20414	2612	3.0314	3.0314	-24051	10151	8616	28547	25416	7730	33146	No	12.69	Si
SLU 47	6.56	2068.92	-25798	-21482	3338	3.0314	3.0314	-25309	10319	8759	28547	25416	7730	33146	No	9.93	Si
SLU 47	8.34	219.72	-21068	-17544	2990	3.0314	3.0314	-20669	9700	8233	28547	25416	7730	33146	No	11.09	Si
SLU 56	6.56	2764.21	-29451	-24524	3287	3.0314	3.0314	-28894	10797	9164	28547	25416	7730	33146	No	10.08	Si
SLU 56	8.34	889.8	-24506	-20406	2572	3.0314	3.0314	-24042	10150	8615	28547	25416	7730	33146	No	12.88	Si
SLU 59	6.56	2720.36	-29022	-24167	3388	3.0314	3.0314	-28472	10741	9117	28547	25416	7730	33146	No	9.78	Si
SLU 59	8.34	806.7	-24093	-20063	2670	3.0314	3.0314	-23637	10096	8569	28547	25416	7730	33146	No	12.41	Si
SLU 51	6.56	2098.79	-26434	-22012	3379	3.0314	3.0314	-25934	10402	8829	28547	25416	7730	33146	No	9.81	Si
SLU 51	8.34	217.69	-21680	-18053	3022	3.0314	3.0314	-21269	9780	8301	28547	25416	7730	33146	No	10.97	Si
SLU 50	6.56	2113.48	-26425	-22005	3338	3.0314	3.0314	-25925	10401	8828	28547	25416	7730	33146	No	9.93	Si
SLU 50	8.34	249.7	-21670	-18045	2982	3.0314	3.0314	-21260	9779	8300	28547	25416	7730	33146	No	11.12	Si
SLU 58	6.56	2735.06	-29013	-24159	3347	3.0314	3.0314	-28464	10740	9116	28547	25416	7730	33146	No	9.9	Si
SLU 58	8.34	838.7	-24084	-20055	2630	3.0314	3.0314	-23628	10095	8568	28547	25416	7730	33146	No	12.6	Si
SLU 63	6.56	2966.68	-29488	-24555	3323	3.0314	3.0314	-28930	10802	9168	28547	25416	7730	33146	No	9.97	Si
SLU 63	8.34	1082.49	-24510	-20410	2461	3.0314	3.0314	-24046	10151	8616	28547	25416	7730	33146	No	13.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 7	6.56	921.2	-22143	-18438	3652	3.0314	3.0314	-21723	14761	12529	28547	38125	7730	41076		11.25	Si
SLD 7	8.34	-846.79	-18012	-14999	2692	3.0314	3.0314	-17671	13951	11841	28547	38125	7730	40388		15	Si
SLV 12	6.56	445.72	-22792	-18979	5246	3.0314	3.0314	-22360	14889	12637	28547	38125	7730	41184		7.85	Si
SLV 12	8.34	-2642.33	-19131	-15931	3296	3.0314	3.0314	-18769	14170	12028	28547	38125	7730	40574		12.31	Si
SLD 8	6.56	893.66	-22173	-18464	3632	3.0314	3.0314	-21753	14767	12534	28547	38125	7730	41081		11.31	Si
SLD 8	8.34	-850.3	-18029	-15013	2689	3.0314	3.0314	-17688	13954	11844	28547	38125	7730	40391		15.02	Si
SLV 11	6.56	508.78	-22722	-18921	5291	3.0314	3.0314	-22292	14875	12626	28547	38125	7730	41172		7.78	Si
SLV 11	8.34	-2634.28	-19093	-15899	3303	3.0314	3.0314	-18732	14163	12021	28547	38125	7730	40568		12.28	Si
SLV 3	6.56	101.67	-21903	-18239	3334	3.0314	3.0314	-21488	14714	12489	28547	38125	7730	41036		12.31	Si
SLV 3	8.34	-242.31	-16659	-13872	3010	3.0314	3.0314	-16343	13685	11616	28547	38125	7730	40162		13.34	Si
SLD 11	6.56	1244.81	-22157	-18450	3636	3.0314	3.0314	-21737	14764	12532	28547	38125	7730	41078		11.3	Si
SLD 11	8.34	-898.58	-18365	-15292	2542	3.0314	3.0314	-18017	14020	11900	28547	38125	7730	40447		15.91	Si
SLD 12	6.56	1217.27	-22187	-18476	3617	3.0314	3.0314	-21767	14770	12537	28547	38125	7730	41083		11.36	Si
SLD 12	8.34	-902.09	-18381	-15306	2539	3.0314	3.0314	-18033	14023	11903	28547	38125	7730	40449		15.93	Si
SLV 4	6.56	3.54	-22011	-18329	3264	3.0314	3.0314	-21595	14736	12507	28547	38125	7730	41054		12.58	Si
SLV 4	8.34	-254.82	-16717	-13921	2999	3.0314	3.0314	-16401	13697	11626	28547	38125	7730	40172		13.39	Si
SLV 8	6.56	-313.13	-22756	-18949	5286	3.0314	3.0314	-22325	14882	12631	28547	38125	7730	41178		7.79	Si
SLV 8	8.34	-2523.54	-18303	-15242	3651	3.0314	3.0314	-17957	14008	11890	28547	38125	7730	40436		11.08	Si
SLV 7	6.56	-250.06	-22686	-18891	5331	3.0314	3.0314	-22256	14868	12620	28547	38125	7730	41166		7.72	Si
SLV 7	8.34	-2515.5	-18266	-15210	3658	3.0314	3.0314	-17920	14001	11884	28547	38125	7730	40430		11.05	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.451 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.4	21640	-18368	187.3	2207.09	11.78	Si
SLV 6	179667	0.4	21721	-18437	187.3	2214.02	11.82	Si
SLV 9	179667	0.4	21962	-18641	187.3	2234.39	11.93	Si
SLV 10	179667	0.4	22043	-18710	187.3	2241.29	11.97	Si
SLV 1	179667	0.4	22518	-19113	187.3	2281.22	12.18	Si
SLV 2	179667	0.4	22644	-19220	187.3	2291.84	12.24	Si
SLV 13	179667	0.4	23590	-20022	187.3	2370.15	12.65	Si
SLV 3	179667	0.4	23611	-20041	187.3	2371.9	12.66	Si
SLV 14	179667	0.4	23716	-20130	187.3	2380.55	12.71	Si
SLV 4	179667	0.4	23738	-20148	187.3	2382.29	12.72	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.451 Wa = 0.05 Ta = 0.0418

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-19131	-22792	617	0.834	2264.7	0.959	12.63933	7.16333	Si
SLV 11	-19093	-22722	618	0.835	2260.9	0.958	12.66115	7.16333	Si
SLV 8	-18303	-22756	-48	0.893	2180.6	0.957	13.56634	7.16333	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-18266	-22686	-48	0.895	2176.7	0.957	13.59113	7.16333	Si
SLV 10	-17328	-20730	78	0.934	2081.4	0.955	14.21321	7.16333	Si
SLV 9	-17290	-20660	79	0.936	2077.6	0.955	14.24031	7.16333	Si
SLV 6	-16500	-20694	-587	0.946	1997.3	0.954	14.4196	7.16333	Si
SLV 5	-16463	-20624	-587	0.948	1993.5	0.954	14.44868	7.16333	Si
SLV 16	-19476	-22131	1205	0.794	2299.8	0.959	12.02766	4.97364	Si
SLV 15	-19417	-22023	1206	0.796	2293.8	0.959	12.05934	4.97364	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.33	SLU 60	Si
V_SLU	9.784	SLU 59	Si
PF_SLV	6.336	SLV 5	Si
V_SLV	7.721	SLV 7	Si
PFFP_SLV	11.784	SLV 5	Si
R_SLV	1.764	SLV 12	Si

Maschio 90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L5	L6	2.105	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	5.72	3312.37	-22211	-0.0000886	0.0003743	0.0035	2.105	14724.1	17369.81	17369.81	5.24	No	Si
SLU 84	7.52	340.93	-19546	-0.0000555	0.0003743	0.0035	2.105	13871.05	15896.99	15896.99	46.63	No	Si
SLU 81	5.72	3309.06	-21988	-0.0000878	0.0003743	0.0035	2.105	14662.27	17275.4	17275.4	5.22	No	Si
SLU 81	7.52	307.19	-19323	-0.0000546	0.0003743	0.0035	2.105	13788.37	15747.46	15747.46	51.26	No	Si
SLU 78	5.72	3269.72	-21874	-0.0000871	0.0003743	0.0035	2.105	14629.99	17227.28	17227.28	5.27	No	Si
SLU 78	7.52	340.11	-19209	-0.0000545	0.0003743	0.0035	2.105	13745.43	15671.24	15671.24	46.08	No	Si
SLU 43	5.72	2658.24	-16610	-0.0000655	0.0003743	0.0035	2.105	12642.81	13969.79	13969.79	5.26	No	Si
SLU 43	7.52	84.41	-13973	-0.0000375	0.0003743	0.0035	2.105	11281.75	12317.09	12317.09	145.93	No	Si
SLU 45	5.72	2728.29	-17207	-0.0000679	0.0003743	0.0035	2.105	12916.89	14353.98	14353.98	5.26	No	Si
SLU 45	7.52	120.72	-14569	-0.0000394	0.0003743	0.0035	2.105	11611.03	12684.38	12684.38	105.08	No	Si
SLU 74	5.72	3266.41	-21651	-0.0000863	0.0003743	0.0035	2.105	14565.52	17133.49	17133.49	5.25	No	Si
SLU 74	7.52	306.36	-18986	-0.0000536	0.0003743	0.0035	2.105	13660.12	15522.6	15522.6	50.67	No	Si
SLU 83	5.72	3326.47	-22206	-0.0000887	0.0003743	0.0035	2.105	14722.67	17367.6	17367.6	5.22	No	Si
SLU 83	7.52	342.61	-19541	-0.0000555	0.0003743	0.0035	2.105	13869.13	15893.48	15893.48	46.39	No	Si
SLU 64	5.72	2933.39	-18876	-0.0000747	0.0003743	0.0035	2.105	13617.32	15449.37	15449.37	5.27	No	Si
SLU 64	7.52	183.39	-16211	-0.0000446	0.0003743	0.0035	2.105	12452.49	13715.12	13715.12	74.78	No	Si
SLU 82	5.72	3294.96	-21993	-0.0000877	0.0003743	0.0035	2.105	14663.74	17277.6	17277.6	5.24	No	Si
SLU 82	7.52	305.51	-19328	-0.0000546	0.0003743	0.0035	2.105	13790.33	15750.95	15750.95	51.56	No	Si
SLU 77	5.72	3283.82	-21869	-0.0000872	0.0003743	0.0035	2.105	14628.5	17225.08	17225.08	5.25	No	Si
SLU 77	7.52	341.78	-19204	-0.0000545	0.0003743	0.0035	2.105	13743.46	15667.76	15667.76	45.84	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	5.72	3135.99	-12299	-0.0000551	0.0005615	0.0035	2.105		11561.78	11561.78	3.69		Si
SLD 16	7.52	-1268.78	-10022	-0.000035	0.0005615	0.0035	2.105		10887.73	10887.73	8.58		Si
SLV 15	5.72	4111.32	-9308	-0.0000553	0.0005615	0.0035	2.105		9220.7	9220.7	2.24		Si
SLV 15	7.52	-2838.45	-6722	-0.0000382	0.0005615	0.0035	2.105		7908.46	7908.46	2.79		Si
SLV 13	5.72	4482.88	-8902	-0.000059	0.0005615	0.0035	2.105		8890.39	8890.39	1.98		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	7.52	-3162.83	-6596	-0.0000413	0.0005615	0.0035	2.105		7794.33	7794.33	2.46		Si
SLD 13	5.72	3218.8	-12187	-0.0000554	0.0005615	0.0035	2.105		11472.66	11472.66	3.56		Si
SLD 13	7.52	-1270.33	-10033	-0.000035	0.0005615	0.0035	2.105		10896.84	10896.84	8.58		Si
SLV 10	5.72	3584.89	-12238	-0.0000583	0.0005615	0.0035	2.105		11513.03	11513.03	3.21		Si
SLV 10	7.52	-1492	-10540	-0.000038	0.0005615	0.0035	2.105		11346.91	11346.91	7.61		Si
SLV 14	5.72	4666.88	-8757	-0.0000614	0.0005615	0.0035	2.105		8763.24	8763.24	1.88		Si
SLV 14	7.52	-3485.36	-6451	-0.0000453	0.0005615	0.0035	2.105		7658.66	7658.66	2.2		Si
SLV 9	5.72	3466.64	-12331	-0.0000576	0.0005615	0.0035	2.105		11587.16	11587.16	3.34		Si
SLV 9	7.52	-1284.71	-10634	-0.0000367	0.0005615	0.0035	2.105		11428.61	11428.61	8.9		Si
SLD 14	5.72	3297.8	-12124	-0.0000558	0.0005615	0.0035	2.105		11423.2	11423.2	3.46		Si
SLD 14	7.52	-1408.8	-9970	-0.0000358	0.0005615	0.0035	2.105		10841.4	10841.4	7.7		Si
SLV 16	5.72	4295.33	-9162	-0.000057	0.0005615	0.0035	2.105		9108.67	9108.67	2.12		Si
SLV 16	7.52	-3160.98	-6576	-0.0000413	0.0005615	0.0035	2.105		7776.26	7776.26	2.46		Si
SLD 15	5.72	3057	-12361	-0.0000546	0.0005615	0.0035	2.105		11611.32	11611.32	3.8		Si
SLD 15	7.52	-1130.31	-10085	-0.0000341	0.0005615	0.0035	2.105		10943.2	10943.2	9.68		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	5.72	3172.86	-21063	-17539	1655	2.105	2.105	-29758	10833	6385	40441	17649	5368	23017	No	13.91	Si
SLU 73	7.52	267.26	-18398	-15320	1655	2.105	2.105	-25993	10410	6136	40441	17649	5368	23017	No	13.91	Si
SLU 82	5.72	3294.96	-21993	-18314	1701	2.105	2.105	-31073	10833	6385	40441	17649	5368	23017	No	13.53	Si
SLU 82	7.52	305.51	-19328	-16095	1701	2.105	2.105	-27307	10585	6239	40441	17649	5368	23017	No	13.53	Si
SLU 81	5.72	3309.06	-21988	-18310	1708	2.105	2.105	-31065	10833	6385	40441	17649	5368	23017	No	13.47	Si
SLU 81	7.52	307.19	-19323	-16090	1708	2.105	2.105	-27300	10584	6238	40441	17649	5368	23017	No	13.47	Si
SLU 78	5.72	3269.72	-21874	-18215	1668	2.105	2.105	-30904	10833	6385	40441	17649	5368	23017	No	13.8	Si
SLU 78	7.52	340.11	-19209	-15996	1668	2.105	2.105	-27139	10563	6226	40441	17649	5368	23017	No	13.8	Si
SLU 84	5.72	3312.37	-22211	-18495	1691	2.105	2.105	-31380	10833	6385	40441	17649	5368	23017	No	13.61	Si
SLU 84	7.52	340.93	-19546	-16276	1691	2.105	2.105	-27615	10626	6263	40441	17649	5368	23017	No	13.61	Si
SLU 75	5.72	3252.31	-21656	-18033	1678	2.105	2.105	-30596	10833	6385	40441	17649	5368	23017	No	13.72	Si
SLU 75	7.52	304.69	-18991	-15814	1678	2.105	2.105	-26831	10522	6202	40441	17649	5368	23017	No	13.72	Si
SLU 83	5.72	3326.47	-22206	-18491	1698	2.105	2.105	-31373	10833	6385	40441	17649	5368	23017	No	13.55	Si
SLU 83	7.52	342.61	-19541	-16272	1698	2.105	2.105	-27608	10625	6263	40441	17649	5368	23017	No	13.55	Si
SLU 79	5.72	3231.18	-21490	-17895	1646	2.105	2.105	-30361	10833	6385	40441	17649	5368	23017	No	13.98	Si
SLU 79	7.52	340.89	-18825	-15676	1646	2.105	2.105	-26596	10491	6183	40441	17649	5368	23017	No	13.98	Si
SLU 74	5.72	3266.41	-21651	-18029	1685	2.105	2.105	-30589	10833	6385	40441	17649	5368	23017	No	13.66	Si
SLU 74	7.52	306.36	-18986	-15810	1685	2.105	2.105	-26824	10521	6201	40441	17649	5368	23017	No	13.66	Si
SLU 77	5.72	3283.82	-21869	-18210	1675	2.105	2.105	-30897	10833	6385	40441	17649	5368	23017	No	13.74	Si
SLU 77	7.52	341.78	-19204	-15991	1675	2.105	2.105	-27132	10562	6225	40441	17649	5368	23017	No	13.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	5.72	4482.88	-8902	-7413	4343	2.105	1.6467	-12577	12932	5963	40441	26474	5368	31841		7.33	Si
SLV 13	7.52	-3162.83	-6596	-5493	3944	2.105	1.719	-11472	12711	6118	40441	26474	5368	31841		8.07	Si
SLD 13	5.72	3218.8	-12187	-10148	2551	2.105	2.105	-17218	13860	8169	40441	26474	5368	31841		12.48	Si
SLD 13	7.52	-1270.33	-10033	-8354	2381	2.105	2.105	-14174	13252	7810	40441	26474	5368	31841		13.38	Si
SLV 15	5.72	4111.32	-9308	-7751	4063	2.105	1.8323	-13150	13047	6694	40441	26474	5368	31841		7.84	Si
SLV 15	7.52	-2838.45	-6722	-5597	3708	2.105	1.8906	-10614	12539	6638	40441	26474	5368	31841		8.59	Si
SLV 16	5.72	4295.33	-9162	-7630	4345	2.105	1.7511	-12945	13006	6377	40441	26474	5368	31841		7.33	Si
SLV 16	7.52	-3160.98	-6576	-5476	3990	2.105	1.7155	-11460	12709	6105	40441	26474	5368	31841		7.98	Si
SLD 16	5.72	3135.99	-12299	-10242	2552	2.105	2.105	-17376	13892	8188	40441	26474	5368	31841		12.48	Si
SLD 16	7.52	-1268.78	-10022	-8346	2400	2.105	2.105	-14160	13249	7809	40441	26474	5368	31841		13.27	Si
SLV 14	5.72	4666.88	-8757	-7292	4624	2.105	1.5586	-12372	12891	5626	40441	26474	5368	31841		6.89	Si
SLV 14	7.52	-3485.36	-6451	-5372	4225	2.105	1.5366	-12557	12928	5562	40441	26474	5368	31841		7.54	Si
SLV 10	5.72	3584.89	-12238	-10190	2708	2.105	2.105	-17290	13875	8178	40441	26474	5368	31841		11.76	Si
SLV 10	7.52	-1492	-10540	-8777	2522	2.105	2.105	-14892	13395	7895	40441	26474	5368	31841		12.62	Si
SLD 14	5.72	3297.8	-12124	-10096	2672	2.105	2.105	-17130	13843	8159	40441	26474	5368	31841		11.92	Si
SLD 14	7.52	-1408.8	-9970	-8302	2501	2.105	2.105	-14086	13234	7800	40441	26474	5368	31841		12.73	Si
SLD 15	5.72	3057	-12361	-10294	2431	2.105	2.105	-17465	13910	8198	40441	26474	5368	31841		13.1	Si
SLD 15	7.52	-1130.31	-10085	-8398	2279	2.105	2.105	-14248	13266	7819	40441	26474	5368	31841		13.97	Si
SLV 9	5.72	3466.64	-12331	-10268	2527	2.105	2.105	-17422	13901	8193	40441	26474	5368	31841		12.6	Si
SLV 9	7.52	-1284.71	-10634	-8855	2342	2.105	2.105	-15024	13421	7911	40441	26474	5368	31841		13.6	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.38	11800	-6955	214.27	898.47	4.19	Si
SLV 13	179667	0.38	12047	-7100	214.27	915.63	4.27	Si
SLV 16	179667	0.38	12332	-7269	214.27	935.43	4.37	Si
SLV 15	179667	0.38	12579	-7414	214.27	952.45	4.45	Si
SLV 10	179667	0.38	18709	-11027	214.27	1354.66	6.32	Si
SLV 9	179667	0.38	18868	-11120	214.27	1364.52	6.37	Si
SLV 12	179667	0.38	20482	-12072	214.27	1463.44	6.83	Si
SLV 11	179667	0.38	20641	-12166	214.27	1472.99	6.87	Si
SLV 6	179667	0.38	25125	-14809	214.27	1732.13	8.08	Si
SLV 5	179667	0.38	25284	-14902	214.27	1740.88	8.12	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-12739	-13955	595	0.814	1590.6	0.947	12.48401	12.69956	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-12688	-14203	595	0.816	1585.4	0.947	12.52812	12.69956	No
SLV 8	-11927	-16310	-760	0.847	1508.3	0.945	13.03333	12.69956	Si
SLV 7	-11876	-16558	-760	0.85	1503	0.945	13.08204	12.69956	Si
SLV 10	-10381	-9243	749	0.95	1351.6	0.939	14.69841	12.69956	Si
SLV 9	-10329	-9491	749	0.954	1346.3	0.939	14.76109	12.69956	Si
SLV 12	-9569	-11598	-605	1.027	1269.4	0.936	15.94893	12.69956	Si
SLV 11	-9518	-11846	-605	1.032	1264.2	0.936	16.02186	12.69956	Si
SLV 4	-14977	-20915	-466	0.718	1817.8	0.953	10.95602	6.60165	Si
SLV 3	-14897	-21301	-466	0.722	1809.7	0.953	11.0075	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.221	SLU 81	Si
V_SLU	13.473	SLU 81	Si
PF_SLV	1.878	SLV 14	Si
V_SLV	6.886	SLV 14	Si
PFFP_SLV	4.193	SLV 14	Si
R_SLV	0.983	SLV 6	No

Maschio 91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	5.72	3623.75	-57309	-0.0000955	0.0003743	0.0035	3.98	56439.62	74812.1	74812.1	20.64	No	Si
SLU 82	7.52	-3037.73	-52311	-0.0000852	0.0003743	0.0035	3.98	56103.13	73082.66	73082.66	24.06	No	Si
SLU 76	5.72	3533.67	-55600	-0.0000922	0.0003743	0.0035	3.98	56423.13	73537.82	73537.82	20.81	No	Si
SLU 76	7.52	-2777.38	-50602	-0.0000816	0.0003743	0.0035	3.98	55787.04	72062.43	72062.43	25.95	No	Si
SLU 63	5.72	3407.05	-52126	-0.0000857	0.0003743	0.0035	3.98	56073.86	70539.42	70539.42	20.7	No	Si
SLU 63	7.52	-2675.5	-47181	-0.0000755	0.0003743	0.0035	3.98	54846.43	69674.82	69674.82	26.04	No	Si
SLU 81	5.72	3590.94	-57380	-0.0000955	0.0003743	0.0035	3.98	56438.06	74837.73	74837.73	20.84	No	Si
SLU 81	7.52	-3037.22	-52383	-0.0000853	0.0003743	0.0035	3.98	56114.19	73126.4	73126.4	24.08	No	Si
SLU 83	5.72	3611.49	-58104	-0.0000969	0.0003743	0.0035	3.98	56412.35	75096.89	75096.89	20.79	No	Si
SLU 83	7.52	-2939.98	-53106	-0.0000863	0.0003743	0.0035	3.98	56215.32	73569.86	73569.86	25.02	No	Si
SLU 55	5.72	3296.42	-49693	-0.0000813	0.0003743	0.0035	3.98	55577.29	68453.76	68453.76	20.77	No	Si
SLU 55	7.52	-2512.39	-44748	-0.0000711	0.0003743	0.0035	3.98	53927.89	67577.64	67577.64	26.9	No	Si
SLU 61	5.72	3386.5	-51402	-0.0000844	0.0003743	0.0035	3.98	55947.84	69913.9	69913.9	20.64	No	Si
SLU 61	7.52	-2772.74	-46457	-0.0000745	0.0003743	0.0035	3.98	54594.89	69072.8	69072.8	24.91	No	Si
SLU 84	5.72	3644.29	-58032	-0.0000968	0.0003743	0.0035	3.98	56415.73	75071	75071	20.6	No	Si
SLU 84	7.52	-2940.49	-53035	-0.0000862	0.0003743	0.0035	3.98	56206.09	73525.48	73525.48	25	No	Si
SLU 73	5.72	3513.12	-54876	-0.0000908	0.0003743	0.0035	3.98	56385.28	72954.97	72954.97	20.77	No	Si
SLU 73	7.52	-2874.62	-49878	-0.0000806	0.0003743	0.0035	3.98	55622.35	71641.34	71641.34	24.92	No	Si
SLU 52	5.72	3275.88	-48970	-0.00008	0.0003743	0.0035	3.98	55389.53	67842.86	67842.86	20.71	No	Si
SLU 52	7.52	-2609.63	-44025	-0.0000701	0.0003743	0.0035	3.98	53614.62	66906.86	66906.86	25.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	5.72	9787.33	-32563	-0.0000658	0.0005615	0.0035	3.98		55534.96	55534.96	5.67		Si
SLD 16	7.52	-8423.2	-28913	-0.0000575	0.0005615	0.0035	3.98		54685.2	54685.2	6.49		Si
SLD 14	5.72	10244.11	-32984	-0.0000674	0.0005615	0.0035	3.98		56189.26	56189.26	5.49		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	7.52	-9000.23	-29289	-0.0000592	0.0005615	0.0035	3.98		55262.39	55262.39	6.14		Si
SLV 15	5.72	18455.29	-25590	-0.0000742	0.0005615	0.0035	3.98		44878.61	44878.61	2.43		Si
SLV 15	7.52	-15679.01	-22185	-0.0000631	0.0005615	0.0035	3.98		44212.42	44212.42	2.82		Si
SLV 4	5.72	-14580.25	-50088	-0.0001037	0.0005615	0.0035	3.98		82592.83	82592.83	5.66		Si
SLV 4	7.52	13080.94	-45934	-0.0000936	0.0005615	0.0035	3.98		72908.78	72908.78	5.57		Si
SLV 14	5.72	20659.23	-25820	-0.0000802	0.0005615	0.0035	3.98		45225.42	45225.42	2.19		Si
SLV 14	7.52	-18414.08	-22310	-0.0000703	0.0005615	0.0035	3.98		44410.82	44410.82	2.41		Si
SLV 3	5.72	-15741.76	-50812	-0.0001076	0.0005615	0.0035	3.98		83411.7	83411.7	5.3		Si
SLV 3	7.52	14478.16	-46657	-0.000098	0.0005615	0.0035	3.98		73775.8	73775.8	5.1		Si
SLV 16	5.72	19616.8	-24866	-0.0000763	0.0005615	0.0035	3.98		43793.29	43793.29	2.23		Si
SLV 16	7.52	-17076.23	-21461	-0.0000656	0.0005615	0.0035	3.98		43062.83	43062.83	2.52		Si
SLV 1	5.72	-14699.33	-51767	-0.0001067	0.0005615	0.0035	3.98		84497.91	84497.91	5.75		Si
SLV 1	7.52	13140.32	-47506	-0.0000963	0.0005615	0.0035	3.98		74795.51	74795.51	5.69		Si
SLV 13	5.72	19497.72	-26544	-0.000078	0.0005615	0.0035	3.98		46315.82	46315.82	2.38		Si
SLV 13	7.52	-17016.85	-23033	-0.0000674	0.0005615	0.0035	3.98		45567.42	45567.42	2.68		Si
SLD 13	5.72	9745.44	-33295	-0.0000668	0.0005615	0.0035	3.98		56673.37	56673.37	5.82		Si
SLD 13	7.52	-8400.36	-29599	-0.0000584	0.0005615	0.0035	3.98		55711.57	55711.57	6.63		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	5.72	3524.73	-56564	-47101	3505	3.98	3.98	-42266	10833	12073	40441	33370	10149	43519	No	12.42	Si
SLU 74	7.52	-2846.37	-51566	-42940	3505	3.98	3.98	-38532	10833	12073	40441	33370	10149	43519	No	12.42	Si
SLU 81	5.72	3590.94	-57380	-47782	3647	3.98	3.98	-42876	10833	12073	40441	33370	10149	43519	No	11.93	Si
SLU 81	7.52	-3037.22	-52383	-43620	3647	3.98	3.98	-39142	10833	12073	40441	33370	10149	43519	No	11.93	Si
SLU 73	5.72	3513.12	-54876	-45696	3514	3.98	3.98	-41005	10833	12073	40441	33370	10149	43519	No	12.38	Si
SLU 73	7.52	-2874.62	-49878	-41534	3514	3.98	3.98	-37271	10833	12073	40441	33370	10149	43519	No	12.38	Si
SLU 78	5.72	3578.08	-57215	-47644	3481	3.98	3.98	-42753	10833	12073	40441	33370	10149	43519	No	12.5	Si
SLU 78	7.52	-2749.63	-52218	-43482	3481	3.98	3.98	-39019	10833	12073	40441	33370	10149	43519	No	12.5	Si
SLU 77	5.72	3545.28	-57287	-47704	3462	3.98	3.98	-42807	10833	12073	40441	33370	10149	43519	No	12.57	Si
SLU 77	7.52	-2749.13	-52290	-43542	3462	3.98	3.98	-39072	10833	12073	40441	33370	10149	43519	No	12.57	Si
SLU 84	5.72	3644.29	-58032	-48324	3623	3.98	3.98	-43363	10833	12073	40441	33370	10149	43519	No	12.01	Si
SLU 84	7.52	-2940.49	-53035	-44163	3623	3.98	3.98	-39629	10833	12073	40441	33370	10149	43519	No	12.01	Si
SLU 82	5.72	3623.75	-57309	-47722	3666	3.98	3.98	-42823	10833	12073	40441	33370	10149	43519	No	11.87	Si
SLU 82	7.52	-3037.73	-52311	-43560	3666	3.98	3.98	-39088	10833	12073	40441	33370	10149	43519	No	11.87	Si
SLU 83	5.72	3611.49	-58104	-48384	3605	3.98	3.98	-43417	10833	12073	40441	33370	10149	43519	No	12.07	Si
SLU 83	7.52	-2939.98	-53106	-44222	3605	3.98	3.98	-39683	10833	12073	40441	33370	10149	43519	No	12.07	Si
SLU 76	5.72	3533.67	-55600	-46299	3471	3.98	3.98	-41546	10833	12073	40441	33370	10149	43519	No	12.54	Si
SLU 76	7.52	-2777.38	-50602	-42137	3471	3.98	3.98	-37811	10833	12073	40441	33370	10149	43519	No	12.54	Si
SLU 75	5.72	3557.53	-56492	-47041	3523	3.98	3.98	-42212	10833	12073	40441	33370	10149	43519	No	12.35	Si
SLU 75	7.52	-2846.88	-51494	-42880	3523	3.98	3.98	-38478	10833	12073	40441	33370	10149	43519	No	12.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	5.72	-15741.76	-50812	-42312	-16995	3.98	3.98	-37968	16250	18109	40441	50055	10149	58550		3.45	Si
SLV 3	7.52	14478.16	-46657	-38852	-16289	3.98	3.98	-34864	16250	18109	40441	50055	10149	58550		3.59	Si
SLV 1	5.72	-14699.33	-51767	-43107	-15552	3.98	3.98	-38682	16250	18109	40441	50055	10149	58550		3.76	Si
SLV 1	7.52	13140.32	-47506	-39559	-14968	3.98	3.98	-35498	16250	18109	40441	50055	10149	58550		3.91	Si
SLV 4	5.72	-14580.25	-50088	-41709	-15573	3.98	3.98	-37428	16250	18109	40441	50055	10149	58550		3.76	Si
SLV 4	7.52	13080.94	-45934	-38250	-14867	3.98	3.98	-34323	16250	18109	40441	50055	10149	58550		3.94	Si
SLV 14	5.72	20659.23	-25820	-21501	21860	3.98	3.5697	-19294	14275	14268	40441	50055	10149	54709		2.5	Si
SLV 14	7.52	-18414.08	-22310	-18577	21154	3.98	3.4938	-19172	14251	13942	40441	50055	10149	54382		2.57	Si
SLD 14	5.72	10244.11	-32984	-27466	10740	3.98	3.98	-24647	15346	17102	40441	50055	10149	57543		5.36	Si
SLD 14	7.52	-9000.23	-29289	-24389	10438	3.98	3.98	-21885	14794	16486	40441	50055	10149	56927		5.45	Si
SLV 13	5.72	19497.72	-26544	-22104	20438	3.98	3.7664	-19835	14384	15169	40441	50055	10149	55610		2.72	Si
SLV 13	7.52	-17016.85	-23033	-19180	19732	3.98	3.7536	-18408	14098	14817	40441	50055	10149	55258		2.8	Si
SLV 15	5.72	18455.29	-25590	-21309	18996	3.98	3.8064	-19121	14241	15178	40441	50055	10149	55619		2.93	Si
SLV 15	7.52	-15679.01	-22185	-18474	18412	3.98	3.8498	-17280	13873	14954	40441	50055	10149	55395		3.01	Si
SLV 2	5.72	-13537.82	-51043	-42504	-14131	3.98	3.98	-38141	16250	18109	40441	50055	10149	58550		4.14	Si
SLV 2	7.52	11743.09	-46782	-38956	-13547	3.98	3.98	-34957	16250	18109	40441	50055	10149	58550		4.32	Si
SLV 16	5.72	19616.8	-24866	-20706	20417	3.98	3.6033	-18581	14133	14259	40441	50055	10149	54700		2.68	Si
SLV 16	7.52	-17076.23	-21461	-17871	19833	3.98	3.583	-17946	14006	14051	40441	50055	10149	54492		2.75	Si
SLV 10	5.72	9698.92	-35891	-29887	10692	3.98	3.98	-26819	15780	17586	40441	50055	10149	58027		5.43	Si
SLV 10	7.52	-9170.26	-31994	-26642	10295	3.98	3.98	-23907	15198	16937	40441	50055	10149	57378		5.57	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.38	20709	-23079	405.13	2792.86	6.89	Si
SLV 14	179667	0.38	21062	-23472	405.13	2832.87	6.99	Si
SLV 15	179667	0.38	21359	-23802	405.13	2866.27	7.07	Si
SLV 13	179667	0.38	21712	-24196	405.13	2905.81	7.17	Si
SLV 12	179667	0.38	28288	-31524	405.13	3595.85	8.88	Si
SLV 11	179667	0.38	28705	-31989	405.13	3636.67	8.98	Si
SLV 10	179667	0.38	29464	-32835	405.13	3710	9.16	Si
SLV 9	179667	0.38	29882	-33300	405.13	3749.82	9.26	Si
SLV 8	179667	0.38	35037	-39045	405.13	4212.21	10.4	Si
SLV 7	179667	0.38	35454	-39510	405.13	4247.27	10.48	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-32540	-43622	1067	0.634	3866.1	0.958	9.61872	12.69956	No
SLV 6	-32250	-43025	1067	0.639	3836.6	0.957	9.69474	12.69956	No
SLV 7	-28223	-40578	-1053	0.715	3427.3	0.953	10.90624	12.69956	No
SLV 8	-27933	-39981	-1052	0.721	3397.9	0.953	11.00541	12.69956	No
SLV 9	-27820	-34105	1042	0.724	3386.5	0.952	11.04914	12.69956	No
SLV 10	-27530	-33508	1042	0.73	3357	0.952	11.15095	12.69956	No
SLV 11	-23503	-31061	-1077	0.832	2948.2	0.946	12.77949	12.69956	Si
SLV 12	-23213	-30464	-1077	0.841	2918.8	0.946	12.91791	12.69956	Si
SLV 1	-36616	-53825	354	0.591	4280.6	0.961	8.93819	6.60165	Si
SLV 2	-36165	-52897	354	0.598	4234.7	0.961	9.03651	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	20.6	SLU 84	Si
V_SLU	11.871	SLU 82	Si
PF_SLV	2.189	SLV 14	Si
V_SLV	2.503	SLV 14	Si
PFFP_SLV	6.894	SLV 16	Si
R_SLV	0.757	SLV 5	No

Maschio 92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	5.72	-148.84	-47745	-0.0000705	0.0003743	0.0035	3.98	55029.69	70131.21	70131.21	471.18	No	Si
SLU 50	7.52	696.2	-42838	-0.0000637	0.0003743	0.0035	3.98	53060.98	62839.88	62839.88	90.26	No	Si
SLU 45	5.72	-107.06	-47830	-0.0000705	0.0003743	0.0035	3.98	55056.5	70199.45	70199.45	655.72	No	Si
SLU 45	7.52	689.59	-42923	-0.0000638	0.0003743	0.0035	3.98	53102.52	62907.49	62907.49	91.22	No	Si
SLU 64	5.72	-41.02	-52259	-0.0000778	0.0003743	0.0035	3.98	56094.96	73050.85	73050.85	1780.72	No	Si
SLU 64	7.52	692.41	-47299	-0.000071	0.0003743	0.0035	3.98	54885.92	66449.09	66449.09	95.97	No	Si
SLU 1	5.72	-78.74	-37118	-0.0000532	0.0003743	0.0035	3.98	49699.74	60935.6	60935.6	773.89	No	Si
SLU 1	7.52	547.73	-33330	-0.0000484	0.0003743	0.0035	3.98	46841.96	52278.09	52278.09	95.45	No	Si
SLU 44	5.72	-132.98	-46092	-0.0000677	0.0003743	0.0035	3.98	54461	68762.04	68762.04	517.08	No	Si
SLU 44	7.52	672.03	-41186	-0.000061	0.0003743	0.0035	3.98	52207.88	61544.93	61544.93	91.58	No	Si
SLU 46	5.72	-106.23	-47787	-0.0000704	0.0003743	0.0035	3.98	55043.14	70165.4	70165.4	660.53	No	Si
SLU 46	7.52	659.44	-42881	-0.0000637	0.0003743	0.0035	3.98	53081.81	62873.71	62873.71	95.34	No	Si
SLU 51	5.72	-148.01	-47702	-0.0000704	0.0003743	0.0035	3.98	55016.2	70097.03	70097.03	473.59	No	Si
SLU 51	7.52	666.05	-42795	-0.0000636	0.0003743	0.0035	3.98	53040.15	62806.13	62806.13	94.3	No	Si
SLU 48	5.72	-114.3	-48621	-0.0000718	0.0003743	0.0035	3.98	55292.35	70818.45	70818.45	619.6	No	Si
SLU 48	7.52	676.55	-43714	-0.0000651	0.0003743	0.0035	3.98	53474.45	63535.63	63535.63	93.91	No	Si
SLU 43	5.72	-134.36	-46163	-0.0000678	0.0003743	0.0035	3.98	54487.47	68822.98	68822.98	512.21	No	Si
SLU 43	7.52	722.29	-41257	-0.0000612	0.0003743	0.0035	3.98	52246.6	61600.23	61600.23	85.28	No	Si
SLU 47	5.72	-140.22	-46883	-0.000069	0.0003743	0.0035	3.98	54745.05	69429.09	69429.09	495.14	No	Si
SLU 47	7.52	658.99	-41976	-0.0000622	0.0003743	0.0035	3.98	52628.01	62161.7	62161.7	94.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	5.72	20481.17	-46224	-0.0001109	0.0005615	0.0035	3.98		73256.08	73256.08	3.58		Si
SLV 13	7.52	-16846.11	-42895	-0.0000973	0.0005615	0.0035	3.98		73966.15	73966.15	4.39		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	5.72	-18989.03	-37218	-0.0000931	0.0005615	0.0035	3.98		66493.6	66493.6	3.5		Si
SLV 2	7.52	17324.35	-33457	-0.0000835	0.0005615	0.0035	3.98		56925.88	56925.88	3.29		Si
SLD 3	5.72	-9385.99	-38032	-0.0000732	0.0005615	0.0035	3.98		67615.55	67615.55	7.2		Si
SLD 3	7.52	8623.86	-34026	-0.0000655	0.0005615	0.0035	3.98		57815.97	57815.97	6.7		Si
SLV 14	5.72	21973.81	-46348	-0.0001145	0.0005615	0.0035	3.98		73405.03	73405.03	3.34		Si
SLV 14	7.52	-18460.97	-43020	-0.0001011	0.0005615	0.0035	3.98		74126.93	74126.93	4.02		Si
SLV 4	5.72	-20468.04	-34842	-0.0000926	0.0005615	0.0035	3.98		63233.71	63233.71	3.09		Si
SLV 4	7.52	17874.22	-30565	-0.0000803	0.0005615	0.0035	3.98		52443.75	52443.75	2.93		Si
SLV 15	5.72	19002.16	-43848	-0.0001037	0.0005615	0.0035	3.98		70425.76	70425.76	3.71		Si
SLV 15	7.52	-16296.24	-40003	-0.0000915	0.0005615	0.0035	3.98		70209.78	70209.78	4.31		Si
SLV 1	5.72	-20481.66	-37094	-0.0000962	0.0005615	0.0035	3.98		66321.68	66321.68	3.24		Si
SLV 1	7.52	18939.2	-33332	-0.0000869	0.0005615	0.0035	3.98		56731.93	56731.93	3		Si
SLV 3	5.72	-21960.68	-34718	-0.0000957	0.0005615	0.0035	3.98		63064.54	63064.54	2.87		Si
SLV 3	7.52	19489.08	-30440	-0.0000836	0.0005615	0.0035	3.98		52252.43	52252.43	2.68		Si
SLV 16	5.72	20494.8	-43973	-0.0001073	0.0005615	0.0035	3.98		70573.16	70573.16	3.44		Si
SLV 16	7.52	-17911.09	-40128	-0.0000953	0.0005615	0.0035	3.98		70369.92	70369.92	3.93		Si
SLV 7	5.72	-9082.54	-35164	-0.0000682	0.0005615	0.0035	3.98		63672.21	63672.21	7.01		Si
SLV 7	7.52	7317.24	-30435	-0.0000573	0.0005615	0.0035	3.98		52245.15	52245.15	7.14		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 64	5.72	-41.02	-52259	-43516	-398	3.98	3.98	-39049	10833	12073	40441	33370	10149	43519	No	109.33	Si
SLU 64	7.52	692.41	-47299	-39387	-398	3.98	3.98	-35344	10833	12073	40441	33370	10149	43519	No	109.33	Si
SLU 51	5.72	-148.01	-47702	-39722	-443	3.98	3.98	-35644	10833	12073	40441	33370	10149	43519	No	98.26	Si
SLU 51	7.52	666.05	-42795	-35636	-443	3.98	3.98	-31978	10833	12073	40441	33370	10149	43519	No	98.26	Si
SLU 43	5.72	-134.36	-46163	-38441	-467	3.98	3.98	-34495	10833	12073	40441	33370	10149	43519	No	93.28	Si
SLU 43	7.52	722.29	-41257	-34355	-467	3.98	3.98	-30828	10833	12073	40441	33370	10149	43519	No	93.28	Si
SLU 45	5.72	-107.06	-47830	-39829	-433	3.98	3.98	-35740	10833	12073	40441	33370	10149	43519	No	100.45	Si
SLU 45	7.52	689.59	-42923	-35743	-433	3.98	3.98	-32074	10833	12073	40441	33370	10149	43519	No	100.45	Si
SLU 47	5.72	-140.22	-46883	-39040	-435	3.98	3.98	-35032	10833	12073	40441	33370	10149	43519	No	100.12	Si
SLU 47	7.52	658.99	-41976	-34954	-435	3.98	3.98	-31366	10833	12073	40441	33370	10149	43519	No	100.12	Si
SLU 50	5.72	-148.84	-47745	-39758	-460	3.98	3.98	-35676	10833	12073	40441	33370	10149	43519	No	94.58	Si
SLU 50	7.52	696.2	-42838	-35672	-460	3.98	3.98	-32010	10833	12073	40441	33370	10149	43519	No	94.58	Si
SLU 48	5.72	-114.3	-48621	-40487	-430	3.98	3.98	-36331	10833	12073	40441	33370	10149	43519	No	101.21	Si
SLU 48	7.52	676.55	-43714	-36401	-430	3.98	3.98	-32664	10833	12073	40441	33370	10149	43519	No	101.21	Si
SLU 46	5.72	-106.23	-47787	-39793	-416	3.98	3.98	-35708	10833	12073	40441	33370	10149	43519	No	104.61	Si
SLU 46	7.52	659.44	-42881	-35707	-416	3.98	3.98	-32042	10833	12073	40441	33370	10149	43519	No	104.61	Si
SLU 44	5.72	-132.98	-46092	-38382	-438	3.98	3.98	-34441	10833	12073	40441	33370	10149	43519	No	99.39	Si
SLU 44	7.52	672.03	-41186	-34296	-438	3.98	3.98	-30775	10833	12073	40441	33370	10149	43519	No	99.39	Si
SLU 49	5.72	-113.47	-48578	-40452	-413	3.98	3.98	-36299	10833	12073	40441	33370	10149	43519	No	105.43	Si
SLU 49	7.52	646.39	-43671	-36366	-413	3.98	3.98	-32633	10833	12073	40441	33370	10149	43519	No	105.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	5.72	-21960.68	-34718	-28910	-23755	3.98	3.98	-25942	15605	17390	40441	50055	10149	57831		2.43	Si
SLV 3	7.52	19489.08	-30440	-25348	-23092	3.98	3.98	-22746	14966	16678	40441	50055	10149	57119		2.47	Si
SLD 3	5.72	-9385.99	-38032	-31669	-10310	3.98	3.98	-28418	16100	17942	40441	50055	10149	58383		5.66	Si
SLD 3	7.52	8623.86	-34026	-28334	-10028	3.98	3.98	-25425	15502	17275	40441	50055	10149	57716		5.76	Si
SLV 2	5.72	-18989.03	-37218	-30992	-20445	3.98	3.98	-27810	15979	17807	40441	50055	10149	58248		2.85	Si
SLV 2	7.52	17324.35	-33457	-27860	-19802	3.98	3.98	-25000	15417	17180	40441	50055	10149	57621		2.91	Si
SLV 7	5.72	-9082.54	-35164	-29282	-10017	3.98	3.98	-26276	15672	17465	40441	50055	10149	57906		5.78	Si
SLV 7	7.52	7317.24	-30435	-25344	-9788	3.98	3.98	-22742	14965	16677	40441	50055	10149	57118		5.84	Si
SLV 4	5.72	-20468.04	-34842	-29014	-22029	3.98	3.98	-26035	15624	17411	40441	50055	10149	57852		2.63	Si
SLV 4	7.52	17874.22	-30565	-25452	-21366	3.98	3.98	-22839	14984	16699	40441	50055	10149	57140		2.67	Si
SLV 16	5.72	20494.8	-43973	-36617	21622	3.98	3.98	-32858	16250	18109	40441	50055	10149	58550		2.71	Si
SLV 16	7.52	-17911.09	-40128	-33415	20979	3.98	3.98	-29985	16250	18109	40441	50055	10149	58550		2.79	Si
SLV 14	5.72	21973.81	-46348	-38595	23205	3.98	3.98	-34633	16250	18109	40441	50055	10149	58550		2.52	Si
SLV 14	7.52	-18460.97	-43020	-35823	22543	3.98	3.98	-32146	16250	18109	40441	50055	10149	58550		2.6	Si
SLV 1	5.72	-20481.66	-37094	-30888	-22171	3.98	3.98	-27718	15960	17786	40441	50055	10149	58227		2.63	Si
SLV 1	7.52	18939.2	-33332	-27756	-21528	3.98	3.98	-24907	15398	17160	40441	50055	10149	57601		2.68	Si
SLV 13	5.72	20481.17	-46224	-38491	21479	3.98	3.98	-34540	16250	18109	40441	50055	10149	58550		2.73	Si
SLV 13	7.52	-16846.11	-42895	-35720	20817	3.98	3.98	-32053	16250	18109	40441	50055	10149	58550		2.81	Si
SLV 15	5.72	19002.16	-43848	-36513	19895	3.98	3.98	-32765	16250	18109	40441	50055	10149	58550		2.94	Si
SLV 15	7.52	-16296.24	-40003	-33311	19252	3.98	3.98	-29892	16250	18109	40441	50055	10149	58550		3.04	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.38	28901	-32207	405.13	3655.71	9.02	Si
SLV 7	179667	0.38	28953	-32266	405.13	3660.78	9.04	Si
SLV 4	179667	0.38	29013	-32332	405.13	3666.51	9.05	Si
SLV 8	179667	0.38	29025	-32346	405.13	3667.72	9.05	Si
SLV 1	179667	0.38	31430	-35025	405.13	3894.38	9.61	Si
SLV 11	179667	0.38	31510	-35115	405.13	3901.74	9.63	Si
SLV 2	179667	0.38	31541	-35150	405.13	3904.61	9.64	Si
SLV 12	179667	0.38	31582	-35195	405.13	3908.31	9.65	Si
SLV 5	179667	0.38	37383	-41660	405.13	4404.66	10.87	Si
SLV 15	179667	0.38	37423	-41705	405.13	4407.87	10.88	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-34173	-46163	1149	0.606	4032.2	0.959	9.18014	12.69956	No
SLV 9	-34132	-46051	1149	0.607	4028	0.959	9.18988	12.69956	No
SLV 6	-32410	-42685	1145	0.634	3852.9	0.958	9.6196	12.69956	No
SLV 5	-32369	-42573	1145	0.635	3848.7	0.958	9.63035	12.69956	No
SLV 12	-27196	-37528	-1154	0.734	3323.1	0.952	11.21516	12.69956	No
SLV 11	-27155	-37416	-1154	0.735	3318.9	0.952	11.23	12.69956	No
SLV 8	-25433	-34050	-1158	0.776	3144.1	0.949	11.88893	12.69956	No
SLV 7	-25392	-33938	-1158	0.778	3139.9	0.949	11.9057	12.69956	No
SLV 14	-33800	-47229	347	0.633	3994.2	0.959	9.59488	6.60165	Si
SLV 13	-33736	-47056	347	0.634	3987.7	0.959	9.61093	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	85.285	SLU 43	Si
V_SLU	93.276	SLU 43	Si
PF_SLV	2.681	SLV 3	Si
V_SLV	2.434	SLV 3	Si
PFFP_SLV	9.023	SLV 3	Si
R_SLV	0.723	SLV 10	No

Maschio 93

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.093	6.526	L5	L6	1.965	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	5.72	-2636.93	-22554	-0.0000925	0.0003743	0.0035	1.965	13237.59	16658.81	16658.81	6.32	No	Si
SLU 81	7.52	390.59	-21810	-0.000068	0.0003743	0.0035	1.965	13085.46	15613.14	15613.14	39.97	No	Si
SLU 77	5.72	-2649.63	-22680	-0.0000931	0.0003743	0.0035	1.965	13261.51	16720.18	16720.18	6.31	No	Si
SLU 77	7.52	424.59	-21919	-0.0000687	0.0003743	0.0035	1.965	13108.98	15655.13	15655.13	36.87	No	Si
SLU 71	5.72	-2466.05	-20257	-0.0000828	0.0003743	0.0035	1.965	12705.53	15589.91	15589.91	6.32	No	Si
SLU 71	7.52	535.04	-19216	-0.0000609	0.0003743	0.0035	1.965	12403.36	14406.51	14406.51	26.93	No	Si
SLU 64	5.72	-2422.82	-19587	-0.0000801	0.0003743	0.0035	1.965	12515.56	15294.57	15294.57	6.31	No	Si
SLU 64	7.52	550.18	-18487	-0.0000587	0.0003743	0.0035	1.965	12169.4	13961.22	13961.22	25.38	No	Si
SLU 83	5.72	-2658.54	-22889	-0.0000939	0.0003743	0.0035	1.965	13299.69	16819.32	16819.32	6.33	No	Si
SLU 83	7.52	383.02	-22174	-0.0000691	0.0003743	0.0035	1.965	13162.33	15753.67	15753.67	41.13	No	Si
SLU 74	5.72	-2628.01	-22346	-0.0000917	0.0003743	0.0035	1.965	13196.95	16558.28	16558.28	6.3	No	Si
SLU 74	7.52	432.15	-21555	-0.0000676	0.0003743	0.0035	1.965	13028.86	15515.2	15515.2	35.9	No	Si
SLU 66	5.72	-2478.14	-20269	-0.000083	0.0003743	0.0035	1.965	12708.77	15595.24	15595.24	6.29	No	Si
SLU 66	7.52	543.87	-19229	-0.000061	0.0003743	0.0035	1.965	12407.46	14414.7	14414.7	26.5	No	Si
SLU 79	5.72	-2615.92	-22334	-0.0000915	0.0003743	0.0035	1.965	13194.58	16552.55	16552.55	6.33	No	Si
SLU 79	7.52	423.33	-21541	-0.0000674	0.0003743	0.0035	1.965	13025.84	15510.02	15510.02	36.64	No	Si
SLU 69	5.72	-2499.75	-20604	-0.0000843	0.0003743	0.0035	1.965	12797.72	15745.75	15745.75	6.3	No	Si
SLU 69	7.52	536.3	-19593	-0.0000621	0.0003743	0.0035	1.965	12517.29	14639.75	14639.75	27.3	No	Si
SLU 67	5.72	-2465.93	-20282	-0.0000829	0.0003743	0.0035	1.965	12712.27	15601.01	15601.01	6.33	No	Si
SLU 67	7.52	548.13	-19257	-0.0000611	0.0003743	0.0035	1.965	12416.09	14431.98	14431.98	26.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 2	5.72	-3712.09	-13169	-0.0000687	0.0005615	0.0035	1.965		12439.75	12439.75	3.35		Si
SLD 2	7.52	2701.36	-11651	-0.0000553	0.0005615	0.0035	1.965		10253.74	10253.74	3.8		Si
SLD 3	5.72	-3889.62	-12335	-0.0000677	0.0005615	0.0035	1.965		11811.12	11811.12	3.04		Si
SLD 3	7.52	2935.95	-10696	-0.0000545	0.0005615	0.0035	1.965		9569.05	9569.05	3.26		Si
SLD 1	5.72	-3878.39	-13065	-0.0000698	0.0005615	0.0035	1.965		12361.42	12361.42	3.19		Si
SLD 1	7.52	2906.97	-11475	-0.0000566	0.0005615	0.0035	1.965		10127.62	10127.62	3.48		Si
SLV 4	5.72	-6213.45	-8796	-0.0001209	0.0005615	0.0035	1.572		8974.42	8974.42	1.44		Si
SLV 4	7.52	5847.41	-6227	-0.0011231	0.0005615	0.0035	1.965		5961.52	5961.52	1.02		Si
SLV 2	5.72	-6188.26	-10469	-0.0001004	0.0005615	0.0035	1.572		10340.3	10340.3	1.67		Si
SLV 2	7.52	5779.97	-8019	-0.0001166	0.0005615	0.0035	1.965		7500.1	7500.1	1.3		Si
SLV 16	5.72	2843.08	-20108	-0.0000823	0.0005615	0.0035	1.965		16317.54	16317.54	5.74		Si
SLV 16	7.52	-5442.05	-21081	-0.0001094	0.0005615	0.0035	1.965		17916.91	17916.91	3.29		Si
SLV 1	5.72	-6575.62	-10228	-0.0001141	0.0005615	0.0035	1.572		10151.01	10151.01	1.54		Si
SLV 1	7.52	6258.88	-7611	-0.0001924	0.0005615	0.0035	1.965		7154.91	7154.91	1.14		Si
SLV 3	5.72	-6600.81	-8555	-0.0001567	0.0005615	0.0035	1.572		8775.81	8775.81	1.33		Si
SLV 3	7.52	6326.32	-5819	-0.0077068	0.0005615	0.0035	1.965		5603.93	5603.93	0.89		No
SLD 4	5.72	-3723.32	-12439	-0.0000665	0.0005615	0.0035	1.965		11888.68	11888.68	3.19		Si
SLD 4	7.52	2730.33	-10871	-0.0000532	0.0005615	0.0035	1.965		9694.16	9694.16	3.55		Si
SLV 7	5.72	-3391.21	-10606	-0.0000582	0.0005615	0.0035	1.965		10448.76	10448.76	3.08		Si
SLV 7	7.52	2368.13	-9001	-0.0000447	0.0005615	0.0035	1.965		8321.6	8321.6	3.51		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	5.72	-2282.85	-18016	-15002	-985	1.965	1.965	-27266	10580	5821	40441	16476	5011	21487	No	21.81	Si
SLU 50	7.52	612.92	-16760	-13956	-978	1.965	1.965	-25365	10326	5682	40441	16476	5011	21487	No	21.97	Si
SLU 44	5.72	-2219.28	-17368	-14462	-941	1.965	1.965	-26285	10449	5749	40441	16476	5011	21487	No	22.84	Si
SLU 44	7.52	635.16	-16078	-13389	-997	1.965	1.965	-24334	10189	5606	40441	16476	5011	21487	No	21.55	Si
SLU 43	5.72	-2239.63	-17346	-14444	-1001	1.965	1.965	-26252	10445	5747	40441	16476	5011	21487	No	21.46	Si
SLU 43	7.52	628.05	-16032	-13350	-995	1.965	1.965	-24263	10180	5601	40441	16476	5011	21487	No	21.6	Si
SLU 46	5.72	-2282.73	-18041	-15023	-960	1.965	1.965	-27304	10585	5824	40441	16476	5011	21487	No	22.39	Si
SLU 46	7.52	626	-16801	-13991	-990	1.965	1.965	-25428	10335	5686	40441	16476	5011	21487	No	21.69	Si
SLU 51	5.72	-2270.64	-18029	-15013	-949	1.965	1.965	-27286	10583	5823	40441	16476	5011	21487	No	22.65	Si
SLU 51	7.52	617.18	-16788	-13980	-980	1.965	1.965	-25408	10332	5685	40441	16476	5011	21487	No	21.93	Si
SLU 45	5.72	-2294.94	-18028	-15012	-996	1.965	1.965	-27284	10582	5822	40441	16476	5011	21487	No	21.58	Si
SLU 45	7.52	621.74	-16773	-13967	-989	1.965	1.965	-25385	10329	5683	40441	16476	5011	21487	No	21.73	Si
SLU 49	5.72	-2304.35	-18375	-15301	-952	1.965	1.965	-27810	10652	5861	40441	16476	5011	21487	No	22.58	Si
SLU 49	7.52	618.43	-17165	-14294	-982	1.965	1.965	-25979	10408	5727	40441	16476	5011	21487	No	21.88	Si
SLU 47	5.72	-2240.89	-17702	-14741	-933	1.965	1.965	-26792	10517	5786	40441	16476	5011	21487	No	23.04	Si
SLU 47	7.52	627.59	-16443	-13692	-989	1.965	1.965	-24885	10262	5646	40441	16476	5011	21487	No	21.73	Si
SLU 48	5.72	-2316.56	-18363	-15291	-988	1.965	1.965	-27791	10650	5860	40441	16476	5011	21487	No	21.75	Si
SLU 48	7.52	614.17	-17137	-14271	-981	1.965	1.965	-25937	10403	5724	40441	16476	5011	21487	No	21.91	Si
SLU 64	5.72	-2422.82	-19587	-16311	-930	1.965	1.965	-29644	10833	5961	40441	16476	5011	21487	No	23.11	Si
SLU 64	7.52	550.18	-18487	-15395	-921	1.965	1.965	-27980	10675	5874	40441	16476	5011	21487	No	23.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	5.72	-6600.81	-8555	-7124	-8140	1.572	0.6329	0	0	0	40441	19771	4009	23779		2.92	Si
SLV 3	7.52	6326.32	-5819	-4846	-7651	1.965	0	-181788	16250	0	40441	24714	5011	29724		3.88	Si
SLV 13	5.72	2480.92	-21540	-17936	6172	1.965	1.965	-32599	16250	8941	40441	24714	5011	29724		4.82	Si
SLV 13	7.52	-5030.59	-22464	-18706	5695	1.965	1.965	-33999	16250	8941	40441	24714	5011	29724		5.22	Si
SLV 2	5.72	-6188.26	-10469	-8717	-6903	1.572	1.1742	0	0	0	40441	19771	4009	23779		3.44	Si
SLV 2	7.52	5779.97	-8019	-6677	-6788	1.965	0.7851	-12136	12844	2823	40441	24714	5011	29724		4.38	Si
SLV 16	5.72	2843.08	-20108	-16744	6077	1.965	1.965	-30432	16250	8941	40441	24714	5011	29724		4.89	Si
SLV 16	7.52	-5442.05	-21081	-17554	5980	1.965	1.965	-31905	16250	8941	40441	24714	5011	29724		4.97	Si
SLV 15	5.72	2455.73	-19867	-16544	5506	1.965	1.965	-30068	16250	8941	40441	24714	5011	29724		5.4	Si
SLV 15	7.52	-4963.14	-20673	-17215	5406	1.965	1.965	-31287	16250	8941	40441	24714	5011	29724		5.5	Si
SLV 7	5.72	-3391.21	-10606	-8832	-4038	1.965	1.965	-16052	13627	7498	40441	24714	5011	29724		7.36	Si
SLV 7	7.52	2368.13	-9001	-7495	-3316	1.965	1.965	-13622	13141	7230	40441	24714	5011	29724		8.96	Si
SLV 4	5.72	-6213.45	-8796	-7325	-7569	1.572	0.8284	0	0	0	40441	19771	4009	23779		3.14	Si
SLV 4	7.52	5847.41	-6227	-5185	-7077	1.965	0.1305	-134761	16250	594	40441	24714	5011	29724		4.2	Si
SLV 1	5.72	-6575.62	-10228	-8517	-7474	1.572	1.0188	0	0	0	40441	19771	4009	23779		3.18	Si
SLV 1	7.52	6258.88	-7611	-6337	-7363	1.965	0.4804	-48453	16250	2186	40441	24714	5011	29724		4.04	Si
SLV 14	5.72	2868.27	-21780	-18137	6743	1.965	1.965	-32963	16250	8941	40441	24714	5011	29724		4.41	Si
SLV 14	7.52	-5509.5	-22872	-19046	6269	1.965	1.965	-34616	16250	8941	40441	24714	5011	29724		4.74	Si
SLD 3	5.72	-3889.62	-12335	-10272	-3878	1.965	1.965	-18669	14150	7786	40441	24714	5011	29724		7.66	Si
SLD 3	7.52	2935.95	-10696	-8907	-3663	1.965	1.965	-16188	13654	7513	40441	24714	5011	29724		8.11	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.38	10382	-5712	200.02	745.33	3.73	Si
SLV 4	179667	0.38	11163	-6142	200.02	797.05	3.98	Si
SLV 1	179667	0.38	13558	-7460	200.02	951.64	4.76	Si
SLV 2	179667	0.38	14340	-7890	200.02	1000.86	5	Si
SLV 7	179667	0.38	16920	-9309	200.02	1158.92	5.79	Si
SLV 8	179667	0.38	17422	-9586	200.02	1188.92	5.94	Si
SLV 11	179667	0.38	25580	-14075	200.02	1640.39	8.2	Si
SLV 12	179667	0.38	26083	-14351	200.02	1666	8.33	Si
SLV 5	179667	0.38	27507	-15135	200.02	1737.22	8.69	Si
SLV 6	179667	0.38	28010	-15411	200.02	1761.86	8.81	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-14222	-18134	691	0.692	1721.4	0.954	10.54863	12.69956	No
SLV 9	-14174	-17808	691	0.694	1716.5	0.954	10.5808	12.69956	No
SLV 6	-12185	-12815	750	0.783	1514.6	0.948	12.0079	12.69956	No
SLV 5	-12137	-12488	749	0.786	1509.7	0.948	12.05024	12.69956	No
SLV 12	-10391	-14065	-768	0.892	1332.6	0.942	13.75786	12.69956	Si
SLV 11	-10343	-13738	-769	0.895	1327.7	0.942	13.81231	12.69956	Si
SLV 8	-8354	-8745	-710	1.069	1126.5	0.933	16.65277	12.69956	Si
SLV 7	-8306	-8419	-710	1.074	1121.7	0.933	16.73319	12.69956	Si
SLV 14	-15271	-23007	112	0.686	1828	0.956	10.42806	6.60165	Si
SLV 13	-15196	-22499	111	0.689	1820.3	0.956	10.47447	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.293	SLU 66	Si
V_SLU	21.46	SLU 43	Si
PF_SLV	0.886	SLV 3	No
V_SLV	2.921	SLV 3	Si
PFFP_SLV	3.726	SLV 3	Si
R_SLV	0.831	SLV 10	No

Maschio 94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.443	1.006	-24.633	1.006	L5	L6	5.19	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	4.82	-11986.61	-58460	-0.0000726	0.0004492	0.0035	5.19	101757.17	138617.86	138617.86	11.56	No	Si
SLU 45	6.92	-5717.66	-51601	-0.0000576	0.0004492	0.0035	5.19	94991.33	126829.85	126829.85	22.18	No	Si
SLU 46	4.82	-11991.03	-58508	-0.0000727	0.0004492	0.0035	5.19	101800.03	138697.3	138697.3	11.57	No	Si
SLU 46	6.92	-5756.69	-51643	-0.0000577	0.0004492	0.0035	5.19	95036.58	126903.26	126903.26	22.04	No	Si
SLU 51	4.82	-12088.41	-58882	-0.0000732	0.0004492	0.0035	5.19	102128.61	139310.61	139310.61	11.52	No	Si
SLU 51	6.92	-5630.92	-51934	-0.0000579	0.0004492	0.0035	5.19	95351.28	127416.09	127416.09	22.63	No	Si
SLU 48	4.82	-12195.35	-59617	-0.0000742	0.0004492	0.0035	5.19	102763.43	140517.76	140517.76	11.52	No	Si
SLU 48	6.92	-5788.47	-52723	-0.0000589	0.0004492	0.0035	5.19	96191.67	128805.87	128805.87	22.25	No	Si
SLU 49	4.82	-12199.77	-59666	-0.0000742	0.0004492	0.0035	5.19	102804.65	140597.2	140597.2	11.52	No	Si
SLU 49	6.92	-5827.5	-52764	-0.000059	0.0004492	0.0035	5.19	96235.55	128879.27	128879.27	22.12	No	Si
SLU 69	4.82	-13031.87	-65599	-0.0000818	0.0004492	0.0035	5.19	107339.84	150161.93	150161.93	11.52	No	Si
SLU 69	6.92	-7218.36	-59375	-0.0000678	0.0004492	0.0035	5.19	102556.45	140120.86	140120.86	19.41	No	Si
SLU 70	4.82	-13036.29	-65648	-0.0000819	0.0004492	0.0035	5.19	107372.6	150235.53	150235.53	11.52	No	Si
SLU 70	6.92	-7257.39	-59417	-0.0000678	0.0004492	0.0035	5.19	102592.23	140189.24	140189.24	19.32	No	Si
SLU 50	4.82	-12083.99	-58833	-0.0000732	0.0004492	0.0035	5.19	102086.28	139231.17	139231.17	11.52	No	Si
SLU 50	6.92	-5591.89	-51892	-0.0000578	0.0004492	0.0035	5.19	95306.39	127342.69	127342.69	22.77	No	Si
SLU 72	4.82	-12924.93	-64864	-0.0000809	0.0004492	0.0035	5.19	106833.62	149043.48	149043.48	11.53	No	Si
SLU 72	6.92	-7060.81	-58587	-0.0000667	0.0004492	0.0035	5.19	101869.43	138826.21	138826.21	19.66	No	Si
SLU 71	4.82	-12920.51	-64815	-0.0000808	0.0004492	0.0035	5.19	106799.75	148969.88	148969.88	11.53	No	Si
SLU 71	6.92	-7021.78	-58545	-0.0000666	0.0004492	0.0035	5.19	101832.64	138757.83	138757.83	19.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	4.82	9722.89	-64262	-0.0000741	0.0006738	0.0035	5.19		141800	141800	14.58		Si
SLV 4	6.92	-27990.16	-62831	-0.0000944	0.0006738	0.0035	5.19		153244.29	153244.29	5.47		Si
SLD 14	4.82	-17802.02	-41609	-0.0000603	0.0006738	0.0035	5.19		111812.15	111812.15	6.28		Si
SLD 14	6.92	3963.49	-35459	-0.0000384	0.0006738	0.0035	5.19		86502.47	86502.47	21.82		Si
SLV 2	4.82	9671.89	-60587	-0.0000703	0.0006738	0.0035	5.19		134797.15	134797.15	13.94		Si
SLV 2	6.92	-23766.85	-59264	-0.0000856	0.0006738	0.0035	5.19		146618.26	146618.26	6.17		Si
SLV 13	4.82	-28872.07	-32261	-0.0000636	0.0006738	0.0035	5.19		91947.69	91947.69	3.18		Si
SLV 13	6.92	17039.16	-24437	-0.0000422	0.0006738	0.0035	5.19		61993.59	61993.59	3.64		Si
SLD 13	4.82	-17812.74	-41409	-0.0000601	0.0006738	0.0035	5.19		111397.53	111397.53	6.25		Si
SLD 13	6.92	4168.96	-35411	-0.0000386	0.0006738	0.0035	5.19		86397.64	86397.64	20.72		Si
SLV 3	4.82	9697.92	-63797	-0.0000736	0.0006738	0.0035	5.19		140914.28	140914.28	14.53		Si
SLV 3	6.92	-27511.59	-62718	-0.0000937	0.0006738	0.0035	5.19		153034.57	153034.57	5.56		Si
SLV 14	4.82	-28847.09	-32725	-0.000064	0.0006738	0.0035	5.19		92964.56	92964.56	3.22		Si
SLV 14	6.92	16560.59	-24549	-0.0000418	0.0006738	0.0035	5.19		62250.06	62250.06	3.76		Si
SLV 15	4.82	-28821.06	-35935	-0.0000672	0.0006738	0.0035	5.19		99987.49	99987.49	3.47		Si
SLV 15	6.92	12815.85	-28003	-0.000041	0.0006738	0.0035	5.19		70071.22	70071.22	5.47		Si
SLV 16	4.82	-28796.09	-36400	-0.0000677	0.0006738	0.0035	5.19		100989.05	100989.05	3.51		Si
SLV 16	6.92	12337.29	-28116	-0.0000406	0.0006738	0.0035	5.19		70323.59	70323.59	5.7		Si
SLV 1	4.82	9646.91	-60122	-0.0000698	0.0006738	0.0035	5.19		133911.43	133911.43	13.88		Si
SLV 1	6.92	-23288.29	-59151	-0.0000849	0.0006738	0.0035	5.19		146408.54	146408.54	6.29		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	4.82	-12195.35	-59617	-42529	-4763	5.19	5.19	-29266	10833	15743	115546	52224	26469	78693	No	16.52	Si
SLU 48	6.92	-5788.47	-52723	-37611	-4758	5.19	5.19	-25882	10833	15743	115546	52224	26469	78693	No	16.54	Si
SLU 51	4.82	-12088.41	-58882	-42005	-4846	5.19	5.19	-28905	10833	15743	115546	52224	26469	78693	No	16.24	Si
SLU 51	6.92	-5630.92	-51934	-37048	-4841	5.19	5.19	-25494	10833	15743	115546	52224	26469	78693	No	16.25	Si
SLU 50	4.82	-12083.99	-58833	-41970	-4833	5.19	5.19	-28881	10833	15743	115546	52224	26469	78693	No	16.28	Si
SLU 50	6.92	-5591.89	-51892	-37019	-4829	5.19	5.19	-25474	10833	15743	115546	52224	26469	78693	No	16.3	Si
SLU 43	4.82	-11666.51	-56518	-40319	-4709	5.19	5.19	-27745	10833	15743	115546	52224	26469	78693	No	16.71	Si
SLU 43	6.92	-5450.28	-49649	-35419	-4705	5.19	5.19	-24373	10833	15743	115546	52224	26469	78693	No	16.73	Si
SLU 49	4.82	-12199.77	-59666	-42564	-4776	5.19	5.19	-29290	10833	15743	115546	52224	26469	78693	No	16.48	Si
SLU 49	6.92	-5827.5	-52764	-37641	-4771	5.19	5.19	-25902	10833	15743	115546	52224	26469	78693	No	16.49	Si
SLU 45	4.82	-11986.61	-58460	-41704	-4701	5.19	5.19	-28698	10833	15743	115546	52224	26469	78693	No	16.74	Si
SLU 45	6.92	-5717.66	-51601	-36811	-4696	5.19	5.19	-25331	10833	15743	115546	52224	26469	78693	No	16.76	Si
SLU 44	4.82	-11673.88	-56599	-40376	-4731	5.19	5.19	-27784	10833	15743	115546	52224	26469	78693	No	16.63	Si
SLU 44	6.92	-5515.33	-49719	-35468	-4726	5.19	5.19	-24407	10833	15743	115546	52224	26469	78693	No	16.65	Si
SLU 72	4.82	-12924.93	-64864	-46272	-4073	5.19	5.19	-31842	10833	15743	115546	52224	26469	78693	No	19.32	Si
SLU 72	6.92	-7060.81	-58587	-41794	-4068	5.19	5.19	-28760	10833	15743	115546	52224	26469	78693	No	19.34	Si
SLU 47	4.82	-11882.61	-57757	-41202	-4793	5.19	5.19	-28353	10833	15743	115546	52224	26469	78693	No	16.42	Si
SLU 47	6.92	-5586.13	-50840	-36268	-4788	5.19	5.19	-24958	10833	15743	115546	52224	26469	78693	No	16.44	Si
SLU 46	4.82	-11991.03	-58508	-41738	-4714	5.19	5.19	-28722	10833	15743	115546	52224	26469	78693	No	16.69	Si
SLU 46	6.92	-5756.69	-51643	-36841	-4709	5.19	5.19	-25352	10833	15743	115546	52224	26469	78693	No	16.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	4.82	-17795.74	-43198	-30817	-13427	5.19	5.19	-21206	16250	23615	115546	78337	26469	104806		7.81	Si
SLD 16	6.92	2113.15	-37013	-26404	-12998	5.19	5.19	-18170	16134	23446	115546	78337	26469	104806		8.06	Si
SLV 1	4.82	9646.91	-60122	-42890	21740	5.19	5.19	-29514	16250	23615	115546	78337	26469	104806		4.82	Si
SLV 1	6.92	-23288.29	-59151	-42197	20739	5.19	5.19	-29037	16250	23615	115546	78337	26469	104806		5.05	Si
SLV 13	4.82	-28872.07	-32261	-23014	-26010	5.19	5.1001	-16233	15747	22487	115546	78337	26469	104806		4.03	Si
SLV 13	6.92	17039.16	-24437	-17432	-24738	5.19	5.19	-11996	14899	21651	115546	78337	26469	104806		4.24	Si
SLV 4	4.82	9722.89	-64262	-45843	20214	5.19	5.19	-31546	16250	23615	115546	78337	26469	104806		5.18	Si
SLV 4	6.92	-27990.16	-62831	-44822	18950	5.19	5.19	-30844	16250	23615	115546	78337	26469	104806		5.53	Si
SLV 14	4.82	-28847.09	-32725	-23346	-26322	5.19	5.1405	-16065	15713	22616	115546	78337	26469	104806		3.98	Si
SLV 14	6.92	16560.59	-24549	-17513	-25050	5.19	5.19	-12051	14910	21668	115546	78337	26469	104806		4.18	Si
SLV 16	4.82	-28796.09	-36400	-25967	-27536	5.19	5.19	-17869	16074	23358	115546	78337	26469	104806		3.81	Si
SLV 16	6.92	12337.29	-28116	-20057	-26526	5.19	5.19	-13802	15260	22176	115546	78337	26469	104806		3.95	Si
SLV 2	4.82	9671.89	-60587	-43221	21428	5.19	5.19	-29742	16250	23615	115546	78337	26469	104806		4.89	Si
SLV 2	6.92	-23766.85	-59264	-42278	20426	5.19	5.19	-29093	16250	23615	115546	78337	26469	104806		5.13	Si
SLV 3	4.82	9697.92	-63797	-45511	20527	5.19	5.19	-31318	16250	23615	115546	78337	26469	104806		5.11	Si
SLV 3	6.92	-27511.59	-62718	-44741	19262	5.19	5.19	-30788	16250	23615	115546	78337	26469	104806		5.44	Si
SLD 15	4.82	-17806.46	-42999	-30674	-13293	5.19	5.19	-21108	16250	23615	115546	78337	26469	104806		7.88	Si
SLD 15	6.92	2318.61	-36965	-26370	-12864	5.19	5.19	-18146	16129	23439	115546	78337	26469	104806		8.15	Si
SLV 15	4.82	-28821.06	-35935	-25635	-27223	5.19	5.19	-17641	16028	23292	115546	78337	26469	104806		3.85	Si
SLV 15	6.92	12815.85	-28003	-19977	-26214	5.19	5.19	-13747	15249	22160	115546	78337	26469	104806		4	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-25400	0.38	540.59	3216.87	4553.12	3884.99	7.19	Si
SLV 14	-25513	0.38	540.59	3229.65	4570.03	3899.84	7.21	Si
SLV 15	-28955	0.38	540.59	3612.97	5084.65	4348.81	8.04	Si
SLV 16	-29067	0.38	540.59	3625.33	5101.41	4363.37	8.07	Si
SLV 9	-33397	0.38	540.59	4089.28	5743.03	4916.15	9.09	Si
SLV 10	-33469	0.38	540.59	4096.89	5753.71	4925.3	9.11	Si
SLV 5	-43789	0.38	540.59	5122.53	7270.03	6196.28	11.46	Si
SLV 6	-43861	0.38	540.59	5129.34	7280.63	6204.99	11.48	Si
SLV 11	-45246	0.38	540.59	5258.34	7483.14	6370.74	11.78	Si
SLV 12	-45318	0.38	540.59	5265.05	7493.75	6379.4	11.8	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-46121	-58714	1112	0.596	5416.5	0.96	9.02189	12.69956	No
SLV 7	-45969	-58416	1113	0.598	5401.1	0.96	9.04789	12.69956	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-41204	-50356	1307	0.652	4916.5	0.957	9.89856	12.69956	No
SLV 11	-41052	-50057	1308	0.654	4901.1	0.957	9.93046	12.69956	No
SLV 6	-35127	-46465	-1303	0.745	4299.1	0.951	11.38696	12.69956	No
SLV 5	-34976	-46166	-1303	0.748	4283.7	0.951	11.43027	12.69956	No
SLV 10	-30210	-38107	-1108	0.851	3800.1	0.946	13.07097	12.69956	Si
SLV 9	-30059	-37808	-1108	0.854	3784.7	0.946	13.12828	12.69956	Si
SLV 4	-48051	-64262	39	0.596	5612.9	0.962	9.0097	6.60165	Si
SLV 3	-47816	-63797	40	0.599	5588.9	0.961	9.04864	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.522	SLU 50	Si
V_SLU	16.238	SLU 51	Si
PF_SLV	3.185	SLV 13	Si
V_SLV	3.806	SLV 16	Si
PFFP_SLV	7.187	SLV 13	Si
R_SLV	0.71	SLV 8	No

Maschio 95

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.006	-18.643	1.006	L5	L6	3.68	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 22	4.82	-840.19	-41977	-0.0000608	0.0004492	0.0035	3.68	51485.73	69956.68	69956.68	83.26	No	Si
SLU 22	6.92	1074.28	-37978	-0.0000554	0.0004492	0.0035	3.68	48800.89	58763.09	58763.09	54.7	No	Si
SLU 30	4.82	-947.05	-43888	-0.0000639	0.0004492	0.0035	3.68	52604.2	72207.9	72207.9	76.25	No	Si
SLU 30	6.92	1136.93	-39874	-0.0000583	0.0004492	0.0035	3.68	50131.82	61278.93	61278.93	53.9	No	Si
SLU 24	4.82	-879.25	-43646	-0.0000634	0.0004492	0.0035	3.68	52468.22	71922.3	71922.3	81.8	No	Si
SLU 24	6.92	1078.41	-39629	-0.0000578	0.0004492	0.0035	3.68	49965.86	60954.07	60954.07	56.52	No	Si
SLU 26	4.82	-888.77	-42937	-0.0000623	0.0004492	0.0035	3.68	52060.98	71087.65	71087.65	79.98	No	Si
SLU 26	6.92	1115.1	-38957	-0.0000569	0.0004492	0.0035	3.68	49501.17	60062.03	60062.03	53.86	No	Si
SLU 72	4.82	-1093.53	-53079	-0.0000784	0.0004492	0.0035	3.68	56490.54	82086.38	82086.38	75.07	No	Si
SLU 72	6.92	1228.95	-47851	-0.0000706	0.0004492	0.0035	3.68	54582.72	70603.93	70603.93	57.45	No	Si
SLU 27	4.82	-934.75	-44600	-0.0000649	0.0004492	0.0035	3.68	52993.13	73045.61	73045.61	78.14	No	Si
SLU 27	6.92	1105.67	-40563	-0.0000593	0.0004492	0.0035	3.68	50590.07	62194.41	62194.41	56.25	No	Si
SLU 29	4.82	-951.2	-43884	-0.0000639	0.0004492	0.0035	3.68	52602.03	72203.3	72203.3	75.91	No	Si
SLU 29	6.92	1128.79	-39847	-0.0000583	0.0004492	0.0035	3.68	50113.94	61243.77	61243.77	54.26	No	Si
SLU 28	4.82	-930.6	-44604	-0.0000649	0.0004492	0.0035	3.68	52995.23	73050.2	73050.2	78.5	No	Si
SLU 28	6.92	1113.81	-40590	-0.0000593	0.0004492	0.0035	3.68	50607.39	62229.57	62229.57	55.87	No	Si
SLU 23	4.82	-833.27	-41983	-0.0000607	0.0004492	0.0035	3.68	51489.72	69964.34	69964.34	83.96	No	Si
SLU 23	6.92	1087.85	-38023	-0.0000555	0.0004492	0.0035	3.68	48833.09	58821.69	58821.69	54.07	No	Si
SLU 25	4.82	-875.09	-43650	-0.0000634	0.0004492	0.0035	3.68	52470.42	71926.89	71926.89	82.19	No	Si
SLU 25	6.92	1086.56	-39656	-0.0000579	0.0004492	0.0035	3.68	49983.91	60989.23	60989.23	56.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	4.82	-24350.94	-32325	-0.0001018	0.0006738	0.0035	3.68		59993.69	59993.69	2.46		Si
SLV 14	6.92	24792.46	-33440	-0.0001045	0.0006738	0.0035	3.68		55017.03	55017.03	2.22		Si
SLV 15	4.82	-22367.09	-33894	-0.0000982	0.0006738	0.0035	3.68		62197.44	62197.44	2.78		Si
SLV 15	6.92	23661.72	-35731	-0.0001041	0.0006738	0.0035	3.68		58090.82	58090.82	2.46		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	4.82	-22573.18	-33863	-0.0000987	0.0006738	0.0035	3.68		62154.34	62154.34	2.75		Si
SLV 16	6.92	23894.76	-35882	-0.0001049	0.0006738	0.0035	3.68		58293.13	58293.13	2.44		Si
SLV 4	4.82	22901.52	-46835	-0.0001191	0.0006738	0.0035	3.68		72987.52	72987.52	3.19		Si
SLV 4	6.92	-23092.54	-38013	-0.0001059	0.0006738	0.0035	3.68		67982.78	67982.78	2.94		Si
SLD 14	4.82	-10765.65	-36485	-0.0000746	0.0006738	0.0035	3.68		65836.42	65836.42	6.12		Si
SLD 14	6.92	11014.57	-34701	-0.0000726	0.0006738	0.0035	3.68		56709.38	56709.38	5.15		Si
SLV 13	4.82	-24144.86	-32356	-0.0001012	0.0006738	0.0035	3.68		60036.79	60036.79	2.49		Si
SLV 13	6.92	24559.42	-33289	-0.0001036	0.0006738	0.0035	3.68		54814.72	54814.72	2.23		Si
SLV 3	4.82	23107.61	-46866	-0.0001196	0.0006738	0.0035	3.68		73028.69	73028.69	3.16		Si
SLV 3	6.92	-23325.58	-37863	-0.0001063	0.0006738	0.0035	3.68		67770.98	67770.98	2.91		Si
SLD 13	4.82	-10677.18	-36498	-0.0000744	0.0006738	0.0035	3.68		65854.92	65854.92	6.17		Si
SLD 13	6.92	10914.52	-34636	-0.0000723	0.0006738	0.0035	3.68		56622.52	56622.52	5.19		Si
SLV 2	4.82	21123.76	-45297	-0.0001124	0.0006738	0.0035	3.68		70923.69	70923.69	3.36		Si
SLV 2	6.92	-22194.83	-35571	-0.0001001	0.0006738	0.0035	3.68		64552.99	64552.99	2.91		Si
SLV 1	4.82	21329.84	-45327	-0.000113	0.0006738	0.0035	3.68		70964.86	70964.86	3.33		Si
SLV 1	6.92	-22427.87	-35421	-0.0001005	0.0006738	0.0035	3.68		64341.19	64341.19	2.87		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	4.82	-1093.53	-53079	-37865	-1135	3.68	3.68	-36748	10833	11163	115546	37030	18768	55798	No	49.16	Si
SLU 72	6.92	1228.95	-47851	-34136	-1148	3.68	3.68	-33129	10833	11163	115546	37030	18768	55798	No	48.59	Si
SLU 70	4.82	-1077.08	-53794	-38375	-1113	3.68	3.68	-37243	10833	11163	115546	37030	18768	55798	No	50.12	Si
SLU 70	6.92	1205.83	-48567	-34647	-1127	3.68	3.68	-33625	10833	11163	115546	37030	18768	55798	No	49.53	Si
SLU 65	4.82	-979.75	-51174	-36506	-1103	3.68	3.68	-35429	10833	11163	115546	37030	18768	55798	No	50.6	Si
SLU 65	6.92	1179.87	-46000	-32815	-1116	3.68	3.68	-31847	10833	11163	115546	37030	18768	55798	No	50.02	Si
SLU 68	4.82	-1035.25	-52127	-37186	-1126	3.68	3.68	-36089	10833	11163	115546	37030	18768	55798	No	49.55	Si
SLU 68	6.92	1207.13	-46934	-33482	-1139	3.68	3.68	-32494	10833	11163	115546	37030	18768	55798	No	48.98	Si
SLU 64	4.82	-986.67	-51167	-36501	-1067	3.68	3.68	-35424	10833	11163	115546	37030	18768	55798	No	52.31	Si
SLU 64	6.92	1166.3	-45956	-32784	-1079	3.68	3.68	-31817	10833	11163	115546	37030	18768	55798	No	51.69	Si
SLU 67	4.82	-1021.58	-52840	-37695	-1090	3.68	3.68	-36583	10833	11163	115546	37030	18768	55798	No	51.2	Si
SLU 67	6.92	1178.58	-47633	-33980	-1103	3.68	3.68	-32978	10833	11163	115546	37030	18768	55798	No	50.59	Si
SLU 66	4.82	-1025.73	-52836	-37692	-1068	3.68	3.68	-36580	10833	11163	115546	37030	18768	55798	No	52.24	Si
SLU 66	6.92	1170.44	-47606	-33961	-1081	3.68	3.68	-32959	10833	11163	115546	37030	18768	55798	No	51.6	Si
SLU 71	4.82	-1097.68	-53075	-37862	-1113	3.68	3.68	-36745	10833	11163	115546	37030	18768	55798	No	50.11	Si
SLU 71	6.92	1220.81	-47825	-34117	-1127	3.68	3.68	-33110	10833	11163	115546	37030	18768	55798	No	49.52	Si
SLU 69	4.82	-1081.24	-53790	-38372	-1092	3.68	3.68	-37240	10833	11163	115546	37030	18768	55798	No	51.12	Si
SLU 69	6.92	1197.69	-48541	-34628	-1105	3.68	3.68	-33606	10833	11163	115546	37030	18768	55798	No	50.5	Si
SLU 30	4.82	-947.05	-43888	-31309	-1070	3.68	3.68	-30385	10833	11163	115546	37030	18768	55798	No	52.13	Si
SLU 30	6.92	1136.93	-39874	-28445	-1081	3.68	3.68	-27606	10833	11163	115546	37030	18768	55798	No	51.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	4.82	-24144.86	-32356	-23082	-28752	3.68	3.2813	-25369	16250	14930	115546	55545	18768	74313		2.58	Si
SLV 13	6.92	24559.42	-33289	-23747	-28240	3.68	3.3067	-23047	16250	15045	115546	55545	18768	74313		2.63	Si
SLV 15	4.82	-22367.09	-33894	-24179	-29434	3.68	3.5403	-24664	16250	16108	115546	55545	18768	74313		2.52	Si
SLV 15	6.92	23661.72	-35731	-25490	-28436	3.68	3.5333	-24738	16250	16077	115546	55545	18768	74313		2.61	Si
SLV 4	4.82	22901.52	-46835	-33411	27352	3.68	3.68	-32425	16250	16744	115546	55545	18768	74313		2.72	Si
SLV 4	6.92	-23092.54	-38013	-27118	26821	3.68	3.68	-26318	16250	16744	115546	55545	18768	74313		2.77	Si
SLV 3	4.82	23107.61	-46866	-33433	27732	3.68	3.68	-32447	16250	16744	115546	55545	18768	74313		2.68	Si
SLV 3	6.92	-23325.58	-37863	-27010	27201	3.68	3.6718	-26213	16250	16707	115546	55545	18768	74313		2.73	Si
SLV 16	4.82	-22573.18	-33863	-24157	-29814	3.68	3.5202	-24782	16250	16017	115546	55545	18768	74313		2.49	Si
SLV 16	6.92	23894.76	-35882	-25597	-28816	3.68	3.5222	-24842	16250	16026	115546	55545	18768	74313		2.58	Si
SLV 2	4.82	21123.76	-45297	-32314	28035	3.68	3.68	-31360	16250	16744	115546	55545	18768	74313		2.65	Si
SLV 2	6.92	-22194.83	-35571	-25376	27017	3.68	3.6481	-24627	16250	16599	115546	55545	18768	74313		2.75	Si
SLD 15	4.82	-9915.31	-37161	-26510	-12984	3.68	3.68	-25727	16250	16744	115546	55545	18768	74313		5.72	Si
SLD 15	6.92	10525.13	-35694	-25463	-12559	3.68	3.68	-24712	16250	16744	115546	55545	18768	74313		5.92	Si
SLV 14	4.82	-24350.94	-32325	-23060	-29132	3.68	3.2601	-25504	16250	14833	115546	55545	18768	74313		2.55	Si
SLV 14	6.92	24792.46	-33440	-23855	-28620	3.68	3.2958	-23151	16250	14996	115546	55545	18768	74313		2.6	Si
SLD 16	4.82	-10003.79	-37148	-26500	-13148	3.68	3.68	-25718	16250	16744	115546	55545	18768	74313		5.65	Si
SLD 16	6.92	10625.18	-35759	-25510	-12722	3.68	3.68	-24757	16250	16744	115546	55545	18768	74313		5.84	Si
SLV 1	4.82	21329.84	-45327	-32335	28415	3.68	3.68	-31381	16250	16744	115546	55545	18768	74313		2.62	Si
SLV 1	6.92	-22427.87	-35421	-25268	27397	3.68	3.6204	-24523	16250	16473	115546	55545	18768	74313		2.71	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 9	-31174	0.38	383.31	3643.94	5169.06	4406.5	11.5	Si
SLV 10	-31271	0.38	383.31	3653.02	5183.22	4418.12	11.53	Si
SLV 5	-31876	0.38	383.31	3709.41	5271.62	4490.51	11.72	Si
SLV 6	-31973	0.38	383.31	3718.39	5285.79	4502.09	11.75	Si
SLV 13	-33647	0.38	383.31	3871.28	5529.4	4700.34	12.26	Si
SLV 14	-33797	0.38	383.31	3884.85	5551.06	4717.96	12.31	Si
SLV 1	-35986	0.38	383.31	4078.08	5865.53	4971.8	12.97	Si
SLV 2	-36137	0.38	383.31	4091.13	5887.2	4989.16	13.02	Si
SLV 15	-36491	0.38	383.31	4121.59	5938.02	5029.81	13.12	Si
SLV 16	-36642	0.38	383.31	4134.53	5959.69	5047.11	13.17	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-35455	-44095	770	0.557	4120.7	0.963	8.40884	12.69956	No
SLV 7	-35370	-44115	770	0.558	4112	0.963	8.42656	12.69956	No
SLV 12	-33100	-40204	980	0.585	3881.1	0.961	8.84668	12.69956	No
SLV 11	-33015	-40224	980	0.586	3872.4	0.961	8.86665	12.69956	No
SLV 6	-27474	-38967	-974	0.685	3309	0.955	10.42466	12.69956	No
SLV 5	-27389	-38987	-974	0.687	3300.4	0.955	10.45318	12.69956	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-25118	-35076	-764	0.746	3069.8	0.952	11.38917	12.69956	No
SLV 9	-25033	-35096	-764	0.748	3061.1	0.951	11.42316	12.69956	No
SLV 4	-35433	-46835	-85	0.575	4118.4	0.963	8.68072	6.60165	Si
SLV 3	-35301	-46866	-85	0.577	4104.9	0.963	8.7096	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	53.862	SLU 26	Si
V_SLU	48.587	SLU 72	Si
PF_SLV	2.219	SLV 14	Si
V_SLV	2.493	SLV 16	Si
PFFP_SLV	11.496	SLV 9	Si
R_SLV	0.662	SLV 8	No

Maschio 96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-14.163	1.006	L5	L6	1.9	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 62	4.82	225.29	-26552	-0.0000752	0.0004492	0.0035	1.9	14921.02	19807.28	19807.28	87.92	No	Si
SLU 62	7.32	-1387.17	-20767	-0.0000687	0.0004492	0.0035	1.9	13425.76	17913.36	17913.36	12.91	No	Si
SLU 59	4.82	141.83	-26065	-0.0000729	0.0004492	0.0035	1.9	14832.77	19550.41	19550.41	137.85	No	Si
SLU 59	7.32	-1314.81	-20141	-0.0000662	0.0004492	0.0035	1.9	13205.35	17523.48	17523.48	13.33	No	Si
SLU 54	4.82	150.69	-25954	-0.0000727	0.0004492	0.0035	1.9	14811.82	19492.22	19492.22	129.35	No	Si
SLU 54	7.32	-1310.46	-20105	-0.0000661	0.0004492	0.0035	1.9	13192.41	17501.21	17501.21	13.36	No	Si
SLU 57	4.82	131.11	-26431	-0.0000739	0.0004492	0.0035	1.9	14899.73	19743.42	19743.42	150.58	No	Si
SLU 57	7.32	-1328.11	-20498	-0.0000674	0.0004492	0.0035	1.9	13332.43	17745.79	17745.79	13.36	No	Si
SLU 63	4.82	232.59	-26520	-0.0000751	0.0004492	0.0035	1.9	14915.39	19790.27	19790.27	85.09	No	Si
SLU 63	7.32	-1387.46	-20720	-0.0000686	0.0004492	0.0035	1.9	13409.65	17884.15	17884.15	12.89	No	Si
SLU 52	4.82	185.85	-25090	-0.0000704	0.0004492	0.0035	1.9	14635.45	19036.66	19036.66	102.43	No	Si
SLU 52	7.32	-1279.71	-19324	-0.0000635	0.0004492	0.0035	1.9	12900.58	17014.86	17014.86	13.3	No	Si
SLU 58	4.82	134.53	-26097	-0.0000729	0.0004492	0.0035	1.9	14838.83	19567.42	19567.42	145.46	No	Si
SLU 58	7.32	-1314.53	-20188	-0.0000664	0.0004492	0.0035	1.9	13222.25	17552.69	17552.69	13.35	No	Si
SLU 61	4.82	252.17	-26043	-0.0000739	0.0004492	0.0035	1.9	14828.72	19539.06	19539.06	77.48	No	Si
SLU 61	7.32	-1369.81	-20327	-0.0000673	0.0004492	0.0035	1.9	13272.18	17639.58	17639.58	12.88	No	Si
SLU 55	4.82	166.27	-25566	-0.0000717	0.0004492	0.0035	1.9	14735.4	19287.86	19287.86	116	No	Si
SLU 55	7.32	-1297.36	-19717	-0.0000648	0.0004492	0.0035	1.9	13049.56	17259.44	17259.44	13.3	No	Si
SLU 60	4.82	244.87	-26075	-0.0000739	0.0004492	0.0035	1.9	14834.8	19556.08	19556.08	79.86	No	Si
SLU 60	7.32	-1369.52	-20374	-0.0000674	0.0004492	0.0035	1.9	13288.83	17668.78	17668.78	12.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	4.82	-13496.89	-20394	-0.0002675	0.0006738	0.0035	1.52		18465.98	18465.98	1.37		Si
SLV 16	7.32	8178.78	-7366	-0.0069004	0.0006738	0.0035	1.52		7011.76	7011.76	0.86		No
SLV 1	4.82	13396.51	-18568	-0.0003196	0.0006738	0.0035	1.9		15597.81	15597.81	1.16		Si
SLV 1	7.32	-9998.29	-22760	-0.0001579	0.0006738	0.0035	1.9		20103.43	20103.43	2.01		Si
SLV 7	4.82	5540.33	-13491	-0.0000848	0.0006738	0.0035	1.9		12032.28	12032.28	2.17		Si
SLV 7	7.32	-2968.06	-9128	-0.0000485	0.0006738	0.0035	1.9		9848.68	9848.68	3.32		Si
SLV 14	4.82	-14348.83	-23543	-0.000261	0.0006738	0.0035	1.52		20620.02	20620.02	1.44		Si
SLV 14	7.32	7809.44	-11906	-0.0001421	0.0006738	0.0035	1.9		10774.92	10774.92	1.38		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	4.82	5507.24	-13475	-0.0000844	0.0006738	0.0035	1.9		12019.94	12019.94	2.18		Si
SLV 8	7.32	-2957.89	-9109	-0.0000484	0.0006738	0.0035	1.9		9833.03	9833.03	3.32		Si
SLV 13	4.82	-14297.34	-23568	-0.0002588	0.0006738	0.0035	1.52		20636.16	20636.16	1.44		Si
SLV 13	7.32	7793.61	-11935	-0.000141	0.0006738	0.0035	1.9		10797.84	10797.84	1.39		Si
SLV 3	4.82	14248.44	-15419	-0.0065928	0.0006738	0.0035	1.9		13427.7	13427.7	0.94		No
SLV 3	7.32	-9628.95	-18219	-0.0001526	0.0006738	0.0035	1.52		16914.67	16914.67	1.76		Si
SLV 2	4.82	13345.02	-18544	-0.0003159	0.0006738	0.0035	1.9		15580.94	15580.94	1.17		Si
SLV 2	7.32	-9982.47	-22731	-0.0001577	0.0006738	0.0035	1.9		20084.5	20084.5	2.01		Si
SLV 15	4.82	-13445.41	-20419	-0.0002643	0.0006738	0.0035	1.52		18483.05	18483.05	1.37		Si
SLV 15	7.32	8162.96	-7394	-0.0067819	0.0006738	0.0035	1.52		7036.28	7036.28	0.86		No
SLV 4	4.82	14196.96	-15395	-0.0064855	0.0006738	0.0035	1.9		13410.83	13410.83	0.94		No
SLV 4	7.32	-9613.13	-18190	-0.0001524	0.0006738	0.0035	1.52		16893.57	16893.57	1.76		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	4.82	-44.95	-28155	-20085	-683	1.9	1.9	-37754	10833	5763	115546	19119	9690	28809	No	42.19	Si
SLU 74	7.32	-1360.41	-22398	-15978	1221	1.9	1.9	-30034	10833	5763	115546	19119	9690	28809	No	23.6	Si
SLU 81	4.82	56.53	-28244	-20149	-591	1.9	1.9	-37873	10833	5763	115546	19119	9690	28809	No	48.77	Si
SLU 81	7.32	-1419.76	-22620	-16137	1297	1.9	1.9	-30332	10833	5763	115546	19119	9690	28809	No	22.21	Si
SLU 83	4.82	36.95	-28721	-20489	-625	1.9	1.9	-38513	10833	5763	115546	19119	9690	28809	No	46.1	Si
SLU 83	7.32	-1437.41	-23013	-16417	1309	1.9	1.9	-30858	10833	5763	115546	19119	9690	28809	No	22.01	Si
SLU 79	4.82	-53.81	-28266	-20164	-707	1.9	1.9	-37902	10833	5763	115546	19119	9690	28809	No	40.76	Si
SLU 79	7.32	-1364.77	-22434	-16004	1215	1.9	1.9	-30082	10833	5763	115546	19119	9690	28809	No	23.71	Si
SLU 75	4.82	-37.65	-28123	-20062	-682	1.9	1.9	-37711	10833	5763	115546	19119	9690	28809	No	42.27	Si
SLU 75	7.32	-1360.7	-22351	-15945	1219	1.9	1.9	-29971	10833	5763	115546	19119	9690	28809	No	23.63	Si
SLU 84	4.82	44.25	-28688	-20466	-624	1.9	1.9	-38469	10833	5763	115546	19119	9690	28809	No	46.19	Si
SLU 84	7.32	-1437.7	-22966	-16383	1307	1.9	1.9	-30796	10833	5763	115546	19119	9690	28809	No	22.04	Si
SLU 82	4.82	63.83	-28212	-20126	-590	1.9	1.9	-37830	10833	5763	115546	19119	9690	28809	No	48.87	Si
SLU 82	7.32	-1420.05	-22573	-16103	1295	1.9	1.9	-30269	10833	5763	115546	19119	9690	28809	No	22.24	Si
SLU 78	4.82	-57.22	-28600	-20402	-716	1.9	1.9	-38350	10833	5763	115546	19119	9690	28809	No	40.25	Si
SLU 78	7.32	-1378.35	-22744	-16225	1231	1.9	1.9	-30498	10833	5763	115546	19119	9690	28809	No	23.4	Si
SLU 77	4.82	-64.53	-28632	-20425	-717	1.9	1.9	-38393	10833	5763	115546	19119	9690	28809	No	40.18	Si
SLU 77	7.32	-1378.06	-22791	-16258	1233	1.9	1.9	-30561	10833	5763	115546	19119	9690	28809	No	23.37	Si
SLU 80	4.82	-46.51	-28233	-20141	-706	1.9	1.9	-37859	10833	5763	115546	19119	9690	28809	No	40.83	Si
SLU 80	7.32	-1365.05	-22387	-15970	1214	1.9	1.9	-30019	10833	5763	115546	19119	9690	28809	No	23.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	4.82	-13496.89	-20394	-14549	-12917	1.52	0.8646	0	0	0	115546	22942	7752	30694		2.38	Si
SLV 16	7.32	8178.78	-7366	-5254	-9176	1.52	0	0	0	0	115546	22942	7752	30694		3.35	Si
SLV 13	4.82	-14297.34	-23568	-16813	-12901	1.52	1.0301	0	0	0	115546	22942	7752	30694		2.38	Si
SLV 13	7.32	7793.61	-11935	-8514	-8679	1.9	0.891	-16004	15701	3917	115546	28678	9690	38368		4.42	Si
SLD 14	4.82	-6159.61	-21240	-15152	-5817	1.9	1.9	-28481	16250	8645	115546	28678	9690	38368		6.6	Si
SLD 14	7.32	2812.09	-13746	-9806	-3278	1.9	1.9	-18432	16186	8611	115546	28678	9690	38368		11.7	Si
SLV 1	4.82	13396.51	-18568	-13246	11891	1.9	0.6856	-24899	16250	3119	115546	28678	9690	38368		3.23	Si
SLV 1	7.32	-9998.29	-22760	-16236	10684	1.9	1.5321	-38559	16250	6971	115546	28678	9690	38368		3.59	Si
SLV 15	4.82	-13445.41	-20419	-14566	-12881	1.52	0.8746	0	0	0	115546	22942	7752	30694		2.38	Si
SLV 15	7.32	8162.96	-7394	-5275	-9166	1.52	0	0	0	0	115546	22942	7752	30694		3.35	Si
SLV 4	4.82	14196.96	-15395	-10982	11876	1.9	0.0834	-231806	16250	380	115546	28678	9690	38368		3.23	Si
SLV 4	7.32	-9613.13	-18190	-12977	10186	1.52	1.2646	0	0	0	115546	22942	7752	30694		3.01	Si
SLV 2	4.82	13345.02	-18544	-13229	11856	1.9	0.6911	-24866	16250	3144	115546	28678	9690	38368		3.24	Si
SLV 2	7.32	-9982.47	-22731	-16216	10674	1.9	1.5325	-38498	16250	6973	115546	28678	9690	38368		3.59	Si
SLD 16	4.82	-5789.36	-19849	-14160	-5812	1.9	1.9	-26616	16250	8645	115546	28678	9690	38368		6.6	Si
SLD 16	7.32	2974.7	-11741	-8376	-3489	1.9	1.9	-15744	15649	8325	115546	28678	9690	38368		11	Si
SLV 3	4.82	14248.44	-15419	-11000	11912	1.9	0.0778	-233682	16250	354	115546	28678	9690	38368		3.22	Si
SLV 3	7.32	-9628.95	-18219	-12997	10196	1.52	1.2645	0	0	0	115546	22942	7752	30694		3.01	Si
SLV 14	4.82	-14348.83	-23543	-16795	-12937	1.52	1.0216	0	0	0	115546	22942	7752	30694		2.37	Si
SLV 14	7.32	7809.44	-11906	-8494	-8689	1.9	0.8823	-15966	15693	3877	115546	28678	9690	38368		4.42	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-9675	0.38	197.9	1220.14	1703.6	1461.87	7.39	Si
SLV 7	-9683	0.38	197.9	1220.95	1704.68	1462.82	7.39	Si
SLV 12	-9984	0.38	197.9	1254.63	1750	1502.32	7.59	Si
SLV 11	-9991	0.38	197.9	1255.43	1751.09	1503.26	7.6	Si
SLV 4	-14609	0.38	197.9	1738.84	2440.54	2089.69	10.56	Si
SLV 3	-14620	0.38	197.9	1739.94	2442.19	2091.06	10.57	Si
SLV 16	-15638	0.38	197.9	1838.15	2591.62	2214.89	11.19	Si
SLV 15	-15649	0.38	197.9	1839.22	2593.27	2216.24	11.2	Si
SLV 2	-19148	0.38	197.9	2154.32	3102.02	2628.17	13.28	Si
SLV 1	-19160	0.38	197.9	2155.27	3103.64	2629.45	13.29	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-21345	-23988	-236	0.496	2436.8	0.967	7.4506	12.69956	No
SLV 9	-21524	-25488	-150	0.496	2455	0.967	7.45192	12.69956	No
SLV 6	-21330	-23972	-236	0.496	2435.3	0.967	7.45516	12.69956	No
SLV 10	-21509	-25472	-150	0.496	2453.5	0.967	7.45644	12.69956	No
SLV 13	-16559	-23568	92	0.623	1949.9	0.96	9.43962	6.60165	Si
SLV 14	-16536	-23543	92	0.624	1947.5	0.96	9.45136	6.60165	Si
SLV 1	-15963	-18568	-196	0.637	1889.2	0.959	9.66024	6.60165	Si
SLV 2	-15940	-18544	-196	0.638	1886.9	0.959	9.67257	6.60165	Si
SLV 11	-6732	-14991	252	1.286	953.5	0.926	20.18196	12.69956	Si
SLV 12	-6717	-14975	252	1.288	952	0.926	20.21873	12.69956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.877	SLU 61	Si
V_SLU	22.011	SLU 83	Si
PF_SLV	0.857	SLV 16	No
V_SLV	2.373	SLV 14	Si
PFFP_SLV	7.387	SLV 8	Si
R_SLV	0.587	SLV 5	No

Maschio 97

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.478	1.006	-11.143	1.006	L5	L6	0.665	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 57	4.82	-180.66	-11666	-0.0001086	0.0004492	0.0035	0.6647	1888.2	2923.74	2923.74	16.18	No	Si
SLU 57	7.32	98.14	-10279	-0.0000893	0.0004492	0.0035	0.6647	1872.07	2607.94	2607.94	26.57	No	Si
SLU 61	4.82	-180.86	-11522	-0.0001072	0.0004492	0.0035	0.6647	1889.14	2901.61	2901.61	16.04	No	Si
SLU 61	7.32	95.74	-10243	-0.0000888	0.0004492	0.0035	0.6647	1870.9	2601.35	2601.35	27.17	No	Si
SLU 55	4.82	-176.74	-11301	-0.0001049	0.0004492	0.0035	0.6647	1889.4	2867.57	2867.57	16.22	No	Si
SLU 55	7.32	95.82	-9910	-0.0000859	0.0004492	0.0035	0.6647	1858.29	2540.36	2540.36	26.51	No	Si
SLU 59	4.82	-180.08	-11528	-0.0001072	0.0004492	0.0035	0.6647	1889.11	2902.52	2902.52	16.12	No	Si
SLU 59	7.32	98.3	-10120	-0.0000879	0.0004492	0.0035	0.6647	1866.63	2578.88	2578.88	26.23	No	Si
SLU 60	4.82	-180.78	-11538	-0.0001074	0.0004492	0.0035	0.6647	1889.06	2904.06	2904.06	16.06	No	Si
SLU 60	7.32	95.95	-10266	-0.000089	0.0004492	0.0035	0.6647	1871.65	2605.56	2605.56	27.16	No	Si
SLU 62	4.82	-184.18	-11755	-0.0001097	0.0004492	0.0035	0.6647	1887.32	2937.38	2937.38	15.95	No	Si
SLU 62	7.32	98.29	-10461	-0.0000909	0.0004492	0.0035	0.6647	1877.4	2641.27	2641.27	26.87	No	Si
SLU 58	4.82	-180	-11544	-0.0001074	0.0004492	0.0035	0.6647	1889.03	2904.98	2904.98	16.14	No	Si
SLU 58	7.32	98.5	-10143	-0.0000881	0.0004492	0.0035	0.6647	1867.47	2583.09	2583.09	26.22	No	Si
SLU 63	4.82	-184.26	-11739	-0.0001095	0.0004492	0.0035	0.6647	1887.49	2934.92	2934.92	15.93	No	Si
SLU 63	7.32	98.09	-10438	-0.0000907	0.0004492	0.0035	0.6647	1876.78	2637.06	2637.06	26.88	No	Si
SLU 54	4.82	-177.26	-11450	-0.0001063	0.0004492	0.0035	0.6647	1889.38	2890.43	2890.43	16.31	No	Si
SLU 54	7.32	95.8	-10084	-0.0000874	0.0004492	0.0035	0.6647	1865.28	2572.22	2572.22	26.85	No	Si
SLU 56	4.82	-180.58	-11682	-0.0001087	0.0004492	0.0035	0.6647	1888.06	2926.2	2926.2	16.2	No	Si
SLU 56	7.32	98.35	-10302	-0.0000895	0.0004492	0.0035	0.6647	1872.79	2612.15	2612.15	26.56	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	4.82	2462.11	-3827	-0.0292953	0.0006738	0.0035	0.5318		1228.65	1228.65	0.5		No
SLV 4	7.32	-2517.79	-4928	-0.0079523	0.0006738	0.0035	0.5318		1634.95	1634.95	0.65		No
SLV 1	4.82	2460.99	-5806	-0.0197205	0.0006738	0.0035	0.5318		1750.88	1750.88	0.71		No
SLV 1	7.32	-2536.14	-7257	-0.0053671	0.0006738	0.0035	0.5318		2236.85	2236.85	0.88		No
SLV 3	4.82	2469.89	-3812	-0.0295115	0.0006738	0.0035	0.5318		1224.43	1224.43	0.5		No
SLV 3	7.32	-2525.46	-4884	-0.0080343	0.0006738	0.0035	0.5318		1623.18	1623.18	0.64		No
SLV 2	4.82	2453.2	-5821	-0.0194826	0.0006738	0.0035	0.5318		1754.45	1754.45	0.72		No
SLV 2	7.32	-2528.48	-7301	-0.0052489	0.0006738	0.0035	0.5318		2247.61	2247.61	0.89		No
SLV 11	4.82	-870.33	-6288	-0.0001115	0.0006738	0.0035	0.6647		1993.48	1993.48	2.29		Si
SLV 11	7.32	839.43	-4117	-0.0001104	0.0006738	0.0035	0.6647		1311.02	1311.02	1.56		Si
SLV 12	4.82	-875.33	-6297	-0.0001121	0.0006738	0.0035	0.6647		1995.93	1995.93	2.28		Si
SLV 12	7.32	844.35	-4146	-0.000111	0.0006738	0.0035	0.6647		1319.04	1319.04	1.56		Si
SLV 15	4.82	-2682.76	-11196	-0.000565	0.0006738	0.0035	0.5318		3115.82	3115.82	1.16		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	7.32	2630	-7952	-0.0110245	0.0006738	0.0035	0.5318		2264.17	2264.17	0.86		No
SLV 14	4.82	-2699.45	-13205	-0.0004422	0.0006738	0.0035	0.5318		3463.75	3463.75	1.28		Si
SLV 14	7.32	2626.98	-10369	-0.0006788	0.0006738	0.0035	0.6647		2832.45	2832.45	1.08		Si
SLV 16	4.82	-2690.54	-11211	-0.0005705	0.0006738	0.0035	0.5318		3118.78	3118.78	1.16		Si
SLV 16	7.32	2637.67	-7996	-0.0109295	0.0006738	0.0035	0.5318		2274.7	2274.7	0.86		No
SLV 13	4.82	-2691.66	-13190	-0.0004396	0.0006738	0.0035	0.5318		3461.37	3461.37	1.29		Si
SLV 13	7.32	2619.32	-10325	-0.0006788	0.0006738	0.0035	0.6647		2824.25	2824.25	1.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	4.82	-155.51	-10115	-7216	-132	0.6647	0.6647	-38772	10833	2016	115546	6689	3390	10078	No	76.18	Si
SLU 43	7.32	88.84	-8555	-6103	-128	0.6647	0.6647	-32792	10833	2016	115546	6689	3390	10078	No	78.46	Si
SLU 51	4.82	-162.4	-10532	-7513	-141	0.6647	0.6647	-40369	10833	2016	115546	6689	3390	10078	No	71.54	Si
SLU 51	7.32	93.33	-8923	-6365	-137	0.6647	0.6647	-34200	10833	2016	115546	6689	3390	10078	No	73.79	Si
SLU 50	4.82	-162.31	-10548	-7525	-140	0.6647	0.6647	-40431	10833	2016	115546	6689	3390	10078	No	71.79	Si
SLU 50	7.32	93.53	-8946	-6382	-136	0.6647	0.6647	-34289	10833	2016	115546	6689	3390	10078	No	74.07	Si
SLU 47	4.82	-159.05	-10305	-7351	-137	0.6647	0.6647	-39499	10833	2016	115546	6689	3390	10078	No	73.47	Si
SLU 47	7.32	90.85	-8712	-6215	-133	0.6647	0.6647	-33393	10833	2016	115546	6689	3390	10078	No	75.72	Si
SLU 48	4.82	-162.89	-10686	-7623	-139	0.6647	0.6647	-40959	10833	2016	115546	6689	3390	10078	No	72.51	Si
SLU 48	7.32	93.37	-9104	-6495	-134	0.6647	0.6647	-34897	10833	2016	115546	6689	3390	10078	No	74.93	Si
SLU 46	4.82	-159.58	-10454	-7457	-135	0.6647	0.6647	-40068	10833	2016	115546	6689	3390	10078	No	74.4	Si
SLU 46	7.32	90.83	-8886	-6339	-131	0.6647	0.6647	-34061	10833	2016	115546	6689	3390	10078	No	76.82	Si
SLU 49	4.82	-162.98	-10670	-7612	-140	0.6647	0.6647	-40898	10833	2016	115546	6689	3390	10078	No	72.25	Si
SLU 49	7.32	93.17	-9081	-6479	-135	0.6647	0.6647	-34809	10833	2016	115546	6689	3390	10078	No	74.65	Si
SLU 45	4.82	-159.49	-10470	-7469	-135	0.6647	0.6647	-40130	10833	2016	115546	6689	3390	10078	No	74.68	Si
SLU 45	7.32	91.03	-8909	-6356	-131	0.6647	0.6647	-34149	10833	2016	115546	6689	3390	10078	No	77.12	Si
SLU 59	4.82	-180.08	-11528	-8224	-124	0.6647	0.6647	-44187	10833	2016	115546	6689	3390	10078	No	81.28	Si
SLU 59	7.32	98.3	-10120	-7220	-133	0.6647	0.6647	-38791	10833	2016	115546	6689	3390	10078	No	76.06	Si
SLU 44	4.82	-155.65	-10089	-7197	-133	0.6647	0.6647	-38670	10833	2016	115546	6689	3390	10078	No	75.71	Si
SLU 44	7.32	88.51	-8517	-6076	-129	0.6647	0.6647	-32645	10833	2016	115546	6689	3390	10078	No	77.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	4.82	2460.99	-5806	-4142	2295	0.5318	0	0	0	0	115546	8026	2712	10738		4.68	Si
SLV 1	7.32	-2536.14	-7257	-5177	1947	0.5318	0	0	0	0	115546	8026	2712	10738		5.51	Si
SLV 16	4.82	-2690.54	-11211	-7998	-2422	0.5318	0.2771	0	0	0	115546	8026	2712	10738		4.43	Si
SLV 16	7.32	2637.67	-7996	-5704	-2076	0.5318	0.0074	0	0	0	115546	8026	2712	10738		5.17	Si
SLV 4	4.82	2462.11	-3827	-2730	2285	0.5318	0	0	0	0	115546	8026	2712	10738		4.7	Si
SLV 4	7.32	-2517.79	-4928	-3516	1946	0.5318	0	0	0	0	115546	8026	2712	10738		5.52	Si
SLV 15	4.82	-2682.76	-11196	-7987	-2418	0.5318	0.2782	0	0	0	115546	8026	2712	10738		4.44	Si
SLV 15	7.32	2630	-7952	-5673	-2072	0.5318	0.0048	0	0	0	115546	8026	2712	10738		5.18	Si
SLD 16	4.82	-1215.46	-9649	-6883	-1071	0.6647	0.6191	-36984	16250	2817	115546	10033	3390	13423		12.53	Si
SLD 16	7.32	1156.15	-7767	-5541	-924	0.6647	0.5505	-29770	16250	2505	115546	10033	3390	13423		14.52	Si
SLD 15	4.82	-1212.11	-9642	-6879	-1070	0.6647	0.6199	-36959	16250	2821	115546	10033	3390	13423		12.55	Si
SLD 15	7.32	1152.86	-7748	-5527	-922	0.6647	0.5507	-29698	16250	2506	115546	10033	3390	13423		14.55	Si
SLV 14	4.82	-2699.45	-13205	-9420	-2416	0.5318	0.3838	0	0	0	115546	8026	2712	10738		4.44	Si
SLV 14	7.32	2626.98	-10369	-7397	-2079	0.6647	0.237	-123763	16250	1078	115546	10033	3390	13423		6.46	Si
SLV 3	4.82	2469.89	-3812	-2719	2289	0.5318	0	0	0	0	115546	8026	2712	10738		4.69	Si
SLV 3	7.32	-2525.46	-4884	-3484	1950	0.5318	0	0	0	0	115546	8026	2712	10738		5.51	Si
SLV 13	4.82	-2691.66	-13190	-9409	-2412	0.5318	0.3848	0	0	0	115546	8026	2712	10738		4.45	Si
SLV 13	7.32	2619.32	-10325	-7365	-2075	0.6647	0.236	-123767	16250	1074	115546	10033	3390	13423		6.47	Si
SLV 2	4.82	2453.2	-5821	-4153	2291	0.5318	0	0	0	0	115546	8026	2712	10738		4.69	Si
SLV 2	7.32	-2528.48	-7301	-5208	1943	0.5318	0	0	0	0	115546	8026	2712	10738		5.53	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-3402	0.38	69.23	428.82	579.08	503.95	7.28	Si
SLV 8	-3423	0.38	69.23	431.15	582.21	506.68	7.32	Si
SLV 11	-4389	0.38	69.23	535.37	727.35	631.36	9.12	Si
SLV 12	-4409	0.38	69.23	537.53	730.45	633.99	9.16	Si
SLV 3	-4783	0.38	69.23	575.78	786.16	680.97	9.84	Si
SLV 4	-4816	0.38	69.23	579.03	790.97	685	9.89	Si
SLV 1	-6959	0.38	69.23	775.47	1104.66	940.07	13.58	Si
SLV 2	-6991	0.38	69.23	778.14	1109.33	943.74	13.63	Si
SLV 15	-8071	0.38	69.23	862.61	1265.38	1063.99	15.37	Si
SLV 16	-8104	0.38	69.23	864.99	1270.04	1067.51	15.42	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-8072	-12944	6	0.473	914.1	0.969	7.09052	12.69956	No
SLV 9	-8038	-12935	6	0.475	910.6	0.969	7.11684	12.69956	No
SLV 6	-7345	-10729	-27	0.51	840.1	0.967	7.66529	12.69956	No
SLV 5	-7311	-10720	-27	0.512	836.6	0.967	7.69629	12.69956	No
SLV 14	-6519	-13205	53	0.561	756	0.963	8.45981	6.60165	Si
SLV 13	-6467	-13190	53	0.565	750.6	0.963	8.52064	6.60165	Si
SLV 16	-4453	-11211	62	0.773	545.9	0.951	11.80734	6.60165	Si
SLV 15	-4400	-11196	62	0.78	540.6	0.95	11.93081	6.60165	Si
SLV 2	-4096	-5821	-54	0.83	509.7	0.948	12.72664	6.60165	Si
SLV 1	-4043	-5806	-55	0.839	504.4	0.947	12.86988	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.928	SLU 63	Si
V_SLU	71.537	SLU 51	Si
PF_SLV	0.496	SLV 3	No
V_SLV	4.434	SLV 16	Si
PFFP_SLV	7.279	SLV 7	Si
R_SLV	0.558	SLV 10	No

Maschio 98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L5	L6	1.935	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	4.82	2837.54	-36422	-0.0001294	0.0004492	0.0035	1.9353	15856.76	25275.97	25275.97	8.91	No	Si
SLU 78	7.32	1663.47	-29233	-0.0000949	0.0004492	0.0035	1.9353	15798.32	21722.89	21722.89	13.06	No	Si
SLU 69	4.82	2707.48	-33156	-0.0001173	0.0004492	0.0035	1.9353	16017.45	23824.37	23824.37	8.8	No	Si
SLU 69	7.32	1457.23	-26232	-0.0000839	0.0004492	0.0035	1.9353	15326.88	20114.57	20114.57	13.8	No	Si
SLU 65	4.82	2618.35	-31460	-0.000111	0.0004492	0.0035	1.9353	15977.9	22915.96	22915.96	8.75	No	Si
SLU 65	7.32	1358.91	-24696	-0.0000784	0.0004492	0.0035	1.9353	14983.79	19291.61	19291.61	14.2	No	Si
SLU 64	4.82	2616.21	-31508	-0.0001111	0.0004492	0.0035	1.9353	15980.16	22941.58	22941.58	8.77	No	Si
SLU 64	7.32	1367.35	-24743	-0.0000786	0.0004492	0.0035	1.9353	14995.44	19317.07	19317.07	14.13	No	Si
SLU 71	4.82	2682.27	-32699	-0.0001156	0.0004492	0.0035	1.9353	16015.07	23579.97	23579.97	8.79	No	Si
SLU 71	7.32	1437.58	-25814	-0.0000825	0.0004492	0.0035	1.9353	15240.43	19890.83	19890.83	13.84	No	Si
SLU 68	4.82	2651.37	-32056	-0.0001132	0.0004492	0.0035	1.9353	16001.37	23235.16	23235.16	8.76	No	Si
SLU 68	7.32	1394.02	-25231	-0.0000803	0.0004492	0.0035	1.9353	15111.22	19578.49	19578.49	14.04	No	Si
SLU 72	4.82	2683.55	-32671	-0.0001155	0.0004492	0.0035	1.9353	16014.71	23564.6	23564.6	8.78	No	Si
SLU 72	7.32	1432.51	-25786	-0.0000823	0.0004492	0.0035	1.9353	15234.34	19875.55	19875.55	13.87	No	Si
SLU 67	4.82	2675.73	-32531	-0.000115	0.0004492	0.0035	1.9353	16012.65	23489.8	23489.8	8.78	No	Si
SLU 67	7.32	1417.05	-25668	-0.0000818	0.0004492	0.0035	1.9353	15208.93	19812.41	19812.41	13.98	No	Si
SLU 66	4.82	2674.45	-32560	-0.0001151	0.0004492	0.0035	1.9353	16013.12	23505.17	23505.17	8.79	No	Si
SLU 66	7.32	1422.12	-25696	-0.000082	0.0004492	0.0035	1.9353	15215.11	19827.69	19827.69	13.94	No	Si
SLU 70	4.82	2708.76	-33127	-0.0001173	0.0004492	0.0035	1.9353	16017.47	23809	23809	8.79	No	Si
SLU 70	7.32	1452.16	-26203	-0.0000838	0.0004492	0.0035	1.9353	15321.14	20099.29	20099.29	13.84	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	4.82	14272.25	-33284	-0.0002289	0.0006738	0.0035	1.9353		25662.72	25662.72	1.8		Si
SLV 1	7.32	-5328.42	-22294	-0.0001035	0.0006738	0.0035	1.9353		20439.09	20439.09	3.84		Si
SLV 15	4.82	-10270.58	-15419	-0.0001831	0.0006738	0.0035	1.5482		15386.17	15386.17	1.5		Si
SLV 15	7.32	7509.68	-16034	-0.0001106	0.0006738	0.0035	1.9353		14148.2	14148.2	1.88		Si
SLV 13	4.82	-10128.61	-18884	-0.0001548	0.0006738	0.0035	1.9353		18000.3	18000.3	1.78		Si
SLV 13	7.32	7970.71	-19107	-0.0001202	0.0006738	0.0035	1.9353		16305.43	16305.43	2.05		Si
SLD 3	4.82	7155.6	-26689	-0.0001325	0.0006738	0.0035	1.9353		21626.5	21626.5	3.02		Si
SLD 3	7.32	-1842.51	-19200	-0.0000651	0.0006738	0.0035	1.9353		18233.55	18233.55	9.9		Si
SLV 16	4.82	-10363.53	-15501	-0.0001858	0.0006738	0.0035	1.5482		15450.14	15450.14	1.49		Si
SLV 16	7.32	7542.11	-16150	-0.0001111	0.0006738	0.0035	1.9353		14229.55	14229.55	1.89		Si
SLV 14	4.82	-10221.56	-18966	-0.0001566	0.0006738	0.0035	1.5482		18060.96	18060.96	1.77		Si
SLV 14	7.32	8003.14	-19223	-0.0001208	0.0006738	0.0035	1.9353		16386.78	16386.78	2.05		Si
SLV 3	4.82	14130.29	-29819	-0.000223	0.0006738	0.0035	1.9353		23774.07	23774.07	1.68		Si
SLV 3	7.32	-5789.45	-19220	-0.0000986	0.0006738	0.0035	1.9353		18248.28	18248.28	3.15		Si
SLV 4	4.82	14037.34	-29901	-0.0002214	0.0006738	0.0035	1.9353		23818.87	23818.87	1.7		Si
SLV 4	7.32	-5757.02	-19336	-0.0000986	0.0006738	0.0035	1.9353		18333.82	18333.82	3.18		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	4.82	7115.69	-26725	-0.0001323	0.0006738	0.0035	1.9353		21651.27	21651.27	3.04		Si
SLD 4	7.32	-1828.59	-19250	-0.0000652	0.0006738	0.0035	1.9353		18270.28	18270.28	9.99		Si
SLV 2	4.82	14179.31	-33366	-0.0002277	0.0006738	0.0035	1.9353		25707.52	25707.52	1.81		Si
SLV 2	7.32	-5295.99	-22410	-0.0001036	0.0006738	0.0035	1.9353		20519.95	20519.95	3.87		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	4.82	2803.23	-35855	-25578	2251	1.9353	1.9353	-47202	10833	5870	115546	19474	9870	29344	No	13.03	Si
SLU 74	7.32	1633.42	-28726	-20493	-419	1.9353	1.9353	-37818	10833	5870	115546	19474	9870	29344	No	70.05	Si
SLU 77	4.82	2836.26	-36451	-26003	2278	1.9353	1.9353	-47986	10833	5870	115546	19474	9870	29344	No	12.88	Si
SLU 77	7.32	1668.54	-29262	-20875	-434	1.9353	1.9353	-38522	10833	5870	115546	19474	9870	29344	No	67.59	Si
SLU 79	4.82	2811.05	-35995	-25678	2259	1.9353	1.9353	-47386	10833	5870	115546	19474	9870	29344	No	12.99	Si
SLU 79	7.32	1648.89	-28844	-20577	-433	1.9353	1.9353	-37973	10833	5870	115546	19474	9870	29344	No	67.78	Si
SLU 83	4.82	2833.21	-36811	-26260	2264	1.9353	1.9353	-48461	10833	5870	115546	19474	9870	29344	No	12.96	Si
SLU 83	7.32	1704.33	-29608	-21121	-408	1.9353	1.9353	-38977	10833	5870	115546	19474	9870	29344	No	71.95	Si
SLU 81	4.82	2800.18	-36215	-25835	2237	1.9353	1.9353	-47677	10833	5870	115546	19474	9870	29344	No	13.12	Si
SLU 81	7.32	1669.22	-29072	-20739	-393	1.9353	1.9353	-38273	10833	5870	115546	19474	9870	29344	No	74.74	Si
SLU 80	4.82	2812.32	-35966	-25657	2262	1.9353	1.9353	-47348	10833	5870	115546	19474	9870	29344	No	12.97	Si
SLU 80	7.32	1643.82	-28816	-20556	-431	1.9353	1.9353	-37935	10833	5870	115546	19474	9870	29344	No	68.05	Si
SLU 84	4.82	2834.48	-36782	-26240	2266	1.9353	1.9353	-48423	10833	5870	115546	19474	9870	29344	No	12.95	Si
SLU 84	7.32	1699.26	-29579	-21101	-406	1.9353	1.9353	-38940	10833	5870	115546	19474	9870	29344	No	72.24	Si
SLU 75	4.82	2804.51	-35826	-25558	2254	1.9353	1.9353	-47164	10833	5870	115546	19474	9870	29344	No	13.02	Si
SLU 75	7.32	1628.36	-28698	-20472	-417	1.9353	1.9353	-37780	10833	5870	115546	19474	9870	29344	No	70.33	Si
SLU 78	4.82	2837.54	-36422	-25983	2281	1.9353	1.9353	-47949	10833	5870	115546	19474	9870	29344	No	12.86	Si
SLU 78	7.32	1663.47	-29233	-20854	-433	1.9353	1.9353	-38485	10833	5870	115546	19474	9870	29344	No	67.85	Si
SLU 82	4.82	2801.46	-36187	-25815	2239	1.9353	1.9353	-47639	10833	5870	115546	19474	9870	29344	No	13.1	Si
SLU 82	7.32	1664.15	-29044	-20719	-391	1.9353	1.9353	-38235	10833	5870	115546	19474	9870	29344	No	75.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	4.82	-10270.58	-15419	-11000	-8813	1.5482	0.9047	0	0	0	115546	23369	7896	31265		3.55	Si
SLV 15	7.32	7509.68	-16034	-11438	-6004	1.9353	1.4979	-21108	16250	6815	115546	29211	9870	39081		6.51	Si
SLV 2	4.82	14179.31	-33366	-23802	11983	1.9353	1.6281	-43925	16250	7408	115546	29211	9870	39081		3.26	Si
SLV 2	7.32	-5295.99	-22410	-15987	5289	1.9353	1.9353	-29502	16250	8806	115546	29211	9870	39081		7.39	Si
SLD 3	4.82	7155.6	-26689	-19040	6088	1.9353	1.9353	-35136	16250	8806	115546	29211	9870	39081		6.42	Si
SLD 3	7.32	-1842.51	-19200	-13697	2122	1.9353	1.9353	-25277	16250	8806	115546	29211	9870	39081		18.42	Si
SLD 4	4.82	7115.69	-26725	-19065	6059	1.9353	1.9353	-35182	16250	8806	115546	29211	9870	39081		6.45	Si
SLD 4	7.32	-1828.59	-19250	-13733	2109	1.9353	1.9353	-25342	16250	8806	115546	29211	9870	39081		18.53	Si
SLV 4	4.82	14037.34	-29901	-21331	12055	1.9353	1.4946	-39364	16250	6800	115546	29211	9870	39081		3.24	Si
SLV 4	7.32	-5757.02	-19336	-13794	5417	1.9353	1.9353	-25455	16250	8806	115546	29211	9870	39081		7.21	Si
SLV 1	4.82	14272.25	-33284	-23744	12052	1.9353	1.6165	-43817	16250	7355	115546	29211	9870	39081		3.24	Si
SLV 1	7.32	-5328.42	-22294	-15904	5318	1.9353	1.9353	-29349	16250	8806	115546	29211	9870	39081		7.35	Si
SLV 13	4.82	-10128.61	-18884	-13471	-8885	1.9353	1.2939	-37842	16250	5887	115546	29211	9870	39081		4.4	Si
SLV 13	7.32	7970.71	-19107	-13631	-6132	1.9353	1.6515	-25154	16250	7514	115546	29211	9870	39081		6.37	Si
SLV 3	4.82	14130.29	-29819	-21272	12124	1.9353	1.4813	-39256	16250	6740	115546	29211	9870	39081		3.22	Si
SLV 3	7.32	-5789.45	-19220	-13711	5446	1.9353	1.9353	-25303	16250	8806	115546	29211	9870	39081		7.18	Si
SLV 14	4.82	-10221.56	-18966	-13530	-8953	1.5482	1.2862	0	0	0	115546	23369	7896	31265		3.49	Si
SLV 14	7.32	8003.14	-19223	-13714	-6161	1.9353	1.654	-25307	16250	7526	115546	29211	9870	39081		6.34	Si
SLV 16	4.82	-10363.53	-15501	-11058	-8881	1.5482	0.8973	0	0	0	115546	23369	7896	31265		3.52	Si
SLV 16	7.32	7542.11	-16150	-11521	-6033	1.9353	1.5019	-21261	16250	6834	115546	29211	9870	39081		6.48	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-13794	0.38	201.58	1662.97	2344.91	2003.94	9.94	Si
SLV 16	-13876	0.38	201.58	1671.27	2357.12	2014.19	9.99	Si
SLV 11	-14855	0.38	201.58	1768.6	2502.19	2135.4	10.59	Si
SLV 12	-14907	0.38	201.58	1773.78	2509.96	2141.87	10.63	Si
SLV 13	-17198	0.38	201.58	1990.83	2846.19	2418.51	12	Si
SLV 14	-17281	0.38	201.58	1998.34	2858.26	2428.3	12.05	Si
SLV 7	-19155	0.38	201.58	2164.5	3128.89	2646.69	13.13	Si
SLV 8	-19208	0.38	201.58	2169.04	3136.5	2652.77	13.16	Si
SLV 9	-26202	0.38	201.58	2700.5	4128.21	3414.35	16.94	Si
SLV 10	-26255	0.38	201.58	2703.99	4135.5	3419.74	16.96	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-21121	-32354	-728	0.487	2418.9	0.966	7.32178	12.69956	No
SLV 5	-21027	-32301	-729	0.489	2409.4	0.966	7.35021	12.69956	No
SLV 10	-20166	-28034	-675	0.509	2321.7	0.965	7.662	12.69956	No
SLV 9	-20073	-27981	-675	0.511	2312.2	0.965	7.69322	12.69956	No
SLV 8	-12329	-20804	698	0.769	1524.9	0.949	11.77373	12.69956	No
SLV 7	-12235	-20751	698	0.774	1515.5	0.949	11.85195	12.69956	No
SLV 12	-11374	-16484	752	0.818	1428.1	0.946	12.56523	12.69956	No
SLV 11	-11281	-16431	752	0.824	1418.6	0.946	12.65529	12.69956	No
SLV 2	-19183	-33366	-291	0.549	2221.7	0.964	8.28315	6.60165	Si
SLV 1	-19038	-33284	-291	0.553	2206.9	0.963	8.33868	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.752	SLU 65	Si
V_SLU	12.864	SLU 78	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.491	SLV 16	Si
V_SLV	3.224	SLV 3	Si
PFFP_SLV	9.941	SLV 15	Si
R_SLV	0.577	SLV 6	No

Maschio 99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L5	L6	1.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	4.82	1925.37	-22903	-0.0001055	0.0004492	0.0035	1.55	10083.85	13713.48	13713.48	7.12	No	Si
SLU 45	6.92	-1338.93	-21797	-0.0000927	0.0004492	0.0035	1.55	9949.11	14301.4	14301.4	10.68	No	Si
SLU 47	4.82	1926.14	-22533	-0.0001041	0.0004492	0.0035	1.55	10042.78	13549.72	13549.72	7.03	No	Si
SLU 47	6.92	-1350.88	-21406	-0.0000914	0.0004492	0.0035	1.55	9893.02	14133.73	14133.73	10.46	No	Si
SLU 46	4.82	1927.02	-22888	-0.0001055	0.0004492	0.0035	1.55	10082.2	13706.58	13706.58	7.11	No	Si
SLU 46	6.92	-1343.26	-21777	-0.0000927	0.0004492	0.0035	1.55	9946.38	14292.92	14292.92	10.64	No	Si
SLU 64	4.82	2038	-24633	-0.0001141	0.0004492	0.0035	1.55	10222.71	14478.98	14478.98	7.1	No	Si
SLU 64	6.92	-1410.1	-23876	-0.0001018	0.0004492	0.0035	1.55	10172.65	15174.21	15174.21	10.76	No	Si
SLU 51	4.82	1942.87	-23015	-0.0001062	0.0004492	0.0035	1.55	10095.44	13762.84	13762.84	7.08	No	Si
SLU 51	6.92	-1351.81	-21885	-0.0000932	0.0004492	0.0035	1.55	9961.19	14339.37	14339.37	10.61	No	Si
SLU 68	4.82	2058.58	-25079	-0.0001162	0.0004492	0.0035	1.55	10244.3	14675.99	14675.99	7.13	No	Si
SLU 68	6.92	-1421.13	-24309	-0.0001036	0.0004492	0.0035	1.55	10203.31	15344.96	15344.96	10.8	No	Si
SLU 44	4.82	1908.31	-22062	-0.0001019	0.0004492	0.0035	1.55	9984.7	13341.2	13341.2	6.99	No	Si
SLU 44	6.92	-1347.06	-20940	-0.0000895	0.0004492	0.0035	1.55	9820.29	13933.37	13933.37	10.34	No	Si
SLU 43	4.82	1905.55	-22088	-0.000102	0.0004492	0.0035	1.55	9988.07	13352.71	13352.71	7.01	No	Si
SLU 43	6.92	-1339.84	-20973	-0.0000895	0.0004492	0.0035	1.55	9825.63	13947.86	13947.86	10.41	No	Si
SLU 65	4.82	2040.75	-24607	-0.000114	0.0004492	0.0035	1.55	10221.28	14467.47	14467.47	7.09	No	Si
SLU 65	6.92	-1417.31	-23843	-0.0001017	0.0004492	0.0035	1.55	10170.1	15161.23	15161.23	10.7	No	Si
SLU 50	4.82	1941.22	-23031	-0.0001062	0.0004492	0.0035	1.55	10097.03	13769.74	13769.74	7.09	No	Si
SLU 50	6.92	-1347.48	-21905	-0.0000932	0.0004492	0.0035	1.55	9963.86	14347.85	14347.85	10.65	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	4.82	10027.18	-13881	-0.0054373	0.0006738	0.0035	1.55		9615.25	9615.25	0.96		No
SLV 3	6.92	-8567.57	-15240	-0.0002698	0.0006738	0.0035	1.24		11580.41	11580.41	1.35		Si
SLV 13	4.82	-6982.97	-24218	-0.0001787	0.0006738	0.0035	1.55		16400.99	16400.99	2.35		Si
SLV 13	6.92	6453.62	-21589	-0.0001611	0.0006738	0.0035	1.55		14048.66	14048.66	2.18		Si
SLD 4	4.82	5156.01	-16862	-0.0001248	0.0006738	0.0035	1.55		11329.5	11329.5	2.2		Si
SLD 4	6.92	-4245.24	-17207	-0.0001123	0.0006738	0.0035	1.55		12713.12	12713.12	2.99		Si
SLV 15	4.82	-6989.82	-22042	-0.0001721	0.0006738	0.0035	1.55		15317.43	15317.43	2.19		Si
SLV 15	6.92	6202.95	-18893	-0.0001491	0.0006738	0.0035	1.55		12497.92	12497.92	2.01		Si
SLV 1	4.82	10034.04	-16057	-0.000467	0.0006738	0.0035	1.55		10866.52	10866.52	1.08		Si
SLV 1	6.92	-8316.9	-17936	-0.0002108	0.0006738	0.0035	1.24		13122.47	13122.47	1.58		Si
SLV 14	4.82	-6982.28	-24260	-0.0001788	0.0006738	0.0035	1.55		16421.94	16421.94	2.35		Si
SLV 14	6.92	6485.16	-21819	-0.0001623	0.0006738	0.0035	1.55		14180.74	14180.74	2.19		Si
SLV 16	4.82	-6989.14	-22084	-0.0001722	0.0006738	0.0035	1.55		15338.38	15338.38	2.19		Si
SLV 16	6.92	6234.5	-19123	-0.0001503	0.0006738	0.0035	1.55		12629.99	12629.99	2.03		Si
SLV 4	4.82	10027.87	-13923	-0.0053089	0.0006738	0.0035	1.55		9639.44	9639.44	0.96		No
SLV 4	6.92	-8536.02	-15470	-0.00026	0.0006738	0.0035	1.24		11716.72	11716.72	1.37		Si
SLV 2	4.82	10034.73	-16099	-0.0004614	0.0006738	0.0035	1.55		10890.7	10890.7	1.09		Si
SLV 2	6.92	-8285.35	-18166	-0.000208	0.0006738	0.0035	1.24		13251.47	13251.47	1.6		Si
SLD 3	4.82	5155.72	-16844	-0.0001248	0.0006738	0.0035	1.55		11319.12	11319.12	2.2		Si
SLD 3	6.92	-4258.79	-17109	-0.0001121	0.0006738	0.0035	1.55		12657.73	12657.73	2.97		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	4.82	1957.36	-28040	-20003	2171	1.55	1.55	-46090	10833	4702	115546	15597	7905	23502	No	10.83	Si
SLU 81	6.92	-1269.86	-27884	-19892	2172	1.55	1.55	-45833	10833	4702	115546	15597	7905	23502	No	10.82	Si
SLU 84	4.82	1976.84	-28495	-20328	2181	1.55	1.55	-46838	10833	4702	115546	15597	7905	23502	No	10.77	Si
SLU 84	6.92	-1278.01	-28330	-20210	2183	1.55	1.55	-46566	10833	4702	115546	15597	7905	23502	No	10.77	Si
SLU 80	4.82	2018.87	-27945	-19935	2172	1.55	1.55	-45933	10833	4702	115546	15597	7905	23502	No	10.82	Si
SLU 80	6.92	-1323.9	-27593	-19684	2173	1.55	1.55	-45356	10833	4702	115546	15597	7905	23502	No	10.82	Si
SLU 77	4.82	2019.2	-28304	-20192	2173	1.55	1.55	-46525	10833	4702	115546	15597	7905	23502	No	10.82	Si
SLU 77	6.92	-1314.84	-27971	-19954	2174	1.55	1.55	-45976	10833	4702	115546	15597	7905	23502	No	10.81	Si
SLU 79	4.82	2017.22	-27960	-19946	2170	1.55	1.55	-45959	10833	4702	115546	15597	7905	23502	No	10.83	Si
SLU 79	6.92	-1319.58	-27613	-19698	2171	1.55	1.55	-45388	10833	4702	115546	15597	7905	23502	No	10.82	Si
SLU 78	4.82	2020.86	-28289	-20181	2174	1.55	1.55	-46499	10833	4702	115546	15597	7905	23502	No	10.81	Si
SLU 78	6.92	-1319.17	-27951	-19939	2176	1.55	1.55	-45943	10833	4702	115546	15597	7905	23502	No	10.8	Si
SLU 82	4.82	1959.01	-28024	-19992	2172	1.55	1.55	-46064	10833	4702	115546	15597	7905	23502	No	10.82	Si
SLU 82	6.92	-1274.19	-27864	-19877	2173	1.55	1.55	-45801	10833	4702	115546	15597	7905	23502	No	10.81	Si
SLU 75	4.82	2003.02	-27818	-19844	2165	1.55	1.55	-45724	10833	4702	115546	15597	7905	23502	No	10.85	Si
SLU 75	6.92	-1315.35	-27485	-19607	2166	1.55	1.55	-45178	10833	4702	115546	15597	7905	23502	No	10.85	Si
SLU 83	4.82	1975.19	-28511	-20339	2180	1.55	1.55	-46864	10833	4702	115546	15597	7905	23502	No	10.78	Si
SLU 83	6.92	-1273.68	-28349	-20224	2181	1.55	1.55	-46599	10833	4702	115546	15597	7905	23502	No	10.78	Si
SLU 76	4.82	2002.14	-27463	-19591	2164	1.55	1.55	-45142	10833	4702	115546	15597	7905	23502	No	10.86	Si
SLU 76	6.92	-1322.97	-27114	-19343	2165	1.55	1.55	-44568	10833	4702	115546	15597	7905	23502	No	10.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	4.82	10027.18	-13881	-9903	10031	1.55	0.1579	-218804	16250	719	115546	23395	7905	31300		3.12	Si
SLV 3	6.92	-8567.57	-15240	-10872	9804	1.24	0.6385	0	0	0	115546	18716	6324	25040		2.55	Si
SLV 13	4.82	-6982.97	-24218	-17276	-6894	1.55	1.46	-43188	16250	6643	115546	23395	7905	31300		4.54	Si
SLV 13	6.92	6453.62	-21589	-15401	-6665	1.55	1.4282	-35487	16250	6498	115546	23395	7905	31300		4.7	Si
SLV 14	4.82	-6982.28	-24260	-17306	-6856	1.55	1.4616	-43217	16250	6650	115546	23395	7905	31300		4.57	Si
SLV 14	6.92	6485.16	-21819	-15565	-6627	1.55	1.4333	-35865	16250	6522	115546	23395	7905	31300		4.72	Si
SLD 2	4.82	5160.35	-17814	-12708	5305	1.55	1.4559	-29280	16250	6625	115546	23395	7905	31300		5.9	Si
SLD 2	6.92	-4135.06	-18393	-13121	5136	1.55	1.55	-30233	16250	7052	115546	23395	7905	31300		6.09	Si
SLV 15	4.82	-6989.82	-22042	-15724	-7113	1.55	1.3737	-41741	16250	6250	115546	23395	7905	31300		4.4	Si
SLV 15	6.92	6202.95	-18893	-13478	-6712	1.55	1.3401	-31055	16250	6097	115546	23395	7905	31300		4.66	Si
SLV 2	4.82	10034.73	-16099	-11485	10287	1.55	0.455	-96038	16250	2070	115546	23395	7905	31300		3.04	Si
SLV 2	6.92	-8285.35	-18166	-12959	9888	1.24	0.9567	0	0	0	115546	18716	6324	25040		2.53	Si
SLV 16	4.82	-6989.14	-22084	-15754	-7075	1.55	1.3756	-41763	16250	6259	115546	23395	7905	31300		4.42	Si
SLV 16	6.92	6234.5	-19123	-13642	-6674	1.55	1.3469	-31433	16250	6129	115546	23395	7905	31300		4.69	Si
SLV 1	4.82	10034.04	-16057	-11455	10249	1.55	0.4503	-96889	16250	2049	115546	23395	7905	31300		3.05	Si
SLV 1	6.92	-8316.9	-17936	-12795	9850	1.24	0.9339	0	0	0	115546	18716	6324	25040		2.54	Si
SLD 1	4.82	5160.05	-17795	-12695	5289	1.55	1.4551	-29251	16250	6621	115546	23395	7905	31300		5.92	Si
SLD 1	6.92	-4148.61	-18294	-13051	5119	1.55	1.55	-30071	16250	7052	115546	23395	7905	31300		6.11	Si
SLV 4	4.82	10027.87	-13923	-9933	10069	1.55	0.1643	-216757	16250	748	115546	23395	7905	31300		3.11	Si
SLV 4	6.92	-8536.02	-15470	-11036	9841	1.24	0.6696	0	0	0	115546	18716	6324	25040		2.54	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-13694	0.38	161.45	1587.11	2264.2	1925.65	11.93	Si
SLV 8	-13842	0.38	161.45	1600.62	2285.87	1943.24	12.04	Si
SLV 11	-14840	0.38	161.45	1690.04	2430.4	2060.22	12.76	Si
SLV 12	-14988	0.38	161.45	1702.95	2451.67	2077.31	12.87	Si
SLV 3	-15439	0.38	161.45	1741.94	2516.68	2129.31	13.19	Si
SLV 4	-15669	0.38	161.45	1761.52	2549.77	2155.65	13.35	Si
SLV 1	-18117	0.38	161.45	1958.66	2902.39	2430.52	15.05	Si
SLV 2	-18346	0.38	161.45	1976.07	2935.45	2455.76	15.21	Si
SLV 15	-19261	0.38	161.45	2043.57	3067.07	2555.32	15.83	Si
SLV 16	-19490	0.38	161.45	2060.06	3098.82	2579.44	15.98	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-19110	-23934	-280	0.454	2160.7	0.97	6.80113	12.69956	No
SLV 9	-18956	-23907	-281	0.457	2145	0.969	6.84925	12.69956	No
SLV 6	-17596	-21486	-284	0.487	2006.6	0.967	7.30966	12.69956	No
SLV 5	-17442	-21459	-285	0.49	1990.9	0.967	7.36603	12.69956	No
SLV 12	-9924	-16682	268	0.791	1226.4	0.949	12.11637	12.69956	No
SLV 11	-9770	-16655	268	0.802	1210.7	0.949	12.28392	12.69956	No
SLV 8	-8410	-14234	265	0.908	1072.8	0.943	13.99416	12.69956	Si
SLV 7	-8256	-14207	264	0.922	1057.2	0.942	14.22031	12.69956	Si
SLV 14	-17704	-24260	-84	0.495	2017.5	0.968	7.42814	6.60165	Si
SLV 13	-17464	-24218	-85	0.5	1993.1	0.967	7.5173	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.991	SLU 44	Si
V_SLU	10.768	SLU 84	Si
PF_SLV	0.959	SLV 3	No
V_SLV	2.532	SLV 2	Si
PFFP_SLV	11.927	SLV 7	Si
R_SLV	0.536	SLV 10	No

Maschio 100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	4.82	5483.68	-41568	-0.0000648	0.0004492	0.0035	3.98	57467.81	69495.81	69495.81	12.67	No	Si
SLU 51	6.92	-207.37	-36139	-0.0000465	0.0004492	0.0035	3.98	52829.91	69812.66	69812.66	336.65	No	Si
SLU 47	4.82	5423.63	-40732	-0.0000635	0.0004492	0.0035	3.98	56809.66	68285.06	68285.06	12.59	No	Si
SLU 47	6.92	-236.76	-35296	-0.0000455	0.0004492	0.0035	3.98	52032.57	68593.75	68593.75	289.72	No	Si
SLU 45	4.82	5480.33	-41307	-0.0000644	0.0004492	0.0035	3.98	57264.48	69117.72	69117.72	12.61	No	Si
SLU 45	6.92	-109.11	-35917	-0.000046	0.0004492	0.0035	3.98	52621.39	69490.8	69490.8	636.91	No	Si
SLU 49	4.82	5528.52	-42156	-0.0000657	0.0004492	0.0035	3.98	57918.41	70347.26	70347.26	12.72	No	Si
SLU 49	6.92	-109.75	-36766	-0.0000472	0.0004492	0.0035	3.98	53409.25	70698.5	70698.5	644.2	No	Si
SLU 50	4.82	5490.79	-41560	-0.0000648	0.0004492	0.0035	3.98	57461.77	69484.53	69484.53	12.65	No	Si
SLU 50	6.92	-189.36	-36135	-0.0000465	0.0004492	0.0035	3.98	52826.36	69807.16	69807.16	368.66	No	Si
SLU 43	4.82	5380.17	-39877	-0.0000622	0.0004492	0.0035	3.98	56116.11	67048	67048	12.46	No	Si
SLU 43	6.92	-224.11	-34445	-0.0000443	0.0004492	0.0035	3.98	51205.75	67362.02	67362.02	300.58	No	Si
SLU 64	4.82	5713.96	-44193	-0.0000689	0.0004492	0.0035	3.98	59401.79	73297.93	73297.93	12.83	No	Si
SLU 64	6.92	443.98	-39236	-0.0000512	0.0004492	0.0035	3.98	55581.18	66118.89	66118.89	148.92	No	Si
SLU 48	4.82	5535.63	-42148	-0.0000657	0.0004492	0.0035	3.98	57912.51	70335.98	70335.98	12.71	No	Si
SLU 48	6.92	-91.73	-36762	-0.0000471	0.0004492	0.0035	3.98	53405.77	70693.35	70693.35	770.67	No	Si
SLU 46	4.82	5473.21	-41314	-0.0000644	0.0004492	0.0035	3.98	57270.57	69128.99	69128.99	12.63	No	Si
SLU 46	6.92	-127.12	-35920	-0.0000461	0.0004492	0.0035	3.98	52624.96	69496.29	69496.29	546.69	No	Si
SLU 44	4.82	5368.32	-39890	-0.0000622	0.0004492	0.0035	3.98	56126.81	67066.8	67066.8	12.49	No	Si
SLU 44	6.92	-254.14	-34451	-0.0000444	0.0004492	0.0035	3.98	51211.98	67371.18	67371.18	265.1	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 2	4.82	9982	-29020	-0.0000556	0.0006738	0.0035	3.98		53761.04	53761.04	5.39		Si
SLD 2	6.92	-4381.82	-24419	-0.0000388	0.0006738	0.0035	3.98		53439.78	53439.78	12.2		Si
SLD 1	4.82	9846.52	-29123	-0.0000554	0.0006738	0.0035	3.98		53911.2	53911.2	5.48		Si
SLD 1	6.92	-4283.07	-24323	-0.0000384	0.0006738	0.0035	3.98		53278.76	53278.76	12.44		Si
SLD 3	4.82	8725.42	-28874	-0.0000529	0.0006738	0.0035	3.98		53546.68	53546.68	6.14		Si
SLD 3	6.92	-4748.31	-23226	-0.0000379	0.0006738	0.0035	3.98		51435.28	51435.28	10.83		Si
SLV 4	4.82	14909.81	-21573	-0.0000554	0.0006738	0.0035	3.98		41402.46	41402.46	2.78		Si
SLV 4	6.92	-11969.87	-13827	-0.0000407	0.0006738	0.0035	3.98		35106.62	35106.62	2.93		Si
SLV 1	4.82	17180.12	-22393	-0.0000613	0.0006738	0.0035	3.98		42809.64	42809.64	2.49		Si
SLV 1	6.92	-10669.8	-16147	-0.0000401	0.0006738	0.0035	3.98		39196.52	39196.52	3.67		Si
SLD 4	4.82	8860.9	-28771	-0.0000531	0.0006738	0.0035	3.98		53396.52	53396.52	6.03		Si
SLD 4	6.92	-4847.06	-23321	-0.0000382	0.0006738	0.0035	3.98		51596.3	51596.3	10.64		Si
SLV 6	4.82	12277.83	-31383	-0.0000632	0.0006738	0.0035	3.98		57218.83	57218.83	4.66		Si
SLV 6	6.92	-1355.19	-30098	-0.0000402	0.0006738	0.0035	3.98		62773.67	62773.67	46.32		Si
SLV 5	4.82	12075.02	-31537	-0.000063	0.0006738	0.0035	3.98		57443.62	57443.62	4.76		Si
SLV 5	6.92	-1207.36	-29954	-0.0000397	0.0006738	0.0035	3.98		62544.69	62544.69	51.8		Si
SLV 3	4.82	14594.25	-21812	-0.000055	0.0006738	0.0035	3.98		41812.76	41812.76	2.87		Si
SLV 3	6.92	-11739.85	-13604	-0.0000399	0.0006738	0.0035	3.98		34712.82	34712.82	2.96		Si
SLV 2	4.82	17495.69	-22154	-0.0000618	0.0006738	0.0035	3.98		42399.34	42399.34	2.42		Si
SLV 2	6.92	-10899.82	-16370	-0.0000409	0.0006738	0.0035	3.98		39590.32	39590.32	3.63		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 47	4.82	5423.63	-40732	-29057	2523	3.98	3.98	-26074	10833	12073	115546	40049	20298	60347	No	23.92	Si
SLU 47	6.92	-236.76	-35296	-25180	2517	3.98	3.98	-22595	10833	12073	115546	40049	20298	60347	No	23.97	Si
SLU 48	4.82	5535.63	-42148	-30067	2461	3.98	3.98	-26981	10833	12073	115546	40049	20298	60347	No	24.52	Si
SLU 48	6.92	-91.73	-36762	-26225	2455	3.98	3.98	-23533	10833	12073	115546	40049	20298	60347	No	24.58	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	4.82	5817.47	-45883	-32732	1811	3.98	3.98	-29372	10833	12073	115546	40049	20298	60347	No	33.32	Si
SLU 72	6.92	460.72	-40930	-29199	1805	3.98	3.98	-26201	10833	12073	115546	40049	20298	60347	No	33.44	Si
SLU 50	4.82	5490.79	-41560	-29648	2522	3.98	3.98	-26604	10833	12073	115546	40049	20298	60347	No	23.92	Si
SLU 50	6.92	-189.36	-36135	-25778	2517	3.98	3.98	-23132	10833	12073	115546	40049	20298	60347	No	23.98	Si
SLU 43	4.82	5380.17	-39877	-28448	2494	3.98	3.98	-25527	10833	12073	115546	40049	20298	60347	No	24.2	Si
SLU 43	6.92	-224.11	-34445	-24572	2488	3.98	3.98	-22049	10833	12073	115546	40049	20298	60347	No	24.25	Si
SLU 51	4.82	5483.68	-41568	-29653	2531	3.98	3.98	-26609	10833	12073	115546	40049	20298	60347	No	23.84	Si
SLU 51	6.92	-207.37	-36139	-25781	2526	3.98	3.98	-23134	10833	12073	115546	40049	20298	60347	No	23.89	Si
SLU 45	4.82	5480.33	-41307	-29467	2446	3.98	3.98	-26442	10833	12073	115546	40049	20298	60347	No	24.67	Si
SLU 45	6.92	-109.11	-35917	-25622	2441	3.98	3.98	-22992	10833	12073	115546	40049	20298	60347	No	24.73	Si
SLU 49	4.82	5528.52	-42156	-30073	2470	3.98	3.98	-26986	10833	12073	115546	40049	20298	60347	No	24.44	Si
SLU 49	6.92	-109.75	-36766	-26228	2464	3.98	3.98	-23535	10833	12073	115546	40049	20298	60347	No	24.49	Si
SLU 46	4.82	5473.21	-41314	-29473	2455	3.98	3.98	-26447	10833	12073	115546	40049	20298	60347	No	24.58	Si
SLU 46	6.92	-127.12	-35920	-25625	2450	3.98	3.98	-22994	10833	12073	115546	40049	20298	60347	No	24.63	Si
SLU 44	4.82	5368.32	-39890	-28457	2509	3.98	3.98	-25536	10833	12073	115546	40049	20298	60347	No	24.05	Si
SLU 44	6.92	-254.14	-34451	-24576	2503	3.98	3.98	-22053	10833	12073	115546	40049	20298	60347	No	24.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	4.82	14594.25	-21812	-15560	17453	3.98	3.9627	-13963	15293	16968	115546	60073	20298	80371		4.6	Si
SLV 3	6.92	-11739.85	-13604	-9705	16579	3.98	3.381	-10297	14559	13783	115546	60073	20298	80371		4.85	Si
SLV 16	4.82	-8456.88	-45885	-32733	-13918	3.98	3.98	-29373	16250	18109	115546	60073	20298	80371		5.77	Si
SLV 16	6.92	11616.21	-44687	-31879	-13130	3.98	3.98	-28606	16250	18109	115546	60073	20298	80371		6.12	Si
SLV 2	4.82	17495.69	-22154	-15804	16187	3.98	3.6008	-14181	15336	15462	115546	60073	20298	80371		4.97	Si
SLV 2	6.92	-10899.82	-16370	-11678	15389	3.98	3.9725	-10479	14596	16235	115546	60073	20298	80371		5.22	Si
SLV 14	4.82	-5871.01	-46466	-33148	-15006	3.98	3.98	-29745	16250	18109	115546	60073	20298	80371		5.36	Si
SLV 14	6.92	12686.27	-47230	-33693	-14142	3.98	3.98	-30234	16250	18109	115546	60073	20298	80371		5.68	Si
SLV 1	4.82	17180.12	-22393	-15974	16365	3.98	3.6683	-14334	15367	15784	115546	60073	20298	80371		4.91	Si
SLV 1	6.92	-10669.8	-16147	-11519	15567	3.98	3.98	-10336	14567	16234	115546	60073	20298	80371		5.16	Si
SLV 13	4.82	-6186.57	-46705	-33318	-14828	3.98	3.98	-29898	16250	18109	115546	60073	20298	80371		5.42	Si
SLV 13	6.92	12916.29	-47007	-33534	-13963	3.98	3.98	-30091	16250	18109	115546	60073	20298	80371		5.76	Si
SLV 15	4.82	-8772.45	-46124	-32904	-13740	3.98	3.98	-29526	16250	18109	115546	60073	20298	80371		5.85	Si
SLV 15	6.92	11846.23	-44464	-31720	-12952	3.98	3.98	-28463	16250	18109	115546	60073	20298	80371		6.21	Si
SLV 4	4.82	14909.81	-21573	-15390	17275	3.98	3.8966	-13810	15262	16651	115546	60073	20298	80371		4.65	Si
SLV 4	6.92	-11969.87	-13827	-9864	16401	3.98	3.3729	-10492	14598	13787	115546	60073	20298	80371		4.9	Si
SLD 3	4.82	8725.42	-28874	-20598	8157	3.98	3.98	-18483	16197	18050	115546	60073	20298	80371		9.85	Si
SLD 3	6.92	-4748.31	-23226	-16569	7784	3.98	3.98	-14868	15474	17244	115546	60073	20298	80371		10.32	Si
SLD 4	4.82	8860.9	-28771	-20524	8080	3.98	3.98	-18417	16183	18035	115546	60073	20298	80371		9.95	Si
SLD 4	6.92	-4847.06	-23321	-16637	7708	3.98	3.98	-14929	15486	17257	115546	60073	20298	80371		10.43	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-14342	0.38	414.55	1866.84	2715.7	2291.27	5.53	Si
SLV 4	-14565	0.38	414.55	1893.68	2749.59	2321.64	5.6	Si
SLV 1	-16916	0.38	414.55	2172.12	3106	2639.06	6.37	Si
SLV 2	-17139	0.38	414.55	2198.17	3139.85	2669.01	6.44	Si
SLV 7	-22145	0.38	414.55	2764.19	3893.74	3328.97	8.03	Si
SLV 8	-22289	0.38	414.55	2779.92	3915.25	3347.59	8.08	Si
SLV 5	-30727	0.38	414.55	3654.64	5164.33	4409.48	10.64	Si
SLV 6	-30871	0.38	414.55	3668.68	5185.27	4426.98	10.68	Si
SLV 11	-31375	0.38	414.55	3717.72	5258.81	4488.26	10.83	Si
SLV 12	-31518	0.38	414.55	3731.63	5279.76	4505.7	10.87	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-32447	-38677	-1088	0.635	3856.7	0.958	9.63395	12.69956	No
SLV 9	-32266	-38830	-1089	0.638	3838.3	0.957	9.68134	12.69956	No
SLV 6	-27592	-31383	-1010	0.73	3363.3	0.952	11.14478	12.69956	No
SLV 5	-27411	-31537	-1011	0.734	3344.9	0.952	11.20903	12.69956	No
SLV 12	-26567	-36741	1029	0.753	3259.2	0.951	11.51053	12.69956	No
SLV 11	-26385	-36895	1029	0.757	3240.7	0.951	11.57986	12.69956	No
SLV 8	-21711	-29447	1107	0.887	2766.5	0.943	13.66848	12.69956	Si
SLV 7	-21530	-29601	1107	0.893	2748.2	0.943	13.76797	12.69956	Si
SLV 14	-36104	-46466	-438	0.596	4228.5	0.961	9.01798	6.60165	Si
SLV 13	-35822	-46705	-439	0.6	4199.8	0.961	9.08032	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.462	SLU 43	Si
V_SLU	23.84	SLU 51	Si
PF_SLV	2.423	SLV 2	Si
V_SLV	4.605	SLV 3	Si
PFFP_SLV	5.527	SLV 3	Si
R_SLV	0.759	SLV 10	No

Maschio 101

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.384	-11.003	-0.676	Z medio 736 cm	L6	2.708	0.28	0.983	1.777	0.189			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 54	8.15	7.69	-22386	-0.0000466	0.0003743	0.0035	2.708	21521.37	23963.07	23963.07	3117.53	No	Si
SLU 54	8.34	467.06	-22752	-0.0000496	0.0003743	0.0035	2.708	21726.82	24266.93	24266.93	51.96	No	Si
SLU 53	8.15	22.95	-22389	-0.0000467	0.0003743	0.0035	2.708	21522.78	23965.11	23965.11	1044.22	No	Si
SLU 53	8.34	490.48	-22756	-0.0000497	0.0003743	0.0035	2.708	21729.06	24270.29	24270.29	49.48	No	Si
SLU 18	8.15	-18.95	-18395	-0.0000378	0.0003743	0.0035	2.708	18972.2	22748.94	22748.94	1200.33	No	Si
SLU 18	8.34	400.22	-18724	-0.0000403	0.0003743	0.0035	2.708	19203.53	20991.53	20991.53	52.45	No	Si
SLU 11	8.15	-11.74	-18470	-0.0000379	0.0003743	0.0035	2.708	19025.14	22816.99	22816.99	1944.07	No	Si
SLU 11	8.34	407.95	-18805	-0.0000405	0.0003743	0.0035	2.708	19259.76	21055.47	21055.47	51.61	No	Si
SLU 81	8.15	-67.29	-24540	-0.0000517	0.0003743	0.0035	2.708	22664.79	27851.48	27851.48	413.92	No	Si
SLU 81	8.34	509.14	-24995	-0.0000549	0.0003743	0.0035	2.708	22885.73	26167.39	26167.39	51.4	No	Si
SLU 60	8.15	15.73	-22314	-0.0000464	0.0003743	0.0035	2.708	21480.12	23903.05	23903.05	1519.12	No	Si
SLU 60	8.34	482.75	-22675	-0.0000495	0.0003743	0.0035	2.708	21684.03	24202.94	24202.94	50.14	No	Si
SLU 62	8.15	-0.91	-22891	-0.0000477	0.0003743	0.0035	2.708	21803.82	26562.93	26562.93	29103	No	Si
SLU 62	8.34	482.22	-23276	-0.0000509	0.0003743	0.0035	2.708	22013.48	24705.78	24705.78	51.23	No	Si
SLU 56	8.15	6.3	-22966	-0.0000479	0.0003743	0.0035	2.708	21844.96	24445.62	24445.62	3878.58	No	Si
SLU 56	8.34	489.95	-23357	-0.0000511	0.0003743	0.0035	2.708	22056.81	24773.71	24773.71	50.56	No	Si
SLU 77	8.15	-76.72	-25192	-0.0000533	0.0003743	0.0035	2.708	22978.75	28204.48	28204.48	367.63	No	Si
SLU 77	8.34	516.34	-25677	-0.0000565	0.0003743	0.0035	2.708	23203.01	26756.84	26756.84	51.82	No	Si
SLU 74	8.15	-60.07	-24615	-0.0000519	0.0003743	0.0035	2.708	22701.6	27892.74	27892.74	464.33	No	Si
SLU 74	8.34	516.87	-25076	-0.0000552	0.0003743	0.0035	2.708	22924.19	26236.96	26236.96	50.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	8.15	-1481.2	-15024	-0.0000366	0.0005615	0.0035	2.708		20409.56	20409.56	13.78		Si
SLV 8	8.34	-2209.76	-15111	-0.0000401	0.0005615	0.0035	2.708		20503.86	20503.86	9.28		Si
SLV 13	8.15	1316.36	-18914	-0.000044	0.0005615	0.0035	2.708		22322.09	22322.09	16.96		Si
SLV 13	8.34	2184	-19203	-0.0000486	0.0005615	0.0035	2.708		22622.54	22622.54	10.36		Si
SLV 9	8.15	1459.36	-18576	-0.000044	0.0005615	0.0035	2.708		21970.67	21970.67	15.05		Si
SLV 9	8.34	2873.33	-19017	-0.0000513	0.0005615	0.0035	2.708		22429.02	22429.02	7.81		Si
SLV 5	8.15	872.82	-17531	-0.0000391	0.0005615	0.0035	2.708		20890.03	20890.03	23.93		Si
SLV 5	8.34	2143.54	-17990	-0.0000458	0.0005615	0.0035	2.708		21363.59	21363.59	9.97		Si
SLV 3	8.15	-1346.61	-14676	-0.0000353	0.0005615	0.0035	2.708		20033.71	20033.71	14.88		Si
SLV 3	8.34	-1562.78	-14912	-0.0000367	0.0005615	0.0035	2.708		20288.61	20288.61	12.98		Si
SLV 6	8.15	878.23	-17537	-0.0000391	0.0005615	0.0035	2.708		20896.67	20896.67	23.79		Si
SLV 6	8.34	2170.76	-17998	-0.000046	0.0005615	0.0035	2.708		21372.46	21372.46	9.85		Si
SLV 14	8.15	1324.78	-18924	-0.0000441	0.0005615	0.0035	2.708		22332.52	22332.52	16.86		Si
SLV 14	8.34	2226.35	-19216	-0.0000488	0.0005615	0.0035	2.708		22636.47	22636.47	10.17		Si
SLV 10	8.15	1464.77	-18582	-0.000044	0.0005615	0.0035	2.708		21977.36	21977.36	15		Si
SLV 10	8.34	2900.54	-19026	-0.0000515	0.0005615	0.0035	2.708		22437.96	22437.96	7.74		Si
SLV 7	8.15	-1486.61	-15018	-0.0000366	0.0005615	0.0035	2.708		20402.59	20402.59	13.72		Si
SLV 7	8.34	-2236.98	-15103	-0.0000402	0.0005615	0.0035	2.708		20494.57	20494.57	9.16		Si
SLV 4	8.15	-1338.19	-14686	-0.0000353	0.0005615	0.0035	2.708		20044.51	20044.51	14.98		Si
SLV 4	8.34	-1520.43	-14926	-0.0000366	0.0005615	0.0035	2.708		20303.04	20303.04	13.35		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	8.15	22.13	-20679	-17219	3914	2.708	2.708	-22710	9972	7562	9516	22705	6905	17077	No	4.36	Si
SLU 50	8.34	386.72	-20973	-17465	3923	2.708	2.708	-23033	10016	7594	9516	22705	6905	17110	No	4.36	Si
SLU 47	8.15	13.34	-20098	-16736	3893	2.708	2.708	-22072	9887	7497	9516	22705	6905	17013	No	4.37	Si
SLU 47	8.34	348.21	-20365	-16959	3904	2.708	2.708	-22366	9927	7527	9516	22705	6905	17042	No	4.37	Si
SLU 58	8.15	-5.65	-22631	-18845	3964	2.708	2.708	-24854	10258	7778	9516	22705	6905	17294	No	4.36	Si
SLU 58	8.34	453.2	-23006	-19157	3919	2.708	2.708	-25265	10313	7820	9516	22705	6905	17335	No	4.42	Si
SLU 59	8.15	-20.92	-22629	-18843	3993	2.708	2.708	-24851	10258	7778	9516	22705	6905	17294	No	4.33	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 59	8.34	429.78	-23002	-19154	3949	2.708	2.708	-25261	10313	7819	9516	22705	6905	17335	No	4.39	Si
SLU 80	8.15	-103.94	-24854	-20697	4030	2.708	2.708	-27295	10584	8025	9516	22705	6905	17541	No	4.35	Si
SLU 80	8.34	456.17	-25322	-21086	3963	2.708	2.708	-27809	10652	8077	9516	22705	6905	17593	No	4.44	Si
SLU 55	8.15	-14.44	-22050	-18361	3943	2.708	2.708	-24216	10173	7714	9516	22705	6905	17229	No	4.37	Si
SLU 55	8.34	414.69	-22398	-18651	3900	2.708	2.708	-24598	10224	7752	9516	22705	6905	17268	No	4.43	Si
SLU 49	8.15	18.82	-21011	-17496	3921	2.708	2.708	-23074	10021	7598	9516	22705	6905	17114	No	4.36	Si
SLU 49	8.34	400.05	-21320	-17754	3929	2.708	2.708	-23414	10066	7633	9516	22705	6905	17148	No	4.36	Si
SLU 51	8.15	6.87	-20676	-17217	3943	2.708	2.708	-22707	9972	7561	9516	22705	6905	17077	No	4.33	Si
SLU 51	8.34	363.3	-20969	-17461	3953	2.708	2.708	-23029	10015	7594	9516	22705	6905	17109	No	4.33	Si
SLU 72	8.15	-76.15	-22902	-19071	3980	2.708	2.708	-25151	10298	7808	9516	22705	6905	17324	No	4.35	Si
SLU 72	8.34	389.69	-23290	-19394	3967	2.708	2.708	-25577	10355	7851	9516	22705	6905	17367	No	4.38	Si
SLU 57	8.15	-8.96	-22963	-19122	3971	2.708	2.708	-25218	10307	7815	9516	22705	6905	17331	No	4.36	Si
SLU 57	8.34	466.53	-23353	-19446	3925	2.708	2.708	-25646	10364	7858	9516	22705	6905	17374	No	4.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	8.15	-1481.2	-15024	-12511	3910	2.708	2.708	-16500	13717	10401	9516	34058	6905	19916		5.09	Si
SLV 8	8.34	-2209.76	-15111	-12583	4080	2.708	2.708	-16595	13736	10415	9516	34058	6905	19931		4.89	Si
SLV 16	8.15	616.95	-18170	-15131	3782	2.708	2.708	-19955	14408	10925	9516	34058	6905	20440		5.4	Si
SLV 16	8.34	912.19	-18350	-15280	3801	2.708	2.708	-20152	14447	10954	9516	34058	6905	20470		5.39	Si
SLV 7	8.15	-1486.61	-15018	-12505	4007	2.708	2.708	-16493	13715	10399	9516	34058	6905	19915		4.97	Si
SLV 7	8.34	-2236.98	-15103	-12576	4180	2.708	2.708	-16586	13734	10414	9516	34058	6905	19929		4.77	Si
SLD 12	8.15	-403.99	-16472	-13717	3501	2.708	2.708	-18090	14035	10642	9516	34058	6905	20157		5.76	Si
SLD 12	8.34	-471.19	-16650	-13865	3561	2.708	2.708	-18285	14074	10671	9516	34058	6905	20187		5.67	Si
SLD 7	8.15	-656.7	-16023	-13343	3399	2.708	2.708	-17597	13936	10567	9516	34058	6905	20082		5.91	Si
SLD 7	8.34	-794.75	-16208	-13496	3464	2.708	2.708	-17800	13977	10598	9516	34058	6905	20113		5.81	Si
SLD 8	8.15	-654.34	-16026	-13345	3357	2.708	2.708	-17600	13937	10567	9516	34058	6905	20083		5.98	Si
SLD 8	8.34	-782.86	-16212	-13500	3420	2.708	2.708	-17804	13977	10598	9516	34058	6905	20114		5.88	Si
SLV 12	8.15	-894.65	-16069	-13381	4248	2.708	2.708	-17648	13946	10575	9516	34058	6905	20090		4.73	Si
SLV 12	8.34	-1479.97	-16139	-13439	4409	2.708	2.708	-17724	13961	10586	9516	34058	6905	20102		4.56	Si
SLV 15	8.15	608.53	-18160	-15122	3933	2.708	2.708	-19944	14405	10923	9516	34058	6905	20438		5.2	Si
SLV 15	8.34	869.85	-18337	-15269	3958	2.708	2.708	-20138	14444	10952	9516	34058	6905	20468		5.17	Si
SLV 11	8.15	-900.06	-16063	-13376	4345	2.708	2.708	-17641	13945	10574	9516	34058	6905	20089		4.62	Si
SLV 11	8.34	-1507.19	-16130	-13432	4510	2.708	2.708	-17714	13960	10585	9516	34058	6905	20100		4.46	Si
SLD 11	8.15	-406.35	-16470	-13715	3544	2.708	2.708	-18087	14034	10641	9516	34058	6905	20157		5.69	Si
SLD 11	8.34	-483.07	-16646	-13862	3605	2.708	2.708	-18281	14073	10671	9516	34058	6905	20186		5.6	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 8.245 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.42	19367	-14685	24.01	1795.18	74.75	Si
SLV 4	179667	0.42	19383	-14697	24.01	1796.41	74.8	Si
SLV 7	179667	0.42	19663	-14909	24.01	1818.56	75.73	Si
SLV 8	179667	0.42	19673	-14917	24.01	1819.35	75.76	Si
SLV 1	179667	0.42	20426	-15488	24.01	1878.27	78.21	Si
SLV 2	179667	0.42	20441	-15499	24.01	1879.48	78.26	Si
SLV 11	179667	0.42	20973	-15903	24.01	1920.61	79.98	Si
SLV 12	179667	0.42	20983	-15910	24.01	1921.38	80.01	Si
SLV 5	179667	0.42	23192	-17585	24.01	2088.04	86.95	Si
SLV 6	179667	0.42	23202	-17593	24.01	2088.77	86.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 8.245 Wa = 0.05 Ta = 0.0058

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-19216	-18924	1442	0.84	2062	0.984	12.40066	3.70266	Si
SLV 13	-19203	-18914	1442	0.84	2060.6	0.984	12.4074	3.70266	Si
SLV 10	-19026	-18582	321	0.903	2042.6	0.984	13.34236	3.86692	Si
SLV 9	-19017	-18576	322	0.904	2041.7	0.984	13.34714	3.86692	Si
SLV 16	-18350	-18170	1528	0.867	1973.7	0.983	12.81113	3.70266	Si
SLV 15	-18337	-18160	1529	0.867	1972.4	0.983	12.81847	3.70266	Si
SLV 6	-17998	-17537	-552	0.933	1937.9	0.983	13.79002	3.86692	Si
SLV 5	-17990	-17531	-552	0.933	1937	0.983	13.79572	3.86692	Si
SLV 12	-16139	-16069	611	1.017	1748.4	0.981	15.05825	3.86692	Si
SLV 11	-16130	-16063	611	1.017	1747.5	0.981	15.06476	3.86692	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	49.483	SLU 53	Si
V_SLU	4.328	SLU 51	Si
PF_SLV	7.736	SLV 10	Si
V_SLV	4.457	SLV 11	Si
PFFP_SLV	74.753	SLV 3	Si
R_SLV	3.349	SLV 14	Si

Maschio 102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.526	L5	L6	3.35	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	4.82	-9480.22	-15599	-0.0000802	0.0004492	0.0035	3.35	19905.11	29436.23	29436.23	3.11	No	Si
SLU 39	8.34	-229.69	-11826	-0.000029	0.0004492	0.0035	3.35	16231.28	24351.28	24351.28	106.02	No	Si
SLU 61	4.82	-9732.96	-17502	-0.0000862	0.0004492	0.0035	3.35	21481.59	31896.05	31896.05	3.28	No	Si
SLU 61	8.34	-206.99	-12886	-0.0000315	0.0004492	0.0035	3.35	17337.12	25803.99	25803.99	124.66	No	Si
SLU 84	4.82	-10815.43	-19977	-0.0000981	0.0004492	0.0035	3.35	23255.08	34973.38	34973.38	3.23	No	Si
SLU 84	8.34	-291.29	-15185	-0.0000375	0.0004492	0.0035	3.35	19537.71	28901.23	28901.23	99.22	No	Si
SLU 60	4.82	-9797.42	-17439	-0.0000864	0.0004492	0.0035	3.35	21432.13	31814.22	31814.22	3.25	No	Si
SLU 60	8.34	-171.94	-12823	-0.0000311	0.0004492	0.0035	3.35	17272.7	25717.25	25717.25	149.57	No	Si
SLU 82	4.82	-10902.6	-19072	-0.0000961	0.0004492	0.0035	3.35	22642.57	33872.94	33872.94	3.11	No	Si
SLU 82	8.34	-270.56	-14279	-0.0000352	0.0004492	0.0035	3.35	18703.19	27713.48	27713.48	102.43	No	Si
SLU 83	4.82	-10879.89	-19914	-0.0000982	0.0004492	0.0035	3.35	23213.63	34896.46	34896.46	3.21	No	Si
SLU 83	8.34	-256.23	-15122	-0.0000372	0.0004492	0.0035	3.35	19480.74	28819.4	28819.4	112.47	No	Si
SLU 73	4.82	-10254.31	-18853	-0.0000923	0.0004492	0.0035	3.35	22488.15	33606.82	33606.82	3.28	No	Si
SLU 73	8.34	-271.7	-14060	-0.0000346	0.0004492	0.0035	3.35	18495.09	27413.4	27413.4	100.9	No	Si
SLU 40	4.82	-9415.76	-15662	-0.00008	0.0004492	0.0035	3.35	19960.54	29518.07	29518.07	3.13	No	Si
SLU 40	8.34	-264.74	-11889	-0.0000293	0.0004492	0.0035	3.35	16298.92	24438.02	24438.02	92.31	No	Si
SLU 81	4.82	-10967.06	-19008	-0.0000962	0.0004492	0.0035	3.35	22598.19	33796.01	33796.01	3.08	No	Si
SLU 81	8.34	-235.5	-14216	-0.0000348	0.0004492	0.0035	3.35	18643.29	27626.74	27626.74	117.31	No	Si
SLU 41	4.82	-9393.05	-16505	-0.000082	0.0004492	0.0035	3.35	20678.5	30606.92	30606.92	3.26	No	Si
SLU 41	8.34	-250.42	-12731	-0.0000313	0.0004492	0.0035	3.35	17179.48	25592.2	25592.2	102.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	4.82	-10678.58	-16971	-0.0000875	0.0006738	0.0035	3.35		31874.92	31874.92	2.98		Si
SLV 12	8.34	-5604.76	-12532	-0.0000536	0.0006738	0.0035	3.35		25697.05	25697.05	4.58		Si
SLV 10	4.82	-5560.11	-11322	-0.0000504	0.0006738	0.0035	3.35		23986.26	23986.26	4.31		Si
SLV 10	8.34	5801.61	-8124	-0.0000445	0.0006738	0.0035	3.35		14010.99	14010.99	2.42		Si
SLV 15	4.82	-11272.29	-15938	-0.0000889	0.0006738	0.0035	3.35		30489.83	30489.83	2.7		Si
SLV 15	8.34	-1369.05	-11534	-0.0000329	0.0006738	0.0035	3.35		24289.16	24289.16	17.74		Si
SLV 6	4.82	-3446.1	-10553	-0.0000394	0.0006738	0.0035	3.35		22847.74	22847.74	6.63		Si
SLV 6	8.34	5468.4	-7698	-0.000042	0.0006738	0.0035	3.35		13365.56	13365.56	2.44		Si
SLV 13	4.82	-9736.75	-14243	-0.000077	0.0006738	0.0035	3.35		28112.58	28112.58	2.89		Si
SLV 13	8.34	2052.87	-10212	-0.0000326	0.0006738	0.0035	3.35		17141.63	17141.63	8.35		Si
SLV 5	4.82	-3382.6	-10591	-0.0000392	0.0006738	0.0035	3.35		22903.56	22903.56	6.77		Si
SLV 5	8.34	5354.72	-7735	-0.0000414	0.0006738	0.0035	3.35		13422.6	13422.6	2.51		Si
SLV 11	4.82	-10615.08	-17009	-0.0000873	0.0006738	0.0035	3.35		31925.41	31925.41	3.01		Si
SLV 11	8.34	-5718.43	-12570	-0.0000542	0.0006738	0.0035	3.35		25750.21	25750.21	4.5		Si
SLV 16	4.82	-11371.1	-15880	-0.0000894	0.0006738	0.0035	3.35		30411.26	30411.26	2.67		Si
SLV 16	8.34	-1192.18	-11476	-0.000032	0.0006738	0.0035	3.35		24206.45	24206.45	20.3		Si
SLV 14	4.82	-9835.56	-14185	-0.0000775	0.0006738	0.0035	3.35		28029.87	28029.87	2.85		Si
SLV 14	8.34	2229.74	-10153	-0.0000333	0.0006738	0.0035	3.35		17054.23	17054.23	7.65		Si
SLV 9	4.82	-5496.6	-11359	-0.0000502	0.0006738	0.0035	3.35		24041.93	24041.93	4.37		Si
SLV 9	8.34	5687.94	-8161	-0.000044	0.0006738	0.0035	3.35		14068.02	14068.02	2.47		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	4.82	-10450.75	-19644	-11534	-2906	3.35	3.35	-21519	10833	5807	115546	19262	17085	36347	No	12.51	Si
SLU 74	8.34	-223.15	-14852	-8720	-2906	3.35	3.35	-16269	10503	5629	115546	19262	17085	36347	No	12.51	Si
SLU 75	4.82	-10386.29	-19707	-11571	-2877	3.35	3.35	-21588	10833	5807	115546	19262	17085	36347	No	12.63	Si
SLU 75	8.34	-258.2	-14915	-8757	-2877	3.35	3.35	-16338	10512	5634	115546	19262	17085	36347	No	12.63	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	4.82	-10299.13	-20613	-12103	-2847	3.35	3.35	-22580	10833	5807	115546	19262	17085	36347	No	12.77	Si
SLU 78	8.34	-278.93	-15821	-9289	-2847	3.35	3.35	-17331	10644	5705	115546	19262	17085	36347	No	12.77	Si
SLU 77	4.82	-10363.58	-20550	-12066	-2875	3.35	3.35	-22511	10833	5807	115546	19262	17085	36347	No	12.64	Si
SLU 77	8.34	-243.88	-15757	-9252	-2875	3.35	3.35	-17261	10635	5700	115546	19262	17085	36347	No	12.64	Si
SLU 79	4.82	-10187.41	-20559	-12071	-2822	3.35	3.35	-22521	10833	5807	115546	19262	17085	36347	No	12.88	Si
SLU 79	8.34	-254.74	-15766	-9257	-2822	3.35	3.35	-17271	10636	5701	115546	19262	17085	36347	No	12.88	Si
SLU 81	4.82	-10967.06	-19008	-11161	-3049	3.35	3.2941	-21512	10833	5710	115546	19262	17085	36347	No	11.92	Si
SLU 81	8.34	-235.5	-14216	-8347	-3049	3.35	3.35	-15573	10410	5580	115546	19262	17085	36347	No	11.92	Si
SLU 84	4.82	-10815.43	-19977	-11730	-2990	3.35	3.35	-21884	10833	5807	115546	19262	17085	36347	No	12.16	Si
SLU 84	8.34	-291.29	-15185	-8916	-2990	3.35	3.35	-16634	10551	5655	115546	19262	17085	36347	No	12.16	Si
SLU 83	4.82	-10879.89	-19914	-11693	-3018	3.35	3.35	-21815	10833	5807	115546	19262	17085	36347	No	12.04	Si
SLU 83	8.34	-256.23	-15122	-8879	-3018	3.35	3.35	-16565	10542	5651	115546	19262	17085	36347	No	12.04	Si
SLU 82	4.82	-10902.6	-19072	-11198	-3020	3.35	3.31	-21480	10833	5737	115546	19262	17085	36347	No	12.03	Si
SLU 82	8.34	-270.56	-14279	-8384	-3020	3.35	3.35	-15642	10419	5585	115546	19262	17085	36347	No	12.03	Si
SLU 73	4.82	-10254.31	-18853	-11069	-2836	3.35	3.35	-20652	10833	5807	115546	19262	17085	36347	No	12.82	Si
SLU 73	8.34	-271.7	-14060	-8256	-2836	3.35	3.35	-15402	10387	5567	115546	19262	17085	36347	No	12.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	4.82	-11371.1	-15880	-9324	-2589	3.35	2.8768	-20454	16250	7480	115546	28894	17085	45979		17.76	Si
SLV 16	8.34	-1192.18	-11476	-6738	-2974	3.35	3.35	-12571	15014	8048	115546	28894	17085	45979		15.46	Si
SLD 10	4.82	-6330.14	-12682	-7446	-2863	3.35	3.35	-13892	15278	8189	115546	28894	17085	45979		16.06	Si
SLD 10	8.34	2488.85	-9239	-5425	-2305	3.35	3.35	-10121	14524	7785	115546	28894	17085	45979		19.94	Si
SLV 14	4.82	-9835.56	-14185	-8329	-3623	3.35	2.9448	-17826	16065	7570	115546	28894	17085	45979		12.69	Si
SLV 14	8.34	2229.74	-10153	-5962	-3247	3.35	3.35	-11122	14724	7892	115546	28894	17085	45979		14.16	Si
SLV 5	4.82	-3382.6	-10591	-6219	-3328	3.35	3.35	-11602	14820	7944	115546	28894	17085	45979		13.81	Si
SLV 5	8.34	5354.72	-7735	-4542	-2060	3.35	2.9482	-8473	14195	6696	115546	28894	17085	45979		22.32	Si
SLV 13	4.82	-9736.75	-14243	-8363	-3544	3.35	2.9742	-17689	16038	7632	115546	28894	17085	45979		12.97	Si
SLV 13	8.34	2052.87	-10212	-5996	-3169	3.35	3.35	-11187	14737	7899	115546	28894	17085	45979		14.51	Si
SLV 6	4.82	-3446.1	-10553	-6197	-3379	3.35	3.35	-11561	14812	7939	115546	28894	17085	45979		13.61	Si
SLV 6	8.34	5468.4	-7698	-4520	-2110	3.35	2.8938	-8432	14186	6568	115546	28894	17085	45979		21.79	Si
SLV 9	4.82	-5496.6	-11359	-6670	-3991	3.35	3.35	-12443	14989	8034	115546	28894	17085	45979		11.52	Si
SLV 9	8.34	5687.94	-8161	-4792	-2726	3.35	2.9342	-8940	14288	6708	115546	28894	17085	45979		16.87	Si
SLV 15	4.82	-11272.29	-15938	-9358	-2510	3.35	2.9033	-20342	16250	7548	115546	28894	17085	45979		18.32	Si
SLV 15	8.34	-1369.05	-11534	-6773	-2895	3.35	3.35	-12635	15027	8055	115546	28894	17085	45979		15.88	Si
SLD 9	4.82	-6302.41	-12698	-7456	-2841	3.35	3.35	-13910	15282	8191	115546	28894	17085	45979		16.19	Si
SLD 9	8.34	2439.22	-9256	-5435	-2284	3.35	3.35	-10139	14528	7787	115546	28894	17085	45979		20.14	Si
SLV 10	4.82	-5560.11	-11322	-6648	-4042	3.35	3.35	-12402	14980	8030	115546	28894	17085	45979		11.38	Si
SLV 10	8.34	5801.61	-8124	-4770	-2776	3.35	2.8825	-8899	14280	6586	115546	28894	17085	45979		16.56	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-9545	0.38	206.19	689.39	1163.29	926.34	4.49	Si
SLV 5	-9582	0.38	206.19	691.82	1166.83	929.32	4.51	Si
SLV 10	-10055	0.38	206.19	722.05	1211.21	966.63	4.69	Si
SLV 9	-10092	0.38	206.19	724.44	1214.75	969.6	4.7	Si
SLV 2	-10569	0.38	206.19	754.53	1259.51	1007.02	4.88	Si
SLV 1	-10627	0.38	206.19	758.21	1265.02	1011.61	4.91	Si
SLV 4	-11965	0.38	206.19	840.62	1390.33	1115.48	5.41	Si
SLV 3	-12024	0.38	206.19	844.17	1395.78	1119.97	5.43	Si
SLV 14	-12268	0.38	206.19	858.91	1418.53	1138.72	5.52	Si
SLV 13	-12327	0.38	206.19	862.42	1423.98	1143.2	5.54	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-12570	-17009	194	1.331	1546.4	0.95	20.35312	16.48959	Si
SLV 12	-12532	-16971	194	1.334	1542.6	0.95	20.40843	16.48959	Si
SLV 7	-12143	-16241	-202	1.37	1503.2	0.949	20.98841	16.48959	Si
SLV 8	-12106	-16203	-202	1.374	1499.3	0.949	21.04721	16.48959	Si
SLV 9	-8161	-11359	189	1.916	1099.7	0.933	29.83041	16.48959	Si
SLV 10	-8124	-11322	189	1.923	1095.9	0.933	29.94953	16.48959	Si
SLV 15	-11534	-15938	654	1.398	1441.4	0.947	21.45756	11.6797	Si
SLV 16	-11476	-15880	654	1.404	1435.4	0.947	21.55584	11.6797	Si
SLV 5	-7735	-10591	-207	2	1056.7	0.931	31.20626	16.48959	Si
SLV 6	-7698	-10553	-207	2.008	1052.9	0.931	31.33661	16.48959	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.082	SLU 81	Si
V_SLU	11.922	SLU 81	Si
PF_SLV	2.415	SLV 10	Si
V_SLV	11.377	SLV 10	Si
PFFP_SLV	4.493	SLV 6	Si
R_SLV	1.234	SLV 11	Si

Maschio 104

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	2.046	-5.163	5.686	L5	L6	3.64	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 72	4.82	-4139.59	-30345	-0.0000854	0.0004492	0.0035	3.64	31677.59	51835.71	51835.71	12.52	No	Si
SLU 72	6.92	-2938.76	-22017	-0.0000602	0.0004492	0.0035	3.64	27673.31	41504.09	41504.09	14.12	No	Si
SLU 67	4.82	-4102.08	-30065	-0.0000846	0.0004492	0.0035	3.64	31600.48	51510.65	51510.65	12.56	No	Si
SLU 67	6.92	-2930.53	-21748	-0.0000596	0.0004492	0.0035	3.64	27484.66	41147.12	41147.12	14.04	No	Si
SLU 70	4.82	-4154.15	-30582	-0.0000861	0.0004492	0.0035	3.64	31739.54	52110.02	52110.02	12.54	No	Si
SLU 70	6.92	-2948.37	-22186	-0.0000607	0.0004492	0.0035	3.64	27789.71	41727.9	41727.9	14.15	No	Si
SLU 76	4.82	-4261.96	-31887	-0.0000898	0.0004492	0.0035	3.64	32029.8	53623.31	53623.31	12.58	No	Si
SLU 76	6.92	-3181.89	-22911	-0.0000633	0.0004492	0.0035	3.64	28272.9	42688.87	42688.87	13.42	No	Si
SLU 47	4.82	-3837.97	-27233	-0.0000764	0.0004492	0.0035	3.64	30596.42	48149.29	48149.29	12.55	No	Si
SLU 47	6.92	-2703.38	-19751	-0.000054	0.0004492	0.0035	3.64	25969.95	38496.09	38496.09	14.24	No	Si
SLU 73	4.82	-4209.9	-31370	-0.0000883	0.0004492	0.0035	3.64	31925.27	53023.94	53023.94	12.6	No	Si
SLU 73	6.92	-3164.04	-22473	-0.0000622	0.0004492	0.0035	3.64	27984.09	42108.09	42108.09	13.31	No	Si
SLU 44	4.82	-3785.91	-26716	-0.000075	0.0004492	0.0035	3.64	30368.78	47506.82	47506.82	12.55	No	Si
SLU 44	6.92	-2685.53	-19313	-0.0000529	0.0004492	0.0035	3.64	25610.35	37878.79	37878.79	14.1	No	Si
SLU 51	4.82	-3861.71	-27748	-0.0000778	0.0004492	0.0035	3.64	30809.64	48789.44	48789.44	12.63	No	Si
SLU 51	6.92	-2685.78	-20189	-0.0000549	0.0004492	0.0035	3.64	26319.15	39079.79	39079.79	14.55	No	Si
SLU 68	4.82	-4115.84	-29830	-0.000084	0.0004492	0.0035	3.64	31532.82	51238.51	51238.51	12.45	No	Si
SLU 68	6.92	-2956.36	-21580	-0.0000593	0.0004492	0.0035	3.64	27365.02	40924.3	40924.3	13.84	No	Si
SLU 65	4.82	-4063.78	-29313	-0.0000825	0.0004492	0.0035	3.64	31373.87	50639.14	50639.14	12.46	No	Si
SLU 65	6.92	-2938.51	-21142	-0.0000582	0.0004492	0.0035	3.64	27046.39	40343.52	40343.52	13.73	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 8	4.82	-3734.07	-23104	-0.0000646	0.0006738	0.0035	3.64		44125.67	44125.67	11.82		Si
SLD 8	6.92	-5146.79	-16722	-0.0000552	0.0006738	0.0035	3.64		34900.12	34900.12	6.78		Si
SLV 11	4.82	-4657.06	-24728	-0.0000719	0.0006738	0.0035	3.64		46374	46374	9.96		Si
SLV 11	6.92	-9106.33	-19165	-0.0000756	0.0006738	0.0035	3.64		38484.76	38484.76	4.23		Si
SLV 5	4.82	-1448.29	-20761	-0.0000507	0.0006738	0.0035	3.64		40815.13	40815.13	28.18		Si
SLV 5	6.92	4419.11	-13504	-0.0000453	0.0006738	0.0035	3.64		24051.03	24051.03	5.44		Si
SLV 7	4.82	-4582.14	-24128	-0.0000702	0.0006738	0.0035	3.64		45544.26	45544.26	9.94		Si
SLV 7	6.92	-9151.33	-17477	-0.0000718	0.0006738	0.0035	3.64		36018.04	36018.04	3.94		Si
SLD 7	4.82	-3734.47	-23263	-0.000065	0.0006738	0.0035	3.64		44346.05	44346.05	11.87		Si
SLD 7	6.92	-5271.27	-16805	-0.0000559	0.0006738	0.0035	3.64		35027.27	35027.27	6.64		Si
SLV 9	4.82	-1523.21	-21360	-0.0000523	0.0006738	0.0035	3.64		41690.42	41690.42	27.37		Si
SLV 9	6.92	4464.11	-15192	-0.0000492	0.0006738	0.0035	3.64		26682.12	26682.12	5.98		Si
SLV 6	4.82	-1447.37	-20396	-0.0000499	0.0006738	0.0035	3.64		40282.65	40282.65	27.83		Si
SLV 6	6.92	4704.2	-13314	-0.0000459	0.0006738	0.0035	3.64		23751.62	23751.62	5.05		Si
SLV 10	4.82	-1522.29	-20995	-0.0000515	0.0006738	0.0035	3.64		41157.94	41157.94	27.04		Si
SLV 10	6.92	4749.2	-15003	-0.0000499	0.0006738	0.0035	3.64		26388.41	26388.41	5.56		Si
SLV 12	4.82	-4656.14	-24363	-0.000071	0.0006738	0.0035	3.64		45869.24	45869.24	9.85		Si
SLV 12	6.92	-8821.24	-18976	-0.0000741	0.0006738	0.0035	3.64		38207.93	38207.93	4.33		Si
SLV 8	4.82	-4581.22	-23764	-0.0000693	0.0006738	0.0035	3.64		45039.5	45039.5	9.83		Si
SLV 8	6.92	-8866.24	-17287	-0.0000703	0.0006738	0.0035	3.64		35741.21	35741.21	4.03		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	4.82	-4248.21	-32122	-18861	-6353	3.64	3.64	-32385	10833	6309	115546	20930	18564	39494	No	6.22	Si
SLU 75	6.92	-3156.06	-23079	-13551	-6237	3.64	3.64	-23267	10833	6309	115546	20930	18564	39494	No	6.33	Si
SLU 74	4.82	-4205.74	-32119	-18859	-6367	3.64	3.64	-32382	10833	6309	115546	20930	18564	39494	No	6.2	Si
SLU 74	6.92	-3102.89	-23078	-13550	-6224	3.64	3.64	-23266	10833	6309	115546	20930	18564	39494	No	6.35	Si
SLU 82	4.82	-4244.21	-32250	-18936	-6470	3.64	3.64	-32514	10833	6309	115546	20930	18564	39494	No	6.1	Si
SLU 82	6.92	-3225.25	-23042	-13529	-6369	3.64	3.64	-23230	10833	6309	115546	20930	18564	39494	No	6.2	Si
SLU 81	4.82	-4201.75	-32247	-18934	-6485	3.64	3.64	-32511	10833	6309	115546	20930	18564	39494	No	6.09	Si
SLU 81	6.92	-3172.08	-23041	-13529	-6356	3.64	3.64	-23229	10833	6309	115546	20930	18564	39494	No	6.21	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	4.82	-4285.71	-32403	-19025	-6378	3.64	3.64	-32667	10833	6309	115546	20930	18564	39494	No	6.19	Si
SLU 80	6.92	-3164.29	-23348	-13709	-6259	3.64	3.64	-23539	10833	6309	115546	20930	18564	39494	No	6.31	Si
SLU 78	4.82	-4300.27	-32639	-19164	-6446	3.64	3.64	-32906	10833	6309	115546	20930	18564	39494	No	6.13	Si
SLU 78	6.92	-3173.91	-23517	-13808	-6327	3.64	3.64	-23709	10833	6309	115546	20930	18564	39494	No	6.24	Si
SLU 77	4.82	-4257.8	-32637	-19163	-6460	3.64	3.64	-32903	10833	6309	115546	20930	18564	39494	No	6.11	Si
SLU 77	6.92	-3120.74	-23516	-13807	-6314	3.64	3.64	-23708	10833	6309	115546	20930	18564	39494	No	6.26	Si
SLU 79	4.82	-4243.24	-32400	-19024	-6392	3.64	3.64	-32664	10833	6309	115546	20930	18564	39494	No	6.18	Si
SLU 79	6.92	-3111.12	-23347	-13708	-6245	3.64	3.64	-23537	10833	6309	115546	20930	18564	39494	No	6.32	Si
SLU 84	4.82	-4296.28	-32767	-19240	-6564	3.64	3.64	-33035	10833	6309	115546	20930	18564	39494	No	6.02	Si
SLU 84	6.92	-3243.1	-23480	-13787	-6460	3.64	3.64	-23672	10833	6309	115546	20930	18564	39494	No	6.11	Si
SLU 83	4.82	-4253.81	-32765	-19238	-6578	3.64	3.64	-33032	10833	6309	115546	20930	18564	39494	No	6	Si
SLU 83	6.92	-3189.93	-23479	-13786	-6446	3.64	3.64	-23671	10833	6309	115546	20930	18564	39494	No	6.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	4.82	-1448.29	-20761	-12190	-7410	3.64	3.64	-20930	16250	9464	115546	31395	18564	49959		6.74	Si
SLV 5	6.92	4419.11	-13504	-7929	-5743	3.64	3.64	-13614	15223	8866	115546	31395	18564	49959		8.7	Si
SLV 10	4.82	-1522.29	-20995	-12328	-6286	3.64	3.64	-21167	16250	9464	115546	31395	18564	49959		7.95	Si
SLV 10	6.92	4749.2	-15003	-8809	-5105	3.64	3.64	-15125	15525	9042	115546	31395	18564	49959		9.79	Si
SLV 6	4.82	-1447.37	-20396	-11976	-7380	3.64	3.64	-20563	16250	9464	115546	31395	18564	49959		6.77	Si
SLV 6	6.92	4704.2	-13314	-7817	-5756	3.64	3.64	-13423	15185	8843	115546	31395	18564	49959		8.68	Si
SLV 2	4.82	-2456.56	-20774	-12198	-6878	3.64	3.64	-20944	16250	9464	115546	31395	18564	49959		7.26	Si
SLV 2	6.92	-18.7	-12682	-7446	-5660	3.64	3.64	-12786	15057	8769	115546	31395	18564	49959		8.83	Si
SLD 6	4.82	-2347.85	-21612	-12689	-5656	3.64	3.64	-21788	16250	9464	115546	31395	18564	49959		8.83	Si
SLD 6	6.92	848.64	-14961	-8784	-4870	3.64	3.64	-15083	15517	9037	115546	31395	18564	49959		10.26	Si
SLV 1	4.82	-2457.99	-21342	-12531	-6924	3.64	3.64	-21516	16250	9464	115546	31395	18564	49959		7.22	Si
SLV 1	6.92	-462.29	-12977	-7619	-5638	3.64	3.64	-13083	15117	8804	115546	31395	18564	49959		8.86	Si
SLD 2	4.82	-2807.13	-21802	-12801	-5417	3.64	3.64	-21980	16250	9464	115546	31395	18564	49959		9.22	Si
SLD 2	6.92	-1240.69	-14723	-8645	-4820	3.64	3.64	-14843	15469	9009	115546	31395	18564	49959		10.37	Si
SLD 1	4.82	-2807.75	-22045	-12944	-5437	3.64	3.64	-22225	16250	9464	115546	31395	18564	49959		9.19	Si
SLD 1	6.92	-1431.13	-14849	-8719	-4810	3.64	3.64	-14971	15494	9024	115546	31395	18564	49959		10.39	Si
SLV 9	4.82	-1523.21	-21360	-12542	-6316	3.64	3.64	-21534	16250	9464	115546	31395	18564	49959		7.91	Si
SLV 9	6.92	4464.11	-15192	-8920	-5091	3.64	3.64	-15316	15563	9064	115546	31395	18564	49959		9.81	Si
SLD 5	4.82	-2348.25	-21771	-12783	-5669	3.64	3.64	-21949	16250	9464	115546	31395	18564	49959		8.81	Si
SLD 5	6.92	724.17	-15044	-8833	-4864	3.64	3.64	-15167	15533	9047	115546	31395	18564	49959		10.27	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.58 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-14318	0.38	224.04	991.82	1625.5	1308.66	5.84	Si
SLV 6	-14451	0.38	224.04	999.55	1637.64	1318.6	5.89	Si
SLV 5	-14689	0.38	224.04	1013.4	1659.49	1336.45	5.97	Si
SLV 1	-14689	0.38	224.04	1013.4	1659.49	1336.45	5.97	Si
SLV 4	-15690	0.38	224.04	1070.73	1751.51	1411.12	6.3	Si
SLV 10	-15880	0.38	224.04	1081.38	1768.9	1425.14	6.36	Si
SLV 3	-16061	0.38	224.04	1091.55	1785.42	1438.48	6.42	Si
SLV 9	-16118	0.38	224.04	1094.72	1790.58	1442.65	6.44	Si
SLV 8	-19024	0.38	224.04	1250.7	2055.45	1653.07	7.38	Si
SLV 14	-19081	0.38	224.04	1253.61	2060.62	1657.12	7.4	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-13014	-24363	189	1.389	1615	0.948	21.28198	16.48959	Si
SLV 11	-12994	-24728	189	1.391	1613	0.948	21.31057	16.48959	Si
SLV 10	-11389	-20995	185	1.557	1450.1	0.943	23.98426	16.48959	Si
SLV 9	-11369	-21360	186	1.559	1448.1	0.943	24.02068	16.48959	Si
SLV 8	-10935	-23764	-186	1.611	1404.1	0.942	24.86354	16.48959	Si
SLV 7	-10915	-24128	-185	1.614	1402.1	0.942	24.90396	16.48959	Si
SLV 16	-14876	-23782	624	1.211	1804	0.953	18.45869	11.6797	Si
SLV 15	-14845	-24349	625	1.213	1800.9	0.953	18.4927	11.6797	Si
SLV 14	-14388	-22772	623	1.246	1754.5	0.952	19.02702	11.6797	Si
SLV 13	-14358	-23339	624	1.249	1751.4	0.952	19.0632	11.6797	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.449	SLU 68	Si
V_SLU	6.004	SLU 83	Si
PF_SLV	3.936	SLV 7	Si
V_SLV	6.742	SLV 5	Si
PFFP_SLV	5.841	SLV 2	Si
R_SLV	1.291	SLV 12	Si

Maschio 106

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)
Maschio considerato membratura sismica secondaria

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.093	6.506	-5.093	6.526	L5	L6	0.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 77	6.82	-330	-0.17	58935	1.39	8.146	Si
SLU 77	7.62	-324	-0.13	57798	1.4	10.884	Si
SLU 81	6.82	-327	-0.17	58357	1.39	8.342	Si
SLU 81	7.62	-320	-0.13	57152	1.4	10.987	Si
SLU 78	6.82	-331	-0.17	59041	1.39	8.157	Si
SLU 78	7.62	-324	-0.13	57931	1.4	10.901	Si
SLU 79	6.82	-325	-0.17	57979	1.4	8.325	Si
SLU 79	7.62	-318	-0.13	56831	1.41	11.118	Si
SLU 75	6.82	-325	-0.17	58105	1.4	8.329	Si
SLU 75	7.62	-319	-0.13	56992	1.4	11.165	Si
SLU 83	6.82	-332	-0.17	59293	1.39	8.168	Si
SLU 83	7.62	-325	-0.13	58091	1.4	10.729	Si
SLU 82	6.82	-327	-0.17	58463	1.39	8.354	Si
SLU 82	7.62	-321	-0.13	57285	1.4	11.005	Si
SLU 80	6.82	-325	-0.17	58085	1.4	8.337	Si
SLU 80	7.62	-319	-0.13	56965	1.41	11.137	Si
SLU 84	6.82	-333	-0.17	59399	1.39	8.178	Si
SLU 84	7.62	-326	-0.13	58225	1.4	10.745	Si
SLU 74	6.82	-325	-0.17	57999	1.4	8.317	Si
SLU 74	7.62	-318	-0.13	56858	1.41	11.146	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 56	6.82	-298	0	-0.16		53135	0.02	10833	61			1000	Si
SLU 56	7.62	-292	0	-0.11		52084	0.02	10833	61			1000	Si
SLU 60	6.82	-294	0	-0.15		52556	0.02	10833	61			1000	Si
SLU 60	7.62	-288	0	-0.11		51438	0.02	10833	61			1000	Si
SLU 58	6.82	-292	0	-0.15		52179	0.02	10833	61			1000	Si
SLU 58	7.62	-286	0	-0.11		51118	0.02	10833	61			1000	Si
SLU 57	6.82	-298	0	-0.16		53241	0.02	10833	61			1000	Si
SLU 57	7.62	-292	0	-0.11		52218	0.02	10833	61			1000	Si
SLU 1	6.82	-203	0	-0.11		36187	0.02	10833	61			1000	Si
SLU 1	7.62	-198	0	-0.07		35436	0.02	10833	61			1000	Si
SLU 61	6.82	-295	0	-0.15		52662	0.02	10833	61			1000	Si
SLU 61	7.62	-289	0	-0.11		51572	0.02	10833	61			1000	Si
SLU 59	6.82	-293	0	-0.15		52284	0.02	10833	61			1000	Si
SLU 59	7.62	-287	0	-0.11		51251	0.02	10833	61			1000	Si
SLU 55	6.82	-288	0	-0.15		51418	0.02	10833	61			1000	Si
SLU 55	7.62	-282	0	-0.11		50401	0.02	10833	61			1000	Si
SLU 53	6.82	-292	0	-0.15		52198	0.02	10833	61			1000	Si
SLU 53	7.62	-286	0	-0.11		51145	0.02	10833	61			1000	Si
SLU 54	6.82	-293	0	-0.15		52304	0.02	10833	61			1000	Si
SLU 54	7.62	-287	0	-0.11		51279	0.02	10833	61			1000	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.38	0	60	2.08	0	0	No, Trazione
SLV 7	179667	0.38	0	-10	2.08	0	0	No, e>t/2
SLV 3	179667	0.38	0	70	2.08	0	0	No, Trazione
SLV 4	179667	0.38	0	59	2.08	0	0	No, Trazione
SLV 2	179667	0.38	0	49	2.08	0	0	No, Trazione
SLV 8	179667	0.38	3021	-17	2.08	2.32	1.11	Si
SLV 5	179667	0.38	7718	-43	2.08	5.75	2.76	Si
SLV 6	179667	0.38	8968	-50	2.08	6.62	3.18	Si
SLV 11	179667	0.38	15502	-87	2.08	10.92	5.24	Si
SLV 12	179667	0.38	16752	-94	2.08	11.69	5.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-120	-99	-2	0.845	15	0.947	12.9712	12.69956	Si
SLV 7	-120	-111	-1	0.855	15	0.947	13.12717	12.69956	Si
SLV 6	-118	-104	-2	0.857	14.8	0.946	13.17036	12.69956	Si
SLV 8	-118	-116	-1	0.868	14.8	0.946	13.32871	12.69956	Si
SLV 11	-89	-177	3	1.075	11.9	0.935	16.69823	12.69956	Si
SLV 9	-89	-166	1	1.089	11.9	0.935	16.93083	12.69956	Si
SLV 12	-87	-182	3	1.096	11.7	0.934	17.04366	12.69956	Si
SLV 10	-87	-170	1	1.111	11.7	0.934	17.28154	12.69956	Si
SLV 1	-157	-25	-5	0.657	18.7	0.956	9.98495	6.60165	Si
SLV 3	-157	-29	-5	0.659	18.7	0.956	10.02207	6.60165	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.146	SLU 77	Si
V_SLU	1000	SLU 1	Si
PFFP_SLV	0	SLV 4	No
R_SLV	1.021	SLV 5	Si

Maschio 107

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-5.093	5.826	L5	L6	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	5.72	1581.07	-21770	-0.0000714	0.0003743	0.0035	2.13	14872.19	17488.32	17488.32	11.06	No	Si
SLU 75	7.52	-2904.03	-23480	-0.0000877	0.0003743	0.0035	2.13	15336.27	19104.51	19104.51	6.58	No	Si
SLU 79	5.72	1579.56	-22113	-0.0000725	0.0003743	0.0035	2.13	14973.66	17634.11	17634.11	11.16	No	Si
SLU 79	7.52	-2921.18	-23828	-0.000089	0.0003743	0.0035	2.13	15418	19278.79	19278.79	6.6	No	Si
SLU 82	5.72	1638.88	-21688	-0.0000716	0.0003743	0.0035	2.13	14847.6	17454	17454	10.65	No	Si
SLU 82	7.52	-2939.4	-23534	-0.0000882	0.0003743	0.0035	2.13	15349.35	19131.66	19131.66	6.51	No	Si
SLU 83	5.72	1646.01	-22276	-0.0000735	0.0003743	0.0035	2.13	15020.2	17703.39	17703.39	10.76	No	Si
SLU 83	7.52	-2993.15	-24174	-0.0000907	0.0003743	0.0035	2.13	15495.34	19454.67	19454.67	6.5	No	Si
SLU 73	5.72	1570.24	-20972	-0.0000689	0.0003743	0.0035	2.13	14620.51	17092.38	17092.38	10.89	No	Si
SLU 73	7.52	-2819.05	-22578	-0.0000841	0.0003743	0.0035	2.13	15104.37	18661.49	18661.49	6.62	No	Si
SLU 81	5.72	1653.71	-21787	-0.0000721	0.0003743	0.0035	2.13	14877.42	17495.67	17495.67	10.58	No	Si
SLU 81	7.52	-2955.52	-23625	-0.0000886	0.0003743	0.0035	2.13	15370.95	19177.12	19177.12	6.49	No	Si
SLU 74	5.72	1595.9	-21868	-0.0000718	0.0003743	0.0035	2.13	14901.73	17530.05	17530.05	10.98	No	Si
SLU 74	7.52	-2920.15	-23571	-0.0000882	0.0003743	0.0035	2.13	15358.05	19149.89	19149.89	6.56	No	Si
SLU 84	5.72	1631.18	-22177	-0.0000731	0.0003743	0.0035	2.13	14992.07	17661.32	17661.32	10.83	No	Si
SLU 84	7.52	-2977.03	-24083	-0.0000903	0.0003743	0.0035	2.13	15475.48	19408.4	19408.4	6.52	No	Si
SLU 78	5.72	1573.37	-22258	-0.0000729	0.0003743	0.0035	2.13	15015.26	17695.97	17695.97	11.25	No	Si
SLU 78	7.52	-2941.66	-24029	-0.0000898	0.0003743	0.0035	2.13	15463.46	19380.76	19380.76	6.59	No	Si
SLU 77	5.72	1588.19	-22357	-0.0000733	0.0003743	0.0035	2.13	15043.11	17738.1	17738.1	11.17	No	Si
SLU 77	7.52	-2957.78	-24120	-0.0000903	0.0003743	0.0035	2.13	15483.49	19426.96	19426.96	6.57	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	5.72	2082.21	-8731	-0.0000369	0.0005615	0.0035	2.13		8858.77	8858.77	4.25		Si
SLV 8	7.52	-2842.93	-10420	-0.0000469	0.0005615	0.0035	2.13		11381.82	11381.82	4		Si
SLD 4	5.72	2265	-13559	-0.0000511	0.0005615	0.0035	2.13		12740.33	12740.33	5.62		Si
SLD 4	7.52	-3393.59	-15486	-0.0000648	0.0005615	0.0035	2.13		15647.51	15647.51	4.61		Si
SLV 2	5.72	3618.64	-15041	-0.0000653	0.0005615	0.0035	2.13		13949.25	13949.25	3.85		Si
SLV 2	7.52	-5277.21	-18313	-0.0000871	0.0005615	0.0035	2.13		17842.78	17842.78	3.38		Si
SLD 3	5.72	2468.05	-13539	-0.0000526	0.0005615	0.0035	2.13		12724.51	12724.51	5.16		Si
SLD 3	7.52	-3635.46	-15625	-0.000067	0.0005615	0.0035	2.13		15758.95	15758.95	4.33		Si
SLD 1	5.72	2400.58	-15087	-0.0000563	0.0005615	0.0035	2.13		13986.47	13986.47	5.83		Si
SLD 1	7.52	-3649.16	-17130	-0.0000713	0.0005615	0.0035	2.13		16931.62	16931.62	4.64		Si
SLV 4	5.72	3773.6	-11537	-0.0000567	0.0005615	0.0035	2.13		11118.65	11118.65	2.95		Si
SLV 4	7.52	-5248.22	-14906	-0.0000771	0.0005615	0.0035	2.13		15175.23	15175.23	2.89		Si
SLD 2	5.72	2197.53	-15106	-0.0000549	0.0005615	0.0035	2.13		14002.52	14002.52	6.37		Si
SLD 2	7.52	-3407.29	-16991	-0.0000691	0.0005615	0.0035	2.13		16822.61	16822.61	4.94		Si
SLV 7	5.72	2386.17	-8702	-0.000039	0.0005615	0.0035	2.13		8832.01	8832.01	3.7		Si
SLV 7	7.52	-3205	-10629	-0.0000501	0.0005615	0.0035	2.13		11567.3	11567.3	3.61		Si
SLV 3	5.72	4246.56	-11492	-0.0000601	0.0005615	0.0035	2.13		11082.47	11082.47	2.61		Si
SLV 3	7.52	-5811.59	-15231	-0.0000825	0.0005615	0.0035	2.13		15441.59	15441.59	2.66		Si
SLV 1	5.72	4091.6	-14996	-0.0000687	0.0005615	0.0035	2.13		13911.89	13911.89	3.4		Si
SLV 1	7.52	-5840.58	-18637	-0.0000924	0.0005615	0.0035	2.13		18079.86	18079.86	3.1		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	5.72	1595.9	-21868	-18210	5395	2.13	2.13	-30534	10833	6461	40441	17859	5431	23290	No	4.32	Si
SLU 74	7.52	-2920.15	-23571	-19628	5408	2.13	2.13	-32911	10833	6461	40441	17859	5431	23290	No	4.31	Si
SLU 78	5.72	1573.37	-22258	-18535	5459	2.13	2.13	-31078	10833	6461	40441	17859	5431	23290	No	4.27	Si
SLU 78	7.52	-2941.66	-24029	-20009	5435	2.13	2.13	-33550	10833	6461	40441	17859	5431	23290	No	4.29	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	5.72	1646.01	-22276	-18549	5587	2.13	2.13	-31103	10833	6461	40441	17859	5431	23290	No	4.17	Si
SLU 83	7.52	-2993.15	-24174	-20130	5600	2.13	2.13	-33753	10833	6461	40441	17859	5431	23290	No	4.16	Si
SLU 84	5.72	1631.18	-22177	-18467	5596	2.13	2.13	-30965	10833	6461	40441	17859	5431	23290	No	4.16	Si
SLU 84	7.52	-2977.03	-24083	-20055	5572	2.13	2.13	-33626	10833	6461	40441	17859	5431	23290	No	4.18	Si
SLU 79	5.72	1579.56	-22113	-18414	5394	2.13	2.13	-30876	10833	6461	40441	17859	5431	23290	No	4.32	Si
SLU 79	7.52	-2921.18	-23828	-19842	5406	2.13	2.13	-33269	10833	6461	40441	17859	5431	23290	No	4.31	Si
SLU 77	5.72	1588.19	-22357	-18617	5450	2.13	2.13	-31216	10833	6461	40441	17859	5431	23290	No	4.27	Si
SLU 77	7.52	-2957.78	-24120	-20085	5463	2.13	2.13	-33677	10833	6461	40441	17859	5431	23290	No	4.26	Si
SLU 81	5.72	1653.71	-21787	-18142	5532	2.13	2.13	-30420	10833	6461	40441	17859	5431	23290	No	4.21	Si
SLU 81	7.52	-2955.52	-23625	-19673	5545	2.13	2.13	-32987	10833	6461	40441	17859	5431	23290	No	4.2	Si
SLU 75	5.72	1581.07	-21770	-18128	5405	2.13	2.13	-30396	10833	6461	40441	17859	5431	23290	No	4.31	Si
SLU 75	7.52	-2904.03	-23480	-19552	5380	2.13	2.13	-32784	10833	6461	40441	17859	5431	23290	No	4.33	Si
SLU 80	5.72	1564.73	-22015	-18332	5403	2.13	2.13	-30738	10833	6461	40441	17859	5431	23290	No	4.31	Si
SLU 80	7.52	-2905.06	-23737	-19766	5379	2.13	2.13	-33142	10833	6461	40441	17859	5431	23290	No	4.33	Si
SLU 82	5.72	1638.88	-21688	-18060	5542	2.13	2.13	-30282	10833	6461	40441	17859	5431	23290	No	4.2	Si
SLU 82	7.52	-2939.4	-23534	-19597	5517	2.13	2.13	-32860	10833	6461	40441	17859	5431	23290	No	4.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	5.72	2265	-13559	-11291	5836	2.13	2.13	-18931	14203	8471	40441	26788	5431	32219		5.52	Si
SLD 4	7.52	-3393.59	-15486	-12896	5657	2.13	2.13	-21623	14741	8792	40441	26788	5431	32219		5.7	Si
SLV 4	5.72	3773.6	-11537	-9607	8733	2.13	2.13	-16109	13638	8134	40441	26788	5431	32219		3.69	Si
SLV 4	7.52	-5248.22	-14906	-12413	8301	2.13	2.13	-20813	14579	8695	40441	26788	5431	32219		3.88	Si
SLD 3	5.72	2468.05	-13539	-11274	6182	2.13	2.13	-18904	14197	8467	40441	26788	5431	32219		5.21	Si
SLD 3	7.52	-3635.46	-15625	-13012	6002	2.13	2.13	-21817	14780	8815	40441	26788	5431	32219		5.37	Si
SLD 1	5.72	2400.58	-15087	-12563	6094	2.13	2.13	-21065	14630	8725	40441	26788	5431	32219		5.29	Si
SLD 1	7.52	-3649.16	-17130	-14264	5852	2.13	2.13	-23918	15200	9065	40441	26788	5431	32219		5.51	Si
SLV 8	5.72	2082.21	-8731	-7271	5364	2.13	2.13	-12191	12855	7667	40441	26788	5431	32219		6.01	Si
SLV 8	7.52	-2842.93	-10420	-8677	5452	2.13	2.13	-14550	13327	7948	40441	26788	5431	32219		5.91	Si
SLD 2	5.72	2197.53	-15106	-12579	5748	2.13	2.13	-21092	14635	8728	40441	26788	5431	32219		5.61	Si
SLD 2	7.52	-3407.29	-16991	-14149	5507	2.13	2.13	-23723	15161	9042	40441	26788	5431	32219		5.85	Si
SLV 1	5.72	4091.6	-14996	-12487	9334	2.13	2.13	-20938	14604	8710	40441	26788	5431	32219		3.45	Si
SLV 1	7.52	-5840.58	-18637	-15519	8759	2.13	2.13	-26022	15621	9316	40441	26788	5431	32219		3.68	Si
SLV 2	5.72	3618.64	-15041	-12525	8529	2.13	2.13	-21001	14617	8717	40441	26788	5431	32219		3.78	Si
SLV 2	7.52	-5277.21	-18313	-15249	7956	2.13	2.13	-25569	15530	9262	40441	26788	5431	32219		4.05	Si
SLV 7	5.72	2386.17	-8702	-7246	5881	2.13	2.13	-12150	12847	7662	40441	26788	5431	32219		5.48	Si
SLV 7	7.52	-3205	-10629	-8851	5968	2.13	2.13	-14841	13385	7983	40441	26788	5431	32219		5.4	Si
SLV 3	5.72	4246.56	-11492	-9569	9538	2.13	2.0864	-16046	13626	7960	40441	26788	5431	32219		3.38	Si
SLV 3	7.52	-5811.59	-15231	-12683	9104	2.13	2.0503	-22335	14884	8544	40441	26788	5431	32219		3.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.38	15863	-9460	216.81	1186.88	5.47	Si
SLV 11	179667	0.38	16142	-9627	216.81	1205.34	5.56	Si
SLV 8	179667	0.38	16687	-9952	216.81	1241.03	5.72	Si
SLV 7	179667	0.38	16966	-10119	216.81	1259.23	5.81	Si
SLV 16	179667	0.38	21791	-12996	216.81	1559.84	7.19	Si
SLV 15	179667	0.38	22226	-13256	216.81	1585.69	7.31	Si
SLV 4	179667	0.38	24538	-14634	216.81	1719.61	7.93	Si
SLV 3	179667	0.38	24973	-14894	216.81	1744.16	8.04	Si
SLV 14	179667	0.38	27763	-16558	216.81	1896.68	8.75	Si
SLV 13	179667	0.38	28198	-16817	216.81	1919.7	8.85	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-19011	-18828	-601	0.587	2231.4	0.961	8.88255	12.69956	No
SLV 10	-18945	-18542	-604	0.589	2224.6	0.96	8.9079	12.69956	No
SLV 5	-18715	-19794	-600	0.595	2201.3	0.96	9.00653	12.69956	No
SLV 6	-18649	-19508	-603	0.597	2194.5	0.96	9.03267	12.69956	No
SLV 11	-10353	-9586	632	0.972	1352.3	0.939	15.04066	12.69956	Si
SLV 12	-10287	-9300	629	0.977	1345.6	0.938	15.12768	12.69956	Si
SLV 7	-10057	-10551	633	0.995	1322.4	0.938	15.41646	12.69956	Si
SLV 8	-9991	-10265	630	1	1315.6	0.937	15.50793	12.69956	Si
SLV 13	-16345	-14546	-169	0.691	1960.3	0.956	10.50511	6.60165	Si
SLV 14	-16241	-14101	-174	0.694	1949.8	0.955	10.56024	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.489	SLU 81	Si
V_SLU	4.159	SLU 83	Si
PF_SLV	2.61	SLV 3	Si
V_SLV	3.378	SLV 3	Si
PFFP_SLV	5.474	SLV 12	Si
R_SLV	0.699	SLV 9	No

Maschio 108

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L5	L6	1.93	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	5.72	1772.43	-13510	-0.0000555	0.0003743	0.0035	1.93	9835.94	10799.74	10799.74	6.09	No	Si
SLU 43	7.52	-24.99	-11572	-0.0000333	0.0003743	0.0035	1.93	8818.11	10503.34	10503.34	420.33	No	Si
SLU 50	5.72	1829.96	-14246	-0.0000584	0.0003743	0.0035	1.93	10188.02	11206.95	11206.95	6.12	No	Si
SLU 50	7.52	24.23	-12349	-0.0000356	0.0003743	0.0035	1.93	9242.31	10120.34	10120.34	417.65	No	Si
SLU 45	5.72	1827.49	-14098	-0.0000579	0.0003743	0.0035	1.93	10118.52	11124.28	11124.28	6.09	No	Si
SLU 45	7.52	0.33	-12177	-0.0000349	0.0003743	0.0035	1.93	9150.19	9998.52	9998.52	30228.71	No	Si
SLU 49	5.72	1843.32	-14388	-0.000059	0.0003743	0.0035	1.93	10253.54	11285.97	11285.97	6.12	No	Si
SLU 49	7.52	35.64	-12515	-0.0000362	0.0003743	0.0035	1.93	9329.92	10231.89	10231.89	287.06	No	Si
SLU 53	5.72	1880.33	-15242	-0.0000621	0.0003743	0.0035	1.93	10633.75	11767.51	11767.51	6.26	No	Si
SLU 53	7.52	148.99	-13593	-0.0000406	0.0003743	0.0035	1.93	9876.69	10845.45	10845.45	72.79	No	Si
SLU 46	5.72	1814.56	-14020	-0.0000575	0.0003743	0.0035	1.93	10081.71	11080.97	11080.97	6.11	No	Si
SLU 46	7.52	11.03	-12126	-0.0000348	0.0003743	0.0035	1.93	9122.73	9959.37	9959.37	902.56	No	Si
SLU 47	5.72	1779.63	-13748	-0.0000563	0.0003743	0.0035	1.93	9951.88	10930.74	10930.74	6.14	No	Si
SLU 47	7.52	17.46	-11875	-0.0000341	0.0003743	0.0035	1.93	8986.41	9767.09	9767.09	559.36	No	Si
SLU 51	5.72	1817.02	-14168	-0.000058	0.0003743	0.0035	1.93	10151.61	11163.5	11163.5	6.14	No	Si
SLU 51	7.52	34.94	-12298	-0.0000356	0.0003743	0.0035	1.93	9215.16	10085	10085	288.68	No	Si
SLU 44	5.72	1750.86	-13380	-0.0000548	0.0003743	0.0035	1.93	9771.78	10728.23	10728.23	6.13	No	Si
SLU 44	7.52	-7.15	-11487	-0.0000329	0.0003743	0.0035	1.93	8770.49	10444.37	10444.37	1461.06	No	Si
SLU 48	5.72	1856.26	-14466	-0.0000593	0.0003743	0.0035	1.93	10289.35	11329.62	11329.62	6.1	No	Si
SLU 48	7.52	24.94	-12566	-0.0000363	0.0003743	0.0035	1.93	9356.68	10265.2	10265.2	411.59	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	5.72	1038.61	-3540	-0.0000186	0.0005615	0.0035	1.93		3482.8	3482.8	3.35		Si
SLV 11	7.52	959.42	-1750	-0.0000148	0.0005615	0.0035	1.93		1844.27	1844.27	1.92		Si
SLV 3	5.72	5007.96	-7468	-0.0000949	0.0005615	0.0035	1.93		6893.86	6893.86	1.38		Si
SLV 3	7.52	-3221.48	-2391	-0.0005566	0.0005615	0.0035	1.544		3288.25	3288.25	1.02		Si
SLD 3	5.72	2954.32	-9727	-0.0000532	0.0005615	0.0035	1.93		8678.19	8678.19	2.94		Si
SLD 3	7.52	-1311.75	-6824	-0.0000303	0.0005615	0.0035	1.93		7176.05	7176.05	5.47		Si
SLV 8	5.72	2606.46	-2697	-0.0005771	0.0005615	0.0035	1.93		2717.31	2717.31	1.04		Si
SLV 8	7.52	-604.14	282	0.0237482	0.0005615	0.0035	1.544		0	0	0		No
SLV 1	5.72	4764.35	-12483	-0.000079	0.0005615	0.0035	1.93		10627	10627	2.23		Si
SLV 1	7.52	-3260.09	-8073	-0.000052	0.0005615	0.0035	1.93		8223.79	8223.79	2.52		Si
SLV 7	5.72	2956.84	-2658	-0.0032314	0.0005615	0.0035	1.93		2681.42	2681.42	0.91		No
SLV 7	7.52	-910.17	931	0.0768984	0.0005615	0.0035	1.544		0	0	0		No
SLV 2	5.72	4219.16	-12545	-0.0000734	0.0005615	0.0035	1.93		10670.85	10670.85	2.53		Si
SLV 2	7.52	-2783.92	-9083	-0.0000498	0.0005615	0.0035	1.93		9040.71	9040.71	3.25		Si
SLV 16	5.72	-1931.32	-10470	-0.0000464	0.0005615	0.0035	1.93		10143.65	10143.65	5.25		Si
SLV 16	7.52	3486.67	-12336	-0.000066	0.0005615	0.0035	1.93		10521.68	10521.68	3.02		Si
SLV 4	5.72	4462.77	-7530	-0.0000744	0.0005615	0.0035	1.93		6944.83	6944.83	1.56		Si
SLV 4	7.52	-2745.31	-3401	-0.0000763	0.0005615	0.0035	1.544		4204.36	4204.36	1.53		Si
SLV 12	5.72	688.23	-3579	-0.0000157	0.0005615	0.0035	1.93		3518.03	3518.03	5.11		Si
SLV 12	7.52	1265.45	-2399	-0.0000193	0.0005615	0.0035	1.93		2445.1	2445.1	1.93		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 46	5.72	1814.56	-14020	-11674	650	1.93	1.93	-21603	9825	5309	40441	16182	4922	21104	No	32.48	Si
SLU 46	7.52	11.03	-12126	-10098	644	1.93	1.93	-18685	9436	5099	40441	16182	4922	21104	No	32.79	Si
SLU 45	5.72	1827.49	-14098	-11739	673	1.93	1.93	-21723	9841	5318	40441	16182	4922	21104	No	31.38	Si
SLU 45	7.52	0.33	-12177	-10140	676	1.93	1.93	-18764	9446	5105	40441	16182	4922	21104	No	31.23	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 53	5.72	1880.33	-15242	-12692	473	1.93	1.93	-23486	10076	5445	40441	16182	4922	21104	No	44.59	Si
SLU 53	7.52	148.99	-13593	-11319	477	1.93	1.93	-20946	9737	5262	40441	16182	4922	21104	No	44.27	Si
SLU 50	5.72	1829.96	-14246	-11863	648	1.93	1.93	-21952	9871	5335	40441	16182	4922	21104	No	32.57	Si
SLU 50	7.52	24.23	-12349	-10283	651	1.93	1.93	-19029	9482	5124	40441	16182	4922	21104	No	32.41	Si
SLU 44	5.72	1750.86	-13380	-11142	628	1.93	1.93	-20617	9693	5238	40441	16182	4922	21104	No	33.62	Si
SLU 44	7.52	-7.15	-11487	-9565	615	1.93	1.93	-17700	9304	5028	40441	16182	4922	21104	No	34.31	Si
SLU 51	5.72	1817.02	-14168	-11798	625	1.93	1.93	-21832	9855	5326	40441	16182	4922	21104	No	33.76	Si
SLU 51	7.52	34.94	-12298	-10241	619	1.93	1.93	-18951	9471	5118	40441	16182	4922	21104	No	34.09	Si
SLU 48	5.72	1856.26	-14466	-12046	664	1.93	1.93	-22290	9917	5359	40441	16182	4922	21104	No	31.8	Si
SLU 48	7.52	24.94	-12566	-10464	667	1.93	1.93	-19363	9526	5148	40441	16182	4922	21104	No	31.64	Si
SLU 43	5.72	1772.43	-13510	-11250	666	1.93	1.93	-20818	9720	5253	40441	16182	4922	21104	No	31.71	Si
SLU 43	7.52	-24.99	-11572	-9636	669	1.93	1.93	-17831	9322	5038	40441	16182	4922	21104	No	31.56	Si
SLU 49	5.72	1843.32	-14388	-11981	641	1.93	1.93	-22170	9900	5350	40441	16182	4922	21104	No	32.92	Si
SLU 49	7.52	35.64	-12515	-10421	635	1.93	1.93	-19284	9516	5142	40441	16182	4922	21104	No	33.24	Si
SLU 47	5.72	1779.63	-13748	-11448	619	1.93	1.93	-21184	9769	5279	40441	16182	4922	21104	No	34.1	Si
SLU 47	7.52	17.46	-11875	-9889	606	1.93	1.93	-18299	9384	5071	40441	16182	4922	21104	No	34.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	5.72	2956.84	-2658	-2213	3677	1.93	0	-129595	16250	0	40441	24273	4922	29195		7.94	Si
SLV 7	7.52	-910.17	931	775	3272	1.544	0	0	0	0	40441	19419	3937	23356		7.14	Si
SLV 1	5.72	4764.35	-12483	-10395	5893	1.93	1.7501	-19236	14264	6990	40441	24273	4922	29195		4.95	Si
SLV 1	7.52	-3260.09	-8073	-6723	5374	1.93	1.6836	-14360	13289	6264	40441	24273	4922	29195		5.43	Si
SLV 14	5.72	-2174.93	-15485	-12894	-6025	1.93	1.93	-23860	15189	8208	40441	24273	4922	29195		4.85	Si
SLV 14	7.52	3448.06	-18019	-15005	-5362	1.93	1.93	-27765	15970	8630	40441	24273	4922	29195		5.44	Si
SLV 15	5.72	-1386.13	-10409	-8667	-4132	1.93	1.93	-16039	13624	7363	40441	24273	4922	29195		7.07	Si
SLV 15	7.52	3010.5	-11327	-9432	-3608	1.93	1.93	-17453	13907	7516	40441	24273	4922	29195		8.09	Si
SLV 16	5.72	-1931.32	-10470	-8718	-5208	1.93	1.93	-16133	13643	7373	40441	24273	4922	29195		5.61	Si
SLV 16	7.52	3486.67	-12336	-10273	-4683	1.93	1.93	-19009	14219	7684	40441	24273	4922	29195		6.23	Si
SLV 3	5.72	5007.96	-7468	-6219	6711	1.93	0.8834	-11508	12718	3146	40441	24273	4922	29195		4.35	Si
SLV 3	7.52	-3221.48	-2391	-1991	6053	1.544	0	0	0	0	40441	19419	3937	23356		3.86	Si
SLV 2	5.72	4219.16	-12545	-10446	4818	1.93	1.886	-19330	14283	7543	40441	24273	4922	29195		6.06	Si
SLV 2	7.52	-2783.92	-9083	-7564	4298	1.93	1.93	-13996	13216	7142	40441	24273	4922	29195		6.79	Si
SLV 4	5.72	4462.77	-7530	-6270	5635	1.93	1.1169	-11602	12737	3983	40441	24273	4922	29195		5.18	Si
SLV 4	7.52	-2745.31	-3401	-2832	4978	1.544	0.4732	0	0	0	40441	19419	3937	23356		4.69	Si
SLV 13	5.72	-1629.74	-15424	-12843	-4949	1.93	1.93	-23766	15170	8198	40441	24273	4922	29195		5.9	Si
SLV 13	7.52	2971.89	-17009	-14164	-4287	1.93	1.93	-26209	15659	8462	40441	24273	4922	29195		6.81	Si
SLV 8	5.72	2606.46	-2697	-2246	2985	1.93	0	-102915	16250	0	40441	24273	4922	29195		9.78	Si
SLV 8	7.52	-604.14	282	235	2581	1.544	0	0	0	0	40441	19419	3937	23356		9.05	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.38	0	-1078	196.46	0	0	No, e>t/2
SLV 8	179667	0.38	2631	-1422	196.46	195.66	1	No, M>Mu
SLV 11	179667	0.38	5045	-2726	196.46	369.09	1.88	Si
SLV 12	179667	0.38	5682	-3071	196.46	413.91	2.11	Si
SLV 3	179667	0.38	9853	-5325	196.46	697.36	3.55	Si
SLV 4	179667	0.38	10845	-5860	196.46	762.2	3.88	Si
SLV 1	179667	0.38	19792	-10696	196.46	1303.34	6.63	Si
SLV 15	179667	0.38	20023	-10820	196.46	1316.25	6.7	Si
SLV 2	179667	0.38	20783	-11231	196.46	1358.42	6.91	Si
SLV 16	179667	0.38	21014	-11356	196.46	1371.1	6.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-19180	-18209	-467	0.54	2220.6	0.964	8.13672	12.69956	No
SLV 9	-18643	-18047	-468	0.553	2166.1	0.963	8.34221	12.69956	No
SLV 6	-17508	-15937	-308	0.591	2050.6	0.961	8.94293	12.69956	No
SLV 5	-16972	-15775	-308	0.607	1996	0.96	9.19126	12.69956	No
SLV 14	-15123	-15799	-380	0.665	1808	0.956	10.10935	6.60165	Si
SLV 13	-14289	-15548	-380	0.698	1723.2	0.954	10.62569	6.60165	Si
SLV 16	-9847	-11423	-145	0.971	1272.5	0.941	15.00276	6.60165	Si
SLV 2	-9551	-8226	153	0.995	1242.6	0.939	15.38851	6.60165	Si
SLV 15	-9012	-11172	-145	1.043	1188	0.937	16.1818	6.60165	Si
SLV 1	-8717	-7975	152	1.071	1158.2	0.936	16.63604	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.087	SLU 45	Si
V_SLU	31.232	SLU 45	Si
PF_SLV	0	SLV 7	No
V_SLV	3.858	SLV 3	Si
PFFP_SLV	0	SLV 7	No
R_SLV	0.641	SLV 10	No

Maschio 109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	1.266	L5	L6	4.58	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	4.82	11239.51	-51015	-0.0000846	0.0003743	0.0035	4.5801	71178.54	84806.85	84806.85	7.55	No	Si
SLU 79	6.92	7966.61	-42658	-0.0000667	0.0003743	0.0035	4.5801	65770.85	75336.57	75336.57	9.46	No	Si
SLU 77	4.82	11389.21	-51544	-0.0000856	0.0003743	0.0035	4.5801	71438.38	85302.84	85302.84	7.49	No	Si
SLU 77	6.92	8076.67	-43147	-0.0000675	0.0003743	0.0035	4.5801	66154.84	76041.38	76041.38	9.41	No	Si
SLU 81	4.82	11465.77	-51035	-0.000085	0.0003743	0.0035	4.5801	71188.72	84825.89	84825.89	7.4	No	Si
SLU 81	6.92	7851.34	-42331	-0.000066	0.0003743	0.0035	4.5801	65509.65	74867.21	74867.21	9.54	No	Si
SLU 84	4.82	11595.79	-52006	-0.0000867	0.0003743	0.0035	4.5801	71657.13	85737.59	85737.59	7.39	No	Si
SLU 84	6.92	7957.37	-43297	-0.0000675	0.0003743	0.0035	4.5801	66271.24	76258.68	76258.68	9.58	No	Si
SLU 83	4.82	11619.63	-51955	-0.0000867	0.0003743	0.0035	4.5801	71633.75	85690.31	85690.31	7.37	No	Si
SLU 83	6.92	7987.21	-43240	-0.0000675	0.0003743	0.0035	4.5801	66227.11	76176.09	76176.09	9.54	No	Si
SLU 80	4.82	11215.67	-51065	-0.0000846	0.0003743	0.0035	4.5801	71203.57	84853.74	84853.74	7.57	No	Si
SLU 80	6.92	7936.78	-42715	-0.0000667	0.0003743	0.0035	4.5801	65816.15	75418.78	75418.78	9.5	No	Si
SLU 75	4.82	11211.51	-50674	-0.000084	0.0003743	0.0035	4.5801	71005.79	84488.27	84488.27	7.54	No	Si
SLU 75	6.92	7910.96	-42295	-0.0000661	0.0003743	0.0035	4.5801	65480.54	74815.39	74815.39	9.46	No	Si
SLU 74	4.82	11235.35	-50624	-0.000084	0.0003743	0.0035	4.5801	70980.07	84441.55	84441.55	7.52	No	Si
SLU 74	6.92	7940.79	-42238	-0.000066	0.0003743	0.0035	4.5801	65434.4	74733.45	74733.45	9.41	No	Si
SLU 82	4.82	11441.93	-51085	-0.000085	0.0003743	0.0035	4.5801	71213.71	84872.78	84872.78	7.42	No	Si
SLU 82	6.92	7821.5	-42388	-0.000066	0.0003743	0.0035	4.5801	65555.6	74949.21	74949.21	9.58	No	Si
SLU 78	4.82	11365.36	-51594	-0.0000857	0.0003743	0.0035	4.5801	71462.49	85349.95	85349.95	7.51	No	Si
SLU 78	6.92	8046.83	-43204	-0.0000676	0.0003743	0.0035	4.5801	66199.16	76123.91	76123.91	9.46	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 6	4.82	5748.16	-28957	-0.0000434	0.0005615	0.0035	4.5801		58582.92	58582.92	10.19		Si
SLD 6	6.92	11875.32	-23459	-0.0000462	0.0005615	0.0035	4.5801		49215.63	49215.63	4.14		Si
SLV 5	4.82	4054.3	-22173	-0.0000324	0.0005615	0.0035	4.5801		47056.71	47056.71	11.61		Si
SLV 5	6.92	18441.19	-16714	-0.0000509	0.0005615	0.0035	4.5801		36807.01	36807.01	2		Si
SLV 6	4.82	3390.63	-21593	-0.0000306	0.0005615	0.0035	4.5801		46086.09	46086.09	13.59		Si
SLV 6	6.92	19797.44	-16567	-0.0000548	0.0005615	0.0035	4.5801		36512.37	36512.37	1.84		Si
SLV 1	4.82	2598.45	-14067	-0.0000203	0.0005615	0.0035	4.5801		31450.72	31450.72	12.1		Si
SLV 1	6.92	8198.01	-15360	-0.0000305	0.0005615	0.0035	4.5801		34080.63	34080.63	4.16		Si
SLD 5	4.82	6037.93	-29211	-0.0000442	0.0005615	0.0035	4.5801		59020.15	59020.15	9.77		Si
SLD 5	6.92	11283.17	-23524	-0.0000453	0.0005615	0.0035	4.5801		49323.87	49323.87	4.37		Si
SLV 10	4.82	6240.01	-32948	-0.0000492	0.0005615	0.0035	4.5801		65520.99	65520.99	10.5		Si
SLV 10	6.92	20072.18	-23118	-0.0000591	0.0005615	0.0035	4.5801		48642.08	48642.08	2.42		Si
SLD 9	4.82	7259.94	-34062	-0.0000522	0.0005615	0.0035	4.5801		67477.82	67477.82	9.29		Si
SLD 9	6.92	11401.3	-26327	-0.000049	0.0005615	0.0035	4.5801		54073.39	54073.39	4.74		Si
SLD 10	4.82	6970.18	-33808	-0.0000514	0.0005615	0.0035	4.5801		67031.68	67031.68	9.62		Si
SLD 10	6.92	11993.45	-26263	-0.0000499	0.0005615	0.0035	4.5801		53963.83	53963.83	4.5		Si
SLV 2	4.82	1565.81	-13164	-0.0000177	0.0005615	0.0035	4.5801		29607.04	29607.04	18.91		Si
SLV 2	6.92	10308.28	-15131	-0.0000335	0.0005615	0.0035	4.5801		33618.88	33618.88	3.26		Si
SLV 9	4.82	6903.67	-33528	-0.000051	0.0005615	0.0035	4.5801		66539.92	66539.92	9.64		Si
SLV 9	6.92	18715.93	-23266	-0.0000569	0.0005615	0.0035	4.5801		48889.66	48889.66	2.61		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	4.82	8988.16	-42414	-35319	835	4.5801	4.5801	-27541	10617	13615	40441	38401	11679	50080	No	59.95	Si
SLU 48	6.92	7153.92	-35619	-29660	813	4.5801	4.5801	-23129	10028	12860	40441	38401	11679	50080	No	61.57	Si
SLU 51	4.82	8814.63	-41935	-34920	856	4.5801	4.5801	-27230	10575	13562	40441	38401	11679	50080	No	58.51	Si
SLU 51	6.92	7014.03	-35187	-29301	834	4.5801	4.5801	-22848	9991	12812	40441	38401	11679	50080	No	60.04	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	4.82	8964.32	-42464	-35361	839	4.5801	4.5801	-27573	10621	13620	40441	38401	11679	50080	No	59.7	Si
SLU 49	6.92	7124.09	-35676	-29708	817	4.5801	4.5801	-23166	10033	12867	40441	38401	11679	50080	No	61.32	Si
SLU 45	4.82	8834.31	-41494	-34553	823	4.5801	4.5801	-26943	10537	13513	40441	38401	11679	50080	No	60.84	Si
SLU 45	6.92	7018.05	-34710	-28903	801	4.5801	4.5801	-22538	9950	12759	40441	38401	11679	50080	No	62.49	Si
SLU 50	4.82	8838.47	-41885	-34878	852	4.5801	4.5801	-27197	10571	13556	40441	38401	11679	50080	No	58.75	Si
SLU 50	6.92	7043.87	-35130	-29253	831	4.5801	4.5801	-22811	9986	12806	40441	38401	11679	50080	No	60.29	Si
SLU 47	4.82	8644.88	-41048	-34182	846	4.5801	4.5801	-26654	10498	13463	40441	38401	11679	50080	No	59.2	Si
SLU 47	6.92	6858.27	-34316	-28575	824	4.5801	4.5801	-22283	9915	12716	40441	38401	11679	50080	No	60.75	Si
SLU 59	4.82	10060.56	-46277	-38535	806	4.5801	4.5801	-30049	10833	13893	40441	38401	11679	50080	No	62.17	Si
SLU 59	6.92	7379.12	-38667	-32199	781	4.5801	4.5801	-25108	10292	13199	40441	38401	11679	50080	No	64.09	Si
SLU 44	4.82	8491.02	-40128	-33415	834	4.5801	4.5801	-26057	10419	13361	40441	38401	11679	50080	No	60.07	Si
SLU 44	6.92	6722.4	-33407	-27818	812	4.5801	4.5801	-21692	9837	12615	40441	38401	11679	50080	No	61.64	Si
SLU 43	4.82	8530.75	-40045	-33346	828	4.5801	4.5801	-26002	10411	13352	40441	38401	11679	50080	No	60.48	Si
SLU 43	6.92	6772.12	-33312	-27739	807	4.5801	4.5801	-21630	9828	12604	40441	38401	11679	50080	No	62.07	Si
SLU 46	4.82	8810.46	-41544	-34594	827	4.5801	4.5801	-26976	10541	13518	40441	38401	11679	50080	No	60.59	Si
SLU 46	6.92	6988.22	-34767	-28951	805	4.5801	4.5801	-22575	9954	12766	40441	38401	11679	50080	No	62.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	4.82	11714.92	-47757	-39768	13239	4.5801	4.5801	-31010	16250	20839	40441	57602	11679	61280		4.63	Si
SLV 11	6.92	-8557.35	-41118	-34240	10273	4.5801	4.5801	-26699	15757	20206	40441	57602	11679	60647		5.9	Si
SLV 2	4.82	1565.81	-13164	-10962	-7790	4.5801	4.5801	-8548	12126	15551	40441	57602	11679	55992		7.19	Si
SLV 2	6.92	10308.28	-15131	-12599	-7013	4.5801	4.5801	-9825	12382	15878	40441	57602	11679	56319		8.03	Si
SLV 10	4.82	6240.01	-32948	-27436	-10101	4.5801	4.5801	-21394	14696	18846	40441	57602	11679	59287		5.87	Si
SLV 10	6.92	20072.18	-23118	-19251	-7116	4.5801	4.2654	-15012	13419	16026	40441	57602	11679	56467		7.94	Si
SLV 7	4.82	8865.54	-36402	-30312	11127	4.5801	4.5801	-23637	15144	19421	40441	57602	11679	59862		5.38	Si
SLV 7	6.92	-8832.09	-34567	-28784	8104	4.5801	4.5801	-22445	14906	19115	40441	57602	11679	59556		7.35	Si
SLV 12	4.82	11051.25	-47176	-39284	11196	4.5801	4.5801	-30633	16250	20839	40441	57602	11679	61280		5.47	Si
SLV 12	6.92	-7201.1	-40971	-34117	8228	4.5801	4.5801	-26604	15737	20182	40441	57602	11679	60623		7.37	Si
SLV 9	4.82	6903.67	-33528	-27920	-8058	4.5801	4.5801	-21771	14771	18942	40441	57602	11679	59383		7.37	Si
SLV 9	6.92	18715.93	-23266	-19374	-5070	4.5801	4.4567	-15107	13438	16769	40441	57602	11679	57210		11.28	Si
SLV 15	4.82	13539.74	-56186	-46787	8816	4.5801	4.5801	-36483	16250	20839	40441	57602	11679	61280		6.95	Si
SLV 15	6.92	931.81	-42554	-35436	8002	4.5801	4.5801	-27632	15943	20446	40441	57602	11679	60887		7.61	Si
SLV 6	4.82	3390.63	-21593	-17981	-12213	4.5801	4.5801	-14021	13221	16955	40441	57602	11679	57396		4.7	Si
SLV 6	6.92	19797.44	-16567	-13795	-9284	4.5801	3.285	-10757	12568	11560	40441	57602	11679	52001		5.6	Si
SLV 5	4.82	4054.3	-22173	-18464	-10170	4.5801	4.5801	-14398	13296	17051	40441	57602	11679	57492		5.65	Si
SLV 5	6.92	18441.19	-16714	-13918	-7239	4.5801	3.5601	-10853	12587	12547	40441	57602	11679	52988		7.32	Si
SLV 8	4.82	8201.88	-35821	-29829	9084	4.5801	4.5801	-23260	15069	19324	40441	57602	11679	59765		6.58	Si
SLV 8	6.92	-7475.84	-34419	-28661	6059	4.5801	4.5801	-22350	14887	19091	40441	57602	11679	59532		9.83	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.38	12311	-15788	466.21	2032.18	4.36	Si
SLV 1	179667	0.38	12490	-16017	466.21	2059.04	4.42	Si
SLV 6	179667	0.38	13163	-16880	466.21	2159.51	4.63	Si
SLV 5	179667	0.38	13277	-17027	466.21	2176.56	4.67	Si
SLV 4	179667	0.38	16720	-21442	466.21	2673.27	5.73	Si
SLV 3	179667	0.38	16899	-21672	466.21	2698.28	5.79	Si
SLV 10	179667	0.38	18274	-23435	466.21	2888.27	6.2	Si
SLV 9	179667	0.38	18389	-23582	466.21	2903.93	6.23	Si
SLV 8	179667	0.38	27859	-35727	466.21	4089.33	8.77	Si
SLV 7	179667	0.38	27974	-35874	466.21	4102.41	8.8	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-35938	-47757	334	0.679	4295.7	0.956	10.31247	12.69956	No
SLV 12	-35634	-47176	334	0.683	4264.8	0.956	10.3897	12.69956	No
SLV 7	-32097	-36402	-228	0.749	3905.4	0.953	11.43431	12.69956	No
SLV 8	-31793	-35821	-228	0.755	3874.5	0.952	11.5303	12.69956	No
SLV 15	-33425	-56186	957	0.705	4040.3	0.954	10.73837	6.60165	Si
SLV 16	-32952	-55282	957	0.713	3992.3	0.953	10.87314	6.60165	Si
SLV 9	-15713	-33528	239	1.337	2246.7	0.925	21.01254	12.69956	Si
SLV 10	-15409	-32948	240	1.357	2216.1	0.924	21.34888	12.69956	Si
SLV 13	-27358	-51917	928	0.834	3424.3	0.947	12.80543	6.60165	Si
SLV 14	-26885	-51014	929	0.846	3376.3	0.946	13.0004	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.375	SLU 83	Si
V_SLU	58.514	SLU 51	Si
PF_SLV	1.844	SLV 6	Si
V_SLV	4.629	SLV 11	Si
PFFP_SLV	4.359	SLV 2	Si
R_SLV	0.812	SLV 11	No

Maschio 110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	2.066	-0.133	5.826	L5	L6	3.76	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	4.82	-8012.83	-41302	-0.0000847	0.0003743	0.0035	3.7599	47727.04	59472.39	59472.39	7.42	No	Si
SLU 78	6.92	-4892.93	-34496	-0.0000645	0.0003743	0.0035	3.7599	43979.95	53926.87	53926.87	11.02	No	Si
SLU 76	4.82	-7895.32	-40083	-0.0000822	0.0003743	0.0035	3.7599	47175.39	58431.65	58431.65	7.4	No	Si
SLU 76	6.92	-4775.12	-33276	-0.0000622	0.0003743	0.0035	3.7599	43136.69	52830.83	52830.83	11.06	No	Si
SLU 65	4.82	-7391.31	-36102	-0.0000738	0.0003743	0.0035	3.7599	45010.68	55203.11	55203.11	7.47	No	Si
SLU 65	6.92	-3965.36	-29672	-0.0000541	0.0003743	0.0035	3.7599	40340.01	48818.86	48818.86	12.31	No	Si
SLU 80	4.82	-7962.54	-40858	-0.0000837	0.0003743	0.0035	3.7599	47531.9	59090.02	59090.02	7.42	No	Si
SLU 80	6.92	-4827.8	-34048	-0.0000636	0.0003743	0.0035	3.7599	43676.76	53538.76	53538.76	11.09	No	Si
SLU 68	4.82	-7511.09	-36877	-0.0000754	0.0003743	0.0035	3.7599	45475.39	55810.74	55810.74	7.43	No	Si
SLU 68	6.92	-4033.24	-30418	-0.0000555	0.0003743	0.0035	3.7599	40956.92	49690.56	49690.56	12.32	No	Si
SLU 70	4.82	-7628.59	-38096	-0.0000779	0.0003743	0.0035	3.7599	46164.16	56787.14	56787.14	7.44	No	Si
SLU 70	6.92	-4151.05	-31638	-0.0000578	0.0003743	0.0035	3.7599	41922.45	51029.4	51029.4	12.29	No	Si
SLU 75	4.82	-7893.05	-40528	-0.000083	0.0003743	0.0035	3.7599	47382.58	58808.31	58808.31	7.45	No	Si
SLU 75	6.92	-4825.05	-33749	-0.0000631	0.0003743	0.0035	3.7599	43469.87	53269.93	53269.93	11.04	No	Si
SLU 72	4.82	-7578.31	-37651	-0.000077	0.0003743	0.0035	3.7599	45919.01	56428.22	56428.22	7.45	No	Si
SLU 72	6.92	-4085.93	-31191	-0.0000569	0.0003743	0.0035	3.7599	41574.41	50544.84	50544.84	12.37	No	Si
SLU 84	4.82	-8007.44	-41457	-0.000085	0.0003743	0.0035	3.7599	47793.52	59606.63	59606.63	7.44	No	Si
SLU 84	6.92	-5077.87	-34526	-0.0000651	0.0003743	0.0035	3.7599	44000.35	53952.72	53952.72	10.63	No	Si
SLU 73	4.82	-7775.54	-39309	-0.0000805	0.0003743	0.0035	3.7599	46797.82	57783.09	57783.09	7.43	No	Si
SLU 73	6.92	-4707.24	-32529	-0.0000607	0.0003743	0.0035	3.7599	42594.65	52004.52	52004.52	11.05	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 8	4.82	-6085.95	-22165	-0.0000461	0.0005615	0.0035	3.7599		41292.8	41292.8	6.78		Si
SLD 8	6.92	-6293.56	-18048	-0.0000404	0.0005615	0.0035	3.7599		34990.95	34990.95	5.56		Si
SLD 12	4.82	-6546.15	-25558	-0.0000524	0.0005615	0.0035	3.7599		46268.12	46268.12	7.07		Si
SLD 12	6.92	-7247.89	-20552	-0.0000464	0.0005615	0.0035	3.7599		38859.26	38859.26	5.36		Si
SLV 8	4.82	-6728.74	-14823	-0.0000365	0.0005615	0.0035	3.7599		29883.55	29883.55	4.44		Si
SLV 8	6.92	-10318.4	-11727	-0.0000421	0.0005615	0.0035	3.7599		24802.97	24802.97	2.4		Si
SLD 11	4.82	-6171.14	-25251	-0.0000511	0.0005615	0.0035	3.7599		45825.49	45825.49	7.43		Si
SLD 11	6.92	-7669.99	-20561	-0.0000474	0.0005615	0.0035	3.7599		38872.5	38872.5	5.07		Si
SLV 7	4.82	-5869.82	-14118	-0.0000335	0.0005615	0.0035	3.7599		28715.69	28715.69	4.89		Si
SLV 7	6.92	-11285.16	-11748	-0.000046	0.0005615	0.0035	3.7599		24835.77	24835.77	2.2		Si
SLV 11	4.82	-6946.93	-22052	-0.000048	0.0005615	0.0035	3.7599		41121.22	41121.22	5.92		Si
SLV 11	6.92	-13517.2	-17601	-0.0000575	0.0005615	0.0035	3.7599		34282.48	34282.48	2.54		Si
SLV 12	4.82	-7805.85	-22757	-0.0000511	0.0005615	0.0035	3.7599		42193.31	42193.31	5.41		Si
SLV 12	6.92	-12550.43	-17581	-0.0000546	0.0005615	0.0035	3.7599		34250.51	34250.51	2.73		Si
SLV 15	4.82	-7077.03	-37723	-0.0000729	0.0005615	0.0035	3.7599		62588.39	62588.39	8.84		Si
SLV 15	6.92	-10207.68	-30254	-0.0000686	0.0005615	0.0035	3.7599		52855.18	52855.18	5.18		Si
SLD 7	4.82	-5710.94	-21857	-0.0000448	0.0005615	0.0035	3.7599		40826.31	40826.31	7.15		Si
SLD 7	6.92	-6715.66	-18057	-0.0000414	0.0005615	0.0035	3.7599		35004.96	35004.96	5.21		Si
SLV 4	4.82	-4823.1	-12373	-0.0000285	0.0005615	0.0035	3.7599		25851.42	25851.42	5.36		Si
SLV 4	6.92	-1263.32	-10713	-0.000018	0.0005615	0.0035	3.7599		23087.36	23087.36	18.28		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	4.82	-8012.83	-41302	-34393	-3026	3.7599	3.7599	-32669	10833	11405	40441	31525	9588	41113	No	13.58	Si
SLU 78	6.92	-4892.93	-34496	-28725	-2984	3.7599	3.7599	-27285	10582	11141	40441	31525	9588	41113	No	13.78	Si
SLU 84	4.82	-8007.44	-41457	-34522	-3047	3.7599	3.7599	-32791	10833	11405	40441	31525	9588	41113	No	13.49	Si
SLU 84	6.92	-5077.87	-34526	-28751	-3005	3.7599	3.7599	-27309	10586	11144	40441	31525	9588	41113	No	13.68	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	4.82	-7887.66	-40683	-33877	-2998	3.7599	3.7599	-32179	10833	11405	40441	31525	9588	41113	No	13.71	Si
SLU 82	6.92	-5010	-33779	-28129	-2955	3.7599	3.7599	-26718	10507	11061	40441	31525	9588	41113	No	13.91	Si
SLU 80	4.82	-7962.54	-40858	-34023	-3036	3.7599	3.7599	-32317	10833	11405	40441	31525	9588	41113	No	13.54	Si
SLU 80	6.92	-4827.8	-34048	-28353	-2993	3.7599	3.7599	-26931	10535	11091	40441	31525	9588	41113	No	13.73	Si
SLU 83	4.82	-7928.6	-41457	-34522	-2972	3.7599	3.7599	-32791	10833	11405	40441	31525	9588	41113	No	13.83	Si
SLU 83	6.92	-5055.09	-34565	-28783	-2976	3.7599	3.7599	-27339	10590	11149	40441	31525	9588	41113	No	13.82	Si
SLU 79	4.82	-7883.71	-40858	-34023	-2960	3.7599	3.7599	-32317	10833	11405	40441	31525	9588	41113	No	13.89	Si
SLU 79	6.92	-4805.02	-34087	-28385	-2964	3.7599	3.7599	-26961	10539	11096	40441	31525	9588	41113	No	13.87	Si
SLU 77	4.82	-7933.99	-41302	-34393	-2951	3.7599	3.7599	-32668	10833	11405	40441	31525	9588	41113	No	13.93	Si
SLU 77	6.92	-4870.14	-34534	-28757	-2955	3.7599	3.7599	-27315	10586	11145	40441	31525	9588	41113	No	13.91	Si
SLU 75	4.82	-7893.05	-40528	-33748	-2977	3.7599	3.7599	-32056	10833	11405	40441	31525	9588	41113	No	13.81	Si
SLU 75	6.92	-4825.05	-33749	-28103	-2934	3.7599	3.7599	-26694	10504	11058	40441	31525	9588	41113	No	14.01	Si
SLU 76	4.82	-7895.32	-40083	-33378	-3037	3.7599	3.7599	-31704	10833	11405	40441	31525	9588	41113	No	13.54	Si
SLU 76	6.92	-4775.12	-33276	-27709	-2963	3.7599	3.7599	-26320	10454	11006	40441	31525	9588	41113	No	13.88	Si
SLU 73	4.82	-7775.54	-39309	-32733	-2987	3.7599	3.7599	-31092	10833	11405	40441	31525	9588	41113	No	13.76	Si
SLU 73	6.92	-4707.24	-32529	-27087	-2913	3.7599	3.7599	-25729	10375	10923	40441	31525	9588	41113	No	14.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	4.82	-5269.37	-41644	-34678	-9372	3.7599	3.7599	-32939	16250	17108	40441	47288	9588	56876		6.07	Si
SLV 10	6.92	5113.27	-34207	-28485	-7224	3.7599	3.7599	-27057	15828	16663	40441	47288	9588	56876		7.87	Si
SLV 9	4.82	-4410.45	-40939	-34091	-7854	3.7599	3.7599	-32381	16250	17108	40441	47288	9588	56876		7.24	Si
SLV 9	6.92	4146.5	-34228	-28502	-5706	3.7599	3.7599	-27073	15831	16667	40441	47288	9588	56876		9.97	Si
SLV 5	4.82	-3333.34	-33005	-27484	-6497	3.7599	3.7599	-26106	15638	16463	40441	47288	9588	56876		8.75	Si
SLV 5	6.92	6378.54	-28374	-23628	-4351	3.7599	3.7599	-22443	14905	15692	40441	47288	9588	56133		12.9	Si
SLV 14	4.82	-7652.53	-44486	-37044	-7273	3.7599	3.7599	-35187	16250	17108	40441	47288	9588	56876		7.82	Si
SLV 14	6.92	-3404.33	-35211	-29321	-6627	3.7599	3.7599	-27851	15987	16831	40441	47288	9588	56876		8.58	Si
SLD 9	4.82	-5053.24	-33597	-27977	-4615	3.7599	3.7599	-26574	15731	16562	40441	47288	9588	56876		12.32	Si
SLD 9	6.92	121.67	-27907	-23238	-3666	3.7599	3.7599	-22073	14831	15614	40441	47288	9588	56055		15.29	Si
SLD 10	4.82	-5428.25	-33905	-28233	-5278	3.7599	3.7599	-26817	15780	16613	40441	47288	9588	56876		10.78	Si
SLD 10	6.92	543.76	-27898	-23231	-4328	3.7599	3.7599	-22066	14830	15613	40441	47288	9588	56054		12.95	Si
SLD 6	4.82	-4968.05	-30511	-25407	-4699	3.7599	3.7599	-24133	15243	16048	40441	47288	9588	56489		12.02	Si
SLD 6	6.92	1498.09	-25394	-21146	-3750	3.7599	3.7599	-20086	14434	15196	40441	47288	9588	55637		14.84	Si
SLV 13	4.82	-6316.09	-43389	-36131	-4910	3.7599	3.7599	-34319	16250	17108	40441	47288	9588	56876		11.58	Si
SLV 13	6.92	-4908.57	-35242	-29347	-4265	3.7599	3.7599	-27875	15992	16836	40441	47288	9588	56876		13.34	Si
SLV 6	4.82	-4192.26	-33710	-28071	-8016	3.7599	3.7599	-26663	15749	16581	40441	47288	9588	56876		7.1	Si
SLV 6	6.92	7345.3	-28354	-23611	-5870	3.7599	3.7599	-22427	14902	15689	40441	47288	9588	56130		9.56	Si
SLV 7	4.82	-5869.82	-14118	-11756	5229	3.7599	3.7599	-11167	12650	13318	40441	47288	9588	53759		10.28	Si
SLV 7	6.92	-11285.16	-11748	-9782	3075	3.7599	2.758	-12741	12965	10012	40441	47288	9588	50453		16.41	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.58 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.38	10372	-10920	382.73	1424.91	3.72	Si
SLV 4	179667	0.38	10574	-11132	382.73	1450.56	3.79	Si
SLV 7	179667	0.38	11936	-12567	382.73	1621.81	4.24	Si
SLV 8	179667	0.38	12066	-12703	382.73	1637.91	4.28	Si
SLV 1	179667	0.38	15007	-15799	382.73	1994.47	5.21	Si
SLV 2	179667	0.38	15208	-16011	382.73	2018.32	5.27	Si
SLV 11	179667	0.38	17881	-18825	382.73	2326.9	6.08	Si
SLV 12	179667	0.38	18011	-18961	382.73	2341.52	6.12	Si
SLV 5	179667	0.38	27385	-28830	382.73	3312.47	8.65	Si
SLV 6	179667	0.38	27514	-28967	382.73	3324.7	8.69	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.58 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-29016	-41644	533	0.68	3477	0.956	10.34287	12.69956	No
SLV 9	-28764	-40939	533	0.685	3451.4	0.956	10.42253	12.69956	No
SLV 6	-25569	-33710	-271	0.766	3126.8	0.951	11.69595	12.69956	No
SLV 5	-25316	-33005	-271	0.772	3101.2	0.951	11.79796	12.69956	No
SLV 14	-26800	-44486	1382	0.699	3251.8	0.953	10.66097	6.60165	Si
SLV 13	-26407	-43389	1382	0.708	3211.9	0.953	10.79937	6.60165	Si
SLV 12	-10993	-22757	279	1.504	1653	0.918	23.80251	12.69956	Si
SLV 11	-10741	-22052	279	1.53	1627.7	0.917	24.2421	12.69956	Si
SLV 16	-21393	-38820	1306	0.846	2703	0.945	13.01871	6.60165	Si
SLV 15	-21000	-37723	1306	0.859	2663.2	0.944	13.22854	6.60165	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.401	SLU 76	Si
V_SLU	13.491	SLU 84	Si
PF_SLV	2.201	SLV 7	Si
V_SLV	6.069	SLV 10	Si
PFFP_SLV	3.723	SLV 3	Si
R_SLV	0.814	SLV 10	No

Maschio 111

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	5.826	L6	L7	9.141	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 34	8.34	-8358.05	-53888	-0.0000359	0.0003743	0.0035	9.1407	195353.36	234163.59	234163.59	28.02	No	Si
SLU 34	11.86	-2093.48	-30587	-0.0000188	0.0003743	0.0035	9.1407	123383.2	152337.21	152337.21	72.77	No	Si
SLU 82	8.34	-9657.73	-64677	-0.0000434	0.0003743	0.0035	9.1407	222226.84	267726.19	267726.19	27.72	No	Si
SLU 82	11.86	-2382.04	-35783	-0.0000221	0.0003743	0.0035	9.1407	141082.34	171929.78	171929.78	72.18	No	Si
SLU 42	8.34	-8526.22	-56049	-0.0000373	0.0003743	0.0035	9.1407	201063.63	241124.88	241124.88	28.28	No	Si
SLU 42	11.86	-1952.48	-31634	-0.0000194	0.0003743	0.0035	9.1407	127026.85	156234.55	156234.55	80.02	No	Si
SLU 73	8.34	-9489.56	-62516	-0.0000419	0.0003743	0.0035	9.1407	217170.7	261164.33	261164.33	27.52	No	Si
SLU 73	11.86	-2523.04	-34736	-0.0000215	0.0003743	0.0035	9.1407	137591.11	167951	167951	66.57	No	Si
SLU 10	8.34	-7198.91	-46212	-0.0000305	0.0003743	0.0035	9.1407	173749.55	208609.48	208609.48	28.98	No	Si
SLU 10	11.86	-2106.81	-25508	-0.0000158	0.0003743	0.0035	9.1407	105169.96	132723.59	132723.59	63	No	Si
SLU 76	8.34	-9294.58	-64166	-0.0000429	0.0003743	0.0035	9.1407	221044.92	266178.28	266178.28	28.64	No	Si
SLU 76	11.86	-2246.12	-36312	-0.0000224	0.0003743	0.0035	9.1407	142830.92	173813.06	173813.06	77.38	No	Si
SLU 84	8.34	-9462.75	-66327	-0.0000444	0.0003743	0.0035	9.1407	225975.99	272691.49	272691.49	28.82	No	Si
SLU 84	11.86	-2105.11	-37359	-0.000023	0.0003743	0.0035	9.1407	146264.24	177498.95	177498.95	84.32	No	Si
SLU 40	8.34	-8721.19	-54399	-0.0000363	0.0003743	0.0035	9.1407	196719.71	235810.12	235810.12	27.04	No	Si
SLU 40	11.86	-2229.4	-30058	-0.0000186	0.0003743	0.0035	9.1407	121528.4	150382.01	150382.01	67.45	No	Si
SLU 39	8.34	-8057.93	-54392	-0.0000361	0.0003743	0.0035	9.1407	196699.89	235786.12	235786.12	29.26	No	Si
SLU 39	11.86	-1724.85	-30064	-0.0000184	0.0003743	0.0035	9.1407	121551.28	150406.04	150406.04	87.2	No	Si
SLU 31	8.34	-8553.02	-52238	-0.0000349	0.0003743	0.0035	9.1407	190884.37	228889.5	228889.5	26.76	No	Si
SLU 31	11.86	-2370.4	-29011	-0.000018	0.0003743	0.0035	9.1407	117826.84	146505.97	146505.97	61.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	8.34	75313.75	-50292	-0.0000595	0.0005615	0.0035	9.1407		208006.21	208006.21	2.76		Si
SLV 6	11.86	45891.07	-26296	-0.0000332	0.0005615	0.0035	9.1407		117745.27	117745.27	2.57		Si
SLV 9	8.34	83138.26	-42885	-0.0000593	0.0005615	0.0035	9.1407		183296.28	183296.28	2.2		Si
SLV 9	11.86	50644.18	-25386	-0.0000352	0.0005615	0.0035	9.1407		113982.19	113982.19	2.25		Si
SLD 12	8.34	-42402.62	-41771	-0.0000411	0.0005615	0.0035	9.1407		199560.55	199560.55	4.71		Si
SLD 12	11.86	-23166.39	-24135	-0.0000229	0.0005615	0.0035	9.1407		129323.6	129323.6	5.58		Si
SLV 12	8.34	-89050.78	-38443	-0.0000622	0.0005615	0.0035	9.1407		186943.43	186943.43	2.1		Si
SLV 12	11.86	-51188.16	-23301	-0.000035	0.0005615	0.0035	9.1407		125863.9	125863.9	2.46		Si
SLV 7	8.34	-91253.69	-45625	-0.0000648	0.0005615	0.0035	9.1407		214335.63	214335.63	2.35		Si
SLV 7	11.86	-49409.49	-24144	-0.0000341	0.0005615	0.0035	9.1407		129360.61	129360.61	2.62		Si
SLV 10	8.34	80327.46	-42997	-0.0000578	0.0005615	0.0035	9.1407		183679.19	183679.19	2.29		Si
SLV 10	11.86	47378.29	-25420	-0.0000335	0.0005615	0.0035	9.1407		114121.48	114121.48	2.41		Si
SLV 5	8.34	78124.55	-50180	-0.0000606	0.0005615	0.0035	9.1407		207628.8	207628.8	2.66		Si
SLV 5	11.86	49156.96	-26262	-0.0000347	0.0005615	0.0035	9.1407		117605.68	117605.68	2.39		Si
SLV 8	8.34	-94064.49	-45737	-0.0000666	0.0005615	0.0035	9.1407		214768.9	214768.9	2.28		Si
SLV 8	11.86	-52675.38	-24177	-0.0000361	0.0005615	0.0035	9.1407		129500.73	129500.73	2.46		Si
SLV 13	8.34	30486.57	-32749	-0.0000309	0.0005615	0.0035	9.1407		143904.1	143904.1	4.72		Si
SLV 13	11.86	18788.88	-23612	-0.0000209	0.0005615	0.0035	9.1407		106669.48	106669.48	5.68		Si
SLV 11	8.34	-86239.97	-38330	-0.0000601	0.0005615	0.0035	9.1407		186516.3	186516.3	2.16		Si
SLV 11	11.86	-47922.27	-23267	-0.000033	0.0005615	0.0035	9.1407		125724.14	125724.14	2.62		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	8.34	-9657.73	-64677	-53858	-2260	9.1407	9.1407	-21043	9750	24955	40441	76640	23309	65396	No	28.93	Si
SLU 82	11.86	-2382.04	-35783	-29797	-2382	9.1407	9.1407	-11642	8497	21746	40441	76640	23309	62187	No	26.11	Si
SLU 73	8.34	-9489.56	-62516	-52058	-2030	9.1407	9.1407	-20340	9656	24715	40441	76640	23309	65156	No	32.1	Si
SLU 73	11.86	-2523.04	-34736	-28925	-2234	9.1407	9.1407	-11301	8451	21630	40441	76640	23309	62071	No	27.79	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	8.34	-8057.93	-54392	-45293	-2318	9.1407	9.1407	-17697	9304	23813	40441	76640	23309	64254	No	27.72	Si
SLU 39	11.86	-1724.85	-30064	-25035	-2316	9.1407	9.1407	-9782	8249	21112	40441	76640	23309	61553	No	26.58	Si
SLU 33	8.34	-7959.54	-54760	-45600	-2122	9.1407	9.1407	-17817	9320	23854	40441	76640	23309	64294	No	30.3	Si
SLU 33	11.86	-1746.11	-31279	-26046	-2243	9.1407	9.1407	-10177	8301	21246	40441	76640	23309	61687	No	27.5	Si
SLU 40	8.34	-8721.19	-54399	-45299	-2412	9.1407	9.1407	-17699	9304	23813	40441	76640	23309	64254	No	26.64	Si
SLU 40	11.86	-2229.4	-30058	-25030	-2533	9.1407	9.1407	-9780	8248	21111	40441	76640	23309	61552	No	24.3	Si
SLU 31	8.34	-8553.02	-52238	-43499	-2181	9.1407	9.1407	-16996	9211	23573	40441	76640	23309	64014	No	29.35	Si
SLU 31	11.86	-2370.4	-29011	-24157	-2385	9.1407	9.1407	-9439	8203	20995	40441	76640	23309	61436	No	25.76	Si
SLU 42	8.34	-8526.22	-56049	-46673	-2395	9.1407	9.1407	-18236	9376	23997	40441	76640	23309	64438	No	26.91	Si
SLU 42	11.86	-1952.48	-31634	-26342	-2516	9.1407	9.1407	-10292	8317	21286	40441	76640	23309	61727	No	24.53	Si
SLU 41	8.34	-7862.96	-56042	-46667	-2301	9.1407	9.1407	-18233	9376	23996	40441	76640	23309	64437	No	28.01	Si
SLU 41	11.86	-1447.93	-31641	-26348	-2299	9.1407	9.1407	-10294	8317	21287	40441	76640	23309	61728	No	26.85	Si
SLU 84	8.34	-9462.75	-66327	-55231	-2243	9.1407	9.1407	-21580	9822	25138	40441	76640	23309	65579	No	29.23	Si
SLU 84	11.86	-2105.11	-37359	-31109	-2365	9.1407	9.1407	-12155	8565	21921	40441	76640	23309	62362	No	26.37	Si
SLU 34	8.34	-8358.05	-53888	-44873	-2164	9.1407	9.1407	-17533	9282	23757	40441	76640	23309	64198	No	29.67	Si
SLU 34	11.86	-2093.48	-30587	-25470	-2368	9.1407	9.1407	-9952	8271	21170	40441	76640	23309	61611	No	26.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	8.34	-86239.97	-38330	-31918	-25986	9.1407	6.9613	-16495	13716	26734	40441	114959	23309	67175		2.59	Si
SLV 11	11.86	-47922.27	-23267	-19375	-33478	9.1407	7.5321	-9224	12262	25859	40441	114959	23309	66300		1.98	Si
SLD 11	8.34	-41175.39	-41722	-34743	-11989	9.1407	9.1407	-13575	13132	33609	40441	114959	23309	74050		6.18	Si
SLD 11	11.86	-21740.47	-24120	-20085	-15302	9.1407	9.1407	-7848	11986	30677	40441	114959	23309	71118		4.65	Si
SLV 8	8.34	-94064.49	-45737	-38086	-24801	9.1407	7.5412	-18198	14056	29680	40441	114959	23309	70121		2.83	Si
SLV 8	11.86	-52675.38	-24177	-20133	-32243	9.1407	7.1749	-10064	12430	24971	40441	114959	23309	65412		2.03	Si
SLV 7	8.34	-91253.69	-45625	-37993	-25715	9.1407	7.7108	-17750	13967	30155	40441	114959	23309	70596		2.75	Si
SLV 7	11.86	-49409.49	-24144	-20105	-33156	9.1407	7.5716	-9523	12321	26122	40441	114959	23309	66563		2.01	Si
SLV 5	8.34	78124.55	-50180	-41786	23230	9.1407	9.0404	-16326	13682	34633	40441	114959	23309	75074		3.23	Si
SLV 5	11.86	49156.96	-26262	-21869	30726	9.1407	8.0957	-8545	12126	27486	40441	114959	23309	67927		2.21	Si
SLV 6	8.34	75313.75	-50292	-41879	24144	9.1407	9.1407	-16363	13689	35036	40441	114959	23309	75477		3.13	Si
SLV 6	11.86	45891.07	-26296	-21897	31639	9.1407	8.4755	-8556	12128	28781	40441	114959	23309	69222		2.19	Si
SLV 10	8.34	80327.46	-42997	-35805	23873	9.1407	8.1065	-13989	13215	29995	40441	114959	23309	70436		2.95	Si
SLV 10	11.86	47378.29	-25420	-21167	31317	9.1407	8.1195	-8270	12071	27442	40441	114959	23309	67883		2.17	Si
SLV 9	8.34	83138.26	-42885	-35711	22959	9.1407	7.8952	-13953	13207	29197	40441	114959	23309	69637		3.03	Si
SLV 9	11.86	50644.18	-25386	-21139	30404	9.1407	7.7261	-8259	12069	26108	40441	114959	23309	66549		2.19	Si
SLD 7	8.34	-43318.96	-44847	-37344	-11874	9.1407	9.1407	-14591	13335	34129	40441	114959	23309	74570		6.28	Si
SLD 7	11.86	-22377.39	-24497	-20399	-15165	9.1407	9.1407	-7970	12011	30740	40441	114959	23309	71181		4.69	Si
SLV 12	8.34	-89050.78	-38443	-32012	-25072	9.1407	6.7616	-17046	13826	26177	40441	114959	23309	66618		2.66	Si
SLV 12	11.86	-51188.16	-23301	-19403	-32565	9.1407	7.1205	-9771	12371	24665	40441	114959	23309	65106		2	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.46	10782	-27596	1109.94	3590.64	3.23	Si
SLV 16	179667	0.46	10819	-27691	1109.94	3602.1	3.25	Si
SLV 13	179667	0.46	11104	-28420	1109.94	3689.55	3.32	Si
SLV 14	179667	0.46	11142	-28516	1109.94	3700.95	3.33	Si
SLV 11	179667	0.46	12070	-30892	1109.94	3983.05	3.59	Si
SLV 12	179667	0.46	12094	-30953	1109.94	3990.27	3.6	Si
SLV 9	179667	0.46	13144	-33641	1109.94	4304.35	3.88	Si
SLV 10	179667	0.46	13168	-33702	1109.94	4311.45	3.88	Si
SLV 7	179667	0.46	13490	-34527	1109.94	4406.81	3.97	Si
SLV 8	179667	0.46	13514	-34589	1109.94	4413.87	3.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-26296	-50292	-1052	1.511	3975.5	0.917	23.93651	14.55598	Si
SLV 5	-26262	-50180	-1052	1.512	3972.1	0.917	23.96072	14.55598	Si
SLV 10	-25420	-42997	1032	1.55	3887.8	0.916	24.59155	14.55598	Si
SLV 9	-25386	-42885	1032	1.552	3884.4	0.916	24.6171	14.55598	Si
SLV 8	-24177	-45737	-1048	1.608	3763.7	0.914	25.56037	14.55598	Si
SLV 7	-24144	-45625	-1048	1.609	3760.3	0.914	25.58796	14.55598	Si
SLV 12	-23301	-38443	1035	1.652	3676.2	0.913	26.30401	14.55598	Si
SLV 11	-23267	-38330	1035	1.653	3672.9	0.913	26.33322	14.55598	Si
SLV 2	-26586	-57240	-3482	1.429	4004.6	0.918	22.62114	7.56668	Si
SLV 1	-26534	-57065	-3482	1.431	3999.3	0.918	22.65641	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	26.761	SLU 31	Si
V_SLU	24.298	SLU 40	Si
PF_SLV	2.099	SLV 12	Si
V_SLV	1.98	SLV 11	Si
PFFP_SLV	3.235	SLV 15	Si
R_SLV	1.644	SLV 6	Si

Maschio 112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	5.826	-22.713	5.826	L6	L7	1.92	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	9.24	936.24	-10489	-0.0000386	0.0003743	0.0035	1.92	8139.67	8667.39	8667.39	9.26	No	Si
SLU 49	11.04	443.14	-8650	-0.0000285	0.0003743	0.0035	1.92	6991.34	7327.57	7327.57	16.54	No	Si
SLU 43	9.24	889.25	-9547	-0.0000353	0.0003743	0.0035	1.92	7566.61	7974.35	7974.35	8.97	No	Si
SLU 43	11.04	290.78	-7596	-0.000024	0.0003743	0.0035	1.92	6280.07	6584.93	6584.93	22.65	No	Si
SLU 44	9.24	888.65	-9351	-0.0000347	0.0003743	0.0035	1.92	7443.06	7831.62	7831.62	8.81	No	Si
SLU 44	11.04	311.2	-7444	-0.0000238	0.0003743	0.0035	1.92	6174.1	6479.12	6479.12	20.82	No	Si
SLU 45	9.24	917.38	-10174	-0.0000374	0.0003743	0.0035	1.92	7951.59	8433.75	8433.75	9.19	No	Si
SLU 45	11.04	369.76	-8272	-0.0000267	0.0003743	0.0035	1.92	6741.17	7059.64	7059.64	19.09	No	Si
SLU 47	9.24	907.87	-9783	-0.0000361	0.0003743	0.0035	1.92	7713.22	8146.64	8146.64	8.97	No	Si
SLU 47	11.04	372.32	-7912	-0.0000257	0.0003743	0.0035	1.92	6497.71	6806.01	6806.01	18.28	No	Si
SLU 51	9.24	927.33	-10295	-0.0000379	0.0003743	0.0035	1.92	8024.02	8523.03	8523.03	9.19	No	Si
SLU 51	11.04	425.28	-8442	-0.0000277	0.0003743	0.0035	1.92	6854.09	7179.63	7179.63	16.88	No	Si
SLU 42	9.24	462.99	-9220	-0.0000304	0.0003743	0.0035	1.92	7359.92	7736.79	7736.79	16.71	No	Si
SLU 42	11.04	817.54	-8785	-0.0000323	0.0003743	0.0035	1.92	7080.17	7424.57	7424.57	9.08	No	Si
SLU 41	9.24	463.36	-9338	-0.0000307	0.0003743	0.0035	1.92	7434.76	7822.11	7822.11	16.88	No	Si
SLU 41	11.04	805.29	-8877	-0.0000325	0.0003743	0.0035	1.92	7139.55	7489.98	7489.98	9.3	No	Si
SLU 46	9.24	917.02	-10056	-0.0000371	0.0003743	0.0035	1.92	7880.21	8346.84	8346.84	9.1	No	Si
SLU 46	11.04	382.01	-8181	-0.0000266	0.0003743	0.0035	1.92	6679.86	6995.12	6995.12	18.31	No	Si
SLU 50	9.24	927.69	-10413	-0.0000382	0.0003743	0.0035	1.92	8094.4	8610.62	8610.62	9.28	No	Si
SLU 50	11.04	413.02	-8533	-0.0000279	0.0003743	0.0035	1.92	6914.57	7244.53	7244.53	17.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	9.24	251.28	3125	0.2455768	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	11.04	617.56	1368	0.1033336	0.0005615	0.0035	1.536		0	0	0		No
SLV 15	9.24	1128.73	-5163	-0.0000241	0.0005615	0.0035	1.92		4893.91	4893.91	4.34		Si
SLV 15	11.04	-1044.44	-3464	-0.0000185	0.0005615	0.0035	1.92		4239.77	4239.77	4.06		Si
SLV 7	9.24	-204.74	3318	0.2635477	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	11.04	1660.87	571	0.0010824	0.0005615	0.0035	1.536		0	0	0		No
SLV 3	9.24	-391.37	-4520	-0.0000159	0.0005615	0.0035	1.92		5162.87	5162.87	13.19		Si
SLV 3	11.04	2433.24	-6121	-0.000039	0.0005615	0.0035	1.92		5719.16	5719.16	2.35		Si
SLD 7	9.24	254.31	-2933	-0.0000103	0.0005615	0.0035	1.92		2915.31	2915.31	11.46		Si
SLD 7	11.04	944.82	-3474	-0.0000177	0.0005615	0.0035	1.92		3404.1	3404.1	3.6		Si
SLV 4	9.24	-223.23	-3795	-0.0000124	0.0005615	0.0035	1.92		4533.13	4533.13	20.31		Si
SLV 4	11.04	2236.8	-5120	-0.0000349	0.0005615	0.0035	1.92		4856.9	4856.9	2.17		Si
SLD 8	9.24	301.48	-2730	-0.0000101	0.0005615	0.0035	1.92		2730.83	2730.83	9.06		Si
SLD 8	11.04	889.7	-3194	-0.0000164	0.0005615	0.0035	1.92		3151.66	3151.66	3.54		Si
SLV 8	9.24	-96.68	3784	0.2997456	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	11.04	1534.62	1214	0.0750846	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	9.24	359.34	3591	0.2816861	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	11.04	491.32	2011	0.1556451	0.0005615	0.0035	1.536		0	0	0		No
SLV 16	9.24	1296.86	-4439	-0.0000235	0.0005615	0.0035	1.92		4261.62	4261.62	3.29		Si
SLV 16	11.04	-1240.88	-2463	-0.000019	0.0005615	0.0035	1.92		3338.64	3338.64	2.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 41	9.24	463.36	-9338	-7776	-852	1.92	1.92	-14464	8873	4770	40441	16098	4896	20994	No	24.63	Si
SLU 41	11.04	805.29	-8877	-7392	-854	1.92	1.92	-13750	8778	4719	40441	16098	4896	20994	No	24.58	Si
SLU 36	9.24	534.46	-9664	-8047	-781	1.92	1.92	-14969	8940	4806	40441	16098	4896	20994	No	26.87	Si
SLU 36	11.04	820.53	-9113	-7588	-768	1.92	1.92	-14115	8826	4745	40441	16098	4896	20994	No	27.34	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 35	9.24	534.83	-9782	-8145	-752	1.92	1.92	-15151	8965	4819	40441	16098	4896	20994	No	27.91	Si
SLU 35	11.04	808.28	-9204	-7664	-754	1.92	1.92	-14257	8845	4755	40441	16098	4896	20994	No	27.84	Si
SLU 39	9.24	444.14	-8905	-7415	-810	1.92	1.92	-13793	8784	4722	40441	16098	4896	20994	No	25.91	Si
SLU 39	11.04	744.16	-8408	-7002	-812	1.92	1.92	-13024	8681	4667	40441	16098	4896	20994	No	25.87	Si
SLU 33	9.24	515.24	-9231	-7687	-739	1.92	1.92	-14298	8851	4758	40441	16098	4896	20994	No	28.4	Si
SLU 33	11.04	759.41	-8644	-7198	-725	1.92	1.92	-13389	8730	4693	40441	16098	4896	20994	No	28.94	Si
SLU 37	9.24	525.92	-9587	-7983	-740	1.92	1.92	-14850	8924	4798	40441	16098	4896	20994	No	28.37	Si
SLU 37	11.04	790.42	-8996	-7491	-742	1.92	1.92	-13935	8802	4732	40441	16098	4896	20994	No	28.3	Si
SLU 34	9.24	506.09	-8958	-7459	-746	1.92	1.92	-13876	8795	4728	40441	16098	4896	20994	No	28.13	Si
SLU 34	11.04	749.72	-8375	-6974	-722	1.92	1.92	-12973	8674	4663	40441	16098	4896	20994	No	29.06	Si
SLU 40	9.24	443.78	-8787	-7317	-839	1.92	1.92	-13611	8759	4709	40441	16098	4896	20994	No	25.01	Si
SLU 40	11.04	756.41	-8317	-6926	-826	1.92	1.92	-12883	8662	4657	40441	16098	4896	20994	No	25.43	Si
SLU 38	9.24	525.55	-9469	-7885	-769	1.92	1.92	-14668	8900	4785	40441	16098	4896	20994	No	27.29	Si
SLU 38	11.04	802.67	-8905	-7415	-756	1.92	1.92	-13793	8784	4722	40441	16098	4896	20994	No	27.78	Si
SLU 42	9.24	462.99	-9220	-7677	-882	1.92	1.92	-14281	8849	4757	40441	16098	4896	20994	No	23.81	Si
SLU 42	11.04	817.54	-8785	-7316	-868	1.92	1.92	-13608	8759	4709	40441	16098	4896	20994	No	24.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	9.24	-223.23	-3795	-3161	-3274	1.92	1.92	-5879	11592	6232	40441	24147	4896	29043		8.87	Si
SLV 4	11.04	2236.8	-5120	-4264	-2606	1.92	1.5695	-7931	12003	5275	40441	24147	4896	29043		11.14	Si
SLV 11	9.24	251.28	3125	2603	-2034	1.536	1.92	0	0	0	40441	19318	3917	23234		11.42	Si
SLV 11	11.04	617.56	1368	1139	-2264	1.536	1.5255	0	0	0	40441	19318	3917	23234		10.26	Si
SLV 12	9.24	359.34	3591	2990	-1809	1.536	1.92	0	0	0	40441	19318	3917	23234		12.84	Si
SLV 12	11.04	491.32	2011	1675	-2040	1.536	1.92	0	0	0	40441	19318	3917	23234		11.39	Si
SLV 13	9.24	1450.54	-11963	-9962	3000	1.92	1.92	-18531	14123	7592	40441	24147	4896	29043		9.68	Si
SLV 13	11.04	-1455.79	-8250	-6870	2329	1.92	1.92	-12778	12972	6974	40441	24147	4896	29043		12.47	Si
SLV 8	9.24	-96.68	3784	3151	-3338	1.536	1.92	0	0	0	40441	19318	3917	23234		6.96	Si
SLV 8	11.04	1534.62	1214	1011	-3162	1.536	0	0	0	0	40441	19318	3917	23234		7.35	Si
SLV 9	9.24	1324	-19543	-16274	3064	1.92	1.92	-30271	16250	8736	40441	24147	4896	29043		9.48	Si
SLV 9	11.04	-753.61	-14584	-12144	2885	1.92	1.92	-22590	14935	8029	40441	24147	4896	29043		10.07	Si
SLV 3	9.24	-391.37	-4520	-3764	-3624	1.92	1.92	-7001	11817	6353	40441	24147	4896	29043		8.01	Si
SLV 3	11.04	2433.24	-6121	-5097	-2956	1.92	1.6874	-9481	12313	5818	40441	24147	4896	29043		9.83	Si
SLV 14	9.24	1618.68	-11239	-9359	3350	1.92	1.92	-17409	13899	7472	40441	24147	4896	29043		8.67	Si
SLV 14	11.04	-1652.23	-7249	-6036	2679	1.92	1.92	-11228	12662	6807	40441	24147	4896	29043		10.84	Si
SLV 10	9.24	1432.06	-19077	-15886	3289	1.92	1.92	-29550	16250	8736	40441	24147	4896	29043		8.83	Si
SLV 10	11.04	-879.86	-13941	-11609	3110	1.92	1.92	-21594	14735	7922	40441	24147	4896	29043		9.34	Si
SLV 7	9.24	-204.74	3318	2763	-3563	1.536	1.92	0	0	0	40441	19318	3917	23234		6.52	Si
SLV 7	11.04	1660.87	571	475	-3387	1.536	0	0	0	0	40441	19318	3917	23234		6.86	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.46	0	1998	233.14	0	0	No, Trazione
SLV 7	179667	0.46	0	1277	233.14	0	0	No, Trazione
SLV 8	179667	0.46	0	1847	233.14	0	0	No, Trazione
SLV 12	179667	0.46	0	2568	233.14	0	0	No, Trazione
SLV 16	179667	0.46	5554	-2986	233.14	402.79	1.73	Si
SLV 15	179667	0.46	7204	-3873	233.14	516.64	2.22	Si
SLV 4	179667	0.46	10022	-5388	233.14	704.79	3.02	Si
SLV 3	179667	0.46	11672	-6275	233.14	811.36	3.48	Si
SLV 14	179667	0.46	16002	-8602	233.14	1078.14	4.62	Si
SLV 13	179667	0.46	17652	-9490	233.14	1174.99	5.04	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-12425	-18613	443	0.777	1532.6	0.95	11.88353	14.55598	No
SLV 6	-11908	-18082	444	0.804	1480.1	0.948	12.332	14.55598	No
SLV 9	-12024	-17625	309	0.808	1491.8	0.948	12.37888	14.55598	No
SLV 10	-11506	-17094	309	0.838	1439.3	0.947	12.86165	14.55598	No
SLV 1	-8507	-12605	335	1.07	1135.5	0.935	16.62874	7.56668	Si
SLV 2	-7702	-11779	335	1.158	1054.2	0.931	18.07687	7.56668	Si
SLV 13	-7168	-9312	-113	1.25	1000.3	0.928	19.58234	7.56668	Si
SLV 14	-6363	-8486	-112	1.371	919.2	0.923	21.59033	7.56668	Si
SLV 3	-4624	-6341	108	1.738	745.3	0.91	27.74286	7.56668	Si
SLV 4	-3819	-5515	108	1.986	665.5	0.904	31.93348	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.813	SLU 44	Si
V_SLU	23.811	SLU 42	Si
PF_SLV	0	SLV 7	No
V_SLV	6.521	SLV 7	Si
PFFP_SLV	0	SLV 12	No
R_SLV	0.816	SLV 5	No

Maschio 113

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-21.813	5.826	-19.613	5.826	L6	L7	2.2	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	9.24	260.73	-12960	-0.0000343	0.0003743	0.0035	2.2	11310.12	12238.75	12238.75	46.94	No	Si
SLU 65	11.04	-1321.15	-12069	-0.0000393	0.0003743	0.0035	2.2	10721.27	12730.86	12730.86	9.64	No	Si
SLU 52	9.24	306.57	-12436	-0.0000332	0.0003743	0.0035	2.2	10967.02	11776.81	11776.81	38.42	No	Si
SLU 52	11.04	-1331	-11571	-0.0000381	0.0003743	0.0035	2.2	10379.88	12334.41	12334.41	9.27	No	Si
SLU 43	9.24	336.85	-11897	-0.000032	0.0003743	0.0035	2.2	10604.55	11305.04	11305.04	33.56	No	Si
SLU 43	11.04	-1291.85	-10859	-0.0000359	0.0003743	0.0035	2.2	9876.59	11737.04	11737.04	9.09	No	Si
SLU 60	9.24	314.84	-12917	-0.0000345	0.0003743	0.0035	2.2	11282.1	12200.45	12200.45	38.75	No	Si
SLU 60	11.04	-1345.07	-12090	-0.0000396	0.0003743	0.0035	2.2	10735.17	12746.83	12746.83	9.48	No	Si
SLU 55	9.24	255.97	-13142	-0.0000347	0.0003743	0.0035	2.2	11427.09	12399.83	12399.83	48.44	No	Si
SLU 55	11.04	-1331.67	-12336	-0.0000401	0.0003743	0.0035	2.2	10900.59	12938.89	12938.89	9.72	No	Si
SLU 44	9.24	321.98	-11722	-0.0000314	0.0003743	0.0035	2.2	10484.53	11153.45	11153.45	34.64	No	Si
SLU 44	11.04	-1293.74	-10709	-0.0000355	0.0003743	0.0035	2.2	9768.78	11613.12	11613.12	8.98	No	Si
SLU 46	9.24	259.65	-12739	-0.0000337	0.0003743	0.0035	2.2	11166.64	12043.7	12043.7	46.38	No	Si
SLU 46	11.04	-1304.69	-11762	-0.0000384	0.0003743	0.0035	2.2	10512.04	12493.49	12493.49	9.58	No	Si
SLU 47	9.24	271.38	-12429	-0.0000329	0.0003743	0.0035	2.2	10962.27	11770.51	11770.51	43.37	No	Si
SLU 47	11.04	-1294.41	-11474	-0.0000376	0.0003743	0.0035	2.2	10312.61	12252.69	12252.69	9.47	No	Si
SLU 45	9.24	268.58	-12844	-0.000034	0.0003743	0.0035	2.2	11235.04	12136.34	12136.34	45.19	No	Si
SLU 45	11.04	-1303.55	-11852	-0.0000386	0.0003743	0.0035	2.2	10573.51	12562.64	12562.64	9.64	No	Si
SLU 61	9.24	305.91	-12812	-0.0000342	0.0003743	0.0035	2.2	11213.97	12107.75	12107.75	39.58	No	Si
SLU 61	11.04	-1346.21	-12000	-0.0000393	0.0003743	0.0035	2.2	10674.45	12677.25	12677.25	9.42	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	9.24	434.49	-7078	-0.00002	0.0005615	0.0035	2.2		7594.04	7594.04	17.48		Si
SLD 16	11.04	-1883.15	-7483	-0.0000307	0.0005615	0.0035	2.2		9000.54	9000.54	4.78		Si
SLV 7	9.24	-299.18	-2390	-0.0000077	0.0005615	0.0035	2.2		3882.78	3882.78	12.98		Si
SLV 7	11.04	566.73	-2295	-0.0000092	0.0005615	0.0035	2.2		2737.66	2737.66	4.83		Si
SLV 12	9.24	123.64	373	0.0259664	0.0005615	0.0035	1.76		0	0	0		No
SLV 12	11.04	-896.26	-926	-0.0000228	0.0005615	0.0035	1.76		2336.81	2336.81	2.61		Si
SLV 11	9.24	-0.74	-174	-0.0000004	0.0005615	0.0035	2.2		1530.86	1530.86	2069.25		Si
SLV 11	11.04	-721.19	-1286	-0.0000083	0.0005615	0.0035	2.2		2719.95	2719.95	3.77		Si
SLV 13	9.24	714.35	-9477	-0.0000279	0.0005615	0.0035	2.2		9883.04	9883.04	13.83		Si
SLV 13	11.04	-3286.17	-10267	-0.0000473	0.0005615	0.0035	2.2		11629.23	11629.23	3.54		Si
SLV 15	9.24	529.05	-4060	-0.0000132	0.0005615	0.0035	2.2		4573.04	4573.04	8.64		Si
SLV 15	11.04	-2773.37	-5625	-0.000033	0.0005615	0.0035	2.2		7176.36	7176.36	2.59		Si
SLV 14	9.24	907.88	-8626	-0.0000271	0.0005615	0.0035	2.2		9085.77	9085.77	10.01		Si
SLV 14	11.04	-3558.57	-9706	-0.0000477	0.0005615	0.0035	2.2		11108.23	11108.23	3.12		Si
SLD 14	9.24	516.56	-9471	-0.0000266	0.0005615	0.0035	2.2		9878.08	9878.08	19.12		Si
SLD 14	11.04	-2110.05	-9535	-0.0000374	0.0005615	0.0035	2.2		10950.52	10950.52	5.19		Si
SLV 16	9.24	722.58	-3209	-0.0000124	0.0005615	0.0035	2.2		3694.93	3694.93	5.11		Si
SLV 16	11.04	-3045.77	-5064	-0.0000363	0.0005615	0.0035	1.76		6615.26	6615.26	2.17		Si
SLD 15	9.24	351.41	-7443	-0.0000204	0.0005615	0.0035	2.2		7949.06	7949.06	22.62		Si
SLD 15	11.04	-1766.2	-7724	-0.0000305	0.0005615	0.0035	2.2		9232.66	9232.66	5.23		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	9.24	159	-15261	-12708	1968	2.2	2.2	-20630	9695	5972	40441	18446	5610	24056	No	12.22	Si
SLU 79	11.04	-1357.86	-14610	-12166	1968	2.2	2.2	-19750	9578	5900	40441	18446	5610	24056	No	12.22	Si
SLU 77	9.24	141.32	-15501	-12908	1957	2.2	2.2	-20955	9738	5999	40441	18446	5610	24056	No	12.29	Si
SLU 77	11.04	-1368.89	-14838	-12356	1957	2.2	2.2	-20058	9619	5925	40441	18446	5610	24056	No	12.29	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	9.24	202.99	-14860	-12374	2004	2.2	2.2	-20088	9623	5928	40441	18446	5610	24056	No	12.01	Si
SLU 83	11.04	-1373.15	-14214	-11836	2004	2.2	2.2	-19215	9506	5856	40441	18446	5610	24056	No	12.01	Si
SLU 84	9.24	194.07	-14755	-12287	2010	2.2	2.2	-19946	9604	5916	40441	18446	5610	24056	No	11.97	Si
SLU 84	11.04	-1374.29	-14125	-11762	2008	2.2	2.2	-19094	9490	5846	40441	18446	5610	24056	No	11.98	Si
SLU 73	9.24	245.32	-13673	-11386	1962	2.2	2.2	-18484	9409	5796	40441	18446	5610	24056	No	12.26	Si
SLU 73	11.04	-1358.4	-12931	-10768	1958	2.2	2.2	-17480	9275	5713	40441	18446	5610	24056	No	12.28	Si
SLU 76	9.24	194.72	-14380	-11974	1970	2.2	2.2	-19438	9536	5874	40441	18446	5610	24056	No	12.21	Si
SLU 76	11.04	-1359.08	-13696	-11405	1967	2.2	2.2	-18514	9413	5798	40441	18446	5610	24056	No	12.23	Si
SLU 82	9.24	244.66	-14049	-11699	2002	2.2	2.2	-18992	9477	5838	40441	18446	5610	24056	No	12.02	Si
SLU 82	11.04	-1373.61	-13360	-11125	2000	2.2	2.2	-18060	9352	5761	40441	18446	5610	24056	No	12.03	Si
SLU 80	9.24	150.07	-15156	-12621	1974	2.2	2.2	-20488	9676	5961	40441	18446	5610	24056	No	12.18	Si
SLU 80	11.04	-1358.99	-14520	-12091	1972	2.2	2.2	-19629	9562	5890	40441	18446	5610	24056	No	12.2	Si
SLU 81	9.24	253.59	-14154	-11786	1995	2.2	2.2	-19134	9496	5849	40441	18446	5610	24056	No	12.06	Si
SLU 81	11.04	-1372.48	-13449	-11200	1996	2.2	2.2	-18181	9369	5771	40441	18446	5610	24056	No	12.05	Si
SLU 78	9.24	132.4	-15396	-12821	1963	2.2	2.2	-20813	9719	5987	40441	18446	5610	24056	No	12.25	Si
SLU 78	11.04	-1370.02	-14749	-12281	1961	2.2	2.2	-19937	9603	5915	40441	18446	5610	24056	No	12.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	9.24	616.93	-18229	-15179	3007	2.2	2.2	-24641	15345	9453	40441	27669	5610	33279		11.07	Si
SLV 9	11.04	-2430.52	-16758	-13955	2177	2.2	2.2	-22654	14947	9208	40441	27669	5610	33279		15.29	Si
SLD 14	9.24	516.56	-9471	-7887	2971	2.2	2.2	-12803	12977	7994	40441	27669	5610	33279		11.2	Si
SLD 14	11.04	-2110.05	-9535	-7940	2622	2.2	2.2	-12889	12994	8005	40441	27669	5610	33279		12.69	Si
SLD 16	9.24	434.49	-7078	-5894	2768	2.2	2.2	-9568	12330	7595	40441	27669	5610	33279		12.02	Si
SLD 16	11.04	-1883.15	-7483	-6231	2589	2.2	2.2	-10116	12440	7663	40441	27669	5610	33279		12.86	Si
SLV 13	9.24	714.35	-9477	-7892	4583	2.2	2.2	-12811	12979	7995	40441	27669	5610	33279		7.26	Si
SLV 13	11.04	-3286.17	-10267	-8549	3770	2.2	2.2	-13878	13192	8127	40441	27669	5610	33279		8.83	Si
SLD 13	9.24	433.48	-9837	-8191	2784	2.2	2.2	-13297	13076	8055	40441	27669	5610	33279		11.95	Si
SLD 13	11.04	-1993.1	-9776	-8140	2435	2.2	2.2	-13215	13060	8045	40441	27669	5610	33279		13.67	Si
SLV 14	9.24	907.88	-8626	-7183	5019	2.2	2.2	-11660	12749	7853	40441	27669	5610	33279		6.63	Si
SLV 14	11.04	-3558.57	-9706	-8082	4206	2.2	2.2	-13120	13041	8033	40441	27669	5610	33279		7.91	Si
SLV 16	9.24	722.58	-3209	-2672	4556	2.2	2.2	-4338	11284	6951	40441	27669	5610	33279		7.3	Si
SLV 16	11.04	-3045.77	-5064	-4217	4129	1.76	1.4956	0	0	0	40441	22135	4488	26623		6.45	Si
SLV 15	9.24	529.05	-4060	-3381	4120	2.2	2.2	-5489	11514	7093	40441	27669	5610	33279		8.08	Si
SLV 15	11.04	-2773.37	-5625	-4684	3693	2.2	1.8209	-9225	12262	6252	40441	27669	5610	33279		9.01	Si
SLV 12	9.24	123.64	373	311	1743	1.76	2.2	0	0	0	40441	22135	4488	26623		15.27	Si
SLV 12	11.04	-896.26	-926	-771	2202	1.76	0.3949	0	0	0	40441	22135	4488	26623		12.09	Si
SLV 10	9.24	741.3	-17682	-14724	3288	2.2	2.2	-23902	15197	9361	40441	27669	5610	33279		10.12	Si
SLV 10	11.04	-2605.6	-16398	-13655	2457	2.2	2.2	-22166	14850	9148	40441	27669	5610	33279		13.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	0	-601	267.15	0	0	No, e>t/2
SLV 11	179667	0.46	0	-1040	267.15	0	0	No, e>t/2
SLV 8	179667	0.46	3466	-2135	267.15	292.09	1.09	Si
SLV 7	179667	0.46	4179	-2574	267.15	350.51	1.31	Si
SLV 16	179667	0.46	7369	-4539	267.15	604.86	2.26	Si
SLV 15	179667	0.46	8479	-5223	267.15	690.63	2.59	Si
SLV 14	179667	0.46	15509	-9553	267.15	1201.66	4.5	Si
SLV 4	179667	0.46	15668	-9652	267.15	1212.59	4.54	Si
SLV 13	179667	0.46	16618	-10237	267.15	1277.23	4.78	Si
SLV 3	179667	0.46	16778	-10335	267.15	1287.96	4.82	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-13741	-20004	435	0.804	1705.7	0.948	12.32817	14.55598	No
SLV 6	-13369	-19632	435	0.823	1667.9	0.947	12.62606	14.55598	No
SLV 9	-12535	-18306	570	0.859	1583.3	0.945	13.20977	14.55598	No
SLV 10	-12163	-17934	570	0.88	1545.6	0.944	13.55813	14.55598	No
SLV 1	-11406	-15932	-75	0.965	1468.9	0.941	14.90146	7.56668	Si
SLV 2	-10827	-15353	-75	1.007	1410.3	0.939	15.58243	7.56668	Si
SLV 3	-8109	-10655	-378	1.238	1135.7	0.927	19.4014	7.56668	Si
SLV 4	-7531	-10075	-378	1.311	1077.5	0.924	20.61507	7.56668	Si
SLV 13	-7385	-10272	372	1.332	1062.8	0.924	20.95453	7.56668	Si
SLV 7	-2753	-2414	-575	2.561	605.1	0.892	41.73093	14.55598	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.976	SLU 44	Si
V_SLU	11.968	SLU 84	Si
PF_SLV	0	SLV 12	No
V_SLV	6.448	SLV 16	Si
PFFP_SLV	0	SLV 11	No
R_SLV	0.847	SLV 5	No

Maschio 114

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.314	-24.633	-3.314	L6	L7	2.14	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	9.24	-420.13	-13908	-0.0000391	0.0003743	0.0035	2.14	11488.62	13716.85	13716.85	32.65	No	Si
SLU 78	11.04	-1249.53	-12395	-0.0000411	0.0003743	0.0035	2.14	10568.1	12586.9	12586.9	10.07	No	Si
SLU 79	9.24	-404.17	-13594	-0.0000381	0.0003743	0.0035	2.14	11304.19	13494.09	13494.09	33.39	No	Si
SLU 79	11.04	-1235.17	-12098	-0.0000402	0.0003743	0.0035	2.14	10377.48	12361.1	12361.1	10.01	No	Si
SLU 83	9.24	-379.22	-13618	-0.000038	0.0003743	0.0035	2.14	11318.61	13511.29	13511.29	35.63	No	Si
SLU 83	11.04	-1228.55	-12133	-0.0000403	0.0003743	0.0035	2.14	10400.41	12387.97	12387.97	10.08	No	Si
SLU 37	9.24	-300.79	-11454	-0.0000315	0.0003743	0.0035	2.14	9954.9	11871.77	11871.77	39.47	No	Si
SLU 37	11.04	-1087.99	-10397	-0.0000345	0.0003743	0.0035	2.14	9228.87	11015.6	11015.6	10.12	No	Si
SLU 36	9.24	-316.75	-11768	-0.0000325	0.0003743	0.0035	2.14	10162.89	12113.26	12113.26	38.24	No	Si
SLU 36	11.04	-1102.35	-10695	-0.0000354	0.0003743	0.0035	2.14	9437.24	11254.25	11254.25	10.21	No	Si
SLU 80	9.24	-406.55	-13691	-0.0000384	0.0003743	0.0035	2.14	11361.85	13563.08	13563.08	33.36	No	Si
SLU 80	11.04	-1222.81	-12172	-0.0000403	0.0003743	0.0035	2.14	10425.37	12417.31	12417.31	10.15	No	Si
SLU 56	9.24	-409.73	-12573	-0.0000354	0.0003743	0.0035	2.14	10680.29	12722.42	12722.42	31.05	No	Si
SLU 56	11.04	-1126.13	-11020	-0.0000364	0.0003743	0.0035	2.14	9661.02	11516.74	11516.74	10.23	No	Si
SLU 41	9.24	-275.83	-11479	-0.0000314	0.0003743	0.0035	2.14	9971.15	11891.76	11891.76	43.11	No	Si
SLU 41	11.04	-1081.37	-10433	-0.0000345	0.0003743	0.0035	2.14	9253.92	11044	11044	10.21	No	Si
SLU 35	9.24	-314.36	-11671	-0.0000322	0.0003743	0.0035	2.14	10098.65	12039.68	12039.68	38.3	No	Si
SLU 35	11.04	-1114.7	-10621	-0.0000353	0.0003743	0.0035	2.14	9385.5	11194.48	11194.48	10.04	No	Si
SLU 77	9.24	-417.74	-13810	-0.0000388	0.0003743	0.0035	2.14	11431.7	13647.45	13647.45	32.67	No	Si
SLU 77	11.04	-1261.88	-12321	-0.000041	0.0003743	0.0035	2.14	10520.79	12530.35	12530.35	9.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	9.24	136.68	2971	0.2105968	0.0005615	0.0035	1.712		0	0	0		No
SLV 10	11.04	-1366.52	441	0.0337333	0.0005615	0.0035	1.712		0	0	0		No
SLV 1	9.24	2128.2	-7301	-0.0000332	0.0005615	0.0035	2.14		7573.52	7573.52	3.56		Si
SLV 1	11.04	-3993.75	-8234	-0.0000509	0.0005615	0.0035	2.14		9456.89	9456.89	2.37		Si
SLV 6	9.24	1496.53	1745	0.1121678	0.0005615	0.0035	1.712		0	0	0		No
SLV 6	11.04	-3128.5	-1489	-0.0006084	0.0005615	0.0035	1.712		2864.12	2864.12	0.92		No
SLV 5	9.24	1339.29	2230	0.149505	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	11.04	-2990.7	-815	-0.0007968	0.0005615	0.0035	1.712		2168.13	2168.13	0.72		No
SLV 14	9.24	-2159.99	-3969	-0.0000268	0.0005615	0.0035	2.14		5372.04	5372.04	2.49		Si
SLV 14	11.04	1665.09	-2850	-0.0000207	0.0005615	0.0035	2.14		3214.69	3214.69	1.93		Si
SLV 16	9.24	-2806.17	-11027	-0.0000479	0.0005615	0.0035	2.14		11977.11	11977.11	4.27		Si
SLV 16	11.04	2534.48	-7440	-0.0000365	0.0005615	0.0035	2.14		7704.38	7704.38	3.04		Si
SLV 13	9.24	-2404.63	-3214	-0.0000355	0.0005615	0.0035	1.712		4617.92	4617.92	1.92		Si
SLV 13	11.04	1879.5	-1801	-0.0001904	0.0005615	0.0035	2.14		2140.39	2140.39	1.14		Si
SLV 9	9.24	-20.55	3456	0.2458782	0.0005615	0.0035	1.712		0	0	0		No
SLV 9	11.04	-1228.72	1115	0.0829389	0.0005615	0.0035	1.712		0	0	0		No
SLV 2	9.24	2372.84	-8055	-0.0000369	0.0005615	0.0035	2.14		8280.52	8280.52	3.49		Si
SLV 2	11.04	-4208.16	-9283	-0.0000546	0.0005615	0.0035	2.14		10413.04	10413.04	2.47		Si
SLV 15	9.24	-3050.82	-10273	-0.0000477	0.0005615	0.0035	2.14		11303.46	11303.46	3.71		Si
SLV 15	11.04	2748.89	-6391	-0.0000357	0.0005615	0.0035	2.14		6709.41	6709.41	2.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	9.24	-382.24	-13343	-11111	1078	2.14	2.14	-18543	9417	5643	40441	17943	5457	23399	No	21.72	Si
SLU 82	11.04	-1141.9	-11779	-9809	1078	2.14	2.14	-16370	9127	5469	40441	17943	5457	23399	No	21.71	Si
SLU 80	9.24	-406.55	-13691	-11401	1135	2.14	2.14	-19027	9481	5681	40441	17943	5457	23399	No	20.61	Si
SLU 80	11.04	-1222.81	-12172	-10136	1136	2.14	2.14	-16916	9200	5513	40441	17943	5457	23399	No	20.59	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	9.24	-381.6	-13716	-11421	1152	2.14	2.14	-19061	9486	5684	40441	17943	5457	23399	No	20.31	Si
SLU 84	11.04	-1216.2	-12208	-10165	1153	2.14	2.14	-16965	9206	5516	40441	17943	5457	23399	No	20.29	Si
SLU 81	9.24	-379.85	-13246	-11030	1100	2.14	2.14	-18408	9399	5632	40441	17943	5457	23399	No	21.28	Si
SLU 81	11.04	-1154.25	-11705	-9747	1100	2.14	2.14	-16266	9113	5461	40441	17943	5457	23399	No	21.27	Si
SLU 77	9.24	-417.74	-13810	-11500	1169	2.14	2.14	-19193	9503	5694	40441	17943	5457	23399	No	20.02	Si
SLU 77	11.04	-1261.88	-12321	-10260	1170	2.14	2.14	-17123	9227	5529	40441	17943	5457	23399	No	20.01	Si
SLU 83	9.24	-379.22	-13618	-11340	1174	2.14	2.14	-18926	9468	5673	40441	17943	5457	23399	No	19.93	Si
SLU 83	11.04	-1228.55	-12133	-10104	1175	2.14	2.14	-16862	9193	5508	40441	17943	5457	23399	No	19.91	Si
SLU 75	9.24	-420.77	-13535	-11271	1072	2.14	2.14	-18810	9452	5664	40441	17943	5457	23399	No	21.83	Si
SLU 75	11.04	-1175.23	-11967	-9965	1073	2.14	2.14	-16631	9162	5490	40441	17943	5457	23399	No	21.81	Si
SLU 74	9.24	-418.38	-13438	-11190	1094	2.14	2.14	-18675	9434	5653	40441	17943	5457	23399	No	21.39	Si
SLU 74	11.04	-1187.58	-11893	-9903	1095	2.14	2.14	-16527	9148	5481	40441	17943	5457	23399	No	21.38	Si
SLU 78	9.24	-420.13	-13908	-11581	1147	2.14	2.14	-19328	9522	5705	40441	17943	5457	23399	No	20.4	Si
SLU 78	11.04	-1249.53	-12395	-10322	1148	2.14	2.14	-17226	9241	5537	40441	17943	5457	23399	No	20.39	Si
SLU 79	9.24	-404.17	-13594	-11320	1157	2.14	2.14	-18892	9463	5670	40441	17943	5457	23399	No	20.22	Si
SLU 79	11.04	-1235.17	-12098	-10074	1158	2.14	2.14	-16813	9186	5504	40441	17943	5457	23399	No	20.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	9.24	-2174.5	-20073	-16715	-5232	2.14	2.14	-27896	15996	9585	40441	26914	5457	32371		6.19	Si
SLV 11	11.04	1669.23	-14186	-11813	-4950	2.14	2.14	-19714	14359	8604	40441	26914	5457	32371		6.54	Si
SLV 9	9.24	-20.55	3456	2878	3681	1.712	2.14	0	0	0	40441	21531	4366	25897		7.04	Si
SLV 9	11.04	-1228.72	1115	929	3907	1.712	0	0	0	0	40441	21531	4366	25897		6.63	Si
SLV 1	9.24	2128.2	-7301	-6079	6038	2.14	2.14	-10146	12446	7457	40441	26914	5457	32371		5.36	Si
SLV 1	11.04	-3993.75	-8234	-6857	5184	2.14	1.755	-14047	13226	6499	40441	26914	5457	32371		6.24	Si
SLV 2	9.24	2372.84	-8055	-6708	6468	2.14	2.14	-11195	12656	7583	40441	26914	5457	32371		5	Si
SLV 2	11.04	-4208.16	-9283	-7730	5614	2.14	1.85	-15031	13423	6953	40441	26914	5457	32371		5.77	Si
SLV 15	9.24	-3050.82	-10273	-8554	-5180	2.14	2.14	-14276	13272	7952	40441	26914	5457	32371		6.25	Si
SLV 15	11.04	2748.89	-6391	-5322	-4325	2.14	1.9197	-8882	12193	6554	40441	26914	5457	32371		7.48	Si
SLV 10	9.24	136.68	2971	2474	3957	1.712	2.14	0	0	0	40441	21531	4366	25897		6.54	Si
SLV 10	11.04	-1366.52	441	368	4183	1.712	0	0	0	0	40441	21531	4366	25897		6.19	Si
SLV 12	9.24	-2017.27	-20558	-17119	-4956	2.14	2.14	-28570	16131	9665	40441	26914	5457	32371		6.53	Si
SLV 12	11.04	1531.43	-14860	-12374	-4674	2.14	2.14	-20651	14547	8716	40441	26914	5457	32371		6.93	Si
SLV 5	9.24	1339.29	2230	1857	6244	1.712	1.4084	0	0	0	40441	21531	4366	25897		4.15	Si
SLV 5	11.04	-2990.7	-815	-678	5963	1.712	0	0	0	0	40441	21531	4366	25897		4.34	Si
SLV 6	9.24	1496.53	1745	1453	6520	1.712	0.6372	0	0	0	40441	21531	4366	25897		3.97	Si
SLV 6	11.04	-3128.5	-1489	-1240	6239	1.712	0	0	0	0	40441	21531	4366	25897		4.15	Si
SLV 16	9.24	-2806.17	-11027	-9183	-4750	2.14	2.14	-15325	13482	8078	40441	26914	5457	32371		6.81	Si
SLV 16	11.04	2534.48	-7440	-6195	-3895	2.14	2.14	-10339	12485	7481	40441	26914	5457	32371		8.31	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.46	0	10	259.86	0	0	No, Trazione
SLV 9	179667	0.46	0	1482	259.86	0	0	No, Trazione
SLV 6	179667	0.46	0	-586	259.86	0	0	No, e>t/2
SLV 10	179667	0.46	0	886	259.86	0	0	No, Trazione
SLV 13	179667	0.46	5013	-3004	259.86	406.75	1.57	Si
SLV 14	179667	0.46	6562	-3932	259.86	526.78	2.03	Si
SLV 1	179667	0.46	13201	-7910	259.86	1011.69	3.89	Si
SLV 15	179667	0.46	14124	-8463	259.86	1075.25	4.14	Si
SLV 2	179667	0.46	14749	-8838	259.86	1117.79	4.3	Si
SLV 16	179667	0.46	15672	-9391	259.86	1179.79	4.54	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-13786	-21245	578	0.774	1701.8	0.949	11.84969	14.55598	No
SLV 7	-13223	-20645	578	0.801	1644.6	0.948	12.28747	14.55598	No
SLV 12	-12715	-18626	359	0.843	1593	0.947	12.94355	14.55598	No
SLV 11	-12152	-18026	359	0.875	1536	0.945	13.46149	14.55598	No
SLV 4	-10622	-16988	504	0.966	1380.9	0.94	14.93671	7.56668	Si
SLV 3	-9746	-16055	504	1.035	1292.3	0.936	16.07178	7.56668	Si
SLV 16	-7051	-8258	-225	1.366	1020.5	0.923	21.51414	7.56668	Si
SLV 2	-6704	-10578	222	1.42	985.7	0.921	22.41208	7.56668	Si
SLV 15	-6175	-7324	-225	1.51	932.6	0.917	23.9204	7.56668	Si
SLV 1	-5829	-9644	223	1.576	898	0.915	25.03262	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.93	SLU 77	Si
V_SLU	19.914	SLU 83	Si
PF_SLV	0	SLV 5	No
V_SLV	3.972	SLV 6	Si
PFFP_SLV	0	SLV 10	No
R_SLV	0.814	SLV 8	No

Maschio 115

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.593	-3.314	L6	L7	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 59	10.34	-947.47	-16057	-0.0000455	0.0003743	0.0035	2.28	13782.95	16414.3	16414.3	17.32	No	Si
SLU 59	11.14	-1137.99	-13925	-0.0000412	0.0003743	0.0035	2.28	12473.31	14773.1	14773.1	12.98	No	Si
SLU 57	10.34	-961.52	-16370	-0.0000464	0.0003743	0.0035	2.28	13961.64	16640.5	16640.5	17.31	No	Si
SLU 57	11.14	-1161.45	-14221	-0.0000421	0.0003743	0.0035	2.28	12665	15001.64	15001.64	12.92	No	Si
SLU 79	10.34	-1041.91	-17750	-0.0000506	0.0003743	0.0035	2.28	14709	17653.26	17653.26	16.94	No	Si
SLU 79	11.14	-1237.98	-15499	-0.000046	0.0003743	0.0035	2.28	13455.87	15995.73	15995.73	12.92	No	Si
SLU 70	10.34	-1047.3	-16853	-0.0000483	0.0003743	0.0035	2.28	14231.14	16993.68	16993.68	16.23	No	Si
SLU 70	11.14	-1170.48	-14646	-0.0000433	0.0003743	0.0035	2.28	12934.53	15329.78	15329.78	13.1	No	Si
SLU 77	10.34	-1055.97	-18063	-0.0000516	0.0003743	0.0035	2.28	14869.12	17863.16	17863.16	16.92	No	Si
SLU 77	11.14	-1261.44	-15796	-0.0000469	0.0003743	0.0035	2.28	13631.18	16223.7	16223.7	12.86	No	Si
SLU 80	10.34	-1044.28	-17793	-0.0000508	0.0003743	0.0035	2.28	14731.57	17682.48	17682.48	16.93	No	Si
SLU 80	11.14	-1239.74	-15536	-0.0000461	0.0003743	0.0035	2.28	13477.89	16024.31	16024.31	12.93	No	Si
SLU 69	10.34	-1044.94	-16810	-0.0000481	0.0003743	0.0035	2.28	14207.13	16961.6	16961.6	16.23	No	Si
SLU 69	11.14	-1168.72	-14609	-0.0000432	0.0003743	0.0035	2.28	12911.35	15301.11	15301.11	13.09	No	Si
SLU 58	10.34	-945.1	-16013	-0.0000454	0.0003743	0.0035	2.28	13757.72	16382.85	16382.85	17.33	No	Si
SLU 58	11.14	-1136.22	-13888	-0.0000411	0.0003743	0.0035	2.28	12449.19	14743.3	14743.3	12.98	No	Si
SLU 56	10.34	-959.16	-16326	-0.0000463	0.0003743	0.0035	2.28	13936.89	16608.8	16608.8	17.32	No	Si
SLU 56	11.14	-1159.69	-14184	-0.000042	0.0003743	0.0035	2.28	12641.27	14973.28	14973.28	12.91	No	Si
SLU 78	10.34	-1058.33	-18106	-0.0000517	0.0003743	0.0035	2.28	14891.21	17892.61	17892.61	16.91	No	Si
SLU 78	11.14	-1263.2	-15833	-0.000047	0.0003743	0.0035	2.28	13652.82	16251.91	16251.91	12.87	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	10.34	-35.58	-5327	-0.0000126	0.0005615	0.0035	2.28		7123.94	7123.94	200.21		Si
SLV 6	11.14	-2265	-5172	-0.0000261	0.0005615	0.0035	2.28		6963.71	6963.71	3.07		Si
SLV 15	10.34	-2153.79	-14015	-0.000047	0.0005615	0.0035	2.28		15564.91	15564.91	7.23		Si
SLV 15	11.14	2435.66	-10926	-0.0000411	0.0005615	0.0035	2.28		11594.03	11594.03	4.76		Si
SLV 14	10.34	-1928.36	-10381	-0.0000366	0.0005615	0.0035	2.28		12182.47	12182.47	6.32		Si
SLV 14	11.14	1789.74	-8074	-0.00003	0.0005615	0.0035	2.28		8906.26	8906.26	4.98		Si
SLV 2	10.34	734.98	-9356	-0.0000266	0.0005615	0.0035	2.28		10174.79	10174.79	13.84		Si
SLV 2	11.14	-3930.24	-9151	-0.0000464	0.0005615	0.0035	2.28		10998.07	10998.07	2.8		Si
SLV 4	10.34	584.91	-13101	-0.0000348	0.0005615	0.0035	2.28		13418.44	13418.44	22.94		Si
SLV 4	11.14	-3594.14	-12207	-0.0000517	0.0005615	0.0035	2.28		13904.23	13904.23	3.87		Si
SLV 13	10.34	-2003.72	-10270	-0.0000368	0.0005615	0.0035	2.28		12074.78	12074.78	6.03		Si
SLV 13	11.14	2099.57	-7870	-0.0000315	0.0005615	0.0035	2.28		8700.94	8700.94	4.14		Si
SLV 1	10.34	659.61	-9245	-0.0000258	0.0005615	0.0035	2.28		10065.43	10065.43	15.26		Si
SLV 1	11.14	-3620.4	-8946	-0.0000437	0.0005615	0.0035	2.28		10798.03	10798.03	2.98		Si
SLV 3	10.34	509.55	-12990	-0.000034	0.0005615	0.0035	2.28		13324.33	13324.33	26.15		Si
SLV 3	11.14	-3284.31	-12002	-0.0000492	0.0005615	0.0035	2.28		13715.93	13715.93	4.18		Si
SLV 5	10.34	-84.02	-5255	-0.0000128	0.0005615	0.0035	2.28		7049.84	7049.84	83.91		Si
SLV 5	11.14	-2065.87	-5040	-0.0000245	0.0005615	0.0035	2.28		6827.73	6827.73	3.31		Si
SLD 2	10.34	-90.43	-10664	-0.0000257	0.0005615	0.0035	2.28		12457.16	12457.16	137.76		Si
SLD 2	11.14	-2110.81	-9638	-0.0000359	0.0005615	0.0035	2.28		11466.17	11466.17	5.43		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	10.34	-1015.79	-17469	-14547	-1232	2.28	2.28	-22786	9983	6373	40441	19117	5814	24931	No	20.23	Si
SLU 75	11.14	-1173.63	-15211	-12667	-715	2.28	2.28	-19841	9590	6122	40441	19117	5814	24931	No	34.85	Si
SLU 82	10.34	-963.92	-17056	-14202	-1254	2.28	2.28	-22247	9911	6327	40441	19117	5814	24931	No	19.87	Si
SLU 82	11.14	-1100.33	-14801	-12325	-736	2.28	2.28	-19307	9519	6077	40441	19117	5814	24931	No	33.89	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	10.34	-1003.31	-17185	-14310	-1228	2.28	2.28	-22416	9933	6341	40441	19117	5814	24931	No	20.3	Si
SLU 76	11.14	-1151.34	-14939	-12440	-713	2.28	2.28	-19486	9543	6092	40441	19117	5814	24931	No	34.95	Si
SLU 66	10.34	-1002.39	-16172	-13467	-1228	2.28	2.28	-21095	9757	6229	40441	19117	5814	24931	No	20.3	Si
SLU 66	11.14	-1079.14	-13988	-11648	-736	2.28	2.28	-18245	9377	5986	40441	19117	5814	24931	No	33.86	Si
SLU 67	10.34	-1004.76	-16216	-13503	-1239	2.28	2.28	-21152	9765	6234	40441	19117	5814	24931	No	20.11	Si
SLU 67	11.14	-1080.91	-14025	-11679	-740	2.28	2.28	-18293	9384	5991	40441	19117	5814	24931	No	33.69	Si
SLU 73	10.34	-960.76	-16548	-13780	-1265	2.28	2.28	-21584	9822	6271	40441	19117	5814	24931	No	19.71	Si
SLU 73	11.14	-1061.77	-14318	-11923	-749	2.28	2.28	-18675	9435	6023	40441	19117	5814	24931	No	33.3	Si
SLU 81	10.34	-961.55	-17012	-14166	-1243	2.28	2.28	-22190	9903	6322	40441	19117	5814	24931	No	20.05	Si
SLU 81	11.14	-1098.56	-14764	-12295	-732	2.28	2.28	-19258	9512	6073	40441	19117	5814	24931	No	34.07	Si
SLU 65	10.34	-949.73	-15295	-12736	-1272	2.28	2.28	-19950	9604	6132	40441	19117	5814	24931	No	19.6	Si
SLU 65	11.14	-969.05	-13131	-10935	-773	2.28	2.28	-17128	9228	5891	40441	19117	5814	24931	No	32.23	Si
SLU 64	10.34	-945.79	-15222	-12676	-1253	2.28	2.28	-19855	9592	6123	40441	19117	5814	24931	No	19.89	Si
SLU 64	11.14	-966.11	-13070	-10883	-767	2.28	2.28	-17048	9217	5884	40441	19117	5814	24931	No	32.5	Si
SLU 68	10.34	-992.27	-15932	-13267	-1235	2.28	2.28	-20781	9715	6202	40441	19117	5814	24931	No	20.19	Si
SLU 68	11.14	-1058.62	-13753	-11452	-738	2.28	2.28	-17939	9336	5960	40441	19117	5814	24931	No	33.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	10.34	-1928.36	-10381	-8645	-6818	2.28	2.28	-13541	13125	8379	40441	28675	5814	34489		5.06	Si
SLV 14	11.14	1789.74	-8074	-6724	-5395	2.28	2.28	-10532	12523	7995	40441	28675	5814	34489		6.39	Si
SLV 1	10.34	659.61	-9245	-7699	6750	2.28	2.28	-12059	12829	8190	40441	28675	5814	34489		5.11	Si
SLV 1	11.14	-3620.4	-8946	-7449	5290	2.28	2.2059	-11669	12750	7876	40441	28675	5814	34489		6.52	Si
SLV 3	10.34	509.55	-12990	-10817	4963	2.28	2.28	-16944	13805	8813	40441	28675	5814	34489		6.95	Si
SLV 3	11.14	-3284.31	-12002	-9994	4273	2.28	2.28	-15655	13548	8649	40441	28675	5814	34489		8.07	Si
SLV 11	10.34	-1383.23	-18045	-15026	-6235	2.28	2.28	-23537	15124	9655	40441	28675	5814	34489		5.53	Si
SLV 11	11.14	770.43	-14905	-12411	-4107	2.28	2.28	-19441	14305	9132	40441	28675	5814	34489		8.4	Si
SLV 15	10.34	-2153.79	-14015	-11670	-9230	2.28	2.28	-18280	14073	8984	40441	28675	5814	34489		3.74	Si
SLV 15	11.14	2435.66	-10926	-9098	-6938	2.28	2.28	-14251	13267	8470	40441	28675	5814	34489		4.97	Si
SLV 13	10.34	-2003.72	-10270	-8552	-7444	2.28	2.28	-13396	13096	8360	40441	28675	5814	34489		4.63	Si
SLV 13	11.14	2099.57	-7870	-6553	-5921	2.28	2.28	-10265	12470	7961	40441	28675	5814	34489		5.82	Si
SLV 2	10.34	734.98	-9356	-7791	7375	2.28	2.28	-12204	12858	8208	40441	28675	5814	34489		4.68	Si
SLV 2	11.14	-3930.24	-9151	-7620	5816	2.28	2.1315	-12840	12985	7750	40441	28675	5814	34489		5.93	Si
SLV 4	10.34	584.91	-13101	-10909	5589	2.28	2.28	-17089	13834	8832	40441	28675	5814	34489		6.17	Si
SLV 4	11.14	-3594.14	-12207	-10165	4799	2.28	2.28	-15922	13601	8683	40441	28675	5814	34489		7.19	Si
SLV 16	10.34	-2078.42	-14126	-11763	-8605	2.28	2.28	-18425	14102	9003	40441	28675	5814	34489		4.01	Si
SLV 16	11.14	2125.83	-11131	-9269	-6412	2.28	2.28	-14518	13320	8504	40441	28675	5814	34489		5.38	Si
SLV 12	10.34	-1334.8	-18116	-15086	-5833	2.28	2.28	-23630	15143	9667	40441	28675	5814	34489		5.91	Si
SLV 12	11.14	571.3	-15036	-12521	-3768	2.28	2.28	-19613	14339	9154	40441	28675	5814	34489		9.15	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	7955	-5078	276.86	673.93	2.43	Si
SLV 10	179667	0.46	8157	-5208	276.86	690.14	2.49	Si
SLV 5	179667	0.46	8690	-5548	276.86	732.5	2.65	Si
SLV 6	179667	0.46	8893	-5677	276.86	748.54	2.7	Si
SLV 13	179667	0.46	13086	-8354	276.86	1069.34	3.86	Si
SLV 14	179667	0.46	13401	-8555	276.86	1092.65	3.95	Si
SLV 1	179667	0.46	15537	-9919	276.86	1247.39	4.51	Si
SLV 2	179667	0.46	15853	-10121	276.86	1269.8	4.59	Si
SLV 15	179667	0.46	18267	-11662	276.86	1437.38	5.19	Si
SLV 16	179667	0.46	18583	-11863	276.86	1458.78	5.27	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-11564	-16937	557	0.947	1496.3	0.94	14.63976	14.55598	Si
SLV 12	-11487	-15550	616	0.948	1488.5	0.94	14.6563	14.55598	Si
SLV 7	-11482	-16805	557	0.953	1488.1	0.94	14.72906	14.55598	Si
SLV 11	-11405	-15418	616	0.954	1480.3	0.94	14.74623	14.55598	Si
SLV 6	-4282	-7020	-616	1.986	765.4	0.902	32.01098	14.55598	Si
SLV 5	-4200	-6888	-616	2.012	757.4	0.901	32.44485	14.55598	Si
SLV 10	-4205	-5633	-557	2.02	757.9	0.901	32.57328	14.55598	Si
SLV 9	-4123	-5501	-557	2.046	749.8	0.901	33.0202	14.55598	Si
SLV 4	-9128	-15120	77	1.189	1250	0.931	18.55662	7.56668	Si
SLV 16	-8871	-10498	274	1.198	1224.1	0.93	18.72102	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.861	SLU 77	Si
V_SLU	19.6	SLU 65	Si
PF_SLV	2.798	SLV 2	Si
V_SLV	3.736	SLV 15	Si
PFFP_SLV	2.434	SLV 9	Si
R_SLV	1.006	SLV 8	Si

Maschio 116

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.314	-18.813	-3.314	L6	L7	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 57	10.34	192.81	-5040	-0.0000751	0.0003743	0.0035	0.55	940.4	1073.25	1073.25	5.57	No	Si
SLU 57	11.14	129.46	-4448	-0.0000606	0.0003743	0.0035	0.55	876.17	972.63	972.63	7.51	No	Si
SLU 79	10.34	205.85	-5453	-0.0000817	0.0003743	0.0035	0.55	978	1146.02	1146.02	5.57	No	Si
SLU 79	11.14	143.28	-4858	-0.000067	0.0003743	0.0035	0.55	921.96	1041.88	1041.88	7.27	No	Si
SLU 63	10.34	189.27	-4937	-0.0000734	0.0003743	0.0035	0.55	930.11	1055.45	1055.45	5.58	No	Si
SLU 63	11.14	119.49	-4382	-0.0000587	0.0003743	0.0035	0.55	868.18	961.58	961.58	8.05	No	Si
SLU 56	10.34	192.34	-5025	-0.0000749	0.0003743	0.0035	0.55	938.97	1070.72	1070.72	5.57	No	Si
SLU 56	11.14	128.92	-4436	-0.0000604	0.0003743	0.0035	0.55	874.71	970.59	970.59	7.53	No	Si
SLU 83	10.34	206.82	-5447	-0.0000818	0.0003743	0.0035	0.55	977.51	1144.97	1144.97	5.54	No	Si
SLU 83	11.14	135.04	-4882	-0.0000663	0.0003743	0.0035	0.55	924.51	1046.08	1046.08	7.75	No	Si
SLU 80	10.34	206.32	-5468	-0.0000819	0.0003743	0.0035	0.55	979.22	1148.62	1148.62	5.57	No	Si
SLU 80	11.14	143.82	-4870	-0.0000672	0.0003743	0.0035	0.55	923.24	1043.98	1043.98	7.26	No	Si
SLU 84	10.34	207.29	-5462	-0.000082	0.0003743	0.0035	0.55	978.72	1147.57	1147.57	5.54	No	Si
SLU 84	11.14	135.58	-4895	-0.0000665	0.0003743	0.0035	0.55	925.78	1048.18	1048.18	7.73	No	Si
SLU 77	10.34	210.36	-5550	-0.0000835	0.0003743	0.0035	0.55	985.95	1159.52	1159.52	5.51	No	Si
SLU 77	11.14	145.01	-4949	-0.0000682	0.0003743	0.0035	0.55	931.33	1057.52	1057.52	7.29	No	Si
SLU 78	10.34	210.83	-5565	-0.0000837	0.0003743	0.0035	0.55	987.12	1161.09	1161.09	5.51	No	Si
SLU 78	11.14	145.55	-4961	-0.0000685	0.0003743	0.0035	0.55	932.57	1059.64	1059.64	7.28	No	Si
SLU 62	10.34	188.8	-4922	-0.0000732	0.0003743	0.0035	0.55	928.62	1052.94	1052.94	5.58	No	Si
SLU 62	11.14	118.95	-4369	-0.0000584	0.0003743	0.0035	0.55	866.69	959.55	959.55	8.07	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	10.34	716.08	-6533	-0.0001551	0.0005615	0.0035	0.55		1423.68	1423.68	1.99		Si
SLV 4	11.14	-459.56	-4684	-0.0000994	0.0005615	0.0035	0.55		1165.17	1165.17	2.54		Si
SLD 13	10.34	-127.24	-2272	-0.0000358	0.0005615	0.0035	0.55		644.58	644.58	5.07		Si
SLD 13	11.14	346.24	-2479	-0.000067	0.0005615	0.0035	0.55		641.96	641.96	1.85		Si
SLV 2	10.34	714.33	-5685	-0.0001487	0.0005615	0.0035	0.55		1283.66	1283.66	1.8		Si
SLV 2	11.14	-523.34	-3914	-0.0001044	0.0005615	0.0035	0.55		1009.3	1009.3	1.93		Si
SLD 14	10.34	-107.29	-2385	-0.0000348	0.0005615	0.0035	0.55		671.7	671.7	6.26		Si
SLD 14	11.14	328.17	-2538	-0.0000636	0.0005615	0.0035	0.55		654.34	654.34	1.99		Si
SLD 15	10.34	-126.83	-2645	-0.0000396	0.0005615	0.0035	0.55		731	731	5.76		Si
SLD 15	11.14	374.79	-2817	-0.000073	0.0005615	0.0035	0.55		710.72	710.72	1.9		Si
SLV 13	10.34	-465.67	-570	-0.0037667	0.0005615	0.0035	0.44		220.49	220.49	0.47		No
SLV 13	11.14	670.29	-1600	-0.0219667	0.0005615	0.0035	0.44		433.93	433.93	0.65		No
SLV 16	10.34	-417.44	-1682	-0.0002267	0.0005615	0.0035	0.44		503.05	503.05	1.21		Si
SLV 16	11.14	691.96	-2509	-0.0070623	0.0005615	0.0035	0.44		648.23	648.23	0.94		No
SLV 1	10.34	667.85	-5421	-0.0001383	0.0005615	0.0035	0.55		1240.69	1240.69	1.86		Si
SLV 1	11.14	-481.24	-3775	-0.0000958	0.0005615	0.0035	0.55		980.1	980.1	2.04		Si
SLV 15	10.34	-463.92	-1418	-0.0011249	0.0005615	0.0035	0.44		436.92	436.92	0.94		No
SLV 15	11.14	734.06	-2370	-0.0120563	0.0005615	0.0035	0.44		619.12	619.12	0.84		No
SLV 14	10.34	-419.19	-834	-0.0020645	0.0005615	0.0035	0.44		289.68	289.68	0.69		No
SLV 14	11.14	628.19	-1739	-0.0158178	0.0005615	0.0035	0.44		468.09	468.09	0.75		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	10.34	200.3	-5364	-4467	501	0.55	0.55	-29007	10812	1665	40441	4611	1402	6014	No	12	Si
SLU 75	11.14	141.57	-4791	-3989	-249	0.55	0.55	-25906	10399	1601	40441	4611	1402	6014	No	24.12	Si
SLU 80	10.34	206.32	-5468	-4553	509	0.55	0.55	-29567	10833	1668	40441	4611	1402	6014	No	11.82	Si
SLU 80	11.14	143.82	-4870	-4055	-237	0.55	0.55	-26335	10456	1610	40441	4611	1402	6014	No	25.38	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	10.34	205.85	-5453	-4541	508	0.55	0.55	-29488	10833	1668	40441	4611	1402	6014	No	11.83	Si
SLU 79	11.14	143.28	-4858	-4045	-238	0.55	0.55	-26269	10447	1609	40441	4611	1402	6014	No	25.31	Si
SLU 77	10.34	210.36	-5550	-4622	522	0.55	0.55	-30013	10833	1668	40441	4611	1402	6014	No	11.52	Si
SLU 77	11.14	145.01	-4949	-4121	-246	0.55	0.55	-26761	10513	1619	40441	4611	1402	6014	No	24.41	Si
SLU 78	10.34	210.83	-5565	-4634	523	0.55	0.55	-30091	10833	1668	40441	4611	1402	6014	No	11.51	Si
SLU 78	11.14	145.55	-4961	-4131	-246	0.55	0.55	-26827	10521	1620	40441	4611	1402	6014	No	24.48	Si
SLU 83	10.34	206.82	-5447	-4536	533	0.55	0.55	-29456	10833	1668	40441	4611	1402	6014	No	11.28	Si
SLU 83	11.14	135.04	-4882	-4066	-261	0.55	0.55	-26401	10465	1611	40441	4611	1402	6014	No	23.04	Si
SLU 82	10.34	196.76	-5261	-4381	512	0.55	0.55	-28451	10738	1654	40441	4611	1402	6014	No	11.74	Si
SLU 82	11.14	131.6	-4724	-3934	-264	0.55	0.55	-25546	10351	1594	40441	4611	1402	6014	No	22.78	Si
SLU 74	10.34	199.83	-5350	-4455	501	0.55	0.55	-28928	10802	1663	40441	4611	1402	6014	No	12.01	Si
SLU 74	11.14	141.03	-4778	-3979	-250	0.55	0.55	-25839	10390	1600	40441	4611	1402	6014	No	24.06	Si
SLU 81	10.34	196.29	-5247	-4369	512	0.55	0.55	-28372	10727	1652	40441	4611	1402	6014	No	11.75	Si
SLU 81	11.14	131.06	-4712	-3924	-265	0.55	0.55	-25480	10342	1593	40441	4611	1402	6014	No	22.72	Si
SLU 84	10.34	207.29	-5462	-4548	534	0.55	0.55	-29535	10833	1668	40441	4611	1402	6014	No	11.27	Si
SLU 84	11.14	135.58	-4895	-4076	-260	0.55	0.55	-26468	10473	1613	40441	4611	1402	6014	No	23.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	10.34	-417.44	-1682	-1401	-1923	0.44	0.0805	0	0	0	40441	5534	1122	6655		3.46	Si
SLV 16	11.14	691.96	-2509	-2089	-322	0.44	0	0	0	0	40441	5534	1122	6655		20.66	Si
SLV 6	10.34	307.25	-2951	-2457	1346	0.55	0.5126	-15956	13608	1953	40441	6917	1402	8319		6.18	Si
SLV 6	11.14	-187.19	-2230	-1857	-26	0.55	0.55	-12061	12829	1976	40441	6917	1402	8319		321.26	Si
SLV 13	10.34	-465.67	-570	-474	-1885	0.44	0	0	0	0	40441	5534	1122	6655		3.53	Si
SLV 13	11.14	670.29	-1600	-1333	-322	0.44	0	0	0	0	40441	5534	1122	6655		20.67	Si
SLV 2	10.34	714.33	-5685	-4734	2678	0.55	0.448	-30742	16250	2039	40441	6917	1402	8319		3.11	Si
SLV 2	11.14	-523.34	-3914	-3259	47	0.55	0.4239	-27848	15987	1897	40441	6917	1402	8319		177.92	Si
SLD 2	10.34	377.24	-4458	-3712	1314	0.55	0.55	-24107	15238	2347	40441	6917	1402	8319		6.33	Si
SLD 2	11.14	-164.07	-3467	-2887	-71	0.55	0.55	-18749	14166	2182	40441	6917	1402	8319		117.77	Si
SLV 1	10.34	667.85	-5421	-4514	2512	0.55	0.4553	-29311	16250	2072	40441	6917	1402	8319		3.31	Si
SLV 1	11.14	-481.24	-3775	-3144	5	0.55	0.4425	-25704	15558	1928	40441	6917	1402	8319		1729.33	Si
SLV 15	10.34	-463.92	-1418	-1180	-2089	0.44	0	0	0	0	40441	5534	1122	6655		3.19	Si
SLV 15	11.14	734.06	-2370	-1974	-364	0.44	0	0	0	0	40441	5534	1122	6655		18.28	Si
SLV 14	10.34	-419.19	-834	-695	-1720	0.44	0	0	0	0	40441	5534	1122	6655		3.87	Si
SLV 14	11.14	628.19	-1739	-1448	-280	0.44	0	0	0	0	40441	5534	1122	6655		23.77	Si
SLV 4	10.34	716.08	-6533	-5440	2475	0.55	0.4961	-35327	16250	2257	40441	6917	1402	8319		3.36	Si
SLV 4	11.14	-459.56	-4684	-3900	5	0.55	0.5306	-25326	15482	2300	40441	6917	1402	8319		1814.18	Si
SLV 3	10.34	669.6	-6269	-5220	2309	0.55	0.5045	-33897	16250	2296	40441	6917	1402	8319		3.6	Si
SLV 3	11.14	-417.46	-4545	-3784	-37	0.55	0.5494	-24575	15332	2358	40441	6917	1402	8319		222.67	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	6439	-992	66.78	132.97	1.99	Si
SLV 10	179667	0.46	7006	-1079	66.78	144.11	2.16	Si
SLV 13	179667	0.46	7454	-1148	66.78	152.86	2.29	Si
SLV 14	179667	0.46	8336	-1284	66.78	169.9	2.54	Si
SLV 5	179667	0.46	10502	-1617	66.78	210.85	3.16	Si
SLV 6	179667	0.46	11069	-1705	66.78	221.34	3.31	Si
SLV 15	179667	0.46	12522	-1928	66.78	247.84	3.71	Si
SLV 16	179667	0.46	13404	-2064	66.78	263.61	3.95	Si
SLV 1	179667	0.46	20998	-3234	66.78	390.46	5.85	Si
SLV 2	179667	0.46	21880	-3369	66.78	404.13	6.05	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2578	-3901	-42	1.04	339.5	0.937	16.1251	14.55598	Si
SLV 7	-2505	-3867	-42	1.064	332.2	0.936	16.52361	14.55598	Si
SLV 12	-2080	-3798	-44	1.233	289.3	0.929	19.30001	14.55598	Si
SLV 11	-2008	-3764	-44	1.268	281.9	0.927	19.87761	14.55598	Si
SLV 6	-1302	-1128	36	1.757	211.2	0.91	28.06581	14.55598	Si
SLV 5	-1229	-1094	36	1.83	204	0.908	29.29805	14.55598	Si
SLV 4	-2732	-3061	-13	1.001	355.1	0.94	15.48458	7.56668	Si
SLV 3	-2619	-3007	-13	1.036	343.6	0.938	16.057	7.56668	Si
SLV 2	-2349	-2229	10	1.132	316.4	0.934	17.62286	7.56668	Si
SLV 1	-2236	-2175	10	1.177	304.9	0.932	18.37002	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.507	SLU 78	Si
V_SLU	11.267	SLU 84	Si
PF_SLV	0.473	SLV 13	No
V_SLV	3.107	SLV 2	Si
PFFP_SLV	1.991	SLV 9	Si
R_SLV	1.108	SLV 8	Si

Maschio 118

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L6	L7	4.82	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	8.34	-1378.07	-26901	-0.0000479	0.0004492	0.0035	4.82	46322.94	69152.12	69152.12	50.18	No	Si
SLU 73	11.86	-625.2	-13426	-0.0000232	0.0004492	0.0035	4.82	27746.6	43105.8	43105.8	68.95	No	Si
SLU 2	8.34	-1087.98	-17958	-0.0000319	0.0004492	0.0035	4.82	35030.52	52243.47	52243.47	48.02	No	Si
SLU 2	11.86	-499.45	-9126	-0.0000158	0.0004492	0.0035	4.82	19863.16	34090.3	34090.3	68.26	No	Si
SLU 23	8.34	-1124.72	-20388	-0.0000361	0.0004492	0.0035	4.82	38504.36	57035.32	57035.32	50.71	No	Si
SLU 23	11.86	-430.54	-10366	-0.0000177	0.0004492	0.0035	4.82	22233.14	36730.57	36730.57	85.31	No	Si
SLU 52	8.34	-1341.33	-24470	-0.0000436	0.0004492	0.0035	4.82	43658.73	64680.03	64680.03	48.22	No	Si
SLU 52	11.86	-694.1	-12186	-0.0000213	0.0004492	0.0035	4.82	25570.72	40523.06	40523.06	58.38	No	Si
SLU 65	8.34	-1394.51	-24954	-0.0000446	0.0004492	0.0035	4.82	44213.49	65580.47	65580.47	47.03	No	Si
SLU 65	11.86	-579.3	-12686	-0.0000219	0.0004492	0.0035	4.82	26457.05	41563.9	41563.9	71.75	No	Si
SLU 47	8.34	-1286.65	-23236	-0.0000413	0.0004492	0.0035	4.82	42190.57	62384.98	62384.98	48.49	No	Si
SLU 47	11.86	-399.29	-12078	-0.0000205	0.0004492	0.0035	4.82	25376.27	40296.7	40296.7	100.92	No	Si
SLU 44	8.34	-1357.77	-22524	-0.0000403	0.0004492	0.0035	4.82	41307.3	61059.7	61059.7	44.97	No	Si
SLU 44	11.86	-648.21	-11446	-0.00002	0.0004492	0.0035	4.82	24234.23	38981.16	38981.16	60.14	No	Si
SLU 68	8.34	-1323.39	-25667	-0.0000457	0.0004492	0.0035	4.82	45008.17	66905.76	66905.76	50.56	No	Si
SLU 68	11.86	-330.39	-13317	-0.0000224	0.0004492	0.0035	4.82	27559.04	42879.44	42879.44	129.78	No	Si
SLU 46	8.34	-1270.25	-23637	-0.000042	0.0004492	0.0035	4.82	42675.82	63130.18	63130.18	49.7	No	Si
SLU 46	11.86	-479.51	-12404	-0.0000212	0.0004492	0.0035	4.82	25958.49	40976.59	40976.59	85.45	No	Si
SLU 43	8.34	-1211.08	-22564	-0.00004	0.0004492	0.0035	4.82	41357.68	61134.25	61134.25	50.48	No	Si
SLU 43	11.86	-565.87	-11471	-0.0000199	0.0004492	0.0035	4.82	24280.58	39034.11	39034.11	68.98	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	8.34	-9182.38	-17527	-0.0000477	0.0006738	0.0035	4.82		52147.05	52147.05	5.68		Si
SLV 7	11.86	-4702.13	-9092	-0.0000243	0.0006738	0.0035	4.82		34214.02	34214.02	7.28		Si
SLV 10	8.34	7288.19	-20969	-0.0000496	0.0006738	0.0035	4.82		48466.93	48466.93	6.65		Si
SLV 10	11.86	3881.05	-10342	-0.0000247	0.0006738	0.0035	4.82		25969.79	25969.79	6.69		Si
SLV 15	8.34	-6897.31	-13061	-0.0000354	0.0006738	0.0035	4.82		42743.81	42743.81	6.2		Si
SLV 15	11.86	-2760.24	-5290	-0.0000141	0.0006738	0.0035	4.82		25756.36	25756.36	9.33		Si
SLV 6	8.34	9386.81	-24132	-0.0000594	0.0006738	0.0035	4.82		54824.29	54824.29	5.84		Si
SLV 6	11.86	4611.59	-12739	-0.0000301	0.0006738	0.0035	4.82		31199.6	31199.6	6.77		Si
SLV 12	8.34	-11811.05	-14245	-0.0000476	0.0006738	0.0035	4.82		45268.79	45268.79	3.83		Si
SLV 12	11.86	-5854.54	-6513	-0.0000224	0.0006738	0.0035	4.82		28498.83	28498.83	4.87		Si
SLV 16	8.34	-7722.05	-12876	-0.0000368	0.0006738	0.0035	4.82		42347.98	42347.98	5.48		Si
SLV 16	11.86	-3416.65	-5006	-0.0000149	0.0006738	0.0035	4.82		25116.86	25116.86	7.35		Si
SLV 9	8.34	7818.24	-21089	-0.0000509	0.0006738	0.0035	4.82		48709.24	48709.24	6.23		Si
SLV 9	11.86	4302.92	-10524	-0.0000258	0.0006738	0.0035	4.82		26371.59	26371.59	6.13		Si
SLV 5	8.34	9916.86	-24251	-0.0000608	0.0006738	0.0035	4.82		55062.49	55062.49	5.55		Si
SLV 5	11.86	5033.46	-12921	-0.0000313	0.0006738	0.0035	4.82		31595.11	31595.11	6.28		Si
SLV 11	8.34	-11281	-14365	-0.0000466	0.0006738	0.0035	4.82		45523.18	45523.18	4.04		Si
SLV 11	11.86	-5432.67	-6695	-0.0000218	0.0006738	0.0035	4.82		28905.16	28905.16	5.32		Si
SLV 8	8.34	-9712.43	-17408	-0.0000486	0.0006738	0.0035	4.82		51904.79	51904.79	5.34		Si
SLV 8	11.86	-5124	-8910	-0.0000248	0.0006738	0.0035	4.82		33812.99	33812.99	6.6		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 47	8.34	-1286.65	-23236	-13643	-633	4.82	4.82	-17691	10692	8246	115546	27715	24582	52297	No	82.56	Si
SLU 47	11.86	-399.29	-12078	-7091	-815	4.82	4.82	-9195	9559	7372	115546	27715	24582	52297	No	64.17	Si
SLU 72	8.34	-1193.61	-26395	-15498	-566	4.82	4.82	-20096	10833	8355	115546	27715	24582	52297	No	92.33	Si
SLU 72	11.86	-48.54	-13959	-8196	-675	4.82	4.82	-10628	9750	7519	115546	27715	24582	52297	No	77.46	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 9	8.34	-887.07	-19399	-11390	-612	4.82	4.82	-14769	10303	7945	115546	27715	24582	52297	No	85.51	Si
SLU 9	11.86	31.31	-10399	-6106	-720	4.82	4.82	-7917	9389	7241	115546	27715	24582	52297	No	72.64	Si
SLU 51	8.34	-1156.86	-23965	-14071	-779	4.82	4.82	-18246	10766	8303	115546	27715	24582	52297	No	67.17	Si
SLU 51	11.86	-117.45	-12719	-7468	-887	4.82	4.82	-9684	9625	7422	115546	27715	24582	52297	No	58.94	Si
SLU 50	8.34	-1068.85	-23989	-14085	-775	4.82	4.82	-18264	10769	8305	115546	27715	24582	52297	No	67.45	Si
SLU 50	11.86	-68.04	-12734	-7477	-776	4.82	4.82	-9695	9626	7424	115546	27715	24582	52297	No	67.4	Si
SLU 5	8.34	-1016.86	-18670	-10962	-466	4.82	4.82	-14215	10229	7888	115546	27715	24582	52297	No	112.11	Si
SLU 5	11.86	-250.54	-9757	-5729	-648	4.82	4.82	-7429	9324	7191	115546	27715	24582	52297	No	80.75	Si
SLU 49	8.34	-1199.14	-24349	-14297	-679	4.82	4.82	-18538	10805	8333	115546	27715	24582	52297	No	76.97	Si
SLU 49	11.86	-230.6	-13035	-7654	-788	4.82	4.82	-9925	9657	7447	115546	27715	24582	52297	No	66.33	Si
SLU 46	8.34	-1270.25	-23637	-13879	-532	4.82	4.82	-17996	10733	8277	115546	27715	24582	52297	No	98.26	Si
SLU 46	11.86	-479.51	-12404	-7283	-642	4.82	4.82	-9444	9593	7398	115546	27715	24582	52297	No	81.49	Si
SLU 48	8.34	-1111.13	-24373	-14311	-676	4.82	4.82	-18557	10808	8335	115546	27715	24582	52297	No	77.33	Si
SLU 48	11.86	-181.2	-13051	-7663	-677	4.82	4.82	-9936	9658	7448	115546	27715	24582	52297	No	77.25	Si
SLU 44	8.34	-1357.77	-22524	-13225	-486	4.82	4.82	-17149	10620	8190	115546	27715	24582	52297	No	107.56	Si
SLU 44	11.86	-648.21	-11446	-6721	-668	4.82	4.82	-8714	9495	7323	115546	27715	24582	52297	No	78.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	8.34	5827.86	-25621	-15043	6238	4.82	4.82	-19507	16250	12532	115546	41573	24582	66155		10.61	Si
SLV 1	11.86	2595.57	-14428	-8471	7727	4.82	4.82	-10984	14697	11334	115546	41573	24582	66155		8.56	Si
SLV 5	8.34	9916.86	-24251	-14239	4502	4.82	4.82	-18464	16193	12488	115546	41573	24582	66155		14.69	Si
SLV 5	11.86	5033.46	-12921	-7587	9333	4.82	4.82	-9837	14467	11157	115546	41573	24582	66155		7.09	Si
SLV 15	8.34	-6897.31	-13061	-7669	-5833	4.82	4.82	-9944	14489	11174	115546	41573	24582	66155		11.34	Si
SLV 15	11.86	-2760.24	-5290	-3106	-7323	4.82	4.82	-4028	13306	10261	115546	41573	24582	66155		9.03	Si
SLV 6	8.34	9386.81	-24132	-14169	4089	4.82	4.82	-18373	16175	12474	115546	41573	24582	66155		16.18	Si
SLV 6	11.86	4611.59	-12739	-7480	8919	4.82	4.82	-9699	14440	11136	115546	41573	24582	66155		7.42	Si
SLV 8	8.34	-9712.43	-17408	-10221	-1634	4.82	4.82	-13254	15151	11684	115546	41573	24582	66155		40.47	Si
SLV 8	11.86	-5124	-8910	-5231	-6441	4.82	4.82	-6783	13857	10686	115546	41573	24582	66155		10.27	Si
SLV 11	8.34	-11281	-14365	-8434	-4327	4.82	4.82	-10936	14687	11327	115546	41573	24582	66155		15.29	Si
SLV 11	11.86	-5432.67	-6695	-3931	-9160	4.82	4.7957	-5097	13519	10374	115546	41573	24582	66155		7.22	Si
SLV 2	8.34	5003.13	-25435	-14935	5595	4.82	4.82	-19365	16250	12532	115546	41573	24582	66155		11.82	Si
SLV 2	11.86	1939.16	-14144	-8305	7083	4.82	4.82	-10768	14654	11301	115546	41573	24582	66155		9.34	Si
SLV 12	8.34	-11811.05	-14245	-8364	-4741	4.82	4.7426	-10846	14669	11131	115546	41573	24582	66155		13.95	Si
SLV 12	11.86	-5854.54	-6513	-3824	-9574	4.82	4.5332	-5284	13557	9833	115546	41573	24582	66155		6.91	Si
SLV 9	8.34	7818.24	-21089	-12382	1396	4.82	4.82	-16056	15711	12116	115546	41573	24582	66155		47.38	Si
SLV 9	11.86	4302.92	-10524	-6179	6201	4.82	4.82	-8013	14103	10876	115546	41573	24582	66155		10.67	Si
SLV 16	8.34	-7722.05	-12876	-7560	-6476	4.82	4.82	-9803	14461	11152	115546	41573	24582	66155		10.22	Si
SLV 16	11.86	-3416.65	-5006	-2939	-7968	4.82	4.82	-3812	13262	10228	115546	41573	24582	66155		8.3	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-7013	0.46	353.89	533.22	1027	780.11	2.2	Si
SLV 15	-7304	0.46	353.89	554.12	1055.05	804.59	2.27	Si
SLV 14	-8635	0.46	353.89	648.62	1182.91	915.77	2.59	Si
SLV 13	-8926	0.46	353.89	668.99	1210.84	939.91	2.66	Si
SLV 12	-9832	0.46	353.89	731.87	1297.29	1014.58	2.87	Si
SLV 11	-10019	0.46	353.89	744.72	1315.04	1029.88	2.91	Si
SLV 8	-13826	0.46	353.89	997.91	1675.24	1336.58	3.78	Si
SLV 7	-14013	0.46	353.89	1009.91	1692.76	1351.34	3.82	Si
SLV 10	-15239	0.46	353.89	1087.7	1807.76	1447.73	4.09	Si
SLV 9	-15426	0.46	353.89	1099.41	1825.29	1462.35	4.13	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-12921	-24251	-213	1.775	1701.4	0.937	27.51549	18.90005	Si
SLV 6	-12739	-24132	-213	1.796	1683	0.937	27.85859	18.90005	Si
SLV 9	-10524	-21089	229	2.097	1459.3	0.929	32.80929	18.90005	Si
SLV 10	-10342	-20969	229	2.127	1441	0.928	33.29795	18.90005	Si
SLV 1	-14428	-25621	-735	1.587	1854	0.942	24.49648	13.38704	Si
SLV 2	-14144	-25435	-735	1.614	1825.2	0.941	24.92993	13.38704	Si
SLV 7	-9092	-17527	-228	2.355	1315.1	0.923	37.08072	18.90005	Si
SLV 3	-13279	-23604	-739	1.701	1737.7	0.938	26.34785	13.38704	Si
SLV 8	-8910	-17408	-228	2.392	1296.8	0.922	37.7043	18.90005	Si
SLV 4	-12995	-23418	-739	1.732	1709	0.938	26.85013	13.38704	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	44.971	SLU 44	Si
V_SLU	58.938	SLU 51	Si
PF_SLV	3.833	SLV 12	Si
V_SLV	6.91	SLV 12	Si
PFFP_SLV	2.204	SLV 16	Si
R_SLV	1.456	SLV 5	Si

Maschio 119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.314	-17.363	-3.314	L6	L7	1.03	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 9	9.24	215.24	-6529	-0.000042	0.0003743	0.0035	1.03	2614.85	2859.09	2859.09	13.28	No	Si
SLU 9	11.04	354.63	-4875	-0.000037	0.0003743	0.0035	1.03	2093.94	2206.08	2206.08	6.22	No	Si
SLU 50	9.24	262.26	-7995	-0.0000521	0.0003743	0.0035	1.03	2996.34	3306.15	3306.15	12.61	No	Si
SLU 50	11.04	431.65	-5903	-0.0000454	0.0003743	0.0035	1.03	2428.97	2623.55	2623.55	6.08	No	Si
SLU 48	9.24	277.94	-8193	-0.0000539	0.0003743	0.0035	1.03	3041.99	3368.27	3368.27	12.12	No	Si
SLU 48	11.04	430.7	-6068	-0.0000463	0.0003743	0.0035	1.03	2479.22	2691.71	2691.71	6.25	No	Si
SLU 44	9.24	257.59	-7379	-0.0000483	0.0003743	0.0035	1.03	2845.22	3115.44	3115.44	12.09	No	Si
SLU 44	11.04	381.7	-5330	-0.0000404	0.0003743	0.0035	1.03	2246.83	2388.9	2388.9	6.26	No	Si
SLU 8	9.24	214.66	-6516	-0.0000419	0.0003743	0.0035	1.03	2611.13	2855.03	2855.03	13.3	No	Si
SLU 8	11.04	352.26	-4864	-0.0000368	0.0003743	0.0035	1.03	2089.97	2201.49	2201.49	6.25	No	Si
SLU 49	9.24	278.51	-8206	-0.000054	0.0003743	0.0035	1.03	3044.95	3372.38	3372.38	12.11	No	Si
SLU 49	11.04	433.08	-6080	-0.0000464	0.0003743	0.0035	1.03	2482.7	2696.48	2696.48	6.23	No	Si
SLU 72	9.24	306.93	-8839	-0.0000587	0.0003743	0.0035	1.03	3181.69	3573.68	3573.68	11.64	No	Si
SLU 72	11.04	463.52	-6621	-0.0000506	0.0003743	0.0035	1.03	2640.98	2886.46	2886.46	6.23	No	Si
SLU 51	9.24	262.83	-8008	-0.0000522	0.0003743	0.0035	1.03	2999.39	3310.23	3310.23	12.59	No	Si
SLU 51	11.04	434.03	-5915	-0.0000455	0.0003743	0.0035	1.03	2432.51	2628.31	2628.31	6.06	No	Si
SLU 71	9.24	306.35	-8826	-0.0000586	0.0003743	0.0035	1.03	3179.02	3569.49	3569.49	11.65	No	Si
SLU 71	11.04	461.15	-6610	-0.0000505	0.0003743	0.0035	1.03	2637.72	2883.02	2883.02	6.25	No	Si
SLU 47	9.24	260.4	-7698	-0.0000503	0.0003743	0.0035	1.03	2925.1	3213.59	3213.59	12.34	No	Si
SLU 47	11.04	408.66	-5626	-0.000043	0.0003743	0.0035	1.03	2342.39	2509.53	2509.53	6.14	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	9.24	1674.8	-6215	-0.0000947	0.0005615	0.0035	1.03		2852.65	2852.65	1.7		Si
SLV 6	11.04	-945.58	-2487	-0.0000672	0.0005615	0.0035	0.824		1459.25	1459.25	1.54		Si
SLV 13	9.24	-2935.72	-1708	-0.0086783	0.0005615	0.0035	0.824		1089.77	1089.77	0.37		No
SLV 13	11.04	2589.79	-4728	-0.0093327	0.0005615	0.0035	0.824		2282.49	2282.49	0.88		No
SLV 5	9.24	1541.61	-6056	-0.0000864	0.0005615	0.0035	1.03		2791.01	2791.01	1.81		Si
SLV 5	11.04	-854.72	-2511	-0.0000519	0.0005615	0.0035	0.824		1470.89	1470.89	1.72		Si
SLV 3	9.24	3265.04	-10705	-0.0002094	0.0005615	0.0035	1.03		4516.07	4516.07	1.38		Si
SLV 3	11.04	-1887.25	-4523	-0.0001821	0.0005615	0.0035	0.824		2381.94	2381.94	1.26		Si
SLV 16	9.24	-2954.06	-2804	-0.0069686	0.0005615	0.0035	0.824		1606.87	1606.87	0.54		No
SLV 16	11.04	2728.69	-5833	-0.0018584	0.0005615	0.0035	0.824		2704.65	2704.65	0.99		No
SLV 2	9.24	3697.86	-10102	-0.0003024	0.0005615	0.0035	1.03		4330.76	4330.76	1.17		Si
SLV 2	11.04	-2308.91	-3341	-0.0027665	0.0005615	0.0035	0.824		1854.03	1854.03	0.8		No
SLV 15	9.24	-3161.3	-2557	-0.0082664	0.0005615	0.0035	0.824		1492.45	1492.45	0.47		No
SLV 15	11.04	2870.07	-5871	-0.0063144	0.0005615	0.0035	0.824		2719.41	2719.41	0.95		No
SLV 14	9.24	-2728.48	-1954	-0.0073664	0.0005615	0.0035	0.824		1207.97	1207.97	0.44		No
SLV 14	11.04	2448.41	-4690	-0.0072442	0.0005615	0.0035	0.824		2268.07	2268.07	0.93		No
SLV 1	9.24	3490.62	-9855	-0.000264	0.0005615	0.0035	1.03		4255.49	4255.49	1.22		Si
SLV 1	11.04	-2167.53	-3380	-0.0020322	0.0005615	0.0035	0.824		1871.45	1871.45	0.86		No
SLV 4	9.24	3472.28	-10952	-0.0002317	0.0005615	0.0035	1.03		4592.45	4592.45	1.32		Si
SLV 4	11.04	-2028.63	-4484	-0.0002887	0.0005615	0.0035	0.824		2365.2	2365.2	1.17		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	9.24	489.73	-8110	-6753	537	1.03	1.03	-23416	10067	2903	40441	8636	2627	11262	No	20.99	Si
SLU 42	11.04	226.19	-5949	-4954	370	1.03	1.03	-17176	9235	2663	40441	8636	2627	11262	No	30.41	Si
SLU 40	9.24	486.92	-7791	-6488	543	1.03	1.03	-22495	9944	2868	40441	8636	2627	11262	No	20.73	Si
SLU 40	11.04	199.24	-5653	-4707	382	1.03	1.03	-16322	9121	2630	40441	8636	2627	11262	No	29.52	Si
SLU 82	9.24	534.51	-9270	-7719	579	1.03	1.03	-26765	10513	3032	40441	8636	2627	11262	No	19.44	Si
SLU 82	11.04	278.63	-6692	-5573	375	1.03	1.03	-19323	9521	2746	40441	8636	2627	11262	No	30.06	Si
SLU 61	9.24	490.42	-8439	-7028	541	1.03	1.03	-24368	10193	2940	40441	8636	2627	11262	No	20.83	Si
SLU 61	11.04	249.13	-5986	-4985	331	1.03	1.03	-17283	9249	2667	40441	8636	2627	11262	No	34.06	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	9.24	537.32	-9589	-7985	573	1.03	1.03	-27686	10636	3067	40441	8636	2627	11262	No	19.67	Si
SLU 84	11.04	305.58	-6988	-5819	363	1.03	1.03	-20178	9635	2779	40441	8636	2627	11262	No	30.98	Si
SLU 83	9.24	536.75	-9576	-7974	572	1.03	1.03	-27648	10631	3066	40441	8636	2627	11262	No	19.68	Si
SLU 83	11.04	303.2	-6977	-5810	367	1.03	1.03	-20144	9630	2777	40441	8636	2627	11262	No	30.68	Si
SLU 81	9.24	533.94	-9257	-7708	579	1.03	1.03	-26728	10508	3031	40441	8636	2627	11262	No	19.46	Si
SLU 81	11.04	276.25	-6681	-5563	378	1.03	1.03	-19290	9516	2745	40441	8636	2627	11262	No	29.78	Si
SLU 41	9.24	489.16	-8097	-6742	536	1.03	1.03	-23378	10062	2902	40441	8636	2627	11262	No	21	Si
SLU 41	11.04	223.81	-5937	-4944	374	1.03	1.03	-17143	9230	2662	40441	8636	2627	11262	No	30.12	Si
SLU 60	9.24	489.84	-8426	-7017	540	1.03	1.03	-24330	10188	2938	40441	8636	2627	11262	No	20.84	Si
SLU 60	11.04	246.75	-5974	-4975	334	1.03	1.03	-17250	9244	2666	40441	8636	2627	11262	No	33.69	Si
SLU 39	9.24	486.35	-7778	-6477	543	1.03	1.03	-22458	9939	2866	40441	8636	2627	11262	No	20.74	Si
SLU 39	11.04	196.86	-5641	-4698	385	1.03	1.03	-16289	9116	2629	40441	8636	2627	11262	No	29.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	9.24	-3161.3	-2557	-2130	-5632	0.824	0	0	0	0	40441	10363	2101	12464		2.21	Si
SLV 15	11.04	2870.07	-5871	-4889	-2812	0.824	0.0785	0	0	0	40441	10363	2101	12464		4.43	Si
SLV 13	9.24	-2935.72	-1708	-1422	-5177	0.824	0	0	0	0	40441	10363	2101	12464		2.41	Si
SLV 13	11.04	2589.79	-4728	-3937	-2339	0.824	0	0	0	0	40441	10363	2101	12464		5.33	Si
SLV 16	9.24	-2954.06	-2804	-2335	-5299	0.824	0	0	0	0	40441	10363	2101	12464		2.35	Si
SLV 16	11.04	2728.69	-5833	-4857	-2650	0.824	0.1416	0	0	0	40441	10363	2101	12464		4.7	Si
SLV 3	9.24	3265.04	-10705	-8914	5330	1.03	0.63	-30909	16250	2867	40441	12954	2627	15580		2.92	Si
SLV 3	11.04	-1887.25	-4523	-3766	2382	0.824	0.2931	0	0	0	40441	10363	2101	12464		5.23	Si
SLV 1	9.24	3490.62	-9855	-8207	5785	1.03	0.4824	-28455	16108	2176	40441	12954	2627	15580		2.69	Si
SLV 1	11.04	-2167.53	-3380	-2814	2855	0.824	0	0	0	0	40441	10363	2101	12464		4.37	Si
SLV 2	9.24	3697.86	-10102	-8412	6118	1.03	0.4468	-29168	16250	2033	40441	12954	2627	15580		2.55	Si
SLV 2	11.04	-2308.91	-3341	-2782	3017	0.824	0	0	0	0	40441	10363	2101	12464		4.13	Si
SLV 6	9.24	1674.8	-6215	-5175	2753	1.03	0.7365	-17944	14005	2888	40441	12954	2627	15580		5.66	Si
SLV 6	11.04	-945.58	-2487	-2071	1722	0.824	0.4043	0	0	0	40441	10363	2101	12464		7.24	Si
SLV 4	9.24	3472.28	-10952	-9120	5662	1.03	0.5939	-31622	16250	2702	40441	12954	2627	15580		2.75	Si
SLV 4	11.04	-2028.63	-4484	-3734	2544	0.824	0.1879	0	0	0	40441	10363	2101	12464		4.9	Si
SLD 2	9.24	1735.5	-7937	-6609	2756	1.03	0.889	-22916	15000	3734	40441	12954	2627	15580		5.65	Si
SLD 2	11.04	-828.49	-4059	-3380	1352	1.03	0.9326	-11720	12761	3332	40441	12954	2627	15580		11.53	Si
SLV 14	9.24	-2728.48	-1954	-1627	-4844	0.824	0	0	0	0	40441	10363	2101	12464		2.57	Si
SLV 14	11.04	2448.41	-4690	-3905	-2176	0.824	0	0	0	0	40441	10363	2101	12464		5.73	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.46	4260	-1229	125.07	167.21	1.34	Si
SLV 14	179667	0.46	5116	-1475	125.07	199.64	1.6	Si
SLV 15	179667	0.46	7861	-2267	125.07	301.07	2.41	Si
SLV 16	179667	0.46	8717	-2514	125.07	331.87	2.65	Si
SLV 9	179667	0.46	10034	-2894	125.07	378.5	3.03	Si
SLV 10	179667	0.46	10584	-3052	125.07	397.71	3.18	Si
SLV 5	179667	0.46	18453	-5322	125.07	655.03	5.24	Si
SLV 6	179667	0.46	19003	-5480	125.07	671.78	5.37	Si
SLV 11	179667	0.46	22038	-6356	125.07	761.41	6.09	Si
SLV 12	179667	0.46	22588	-6514	125.07	777.12	6.21	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-4528	-6837	-84	1.094	605.5	0.935	17.01262	14.55598	Si
SLV 8	-4516	-6749	-84	1.097	604.3	0.935	17.05197	14.55598	Si
SLV 11	-4397	-8059	-54	1.126	592.3	0.934	17.52683	14.55598	Si
SLV 12	-4385	-7970	-54	1.128	591.1	0.933	17.56844	14.55598	Si
SLV 5	-3995	-3190	48	1.216	551.8	0.93	19.00882	14.55598	Si
SLV 6	-3983	-3102	48	1.219	550.5	0.929	19.05782	14.55598	Si
SLV 9	-3865	-4412	78	1.242	538.6	0.928	19.4423	14.55598	Si
SLV 10	-3852	-4324	78	1.245	537.3	0.928	19.49386	14.55598	Si
SLV 3	-4498	-4160	-73	1.102	602.5	0.934	17.14203	7.56668	Si
SLV 4	-4478	-4023	-73	1.106	600.5	0.934	17.20417	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.056	SLU 51	Si
V_SLU	19.444	SLU 82	Si
PF_SLV	0.371	SLV 13	No
V_SLV	2.213	SLV 15	Si
PFFP_SLV	1.337	SLV 13	Si
R_SLV	1.169	SLV 7	Si

Maschio 120

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L6	L7	3.221	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	8.34	1740.74	-14683	-0.0000448	0.0004492	0.0035	3.2207	18130.79	21963.75	21963.75	12.62	No	Si
SLU 39	10.44	183.95	-11405	-0.0000289	0.0004492	0.0035	3.2207	15039.42	17752.55	17752.55	96.51	No	Si
SLU 77	8.34	2082.76	-18218	-0.0000558	0.0004492	0.0035	3.2207	20848.91	26031.28	26031.28	12.5	No	Si
SLU 77	10.44	300.22	-14536	-0.0000375	0.0004492	0.0035	3.2207	18003.86	21794.53	21794.53	72.6	No	Si
SLU 79	8.34	2061.85	-18026	-0.0000552	0.0004492	0.0035	3.2207	20717.62	25810.22	25810.22	12.52	No	Si
SLU 79	10.44	331.2	-14367	-0.0000372	0.0004492	0.0035	3.2207	17857.09	21600.68	21600.68	65.22	No	Si
SLU 81	8.34	2033.8	-17490	-0.0000536	0.0004492	0.0035	3.2207	20341.1	25193.11	25193.11	12.39	No	Si
SLU 81	10.44	234.1	-13556	-0.0000346	0.0004492	0.0035	3.2207	17130.37	20617.87	20617.87	88.07	No	Si
SLU 82	8.34	1988.99	-17461	-0.0000533	0.0004492	0.0035	3.2207	20320.94	25160.74	25160.74	12.65	No	Si
SLU 82	10.44	196.7	-13532	-0.0000344	0.0004492	0.0035	3.2207	17107.74	20585.34	20585.34	104.66	No	Si
SLU 62	8.34	1890.32	-16423	-0.0000501	0.0004492	0.0035	3.2207	19548.49	23965.72	23965.72	12.68	No	Si
SLU 62	10.44	257.47	-12827	-0.0000329	0.0004492	0.0035	3.2207	16447.57	19655.44	19655.44	76.34	No	Si
SLU 84	8.34	2051.41	-18010	-0.0000551	0.0004492	0.0035	3.2207	20706.4	25791.49	25791.49	12.57	No	Si
SLU 84	10.44	241.03	-14142	-0.0000362	0.0004492	0.0035	3.2207	17658.26	21341.06	21341.06	88.54	No	Si
SLU 74	8.34	2020.34	-17670	-0.000054	0.0004492	0.0035	3.2207	20469.29	25400.53	25400.53	12.57	No	Si
SLU 74	10.44	255.89	-13926	-0.0000357	0.0004492	0.0035	3.2207	17465.63	21092.73	21092.73	82.43	No	Si
SLU 41	8.34	1803.16	-15231	-0.0000465	0.0004492	0.0035	3.2207	18594.16	22594.49	22594.49	12.53	No	Si
SLU 41	10.44	228.28	-12015	-0.0000307	0.0004492	0.0035	3.2207	15656.29	18572.73	18572.73	81.36	No	Si
SLU 83	8.34	2096.22	-18038	-0.0000554	0.0004492	0.0035	3.2207	20725.77	25823.86	25823.86	12.32	No	Si
SLU 83	10.44	278.43	-14166	-0.0000364	0.0004492	0.0035	3.2207	17680.12	21369.44	21369.44	76.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	8.34	-3630.65	-9372	-0.0000395	0.0006738	0.0035	3.2207		19824.92	19824.92	5.46		Si
SLV 8	10.44	-4050.29	-7362	-0.0000364	0.0006738	0.0035	3.2207		16955.38	16955.38	4.19		Si
SLV 5	8.34	6415.6	-15937	-0.0000695	0.0006738	0.0035	3.2207		24237.12	24237.12	3.78		Si
SLV 5	10.44	4161.23	-12551	-0.0000501	0.0006738	0.0035	3.2207		19651.24	19651.24	4.72		Si
SLV 10	8.34	6108.46	-14563	-0.0000645	0.0006738	0.0035	3.2207		22397.38	22397.38	3.67		Si
SLV 10	10.44	4215.95	-11249	-0.000047	0.0006738	0.0035	3.2207		17837.69	17837.69	4.23		Si
SLV 6	8.34	6222.31	-15801	-0.0000682	0.0006738	0.0035	3.2207		24056.95	24056.95	3.87		Si
SLV 6	10.44	3943.92	-12447	-0.0000488	0.0006738	0.0035	3.2207		19508.22	19508.22	4.95		Si
SLV 9	8.34	6301.75	-14699	-0.0000657	0.0006738	0.0035	3.2207		22580.77	22580.77	3.58		Si
SLV 9	10.44	4433.26	-11353	-0.0000483	0.0006738	0.0035	3.2207		17983.19	17983.19	4.06		Si
SLD 10	8.34	3445.16	-13162	-0.0000483	0.0006738	0.0035	3.2207		20490.58	20490.58	5.95		Si
SLD 10	10.44	1965.21	-10201	-0.0000339	0.0006738	0.0035	3.2207		16359.32	16359.32	8.32		Si
SLV 12	8.34	-3744.49	-8135	-0.0000369	0.0006738	0.0035	3.2207		18058.1	18058.1	4.82		Si
SLV 12	10.44	-3778.26	-6164	-0.0000323	0.0006738	0.0035	3.2207		15223.62	15223.62	4.03		Si
SLD 9	8.34	3529.56	-13222	-0.0000488	0.0006738	0.0035	3.2207		20572.07	20572.07	5.83		Si
SLD 9	10.44	2060.09	-10247	-0.0000345	0.0006738	0.0035	3.2207		16423.92	16423.92	7.97		Si
SLV 7	8.34	-3437.36	-9508	-0.000039	0.0006738	0.0035	3.2207		20018.91	20018.91	5.82		Si
SLV 7	10.44	-3832.98	-7466	-0.0000357	0.0006738	0.0035	3.2207		17104.05	17104.05	4.46		Si
SLV 11	8.34	-3551.2	-8271	-0.0000364	0.0006738	0.0035	3.2207		18252.1	18252.1	5.14		Si
SLV 11	10.44	-3560.95	-6268	-0.0000315	0.0006738	0.0035	3.2207		15376.89	15376.89	4.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	8.34	2051.41	-18010	-10574	1687	3.2207	3.2207	-20521	10833	5583	115546	18519	16426	34945	No	20.71	Si
SLU 84	10.44	241.03	-14142	-8303	1674	3.2207	3.2207	-16113	10482	5401	115546	18519	16426	34945	No	20.87	Si
SLU 81	8.34	2033.8	-17490	-10269	1732	3.2207	3.2207	-19928	10833	5583	115546	18519	16426	34945	No	20.18	Si
SLU 81	10.44	234.1	-13556	-7960	1719	3.2207	3.2207	-15446	10393	5356	115546	18519	16426	34945	No	20.32	Si
SLU 40	8.34	1695.92	-14655	-8605	1565	3.2207	3.2207	-16698	10560	5442	115546	18519	16426	34945	No	22.33	Si
SLU 40	10.44	146.55	-11380	-6682	1554	3.2207	3.2207	-12967	10062	5185	115546	18519	16426	34945	No	22.48	Si
SLU 83	8.34	2096.22	-18038	-10591	1693	3.2207	3.2207	-20553	10833	5583	115546	18519	16426	34945	No	20.64	Si
SLU 83	10.44	278.43	-14166	-8318	1680	3.2207	3.2207	-16141	10486	5403	115546	18519	16426	34945	No	20.8	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	8.34	1862.32	-16883	-9913	1555	3.2207	3.2207	-19236	10833	5583	115546	18519	16426	34945	No	22.47	Si
SLU 73	10.44	180.2	-13106	-7695	1543	3.2207	3.2207	-14934	10324	5320	115546	18519	16426	34945	No	22.64	Si
SLU 75	8.34	1975.53	-17642	-10358	1564	3.2207	3.2207	-20101	10833	5583	115546	18519	16426	34945	No	22.34	Si
SLU 75	10.44	218.48	-13901	-8162	1551	3.2207	3.2207	-15839	10445	5383	115546	18519	16426	34945	No	22.53	Si
SLU 74	8.34	2020.34	-17670	-10375	1570	3.2207	3.2207	-20133	10833	5583	115546	18519	16426	34945	No	22.26	Si
SLU 74	10.44	255.89	-13926	-8177	1557	3.2207	3.2207	-15867	10449	5384	115546	18519	16426	34945	No	22.44	Si
SLU 82	8.34	1988.99	-17461	-10253	1725	3.2207	3.2207	-19896	10833	5583	115546	18519	16426	34945	No	20.25	Si
SLU 82	10.44	196.7	-13532	-7945	1713	3.2207	3.2207	-15418	10389	5354	115546	18519	16426	34945	No	20.4	Si
SLU 41	8.34	1803.16	-15231	-8943	1533	3.2207	3.2207	-17355	10647	5487	115546	18519	16426	34945	No	22.8	Si
SLU 41	10.44	228.28	-12015	-7055	1522	3.2207	3.2207	-13690	10159	5235	115546	18519	16426	34945	No	22.96	Si
SLU 39	8.34	1740.74	-14683	-8621	1571	3.2207	3.2207	-16730	10564	5444	115546	18519	16426	34945	No	22.24	Si
SLU 39	10.44	183.95	-11405	-6697	1561	3.2207	3.2207	-12995	10066	5187	115546	18519	16426	34945	No	22.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	8.34	6108.46	-14563	-8551	687	3.2207	3.2207	-16594	15819	8152	115546	27778	16426	44204		64.33	Si
SLV 10	10.44	4215.95	-11249	-6605	2187	3.2207	3.2207	-12817	15063	7762	115546	27778	16426	44204		20.21	Si
SLV 5	8.34	6415.6	-15937	-9358	889	3.2207	3.2207	-18159	16132	8313	115546	27778	16426	44204		49.73	Si
SLV 5	10.44	4161.23	-12551	-7369	2284	3.2207	3.2207	-14301	15360	7915	115546	27778	16426	44204		19.35	Si
SLD 10	8.34	3445.16	-13162	-7728	849	3.2207	3.2207	-14997	15499	7987	115546	27778	16426	44204		52.07	Si
SLD 10	10.44	1965.21	-10201	-5990	1501	3.2207	3.2207	-11623	14825	7639	115546	27778	16426	44204		29.44	Si
SLD 9	8.34	3529.56	-13222	-7763	855	3.2207	3.2207	-15065	15513	7994	115546	27778	16426	44204		51.73	Si
SLD 9	10.44	2060.09	-10247	-6016	1507	3.2207	3.2207	-11675	14835	7645	115546	27778	16426	44204		29.33	Si
SLV 1	8.34	3153.61	-15169	-8907	1239	3.2207	3.2207	-17284	15957	8223	115546	27778	16426	44204		35.69	Si
SLV 1	10.44	1106.29	-12198	-7162	1492	3.2207	3.2207	-13898	15280	7874	115546	27778	16426	44204		29.63	Si
SLV 6	8.34	6222.31	-15801	-9278	876	3.2207	3.2207	-18004	16101	8297	115546	27778	16426	44204		50.46	Si
SLV 6	10.44	3943.92	-12447	-7308	2271	3.2207	3.2207	-14182	15336	7903	115546	27778	16426	44204		19.46	Si
SLV 9	8.34	6301.75	-14699	-8631	700	3.2207	3.2207	-16749	15850	8168	115546	27778	16426	44204		63.15	Si
SLV 9	10.44	4433.26	-11353	-6666	2200	3.2207	3.2207	-12936	15087	7775	115546	27778	16426	44204		20.09	Si
SLD 6	8.34	3491.77	-13688	-8037	928	3.2207	3.2207	-15596	15619	8049	115546	27778	16426	44204		47.61	Si
SLD 6	10.44	1848.22	-10711	-6289	1538	3.2207	3.2207	-12205	14941	7699	115546	27778	16426	44204		28.75	Si
SLD 5	8.34	3576.16	-13747	-8072	934	3.2207	3.2207	-15664	15633	8056	115546	27778	16426	44204		47.32	Si
SLD 5	10.44	1943.1	-10757	-6316	1543	3.2207	3.2207	-12257	14951	7705	115546	27778	16426	44204		28.64	Si
SLV 2	8.34	2852.86	-14958	-8782	1219	3.2207	3.2207	-17043	15909	8198	115546	27778	16426	44204		36.28	Si
SLV 2	10.44	768.17	-12036	-7067	1472	3.2207	3.2207	-13714	15243	7855	115546	27778	16426	44204		30.03	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-6334	0.46	236.47	472.77	843.74	658.26	2.78	Si
SLV 11	-6451	0.46	236.47	480.83	854.83	667.83	2.82	Si
SLV 16	-7040	0.46	236.47	521.25	910.9	716.08	3.03	Si
SLV 15	-7222	0.46	236.47	533.57	928.16	730.86	3.09	Si
SLV 8	-7447	0.46	236.47	548.77	949.55	749.16	3.17	Si
SLV 7	-7563	0.46	236.47	556.61	960.65	758.63	3.21	Si
SLV 14	-8786	0.46	236.47	637.47	1076.62	857.04	3.62	Si
SLV 13	-8967	0.46	236.47	649.25	1093.7	871.47	3.69	Si
SLV 4	-10748	0.46	236.47	761.98	1261.08	1011.53	4.28	Si
SLV 3	-10929	0.46	236.47	773.17	1278.13	1025.65	4.34	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-8856	-15937	-217	1.73	1159.4	0.938	26.79885	18.90005	Si
SLV 6	-8764	-15801	-217	1.745	1150.1	0.938	27.04602	18.90005	Si
SLV 9	-8006	-14699	44	1.899	1073.4	0.934	29.53884	18.90005	Si
SLV 10	-7914	-14563	44	1.917	1064.1	0.934	29.83645	18.90005	Si
SLV 1	-8452	-15169	-461	1.775	1118.5	0.936	27.53959	13.38704	Si
SLV 2	-8308	-14958	-461	1.8	1104	0.936	27.95352	13.38704	Si
SLV 3	-7233	-13240	-409	2.021	995.4	0.93	31.5822	13.38704	Si
SLV 7	-4794	-9508	-43	2.837	750.4	0.913	45.13574	18.90005	Si
SLV 4	-7090	-13029	-409	2.054	980.9	0.929	32.12555	13.38704	Si
SLV 8	-4701	-9372	-43	2.878	741.2	0.913	45.82692	18.90005	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.319	SLU 83	Si
V_SLU	20.181	SLU 81	Si
PF_SLV	3.583	SLV 9	Si
V_SLV	19.354	SLV 5	Si
PFFP_SLV	2.784	SLV 12	Si
R_SLV	1.418	SLV 5	Si

Maschio 123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L6	L7	1.655	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	8.34	-52.7	-11485	-0.0000392	0.0003743	0.0035	1.655	7190.54	8529.3	8529.3	161.85	No	Si
SLU 81	10.44	2156.09	-10905	-0.0000639	0.0003743	0.0035	1.655	6938.42	7592.41	7592.41	3.52	No	Si
SLU 39	8.34	-36.15	-9508	-0.000032	0.0003743	0.0035	1.655	6282.56	7401.81	7401.81	204.78	No	Si
SLU 39	10.44	1900.89	-9146	-0.000054	0.0003743	0.0035	1.655	6101.14	6532.34	6532.34	3.44	No	Si
SLU 40	8.34	-35.91	-9531	-0.0000321	0.0003743	0.0035	1.655	6293.88	7415.74	7415.74	206.53	No	Si
SLU 40	10.44	1899.39	-9166	-0.000054	0.0003743	0.0035	1.655	6111.14	6545.31	6545.31	3.45	No	Si
SLU 18	8.34	41.35	-8646	-0.0000291	0.0003743	0.0035	1.655	5843.76	6206.22	6206.22	150.09	No	Si
SLU 18	10.44	1640.48	-7978	-0.0000465	0.0003743	0.0035	1.655	5485.73	5778.41	5778.41	3.52	No	Si
SLU 41	8.34	-48.63	-9852	-0.0000334	0.0003743	0.0035	1.655	6450.32	7608.17	7608.17	156.46	No	Si
SLU 41	10.44	1971	-9565	-0.0000564	0.0003743	0.0035	1.655	6310.35	6808.35	6808.35	3.45	No	Si
SLU 83	8.34	-65.18	-11829	-0.0000406	0.0003743	0.0035	1.655	7334.46	8712.18	8712.18	133.66	No	Si
SLU 83	10.44	2226.2	-11324	-0.0000664	0.0003743	0.0035	1.655	7121.77	7792.98	7792.98	3.5	No	Si
SLU 82	8.34	-52.46	-11508	-0.0000393	0.0003743	0.0035	1.655	7200.28	8541.44	8541.44	162.82	No	Si
SLU 82	10.44	2154.59	-10925	-0.0000639	0.0003743	0.0035	1.655	6947.2	7601.82	7601.82	3.53	No	Si
SLU 42	8.34	-48.39	-9875	-0.0000335	0.0003743	0.0035	1.655	6461.37	7621.76	7621.76	157.52	No	Si
SLU 42	10.44	1969.49	-9585	-0.0000565	0.0003743	0.0035	1.655	6320.07	6821.42	6821.42	3.46	No	Si
SLU 19	8.34	41.59	-8669	-0.0000292	0.0003743	0.0035	1.655	5855.78	6221.09	6221.09	149.59	No	Si
SLU 19	10.44	1638.97	-7998	-0.0000465	0.0003743	0.0035	1.655	5496.54	5790.96	5790.96	3.53	No	Si
SLU 84	8.34	-64.94	-11852	-0.0000407	0.0003743	0.0035	1.655	7343.91	8724.46	8724.46	134.35	No	Si
SLU 84	10.44	2224.7	-11344	-0.0000664	0.0003743	0.0035	1.655	7130.26	7802.5	7802.5	3.51	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	8.34	-4945.93	-5257	-0.0011233	0.0005615	0.0035	1.324		4762.46	4762.46	0.96		No
SLV 15	10.44	5933.48	-12531	-0.0001369	0.0005615	0.0035	1.655		8967.42	8967.42	1.51		Si
SLV 10	8.34	-1235.52	-3232	-0.0000257	0.0005615	0.0035	1.655		3247.93	3247.93	2.63		Si
SLV 10	10.44	2249.93	-5399	-0.0000474	0.0005615	0.0035	1.655		4363.47	4363.47	1.94		Si
SLV 2	8.34	4688.2	-10814	-0.0001034	0.0005615	0.0035	1.655		7880.64	7880.64	1.68		Si
SLV 2	10.44	-3291.21	-2847	-0.0009886	0.0005615	0.0035	1.324		2953.38	2953.38	0.9		No
SLV 1	8.34	4453.33	-10605	-0.0000975	0.0005615	0.0035	1.655		7749.94	7749.94	1.74		Si
SLV 1	10.44	-3015.74	-3085	-0.0005955	0.0005615	0.0035	1.324		3135.46	3135.46	1.04		Si
SLV 16	8.34	-4711.06	-5466	-0.0007115	0.0005615	0.0035	1.324		4914.48	4914.48	1.04		Si
SLV 16	10.44	5658.01	-12293	-0.0001286	0.0005615	0.0035	1.655		8815.65	8815.65	1.56		Si
SLV 9	8.34	-1386.47	-3098	-0.000029	0.0005615	0.0035	1.655		3145.35	3145.35	2.27		Si
SLV 9	10.44	2426.97	-5552	-0.0000514	0.0005615	0.0035	1.655		4475.36	4475.36	1.84		Si
SLV 13	8.34	-4820.56	-3017	-0.0028897	0.0005615	0.0035	1.324		3083.7	3083.7	0.64		No
SLV 13	10.44	5754.54	-10532	-0.000146	0.0005615	0.0035	1.655		7704.26	7704.26	1.34		Si
SLV 14	8.34	-4585.69	-3226	-0.0022922	0.0005615	0.0035	1.324		3243.4	3243.4	0.71		No
SLV 14	10.44	5479.07	-10295	-0.0001346	0.0005615	0.0035	1.655		7556.07	7556.07	1.38		Si
SLV 4	8.34	4562.83	-13053	-0.0001028	0.0005615	0.0035	1.655		9302.89	9302.89	2.04		Si
SLV 4	10.44	-3112.28	-4846	-0.0000968	0.0005615	0.0035	1.324		4464.79	4464.79	1.43		Si
SLV 3	8.34	4327.96	-12845	-0.0000982	0.0005615	0.0035	1.655		9168.66	9168.66	2.12		Si
SLV 3	10.44	-2836.81	-5083	-0.000069	0.0005615	0.0035	1.324		4636.68	4636.68	1.63		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	8.34	-253.52	-11326	-9431	-1414	1.655	1.655	-20352	9658	4476	40441	13876	4220	18097	No	12.8	Si
SLU 70	10.44	1829.57	-11204	-9330	-3087	1.655	1.655	-20133	9629	4462	40441	13876	4220	18097	No	5.86	Si
SLU 69	8.34	-253.76	-11303	-9412	-1416	1.655	1.655	-20311	9653	4473	40441	13876	4220	18097	No	12.78	Si
SLU 69	10.44	1831.07	-11184	-9313	-3087	1.655	1.655	-20097	9624	4460	40441	13876	4220	18097	No	5.86	Si
SLU 68	8.34	-249.88	-10796	-8990	-1345	1.655	1.655	-19399	9531	4417	40441	13876	4220	18097	No	13.45	Si
SLU 68	10.44	1731.51	-10579	-8809	-2920	1.655	1.655	-19009	9479	4393	40441	13876	4220	18097	No	6.2	Si
SLU 66	8.34	-241.28	-10959	-9126	-1358	1.655	1.655	-19693	9570	4435	40441	13876	4220	18097	No	13.32	Si
SLU 66	10.44	1760.97	-10765	-8964	-2966	1.655	1.655	-19345	9524	4413	40441	13876	4220	18097	No	6.1	Si
SLU 79	8.34	-133.19	-11851	-9869	-1154	1.655	1.655	-21296	9784	4534	40441	13876	4220	18097	No	15.68	Si
SLU 79	10.44	2148.66	-11510	-9584	-2826	1.655	1.655	-20682	9702	4496	40441	13876	4220	18097	No	6.4	Si
SLU 72	8.34	-262.51	-11124	-9263	-1405	1.655	1.655	-19990	9610	4453	40441	13876	4220	18097	No	12.88	Si
SLU 72	10.44	1802.62	-10984	-9147	-3042	1.655	1.655	-19738	9576	4438	40441	13876	4220	18097	No	5.95	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	8.34	-124.19	-12053	-10037	-1163	1.655	1.655	-21659	9832	4556	40441	13876	4220	18097	No	15.55	Si
SLU 77	10.44	2175.6	-11729	-9767	-2870	1.655	1.655	-21077	9755	4520	40441	13876	4220	18097	No	6.31	Si
SLU 78	8.34	-123.95	-12076	-10056	-1161	1.655	1.655	-21700	9838	4559	40441	13876	4220	18097	No	15.59	Si
SLU 78	10.44	2174.1	-11749	-9784	-2869	1.655	1.655	-21112	9759	4523	40441	13876	4220	18097	No	6.31	Si
SLU 71	8.34	-262.75	-11101	-9244	-1407	1.655	1.655	-19948	9604	4451	40441	13876	4220	18097	No	12.86	Si
SLU 71	10.44	1804.13	-10965	-9130	-3043	1.655	1.655	-19703	9572	4435	40441	13876	4220	18097	No	5.95	Si
SLU 67	8.34	-241.04	-10982	-9145	-1356	1.655	1.655	-19735	9576	4437	40441	13876	4220	18097	No	13.35	Si
SLU 67	10.44	1759.46	-10785	-8981	-2965	1.655	1.655	-19380	9528	4416	40441	13876	4220	18097	No	6.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	8.34	-4711.06	-5466	-4551	-8408	1.324	0	0	0	0	40441	16652	3376	20028		2.38	Si
SLV 16	10.44	5658.01	-12293	-10237	-8352	1.655	1.1017	-22090	14835	4576	40441	20815	4220	25035		3	Si
SLD 15	8.34	-2189.13	-6859	-5712	-4274	1.655	1.5251	-13453	13107	5597	40441	20815	4220	25035		5.86	Si
SLD 15	10.44	3293.69	-9772	-8137	-4895	1.655	1.4713	-17559	13928	5738	40441	20815	4220	25035		5.11	Si
SLV 2	8.34	4688.2	-10814	-9005	7082	1.655	1.182	-19432	14303	4734	40441	20815	4220	25035		3.53	Si
SLV 2	10.44	-3291.21	-2847	-2371	4776	1.324	0	0	0	0	40441	16652	3376	20028		4.19	Si
SLV 13	8.34	-4820.56	-3017	-2513	-8932	1.324	0	0	0	0	40441	16652	3376	20028		2.24	Si
SLV 13	10.44	5754.54	-10532	-8770	-8324	1.655	0.8434	-18926	14202	3354	40441	20815	4220	25035		3.01	Si
SLV 4	8.34	4562.83	-13053	-10870	7187	1.655	1.4339	-23456	15108	6066	40441	20815	4220	25035		3.48	Si
SLV 4	10.44	-3112.28	-4846	-4035	4328	1.324	0.5557	0	0	0	40441	16652	3376	20028		4.63	Si
SLV 15	8.34	-4945.93	-5257	-4377	-8828	1.324	0	0	0	0	40441	16652	3376	20028		2.27	Si
SLV 15	10.44	5933.48	-12531	-10434	-8772	1.655	1.062	-22517	14920	4437	40441	20815	4220	25035		2.85	Si
SLV 11	8.34	-1804.38	-10562	-8795	-3173	1.655	1.655	-18980	14213	6586	40441	20815	4220	25035		7.89	Si
SLV 11	10.44	3023.42	-12213	-10170	-4782	1.655	1.655	-21946	14806	6861	40441	20815	4220	25035		5.24	Si
SLV 14	8.34	-4585.69	-3226	-2686	-8513	1.324	0	0	0	0	40441	16652	3376	20028		2.35	Si
SLV 14	10.44	5479.07	-10295	-8572	-7904	1.655	0.8858	-18499	14116	3501	40441	20815	4220	25035		3.17	Si
SLV 3	8.34	4327.96	-12845	-10696	6767	1.655	1.4717	-23081	15033	6195	40441	20815	4220	25035		3.7	Si
SLV 3	10.44	-2836.81	-5083	-4233	3908	1.324	0.8084	0	0	0	40441	16652	3376	20028		5.12	Si
SLV 1	8.34	4453.33	-10605	-8831	6663	1.655	1.2228	-19057	14228	4871	40441	20815	4220	25035		3.76	Si
SLV 1	10.44	-3015.74	-3085	-2569	4356	1.324	0	0	0	0	40441	16652	3376	20028		4.6	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.46	6767	-3136	200.97	419.59	2.09	Si
SLV 1	179667	0.46	7280	-3374	200.97	449.8	2.24	Si
SLV 6	179667	0.46	7478	-3466	200.97	461.42	2.3	Si
SLV 5	179667	0.46	7808	-3618	200.97	480.66	2.39	Si
SLV 4	179667	0.46	11068	-5129	200.97	666.01	3.31	Si
SLV 3	179667	0.46	11581	-5367	200.97	694.34	3.45	Si
SLV 10	179667	0.46	12310	-5704	200.97	734.25	3.65	Si
SLV 9	179667	0.46	12639	-5857	200.97	752.14	3.74	Si
SLV 8	179667	0.46	21813	-10108	200.97	1213.04	6.04	Si
SLV 7	179667	0.46	22143	-10261	200.97	1228.26	6.11	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-7527	-12973	234	1.054	998.4	0.936	16.36098	14.55598	Si
SLV 7	-7509	-12839	234	1.056	996.6	0.936	16.39279	14.55598	Si
SLV 12	-6941	-10697	372	1.108	939.2	0.933	17.26262	14.55598	Si
SLV 11	-6924	-10562	372	1.11	937.4	0.933	17.29867	14.55598	Si
SLV 6	-3427	-5509	-373	1.875	587	0.905	30.10758	14.55598	Si
SLV 5	-3409	-5374	-372	1.881	585.3	0.905	30.21904	14.55598	Si
SLV 4	-6780	-13053	-140	1.157	922.9	0.932	18.04446	7.56668	Si
SLV 3	-6753	-12845	-140	1.161	920.2	0.932	18.10549	7.56668	Si
SLV 10	-2841	-3232	-234	2.156	529.4	0.899	34.85828	14.55598	Si
SLV 9	-2824	-3098	-234	2.165	527.7	0.899	35.00443	14.55598	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.436	SLU 39	Si
V_SLU	5.862	SLU 69	Si
PF_SLV	0.64	SLV 13	No
V_SLV	2.242	SLV 13	Si
PFFP_SLV	2.088	SLV 2	Si
R_SLV	1.124	SLV 8	Si

Maschio 125

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	1.006	-15.033	6.386	L6	L7	5.38	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 22	8.34	-790.89	-20447	-0.0000315	0.0004492	0.0035	5.38	44309.79	66231.18	66231.18	83.74	No	Si
SLU 22	11.86	-9.86	-11984	-0.0000175	0.0004492	0.0035	5.38	28564.33	46993.13	46993.13	4765.3	No	Si
SLU 31	8.34	-1006.66	-22353	-0.0000348	0.0004492	0.0035	5.38	47350.69	70419.67	70419.67	69.95	No	Si
SLU 31	11.86	-74.95	-13043	-0.0000192	0.0004492	0.0035	5.38	30734.49	49452.08	49452.08	659.84	No	Si
SLU 8	8.34	-109.46	-19893	-0.0000295	0.0004492	0.0035	5.38	43391.05	65013.73	65013.73	593.93	No	Si
SLU 8	11.86	411.41	-12263	-0.0000186	0.0004492	0.0035	5.38	29140.77	33682.99	33682.99	81.87	No	Si
SLU 40	8.34	-1019.01	-23168	-0.0000361	0.0004492	0.0035	5.38	48594.11	72210.46	72210.46	70.86	No	Si
SLU 40	11.86	-29.64	-13481	-0.0000197	0.0004492	0.0035	5.38	31616.18	50470.1	50470.1	1702.57	No	Si
SLU 23	8.34	-887.59	-20449	-0.0000317	0.0004492	0.0035	5.38	44313.65	66236.34	66236.34	74.62	No	Si
SLU 23	11.86	-98.2	-12003	-0.0000177	0.0004492	0.0035	5.38	28602.96	47036.35	47036.35	478.98	No	Si
SLU 39	8.34	-960.99	-23167	-0.000036	0.0004492	0.0035	5.38	48591.99	72207.36	72207.36	75.14	No	Si
SLU 39	11.86	23.36	-13470	-0.0000197	0.0004492	0.0035	5.38	31593.85	36565.32	36565.32	1565.28	No	Si
SLU 33	8.34	-916.77	-23681	-0.0000367	0.0004492	0.0035	5.38	49360.12	73304.16	73304.16	79.96	No	Si
SLU 33	11.86	19.24	-14306	-0.000021	0.0004492	0.0035	5.38	33249.3	38528.8	38528.8	2002.77	No	Si
SLU 73	8.34	-1003.99	-26922	-0.0000418	0.0004492	0.0035	5.38	53882.81	80018.44	80018.44	79.7	No	Si
SLU 73	11.86	-93.75	-15544	-0.0000229	0.0004492	0.0035	5.38	35633.15	55260.53	55260.53	589.44	No	Si
SLU 82	8.34	-1016.34	-27737	-0.0000431	0.0004492	0.0035	5.38	54935.79	81707.14	81707.14	80.39	No	Si
SLU 82	11.86	-48.45	-15982	-0.0000235	0.0004492	0.0035	5.38	36458.78	56278.56	56278.56	1161.63	No	Si
SLU 16	8.34	-228.53	-21797	-0.0000326	0.0004492	0.0035	5.38	46482.26	69197.06	69197.06	302.79	No	Si
SLU 16	11.86	434.66	-13303	-0.0000202	0.0004492	0.0035	5.38	31258.48	36166.04	36166.04	83.21	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	8.34	15080.63	-27099	-0.0000654	0.0006738	0.0035	5.38		68638.67	68638.67	4.55		Si
SLV 6	11.86	8649.14	-15100	-0.0000362	0.0006738	0.0035	5.38		40963.47	40963.47	4.74		Si
SLV 8	8.34	-19023.16	-7724	-0.0001267	0.0006738	0.0035	4.304		36907.07	36907.07	1.94		Si
SLV 8	11.86	-8062.22	-6541	-0.0000234	0.0006738	0.0035	5.38		33961.96	33961.96	4.21		Si
SLV 3	8.34	-10178.62	-10027	-0.0000313	0.0006738	0.0035	5.38		42597.81	42597.81	4.19		Si
SLV 3	11.86	-814.32	-9085	-0.0000145	0.0006738	0.0035	5.38		40287.98	40287.98	49.47		Si
SLV 4	8.34	-10309.17	-10144	-0.0000317	0.0006738	0.0035	5.38		42886.46	42886.46	4.16		Si
SLV 4	11.86	-1237.95	-9008	-0.000015	0.0006738	0.0035	5.38		40098.99	40098.99	32.39		Si
SLV 5	8.34	15164.53	-27024	-0.0000655	0.0006738	0.0035	5.38		68470.06	68470.06	4.52		Si
SLV 5	11.86	8921.41	-15149	-0.0000368	0.0006738	0.0035	5.38		41081.5	41081.5	4.6		Si
SLV 7	8.34	-18939.26	-7648	-0.0001284	0.0006738	0.0035	4.304		36719.09	36719.09	1.94		Si
SLV 7	11.86	-7789.96	-6590	-0.0000228	0.0006738	0.0035	5.38		34086.47	34086.47	4.38		Si
SLV 12	8.34	-16281.16	-11479	-0.0000476	0.0006738	0.0035	5.38		46145.9	46145.9	2.83		Si
SLV 12	11.86	-8963.06	-6981	-0.0000259	0.0006738	0.0035	5.38		35061.4	35061.4	3.91		Si
SLV 11	8.34	-16197.26	-11404	-0.0000474	0.0006738	0.0035	5.38		45966.07	45966.07	2.84		Si
SLV 11	11.86	-8690.79	-7031	-0.0000252	0.0006738	0.0035	5.38		35184.48	35184.48	4.05		Si
SLV 9	8.34	17906.54	-30779	-0.0000761	0.0006738	0.0035	5.38		75848.59	75848.59	4.24		Si
SLV 9	11.86	8020.58	-15590	-0.0000359	0.0006738	0.0035	5.38		42132.16	42132.16	5.25		Si
SLV 10	8.34	17822.63	-30855	-0.0000761	0.0006738	0.0035	5.38		75996.72	75996.72	4.26		Si
SLV 10	11.86	7748.31	-15540	-0.0000354	0.0006738	0.0035	5.38		42014.13	42014.13	5.42		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	8.34	-1016.34	-27737	-16286	2824	5.38	5.38	-18919	10833	9325	115546	30935	27438	58373	No	20.67	Si
SLU 82	11.86	-48.45	-15982	-9384	2810	5.38	5.38	-10901	9787	8425	115546	30935	27438	58373	No	20.77	Si
SLU 73	8.34	-1003.99	-26922	-15807	2552	5.38	5.38	-18363	10782	9281	115546	30935	27438	58373	No	22.87	Si
SLU 73	11.86	-93.75	-15544	-9127	2540	5.38	5.38	-10602	9747	8390	115546	30935	27438	58373	No	22.98	Si
SLU 74	8.34	-856.08	-28249	-16586	2610	5.38	5.38	-19269	10833	9325	115546	30935	27438	58373	No	22.36	Si
SLU 74	11.86	53.44	-16796	-9862	2597	5.38	5.38	-11457	9861	8488	115546	30935	27438	58373	No	22.48	Si
SLU 84	8.34	-862.24	-28677	-16838	2766	5.38	5.38	-19561	10833	9325	115546	30935	27438	58373	No	21.1	Si
SLU 84	11.86	174.51	-16972	-9965	2752	5.38	5.38	-11577	9877	8502	115546	30935	27438	58373	No	21.21	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	8.34	-585.08	-25300	-14855	2605	5.38	5.38	-17257	10634	9154	115546	30935	27438	58373	No	22.41	Si
SLU 60	11.86	-20.09	-14268	-8378	2592	5.38	5.38	-9732	9631	8290	115546	30935	27438	58373	No	22.52	Si
SLU 75	8.34	-914.1	-28250	-16587	2601	5.38	5.38	-19270	10833	9325	115546	30935	27438	58373	No	22.44	Si
SLU 75	11.86	0.43	-16807	-9868	2588	5.38	5.38	-11464	9862	8489	115546	30935	27438	58373	No	22.56	Si
SLU 83	8.34	-804.22	-28676	-16837	2775	5.38	5.38	-19560	10833	9325	115546	30935	27438	58373	No	21.03	Si
SLU 83	11.86	227.51	-16961	-9959	2761	5.38	5.38	-11569	9876	8501	115546	30935	27438	58373	No	21.14	Si
SLU 77	8.34	-701.99	-29189	-17139	2552	5.38	5.38	-19910	10833	9325	115546	30935	27438	58373	No	22.87	Si
SLU 77	11.86	276.4	-17786	-10443	2539	5.38	5.38	-12132	9951	8566	115546	30935	27438	58373	No	22.99	Si
SLU 61	8.34	-643.1	-25301	-14856	2596	5.38	5.38	-17258	10634	9154	115546	30935	27438	58373	No	22.49	Si
SLU 61	11.86	-73.1	-14279	-8384	2583	5.38	5.38	-9740	9632	8291	115546	30935	27438	58373	No	22.6	Si
SLU 81	8.34	-958.32	-27735	-16285	2833	5.38	5.38	-18918	10833	9325	115546	30935	27438	58373	No	20.61	Si
SLU 81	11.86	4.56	-15971	-9377	2819	5.38	5.38	-10894	9786	8424	115546	30935	27438	58373	No	20.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	8.34	17822.63	-30855	-18117	7819	5.38	5.38	-21046	16250	13988	115546	46402	27438	73840		9.44	Si
SLV 10	11.86	7748.31	-15540	-9125	11542	5.38	5.38	-10600	14620	12585	115546	46402	27438	73840		6.4	Si
SLV 3	8.34	-10178.62	-10027	-5887	-5731	5.38	5.0246	-7346	13969	11230	115546	46402	27438	73840		12.89	Si
SLV 3	11.86	-814.32	-9085	-5335	-7037	5.38	5.38	-6197	13739	11827	115546	46402	27438	73840		10.49	Si
SLV 6	8.34	15080.63	-27099	-15912	4256	5.38	5.38	-18485	16197	13942	115546	46402	27438	73840		17.35	Si
SLV 6	11.86	8649.14	-15100	-8866	7862	5.38	5.38	-10300	14560	12533	115546	46402	27438	73840		9.39	Si
SLV 4	8.34	-10309.17	-10144	-5956	-5498	5.38	5.0213	-7437	13987	11238	115546	46402	27438	73840		13.43	Si
SLV 4	11.86	-1237.95	-9008	-5289	-6805	5.38	5.38	-6145	13729	11818	115546	46402	27438	73840		10.85	Si
SLV 9	8.34	17906.54	-30779	-18072	7670	5.38	5.38	-20995	16250	13988	115546	46402	27438	73840		9.63	Si
SLV 9	11.86	8020.58	-15590	-9154	11393	5.38	5.38	-10634	14627	12591	115546	46402	27438	73840		6.48	Si
SLV 8	8.34	-19023.16	-7724	-4535	-4420	4.304	0.681	0	0	0	115546	37122	21950	59072		13.37	Si
SLV 8	11.86	-8062.22	-6541	-3840	-8160	5.38	4.372	-5502	13600	9514	115546	46402	27438	73840		9.05	Si
SLV 5	8.34	15164.53	-27024	-15867	4107	5.38	5.38	-18433	16187	13933	115546	46402	27438	73840		17.98	Si
SLV 5	11.86	8921.41	-15149	-8895	7713	5.38	5.38	-10333	14567	12539	115546	46402	27438	73840		9.57	Si
SLV 7	8.34	-18939.26	-7648	-4491	-4569	4.304	0.6409	0	0	0	115546	37122	21950	59072		12.93	Si
SLV 7	11.86	-7789.96	-6590	-3869	-8309	5.38	4.5238	-5358	13572	9823	115546	46402	27438	73840		8.89	Si
SLV 14	8.34	9061.99	-28476	-16720	8980	5.38	5.38	-19424	16250	13988	115546	46402	27438	73840		8.22	Si
SLV 14	11.86	772.67	-13045	-7659	10270	5.38	5.38	-8898	14280	12292	115546	46402	27438	73840		7.19	Si
SLV 13	8.34	9192.54	-28359	-16651	8748	5.38	5.38	-19343	16250	13988	115546	46402	27438	73840		8.44	Si
SLV 13	11.86	1196.31	-13122	-7705	10038	5.38	5.38	-8951	14290	12301	115546	46402	27438	73840		7.36	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-6747	0.46	395.01	516.65	1043.57	780.11	1.97	Si
SLV 7	-6768	0.46	395.01	518.2	1045.62	781.91	1.98	Si
SLV 12	-7320	0.46	395.01	558.45	1099.03	828.74	2.1	Si
SLV 11	-7341	0.46	395.01	559.98	1101.08	830.53	2.1	Si
SLV 4	-11933	0.46	395.01	882.45	1540.69	1211.57	3.07	Si
SLV 3	-11966	0.46	395.01	884.68	1543.81	1214.25	3.07	Si
SLV 16	-13845	0.46	395.01	1010.41	1721.82	1366.11	3.46	Si
SLV 15	-13878	0.46	395.01	1012.58	1724.94	1368.76	3.47	Si
SLV 2	-16957	0.46	395.01	1210.78	2013.4	1612.09	4.08	Si
SLV 1	-16990	0.46	395.01	1212.85	2016.42	1614.64	4.09	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-15590	-30779	245	1.663	2017.3	0.94	25.69309	18.90005	Si
SLV 10	-15540	-30855	245	1.667	2012.3	0.94	25.7652	18.90005	Si
SLV 5	-15149	-27024	-344	1.697	1972.7	0.939	26.26379	18.90005	Si
SLV 6	-15100	-27099	-344	1.702	1967.7	0.939	26.33939	18.90005	Si
SLV 13	-13122	-28359	968	1.872	1767.7	0.934	29.14816	13.38704	Si
SLV 14	-13045	-28476	968	1.881	1759.9	0.933	29.29632	13.38704	Si
SLV 1	-11653	-15840	-996	2.059	1619.4	0.929	32.22701	13.38704	Si
SLV 2	-11576	-15957	-996	2.07	1611.7	0.928	32.40818	13.38704	Si
SLV 15	-10554	-22546	999	2.228	1508.8	0.925	35.01474	13.38704	Si
SLV 11	-7031	-11404	346	3.091	1156.2	0.909	49.43827	18.90005	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	69.954	SLU 31	Si
V_SLU	20.606	SLU 81	Si
PF_SLV	1.939	SLV 7	Si
V_SLV	6.397	SLV 10	Si
PFFP_SLV	1.975	SLV 8	Si
R_SLV	1.359	SLV 9	Si

Maschio 126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.384	L6	L7	1.44	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	8.34	-488.72	-11414	-0.0000527	0.0003743	0.0035	1.4402	5934.42	7096.06	7096.06	14.52	No	Si
SLU 81	11.86	16.88	-5879	-0.0000224	0.0003743	0.0035	1.4402	3627.38	3822.76	3822.76	226.42	No	Si
SLU 84	8.34	-502.63	-11766	-0.0000545	0.0003743	0.0035	1.4402	6044.63	7250.85	7250.85	14.43	No	Si
SLU 84	11.86	-7.88	-6199	-0.0000235	0.0003743	0.0035	1.4402	3789.87	4471.54	4471.54	567.35	No	Si
SLU 75	8.34	-484.55	-11507	-0.0000531	0.0003743	0.0035	1.4402	5963.93	7136.71	7136.71	14.73	No	Si
SLU 75	11.86	0.88	-6190	-0.0000234	0.0003743	0.0035	1.4402	3785.42	3983.68	3983.68	4523.52	No	Si
SLU 40	8.34	-438.9	-9664	-0.0000445	0.0003743	0.0035	1.4402	5321.28	6290.29	6290.29	14.33	No	Si
SLU 40	11.86	54.35	-4908	-0.0000192	0.0003743	0.0035	1.4402	3111.61	3326.88	3326.88	61.22	No	Si
SLU 42	8.34	-443.94	-9969	-0.0000459	0.0003743	0.0035	1.4402	5435.64	6434.76	6434.76	14.49	No	Si
SLU 42	11.86	30.24	-5195	-0.00002	0.0003743	0.0035	1.4402	3267.8	3474.25	3474.25	114.9	No	Si
SLU 73	8.34	-475.58	-11094	-0.0000512	0.0003743	0.0035	1.4402	5830.3	6956.96	6956.96	14.63	No	Si
SLU 73	11.86	-7.25	-5843	-0.0000221	0.0003743	0.0035	1.4402	3609	4267.16	4267.16	588.91	No	Si
SLU 83	8.34	-493.76	-11719	-0.0000541	0.0003743	0.0035	1.4402	6030.1	7229.96	7229.96	14.64	No	Si
SLU 83	11.86	-7.23	-6167	-0.0000234	0.0003743	0.0035	1.4402	3773.77	4453.46	4453.46	616.25	No	Si
SLU 39	8.34	-430.03	-9617	-0.0000442	0.0003743	0.0035	1.4402	5303.27	6267.16	6267.16	14.57	No	Si
SLU 39	11.86	55	-4876	-0.0000191	0.0003743	0.0035	1.4402	3094.06	3309.85	3309.85	60.18	No	Si
SLU 31	8.34	-416.88	-9297	-0.0000426	0.0003743	0.0035	1.4402	5178.98	6108.32	6108.32	14.65	No	Si
SLU 31	11.86	30.87	-4840	-0.0000186	0.0003743	0.0035	1.4402	3074.41	3290.66	3290.66	106.59	No	Si
SLU 82	8.34	-497.59	-11461	-0.0000531	0.0003743	0.0035	1.4402	5949.45	7116.7	7116.7	14.3	No	Si
SLU 82	11.86	16.23	-5911	-0.0000225	0.0003743	0.0035	1.4402	3643.8	3839.25	3839.25	236.57	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	8.34	-84.12	-7826	-0.0000307	0.0005615	0.0035	1.4402		5583.52	5583.52	66.38		Si
SLV 15	11.86	1115.92	-4908	-0.0000356	0.0005615	0.0035	1.4402		3431.13	3431.13	3.07		Si
SLV 16	8.34	-119.55	-7992	-0.0000319	0.0005615	0.0035	1.4402		5681.64	5681.64	47.53		Si
SLV 16	11.86	1089.99	-4975	-0.0000354	0.0005615	0.0035	1.4402		3473.35	3473.35	3.19		Si
SLV 14	8.34	525.14	-4200	-0.0000236	0.0005615	0.0035	1.4402		2977.2	2977.2	5.67		Si
SLV 14	11.86	710.54	-2571	-0.0000205	0.0005615	0.0035	1.4402		1902.6	1902.6	2.68		Si
SLV 10	8.34	913.32	-988	-0.0016052	0.0005615	0.0035	1.1522		817.17	817.17	0.89		No
SLV 10	11.86	-395.86	-95	-0.0002668	0.0005615	0.0035	1.1522		581.48	581.48	1.47		Si
SLV 2	8.34	-532.8	-7751	-0.0000375	0.0005615	0.0035	1.4402		5539.36	5539.36	10.4		Si
SLV 2	11.86	-1198.97	-3545	-0.0000331	0.0005615	0.0035	1.4402		2928.53	2928.53	2.44		Si
SLV 13	8.34	560.57	-4033	-0.0000236	0.0005615	0.0035	1.4402		2869.49	2869.49	5.12		Si
SLV 13	11.86	736.47	-2504	-0.0000208	0.0005615	0.0035	1.4402		1858.09	1858.09	2.52		Si
SLV 1	8.34	-497.37	-7584	-0.0000363	0.0005615	0.0035	1.4402		5441.67	5441.67	10.94		Si
SLV 1	11.86	-1173.04	-3479	-0.0000324	0.0005615	0.0035	1.4402		2884.69	2884.69	2.46		Si
SLV 9	8.34	936.09	-881	-0.002659	0.0005615	0.0035	1.1522		742.22	742.22	0.79		No
SLV 9	11.86	-379.19	-52	-0.0002904	0.0005615	0.0035	1.1522		551.12	551.12	1.45		Si
SLV 6	8.34	595.94	-2054	-0.0000168	0.0005615	0.0035	1.4402		1551.72	1551.72	2.6		Si
SLV 6	11.86	-968.71	-388	-0.000611	0.0005615	0.0035	1.1522		787.66	787.66	0.81		No
SLV 5	8.34	618.71	-1947	-0.000017	0.0005615	0.0035	1.4402		1479.04	1479.04	2.39		Si
SLV 5	11.86	-952.04	-345	-0.0006233	0.0005615	0.0035	1.1522		757.64	757.64	0.8		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	8.34	-493.76	-11719	-9758	-2797	1.4402	1.4402	-24198	10171	4102	40441	12075	3673	15748	No	5.63	Si
SLU 83	11.86	-7.23	-6167	-5135	106	1.4402	1.4402	-12734	8642	3485	40441	12075	3673	15748	No	148.9	Si
SLU 84	8.34	-502.63	-11766	-9798	-2813	1.4402	1.4402	-24296	10184	4107	40441	12075	3673	15748	No	5.6	Si
SLU 84	11.86	-7.88	-6199	-5162	99	1.4402	1.4402	-12800	8651	3489	40441	12075	3673	15748	No	158.62	Si
SLU 78	8.34	-489.59	-11811	-9836	-2736	1.4402	1.4402	-24390	10196	4112	40441	12075	3673	15748	No	5.75	Si
SLU 78	11.86	-23.23	-6478	-5394	237	1.4402	1.4402	-13376	8728	3520	40441	12075	3673	15748	No	66.45	Si
SLU 75	8.34	-484.55	-11507	-9582	-2707	1.4402	1.4402	-23762	10113	4078	40441	12075	3673	15748	No	5.82	Si
SLU 75	11.86	0.88	-6190	-5154	169	1.4402	1.4402	-12782	8649	3488	40441	12075	3673	15748	No	92.92	Si
SLU 80	8.34	-479.74	-11672	-9719	-2652	1.4402	1.4402	-24101	10158	4096	40441	12075	3673	15748	No	5.94	Si
SLU 80	11.86	-55.03	-6397	-5327	287	1.4402	1.4402	-13210	8706	3511	40441	12075	3673	15748	No	54.84	Si
SLU 77	8.34	-480.72	-11764	-9796	-2721	1.4402	1.4402	-24293	10183	4107	40441	12075	3673	15748	No	5.79	Si
SLU 77	11.86	-22.57	-6446	-5367	243	1.4402	1.4402	-13310	8719	3516	40441	12075	3673	15748	No	64.68	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	8.34	-497.59	-11461	-9544	-2784	1.4402	1.4402	-23667	10100	4073	40441	12075	3673	15748	No	5.66	Si
SLU 82	11.86	16.23	-5911	-4922	32	1.4402	1.4402	-12206	8572	3457	40441	12075	3673	15748	No	495.7	Si
SLU 79	8.34	-470.87	-11624	-9680	-2637	1.4402	1.4402	-24004	10145	4091	40441	12075	3673	15748	No	5.97	Si
SLU 79	11.86	-54.37	-6365	-5301	294	1.4402	1.4402	-13144	8697	3507	40441	12075	3673	15748	No	53.63	Si
SLU 74	8.34	-475.68	-11460	-9543	-2692	1.4402	1.4402	-23664	10100	4073	40441	12075	3673	15748	No	5.85	Si
SLU 74	11.86	1.54	-6158	-5128	176	1.4402	1.4402	-12716	8640	3484	40441	12075	3673	15748	No	89.5	Si
SLU 81	8.34	-488.72	-11414	-9505	-2768	1.4402	1.4402	-23570	10087	4068	40441	12075	3673	15748	No	5.69	Si
SLU 81	11.86	16.88	-5879	-4896	38	1.4402	1.4402	-12140	8563	3453	40441	12075	3673	15748	No	411.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	8.34	-1235.63	-13630	-11349	-4126	1.4402	1.4402	-28144	16046	6471	40441	18113	3673	21786		5.28	Si
SLV 12	11.86	869	-8109	-6752	-3980	1.4402	1.4402	-16745	13766	5551	40441	18113	3673	21786		5.47	Si
SLV 13	8.34	560.57	-4033	-3359	-5727	1.4402	1.4402	-8328	12082	4872	40441	18113	3673	21786		3.8	Si
SLV 13	11.86	736.47	-2504	-2085	-2231	1.4402	1.2781	-5171	11451	4098	40441	18113	3673	21786		9.76	Si
SLV 5	8.34	618.71	-1947	-1621	772	1.4402	1.2069	-4020	11221	3792	40441	18113	3673	21786		28.21	Si
SLV 5	11.86	-952.04	-345	-287	4572	1.1522	0	0	0	0	40441	14491	2938	17429		3.81	Si
SLV 2	8.34	-532.8	-7751	-6454	3106	1.4402	1.4402	-16005	13618	5491	40441	18113	3673	21786		7.01	Si
SLV 2	11.86	-1198.97	-3545	-2952	4802	1.4402	1.1458	-9239	12265	3935	40441	18113	3673	21786		4.54	Si
SLV 6	8.34	595.94	-2054	-1710	905	1.4402	1.2898	-4241	11265	4068	40441	18113	3673	21786		24.07	Si
SLV 6	11.86	-968.71	-388	-323	4677	1.1522	0	0	0	0	40441	14491	2938	17429		3.73	Si
SLV 15	8.34	-84.12	-7826	-6517	-6460	1.4402	1.4402	-16160	13649	5504	40441	18113	3673	21786		3.37	Si
SLV 15	11.86	1115.92	-4908	-4087	-4210	1.4402	1.4402	-10136	12444	5018	40441	18113	3673	21786		5.17	Si
SLV 16	8.34	-119.55	-7992	-6655	-6253	1.4402	1.4402	-16503	13717	5532	40441	18113	3673	21786		3.48	Si
SLV 16	11.86	1089.99	-4975	-4143	-4047	1.4402	1.4402	-10273	12471	5029	40441	18113	3673	21786		5.38	Si
SLV 1	8.34	-497.37	-7584	-6316	2900	1.4402	1.4402	-15661	13549	5464	40441	18113	3673	21786		7.51	Si
SLV 1	11.86	-1173.04	-3479	-2897	4639	1.4402	1.1488	-9042	12225	3932	40441	18113	3673	21786		4.7	Si
SLV 14	8.34	525.14	-4200	-3497	-5520	1.4402	1.4402	-8672	12151	4900	40441	18113	3673	21786		3.95	Si
SLV 14	11.86	710.54	-2571	-2141	-2068	1.4402	1.3311	-5308	11478	4278	40441	18113	3673	21786		10.53	Si
SLV 11	8.34	-1212.86	-13523	-11261	-4259	1.4402	1.4402	-27924	16001	6453	40441	18113	3673	21786		5.12	Si
SLV 11	11.86	885.66	-8066	-6717	-4085	1.4402	1.4402	-16656	13748	5544	40441	18113	3673	21786		5.33	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	0	-289	178.95	0	0	No, e>t/2
SLV 5	179667	0.46	0	-260	178.95	0	0	No, e>t/2
SLV 10	179667	0.46	0	-362	178.95	0	0	No, e>t/2
SLV 9	179667	0.46	0	-332	178.95	0	0	No, e>t/2
SLV 1	179667	0.46	9702	-3913	178.95	512.96	2.87	Si
SLV 2	179667	0.46	9816	-3958	178.95	518.56	2.9	Si
SLV 13	179667	0.46	10298	-4153	178.95	542.18	3.03	Si
SLV 14	179667	0.46	10411	-4199	178.95	547.72	3.06	Si
SLV 3	179667	0.46	17662	-7122	178.95	881.82	4.93	Si
SLV 4	179667	0.46	17776	-7168	178.95	886.75	4.96	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-8401	-14695	-115	0.869	1056.4	0.946	13.35207	14.55598	No
SLV 7	-8359	-14588	-116	0.873	1052	0.946	13.40969	14.55598	No
SLV 12	-8109	-13630	-60	0.901	1026.7	0.944	13.85873	14.55598	No
SLV 11	-8066	-13523	-61	0.904	1022.4	0.944	13.92061	14.55598	No
SLV 4	-5950	-11543	-114	1.15	808.1	0.932	17.93591	7.56668	Si
SLV 3	-5883	-11377	-115	1.161	801.4	0.932	18.10214	7.56668	Si
SLV 16	-4975	-7992	70	1.331	709.9	0.925	20.91087	7.56668	Si
SLV 15	-4908	-7826	68	1.345	703.2	0.924	21.14518	7.56668	Si
SLV 2	-3545	-7751	-58	1.716	566.7	0.911	27.36148	7.56668	Si
SLV 1	-3479	-7584	-60	1.739	560.1	0.911	27.75142	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.302	SLU 82	Si
V_SLU	5.599	SLU 84	Si
PF_SLV	0.793	SLV 9	No
V_SLV	3.372	SLV 15	Si
PFFP_SLV	0	SLV 5	No
R_SLV	0.917	SLV 8	No

Maschio 128

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.384	-13.778	-0.354	Z medio 921 cm	L7	3.03	0.28	2.651	1.783	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 19	10.08	1518.86	-13909	-0.0000305	0.0003743	0.0035	3.0298	17677.59	18531.47	18531.47	12.2	No	Si
SLU 19	11.86	917.37	-9697	-0.0000205	0.0003743	0.0035	3.0298	13040.03	13878.46	13878.46	15.13	No	Si
SLU 18	10.08	1542.83	-13896	-0.0000306	0.0003743	0.0035	3.0298	17663.81	18516.2	18516.2	12	No	Si
SLU 18	11.86	931.7	-9687	-0.0000205	0.0003743	0.0035	3.0298	13028.42	13867.69	13867.69	14.88	No	Si
SLU 39	10.08	1683.42	-15727	-0.0000346	0.0003743	0.0035	3.0298	19486.85	20628.04	20628.04	12.25	No	Si
SLU 39	11.86	1090.08	-10965	-0.0000234	0.0003743	0.0035	3.0298	14501.6	15249.45	15249.45	13.99	No	Si
SLU 42	10.08	1665.57	-16332	-0.0000357	0.0003743	0.0035	3.0298	20062.79	21337.1	21337.1	12.81	No	Si
SLU 42	11.86	1083.57	-11526	-0.0000245	0.0003743	0.0035	3.0298	15130.98	15864.81	15864.81	14.64	No	Si
SLU 61	10.08	1713.54	-17075	-0.0000373	0.0003743	0.0035	3.0298	20753.04	22220.35	22220.35	12.97	No	Si
SLU 61	11.86	971.22	-11884	-0.0000247	0.0003743	0.0035	3.0298	15526.18	16259.49	16259.49	16.74	No	Si
SLU 21	10.08	1524.98	-14500	-0.0000317	0.0003743	0.0035	3.0298	18278.6	19207.31	19207.31	12.6	No	Si
SLU 21	11.86	925.18	-10248	-0.0000215	0.0003743	0.0035	3.0298	13682.98	14472.08	14472.08	15.64	No	Si
SLU 41	10.08	1689.54	-16319	-0.0000357	0.0003743	0.0035	3.0298	20050.15	21321.3	21321.3	12.62	No	Si
SLU 41	11.86	1097.9	-11517	-0.0000245	0.0003743	0.0035	3.0298	15120.01	15853.94	15853.94	14.44	No	Si
SLU 60	10.08	1737.51	-17062	-0.0000373	0.0003743	0.0035	3.0298	20740.75	22204.34	22204.34	12.78	No	Si
SLU 60	11.86	985.54	-11874	-0.0000248	0.0003743	0.0035	3.0298	15515.33	16248.57	16248.57	16.49	No	Si
SLU 20	10.08	1548.95	-14487	-0.0000317	0.0003743	0.0035	3.0298	18265.1	19191.91	19191.91	12.39	No	Si
SLU 20	11.86	939.51	-10239	-0.0000216	0.0003743	0.0035	3.0298	13671.57	14461.41	14461.41	15.39	No	Si
SLU 40	10.08	1659.45	-15741	-0.0000345	0.0003743	0.0035	3.0298	19499.76	20643.7	20643.7	12.44	No	Si
SLU 40	11.86	1075.75	-10975	-0.0000234	0.0003743	0.0035	3.0298	14512.77	15260.22	15260.22	14.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	10.08	5251.16	-12800	-0.0000413	0.0005615	0.0035	3.0298		18396.39	18396.39	3.5		Si
SLV 6	11.86	1579.89	-7611	-0.0000188	0.0005615	0.0035	3.0298		11458.39	11458.39	7.25		Si
SLV 14	10.08	4039.21	-12331	-0.0000361	0.0005615	0.0035	3.0298		17787.96	17787.96	4.4		Si
SLV 14	11.86	1389.35	-9041	-0.0000207	0.0005615	0.0035	3.0298		13415.06	13415.06	9.66		Si
SLV 5	10.08	5308.75	-12698	-0.0000413	0.0005615	0.0035	3.0298		18265.37	18265.37	3.44		Si
SLV 5	11.86	1604.34	-7545	-0.0000188	0.0005615	0.0035	3.0298		11367.06	11367.06	7.09		Si
SLV 8	10.08	-4308.11	-14672	-0.0000414	0.0005615	0.0035	3.0298		22784.09	22784.09	5.29		Si
SLV 8	11.86	-876.32	-10954	-0.0000224	0.0005615	0.0035	3.0298		17977.1	17977.1	20.51		Si
SLV 9	10.08	6300.96	-12167	-0.0000439	0.0005615	0.0035	3.0298		17572.73	17572.73	2.79		Si
SLV 9	11.86	1916.3	-7656	-0.0000201	0.0005615	0.0035	3.0298		11521.45	11521.45	6.01		Si
SLV 13	10.08	4128.82	-12174	-0.0000361	0.0005615	0.0035	3.0298		17581.83	17581.83	4.26		Si
SLV 13	11.86	1427.39	-8938	-0.0000207	0.0005615	0.0035	3.0298		13276.29	13276.29	9.3		Si
SLD 10	10.08	3307.71	-12914	-0.0000346	0.0005615	0.0035	3.0298		18544.19	18544.19	5.61		Si
SLD 10	11.86	1123.63	-8605	-0.000019	0.0005615	0.0035	3.0298		12821.32	12821.32	11.41		Si
SLD 9	10.08	3332.85	-12870	-0.0000346	0.0005615	0.0035	3.0298		18487.07	18487.07	5.55		Si
SLD 9	11.86	1134.31	-8576	-0.000019	0.0005615	0.0035	3.0298		12781.86	12781.86	11.27		Si
SLV 7	10.08	-4250.52	-14571	-0.000041	0.0005615	0.0035	3.0298		22653.98	22653.98	5.33		Si
SLV 7	11.86	-851.87	-10888	-0.0000222	0.0005615	0.0035	3.0298		17889.29	17889.29	21		Si
SLV 10	10.08	6243.37	-12268	-0.0000438	0.0005615	0.0035	3.0298		17705.18	17705.18	2.84		Si
SLV 10	11.86	1891.86	-7722	-0.0000201	0.0005615	0.0035	3.0298		11612.69	11612.69	6.14		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	10.08	1050.73	-17439	-14522	1066	3.0298	3.0298	-17118	9227	7827	28547	25403	7726	33129	No	31.08	Si
SLU 49	11.86	472.18	-12406	-10330	1001	3.0298	3.0298	-12177	8568	7269	28547	25403	7726	33129	No	33.1	Si
SLU 45	10.08	1068.58	-16834	-14018	1015	3.0298	3.0298	-16524	9148	7760	28547	25403	7726	33129	No	32.65	Si
SLU 45	11.86	478.69	-11844	-9863	973	3.0298	3.0298	-11626	8495	7206	28547	25403	7726	33129	No	34.04	Si
SLU 48	10.08	1074.7	-17425	-14510	1103	3.0298	3.0298	-17105	9225	7826	28547	25403	7726	33129	No	30.04	Si
SLU 48	11.86	486.51	-12396	-10322	1038	3.0298	3.0298	-12167	8567	7267	28547	25403	7726	33129	No	31.93	Si
SLU 43	10.08	1004.3	-15812	-13167	1076	3.0298	3.0298	-15521	9014	7647	28547	25403	7726	33129	No	30.78	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	11.86	414.35	-10941	-9111	1014	3.0298	3.0298	-10740	8376	7106	28547	25403	7726	33129	No	32.66	Si
SLU 51	10.08	992.56	-17008	-14163	1215	3.0298	3.0298	-16695	9170	7780	28547	25403	7726	33129	No	27.26	Si
SLU 51	11.86	415.65	-12055	-10038	1106	3.0298	3.0298	-11833	8522	7230	28547	25403	7726	33129	No	29.94	Si
SLU 46	10.08	1044.61	-16848	-14029	978	3.0298	3.0298	-16537	9149	7762	28547	25403	7726	33129	No	33.89	Si
SLU 46	11.86	464.36	-11854	-9871	936	3.0298	3.0298	-11635	8496	7207	28547	25403	7726	33129	No	35.38	Si
SLU 44	10.08	964.34	-15834	-13186	1015	3.0298	3.0298	-15543	9017	7649	28547	25403	7726	33129	No	32.65	Si
SLU 44	11.86	390.47	-10958	-9125	953	3.0298	3.0298	-10756	8379	7108	28547	25403	7726	33129	No	34.76	Si
SLU 47	10.08	970.46	-16426	-13678	1103	3.0298	3.0298	-16123	9094	7715	28547	25403	7726	33129	No	30.04	Si
SLU 47	11.86	398.28	-11509	-9584	1017	3.0298	3.0298	-11297	8451	7169	28547	25403	7726	33129	No	32.56	Si
SLU 58	10.08	1529.79	-17869	-14880	982	3.0298	3.0298	-17540	9283	7875	28547	25403	7726	33129	No	33.74	Si
SLU 58	11.86	829.81	-12698	-10574	633	3.0298	3.0298	-12464	8606	7301	28547	25403	7726	33129	No	52.33	Si
SLU 50	10.08	1016.54	-16994	-14152	1252	3.0298	3.0298	-16682	9169	7778	28547	25403	7726	33129	No	26.45	Si
SLU 50	11.86	429.98	-12045	-10030	1143	3.0298	3.0298	-11823	8521	7229	28547	25403	7726	33129	No	28.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	10.08	-4308.11	-14672	-12218	-8082	3.0298	3.0298	-14402	13297	11280	28547	38104	7726	39827		4.93	Si
SLV 8	11.86	-876.32	-10954	-9121	-9902	3.0298	3.0298	-10752	12567	10661	28547	38104	7726	39208		3.96	Si
SLV 12	10.08	-3315.89	-14141	-11775	-8146	3.0298	3.0298	-13880	13193	11192	28547	38104	7726	39738		4.88	Si
SLV 12	11.86	-564.35	-11065	-9214	-9938	3.0298	3.0298	-10862	12589	10680	28547	38104	7726	39226		3.95	Si
SLV 10	10.08	6243.37	-12268	-10216	8947	3.0298	3.0179	-12042	12825	10837	28547	38104	7726	39384		4.4	Si
SLV 10	11.86	1891.86	-7722	-6431	10540	3.0298	3.0298	-7580	11933	10123	28547	38104	7726	38670		3.67	Si
SLV 9	10.08	6300.96	-12167	-10131	9045	3.0298	2.991	-11943	12805	10724	28547	38104	7726	39271		4.34	Si
SLV 9	11.86	1916.3	-7656	-6376	10603	3.0298	3.0298	-7515	11920	10112	28547	38104	7726	38659		3.65	Si
SLV 11	10.08	-3258.3	-14039	-11691	-8049	3.0298	3.0298	-13781	13173	11175	28547	38104	7726	39722		4.94	Si
SLV 11	11.86	-539.91	-10999	-9159	-9876	3.0298	3.0298	-10797	12576	10669	28547	38104	7726	39215		3.97	Si
SLV 6	10.08	5251.16	-12800	-10658	9012	3.0298	3.0298	-12564	12929	10969	28547	38104	7726	39515		4.38	Si
SLV 6	11.86	1579.89	-7611	-6338	10577	3.0298	3.0298	-7471	11911	10104	28547	38104	7726	38651		3.65	Si
SLV 5	10.08	5308.75	-12698	-10574	9110	3.0298	3.0298	-12465	12910	10952	28547	38104	7726	39498		4.34	Si
SLV 5	11.86	1604.34	-7545	-6283	10639	3.0298	3.0298	-7406	11898	10093	28547	38104	7726	38640		3.63	Si
SLD 5	10.08	2909.34	-13097	-10906	4294	3.0298	3.0298	-12856	12988	11018	28547	38104	7726	39565		9.21	Si
SLD 5	11.86	1001.21	-8528	-7102	4899	3.0298	3.0298	-8371	12091	10257	28547	38104	7726	38804		7.92	Si
SLV 7	10.08	-4250.52	-14571	-12134	-7984	3.0298	3.0298	-14303	13277	11264	28547	38104	7726	39810		4.99	Si
SLV 7	11.86	-851.87	-10888	-9066	-9839	3.0298	3.0298	-10687	12554	10650	28547	38104	7726	39197		3.98	Si
SLD 9	10.08	3332.85	-12870	-10717	4267	3.0298	3.0298	-12633	12943	10980	28547	38104	7726	39527		9.26	Si
SLD 9	11.86	1134.31	-8576	-7141	4883	3.0298	3.0298	-8418	12100	10265	28547	38104	7726	38812		7.95	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.969 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.47	10964	-9301	222.11	1208.68	5.44	Si
SLV 10	179667	0.47	11064	-9386	222.11	1218.88	5.49	Si
SLV 5	179667	0.47	11584	-9827	222.11	1271.4	5.72	Si
SLV 13	179667	0.47	11643	-9877	222.11	1277.41	5.75	Si
SLV 6	179667	0.47	11684	-9912	222.11	1281.51	5.77	Si
SLV 14	179667	0.47	11800	-10010	222.11	1293.12	5.82	Si
SLV 15	179667	0.47	12869	-10917	222.11	1399.63	6.3	Si
SLV 16	179667	0.47	13025	-11050	222.11	1415.04	6.37	Si
SLV 1	179667	0.47	13709	-11630	222.11	1481.99	6.67	Si
SLV 2	179667	0.47	13865	-11762	222.11	1497.2	6.74	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.969 Wa = 0.05 Ta = 0.0419

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-11065	-14141	678	1.309	1446.1	0.939	20.27231	8.18718	Si
SLV 11	-10999	-14039	678	1.316	1439.5	0.938	20.37603	8.18718	Si
SLV 8	-10954	-14672	-238	1.354	1434.9	0.938	20.97359	8.18718	Si
SLV 7	-10888	-14571	-238	1.361	1428.2	0.938	21.08196	8.18718	Si
SLV 6	-7611	-12800	-652	1.762	1097.5	0.923	27.73959	8.18718	Si
SLV 5	-7545	-12698	-652	1.774	1090.8	0.923	27.93585	8.18718	Si
SLV 10	-7722	-12268	263	1.783	1108.7	0.924	28.0416	8.18718	Si
SLV 9	-7656	-12167	263	1.795	1102.1	0.924	28.2378	8.18718	Si
SLV 16	-10044	-12893	1601	1.339	1342.8	0.935	20.82081	5.67954	Si
SLV 15	-9941	-12735	1601	1.35	1332.4	0.934	21.00176	5.67954	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.001	SLU 18	Si
V_SLU	26.453	SLU 50	Si
PF_SLV	2.789	SLV 9	Si
V_SLV	3.632	SLV 5	Si
PFFP_SLV	5.442	SLV 9	Si
R_SLV	2.476	SLV 12	Si

Maschio 129

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L6	L7	2.105	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	9.24	1259.97	-12792	-0.0000432	0.0003743	0.0035	2.105	10593.28	11547.18	11547.18	9.16	No	Si
SLU 52	11.04	247.67	-10277	-0.0000285	0.0003743	0.0035	2.105	8963.92	9436.72	9436.72	38.1	No	Si
SLU 61	9.24	1294.38	-13224	-0.0000447	0.0003743	0.0035	2.105	10851.14	11854.68	11854.68	9.16	No	Si
SLU 61	11.04	286.26	-10709	-0.00003	0.0003743	0.0035	2.105	9259.94	9793.29	9793.29	34.21	No	Si
SLU 44	9.24	1192.57	-11791	-0.0000399	0.0003743	0.0035	2.105	9971.4	10697.45	10697.45	8.97	No	Si
SLU 44	11.04	157.8	-9276	-0.0000251	0.0003743	0.0035	2.105	8253.73	8626.01	8626.01	54.66	No	Si
SLU 45	9.24	1234.38	-12386	-0.0000419	0.0003743	0.0035	2.105	10345.42	11202.06	11202.06	9.08	No	Si
SLU 45	11.04	213.61	-9871	-0.0000272	0.0003743	0.0035	2.105	8680.26	9106.1	9106.1	42.63	No	Si
SLU 46	9.24	1226.08	-12381	-0.0000418	0.0003743	0.0035	2.105	10342.11	11197.51	11197.51	9.13	No	Si
SLU 46	11.04	213.5	-9866	-0.0000271	0.0003743	0.0035	2.105	8676.48	9101.76	9101.76	42.63	No	Si
SLU 81	9.24	1376.36	-14427	-0.0000488	0.0003743	0.0035	2.105	11533.6	12596.37	12596.37	9.15	No	Si
SLU 81	11.04	400.18	-11880	-0.0000341	0.0003743	0.0035	2.105	10028.36	10773.1	10773.1	26.92	No	Si
SLU 64	9.24	1280.08	-12997	-0.000044	0.0003743	0.0035	2.105	10716.45	11699.47	11699.47	9.14	No	Si
SLU 64	11.04	271.79	-10450	-0.0000292	0.0003743	0.0035	2.105	9083.48	9579.34	9579.34	35.24	No	Si
SLU 43	9.24	1206.4	-11800	-0.00004	0.0003743	0.0035	2.105	9977.1	10705	10705	8.87	No	Si
SLU 43	11.04	157.99	-9285	-0.0000252	0.0003743	0.0035	2.105	8260.22	8633.17	8633.17	54.64	No	Si
SLU 47	9.24	1183.39	-11950	-0.0000403	0.0003743	0.0035	2.105	10072.78	10832.38	10832.38	9.15	No	Si
SLU 47	11.04	209.4	-9435	-0.000026	0.0003743	0.0035	2.105	8369.17	8754.01	8754.01	41.81	No	Si
SLU 60	9.24	1302.68	-13230	-0.0000448	0.0003743	0.0035	2.105	10854.3	11858.22	11858.22	9.1	No	Si
SLU 60	11.04	286.38	-10715	-0.00003	0.0003743	0.0035	2.105	9263.56	9797.72	9797.72	34.21	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	9.24	2093.74	-10143	-0.0000414	0.0005615	0.0035	2.105		9867.47	9867.47	4.71		Si
SLV 9	11.04	-891.89	-8929	-0.0000293	0.0005615	0.0035	2.105		9925.34	9925.34	11.13		Si
SLV 15	9.24	2340.37	-9213	-0.0000407	0.0005615	0.0035	2.105		9147.57	9147.57	3.91		Si
SLV 15	11.04	-2220.39	-7825	-0.0000361	0.0005615	0.0035	2.105		8920.05	8920.05	4.02		Si
SLV 14	9.24	2731	-9724	-0.000045	0.0005615	0.0035	2.105		9542.78	9542.78	3.49		Si
SLV 14	11.04	-2626.12	-8650	-0.0000413	0.0005615	0.0035	2.105		9676.62	9676.62	3.68		Si
SLV 2	9.24	-364.88	-10828	-0.0000304	0.0005615	0.0035	2.105		11597.82	11597.82	31.78		Si
SLV 2	11.04	2639.87	-8313	-0.0000405	0.0005615	0.0035	2.105		8363.92	8363.92	3.17		Si
SLV 3	9.24	-755.52	-10317	-0.0000319	0.0005615	0.0035	2.105		11150	11150	14.76		Si
SLV 3	11.04	3045.59	-7488	-0.0000416	0.0005615	0.0035	2.105		7608.38	7608.38	2.5		Si
SLV 16	9.24	2345.11	-9497	-0.0000415	0.0005615	0.0035	2.105		9366.85	9366.85	3.99		Si
SLV 16	11.04	-2403.73	-8109	-0.0000382	0.0005615	0.0035	2.105		9183.23	9183.23	3.82		Si
SLV 4	9.24	-750.77	-10601	-0.0000327	0.0005615	0.0035	2.105		11399.85	11399.85	15.18		Si
SLV 4	11.04	2862.25	-7772	-0.0000407	0.0005615	0.0035	2.105		7869.76	7869.76	2.75		Si
SLV 1	9.24	-369.63	-10544	-0.0000297	0.0005615	0.0035	2.105		11350.19	11350.19	30.71		Si
SLV 1	11.04	2823.21	-8029	-0.0000411	0.0005615	0.0035	2.105		8105.86	8105.86	2.87		Si
SLV 13	9.24	2726.25	-9440	-0.0000442	0.0005615	0.0035	2.105		9323.02	9323.02	3.42		Si
SLV 13	11.04	-2442.78	-8365	-0.0000392	0.0005615	0.0035	2.105		9418.68	9418.68	3.86		Si
SLV 10	9.24	2096.79	-10325	-0.0000419	0.0005615	0.0035	2.105		10009.62	10009.62	4.77		Si
SLV 10	11.04	-1009.72	-9112	-0.0000306	0.0005615	0.0035	2.105		10085.13	10085.13	9.99		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 64	9.24	1280.08	-12997	-10823	600	2.105	2.105	-18363	9393	5536	40441	17649	5368	23017	No	38.36	Si
SLU 64	11.04	271.79	-10450	-8702	600	2.105	2.105	-14765	8913	5253	40441	17649	5368	23017	No	38.36	Si
SLU 43	9.24	1206.4	-11800	-9826	622	2.105	2.105	-16671	9167	5403	40441	17649	5368	23017	No	36.99	Si
SLU 43	11.04	157.99	-9285	-7732	622	2.105	2.105	-13118	8694	5124	40441	17649	5368	23017	No	36.99	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	9.24	1192.57	-11791	-9818	615	2.105	2.105	-16659	9166	5402	40441	17649	5368	23017	No	37.45	Si
SLU 44	11.04	157.8	-9276	-7724	615	2.105	2.105	-13105	8692	5123	40441	17649	5368	23017	No	37.45	Si
SLU 53	9.24	1301.77	-13387	-11148	594	2.105	2.105	-18914	9466	5579	40441	17649	5368	23017	No	38.72	Si
SLU 53	11.04	303.48	-10872	-9053	594	2.105	2.105	-15360	8992	5300	40441	17649	5368	23017	No	38.72	Si
SLU 65	9.24	1266.25	-12988	-10815	593	2.105	2.105	-18350	9391	5535	40441	17649	5368	23017	No	38.85	Si
SLU 65	11.04	271.6	-10442	-8695	593	2.105	2.105	-14752	8911	5252	40441	17649	5368	23017	No	38.85	Si
SLU 61	9.24	1294.38	-13224	-11012	600	2.105	2.105	-18684	9436	5561	40441	17649	5368	23017	No	38.37	Si
SLU 61	11.04	286.26	-10709	-8918	600	2.105	2.105	-15131	8962	5282	40441	17649	5368	23017	No	38.37	Si
SLU 46	9.24	1226.08	-12381	-10310	602	2.105	2.105	-17492	9277	5468	40441	17649	5368	23017	No	38.21	Si
SLU 46	11.04	213.5	-9866	-8215	602	2.105	2.105	-13939	8803	5188	40441	17649	5368	23017	No	38.21	Si
SLU 52	9.24	1259.97	-12792	-10652	602	2.105	2.105	-18073	9354	5513	40441	17649	5368	23017	No	38.22	Si
SLU 52	11.04	247.67	-10277	-8558	602	2.105	2.105	-14520	8880	5234	40441	17649	5368	23017	No	38.22	Si
SLU 45	9.24	1234.38	-12386	-10314	607	2.105	2.105	-17499	9278	5468	40441	17649	5368	23017	No	37.93	Si
SLU 45	11.04	213.61	-9871	-8220	607	2.105	2.105	-13946	8804	5189	40441	17649	5368	23017	No	37.93	Si
SLU 60	9.24	1302.68	-13230	-11017	604	2.105	2.105	-18691	9437	5562	40441	17649	5368	23017	No	38.08	Si
SLU 60	11.04	286.38	-10715	-8922	604	2.105	2.105	-15138	8963	5283	40441	17649	5368	23017	No	38.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	9.24	-750.77	-10601	-8828	-1685	2.105	2.105	-14977	13412	7905	40441	26474	5368	31841		18.9	Si
SLV 4	11.04	2862.25	-7772	-6472	-1258	2.105	2.0526	-10980	12613	7249	40441	26474	5368	31841		25.3	Si
SLV 15	9.24	2340.37	-9213	-7672	2493	2.105	2.105	-13016	13020	7674	40441	26474	5368	31841		12.77	Si
SLV 15	11.04	-2220.39	-7825	-6516	1950	2.105	2.105	-11055	12628	7443	40441	26474	5368	31841		16.33	Si
SLV 1	9.24	-369.63	-10544	-8780	-1672	2.105	2.105	-14897	13396	7896	40441	26474	5368	31841		19.04	Si
SLV 1	11.04	2823.21	-8029	-6685	-1129	2.105	2.1025	-11343	12685	7468	40441	26474	5368	31841		28.21	Si
SLV 2	9.24	-364.88	-10828	-9017	-1567	2.105	2.105	-15298	13476	7943	40441	26474	5368	31841		20.31	Si
SLV 2	11.04	2639.87	-8313	-6922	-1024	2.105	2.105	-11744	12766	7524	40441	26474	5368	31841		31.09	Si
SLV 13	9.24	2726.25	-9440	-7861	2611	2.105	2.105	-13338	13084	7712	40441	26474	5368	31841		12.2	Si
SLV 13	11.04	-2442.78	-8365	-6966	2184	2.105	2.105	-11819	12780	7533	40441	26474	5368	31841		14.58	Si
SLV 10	9.24	2096.79	-10325	-8598	1334	2.105	2.105	-14588	13334	7859	40441	26474	5368	31841		23.86	Si
SLV 10	11.04	-1009.72	-9112	-7588	1384	2.105	2.105	-12874	12991	7657	40441	26474	5368	31841		23.01	Si
SLD 14	9.24	1735.2	-9893	-8238	1426	2.105	2.105	-13978	13212	7787	40441	26474	5368	31841		22.32	Si
SLD 14	11.04	-1004.08	-8317	-6926	1245	2.105	2.105	-11751	12767	7525	40441	26474	5368	31841		25.57	Si
SLV 14	9.24	2731	-9724	-8098	2715	2.105	2.105	-13739	13164	7759	40441	26474	5368	31841		11.73	Si
SLV 14	11.04	-2626.12	-8650	-7203	2289	2.105	2.105	-12220	12861	7580	40441	26474	5368	31841		13.91	Si
SLV 3	9.24	-755.52	-10317	-8591	-1789	2.105	2.105	-14576	13332	7858	40441	26474	5368	31841		17.8	Si
SLV 3	11.04	3045.59	-7488	-6235	-1363	2.105	1.9372	-10579	12532	6798	40441	26474	5368	31841		23.36	Si
SLV 16	9.24	2345.11	-9497	-7908	2598	2.105	2.105	-13418	13100	7721	40441	26474	5368	31841		12.26	Si
SLV 16	11.04	-2403.73	-8109	-6752	2054	2.105	2.105	-11456	12708	7490	40441	26474	5368	31841		15.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.46	14239	-8392	255.61	1065.38	4.17	Si
SLV 7	179667	0.46	14329	-8445	255.61	1071.4	4.19	Si
SLV 15	179667	0.46	14514	-8554	255.61	1083.8	4.24	Si
SLV 12	179667	0.46	14549	-8575	255.61	1086.12	4.25	Si
SLV 8	179667	0.46	14639	-8628	255.61	1092.12	4.27	Si
SLV 3	179667	0.46	14813	-8731	255.61	1103.76	4.32	Si
SLV 13	179667	0.46	14913	-8790	255.61	1110.4	4.34	Si
SLV 16	179667	0.46	14996	-8839	255.61	1115.89	4.37	Si
SLV 1	179667	0.46	15213	-8966	255.61	1130.24	4.42	Si
SLV 4	179667	0.46	15295	-9015	255.61	1135.69	4.44	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-8349	-8479	532	1.152	1146.1	0.931	17.99753	14.55598	Si
SLV 9	-8137	-8384	532	1.176	1124.7	0.929	18.38713	14.55598	Si
SLV 6	-7447	-10329	514	1.262	1055.2	0.926	19.81153	14.55598	Si
SLV 5	-7234	-10234	514	1.291	1033.8	0.925	20.2851	14.55598	Si
SLV 12	-6305	-8312	-510	1.433	940.5	0.919	22.66501	14.55598	Si
SLV 11	-6093	-8216	-510	1.47	919.2	0.918	23.28807	14.55598	Si
SLV 8	-5403	-10162	-528	1.604	850.3	0.913	25.53072	14.55598	Si
SLV 7	-5191	-10066	-528	1.651	829.1	0.911	26.32446	14.55598	Si
SLV 14	-8745	-6289	188	1.143	1186.2	0.932	17.81781	7.56668	Si
SLV 13	-8415	-6141	189	1.179	1152.8	0.931	18.40133	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.873	SLU 43	Si
V_SLU	36.989	SLU 43	Si
PF_SLV	2.498	SLV 3	Si
V_SLV	11.728	SLV 14	Si
PFFP_SLV	4.168	SLV 11	Si
R_SLV	1.236	SLV 10	Si

Maschio 130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 62	9.24	3304.1	-31593	-0.0000519	0.0003743	0.0035	3.98	45363.42	50184.27	50184.27	15.19	No	Si
SLU 62	11.04	-1021.31	-27384	-0.0000405	0.0003743	0.0035	3.98	41341.84	49572.78	49572.78	48.54	No	Si
SLU 61	9.24	3258.82	-30776	-0.0000505	0.0003743	0.0035	3.98	44631.67	49208.31	49208.31	15.1	No	Si
SLU 61	11.04	-1229.23	-26568	-0.0000397	0.0003743	0.0035	3.98	40489.54	48482.03	48482.03	39.44	No	Si
SLU 76	9.24	3425.1	-33562	-0.0000552	0.0003743	0.0035	3.98	47032.11	52560.72	52560.72	15.35	No	Si
SLU 76	11.04	-943.91	-29291	-0.0000431	0.0003743	0.0035	3.98	43241.19	52044.62	52044.62	55.14	No	Si
SLU 73	9.24	3396.81	-32801	-0.000054	0.0003743	0.0035	3.98	46403.43	51639.1	51639.1	15.2	No	Si
SLU 73	11.04	-1153.06	-28530	-0.0000425	0.0003743	0.0035	3.98	42498.48	51082.27	51082.27	44.3	No	Si
SLU 60	9.24	3275.81	-30832	-0.0000506	0.0003743	0.0035	3.98	44682.15	49274.4	49274.4	15.04	No	Si
SLU 60	11.04	-1230.46	-26623	-0.0000398	0.0003743	0.0035	3.98	40548.21	48555.77	48555.77	39.46	No	Si
SLU 84	9.24	3584.8	-34681	-0.0000573	0.0003743	0.0035	3.98	47919.39	53927.93	53927.93	15.04	No	Si
SLU 84	11.04	-1021.97	-30410	-0.000045	0.0003743	0.0035	3.98	44296.11	53437.98	53437.98	52.29	No	Si
SLU 82	9.24	3556.51	-33920	-0.0000561	0.0003743	0.0035	3.98	47320.59	52996.27	52996.27	14.9	No	Si
SLU 82	11.04	-1231.12	-29649	-0.0000443	0.0003743	0.0035	3.98	43583.27	52490.78	52490.78	42.64	No	Si
SLU 63	9.24	3287.1	-31537	-0.0000517	0.0003743	0.0035	3.98	45314.42	50117.69	50117.69	15.25	No	Si
SLU 63	11.04	-1020.08	-27329	-0.0000404	0.0003743	0.0035	3.98	41284.65	49498.23	49498.23	48.52	No	Si
SLU 81	9.24	3573.5	-33976	-0.0000562	0.0003743	0.0035	3.98	47364.94	53063.99	53063.99	14.85	No	Si
SLU 81	11.04	-1232.35	-29705	-0.0000444	0.0003743	0.0035	3.98	43635.94	52559.65	52559.65	42.65	No	Si
SLU 83	9.24	3601.79	-34737	-0.0000574	0.0003743	0.0035	3.98	47962.27	53996.14	53996.14	14.99	No	Si
SLU 83	11.04	-1023.2	-30466	-0.0000451	0.0003743	0.0035	3.98	44347.3	53507.48	53507.48	52.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	9.24	-6122.69	-28173	-0.0000515	0.0005615	0.0035	3.98		53545.34	53545.34	8.75		Si
SLV 1	11.04	10944.8	-24945	-0.000057	0.0005615	0.0035	3.98		43912.48	43912.48	4.01		Si
SLV 4	9.24	-6909.08	-26330	-0.0000505	0.0005615	0.0035	3.98		50728.92	50728.92	7.34		Si
SLV 4	11.04	11032.19	-23223	-0.0000546	0.0005615	0.0035	3.98		41344.37	41344.37	3.75		Si
SLV 14	9.24	11930	-20241	-0.0000522	0.0005615	0.0035	3.98		36949.09	36949.09	3.1		Si
SLV 14	11.04	-13536.39	-16804	-0.0000512	0.0005615	0.0035	3.98		35365.74	35365.74	2.61		Si
SLV 16	9.24	10926.49	-18610	-0.0000477	0.0005615	0.0035	3.98		34571.46	34571.46	3.16		Si
SLV 16	11.04	-12546.79	-15294	-0.0000471	0.0005615	0.0035	3.98		32776.22	32776.22	2.61		Si
SLV 2	9.24	-5905.57	-27962	-0.0000507	0.0005615	0.0035	3.98		53220.12	53220.12	9.01		Si
SLV 2	11.04	10042.59	-24734	-0.0000548	0.0005615	0.0035	3.98		43595.53	43595.53	4.34		Si
SLD 14	9.24	6482.19	-22053	-0.0000434	0.0005615	0.0035	3.98		39612.18	39612.18	6.11		Si
SLD 14	11.04	-6248.61	-18712	-0.0000382	0.0005615	0.0035	3.98		38536.94	38536.94	6.17		Si
SLD 13	9.24	6388.98	-22144	-0.0000433	0.0005615	0.0035	3.98		39746.42	39746.42	6.22		Si
SLD 13	11.04	-5861.26	-18803	-0.0000375	0.0005615	0.0035	3.98		38689.2	38689.2	6.6		Si
SLV 3	9.24	-7126.2	-26541	-0.0000512	0.0005615	0.0035	3.98		51050.59	51050.59	7.16		Si
SLV 3	11.04	11934.39	-23435	-0.0000569	0.0005615	0.0035	3.98		41658.9	41658.9	3.49		Si
SLV 13	9.24	11712.89	-20453	-0.000052	0.0005615	0.0035	3.98		37258.98	37258.98	3.18		Si
SLV 13	11.04	-12634.18	-17016	-0.0000492	0.0005615	0.0035	3.98		35715.39	35715.39	2.83		Si
SLV 15	9.24	10709.37	-18821	-0.0000476	0.0005615	0.0035	3.98		34878.85	34878.85	3.26		Si
SLV 15	11.04	-11644.59	-15506	-0.000045	0.0005615	0.0035	3.98		33147.86	33147.86	2.85		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	9.24	3497.49	-34493	-28723	2493	3.98	3.98	-25774	10381	11569	40441	33370	10149	43519	No	17.45	Si
SLU 74	11.04	-1004.26	-30222	-25166	2493	3.98	3.98	-22583	9955	11094	40441	33370	10149	43519	No	17.45	Si
SLU 84	9.24	3584.8	-34681	-28880	2552	3.98	3.98	-25915	10400	11589	40441	33370	10149	43519	No	17.06	Si
SLU 84	11.04	-1021.97	-30410	-25323	2552	3.98	3.98	-22723	9974	11115	40441	33370	10149	43519	No	17.06	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	9.24	3275.81	-30832	-25674	2496	3.98	3.98	-23038	10016	11162	40441	33370	10149	43519	No	17.44	Si
SLU 60	11.04	-1230.46	-26623	-22169	2496	3.98	3.98	-19894	9597	10695	40441	33370	10149	43519	No	17.44	Si
SLU 73	9.24	3396.81	-32801	-27314	2520	3.98	3.98	-24510	10212	11381	40441	33370	10149	43519	No	17.27	Si
SLU 73	11.04	-1153.06	-28530	-23758	2520	3.98	3.98	-21319	9787	10907	40441	33370	10149	43519	No	17.27	Si
SLU 81	9.24	3573.5	-33976	-28292	2662	3.98	3.98	-25388	10329	11511	40441	33370	10149	43519	No	16.35	Si
SLU 81	11.04	-1232.35	-29705	-24735	2662	3.98	3.98	-22196	9904	11037	40441	33370	10149	43519	No	16.35	Si
SLU 82	9.24	3556.51	-33920	-28246	2652	3.98	3.98	-25346	10324	11505	40441	33370	10149	43519	No	16.41	Si
SLU 82	11.04	-1231.12	-29649	-24689	2652	3.98	3.98	-22155	9898	11031	40441	33370	10149	43519	No	16.41	Si
SLU 83	9.24	3601.79	-34737	-28926	2562	3.98	3.98	-25956	10405	11596	40441	33370	10149	43519	No	16.99	Si
SLU 83	11.04	-1023.2	-30466	-25369	2562	3.98	3.98	-22765	9980	11121	40441	33370	10149	43519	No	16.99	Si
SLU 76	9.24	3425.1	-33562	-27948	2420	3.98	3.98	-25079	10288	11465	40441	33370	10149	43519	No	17.99	Si
SLU 76	11.04	-943.91	-29291	-24391	2420	3.98	3.98	-21887	9863	10991	40441	33370	10149	43519	No	17.99	Si
SLU 75	9.24	3480.49	-34437	-28676	2483	3.98	3.98	-25733	10375	11562	40441	33370	10149	43519	No	17.53	Si
SLU 75	11.04	-1003.03	-30166	-25120	2483	3.98	3.98	-22541	9950	11088	40441	33370	10149	43519	No	17.53	Si
SLU 61	9.24	3258.82	-30776	-25628	2486	3.98	3.98	-22997	10011	11156	40441	33370	10149	43519	No	17.51	Si
SLU 61	11.04	-1229.23	-26568	-22123	2486	3.98	3.98	-19852	9591	10689	40441	33370	10149	43519	No	17.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	9.24	6819.53	-24885	-20722	7224	3.98	3.98	-18595	14136	15753	40441	50055	10149	56194		7.78	Si
SLV 10	11.04	-6277.09	-21379	-17803	6802	3.98	3.98	-15975	13612	15169	40441	50055	10149	55610		8.18	Si
SLV 14	9.24	11930	-20241	-16855	14537	3.98	3.98	-15125	13442	14979	40441	50055	10149	55420		3.81	Si
SLV 14	11.04	-13536.39	-16804	-13993	13503	3.98	3.5534	-14139	13244	13178	40441	50055	10149	53619		3.97	Si
SLV 15	9.24	10709.37	-18821	-15673	12916	3.98	3.98	-14064	13229	14743	40441	50055	10149	55184		4.27	Si
SLV 15	11.04	-11644.59	-15506	-12912	11956	3.98	3.717	-12475	12912	13438	40441	50055	10149	53879		4.51	Si
SLV 3	9.24	-7126.2	-26541	-22101	-10990	3.98	3.98	-19833	14383	16029	40441	50055	10149	56470		5.14	Si
SLV 3	11.04	11934.39	-23435	-19515	-9956	3.98	3.98	-17511	13919	15511	40441	50055	10149	55952		5.62	Si
SLV 13	9.24	11712.89	-20453	-17032	13915	3.98	3.98	-15283	13473	15015	40441	50055	10149	55456		3.99	Si
SLV 13	11.04	-12634.18	-17016	-14169	12881	3.98	3.7425	-13605	13138	13767	40441	50055	10149	54208		4.21	Si
SLD 14	9.24	6482.19	-22053	-18364	7235	3.98	3.98	-16479	13712	15281	40441	50055	10149	55722		7.7	Si
SLD 14	11.04	-6248.61	-18712	-15582	6792	3.98	3.98	-13982	13213	14725	40441	50055	10149	55166		8.12	Si
SLV 16	9.24	10926.49	-18610	-15496	13538	3.98	3.98	-13906	13198	14708	40441	50055	10149	55149		4.07	Si
SLV 16	11.04	-12546.79	-15294	-12736	12578	3.98	3.5089	-13043	13025	12797	40441	50055	10149	53238		4.23	Si
SLV 4	9.24	-6909.08	-26330	-21925	-10368	3.98	3.98	-19674	14352	15993	40441	50055	10149	56434		5.44	Si
SLV 4	11.04	11032.19	-23223	-19338	-9334	3.98	3.98	-17353	13887	15476	40441	50055	10149	55917		5.99	Si
SLV 2	9.24	-5905.57	-27962	-23284	-9369	3.98	3.98	-20894	14595	16265	40441	50055	10149	56706		6.05	Si
SLV 2	11.04	10042.59	-24734	-20596	-8409	3.98	3.98	-18482	14113	15728	40441	50055	10149	56169		6.68	Si
SLV 1	9.24	-6122.69	-28173	-23460	-9991	3.98	3.98	-21052	14627	16300	40441	50055	10149	56741		5.68	Si
SLV 1	11.04	10944.8	-24945	-20772	-9031	3.98	3.98	-18640	14145	15763	40441	50055	10149	56204		6.22	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.46	14808	-16502	483.29	2086.27	4.32	Si
SLV 15	179667	0.46	14998	-16714	483.29	2110.12	4.37	Si
SLV 12	179667	0.46	15324	-17077	483.29	2150.88	4.45	Si
SLV 11	179667	0.46	15446	-17213	483.29	2166.09	4.48	Si
SLV 14	179667	0.46	16585	-18482	483.29	2306.49	4.77	Si
SLV 13	179667	0.46	16775	-18694	483.29	2329.66	4.82	Si
SLV 8	179667	0.46	17514	-19517	483.29	2419.08	5.01	Si
SLV 7	179667	0.46	17636	-19654	483.29	2433.75	5.04	Si
SLV 10	179667	0.46	21247	-23677	483.29	2853.65	5.9	Si
SLV 9	179667	0.46	21369	-23813	483.29	2867.38	5.93	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-18044	-27601	1158	1.029	2395.2	0.936	15.97517	14.55598	Si
SLV 6	-17981	-27357	1158	1.032	2388.8	0.936	16.02274	14.55598	Si
SLV 9	-17165	-23424	1027	1.077	2306.3	0.934	16.76215	14.55598	Si
SLV 10	-17102	-23180	1027	1.08	2300	0.934	16.81433	14.55598	Si
SLV 7	-12892	-22939	-1025	1.347	1875.7	0.922	21.23119	14.55598	Si
SLV 8	-12829	-22695	-1025	1.352	1869.3	0.922	21.3154	14.55598	Si
SLV 11	-12013	-18761	-1156	1.413	1787.4	0.919	22.33368	14.55598	Si
SLV 12	-11950	-18517	-1156	1.418	1781.1	0.919	22.42746	14.55598	Si
SLV 1	-17284	-30910	547	1.094	2318.4	0.934	17.0235	7.56668	Si
SLV 2	-17186	-30531	547	1.099	2308.5	0.934	17.10566	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.849	SLU 81	Si
V_SLU	16.346	SLU 81	Si
PF_SLV	2.612	SLV 16	Si
V_SLV	3.812	SLV 14	Si
PFFP_SLV	4.317	SLV 16	Si
R_SLV	1.097	SLV 5	Si

Maschio 131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 38	9.24	-416.44	-30144	-0.0000433	0.0003743	0.0035	3.98	44049.14	53105.45	53105.45	127.52	No	Si
SLU 38	11.04	-803.65	-26740	-0.000039	0.0003743	0.0035	3.98	40670.99	48710.7	48710.7	60.61	No	Si
SLU 42	9.24	-366.99	-30401	-0.0000436	0.0003743	0.0035	3.98	44287.9	53426.86	53426.86	145.58	No	Si
SLU 42	11.04	-799.09	-26997	-0.0000394	0.0003743	0.0035	3.98	40940.48	49053.81	49053.81	61.39	No	Si
SLU 77	9.24	-528.53	-36704	-0.0000536	0.0003743	0.0035	3.98	49412.1	60602.9	60602.9	114.66	No	Si
SLU 77	11.04	-838.67	-32319	-0.0000475	0.0003743	0.0035	3.98	45994.24	55781.16	55781.16	66.51	No	Si
SLU 32	9.24	-378.25	-30163	-0.0000432	0.0003743	0.0035	3.98	44067.28	53129.72	53129.72	140.46	No	Si
SLU 32	11.04	-737.01	-26759	-0.0000389	0.0003743	0.0035	3.98	40691.46	48736.61	48736.61	66.13	No	Si
SLU 78	9.24	-537.09	-36662	-0.0000535	0.0003743	0.0035	3.98	49382.35	60569.05	60569.05	112.77	No	Si
SLU 78	11.04	-834.72	-32276	-0.0000474	0.0003743	0.0035	3.98	45957.99	55730.04	55730.04	66.77	No	Si
SLU 37	9.24	-407.88	-30186	-0.0000433	0.0003743	0.0035	3.98	44088.55	53158.21	53158.21	130.33	No	Si
SLU 37	11.04	-807.6	-26782	-0.0000391	0.0003743	0.0035	3.98	40715.46	48767.02	48767.02	60.38	No	Si
SLU 33	9.24	-386.81	-30121	-0.0000432	0.0003743	0.0035	3.98	44027.83	53076.97	53076.97	137.22	No	Si
SLU 33	11.04	-733.05	-26717	-0.0000388	0.0003743	0.0035	3.98	40646.96	48680.3	48680.3	66.41	No	Si
SLU 35	9.24	-393.26	-31012	-0.0000445	0.0003743	0.0035	3.98	44845.67	54186.43	54186.43	137.79	No	Si
SLU 35	11.04	-829.94	-27608	-0.0000404	0.0003743	0.0035	3.98	41571.22	49873.77	49873.77	60.09	No	Si
SLU 41	9.24	-358.43	-30444	-0.0000436	0.0003743	0.0035	3.98	44326.94	53479.81	53479.81	149.21	No	Si
SLU 41	11.04	-803.04	-27039	-0.0000395	0.0003743	0.0035	3.98	40984.57	49110.34	49110.34	61.16	No	Si
SLU 36	9.24	-401.83	-30970	-0.0000445	0.0003743	0.0035	3.98	44807.48	54134.24	54134.24	134.72	No	Si
SLU 36	11.04	-825.99	-27566	-0.0000403	0.0003743	0.0035	3.98	41527.97	49816.78	49816.78	60.31	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	9.24	-13062.83	-22072	-0.0000572	0.0005615	0.0035	3.98		44033.15	44033.15	3.37		Si
SLV 3	11.04	14859.91	-18626	-0.0000567	0.0005615	0.0035	3.98		34594.72	34594.72	2.33		Si
SLV 16	9.24	11096.9	-24773	-0.000057	0.0005615	0.0035	3.98		43654.39	43654.39	3.93		Si
SLV 16	11.04	-14618.89	-21447	-0.0000596	0.0005615	0.0035	3.98		43040.34	43040.34	2.94		Si
SLD 3	9.24	-5836.33	-23356	-0.0000439	0.0005615	0.0035	3.98		46085.35	46085.35	7.9		Si
SLD 3	11.04	6156.6	-19959	-0.0000397	0.0005615	0.0035	3.98		36536.66	36536.66	5.93		Si
SLV 4	9.24	-12582.1	-22070	-0.0000562	0.0005615	0.0035	3.98		44028.75	44028.75	3.5		Si
SLV 4	11.04	13797.95	-18623	-0.000054	0.0005615	0.0035	3.98		34590.71	34590.71	2.51		Si
SLV 14	9.24	12197.22	-26594	-0.0000621	0.0005615	0.0035	3.98		46391.78	46391.78	3.8		Si
SLV 14	11.04	-15551.14	-23322	-0.0000644	0.0005615	0.0035	3.98		46031	46031	2.96		Si
SLV 2	9.24	-11481.77	-23891	-0.0000566	0.0005615	0.0035	3.98		46947.23	46947.23	4.09		Si
SLV 2	11.04	12865.7	-20498	-0.0000545	0.0005615	0.0035	3.98		37324.46	37324.46	2.9		Si
SLV 13	9.24	11716.49	-26597	-0.0000611	0.0005615	0.0035	3.98		46395.95	46395.95	3.96		Si
SLV 13	11.04	-14489.18	-23325	-0.0000621	0.0005615	0.0035	3.98		46035.45	46035.45	3.18		Si
SLV 15	9.24	10616.17	-24776	-0.000056	0.0005615	0.0035	3.98		43658.53	43658.53	4.11		Si
SLV 15	11.04	-13556.94	-21450	-0.0000574	0.0005615	0.0035	3.98		43044.71	43044.71	3.18		Si
SLV 7	9.24	-5973	-20893	-0.0000407	0.0005615	0.0035	3.98		42164.45	42164.45	7.06		Si
SLV 7	11.04	5811.91	-17426	-0.0000354	0.0005615	0.0035	3.98		32774.58	32774.58	5.64		Si
SLV 1	9.24	-11962.51	-23894	-0.0000576	0.0005615	0.0035	3.98		46951.69	46951.69	3.92		Si
SLV 1	11.04	13927.66	-20501	-0.0000568	0.0005615	0.0035	3.98		37328.5	37328.5	2.68		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 37	9.24	-407.88	-30186	-25137	217	3.98	3.98	-22556	9952	11090	40441	33370	10149	43519	No	200.1	Si
SLU 37	11.04	-807.6	-26782	-22302	217	3.98	3.98	-20012	9613	10712	40441	33370	10149	43519	No	200.1	Si
SLU 41	9.24	-358.43	-30444	-25351	242	3.98	3.98	-22748	9978	11119	40441	33370	10149	43519	No	179.51	Si
SLU 41	11.04	-803.04	-27039	-22516	242	3.98	3.98	-20205	9638	10741	40441	33370	10149	43519	No	179.51	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	9.24	-604.31	-28293	-23560	-210	3.98	3.98	-21141	9763	10880	40441	33370	10149	43519	No	207.23	Si
SLU 44	11.04	-237.31	-23970	-19960	-210	3.98	3.98	-17911	9333	10400	40441	33370	10149	43519	No	207.23	Si
SLU 39	9.24	-343.41	-29595	-24644	199	3.98	3.98	-22114	9893	11025	40441	33370	10149	43519	No	218.54	Si
SLU 39	11.04	-710.1	-26190	-21809	199	3.98	3.98	-19570	9554	10647	40441	33370	10149	43519	No	218.54	Si
SLU 32	9.24	-378.25	-30163	-25118	195	3.98	3.98	-22539	9950	11088	40441	33370	10149	43519	No	223.49	Si
SLU 32	11.04	-737.01	-26759	-22283	195	3.98	3.98	-19995	9610	10710	40441	33370	10149	43519	No	223.49	Si
SLU 38	9.24	-416.44	-30144	-25101	211	3.98	3.98	-22525	9948	11086	40441	33370	10149	43519	No	206.71	Si
SLU 38	11.04	-803.65	-26740	-22266	211	3.98	3.98	-19981	9609	10708	40441	33370	10149	43519	No	206.71	Si
SLU 36	9.24	-401.83	-30970	-25789	231	3.98	3.98	-23142	10030	11177	40441	33370	10149	43519	No	188.34	Si
SLU 36	11.04	-825.99	-27566	-22954	231	3.98	3.98	-20598	9691	10799	40441	33370	10149	43519	No	188.34	Si
SLU 43	9.24	-590.04	-28363	-23618	-198	3.98	3.98	-21194	9770	10888	40441	33370	10149	43519	No	219.34	Si
SLU 43	11.04	-243.9	-24040	-20019	-198	3.98	3.98	-17964	9340	10408	40441	33370	10149	43519	No	219.34	Si
SLU 42	9.24	-366.99	-30401	-25316	235	3.98	3.98	-22717	9973	11114	40441	33370	10149	43519	No	184.81	Si
SLU 42	11.04	-799.09	-26997	-22481	235	3.98	3.98	-20173	9634	10736	40441	33370	10149	43519	No	184.81	Si
SLU 35	9.24	-393.26	-31012	-25824	238	3.98	3.98	-23173	10034	11182	40441	33370	10149	43519	No	182.84	Si
SLU 35	11.04	-829.94	-27608	-22989	238	3.98	3.98	-20629	9695	10804	40441	33370	10149	43519	No	182.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	9.24	10616.17	-24776	-20631	14097	3.98	3.98	-18513	14119	15735	40441	50055	10149	56176		3.98	Si
SLV 15	11.04	-13556.94	-21450	-17862	13046	3.98	3.98	-16028	13622	15181	40441	50055	10149	55622		4.26	Si
SLV 4	9.24	-12582.1	-22070	-18378	-15270	3.98	3.98	-16491	13715	15284	40441	50055	10149	55725		3.65	Si
SLV 4	11.04	13797.95	-18623	-15508	-14270	3.98	3.7473	-13916	13200	13850	40441	50055	10149	54291		3.8	Si
SLD 3	9.24	-5836.33	-23356	-19449	-6927	3.98	3.98	-17452	13907	15498	40441	50055	10149	55939		8.08	Si
SLD 3	11.04	6156.6	-19959	-16620	-6500	3.98	3.98	-14914	13400	14932	40441	50055	10149	55373		8.52	Si
SLD 14	9.24	4970.73	-25311	-21077	6821	3.98	3.98	-18913	14199	15824	40441	50055	10149	56265		8.25	Si
SLD 14	11.04	-6847.84	-21988	-18310	6394	3.98	3.98	-16430	13703	15270	40441	50055	10149	55711		8.71	Si
SLV 1	9.24	-11962.51	-23894	-19897	-15060	3.98	3.98	-17854	13987	15588	40441	50055	10149	56029		3.72	Si
SLV 1	11.04	13927.66	-20501	-17071	-14009	3.98	3.9319	-15319	13480	14841	40441	50055	10149	55282		3.95	Si
SLV 13	9.24	11716.49	-26597	-22148	15164	3.98	3.98	-19874	14392	16038	40441	50055	10149	56479		3.72	Si
SLV 13	11.04	-14489.18	-23325	-19423	14163	3.98	3.98	-17429	13902	15493	40441	50055	10149	55934		3.95	Si
SLV 16	9.24	11096.9	-24773	-20629	14954	3.98	3.98	-18511	14119	15734	40441	50055	10149	56175		3.76	Si
SLV 16	11.04	-14618.89	-21447	-17859	13903	3.98	3.9251	-16378	13692	15048	40441	50055	10149	55489		3.99	Si
SLV 14	9.24	12197.22	-26594	-22146	16021	3.98	3.98	-19872	14391	16037	40441	50055	10149	56478		3.53	Si
SLV 14	11.04	-15551.14	-23322	-19421	15021	3.98	3.9696	-17427	13902	15452	40441	50055	10149	55893		3.72	Si
SLV 2	9.24	-11481.77	-23891	-19894	-14203	3.98	3.98	-17852	13987	15587	40441	50055	10149	56028		3.94	Si
SLV 2	11.04	12865.7	-20498	-17069	-13152	3.98	3.98	-15317	13480	15022	40441	50055	10149	55463		4.22	Si
SLV 3	9.24	-13062.83	-22072	-18380	-16128	3.98	3.98	-16493	13715	15284	40441	50055	10149	55725		3.46	Si
SLV 3	11.04	14859.91	-18626	-15510	-15127	3.98	3.5765	-13918	13200	13219	40441	50055	10149	53660		3.55	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.46	16824	-18748	483.29	2335.6	4.83	Si
SLV 7	179667	0.46	16825	-18750	483.29	2335.8	4.83	Si
SLV 12	179667	0.46	17558	-19567	483.29	2424.37	5.02	Si
SLV 11	179667	0.46	17559	-19568	483.29	2424.57	5.02	Si
SLV 4	179667	0.46	18188	-20269	483.29	2499.68	5.17	Si
SLV 3	179667	0.46	18191	-20272	483.29	2499.98	5.17	Si
SLV 2	179667	0.46	20092	-22391	483.29	2722.31	5.63	Si
SLV 1	179667	0.46	20095	-22394	483.29	2722.59	5.63	Si
SLV 16	179667	0.46	20636	-22997	483.29	2784.48	5.76	Si
SLV 15	179667	0.46	20638	-22999	483.29	2784.76	5.76	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-18850	-28623	1075	0.997	2476.8	0.938	15.45061	14.55598	Si
SLV 9	-18845	-28595	1075	0.997	2476.2	0.938	15.45429	14.55598	Si
SLV 6	-18398	-27166	1019	1.019	2431	0.937	15.81289	14.55598	Si
SLV 5	-18392	-27138	1019	1.019	2430.4	0.937	15.81674	14.55598	Si
SLV 12	-13315	-22006	-1016	1.315	1918.2	0.924	20.69291	14.55598	Si
SLV 11	-13310	-21978	-1016	1.315	1917.6	0.923	20.6996	14.55598	Si
SLV 8	-12862	-20549	-1072	1.347	1872.7	0.922	21.22549	14.55598	Si
SLV 7	-12857	-20521	-1072	1.347	1872.2	0.922	21.23255	14.55598	Si
SLV 14	-17442	-28016	409	1.093	2334.4	0.935	16.99548	7.56668	Si
SLV 13	-17434	-27972	409	1.093	2333.5	0.935	17.00225	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	60.093	SLU 35	Si
V_SLU	179.512	SLU 41	Si
PF_SLV	2.328	SLV 3	Si
V_SLV	3.455	SLV 3	Si
PFFP_SLV	4.833	SLV 8	Si
R_SLV	1.061	SLV 10	Si

Maschio 132

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.093	6.526	L6	L7	1.965	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	9.24	-1335.44	-12446	-0.0000469	0.0003743	0.0035	1.965	9511.73	11323.21	11323.21	8.48	No	Si
SLU 50	11.04	-479.99	-9961	-0.0000319	0.0003743	0.0035	1.965	8046.27	9564.48	9564.48	19.93	No	Si
SLU 45	9.24	-1356.23	-12515	-0.0000473	0.0003743	0.0035	1.965	9549.27	11368.24	11368.24	8.38	No	Si
SLU 45	11.04	-470.98	-10030	-0.000032	0.0003743	0.0035	1.965	8089.83	9615.98	9615.98	20.42	No	Si
SLU 47	9.24	-1336.49	-12143	-0.000046	0.0003743	0.0035	1.965	9344.41	11117.19	11117.19	8.32	No	Si
SLU 47	11.04	-435.45	-9657	-0.0000306	0.0003743	0.0035	1.965	7852.49	9339.36	9339.36	21.45	No	Si
SLU 49	9.24	-1364.84	-12815	-0.0000483	0.0003743	0.0035	1.965	9710.51	11565.03	11565.03	8.47	No	Si
SLU 49	11.04	-502.88	-10329	-0.0000332	0.0003743	0.0035	1.965	8277.19	9838.31	9838.31	19.56	No	Si
SLU 51	9.24	-1339.06	-12445	-0.0000469	0.0003743	0.0035	1.965	9510.92	11322.24	11322.24	8.46	No	Si
SLU 51	11.04	-475.25	-9959	-0.0000318	0.0003743	0.0035	1.965	8045.33	9563.37	9563.37	20.12	No	Si
SLU 44	9.24	-1331.51	-11842	-0.000045	0.0003743	0.0035	1.965	9175.27	10908.61	10908.61	8.19	No	Si
SLU 44	11.04	-398.81	-9356	-0.0000294	0.0003743	0.0035	1.965	7657.1	9118.02	9118.02	22.86	No	Si
SLU 43	9.24	-1325.47	-11844	-0.000045	0.0003743	0.0035	1.965	9176.68	10910.34	10910.34	8.23	No	Si
SLU 43	11.04	-406.7	-9358	-0.0000295	0.0003743	0.0035	1.965	7658.72	9119.83	9119.83	22.42	No	Si
SLU 48	9.24	-1361.22	-12816	-0.0000482	0.0003743	0.0035	1.965	9711.3	11566.01	11566.01	8.5	No	Si
SLU 48	11.04	-507.62	-10331	-0.0000332	0.0003743	0.0035	1.965	8278.11	9839.41	9839.41	19.38	No	Si
SLU 65	9.24	-1349.06	-13114	-0.0000491	0.0003743	0.0035	1.965	9868.15	11762.96	11762.96	8.72	No	Si
SLU 65	11.04	-574.55	-10598	-0.0000346	0.0003743	0.0035	1.965	8442.93	10034.59	10034.59	17.47	No	Si
SLU 46	9.24	-1359.86	-12514	-0.0000473	0.0003743	0.0035	1.965	9548.47	11367.27	11367.27	8.36	No	Si
SLU 46	11.04	-466.24	-10028	-0.000032	0.0003743	0.0035	1.965	8088.89	9614.86	9614.86	20.62	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	9.24	-4791.88	-9315	-0.0000731	0.0005615	0.0035	1.965		9404.41	9404.41	1.96		Si
SLV 3	11.04	4309.33	-7843	-0.0000662	0.0005615	0.0035	1.965		7351.28	7351.28	1.71		Si
SLV 13	9.24	2552.18	-11065	-0.0000523	0.0005615	0.0035	1.965		9833.05	9833.05	3.85		Si
SLV 13	11.04	-4927.26	-8680	-0.0000771	0.0005615	0.0035	1.572		8878.77	8878.77	1.8		Si
SLV 15	9.24	2515.16	-10082	-0.0000491	0.0005615	0.0035	1.965		9132.3	9132.3	3.63		Si
SLV 15	11.04	-4867.51	-7603	-0.0000821	0.0005615	0.0035	1.572		7981.8	7981.8	1.64		Si
SLV 1	9.24	-4754.86	-10298	-0.0000727	0.0005615	0.0035	1.965		10205.97	10205.97	2.15		Si
SLV 1	11.04	4249.58	-8919	-0.0000644	0.0005615	0.0035	1.965		8254.24	8254.24	1.94		Si
SLV 2	9.24	-4561.3	-10120	-0.0000698	0.0005615	0.0035	1.965		10066.19	10066.19	2.21		Si
SLV 2	11.04	3943.4	-8741	-0.0000599	0.0005615	0.0035	1.965		8106.7	8106.7	2.06		Si
SLV 4	9.24	-4598.32	-9136	-0.0000699	0.0005615	0.0035	1.965		9256.36	9256.36	2.01		Si
SLV 4	11.04	4003.16	-7664	-0.0000606	0.0005615	0.0035	1.965		7200.56	7200.56	1.8		Si
SLD 14	9.24	587.68	-10443	-0.0000337	0.0005615	0.0035	1.965		9388.76	9388.76	15.98		Si
SLD 14	11.04	-2501.33	-8320	-0.0000438	0.0005615	0.0035	1.965		8581.83	8581.83	3.43		Si
SLV 14	9.24	2745.74	-10887	-0.0000534	0.0005615	0.0035	1.965		9705.63	9705.63	3.53		Si
SLV 14	11.04	-5233.43	-8502	-0.0000859	0.0005615	0.0035	1.572		8732	8732	1.67		Si
SLD 16	9.24	572.11	-10012	-0.0000323	0.0005615	0.0035	1.965		9082.7	9082.7	15.88		Si
SLD 16	11.04	-2475.84	-7848	-0.0000422	0.0005615	0.0035	1.965		8191.39	8191.39	3.31		Si
SLV 16	9.24	2708.72	-9904	-0.0000502	0.0005615	0.0035	1.965		9006.11	9006.11	3.32		Si
SLV 16	11.04	-5173.68	-7425	-0.0000969	0.0005615	0.0035	1.572		7827.98	7827.98	1.51		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 65	9.24	-1349.06	-13114	-10920	-419	1.965	1.965	-19847	9591	5277	40441	16476	5011	21487	No	51.32	Si
SLU 65	11.04	-574.55	-10598	-8825	-419	1.965	1.965	-16040	9083	4998	40441	16476	5011	21487	No	51.32	Si
SLU 45	9.24	-1356.23	-12515	-10422	-480	1.965	1.965	-18941	9470	5210	40441	16476	5011	21487	No	44.74	Si
SLU 45	11.04	-470.98	-10030	-8352	-480	1.965	1.965	-15179	8968	4934	40441	16476	5011	21487	No	44.74	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	9.24	-1339.06	-12445	-10363	-468	1.965	1.965	-18835	9456	5203	40441	16476	5011	21487	No	45.88	Si
SLU 51	11.04	-475.25	-9959	-8293	-468	1.965	1.965	-15073	8954	4927	40441	16476	5011	21487	No	45.88	Si
SLU 50	9.24	-1335.44	-12446	-10364	-464	1.965	1.965	-18837	9456	5203	40441	16476	5011	21487	No	46.34	Si
SLU 50	11.04	-479.99	-9961	-8294	-464	1.965	1.965	-15075	8954	4927	40441	16476	5011	21487	No	46.34	Si
SLU 48	9.24	-1361.22	-12816	-10672	-463	1.965	1.965	-19397	9531	5244	40441	16476	5011	21487	No	46.44	Si
SLU 48	11.04	-507.62	-10331	-8602	-463	1.965	1.965	-15635	9029	4968	40441	16476	5011	21487	No	46.44	Si
SLU 49	9.24	-1364.84	-12815	-10671	-467	1.965	1.965	-19395	9530	5244	40441	16476	5011	21487	No	45.98	Si
SLU 49	11.04	-502.88	-10329	-8601	-467	1.965	1.965	-15633	9029	4968	40441	16476	5011	21487	No	45.98	Si
SLU 46	9.24	-1359.86	-12514	-10421	-485	1.965	1.965	-18939	9470	5210	40441	16476	5011	21487	No	44.31	Si
SLU 46	11.04	-466.24	-10028	-8350	-485	1.965	1.965	-15177	8968	4934	40441	16476	5011	21487	No	44.31	Si
SLU 44	9.24	-1331.51	-11842	-9861	-507	1.965	1.965	-17922	9334	5136	40441	16476	5011	21487	No	42.41	Si
SLU 44	11.04	-398.81	-9356	-7791	-507	1.965	1.965	-14160	8832	4860	40441	16476	5011	21487	No	42.41	Si
SLU 47	9.24	-1336.49	-12143	-10112	-489	1.965	1.965	-18378	9395	5169	40441	16476	5011	21487	No	43.94	Si
SLU 47	11.04	-435.45	-9657	-8042	-489	1.965	1.965	-14615	8893	4893	40441	16476	5011	21487	No	43.94	Si
SLU 43	9.24	-1325.47	-11844	-9863	-499	1.965	1.965	-17926	9335	5136	40441	16476	5011	21487	No	43.07	Si
SLU 43	11.04	-406.7	-9358	-7793	-499	1.965	1.965	-14164	8833	4860	40441	16476	5011	21487	No	43.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	9.24	2552.18	-11065	-9214	4363	1.965	1.965	-16746	13766	7574	40441	24714	5011	29724		6.81	Si
SLV 13	11.04	-4927.26	-8680	-7228	3859	1.572	1.2446	0	0	0	40441	19771	4009	23779		6.16	Si
SLV 14	9.24	2745.74	-10887	-9066	4640	1.965	1.965	-16477	13712	7544	40441	24714	5011	29724		6.41	Si
SLV 14	11.04	-5233.43	-8502	-7080	4137	1.572	1.1009	0	0	0	40441	19771	4009	23779		5.75	Si
SLV 3	9.24	-4791.88	-9315	-7756	-5246	1.965	1.4042	-19920	14401	5662	40441	24714	5011	29724		5.67	Si
SLV 3	11.04	4309.33	-7843	-6531	-4742	1.965	1.2991	-11869	12791	4653	40441	24714	5011	29724		6.27	Si
SLV 16	9.24	2708.72	-9904	-8247	4301	1.965	1.965	-14989	13414	7381	40441	24714	5011	29724		6.91	Si
SLV 16	11.04	-5173.68	-7425	-6183	4004	1.572	0.8572	0	0	0	40441	19771	4009	23779		5.94	Si
SLV 15	9.24	2515.16	-10082	-8395	4024	1.965	1.965	-15258	13468	7410	40441	24714	5011	29724		7.39	Si
SLV 15	11.04	-4867.51	-7603	-6331	3727	1.572	1.027	0	0	0	40441	19771	4009	23779		6.38	Si
SLV 7	9.24	-2243.03	-8404	-6998	-2347	1.965	1.965	-12719	12960	7131	40441	24714	5011	29724		12.66	Si
SLV 7	11.04	1112.45	-6470	-5388	-1883	1.965	1.965	-9793	12375	6809	40441	24714	5011	29724		15.79	Si
SLV 1	9.24	-4754.86	-10298	-8575	-4907	1.965	1.5624	-19791	14375	6288	40441	24714	5011	29724		6.06	Si
SLV 1	11.04	4249.58	-8919	-7427	-4610	1.965	1.5182	-13499	13117	5576	40441	24714	5011	29724		6.45	Si
SLV 4	9.24	-4598.32	-9136	-7608	-4968	1.965	1.4377	-19076	14232	5729	40441	24714	5011	29724		5.98	Si
SLV 4	11.04	4003.16	-7664	-6382	-4465	1.965	1.3806	-11600	12737	4924	40441	24714	5011	29724		6.66	Si
SLD 3	9.24	-2633.82	-9759	-8126	-2416	1.965	1.965	-14769	13371	7357	40441	24714	5011	29724		12.3	Si
SLD 3	11.04	1577.22	-8025	-6683	-2200	1.965	1.965	-12146	12846	7068	40441	24714	5011	29724		13.51	Si
SLV 2	9.24	-4561.3	-10120	-8427	-4629	1.965	1.5954	-19041	14225	6354	40441	24714	5011	29724		6.42	Si
SLV 2	11.04	3943.4	-8741	-7279	-4332	1.965	1.5942	-13230	13063	5831	40441	24714	5011	29724		6.86	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.46	13226	-7277	238.61	930.53	3.9	Si
SLV 12	179667	0.46	13412	-7380	238.61	942.41	3.95	Si
SLV 7	179667	0.46	13434	-7391	238.61	943.75	3.96	Si
SLV 11	179667	0.46	13620	-7494	238.61	955.6	4	Si
SLV 4	179667	0.46	15164	-8343	238.61	1052.08	4.41	Si
SLV 3	179667	0.46	15487	-8521	238.61	1072	4.49	Si
SLV 16	179667	0.46	15787	-8686	238.61	1090.34	4.57	Si
SLV 15	179667	0.46	16111	-8864	238.61	1110.07	4.65	Si
SLV 2	179667	0.46	17062	-9388	238.61	1167.42	4.89	Si
SLV 1	179667	0.46	17385	-9566	238.61	1186.73	4.97	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-9422	-9705	545	0.986	1234.5	0.938	15.27075	14.55598	Si
SLV 6	-9200	-9773	545	1.005	1212	0.937	15.58329	14.55598	Si
SLV 9	-7613	-12597	586	1.164	1051.6	0.93	18.20505	14.55598	Si
SLV 10	-7391	-12665	586	1.192	1029.3	0.928	18.656	14.55598	Si
SLV 7	-5836	-6127	-584	1.428	873	0.919	22.59352	14.55598	Si
SLV 8	-5615	-6195	-584	1.47	850.8	0.917	23.29452	14.55598	Si
SLV 1	-10339	-5061	102	0.951	1327.4	0.942	14.66828	7.56668	Si
SLV 2	-9994	-5167	102	0.977	1292.5	0.941	15.1024	7.56668	Si
SLV 11	-4027	-9019	-543	1.871	692.8	0.905	30.05154	14.55598	Si
SLV 3	-9264	-3987	-237	1.027	1218.5	0.938	15.92623	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.193	SLU 44	Si
V_SLU	42.414	SLU 44	Si
PF_SLV	1.513	SLV 16	Si
V_SLV	5.666	SLV 3	Si
PFFP_SLV	3.9	SLV 8	Si
R_SLV	1.049	SLV 5	Si

Maschio 133

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.443	1.006	-24.633	1.006	L6	L7	5.19	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	8.34	-7929.95	-37631	-0.0000457	0.0004492	0.0035	5.19	76957.22	100730.91	100730.91	12.7	No	Si
SLU 47	10.44	-5120.57	-30926	-0.0000356	0.0004492	0.0035	5.19	66275.73	87222.43	87222.43	17.03	No	Si
SLU 40	8.34	-6133.57	-33733	-0.0000396	0.0004492	0.0035	5.19	70906.33	92921.05	92921.05	15.15	No	Si
SLU 40	10.44	-6975.12	-31666	-0.0000385	0.0004492	0.0035	5.19	67518.15	88780.52	88780.52	12.73	No	Si
SLU 82	8.34	-7824.89	-41455	-0.0000495	0.0004492	0.0035	5.19	82460.22	108179.88	108179.88	13.83	No	Si
SLU 82	10.44	-7835.66	-37615	-0.0000456	0.0004492	0.0035	5.19	76933.35	100698.93	100698.93	12.85	No	Si
SLU 42	8.34	-6299.5	-34778	-0.0000409	0.0004492	0.0035	5.19	72572.87	95015.76	95015.76	15.08	No	Si
SLU 42	10.44	-7084.68	-32650	-0.0000397	0.0004492	0.0035	5.19	69147.48	90752.61	90752.61	12.81	No	Si
SLU 49	8.34	-8175.05	-39449	-0.0000479	0.0004492	0.0035	5.19	79626.7	104372.41	104372.41	12.77	No	Si
SLU 49	10.44	-5538.86	-32809	-0.000038	0.0004492	0.0035	5.19	69407.08	91070.02	91070.02	16.44	No	Si
SLU 39	8.34	-6059.84	-33672	-0.0000395	0.0004492	0.0035	5.19	70809.5	92800.56	92800.56	15.31	No	Si
SLU 39	10.44	-6938.85	-31613	-0.0000384	0.0004492	0.0035	5.19	67430.77	88675.72	88675.72	12.78	No	Si
SLU 44	8.34	-7764.02	-36586	-0.0000445	0.0004492	0.0035	5.19	75377.89	98636.19	98636.19	12.7	No	Si
SLU 44	10.44	-5011.01	-29942	-0.0000345	0.0004492	0.0035	5.19	64596.8	85131.63	85131.63	16.99	No	Si
SLU 51	8.34	-8046.74	-38637	-0.0000469	0.0004492	0.0035	5.19	78445.85	102745.3	102745.3	12.77	No	Si
SLU 51	10.44	-5205.95	-31876	-0.0000367	0.0004492	0.0035	5.19	67868.34	89201.5	89201.5	17.13	No	Si
SLU 46	8.34	-8009.11	-38403	-0.0000466	0.0004492	0.0035	5.19	78102.92	102277.69	102277.69	12.77	No	Si
SLU 46	10.44	-5429.3	-31824	-0.0000369	0.0004492	0.0035	5.19	67782.31	89097.93	89097.93	16.41	No	Si
SLU 41	8.34	-6225.78	-34718	-0.0000408	0.0004492	0.0035	5.19	72477.88	94895.28	94895.28	15.24	No	Si
SLU 41	10.44	-7048.41	-32598	-0.0000396	0.0004492	0.0035	5.19	69061.61	90647.81	90647.81	12.86	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	8.34	348.94	-38007	-0.0000368	0.0006738	0.0035	5.19		91767.23	91767.23	262.99		Si
SLV 3	10.44	-22714.6	-37479	-0.0000618	0.0006738	0.0035	5.19		103230.96	103230.96	4.54		Si
SLV 12	8.34	-14971.23	-33898	-0.0000493	0.0006738	0.0035	5.19		95529.74	95529.74	6.38		Si
SLV 12	10.44	-4824.25	-27586	-0.0000316	0.0006738	0.0035	5.19		81720.45	81720.45	16.94		Si
SLV 4	8.34	-547.15	-38304	-0.0000373	0.0006738	0.0035	5.19		104943.93	104943.93	191.8		Si
SLV 4	10.44	-22904.56	-37683	-0.0000622	0.0006738	0.0035	5.19		103655.51	103655.51	4.53		Si
SLV 1	8.34	4157.67	-34547	-0.0000377	0.0006738	0.0035	5.19		84528.3	84528.3	20.33		Si
SLV 1	10.44	-19726.02	-34552	-0.0000554	0.0006738	0.0035	5.19		96961.37	96961.37	4.92		Si
SLV 15	8.34	-15252.05	-25100	-0.0000409	0.0006738	0.0035	5.19		76113.4	76113.4	4.99		Si
SLV 15	10.44	10413.17	-16748	-0.0000273	0.0006738	0.0035	5.19		44081.04	44081.04	4.23		Si
SLV 2	8.34	3261.58	-34843	-0.000037	0.0006738	0.0035	5.19		85169.46	85169.46	26.11		Si
SLV 2	10.44	-19915.98	-34757	-0.0000558	0.0006738	0.0035	5.19		97408.4	97408.4	4.89		Si
SLV 13	8.34	-11443.31	-21640	-0.0000332	0.0006738	0.0035	5.19		68162.08	68162.08	5.96		Si
SLV 13	10.44	13401.75	-13821	-0.0000279	0.0006738	0.0035	5.19		37094.16	37094.16	2.77		Si
SLV 16	8.34	-16148.14	-25396	-0.0000422	0.0006738	0.0035	5.19		76794.56	76794.56	4.76		Si
SLV 16	10.44	10223.21	-16952	-0.0000273	0.0006738	0.0035	5.19		44567.55	44567.55	4.36		Si
SLV 14	8.34	-12339.4	-21936	-0.0000345	0.0006738	0.0035	5.19		68843.24	68843.24	5.58		Si
SLV 14	10.44	13211.79	-14025	-0.0000278	0.0006738	0.0035	5.19		37588.1	37588.1	2.85		Si
SLV 8	8.34	-10290.93	-37770	-0.0000479	0.0006738	0.0035	5.19		103835.51	103835.51	10.09		Si
SLV 8	10.44	-14762.59	-33806	-0.000049	0.0006738	0.0035	5.19		95327.76	95327.76	6.46		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	8.34	-6133.57	-33733	-24064	1588	5.19	5.19	-16559	10541	15319	115546	52224	26469	78693	No	49.56	Si
SLU 40	10.44	-6975.12	-31666	-22590	1598	5.19	5.19	-15545	10406	15122	115546	52224	26469	78693	No	49.23	Si
SLU 48	8.34	-8101.32	-39389	-28099	-2209	5.19	5.19	-19336	10833	15743	115546	52224	26469	78693	No	35.62	Si
SLU 48	10.44	-5502.59	-32756	-23368	-2200	5.19	5.19	-16080	10477	15226	115546	52224	26469	78693	No	35.78	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	8.34	-7764.02	-36586	-26099	-2327	5.19	5.19	-17960	10728	15590	115546	52224	26469	78693	No	33.82	Si
SLU 44	10.44	-5011.01	-29942	-21360	-2316	5.19	5.19	-14698	10293	14958	115546	52224	26469	78693	No	33.98	Si
SLU 50	8.34	-7973.02	-38577	-27520	-2387	5.19	5.19	-18937	10833	15743	115546	52224	26469	78693	No	32.97	Si
SLU 50	10.44	-5169.68	-31823	-22702	-2377	5.19	5.19	-15622	10416	15137	115546	52224	26469	78693	No	33.11	Si
SLU 43	8.34	-7641.14	-36485	-26028	-2337	5.19	5.19	-17911	10721	15580	115546	52224	26469	78693	No	33.67	Si
SLU 43	10.44	-4950.56	-29855	-21298	-2328	5.19	5.19	-14656	10287	14950	115546	52224	26469	78693	No	33.8	Si
SLU 47	8.34	-7929.95	-37631	-26845	-2352	5.19	5.19	-18473	10796	15689	115546	52224	26469	78693	No	33.46	Si
SLU 47	10.44	-5120.57	-30926	-22062	-2340	5.19	5.19	-15182	10358	15052	115546	52224	26469	78693	No	33.62	Si
SLU 49	8.34	-8175.05	-39449	-28142	-2203	5.19	5.19	-19366	10833	15743	115546	52224	26469	78693	No	35.72	Si
SLU 49	10.44	-5538.86	-32809	-23405	-2192	5.19	5.19	-16106	10481	15231	115546	52224	26469	78693	No	35.89	Si
SLU 45	8.34	-7935.39	-38343	-27353	-2185	5.19	5.19	-18823	10833	15743	115546	52224	26469	78693	No	36.02	Si
SLU 45	10.44	-5393.03	-31772	-22665	-2175	5.19	5.19	-15597	10413	15132	115546	52224	26469	78693	No	36.18	Si
SLU 51	8.34	-8046.74	-38637	-27563	-2380	5.19	5.19	-18967	10833	15743	115546	52224	26469	78693	No	33.06	Si
SLU 51	10.44	-5205.95	-31876	-22739	-2370	5.19	5.19	-15648	10420	15142	115546	52224	26469	78693	No	33.21	Si
SLU 46	8.34	-8009.11	-38403	-27396	-2179	5.19	5.19	-18852	10833	15743	115546	52224	26469	78693	No	36.12	Si
SLU 46	10.44	-5429.3	-31824	-22703	-2168	5.19	5.19	-15622	10416	15137	115546	52224	26469	78693	No	36.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	8.34	348.94	-38007	-27113	16304	5.19	5.19	-18658	16232	23588	115546	78337	26469	104806		6.43	Si
SLV 3	10.44	-22714.6	-37479	-26737	14840	5.19	5.19	-18398	16180	23512	115546	78337	26469	104806		7.06	Si
SLV 13	8.34	-11443.31	-21640	-15437	-17809	5.19	5.19	-10623	14625	21252	115546	78337	26469	104806		5.89	Si
SLV 13	10.44	13401.75	-13821	-9859	-16328	5.19	4.876	-6785	13857	18918	115546	78337	26469	104806		6.42	Si
SLV 2	8.34	3261.58	-34843	-24856	14865	5.19	5.19	-17105	15921	23136	115546	78337	26469	104806		7.05	Si
SLV 2	10.44	-19915.98	-34757	-24795	13062	5.19	5.19	-17062	15912	23124	115546	78337	26469	104806		8.02	Si
SLV 15	8.34	-15252.05	-25100	-17906	-16449	5.19	5.19	-12322	14964	21746	115546	78337	26469	104806		6.37	Si
SLV 15	10.44	10413.17	-16748	-11947	-14631	5.19	5.19	-8221	14144	20554	115546	78337	26469	104806		7.16	Si
SLV 4	8.34	-547.15	-38304	-27325	16224	5.19	5.19	-18803	16250	23615	115546	78337	26469	104806		6.46	Si
SLV 4	10.44	-22904.56	-37683	-26882	14760	5.19	5.19	-18499	16200	23541	115546	78337	26469	104806		7.1	Si
SLV 14	8.34	-12339.4	-21936	-15649	-17889	5.19	5.19	-10768	14654	21295	115546	78337	26469	104806		5.86	Si
SLV 14	10.44	13211.79	-14025	-10005	-16409	5.19	4.959	-6885	13877	19268	115546	78337	26469	104806		6.39	Si
SLV 16	8.34	-16148.14	-25396	-18117	-16529	5.19	5.19	-12467	14993	21788	115546	78337	26469	104806		6.34	Si
SLV 16	10.44	10223.21	-16952	-12093	-14711	5.19	5.19	-8322	14164	20584	115546	78337	26469	104806		7.12	Si
SLV 1	8.34	4157.67	-34547	-24645	14945	5.19	5.19	-16959	15892	23094	115546	78337	26469	104806		7.01	Si
SLV 1	10.44	-19726.02	-34552	-24649	13142	5.19	5.19	-16962	15892	23095	115546	78337	26469	104806		7.97	Si
SLD 13	8.34	-8307.3	-26390	-18826	-8078	5.19	5.19	-12955	15091	21930	115546	78337	26469	104806		12.97	Si
SLD 13	10.44	3020.33	-20634	-14720	-7443	5.19	5.19	-10129	14526	21109	115546	78337	26469	104806		14.08	Si
SLD 14	8.34	-8692.02	-26517	-18917	-8113	5.19	5.19	-13017	15103	21948	115546	78337	26469	104806		12.92	Si
SLD 14	10.44	2938.77	-20722	-14783	-7478	5.19	5.19	-10172	14534	21122	115546	78337	26469	104806		14.02	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-14818	0.46	644.87	1959.05	2946.09	2452.57	3.8	Si
SLV 14	-15022	0.46	644.87	1984.45	2977.34	2480.9	3.85	Si
SLV 15	-17694	0.46	644.87	2312.61	3386.08	2849.35	4.42	Si
SLV 16	-17898	0.46	644.87	2337.4	3417.28	2877.34	4.46	Si
SLV 9	-18718	0.46	644.87	2436.37	3542.15	2989.26	4.64	Si
SLV 10	-18849	0.46	644.87	2452.16	3562.05	3007.1	4.66	Si
SLV 5	-24907	0.46	644.87	3160.86	4479.14	3820	5.92	Si
SLV 6	-25038	0.46	644.87	3175.79	4498.9	3837.35	5.95	Si
SLV 11	-28307	0.46	644.87	3541.76	4988.46	4265.11	6.61	Si
SLV 12	-28438	0.46	644.87	3556.23	5007.95	4282.09	6.64	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-27389	-37770	1045	0.924	3514	0.942	14.2568	14.55598	No
SLV 7	-27160	-37580	1045	0.93	3490.9	0.942	14.35984	14.55598	No
SLV 12	-25195	-33898	1181	0.985	3291.9	0.939	15.24389	14.55598	Si
SLV 11	-24967	-33707	1181	0.992	3268.8	0.938	15.36278	14.55598	Si
SLV 6	-19087	-26236	-1193	1.228	2674.9	0.927	19.23885	14.55598	Si
SLV 5	-18859	-26045	-1192	1.239	2651.9	0.927	19.43084	14.55598	Si
SLV 10	-16894	-22363	-1057	1.355	2454.2	0.922	21.3524	14.55598	Si
SLV 9	-16666	-22173	-1057	1.369	2431.2	0.922	21.58845	14.55598	Si
SLV 4	-27106	-38304	104	0.962	3485.4	0.942	14.84306	7.56668	Si
SLV 3	-26750	-38007	104	0.972	3449.3	0.941	15.01252	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.703	SLU 47	Si
V_SLU	32.974	SLU 50	Si
PF_SLV	2.768	SLV 13	Si
V_SLV	5.859	SLV 14	Si
PFFP_SLV	3.803	SLV 13	Si
R_SLV	0.979	SLV 8	No

Maschio 134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.006	-18.643	1.006	L6	L7	3.68	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	8.34	-419.78	-33030	-0.0000465	0.0004492	0.0035	3.68	44830.74	58901.96	58901.96	140.32	No	Si
SLU 68	10.44	1425.45	-28762	-0.0000427	0.0004492	0.0035	3.68	40832.54	46529.53	46529.53	32.64	No	Si
SLU 23	8.34	-358.3	-25922	-0.0000362	0.0004492	0.0035	3.68	37875.79	49196.36	49196.36	137.31	No	Si
SLU 23	10.44	1221.92	-22758	-0.0000337	0.0004492	0.0035	3.68	34304.97	38558.69	38558.69	31.56	No	Si
SLU 65	8.34	-365.35	-32095	-0.0000451	0.0004492	0.0035	3.68	44000.2	57644.06	57644.06	157.78	No	Si
SLU 65	10.44	1374.21	-27855	-0.0000413	0.0004492	0.0035	3.68	39913.54	45324.78	45324.78	32.98	No	Si
SLU 72	8.34	-457.19	-33941	-0.000048	0.0004492	0.0035	3.68	45615.82	60073.58	60073.58	131.4	No	Si
SLU 72	10.44	1449.4	-29646	-0.0000441	0.0004492	0.0035	3.68	41703.73	47701.92	47701.92	32.91	No	Si
SLU 29	8.34	-424.6	-27733	-0.0000389	0.0004492	0.0035	3.68	39788.37	51776.33	51776.33	121.94	No	Si
SLU 29	10.44	1256.16	-24512	-0.0000363	0.0004492	0.0035	3.68	36320.89	40887.28	40887.28	32.55	No	Si
SLU 30	8.34	-450.13	-27768	-0.000039	0.0004492	0.0035	3.68	39824.6	51823.7	51823.7	115.13	No	Si
SLU 30	10.44	1297.11	-24548	-0.0000364	0.0004492	0.0035	3.68	36361.97	40935.83	40935.83	31.56	No	Si
SLU 71	8.34	-431.65	-33906	-0.0000479	0.0004492	0.0035	3.68	45585.95	60029.16	60029.16	139.07	No	Si
SLU 71	10.44	1408.45	-29609	-0.0000439	0.0004492	0.0035	3.68	41668.11	47653.37	47653.37	33.83	No	Si
SLU 28	8.34	-389.8	-28557	-0.00004	0.0004492	0.0035	3.68	40626.79	52885.01	52885.01	135.67	No	Si
SLU 28	10.44	1256.74	-25378	-0.0000375	0.0004492	0.0035	3.68	37283.44	42037.45	42037.45	33.45	No	Si
SLU 26	8.34	-412.72	-26857	-0.0000377	0.0004492	0.0035	3.68	38875.04	50532.61	50532.61	122.44	No	Si
SLU 26	10.44	1273.16	-23665	-0.0000351	0.0004492	0.0035	3.68	35359.19	39763.44	39763.44	31.23	No	Si
SLU 22	8.34	-315.74	-25863	-0.000036	0.0004492	0.0035	3.68	37812.22	49112.49	49112.49	155.55	No	Si
SLU 22	10.44	1153.68	-22697	-0.0000335	0.0004492	0.0035	3.68	34233.3	38477.77	38477.77	33.35	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	8.34	-7522.93	-23500	-0.0000486	0.0006738	0.0035	3.68		46821.96	46821.96	6.22		Si
SLD 16	10.44	9695.05	-21994	-0.0000513	0.0006738	0.0035	3.68		38636.15	38636.15	3.99		Si
SLV 16	8.34	-17460.76	-22025	-0.0000707	0.0006738	0.0035	3.68		44524.61	44524.61	2.55		Si
SLV 16	10.44	21538.86	-22774	-0.0000865	0.0006738	0.0035	3.68		39857.05	39857.05	1.85		Si
SLV 2	8.34	16951.65	-27277	-0.0000755	0.0006738	0.0035	3.68		46749.42	46749.42	2.76		Si
SLV 2	10.44	-19449.78	-20285	-0.0000777	0.0006738	0.0035	3.68		41815.63	41815.63	2.15		Si
SLV 15	8.34	-17121.89	-21867	-0.0000695	0.0006738	0.0035	3.68		44279.03	44279.03	2.59		Si
SLV 15	10.44	21112.63	-22484	-0.0000846	0.0006738	0.0035	3.68		39407.36	39407.36	1.87		Si
SLV 3	8.34	16338.4	-30121	-0.0000782	0.0006738	0.0035	3.68		50564.68	50564.68	3.09		Si
SLV 3	10.44	-17427.29	-21909	-0.0000705	0.0006738	0.0035	3.68		44344.47	44344.47	2.54		Si
SLV 1	8.34	17290.52	-27119	-0.0000761	0.0006738	0.0035	3.68		46531.46	46531.46	2.69		Si
SLV 1	10.44	-19876.01	-19995	-0.0000799	0.0006738	0.0035	3.68		41363.96	41363.96	2.08		Si
SLV 14	8.34	-16508.64	-19023	-0.0000656	0.0006738	0.0035	3.68		39850.09	39850.09	2.41		Si
SLV 14	10.44	19090.13	-20860	-0.0000761	0.0006738	0.0035	3.68		36848.79	36848.79	1.93		Si
SLV 12	8.34	-6799.93	-28387	-0.0000538	0.0006738	0.0035	3.68		54192.24	54192.24	7.97		Si
SLV 12	10.44	10830.59	-24754	-0.0000578	0.0006738	0.0035	3.68		42926.6	42926.6	3.96		Si
SLV 13	8.34	-16169.77	-18865	-0.0000643	0.0006738	0.0035	3.68		39604.52	39604.52	2.45		Si
SLV 13	10.44	18663.9	-20570	-0.0000744	0.0006738	0.0035	3.68		36391.39	36391.39	1.95		Si
SLV 4	8.34	15999.53	-30278	-0.0000777	0.0006738	0.0035	3.68		50776.23	50776.23	3.17		Si
SLV 4	10.44	-17001.05	-22199	-0.0000695	0.0006738	0.0035	3.68		44796.14	44796.14	2.63		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	8.34	-371.33	-34695	-24751	-1757	3.68	3.68	-24020	10833	11163	115546	37030	18768	55798	No	31.75	Si
SLU 69	10.44	1368.09	-30439	-21714	-1757	3.68	3.68	-21074	10833	11163	115546	37030	18768	55798	No	31.75	Si
SLU 80	8.34	9.07	-35590	-25389	-1729	3.68	3.68	-24640	10833	11163	115546	37030	18768	55798	No	32.28	Si
SLU 80	10.44	1075.21	-31711	-22622	-1728	3.68	3.68	-21954	10833	11163	115546	37030	18768	55798	No	32.28	Si
SLU 67	8.34	-342.43	-33795	-24109	-1765	3.68	3.68	-23397	10833	11163	115546	37030	18768	55798	No	31.61	Si
SLU 67	10.44	1357.79	-29568	-21093	-1765	3.68	3.68	-20471	10833	11163	115546	37030	18768	55798	No	31.61	Si
SLU 76	8.34	46.48	-34678	-24739	-1725	3.68	3.68	-24009	10833	11163	115546	37030	18768	55798	No	32.35	Si
SLU 76	10.44	1051.26	-30827	-21992	-1725	3.68	3.68	-21343	10833	11163	115546	37030	18768	55798	No	32.35	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	8.34	-419.78	-33030	-23563	-1807	3.68	3.68	-22867	10833	11163	115546	37030	18768	55798	No	30.88	Si
SLU 68	10.44	1425.45	-28762	-20518	-1807	3.68	3.68	-19913	10833	11163	115546	37030	18768	55798	No	30.88	Si
SLU 72	8.34	-457.19	-33941	-24213	-1811	3.68	3.68	-23499	10833	11163	115546	37030	18768	55798	No	30.81	Si
SLU 72	10.44	1449.4	-29646	-21148	-1811	3.68	3.68	-20525	10833	11163	115546	37030	18768	55798	No	30.82	Si
SLU 71	8.34	-431.65	-33906	-24188	-1776	3.68	3.68	-23474	10833	11163	115546	37030	18768	55798	No	31.42	Si
SLU 71	10.44	1408.45	-29609	-21122	-1776	3.68	3.68	-20499	10833	11163	115546	37030	18768	55798	No	31.42	Si
SLU 66	8.34	-316.9	-33760	-24083	-1731	3.68	3.68	-23373	10833	11163	115546	37030	18768	55798	No	32.24	Si
SLU 66	10.44	1316.85	-29531	-21067	-1730	3.68	3.68	-20445	10833	11163	115546	37030	18768	55798	No	32.25	Si
SLU 70	8.34	-396.86	-34730	-24776	-1792	3.68	3.68	-24045	10833	11163	115546	37030	18768	55798	No	31.13	Si
SLU 70	10.44	1409.03	-30475	-21740	-1792	3.68	3.68	-21099	10833	11163	115546	37030	18768	55798	No	31.14	Si
SLU 65	8.34	-365.35	-32095	-22896	-1780	3.68	3.68	-22220	10833	11163	115546	37030	18768	55798	No	31.34	Si
SLU 65	10.44	1374.21	-27855	-19871	-1780	3.68	3.68	-19285	10833	11163	115546	37030	18768	55798	No	31.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	8.34	16338.4	-30121	-21487	20963	3.68	3.68	-20853	16250	16744	115546	55545	18768	74313		3.54	Si
SLV 3	10.44	-17427.29	-21909	-15629	19996	3.68	3.1337	-17957	16092	14119	115546	55545	18768	74313		3.72	Si
SLV 13	8.34	-16169.77	-18865	-13458	-22856	3.68	2.9487	-16417	15784	13031	115546	55545	18768	74313		3.25	Si
SLV 13	10.44	18663.9	-20570	-14674	-21888	3.68	2.798	-14241	15348	12025	115546	55545	18768	74313		3.4	Si
SLV 1	8.34	17290.52	-27119	-19346	22550	3.68	3.6073	-18775	16250	16413	115546	55545	18768	74313		3.3	Si
SLV 1	10.44	-19876.01	-19995	-14264	21618	3.68	2.5379	-20246	16250	11547	115546	55545	18768	74313		3.44	Si
SLV 2	8.34	16951.65	-27277	-19459	22044	3.68	3.6556	-18884	16250	16633	115546	55545	18768	74313		3.37	Si
SLV 2	10.44	-19449.78	-20285	-14471	21112	3.68	2.6435	-19718	16250	12028	115546	55545	18768	74313		3.52	Si
SLD 15	8.34	-7377.45	-23432	-16716	-11143	3.68	3.68	-16223	15745	16223	115546	55545	18768	74313		6.67	Si
SLD 15	10.44	9512.05	-21869	-15601	-10745	3.68	3.68	-15141	15528	16000	115546	55545	18768	74313		6.92	Si
SLV 15	8.34	-17121.89	-21867	-15599	-24443	3.68	3.171	-17710	16042	14244	115546	55545	18768	74313		3.04	Si
SLV 15	10.44	21112.63	-22484	-16040	-23510	3.68	2.703	-15566	15613	11817	115546	55545	18768	74313		3.16	Si
SLV 14	8.34	-16508.64	-19023	-13571	-23362	3.68	2.9165	-16737	15848	12942	115546	55545	18768	74313		3.18	Si
SLV 14	10.44	19090.13	-20860	-14881	-22394	3.68	2.7746	-14442	15388	11955	115546	55545	18768	74313		3.32	Si
SLV 4	8.34	15999.53	-30278	-21600	20457	3.68	3.68	-20963	16250	16744	115546	55545	18768	74313		3.63	Si
SLV 4	10.44	-17001.05	-22199	-15836	19489	3.68	3.2225	-17692	16039	14471	115546	55545	18768	74313		3.81	Si
SLD 16	8.34	-7522.93	-23500	-16764	-11360	3.68	3.68	-16270	15754	16233	115546	55545	18768	74313		6.54	Si
SLD 16	10.44	9695.05	-21994	-15690	-10962	3.68	3.68	-15227	15545	16018	115546	55545	18768	74313		6.78	Si
SLV 16	8.34	-17460.76	-22025	-15712	-24949	3.68	3.1417	-18007	16101	14164	115546	55545	18768	74313		2.98	Si
SLV 16	10.44	21538.86	-22774	-16247	-24016	3.68	2.6827	-15767	15653	11758	115546	55545	18768	74313		3.09	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 5	-18988	0.46	457.25	2391.01	3365.16	2878.09	6.29	Si
SLV 6	-19174	0.46	457.25	2411.84	3393.12	2902.48	6.35	Si
SLV 9	-19246	0.46	457.25	2419.85	3403.9	2911.87	6.37	Si
SLV 10	-19432	0.46	457.25	2440.6	3431.86	2936.23	6.42	Si
SLV 1	-20613	0.46	457.25	2570.87	3609.08	3089.97	6.76	Si
SLV 2	-20903	0.46	457.25	2602.55	3652.61	3127.58	6.84	Si
SLV 13	-21474	0.46	457.25	2664.52	3738.26	3201.39	7	Si
SLV 14	-21764	0.46	457.25	2695.83	3781.73	3238.78	7.08	Si
SLV 3	-22309	0.46	457.25	2754.34	3863.46	3308.9	7.24	Si
SLV 4	-22599	0.46	457.25	2785.29	3906.94	3346.11	7.32	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-20879	-30863	741	0.871	2639.5	0.945	13.39278	14.55598	No
SLV 7	-20789	-30762	741	0.874	2630.4	0.945	13.44288	14.55598	No
SLV 12	-19918	-28387	923	0.897	2542.1	0.943	13.8284	14.55598	No
SLV 11	-19828	-28286	923	0.901	2533	0.943	13.88242	14.55598	No
SLV 6	-15234	-20858	-922	1.114	2068.1	0.932	17.37265	14.55598	Si
SLV 5	-15144	-20757	-922	1.12	2059.1	0.932	17.45925	14.55598	Si
SLV 10	-14273	-18382	-740	1.184	1971.2	0.93	18.50454	14.55598	Si
SLV 9	-14183	-18280	-740	1.19	1962.1	0.929	18.60216	14.55598	Si
SLV 4	-20049	-30278	-53	0.93	2555.4	0.943	14.32574	7.56668	Si
SLV 3	-19909	-30121	-52	0.935	2541.2	0.943	14.41293	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	31.232	SLU 26	Si
V_SLU	30.813	SLU 72	Si
PF_SLV	1.85	SLV 16	Si
V_SLV	2.979	SLV 16	Si
PFFP_SLV	6.294	SLV 5	Si
R_SLV	0.92	SLV 8	No

Maschio 135

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-14.163	1.006	L6	L7	1.9	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	8.34	41.38	-16763	-0.0000451	0.0004492	0.0035	1.9	11818.37	13733.38	13733.38	331.92	No	Si
SLU 60	10.84	-934.45	-12699	-0.0000416	0.0004492	0.0035	1.9	9707.15	12415.71	12415.71	13.29	No	Si
SLU 56	8.34	-52.73	-17771	-0.000048	0.0004492	0.0035	1.9	12267.1	15984.25	15984.25	303.12	No	Si
SLU 56	10.84	-932.79	-13377	-0.0000435	0.0004492	0.0035	1.9	10092.86	12922.25	12922.25	13.85	No	Si
SLU 53	8.34	-28.12	-17344	-0.0000466	0.0004492	0.0035	1.9	12080.31	15700.18	15700.18	558.42	No	Si
SLU 53	10.84	-914.88	-13058	-0.0000424	0.0004492	0.0035	1.9	9913.06	12683.93	12683.93	13.86	No	Si
SLU 52	8.34	-9.45	-16370	-0.0000437	0.0004492	0.0035	1.9	11634.96	15047.86	15047.86	1592.68	No	Si
SLU 52	10.84	-864.22	-12160	-0.0000395	0.0004492	0.0035	1.9	9391.24	12013.39	12013.39	13.9	No	Si
SLU 58	8.34	-44.03	-17315	-0.0000467	0.0004492	0.0035	1.9	12067.71	15681.3	15681.3	356.17	No	Si
SLU 58	10.84	-913.94	-12871	-0.0000419	0.0004492	0.0035	1.9	9806.6	12544.63	12544.63	13.73	No	Si
SLU 61	8.34	32.58	-16709	-0.0000449	0.0004492	0.0035	1.9	11793.42	13696.48	13696.48	420.35	No	Si
SLU 61	10.84	-926.1	-12655	-0.0000414	0.0004492	0.0035	1.9	9681.75	12382.95	12382.95	13.37	No	Si
SLU 62	8.34	16.76	-17191	-0.0000461	0.0004492	0.0035	1.9	12012.41	14024.82	14024.82	836.85	No	Si
SLU 62	10.84	-952.35	-13018	-0.0000426	0.0004492	0.0035	1.9	9890.29	12654.03	12654.03	13.29	No	Si
SLU 63	8.34	7.97	-17137	-0.0000459	0.0004492	0.0035	1.9	11988.14	13987.92	13987.92	1755.9	No	Si
SLU 63	10.84	-944.01	-12974	-0.0000424	0.0004492	0.0035	1.9	9865.29	12621.27	12621.27	13.37	No	Si
SLU 59	8.34	-52.82	-17261	-0.0000466	0.0004492	0.0035	1.9	12043.63	15645.33	15645.33	296.2	No	Si
SLU 59	10.84	-905.6	-12828	-0.0000417	0.0004492	0.0035	1.9	9781.41	12511.87	12511.87	13.82	No	Si
SLU 55	8.34	-34.07	-16797	-0.0000451	0.0004492	0.0035	1.9	11833.92	15337.28	15337.28	450.23	No	Si
SLU 55	10.84	-882.13	-12479	-0.0000405	0.0004492	0.0035	1.9	9579.4	12251.71	12251.71	13.89	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	8.34	10124.52	-9963	-0.0068176	0.0006738	0.0035	1.52		9191.75	9191.75	0.91		No
SLV 4	10.84	-8226.6	-13409	-0.0001394	0.0006738	0.0035	1.52		13288.57	13288.57	1.62		Si
SLV 16	8.34	-11739.23	-10816	-0.0014609	0.0006738	0.0035	1.52		11219.92	11219.92	0.96		No
SLV 16	10.84	7906.97	-2089	-0.0166255	0.0006738	0.0035	1.52		2349	2349	0.3		No
SLV 15	8.34	-11656.21	-10843	-0.0014066	0.0006738	0.0035	1.52		11241.92	11241.92	0.96		No
SLV 15	10.84	7887.28	-2094	-0.0165638	0.0006738	0.0035	1.52		2353.74	2353.74	0.3		No
SLV 3	8.34	10207.54	-9990	-0.0070217	0.0006738	0.0035	1.52		9214.18	9214.18	0.9		No
SLV 3	10.84	-8246.29	-13415	-0.00014	0.0006738	0.0035	1.52		13292.59	13292.59	1.61		Si
SLV 11	8.34	-5326.47	-4660	-0.0004911	0.0006738	0.0035	1.52		6026.3	6026.3	1.13		Si
SLV 11	10.84	3263.51	-1699	-0.0044338	0.0006738	0.0035	1.52		1994.25	1994.25	0.61		No
SLV 13	8.34	-10535.3	-15883	-0.0002006	0.0006738	0.0035	1.52		15197.52	15197.52	1.44		Si
SLV 13	10.84	7013.45	-5827	-0.0068462	0.0006738	0.0035	1.52		5685.19	5685.19	0.81		No
SLV 2	8.34	11245.44	-15002	-0.0002883	0.0006738	0.0035	1.9		13140.28	13140.28	1.17		Si
SLV 2	10.84	-9100.43	-17143	-0.0001436	0.0006738	0.0035	1.52		16123.82	16123.82	1.77		Si
SLV 14	8.34	-10618.32	-15855	-0.0002053	0.0006738	0.0035	1.52		15177.56	15177.56	1.43		Si
SLV 14	10.84	7033.15	-5822	-0.0069186	0.0006738	0.0035	1.52		5680.67	5680.67	0.81		No
SLV 12	8.34	-5379.82	-4642	-0.0005083	0.0006738	0.0035	1.52		6010.88	6010.88	1.12		Si
SLV 12	10.84	3276.17	-1696	-0.0044845	0.0006738	0.0035	1.52		1991.17	1991.17	0.61		No
SLV 1	8.34	11328.46	-15029	-0.0002966	0.0006738	0.0035	1.9		13158.99	13158.99	1.16		Si
SLV 1	10.84	-9120.12	-17148	-0.0001441	0.0006738	0.0035	1.52		16127.64	16127.64	1.77		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	8.34	-298.86	-18235	-13009	-366	1.9	1.9	-24452	10833	5763	115546	19119	9690	28809	No	78.73	Si
SLU 84	10.84	-934.24	-14308	-10207	916	1.9	1.9	-19186	10833	5763	115546	19119	9690	28809	No	31.46	Si
SLU 79	8.34	-350.85	-18414	-13136	-461	1.9	1.9	-24691	10833	5763	115546	19119	9690	28809	No	62.54	Si
SLU 79	10.84	-904.18	-14206	-10134	847	1.9	1.9	-19049	10833	5763	115546	19119	9690	28809	No	34.03	Si
SLU 74	8.34	-334.94	-18442	-13156	-409	1.9	1.9	-24729	10833	5763	115546	19119	9690	28809	No	70.5	Si
SLU 74	10.84	-905.11	-14392	-10267	864	1.9	1.9	-19299	10833	5763	115546	19119	9690	28809	No	33.35	Si
SLU 83	8.34	-290.07	-18289	-13047	-358	1.9	1.9	-24525	10833	5763	115546	19119	9690	28809	No	80.36	Si
SLU 83	10.84	-942.59	-14352	-10238	914	1.9	1.9	-19245	10833	5763	115546	19119	9690	28809	No	31.51	Si
SLU 77	8.34	-359.56	-18870	-13461	-453	1.9	1.9	-25303	10833	5763	115546	19119	9690	28809	No	63.56	Si
SLU 77	10.84	-923.02	-14711	-10494	877	1.9	1.9	-19726	10833	5763	115546	19119	9690	28809	No	32.83	Si
SLU 75	8.34	-343.73	-18388	-13117	-416	1.9	1.9	-24657	10833	5763	115546	19119	9690	28809	No	69.23	Si
SLU 75	10.84	-896.77	-14348	-10236	865	1.9	1.9	-19240	10833	5763	115546	19119	9690	28809	No	33.29	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	8.34	-359.65	-18359	-13097	-468	1.9	1.9	-24619	10833	5763	115546	19119	9690	28809	No	61.55	Si
SLU 80	10.84	-895.83	-14162	-10103	848	1.9	1.9	-18990	10833	5763	115546	19119	9690	28809	No	33.97	Si
SLU 81	8.34	-265.45	-17862	-12742	-314	1.9	1.9	-23952	10833	5763	115546	19119	9690	28809	No	91.78	Si
SLU 81	10.84	-924.68	-14033	-10011	901	1.9	1.9	-18817	10833	5763	115546	19119	9690	28809	No	31.99	Si
SLU 78	8.34	-368.35	-18815	-13422	-461	1.9	1.9	-25230	10833	5763	115546	19119	9690	28809	No	62.53	Si
SLU 78	10.84	-914.68	-14667	-10463	879	1.9	1.9	-19668	10833	5763	115546	19119	9690	28809	No	32.78	Si
SLU 82	8.34	-274.24	-17808	-12704	-321	1.9	1.9	-23879	10833	5763	115546	19119	9690	28809	No	89.65	Si
SLU 82	10.84	-916.34	-13989	-9979	902	1.9	1.9	-18758	10833	5763	115546	19119	9690	28809	No	31.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	8.34	-11739.23	-10816	-7716	-11088	1.52	0	0	0	0	115546	22942	7752	30694		2.77	Si
SLV 16	10.84	7906.97	-2089	-1490	-7749	1.52	0	0	0	0	115546	22942	7752	30694		3.96	Si
SLV 14	8.34	-10618.32	-15855	-11311	-10428	1.52	0.8409	0	0	0	115546	22942	7752	30694		2.94	Si
SLV 14	10.84	7033.15	-5822	-4153	-7753	1.52	0	0	0	0	115546	22942	7752	30694		3.96	Si
SLV 15	8.34	-11656.21	-10843	-7735	-11031	1.52	0	0	0	0	115546	22942	7752	30694		2.78	Si
SLV 15	10.84	7887.28	-2094	-1494	-7760	1.52	0	0	0	0	115546	22942	7752	30694		3.96	Si
SLV 4	8.34	10124.52	-9963	-7107	9742	1.52	0	0	0	0	115546	22942	7752	30694		3.15	Si
SLV 4	10.84	-8226.6	-13409	-9566	8788	1.52	1.0095	0	0	0	115546	22942	7752	30694		3.49	Si
SLV 12	8.34	-5379.82	-4642	-3312	-4558	1.52	0	0	0	0	115546	22942	7752	30694		6.73	Si
SLV 12	10.84	3276.17	-1696	-1210	-1957	1.52	0	0	0	0	115546	22942	7752	30694		15.68	Si
SLV 11	8.34	-5326.47	-4660	-3324	-4521	1.52	0	0	0	0	115546	22942	7752	30694		6.79	Si
SLV 11	10.84	3263.51	-1699	-1212	-1964	1.52	0	0	0	0	115546	22942	7752	30694		15.63	Si
SLV 13	8.34	-10535.3	-15883	-11330	-10370	1.52	0.86	0	0	0	115546	22942	7752	30694		2.96	Si
SLV 13	10.84	7013.45	-5827	-4157	-7764	1.52	0	0	0	0	115546	22942	7752	30694		3.95	Si
SLV 1	8.34	11328.46	-15029	-10722	10460	1.9	0.5887	-67544	16250	2679	115546	28678	9690	38368		3.67	Si
SLV 1	10.84	-9120.12	-17148	-12233	8772	1.52	1.2545	0	0	0	115546	22942	7752	30694		3.5	Si
SLV 3	8.34	10207.54	-9990	-7126	9800	1.52	0	0	0	0	115546	22942	7752	30694		3.13	Si
SLV 3	10.84	-8246.29	-13415	-9570	8777	1.52	1.0058	0	0	0	115546	22942	7752	30694		3.5	Si
SLV 2	8.34	11245.44	-15002	-10702	10403	1.9	0.6013	-65943	16250	2736	115546	28678	9690	38368		3.69	Si
SLV 2	10.84	-9100.43	-17143	-12229	8784	1.52	1.2574	0	0	0	115546	22942	7752	30694		3.49	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-4139	0.46	236.08	554.88	858.42	706.65	2.99	Si
SLV 12	-4160	0.46	236.08	557.57	861.68	709.62	3.01	Si
SLV 7	-4784	0.46	236.08	636.86	958.11	797.48	3.38	Si
SLV 8	-4805	0.46	236.08	639.51	961.33	800.42	3.39	Si
SLV 15	-8115	0.46	236.08	1041.56	1467.26	1254.41	5.31	Si
SLV 16	-8148	0.46	236.08	1045.37	1472.23	1258.8	5.33	Si
SLV 3	-10264	0.46	236.08	1285.65	1792.08	1538.87	6.52	Si
SLV 4	-10296	0.46	236.08	1289.27	1797	1543.13	6.54	Si
SLV 13	-12173	0.46	236.08	1491.42	2078.49	1784.95	7.56	Si
SLV 14	-12205	0.46	236.08	1494.85	2083.35	1789.1	7.58	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-14083	-21203	-259	0.704	1698.1	0.954	10.72609	14.55598	No
SLV 6	-14048	-21186	-259	0.706	1694.6	0.954	10.74933	14.55598	No
SLV 9	-13670	-21459	-197	0.726	1656.2	0.953	11.07099	14.55598	No
SLV 10	-13636	-21441	-197	0.728	1652.7	0.953	11.09568	14.55598	No
SLV 1	-10884	-15029	-168	0.881	1373.4	0.945	13.54381	7.56668	Si
SLV 2	-10830	-15002	-168	0.884	1367.9	0.945	13.60223	7.56668	Si
SLV 13	-9510	-15883	38	0.996	1234.1	0.94	15.39458	7.56668	Si
SLV 14	-9456	-15855	38	1	1228.7	0.94	15.46989	7.56668	Si
SLV 7	-3543	-4404	207	2.054	635.4	0.902	33.11407	14.55598	Si
SLV 8	-3508	-4386	207	2.068	632	0.901	33.34234	14.55598	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.287	SLU 60	Si
V_SLU	31.457	SLU 84	Si
PF_SLV	0.297	SLV 16	No
V_SLV	2.768	SLV 16	Si
PFFP_SLV	2.993	SLV 11	Si
R_SLV	0.737	SLV 5	No

Maschio 136

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.478	1.006	-11.143	1.006	L6	L7	0.665	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 38	8.34	156.02	-5188	-0.0000505	0.0004492	0.0035	0.6647	1330.89	1525.93	1525.93	9.78	No	Si
SLU 38	10.84	-134.29	-6232	-0.0000575	0.0004492	0.0035	0.6647	1503.66	1907.48	1907.48	14.2	No	Si
SLU 36	8.34	159.7	-5320	-0.0000519	0.0004492	0.0035	0.6647	1354.43	1557.05	1557.05	9.75	No	Si
SLU 36	10.84	-136.92	-6432	-0.0000593	0.0004492	0.0035	0.6647	1533.06	1954.06	1954.06	14.27	No	Si
SLU 41	8.34	161.83	-5129	-0.0000505	0.0004492	0.0035	0.6647	1320.21	1512.03	1512.03	9.34	No	Si
SLU 41	10.84	-138.43	-6352	-0.0000588	0.0004492	0.0035	0.6647	1521.42	1935.39	1935.39	13.98	No	Si
SLU 40	8.34	159.23	-4924	-0.0000486	0.0004492	0.0035	0.6647	1282.05	1463.39	1463.39	9.19	No	Si
SLU 40	10.84	-136.01	-6160	-0.000057	0.0004492	0.0035	0.6647	1492.64	1890.49	1890.49	13.9	No	Si
SLU 39	8.34	158.95	-4953	-0.0000489	0.0004492	0.0035	0.6647	1287.68	1470.46	1470.46	9.25	No	Si
SLU 39	10.84	-135.32	-6179	-0.0000571	0.0004492	0.0035	0.6647	1495.59	1895.02	1895.02	14	No	Si
SLU 32	8.34	156.53	-5174	-0.0000505	0.0004492	0.0035	0.6647	1328.31	1522.56	1522.56	9.73	No	Si
SLU 32	10.84	-133.12	-6278	-0.0000578	0.0004492	0.0035	0.6647	1510.54	1918.21	1918.21	14.41	No	Si
SLU 31	8.34	150.44	-4816	-0.0000471	0.0004492	0.0035	0.6647	1261.71	1438.07	1438.07	9.56	No	Si
SLU 31	10.84	-128.53	-5873	-0.0000541	0.0004492	0.0035	0.6647	1447.85	1823.27	1823.27	14.19	No	Si
SLU 34	8.34	153.32	-4992	-0.0000488	0.0004492	0.0035	0.6647	1294.94	1479.64	1479.64	9.65	No	Si
SLU 34	10.84	-131.64	-6046	-0.0000558	0.0004492	0.0035	0.6647	1475.22	1864.09	1864.09	14.16	No	Si
SLU 42	8.34	162.11	-5099	-0.0000503	0.0004492	0.0035	0.6647	1314.74	1504.95	1504.95	9.28	No	Si
SLU 42	10.84	-139.12	-6333	-0.0000587	0.0004492	0.0035	0.6647	1518.56	1930.86	1930.86	13.88	No	Si
SLU 33	8.34	156.81	-5144	-0.0000502	0.0004492	0.0035	0.6647	1322.88	1515.48	1515.48	9.66	No	Si
SLU 33	10.84	-133.81	-6259	-0.0000577	0.0004492	0.0035	0.6647	1507.64	1913.68	1913.68	14.3	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	8.34	2730.31	-4704	-0.0304089	0.0006738	0.0035	0.5318		1474.46	1474.46	0.54		No
SLV 2	10.84	-2427.4	-5749	-0.0065942	0.0006738	0.0035	0.5318		1854.43	1854.43	0.76		No
SLV 11	8.34	-665.11	-208	-0.0014901	0.0006738	0.0035	0.5318		225.68	225.68	0.34		No
SLV 11	10.84	595.71	-2259	-0.0001135	0.0006738	0.0035	0.6647		767.47	767.47	1.29		Si
SLV 8	8.34	921.29	534	-0.0190633	0.0006738	0.0035	0.5318		0	0	0		No
SLV 8	10.84	-822.63	-2387	-0.0005784	0.0006738	0.0035	0.5318		905.3	905.3	1.1		Si
SLV 16	8.34	-2557.94	-4498	-0.0085443	0.0006738	0.0035	0.5318		1515.89	1515.89	0.59		No
SLV 16	10.84	2295.12	-3920	-0.0256719	0.0006738	0.0035	0.5318		1254.97	1254.97	0.55		No
SLV 3	8.34	2762.74	-1795	-0.0438103	0.0006738	0.0035	0.5318		625.54	625.54	0.23		No
SLV 3	10.84	-2462.42	-4213	-0.0082796	0.0006738	0.0035	0.5318		1436.46	1436.46	0.58		No
SLV 4	8.34	2752.33	-1868	-0.0433084	0.0006738	0.0035	0.5318		648.01	648.01	0.24		No
SLV 4	10.84	-2452.95	-4255	-0.0081954	0.0006738	0.0035	0.5318		1448.13	1448.13	0.59		No
SLV 12	8.34	-671.8	-255	-0.0014986	0.0006738	0.0035	0.5318		240.79	240.79	0.36		No
SLV 12	10.84	601.8	-2286	-0.0001142	0.0006738	0.0035	0.6647		775.64	775.64	1.29		Si
SLV 1	8.34	2740.72	-4631	-0.0309451	0.0006738	0.0035	0.5318		1454.52	1454.52	0.53		No
SLV 1	10.84	-2436.87	-5707	-0.0066985	0.0006738	0.0035	0.5318		1843.24	1843.24	0.76		No
SLV 7	8.34	927.97	581	-0.0193807	0.0006738	0.0035	0.5318		0	0	0		No
SLV 7	10.84	-828.72	-2360	-0.0006287	0.0006738	0.0035	0.5318		897.18	897.18	1.08		Si
SLV 15	8.34	-2547.53	-4425	-0.0085503	0.0006738	0.0035	0.5318		1495.59	1495.59	0.59		No
SLV 15	10.84	2285.65	-3878	-0.0256833	0.0006738	0.0035	0.5318		1243.1	1243.1	0.54		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	8.34	159.23	-4924	-3512	300	0.6647	0.6647	-18872	10833	2016	115546	6689	3390	10078	No	33.55	Si
SLU 40	10.84	-136.01	-6160	-4394	281	0.6647	0.6647	-23610	10833	2016	115546	6689	3390	10078	No	35.86	Si
SLU 35	8.34	159.41	-5350	-3816	285	0.6647	0.6647	-20505	10833	2016	115546	6689	3390	10078	No	35.31	Si
SLU 35	10.84	-136.23	-6452	-4602	273	0.6647	0.6647	-24729	10833	2016	115546	6689	3390	10078	No	36.96	Si
SLU 39	8.34	158.95	-4953	-3534	299	0.6647	0.6647	-18987	10833	2016	115546	6689	3390	10078	No	33.69	Si
SLU 39	10.84	-135.32	-6179	-4408	280	0.6647	0.6647	-23684	10833	2016	115546	6689	3390	10078	No	36.01	Si
SLU 82	8.34	158.67	-6182	-4410	298	0.6647	0.6647	-23694	10833	2016	115546	6689	3390	10078	No	33.86	Si
SLU 82	10.84	-129.72	-7167	-5113	279	0.6647	0.6647	-27471	10833	2016	115546	6689	3390	10078	No	36.13	Si
SLU 81	8.34	158.39	-6212	-4431	296	0.6647	0.6647	-23809	10833	2016	115546	6689	3390	10078	No	34	Si
SLU 81	10.84	-129.03	-7186	-5127	278	0.6647	0.6647	-27545	10833	2016	115546	6689	3390	10078	No	36.29	Si
SLU 36	8.34	159.7	-5320	-3795	287	0.6647	0.6647	-20391	10833	2016	115546	6689	3390	10078	No	35.16	Si
SLU 36	10.84	-136.92	-6432	-4588	274	0.6647	0.6647	-24654	10833	2016	115546	6689	3390	10078	No	36.79	Si
SLU 42	8.34	162.11	-5099	-3638	302	0.6647	0.6647	-19546	10833	2016	115546	6689	3390	10078	No	33.32	Si
SLU 42	10.84	-139.12	-6333	-4518	283	0.6647	0.6647	-24273	10833	2016	115546	6689	3390	10078	No	35.57	Si
SLU 83	8.34	161.27	-6387	-4557	299	0.6647	0.6647	-24483	10833	2016	115546	6689	3390	10078	No	33.76	Si
SLU 83	10.84	-132.14	-7359	-5250	280	0.6647	0.6647	-28209	10833	2016	115546	6689	3390	10078	No	35.99	Si
SLU 84	8.34	161.55	-6357	-4535	300	0.6647	0.6647	-24368	10833	2016	115546	6689	3390	10078	No	33.63	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	10.84	-132.83	-7340	-5236	281	0.6647	0.6647	-28134	10833	2016	115546	6689	3390	10078	No	35.83	Si
SLU 41	8.34	161.83	-5129	-3659	301	0.6647	0.6647	-19661	10833	2016	115546	6689	3390	10078	No	33.45	Si
SLU 41	10.84	-138.43	-6352	-4531	282	0.6647	0.6647	-24347	10833	2016	115546	6689	3390	10078	No	35.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	8.34	2762.74	-1795	-1280	2577	0.5318	0	0	0	0	115546	8026	2712	10738		4.17	Si
SLV 3	10.84	-2462.42	-4213	-3005	2010	0.5318	0	0	0	0	115546	8026	2712	10738		5.34	Si
SLV 2	8.34	2730.31	-4704	-3356	2422	0.5318	0	0	0	0	115546	8026	2712	10738		4.43	Si
SLV 2	10.84	-2427.4	-5749	-4101	1906	0.5318	0	0	0	0	115546	8026	2712	10738		5.63	Si
SLV 15	8.34	-2547.53	-4425	-3157	-2109	0.5318	0	0	0	0	115546	8026	2712	10738		5.09	Si
SLV 15	10.84	2285.65	-3878	-2766	-1599	0.5318	0	0	0	0	115546	8026	2712	10738		6.72	Si
SLD 4	8.34	1228.26	-3393	-2420	1188	0.5318	0	0	0	0	115546	8026	2712	10738		9.04	Si
SLD 4	10.84	-1088.62	-4566	-3257	943	0.5318	0.2818	0	0	0	115546	8026	2712	10738		11.39	Si
SLV 16	8.34	-2557.94	-4498	-3209	-2119	0.5318	0	0	0	0	115546	8026	2712	10738		5.07	Si
SLV 16	10.84	2295.12	-3920	-2796	-1609	0.5318	0	0	0	0	115546	8026	2712	10738		6.67	Si
SLD 3	8.34	1232.73	-3361	-2398	1192	0.5318	0	0	0	0	115546	8026	2712	10738		9.01	Si
SLD 3	10.84	-1092.69	-4548	-3245	947	0.5318	0.2763	0	0	0	115546	8026	2712	10738		11.34	Si
SLV 13	8.34	-2569.55	-7262	-5180	-2254	0.5318	0	0	0	0	115546	8026	2712	10738		4.76	Si
SLV 13	10.84	2311.2	-5372	-3833	-1692	0.5318	0	0	0	0	115546	8026	2712	10738		6.35	Si
SLV 4	8.34	2752.33	-1868	-1332	2567	0.5318	0	0	0	0	115546	8026	2712	10738		4.18	Si
SLV 4	10.84	-2452.95	-4255	-3035	1999	0.5318	0	0	0	0	115546	8026	2712	10738		5.37	Si
SLV 1	8.34	2740.72	-4631	-3304	2432	0.5318	0	0	0	0	115546	8026	2712	10738		4.41	Si
SLV 1	10.84	-2436.87	-5707	-4072	1916	0.5318	0	0	0	0	115546	8026	2712	10738		5.6	Si
SLV 14	8.34	-2579.96	-7335	-5232	-2265	0.5318	0	0	0	0	115546	8026	2712	10738		4.74	Si
SLV 14	10.84	2320.68	-5414	-3862	-1703	0.5318	0	0	0	0	115546	8026	2712	10738		6.31	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-1187	0.46	82.59	160.43	239.78	200.1	2.42	Si
SLV 12	-1221	0.46	82.59	164.79	244.96	204.88	2.48	Si
SLV 7	-1351	0.46	82.59	181.7	265.18	223.44	2.71	Si
SLV 8	-1385	0.46	82.59	186.02	270.37	228.2	2.76	Si
SLV 15	-3198	0.46	82.59	405.73	548.12	476.92	5.77	Si
SLV 16	-3250	0.46	82.59	411.65	556.05	483.85	5.86	Si
SLV 3	-3745	0.46	82.59	466.74	630.69	548.72	6.64	Si
SLV 4	-3797	0.46	82.59	472.43	638.54	555.49	6.73	Si
SLV 13	-5093	0.46	82.59	606.6	832.31	719.45	8.71	Si
SLV 14	-5146	0.46	82.59	611.71	840.07	725.89	8.79	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-4941	-9710	14	0.717	595.6	0.955	10.91031	14.55598	No
SLV 9	-4905	-9663	14	0.721	591.8	0.954	10.98238	14.55598	No
SLV 6	-4595	-8921	-12	0.762	560.3	0.952	11.63602	14.55598	No
SLV 5	-4558	-8874	-12	0.767	556.6	0.952	11.71807	14.55598	No
SLV 14	-3599	-7335	44	0.926	459.3	0.943	14.27484	7.56668	Si
SLV 13	-3542	-7262	44	0.939	453.5	0.942	14.47387	7.56668	Si
SLV 2	-2443	-4704	-40	1.265	342.5	0.927	19.82757	7.56668	Si
SLV 1	-2386	-4631	-40	1.289	336.7	0.926	20.21736	7.56668	Si
SLV 16	-2093	-4498	45	1.423	307.3	0.921	22.46163	7.56668	Si
SLV 15	-2036	-4425	45	1.454	301.5	0.92	22.96596	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.19	SLU 40	Si
V_SLU	33.318	SLU 42	Si
PF_SLV	0	SLV 7	No
V_SLV	4.166	SLV 3	Si
PFFP_SLV	2.423	SLV 11	Si
R_SLV	0.75	SLV 10	No

Maschio 137

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L6	L7	1.935	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 31	8.34	1369.46	-17645	-0.0000581	0.0004492	0.0035	1.9353	12524.16	14630.68	14630.68	10.68	No	Si
SLU 31	10.84	202.07	-13053	-0.0000355	0.0004492	0.0035	1.9353	10140.91	11442.24	11442.24	56.62	No	Si
SLU 30	8.34	1359.4	-17598	-0.0000579	0.0004492	0.0035	1.9353	12502.66	14597.7	14597.7	10.74	No	Si
SLU 30	10.84	215.14	-12971	-0.0000354	0.0004492	0.0035	1.9353	10092.81	11385.38	11385.38	52.92	No	Si
SLU 22	8.34	1330.13	-16420	-0.0000543	0.0004492	0.0035	1.9353	11948.4	13779.74	13779.74	10.36	No	Si
SLU 22	10.84	182.69	-11903	-0.0000323	0.0004492	0.0035	1.9353	9447.17	10643.31	10643.31	58.26	No	Si
SLU 29	8.34	1355.35	-17630	-0.0000579	0.0004492	0.0035	1.9353	12517.42	14620.33	14620.33	10.79	No	Si
SLU 29	10.84	224.26	-13003	-0.0000356	0.0004492	0.0035	1.9353	10111.11	11406.99	11406.99	50.87	No	Si
SLU 25	8.34	1357.3	-17509	-0.0000576	0.0004492	0.0035	1.9353	12462.39	14536.19	14536.19	10.71	No	Si
SLU 25	10.84	212.26	-12901	-0.0000352	0.0004492	0.0035	1.9353	10051.18	11336.35	11336.35	53.41	No	Si
SLU 26	8.34	1349.49	-16971	-0.000056	0.0004492	0.0035	1.9353	12212.69	14162.32	14162.32	10.49	No	Si
SLU 26	10.84	188.28	-12401	-0.0000336	0.0004492	0.0035	1.9353	9752.21	10989.14	10989.14	58.37	No	Si
SLU 24	8.34	1353.25	-17542	-0.0000576	0.0004492	0.0035	1.9353	12477.24	14558.82	14558.82	10.76	No	Si
SLU 24	10.84	221.38	-12932	-0.0000353	0.0004492	0.0035	1.9353	10069.54	11357.95	11357.95	51.31	No	Si
SLU 23	8.34	1336.88	-16365	-0.0000542	0.0004492	0.0035	1.9353	11921.87	13742.02	13742.02	10.28	No	Si
SLU 23	10.84	167.49	-11851	-0.000032	0.0004492	0.0035	1.9353	9414.99	10607.3	10607.3	63.33	No	Si
SLU 64	8.34	1512.64	-20188	-0.0000666	0.0004492	0.0035	1.9353	13578.92	16396.6	16396.6	10.84	No	Si
SLU 64	10.84	337.84	-14523	-0.0000406	0.0004492	0.0035	1.9353	10970.54	12462.46	12462.46	36.89	No	Si
SLU 65	8.34	1519.4	-20134	-0.0000665	0.0004492	0.0035	1.9353	13558.37	16358.88	16358.88	10.77	No	Si
SLU 65	10.84	322.65	-14471	-0.0000404	0.0004492	0.0035	1.9353	10942.33	12426.45	12426.45	38.51	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	8.34	9811.44	-15549	-0.0001644	0.0006738	0.0035	1.9353		13807.85	13807.85	1.41		Si
SLV 4	10.84	-6721.5	-7744	-0.0002326	0.0006738	0.0035	1.5482		9106.76	9106.76	1.35		Si
SLV 3	8.34	9902.17	-15363	-0.0001698	0.0006738	0.0035	1.9353		13677.68	13677.68	1.38		Si
SLV 3	10.84	-6774.65	-7552	-0.000271	0.0006738	0.0035	1.5482		8941.69	8941.69	1.32		Si
SLV 8	8.34	3933.61	-10787	-0.0000598	0.0006738	0.0035	1.9353		10039.6	10039.6	2.55		Si
SLV 8	10.84	-2908.71	-6093	-0.0000411	0.0006738	0.0035	1.9353		7684.74	7684.74	2.64		Si
SLV 13	8.34	-7613.73	-15451	-0.0001121	0.0006738	0.0035	1.9353		15410.51	15410.51	2.02		Si
SLV 13	10.84	7329.63	-14636	-0.0001078	0.0006738	0.0035	1.9353		13165.02	13165.02	1.8		Si
SLV 15	8.34	-7457.77	-12313	-0.0001174	0.0006738	0.0035	1.5482		12928.49	12928.49	1.73		Si
SLV 15	10.84	6594.98	-11935	-0.0000983	0.0006738	0.0035	1.9353		10988.1	10988.1	1.67		Si
SLV 16	8.34	-7548.51	-12498	-0.0001187	0.0006738	0.0035	1.5482		13080.3	13080.3	1.73		Si
SLV 16	10.84	6648.14	-12127	-0.0000989	0.0006738	0.0035	1.9353		11146.47	11146.47	1.68		Si
SLV 14	8.34	-7704.46	-15636	-0.0001136	0.0006738	0.0035	1.9353		15554.83	15554.83	2.02		Si
SLV 14	10.84	7382.78	-14828	-0.0001086	0.0006738	0.0035	1.9353		13301.81	13301.81	1.8		Si
SLV 7	8.34	3991.92	-10668	-0.0000601	0.0006738	0.0035	1.9353		9939.42	9939.42	2.49		Si
SLV 7	10.84	-2942.87	-5969	-0.0000416	0.0006738	0.0035	1.9353		7575.38	7575.38	2.57		Si
SLV 2	8.34	9655.48	-18687	-0.0001458	0.0006738	0.0035	1.9353		16009.97	16009.97	1.66		Si
SLV 2	10.84	-5986.85	-10445	-0.00009	0.0006738	0.0035	1.5482		11399.34	11399.34	1.9		Si
SLV 1	8.34	9746.22	-18501	-0.0001478	0.0006738	0.0035	1.9353		15879.81	15879.81	1.63		Si
SLV 1	10.84	-6040.01	-10252	-0.0000921	0.0006738	0.0035	1.5482		11242.03	11242.03	1.86		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	8.34	1574.5	-22646	-16155	1624	1.9353	1.9353	-29813	10833	5870	115546	19474	9870	29344	No	18.07	Si
SLU 80	10.84	404.87	-16794	-11980	243	1.9353	1.9353	-22108	10833	5870	115546	19474	9870	29344	No	120.98	Si
SLU 72	8.34	1541.92	-21366	-15242	1607	1.9353	1.9353	-28128	10833	5870	115546	19474	9870	29344	No	18.25	Si
SLU 72	10.84	370.3	-15591	-11122	115	1.9353	1.9353	-20525	10833	5870	115546	19474	9870	29344	No	254.38	Si
SLU 74	8.34	1568.35	-22590	-16115	1611	1.9353	1.9353	-29739	10833	5870	115546	19474	9870	29344	No	18.21	Si
SLU 74	10.84	411.11	-16754	-11952	239	1.9353	1.9353	-22056	10833	5870	115546	19474	9870	29344	No	122.99	Si
SLU 84	8.34	1575.85	-22590	-16115	1610	1.9353	1.9353	-29738	10833	5870	115546	19474	9870	29344	No	18.22	Si
SLU 84	10.84	398.91	-16759	-11956	298	1.9353	1.9353	-22063	10833	5870	115546	19474	9870	29344	No	98.52	Si
SLU 78	8.34	1585.01	-23163	-16524	1636	1.9353	1.9353	-30493	10833	5870	115546	19474	9870	29344	No	17.93	Si
SLU 78	10.84	422.78	-17273	-12322	243	1.9353	1.9353	-22739	10833	5870	115546	19474	9870	29344	No	120.63	Si
SLU 75	8.34	1572.4	-22558	-16092	1616	1.9353	1.9353	-29697	10833	5870	115546	19474	9870	29344	No	18.16	Si
SLU 75	10.84	401.99	-16723	-11930	244	1.9353	1.9353	-22016	10833	5870	115546	19474	9870	29344	No	120.25	Si
SLU 69	8.34	1548.38	-21916	-15634	1615	1.9353	1.9353	-28851	10833	5870	115546	19474	9870	29344	No	18.17	Si
SLU 69	10.84	397.32	-16102	-11487	111	1.9353	1.9353	-21197	10833	5870	115546	19474	9870	29344	No	265.32	Si
SLU 79	8.34	1570.45	-22679	-16179	1619	1.9353	1.9353	-29856	10833	5870	115546	19474	9870	29344	No	18.12	Si
SLU 79	10.84	413.99	-16825	-12002	237	1.9353	1.9353	-22149	10833	5870	115546	19474	9870	29344	No	123.76	Si
SLU 77	8.34	1580.96	-23196	-16547	1632	1.9353	1.9353	-30536	10833	5870	115546	19474	9870	29344	No	17.98	Si
SLU 77	10.84	431.9	-17304	-12344	238	1.9353	1.9353	-22780	10833	5870	115546	19474	9870	29344	No	123.4	Si
SLU 70	8.34	1552.43	-21883	-15611	1620	1.9353	1.9353	-28809	10833	5870	115546	19474	9870	29344	No	18.11	Si
SLU 70	10.84	388.2	-16071	-11464	116	1.9353	1.9353	-21156	10833	5870	115546	19474	9870	29344	No	252.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	8.34	9655.48	-18687	-13330	9210	1.9353	1.3528	-24600	16250	6155	115546	29211	9870	39081		4.24	Si
SLV 2	10.84	-5986.85	-10445	-7451	5102	1.5482	1.1833	0	0	0	115546	23369	7896	31265		6.13	Si
SLV 13	8.34	-7613.73	-15451	-11022	-7122	1.9353	1.4246	-27987	16250	6482	115546	29211	9870	39081		5.49	Si
SLV 13	10.84	7329.63	-14636	-10441	-5527	1.9353	1.4005	-19267	16250	6372	115546	29211	9870	39081		7.07	Si
SLV 15	8.34	-7457.77	-12313	-8784	-6927	1.5482	1.0859	0	0	0	115546	23369	7896	31265		4.51	Si
SLV 15	10.84	6594.98	-11935	-8514	-4983	1.9353	1.2452	-15712	15642	5454	115546	29211	9870	39081		7.84	Si
SLV 4	8.34	9811.44	-15549	-11092	9405	1.9353	1.0099	-20469	16250	4595	115546	29211	9870	39081		4.16	Si
SLV 4	10.84	-6721.5	-7744	-5524	5647	1.5482	0.299	0	0	0	115546	23369	7896	31265		5.54	Si
SLD 4	8.34	4823.14	-15500	-11058	4674	1.9353	1.9353	-20406	16250	8806	115546	29211	9870	39081		8.36	Si
SLD 4	10.84	-2702.59	-9699	-6919	2450	1.9353	1.9353	-12769	15054	8157	115546	29211	9870	39081		15.95	Si
SLV 16	8.34	-7548.51	-12498	-8916	-6991	1.5482	1.0911	0	0	0	115546	23369	7896	31265		4.47	Si
SLV 16	10.84	6648.14	-12127	-8651	-5024	1.9353	1.2583	-15965	15693	5529	115546	29211	9870	39081		7.78	Si
SLD 3	8.34	4862.09	-15421	-11001	4701	1.9353	1.9353	-20301	16250	8806	115546	29211	9870	39081		8.31	Si
SLD 3	10.84	-2725.41	-9617	-6860	2468	1.9353	1.9353	-12660	15032	8146	115546	29211	9870	39081		15.84	Si
SLV 1	8.34	9746.22	-18501	-13198	9273	1.9353	1.3226	-24356	16250	6018	115546	29211	9870	39081		4.21	Si
SLV 1	10.84	-6040.01	-10252	-7314	5144	1.5482	1.1356	0	0	0	115546	23369	7896	31265		6.08	Si
SLV 14	8.34	-7704.46	-15636	-11154	-7185	1.9353	1.4247	-28326	16250	6483	115546	29211	9870	39081		5.44	Si
SLV 14	10.84	7382.78	-14828	-10578	-5569	1.9353	1.4092	-19520	16250	6412	115546	29211	9870	39081		7.02	Si
SLV 3	8.34	9902.17	-15363	-10960	9468	1.9353	0.9694	-20225	16250	4411	115546	29211	9870	39081		4.13	Si
SLV 3	10.84	-6774.65	-7552	-5387	5688	1.5482	0.2116	0	0	0	115546	23369	7896	31265		5.5	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-8116	0.46	240.47	1043.4	1492.68	1268.04	5.27	Si
SLV 12	-8235	0.46	240.47	1057.34	1510.79	1284.07	5.34	Si
SLV 7	-9044	0.46	240.47	1150.83	1633.52	1392.18	5.79	Si
SLV 8	-9163	0.46	240.47	1164.46	1651.61	1408.03	5.86	Si
SLV 15	-10618	0.46	240.47	1327.59	1870.68	1599.14	6.65	Si
SLV 16	-10803	0.46	240.47	1347.95	1898.55	1623.25	6.75	Si
SLV 3	-13710	0.46	240.47	1654.42	2332.36	1993.39	8.29	Si
SLV 13	-13718	0.46	240.47	1655.28	2333.62	1994.45	8.29	Si
SLV 4	-13895	0.46	240.47	1673.17	2359.91	2016.54	8.39	Si
SLV 14	-13904	0.46	240.47	1674.02	2361.17	2017.59	8.39	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-11800	-21246	-710	0.797	1471.2	0.947	12.21863	14.55598	No
SLV 5	-11696	-21127	-710	0.802	1460.7	0.947	12.31266	14.55598	No
SLV 10	-11642	-20331	-663	0.809	1455.3	0.947	12.41583	14.55598	No
SLV 9	-11538	-20212	-663	0.815	1444.7	0.947	12.51261	14.55598	No
SLV 8	-6822	-10787	678	1.242	967.6	0.926	19.49256	14.55598	Si
SLV 7	-6718	-10668	678	1.256	957.2	0.925	19.73841	14.55598	Si
SLV 12	-6664	-9872	725	1.258	951.8	0.925	19.77937	14.55598	Si
SLV 11	-6560	-9753	725	1.274	941.4	0.924	20.03375	14.55598	Si
SLV 2	-10270	-18687	-279	0.929	1316.1	0.942	14.33168	7.56668	Si
SLV 1	-10108	-18501	-279	0.941	1299.7	0.942	14.52842	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.279	SLU 23	Si
V_SLU	17.933	SLU 78	Si
PF_SLV	1.32	SLV 3	Si
V_SLV	4.128	SLV 3	Si
PFFP_SLV	5.273	SLV 11	Si
R_SLV	0.839	SLV 6	No

Maschio 138

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L6	L7	1.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 2	8.34	1054.14	-11166	-0.00005	0.0004492	0.0035	1.55	6831.64	7704.54	7704.54	7.31	No	Si
SLU 2	10.44	-751.04	-10011	-0.0000421	0.0004492	0.0035	1.55	6293.94	8155.43	8155.43	10.86	No	Si
SLU 64	8.34	1403.13	-15330	-0.0000695	0.0004492	0.0035	1.55	8446.14	10073.94	10073.94	7.18	No	Si
SLU 64	10.44	-970.58	-14053	-0.000059	0.0004492	0.0035	1.55	8004.99	10501.67	10501.67	10.82	No	Si
SLU 43	8.34	1344.69	-14177	-0.0000645	0.0004492	0.0035	1.55	8049.98	9418.11	9418.11	7	No	Si
SLU 43	10.44	-959.11	-12525	-0.0000535	0.0004492	0.0035	1.55	7414.27	9638.41	9638.41	10.05	No	Si
SLU 51	8.34	1347.45	-15096	-0.0000679	0.0004492	0.0035	1.55	8368.97	9941	9941	7.38	No	Si
SLU 51	10.44	-927.89	-13374	-0.0000561	0.0004492	0.0035	1.55	7751	10121.64	10121.64	10.91	No	Si
SLU 1	8.34	1049.79	-11210	-0.0000501	0.0004492	0.0035	1.55	6851.06	7729.21	7729.21	7.36	No	Si
SLU 1	10.44	-740.8	-10038	-0.000042	0.0004492	0.0035	1.55	6306.74	8171.48	8171.48	11.03	No	Si
SLU 47	8.34	1349.12	-14606	-0.0000661	0.0004492	0.0035	1.55	8202.01	9662.29	9662.29	7.16	No	Si
SLU 47	10.44	-950.67	-12931	-0.0000548	0.0004492	0.0035	1.55	7577.89	9869.44	9869.44	10.38	No	Si
SLU 65	8.34	1407.48	-15286	-0.0000694	0.0004492	0.0035	1.55	8431.94	10049.27	10049.27	7.14	No	Si
SLU 65	10.44	-980.81	-14027	-0.0000591	0.0004492	0.0035	1.55	7995.31	10487.48	10487.48	10.69	No	Si
SLU 68	8.34	1407.55	-15759	-0.0000711	0.0004492	0.0035	1.55	8583.73	10318.12	10318.12	7.33	No	Si
SLU 68	10.44	-962.14	-14459	-0.0000604	0.0004492	0.0035	1.55	8150.48	10718.52	10718.52	11.14	No	Si
SLU 44	8.34	1349.04	-14134	-0.0000644	0.0004492	0.0035	1.55	8034.32	9393.44	9393.44	6.96	No	Si
SLU 44	10.44	-969.34	-12499	-0.0000535	0.0004492	0.0035	1.55	7403.39	9623.29	9623.29	9.93	No	Si
SLU 46	8.34	1340.22	-14998	-0.0000674	0.0004492	0.0035	1.55	8336.17	9885.3	9885.3	7.38	No	Si
SLU 46	10.44	-934.21	-13338	-0.000056	0.0004492	0.0035	1.55	7736.97	10100.87	10100.87	10.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	8.34	-4901.16	-15832	-0.0001175	0.0006738	0.0035	1.55		11932.03	11932.03	2.43		Si
SLV 13	10.44	4649.67	-12597	-0.0001066	0.0006738	0.0035	1.55		8876.68	8876.68	1.91		Si
SLV 7	8.34	2997.95	-5705	-0.0000772	0.0006738	0.0035	1.55		4463.02	4463.02	1.49		Si
SLV 7	10.44	-2787.21	-6977	-0.0000622	0.0006738	0.0035	1.55		6336.62	6336.62	2.27		Si
SLV 1	8.34	6911.94	-10476	-0.0003696	0.0006738	0.0035	1.55		7656.69	7656.69	1.11		Si
SLV 1	10.44	-5833.39	-10905	-0.0001604	0.0006738	0.0035	1.24		8930.52	8930.52	1.53		Si
SLV 3	8.34	7017.55	-7384	-0.0107458	0.0006738	0.0035	1.55		5621.92	5621.92	0.8		No
SLV 3	10.44	-6126.74	-8797	-0.0003594	0.0006738	0.0035	1.24		7557.37	7557.37	1.23		Si
SLV 2	8.34	6866	-10772	-0.0003048	0.0006738	0.0035	1.55		7826.95	7826.95	1.14		Si
SLV 2	10.44	-5762.22	-11163	-0.0001518	0.0006738	0.0035	1.24		9091.72	9091.72	1.58		Si
SLV 14	8.34	-4947.11	-16128	-0.0001191	0.0006738	0.0035	1.55		12106.91	12106.91	2.45		Si
SLV 14	10.44	4720.84	-12855	-0.0001084	0.0006738	0.0035	1.55		9024.91	9024.91	1.91		Si
SLV 16	8.34	-4841.51	-13037	-0.0001113	0.0006738	0.0035	1.55		10263.89	10263.89	2.12		Si
SLV 16	10.44	4427.48	-10747	-0.0001014	0.0006738	0.0035	1.55		7812.63	7812.63	1.76		Si
SLV 15	8.34	-4795.56	-12741	-0.00011	0.0006738	0.0035	1.55		10078.73	10078.73	2.1		Si
SLV 15	10.44	4356.31	-10489	-0.0000998	0.0006738	0.0035	1.55		7664.39	7664.39	1.76		Si
SLV 8	8.34	2968.43	-5896	-0.0000732	0.0006738	0.0035	1.55		4595.23	4595.23	1.55		Si
SLV 8	10.44	-2741.47	-7142	-0.0000611	0.0006738	0.0035	1.55		6450.77	6450.77	2.35		Si
SLV 4	8.34	6971.6	-7681	-0.0096735	0.0006738	0.0035	1.55		5822.88	5822.88	0.84		No
SLV 4	10.44	-6055.57	-9055	-0.0002957	0.0006738	0.0035	1.24		7726.77	7726.77	1.28		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 65	8.34	1407.48	-15286	-10905	1452	1.55	1.55	-25127	10833	4702	115546	15597	7905	23502	No	16.19	Si
SLU 65	10.44	-980.81	-14027	-10006	1452	1.55	1.55	-23056	10833	4702	115546	15597	7905	23502	No	16.18	Si
SLU 68	8.34	1407.55	-15759	-11242	1431	1.55	1.55	-25903	10833	4702	115546	15597	7905	23502	No	16.42	Si
SLU 68	10.44	-962.14	-14459	-10315	1432	1.55	1.55	-23767	10833	4702	115546	15597	7905	23502	No	16.41	Si
SLU 82	8.34	1249.4	-16391	-11693	1460	1.55	1.55	-26943	10833	4702	115546	15597	7905	23502	No	16.1	Si
SLU 82	10.44	-771.09	-15796	-11268	1461	1.55	1.55	-25964	10833	4702	115546	15597	7905	23502	No	16.09	Si
SLU 73	8.34	1298.04	-16048	-11448	1461	1.55	1.55	-26378	10833	4702	115546	15597	7905	23502	No	16.09	Si
SLU 73	10.44	-836.87	-15258	-10884	1461	1.55	1.55	-25079	10833	4702	115546	15597	7905	23502	No	16.08	Si
SLU 64	8.34	1403.13	-15330	-10936	1440	1.55	1.55	-25198	10833	4702	115546	15597	7905	23502	No	16.32	Si
SLU 64	10.44	-970.58	-14053	-10025	1440	1.55	1.55	-23100	10833	4702	115546	15597	7905	23502	No	16.32	Si
SLU 81	8.34	1246.79	-16418	-11712	1453	1.55	1.55	-26986	10833	4702	115546	15597	7905	23502	No	16.17	Si
SLU 81	10.44	-764.95	-15812	-11280	1454	1.55	1.55	-25990	10833	4702	115546	15597	7905	23502	No	16.17	Si
SLU 83	8.34	1246.86	-16890	-12049	1433	1.55	1.55	-27762	10833	4702	115546	15597	7905	23502	No	16.4	Si
SLU 83	10.44	-746.27	-16244	-11588	1433	1.55	1.55	-26701	10833	4702	115546	15597	7905	23502	No	16.4	Si
SLU 84	8.34	1249.47	-16864	-12030	1440	1.55	1.55	-27720	10833	4702	115546	15597	7905	23502	No	16.32	Si
SLU 84	10.44	-752.41	-16228	-11577	1440	1.55	1.55	-26675	10833	4702	115546	15597	7905	23502	No	16.32	Si
SLU 76	8.34	1298.12	-16520	-11785	1441	1.55	1.55	-27155	10833	4702	115546	15597	7905	23502	No	16.31	Si
SLU 76	10.44	-818.2	-15690	-11193	1441	1.55	1.55	-25791	10833	4702	115546	15597	7905	23502	No	16.31	Si
SLU 75	8.34	1289.22	-16912	-12065	1433	1.55	1.55	-27799	10833	4702	115546	15597	7905	23502	No	16.4	Si
SLU 75	10.44	-801.74	-16097	-11483	1433	1.55	1.55	-26459	10833	4702	115546	15597	7905	23502	No	16.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	8.34	6971.6	-7681	-5479	7472	1.55	0	-232823	16250	0	115546	23395	7905	31300		4.19	Si
SLV 4	10.44	-6055.57	-9055	-6460	7059	1.24	0.3187	0	0	0	115546	18716	6324	25040		3.55	Si
SLV 3	8.34	7017.55	-7384	-5268	7540	1.55	0	-236140	16250	0	115546	23395	7905	31300		4.15	Si
SLV 3	10.44	-6126.74	-8797	-6276	7127	1.24	0.2357	0	0	0	115546	18716	6324	25040		3.51	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	8.34	-4841.51	-13037	-9300	-4897	1.55	1.2109	-27775	16250	5510	115546	23395	7905	31300		6.39	Si
SLV 16	10.44	4427.48	-10747	-7667	-4294	1.55	1.0891	-17665	16033	4889	115546	23395	7905	31300		7.29	Si
SLV 14	8.34	-4947.11	-16128	-11506	-5388	1.55	1.4048	-29612	16250	6392	115546	23395	7905	31300		5.81	Si
SLV 14	10.44	4720.84	-12855	-9170	-4974	1.55	1.2233	-21130	16250	5566	115546	23395	7905	31300		6.29	Si
SLV 8	8.34	2968.43	-5896	-4206	3729	1.55	0.8145	-9691	14438	3293	115546	23395	7905	31300		8.39	Si
SLV 8	10.44	-2741.47	-7142	-5095	3891	1.55	1.1735	-15612	15623	5133	115546	23395	7905	31300		8.05	Si
SLV 15	8.34	-4795.56	-12741	-9089	-4829	1.55	1.1958	-27477	16250	5441	115546	23395	7905	31300		6.48	Si
SLV 15	10.44	4356.31	-10489	-7483	-4226	1.55	1.0791	-17242	15948	4819	115546	23395	7905	31300		7.41	Si
SLV 2	8.34	6866	-10772	-7685	6981	1.55	0.4128	-69090	16250	1878	115546	23395	7905	31300		4.48	Si
SLV 2	10.44	-5762.22	-11163	-7963	6379	1.24	0.7764	0	0	0	115546	18716	6324	25040		3.93	Si
SLV 1	8.34	6911.94	-10476	-7473	7049	1.55	0.3456	-80912	16250	1573	115546	23395	7905	31300		4.44	Si
SLV 1	10.44	-5833.39	-10905	-7779	6447	1.24	0.7202	0	0	0	115546	18716	6324	25040		3.88	Si
SLV 7	8.34	2997.95	-5705	-4070	3772	1.55	0.7486	-9378	14376	3013	115546	23395	7905	31300		8.3	Si
SLV 7	10.44	-2787.21	-6977	-4977	3934	1.55	1.1265	-15886	15678	4945	115546	23395	7905	31300		7.96	Si
SLV 13	8.34	-4901.16	-15832	-11294	-5320	1.55	1.3963	-29234	16250	6353	115546	23395	7905	31300		5.88	Si
SLV 13	10.44	4649.67	-12597	-8987	-4905	1.55	1.2177	-20706	16250	5540	115546	23395	7905	31300		6.38	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-7343	0.46	192.59	933.13	1319.29	1126.21	5.85	Si
SLV 8	-7509	0.46	192.59	951.99	1344.44	1148.22	5.96	Si
SLV 11	-7887	0.46	192.59	994.65	1401.3	1197.97	6.22	Si
SLV 12	-8052	0.46	192.59	1013.19	1426.23	1219.71	6.33	Si
SLV 3	-9045	0.46	192.59	1122.28	1575.44	1348.86	7	Si
SLV 4	-9302	0.46	192.59	1150.04	1614.19	1382.12	7.18	Si
SLV 15	-10856	0.46	192.59	1312.43	1845.71	1579.07	8.2	Si
SLV 1	-11086	0.46	192.59	1335.75	1879.91	1607.83	8.35	Si
SLV 16	-11114	0.46	192.59	1338.54	1884.03	1611.29	8.37	Si
SLV 2	-11344	0.46	192.59	1361.65	1918.22	1639.94	8.52	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-11874	-17808	-245	0.683	1424.5	0.956	10.38108	14.55598	No
SLV 9	-11686	-17617	-245	0.692	1405.4	0.955	10.52779	14.55598	No
SLV 6	-11055	-16201	-260	0.724	1341.2	0.953	11.03547	14.55598	No
SLV 5	-10867	-16010	-260	0.734	1322.1	0.953	11.20272	14.55598	No
SLV 12	-4850	-7502	248	1.407	713.3	0.921	22.21445	14.55598	Si
SLV 14	-10424	-16128	-55	0.778	1277.1	0.951	11.88387	7.56668	Si
SLV 11	-4662	-7312	248	1.45	694.5	0.919	22.92572	14.55598	Si
SLV 13	-10132	-15832	-55	0.796	1247.5	0.95	12.18371	7.56668	Si
SLV 8	-4030	-5896	233	1.618	631.3	0.913	25.73741	14.55598	Si
SLV 7	-3842	-5705	233	1.674	612.5	0.912	26.69456	14.55598	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.963	SLU 44	Si
V_SLU	16.081	SLU 73	Si
PF_SLV	0.801	SLV 3	No
V_SLV	3.514	SLV 3	Si
PFFP_SLV	5.848	SLV 7	Si
R_SLV	0.713	SLV 10	No

Maschio 139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	8.34	4800.3	-26418	-0.0000427	0.0004492	0.0035	3.98	42372.47	47555.89	47555.89	9.91	No	Si
SLU 43	10.44	2189.39	-21409	-0.000031	0.0004492	0.0035	3.98	35905.38	40206.76	40206.76	18.36	No	Si
SLU 64	8.34	4943.95	-28307	-0.0000455	0.0004492	0.0035	3.98	44620.19	50290.84	50290.84	10.17	No	Si
SLU 64	10.44	2783.37	-24018	-0.0000356	0.0004492	0.0035	3.98	39364.85	44079.41	44079.41	15.84	No	Si
SLU 49	8.34	5020.51	-28647	-0.0000461	0.0004492	0.0035	3.98	45014.39	50783.98	50783.98	10.12	No	Si
SLU 49	10.44	2659.79	-23739	-0.000035	0.0004492	0.0035	3.98	39005.42	43676.54	43676.54	16.42	No	Si
SLU 45	8.34	4959.87	-27851	-0.000045	0.0004492	0.0035	3.98	44087.22	49630.73	49630.73	10.01	No	Si
SLU 45	10.44	2555.62	-22947	-0.0000337	0.0004492	0.0035	3.98	37968.83	42528.56	42528.56	16.64	No	Si
SLU 50	8.34	4927.39	-28005	-0.0000451	0.0004492	0.0035	3.98	44267.8	49853.54	49853.54	10.12	No	Si
SLU 50	10.44	2429.58	-22999	-0.0000336	0.0004492	0.0035	3.98	38037.95	42604.49	42604.49	17.54	No	Si
SLU 51	8.34	4924.49	-28008	-0.0000451	0.0004492	0.0035	3.98	44271.39	49857.97	49857.97	10.12	No	Si
SLU 51	10.44	2413.65	-22997	-0.0000335	0.0004492	0.0035	3.98	38034.7	42600.92	42600.92	17.65	No	Si
SLU 44	8.34	4795.47	-26423	-0.0000427	0.0004492	0.0035	3.98	42378.68	47563.27	47563.27	9.92	No	Si
SLU 44	10.44	2162.84	-21405	-0.000031	0.0004492	0.0035	3.98	35899.77	40199.97	40199.97	18.59	No	Si
SLU 48	8.34	5023.42	-28644	-0.0000461	0.0004492	0.0035	3.98	45010.86	50779.55	50779.55	10.11	No	Si
SLU 48	10.44	2675.72	-23742	-0.000035	0.0004492	0.0035	3.98	39008.62	43680.11	43680.11	16.32	No	Si
SLU 47	8.34	4859.01	-27216	-0.0000439	0.0004492	0.0035	3.98	43335.42	48712.1	48712.1	10.03	No	Si
SLU 47	10.44	2282.94	-22200	-0.0000322	0.0004492	0.0035	3.98	36975.39	41446.99	41446.99	18.16	No	Si
SLU 46	8.34	4956.97	-27854	-0.000045	0.0004492	0.0035	3.98	44090.82	49635.16	49635.16	10.01	No	Si
SLU 46	10.44	2539.7	-22944	-0.0000337	0.0004492	0.0035	3.98	37965.58	42524.99	42524.99	16.74	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	8.34	7836.72	-16232	-0.0000349	0.0006738	0.0035	3.98		32053.99	32053.99	4.09		Si
SLV 2	10.44	-7616.93	-10759	-0.0000275	0.0006738	0.0035	3.98		29574.75	29574.75	3.88		Si
SLV 14	8.34	-201.9	-29177	-0.0000368	0.0006738	0.0035	3.98		61304.11	61304.11	303.64		Si
SLV 14	10.44	13487.08	-28269	-0.0000614	0.0006738	0.0035	3.98		52662.31	52662.31	3.9		Si
SLV 3	8.34	7694.94	-14146	-0.0000319	0.0006738	0.0035	3.98		28312.51	28312.51	3.68		Si
SLV 3	10.44	-9052.99	-8704	-0.0000301	0.0006738	0.0035	3.98		25794.39	25794.39	2.85		Si
SLV 9	8.34	3165.44	-26548	-0.0000391	0.0006738	0.0035	3.98		49825.76	49825.76	15.74		Si
SLV 9	10.44	7489.38	-24062	-0.0000443	0.0006738	0.0035	3.98		45651.15	45651.15	6.1		Si
SLV 10	8.34	3039.87	-26720	-0.0000391	0.0006738	0.0035	3.98		50111.47	50111.47	16.48		Si
SLV 10	10.44	7582.07	-24215	-0.0000446	0.0006738	0.0035	3.98		45911.03	45911.03	6.06		Si
SLV 16	8.34	-539.06	-27358	-0.0000351	0.0006738	0.0035	3.98		58375.29	58375.29	108.29		Si
SLV 16	10.44	12195.24	-26454	-0.0000565	0.0006738	0.0035	3.98		49670.23	49670.23	4.07		Si
SLV 15	8.34	-343.68	-27091	-0.0000344	0.0006738	0.0035	3.98		57925.91	57925.91	168.55		Si
SLV 15	10.44	12051.02	-26215	-0.0000559	0.0006738	0.0035	3.98		49272.49	49272.49	4.09		Si
SLV 13	8.34	-6.52	-28909	-0.0000361	0.0006738	0.0035	3.98		60877.2	60877.2	9335.54		Si
SLV 13	10.44	13342.86	-28030	-0.0000608	0.0006738	0.0035	3.98		52287.77	52287.77	3.92		Si
SLV 1	8.34	8032.1	-15964	-0.0000349	0.0006738	0.0035	3.98		31579.81	31579.81	3.93		Si
SLV 1	10.44	-7761.15	-10520	-0.0000276	0.0006738	0.0035	3.98		29138.65	29138.65	3.75		Si
SLV 4	8.34	7499.56	-14414	-0.0000319	0.0006738	0.0035	3.98		28794.1	28794.1	3.84		Si
SLV 4	10.44	-8908.77	-8944	-0.0000296	0.0006738	0.0035	3.98		26235.52	26235.52	2.94		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 33	8.34	3943.43	-25202	-17978	-2271	3.98	3.98	-16133	10484	11684	115546	40049	20298	60347	No	26.58	Si
SLU 33	10.44	3507.98	-23348	-16656	-2280	3.98	3.98	-14946	10326	11507	115546	40049	20298	60347	No	26.47	Si
SLU 83	8.34	4882.76	-30611	-21837	-2261	3.98	3.98	-19595	10833	12073	115546	40049	20298	60347	No	26.69	Si
SLU 83	10.44	3936.16	-27738	-19788	-2272	3.98	3.98	-17756	10701	11925	115546	40049	20298	60347	No	26.56	Si
SLU 32	8.34	3946.33	-25199	-17976	-2282	3.98	3.98	-16131	10484	11683	115546	40049	20298	60347	No	26.44	Si
SLU 32	10.44	3523.9	-23351	-16658	-2292	3.98	3.98	-14948	10326	11508	115546	40049	20298	60347	No	26.33	Si
SLU 41	8.34	3812.88	-25012	-17843	-2680	3.98	3.98	-16011	10468	11666	115546	40049	20298	60347	No	22.52	Si
SLU 41	10.44	3587.57	-23485	-16754	-2689	3.98	3.98	-15034	10338	11521	115546	40049	20298	60347	No	22.44	Si
SLU 84	8.34	4879.86	-30614	-21839	-2250	3.98	3.98	-19597	10833	12073	115546	40049	20298	60347	No	26.82	Si
SLU 84	10.44	3920.23	-27736	-19786	-2261	3.98	3.98	-17755	10701	11925	115546	40049	20298	60347	No	26.69	Si
SLU 35	8.34	4009.87	-25992	-18542	-2311	3.98	3.98	-16638	10552	11759	115546	40049	20298	60347	No	26.12	Si
SLU 35	10.44	3644	-24146	-17225	-2320	3.98	3.98	-15457	10394	11583	115546	40049	20298	60347	No	26.01	Si
SLU 42	8.34	3809.98	-25015	-17845	-2668	3.98	3.98	-16013	10468	11666	115546	40049	20298	60347	No	22.61	Si
SLU 42	10.44	3571.65	-23483	-16752	-2678	3.98	3.98	-15032	10338	11520	115546	40049	20298	60347	No	22.54	Si
SLU 39	8.34	3749.34	-24219	-17277	-2651	3.98	3.98	-15504	10400	11590	115546	40049	20298	60347	No	22.76	Si
SLU 39	10.44	3467.48	-22690	-16187	-2661	3.98	3.98	-14525	10270	11445	115546	40049	20298	60347	No	22.68	Si
SLU 36	8.34	4006.97	-25995	-18544	-2299	3.98	3.98	-16640	10552	11759	115546	40049	20298	60347	No	26.25	Si
SLU 36	10.44	3628.07	-24143	-17223	-2309	3.98	3.98	-15455	10394	11583	115546	40049	20298	60347	No	26.14	Si
SLU 40	8.34	3746.44	-24222	-17280	-2640	3.98	3.98	-15506	10401	11591	115546	40049	20298	60347	No	22.86	Si
SLU 40	10.44	3451.55	-22688	-16185	-2649	3.98	3.98	-14523	10270	11445	115546	40049	20298	60347	No	22.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	8.34	-201.9	-29177	-20814	-11527	3.98	3.98	-18677	16235	18093	115546	60073	20298	80371		6.97	Si
SLV 14	10.44	13487.08	-28269	-20167	-10296	3.98	3.98	-18096	16119	17963	115546	60073	20298	80371		7.81	Si
SLV 4	8.34	7499.56	-14414	-10282	10550	3.98	3.98	-9227	14345	15987	115546	60073	20298	80371		7.62	Si
SLV 4	10.44	-8908.77	-8944	-6380	9305	3.98	2.9818	-7665	14033	11716	115546	60073	20298	80371		8.64	Si
SLV 13	8.34	-6.52	-28909	-20623	-11392	3.98	3.98	-18506	16201	18055	115546	60073	20298	80371		7.06	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	10.44	13342.86	-28030	-19996	-10161	3.98	3.98	-17943	16089	17929	115546	60073	20298	80371		7.91	Si
SLV 3	8.34	7694.94	-14146	-10092	10685	3.98	3.98	-9056	14311	15948	115546	60073	20298	80371		7.52	Si
SLV 3	10.44	-9052.99	-8704	-6210	9440	3.98	2.8499	-7804	14061	11220	115546	60073	20298	80371		8.51	Si
SLV 15	8.34	-343.68	-27091	-19326	-10306	3.98	3.98	-17342	15968	17795	115546	60073	20298	80371		7.8	Si
SLV 15	10.44	12051.02	-26215	-18701	-9030	3.98	3.98	-16781	15856	17670	115546	60073	20298	80371		8.9	Si
SLV 2	8.34	7836.72	-16232	-11580	9465	3.98	3.98	-10391	14578	16246	115546	60073	20298	80371		8.49	Si
SLV 2	10.44	-7616.93	-10759	-7675	8174	3.98	3.8461	-7149	13930	15001	115546	60073	20298	80371		9.83	Si
SLV 16	8.34	-539.06	-27358	-19517	-10441	3.98	3.98	-17513	16003	17833	115546	60073	20298	80371		7.7	Si
SLV 16	10.44	12195.24	-26454	-18872	-9165	3.98	3.98	-16934	15887	17704	115546	60073	20298	80371		8.77	Si
SLV 10	8.34	3039.87	-26720	-19061	-5422	3.98	3.98	-17104	15921	17742	115546	60073	20298	80371		14.82	Si
SLV 10	10.44	7582.07	-24215	-17275	-5127	3.98	3.98	-15501	15600	17385	115546	60073	20298	80371		15.68	Si
SLV 1	8.34	8032.1	-15964	-11389	9600	3.98	3.98	-10220	14544	16208	115546	60073	20298	80371		8.37	Si
SLV 1	10.44	-7761.15	-10520	-7504	8309	3.98	3.7567	-7156	13931	14654	115546	60073	20298	80371		9.67	Si
SLV 9	8.34	3165.44	-26548	-18938	-5336	3.98	3.98	-16994	15899	17718	115546	60073	20298	80371		15.06	Si
SLV 9	10.44	7489.38	-24062	-17165	-5040	3.98	3.98	-15403	15581	17363	115546	60073	20298	80371		15.95	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-9463	0.46	494.53	1263.42	1968.62	1616.02	3.27	Si
SLV 4	-9702	0.46	494.53	1293.79	2005.62	1649.7	3.34	Si
SLV 1	-11282	0.46	494.53	1492.28	2247.7	1869.99	3.78	Si
SLV 2	-11522	0.46	494.53	1522.06	2284.38	1903.22	3.85	Si
SLV 7	-13473	0.46	494.53	1761.8	2583.06	2172.43	4.39	Si
SLV 8	-13627	0.46	494.53	1780.49	2606.59	2193.54	4.44	Si
SLV 11	-18693	0.46	494.53	2377.54	3375.3	2876.42	5.82	Si
SLV 12	-18847	0.46	494.53	2395.12	3398.58	2896.85	5.86	Si
SLV 5	-19538	0.46	494.53	2473.69	3502.67	2988.18	6.04	Si
SLV 6	-19692	0.46	494.53	2491.1	3525.76	3008.43	6.08	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-18637	-26720	-1008	1.009	2455.2	0.937	15.6483	14.55598	Si
SLV 9	-18574	-26548	-1008	1.012	2448.9	0.937	15.69254	14.55598	Si
SLV 6	-16237	-22836	-1048	1.125	2212.6	0.932	17.54592	14.55598	Si
SLV 5	-16175	-22664	-1049	1.128	2206.3	0.932	17.60197	14.55598	Si
SLV 12	-16023	-20659	1047	1.137	2191	0.931	17.74243	14.55598	Si
SLV 11	-15961	-20487	1046	1.14	2184.8	0.931	17.80044	14.55598	Si
SLV 8	-13624	-16775	1006	1.293	1949.2	0.924	20.31975	14.55598	Si
SLV 7	-13562	-16603	1006	1.297	1943	0.924	20.39594	14.55598	Si
SLV 14	-20539	-29177	-241	0.964	2647.7	0.941	14.89288	7.56668	Si
SLV 13	-20442	-28909	-242	0.968	2637.9	0.941	14.95304	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.907	SLU 43	Si
V_SLU	22.439	SLU 41	Si
PF_SLV	2.849	SLV 3	Si
V_SLV	6.972	SLV 14	Si
PFFP_SLV	3.268	SLV 3	Si
R_SLV	1.075	SLV 10	Si

Maschio 140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.383	L6	L7	1.441	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	8.34	-524.89	-12555	-0.0000583	0.0003743	0.0035	1.4409	6280.7	7554.57	7554.57	14.39	No	Si
SLU 84	11.86	-104.63	-6204	-0.0000251	0.0003743	0.0035	1.4409	3794.74	4476.94	4476.94	42.79	No	Si
SLU 82	8.34	-518.97	-12236	-0.0000568	0.0003743	0.0035	1.4409	6189.35	7447.59	7447.59	14.35	No	Si
SLU 82	11.86	-71.24	-5898	-0.0000233	0.0003743	0.0035	1.4409	3639.03	4301.02	4301.02	60.37	No	Si
SLU 75	8.34	-506.99	-12251	-0.0000566	0.0003743	0.0035	1.4409	6193.72	7452.89	7452.89	14.7	No	Si
SLU 75	11.86	-91.03	-6163	-0.0000247	0.0003743	0.0035	1.4409	3774.1	4453.75	4453.75	48.93	No	Si
SLU 40	8.34	-451.6	-10324	-0.0000475	0.0003743	0.0035	1.4409	5568.4	6603.75	6603.75	14.62	No	Si
SLU 40	11.86	-32.79	-4913	-0.0000189	0.0003743	0.0035	1.4409	3116.45	3726.23	3726.23	113.63	No	Si
SLU 83	8.34	-516.92	-12518	-0.000058	0.0003743	0.0035	1.4409	6270.27	7542.89	7542.89	14.59	No	Si
SLU 83	11.86	-103.1	-6180	-0.0000249	0.0003743	0.0035	1.4409	3782.64	4463.34	4463.34	43.29	No	Si
SLU 42	8.34	-457.52	-10643	-0.0000489	0.0003743	0.0035	1.4409	5681.19	6754.74	6754.74	14.76	No	Si
SLU 42	11.86	-66.18	-5220	-0.0000206	0.0003743	0.0035	1.4409	3282.75	3908.55	3908.55	59.06	No	Si
SLU 76	8.34	-502.32	-12141	-0.0000561	0.0003743	0.0035	1.4409	6161.57	7413.5	7413.5	14.76	No	Si
SLU 76	11.86	-121.49	-6119	-0.000025	0.0003743	0.0035	1.4409	3751.95	4428.86	4428.86	36.45	No	Si
SLU 81	8.34	-511	-12199	-0.0000565	0.0003743	0.0035	1.4409	6178.51	7434.36	7434.36	14.55	No	Si
SLU 81	11.86	-69.71	-5874	-0.0000232	0.0003743	0.0035	1.4409	3626.66	4287.01	4287.01	61.5	No	Si
SLU 73	8.34	-496.4	-11821	-0.0000546	0.0003743	0.0035	1.4409	6065.57	7279.5	7279.5	14.66	No	Si
SLU 73	11.86	-88.1	-5813	-0.0000233	0.0003743	0.0035	1.4409	3595.32	4251.67	4251.67	48.26	No	Si
SLU 78	8.34	-512.91	-12570	-0.0000581	0.0003743	0.0035	1.4409	6284.89	7559.29	7559.29	14.74	No	Si
SLU 78	11.86	-124.42	-6470	-0.0000264	0.0003743	0.0035	1.4409	3926.96	4625.57	4625.57	37.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	8.34	775.18	-2428	-0.0000214	0.0005615	0.0035	1.4409		1807.03	1807.03	2.33		Si
SLV 5	11.86	-354.3	-1086	-0.0000096	0.0005615	0.0035	1.4409		1274.79	1274.79	3.6		Si
SLV 4	8.34	-515.13	-9029	-0.0000422	0.0005615	0.0035	1.4409		6278.69	6278.69	12.19		Si
SLV 4	11.86	662.39	-4960	-0.0000287	0.0005615	0.0035	1.4409		3465.86	3465.86	5.23		Si
SLV 9	8.34	698.8	-2975	-0.0000217	0.0005615	0.0035	1.4409		2173.62	2173.62	3.11		Si
SLV 9	11.86	-718.89	-1167	-0.0000381	0.0005615	0.0035	1.1527		1330.84	1330.84	1.85		Si
SLV 14	8.34	-129.27	-7476	-0.00003	0.0005615	0.0035	1.4409		5380.92	5380.92	41.63		Si
SLV 14	11.86	-817.95	-3378	-0.000025	0.0005615	0.0035	1.4409		2819.26	2819.26	3.45		Si
SLV 3	8.34	-525.2	-9121	-0.0000427	0.0005615	0.0035	1.4409		6330.54	6330.54	12.05		Si
SLV 3	11.86	641.56	-5015	-0.0000286	0.0005615	0.0035	1.4409		3500.86	3500.86	5.46		Si
SLV 6	8.34	781.65	-2368	-0.0000214	0.0005615	0.0035	1.4409		1766.74	1766.74	2.26		Si
SLV 6	11.86	-340.91	-1051	-0.0000093	0.0005615	0.0035	1.4409		1250.33	1250.33	3.67		Si
SLV 13	8.34	-139.33	-7568	-0.0000305	0.0005615	0.0035	1.4409		5434.94	5434.94	39.01		Si
SLV 13	11.86	-838.78	-3433	-0.0000256	0.0005615	0.0035	1.4409		2855.53	2855.53	3.4		Si
SLV 1	8.34	115.28	-5745	-0.0000232	0.0005615	0.0035	1.4409		3958.42	3958.42	34.34		Si
SLV 1	11.86	376.53	-3163	-0.0000174	0.0005615	0.0035	1.4409		2299.25	2299.25	6.11		Si
SLV 10	8.34	705.27	-2915	-0.0000215	0.0005615	0.0035	1.4409		2134.05	2134.05	3.03		Si
SLV 10	11.86	-705.5	-1132	-0.0000394	0.0005615	0.0035	1.1527		1306.38	1306.38	1.85		Si
SLV 2	8.34	125.34	-5653	-0.000023	0.0005615	0.0035	1.4409		3900.91	3900.91	31.12		Si
SLV 2	11.86	397.37	-3108	-0.0000175	0.0005615	0.0035	1.4409		2262.5	2262.5	5.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	8.34	-516.92	-12518	-10424	-2523	1.4409	1.4409	-25837	10389	4192	40441	12081	3674	15755	No	6.25	Si
SLU 83	11.86	-103.1	-6180	-5146	573	1.4409	1.4409	-12756	8645	3488	40441	12081	3674	15755	No	27.47	Si
SLU 81	8.34	-511	-12199	-10158	-2503	1.4409	1.4409	-25177	10301	4156	40441	12081	3674	15755	No	6.3	Si
SLU 81	11.86	-69.71	-5874	-4891	480	1.4409	1.4409	-12123	8561	3454	40441	12081	3674	15755	No	32.8	Si
SLU 82	8.34	-518.97	-12236	-10189	-2517	1.4409	1.4409	-25254	10312	4160	40441	12081	3674	15755	No	6.26	Si
SLU 82	11.86	-71.24	-5898	-4911	473	1.4409	1.4409	-12173	8568	3457	40441	12081	3674	15755	No	33.31	Si
SLU 80	8.34	-502.92	-12436	-10355	-2378	1.4409	1.4409	-25667	10367	4182	40441	12081	3674	15755	No	6.63	Si
SLU 80	11.86	-153.86	-6410	-5338	760	1.4409	1.4409	-13230	8708	3513	40441	12081	3674	15755	No	20.74	Si
SLU 74	8.34	-499.02	-12214	-10170	-2418	1.4409	1.4409	-25208	10306	4158	40441	12081	3674	15755	No	6.52	Si
SLU 74	11.86	-89.5	-6139	-5112	629	1.4409	1.4409	-12671	8634	3483	40441	12081	3674	15755	No	25.06	Si
SLU 76	8.34	-502.32	-12141	-10110	-2367	1.4409	1.4409	-25058	10286	4150	40441	12081	3674	15755	No	6.66	Si
SLU 76	11.86	-121.49	-6119	-5096	662	1.4409	1.4409	-12630	8628	3481	40441	12081	3674	15755	No	23.81	Si
SLU 77	8.34	-504.93	-12533	-10437	-2438	1.4409	1.4409	-25868	10394	4193	40441	12081	3674	15755	No	6.46	Si
SLU 77	11.86	-122.89	-6446	-5367	722	1.4409	1.4409	-13304	8718	3517	40441	12081	3674	15755	No	21.83	Si
SLU 78	8.34	-512.91	-12570	-10468	-2452	1.4409	1.4409	-25945	10404	4197	40441	12081	3674	15755	No	6.43	Si
SLU 78	11.86	-124.42	-6470	-5387	714	1.4409	1.4409	-13353	8725	3520	40441	12081	3674	15755	No	22.05	Si
SLU 84	8.34	-524.89	-12555	-10455	-2537	1.4409	1.4409	-25914	10400	4196	40441	12081	3674	15755	No	6.21	Si
SLU 84	11.86	-104.63	-6204	-5166	566	1.4409	1.4409	-12805	8652	3491	40441	12081	3674	15755	No	27.83	Si
SLU 75	8.34	-506.99	-12251	-10201	-2432	1.4409	1.4409	-25285	10316	4162	40441	12081	3674	15755	No	6.48	Si
SLU 75	11.86	-91.03	-6163	-5132	621	1.4409	1.4409	-12721	8641	3486	40441	12081	3674	15755	No	25.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	8.34	-779.8	-10944	-9114	1889	1.4409	1.4409	-22589	14934	6025	40441	18122	3674	21796		11.54	Si
SLV 15	11.86	-573.75	-5285	-4401	3762	1.4409	1.4409	-10909	12598	5083	40441	18122	3674	21796		5.79	Si
SLV 13	8.34	-139.33	-7568	-6302	2504	1.4409	1.4409	-15621	13541	5463	40441	18122	3674	21796		8.7	Si
SLV 13	11.86	-838.78	-3433	-2858	5348	1.4409	1.4283	-7085	11834	4733	40441	18122	3674	21796		4.08	Si
SLV 4	8.34	-515.13	-9029	-7518	-5522	1.4409	1.4409	-18635	14144	5706	40441	18122	3674	21796		3.95	Si
SLV 4	11.86	662.39	-4960	-4130	-4189	1.4409	1.4409	-10238	12464	5029	40441	18122	3674	21796		5.2	Si
SLV 9	8.34	698.8	-2975	-2477	662	1.4409	1.4409	-6140	11645	4698	40441	18122	3674	21796		32.91	Si
SLV 9	11.86	-718.89	-1167	-972	4451	1.1527	0.3135	0	0	0	40441	14497	2939	17437		3.92	Si
SLV 10	8.34	705.27	-2915	-2428	535	1.4409	1.4356	-6017	11620	4671	40441	18122	3674	21796		40.71	Si
SLV 10	11.86	-705.5	-1132	-942	4321	1.1527	0.2913	0	0	0	40441	14497	2939	17437		4.04	Si
SLV 8	8.34	-1353.27	-13622	-11344	-3680	1.4409	1.4409	-28116	16040	6471	40441	18122	3674	21796		5.92	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	11.86	542.51	-7226	-6017	-3292	1.4409	1.4409	-14914	13399	5406	40441	18122	3674	21796		6.62	Si
SLV 1	8.34	115.28	-5745	-4784	-4710	1.4409	1.4409	-11857	12788	5159	40441	18122	3674	21796		4.63	Si
SLV 1	11.86	376.53	-3163	-2634	-2401	1.4409	1.4409	-6528	11722	4729	40441	18122	3674	21796		9.08	Si
SLV 2	8.34	125.34	-5653	-4707	-4907	1.4409	1.4409	-11667	12750	5144	40441	18122	3674	21796		4.44	Si
SLV 2	11.86	397.37	-3108	-2588	-2603	1.4409	1.4409	-6414	11699	4720	40441	18122	3674	21796		8.38	Si
SLV 3	8.34	-525.2	-9121	-7595	-5325	1.4409	1.4409	-18825	14182	5722	40441	18122	3674	21796		4.09	Si
SLV 3	11.86	641.56	-5015	-4176	-3987	1.4409	1.4409	-10351	12487	5038	40441	18122	3674	21796		5.47	Si
SLV 14	8.34	-129.27	-7476	-6225	2307	1.4409	1.4409	-15430	13503	5448	40441	18122	3674	21796		9.45	Si
SLV 14	11.86	-817.95	-3378	-2813	5146	1.4409	1.4349	-6971	11811	4745	40441	18122	3674	21796		4.24	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	0	-1050	179.04	0	0	No, e>t/2
SLV 5	179667	0.46	0	-1112	179.04	0	0	No, e>t/2
SLV 10	179667	0.46	3828	-1544	179.04	210.78	1.18	Si
SLV 9	179667	0.46	3981	-1606	179.04	218.98	1.22	Si
SLV 2	179667	0.46	8698	-3509	179.04	463.33	2.59	Si
SLV 1	179667	0.46	8937	-3605	179.04	475.23	2.65	Si
SLV 14	179667	0.46	12781	-5156	179.04	661.49	3.69	Si
SLV 13	179667	0.46	13019	-5253	179.04	672.67	3.76	Si
SLV 4	179667	0.46	15184	-6126	179.04	772.39	4.31	Si
SLV 3	179667	0.46	15422	-6222	179.04	783.14	4.37	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-7342	-14229	132	0.969	949.1	0.941	14.97584	14.55598	Si
SLV 12	-7307	-14169	134	0.973	945.5	0.94	15.03517	14.55598	Si
SLV 7	-7261	-13682	93	0.983	940.9	0.94	15.18975	14.55598	Si
SLV 8	-7226	-13622	95	0.986	937.3	0.94	15.25059	14.55598	Si
SLV 15	-5285	-10944	92	1.267	741.2	0.927	19.85156	7.56668	Si
SLV 16	-5230	-10852	95	1.277	735.7	0.927	20.01745	7.56668	Si
SLV 3	-5015	-9121	-38	1.328	714	0.925	20.86019	7.56668	Si
SLV 4	-4960	-9029	-35	1.34	708.5	0.925	21.05518	7.56668	Si
SLV 13	-3433	-7568	19	1.765	555.6	0.91	28.17962	7.56668	Si
SLV 9	-1167	-2975	-111	3.325	337.5	0.889	54.3533	14.55598	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.351	SLU 82	Si
V_SLU	6.211	SLU 84	Si
PF_SLV	1.851	SLV 9	Si
V_SLV	3.917	SLV 9	Si
PFFP_SLV	0	SLV 5	No
R_SLV	1.029	SLV 11	Si

Maschio 141

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.383	-11.003	-0.676	L6	Z medio 1087 cm	2.706	0.28	2.534	1.737	3.33			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	8.34	889.72	-20743	-0.0000471	0.0003743	0.0035	2.7064	20523.06	22594.7	22594.7	25.4	No	Si
SLU 48	10.08	408.58	-16821	-0.0000362	0.0003743	0.0035	2.7064	17799.76	19435.43	19435.43	47.57	No	Si
SLU 50	8.34	882.87	-20400	-0.0000463	0.0003743	0.0035	2.7064	20306.33	22316.06	22316.06	25.28	No	Si
SLU 50	10.08	353.09	-16495	-0.0000353	0.0003743	0.0035	2.7064	17549	19111.38	19111.38	54.13	No	Si
SLU 1	8.34	641.5	-15361	-0.0000342	0.0003743	0.0035	2.7064	16648.38	17887.92	17887.92	27.88	No	Si
SLU 1	10.08	280.69	-12280	-0.000026	0.0003743	0.0035	2.7064	13972.38	14622.14	14622.14	52.09	No	Si
SLU 45	8.34	871.93	-20153	-0.0000457	0.0003743	0.0035	2.7064	20147.75	22116.33	22116.33	25.36	No	Si
SLU 45	10.08	410.03	-16251	-0.000035	0.0003743	0.0035	2.7064	17359.2	18856.2	18856.2	45.99	No	Si
SLU 47	8.34	827.85	-19803	-0.0000447	0.0003743	0.0035	2.7064	19919.39	21834.55	21834.55	26.38	No	Si
SLU 47	10.08	332.93	-15917	-0.0000339	0.0003743	0.0035	2.7064	17095.54	18492.34	18492.34	55.54	No	Si
SLU 43	8.34	847.27	-19220	-0.0000435	0.0003743	0.0035	2.7064	19529.27	21368.14	21368.14	25.22	No	Si
SLU 43	10.08	355.98	-15355	-0.0000328	0.0003743	0.0035	2.7064	16643.44	17881.34	17881.34	50.23	No	Si
SLU 46	8.34	849.6	-20149	-0.0000456	0.0003743	0.0035	2.7064	20145.08	22113	22113	26.03	No	Si
SLU 46	10.08	397.07	-16246	-0.0000349	0.0003743	0.0035	2.7064	17355.43	18850.96	18850.96	47.48	No	Si
SLU 44	8.34	810.05	-19213	-0.0000433	0.0003743	0.0035	2.7064	19524.6	21362.67	21362.67	26.37	No	Si
SLU 44	10.08	334.38	-15347	-0.0000327	0.0003743	0.0035	2.7064	16636.9	17872.64	17872.64	53.45	No	Si
SLU 51	8.34	860.53	-20396	-0.0000462	0.0003743	0.0035	2.7064	20303.7	22312.73	22312.73	25.93	No	Si
SLU 51	10.08	340.13	-16490	-0.0000352	0.0003743	0.0035	2.7064	17545.27	19106.46	19106.46	56.17	No	Si
SLU 49	8.34	867.39	-20739	-0.000047	0.0003743	0.0035	2.7064	20520.48	22591.35	22591.35	26.05	No	Si
SLU 49	10.08	395.62	-16816	-0.0000362	0.0003743	0.0035	2.7064	17796.09	19430.78	19430.78	49.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	8.34	-3018.5	-16725	-0.0000472	0.0005615	0.0035	2.7064		22248.15	22248.15	7.37		Si
SLV 12	10.08	-2948.75	-13678	-0.0000404	0.0005615	0.0035	2.7064		18925.68	18925.68	6.42		Si
SLV 6	8.34	4239.59	-16376	-0.000052	0.0005615	0.0035	2.7064		19692.2	19692.2	4.64		Si
SLV 6	10.08	3334.6	-12809	-0.0000403	0.0005615	0.0035	2.7064		16097.53	16097.53	4.83		Si
SLV 9	8.34	4933.76	-17280	-0.0000571	0.0005615	0.0035	2.7064		20618.3	20618.3	4.18		Si
SLV 9	10.08	3078.89	-14442	-0.0000426	0.0005615	0.0035	2.7064		17731.48	17731.48	5.76		Si
SLV 8	8.34	-3724.74	-15808	-0.0000484	0.0005615	0.0035	2.7064		21247.09	21247.09	5.7		Si
SLV 8	10.08	-2733.78	-12085	-0.0000361	0.0005615	0.0035	2.7064		17114.15	17114.15	6.26		Si
SLV 14	8.34	2985.62	-18169	-0.0000501	0.0005615	0.0035	2.7064		21534.33	21534.33	7.21		Si
SLV 14	10.08	756.22	-15997	-0.0000354	0.0005615	0.0035	2.7064		19305.57	19305.57	25.53		Si
SLV 13	8.34	2966.83	-18148	-0.0000499	0.0005615	0.0035	2.7064		21512.77	21512.77	7.25		Si
SLV 13	10.08	692.83	-16058	-0.0000352	0.0005615	0.0035	2.7064		19368.27	19368.27	27.96		Si
SLV 7	8.34	-3736.82	-15794	-0.0000484	0.0005615	0.0035	2.7064		21232.46	21232.46	5.68		Si
SLV 7	10.08	-2774.51	-12124	-0.0000364	0.0005615	0.0035	2.7064		17158.85	17158.85	6.18		Si
SLV 10	8.34	4945.83	-17294	-0.0000572	0.0005615	0.0035	2.7064		20632.07	20632.07	4.17		Si
SLV 10	10.08	3119.63	-14403	-0.0000427	0.0005615	0.0035	2.7064		17691.65	17691.65	5.67		Si
SLV 5	8.34	4227.52	-16363	-0.0000519	0.0005615	0.0035	2.7064		19678.51	19678.51	4.65		Si
SLV 5	10.08	3293.87	-12849	-0.0000402	0.0005615	0.0035	2.7064		16136.9	16136.9	4.9		Si
SLV 11	8.34	-3030.58	-16712	-0.0000472	0.0005615	0.0035	2.7064		22233.85	22233.85	7.34		Si
SLV 11	10.08	-2989.49	-13718	-0.0000407	0.0005615	0.0035	2.7064		18970.36	18970.36	6.35		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	8.34	882.87	-20400	-16987	1250	2.7064	2.7064	-22417	9933	7527	28547	22692	6901	29593	No	23.67	Si
SLU 50	10.08	353.09	-16495	-13736	1275	2.7064	2.7064	-18126	9361	7094	28547	22692	6901	29593	No	23.22	Si
SLU 51	8.34	860.53	-20396	-16984	1228	2.7064	2.7064	-22412	9933	7527	28547	22692	6901	29593	No	24.09	Si
SLU 51	10.08	340.13	-16490	-13732	1251	2.7064	2.7064	-18120	9360	7093	28547	22692	6901	29593	No	23.66	Si
SLU 45	8.34	871.93	-20153	-16782	1050	2.7064	2.7064	-22145	9897	7500	28547	22692	6901	29593	No	28.19	Si
SLU 45	10.08	410.03	-16251	-13533	1105	2.7064	2.7064	-17858	9325	7067	28547	22692	6901	29593	No	26.79	Si
SLU 48	8.34	889.72	-20743	-17273	1130	2.7064	2.7064	-22794	9984	7566	28547	22692	6901	29593	No	26.2	Si
SLU 48	10.08	408.58	-16821	-14007	1172	2.7064	2.7064	-18484	9409	7130	28547	22692	6901	29593	No	25.25	Si
SLU 47	8.34	827.85	-19803	-16490	1134	2.7064	2.7064	-21761	9846	7461	28547	22692	6901	29593	No	26.11	Si
SLU 47	10.08	332.93	-15917	-13254	1167	2.7064	2.7064	-17491	9277	7030	28547	22692	6901	29593	No	25.35	Si
SLU 43	8.34	847.27	-19220	-16004	1090	2.7064	2.7064	-21120	9760	7396	28547	22692	6901	29593	No	27.14	Si
SLU 43	10.08	355.98	-15355	-12787	1140	2.7064	2.7064	-16873	9194	6967	28547	22692	6901	29593	No	25.96	Si
SLU 46	8.34	849.6	-20149	-16778	1028	2.7064	2.7064	-22141	9897	7500	28547	22692	6901	29593	No	28.8	Si
SLU 46	10.08	397.07	-16246	-13529	1081	2.7064	2.7064	-17853	9325	7066	28547	22692	6901	29593	No	27.38	Si
SLU 44	8.34	810.05	-19213	-15999	1054	2.7064	2.7064	-21112	9759	7396	28547	22692	6901	29593	No	28.09	Si
SLU 44	10.08	334.38	-15347	-12780	1100	2.7064	2.7064	-16864	9193	6966	28547	22692	6901	29593	No	26.91	Si
SLU 58	8.34	792.25	-22351	-18612	817	2.7064	2.7064	-24561	10219	7744	28547	22692	6901	29593	No	36.23	Si
SLU 58	10.08	-51.36	-18163	-15124	1055	2.7064	2.7064	-19958	9606	7279	28547	22692	6901	29593	No	28.05	Si
SLU 49	8.34	867.39	-20739	-17270	1108	2.7064	2.7064	-22789	9983	7565	28547	22692	6901	29593	No	26.72	Si
SLU 49	10.08	395.62	-16816	-14003	1148	2.7064	2.7064	-18479	9408	7130	28547	22692	6901	29593	No	25.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	8.34	4945.83	-17294	-14401	4303	2.7064	2.7064	-19003	14217	10774	28547	34038	6901	39320		9.14	Si
SLV 10	10.08	3119.63	-14403	-11993	5785	2.7064	2.7064	-15826	13582	10292	28547	34038	6901	38839		6.71	Si
SLV 9	8.34	4933.76	-17280	-14389	4274	2.7064	2.7064	-18989	14214	10772	28547	34038	6901	39318		9.2	Si
SLV 9	10.08	3078.89	-14442	-12026	5745	2.7064	2.7064	-15870	13591	10299	28547	34038	6901	38846		6.76	Si
SLV 2	8.34	631.48	-15110	-12583	3706	2.7064	2.7064	-16604	13738	10410	28547	34038	6901	38957		10.51	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	10.08	1472.8	-10686	-8898	4805	2.7064	2.7064	-11742	12765	9673	28547	34038	6901	38220		7.95	Si
SLV 7	8.34	-3736.82	-15794	-13152	-3201	2.7064	2.7064	-17356	13888	10524	28547	34038	6901	39071		12.21	Si
SLV 7	10.08	-2774.51	-12124	-10096	-4450	2.7064	2.7064	-13323	13081	9913	28547	34038	6901	38460		8.64	Si
SLV 11	8.34	-3030.58	-16712	-13916	-4308	2.7064	2.7064	-18364	14089	10677	28547	34038	6901	39223		9.1	Si
SLV 11	10.08	-2989.49	-13718	-11423	-5868	2.7064	2.7064	-15074	13431	10178	28547	34038	6901	38725		6.6	Si
SLV 1	8.34	612.7	-15090	-12565	3661	2.7064	2.7064	-16581	13733	10407	28547	34038	6901	38953		10.64	Si
SLV 1	10.08	1409.41	-10747	-8949	4742	2.7064	2.7064	-11810	12779	9684	28547	34038	6901	38230		8.06	Si
SLV 6	8.34	4239.59	-16376	-13637	5410	2.7064	2.7064	-17995	14016	10621	28547	34038	6901	39168		7.24	Si
SLV 6	10.08	3334.6	-12809	-10666	7203	2.7064	2.7064	-14076	13232	10027	28547	34038	6901	38574		5.35	Si
SLV 5	8.34	4227.52	-16363	-13625	5381	2.7064	2.7064	-17980	14013	10619	28547	34038	6901	39165		7.28	Si
SLV 5	10.08	3293.87	-12849	-10699	7163	2.7064	2.7064	-14119	13240	10034	28547	34038	6901	38580		5.39	Si
SLV 12	8.34	-3018.5	-16725	-13927	-4279	2.7064	2.7064	-18378	14092	10679	28547	34038	6901	39226		9.17	Si
SLV 12	10.08	-2948.75	-13678	-11390	-5827	2.7064	2.7064	-15030	13423	10172	28547	34038	6901	38718		6.64	Si
SLV 8	8.34	-3724.74	-15808	-13163	-3172	2.7064	2.7064	-17370	13891	10526	28547	34038	6901	39073		12.32	Si
SLV 8	10.08	-2733.78	-12085	-10063	-4409	2.7064	2.7064	-13279	13073	9906	28547	34038	6901	38453		8.72	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.209 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.44	16875	-12788	167.09	1592.44	9.53	Si
SLV 3	179667	0.44	16892	-12800	167.09	1593.84	9.54	Si
SLV 2	179667	0.44	17441	-13217	167.09	1639.01	9.81	Si
SLV 1	179667	0.44	17458	-13229	167.09	1640.4	9.82	Si
SLV 8	179667	0.44	18205	-13796	167.09	1701.18	10.18	Si
SLV 7	179667	0.44	18216	-13804	167.09	1702.06	10.19	Si
SLV 12	179667	0.44	19909	-15087	167.09	1836.85	10.99	Si
SLV 11	179667	0.44	19920	-15096	167.09	1837.7	11	Si
SLV 6	179667	0.44	20092	-15226	167.09	1851.18	11.08	Si
SLV 5	179667	0.44	20103	-15234	167.09	1852.04	11.08	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 9.209 Wa = 0.05 Ta = 0.0383

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-14442	-17280	-48	0.998	1741.4	0.954	15.20152	7.15954	Si
SLV 10	-14403	-17294	-48	1.001	1737.4	0.954	15.23838	7.15954	Si
SLV 11	-13718	-16712	-59	1.042	1667.8	0.953	15.89403	7.15954	Si
SLV 12	-13678	-16725	-58	1.044	1663.8	0.953	15.93452	7.15954	Si
SLV 5	-12849	-16363	26	1.103	1579.5	0.95	16.86685	7.15954	Si
SLV 6	-12809	-16376	26	1.106	1575.5	0.95	16.91229	7.15954	Si
SLV 7	-12124	-15794	15	1.159	1506	0.948	17.75633	7.15954	Si
SLV 8	-12085	-15808	15	1.162	1502	0.948	17.80687	7.15954	Si
SLV 13	-16058	-18148	-137	0.908	1905.7	0.958	13.76907	5.14738	Si
SLV 14	-15997	-18169	-137	0.911	1899.4	0.958	13.81598	5.14738	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	25.22	SLU 43	Si
V_SLU	23.216	SLU 50	Si
PF_SLV	4.172	SLV 10	Si
V_SLV	5.355	SLV 6	Si
PFFP_SLV	9.53	SLV 4	Si
R_SLV	2.123	SLV 9	Si

Maschio 142

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.383	-11.003	-0.676	Z medio 1087 cm	L7	2.706	0.28	0.986	1.783	0.19			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	11.67	-1.71	-10148	-0.0000203	0.0003743	0.0035	2.7064	11925.8	14512.56	14512.56	8482.28	No	Si
SLU 39	11.86	646.39	-10076	-0.000023	0.0003743	0.0035	2.7064	11854.1	12385.59	12385.59	19.16	No	Si
SLU 32	11.67	5.59	-10697	-0.0000214	0.0003743	0.0035	2.7064	12468.63	13008.21	13008.21	2326.37	No	Si
SLU 32	11.86	663.91	-10651	-0.0000243	0.0003743	0.0035	2.7064	12422.92	12961.21	12961.21	19.52	No	Si
SLU 41	11.67	1.99	-10636	-0.0000213	0.0003743	0.0035	2.7064	12408.43	12946.33	12946.33	6502.1	No	Si
SLU 41	11.86	672.94	-10584	-0.0000242	0.0003743	0.0035	2.7064	12357.14	12893.76	12893.76	19.16	No	Si
SLU 33	11.67	-8.26	-10694	-0.0000214	0.0003743	0.0035	2.7064	12465.69	15108.74	15108.74	1829.62	No	Si
SLU 33	11.86	653.1	-10646	-0.0000242	0.0003743	0.0035	2.7064	12418.59	12956.76	12956.76	19.84	No	Si
SLU 83	11.67	18.7	-12766	-0.0000258	0.0003743	0.0035	2.7064	14416.37	15125.77	15125.77	808.7	No	Si
SLU 83	11.86	758.43	-12658	-0.0000289	0.0003743	0.0035	2.7064	14318.25	15013.32	15013.32	19.8	No	Si
SLU 35	11.67	9.29	-11185	-0.0000225	0.0003743	0.0035	2.7064	12941.84	13501.68	13501.68	1452.78	No	Si
SLU 35	11.86	690.46	-11158	-0.0000255	0.0003743	0.0035	2.7064	12915.73	13474.12	13474.12	19.51	No	Si
SLU 40	11.67	-15.56	-10145	-0.0000203	0.0003743	0.0035	2.7064	11922.81	14509.15	14509.15	932.44	No	Si
SLU 40	11.86	635.58	-10071	-0.000023	0.0003743	0.0035	2.7064	11849.67	12381.18	12381.18	19.48	No	Si
SLU 36	11.67	-4.56	-11182	-0.0000224	0.0003743	0.0035	2.7064	12938.96	15623.36	15623.36	3429.33	No	Si
SLU 36	11.86	679.65	-11154	-0.0000254	0.0003743	0.0035	2.7064	12911.47	13469.63	13469.63	19.82	No	Si
SLU 81	11.67	15	-12277	-0.0000248	0.0003743	0.0035	2.7064	13970.21	14619.7	14619.7	974.53	No	Si
SLU 81	11.86	731.88	-12150	-0.0000277	0.0003743	0.0035	2.7064	13852.15	14487.99	14487.99	19.8	No	Si
SLU 42	11.67	-11.86	-10633	-0.0000213	0.0003743	0.0035	2.7064	12405.49	15043.2	15043.2	1268.57	No	Si
SLU 42	11.86	662.13	-10579	-0.0000241	0.0003743	0.0035	2.7064	12352.79	12889.31	12889.31	19.47	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	11.67	-2326.71	-8064	-0.0000261	0.0005615	0.0035	2.7064		12409.8	12409.8	5.33		Si
SLV 7	11.86	-897.87	-7710	-0.0000191	0.0005615	0.0035	2.7064		11975.12	11975.12	13.34		Si
SLV 11	11.67	-2517.21	-9059	-0.0000289	0.0005615	0.0035	2.7064		13587.12	13587.12	5.4		Si
SLV 11	11.86	-880.58	-8742	-0.0000211	0.0005615	0.0035	2.7064		13215.89	13215.89	15.01		Si
SLV 12	11.67	-2478.11	-9019	-0.0000287	0.0005615	0.0035	2.7064		13540.5	13540.5	5.46		Si
SLV 12	11.86	-842.66	-8704	-0.0000208	0.0005615	0.0035	2.7064		13171.72	13171.72	15.63		Si
SLV 8	11.67	-2287.61	-8024	-0.0000258	0.0005615	0.0035	2.7064		12361.96	12361.96	5.4		Si
SLV 8	11.86	-859.96	-7673	-0.0000188	0.0005615	0.0035	2.7064		11928.35	11928.35	13.87		Si
SLV 10	11.67	2338.34	-9555	-0.0000292	0.0005615	0.0035	2.7064		12481.67	12481.67	5.34		Si
SLV 10	11.86	1786.84	-9665	-0.000027	0.0005615	0.0035	2.7064		12612.64	12612.64	7.06		Si
SLV 2	11.67	1076.21	-7202	-0.0000188	0.0005615	0.0035	2.7064		9641.26	9641.26	8.96		Si
SLV 2	11.86	839.59	-7083	-0.0000176	0.0005615	0.0035	2.7064		9495.83	9495.83	11.31		Si
SLV 9	11.67	2299.24	-9595	-0.0000291	0.0005615	0.0035	2.7064		12528.9	12528.9	5.45		Si
SLV 9	11.86	1748.92	-9703	-0.0000269	0.0005615	0.0035	2.7064		12657.51	12657.51	7.24		Si
SLV 5	11.67	2489.74	-8600	-0.0000279	0.0005615	0.0035	2.7064		11340.28	11340.28	4.55		Si
SLV 5	11.86	1731.63	-8671	-0.0000247	0.0005615	0.0035	2.7064		11425.41	11425.41	6.6		Si
SLV 1	11.67	1015.36	-7263	-0.0000187	0.0005615	0.0035	2.7064		9716.99	9716.99	9.57		Si
SLV 1	11.86	780.59	-7142	-0.0000174	0.0005615	0.0035	2.7064		9567.91	9567.91	12.26		Si
SLV 6	11.67	2528.84	-8561	-0.000028	0.0005615	0.0035	2.7064		11292.7	11292.7	4.47		Si
SLV 6	11.86	1769.55	-8633	-0.0000248	0.0005615	0.0035	2.7064		11380.19	11380.19	6.43		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	11.67	43.29	-11244	-9363	1094	2.7064	2.7064	-12355	8592	6511	9516	22692	6901	16026	No	14.65	Si
SLU 45	11.86	540.02	-11082	-9228	1000	2.7064	2.7064	-12177	8568	6493	9516	22692	6901	16008	No	16.01	Si
SLU 47	11.67	9.14	-10970	-9135	1112	2.7064	2.7064	-12055	8552	6480	9516	22692	6901	15996	No	14.39	Si
SLU 47	11.86	478.69	-10793	-8987	1022	2.7064	2.7064	-11859	8526	6461	9516	22692	6901	15976	No	15.64	Si
SLU 43	11.67	28.52	-10487	-8733	1111	2.7064	2.7064	-11524	8481	6427	9516	22692	6901	15942	No	14.35	Si
SLU 43	11.86	470.15	-10292	-8570	1024	2.7064	2.7064	-11310	8452	6405	9516	22692	6901	15921	No	15.55	Si
SLU 46	11.67	29.44	-11241	-9360	1069	2.7064	2.7064	-12352	8591	6511	9516	22692	6901	16026	No	14.99	Si
SLU 46	11.86	529.21	-11077	-9224	974	2.7064	2.7064	-12172	8567	6492	9516	22692	6901	16008	No	16.44	Si
SLU 51	11.67	22.08	-11460	-9543	1172	2.7064	2.7064	-12593	8624	6535	9516	22692	6901	16050	No	13.69	Si
SLU 51	11.86	512.45	-11303	-9412	1080	2.7064	2.7064	-12421	8601	6517	9516	22692	6901	16033	No	14.84	Si
SLU 49	11.67	33.15	-11729	-9767	1112	2.7064	2.7064	-12888	8663	6565	9516	22692	6901	16080	No	14.46	Si
SLU 49	11.86	555.76	-11585	-9647	1015	2.7064	2.7064	-12730	8642	6549	9516	22692	6901	16064	No	15.83	Si
SLU 50	11.67	35.93	-11463	-9546	1197	2.7064	2.7064	-12596	8624	6535	9516	22692	6901	16051	No	13.4	Si
SLU 50	11.86	523.25	-11308	-9416	1106	2.7064	2.7064	-12425	8601	6518	9516	22692	6901	16033	No	14.5	Si
SLU 48	11.67	47	-11732	-9769	1138	2.7064	2.7064	-12892	8663	6565	9516	22692	6901	16081	No	14.14	Si
SLU 48	11.86	566.57	-11589	-9651	1041	2.7064	2.7064	-12735	8642	6549	9516	22692	6901	16065	No	15.43	Si
SLU 71	11.67	-2.48	-12564	-10462	905	2.7064	2.7064	-13806	8785	6657	9516	22692	6901	16173	No	17.87	Si
SLU 71	11.86	610.48	-12449	-10367	781	2.7064	2.7064	-13680	8768	6645	9516	22692	6901	16160	No	20.7	Si
SLU 44	11.67	5.44	-10482	-8728	1069	2.7064	2.7064	-11518	8480	6426	9516	22692	6901	15942	No	14.92	Si
SLU 44	11.86	452.14	-10285	-8564	980	2.7064	2.7064	-11302	8451	6404	9516	22692	6901	15920	No	16.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	11.67	1076.21	-7202	-5997	4297	2.7064	2.7064	-7914	11999	9093	9516	34038	6901	18609		4.33	Si
SLV 2	11.86	839.59	-7083	-5898	4321	2.7064	2.7064	-7783	11973	9073	9516	34038	6901	18589		4.3	Si
SLV 5	11.67	2489.74	-8600	-7161	8885	2.7064	2.7064	-9450	12307	9326	9516	34038	6901	18842		2.12	Si
SLV 5	11.86	1731.63	-8671	-7221	8962	2.7064	2.7064	-9528	12322	9338	9516	34038	6901	18853		2.1	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	11.67	-2326.71	-8064	-6715	-6929	2.7064	2.7064	-8861	12189	9237	9516	34038	6901	18752		2.71	Si
SLV 7	11.86	-897.87	-7710	-6420	-7163	2.7064	2.7064	-8473	12111	9178	9516	34038	6901	18693		2.61	Si
SLV 8	11.67	-2287.61	-8024	-6682	-6914	2.7064	2.7064	-8818	12180	9230	9516	34038	6901	18746		2.71	Si
SLV 8	11.86	-859.96	-7673	-6389	-7146	2.7064	2.7064	-8431	12103	9172	9516	34038	6901	18687		2.61	Si
SLV 6	11.67	2528.84	-8561	-7128	8901	2.7064	2.7064	-9407	12298	9319	9516	34038	6901	18835		2.12	Si
SLV 6	11.86	1769.55	-8633	-7189	8978	2.7064	2.7064	-9487	12314	9332	9516	34038	6901	18847		2.1	Si
SLV 11	11.67	-2517.21	-9059	-7543	-7724	2.7064	2.7064	-9954	12407	9402	9516	34038	6901	18918		2.45	Si
SLV 11	11.86	-880.58	-8742	-7279	-8004	2.7064	2.7064	-9606	12338	9350	9516	34038	6901	18865		2.36	Si
SLV 10	11.67	2338.34	-9555	-7957	8106	2.7064	2.7064	-10500	12517	9485	9516	34038	6901	19001		2.34	Si
SLV 10	11.86	1786.84	-9665	-8048	8137	2.7064	2.7064	-10620	12541	9503	9516	34038	6901	19019		2.34	Si
SLV 12	11.67	-2478.11	-9019	-7510	-7708	2.7064	2.7064	-9910	12399	9396	9516	34038	6901	18911		2.45	Si
SLV 12	11.86	-842.66	-8704	-7248	-7988	2.7064	2.7064	-9565	12330	9343	9516	34038	6901	18859		2.36	Si
SLV 1	11.67	1015.36	-7263	-6048	4273	2.7064	2.7064	-7981	12013	9103	9516	34038	6901	18619		4.36	Si
SLV 1	11.86	780.59	-7142	-5947	4295	2.7064	2.7064	-7848	11986	9083	9516	34038	6901	18599		4.33	Si
SLV 9	11.67	2299.24	-9595	-7990	8091	2.7064	2.7064	-10543	12525	9492	9516	34038	6901	19007		2.35	Si
SLV 9	11.86	1748.92	-9703	-8080	8120	2.7064	2.7064	-10662	12549	9510	9516	34038	6901	19025		2.34	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 11.765 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.49	8834	-6694	28.42	882.96	31.06	Si
SLV 3	179667	0.49	8913	-6754	28.42	890.39	31.33	Si
SLV 2	179667	0.49	9132	-6920	28.42	910.85	32.05	Si
SLV 1	179667	0.49	9211	-6980	28.42	918.25	32.31	Si
SLV 8	179667	0.49	10077	-7637	28.42	998.56	35.13	Si
SLV 7	179667	0.49	10128	-7675	28.42	1003.25	35.3	Si
SLV 6	179667	0.49	11071	-8389	28.42	1089.36	38.33	Si
SLV 5	179667	0.49	11122	-8428	28.42	1093.98	38.49	Si
SLV 12	179667	0.49	11429	-8661	28.42	1121.79	39.47	Si
SLV 11	179667	0.49	11480	-8700	28.42	1126.38	39.63	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 11.765 Wa = 0.05 Ta = 0.0058

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-10580	-10578	1829	1.339	1182.4	0.973	20.00444	4.21018	Si
SLV 14	-10522	-10517	1829	1.345	1176.5	0.973	20.1012	4.21018	Si
SLV 15	-10292	-10417	1966	1.358	1153.1	0.972	20.30104	4.21018	Si
SLV 16	-10233	-10356	1966	1.364	1147.1	0.972	20.40205	4.21018	Si
SLV 9	-9703	-9595	350	1.583	1093.1	0.971	23.69852	4.39819	Si
SLV 10	-9665	-9555	349	1.588	1089.2	0.97	23.77982	4.39819	Si
SLV 11	-8742	-9059	807	1.681	995.2	0.968	25.24189	4.39819	Si
SLV 12	-8704	-9019	807	1.687	991.4	0.968	25.3381	4.39819	Si
SLV 5	-8671	-8600	-781	1.696	988	0.968	25.46473	4.39819	Si
SLV 6	-8633	-8561	-781	1.702	984.2	0.968	25.56212	4.39819	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.16	SLU 41	Si
V_SLU	13.405	SLU 50	Si
PF_SLV	4.466	SLV 6	Si
V_SLV	2.099	SLV 6	Si
PFFP_SLV	31.065	SLV 4	Si
R_SLV	4.751	SLV 13	Si

Maschio 144

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.386	L6	L7	3.21	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	8.34	822.99	-13739	-0.0000381	0.0004492	0.0035	3.21	17223.06	20777.69	20777.69	25.25	No	Si
SLU 50	11.86	324.65	-9315	-0.0000244	0.0004492	0.0035	3.21	12731.73	14824.45	14824.45	45.66	No	Si
SLU 43	8.34	737.66	-11927	-0.000033	0.0004492	0.0035	3.21	15504.83	18382.93	18382.93	24.92	No	Si
SLU 43	11.86	395.1	-7504	-0.0000202	0.0004492	0.0035	3.21	10603.68	12279.22	12279.22	31.08	No	Si
SLU 46	8.34	759.94	-12887	-0.0000356	0.0004492	0.0035	3.21	16436.37	19658.29	19658.29	25.87	No	Si
SLU 46	11.86	368.17	-8464	-0.0000225	0.0004492	0.0035	3.21	11752.42	13639.02	13639.02	37.05	No	Si
SLU 49	8.34	802.6	-13793	-0.0000381	0.0004492	0.0035	3.21	17271.99	20847.77	20847.77	25.98	No	Si
SLU 49	11.86	332.94	-9370	-0.0000246	0.0004492	0.0035	3.21	12792.95	14900.08	14900.08	44.75	No	Si
SLU 56	8.34	824.03	-14339	-0.0000396	0.0004492	0.0035	3.21	17755.65	21474.41	21474.41	26.06	No	Si
SLU 56	11.86	416.83	-9916	-0.0000264	0.0004492	0.0035	3.21	13400.2	15656.09	15656.09	37.56	No	Si
SLU 69	8.34	866.24	-15102	-0.0000418	0.0004492	0.0035	3.21	18405.39	22349.28	22349.28	25.8	No	Si
SLU 69	11.86	394.17	-10510	-0.0000277	0.0004492	0.0035	3.21	14043.08	16467.55	16467.55	41.78	No	Si
SLU 48	8.34	833.22	-13730	-0.0000381	0.0004492	0.0035	3.21	17214.94	20765.87	20765.87	24.92	No	Si
SLU 48	11.86	363.13	-9306	-0.0000246	0.0004492	0.0035	3.21	12721.58	14811.93	14811.93	40.79	No	Si
SLU 3	8.34	629.03	-10433	-0.0000287	0.0004492	0.0035	3.21	13961.48	16363.27	16363.27	26.01	No	Si
SLU 3	11.86	315.36	-6986	-0.0000185	0.0004492	0.0035	3.21	9964.72	11543.43	11543.43	36.6	No	Si
SLU 66	8.34	823.57	-14196	-0.0000392	0.0004492	0.0035	3.21	17630.4	21310.22	21310.22	25.88	No	Si
SLU 66	11.86	429.39	-9604	-0.0000256	0.0004492	0.0035	3.21	13055.37	15226.39	15226.39	35.46	No	Si
SLU 45	8.34	790.56	-12824	-0.0000355	0.0004492	0.0035	3.21	16376.39	19575.05	19575.05	24.76	No	Si
SLU 45	11.86	398.36	-8401	-0.0000225	0.0004492	0.0035	3.21	11678.12	13550.87	13550.87	34.02	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	8.34	-4916.95	-12302	-0.0000532	0.0006738	0.0035	3.21		23826.27	23826.27	4.85		Si
SLV 12	11.86	-2646.94	-9002	-0.0000342	0.0006738	0.0035	3.21		19234.06	19234.06	7.27		Si
SLV 5	8.34	6082.83	-7904	-0.00005	0.0006738	0.0035	3.21		13010.42	13010.42	2.14		Si
SLV 5	11.86	3319.58	-4213	-0.0000269	0.0006738	0.0035	3.21		7550.88	7550.88	2.27		Si
SLV 6	8.34	6193.87	-7866	-0.0000509	0.0006738	0.0035	3.21		12956.19	12956.19	2.09		Si
SLV 6	11.86	3439.23	-4176	-0.0000279	0.0006738	0.0035	3.21		7493.97	7493.97	2.18		Si
SLD 6	8.34	3060.44	-9123	-0.0000364	0.0006738	0.0035	3.21		14766.04	14766.04	4.82		Si
SLD 6	11.86	1702.86	-5544	-0.0000212	0.0006738	0.0035	3.21		9543.09	9543.09	5.6		Si
SLD 10	8.34	3131.4	-9343	-0.0000373	0.0006738	0.0035	3.21		15080.51	15080.51	4.82		Si
SLD 10	11.86	1708.75	-5773	-0.0000218	0.0006738	0.0035	3.21		9884.03	9884.03	5.78		Si
SLV 11	8.34	-5027.99	-12339	-0.0000539	0.0006738	0.0035	3.21		23877.31	23877.31	4.75		Si
SLV 11	11.86	-2766.58	-9039	-0.0000349	0.0006738	0.0035	3.21		19287.63	19287.63	6.97		Si
SLV 7	8.34	-5189.07	-11811	-0.0000533	0.0006738	0.0035	3.21		23160.83	23160.83	4.46		Si
SLV 7	11.86	-2780.61	-8486	-0.0000335	0.0006738	0.0035	3.21		18501.04	18501.04	6.65		Si
SLV 8	8.34	-5078.04	-11773	-0.0000526	0.0006738	0.0035	3.21		23109.79	23109.79	4.55		Si
SLV 8	11.86	-2660.97	-8449	-0.0000329	0.0006738	0.0035	3.21		18447.48	18447.48	6.93		Si
SLV 10	8.34	6354.96	-8395	-0.0000524	0.0006738	0.0035	3.21		13717.41	13717.41	2.16		Si
SLV 10	11.86	3453.26	-4729	-0.0000282	0.0006738	0.0035	3.21		8329.58	8329.58	2.41		Si
SLV 9	8.34	6243.92	-8433	-0.0000516	0.0006738	0.0035	3.21		13771.64	13771.64	2.21		Si
SLV 9	11.86	3333.61	-4767	-0.0000275	0.0006738	0.0035	3.21		8386.49	8386.49	2.52		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	8.34	846.81	-15720	-9230	124	3.21	3.21	-17971	10730	5511	115546	18458	16371	34829	No	280.27	Si
SLU 79	11.86	409.39	-11128	-6534	124	3.21	3.21	-12722	10030	5151	115546	18458	16371	34829	No	280.27	Si
SLU 72	8.34	825.38	-15174	-8909	142	3.21	3.21	-17347	10646	5468	115546	18458	16371	34829	No	245.25	Si
SLU 72	11.86	325.5	-10582	-6213	142	3.21	3.21	-12097	9946	5108	115546	18458	16371	34829	No	245.25	Si
SLU 69	8.34	866.24	-15102	-8867	134	3.21	3.21	-17264	10635	5462	115546	18458	16371	34829	No	259.7	Si
SLU 69	11.86	394.17	-10510	-6171	134	3.21	3.21	-12015	9935	5103	115546	18458	16371	34829	No	259.7	Si
SLU 80	8.34	816.19	-15783	-9267	124	3.21	3.21	-18044	10739	5516	115546	18458	16371	34829	No	280.55	Si
SLU 80	11.86	379.2	-11191	-6571	124	3.21	3.21	-12794	10039	5156	115546	18458	16371	34829	No	280.55	Si
SLU 49	8.34	802.6	-13793	-8099	133	3.21	3.21	-15768	10436	5360	115546	18458	16371	34829	No	261.03	Si
SLU 49	11.86	332.94	-9370	-5501	133	3.21	3.21	-10711	9762	5014	115546	18458	16371	34829	No	261.03	Si
SLU 71	8.34	856	-15111	-8872	142	3.21	3.21	-17275	10637	5463	115546	18458	16371	34829	No	245.04	Si
SLU 71	11.86	355.68	-10519	-6176	142	3.21	3.21	-12025	9937	5103	115546	18458	16371	34829	No	245.04	Si
SLU 50	8.34	822.99	-13739	-8067	142	3.21	3.21	-15706	10427	5356	115546	18458	16371	34829	No	246.01	Si
SLU 50	11.86	324.65	-9315	-5470	142	3.21	3.21	-10649	9753	5009	115546	18458	16371	34829	No	246.01	Si
SLU 70	8.34	835.62	-15165	-8904	134	3.21	3.21	-17337	10645	5467	115546	18458	16371	34829	No	259.94	Si
SLU 70	11.86	363.98	-10573	-6208	134	3.21	3.21	-12087	9945	5108	115546	18458	16371	34829	No	259.94	Si
SLU 48	8.34	833.22	-13730	-8061	134	3.21	3.21	-15696	10426	5355	115546	18458	16371	34829	No	260.79	Si
SLU 48	11.86	363.13	-9306	-5464	134	3.21	3.21	-10639	9752	5009	115546	18458	16371	34829	No	260.79	Si
SLU 51	8.34	792.37	-13802	-8104	141	3.21	3.21	-15778	10437	5361	115546	18458	16371	34829	No	246.22	Si
SLU 51	11.86	294.46	-9379	-5507	141	3.21	3.21	-10722	9763	5014	115546	18458	16371	34829	No	246.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	8.34	-5078.04	-11773	-6913	243	3.21	3.21	-13459	15192	7803	115546	27686	16371	44057		181.08	Si
SLV 8	11.86	-2660.97	-8449	-4961	-1169	3.21	3.21	-9659	14432	7412	115546	27686	16371	44057		37.7	Si
SLV 10	8.34	6354.96	-8395	-4929	-106	3.21	2.544	-9597	14419	5869	115546	27686	16371	44057		417.11	Si
SLV 10	11.86	3453.26	-4729	-2777	1306	3.21	2.6243	-5406	13581	5702	115546	27686	16371	44057		33.72	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 10	8.34	3131.4	-9343	-5486	-7	3.21	3.21	-10681	14636	7517	115546	27686	16371	44057		6432.59	Si
SLD 10	11.86	1708.75	-5773	-3390	618	3.21	3.21	-6600	13820	7098	115546	27686	16371	44057		71.3	Si
SLV 9	8.34	6243.92	-8433	-4951	-103	3.21	2.5936	-9640	14428	5987	115546	27686	16371	44057		426.99	Si
SLV 9	11.86	3333.61	-4767	-2799	1309	3.21	2.7169	-5449	13590	5907	115546	27686	16371	44057		33.66	Si
SLV 6	8.34	6193.87	-7866	-4619	-110	3.21	2.4528	-8993	14299	5611	115546	27686	16371	44057		400.7	Si
SLV 6	11.86	3439.23	-4176	-2452	1287	3.21	2.3442	-4774	13455	5046	115546	27686	16371	44057		34.23	Si
SLV 11	8.34	-5027.99	-12339	-7245	250	3.21	3.21	-14107	15321	7869	115546	27686	16371	44057		176.18	Si
SLV 11	11.86	-2766.58	-9039	-5307	-1147	3.21	3.21	-10334	14567	7481	115546	27686	16371	44057		38.41	Si
SLD 9	8.34	3082.92	-9359	-5495	-6	3.21	3.21	-10700	14640	7519	115546	27686	16371	44057		7620.43	Si
SLD 9	11.86	1656.52	-5790	-3400	619	3.21	3.21	-6619	13824	7100	115546	27686	16371	44057		71.18	Si
SLV 7	8.34	-5189.07	-11811	-6935	246	3.21	3.21	-13502	15200	7807	115546	27686	16371	44057		179.28	Si
SLV 7	11.86	-2780.61	-8486	-4983	-1166	3.21	3.21	-9702	14440	7417	115546	27686	16371	44057		37.78	Si
SLV 12	8.34	-4916.95	-12302	-7223	248	3.21	3.21	-14064	15313	7865	115546	27686	16371	44057		177.92	Si
SLV 12	11.86	-2646.94	-9002	-5285	-1149	3.21	3.21	-10291	14558	7477	115546	27686	16371	44057		38.33	Si
SLV 5	8.34	6082.83	-7904	-4641	-108	3.21	2.5062	-9036	14307	5737	115546	27686	16371	44057		409.81	Si
SLV 5	11.86	3319.58	-4213	-2474	1290	3.21	2.4515	-4817	13463	5281	115546	27686	16371	44057		34.16	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-6046	0.46	235.69	452.6	815.98	634.29	2.69	Si
SLV 5	-6083	0.46	235.69	455.22	819.6	637.41	2.7	Si
SLV 10	-6561	0.46	235.69	488.27	865.14	676.71	2.87	Si
SLV 9	-6598	0.46	235.69	490.87	868.72	679.8	2.88	Si
SLV 2	-6826	0.46	235.69	506.49	890.39	698.44	2.96	Si
SLV 1	-6885	0.46	235.69	510.49	895.96	703.23	2.98	Si
SLV 4	-8019	0.46	235.69	586.86	1003.78	795.32	3.37	Si
SLV 3	-8077	0.46	235.69	590.75	1009.34	800.04	3.39	Si
SLV 14	-8543	0.46	235.69	621.38	1053.49	837.44	3.55	Si
SLV 13	-8601	0.46	235.69	625.22	1059.05	842.14	3.57	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-9039	-12339	181	1.7	1177.1	0.939	26.29863	18.90005	Si
SLV 12	-9002	-12302	181	1.706	1173.3	0.939	26.39521	18.90005	Si
SLV 7	-8486	-11811	-190	1.79	1121.1	0.937	27.77752	18.90005	Si
SLV 8	-8449	-11773	-190	1.797	1117.3	0.937	27.88536	18.90005	Si
SLV 15	-8200	-11599	617	1.799	1092.1	0.935	27.94441	13.38704	Si
SLV 16	-8141	-11541	617	1.809	1086.2	0.935	28.11865	13.38704	Si
SLV 9	-4767	-8433	193	2.818	746.8	0.913	44.84584	18.90005	Si
SLV 10	-4729	-8395	193	2.835	743	0.913	45.12462	18.90005	Si
SLV 13	-6918	-10427	621	2.064	962.7	0.928	32.31651	13.38704	Si
SLV 14	-6859	-10369	621	2.079	956.8	0.928	32.54947	13.38704	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	24.761	SLU 45	Si
V_SLU	245.036	SLU 71	Si
PF_SLV	2.092	SLV 6	Si
V_SLV	33.661	SLV 9	Si
PFFP_SLV	2.691	SLV 6	Si
R_SLV	1.391	SLV 11	Si

Maschio 147

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L6	L7	1.67	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	8.34	586.05	-12408	-0.0000488	0.0003743	0.0035	1.67	7660.38	8416.75	8416.75	14.36	No	Si
SLU 83	10.44	-2721.11	-12315	-0.0000757	0.0003743	0.0035	1.67	7623	9069.92	9069.92	3.33	No	Si
SLU 32	8.34	549.91	-10169	-0.0000403	0.0003743	0.0035	1.67	6677.25	7275.54	7275.54	13.23	No	Si
SLU 32	10.44	-2289.9	-10351	-0.0000626	0.0003743	0.0035	1.67	6763.88	7973.96	7973.96	3.48	No	Si
SLU 39	8.34	520.56	-9994	-0.0000393	0.0003743	0.0035	1.67	6593.25	7160.04	7160.04	13.75	No	Si
SLU 39	10.44	-2366.73	-10038	-0.0000624	0.0003743	0.0035	1.67	6614.38	7796.1	7796.1	3.29	No	Si
SLU 41	8.34	525.54	-10351	-0.0000407	0.0003743	0.0035	1.67	6763.78	7389.94	7389.94	14.06	No	Si
SLU 41	10.44	-2423.92	-10442	-0.0000646	0.0003743	0.0035	1.67	6806.8	8026.13	8026.13	3.31	No	Si
SLU 42	8.34	526.55	-10369	-0.0000407	0.0003743	0.0035	1.67	6772.21	7400.85	7400.85	14.06	No	Si
SLU 42	10.44	-2427.15	-10463	-0.0000648	0.0003743	0.0035	1.67	6816.39	8037.87	8037.87	3.31	No	Si
SLU 82	8.34	582.08	-12069	-0.0000475	0.0003743	0.0035	1.67	7522.94	8249.92	8249.92	14.17	No	Si
SLU 82	10.44	-2667.15	-11931	-0.0000735	0.0003743	0.0035	1.67	7465.69	8860.56	8860.56	3.32	No	Si
SLU 31	8.34	539.88	-9665	-0.0000384	0.0003743	0.0035	1.67	6431.86	6940.11	6940.11	12.85	No	Si
SLU 31	10.44	-2194.88	-9765	-0.0000592	0.0003743	0.0035	1.67	6481.16	7632.88	7632.88	3.48	No	Si
SLU 81	8.34	581.08	-12051	-0.0000474	0.0003743	0.0035	1.67	7515.58	8241.17	8241.17	14.18	No	Si
SLU 81	10.44	-2663.92	-11910	-0.0000733	0.0003743	0.0035	1.67	7457.15	8849.47	8849.47	3.32	No	Si
SLU 40	8.34	521.57	-10012	-0.0000394	0.0003743	0.0035	1.67	6601.9	7171.97	7171.97	13.75	No	Si
SLU 40	10.44	-2369.96	-10058	-0.0000625	0.0003743	0.0035	1.67	6624.26	7807.67	7807.67	3.29	No	Si
SLU 84	8.34	587.06	-12426	-0.0000489	0.0003743	0.0035	1.67	7667.51	8425.59	8425.59	14.35	No	Si
SLU 84	10.44	-2724.33	-12335	-0.0000758	0.0003743	0.0035	1.67	7631.24	9081.16	9081.16	3.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	8.34	5448.87	-3152	-0.027509	0.0005615	0.0035	1.336		2702.59	2702.59	0.5		No
SLV 1	10.44	-6561.88	-11702	-0.000169	0.0005615	0.0035	1.336		9247.88	9247.88	1.41		Si
SLV 13	8.34	-4569.99	-11583	-0.0000986	0.0005615	0.0035	1.67		9171.86	9171.86	2.01		Si
SLV 13	10.44	3539.72	-3066	-0.0106779	0.0005615	0.0035	1.336		2635.19	2635.19	0.74		No
SLV 3	8.34	5222.15	-5365	-0.0104717	0.0005615	0.0035	1.336		4382.45	4382.45	0.84		No
SLV 3	10.44	-6525.64	-13260	-0.0001512	0.0005615	0.0035	1.336		10218.64	10218.64	1.57		Si
SLV 5	8.34	2248.09	-3491	-0.0000669	0.0005615	0.0035	1.67		2965.17	2965.17	1.32		Si
SLV 5	10.44	-3118.41	-6908	-0.0000658	0.0005615	0.0035	1.336		6008.22	6008.22	1.93		Si
SLV 4	8.34	5453.4	-5197	-0.0136154	0.0005615	0.0035	1.336		4257.99	4257.99	0.78		No
SLV 4	10.44	-6804.38	-13523	-0.0001606	0.0005615	0.0035	1.336		10377.3	10377.3	1.53		Si
SLV 16	8.34	-4565.45	-13628	-0.0001026	0.0005615	0.0035	1.67		10438.79	10438.79	2.29		Si
SLV 16	10.44	3297.23	-4887	-0.0001159	0.0005615	0.0035	1.67		4026.88	4026.88	1.22		Si
SLV 2	8.34	5680.12	-2984	-0.0308434	0.0005615	0.0035	1.336		2571.09	2571.09	0.45		No
SLV 2	10.44	-6840.63	-11965	-0.0001818	0.0005615	0.0035	1.336		9410.61	9410.61	1.38		Si
SLV 15	8.34	-4796.71	-13796	-0.0001066	0.0005615	0.0035	1.67		10537.69	10537.69	2.2		Si
SLV 15	10.44	3575.97	-4624	-0.0003328	0.0005615	0.0035	1.67		3828.44	3828.44	1.07		Si
SLV 6	8.34	2396.71	-3383	-0.0001003	0.0005615	0.0035	1.67		2881.99	2881.99	1.2		Si
SLV 6	10.44	-3297.55	-7078	-0.0000703	0.0005615	0.0035	1.336		6128.09	6128.09	1.86		Si
SLV 14	8.34	-4338.73	-11415	-0.0000938	0.0005615	0.0035	1.67		9063.07	9063.07	2.09		Si
SLV 14	10.44	3260.98	-3329	-0.0062538	0.0005615	0.0035	1.336		2840.82	2840.82	0.87		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	8.34	650.81	-11586	-9648	1889	1.67	1.67	-20632	9695	4534	40441	14002	4259	18261	No	9.66	Si
SLU 72	10.44	-2190.74	-11715	-9755	3534	1.67	1.67	-20863	9726	4548	40441	14002	4259	18261	No	5.17	Si
SLU 67	8.34	652.57	-11406	-9498	1885	1.67	1.67	-20312	9653	4514	40441	14002	4259	18261	No	9.69	Si
SLU 67	10.44	-2176.77	-11527	-9599	3501	1.67	1.67	-20527	9681	4527	40441	14002	4259	18261	No	5.22	Si
SLU 68	8.34	646.51	-11241	-9361	1854	1.67	1.67	-20018	9614	4495	40441	14002	4259	18261	No	9.85	Si
SLU 68	10.44	-2135.71	-11325	-9430	3436	1.67	1.67	-20167	9633	4505	40441	14002	4259	18261	No	5.31	Si
SLU 80	8.34	609.66	-12423	-10345	1739	1.67	1.67	-22124	9894	4627	40441	14002	4259	18261	No	10.5	Si
SLU 80	10.44	-2604.29	-12432	-10353	3428	1.67	1.67	-22140	9896	4628	40441	14002	4259	18261	No	5.33	Si
SLU 66	8.34	651.56	-11388	-9483	1883	1.67	1.67	-20280	9648	4512	40441	14002	4259	18261	No	9.7	Si
SLU 66	10.44	-2173.54	-11506	-9582	3497	1.67	1.67	-20491	9677	4525	40441	14002	4259	18261	No	5.22	Si
SLU 78	8.34	616.4	-12600	-10492	1772	1.67	1.67	-22439	9936	4646	40441	14002	4259	18261	No	10.31	Si
SLU 78	10.44	-2647.5	-12648	-10533	3496	1.67	1.67	-22524	9948	4652	40441	14002	4259	18261	No	5.22	Si
SLU 71	8.34	649.8	-11568	-9633	1887	1.67	1.67	-20600	9691	4532	40441	14002	4259	18261	No	9.68	Si
SLU 71	10.44	-2187.51	-11695	-9738	3530	1.67	1.67	-20826	9721	4546	40441	14002	4259	18261	No	5.17	Si
SLU 70	8.34	657.55	-11763	-9795	1923	1.67	1.67	-20947	9737	4553	40441	14002	4259	18261	No	9.5	Si
SLU 70	10.44	-2233.96	-11931	-9935	3602	1.67	1.67	-21247	9777	4572	40441	14002	4259	18261	No	5.07	Si
SLU 69	8.34	656.54	-11745	-9780	1920	1.67	1.67	-20915	9733	4551	40441	14002	4259	18261	No	9.51	Si
SLU 69	10.44	-2230.73	-11911	-9918	3598	1.67	1.67	-21211	9773	4570	40441	14002	4259	18261	No	5.08	Si
SLU 77	8.34	615.39	-12582	-10478	1769	1.67	1.67	-22407	9932	4644	40441	14002	4259	18261	No	10.32	Si
SLU 77	10.44	-2644.28	-12628	-10515	3491	1.67	1.67	-22488	9943	4649	40441	14002	4259	18261	No	5.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	8.34	2396.71	-3383	-2817	4949	1.67	0.3795	-26857	15790	1678	40441	21003	4259	25262		5.1	Si
SLV 6	10.44	-3297.55	-7078	-5894	5896	1.336	1.1073	0	0	0	40441	16803	3407	20209		3.43	Si
SLV 16	8.34	-4565.45	-13628	-11348	-7434	1.67	1.5	-27411	15899	6678	40441	21003	4259	25262		3.4	Si
SLV 16	10.44	3297.23	-4887	-4070	-5239	1.67	0.4811	-30707	16250	2189	40441	21003	4259	25262		4.82	Si
SLV 14	8.34	-4338.73	-11415	-9505	-6863	1.67	1.3648	-25197	15456	5906	40441	21003	4259	25262		3.68	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	10.44	3260.98	-3329	-2772	-4580	1.336	0	0	0	0	40441	16803	3407	20209		4.41	Si
SLV 13	8.34	-4569.99	-11583	-9646	-7278	1.67	1.3214	-26420	15701	5809	40441	21003	4259	25262		3.47	Si
SLV 13	10.44	3539.72	-3066	-2553	-4994	1.336	0	0	0	0	40441	16803	3407	20209		4.05	Si
SLV 3	8.34	5222.15	-5365	-4468	9411	1.336	0	0	0	0	40441	16803	3407	20209		2.15	Si
SLV 3	10.44	-6525.64	-13260	-11041	9393	1.336	1.0286	0	0	0	40441	16803	3407	20209		2.15	Si
SLV 15	8.34	-4796.71	-13796	-11488	-7850	1.67	1.462	-28384	16094	6588	40441	21003	4259	25262		3.22	Si
SLV 15	10.44	3575.97	-4624	-3850	-5654	1.67	0.1848	-75964	16250	841	40441	21003	4259	25262		4.47	Si
SLV 2	8.34	5680.12	-2984	-2485	10397	1.336	0	0	0	0	40441	16803	3407	20209		1.94	Si
SLV 2	10.44	-6840.63	-11965	-9964	10467	1.336	0.7899	0	0	0	40441	16803	3407	20209		1.93	Si
SLV 4	8.34	5453.4	-5197	-4327	9826	1.336	0	0	0	0	40441	16803	3407	20209		2.06	Si
SLV 4	10.44	-6804.38	-13523	-11261	9808	1.336	0.9955	0	0	0	40441	16803	3407	20209		2.06	Si
SLV 1	8.34	5448.87	-3152	-2625	9982	1.336	0	0	0	0	40441	16803	3407	20209		2.02	Si
SLV 1	10.44	-6561.88	-11702	-9744	10052	1.336	0.8227	0	0	0	40441	16803	3407	20209		2.01	Si
SLV 5	8.34	2248.09	-3491	-2907	4682	1.67	0.5731	-6217	11660	1871	40441	21003	4259	25262		5.4	Si
SLV 5	10.44	-3118.41	-6908	-5753	5630	1.336	1.1509	0	0	0	40441	16803	3407	20209		3.59	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.46	7206	-3370	202.79	449.5	2.22	Si
SLV 14	179667	0.46	7770	-3633	202.79	482.79	2.38	Si
SLV 9	179667	0.46	9957	-4656	202.79	609.32	3	Si
SLV 10	179667	0.46	10319	-4825	202.79	629.89	3.11	Si
SLV 15	179667	0.46	10483	-4902	202.79	639.14	3.15	Si
SLV 16	179667	0.46	11047	-5165	202.79	670.85	3.31	Si
SLV 5	179667	0.46	15504	-7250	202.79	911.94	4.5	Si
SLV 6	179667	0.46	15867	-7419	202.79	930.79	4.59	Si
SLV 11	179667	0.46	20878	-9763	202.79	1179.91	5.82	Si
SLV 12	179667	0.46	21240	-9932	202.79	1197.09	5.9	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-7350	-13397	245	1.081	982.7	0.935	16.80551	14.55598	Si
SLV 12	-7346	-13289	245	1.081	982.2	0.935	16.81352	14.55598	Si
SLV 7	-6610	-10868	368	1.161	907.9	0.93	18.13296	14.55598	Si
SLV 8	-6606	-10760	368	1.161	907.5	0.93	18.14246	14.55598	Si
SLV 9	-3280	-6020	-370	1.945	574.8	0.903	31.28998	14.55598	Si
SLV 10	-3276	-5912	-369	1.946	574.4	0.903	31.31981	14.55598	Si
SLV 15	-6790	-13796	-114	1.167	926.1	0.932	18.20952	7.56668	Si
SLV 16	-6783	-13628	-114	1.168	925.4	0.931	18.22508	7.56668	Si
SLV 5	-2540	-3491	-246	2.326	502.5	0.896	37.73411	14.55598	Si
SLV 6	-2536	-3383	-246	2.328	502.1	0.896	37.77632	14.55598	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.294	SLU 39	Si
V_SLU	5.069	SLU 70	Si
PF_SLV	0.453	SLV 2	No
V_SLV	1.931	SLV 2	Si
PFFP_SLV	2.217	SLV 13	Si
R_SLV	1.155	SLV 11	Si

Maschio 149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	1.006	L6	L7	4.32	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	8.34	2441.47	-22159	-0.0000477	0.0004492	0.0035	4.32	35305.16	43212.13	43212.13	17.7	No	Si
SLU 50	11.86	1136.66	-12922	-0.0000266	0.0004492	0.0035	4.32	23641.36	27510.27	27510.27	24.2	No	Si
SLU 47	8.34	2342.35	-21500	-0.0000462	0.0004492	0.0035	4.32	34617.38	42188.98	42188.98	18.01	No	Si
SLU 47	11.86	1095.2	-12245	-0.0000252	0.0004492	0.0035	4.32	22613.86	26238.58	26238.58	23.96	No	Si
SLU 46	8.34	2422.6	-21921	-0.0000472	0.0004492	0.0035	4.32	35059.61	42843.04	42843.04	17.68	No	Si
SLU 46	11.86	1212.88	-12611	-0.0000262	0.0004492	0.0035	4.32	23171.72	26926.27	26926.27	22.2	No	Si
SLU 3	8.34	1911.83	-17780	-0.0000378	0.0004492	0.0035	4.32	30319.99	36319.45	36319.45	19	No	Si
SLU 3	11.86	1000.15	-10304	-0.0000213	0.0004492	0.0035	4.32	19540.96	22564.39	22564.39	22.56	No	Si
SLU 43	8.34	2351.12	-20842	-0.0000449	0.0004492	0.0035	4.32	33909.4	41168.69	41168.69	17.51	No	Si
SLU 43	11.86	1097.46	-11572	-0.0000239	0.0004492	0.0035	4.32	21570.77	24974.75	24974.75	22.76	No	Si
SLU 51	8.34	2409.1	-22158	-0.0000476	0.0004492	0.0035	4.32	35304.59	43211.27	43211.27	17.94	No	Si
SLU 51	11.86	1123.54	-12921	-0.0000265	0.0004492	0.0035	4.32	23639.1	27507.48	27507.48	24.48	No	Si
SLU 44	8.34	2297.18	-20841	-0.0000448	0.0004492	0.0035	4.32	33908.39	41167.26	41167.26	17.92	No	Si
SLU 44	11.86	1075.6	-11570	-0.0000239	0.0004492	0.0035	4.32	21566.82	24970.02	24970.02	23.21	No	Si
SLU 48	8.34	2500.14	-22580	-0.0000487	0.0004492	0.0035	4.32	35732.81	43865.62	43865.62	17.55	No	Si
SLU 48	11.86	1245.59	-13287	-0.0000275	0.0004492	0.0035	4.32	24185.04	28183.57	28183.57	22.63	No	Si
SLU 49	8.34	2467.77	-22579	-0.0000486	0.0004492	0.0035	4.32	35732.25	43864.76	43864.76	17.78	No	Si
SLU 49	11.86	1232.48	-13286	-0.0000275	0.0004492	0.0035	4.32	24182.8	28180.78	28180.78	22.87	No	Si
SLU 45	8.34	2454.97	-21922	-0.0000473	0.0004492	0.0035	4.32	35060.19	42843.9	42843.9	17.45	No	Si
SLU 45	11.86	1225.99	-12612	-0.0000262	0.0004492	0.0035	4.32	23174.01	26929.11	26929.11	21.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	8.34	5540.24	-15915	-0.0000433	0.0006738	0.0035	4.32		33574.59	33574.59	6.06		Si
SLV 2	11.86	3548.11	-7771	-0.000023	0.0006738	0.0035	4.32		17835.05	17835.05	5.03		Si
SLD 5	8.34	4976.59	-17833	-0.0000454	0.0006738	0.0035	4.32		37129.2	37129.2	7.46		Si
SLD 5	11.86	2706.14	-9650	-0.0000243	0.0006738	0.0035	4.32		21557.23	21557.23	7.97		Si
SLV 11	8.34	-5697.68	-18528	-0.0000486	0.0006738	0.0035	4.32		47258.02	47258.02	8.29		Si
SLV 11	11.86	-3442.17	-10541	-0.0000278	0.0006738	0.0035	4.32		32357.6	32357.6	9.4		Si
SLD 6	8.34	5072.83	-17829	-0.0000457	0.0006738	0.0035	4.32		37122.89	37122.89	7.32		Si
SLD 6	11.86	2806.81	-9633	-0.0000245	0.0006738	0.0035	4.32		21523.25	21523.25	7.67		Si
SLV 10	8.34	8350.92	-18847	-0.0000562	0.0006738	0.0035	4.32		38982.67	38982.67	4.67		Si
SLV 10	11.86	4442.75	-10533	-0.0000304	0.0006738	0.0035	4.32		23291.15	23291.15	5.24		Si
SLV 9	8.34	8130.5	-18855	-0.0000556	0.0006738	0.0035	4.32		38996.87	38996.87	4.8		Si
SLV 9	11.86	4212.18	-10572	-0.0000299	0.0006738	0.0035	4.32		23367.75	23367.75	5.55		Si
SLV 1	8.34	5197.28	-15927	-0.0000424	0.0006738	0.0035	4.32		33597.44	33597.44	6.46		Si
SLV 1	11.86	3189.35	-7833	-0.0000222	0.0006738	0.0035	4.32		17958.08	17958.08	5.63		Si
SLD 10	8.34	4684.09	-18384	-0.0000457	0.0006738	0.0035	4.32		38142.85	38142.85	8.14		Si
SLD 10	11.86	2467.44	-10173	-0.0000247	0.0006738	0.0035	4.32		22588.99	22588.99	9.15		Si
SLV 5	8.34	9038.77	-17555	-0.0000555	0.0006738	0.0035	4.32		36615.73	36615.73	4.05		Si
SLV 5	11.86	5006.15	-9308	-0.0000295	0.0006738	0.0035	4.32		20882.74	20882.74	4.17		Si
SLV 6	8.34	9259.18	-17547	-0.0000561	0.0006738	0.0035	4.32		36601.29	36601.29	3.95		Si
SLV 6	11.86	5236.73	-9269	-0.00003	0.0006738	0.0035	4.32		20804.9	20804.9	3.97		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 36	8.34	1829.33	-23115	-13572	-1003	4.32	4.32	-19636	10833	7488	115546	24840	22032	46872	No	46.73	Si
SLU 36	11.86	1096.46	-13220	-7762	-1009	4.32	4.32	-11230	9831	6795	115546	24840	22032	46872	No	46.47	Si
SLU 42	8.34	1685.57	-22955	-13478	-1234	4.32	4.32	-19499	10833	7488	115546	24840	22032	46872	No	37.97	Si
SLU 42	11.86	961.87	-12553	-7370	-1239	4.32	4.32	-10663	9755	6743	115546	24840	22032	46872	No	37.83	Si
SLU 34	8.34	1703.91	-22036	-12938	-999	4.32	4.32	-18719	10829	7485	115546	24840	22032	46872	No	46.91	Si
SLU 34	11.86	959.18	-12179	-7151	-1004	4.32	4.32	-10346	9713	6713	115546	24840	22032	46872	No	46.68	Si
SLU 82	8.34	2183.54	-26438	-15523	-1013	4.32	4.32	-22458	10833	7488	115546	24840	22032	46872	No	46.26	Si
SLU 82	11.86	1168.12	-14186	-8329	-1018	4.32	4.32	-12050	9940	6871	115546	24840	22032	46872	No	46.04	Si
SLU 33	8.34	1784.16	-22457	-13186	-1054	4.32	4.32	-19077	10833	7488	115546	24840	22032	46872	No	44.46	Si
SLU 33	11.86	1076.86	-12545	-7366	-1059	4.32	4.32	-10657	9754	6742	115546	24840	22032	46872	No	44.26	Si
SLU 40	8.34	1640.4	-22296	-13091	-1286	4.32	4.32	-18940	10833	7488	115546	24840	22032	46872	No	36.46	Si
SLU 40	11.86	942.27	-11877	-6974	-1289	4.32	4.32	-10090	9679	6690	115546	24840	22032	46872	No	36.35	Si
SLU 32	8.34	1816.52	-22458	-13186	-1028	4.32	4.32	-19077	10833	7488	115546	24840	22032	46872	No	45.58	Si
SLU 32	11.86	1089.97	-12546	-7367	-1033	4.32	4.32	-10658	9754	6742	115546	24840	22032	46872	No	45.38	Si
SLU 31	8.34	1658.74	-21378	-12552	-1050	4.32	4.32	-18160	10755	7434	115546	24840	22032	46872	No	44.63	Si
SLU 31	11.86	939.58	-11504	-6755	-1054	4.32	4.32	-9772	9636	6661	115546	24840	22032	46872	No	44.45	Si
SLU 39	8.34	1672.77	-22297	-13092	-1260	4.32	4.32	-18941	10833	7488	115546	24840	22032	46872	No	37.21	Si
SLU 39	11.86	955.39	-11879	-6975	-1263	4.32	4.32	-10091	9679	6690	115546	24840	22032	46872	No	37.1	Si
SLU 41	8.34	1717.94	-22955	-13478	-1208	4.32	4.32	-19500	10833	7488	115546	24840	22032	46872	No	38.79	Si
SLU 41	11.86	974.99	-12554	-7371	-1213	4.32	4.32	-10664	9755	6743	115546	24840	22032	46872	No	38.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	8.34	-5697.68	-18528	-10879	-4065	4.32	4.32	-15739	15648	10816	115546	37260	22032	59292		14.59	Si
SLV 11	11.86	-3442.17	-10541	-6189	-7153	4.32	4.32	-8954	14291	9878	115546	37260	22032	59292		8.29	Si
SLV 3	8.34	1048.83	-15829	-9294	-3244	4.32	4.32	-13446	15189	10499	115546	37260	22032	59292		18.28	Si
SLV 3	11.86	893.04	-7823	-4593	-4124	4.32	4.32	-6646	13829	9559	115546	37260	22032	59292		14.38	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	8.34	1391.79	-15816	-9287	-3154	4.32	4.32	-13436	15187	10497	115546	37260	22032	59292		18.8	Si
SLV 4	11.86	1251.81	-7762	-4557	-4032	4.32	4.32	-6593	13819	9551	115546	37260	22032	59292		14.71	Si
SLV 9	8.34	8130.5	-18855	-11071	4757	4.32	4.32	-16016	15703	10854	115546	37260	22032	59292		12.46	Si
SLV 9	11.86	4212.18	-10572	-6208	7809	4.32	4.32	-8981	14296	9882	115546	37260	22032	59292		7.59	Si
SLV 6	8.34	9259.18	-17547	-10303	3776	4.32	4.32	-14906	15481	10701	115546	37260	22032	59292		15.7	Si
SLV 6	11.86	5236.73	-9269	-5442	6857	4.32	4.32	-7873	14075	9728	115546	37260	22032	59292		8.65	Si
SLV 7	8.34	-4789.41	-17228	-10116	-5104	4.32	4.32	-14635	15427	10663	115546	37260	22032	59292		11.62	Si
SLV 7	11.86	-2648.19	-9276	-5447	-8164	4.32	4.32	-7880	14076	9729	115546	37260	22032	59292		7.26	Si
SLV 12	8.34	-5477.26	-18520	-10874	-4007	4.32	4.32	-15732	15646	10815	115546	37260	22032	59292		14.8	Si
SLV 12	11.86	-3211.6	-10501	-6166	-7094	4.32	4.32	-8920	14284	9873	115546	37260	22032	59292		8.36	Si
SLV 10	8.34	8350.92	-18847	-11066	4815	4.32	4.32	-16010	15702	10853	115546	37260	22032	59292		12.31	Si
SLV 10	11.86	4442.75	-10533	-6184	7868	4.32	4.32	-8947	14289	9877	115546	37260	22032	59292		7.54	Si
SLV 8	8.34	-4568.99	-17220	-10111	-5046	4.32	4.32	-14628	15426	10662	115546	37260	22032	59292		11.75	Si
SLV 8	11.86	-2417.62	-9237	-5423	-8105	4.32	4.32	-7846	14069	9725	115546	37260	22032	59292		7.32	Si
SLV 5	8.34	9038.77	-17555	-10308	3718	4.32	4.32	-14913	15483	10702	115546	37260	22032	59292		15.95	Si
SLV 5	11.86	5006.15	-9308	-5465	6798	4.32	4.32	-7907	14081	9733	115546	37260	22032	59292		8.72	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-10568	0.46	317.18	774.93	1335.78	1055.36	3.33	Si
SLV 3	-10611	0.46	317.18	777.79	1339.85	1058.82	3.34	Si
SLV 2	-10758	0.46	317.18	787.58	1353.79	1070.68	3.38	Si
SLV 1	-10801	0.46	317.18	790.43	1357.86	1074.14	3.39	Si
SLV 8	-13140	0.46	317.18	942.14	1578.08	1260.11	3.97	Si
SLV 7	-13167	0.46	317.18	943.89	1580.67	1262.28	3.98	Si
SLV 6	-13773	0.46	317.18	982.06	1637.5	1309.78	4.13	Si
SLV 5	-13801	0.46	317.18	983.79	1640.09	1311.94	4.14	Si
SLV 12	-15527	0.46	317.18	1089.91	1800.23	1445.07	4.56	Si
SLV 11	-15555	0.46	317.18	1091.58	1802.75	1447.17	4.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-10572	-18855	221	1.911	1423	0.934	29.74264	18.90005	Si
SLV 10	-10533	-18847	221	1.917	1419	0.933	29.83862	18.90005	Si
SLV 11	-10541	-18528	60	1.928	1419.8	0.934	30.01689	18.90005	Si
SLV 12	-10501	-18520	60	1.934	1415.8	0.933	30.11401	18.90005	Si
SLV 7	-9276	-17228	-221	2.124	1292.2	0.928	33.25449	18.90005	Si
SLV 8	-9237	-17220	-221	2.131	1288.2	0.928	33.37438	18.90005	Si
SLV 5	-9308	-17555	-60	2.132	1295.4	0.928	33.3779	18.90005	Si
SLV 6	-9269	-17547	-60	2.14	1291.4	0.928	33.4979	18.90005	Si
SLV 13	-12047	-20258	492	1.696	1572.2	0.939	26.25341	13.38704	Si
SLV 15	-12038	-20160	444	1.701	1571.2	0.939	26.32422	13.38704	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.452	SLU 45	Si
V_SLU	36.35	SLU 40	Si
PF_SLV	3.953	SLV 6	Si
V_SLV	7.263	SLV 7	Si
PFFP_SLV	3.327	SLV 4	Si
R_SLV	1.574	SLV 9	Si

Maschio 150

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.314	-8.433	-3.314	L6	L7	1.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	9.24	70.62	-7905	-0.0000458	0.0003743	0.0035	1.02	2935.54	3238.02	3238.02	45.85	No	Si
SLU 65	11.04	-745.13	-6299	-0.0000588	0.0003743	0.0035	1.02	2516.54	2950.76	2950.76	3.96	No	Si
SLU 66	9.24	60.1	-8381	-0.0000483	0.0003743	0.0035	1.02	3042.39	3387.06	3387.06	56.36	No	Si
SLU 66	11.04	-781.59	-6737	-0.0000627	0.0003743	0.0035	1.02	2639.87	3105.69	3105.69	3.97	No	Si
SLU 70	9.24	56.32	-8705	-0.0000501	0.0003743	0.0035	1.02	3110.52	3489.63	3489.63	61.96	No	Si
SLU 70	11.04	-811.16	-7037	-0.0000656	0.0003743	0.0035	1.02	2720.22	3206.77	3206.77	3.95	No	Si
SLU 68	9.24	65.04	-8219	-0.0000475	0.0003743	0.0035	1.02	3006.87	3336.12	3336.12	51.29	No	Si
SLU 68	11.04	-771.77	-6587	-0.0000614	0.0003743	0.0035	1.02	2598.48	3053.2	3053.2	3.96	No	Si
SLU 64	9.24	67.61	-7888	-0.0000456	0.0003743	0.0035	1.02	2931.67	3232.87	3232.87	47.82	No	Si
SLU 64	11.04	-740.26	-6281	-0.0000585	0.0003743	0.0035	1.02	2511.32	2944.33	2944.33	3.98	No	Si
SLU 69	9.24	54.52	-8695	-0.00005	0.0003743	0.0035	1.02	3108.48	3486.46	3486.46	63.95	No	Si
SLU 69	11.04	-808.24	-7026	-0.0000654	0.0003743	0.0035	1.02	2717.37	3203.14	3203.14	3.96	No	Si
SLU 26	9.24	69.81	-6778	-0.0000391	0.0003743	0.0035	1.02	2651.11	2895.41	2895.41	41.48	No	Si
SLU 26	11.04	-652.25	-5525	-0.000051	0.0003743	0.0035	1.02	2282.36	2668.91	2668.91	4.09	No	Si
SLU 71	9.24	56.45	-8516	-0.000049	0.0003743	0.0035	1.02	3071.26	3429.69	3429.69	60.75	No	Si
SLU 71	11.04	-793.55	-6858	-0.0000639	0.0003743	0.0035	1.02	2672.64	3147.09	3147.09	3.97	No	Si
SLU 72	9.24	58.26	-8526	-0.0000491	0.0003743	0.0035	1.02	3073.36	3432.84	3432.84	58.92	No	Si
SLU 72	11.04	-796.47	-6869	-0.000064	0.0003743	0.0035	1.02	2675.56	3150.69	3150.69	3.96	No	Si
SLU 67	9.24	61.9	-8391	-0.0000484	0.0003743	0.0035	1.02	3044.54	3390.19	3390.19	54.77	No	Si
SLU 67	11.04	-784.51	-6748	-0.0000629	0.0003743	0.0035	1.02	2642.83	3109.47	3109.47	3.96	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	9.24	-3487.07	-10762	-0.0002447	0.0005615	0.0035	0.816		4727.61	4727.61	1.36		Si
SLV 15	11.04	1731.26	-4067	-0.0001956	0.0005615	0.0035	1.02		1992.42	1992.42	1.15		Si
SLV 5	9.24	1209.8	-2676	-0.0001851	0.0005615	0.0035	1.02		1365.68	1365.68	1.13		Si
SLV 5	11.04	-1022.25	-3462	-0.0000586	0.0005615	0.0035	0.816		1890.06	1890.06	1.85		Si
SLV 2	9.24	3529.61	-1430	-0.0691385	0.0005615	0.0035	0.816		777.04	777.04	0.22		No
SLV 2	11.04	-2821.43	-5559	-0.0015943	0.0005615	0.0035	0.816		2796.12	2796.12	0.99		No
SLV 14	9.24	-3123.75	-9107	-0.0002269	0.0005615	0.0035	0.816		4161.59	4161.59	1.33		Si
SLV 14	11.04	1695.4	-3073	-0.006441	0.0005615	0.0035	0.816		1548.35	1548.35	0.91		No
SLV 3	9.24	3166.28	-3085	-0.0405172	0.0005615	0.0035	0.816		1554.04	1554.04	0.49		No
SLV 3	11.04	-2785.58	-6554	-0.0003444	0.0005615	0.0035	0.816		3200.22	3200.22	1.15		Si
SLV 4	9.24	3375.04	-2838	-0.0482393	0.0005615	0.0035	0.816		1440.59	1440.59	0.43		No
SLV 4	11.04	-2916.42	-6588	-0.0004734	0.0005615	0.0035	0.816		3213.49	3213.49	1.1		Si
SLV 1	9.24	3320.85	-1676	-0.0607969	0.0005615	0.0035	0.816		895.36	895.36	0.27		No
SLV 1	11.04	-2690.59	-5526	-0.0010083	0.0005615	0.0035	0.816		2781.97	2781.97	1.03		Si
SLV 16	9.24	-3278.32	-10515	-0.0002196	0.0005615	0.0035	0.816		4646.42	4646.42	1.42		Si
SLV 16	11.04	1600.42	-4101	-0.0001319	0.0005615	0.0035	1.02		2006.42	2006.42	1.25		Si
SLV 6	9.24	1343.97	-2517	-0.0035031	0.0005615	0.0035	0.816		1292.05	1292.05	0.96		No
SLV 6	11.04	-1106.34	-3483	-0.0000661	0.0005615	0.0035	0.816		1899.84	1899.84	1.72		Si
SLV 13	9.24	-3332.5	-9353	-0.0002603	0.0005615	0.0035	0.816		4248.88	4248.88	1.27		Si
SLV 13	11.04	1826.24	-3039	-0.0098316	0.0005615	0.0035	0.816		1532.94	1532.94	0.84		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	9.24	56.32	-8705	-7249	408	1.02	1.02	-25382	10329	2950	40441	8552	2601	11153	No	27.37	Si
SLU 70	11.04	-811.16	-7037	-5859	397	1.02	1.02	-20516	9680	2765	40441	8552	2601	11153	No	28.09	Si
SLU 72	9.24	58.26	-8526	-7100	403	1.02	1.02	-24860	10259	2930	40441	8552	2601	11153	No	27.69	Si
SLU 72	11.04	-796.47	-6869	-5720	393	1.02	1.02	-20027	9615	2746	40441	8552	2601	11153	No	28.39	Si
SLU 67	9.24	61.9	-8391	-6988	405	1.02	1.02	-24466	10207	2915	40441	8552	2601	11153	No	27.54	Si
SLU 67	11.04	-784.51	-6748	-5619	383	1.02	1.02	-19675	9568	2733	40441	8552	2601	11153	No	29.12	Si
SLU 68	9.24	65.04	-8219	-6844	402	1.02	1.02	-23964	10140	2896	40441	8552	2601	11153	No	27.73	Si
SLU 68	11.04	-771.77	-6587	-5485	381	1.02	1.02	-19207	9505	2715	40441	8552	2601	11153	No	29.26	Si
SLU 66	9.24	60.1	-8381	-6979	402	1.02	1.02	-24437	10203	2914	40441	8552	2601	11153	No	27.74	Si
SLU 66	11.04	-781.59	-6737	-5610	380	1.02	1.02	-19644	9564	2731	40441	8552	2601	11153	No	29.38	Si
SLU 69	9.24	54.52	-8695	-7241	405	1.02	1.02	-25353	10325	2949	40441	8552	2601	11153	No	27.56	Si
SLU 69	11.04	-808.24	-7026	-5850	394	1.02	1.02	-20485	9676	2763	40441	8552	2601	11153	No	28.33	Si
SLU 28	9.24	61.09	-7265	-6049	372	1.02	1.02	-21181	9769	2790	40441	8552	2601	11153	No	29.94	Si
SLU 28	11.04	-691.63	-5974	-4975	335	1.02	1.02	-17419	9267	2647	40441	8552	2601	11153	No	33.25	Si
SLU 65	9.24	70.62	-7905	-6583	400	1.02	1.02	-23048	10018	2861	40441	8552	2601	11153	No	27.9	Si
SLU 65	11.04	-745.13	-6299	-5245	367	1.02	1.02	-18366	9393	2683	40441	8552	2601	11153	No	30.38	Si
SLU 71	9.24	56.45	-8516	-7092	400	1.02	1.02	-24831	10255	2929	40441	8552	2601	11153	No	27.89	Si
SLU 71	11.04	-793.55	-6858	-5711	389	1.02	1.02	-19995	9611	2745	40441	8552	2601	11153	No	28.64	Si
SLU 64	9.24	67.61	-7888	-6569	395	1.02	1.02	-23000	10011	2859	40441	8552	2601	11153	No	28.25	Si
SLU 64	11.04	-740.26	-6281	-5230	361	1.02	1.02	-18313	9386	2681	40441	8552	2601	11153	No	30.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	9.24	-3487.07	-10762	-8962	-5784	0.816	0.558	0	0	0	40441	10263	2081	12343		2.13	Si
SLV 15	11.04	1731.26	-4067	-3387	-2050	1.02	0.2531	-49172	16250	1152	40441	12828	2601	15429		7.53	Si
SLD 2	9.24	1521.69	-4093	-3408	2837	1.02	0.4147	-11934	12803	1487	40441	12828	2601	15429		5.44	Si
SLD 2	11.04	-1517.44	-5126	-4269	1213	0.816	0.6419	0	0	0	40441	10263	2081	12343		10.18	Si
SLV 13	9.24	-3332.5	-9353	-7789	-5403	0.816	0.4611	0	0	0	40441	10263	2081	12343		2.28	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	11.04	1826.24	-3039	-2531	-2220	0.816	0	0	0	0	40441	10263	2081	12343		5.56	Si
SLV 2	9.24	3529.61	-1430	-1190	6294	0.816	0	0	0	0	40441	10263	2081	12343		1.96	Si
SLV 2	11.04	-2821.43	-5559	-4629	2522	0.816	0.0075	0	0	0	40441	10263	2081	12343		4.89	Si
SLV 4	9.24	3375.04	-2838	-2363	5912	0.816	0	0	0	0	40441	10263	2081	12343		2.09	Si
SLV 4	11.04	-2916.42	-6588	-5486	2693	0.816	0.2019	0	0	0	40441	10263	2081	12343		4.58	Si
SLV 1	9.24	3320.85	-1676	-1396	5967	0.816	0	0	0	0	40441	10263	2081	12343		2.07	Si
SLV 1	11.04	-2690.59	-5526	-4601	2374	0.816	0.0693	0	0	0	40441	10263	2081	12343		5.2	Si
SLV 16	9.24	-3278.32	-10515	-8756	-5457	0.816	0.5947	0	0	0	40441	10263	2081	12343		2.26	Si
SLV 16	11.04	1600.42	-4101	-3415	-1901	1.02	0.3593	-11957	12808	1288	40441	12828	2601	15429		8.12	Si
SLV 3	9.24	3166.28	-3085	-2569	5585	0.816	0	0	0	0	40441	10263	2081	12343		2.21	Si
SLV 3	11.04	-2785.58	-6554	-5458	2544	0.816	0.255	0	0	0	40441	10263	2081	12343		4.85	Si
SLV 14	9.24	-3123.75	-9107	-7583	-5075	0.816	0.5009	0	0	0	40441	10263	2081	12343		2.43	Si
SLV 14	11.04	1695.4	-3073	-2559	-2072	0.816	0	0	0	0	40441	10263	2081	12343		5.96	Si
SLV 6	9.24	1343.97	-2517	-2096	2702	0.816	0	0	0	0	40441	10263	2081	12343		4.57	Si
SLV 6	11.04	-1106.34	-3483	-2901	689	0.816	0.5771	0	0	0	40441	10263	2081	12343		17.91	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.46	3771	-1077	123.86	147.07	1.19	Si
SLV 1	179667	0.46	4636	-1324	123.86	179.73	1.45	Si
SLV 6	179667	0.46	7683	-2194	123.86	291.75	2.36	Si
SLV 5	179667	0.46	8239	-2353	123.86	311.65	2.52	Si
SLV 4	179667	0.46	8546	-2441	123.86	322.59	2.6	Si
SLV 3	179667	0.46	9411	-2688	123.86	353.09	2.85	Si
SLV 10	179667	0.46	15679	-4478	123.86	562.54	4.54	Si
SLV 9	179667	0.46	16234	-4637	123.86	580.11	4.68	Si
SLV 8	179667	0.46	23599	-6740	123.86	797.79	6.44	Si
SLV 7	179667	0.46	24155	-6899	123.86	813.05	6.56	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-5584	-8348	-53	0.92	711	0.943	14.17455	14.55598	No
SLV 7	-5542	-8257	-53	0.926	706.8	0.943	14.26732	14.55598	No
SLV 12	-4237	-6864	-78	1.146	574.7	0.932	17.86195	14.55598	Si
SLV 6	-4236	-4916	72	1.147	574.6	0.932	17.88347	14.55598	Si
SLV 11	-4195	-6773	-78	1.155	570.4	0.932	18.01176	14.55598	Si
SLV 5	-4194	-4825	72	1.156	570.3	0.932	18.03273	14.55598	Si
SLV 4	-6696	-8903	20	0.796	823.8	0.95	12.16989	7.56668	Si
SLV 3	-6631	-8761	20	0.802	817.2	0.95	12.27404	7.56668	Si
SLV 10	-2888	-3433	47	1.547	439	0.917	24.53093	14.55598	Si
SLV 2	-6291	-7874	58	0.833	782.8	0.948	12.77083	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.953	SLU 70	Si
V_SLU	27.368	SLU 70	Si
PF_SLV	0.22	SLV 2	No
V_SLV	1.961	SLV 2	Si
PFFP_SLV	1.187	SLV 2	Si
R_SLV	0.974	SLV 8	No

Maschio 152

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	2.046	-5.163	5.686	L6	L7	3.64	0.16	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	8.34	-3808.99	-11944	-0.00004	0.0004492	0.0035	3.64	18089.33	27188.88	27188.88	7.14	No	Si
SLU 40	10.44	-2050.32	-9131	-0.0000272	0.0004492	0.0035	3.64	14485.99	22800.07	22800.07	11.12	No	Si
SLU 41	8.34	-3816.53	-12303	-0.0000408	0.0004492	0.0035	3.64	18519.69	27724.2	27724.2	7.26	No	Si
SLU 41	10.44	-1994.15	-9477	-0.0000277	0.0004492	0.0035	3.64	14950.99	23345.24	23345.24	11.71	No	Si
SLU 81	8.34	-4314.58	-14613	-0.000048	0.0004492	0.0035	3.64	21134.06	31172.32	31172.32	7.22	No	Si
SLU 81	10.44	-2341.13	-11096	-0.0000326	0.0004492	0.0035	3.64	17045.85	25896.74	25896.74	11.06	No	Si
SLU 83	8.34	-4367.9	-14964	-0.0000491	0.0004492	0.0035	3.64	21507.81	31696.81	31696.81	7.26	No	Si
SLU 83	10.44	-2321.14	-11432	-0.0000333	0.0004492	0.0035	3.64	17464.15	26425.4	26425.4	11.38	No	Si
SLU 73	8.34	-4143.16	-14358	-0.0000468	0.0004492	0.0035	3.64	20858.63	30791.37	30791.37	7.43	No	Si
SLU 73	10.44	-2275.14	-10861	-0.0000319	0.0004492	0.0035	3.64	16749.48	25525.62	25525.62	11.22	No	Si
SLU 42	8.34	-3862.31	-12295	-0.000041	0.0004492	0.0035	3.64	18511.05	27713.38	27713.38	7.18	No	Si
SLU 42	10.44	-2030.33	-9467	-0.0000279	0.0004492	0.0035	3.64	14938.09	23330.02	23330.02	11.49	No	Si
SLU 76	8.34	-4196.47	-14709	-0.0000478	0.0004492	0.0035	3.64	21236.97	31315.86	31315.86	7.46	No	Si
SLU 76	10.44	-2255.16	-11197	-0.0000326	0.0004492	0.0035	3.64	17171.83	26055.57	26055.57	11.55	No	Si
SLU 82	8.34	-4360.36	-14606	-0.0000482	0.0004492	0.0035	3.64	21126.27	31161.49	31161.49	7.15	No	Si
SLU 82	10.44	-2377.31	-11086	-0.0000328	0.0004492	0.0035	3.64	17033.75	25881.51	25881.51	10.89	No	Si
SLU 84	8.34	-4413.68	-14957	-0.0000492	0.0004492	0.0035	3.64	21500.16	31685.98	31685.98	7.18	No	Si
SLU 84	10.44	-2357.33	-11423	-0.0000334	0.0004492	0.0035	3.64	17452.21	26410.98	26410.98	11.2	No	Si
SLU 39	8.34	-3763.21	-11951	-0.0000398	0.0004492	0.0035	3.64	18098.09	27199.71	27199.71	7.23	No	Si
SLU 39	10.44	-2014.13	-9141	-0.0000271	0.0004492	0.0035	3.64	14499.06	22815.29	22815.29	11.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	8.34	-1350.27	-9861	-0.000026	0.0006738	0.0035	3.64		24175.5	24175.5	17.9		Si
SLV 4	10.44	-6137.63	-3141	-0.0001388	0.0006738	0.0035	2.912		13030.42	13030.42	2.12		Si
SLV 5	8.34	6140.39	-8851	-0.0000413	0.0006738	0.0035	3.64		16565.38	16565.38	2.7		Si
SLV 5	10.44	3309.01	-5072	-0.0000226	0.0006738	0.0035	3.64		10238.73	10238.73	3.09		Si
SLV 8	8.34	-9563.63	-11584	-0.000062	0.0006738	0.0035	3.64		26954.35	26954.35	2.82		Si
SLV 8	10.44	-8239.45	-7667	-0.0000544	0.0006738	0.0035	2.912		20637.13	20637.13	2.5		Si
SLV 12	8.34	-11612.55	-12242	-0.0000752	0.0006738	0.0035	3.64		28014.59	28014.59	2.41		Si
SLV 12	10.44	-6328.27	-10778	-0.0000461	0.0006738	0.0035	3.64		25654.31	25654.31	4.05		Si
SLV 9	8.34	4091.46	-9509	-0.0000352	0.0006738	0.0035	3.64		17642.77	17642.77	4.31		Si
SLV 9	10.44	5220.19	-8183	-0.0000363	0.0006738	0.0035	3.64		15462.95	15462.95	2.96		Si
SLV 3	8.34	-2159.34	-9858	-0.000029	0.0006738	0.0035	3.64		24171.29	24171.29	11.19		Si
SLV 3	10.44	-6855.09	-3113	-0.0001897	0.0006738	0.0035	2.912		12982.41	12982.41	1.89		Si
SLV 6	8.34	6660.37	-8853	-0.0000437	0.0006738	0.0035	3.64		16568.13	16568.13	2.49		Si
SLV 6	10.44	3770.12	-5090	-0.0000246	0.0006738	0.0035	3.64		10269.81	10269.81	2.72		Si
SLV 11	8.34	-12132.53	-12240	-0.0000792	0.0006738	0.0035	3.64		28012.01	28012.01	2.31		Si
SLV 11	10.44	-6789.38	-10760	-0.0000478	0.0006738	0.0035	3.64		25625.1	25625.1	3.77		Si
SLV 10	8.34	4611.44	-9511	-0.000037	0.0006738	0.0035	3.64		17645.51	17645.51	3.83		Si
SLV 10	10.44	5681.29	-8201	-0.0000382	0.0006738	0.0035	3.64		15493.08	15493.08	2.73		Si
SLV 7	8.34	-10083.61	-11582	-0.000065	0.0006738	0.0035	3.64		26951.64	26951.64	2.67		Si
SLV 7	10.44	-8700.55	-7649	-0.0000594	0.0006738	0.0035	2.912		20607.92	20607.92	2.37		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	8.34	-4413.68	-14957	-8782	-1423	3.64	3.64	-15079	10344	6024	115546	20930	18564	39494	No	27.76	Si
SLU 84	10.44	-2357.33	-11423	-6707	-1467	3.64	3.64	-11516	9869	5748	115546	20930	18564	39494	No	26.93	Si
SLU 75	8.34	-4200.79	-14802	-8691	-1361	3.64	3.64	-14923	10323	6012	115546	20930	18564	39494	No	29.02	Si
SLU 75	10.44	-2246.1	-11284	-6626	-1398	3.64	3.64	-11376	9850	5737	115546	20930	18564	39494	No	28.26	Si
SLU 81	8.34	-4314.58	-14613	-8580	-1368	3.64	3.64	-14732	10298	5997	115546	20930	18564	39494	No	28.87	Si
SLU 81	10.44	-2341.13	-11096	-6515	-1413	3.64	3.64	-11187	9825	5722	115546	20930	18564	39494	No	27.95	Si
SLU 78	8.34	-4254.1	-15154	-8898	-1410	3.64	3.64	-15277	10370	6040	115546	20930	18564	39494	No	28	Si
SLU 78	10.44	-2226.12	-11620	-6823	-1443	3.64	3.64	-11715	9895	5763	115546	20930	18564	39494	No	27.37	Si
SLU 82	8.34	-4360.36	-14606	-8576	-1373	3.64	3.64	-14725	10297	5997	115546	20930	18564	39494	No	28.76	Si
SLU 82	10.44	-2377.31	-11086	-6509	-1421	3.64	3.64	-11177	9824	5721	115546	20930	18564	39494	No	27.79	Si
SLU 80	8.34	-4219.27	-15065	-8846	-1396	3.64	3.64	-15188	10358	6033	115546	20930	18564	39494	No	28.29	Si
SLU 80	10.44	-2211.05	-11540	-6776	-1425	3.64	3.64	-11634	9885	5757	115546	20930	18564	39494	No	27.72	Si
SLU 77	8.34	-4208.32	-15161	-8902	-1405	3.64	3.64	-15285	10371	6040	115546	20930	18564	39494	No	28.12	Si
SLU 77	10.44	-2189.93	-11630	-6829	-1435	3.64	3.64	-11725	9897	5764	115546	20930	18564	39494	No	27.52	Si
SLU 74	8.34	-4155	-14809	-8695	-1356	3.64	3.64	-14930	10324	6013	115546	20930	18564	39494	No	29.14	Si
SLU 74	10.44	-2209.92	-11294	-6631	-1390	3.64	3.64	-11386	9851	5737	115546	20930	18564	39494	No	28.42	Si
SLU 79	8.34	-4173.48	-15072	-8850	-1390	3.64	3.64	-15196	10359	6033	115546	20930	18564	39494	No	28.41	Si
SLU 79	10.44	-2174.87	-11549	-6781	-1417	3.64	3.64	-11644	9886	5757	115546	20930	18564	39494	No	27.88	Si
SLU 83	8.34	-4367.9	-14964	-8786	-1417	3.64	3.64	-15086	10345	6025	115546	20930	18564	39494	No	27.87	Si
SLU 83	10.44	-2321.14	-11432	-6713	-1459	3.64	3.64	-11526	9870	5748	115546	20930	18564	39494	No	27.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	8.34	-9563.63	-11584	-6802	-1094	3.64	2.9832	-14342	15369	7336	115546	31395	18564	49959		45.66	Si
SLV 8	10.44	-8239.45	-7667	-4502	-2578	2.912	2.2361	0	0	0	115546	25116	14851	39967		15.5	Si
SLV 12	8.34	-11612.55	-12242	-7188	-619	3.64	2.6142	-17312	15964	6677	115546	31395	18564	49959		80.75	Si
SLV 12	10.44	-6328.27	-10778	-6328	-2721	3.64	3.64	-10866	14673	8546	115546	31395	18564	49959		18.36	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 11	8.34	-6864.4	-11291	-6630	-782	3.64	3.6362	-11384	14777	8597	115546	31395	18564	49959		63.9	Si
SLD 11	10.44	-3860.11	-9151	-5373	-1704	3.64	3.64	-9226	14345	8355	115546	31395	18564	49959		29.32	Si
SLV 15	8.34	-8989.09	-12051	-7076	-116	3.64	3.2223	-13813	15263	7869	115546	31395	18564	49959		429.46	Si
SLV 15	10.44	-484.5	-13482	-7916	-1671	3.64	3.64	-13592	15218	8863	115546	31395	18564	49959		29.9	Si
SLV 1	8.34	2707.85	-9039	-5307	-1695	3.64	3.64	-9113	14323	8341	115546	31395	18564	49959		29.47	Si
SLV 1	10.44	-3252.22	-2340	-1374	-124	2.912	1.2905	0	0	0	115546	25116	14851	39967		321.66	Si
SLD 7	8.34	-6002.19	-11010	-6465	-989	3.64	3.64	-11100	14720	8573	115546	31395	18564	49959		50.5	Si
SLD 7	10.44	-4662.83	-7832	-4599	-1643	3.64	3.64	-7896	14079	8200	115546	31395	18564	49959		30.41	Si
SLV 3	8.34	-2159.34	-9858	-5788	-1702	3.64	3.64	-9939	14488	8438	115546	31395	18564	49959		29.36	Si
SLV 3	10.44	-6855.09	-3113	-1828	-1195	2.912	0	0	0	0	115546	25116	14851	39967		33.45	Si
SLD 12	8.34	-6637.37	-11292	-6630	-761	3.64	3.64	-11384	14777	8606	115546	31395	18564	49959		65.62	Si
SLD 12	10.44	-3658.79	-9159	-5378	-1693	3.64	3.64	-9234	14347	8356	115546	31395	18564	49959		29.51	Si
SLV 7	8.34	-10083.61	-11582	-6801	-1141	3.64	2.8482	-15019	15504	7065	115546	31395	18564	49959		43.77	Si
SLV 7	10.44	-8700.55	-7649	-4491	-2603	2.912	2.0476	0	0	0	115546	25116	14851	39967		15.35	Si
SLV 11	8.34	-12132.53	-12240	-7187	-666	3.64	2.4864	-18200	16142	6421	115546	31395	18564	49959		75.05	Si
SLV 11	10.44	-6789.38	-10760	-6318	-2746	3.64	3.567	-10848	14670	8372	115546	31395	18564	49959		18.19	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.1 Ta 0.13 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-2290	0.46	267.26	0	480.89	240.44	0.9	No
SLV 2	-2315	0.46	267.26	0	483.33	241.66	0.9	No
SLV 3	-2945	0.46	267.26	0	545.44	272.72	1.02	Si
SLV 4	-2969	0.46	267.26	0	547.85	273.92	1.02	Si
SLV 5	-5599	0.46	267.26	424.41	803.35	613.88	2.3	Si
SLV 6	-5615	0.46	267.26	425.54	804.87	615.2	2.3	Si
SLV 7	-7780	0.46	267.26	577.06	1012.31	794.68	2.97	Si
SLV 8	-7796	0.46	267.26	578.14	1013.81	795.97	2.98	Si
SLV 9	-9085	0.46	267.26	664.95	1136.21	900.58	3.37	Si
SLV 10	-9101	0.46	267.26	666	1137.71	901.85	3.37	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.03 Ta = 0.1293

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-6377	-12242	225	2.487	944	0.92	39.29503	18.90005	Si
SLV 11	-6344	-12240	225	2.497	940.7	0.92	39.45872	18.90005	Si
SLV 8	-6225	-11584	-188	2.538	928.9	0.919	40.13929	18.90005	Si
SLV 7	-6193	-11582	-187	2.548	925.6	0.919	40.31122	18.90005	Si
SLV 10	-4812	-9511	188	3.072	787.7	0.909	49.1229	18.90005	Si
SLV 9	-4779	-9509	188	3.087	784.5	0.909	49.37633	18.90005	Si
SLV 6	-4660	-8853	-224	3.138	772.7	0.908	50.23177	18.90005	Si
SLV 5	-4628	-8851	-224	3.153	769.5	0.908	50.49882	18.90005	Si
SLV 16	-6014	-12054	693	2.541	907.7	0.918	40.25209	13.38704	Si
SLV 15	-5963	-12051	693	2.558	902.6	0.917	40.52587	13.38704	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.138	SLU 40	Si
V_SLU	26.929	SLU 84	Si
PF_SLV	1.894	SLV 3	Si
V_SLV	15.352	SLV 7	Si
PFFP_SLV	0.9	SLV 1	No
R_SLV	2.079	SLV 12	Si

Maschio 153

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)
Maschio considerato membratura sismica secondaria

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.093	5.686	-5.093	6.006	L6	L7	0.32	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	2	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	10.34	80.67	-1827	-0.0000584	0.0003743	0.0035	0.32	233.8	698.83	698.83	8.66	No	Si
SLU 77	11.14	65.84	-1753	-0.0000519	0.0003743	0.0035	0.32	226.59	693.92	693.92	10.54	No	Si
SLU 74	10.34	78.09	-1753	-0.0000561	0.0003743	0.0035	0.32	226.6	693.93	693.93	8.89	No	Si
SLU 74	11.14	63.59	-1677	-0.0000497	0.0003743	0.0035	0.32	218.99	688.8	688.8	10.83	No	Si
SLU 84	10.34	78.33	-1739	-0.0000559	0.0003743	0.0035	0.32	225.19	692.97	692.97	8.85	No	Si
SLU 84	11.14	63.03	-1668	-0.0000494	0.0003743	0.0035	0.32	218.07	688.19	688.19	10.92	No	Si
SLU 79	10.34	78.81	-1797	-0.0000572	0.0003743	0.0035	0.32	230.92	696.86	696.86	8.84	No	Si
SLU 79	11.14	64.26	-1721	-0.0000508	0.0003743	0.0035	0.32	223.43	691.79	691.79	10.77	No	Si
SLU 75	10.34	79.32	-1752	-0.0000565	0.0003743	0.0035	0.32	226.44	693.82	693.82	8.75	No	Si
SLU 75	11.14	64.74	-1676	-0.0000501	0.0003743	0.0035	0.32	218.86	688.72	688.72	10.64	No	Si
SLU 69	10.34	78.63	-1787	-0.0000569	0.0003743	0.0035	0.32	229.92	696.18	696.18	8.85	No	Si
SLU 69	11.14	66.15	-1697	-0.000051	0.0003743	0.0035	0.32	221.01	690.16	690.16	10.43	No	Si
SLU 78	10.34	81.9	-1826	-0.0000588	0.0003743	0.0035	0.32	233.64	698.72	698.72	8.53	No	Si
SLU 78	11.14	66.99	-1752	-0.0000523	0.0003743	0.0035	0.32	226.47	693.84	693.84	10.36	No	Si
SLU 80	10.34	80.04	-1796	-0.0000576	0.0003743	0.0035	0.32	230.76	696.75	696.75	8.71	No	Si
SLU 80	11.14	65.41	-1720	-0.0000512	0.0003743	0.0035	0.32	223.31	691.71	691.71	10.57	No	Si
SLU 76	10.34	78.28	-1721	-0.0000555	0.0003743	0.0035	0.32	223.37	691.75	691.75	8.84	No	Si
SLU 76	11.14	63.93	-1643	-0.0000492	0.0003743	0.0035	0.32	215.54	686.5	686.5	10.74	No	Si
SLU 70	10.34	79.86	-1785	-0.0000573	0.0003743	0.0035	0.32	229.76	696.07	696.07	8.72	No	Si
SLU 70	11.14	67.31	-1696	-0.0000513	0.0003743	0.0035	0.32	220.89	690.08	690.08	10.25	No	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	10.34	75.75	-1665	-1386	-1	0.32	0.32	-15472	9007	807	5075	2683	816	3499	No	4262.82	Si
SLU 82	11.14	60.78	-1592	-1325	-1	0.32	0.32	-14793	8917	799	5075	2683	816	3499	No	3406.94	Si
SLU 74	10.34	78.09	-1753	-1460	-1	0.32	0.32	-16293	9117	817	5075	2683	816	3499	No	4577.48	Si
SLU 74	11.14	63.59	-1677	-1396	-1	0.32	0.32	-15585	9022	808	5075	2683	816	3499	No	3614.14	Si
SLU 39	10.34	60.17	-1354	-1127	-1	0.32	0.32	-12581	8622	773	5075	2683	816	3499	No	4480.03	Si
SLU 39	11.14	46.9	-1308	-1090	-1	0.32	0.32	-12160	8566	767	5075	2683	816	3499	No	3673.11	Si
SLU 41	10.34	62.76	-1428	-1189	-1	0.32	0.32	-13270	8714	781	5075	2683	816	3499	No	4503.74	Si
SLU 41	11.14	49.15	-1385	-1153	-1	0.32	0.32	-12867	8660	776	5075	2683	816	3499	No	3674.78	Si
SLU 75	10.34	79.32	-1752	-1459	-1	0.32	0.32	-16278	9115	817	5075	2683	816	3499	No	4617.58	Si
SLU 75	11.14	64.74	-1676	-1395	-1	0.32	0.32	-15573	9021	808	5075	2683	816	3499	No	3624.16	Si
SLU 81	10.34	74.52	-1666	-1388	-1	0.32	0.32	-15487	9009	807	5075	2683	816	3499	No	4228.62	Si
SLU 81	11.14	59.63	-1593	-1326	-1	0.32	0.32	-14804	8918	799	5075	2683	816	3499	No	3398.09	Si
SLU 78	10.34	81.9	-1826	-1520	-1	0.32	0.32	-16966	9207	825	5075	2683	816	3499	No	4642.77	Si
SLU 78	11.14	66.99	-1752	-1459	-1	0.32	0.32	-16281	9115	817	5075	2683	816	3499	No	3625.79	Si
SLU 84	10.34	78.33	-1739	-1448	-1	0.32	0.32	-16160	9099	815	5075	2683	816	3499	No	4284.28	Si
SLU 84	11.14	63.03	-1668	-1389	-1	0.32	0.32	-15501	9011	807	5075	2683	816	3499	No	3408.38	Si
SLU 77	10.34	80.67	-1827	-1522	-1	0.32	0.32	-16982	9209	825	5075	2683	816	3499	No	4602.23	Si
SLU 77	11.14	65.84	-1753	-1460	-1	0.32	0.32	-16292	9117	817	5075	2683	816	3499	No	3615.76	Si
SLU 83	10.34	77.1	-1741	-1449	-1	0.32	0.32	-16176	9101	815	5075	2683	816	3499	No	4249.74	Si
SLU 83	11.14	61.88	-1669	-1390	-1	0.32	0.32	-15512	9013	808	5075	2683	816	3499	No	3399.51	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.46	0	241	39.76	0	0	No, Trazione
SLV 15	179667	0.46	0	786	39.76	0	0	No, Trazione
SLV 14	179667	0.46	0	268	39.76	0	0	No, Trazione
SLV 16	179667	0.46	0	685	39.76	0	0	No, Trazione
SLV 12	179667	0.46	0	176	39.76	0	0	No, Trazione
SLV 13	179667	0.46	0	368	39.76	0	0	No, Trazione
SLV 7	179667	0.46	7015	-629	39.76	83.95	2.11	Si
SLV 8	179667	0.46	7737	-693	39.76	92.14	2.32	Si
SLV 9	179667	0.46	12842	-1151	39.76	147.54	3.71	Si
SLV 10	179667	0.46	13564	-1215	39.76	155.03	3.9	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-1921	-2963	105	0.813	240.2	0.947	12.47332	14.55598	No
SLV 10	-1860	-3108	105	0.835	234	0.946	12.8268	14.55598	No
SLV 5	-1221	-103	-90	1.181	169.4	0.929	18.48197	14.55598	Si
SLV 6	-1161	-248	-91	1.229	163.3	0.927	19.27351	14.55598	Si
SLV 13	-1916	-5657	335	0.71	239.7	0.947	10.89546	7.56668	Si
SLV 14	-1822	-5883	334	0.74	230.2	0.945	11.3817	7.56668	Si
SLV 15	-1199	-5141	336	1.033	167.1	0.928	16.17378	7.56668	Si
SLV 16	-1104	-5366	336	1.101	157.6	0.925	17.29763	7.56668	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	1230	1473	-85	5.088	57.9	1	73.94381	14.55598	Si, Trazione
SLV 7	1170	1618	-85	5.609	57.9	1	81.52288	14.55598	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.531	SLU 78	Si
V_SLU	3398.085	SLU 81	Si
PFFP_SLV	0	SLV 16	No
R_SLV	0.857	SLV 9	No

Maschio 155

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.513	-3.314	L6	L7	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	10.34	-92.48	-4742	-0.0000596	0.0003743	0.0035	0.55	909.65	1080.62	1080.62	11.68	No	Si
SLU 68	11.14	-231.93	-4341	-0.0000715	0.0003743	0.0035	0.55	863.29	1025.43	1025.43	4.42	No	Si
SLU 44	10.34	-67.08	-4006	-0.0000483	0.0003743	0.0035	0.55	820.23	969.23	969.23	14.45	No	Si
SLU 44	11.14	-205.83	-3675	-0.0000607	0.0003743	0.0035	0.55	773.74	908.96	908.96	4.42	No	Si
SLU 72	10.34	-100.02	-4935	-0.0000627	0.0003743	0.0035	0.55	930.06	1106.19	1106.19	11.06	No	Si
SLU 72	11.14	-237.25	-4520	-0.0000742	0.0003743	0.0035	0.55	884.66	1051.12	1051.12	4.43	No	Si
SLU 47	10.34	-74.83	-4205	-0.0000514	0.0003743	0.0035	0.55	846.26	1004.03	1004.03	13.42	No	Si
SLU 47	11.14	-211.38	-3857	-0.0000634	0.0003743	0.0035	0.55	799.72	942.12	942.12	4.46	No	Si
SLU 70	10.34	-105.53	-5042	-0.0000646	0.0003743	0.0035	0.55	940.72	1120.52	1120.52	10.62	No	Si
SLU 70	11.14	-238.58	-4610	-0.0000755	0.0003743	0.0035	0.55	895.01	1063.39	1063.39	4.46	No	Si
SLU 64	10.34	-84.2	-4531	-0.0000562	0.0003743	0.0035	0.55	885.96	1052.67	1052.67	12.5	No	Si
SLU 64	11.14	-225.83	-4151	-0.0000685	0.0003743	0.0035	0.55	839.4	994.71	994.71	4.4	No	Si
SLU 67	10.34	-97.78	-4843	-0.0000614	0.0003743	0.0035	0.55	920.53	1093.97	1093.97	11.19	No	Si
SLU 67	11.14	-233.04	-4428	-0.0000726	0.0003743	0.0035	0.55	873.84	1038.17	1038.17	4.45	No	Si
SLU 71	10.34	-99.7	-4928	-0.0000626	0.0003743	0.0035	0.55	929.32	1105.22	1105.22	11.09	No	Si
SLU 71	11.14	-236.92	-4515	-0.0000741	0.0003743	0.0035	0.55	884.12	1050.48	1050.48	4.43	No	Si
SLU 65	10.34	-84.73	-4543	-0.0000564	0.0003743	0.0035	0.55	887.36	1054.33	1054.33	12.44	No	Si
SLU 65	11.14	-226.38	-4159	-0.0000687	0.0003743	0.0035	0.55	840.4	996.05	996.05	4.4	No	Si
SLU 43	10.34	-66.55	-3994	-0.0000481	0.0003743	0.0035	0.55	818.6	967.05	967.05	14.53	No	Si
SLU 43	11.14	-205.28	-3667	-0.0000605	0.0003743	0.0035	0.55	772.62	907.55	907.55	4.42	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	10.34	328.76	-533	-0.0157861	0.0005615	0.0035	0.44		161.28	161.28	0.49		No
SLV 6	11.14	-431.71	-1623	-0.0003781	0.0005615	0.0035	0.44		488.28	488.28	1.13		Si
SLV 1	10.34	549.84	-246	-0.0416966	0.0005615	0.0035	0.44		84.62	84.62	0.15		No
SLV 1	11.14	-798.82	-1652	-0.0059265	0.0005615	0.0035	0.44		495.7	495.7	0.62		No
SLV 5	10.34	296.8	-729	-0.0089721	0.0005615	0.0035	0.44		212.86	212.86	0.72		No
SLV 5	11.14	-401.56	-1725	-0.0001541	0.0005615	0.0035	0.44		513.63	513.63	1.28		Si
SLD 2	10.34	217.42	-1974	-0.000043	0.0005615	0.0035	0.55		525.12	525.12	2.42		Si
SLD 2	11.14	-457.12	-2472	-0.0001031	0.0005615	0.0035	0.44		691.59	691.59	1.51		Si
SLD 3	10.34	141.1	-2645	-0.0000411	0.0005615	0.0035	0.55		676	676	4.79		Si
SLD 3	11.14	-421.27	-2844	-0.000083	0.0005615	0.0035	0.44		776.62	776.62	1.84		Si
SLV 3	10.34	425.19	-1467	-0.0045639	0.0005615	0.0035	0.44		400.86	400.86	0.94		No
SLV 3	11.14	-763.5	-2341	-0.0027767	0.0005615	0.0035	0.44		661.19	661.19	0.87		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	10.34	162.45	-2513	-0.0000421	0.0005615	0.0035	0.55		649.19	649.19	4		Si
SLD 4	11.14	-441.41	-2775	-0.0000891	0.0005615	0.0035	0.44		760.91	760.91	1.72		Si
SLD 1	10.34	196.07	-2105	-0.0000415	0.0005615	0.0035	0.55		556.73	556.73	2.84		Si
SLD 1	11.14	-436.98	-2541	-0.0000919	0.0005615	0.0035	0.44		707.31	707.31	1.62		Si
SLV 4	10.34	474.91	-1161	-0.0148988	0.0005615	0.0035	0.44		323.96	323.96	0.68		No
SLV 4	11.14	-810.42	-2181	-0.0043755	0.0005615	0.0035	0.44		622.8	622.8	0.77		No
SLV 2	10.34	599.56	60	-0.0539798	0.0005615	0.0035	0.44		0	0	0		No
SLV 2	11.14	-845.74	-1492	-0.0071689	0.0005615	0.0035	0.44		455.6	455.6	0.54		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	10.34	-87.56	-4498	-3746	-90	0.55	0.55	-24321	10187	1569	40441	4612	1403	6014	No	66.91	Si
SLU 48	11.14	-217.7	-4121	-3431	242	0.55	0.55	-22281	9915	1527	40441	4612	1403	6014	No	24.84	Si
SLU 45	10.34	-79.81	-4299	-3580	-73	0.55	0.55	-23247	10044	1547	40441	4612	1403	6014	No	82.11	Si
SLU 45	11.14	-212.16	-3939	-3280	239	0.55	0.55	-21298	9784	1507	40441	4612	1403	6014	No	25.16	Si
SLU 58	10.34	-112.33	-4883	-4066	-175	0.55	0.55	-26401	10465	1612	40441	4612	1403	6014	No	34.45	Si
SLU 58	11.14	-206.12	-4461	-3715	239	0.55	0.55	-24123	10161	1565	40441	4612	1403	6014	No	25.16	Si
SLU 49	10.34	-87.88	-4505	-3752	-90	0.55	0.55	-24360	10192	1570	40441	4612	1403	6014	No	67.01	Si
SLU 49	11.14	-218.03	-4125	-3435	241	0.55	0.55	-22306	9919	1528	40441	4612	1403	6014	No	24.95	Si
SLU 50	10.34	-82.05	-4391	-3657	-76	0.55	0.55	-23745	10110	1557	40441	4612	1403	6014	No	78.75	Si
SLU 50	11.14	-216.37	-4031	-3356	244	0.55	0.55	-21794	9850	1517	40441	4612	1403	6014	No	24.65	Si
SLU 51	10.34	-82.37	-4399	-3663	-76	0.55	0.55	-23784	10116	1558	40441	4612	1403	6014	No	78.88	Si
SLU 51	11.14	-216.71	-4035	-3360	243	0.55	0.55	-21819	9854	1518	40441	4612	1403	6014	No	24.77	Si
SLU 71	10.34	-99.7	-4928	-4104	-100	0.55	0.55	-26647	10497	1617	40441	4612	1403	6014	No	59.88	Si
SLU 71	11.14	-236.92	-4515	-3760	243	0.55	0.55	-24413	10199	1571	40441	4612	1403	6014	No	24.79	Si
SLU 69	10.34	-105.21	-5035	-4193	-114	0.55	0.55	-27224	10574	1628	40441	4612	1403	6014	No	52.78	Si
SLU 69	11.14	-238.25	-4605	-3835	241	0.55	0.55	-24900	10264	1581	40441	4612	1403	6014	No	24.98	Si
SLU 70	10.34	-105.53	-5042	-4199	-114	0.55	0.55	-27263	10579	1629	40441	4612	1403	6014	No	52.84	Si
SLU 70	11.14	-238.58	-4610	-3839	240	0.55	0.55	-24925	10268	1581	40441	4612	1403	6014	No	25.1	Si
SLU 72	10.34	-100.02	-4935	-4110	-100	0.55	0.55	-26686	10503	1617	40441	4612	1403	6014	No	59.96	Si
SLU 72	11.14	-237.25	-4520	-3764	241	0.55	0.55	-24438	10203	1571	40441	4612	1403	6014	No	24.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	10.34	328.76	-533	-444	1218	0.44	0	0	0	0	40441	5534	1122	6656		5.47	Si
SLV 6	11.14	-431.71	-1623	-1351	762	0.44	0.0268	0	0	0	40441	5534	1122	6656		8.74	Si
SLV 13	10.34	-613.99	-5854	-4875	-2353	0.55	0.5104	-31653	16250	2322	40441	6917	1403	8320		3.54	Si
SLV 13	11.14	477.88	-4239	-3530	-11	0.55	0.4868	-22921	15001	2045	40441	6917	1403	8320		730.05	Si
SLV 15	10.34	-738.64	-7075	-5892	-2671	0.55	0.5118	-38256	16250	2329	40441	6917	1403	8320		3.12	Si
SLV 15	11.14	513.2	-4928	-4104	-294	0.55	0.5126	-26646	15746	2260	40441	6917	1403	8320		28.3	Si
SLV 3	10.34	425.19	-1467	-1222	2024	0.44	0	0	0	0	40441	5534	1122	6656		3.29	Si
SLV 3	11.14	-763.5	-2341	-1949	314	0.44	0	0	0	0	40441	5534	1122	6656		21.22	Si
SLV 16	10.34	-688.92	-6769	-5637	-2490	0.55	0.5197	-36603	16250	2365	40441	6917	1403	8320		3.34	Si
SLV 16	11.14	466.28	-4768	-3970	-235	0.55	0.5316	-25780	15573	2318	40441	6917	1403	8320		35.4	Si
SLV 1	10.34	549.84	-246	-205	2342	0.44	0	0	0	0	40441	5534	1122	6656		2.84	Si
SLV 1	11.14	-798.82	-1652	-1376	596	0.44	0	0	0	0	40441	5534	1122	6656		11.16	Si
SLV 2	10.34	599.56	60	50	2522	0.44	0	0	0	0	40441	5534	1122	6656		2.64	Si
SLV 2	11.14	-845.74	-1492	-1242	655	0.44	0	0	0	0	40441	5534	1122	6656		10.16	Si
SLV 14	10.34	-564.27	-5548	-4620	-2172	0.55	0.5199	-30000	16250	2366	40441	6917	1403	8320		3.83	Si
SLV 14	11.14	430.96	-4079	-3397	48	0.55	0.5081	-22056	14828	2109	40441	6917	1403	8320		174.81	Si
SLV 4	10.34	474.91	-1161	-967	2204	0.44	0	0	0	0	40441	5534	1122	6656		3.02	Si
SLV 4	11.14	-810.42	-2181	-1816	373	0.44	0	0	0	0	40441	5534	1122	6656		17.86	Si
SLV 5	10.34	296.8	-729	-607	1102	0.44	0	0	0	0	40441	5534	1122	6656		6.04	Si
SLV 5	11.14	-401.56	-1725	-1437	724	0.44	0.1268	0	0	0	40441	5534	1122	6656		9.19	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	4555	-701	66.79	95.28	1.43	Si
SLV 5	179667	0.46	5357	-825	66.79	111.46	1.67	Si
SLV 2	179667	0.46	6273	-966	66.79	129.7	1.94	Si
SLV 1	179667	0.46	7522	-1158	66.79	154.19	2.31	Si
SLV 10	179667	0.46	9951	-1532	66.79	200.57	3	Si
SLV 9	179667	0.46	10753	-1656	66.79	215.53	3.23	Si
SLV 4	179667	0.46	13333	-2053	66.79	262.37	3.93	Si
SLV 3	179667	0.46	14582	-2246	66.79	284.37	4.26	Si
SLV 14	179667	0.46	24260	-3736	66.79	439.97	6.59	Si
SLV 13	179667	0.46	25508	-3928	66.79	458.12	6.86	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-2826	-4403	-41	0.965	364.7	0.941	14.91149	14.55598	Si
SLV 12	-2741	-4349	-41	0.99	356.1	0.94	15.30927	14.55598	Si
SLV 7	-2275	-4304	-42	1.15	308.9	0.932	17.92133	14.55598	Si
SLV 8	-2190	-4249	-42	1.185	300.3	0.931	18.50402	14.55598	Si
SLV 15	-2940	-3442	-13	0.943	376.2	0.942	14.54028	7.56668	Si
SLV 9	-1245	-1283	33	1.815	205.6	0.908	29.03862	14.55598	Si
SLV 16	-2807	-3357	-13	0.979	362.7	0.941	15.13098	7.56668	Si
SLV 10	-1160	-1228	34	1.906	197.1	0.906	30.59219	14.55598	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-2465	-2506	9	1.089	328.1	0.935	16.92567	7.56668	Si
SLV 14	-2333	-2421	9	1.139	314.7	0.933	17.73403	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.4	SLU 65	Si
V_SLU	24.65	SLU 50	Si
PF_SLV	0	SLV 2	No
V_SLV	2.639	SLV 2	Si
PFFP_SLV	1.427	SLV 6	Si
R_SLV	1.024	SLV 11	Si

Maschio 156

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.314	-5.463	-3.314	L6	L7	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 71	10.34	1213.43	-17166	-0.0000502	0.0003743	0.0035	2.28	14400.62	15841.35	15841.35	13.06	No	Si
SLU 71	11.14	837.69	-14589	-0.0000409	0.0003743	0.0035	2.28	12898.51	14135.46	14135.46	16.87	No	Si
SLU 67	10.34	1189.59	-16884	-0.0000493	0.0003743	0.0035	2.28	14247.49	15651.33	15651.33	13.16	No	Si
SLU 67	11.14	814.22	-14321	-0.0000401	0.0003743	0.0035	2.28	12728.4	13922.76	13922.76	17.1	No	Si
SLU 77	10.34	1281.88	-18859	-0.0000553	0.0003743	0.0035	2.28	15260.89	17000.06	17000.06	13.26	No	Si
SLU 77	11.14	1080.03	-16234	-0.0000468	0.0003743	0.0035	2.28	13884.07	15217.08	15217.08	14.09	No	Si
SLU 68	10.34	1170.23	-16569	-0.0000483	0.0003743	0.0035	2.28	14073.22	15440.26	15440.26	13.19	No	Si
SLU 68	11.14	770.88	-14013	-0.000039	0.0003743	0.0035	2.28	12530.86	13663.75	13663.75	17.72	No	Si
SLU 70	10.34	1232.97	-17531	-0.0000513	0.0003743	0.0035	2.28	14594.42	16088.37	16088.37	13.05	No	Si
SLU 70	11.14	881.27	-14940	-0.0000421	0.0003743	0.0035	2.28	13116.77	14365.33	14365.33	16.3	No	Si
SLU 66	10.34	1189.47	-16854	-0.0000492	0.0003743	0.0035	2.28	14231.16	15631.32	15631.32	13.14	No	Si
SLU 66	11.14	814.08	-14294	-0.00004	0.0003743	0.0035	2.28	12711.68	13901.33	13901.33	17.08	No	Si
SLU 72	10.34	1213.54	-17196	-0.0000503	0.0003743	0.0035	2.28	14416.63	15861.48	15861.48	13.07	No	Si
SLU 72	11.14	837.83	-14616	-0.000041	0.0003743	0.0035	2.28	12914.96	14154.34	14154.34	16.89	No	Si
SLU 79	10.34	1262.45	-18524	-0.0000542	0.0003743	0.0035	2.28	15098.71	16769.01	16769.01	13.28	No	Si
SLU 79	11.14	1036.6	-15909	-0.0000457	0.0003743	0.0035	2.28	13696.98	15002.03	15002.03	14.47	No	Si
SLU 78	10.34	1282	-18889	-0.0000554	0.0003743	0.0035	2.28	15275.13	17020.69	17020.69	13.28	No	Si
SLU 78	11.14	1080.17	-16260	-0.0000469	0.0003743	0.0035	2.28	13899	15234.49	15234.49	14.1	No	Si
SLU 69	10.34	1232.86	-17501	-0.0000513	0.0003743	0.0035	2.28	14578.75	16068.13	16068.13	13.03	No	Si
SLU 69	11.14	881.12	-14914	-0.000042	0.0003743	0.0035	2.28	13100.63	14348.26	14348.26	16.28	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	10.34	1375.83	-6585	-0.0000239	0.0005615	0.0035	2.28		7399.87	7399.87	5.38		Si
SLV 5	11.14	-1270.46	-4727	-0.0000188	0.0005615	0.0035	2.28		6504.4	6504.4	5.12		Si
SLD 15	10.34	300.92	-12649	-0.0000319	0.0005615	0.0035	2.28		13036.01	13036.01	43.32		Si
SLD 15	11.14	2125.79	-11244	-0.0000399	0.0005615	0.0035	2.28		11857.99	11857.99	5.58		Si
SLV 6	10.34	1410.62	-6504	-0.0000239	0.0005615	0.0035	2.28		7317.41	7317.41	5.19		Si
SLV 6	11.14	-1508.75	-4570	-0.0000198	0.0005615	0.0035	2.28		6341.85	6341.85	4.2		Si
SLV 15	10.34	-434	-13202	-0.0000341	0.0005615	0.0035	2.28		14828.67	14828.67	34.17		Si
SLV 15	11.14	4208.92	-12498	-0.0000564	0.0005615	0.0035	2.28		12908.58	12908.58	3.07		Si
SLV 14	10.34	-272.33	-9539	-0.0000241	0.0005615	0.0035	2.28		11370.72	11370.72	41.75		Si
SLV 14	11.14	3235.63	-8965	-0.0000413	0.0005615	0.0035	2.28		9789.01	9789.01	3.03		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	10.34	2031.1	-14723	-0.000048	0.0005615	0.0035	2.28		14801.25	14801.25	7.29		Si
SLV 4	11.14	-2481.3	-11325	-0.0000424	0.0005615	0.0035	2.28		13088.65	13088.65	5.27		Si
SLV 16	10.34	-379.88	-13076	-0.0000334	0.0005615	0.0035	2.28		14711.11	14711.11	38.73		Si
SLV 16	11.14	3838.16	-12253	-0.0000534	0.0005615	0.0035	2.28		12702.32	12702.32	3.31		Si
SLV 1	10.34	2084.53	-11311	-0.0000398	0.0005615	0.0035	2.28		11913.96	11913.96	5.72		Si
SLV 1	11.14	-2713.08	-8282	-0.0000363	0.0005615	0.0035	2.28		10135.85	10135.85	3.74		Si
SLV 13	10.34	-326.45	-9665	-0.0000248	0.0005615	0.0035	2.28		11491.33	11491.33	35.2		Si
SLV 13	11.14	3606.39	-9210	-0.0000443	0.0005615	0.0035	2.28		10030.51	10030.51	2.78		Si
SLV 2	10.34	2138.65	-11185	-0.0000399	0.0005615	0.0035	2.28		11809.06	11809.06	5.52		Si
SLV 2	11.14	-3083.84	-8037	-0.000038	0.0005615	0.0035	2.28		9888.55	9888.55	3.21		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 65	10.34	1126.84	-15922	-13258	2293	2.28	2.28	-20768	9714	6201	40441	19116	5814	24930	No	10.87	Si
SLU 65	11.14	703.83	-13394	-11153	1565	2.28	2.28	-17471	9274	5920	40441	19116	5814	24930	No	15.93	Si
SLU 68	10.34	1170.23	-16569	-13797	2304	2.28	2.28	-21612	9826	6273	40441	19116	5814	24930	No	10.82	Si
SLU 68	11.14	770.88	-14013	-11669	1565	2.28	2.28	-18279	9382	5989	40441	19116	5814	24930	No	15.93	Si
SLU 72	10.34	1213.54	-17196	-14319	2311	2.28	2.28	-22430	9935	6343	40441	19116	5814	24930	No	10.79	Si
SLU 72	11.14	837.83	-14616	-12171	1564	2.28	2.28	-19064	9486	6056	40441	19116	5814	24930	No	15.94	Si
SLU 70	10.34	1232.97	-17531	-14598	2295	2.28	2.28	-22867	9993	6380	40441	19116	5814	24930	No	10.86	Si
SLU 70	11.14	881.27	-14940	-12441	1548	2.28	2.28	-19488	9543	6092	40441	19116	5814	24930	No	16.1	Si
SLU 69	10.34	1232.86	-17501	-14573	2290	2.28	2.28	-22828	9988	6376	40441	19116	5814	24930	No	10.89	Si
SLU 69	11.14	881.12	-14914	-12419	1546	2.28	2.28	-19454	9538	6089	40441	19116	5814	24930	No	16.12	Si
SLU 64	10.34	1126.65	-15872	-13217	2284	2.28	2.28	-20704	9705	6196	40441	19116	5814	24930	No	10.91	Si
SLU 64	11.14	703.59	-13350	-11117	1562	2.28	2.28	-17414	9266	5916	40441	19116	5814	24930	No	15.96	Si
SLU 67	10.34	1189.59	-16884	-14059	2285	2.28	2.28	-22023	9881	6308	40441	19116	5814	24930	No	10.91	Si
SLU 67	11.14	814.22	-14321	-11925	1548	2.28	2.28	-18680	9435	6023	40441	19116	5814	24930	No	16.1	Si
SLU 51	10.34	1084.64	-15358	-12789	2204	2.28	2.28	-20033	9615	6138	40441	19116	5814	24930	No	11.31	Si
SLU 51	11.14	676.24	-12891	-10734	1501	2.28	2.28	-16815	9186	5865	40441	19116	5814	24930	No	16.61	Si
SLU 66	10.34	1189.47	-16854	-14035	2279	2.28	2.28	-21984	9876	6305	40441	19116	5814	24930	No	10.94	Si
SLU 66	11.14	814.08	-14294	-11903	1546	2.28	2.28	-18646	9431	6020	40441	19116	5814	24930	No	16.12	Si
SLU 71	10.34	1213.43	-17166	-14294	2305	2.28	2.28	-22391	9930	6339	40441	19116	5814	24930	No	10.81	Si
SLU 71	11.14	837.69	-14589	-12149	1562	2.28	2.28	-19030	9482	6053	40441	19116	5814	24930	No	15.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	10.34	-326.45	-9665	-8048	-5866	2.28	2.28	-12606	12938	8259	40441	28675	5814	34489		5.88	Si
SLV 13	11.14	3606.39	-9210	-7669	-4732	2.28	2.2453	-12013	12819	8059	40441	28675	5814	34489		7.29	Si
SLV 15	10.34	-434	-13202	-10994	-6501	2.28	2.28	-17221	13861	8849	40441	28675	5814	34489		5.31	Si
SLV 15	11.14	4208.92	-12498	-10407	-5460	2.28	2.28	-16302	13677	8731	40441	28675	5814	34489		6.32	Si
SLV 4	10.34	2031.1	-14723	-12260	9257	2.28	2.28	-19204	14257	9102	40441	28675	5814	34489		3.73	Si
SLV 4	11.14	-2481.3	-11325	-9430	7038	2.28	2.28	-14772	13371	8536	40441	28675	5814	34489		4.9	Si
SLD 2	10.34	1403.74	-11738	-9775	5204	2.28	2.28	-15311	13479	8605	40441	28675	5814	34489		6.63	Si
SLD 2	11.14	-1000.7	-9291	-7737	3986	2.28	2.28	-12119	12840	8197	40441	28675	5814	34489		8.65	Si
SLV 6	10.34	1410.62	-6504	-5416	5239	2.28	2.28	-8483	12113	7733	40441	28675	5814	34489		6.58	Si
SLV 6	11.14	-1508.75	-4570	-3805	4342	2.28	2.28	-5961	11609	7411	40441	28675	5814	34489		7.94	Si
SLV 3	10.34	1976.98	-14849	-12365	8540	2.28	2.28	-19368	14290	9123	40441	28675	5814	34489		4.04	Si
SLV 3	11.14	-2110.54	-11570	-9634	6446	2.28	2.28	-15091	13435	8577	40441	28675	5814	34489		5.35	Si
SLV 14	10.34	-272.33	-9539	-7943	-5149	2.28	2.28	-12442	12905	8239	40441	28675	5814	34489		6.7	Si
SLV 14	11.14	3235.63	-8965	-7465	-4140	2.28	2.28	-11694	12755	8143	40441	28675	5814	34489		8.33	Si
SLV 2	10.34	2138.65	-11185	-9314	9891	2.28	2.28	-14589	13335	8513	40441	28675	5814	34489		3.49	Si
SLV 2	11.14	-3083.84	-8037	-6692	7765	2.28	2.2688	-10483	12513	7949	40441	28675	5814	34489		4.44	Si
SLV 16	10.34	-379.88	-13076	-10889	-5784	2.28	2.28	-17057	13828	8828	40441	28675	5814	34489		5.96	Si
SLV 16	11.14	3838.16	-12253	-10203	-4867	2.28	2.28	-15982	13613	8691	40441	28675	5814	34489		7.09	Si
SLV 1	10.34	2084.53	-11311	-9419	9174	2.28	2.28	-14754	13367	8534	40441	28675	5814	34489		3.76	Si
SLV 1	11.14	-2713.08	-8282	-6897	7173	2.28	2.28	-10803	12577	8029	40441	28675	5814	34489		4.81	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	7818	-4991	276.86	663	2.39	Si
SLV 5	179667	0.46	8082	-5159	276.86	684.07	2.47	Si
SLV 10	179667	0.46	8783	-5607	276.86	739.87	2.67	Si
SLV 9	179667	0.46	9047	-5775	276.86	760.65	2.75	Si
SLV 2	179667	0.46	12999	-8298	276.86	1062.89	3.84	Si
SLV 1	179667	0.46	13408	-8560	276.86	1093.16	3.95	Si
SLV 14	179667	0.46	16216	-10352	276.86	1295.39	4.68	Si
SLV 13	179667	0.46	16625	-10613	276.86	1324.12	4.78	Si
SLV 4	179667	0.46	18467	-11789	276.86	1450.91	5.24	Si
SLV 3	179667	0.46	18876	-12051	276.86	1478.56	5.34	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-11756	-16212	672	0.926	1515.8	0.941	14.30566	14.55598	No
SLV 11	-11792	-17478	551	0.933	1519.4	0.941	14.40261	14.55598	No
SLV 8	-11656	-16094	672	0.933	1505.6	0.941	14.41126	14.55598	No
SLV 12	-11692	-17360	551	0.939	1509.3	0.941	14.50868	14.55598	No
SLV 9	-4110	-6254	-672	2.032	748.6	0.9	32.79027	14.55598	Si
SLV 5	-4074	-4988	-552	2.063	745	0.9	33.30709	14.55598	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-4010	-6136	-672	2.065	738.7	0.9	33.35273	14.55598	Si
SLV 6	-3974	-4871	-552	2.097	735.2	0.899	33.88182	14.55598	Si
SLV 3	-9054	-10840	384	1.169	1242.5	0.931	18.25197	7.56668	Si
SLV 4	-8897	-10657	384	1.185	1226.7	0.93	18.5183	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.033	SLU 69	Si
V_SLU	10.788	SLU 72	Si
PF_SLV	2.781	SLV 13	Si
V_SLV	3.487	SLV 2	Si
PFFP_SLV	2.395	SLV 6	Si
R_SLV	0.983	SLV 7	No

Maschio 157

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.283	-3.314	L6	L7	2.15	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 32	9.24	535.6	-11480	-0.0000332	0.0003743	0.0035	2.15	10029.68	10674.69	10674.69	19.93	No	Si
SLU 32	11.04	850.79	-10186	-0.000032	0.0003743	0.0035	2.15	9130.55	9589.13	9589.13	11.27	No	Si
SLU 35	9.24	551.77	-11903	-0.0000344	0.0003743	0.0035	2.15	10310.75	11035.49	11035.49	20	No	Si
SLU 35	11.04	900.31	-10632	-0.0000335	0.0003743	0.0035	2.15	9447.05	9960.04	9960.04	11.06	No	Si
SLU 37	9.24	548.09	-11708	-0.0000339	0.0003743	0.0035	2.15	10182.11	10868.87	10868.87	19.83	No	Si
SLU 37	11.04	857.73	-10416	-0.0000326	0.0003743	0.0035	2.15	9294.12	9779.24	9779.24	11.4	No	Si
SLU 39	9.24	469.23	-11233	-0.000032	0.0003743	0.0035	2.15	9862.52	10465.3	10465.3	22.3	No	Si
SLU 39	11.04	860.3	-10007	-0.0000316	0.0003743	0.0035	2.15	9000.86	9440.54	9440.54	10.97	No	Si
SLU 41	9.24	485.4	-11656	-0.0000333	0.0003743	0.0035	2.15	10147.25	10824.19	10824.19	22.3	No	Si
SLU 41	11.04	909.82	-10452	-0.0000331	0.0003743	0.0035	2.15	9320.17	9809.85	9809.85	10.78	No	Si
SLU 33	9.24	536.72	-11526	-0.0000333	0.0003743	0.0035	2.15	10060.73	10713.99	10713.99	19.96	No	Si
SLU 33	11.04	842.91	-10218	-0.000032	0.0003743	0.0035	2.15	9152.99	9615.03	9615.03	11.41	No	Si
SLU 36	9.24	552.9	-11949	-0.0000346	0.0003743	0.0035	2.15	10341.11	11075.29	11075.29	20.03	No	Si
SLU 36	11.04	892.43	-10664	-0.0000336	0.0003743	0.0035	2.15	9469	9986.2	9986.2	11.19	No	Si
SLU 42	9.24	486.53	-11702	-0.0000334	0.0003743	0.0035	2.15	10178.02	10863.61	10863.61	22.33	No	Si
SLU 42	11.04	901.94	-10484	-0.0000331	0.0003743	0.0035	2.15	9342.31	9835.93	9835.93	10.91	No	Si
SLU 40	9.24	470.35	-11279	-0.0000321	0.0003743	0.0035	2.15	9893.97	10504.42	10504.42	22.33	No	Si
SLU 40	11.04	852.42	-10038	-0.0000316	0.0003743	0.0035	2.15	9023.49	9466.34	9466.34	11.11	No	Si
SLU 38	9.24	549.21	-11754	-0.000034	0.0003743	0.0035	2.15	10212.79	10908.33	10908.33	19.86	No	Si
SLU 38	11.04	849.85	-10447	-0.0000327	0.0003743	0.0035	2.15	9316.3	9805.3	9805.3	11.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	9.24	593.76	1026	0.0691083	0.0005615	0.0035	1.72		0	0	0		No
SLV 10	11.04	1681.74	-211	-0.008723	0.0005615	0.0035	2.15		483.84	483.84	0.29		No
SLV 14	9.24	-926.69	-6389	-0.0000223	0.0005615	0.0035	2.15		7762.05	7762.05	8.38		Si
SLV 14	11.04	3601.76	-7871	-0.0000459	0.0005615	0.0035	2.15		8151.44	8151.44	2.26		Si
SLV 5	9.24	1490.57	857	0.0407618	0.0005615	0.0035	1.72		0	0	0		No
SLV 5	11.04	-46.48	951	0.0678658	0.0005615	0.0035	1.72		0	0	0		No
SLV 13	9.24	-1215.87	-7084	-0.000026	0.0005615	0.0035	2.15		8417.82	8417.82	6.92		Si
SLV 13	11.04	3865.01	-8949	-0.0000503	0.0005615	0.0035	2.15		9152.87	9152.87	2.37		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	9.24	407.9	580	0.0382937	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	11.04	1850.93	-903	-0.0047196	0.0005615	0.0035	2.15		1214.94	1214.94	0.66		No
SLV 2	9.24	2682.22	-5463	-0.0000334	0.0005615	0.0035	2.15		5843.92	5843.92	2.18		Si
SLV 2	11.04	-2722.93	-1690	-0.00039	0.0005615	0.0035	1.72		3083.61	3083.61	1.13		Si
SLV 1	9.24	2393.03	-6158	-0.000032	0.0005615	0.0035	2.15		6518.85	6518.85	2.72		Si
SLV 1	11.04	-2459.68	-2768	-0.000052	0.0005615	0.0035	1.72		4186.33	4186.33	1.7		Si
SLV 6	9.24	1676.43	1304	0.0756587	0.0005615	0.0035	1.72		0	0	0		No
SLV 6	11.04	-215.67	1644	0.1179274	0.0005615	0.0035	1.72		0	0	0		No
SLV 4	9.24	2417.37	-11647	-0.0000465	0.0005615	0.0035	2.15		11335.01	11335.01	4.69		Si
SLV 4	11.04	-2934.29	-6567	-0.0000374	0.0005615	0.0035	2.15		7933.46	7933.46	2.7		Si
SLV 3	9.24	2128.18	-12342	-0.0000462	0.0005615	0.0035	2.15		11893.44	11893.44	5.59		Si
SLV 3	11.04	-2671.05	-7645	-0.0000377	0.0005615	0.0035	2.15		8944.26	8944.26	3.35		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	9.24	470.35	-11279	-9392	-608	2.15	2.15	-15602	9025	5433	40441	18027	5483	23509	No	38.67	Si
SLU 40	11.04	852.42	-10038	-8359	-609	2.15	2.15	-13885	8796	5295	40441	18027	5483	23509	No	38.63	Si
SLU 83	9.24	679.42	-13863	-11544	-570	2.15	2.15	-19176	9501	5720	40441	18027	5483	23509	No	41.26	Si
SLU 83	11.04	954.72	-12106	-10081	-571	2.15	2.15	-16746	9177	5525	40441	18027	5483	23509	No	41.2	Si
SLU 35	9.24	551.77	-11903	-9912	-572	2.15	2.15	-16464	9140	5502	40441	18027	5483	23509	No	41.11	Si
SLU 35	11.04	900.31	-10632	-8854	-573	2.15	2.15	-14707	8905	5361	40441	18027	5483	23509	No	41.04	Si
SLU 32	9.24	535.6	-11480	-9560	-540	2.15	2.15	-15880	9062	5455	40441	18027	5483	23509	No	43.57	Si
SLU 32	11.04	850.79	-10186	-8482	-540	2.15	2.15	-14090	8823	5312	40441	18027	5483	23509	No	43.51	Si
SLU 39	9.24	469.23	-11233	-9354	-622	2.15	2.15	-15538	9016	5428	40441	18027	5483	23509	No	37.8	Si
SLU 39	11.04	860.3	-10007	-8333	-622	2.15	2.15	-13841	8790	5292	40441	18027	5483	23509	No	37.77	Si
SLU 42	9.24	486.53	-11702	-9744	-640	2.15	2.15	-16187	9103	5480	40441	18027	5483	23509	No	36.72	Si
SLU 42	11.04	901.94	-10484	-8730	-641	2.15	2.15	-14501	8878	5345	40441	18027	5483	23509	No	36.68	Si
SLU 41	9.24	485.4	-11656	-9706	-654	2.15	2.15	-16123	9094	5475	40441	18027	5483	23509	No	35.94	Si
SLU 41	11.04	909.82	-10452	-8704	-655	2.15	2.15	-14458	8872	5341	40441	18027	5483	23509	No	35.9	Si
SLU 84	9.24	680.55	-13909	-11583	-556	2.15	2.15	-19240	9510	5725	40441	18027	5483	23509	No	42.29	Si
SLU 84	11.04	946.84	-12138	-10107	-557	2.15	2.15	-16789	9183	5528	40441	18027	5483	23509	No	42.23	Si
SLU 36	9.24	552.9	-11949	-9950	-558	2.15	2.15	-16528	9148	5507	40441	18027	5483	23509	No	42.14	Si
SLU 36	11.04	892.43	-10664	-8880	-559	2.15	2.15	-14750	8911	5365	40441	18027	5483	23509	No	42.07	Si
SLU 81	9.24	663.25	-13440	-11192	-538	2.15	2.15	-18591	9423	5673	40441	18027	5483	23509	No	43.73	Si
SLU 81	11.04	905.2	-11660	-9710	-538	2.15	2.15	-16129	9095	5475	40441	18027	5483	23509	No	43.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	9.24	-1215.87	-7084	-5899	-5532	2.15	2.15	-9798	12376	7451	40441	27040	5483	32523		5.88	Si
SLV 13	11.04	3865.01	-8949	-7452	-4540	2.15	1.9294	-12379	12892	6965	40441	27040	5483	32523		7.16	Si
SLV 1	9.24	2393.03	-6158	-5127	3975	2.15	2.0591	-8517	12120	6988	40441	27040	5483	32523		8.18	Si
SLV 1	11.04	-2459.68	-2768	-2305	3236	1.72	0.5587	0	0	0	40441	21632	4386	26018		8.04	Si
SLV 2	9.24	2682.22	-5463	-4549	4511	2.15	1.752	-7556	11928	5851	40441	27040	5483	32523		7.21	Si
SLV 2	11.04	-2722.93	-1690	-1407	3772	1.72	0	0	0	0	40441	21632	4386	26018		6.9	Si
SLV 9	9.24	407.9	580	483	-3094	1.72	1.1139	0	0	0	40441	21632	4386	26018		8.41	Si
SLV 9	11.04	1850.93	-903	-752	-2411	2.15	0	0	16250	0	40441	27040	5483	32523		13.49	Si
SLV 4	9.24	2417.37	-11647	-9699	5355	2.15	2.15	-16110	13639	8211	40441	27040	5483	32523		6.07	Si
SLV 4	11.04	-2934.29	-6567	-5468	4362	2.15	1.8845	-10413	12499	6595	40441	27040	5483	32523		7.46	Si
SLV 3	9.24	2128.18	-12342	-10277	4819	2.15	2.15	-17072	13831	8326	40441	27040	5483	32523		6.75	Si
SLV 3	11.04	-2671.05	-7645	-6366	3826	2.15	2.15	-10574	12531	7544	40441	27040	5483	32523		8.5	Si
SLV 15	9.24	-1480.72	-13268	-11048	-4688	2.15	2.15	-18352	14087	8481	40441	27040	5483	32523		6.94	Si
SLV 15	11.04	3653.65	-13826	-11513	-3950	2.15	2.15	-19125	14242	8574	40441	27040	5483	32523		8.23	Si
SLV 14	9.24	-926.69	-6389	-5320	-4997	2.15	2.15	-8837	12184	7335	40441	27040	5483	32523		6.51	Si
SLV 14	11.04	3601.76	-7871	-6555	-4005	2.15	1.8523	-10888	12594	6532	40441	27040	5483	32523		8.12	Si
SLV 16	9.24	-1191.54	-12573	-10470	-4153	2.15	2.15	-17391	13895	8365	40441	27040	5483	32523		7.83	Si
SLV 16	11.04	3390.4	-12748	-10616	-3415	2.15	2.15	-17634	13943	8394	40441	27040	5483	32523		9.52	Si
SLV 10	9.24	593.76	1026	855	-2750	1.72	1.4892	0	0	0	40441	21632	4386	26018		9.46	Si
SLV 10	11.04	1681.74	-211	-175	-2067	2.15	0	0	0	0	40441	27040	5483	32523		15.73	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.46	0	9	261.07	0	0	No, Trazione
SLV 9	179667	0.46	0	-583	261.07	0	0	No, e>t/2
SLV 6	179667	0.46	0	1322	261.07	0	0	No, Trazione
SLV 5	179667	0.46	0	730	261.07	0	0	No, Trazione
SLV 2	179667	0.46	5487	-3303	261.07	445.84	1.71	Si
SLV 1	179667	0.46	7016	-4224	261.07	564.18	2.16	Si
SLV 14	179667	0.46	12757	-7680	261.07	985.33	3.77	Si
SLV 13	179667	0.46	14286	-8600	261.07	1091.4	4.18	Si
SLV 4	179667	0.46	14487	-8721	261.07	1105.16	4.23	Si
SLV 3	179667	0.46	16016	-9642	261.07	1208.31	4.63	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-13804	-20616	542	0.779	1705	0.949	11.92193	14.55598	No
SLV 12	-13232	-20040	542	0.807	1647	0.948	12.36919	14.55598	No
SLV 7	-12917	-18623	414	0.832	1615	0.947	12.76422	14.55598	No
SLV 8	-12345	-18047	414	0.863	1557	0.945	13.27546	14.55598	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-10354	-15971	355	1.002	1355.3	0.938	15.51714	7.56668	Si
SLV 16	-9464	-15075	356	1.077	1265.3	0.935	16.747	7.56668	Si
SLV 3	-7397	-9329	-71	1.338	1056.7	0.925	21.03518	7.56668	Si
SLV 4	-6507	-8433	-71	1.476	967.3	0.919	23.32736	7.56668	Si
SLV 13	-6374	-9860	68	1.499	954	0.919	23.71776	7.56668	Si
SLV 14	-5484	-8964	68	1.675	865	0.913	26.66926	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.782	SLU 41	Si
V_SLU	35.898	SLU 41	Si
PF_SLV	0	SLV 5	No
V_SLV	5.879	SLV 13	Si
PFFP_SLV	0	SLV 10	No
R_SLV	0.819	SLV 11	No

Maschio 158

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-5.093	5.826	L6	L7	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 64	9.24	1312.95	-16278	-0.0000529	0.0003743	0.0035	2.13	12688.2	13964.19	13964.19	10.64	No	Si
SLU 64	11.04	-1569.02	-13807	-0.0000478	0.0003743	0.0035	2.13	11360.97	13571.5	13571.5	8.65	No	Si
SLU 52	9.24	1398.18	-15787	-0.0000521	0.0003743	0.0035	2.13	12441.63	13651.37	13651.37	9.76	No	Si
SLU 52	11.04	-1550.27	-13349	-0.0000463	0.0003743	0.0035	2.13	11090.92	13248.39	13248.39	8.55	No	Si
SLU 47	9.24	1179.35	-15162	-0.0000486	0.0003743	0.0035	2.13	12115.43	13255.56	13255.56	11.24	No	Si
SLU 47	11.04	-1480.47	-12724	-0.000044	0.0003743	0.0035	2.13	10711.29	12770.83	12770.83	8.63	No	Si
SLU 61	9.24	1478.31	-16365	-0.0000544	0.0003743	0.0035	2.13	12731.17	14020.13	14020.13	9.48	No	Si
SLU 61	11.04	-1590.45	-13927	-0.0000483	0.0003743	0.0035	2.13	11429.89	13655.9	13655.9	8.59	No	Si
SLU 44	9.24	1200.76	-14512	-0.000047	0.0003743	0.0035	2.13	11761.36	12848.33	12848.33	10.7	No	Si
SLU 44	11.04	-1477.48	-12074	-0.0000422	0.0003743	0.0035	2.13	10301.6	12277.89	12277.89	8.31	No	Si
SLU 43	9.24	1189.58	-14591	-0.0000471	0.0003743	0.0035	2.13	11804.95	12897.3	12897.3	10.84	No	Si
SLU 43	11.04	-1499.94	-12152	-0.0000426	0.0003743	0.0035	2.13	10351.92	12337.03	12337.03	8.23	No	Si
SLU 46	9.24	1188.64	-15520	-0.0000497	0.0003743	0.0035	2.13	12303.87	13481.67	13481.67	11.34	No	Si
SLU 46	11.04	-1520.15	-13082	-0.0000454	0.0003743	0.0035	2.13	10930.31	13045.6	13045.6	8.58	No	Si
SLU 45	9.24	1181.93	-15567	-0.0000498	0.0003743	0.0035	2.13	12328.38	13511.59	13511.59	11.43	No	Si
SLU 45	11.04	-1533.62	-13129	-0.0000456	0.0003743	0.0035	2.13	10958.86	13082.02	13082.02	8.53	No	Si
SLU 60	9.24	1471.6	-16412	-0.0000545	0.0003743	0.0035	2.13	12754.29	14050.4	14050.4	9.55	No	Si
SLU 60	11.04	-1603.93	-13974	-0.0000485	0.0003743	0.0035	2.13	11457.04	13689.39	13689.39	8.53	No	Si
SLU 53	9.24	1379.35	-16842	-0.000055	0.0003743	0.0035	2.13	12961.46	14327.63	14327.63	10.39	No	Si
SLU 53	11.04	-1606.41	-14404	-0.0000498	0.0003743	0.0035	2.13	11700.99	13996.73	13996.73	8.71	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	9.24	2566.29	-10775	-0.0000458	0.0005615	0.0035	2.13		10514.62	10514.62	4.1		Si
SLV 2	11.04	-3382.15	-9136	-0.0000474	0.0005615	0.0035	2.13		10232.05	10232.05	3.03		Si
SLD 2	9.24	1690.73	-11789	-0.0000422	0.0005615	0.0035	2.13		11318.98	11318.98	6.69		Si
SLD 2	11.04	-2145.99	-10006	-0.0000407	0.0005615	0.0035	2.13		11007.99	11007.99	5.13		Si
SLV 1	9.24	2913.16	-10489	-0.0000476	0.0005615	0.0035	2.13		10289.64	10289.64	3.53		Si
SLV 1	11.04	-3591.47	-8851	-0.0000484	0.0005615	0.0035	2.13		9978.47	9978.47	2.78		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	9.24	1670.1	-7791	-0.0000315	0.0005615	0.0035	2.13		7992.42	7992.42	4.79		Si
SLV 8	11.04	-400.63	-6026	-0.0000179	0.0005615	0.0035	2.13		7341.15	7341.15	18.32		Si
SLD 1	9.24	1839.65	-11667	-0.0000429	0.0005615	0.0035	2.13		11221.37	11221.37	6.1		Si
SLD 1	11.04	-2235.86	-9883	-0.000041	0.0005615	0.0035	2.13		10897.91	10897.91	4.87		Si
SLV 5	9.24	1467.03	-15406	-0.0000503	0.0005615	0.0035	2.13		14249.45	14249.45	9.71		Si
SLV 5	11.04	-3153.39	-13547	-0.0000577	0.0005615	0.0035	2.13		14064.8	14064.8	4.46		Si
SLV 6	9.24	1244.1	-15590	-0.0000491	0.0005615	0.0035	2.13		14400.71	14400.71	11.58		Si
SLV 6	11.04	-3018.86	-13731	-0.0000572	0.0005615	0.0035	2.13		14213.48	14213.48	4.71		Si
SLV 4	9.24	2694.09	-8435	-0.0000405	0.0005615	0.0035	2.13		8588	8588	3.19		Si
SLV 4	11.04	-2596.68	-6825	-0.0000356	0.0005615	0.0035	2.13		8099.1	8099.1	3.12		Si
SLV 3	9.24	3040.96	-8150	-0.0000423	0.0005615	0.0035	2.13		8325.05	8325.05	2.74		Si
SLV 3	11.04	-2806	-6540	-0.0000367	0.0005615	0.0035	2.13		7833.67	7833.67	2.79		Si
SLV 7	9.24	1893.03	-7608	-0.0000326	0.0005615	0.0035	2.13		7821.29	7821.29	4.13		Si
SLV 7	11.04	-535.16	-5843	-0.0000184	0.0005615	0.0035	2.13		7162.96	7162.96	13.38		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	9.24	1573.56	-18749	-15613	1781	2.13	2.13	-26179	10435	6223	40441	17859	5431	23290	No	13.08	Si
SLU 83	11.04	-1676	-16279	-13556	1781	2.13	2.13	-22730	9975	5949	40441	17859	5431	23290	No	13.08	Si
SLU 77	9.24	1481.3	-19179	-15971	1731	2.13	2.13	-26779	10515	6271	40441	17859	5431	23290	No	13.45	Si
SLU 77	11.04	-1678.48	-16709	-13914	1731	2.13	2.13	-23330	10055	5997	40441	17859	5431	23290	No	13.45	Si
SLU 82	9.24	1601.68	-18052	-15032	1787	2.13	2.13	-25205	10305	6146	40441	17859	5431	23290	No	13.03	Si
SLU 82	11.04	-1659.52	-15582	-12975	1787	2.13	2.13	-21756	9845	5872	40441	17859	5431	23290	No	13.03	Si
SLU 84	9.24	1580.27	-18702	-15573	1777	2.13	2.13	-26113	10426	6218	40441	17859	5431	23290	No	13.11	Si
SLU 84	11.04	-1662.52	-16232	-13517	1777	2.13	2.13	-22664	9966	5944	40441	17859	5431	23290	No	13.11	Si
SLU 73	9.24	1521.54	-17474	-14551	1721	2.13	2.13	-24398	10198	6082	40441	17859	5431	23290	No	13.54	Si
SLU 73	11.04	-1619.34	-15004	-12494	1721	2.13	2.13	-20949	9738	5807	40441	17859	5431	23290	No	13.54	Si
SLU 74	9.24	1502.71	-18529	-15429	1741	2.13	2.13	-25871	10394	6199	40441	17859	5431	23290	No	13.38	Si
SLU 74	11.04	-1675.49	-16059	-13372	1741	2.13	2.13	-22422	9934	5925	40441	17859	5431	23290	No	13.38	Si
SLU 76	9.24	1500.13	-18124	-15092	1710	2.13	2.13	-25306	10319	6154	40441	17859	5431	23290	No	13.62	Si
SLU 76	11.04	-1622.34	-15654	-13035	1710	2.13	2.13	-21857	9859	5880	40441	17859	5431	23290	No	13.62	Si
SLU 81	9.24	1594.97	-18099	-15071	1791	2.13	2.13	-25271	10314	6151	40441	17859	5431	23290	No	13	Si
SLU 81	11.04	-1673	-15629	-13014	1791	2.13	2.13	-21822	9854	5877	40441	17859	5431	23290	No	13	Si
SLU 78	9.24	1488.01	-19132	-15932	1727	2.13	2.13	-26713	10506	6266	40441	17859	5431	23290	No	13.48	Si
SLU 78	11.04	-1665	-16662	-13875	1727	2.13	2.13	-23264	10046	5992	40441	17859	5431	23290	No	13.48	Si
SLU 75	9.24	1509.42	-18482	-15390	1738	2.13	2.13	-25805	10385	6194	40441	17859	5431	23290	No	13.4	Si
SLU 75	11.04	-1662.01	-16012	-13333	1738	2.13	2.13	-22356	9925	5919	40441	17859	5431	23290	No	13.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	9.24	2694.09	-8435	-7024	3396	2.13	2.13	-11777	12772	7617	40441	26788	5431	32219		9.49	Si
SLV 4	11.04	-2596.68	-6825	-5683	2750	2.13	2.0536	-9928	12402	7131	40441	26788	5431	32219		11.72	Si
SLV 3	9.24	3040.96	-8150	-6786	3705	2.13	2.0755	-11379	12692	7376	40441	26788	5431	32219		8.7	Si
SLV 3	11.04	-2806	-6540	-5446	3059	2.13	1.9077	-10231	12463	6657	40441	26788	5431	32219		10.53	Si
SLD 4	9.24	1746.92	-10756	-8957	2156	2.13	2.13	-15019	13420	8004	40441	26788	5431	32219		14.94	Si
SLD 4	11.04	-1798.35	-8986	-7482	1879	2.13	2.13	-12546	12926	7709	40441	26788	5431	32219		17.15	Si
SLV 1	9.24	2913.16	-10489	-8734	3879	2.13	2.13	-14645	13346	7959	40441	26788	5431	32219		8.31	Si
SLV 1	11.04	-3591.47	-8851	-7370	3413	2.13	1.9776	-13388	13094	7251	40441	26788	5431	32219		9.44	Si
SLD 3	9.24	1895.84	-10634	-8855	2289	2.13	2.13	-14847	13386	7983	40441	26788	5431	32219		14.07	Si
SLD 3	11.04	-1888.22	-8863	-7380	2012	2.13	2.13	-12375	12892	7689	40441	26788	5431	32219		16.02	Si
SLD 2	9.24	1690.73	-11789	-9817	2233	2.13	2.13	-16461	13709	8176	40441	26788	5431	32219		14.43	Si
SLD 2	11.04	-2145.99	-10006	-8332	2036	2.13	2.13	-13971	13211	7879	40441	26788	5431	32219		15.83	Si
SLV 2	9.24	2566.29	-10775	-8972	3570	2.13	2.13	-15044	13425	8007	40441	26788	5431	32219		9.03	Si
SLV 2	11.04	-3382.15	-9136	-7608	3104	2.13	2.0844	-13116	13040	7611	40441	26788	5431	32219		10.38	Si
SLV 5	9.24	1467.03	-15406	-12829	2343	2.13	2.13	-21511	14719	8778	40441	26788	5431	32219		13.75	Si
SLV 5	11.04	-3153.39	-13547	-11281	2477	2.13	2.13	-18915	14200	8469	40441	26788	5431	32219		13.01	Si
SLV 6	9.24	1244.1	-15590	-12982	2144	2.13	2.13	-21768	14770	8809	40441	26788	5431	32219		15.03	Si
SLV 6	11.04	-3018.86	-13731	-11434	2278	2.13	2.13	-19171	14251	8499	40441	26788	5431	32219		14.14	Si
SLD 1	9.24	1839.65	-11667	-9715	2366	2.13	2.13	-16289	13675	8155	40441	26788	5431	32219		13.62	Si
SLD 1	11.04	-2235.86	-9883	-8230	2168	2.13	2.13	-13800	13177	7858	40441	26788	5431	32219		14.86	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.46	11391	-6793	258.64	880.13	3.4	Si
SLV 8	179667	0.46	11698	-6977	258.64	901.93	3.49	Si
SLV 3	179667	0.46	12183	-7266	258.64	936.04	3.62	Si
SLV 4	179667	0.46	12661	-7551	258.64	969.51	3.75	Si
SLV 11	179667	0.46	14522	-8661	258.64	1097.22	4.24	Si
SLV 12	179667	0.46	14830	-8844	258.64	1117.97	4.32	Si
SLV 1	179667	0.46	16066	-9582	258.64	1200.31	4.64	Si
SLV 2	179667	0.46	16545	-9867	258.64	1231.75	4.76	Si
SLV 15	179667	0.46	22620	-13491	258.64	1608.95	6.22	Si
SLV 16	179667	0.46	23099	-13776	258.64	1636.95	6.33	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-12174	-17413	-573	0.855	1536.8	0.945	13.15019	14.55598	No
SLV 9	-11873	-17452	-573	0.873	1506.3	0.944	13.43793	14.55598	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-9812	-16897	-573	1.02	1297.6	0.937	15.82219	14.55598	Si
SLV 5	-9511	-16936	-573	1.046	1267.1	0.935	16.24533	14.55598	Si
SLV 12	-6778	-9624	574	1.363	991.6	0.921	21.4902	14.55598	Si
SLV 11	-6477	-9664	574	1.41	961.4	0.92	22.28547	14.55598	Si
SLV 14	-13124	-15278	-171	0.83	1633.2	0.948	12.72999	7.56668	Si
SLV 13	-12656	-15340	-171	0.856	1585.7	0.947	13.13888	7.56668	Si
SLV 16	-11506	-12942	173	0.926	1469.1	0.943	14.26741	7.56668	Si
SLV 15	-11037	-13003	173	0.958	1421.6	0.941	14.78747	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.225	SLU 43	Si
V_SLU	13.003	SLU 81	Si
PF_SLV	2.738	SLV 3	Si
V_SLV	8.306	SLV 1	Si
PFFP_SLV	3.403	SLV 7	Si
R_SLV	0.903	SLV 10	No

Maschio 159

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L6	L7	1.93	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	9.24	1058.5	-10112	-0.0000383	0.0003743	0.0035	1.93	7964.42	8436.54	8436.54	7.97	No	Si
SLU 44	11.04	270.22	-8014	-0.0000249	0.0003743	0.0035	1.93	6606.93	6921.25	6921.25	25.61	No	Si
SLU 49	9.24	1119.64	-11177	-0.0000421	0.0003743	0.0035	1.93	8594.9	9234.81	9234.81	8.25	No	Si
SLU 49	11.04	369.41	-9114	-0.000029	0.0003743	0.0035	1.93	7338.07	7707.07	7707.07	20.86	No	Si
SLU 43	9.24	1074.48	-10209	-0.0000387	0.0003743	0.0035	1.93	8023.54	8508.44	8508.44	7.92	No	Si
SLU 43	11.04	261.12	-8072	-0.000025	0.0003743	0.0035	1.93	6646.96	6962.63	6962.63	26.66	No	Si
SLU 50	9.24	1103.25	-10989	-0.0000413	0.0003743	0.0035	1.93	8486.19	9092.23	9092.23	8.24	No	Si
SLU 50	11.04	353.82	-8907	-0.0000283	0.0003743	0.0035	1.93	7204.05	7558.07	7558.07	21.36	No	Si
SLU 51	9.24	1093.66	-10930	-0.0000411	0.0003743	0.0035	1.93	8452.36	9048.29	9048.29	8.27	No	Si
SLU 51	11.04	359.28	-8872	-0.0000282	0.0003743	0.0035	1.93	7181.07	7532.76	7532.76	20.97	No	Si
SLU 45	9.24	1114.84	-10846	-0.000041	0.0003743	0.0035	1.93	8402.95	8984.5	8984.5	8.06	No	Si
SLU 45	11.04	317.6	-8732	-0.0000275	0.0003743	0.0035	1.93	7088.79	7431.78	7431.78	23.4	No	Si
SLU 1	9.24	825.44	-8091	-0.0000301	0.0003743	0.0035	1.93	6659.87	6976.01	6976.01	8.45	No	Si
SLU 1	11.04	243.03	-6511	-0.0000203	0.0003743	0.0035	1.93	5539.86	5879.5	5879.5	24.19	No	Si
SLU 47	9.24	1072.88	-10501	-0.0000396	0.0003743	0.0035	1.93	8199.75	8726.55	8726.55	8.13	No	Si
SLU 47	11.04	316.57	-8431	-0.0000266	0.0003743	0.0035	1.93	6889.39	7217.17	7217.17	22.8	No	Si
SLU 48	9.24	1129.22	-11235	-0.0000423	0.0003743	0.0035	1.93	8628.24	9278.97	9278.97	8.22	No	Si
SLU 48	11.04	363.95	-9149	-0.0000291	0.0003743	0.0035	1.93	7360.74	7732.51	7732.51	21.25	No	Si
SLU 46	9.24	1105.25	-10787	-0.0000407	0.0003743	0.0035	1.93	8368.83	8940.68	8940.68	8.09	No	Si
SLU 46	11.04	323.06	-8696	-0.0000274	0.0003743	0.0035	1.93	7065.61	7406.57	7406.57	22.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	9.24	858.11	1468	0.109103	0.0005615	0.0035	1.544		0	0	0		No
SLV 7	11.04	346.4	868	0.0660748	0.0005615	0.0035	1.544		0	0	0		No
SLV 12	9.24	59.36	521	0	0.0005615	0.0035	1.544		0	0	0		No
SLV 12	11.04	1789.56	-1483	-0.001949	0.0005615	0.0035	1.544		1595.84	1595.84	0.89		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	9.24	-268.95	-6205	-0.0000195	0.0005615	0.0035	1.93		6655.4	6655.4	24.75		Si
SLV 15	11.04	2589.15	-7357	-0.0000431	0.0005615	0.0035	1.93		6801.11	6801.11	2.63		Si
SLV 1	9.24	2133.41	-10168	-0.0000473	0.0005615	0.0035	1.93		8985.92	8985.92	4.21		Si
SLV 1	11.04	-2171.03	-5777	-0.000035	0.0005615	0.0035	1.93		6292.73	6292.73	2.9		Si
SLV 11	9.24	202.57	945	0.0733969	0.0005615	0.0035	1.544		0	0	0		No
SLV 11	11.04	1640.7	-825	-0.0057758	0.0005615	0.0035	1.93		978.72	978.72	0.6		No
SLV 2	9.24	1910.58	-10827	-0.0000472	0.0005615	0.0035	1.93		9449.12	9449.12	4.95		Si
SLV 2	11.04	-1939.41	-6800	-0.0000357	0.0005615	0.0035	1.93		7155.27	7155.27	3.69		Si
SLV 4	9.24	1693.33	-5121	-0.0000287	0.0005615	0.0035	1.93		4885.25	4885.25	2.88		Si
SLV 4	11.04	-1493.54	-2737	-0.0000231	0.0005615	0.0035	1.544		3604.14	3604.14	2.41		Si
SLV 3	9.24	1916.16	-4461	-0.0000296	0.0005615	0.0035	1.93		4306.31	4306.31	2.25		Si
SLV 3	11.04	-1725.16	-1714	-0.0001375	0.0005615	0.0035	1.544		2667.36	2667.36	1.55		Si
SLV 16	9.24	-491.78	-6865	-0.0000233	0.0005615	0.0035	1.93		7210.42	7210.42	14.66		Si
SLV 16	11.04	2820.77	-8380	-0.0000481	0.0005615	0.0035	1.93		7650.52	7650.52	2.71		Si
SLV 8	9.24	714.9	1044	0.0763107	0.0005615	0.0035	1.544		0	0	0		No
SLV 8	11.04	495.26	210	0.0051266	0.0005615	0.0035	1.544		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	9.24	1093.66	-10930	-9102	351	1.93	1.93	-16842	9190	4966	40441	16182	4922	21104	No	60.13	Si
SLU 51	11.04	359.28	-8872	-7388	338	1.93	1.93	-13671	8767	4738	40441	16182	4922	21104	No	62.42	Si
SLU 42	9.24	808.85	-10160	-8461	-320	1.93	1.93	-15656	9032	4881	40441	16182	4922	21104	No	66.01	Si
SLU 42	11.04	635.51	-9239	-7693	-332	1.93	1.93	-14236	8843	4779	40441	16182	4922	21104	No	63.48	Si
SLU 44	9.24	1058.5	-10112	-8420	406	1.93	1.93	-15581	9022	4875	40441	16182	4922	21104	No	52.02	Si
SLU 44	11.04	270.22	-8014	-6673	386	1.93	1.93	-12348	8591	4643	40441	16182	4922	21104	No	54.64	Si
SLU 43	9.24	1074.48	-10209	-8501	431	1.93	1.93	-15731	9042	4886	40441	16182	4922	21104	No	48.99	Si
SLU 43	11.04	261.12	-8072	-6722	429	1.93	1.93	-12439	8603	4649	40441	16182	4922	21104	No	49.15	Si
SLU 48	9.24	1129.22	-11235	-9356	378	1.93	1.93	-17313	9253	5000	40441	16182	4922	21104	No	55.88	Si
SLU 48	11.04	363.95	-9149	-7618	376	1.93	1.93	-14098	8824	4769	40441	16182	4922	21104	No	56.18	Si
SLU 50	9.24	1103.25	-10989	-9150	366	1.93	1.93	-16932	9202	4973	40441	16182	4922	21104	No	57.65	Si
SLU 50	11.04	353.82	-8907	-7417	364	1.93	1.93	-13725	8774	4742	40441	16182	4922	21104	No	57.98	Si
SLU 47	9.24	1072.88	-10501	-8745	373	1.93	1.93	-16182	9102	4919	40441	16182	4922	21104	No	56.54	Si
SLU 47	11.04	316.57	-8431	-7021	354	1.93	1.93	-12992	8677	4689	40441	16182	4922	21104	No	59.69	Si
SLU 46	9.24	1105.25	-10787	-8983	395	1.93	1.93	-16622	9161	4951	40441	16182	4922	21104	No	53.44	Si
SLU 46	11.04	323.06	-8696	-7242	382	1.93	1.93	-13400	8731	4718	40441	16182	4922	21104	No	55.18	Si
SLU 49	9.24	1119.64	-11177	-9307	363	1.93	1.93	-17223	9241	4994	40441	16182	4922	21104	No	58.21	Si
SLU 49	11.04	369.41	-9114	-7589	350	1.93	1.93	-14044	8817	4765	40441	16182	4922	21104	No	60.34	Si
SLU 45	9.24	1114.84	-10846	-9031	410	1.93	1.93	-16712	9173	4957	40441	16182	4922	21104	No	51.47	Si
SLU 45	11.04	317.6	-8732	-7271	408	1.93	1.93	-13454	8738	4722	40441	16182	4922	21104	No	51.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	9.24	2133.41	-10168	-8467	4296	1.93	1.93	-15667	13550	7323	40441	24273	4922	29195		6.8	Si
SLV 1	11.04	-2171.03	-5777	-4810	3346	1.93	1.7675	-9757	12368	6121	40441	24273	4922	29195		8.73	Si
SLV 2	9.24	1910.58	-10827	-9016	3848	1.93	1.93	-16683	13753	7432	40441	24273	4922	29195		7.59	Si
SLV 2	11.04	-1939.41	-6800	-5662	2898	1.93	1.93	-10478	12512	6762	40441	24273	4922	29195		10.07	Si
SLV 14	9.24	-274.53	-12571	-10468	-2719	1.93	1.93	-19371	14291	7723	40441	24273	4922	29195		10.74	Si
SLV 14	11.04	2374.9	-12443	-10361	-2112	1.93	1.93	-19173	14251	7701	40441	24273	4922	29195		13.82	Si
SLV 5	9.24	1582.26	-17553	-14617	3428	1.93	1.93	-27048	15826	8553	40441	24273	4922	29195		8.52	Si
SLV 5	11.04	-1139.81	-12674	-10554	2625	1.93	1.93	-19529	14323	7740	40441	24273	4922	29195		11.12	Si
SLV 3	9.24	1916.16	-4461	-3715	3001	1.93	1.6065	-6874	11792	5304	40441	24273	4922	29195		9.73	Si
SLV 3	11.04	-1725.16	-1714	-1427	2392	1.544	0	0	0	0	40441	19419	3937	23356		9.77	Si
SLV 15	9.24	-268.95	-6205	-5167	-3566	1.93	1.93	-9562	12329	6663	40441	24273	4922	29195		8.19	Si
SLV 15	11.04	2589.15	-7357	-6127	-2619	1.93	1.8393	-11337	12684	6532	40441	24273	4922	29195		11.15	Si
SLV 6	9.24	1439.06	-17977	-14970	3141	1.93	1.93	-27701	15957	8623	40441	24273	4922	29195		9.3	Si
SLV 6	11.04	-990.96	-13331	-11101	2337	1.93	1.93	-20543	14525	7849	40441	24273	4922	29195		12.49	Si
SLV 16	9.24	-491.78	-6865	-5716	-4014	1.93	1.93	-10578	12532	6773	40441	24273	4922	29195		7.27	Si
SLV 16	11.04	2820.77	-8380	-6978	-3066	1.93	1.8852	-12913	12999	6862	40441	24273	4922	29195		9.52	Si
SLV 11	9.24	202.57	945	787	-2859	1.544	1.93	0	0	0	40441	19419	3937	23356		8.17	Si
SLV 11	11.04	1640.7	-825	-687	-2058	1.93	0	0	16250	0	40441	24273	4922	29195		14.19	Si
SLV 12	9.24	59.36	521	434	-3146	1.544	1.93	0	0	0	40441	19419	3937	23356		7.42	Si
SLV 12	11.04	1789.56	-1483	-1235	-2345	1.544	0	0	0	0	40441	19419	3937	23356		9.96	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	0	-991	234.36	0	0	No, e>t/2
SLV 7	179667	0.46	0	879	234.36	0	0	No, Trazione
SLV 8	179667	0.46	0	318	234.36	0	0	No, Trazione
SLV 11	179667	0.46	0	-430	234.36	0	0	No, e>t/2
SLV 3	179667	0.46	5466	-2954	234.36	398.76	1.7	Si
SLV 4	179667	0.46	7083	-3827	234.36	510.99	2.18	Si
SLV 15	179667	0.46	13542	-7318	234.36	933.71	3.98	Si
SLV 1	179667	0.46	14217	-7683	234.36	975.46	4.16	Si
SLV 16	179667	0.46	15159	-8192	234.36	1033.01	4.41	Si
SLV 2	179667	0.46	15833	-8556	234.36	1073.68	4.58	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-12307	-17656	-475	0.784	1522	0.949	12.00567	14.55598	No
SLV 9	-11784	-17146	-475	0.813	1468.9	0.948	12.46786	14.55598	No
SLV 6	-11444	-16104	-312	0.845	1434.4	0.946	12.98055	14.55598	No
SLV 5	-10921	-15594	-312	0.879	1381.3	0.945	13.51746	14.55598	No
SLV 14	-9458	-13468	-388	0.982	1233.2	0.939	15.19225	7.56668	Si
SLV 13	-8644	-12675	-389	1.056	1150.8	0.935	16.39973	7.56668	Si
SLV 2	-6579	-8294	156	1.337	942.5	0.924	21.01865	7.56668	Si
SLV 16	-6028	-8205	-151	1.43	887.1	0.921	22.56884	7.56668	Si
SLV 1	-5765	-7501	155	1.478	860.8	0.919	23.37588	7.56668	Si
SLV 15	-5214	-7412	-152	1.593	805.6	0.915	25.30553	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.919	SLU 43	Si
V_SLU	48.986	SLU 43	Si
PF_SLV	0	SLV 7	No
V_SLV	6.796	SLV 1	Si
PFFP_SLV	0	SLV 8	No
R_SLV	0.825	SLV 10	No

Maschio 160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	5.826	L6	L7	9.14	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 31	8.34	-4668.96	-52916	-0.0000337	0.0003743	0.0035	9.14	192713.06	231029.2	231029.2	49.48	No	Si
SLU 31	11.86	-587.55	-29680	-0.0000177	0.0003743	0.0035	9.14	120187.38	148977.83	148977.83	253.56	No	Si
SLU 23	8.34	-3966.08	-47843	-0.0000303	0.0003743	0.0035	9.14	178495.67	214142.48	214142.48	53.99	No	Si
SLU 23	11.86	-277.84	-27272	-0.0000161	0.0003743	0.0035	9.14	111588.77	139679.93	139679.93	502.73	No	Si
SLU 42	8.34	-4743.79	-56774	-0.0000362	0.0003743	0.0035	9.14	202923.11	243382.4	243382.4	51.31	No	Si
SLU 42	11.86	-494.86	-32345	-0.0000193	0.0003743	0.0035	9.14	129465.34	158886.09	158886.09	321.08	No	Si
SLU 10	8.34	-3921.14	-46737	-0.0000295	0.0003743	0.0035	9.14	175274.62	210370.27	210370.27	53.65	No	Si
SLU 10	11.86	-426.63	-25946	-0.0000154	0.0003743	0.0035	9.14	106765.46	134434.19	134434.19	315.11	No	Si
SLU 40	8.34	-4721.48	-55081	-0.0000351	0.0003743	0.0035	9.14	198506.95	237991.89	237991.89	50.41	No	Si
SLU 40	11.86	-561.35	-30707	-0.0000183	0.0003743	0.0035	9.14	123792.95	152770.65	152770.65	272.15	No	Si
SLU 84	8.34	-5266.33	-67148	-0.0000432	0.0003743	0.0035	9.14	227784.22	275140.41	275140.41	52.25	No	Si
SLU 84	11.86	-355.56	-38122	-0.0000228	0.0003743	0.0035	9.14	148727.58	180184.43	180184.43	506.77	No	Si
SLU 73	8.34	-5191.51	-63290	-0.0000406	0.0003743	0.0035	9.14	218978.34	263487.11	263487.11	50.75	No	Si
SLU 73	11.86	-448.25	-35458	-0.0000212	0.0003743	0.0035	9.14	139989.62	170697.14	170697.14	380.81	No	Si
SLU 34	8.34	-4691.27	-54609	-0.0000348	0.0003743	0.0035	9.14	197257.83	236465.88	236465.88	50.41	No	Si
SLU 34	11.86	-521.06	-31318	-0.0000187	0.0003743	0.0035	9.14	125918.76	155039.05	155039.05	297.54	No	Si
SLU 82	8.34	-5244.02	-65455	-0.0000421	0.0003743	0.0035	9.14	223984.25	270044.12	270044.12	51.5	No	Si
SLU 82	11.86	-422.04	-36485	-0.0000218	0.0003743	0.0035	9.14	143387.05	174404.98	174404.98	413.24	No	Si
SLU 76	8.34	-5213.82	-64983	-0.0000417	0.0003743	0.0035	9.14	222906.92	268623.49	268623.49	51.52	No	Si
SLU 76	11.86	-381.76	-37095	-0.0000222	0.0003743	0.0035	9.14	145389.14	176552.74	176552.74	462.47	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	8.34	30684.06	-47443	-0.00004	0.0005615	0.0035	9.14		198438.64	198438.64	6.47		Si
SLD 10	11.86	22181.29	-25574	-0.0000234	0.0005615	0.0035	9.14		114748.37	114748.37	5.17		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	8.34	-78476.44	-47095	-0.000059	0.0005615	0.0035	9.14		219990.89	219990.89	2.8		Si
SLV 11	11.86	-48260.37	-25884	-0.0000341	0.0005615	0.0035	9.14		136601.42	136601.42	2.83		Si
SLV 10	8.34	73322.41	-50842	-0.0000591	0.0005615	0.0035	9.14		209833.77	209833.77	2.86		Si
SLV 10	11.86	50113.83	-25961	-0.0000351	0.0005615	0.0035	9.14		116351.18	116351.18	2.32		Si
SLV 6	8.34	72454.51	-42619	-0.0000538	0.0005615	0.0035	9.14		182363.52	182363.52	2.52		Si
SLV 6	11.86	48552.29	-24677	-0.0000338	0.0005615	0.0035	9.14		111048.53	111048.53	2.29		Si
SLV 8	8.34	-76768.76	-38827	-0.0000543	0.0005615	0.0035	9.14		188381.22	188381.22	2.45		Si
SLV 8	11.86	-46529.74	-24607	-0.0000327	0.0005615	0.0035	9.14		131275.25	131275.25	2.82		Si
SLV 7	8.34	-79344.34	-38872	-0.0000558	0.0005615	0.0035	9.14		188552.15	188552.15	2.38		Si
SLV 7	11.86	-49821.91	-24600	-0.0000345	0.0005615	0.0035	9.14		131246.46	131246.46	2.63		Si
SLV 9	8.34	70746.84	-50887	-0.0000581	0.0005615	0.0035	9.14		209986.09	209986.09	2.97		Si
SLV 9	11.86	46821.66	-25955	-0.0000335	0.0005615	0.0035	9.14		116322.56	116322.56	2.48		Si
SLV 12	8.34	-75900.86	-47049	-0.0000578	0.0005615	0.0035	9.14		219817.33	219817.33	2.9		Si
SLV 12	11.86	-44968.21	-25891	-0.0000326	0.0005615	0.0035	9.14		136630.33	136630.33	3.04		Si
SLV 5	8.34	69878.94	-42665	-0.0000527	0.0005615	0.0035	9.14		182520.36	182520.36	2.61		Si
SLV 5	11.86	45260.12	-24670	-0.0000321	0.0005615	0.0035	9.14		111020.02	111020.02	2.45		Si
SLD 6	8.34	30314.54	-43921	-0.0000377	0.0005615	0.0035	9.14		186722.59	186722.59	6.16		Si
SLD 6	11.86	21513.14	-25022	-0.0000228	0.0005615	0.0035	9.14		112470.28	112470.28	5.23		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	8.34	-5266.33	-67148	-55915	-1423	9.14	9.14	-21849	9858	25228	40441	76634	23307	65669	No	46.15	Si
SLU 84	11.86	-355.56	-38122	-31745	-1353	9.14	9.14	-12404	8598	22005	40441	76634	23307	62446	No	46.14	Si
SLU 65	8.34	-4488.63	-58217	-48478	-1488	9.14	9.14	-18943	9470	24236	40441	76634	23307	64677	No	43.47	Si
SLU 65	11.86	-138.54	-33050	-27521	-1374	9.14	9.14	-10754	8378	21442	40441	76634	23307	61883	No	45.03	Si
SLU 73	8.34	-5191.51	-63290	-52702	-1491	9.14	9.14	-20593	9690	24799	40441	76634	23307	65240	No	43.75	Si
SLU 73	11.86	-448.25	-35458	-29526	-1377	9.14	9.14	-11537	8483	21709	40441	76634	23307	62150	No	45.12	Si
SLU 76	8.34	-5213.82	-64983	-54112	-1526	9.14	9.14	-21144	9764	24987	40441	76634	23307	65428	No	42.87	Si
SLU 76	11.86	-381.76	-37095	-30890	-1412	9.14	9.14	-12070	8554	21891	40441	76634	23307	62332	No	44.13	Si
SLU 23	8.34	-3966.08	-47843	-39840	-1378	9.14	9.14	-15567	9020	23084	40441	76634	23307	63525	No	46.09	Si
SLU 23	11.86	-277.84	-27272	-22710	-1265	9.14	9.14	-8874	8128	20800	40441	76634	23307	61241	No	48.41	Si
SLU 80	8.34	-4987.41	-66668	-55515	-1456	9.14	9.14	-21692	9837	25174	40441	76634	23307	65615	No	45.05	Si
SLU 80	11.86	-156.33	-38728	-32249	-1387	9.14	9.14	-12601	8625	22072	40441	76634	23307	62513	No	45.07	Si
SLU 26	8.34	-3988.39	-49536	-41250	-1413	9.14	9.14	-16118	9094	23272	40441	76634	23307	63713	No	45.08	Si
SLU 26	11.86	-211.35	-28910	-24074	-1300	9.14	9.14	-9407	8199	20982	40441	76634	23307	61423	No	47.25	Si
SLU 72	8.34	-4284.54	-61595	-51291	-1453	9.14	9.14	-20042	9617	24611	40441	76634	23307	65052	No	44.76	Si
SLU 72	11.86	153.37	-36320	-30244	-1384	9.14	9.14	-11818	8520	21805	40441	76634	23307	62246	No	44.98	Si
SLU 68	8.34	-4510.94	-59910	-49888	-1523	9.14	9.14	-19494	9544	24424	40441	76634	23307	64865	No	42.59	Si
SLU 68	11.86	-72.05	-34687	-28884	-1409	9.14	9.14	-11287	8449	21623	40441	76634	23307	62064	No	44.04	Si
SLU 34	8.34	-4691.27	-54609	-45474	-1417	9.14	9.14	-17769	9314	23835	40441	76634	23307	64276	No	45.38	Si
SLU 34	11.86	-521.06	-31318	-26079	-1303	9.14	9.14	-10190	8303	21249	40441	76634	23307	61690	No	47.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	8.34	69878.94	-42665	-35527	9479	9.14	8.7964	-13882	13193	32495	40441	114951	23307	72935		7.69	Si
SLV 5	11.86	45260.12	-24670	-20543	21749	9.14	8.2062	-8027	12022	27624	40441	114951	23307	68064		3.13	Si
SLV 8	8.34	-76768.76	-38827	-32332	-11708	9.14	7.7784	-14952	13407	29200	40441	114951	23307	69641		5.95	Si
SLV 8	11.86	-46529.74	-24607	-20490	-24327	9.14	8.0372	-9143	12245	27557	40441	114951	23307	67998		2.8	Si
SLV 10	8.34	73322.41	-50842	-42337	8740	9.14	9.14	-16543	13725	35126	40441	114951	23307	75567		8.65	Si
SLV 10	11.86	50113.83	-25961	-21618	21365	9.14	7.9191	-8447	12106	26843	40441	114951	23307	67284		3.15	Si
SLV 9	8.34	70746.84	-50887	-42374	9974	9.14	9.14	-16558	13728	35133	40441	114951	23307	75574		7.58	Si
SLV 9	11.86	46821.66	-25955	-21613	22597	9.14	8.298	-8445	12106	28127	40441	114951	23307	68568		3.03	Si
SLV 6	8.34	72454.51	-42619	-35490	8245	9.14	8.6099	-13867	13190	31798	40441	114951	23307	72239		8.76	Si
SLV 6	11.86	48552.29	-24677	-20549	20516	9.14	7.8075	-8029	12023	26282	40441	114951	23307	66723		3.25	Si
SLD 8	8.34	-35581.46	-42252	-35183	-5648	9.14	9.14	-13748	13166	33695	40441	114951	23307	74136		13.13	Si
SLD 8	11.86	-20451.98	-24990	-20810	-11226	9.14	9.14	-8131	12043	30820	40441	114951	23307	71261		6.35	Si
SLD 12	8.34	-35211.95	-45773	-38116	-5438	9.14	9.14	-14894	13395	34281	40441	114951	23307	74722		13.74	Si
SLD 12	11.86	-19783.83	-25542	-21269	-10864	9.14	9.14	-8311	12079	30912	40441	114951	23307	71353		6.57	Si
SLV 7	8.34	-79344.34	-38872	-32369	-10474	9.14	7.5865	-15350	13487	28649	40441	114951	23307	69090		6.6	Si
SLV 7	11.86	-49821.91	-24600	-20484	-23094	9.14	7.6341	-9625	12342	26381	40441	114951	23307	66822		2.89	Si
SLV 11	8.34	-78476.44	-47095	-39216	-9979	9.14	8.7109	-16201	13657	33310	40441	114951	23307	73751		7.39	Si
SLV 11	11.86	-48260.37	-25884	-21554	-22246	9.14	8.1166	-9525	12322	28003	40441	114951	23307	68444		3.08	Si
SLV 12	8.34	-75900.86	-47049	-39179	-11213	9.14	8.8703	-15894	13595	33767	40441	114951	23307	74208		6.62	Si
SLV 12	11.86	-44968.21	-25891	-21560	-23479	9.14	8.4995	-9094	12235	29119	40441	114951	23307	69560		2.96	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.1 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.46	11308	-28940	1109.86	3751.57	3.38	Si
SLV 1	179667	0.46	11315	-28957	1109.86	3753.65	3.38	Si
SLV 4	179667	0.46	11367	-29089	1109.86	3769.39	3.4	Si
SLV 3	179667	0.46	11373	-29107	1109.86	3771.46	3.4	Si
SLV 6	179667	0.46	12781	-32710	1109.86	4196.14	3.78	Si
SLV 5	179667	0.46	12786	-32721	1109.86	4197.44	3.78	Si
SLV 8	179667	0.46	12976	-33208	1109.86	4254.12	3.83	Si
SLV 7	179667	0.46	12980	-33219	1109.86	4255.42	3.83	Si
SLV 10	179667	0.46	14101	-36088	1109.86	4585.85	4.13	Si
SLV 9	179667	0.46	14106	-36100	1109.86	4587.13	4.13	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.1 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-25961	-50842	1128	1.523	3941.9	0.917	24.14182	14.55598	Si
SLV 9	-25955	-50887	1128	1.523	3941.2	0.917	24.1469	14.55598	Si
SLV 12	-25891	-47049	946	1.531	3934.9	0.917	24.27854	14.55598	Si
SLV 11	-25884	-47095	946	1.532	3934.2	0.917	24.28366	14.55598	Si
SLV 8	-24607	-38827	-1110	1.585	3806.4	0.915	25.18265	14.55598	Si
SLV 7	-24600	-38872	-1111	1.585	3805.8	0.915	25.18812	14.55598	Si
SLV 6	-24677	-42619	-928	1.587	3813.5	0.915	25.21518	14.55598	Si
SLV 5	-24670	-42665	-928	1.588	3812.8	0.915	25.22065	14.55598	Si
SLV 14	-27437	-59095	3464	1.396	4089.7	0.919	22.0708	7.56668	Si
SLV 13	-27426	-59165	3464	1.396	4088.7	0.919	22.07771	7.56668	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	49.482	SLU 31	Si
V_SLU	42.589	SLU 68	Si
PF_SLV	2.287	SLV 6	Si
V_SLV	2.795	SLV 8	Si
PFFP_SLV	3.38	SLV 2	Si
R_SLV	1.659	SLV 10	Si

Maschio 161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	5.826	L7	L8	9.141	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	11.86	-2430.32	-28487	-0.0000177	0.0003743	0.0035	9.1407	115961.67	144486.81	144486.81	59.45	No	Si
SLU 40	15.02	769.26	-5275	-0.0000033	0.0003743	0.0035	9.1407	23619.79	27658.3	27658.3	35.95	No	Si
SLU 39	11.86	-1838.1	-28496	-0.0000175	0.0003743	0.0035	9.1407	115995.74	144523.88	144523.88	78.63	No	Si
SLU 39	15.02	762.73	-5292	-0.0000033	0.0003743	0.0035	9.1407	23693.62	27732.78	27732.78	36.36	No	Si
SLU 31	11.86	-2579.62	-27620	-0.0000172	0.0003743	0.0035	9.1407	112852.03	141072.36	141072.36	54.69	No	Si
SLU 31	15.02	717.25	-5180	-0.0000033	0.0003743	0.0035	9.1407	23205.74	27241.48	27241.48	37.98	No	Si
SLU 61	11.86	-2049.46	-31095	-0.0000191	0.0003743	0.0035	9.1407	125156.76	154222.64	154222.64	75.25	No	Si
SLU 61	15.02	707.93	-5028	-0.0000032	0.0003743	0.0035	9.1407	22536.82	26571.2	26571.2	37.53	No	Si
SLU 18	11.86	-1420.06	-25404	-0.0000155	0.0003743	0.0035	9.1407	104787	132314.59	132314.59	93.18	No	Si
SLU 18	15.02	620.42	-4226	-0.0000027	0.0003743	0.0035	9.1407	19000.21	23009.58	23009.58	37.09	No	Si
SLU 82	11.86	-2467.5	-34187	-0.0000212	0.0003743	0.0035	9.1407	135748.23	165863.61	165863.61	67.22	No	Si
SLU 82	15.02	850.23	-6094	-0.0000038	0.0003743	0.0035	9.1407	27200.24	31244.22	31244.22	36.75	No	Si
SLU 60	11.86	-1457.24	-31105	-0.0000189	0.0003743	0.0035	9.1407	125189.96	154258.09	154258.09	105.86	No	Si
SLU 60	15.02	701.39	-5045	-0.0000032	0.0003743	0.0035	9.1407	22610.81	26645.14	26645.14	37.99	No	Si
SLU 81	11.86	-1875.27	-34197	-0.000021	0.0003743	0.0035	9.1407	135780.4	165899.88	165899.88	88.47	No	Si
SLU 81	15.02	843.69	-6111	-0.0000038	0.0003743	0.0035	9.1407	27273.59	31317.66	31317.66	37.12	No	Si
SLU 19	11.86	-2012.29	-25395	-0.0000157	0.0003743	0.0035	9.1407	104751.89	132277.12	132277.12	65.73	No	Si
SLU 19	15.02	626.96	-4209	-0.0000027	0.0003743	0.0035	9.1407	18925.74	22934.68	22934.68	36.58	No	Si
SLU 73	11.86	-2616.79	-33320	-0.0000207	0.0003743	0.0035	9.1407	132811.98	162576.44	162576.44	62.13	No	Si
SLU 73	15.02	798.21	-6000	-0.0000038	0.0003743	0.0035	9.1407	26788.9	30832.73	30832.73	38.63	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	11.86	52930.02	-25053	-0.0000364	0.0005615	0.0035	9.1407		112608.85	112608.85	2.13		Si
SLV 5	15.02	-8112.14	-5102	-0.000006	0.0005615	0.0035	9.1407		48294.32	48294.32	5.95		Si
SLV 7	11.86	-53956.84	-23001	-0.000037	0.0005615	0.0035	9.1407		124622.91	124622.91	2.31		Si
SLV 7	15.02	5573.85	-4641	-0.0000048	0.0005615	0.0035	9.1407		24930.63	24930.63	4.47		Si
SLV 11	11.86	-51277.44	-22903	-0.0000351	0.0005615	0.0035	9.1407		124214.61	124214.61	2.42		Si
SLV 11	15.02	8841.12	-3512	-0.000006	0.0005615	0.0035	9.1407		19891.67	19891.67	2.25		Si
SLV 8	11.86	-57378.99	-23030	-0.0000397	0.0005615	0.0035	9.1407		124743.52	124743.52	2.17		Si
SLV 8	15.02	5866.38	-4645	-0.0000049	0.0005615	0.0035	9.1407		24944.91	24944.91	4.25		Si
SLV 9	11.86	55609.42	-24955	-0.0000381	0.0005615	0.0035	9.1407		112201.94	112201.94	2.02		Si
SLV 9	15.02	-4844.87	-3973	-0.0000041	0.0005615	0.0035	9.1407		43302.27	43302.27	8.94		Si
SLV 16	11.86	-15114.52	-23543	-0.0000195	0.0005615	0.0035	9.1407		126867.64	126867.64	8.39		Si
SLV 16	15.02	8236.69	-2359	-0.0000076	0.0005615	0.0035	9.1407		14722.82	14722.82	1.79		Si
SLV 10	11.86	52187.27	-24984	-0.000036	0.0005615	0.0035	9.1407		112322.11	112322.11	2.15		Si
SLV 10	15.02	-4552.33	-3976	-0.000004	0.0005615	0.0035	9.1407		43316.48	43316.48	9.52		Si
SLV 6	11.86	49507.87	-25082	-0.0000345	0.0005615	0.0035	9.1407		112729.04	112729.04	2.28		Si
SLV 6	15.02	-7819.6	-5106	-0.0000059	0.0005615	0.0035	9.1407		48308.49	48308.49	6.18		Si
SLV 12	11.86	-54699.59	-22932	-0.0000375	0.0005615	0.0035	9.1407		124335.18	124335.18	2.27		Si
SLV 12	15.02	9133.65	-3515	-0.0000062	0.0005615	0.0035	9.1407		19906.07	19906.07	2.18		Si
SLV 15	11.86	-9789.77	-23498	-0.0000174	0.0005615	0.0035	9.1407		126679.71	126679.71	12.94		Si
SLV 15	15.02	7781.52	-2354	-0.0000065	0.0005615	0.0035	9.1407		14700.38	14700.38	1.89		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	11.86	-18.73	-31353	-26108	1438	9.1407	9.1407	-10201	8305	21255	35683	76640	23309	56938	No	39.59	Si
SLU 50	15.02	396.51	-7629	-6353	1439	9.1407	9.1407	-2482	7275	18621	35683	76640	23309	54304	No	37.75	Si
SLU 31	11.86	-2579.62	-27620	-22999	-1432	9.1407	9.1407	-8986	8143	20840	35683	76640	23309	56523	No	39.46	Si
SLU 31	15.02	717.25	-5180	-4314	-1295	9.1407	9.1407	-1685	7169	18349	35683	76640	23309	54032	No	41.73	Si
SLU 40	11.86	-2430.32	-28487	-23721	-1283	9.1407	9.1407	-9268	8180	20936	35683	76640	23309	56620	No	44.13	Si
SLU 40	15.02	769.26	-5275	-4392	-1200	9.1407	9.1407	-1716	7173	18359	35683	76640	23309	54042	No	45.05	Si
SLU 48	11.86	-9.52	-31996	-26643	1434	9.1407	9.1407	-10410	8332	21326	35683	76640	23309	57009	No	39.75	Si
SLU 48	15.02	400.35	-7567	-6301	1435	9.1407	9.1407	-2462	7273	18614	35683	76640	23309	54297	No	37.85	Si
SLU 45	11.86	-319.57	-30437	-25345	1158	9.1407	9.1407	-9903	8265	21153	35683	76640	23309	56836	No	49.06	Si
SLU 45	15.02	458.83	-6136	-5109	1160	9.1407	9.1407	-1996	7211	18455	35683	76640	23309	54138	No	46.69	Si
SLU 8	11.86	18.44	-25653	-21361	1088	9.1407	9.1407	-8346	8057	20622	35683	76640	23309	56305	No	51.75	Si
SLU 8	15.02	315.54	-6810	-5671	1088	9.1407	9.1407	-2216	7240	18530	35683	76640	23309	54213	No	49.83	Si
SLU 6	11.86	27.66	-26295	-21896	1084	9.1407	9.1407	-8555	8085	20693	35683	76640	23309	56376	No	52.01	Si
SLU 6	15.02	319.38	-6747	-5619	1084	9.1407	9.1407	-2195	7237	18523	35683	76640	23309	54206	No	50	Si
SLU 73	11.86	-2616.79	-33320	-27746	-1082	9.1407	9.1407	-10841	8390	21473	35683	76640	23309	57156	No	52.81	Si
SLU 73	15.02	798.21	-6000	-4996	-944	9.1407	9.1407	-1952	7205	18440	35683	76640	23309	54123	No	57.31	Si
SLU 51	11.86	-610.96	-31344	-26100	890	9.1407	9.1407	-10198	8304	21254	35683	76640	23309	56937	No	63.97	Si
SLU 51	15.02	403.05	-7612	-6339	972	9.1407	9.1407	-2477	7275	18619	35683	76640	23309	54302	No	55.87	Si
SLU 34	11.86	-2269.57	-29179	-24297	-1157	9.1407	9.1407	-9493	8210	21013	35683	76640	23309	56696	No	49.01	Si
SLU 34	15.02	658.76	-6611	-5505	-1020	9.1407	9.1407	-2151	7231	18508	35683	76640	23309	54191	No	53.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	11.86	-9789.77	-23498	-19567	-15011	9.1407	9.1407	-7645	11946	30574	35683	114959	23309	66257		4.41	Si
SLV 15	15.02	7781.52	-2354	-1960	-16763	9.1407	3.7935	-766	10570	11227	35683	114959	23309	46910		2.8	Si
SLV 7	11.86	-53956.84	-23001	-19154	-41624	9.1407	6.6736	-10296	12476	23313	35683	114959	23309	58996		1.42	Si
SLV 7	15.02	5573.85	-4641	-3865	-40336	9.1407	9.1407	-1510	10719	27433	35683	114959	23309	63117		1.56	Si
SLV 6	11.86	49507.87	-25082	-20886	44484	9.1407	7.7896	-8161	12049	26279	35683	114959	23309	61963		1.39	Si
SLV 6	15.02	-7819.6	-5106	-4252	44376	9.1407	9.1164	0	16250	41479	35683	114959	23309	77163		1.74	Si
SLV 8	11.86	-57378.99	-23030	-19178	-44256	9.1407	6.2367	-11033	12624	22045	35683	114959	23309	57728		1.3	Si
SLV 8	15.02	5866.38	-4645	-3868	-42967	9.1407	9.1407	-1511	10719	27434	35683	114959	23309	63117		1.47	Si
SLV 9	11.86	55609.42	-24955	-20780	44726	9.1407	7.0258	-8119	12040	23686	35683	114959	23309	59369		1.33	Si
SLV 9	15.02	-4844.87	-3973	-3308	43440	9.1407	9.1407	-1293	10675	27322	35683	114959	23309	63005		1.45	Si
SLV 16	11.86	-15114.52	-23543	-19605	-19106	9.1407	9.1407	-7660	11949	30581	35683	114959	23309	66264		3.47	Si
SLV 16	15.02	8236.69	-2359	-1964	-20858	9.1407	3.2356	-767	10570	9576	35683	114959	23309	45259		2.17	Si
SLV 10	11.86	52187.27	-24984	-20804	42094	9.1407	7.4445	-8129	12042	25102	35683	114959	23309	60785		1.44	Si
SLV 10	15.02	-4552.33	-3976	-3311	40808	9.1407	9.1407	-1294	10675	27322	35683	114959	23309	63006		1.54	Si
SLV 11	11.86	-51277.44	-22903	-19071	-44014	9.1407	6.9943	-9776	12372	24229	35683	114959	23309	59912		1.36	Si
SLV 11	15.02	8841.12	-3512	-2924	-43903	9.1407	6.1578	-1142	10645	18354	35683	114959	23309	54038		1.23	Si
SLV 5	11.86	52930.02	-25053	-20862	47115	9.1407	7.3729	-8151	12047	24870	35683	114959	23309	60553		1.29	Si
SLV 5	15.02	-8112.14	-5102	-4249	47007	9.1407	8.9415	-1698	10756	26929	35683	114959	23309	62613		1.33	Si
SLV 12	11.86	-54699.59	-22932	-19096	-46645	9.1407	6.5551	-10451	12507	22956	35683	114959	23309	58639		1.26	Si
SLV 12	15.02	9133.65	-3515	-2927	-46535	9.1407	5.915	-1144	10645	17631	35683	114959	23309	53314		1.15	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.53	5279	-13512	1031.78	1826.25	1.77	Si
SLV 8	179667	0.53	5285	-13528	1031.78	1828.33	1.77	Si
SLV 3	179667	0.53	5302	-13569	1031.78	1833.68	1.78	Si
SLV 4	179667	0.53	5311	-13594	1031.78	1836.91	1.78	Si
SLV 11	179667	0.53	5426	-13888	1031.78	1875.22	1.82	Si
SLV 12	179667	0.53	5432	-13904	1031.78	1877.29	1.82	Si
SLV 1	179667	0.53	5469	-13997	1031.78	1889.47	1.83	Si
SLV 2	179667	0.53	5479	-14022	1031.78	1892.69	1.83	Si
SLV 15	179667	0.53	5791	-14822	1031.78	1996.45	1.93	Si
SLV 16	179667	0.53	5801	-14847	1031.78	1999.66	1.94	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-5106	-25082	-1474	4.097	1787.8	0.892	66.75799	12.56426	Si
SLV 5	-5102	-25053	-1474	4.098	1787.6	0.892	66.7743	12.56426	Si
SLV 8	-4645	-23030	-1374	4.262	1749.4	0.894	69.30804	12.56426	Si
SLV 7	-4641	-23001	-1374	4.263	1749.2	0.894	69.32538	12.56426	Si
SLV 10	-3976	-24984	1402	4.51	1695.6	0.897	73.03761	12.56426	Si
SLV 9	-3973	-24955	1402	4.512	1695.3	0.898	73.05649	12.56426	Si
SLV 12	-3515	-22932	1502	4.692	1660	0.901	75.67481	12.56426	Si
SLV 11	-3512	-22903	1502	4.693	1659.8	0.901	75.69474	12.56426	Si
SLV 2	-6263	-24487	-4795	3.505	1887.8	0.889	57.27754	7.33323	Si
SLV 1	-6258	-24442	-4795	3.507	1887.4	0.889	57.29801	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	35.954	SLU 40	Si
V_SLU	37.749	SLU 50	Si
PF_SLV	1.787	SLV 16	Si
V_SLV	1.146	SLV 12	Si
PFFP_SLV	1.77	SLV 7	Si
R_SLV	5.313	SLV 6	Si

Maschio 162

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.713	5.826	-24.633	5.826	L7	L8	1.92	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	12.76	-380.18	-5701	-0.0000193	0.0003743	0.0035	1.92	4902.66	6078.83	6078.83	15.99	No	Si
SLU 79	14.56	-1696.21	-4653	-0.000028	0.0003743	0.0035	1.92	4087.35	5212.26	5212.26	3.07	No	Si
SLU 27	12.76	-401.02	-5059	-0.0000176	0.0003743	0.0035	1.92	4408.01	5544.94	5544.94	13.83	No	Si
SLU 27	14.56	-1654.81	-4314	-0.0000268	0.0003743	0.0035	1.92	3814.99	4925.7	4925.7	2.98	No	Si
SLU 28	12.76	-382.94	-5002	-0.0000173	0.0003743	0.0035	1.92	4363.1	5497.92	5497.92	14.36	No	Si
SLU 28	14.56	-1644.49	-4321	-0.0000267	0.0003743	0.0035	1.92	3820.37	4931.39	4931.39	3	No	Si
SLU 37	12.76	-204.68	-4540	-0.0000144	0.0003743	0.0035	1.92	3997.06	5117.59	5117.59	25	No	Si
SLU 37	14.56	-1644.54	-3969	-0.0000261	0.0003743	0.0035	1.92	3533.85	4627.73	4627.73	2.81	No	Si
SLU 30	12.76	-359.9	-4757	-0.0000164	0.0003743	0.0035	1.92	4169.7	5297.69	5297.69	14.72	No	Si
SLU 30	14.56	-1608.64	-3986	-0.0000256	0.0003743	0.0035	1.92	3547.63	4642.21	4642.21	2.89	No	Si
SLU 29	12.76	-377.98	-4814	-0.0000167	0.0003743	0.0035	1.92	4215.11	5344.37	5344.37	14.14	No	Si
SLU 29	14.56	-1618.96	-3979	-0.0000258	0.0003743	0.0035	1.92	3542.17	4636.47	4636.47	2.86	No	Si
SLU 38	12.76	-186.6	-4483	-0.0000141	0.0003743	0.0035	1.92	3951.11	5069.29	5069.29	27.17	No	Si
SLU 38	14.56	-1634.22	-3976	-0.0000259	0.0003743	0.0035	1.92	3539.32	4633.47	4633.47	2.84	No	Si
SLU 80	12.76	-362.1	-5643	-0.000019	0.0003743	0.0035	1.92	4859.04	6031.12	6031.12	16.66	No	Si
SLU 80	14.56	-1685.89	-4660	-0.000028	0.0003743	0.0035	1.92	4092.65	5217.81	5217.81	3.09	No	Si
SLU 35	12.76	-227.72	-4785	-0.0000153	0.0003743	0.0035	1.92	4192.33	5320.92	5320.92	23.37	No	Si
SLU 35	14.56	-1680.39	-4304	-0.0000271	0.0003743	0.0035	1.92	3806.79	4917.03	4917.03	2.93	No	Si
SLU 36	12.76	-209.64	-4728	-0.000015	0.0003743	0.0035	1.92	4146.87	5274.28	5274.28	25.16	No	Si
SLU 36	14.56	-1670.06	-4311	-0.000027	0.0003743	0.0035	1.92	3812.17	4922.73	4922.73	2.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	12.76	-1194.46	-3353	-0.0000196	0.0005615	0.0035	1.92		4141.44	4141.44	3.47		Si
SLV 3	14.56	-296.78	-2465	-0.0000093	0.0005615	0.0035	1.92		3340.36	3340.36	11.26		Si
SLV 15	12.76	952.03	-1570	-0.0000156	0.0005615	0.0035	1.92		1666.79	1666.79	1.75		Si
SLV 15	14.56	-1367	-2849	-0.000021	0.0005615	0.0035	1.92		3687.57	3687.57	2.7		Si
SLV 12	12.76	758.07	2457	0.188875	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	14.56	-1577.97	-2047	-0.0000379	0.0005615	0.0035	1.536		2959.7	2959.7	1.88		Si
SLV 8	12.76	114.12	1922	0.151229	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	14.56	-1256.9	-1932	-0.000022	0.0005615	0.0035	1.536		2854.65	2854.65	2.27		Si
SLV 16	12.76	959.58	-952	-0.0002931	0.0005615	0.0035	1.536		1090.22	1090.22	1.14		Si
SLV 16	14.56	-1398.09	-2724	-0.0000215	0.0005615	0.0035	1.92		3574.32	3574.32	2.56		Si
SLV 7	12.76	109.27	1524	0.1198106	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	14.56	-1236.92	-2013	-0.0000205	0.0005615	0.0035	1.536		2928.39	2928.39	2.37		Si
SLD 12	12.76	133.73	-1114	-0.0000042	0.0005615	0.0035	1.92		1241.69	1241.69	9.29		Si
SLD 12	14.56	-1032.85	-2488	-0.0000161	0.0005615	0.0035	1.92		3361.42	3361.42	3.25		Si
SLV 4	12.76	-1186.91	-2735	-0.0000183	0.0005615	0.0035	1.92		3584.49	3584.49	3.02		Si
SLV 4	14.56	-327.88	-2340	-0.0000092	0.0005615	0.0035	1.92		3226.04	3226.04	9.84		Si
SLV 11	12.76	753.22	2059	0.1572724	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	14.56	-1557.98	-2128	-0.0000329	0.0005615	0.0035	1.536		3033.15	3033.15	1.95		Si
SLD 11	12.76	131.61	-1287	-0.0000046	0.0005615	0.0035	1.92		1403.83	1403.83	10.67		Si
SLD 11	14.56	-1024.12	-2524	-0.000016	0.0005615	0.0035	1.92		3393.51	3393.51	3.31		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	12.76	-79.44	-3996	-3328	1375	1.92	1.92	-6190	7770	4177	35683	16098	4896	20994	No	15.26	Si
SLU 42	14.56	-1242.73	-3541	-2949	1386	1.92	1.8271	-5785	7716	3947	35683	16098	4896	20994	No	15.15	Si
SLU 79	12.76	-380.18	-5701	-4747	1436	1.92	1.92	-8830	8122	4366	35683	16098	4896	20994	No	14.62	Si
SLU 79	14.56	-1696.21	-4653	-3875	1434	1.92	1.7864	-7786	7983	3993	35683	16098	4896	20994	No	14.64	Si
SLU 37	12.76	-204.68	-4540	-3781	1474	1.92	1.92	-7033	7882	4237	35683	16098	4896	20994	No	14.24	Si
SLU 37	14.56	-1644.54	-3969	-3305	1472	1.92	1.6369	-7247	7911	3626	35683	16098	4896	20994	No	14.26	Si
SLU 80	12.76	-362.1	-5643	-4699	1468	1.92	1.92	-8741	8110	4360	35683	16098	4896	20994	No	14.3	Si
SLU 80	14.56	-1685.89	-4660	-3880	1477	1.92	1.7946	-7761	7979	4010	35683	16098	4896	20994	No	14.21	Si
SLU 35	12.76	-227.72	-4785	-3985	1529	1.92	1.92	-7412	7933	4265	35683	16098	4896	20994	No	13.73	Si
SLU 35	14.56	-1680.39	-4304	-3584	1527	1.92	1.7087	-7530	7948	3803	35683	16098	4896	20994	No	13.75	Si
SLU 84	12.76	-254.94	-5157	-4294	1337	1.92	1.92	-7988	8009	4306	35683	16098	4896	20994	No	15.7	Si
SLU 84	14.56	-1294.4	-4225	-3518	1348	1.92	1.92	-6545	7817	4202	35683	16098	4896	20994	No	15.58	Si
SLU 77	12.76	-403.23	-5946	-4951	1491	1.92	1.92	-9210	8172	4393	35683	16098	4896	20994	No	14.08	Si
SLU 77	14.56	-1732.06	-4988	-4154	1489	1.92	1.8383	-8115	8026	4131	35683	16098	4896	20994	No	14.1	Si
SLU 36	12.76	-209.64	-4728	-3937	1561	1.92	1.92	-7324	7921	4258	35683	16098	4896	20994	No	13.45	Si
SLU 36	14.56	-1670.06	-4311	-3589	1571	1.92	1.7177	-7493	7943	3820	35683	16098	4896	20994	No	13.37	Si
SLU 38	12.76	-186.6	-4483	-3733	1506	1.92	1.92	-6944	7870	4231	35683	16098	4896	20994	No	13.94	Si
SLU 38	14.56	-1634.22	-3976	-3311	1516	1.92	1.6468	-7215	7906	3646	35683	16098	4896	20994	No	13.85	Si
SLU 78	12.76	-385.15	-5889	-4904	1523	1.92	1.92	-9121	8161	4387	35683	16098	4896	20994	No	13.79	Si
SLU 78	14.56	-1721.74	-4995	-4159	1532	1.92	1.8459	-8092	8023	4147	35683	16098	4896	20994	No	13.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	12.76	109.27	1524	1269	3703	1.536	1.92	0	0	0	35683	19318	3917	23234		6.27	Si
SLV 7	14.56	-1236.92	-2013	-1676	3482	1.536	1.0362	0	0	0	35683	19318	3917	23234		6.67	Si
SLV 5	12.76	-1465.33	-10313	-8588	-3484	1.92	1.92	-15974	13612	7317	35683	24147	4896	29043		8.34	Si
SLV 5	14.56	363.11	-3626	-3019	-3679	1.92	1.92	-5616	11540	6204	35683	24147	4896	29043		7.89	Si
SLV 10	12.76	-816.53	-9380	-7811	-2649	1.92	1.92	-14530	13323	7162	35683	24147	4896	29043		10.96	Si
SLV 10	14.56	22.06	-3660	-3048	-2428	1.92	1.92	-5670	11551	6210	35683	24147	4896	29043		11.96	Si
SLV 15	12.76	952.03	-1570	-1308	2549	1.92	1.0612	-2432	10903	3240	35683	24147	4896	29043		11.39	Si
SLV 15	14.56	-1367	-2849	-2373	3240	1.92	1.4406	-5896	11596	4677	35683	24147	4896	29043		8.96	Si
SLV 8	12.76	114.12	1922	1600	3886	1.536	1.92	0	0	0	35683	19318	3917	23234		5.98	Si
SLV 8	14.56	-1256.9	-1932	-1609	3664	1.536	0.9281	0	0	0	35683	19318	3917	23234		6.34	Si
SLV 16	12.76	959.58	-952	-793	2833	1.536	0	0	0	0	35683	19318	3917	23234		8.2	Si
SLV 16	14.56	-1398.09	-2724	-2268	3524	1.92	1.34	-6058	11628	4363	35683	24147	4896	29043		8.24	Si
SLV 9	12.76	-821.38	-9778	-8142	-2832	1.92	1.92	-15146	13446	7228	35683	24147	4896	29043		10.26	Si
SLV 9	14.56	42.04	-3741	-3115	-2611	1.92	1.92	-5795	11576	6223	35683	24147	4896	29043		11.12	Si
SLV 11	12.76	753.22	2059	1715	4355	1.536	1.7825	0	0	0	35683	19318	3917	23234		5.34	Si
SLV 11	14.56	-1557.98	-2128	-1772	4550	1.536	0.6833	0	0	0	35683	19318	3917	23234		5.11	Si
SLV 6	12.76	-1460.47	-9915	-8257	-3301	1.92	1.92	-15359	13488	7251	35683	24147	4896	29043		8.8	Si
SLV 6	14.56	343.12	-3545	-2952	-3497	1.92	1.92	-5491	11515	6190	35683	24147	4896	29043		8.31	Si
SLV 12	12.76	758.07	2457	2046	4537	1.536	1.92	0	0	0	35683	19318	3917	23234		5.12	Si
SLV 12	14.56	-1577.97	-2047	-1705	4733	1.536	0.5674	0	0	0	35683	19318	3917	23234		4.91	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.53	0	81	216.72	0	0	No, Trazione
SLV 12	179667	0.53	0	708	216.72	0	0	No, Trazione
SLV 8	179667	0.53	0	350	216.72	0	0	No, Trazione
SLV 11	179667	0.53	0	439	216.72	0	0	No, Trazione
SLV 16	179667	0.53	2959	-1591	216.72	218.36	1.01	Si
SLV 15	179667	0.53	3739	-2010	216.72	274.5	1.27	Si
SLV 4	179667	0.53	5178	-2784	216.72	376.5	1.74	Si
SLV 3	179667	0.53	5958	-3203	216.72	430.93	1.99	Si
SLV 14	179667	0.53	7409	-3983	216.72	530.58	2.45	Si
SLV 13	179667	0.53	8189	-4402	216.72	583.29	2.69	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-2738	-10720	-410	2.492	529.8	0.897	40.37787	12.56426	Si
SLV 6	-2709	-10231	-410	2.508	527.1	0.897	40.6589	12.56426	Si
SLV 9	-2548	-10286	-258	2.643	511.5	0.895	42.91275	12.56426	Si
SLV 10	-2519	-9796	-257	2.661	508.7	0.895	43.22451	12.56426	Si
SLV 7	-1882	1791	266	3.148	448.2	0.89	51.40216	12.56426	Si, Trazione
SLV 8	-1854	2280	266	3.174	445.5	0.89	51.83667	12.56426	Si, Trazione
SLV 11	-1693	2225	418	3.283	430.6	0.889	53.6624	12.56426	Si, Trazione
SLV 12	-1664	2714	419	3.312	428	0.889	54.13845	12.56426	Si, Trazione
SLV 1	-2667	-6984	-351	2.547	523	0.896	41.29921	7.33323	Si
SLV 2	-2623	-6223	-350	2.574	518.7	0.896	41.75525	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.814	SLU 37	Si
V_SLU	13.367	SLU 36	Si
PF_SLV	0	SLV 7	No
V_SLV	4.909	SLV 12	Si
PFFP_SLV	0	SLV 12	No
R_SLV	3.214	SLV 5	Si

Maschio 163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	5.826	-21.813	5.826	L7	L8	2.2	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 2	12.76	-81.24	-4735	-0.000012	0.0003743	0.0035	2.2	4815.65	6216.18	6216.18	76.51	No	Si
SLU 2	14.56	1162.09	-3619	-0.0000164	0.0003743	0.0035	2.2	3751.24	4067.2	4067.2	3.5	No	Si
SLU 52	12.76	-157.51	-5756	-0.0000151	0.0003743	0.0035	2.2	5750.44	7193.18	7193.18	45.67	No	Si
SLU 52	14.56	1506.15	-4299	-0.0000204	0.0003743	0.0035	2.2	4405.22	4745.73	4745.73	3.15	No	Si
SLU 1	12.76	-81.56	-4791	-0.0000122	0.0003743	0.0035	2.2	4867.63	6272	6272	76.9	No	Si
SLU 1	14.56	1206.27	-3633	-0.0000167	0.0003743	0.0035	2.2	3765.04	4081.43	4081.43	3.38	No	Si
SLU 18	12.76	-123.9	-4490	-0.0000117	0.0003743	0.0035	2.2	4585.25	5971.09	5971.09	48.19	No	Si
SLU 18	14.56	1167.65	-3380	-0.0000159	0.0003743	0.0035	2.2	3517.21	3826.62	3826.62	3.28	No	Si
SLU 61	12.76	-170.34	-5688	-0.000015	0.0003743	0.0035	2.2	5689.2	7128.69	7128.69	41.85	No	Si
SLU 61	14.56	1512.23	-4229	-0.0000203	0.0003743	0.0035	2.2	4338.29	4676.07	4676.07	3.09	No	Si
SLU 19	12.76	-123.72	-4456	-0.0000116	0.0003743	0.0035	2.2	4553.73	5937.85	5937.85	48	No	Si
SLU 19	14.56	1141.14	-3371	-0.0000157	0.0003743	0.0035	2.2	3508.85	3818.05	3818.05	3.35	No	Si
SLU 60	12.76	-170.53	-5721	-0.0000151	0.0003743	0.0035	2.2	5719.28	7160.33	7160.33	41.99	No	Si
SLU 60	14.56	1538.74	-4238	-0.0000205	0.0003743	0.0035	2.2	4346.39	4684.49	4684.49	3.04	No	Si
SLU 44	12.76	-127.87	-5967	-0.0000154	0.0003743	0.0035	2.2	5939.07	7393.6	7393.6	57.82	No	Si
SLU 44	14.56	1533.18	-4477	-0.000021	0.0003743	0.0035	2.2	4573.21	4921.81	4921.81	3.21	No	Si
SLU 43	12.76	-128.18	-6022	-0.0000155	0.0003743	0.0035	2.2	5988.64	7446.72	7446.72	58.1	No	Si
SLU 43	14.56	1577.36	-4491	-0.0000214	0.0003743	0.0035	2.2	4586.59	4935.91	4935.91	3.13	No	Si
SLU 10	12.76	-110.89	-4524	-0.0000117	0.0003743	0.0035	2.2	4617.91	6005.61	6005.61	54.16	No	Si
SLU 10	14.56	1135.06	-3441	-0.0000158	0.0003743	0.0035	2.2	3577.9	3888.9	3888.9	3.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	12.76	1143.16	-4628	-0.0000187	0.0005615	0.0035	2.2		5154.83	5154.83	4.51		Si
SLV 13	14.56	1786.42	-2623	-0.0000221	0.0005615	0.0035	2.2		3081.56	3081.56	1.72		Si
SLV 14	12.76	1228.52	-4119	-0.000018	0.0005615	0.0035	2.2		4633.12	4633.12	3.77		Si
SLV 14	14.56	1860.09	-2440	-0.0000256	0.0005615	0.0035	2.2		2890.34	2890.34	1.55		Si
SLV 10	12.76	-338.03	-7574	-0.0000206	0.0005615	0.0035	2.2		9088.36	9088.36	26.89		Si
SLV 10	14.56	2475.64	-4228	-0.0000292	0.0005615	0.0035	2.2		4744.56	4744.56	1.92		Si
SLV 15	12.76	1585.66	-2654	-0.0000186	0.0005615	0.0035	2.2		3114.58	3114.58	1.96		Si
SLV 15	14.56	1080.02	-2040	-0.0000126	0.0005615	0.0035	2.2		2467.44	2467.44	2.28		Si
SLV 9	12.76	-392.88	-7902	-0.0000218	0.0005615	0.0035	2.2		9404.59	9404.59	23.94		Si
SLV 9	14.56	2428.3	-4345	-0.0000285	0.0005615	0.0035	2.2		4864.72	4864.72	2		Si
SLV 12	12.76	1136.95	-993	-0.0002397	0.0005615	0.0035	1.76		1350.86	1350.86	1.19		Si
SLV 12	14.56	120.95	-2285	-0.0000063	0.0005615	0.0035	2.2		2727.72	2727.72	22.55		Si
SLV 6	12.76	-1225.22	-8484	-0.0000288	0.0005615	0.0035	2.2		9968.31	9968.31	8.14		Si
SLV 6	14.56	2308.13	-5149	-0.0000281	0.0005615	0.0035	2.2		5679.96	5679.96	2.46		Si
SLV 16	12.76	1671.01	-2145	-0.0000237	0.0005615	0.0035	2.2		2578.96	2578.96	1.54		Si
SLV 16	14.56	1153.68	-1857	-0.0000136	0.0005615	0.0035	2.2		2273.6	2273.6	1.97		Si
SLV 11	12.76	1082.09	-1321	-0.0000166	0.0005615	0.0035	2.2		1702.17	1702.17	1.57		Si
SLV 11	14.56	73.61	-2402	-0.0000062	0.0005615	0.0035	2.2		2850.84	2850.84	38.73		Si
SLD 14	12.76	481.78	-4582	-0.0000142	0.0005615	0.0035	2.2		5108.03	5108.03	10.6		Si
SLD 14	14.56	1481.67	-3208	-0.0000177	0.0005615	0.0035	2.2		3694.16	3694.16	2.49		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	12.76	162.28	-8648	-7201	-1788	2.2	2.2	-11690	8503	5238	35683	18446	5610	24056	No	13.45	Si
SLU 78	14.56	1525.87	-7514	-6257	-1789	2.2	2.2	-10157	8299	5112	35683	18446	5610	24056	No	13.44	Si
SLU 75	12.76	58.67	-7630	-6353	-1795	2.2	2.2	-10314	8320	5125	35683	18446	5610	24056	No	13.4	Si
SLU 75	14.56	1568.08	-6376	-5309	-1795	2.2	2.2	-8619	8094	4986	35683	18446	5610	24056	No	13.41	Si
SLU 66	12.76	88.13	-7874	-6557	-1773	2.2	2.2	-10644	8364	5152	35683	18446	5610	24056	No	13.57	Si
SLU 66	14.56	1621.62	-6562	-5464	-1775	2.2	2.2	-8871	8127	5006	35683	18446	5610	24056	No	13.56	Si
SLU 53	12.76	-6.13	-7062	-5881	-1779	2.2	2.2	-9547	8217	5062	35683	18446	5610	24056	No	13.52	Si
SLU 53	14.56	1621.45	-5708	-4753	-1780	2.2	2.2	-7716	7973	4912	35683	18446	5610	24056	No	13.52	Si
SLU 67	12.76	88.32	-7840	-6529	-1774	2.2	2.2	-10599	8358	5148	35683	18446	5610	24056	No	13.56	Si
SLU 67	14.56	1595.12	-6554	-5457	-1773	2.2	2.2	-8859	8126	5005	35683	18446	5610	24056	No	13.56	Si
SLU 77	12.76	162.09	-8682	-7229	-1788	2.2	2.2	-11736	8509	5242	35683	18446	5610	24056	No	13.46	Si
SLU 77	14.56	1552.37	-7522	-6264	-1790	2.2	2.2	-10168	8300	5113	35683	18446	5610	24056	No	13.44	Si
SLU 74	12.76	58.49	-7663	-6381	-1794	2.2	2.2	-10359	8326	5129	35683	18446	5610	24056	No	13.41	Si
SLU 74	14.56	1594.59	-6384	-5316	-1796	2.2	2.2	-8630	8095	4987	35683	18446	5610	24056	No	13.4	Si
SLU 57	12.76	97.65	-8048	-6701	-1773	2.2	2.2	-10879	8395	5171	35683	18446	5610	24056	No	13.57	Si
SLU 57	14.56	1552.73	-6837	-5693	-1773	2.2	2.2	-9242	8177	5037	35683	18446	5610	24056	No	13.56	Si
SLU 56	12.76	97.47	-8081	-6729	-1773	2.2	2.2	-10924	8401	5175	35683	18446	5610	24056	No	13.57	Si
SLU 56	14.56	1579.23	-6846	-5700	-1775	2.2	2.2	-9254	8178	5038	35683	18446	5610	24056	No	13.56	Si
SLU 54	12.76	-5.95	-7029	-5853	-1779	2.2	2.2	-9502	8211	5058	35683	18446	5610	24056	No	13.52	Si
SLU 54	14.56	1594.94	-5699	-4746	-1779	2.2	2.2	-7704	7972	4911	35683	18446	5610	24056	No	13.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	12.76	-1371.64	-5686	-4735	-15	2.2	2.2	-7686	11954	7364	35683	27669	5610	33279		2225.64	Si
SLV 3	14.56	521.65	-5111	-4256	-2143	2.2	2.2	-6910	11799	7268	35683	27669	5610	33279		15.53	Si
SLV 13	12.76	1143.16	-4628	-3854	-2456	2.2	2.2	-6257	11668	7188	35683	27669	5610	33279		13.55	Si
SLV 13	14.56	1786.42	-2623	-2184	-330	2.2	1.2565	-3545	11126	3914	35683	27669	5610	33279		100.98	Si
SLV 8	12.76	249.76	-1903	-1585	-1496	2.2	2.2	-2572	10931	6734	35683	27669	5610	33279		22.24	Si
SLV 8	14.56	-46.56	-3207	-2670	-2158	2.2	2.2	-4335	11284	6951	35683	27669	5610	33279		15.42	Si
SLV 12	12.76	1136.95	-993	-827	-2321	1.76	0	0	0	0	35683	22135	4488	26623		11.47	Si
SLV 12	14.56	120.95	-2285	-1903	-1711	2.2	2.2	-3089	11034	6797	35683	27669	5610	33279		19.45	Si
SLV 7	12.76	194.9	-2230	-1857	-1372	2.2	2.2	-3015	11020	6788	35683	27669	5610	33279		24.26	Si
SLV 7	14.56	-93.9	-3324	-2768	-2034	2.2	2.2	-4493	11315	6970	35683	27669	5610	33279		16.36	Si
SLV 15	12.76	1585.66	-2654	-2210	-2765	2.2	1.5077	-3588	11134	4700	35683	27669	5610	33279		12.04	Si
SLV 15	14.56	1080.02	-2040	-1699	-653	2.2	1.7116	-2757	10968	5257	35683	27669	5610	33279		50.93	Si
SLV 11	12.76	1082.09	-1321	-1100	-2197	2.2	0.8422	-1785	10774	2541	35683	27669	5610	33279		15.15	Si
SLV 11	14.56	73.61	-2402	-2001	-1587	2.2	2.2	-3248	11066	6817	35683	27669	5610	33279		20.97	Si
SLV 14	12.76	1228.52	-4119	-3430	-2650	2.2	2.2	-5568	11530	7103	35683	27669	5610	33279		12.56	Si
SLV 14	14.56	1860.09	-2440	-2032	-523	2.2	1.0131	-3298	11076	3142	35683	27669	5610	33279		63.62	Si
SLV 16	12.76	1671.01	-2145	-1786	-2958	2.2	0.9626	-2899	10997	2964	35683	27669	5610	33279		11.25	Si
SLV 16	14.56	1153.68	-1857	-1547	-847	2.2	1.4366	-2511	10919	4392	35683	27669	5610	33279		39.29	Si
SLV 4	12.76	-1286.29	-5176	-4310	-208	2.2	2.2	-6997	11816	7279	35683	27669	5610	33279		159.63	Si
SLV 4	14.56	595.32	-4929	-4104	-2336	2.2	2.2	-6663	11749	7238	35683	27669	5610	33279		14.24	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.53	0	-1425	248.33	0	0	No, e>t/2
SLV 11	179667	0.53	0	-1670	248.33	0	0	No, e>t/2
SLV 16	179667	0.53	3275	-2018	248.33	276.4	1.11	Si
SLV 8	179667	0.53	3850	-2372	248.33	323.64	1.3	Si
SLV 15	179667	0.53	3893	-2398	248.33	327.19	1.32	Si
SLV 7	179667	0.53	4247	-2616	248.33	356.07	1.43	Si
SLV 14	179667	0.53	5731	-3530	248.33	475.71	1.92	Si
SLV 13	179667	0.53	6349	-3911	248.33	524.78	2.11	Si
SLV 4	179667	0.53	8397	-5173	248.33	684.38	2.76	Si
SLV 3	179667	0.53	9015	-5554	248.33	731.59	2.95	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-3641	-1409	577	2.243	656.4	0.901	36.17435	12.56426	Si
SLV 8	-3568	-1050	574	2.274	649.2	0.901	36.69303	12.56426	Si
SLV 11	-3044	-168	333	2.568	598.1	0.896	41.6471	12.56426	Si
SLV 12	-2971	191	330	2.607	591.1	0.896	42.3151	12.56426	Si, Trazione
SLV 5	-2893	-10826	-340	2.648	583.5	0.895	43.01182	12.56426	Si
SLV 6	-2820	-10466	-343	2.689	576.5	0.894	43.70158	12.56426	Si
SLV 9	-2295	-9584	-585	2.972	526.5	0.891	48.50076	12.56426	Si
SLV 10	-2223	-9225	-588	3.025	519.7	0.89	49.38411	12.56426	Si
SLV 3	-4096	-6253	542	2.078	701.2	0.905	33.36837	7.33323	Si
SLV 4	-3983	-5693	537	2.119	690	0.904	34.06106	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.044	SLU 60	Si
V_SLU	13.397	SLU 74	Si
PF_SLV	1.188	SLV 12	Si
V_SLV	11.25	SLV 16	Si
PFFP_SLV	0	SLV 11	No
R_SLV	2.879	SLV 7	Si

Maschio 164

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.314	-24.633	-3.314	L7	L8	2.14	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 71	12.76	-361.38	-6423	-0.0000187	0.0003743	0.0035	2.14	6149.36	7615.67	7615.67	21.07	No	Si
SLU 71	14.56	-2027.44	-5231	-0.0000275	0.0003743	0.0035	2.14	5116.94	6513.74	6513.74	3.21	No	Si
SLU 36	12.76	-200.84	-5528	-0.0000152	0.0003743	0.0035	2.14	5378.53	6784.94	6784.94	33.78	No	Si
SLU 36	14.56	-1891.01	-4805	-0.0000254	0.0003743	0.0035	2.14	4736.04	6116.47	6116.47	3.23	No	Si
SLU 80	12.76	-241.93	-6413	-0.0000178	0.0003743	0.0035	2.14	6140.46	7605.79	7605.79	31.44	No	Si
SLU 80	14.56	-2048.08	-5249	-0.0000277	0.0003743	0.0035	2.14	5133.43	6530.78	6530.78	3.19	No	Si
SLU 30	12.76	-304.66	-5362	-0.0000156	0.0003743	0.0035	2.14	5232.89	6633.45	6633.45	21.77	No	Si
SLU 30	14.56	-1810.33	-4468	-0.000024	0.0003743	0.0035	2.14	4430.8	5790.79	5790.79	3.2	No	Si
SLU 37	12.76	-157.81	-5222	-0.0000142	0.0003743	0.0035	2.14	5109.23	6505.76	6505.76	41.23	No	Si
SLU 37	14.56	-1859.02	-4495	-0.0000245	0.0003743	0.0035	2.14	4454.81	5816.25	5816.25	3.13	No	Si
SLU 35	12.76	-187.14	-5463	-0.000015	0.0003743	0.0035	2.14	5321.82	6725.75	6725.75	35.94	No	Si
SLU 35	14.56	-1905.04	-4809	-0.0000255	0.0003743	0.0035	2.14	4739.51	6120.12	6120.12	3.21	No	Si
SLU 29	12.76	-290.96	-5297	-0.0000153	0.0003743	0.0035	2.14	5175.81	6574.54	6574.54	22.6	No	Si
SLU 29	14.56	-1824.35	-4472	-0.0000241	0.0003743	0.0035	2.14	4434.31	5794.52	5794.52	3.18	No	Si
SLU 38	12.76	-171.51	-5287	-0.0000144	0.0003743	0.0035	2.14	5166.49	6564.93	6564.93	38.28	No	Si
SLU 38	14.56	-1845	-4491	-0.0000243	0.0003743	0.0035	2.14	4451.3	5812.52	5812.52	3.15	No	Si
SLU 72	12.76	-375.08	-6488	-0.000019	0.0003743	0.0035	2.14	6203.89	7675.63	7675.63	20.46	No	Si
SLU 72	14.56	-2013.42	-5227	-0.0000274	0.0003743	0.0035	2.14	5113.53	6510.2	6510.2	3.23	No	Si
SLU 79	12.76	-228.23	-6348	-0.0000176	0.0003743	0.0035	2.14	6085.76	7545.21	7545.21	33.06	No	Si
SLU 79	14.56	-2062.11	-5253	-0.0000278	0.0003743	0.0035	2.14	5136.84	6534.31	6534.31	3.17	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	12.76	1500.58	2857	0.1934419	0.0005615	0.0035	1.712		0	0	0		No
SLV 9	14.56	-2639.6	-2488	-0.0001383	0.0005615	0.0035	1.712		3885.04	3885.04	1.47		Si
SLD 6	12.76	622.43	-1346	-0.0000078	0.0005615	0.0035	2.14		1669.64	1669.64	2.68		Si
SLD 6	14.56	-1748.61	-3161	-0.0000216	0.0005615	0.0035	2.14		4565.26	4565.26	2.61		Si
SLV 13	12.76	140.91	-1642	-0.000005	0.0005615	0.0035	2.14		1975.91	1975.91	14.02		Si
SLV 13	14.56	-1371.68	-1974	-0.0000185	0.0005615	0.0035	1.712		3362.05	3362.05	2.45		Si
SLV 6	12.76	1632.45	2309	0.1524025	0.0005615	0.0035	1.712		0	0	0		No
SLV 6	14.56	-2706.89	-3185	-0.0000513	0.0005615	0.0035	1.712		4589.39	4589.39	1.7		Si
SLV 14	12.76	164.63	-2273	-0.0000067	0.0005615	0.0035	2.14		2627.15	2627.15	15.96		Si
SLV 14	14.56	-1348.99	-2117	-0.0000172	0.0005615	0.0035	1.712		3507.68	3507.68	2.6		Si
SLV 10	12.76	1515.83	2451	0.1639186	0.0005615	0.0035	1.712		0	0	0		No
SLV 10	14.56	-2625.02	-2580	-0.0001102	0.0005615	0.0035	1.712		3977.86	3977.86	1.52		Si
SLV 5	12.76	1617.2	2715	0.1821418	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	14.56	-2721.47	-3094	-0.0000572	0.0005615	0.0035	1.712		4497.41	4497.41	1.65		Si
SLD 10	12.76	572.11	-1286	-0.0000072	0.0005615	0.0035	2.14		1606.62	1606.62	2.81		Si
SLD 10	14.56	-1713.68	-2903	-0.0000214	0.0005615	0.0035	1.712		4304.95	4304.95	2.51		Si
SLD 9	12.76	565.45	-1109	-0.0000069	0.0005615	0.0035	2.14		1421.87	1421.87	2.51		Si
SLD 9	14.56	-1720.05	-2863	-0.0000216	0.0005615	0.0035	1.712		4264.62	4264.62	2.48		Si
SLD 5	12.76	615.78	-1169	-0.0000075	0.0005615	0.0035	2.14		1485.13	1485.13	2.41		Si
SLD 5	14.56	-1754.97	-3121	-0.0000217	0.0005615	0.0035	2.14		4525.1	4525.1	2.58		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	12.76	-127.12	-5926	-4935	1774	2.14	2.14	-8236	8043	4819	35683	17943	5457	23399	No	13.19	Si
SLU 83	14.56	-1732.56	-4751	-3956	1771	2.14	2.116	-6603	7825	4636	35683	17943	5457	23399	No	13.21	Si
SLU 78	12.76	-271.26	-6654	-5541	1945	2.14	2.14	-9247	8177	4900	35683	17943	5457	23399	No	12.03	Si
SLU 78	14.56	-2094.1	-5563	-4633	1942	2.14	2.0807	-7995	8011	4667	35683	17943	5457	23399	No	12.05	Si
SLU 79	12.76	-228.23	-6348	-5286	1948	2.14	2.14	-8822	8121	4866	35683	17943	5457	23399	No	12.01	Si
SLU 79	14.56	-2062.11	-5253	-4374	1945	2.14	2.0323	-7727	7975	4538	35683	17943	5457	23399	No	12.03	Si
SLU 80	12.76	-241.93	-6413	-5340	1892	2.14	2.14	-8912	8133	4873	35683	17943	5457	23399	No	12.37	Si
SLU 80	14.56	-2048.08	-5249	-4371	1889	2.14	2.0395	-7694	7970	4552	35683	17943	5457	23399	No	12.39	Si
SLU 77	12.76	-257.57	-6589	-5487	2001	2.14	2.14	-9157	8165	4893	35683	17943	5457	23399	No	11.69	Si
SLU 77	14.56	-2108.13	-5567	-4636	1998	2.14	2.074	-8027	8015	4654	35683	17943	5457	23399	No	11.71	Si
SLU 35	12.76	-187.14	-5463	-4549	1791	2.14	2.14	-7592	7957	4768	35683	17943	5457	23399	No	13.07	Si
SLU 35	14.56	-1905.04	-4809	-4004	1788	2.14	2.0214	-7108	7892	4467	35683	17943	5457	23399	No	13.09	Si
SLU 69	12.76	-390.72	-6664	-5549	1850	2.14	2.14	-9262	8179	4901	35683	17943	5457	23399	No	12.65	Si
SLU 69	14.56	-2073.46	-5545	-4617	1847	2.14	2.0881	-7940	8003	4679	35683	17943	5457	23399	No	12.67	Si
SLU 71	12.76	-361.38	-6423	-5349	1797	2.14	2.14	-8927	8135	4874	35683	17943	5457	23399	No	13.02	Si
SLU 71	14.56	-2027.44	-5231	-4356	1794	2.14	2.0472	-7638	7963	4564	35683	17943	5457	23399	No	13.04	Si
SLU 70	12.76	-404.42	-6729	-5603	1794	2.14	2.14	-9351	8191	4908	35683	17943	5457	23399	No	13.05	Si
SLU 70	14.56	-2059.44	-5541	-4614	1791	2.14	2.0949	-7909	7999	4692	35683	17943	5457	23399	No	13.07	Si
SLU 56	12.76	-272.44	-6233	-5190	1811	2.14	2.14	-8662	8099	4853	35683	17943	5457	23399	No	12.92	Si
SLU 56	14.56	-1894.13	-5138	-4278	1809	2.14	2.104	-7140	7896	4652	35683	17943	5457	23399	No	12.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	12.76	1617.2	2715	2261	7208	1.712	1.423	0	0	0	35683	21531	4366	25897		3.59	Si
SLV 5	14.56	-2721.47	-3094	-2576	6640	1.712	0.571	0	0	0	35683	21531	4366	25897		3.9	Si
SLV 6	12.76	1632.45	2309	1923	7022	1.712	1.0893	0	0	0	35683	21531	4366	25897		3.69	Si
SLV 6	14.56	-2706.89	-3185	-2652	6454	1.712	0.6606	0	0	0	35683	21531	4366	25897		4.01	Si
SLV 11	12.76	-1983.36	-10792	-8987	-4991	2.14	2.14	-14998	13416	8039	35683	26914	5457	32371		6.49	Si
SLV 11	14.56	721.72	-3112	-2591	-4425	2.14	2.14	-4324	11282	6760	35683	26914	5457	32371		7.32	Si
SLD 9	12.76	565.45	-1109	-923	3458	2.14	1.6799	-1541	10725	5045	35683	26914	5457	32371		9.36	Si
SLD 9	14.56	-1720.05	-2863	-2384	3584	1.712	1.4074	0	0	0	35683	21531	4366	25897		7.23	Si
SLV 7	12.76	-1866.74	-10934	-9105	-4317	2.14	2.14	-15195	13456	8063	35683	26914	5457	32371		7.5	Si
SLV 7	14.56	639.85	-3717	-3095	-4620	2.14	2.14	-5166	11450	6861	35683	26914	5457	32371		7.01	Si
SLV 12	12.76	-1968.11	-11198	-9324	-5178	2.14	2.14	-15562	13529	8106	35683	26914	5457	32371		6.25	Si
SLV 12	14.56	736.3	-3203	-2667	-4611	2.14	2.14	-4451	11307	6775	35683	26914	5457	32371		7.02	Si
SLV 9	12.76	1500.58	2857	2379	6534	1.712	1.6342	0	0	0	35683	21531	4366	25897		3.96	Si
SLV 9	14.56	-2639.6	-2488	-2072	6835	1.712	0.0275	0	0	0	35683	21531	4366	25897		3.79	Si
SLV 10	12.76	1515.83	2451	2041	6348	1.712	1.3548	0	0	0	35683	21531	4366	25897		4.08	Si
SLV 10	14.56	-2625.02	-2580	-2148	6648	1.712	0.1574	0	0	0	35683	21531	4366	25897		3.9	Si
SLD 10	12.76	572.11	-1286	-1071	3377	2.14	1.8751	-1787	10774	5657	35683	26914	5457	32371		9.59	Si
SLD 10	14.56	-1713.68	-2903	-2417	3502	1.712	1.4388	0	0	0	35683	21531	4366	25897		7.39	Si
SLV 8	12.76	-1851.49	-11340	-9443	-4504	2.14	2.14	-15759	13568	8130	35683	26914	5457	32371		7.19	Si
SLV 8	14.56	654.43	-3809	-3172	-4806	2.14	2.14	-5293	11475	6876	35683	26914	5457	32371		6.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.53	0	254	241.56	0	0	No, Trazione
SLV 5	179667	0.53	0	533	241.56	0	0	No, Trazione
SLV 9	179667	0.53	0	495	241.56	0	0	No, Trazione
SLV 10	179667	0.53	0	216	241.56	0	0	No, Trazione
SLV 1	179667	0.53	3771	-2260	241.56	308.53	1.28	Si
SLV 13	179667	0.53	3980	-2385	241.56	325.14	1.35	Si
SLV 2	179667	0.53	4496	-2694	241.56	366.04	1.52	Si
SLV 14	179667	0.53	4705	-2819	241.56	382.49	1.58	Si
SLV 3	179667	0.53	7939	-4757	241.56	631.37	2.61	Si
SLV 15	179667	0.53	8148	-4882	241.56	647.03	2.68	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2907	-11482	410	2.579	576.6	0.896	41.84251	12.56426	Si
SLV 7	-2875	-10980	410	2.596	573.5	0.895	42.14352	12.56426	Si
SLV 12	-2436	-10757	227	2.911	531.4	0.892	47.43039	12.56426	Si
SLV 11	-2404	-10254	226	2.933	528.4	0.892	47.8072	12.56426	Si
SLV 6	-2344	975	-228	2.976	522.7	0.891	48.51607	12.56426	Si, Trazione
SLV 5	-2312	1478	-229	2.999	519.7	0.891	48.90645	12.56426	Si, Trazione
SLV 10	-1874	1700	-412	3.31	478.7	0.889	54.10294	12.56426	Si, Trazione
SLV 9	-1842	2203	-412	3.339	475.8	0.889	54.58719	12.56426	Si, Trazione
SLV 4	-3268	-8108	401	2.396	611.6	0.899	38.75148	7.33323	Si
SLV 3	-3218	-7326	400	2.42	606.8	0.898	39.1567	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.129	SLU 37	Si
V_SLU	11.694	SLU 77	Si
PF_SLV	0	SLV 5	No
V_SLV	3.593	SLV 5	Si
PFFP_SLV	0	SLV 10	No
R_SLV	3.33	SLV 8	Si

Maschio 165

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.593	-3.314	L7	L8	2.28	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	13.86	61.66	-5189	-0.0000125	0.0003743	0.0035	2.28	5443.55	5849.44	5849.44	94.87	No	Si
SLU 40	14.66	205.85	-3919	-0.0000104	0.0003743	0.0035	2.28	4198.54	4550.69	4550.69	22.11	No	Si
SLU 31	13.86	44.2	-5233	-0.0000125	0.0003743	0.0035	2.28	5485.56	5893.75	5893.75	133.34	No	Si
SLU 31	14.66	204.71	-3948	-0.0000105	0.0003743	0.0035	2.28	4227.62	4580.86	4580.86	22.38	No	Si
SLU 42	13.86	130.97	-5942	-0.0000148	0.0003743	0.0035	2.28	6154.55	6600.81	6600.81	50.4	No	Si
SLU 42	14.66	247.61	-4617	-0.0000123	0.0003743	0.0035	2.28	4889.32	5268.7	5268.7	21.28	No	Si
SLU 30	13.86	148.9	-6811	-0.000017	0.0003743	0.0035	2.28	6951.23	7454.13	7454.13	50.06	No	Si
SLU 30	14.66	274.34	-5397	-0.0000144	0.0003743	0.0035	2.28	5641.44	6058.43	6058.43	22.08	No	Si
SLU 34	13.86	113.52	-5986	-0.0000148	0.0003743	0.0035	2.28	6195.4	6644.27	6644.27	58.53	No	Si
SLU 34	14.66	246.47	-4646	-0.0000124	0.0003743	0.0035	2.28	4917.69	5298.45	5298.45	21.5	No	Si
SLU 38	13.86	184.87	-6729	-0.000017	0.0003743	0.0035	2.28	6877.4	7374.27	7374.27	39.89	No	Si
SLU 38	14.66	284.87	-5339	-0.0000143	0.0003743	0.0035	2.28	5586.58	6000.78	6000.78	21.07	No	Si
SLU 41	13.86	134.04	-5929	-0.0000148	0.0003743	0.0035	2.28	6142.22	6587.69	6587.69	49.15	No	Si
SLU 41	14.66	242.56	-4610	-0.0000123	0.0003743	0.0035	2.28	4882.98	5262.06	5262.06	21.69	No	Si
SLU 29	13.86	151.96	-6798	-0.000017	0.0003743	0.0035	2.28	6939.31	7441.58	7441.58	48.97	No	Si
SLU 29	14.66	269.28	-5390	-0.0000143	0.0003743	0.0035	2.28	5635.28	6051.95	6051.95	22.47	No	Si
SLU 37	13.86	187.93	-6716	-0.000017	0.0003743	0.0035	2.28	6865.43	7361.29	7361.29	39.17	No	Si
SLU 37	14.66	279.81	-5333	-0.0000142	0.0003743	0.0035	2.28	5580.41	5994.23	5994.23	21.42	No	Si
SLU 80	13.86	183.27	-7919	-0.0000199	0.0003743	0.0035	2.28	7927.61	8358.76	8358.76	45.61	No	Si
SLU 80	14.66	305.25	-6181	-0.0000164	0.0003743	0.0035	2.28	6375.99	6836.88	6836.88	22.4	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	13.86	-424.85	-7469	-0.0000201	0.0005615	0.0035	2.28		9319.34	9319.34	21.94		Si
SLV 12	14.66	926.07	-5240	-0.0000179	0.0005615	0.0035	2.28		6007.44	6007.44	6.49		Si
SLV 11	13.86	-445.25	-7424	-0.0000201	0.0005615	0.0035	2.28		9274.74	9274.74	20.83		Si
SLV 11	14.66	951.42	-5198	-0.0000179	0.0005615	0.0035	2.28		5963.02	5963.02	6.27		Si
SLV 1	13.86	736.44	-3081	-0.0000116	0.0005615	0.0035	2.28		3709.74	3709.74	5.04		Si
SLV 1	14.66	-439.03	-2422	-0.0000083	0.0005615	0.0035	2.28		4047.98	4047.98	9.22		Si
SLV 5	13.86	459.61	-2184	-0.0000078	0.0005615	0.0035	2.28		2734.53	2734.53	5.95		Si
SLV 5	14.66	-627.07	-1924	-0.0000082	0.0005615	0.0035	2.28		3505.06	3505.06	5.59		Si
SLV 6	13.86	480.02	-2229	-0.0000081	0.0005615	0.0035	2.28		2783.74	2783.74	5.8		Si
SLV 6	14.66	-652.42	-1966	-0.0000085	0.0005615	0.0035	2.28		3551.43	3551.43	5.44		Si
SLV 2	13.86	768.19	-3150	-0.000012	0.0005615	0.0035	2.28		3785.01	3785.01	4.93		Si
SLV 2	14.66	-478.47	-2488	-0.0000087	0.0005615	0.0035	2.28		4119.47	4119.47	8.61		Si
SLV 8	13.86	-29.77	-6859	-0.0000162	0.0005615	0.0035	2.28		8711.4	8711.4	292.66		Si
SLV 8	14.66	681.14	-4821	-0.0000154	0.0005615	0.0035	2.28		5568.67	5568.67	8.18		Si
SLV 15	13.86	-733.43	-6503	-0.0000197	0.0005615	0.0035	2.28		8348.13	8348.13	11.38		Si
SLV 15	14.66	777.46	-4676	-0.0000156	0.0005615	0.0035	2.28		5414.71	5414.71	6.96		Si
SLV 7	13.86	-50.17	-6814	-0.0000162	0.0005615	0.0035	2.28		8665.97	8665.97	172.73		Si
SLV 7	14.66	706.49	-4779	-0.0000154	0.0005615	0.0035	2.28		5523.71	5523.71	7.82		Si
SLV 16	13.86	-701.68	-6573	-0.0000197	0.0005615	0.0035	2.28		8419.54	8419.54	12		Si
SLV 16	14.66	738.02	-4742	-0.0000155	0.0005615	0.0035	2.28		5484.7	5484.7	7.43		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	13.86	176.57	-8272	-6888	-988	2.28	2.28	-10790	8383	5352	35683	19117	5814	24931	No	25.23	Si
SLU 77	14.66	290.9	-6518	-5427	-833	2.28	2.28	-8502	8078	5157	35683	19117	5814	24931	No	29.94	Si
SLU 78	13.86	173.51	-8285	-6899	-1009	2.28	2.28	-10807	8385	5353	35683	19117	5814	24931	No	24.71	Si
SLU 78	14.66	295.96	-6524	-5433	-845	2.28	2.28	-8510	8079	5158	35683	19117	5814	24931	No	29.49	Si
SLU 70	13.86	137.53	-8367	-6967	-1079	2.28	2.28	-10914	8400	5362	35683	19117	5814	24931	No	23.1	Si
SLU 70	14.66	285.43	-6582	-5481	-887	2.28	2.28	-8585	8089	5164	35683	19117	5814	24931	No	28.1	Si
SLU 71	13.86	150.36	-7987	-6651	-1024	2.28	2.28	-10418	8334	5320	35683	19117	5814	24931	No	24.35	Si
SLU 71	14.66	289.67	-6232	-5189	-849	2.28	2.28	-8129	8028	5125	35683	19117	5814	24931	No	29.37	Si
SLU 66	13.86	71.28	-7601	-6330	-1013	2.28	2.28	-9915	8266	5277	35683	19117	5814	24931	No	24.61	Si
SLU 66	14.66	238.61	-5878	-4895	-837	2.28	2.28	-7667	7967	5086	35683	19117	5814	24931	No	29.8	Si
SLU 69	13.86	140.59	-8354	-6956	-1058	2.28	2.28	-10897	8397	5361	35683	19117	5814	24931	No	23.56	Si
SLU 69	14.66	280.37	-6575	-5475	-875	2.28	2.28	-8577	8088	5163	35683	19117	5814	24931	No	28.51	Si
SLU 68	13.86	75.94	-7257	-6043	-1014	2.28	2.28	-9466	8207	5239	35683	19117	5814	24931	No	24.6	Si
SLU 68	14.66	256.33	-5545	-4617	-832	2.28	2.28	-7233	7909	5049	35683	19117	5814	24931	No	29.97	Si
SLU 72	13.86	147.3	-8001	-6662	-1045	2.28	2.28	-10436	8336	5322	35683	19117	5814	24931	No	23.86	Si
SLU 72	14.66	294.72	-6238	-5195	-861	2.28	2.28	-8137	8029	5126	35683	19117	5814	24931	No	28.94	Si
SLU 67	13.86	68.22	-7615	-6341	-1034	2.28	2.28	-9932	8269	5279	35683	19117	5814	24931	No	24.11	Si
SLU 67	14.66	243.66	-5884	-4900	-849	2.28	2.28	-7675	7968	5087	35683	19117	5814	24931	No	29.36	Si
SLU 80	13.86	183.27	-7919	-6594	-975	2.28	2.28	-10329	8322	5313	35683	19117	5814	24931	No	25.58	Si
SLU 80	14.66	305.25	-6181	-5147	-820	2.28	2.28	-8062	8019	5120	35683	19117	5814	24931	No	30.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	13.86	768.19	-3150	-2623	2215	2.28	2.28	-4109	11238	7175	35683	28675	5814	34489		15.57	Si
SLV 2	14.66	-478.47	-2488	-2072	1185	2.28	2.28	-3246	11066	7064	35683	28675	5814	34489		29.1	Si
SLV 6	13.86	480.02	-2229	-1856	2506	2.28	2.28	-2908	10998	7021	35683	28675	5814	34489		13.76	Si
SLV 6	14.66	-652.42	-1966	-1637	1149	2.28	2.28	-2565	10930	6978	35683	28675	5814	34489		30.03	Si
SLV 1	13.86	736.44	-3081	-2565	2131	2.28	2.28	-4018	11220	7163	35683	28675	5814	34489		16.18	Si
SLV 1	14.66	-439.03	-2422	-2017	1097	2.28	2.28	-3159	11049	7053	35683	28675	5814	34489		31.44	Si
SLV 15	13.86	-733.43	-6503	-5415	-3554	2.28	2.28	-8482	12113	7733	35683	28675	5814	34489		9.7	Si
SLV 15	14.66	777.46	-4676	-3894	-2300	2.28	2.28	-6099	11636	7429	35683	28675	5814	34489		15	Si
SLV 7	13.86	-50.17	-6814	-5674	-2594	2.28	2.28	-8888	12194	7785	35683	28675	5814	34489		13.3	Si
SLV 7	14.66	706.49	-4779	-3979	-1475	2.28	2.28	-6233	11663	7446	35683	28675	5814	34489		23.38	Si
SLV 16	13.86	-701.68	-6573	-5473	-3470	2.28	2.28	-8573	12131	7745	35683	28675	5814	34489		9.94	Si
SLV 16	14.66	738.02	-4742	-3949	-2212	2.28	2.28	-6185	11654	7440	35683	28675	5814	34489		15.59	Si
SLV 8	13.86	-29.77	-6859	-5711	-2540	2.28	2.28	-8946	12206	7792	35683	28675	5814	34489		13.58	Si
SLV 8	14.66	681.14	-4821	-4015	-1419	2.28	2.28	-6289	11674	7453	35683	28675	5814	34489		24.31	Si
SLV 5	13.86	459.61	-2184	-1819	2453	2.28	2.28	-2849	10987	7014	35683	28675	5814	34489		14.06	Si
SLV 5	14.66	-627.07	-1924	-1602	1092	2.28	2.28	-2509	10919	6970	35683	28675	5814	34489		31.59	Si
SLV 11	13.86	-445.25	-7424	-6182	-3845	2.28	2.28	-9684	12353	7886	35683	28675	5814	34489		8.97	Si
SLV 11	14.66	951.42	-5198	-4328	-2263	2.28	2.28	-6780	11773	7516	35683	28675	5814	34489		15.24	Si
SLV 12	13.86	-424.85	-7469	-6219	-3792	2.28	2.28	-9742	12365	7894	35683	28675	5814	34489		9.1	Si
SLV 12	14.66	926.07	-5240	-4364	-2207	2.28	2.28	-6835	11784	7523	35683	28675	5814	34489		15.63	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.53	4803	-3066	257.36	415.76	1.62	Si
SLV 6	179667	0.53	4908	-3133	257.36	424.54	1.65	Si
SLV 9	179667	0.53	4962	-3168	257.36	429.1	1.67	Si
SLV 10	179667	0.53	5067	-3235	257.36	437.86	1.7	Si
SLV 1	179667	0.53	6542	-4176	257.36	559.66	2.17	Si
SLV 2	179667	0.53	6705	-4281	257.36	572.98	2.23	Si
SLV 13	179667	0.53	7074	-4516	257.36	602.93	2.34	Si
SLV 14	179667	0.53	7237	-4620	257.36	616.14	2.39	Si
SLV 3	179667	0.53	8217	-5246	257.36	694.91	2.7	Si
SLV 4	179667	0.53	8380	-5350	257.36	707.91	2.75	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-4077	-8460	625	2.125	710.1	0.904	34.17833	12.56426	Si
SLV 11	-4052	-8369	625	2.134	707.6	0.903	34.33199	12.56426	Si
SLV 8	-3684	-8799	581	2.282	671.5	0.9	36.83058	12.56426	Si
SLV 7	-3659	-8708	581	2.292	669	0.9	37.00781	12.56426	Si
SLV 10	-2137	-2864	-567	3.161	523.1	0.89	51.64751	12.56426	Si
SLV 9	-2112	-2773	-566	3.182	520.7	0.889	51.98521	12.56426	Si
SLV 6	-1744	-3203	-610	3.493	487.1	0.889	57.11	12.56426	Si
SLV 5	-1719	-3112	-610	3.518	484.8	0.889	57.51655	12.56426	Si
SLV 16	-3864	-6132	259	2.268	689.1	0.902	36.54199	7.33323	Si
SLV 15	-3824	-5990	259	2.283	685.2	0.902	36.80792	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	21.065	SLU 38	Si
V_SLU	23.103	SLU 70	Si
PF_SLV	4.927	SLV 2	Si
V_SLV	8.969	SLV 11	Si
PFFP_SLV	1.615	SLV 5	Si
R_SLV	2.72	SLV 12	Si

Maschio 166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.314	-18.813	-3.314	L7	L8	0.55	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 16	13.86	78.21	-1817	-0.0000263	0.0003743	0.0035	0.55	441.82	467.8	467.8	5.98	No	Si
SLU 16	14.66	-28.54	-1708	-0.0000198	0.0003743	0.0035	0.55	418.45	498.43	498.43	17.47	No	Si
SLU 77	13.86	99.42	-2485	-0.0000356	0.0003743	0.0035	0.55	575.12	603.49	603.49	6.07	No	Si
SLU 77	14.66	-27.54	-2357	-0.0000263	0.0003743	0.0035	0.55	550.78	644.07	644.07	23.39	No	Si
SLU 17	13.86	77.9	-1818	-0.0000262	0.0003743	0.0035	0.55	441.96	467.94	467.94	6.01	No	Si
SLU 17	14.66	-27.48	-1706	-0.0000196	0.0003743	0.0035	0.55	418.07	498.02	498.02	18.12	No	Si
SLU 79	13.86	94.56	-2345	-0.0000335	0.0003743	0.0035	0.55	548.43	574.31	574.31	6.07	No	Si
SLU 79	14.66	-27.28	-2219	-0.0000248	0.0003743	0.0035	0.55	523.84	614.08	614.08	22.51	No	Si
SLU 14	13.86	83.07	-1958	-0.0000282	0.0003743	0.0035	0.55	471.1	495.65	495.65	5.97	No	Si
SLU 14	14.66	-28.8	-1846	-0.0000212	0.0003743	0.0035	0.55	447.87	530.18	530.18	18.41	No	Si
SLU 59	13.86	92.54	-2213	-0.0000319	0.0003743	0.0035	0.55	522.72	547.27	547.27	5.91	No	Si
SLU 59	14.66	-30.32	-2033	-0.0000233	0.0003743	0.0035	0.55	486.54	573.03	573.03	18.9	No	Si
SLU 56	13.86	97.71	-2353	-0.000034	0.0003743	0.0035	0.55	549.92	575.91	575.91	5.89	No	Si
SLU 56	14.66	-31.64	-2173	-0.0000248	0.0003743	0.0035	0.55	514.74	604.1	604.1	19.1	No	Si
SLU 15	13.86	82.75	-1958	-0.0000282	0.0003743	0.0035	0.55	471.24	495.79	495.79	5.99	No	Si
SLU 15	14.66	-27.74	-1844	-0.0000211	0.0003743	0.0035	0.55	447.5	529.77	529.77	19.1	No	Si
SLU 57	13.86	97.4	-2354	-0.0000339	0.0003743	0.0035	0.55	550.05	576.05	576.05	5.91	No	Si
SLU 57	14.66	-30.58	-2171	-0.0000247	0.0003743	0.0035	0.55	514.38	603.71	603.71	19.74	No	Si
SLU 58	13.86	92.85	-2213	-0.000032	0.0003743	0.0035	0.55	522.58	547.13	547.13	5.89	No	Si
SLU 58	14.66	-31.38	-2035	-0.0000234	0.0003743	0.0035	0.55	486.9	573.44	573.44	18.28	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	13.86	15.65	-1426	-0.0000154	0.0005615	0.0035	0.55		390.51	390.51	24.96		Si
SLV 12	14.66	251.69	-1089	-0.0000924	0.0005615	0.0035	0.55		305.72	305.72	1.21		Si
SLV 13	13.86	-161.8	-276	-0.0006035	0.0005615	0.0035	0.44		142.79	142.79	0.88		No
SLV 13	14.66	290.11	-927	-0.0039256	0.0005615	0.0035	0.44		263.98	263.98	0.91		No
SLV 4	13.86	267.7	-2771	-0.0000564	0.0005615	0.0035	0.55		701.49	701.49	2.62		Si
SLV 4	14.66	-307.65	-1822	-0.0000626	0.0005615	0.0035	0.44		536.64	536.64	1.74		Si
SLV 6	13.86	100.39	-1685	-0.000027	0.0005615	0.0035	0.55		454.64	454.64	4.53		Si
SLV 6	14.66	-281.24	-1672	-0.0000568	0.0005615	0.0035	0.44		500.54	500.54	1.78		Si
SLV 1	13.86	241.08	-2546	-0.000051	0.0005615	0.0035	0.55		655.91	655.91	2.72		Si
SLV 1	14.66	-387.82	-1889	-0.0001012	0.0005615	0.0035	0.44		552.86	552.86	1.43		Si
SLV 2	13.86	256.86	-2645	-0.0000539	0.0005615	0.0035	0.55		675.95	675.95	2.63		Si
SLV 2	14.66	-406.51	-1910	-0.0001158	0.0005615	0.0035	0.44		557.75	557.75	1.37		Si
SLV 11	13.86	5.51	-1362	-0.0000137	0.0005615	0.0035	0.55		374.68	374.68	68.02		Si
SLV 11	14.66	263.7	-1076	-0.0001381	0.0005615	0.0035	0.55		302.39	302.39	1.15		Si
SLV 14	13.86	-146.02	-374	-0.0003508	0.0005615	0.0035	0.44		169.01	169.01	1.16		Si
SLV 14	14.66	271.42	-947	-0.0015108	0.0005615	0.0035	0.44		269.21	269.21	0.99		No
SLV 15	13.86	-150.96	-403	-0.0003429	0.0005615	0.0035	0.44		176.43	176.43	1.17		Si
SLV 15	14.66	388.98	-839	-0.0144116	0.0005615	0.0035	0.44		241.29	241.29	0.62		No
SLV 16	13.86	-135.19	-501	-0.0001108	0.0005615	0.0035	0.44		202.51	202.51	1.5		Si
SLV 16	14.66	370.29	-859	-0.0124442	0.0005615	0.0035	0.44		246.54	246.54	0.67		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	13.86	99.42	-2485	-2070	470	0.55	0.55	-13440	8736	1345	35683	4611	1402	6014	No	12.78	Si
SLU 77	14.66	-27.54	-2357	-1963	-193	0.55	0.55	-12747	8644	1331	35683	4611	1402	6014	No	31.1	Si
SLU 74	13.86	88.67	-2340	-1949	437	0.55	0.55	-12655	8632	1329	35683	4611	1402	6014	No	13.75	Si
SLU 74	14.66	-24.68	-2190	-1824	-188	0.55	0.55	-11844	8524	1313	35683	4611	1402	6014	No	32.05	Si
SLU 78	13.86	99.1	-2486	-2070	467	0.55	0.55	-13443	8737	1345	35683	4611	1402	6014	No	12.87	Si
SLU 78	14.66	-26.48	-2356	-1962	-193	0.55	0.55	-12738	8643	1331	35683	4611	1402	6014	No	31.22	Si
SLU 75	13.86	88.36	-2341	-1949	434	0.55	0.55	-12658	8632	1329	35683	4611	1402	6014	No	13.85	Si
SLU 75	14.66	-23.62	-2189	-1822	-187	0.55	0.55	-11835	8522	1312	35683	4611	1402	6014	No	32.17	Si
SLU 80	13.86	94.25	-2346	-1953	443	0.55	0.55	-12685	8636	1330	35683	4611	1402	6014	No	13.59	Si
SLU 80	14.66	-26.22	-2217	-1846	-184	0.55	0.55	-11990	8543	1316	35683	4611	1402	6014	No	32.77	Si
SLU 83	13.86	86.37	-2225	-1853	439	0.55	0.55	-12030	8548	1316	35683	4611	1402	6014	No	13.7	Si
SLU 83	14.66	-32.15	-2083	-1735	-186	0.55	0.55	-11265	8447	1301	35683	4611	1402	6014	No	32.27	Si
SLU 57	13.86	97.4	-2354	-1960	453	0.55	0.55	-12727	8641	1331	35683	4611	1402	6014	No	13.29	Si
SLU 57	14.66	-30.58	-2171	-1808	-162	0.55	0.55	-11741	8510	1310	35683	4611	1402	6014	No	37.2	Si
SLU 84	13.86	86.05	-2225	-1853	436	0.55	0.55	-12034	8549	1316	35683	4611	1402	6014	No	13.8	Si
SLU 84	14.66	-31.09	-2082	-1733	-186	0.55	0.55	-11256	8445	1301	35683	4611	1402	6014	No	32.4	Si
SLU 56	13.86	97.71	-2353	-1959	456	0.55	0.55	-12723	8641	1331	35683	4611	1402	6014	No	13.2	Si
SLU 56	14.66	-31.64	-2173	-1809	-162	0.55	0.55	-11750	8511	1311	35683	4611	1402	6014	No	37.04	Si
SLU 79	13.86	94.56	-2345	-1953	446	0.55	0.55	-12681	8635	1330	35683	4611	1402	6014	No	13.49	Si
SLU 79	14.66	-27.28	-2219	-1848	-184	0.55	0.55	-11999	8544	1316	35683	4611	1402	6014	No	32.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	13.86	-150.96	-403	-335	-1057	0.44	0	0	0	0	35683	5534	1122	6655		6.3	Si
SLV 15	14.66	388.98	-839	-698	-42	0.44	0	0	0	0	35683	5534	1122	6655		158.09	Si
SLV 16	13.86	-135.19	-501	-417	-995	0.44	0.0156	0	0	0	35683	5534	1122	6655		6.69	Si
SLV 16	14.66	370.29	-859	-715	-15	0.44	0	0	0	0	35683	5534	1122	6655		433.65	Si
SLV 13	13.86	-161.8	-276	-230	-771	0.44	0	0	0	0	35683	5534	1122	6655		8.63	Si
SLV 13	14.66	290.11	-927	-772	-113	0.44	0	0	0	0	35683	5534	1122	6655		58.85	Si
SLV 1	13.86	241.08	-2546	-2120	1513	0.55	0.5409	-13767	13170	1995	35683	6917	1402	8319		5.5	Si
SLV 1	14.66	-387.82	-1889	-1573	-219	0.44	0.2092	0	0	0	35683	5534	1122	6655		30.38	Si
SLV 4	13.86	267.7	-2771	-2308	1289	0.55	0.5352	-14985	13414	2010	35683	6917	1402	8319		6.45	Si
SLV 4	14.66	-307.65	-1822	-1517	-121	0.44	0.3183	0	0	0	35683	5534	1122	6655		54.84	Si
SLV 3	13.86	251.92	-2673	-2226	1227	0.55	0.5422	-14452	13307	2020	35683	6917	1402	8319		6.78	Si
SLV 3	14.66	-288.96	-1801	-1500	-148	0.44	0.3437	0	0	0	35683	5534	1122	6655		44.93	Si
SLV 2	13.86	256.86	-2645	-2202	1575	0.55	0.5336	-14300	13277	1984	35683	6917	1402	8319		5.28	Si
SLV 2	14.66	-406.51	-1910	-1590	-192	0.44	0.1864	0	0	0	35683	5534	1122	6655		34.6	Si
SLV 5	13.86	90.25	-1621	-1350	1058	0.55	0.55	-8767	12170	1874	35683	6917	1402	8319		7.87	Si
SLV 5	14.66	-269.23	-1659	-1381	-260	0.44	0.3381	0	0	0	35683	5534	1122	6655		25.59	Si
SLV 14	13.86	-146.02	-374	-312	-709	0.44	0	0	0	0	35683	5534	1122	6655		9.39	Si
SLV 14	14.66	271.42	-947	-789	-86	0.44	0	0	0	0	35683	5534	1122	6655		77.09	Si
SLV 6	13.86	100.39	-1685	-1403	1097	0.55	0.55	-9110	12239	1885	35683	6917	1402	8319		7.58	Si
SLV 6	14.66	-281.24	-1672	-1392	-243	0.44	0.3203	0	0	0	35683	5534	1122	6655		27.41	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.53	0	-246	62.08	0	0	No, e>t/2
SLV 10	179667	0.53	0	-284	62.08	0	0	No, e>t/2
SLV 6	179667	0.53	0	-152	62.08	0	0	No, e>t/2
SLV 5	179667	0.53	0	-113	62.08	0	0	No, e>t/2
SLV 1	179667	0.53	3078	-474	62.08	65.02	1.05	Si
SLV 2	179667	0.53	3465	-534	62.08	73	1.18	Si
SLV 13	179667	0.53	5952	-917	62.08	123.33	1.99	Si
SLV 3	179667	0.53	6007	-925	62.08	124.41	2	Si
SLV 14	179667	0.53	6339	-976	62.08	130.99	2.11	Si
SLV 4	179667	0.53	6394	-985	62.08	132.07	2.13	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1258	-413	10	1.871	198.5	0.913	29.79945	12.56426	Si
SLV 5	-1251	-353	10	1.879	197.9	0.912	29.92259	12.56426	Si
SLV 10	-1058	-288	7	2.117	178.7	0.906	33.95542	12.56426	Si
SLV 9	-1051	-227	7	2.127	178	0.906	34.11458	12.56426	Si
SLV 8	-826	-2185	0	2.503	155.9	0.898	40.49274	12.56426	Si
SLV 7	-820	-2125	0	2.516	155.2	0.898	40.71444	12.56426	Si
SLV 12	-626	-2060	-3	2.963	136.6	0.892	48.27118	12.56426	Si
SLV 2	-1342	-1197	9	1.785	206.9	0.915	28.35186	7.33323	Si
SLV 11	-620	-1999	-3	2.981	135.9	0.892	48.58176	12.56426	Si
SLV 1	-1332	-1103	9	1.796	205.9	0.915	28.52578	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.892	SLU 58	Si
V_SLU	12.784	SLU 77	Si
PF_SLV	0.62	SLV 15	No
V_SLV	5.283	SLV 2	Si
PFFP_SLV	0	SLV 5	No
R_SLV	2.372	SLV 6	Si

Maschio 169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L7	L8	4.82	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 29	11.86	342.11	-10907	-0.0000185	0.0004492	0.0035	4.82	23243.88	26895.22	26895.22	78.62	No	Si
SLU 29	15.02	335.78	-1017	-0.0000023	0.0004492	0.0035	4.82	2424.87	4761.4	4761.4	14.18	No	Si
SLU 19	11.86	8.22	-9373	-0.0000152	0.0004492	0.0035	4.82	20341.43	23583.68	23583.68	2867.72	No	Si
SLU 19	15.02	-1059.47	-334	-0.0000172	0.0004492	0.0035	3.856	0	14468.9	14468.9	13.66	No	Si
SLU 18	11.86	100.44	-9389	-0.0000155	0.0004492	0.0035	4.82	20372.39	23618.58	23618.58	235.14	No	Si
SLU 18	15.02	-1093.22	-330	-0.0000184	0.0004492	0.0035	3.856	0	14459.22	14459.22	13.23	No	Si
SLU 73	11.86	-89.77	-12412	-0.0000204	0.0004492	0.0035	4.82	25972.43	40992.94	40992.94	456.66	No	Si
SLU 73	15.02	-1099.08	-555	-0.0000062	0.0004492	0.0035	3.856	1330.71	14980.33	14980.33	13.63	No	Si
SLU 52	11.86	-363.71	-11385	-0.0000193	0.0004492	0.0035	4.82	24122.31	38853.49	38853.49	106.82	No	Si
SLU 52	15.02	-1187.21	-415	-0.0000172	0.0004492	0.0035	3.856	0	14655.82	14655.82	12.34	No	Si
SLU 30	11.86	249.89	-10891	-0.0000182	0.0004492	0.0035	4.82	23214.17	26860.93	26860.93	107.49	No	Si
SLU 30	15.02	369.52	-1021	-0.0000024	0.0004492	0.0035	4.82	2434.73	4771.13	4771.13	12.91	No	Si
SLU 60	11.86	-86.68	-11632	-0.0000191	0.0004492	0.0035	4.82	24573.27	39369.28	39369.28	454.19	No	Si
SLU 60	15.02	-1347.43	-395	-0.0000233	0.0004492	0.0035	3.856	0	14608.42	14608.42	10.84	No	Si
SLU 81	11.86	187.27	-12659	-0.0000211	0.0004492	0.0035	4.82	26410.39	30621.86	30621.86	163.52	No	Si
SLU 81	15.02	-1259.3	-535	-0.0000123	0.0004492	0.0035	3.856	1281.91	14932.92	14932.92	11.86	No	Si
SLU 61	11.86	-178.9	-11616	-0.0000193	0.0004492	0.0035	4.82	24544.16	39335.86	39335.86	219.88	No	Si
SLU 61	15.02	-1313.68	-399	-0.0000221	0.0004492	0.0035	3.856	0	14618.1	14618.1	11.13	No	Si
SLU 82	11.86	95.05	-12643	-0.0000208	0.0004492	0.0035	4.82	26382.11	30588.17	30588.17	321.82	No	Si
SLU 82	15.02	-1225.55	-539	-0.0000107	0.0004492	0.0035	3.856	1291.87	14942.6	14942.6	12.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	11.86	-6132.71	-4931	-0.000022	0.0006738	0.0035	4.82		24946.7	24946.7	4.07		Si
SLV 16	15.02	1169.08	-7	-0.0002273	0.0006738	0.0035	3.856		2400.02	2400.02	2.05		Si
SLV 15	11.86	-5140.92	-5196	-0.000019	0.0006738	0.0035	4.82		25544.14	25544.14	4.97		Si
SLV 15	15.02	960.5	-44	-0.0001705	0.0006738	0.0035	3.856		2488.7	2488.7	2.59		Si
SLV 5	11.86	7966.71	-11796	-0.0000355	0.0006738	0.0035	4.82		29155.31	29155.31	3.66		Si
SLV 5	15.02	-3471.22	-486	-0.0000772	0.0006738	0.0035	3.856		14807.8	14807.8	4.27		Si
SLV 12	11.86	-8267.06	-6390	-0.0000299	0.0006738	0.0035	4.82		28225.29	28225.29	3.41		Si
SLV 12	15.02	1889.67	-326	-0.0002551	0.0006738	0.0035	3.856		3152.51	3152.51	1.67		Si
SLV 6	11.86	7329.31	-11626	-0.0000339	0.0006738	0.0035	4.82		28785.81	28785.81	3.93		Si
SLV 6	15.02	-3337.17	-462	-0.0000743	0.0006738	0.0035	3.856		14751.73	14751.73	4.42		Si
SLV 9	11.86	5891.65	-9657	-0.0000276	0.0006738	0.0035	4.82		24460.29	24460.29	4.15		Si
SLV 9	15.02	-2764.71	-249	-0.0000639	0.0006738	0.0035	3.856		14257.46	14257.46	5.16		Si
SLV 10	11.86	5254.24	-9487	-0.000026	0.0006738	0.0035	4.82		24084.91	24084.91	4.58		Si
SLV 10	15.02	-2630.66	-225	-0.0000609	0.0006738	0.0035	3.856		14201.4	14201.4	5.4		Si
SLV 7	11.86	-5554.59	-8700	-0.0000254	0.0006738	0.0035	4.82		33351.49	33351.49	6		Si
SLV 7	15.02	1049.11	-588	-0.0000048	0.0006738	0.0035	4.82		3767.57	3767.57	3.59		Si
SLV 11	11.86	-7629.65	-6560	-0.0000275	0.0006738	0.0035	4.82		28604.9	28604.9	3.75		Si
SLV 11	15.02	1755.62	-351	-0.0002171	0.0006738	0.0035	3.856		3209.5	3209.5	1.83		Si
SLV 8	11.86	-6191.99	-8529	-0.0000264	0.0006738	0.0035	4.82		32976.83	32976.83	5.33		Si
SLV 8	15.02	1183.16	-564	-0.0000093	0.0006738	0.0035	4.82		3710.75	3710.75	3.14		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 53	11.86	-93.99	-12326	-7238	1209	4.82	4.82	-9385	9585	7392	101952	27715	24582	52297	No	43.26	Si
SLU 53	15.02	-941.12	-677	-398	1194	3.856	3.0598	0	0	0	101952	22172	19666	41838	No	35.05	Si
SLU 40	11.86	282.17	-10400	-6106	1376	4.82	4.82	-7918	9389	7241	101952	27715	24582	52297	No	38	Si
SLU 40	15.02	-971.34	-475	-279	1444	3.856	1.0906	0	0	0	101952	22172	19666	41838	No	28.98	Si
SLU 81	11.86	187.27	-12659	-7433	1656	4.82	4.82	-9638	9618	7418	101952	27715	24582	52297	No	31.58	Si
SLU 81	15.02	-1259.3	-535	-314	1650	3.856	0.1678	0	0	0	101952	22172	19666	41838	No	25.36	Si
SLU 19	11.86	8.22	-9373	-5503	1147	4.82	4.82	-7136	9285	7160	101952	27715	24582	52297	No	45.58	Si
SLU 19	15.02	-1059.47	-334	-196	1220	3.856	0	0	0	0	101952	22172	19666	41838	No	34.28	Si
SLU 18	11.86	100.44	-9389	-5513	1325	4.82	4.82	-7148	9286	7162	101952	27715	24582	52297	No	39.48	Si
SLU 18	15.02	-1093.22	-330	-194	1324	3.856	0	0	0	0	101952	22172	19666	41838	No	31.61	Si
SLU 39	11.86	374.39	-10416	-6116	1554	4.82	4.82	-7930	9391	7242	101952	27715	24582	52297	No	33.66	Si
SLU 39	15.02	-1005.09	-470	-276	1547	3.856	0.8208	0	0	0	101952	22172	19666	41838	No	27.04	Si
SLU 60	11.86	-86.68	-11632	-6830	1427	4.82	4.82	-8856	9514	7337	101952	27715	24582	52297	No	36.64	Si
SLU 60	15.02	-1347.43	-395	-232	1426	3.856	0	0	0	0	101952	22172	19666	41838	No	29.34	Si
SLU 82	11.86	95.05	-12643	-7424	1479	4.82	4.82	-9626	9617	7416	101952	27715	24582	52297	No	35.37	Si
SLU 82	15.02	-1225.55	-539	-317	1546	3.856	0.4104	0	0	0	101952	22172	19666	41838	No	27.06	Si
SLU 61	11.86	-178.9	-11616	-6821	1250	4.82	4.82	-8844	9513	7336	101952	27715	24582	52297	No	41.84	Si
SLU 61	15.02	-1313.68	-399	-234	1323	3.856	0	0	0	0	101952	22172	19666	41838	No	31.63	Si
SLU 73	11.86	-89.77	-12412	-7288	1144	4.82	4.82	-9450	9593	7398	101952	27715	24582	52297	No	45.71	Si
SLU 73	15.02	-1099.08	-555	-326	1259	3.856	1.2937	0	0	0	101952	22172	19666	41838	No	33.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	11.86	-6132.71	-4931	-2895	-7946	4.82	3.4987	-5180	13536	7578	101952	41572	24582	66154		8.33	Si
SLV 16	15.02	1169.08	-7	-4	-7922	3.856	0	0	0	0	101952	33258	19666	52924		6.68	Si
SLV 6	11.86	7329.31	-11626	-6826	12676	4.82	4.82	-8851	14270	11005	101952	41572	24582	66154		5.22	Si
SLV 6	15.02	-3337.17	-462	-271	12675	3.856	0	0	0	0	101952	33258	19666	52924		4.18	Si
SLV 12	11.86	-8267.06	-6390	-3752	-11920	4.82	3.3488	-7017	13904	7450	101952	41572	24582	66154		5.55	Si
SLV 12	15.02	1889.67	-326	-192	-11936	3.856	0	0	0	0	101952	33258	19666	52924		4.43	Si
SLV 9	11.86	5891.65	-9657	-5670	10650	4.82	4.82	-7352	13970	10774	101952	41572	24582	66154		6.21	Si
SLV 9	15.02	-2764.71	-249	-146	10675	3.856	0	0	0	0	101952	33258	19666	52924		4.96	Si
SLV 5	11.86	7966.71	-11796	-6926	13546	4.82	4.82	-8981	14296	11025	101952	41572	24582	66154		4.88	Si
SLV 5	15.02	-3471.22	-486	-286	13547	3.856	0	0	0	0	101952	33258	19666	52924		3.91	Si
SLV 10	11.86	5254.24	-9487	-5570	9780	4.82	4.82	-7223	13945	10754	101952	41572	24582	66154		6.76	Si
SLV 10	15.02	-2630.66	-225	-132	9802	3.856	0	0	0	0	101952	33258	19666	52924		5.4	Si
SLV 11	11.86	-7629.65	-6560	-3852	-11051	4.82	3.7411	-6450	13790	8254	101952	41572	24582	66154		5.99	Si
SLV 11	15.02	1755.62	-351	-206	-11063	3.856	0	0	0	0	101952	33258	19666	52924		4.78	Si
SLV 2	11.86	4840.58	-12991	-7627	8219	4.82	4.82	-9890	14478	11165	101952	41572	24582	66154		8.05	Si
SLV 2	15.02	-2542.05	-768	-451	8176	3.856	0	0	0	0	101952	33258	19666	52924		6.47	Si
SLV 8	11.86	-6191.99	-8529	-5008	-9024	4.82	4.82	-6494	13799	10642	101952	41572	24582	66154		7.33	Si
SLV 8	15.02	1183.16	-564	-331	-9063	4.82	0.9357	-2204	12941	1937	101952	41572	24582	66154		7.3	Si
SLV 1	11.86	5832.36	-13256	-7783	9572	4.82	4.82	-10092	14518	11197	101952	41572	24582	66154		6.91	Si
SLV 1	15.02	-2750.63	-806	-473	9533	3.856	0	0	0	0	101952	33258	19666	52924		5.55	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-1241	0.53	328.97	0	455.15	227.58	0.69	No
SLV 15	-1457	0.53	328.97	0	477.54	238.77	0.73	No
SLV 14	-1777	0.53	328.97	0	510.51	255.26	0.78	No
SLV 13	-1993	0.53	328.97	0	532.6	266.3	0.81	No
SLV 12	-2945	0.53	328.97	0	628.79	314.4	0.96	No
SLV 11	-3084	0.53	328.97	0	642.66	321.33	0.98	No
SLV 10	-4731	0.53	328.97	365.79	805.22	585.5	1.78	Si
SLV 9	-4869	0.53	328.97	376.13	818.79	597.46	1.82	Si
SLV 8	-4908	0.53	328.97	379.01	822.58	600.8	1.83	Si
SLV 7	-5047	0.53	328.97	389.32	836.15	612.74	1.86	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-588	-8700	-58	9.758	468.1	0.923	153.64676	21.18724	Si
SLV 8	-564	-8529	-58	9.844	466.7	0.925	154.70229	21.18724	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-486	-11796	-107	10.11	462.4	0.931	157.8452	21.18724	Si
SLV 6	-462	-11626	-107	10.202	461.1	0.933	158.92332	21.18724	Si
SLV 11	-351	-6560	106	10.648	455.8	0.944	163.95005	21.18724	Si
SLV 12	-326	-6390	106	10.75	454.8	0.947	165.04752	21.18724	Si
SLV 9	-249	-9657	57	11.111	451.8	0.956	168.87242	21.18724	Si
SLV 10	-225	-9487	57	11.222	451	0.96	169.96901	21.18724	Si
SLV 3	-836	-12327	-266	8.892	484	0.909	142.14754	11.64352	Si
SLV 1	-806	-13256	-280	8.978	481.9	0.911	143.29373	11.64352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.842	SLU 60	Si
V_SLU	25.363	SLU 81	Si
PF_SLV	1.668	SLV 12	Si
V_SLV	3.907	SLV 5	Si
PFFP_SLV	0.692	SLV 16	No
R_SLV	7.252	SLV 7	Si

Maschio 170

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L7	L8	3.221	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 38	11.86	1401	-8459	-0.0000272	0.0004492	0.0035	3.2207	11791.95	13686.67	13686.67	9.77	No	Si
SLU 38	13.96	957.68	-5220	-0.000017	0.0004492	0.0035	3.2207	7709.77	9017.86	9017.86	9.42	No	Si
SLU 41	11.86	1416.94	-8096	-0.0000263	0.0004492	0.0035	3.2207	11360.67	13170.29	13170.29	9.29	No	Si
SLU 41	13.96	741.44	-4627	-0.0000146	0.0004492	0.0035	3.2207	6903.81	8142.92	8142.92	10.98	No	Si
SLU 32	11.86	1329.79	-7981	-0.0000256	0.0004492	0.0035	3.2207	11223.64	13007.71	13007.71	9.78	No	Si
SLU 32	13.96	571.85	-4559	-0.0000136	0.0004492	0.0035	3.2207	6809.59	8041.89	8041.89	14.06	No	Si
SLU 42	11.86	1372.42	-8072	-0.0000261	0.0004492	0.0035	3.2207	11332.23	13136.48	13136.48	9.57	No	Si
SLU 42	13.96	735.21	-4622	-0.0000145	0.0004492	0.0035	3.2207	6897.2	8135.82	8135.82	11.07	No	Si
SLU 39	11.86	1301.39	-7487	-0.0000243	0.0004492	0.0035	3.2207	10622.82	12304.03	12304.03	9.45	No	Si
SLU 39	13.96	485.57	-3948	-0.0000118	0.0004492	0.0035	3.2207	5958.39	7129.23	7129.23	14.68	No	Si
SLU 79	11.86	1610.1	-9924	-0.0000319	0.0004492	0.0035	3.2207	13462.58	15729.67	15729.67	9.77	No	Si
SLU 79	13.96	935.45	-5928	-0.0000187	0.0004492	0.0035	3.2207	8647.09	10055.87	10055.87	10.75	No	Si
SLU 83	11.86	1581.51	-9537	-0.0000308	0.0004492	0.0035	3.2207	13031.88	15192.51	15192.51	9.61	No	Si
SLU 83	13.96	712.98	-5330	-0.0000162	0.0004492	0.0035	3.2207	7856.16	9178.91	9178.91	12.87	No	Si
SLU 37	11.86	1445.53	-8483	-0.0000274	0.0004492	0.0035	3.2207	11819.92	13719.86	13719.86	9.49	No	Si
SLU 37	13.96	963.91	-5225	-0.0000171	0.0004492	0.0035	3.2207	7716.24	9024.96	9024.96	9.36	No	Si
SLU 40	11.86	1256.86	-7463	-0.000024	0.0004492	0.0035	3.2207	10593.64	12270.22	12270.22	9.76	No	Si
SLU 40	13.96	479.34	-3943	-0.0000117	0.0004492	0.0035	3.2207	5951.61	7122.01	7122.01	14.86	No	Si
SLU 35	11.86	1445.35	-8590	-0.0000277	0.0004492	0.0035	3.2207	11946.09	13870.01	13870.01	9.6	No	Si
SLU 35	13.96	827.72	-5238	-0.0000165	0.0004492	0.0035	3.2207	7733.77	9044.22	9044.22	10.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	11.86	-2844.92	-3728	-0.0000229	0.0006738	0.0035	3.2207		11605.41	11605.41	4.08		Si
SLV 12	13.96	-551.33	-2453	-0.0000084	0.0006738	0.0035	3.2207		9678.67	9678.67	17.56		Si
SLV 11	11.86	-2597.46	-3838	-0.0000214	0.0006738	0.0035	3.2207		11770.37	11770.37	4.53		Si
SLV 11	13.96	-493.09	-2464	-0.0000081	0.0006738	0.0035	3.2207		9695.35	9695.35	19.66		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	11.86	4557.78	-8047	-0.0000405	0.0006738	0.0035	3.2207		13269.27	13269.27	2.91		Si
SLV 9	13.96	1141.12	-3718	-0.0000141	0.0006738	0.0035	3.2207		6831.35	6831.35	5.99		Si
SLV 10	11.86	4310.32	-7938	-0.0000391	0.0006738	0.0035	3.2207		13111.23	13111.23	3.04		Si
SLV 10	13.96	1082.89	-3707	-0.0000138	0.0006738	0.0035	3.2207		6814.74	6814.74	6.29		Si
SLV 5	11.86	4675.24	-8767	-0.0000428	0.0006738	0.0035	3.2207		14309.4	14309.4	3.06		Si
SLV 5	13.96	1031.57	-4118	-0.0000146	0.0006738	0.0035	3.2207		7438.18	7438.18	7.21		Si
SLD 9	11.86	2523.94	-7046	-0.0000286	0.0006738	0.0035	3.2207		11805.37	11805.37	4.68		Si
SLD 9	13.96	634.68	-3478	-0.0000112	0.0006738	0.0035	3.2207		6467.91	6467.91	10.19		Si
SLD 10	11.86	2415.9	-6999	-0.000028	0.0006738	0.0035	3.2207		11735.22	11735.22	4.86		Si
SLD 10	13.96	609.25	-3473	-0.0000111	0.0006738	0.0035	3.2207		6460.66	6460.66	10.6		Si
SLV 8	11.86	-2727.46	-4448	-0.0000232	0.0006738	0.0035	3.2207		12682.76	12682.76	4.65		Si
SLV 8	13.96	-660.87	-2853	-0.0000098	0.0006738	0.0035	3.2207		10285.73	10285.73	15.56		Si
SLV 6	11.86	4427.78	-8658	-0.0000414	0.0006738	0.0035	3.2207		14151.36	14151.36	3.2		Si
SLV 6	13.96	973.34	-4107	-0.0000143	0.0006738	0.0035	3.2207		7421.58	7421.58	7.62		Si
SLD 5	11.86	2573.65	-7353	-0.0000296	0.0006738	0.0035	3.2207		12255.95	12255.95	4.76		Si
SLD 5	13.96	587.73	-3649	-0.0000114	0.0006738	0.0035	3.2207		6726.87	6726.87	11.45		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	11.86	1249.91	-8022	-4710	1478	3.2207	3.2207	-9140	9552	4922	101952	18519	16426	34945	No	23.65	Si
SLU 60	13.96	238.2	-4027	-2365	1476	3.2207	3.2207	-4589	8945	4610	101952	18519	16426	34945	No	23.67	Si
SLU 84	11.86	1536.98	-9513	-5586	1466	3.2207	3.2207	-10840	9779	5039	101952	18519	16426	34945	No	23.84	Si
SLU 84	13.96	706.75	-5325	-3127	1466	3.2207	3.2207	-6067	9142	4711	101952	18519	16426	34945	No	23.84	Si
SLU 74	11.86	1494.36	-9423	-5533	1503	3.2207	3.2207	-10737	9765	5032	101952	18519	16426	34945	No	23.25	Si
SLU 74	13.96	543.39	-5261	-3089	1502	3.2207	3.2207	-5995	9133	4706	101952	18519	16426	34945	No	23.26	Si
SLU 75	11.86	1449.83	-9399	-5519	1470	3.2207	3.2207	-10710	9761	5030	101952	18519	16426	34945	No	23.77	Si
SLU 75	13.96	537.16	-5256	-3086	1470	3.2207	3.2207	-5989	9132	4706	101952	18519	16426	34945	No	23.78	Si
SLU 73	11.86	1304.78	-8667	-5089	1432	3.2207	3.2207	-9875	9650	4973	101952	18519	16426	34945	No	24.4	Si
SLU 73	13.96	413.32	-4560	-2678	1431	3.2207	3.2207	-5196	9026	4651	101952	18519	16426	34945	No	24.42	Si
SLU 61	11.86	1205.38	-7998	-4696	1445	3.2207	3.2207	-9113	9548	4920	101952	18519	16426	34945	No	24.18	Si
SLU 61	13.96	231.97	-4023	-2362	1443	3.2207	3.2207	-4583	8944	4609	101952	18519	16426	34945	No	24.21	Si
SLU 81	11.86	1465.95	-8928	-5242	1620	3.2207	3.2207	-10173	9690	4993	101952	18519	16426	34945	No	21.57	Si
SLU 81	13.96	457.11	-4650	-2730	1618	3.2207	3.2207	-5298	9040	4658	101952	18519	16426	34945	No	21.59	Si
SLU 82	11.86	1421.43	-8905	-5228	1587	3.2207	3.2207	-10146	9686	4991	101952	18519	16426	34945	No	22.02	Si
SLU 82	13.96	450.88	-4645	-2727	1586	3.2207	3.2207	-5293	9039	4658	101952	18519	16426	34945	No	22.04	Si
SLU 83	11.86	1581.51	-9537	-5600	1499	3.2207	3.2207	-10867	9782	5041	101952	18519	16426	34945	No	23.32	Si
SLU 83	13.96	712.98	-5330	-3129	1498	3.2207	3.2207	-6073	9143	4712	101952	18519	16426	34945	No	23.32	Si
SLU 39	11.86	1301.39	-7487	-4396	1418	3.2207	3.2207	-8531	9471	4880	101952	18519	16426	34945	No	24.64	Si
SLU 39	13.96	485.57	-3948	-2318	1418	3.2207	3.2207	-4498	8933	4603	101952	18519	16426	34945	No	24.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	11.86	-2844.92	-3728	-2189	-1688	3.2207	2.5419	-5393	13579	5522	101952	27778	16426	44204		26.18	Si
SLV 12	13.96	-551.33	-2453	-1440	-2203	3.2207	3.2207	-2795	13059	6729	101952	27778	16426	44204		20.06	Si
SLD 5	11.86	2573.65	-7353	-4317	2130	3.2207	3.2207	-8378	14176	7305	101952	27778	16426	44204		20.76	Si
SLD 5	13.96	587.73	-3649	-2142	2353	3.2207	3.2207	-4158	13332	6870	101952	27778	16426	44204		18.78	Si
SLV 9	11.86	4557.78	-8047	-4725	3233	3.2207	3.1319	-9169	14334	7183	101952	27778	16426	44204		13.67	Si
SLV 9	13.96	1141.12	-3718	-2183	3709	3.2207	3.2207	-4236	13347	6878	101952	27778	16426	44204		11.92	Si
SLV 1	11.86	2376.73	-8165	-4794	2438	3.2207	3.2207	-9303	14361	7400	101952	27778	16426	44204		18.13	Si
SLV 1	13.96	347.98	-4149	-2436	2648	3.2207	3.2207	-4728	13446	6929	101952	27778	16426	44204		16.69	Si
SLV 6	11.86	4427.78	-8658	-5084	3448	3.2207	3.2207	-9865	14473	7458	101952	27778	16426	44204		12.82	Si
SLV 6	13.96	973.34	-4107	-2412	3961	3.2207	3.2207	-4680	13436	6924	101952	27778	16426	44204		11.16	Si
SLD 6	11.86	2465.61	-7305	-4289	2057	3.2207	3.2207	-8324	14165	7299	101952	27778	16426	44204		21.49	Si
SLD 6	13.96	562.31	-3644	-2140	2281	3.2207	3.2207	-4152	13330	6869	101952	27778	16426	44204		19.38	Si
SLV 2	11.86	1991.69	-7994	-4694	2181	3.2207	3.2207	-9109	14322	7380	101952	27778	16426	44204		20.27	Si
SLV 2	13.96	257.37	-4132	-2426	2390	3.2207	3.2207	-4708	13442	6927	101952	27778	16426	44204		18.49	Si
SLV 5	11.86	4675.24	-8767	-5148	3613	3.2207	3.2207	-9990	14498	7471	101952	27778	16426	44204		12.23	Si
SLV 5	13.96	1031.57	-4118	-2418	4126	3.2207	3.2207	-4692	13438	6925	101952	27778	16426	44204		10.71	Si
SLV 10	11.86	4310.32	-7938	-4661	3068	3.2207	3.202	-9045	14309	7331	101952	27778	16426	44204		14.41	Si
SLV 10	13.96	1082.89	-3707	-2176	3543	3.2207	3.2207	-4224	13345	6877	101952	27778	16426	44204		12.48	Si
SLD 9	11.86	2523.94	-7046	-4137	1968	3.2207	3.2207	-8029	14106	7269	101952	27778	16426	44204		22.46	Si
SLD 9	13.96	634.68	-3478	-2042	2175	3.2207	3.2207	-3963	13293	6850	101952	27778	16426	44204		20.32	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-3020	0.53	219.82	233.84	523.36	378.6	1.72	Si
SLV 11	-3069	0.53	219.82	237.57	528.24	382.91	1.74	Si
SLV 16	-3321	0.53	219.82	256.37	552.9	404.64	1.84	Si
SLV 8	-3365	0.53	219.82	259.6	557.15	408.37	1.86	Si
SLV 15	-3399	0.53	219.82	262.13	560.48	411.3	1.87	Si
SLV 7	-3415	0.53	219.82	263.3	562.02	412.66	1.88	Si
SLV 14	-3937	0.53	219.82	301.85	612.89	457.37	2.08	Si
SLV 13	-4015	0.53	219.82	307.53	620.43	463.98	2.11	Si
SLV 4	-4472	0.53	219.82	340.84	664.67	502.76	2.29	Si
SLV 3	-4550	0.53	219.82	346.45	672.15	509.3	2.32	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1539	-8658	-203	5.992	405	0.889	97.96156	21.18724	Si
SLV 5	-1534	-8767	-203	6.002	404.6	0.889	98.12387	21.18724	Si
SLV 8	-1555	-4448	-45	6.013	406.5	0.889	98.29999	21.18724	Si
SLV 7	-1550	-4558	-45	6.023	406	0.889	98.46217	21.18724	Si
SLV 12	-1437	-3728	202	6.201	395.8	0.889	101.38203	21.18724	Si
SLV 11	-1432	-3838	202	6.211	395.4	0.889	101.55447	21.18724	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-1421	-7938	44	6.29	394.4	0.889	102.83474	21.18724	Si
SLV 9	-1416	-8047	44	6.301	393.9	0.889	103.01041	21.18724	Si
SLV 2	-1683	-7994	-436	5.645	418.3	0.889	92.24854	11.64352	Si
SLV 4	-1687	-6732	-388	5.652	418.7	0.889	92.35319	11.64352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.295	SLU 41	Si
V_SLU	21.574	SLU 81	Si
PF_SLV	2.911	SLV 9	Si
V_SLV	10.713	SLV 5	Si
PFFP_SLV	1.722	SLV 12	Si
R_SLV	4.624	SLV 6	Si

Maschio 172

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	1.006	-15.033	6.386	L7	L8	5.38	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	11.86	2409.51	-12501	-0.0000222	0.0004492	0.0035	5.38	29630.57	34251.56	34251.56	14.22	No	Si
SLU 40	15.02	4733.16	-3524	-0.0000136	0.0004492	0.0035	5.38	9160.96	12056.74	12056.74	2.55	No	Si
SLU 81	11.86	2618.7	-14925	-0.0000262	0.0004492	0.0035	5.38	34451.83	39980.86	39980.86	15.27	No	Si
SLU 81	15.02	4954.9	-3796	-0.0000143	0.0004492	0.0035	5.38	9842.87	12752.9	12752.9	2.57	No	Si
SLU 31	11.86	2051.73	-12179	-0.0000212	0.0004492	0.0035	5.38	28967.42	33482.56	33482.56	16.32	No	Si
SLU 31	15.02	4508.1	-3446	-0.000013	0.0004492	0.0035	5.38	8965.56	11857.96	11857.96	2.63	No	Si
SLU 60	11.86	2164.02	-13417	-0.0000232	0.0004492	0.0035	5.38	31487.41	36438.41	36438.41	16.84	No	Si
SLU 60	15.02	3844.16	-2895	-0.000011	0.0004492	0.0035	5.38	7572.82	10450.21	10450.21	2.72	No	Si
SLU 39	11.86	2478.87	-12484	-0.0000223	0.0004492	0.0035	5.38	29595.21	34210.4	34210.4	13.8	No	Si
SLU 39	15.02	4601.41	-3459	-0.0000132	0.0004492	0.0035	5.38	8998.17	11891.12	11891.12	2.58	No	Si
SLU 73	11.86	2191.56	-14620	-0.0000251	0.0004492	0.0035	5.38	33862.11	39265.82	39265.82	17.92	No	Si
SLU 73	15.02	4861.59	-3783	-0.000014	0.0004492	0.0035	5.38	9810.47	12719.74	12719.74	2.62	No	Si
SLU 82	11.86	2549.34	-14943	-0.0000261	0.0004492	0.0035	5.38	34485.03	40021.3	40021.3	15.7	No	Si
SLU 82	15.02	5086.65	-3861	-0.0000146	0.0004492	0.0035	5.38	10004.54	12918.52	12918.52	2.54	No	Si
SLU 19	11.86	1954.83	-10992	-0.0000192	0.0004492	0.0035	5.38	26479.08	30635.42	30635.42	15.67	No	Si
SLU 19	15.02	3622.43	-2622	-0.0000104	0.0004492	0.0035	5.38	6878.36	9754.05	9754.05	2.69	No	Si
SLU 61	11.86	2094.66	-13434	-0.0000231	0.0004492	0.0035	5.38	31521.95	36479.57	36479.57	17.42	No	Si
SLU 61	15.02	3975.91	-2960	-0.0000114	0.0004492	0.0035	5.38	7737.48	10615.83	10615.83	2.67	No	Si
SLU 18	11.86	2024.19	-10975	-0.0000193	0.0004492	0.0035	5.38	26442.39	30593.54	30593.54	15.11	No	Si
SLU 18	15.02	3490.68	-2558	-0.00001	0.0004492	0.0035	5.38	6712.58	9585.82	9585.82	2.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	11.86	-8623.76	-7231	-0.0000252	0.0006738	0.0035	5.38		35682.24	35682.24	4.14		Si
SLV 7	15.02	18671.55	-7288	-0.0002875	0.0006738	0.0035	5.38		21727.06	21727.06	1.16		Si
SLV 12	11.86	-9278.61	-7438	-0.0000269	0.0006738	0.0035	5.38		36196.59	36196.59	3.9		Si
SLV 12	15.02	11933.95	-5271	-0.0000659	0.0006738	0.0035	5.38		16610	16610	1.39		Si
SLV 8	11.86	-8888.76	-7179	-0.0000258	0.0006738	0.0035	5.38		35552.42	35552.42	4		Si
SLV 8	15.02	18510.69	-7220	-0.0002874	0.0006738	0.0035	5.38		21553.22	21553.22	1.16		Si
SLV 9	11.86	11535.43	-13854	-0.0000391	0.0006738	0.0035	5.38		37952.8	37952.8	3.29		Si
SLV 9	15.02	-12563.4	2235	-0.0002487	0.0006738	0.0035	4.304		11522.57	11522.57	0.92		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	11.86	-9013.61	-7490	-0.0000263	0.0006738	0.0035	5.38		36326.41	36326.41	4.03		Si
SLV 11	15.02	12094.81	-5340	-0.000067	0.0006738	0.0035	5.38		16783.83	16783.83	1.39		Si
SLV 3	11.86	-903.11	-9171	-0.0000147	0.0006738	0.0035	5.38		40497.24	40497.24	44.84		Si
SLV 3	15.02	17758.75	-6929	-0.0002725	0.0006738	0.0035	5.38		20815.6	20815.6	1.17		Si
SLV 10	11.86	11270.43	-13802	-0.0000386	0.0006738	0.0035	5.38		37826.3	37826.3	3.36		Si
SLV 10	15.02	-12724.26	2303	-0.0002517	0.0006738	0.0035	4.304		11343.23	11343.23	0.89		No
SLV 14	11.86	3549.78	-11862	-0.000023	0.0006738	0.0035	5.38		33102.91	33102.91	9.33		Si
SLV 14	15.02	-11811.47	1944	-0.000234	0.0006738	0.0035	4.304		12280.34	12280.34	1.04		Si
SLV 4	11.86	-1315.44	-9089	-0.0000153	0.0006738	0.0035	5.38		40297.89	40297.89	30.63		Si
SLV 4	15.02	17508.46	-6822	-0.0002724	0.0006738	0.0035	5.38		20545.12	20545.12	1.17		Si
SLV 13	11.86	3962.11	-11944	-0.0000238	0.0006738	0.0035	5.38		33302.85	33302.85	8.41		Si
SLV 13	15.02	-11561.17	1838	-0.0002293	0.0006738	0.0035	4.304		12557.83	12557.83	1.09		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	11.86	2164.02	-13417	-7878	2761	5.38	5.38	-9152	9554	8224	101952	30935	27438	58373	No	21.14	Si
SLU 60	15.02	3844.16	-2895	-1700	2777	5.38	4.0862	-1975	8597	5620	101952	30935	27438	58373	No	21.02	Si
SLU 77	11.86	2541.56	-16871	-9906	2807	5.38	5.38	-11508	9868	8494	101952	30935	27438	58373	No	20.8	Si
SLU 77	15.02	5403.23	-5604	-3291	2831	5.38	5.1776	-3823	8843	7326	101952	30935	27438	58373	No	20.62	Si
SLU 75	11.86	2298.18	-15879	-9324	2752	5.38	5.38	-10831	9778	8416	101952	30935	27438	58373	No	21.21	Si
SLU 75	15.02	5153.31	-4680	-2748	2773	5.38	4.7669	-3193	8759	6681	101952	30935	27438	58373	No	21.05	Si
SLU 56	11.86	2086.88	-15362	-9020	2711	5.38	5.38	-10479	9730	8376	101952	30935	27438	58373	No	21.53	Si
SLU 56	15.02	4292.5	-4703	-2761	2732	5.38	5.3318	-3208	8761	7474	101952	30935	27438	58373	No	21.36	Si
SLU 82	11.86	2549.34	-14943	-8774	2753	5.38	5.38	-10192	9692	8343	101952	30935	27438	58373	No	21.21	Si
SLU 82	15.02	5086.65	-3861	-2267	2772	5.38	4.1176	-2634	8684	5721	101952	30935	27438	58373	No	21.06	Si
SLU 81	11.86	2618.7	-14925	-8764	2857	5.38	5.38	-10181	9691	8342	101952	30935	27438	58373	No	20.43	Si
SLU 81	15.02	4954.9	-3796	-2229	2876	5.38	4.1542	-2589	8679	5768	101952	30935	27438	58373	No	20.3	Si
SLU 83	11.86	2792.71	-15934	-9356	2808	5.38	5.38	-10869	9782	8421	101952	30935	27438	58373	No	20.79	Si
SLU 83	15.02	5336.56	-4785	-2809	2830	5.38	4.7239	-3264	8768	6627	101952	30935	27438	58373	No	20.62	Si
SLU 74	11.86	2367.55	-15862	-9313	2856	5.38	5.38	-10820	9776	8415	101952	30935	27438	58373	No	20.44	Si
SLU 74	15.02	5021.56	-4616	-2710	2877	5.38	4.8061	-3148	8753	6731	101952	30935	27438	58373	No	20.29	Si
SLU 53	11.86	1912.87	-14353	-8428	2760	5.38	5.38	-9791	9639	8297	101952	30935	27438	58373	No	21.15	Si
SLU 53	15.02	3910.83	-3714	-2181	2778	5.38	4.9113	-2534	8671	6814	101952	30935	27438	58373	No	21.01	Si
SLU 62	11.86	2338.03	-14426	-8470	2712	5.38	5.38	-9840	9645	8303	101952	30935	27438	58373	No	21.53	Si
SLU 62	15.02	4225.83	-3883	-2280	2731	5.38	4.8055	-2649	8687	6679	101952	30935	27438	58373	No	21.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	11.86	11925.28	-13595	-7982	12251	5.38	5.38	-9273	14355	12356	101952	46403	27438	73841		6.03	Si
SLV 5	15.02	-5986.66	287	168	12783	4.304	0	0	0	0	101952	37122	21950	59072		4.62	Si
SLV 14	11.86	3549.78	-11862	-6965	11749	5.38	5.38	-8091	14118	12153	101952	46403	27438	73841		6.29	Si
SLV 14	15.02	-11811.47	1944	1142	12051	4.304	0	0	0	0	101952	37122	21950	59072		4.9	Si
SLV 13	11.86	3962.11	-11944	-7013	11778	5.38	5.38	-8147	14129	12163	101952	46403	27438	73841		6.27	Si
SLV 13	15.02	-11561.17	1838	1079	12080	4.304	0	0	0	0	101952	37122	21950	59072		4.89	Si
SLV 8	11.86	-8888.76	-7179	-4215	-12329	5.38	4.3554	-6063	13713	9556	101952	46403	27438	73841		5.99	Si
SLV 8	15.02	18510.69	-7220	-4239	-12910	5.38	0.3781	-58514	16250	983	101952	46403	27438	73841		5.72	Si
SLV 6	11.86	11660.28	-13543	-7952	12232	5.38	5.38	-9238	14348	12350	101952	46403	27438	73841		6.04	Si
SLV 6	15.02	-6147.52	355	209	12764	4.304	0	0	0	0	101952	37122	21950	59072		4.63	Si
SLV 9	11.86	11535.43	-13854	-8135	15998	5.38	5.38	-9450	14390	12387	101952	46403	27438	73841		4.62	Si
SLV 9	15.02	-12563.4	2235	1312	16604	4.304	0	0	0	0	101952	37122	21950	59072		3.56	Si
SLD 9	11.86	5836.68	-11992	-7041	8062	5.38	5.38	-8180	14136	12168	101952	46403	27438	73841		9.16	Si
SLD 9	15.02	-3823.25	-423	-248	8324	4.304	0	0	0	0	101952	37122	21950	59072		7.1	Si
SLV 7	11.86	-8623.76	-7231	-4246	-12310	5.38	4.4921	-5922	13684	9836	101952	46403	27438	73841		6	Si
SLV 7	15.02	18671.55	-7288	-4279	-12891	5.38	0.3842	-58568	16250	999	101952	46403	27438	73841		5.73	Si
SLD 10	11.86	5720.98	-11969	-7028	8053	5.38	5.38	-8164	14133	12166	101952	46403	27438	73841		9.17	Si
SLD 10	15.02	-3893.48	-393	-231	8315	4.304	0	0	0	0	101952	37122	21950	59072		7.1	Si
SLV 10	11.86	11270.43	-13802	-8104	15979	5.38	5.38	-9414	14383	12381	101952	46403	27438	73841		4.62	Si
SLV 10	15.02	-12724.26	2303	1352	16585	4.304	0	0	0	0	101952	37122	21950	59072		3.56	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-3906	0.53	367.19	0	764.89	382.45	1.04	Si
SLV 15	-4035	0.53	367.19	0	777.69	388.84	1.06	Si
SLV 14	-4582	0.53	367.19	0	831.73	415.87	1.13	Si
SLV 13	-4711	0.53	367.19	365.62	844.4	605.01	1.65	Si
SLV 12	-4951	0.53	367.19	383.63	867.97	625.8	1.7	Si
SLV 11	-5033	0.53	367.19	389.83	876.1	632.96	1.72	Si
SLV 8	-6503	0.53	367.19	498.79	1019.85	759.32	2.07	Si
SLV 7	-6586	0.53	367.19	504.86	1027.91	766.38	2.09	Si
SLV 10	-7205	0.53	367.19	550.09	1087.91	819	2.23	Si
SLV 9	-7288	0.53	367.19	556.1	1095.91	826	2.25	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-7288	-7231	-283	3.106	1135.2	0.914	49.39611	21.18724	Si
SLV 8	-7220	-7179	-283	3.128	1128.4	0.914	49.76307	21.18724	Si
SLV 11	-5340	-7490	252	3.881	941.9	0.903	62.48559	21.18724	Si
SLV 12	-5271	-7438	252	3.915	935.2	0.902	63.06617	21.18724	Si
SLV 3	-6929	-9171	-888	3.16	1099.4	0.912	50.35408	11.64352	Si
SLV 4	-6822	-9089	-888	3.196	1088.8	0.911	50.96108	11.64352	Si
SLV 1	-4656	-11080	-873	4.165	875	0.899	67.36208	11.64352	Si
SLV 2	-4550	-10999	-873	4.228	864.6	0.898	68.43061	11.64352	Si
SLV 5	287	-13595	-231	13.062	499.1	1	189.83172	21.18724	Si, Trazione
SLV 6	355	-13543	-232	13.258	499.1	1	192.68345	21.18724	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.54	SLU 82	Si
V_SLU	20.289	SLU 74	Si
PF_SLV	0.891	SLV 10	No
V_SLV	3.558	SLV 9	Si
PFFP_SLV	1.042	SLV 16	Si
R_SLV	2.331	SLV 7	Si

Maschio 173

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.454	-13.778	-0.354	L7	L8	3.101	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 41	11.86	-111.42	-10494	-0.0000186	0.0003743	0.0035	3.1007	14337.96	17616.03	17616.03	158.11	No	Si
SLU 41	15.02	1203.58	-2597	-0.0000084	0.0003743	0.0035	3.1007	3907.62	4392.6	4392.6	3.65	No	Si
SLU 36	11.86	-28.23	-11301	-0.0000198	0.0003743	0.0035	3.1007	15280.42	18645.38	18645.38	660.49	No	Si
SLU 36	15.02	1457.83	-3291	-0.0000104	0.0003743	0.0035	3.1007	4912.71	5411.7	5411.7	3.71	No	Si
SLU 33	11.86	-62.8	-10728	-0.0000189	0.0003743	0.0035	3.1007	14613.53	17912.88	17912.88	285.22	No	Si
SLU 33	15.02	1108.02	-2511	-0.0000079	0.0003743	0.0035	3.1007	3782.67	4266.46	4266.46	3.85	No	Si
SLU 39	11.86	-145.99	-9921	-0.0000177	0.0003743	0.0035	3.1007	13654.85	16894.01	16894.01	115.72	No	Si
SLU 39	15.02	853.76	-1817	-0.0000059	0.0003743	0.0035	3.1007	2758.57	3235.22	3235.22	3.79	No	Si
SLU 35	11.86	13.34	-11290	-0.0000197	0.0003743	0.0035	3.1007	15267.69	16041.52	16041.52	1202.74	No	Si
SLU 35	15.02	1441.61	-3293	-0.0000104	0.0003743	0.0035	3.1007	4914.39	5413.42	5413.42	3.76	No	Si
SLU 34	11.86	-80.34	-10408	-0.0000184	0.0003743	0.0035	3.1007	14235.91	17506.94	17506.94	217.91	No	Si
SLU 34	15.02	1179.74	-2590	-0.0000083	0.0003743	0.0035	3.1007	3897.26	4382.14	4382.14	3.71	No	Si
SLU 40	11.86	-187.56	-9932	-0.0000179	0.0003743	0.0035	3.1007	13668.12	16907.97	16907.97	90.15	No	Si
SLU 40	15.02	869.99	-1816	-0.0000059	0.0003743	0.0035	3.1007	2756.82	3233.45	3233.45	3.72	No	Si
SLU 37	11.86	23.51	-10963	-0.0000192	0.0003743	0.0035	3.1007	14887.8	15677.01	15677.01	666.8	No	Si
SLU 37	15.02	1502.51	-3372	-0.0000107	0.0003743	0.0035	3.1007	5027.95	5529.07	5529.07	3.68	No	Si
SLU 38	11.86	-18.06	-10974	-0.0000192	0.0003743	0.0035	3.1007	14900.66	18225.77	18225.77	1009.4	No	Si
SLU 38	15.02	1518.73	-3371	-0.0000108	0.0003743	0.0035	3.1007	5026.27	5527.36	5527.36	3.64	No	Si
SLU 42	11.86	-152.99	-10505	-0.0000188	0.0003743	0.0035	3.1007	14351	17630.01	17630.01	115.24	No	Si
SLU 42	15.02	1219.8	-2596	-0.0000084	0.0003743	0.0035	3.1007	3905.9	4390.87	4390.87	3.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	11.86	-4772.85	-10037	-0.0000333	0.0005615	0.0035	3.1007		17395.73	17395.73	3.64		Si
SLV 7	15.02	3449.14	-1096	-0.0045118	0.0005615	0.0035	3.1007		2156.19	2156.19	0.63		No
SLD 8	11.86	-2031.68	-9403	-0.0000229	0.0005615	0.0035	3.1007		16543.56	16543.56	8.14		Si
SLD 8	15.02	1803.8	-1291	-0.0000298	0.0005615	0.0035	3.1007		2452.08	2452.08	1.36		Si
SLV 16	11.86	-945.9	-10006	-0.0000204	0.0005615	0.0035	3.1007		17354.48	17354.48	18.35		Si
SLV 16	15.02	1609.66	-1007	-0.0001573	0.0005615	0.0035	3.1007		2020.6	2020.6	1.26		Si
SLV 11	11.86	-4543.3	-10447	-0.0000332	0.0005615	0.0035	3.1007		17946.53	17946.53	3.95		Si
SLV 11	15.02	3567.05	-911	-0.0059553	0.0005615	0.0035	3.1007		1873.94	1873.94	0.53		No
SLD 12	11.86	-1933.85	-9578	-0.0000229	0.0005615	0.0035	3.1007		16781.06	16781.06	8.68		Si
SLD 12	15.02	1854.13	-1211	-0.000104	0.0005615	0.0035	3.1007		2331.19	2331.19	1.26		Si
SLV 8	11.86	-4838.74	-10097	-0.0000336	0.0005615	0.0035	3.1007		17477.03	17477.03	3.61		Si
SLV 8	15.02	3477.05	-1103	-0.004581	0.0005615	0.0035	3.1007		2166.52	2166.52	0.62		No
SLD 11	11.86	-1905.08	-9551	-0.0000228	0.0005615	0.0035	3.1007		16745.21	16745.21	8.79		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 11	15.02	1841.95	-1208	-0.0000964	0.0005615	0.0035	3.1007		2326.68	2326.68	1.26		Si
SLD 7	11.86	-2002.91	-9377	-0.0000228	0.0005615	0.0035	3.1007		16507.46	16507.46	8.24		Si
SLD 7	15.02	1791.62	-1288	-0.0000286	0.0005615	0.0035	3.1007		2447.57	2447.57	1.37		Si
SLV 15	11.86	-843.38	-9911	-0.0000199	0.0005615	0.0035	3.1007		17228.1	17228.1	20.43		Si
SLV 15	15.02	1566.24	-997	-0.0001267	0.0005615	0.0035	3.1007		2004.55	2004.55	1.28		Si
SLV 12	11.86	-4609.19	-10507	-0.0000336	0.0005615	0.0035	3.1007		18028.12	18028.12	3.91		Si
SLV 12	15.02	3594.95	-918	-0.0060183	0.0005615	0.0035	3.1007		1884.27	1884.27	0.52		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	11.86	451.76	-12091	-10068	4	3.1007	3.1007	-11597	8491	7372	35683	25997	7907	33904	No	9411.02	Si
SLU 48	15.02	976.7	-2989	-2489	2109	3.1007	3.1007	-2867	7327	6361	35683	25997	7907	33904	No	16.08	Si
SLU 8	11.86	347.58	-9606	-7999	17	3.1007	3.1007	-9214	8173	7096	35683	25997	7907	33904	No	1966.26	Si
SLU 8	15.02	1048.14	-2854	-2377	1870	3.1007	3.1007	-2737	7309	6346	35683	25997	7907	33904	No	18.13	Si
SLU 69	11.86	361.86	-13203	-10994	-551	3.1007	3.1007	-12663	8633	7495	35683	25997	7907	33904	No	61.57	Si
SLU 69	15.02	1312.36	-3495	-2911	1715	3.1007	3.1007	-3352	7391	6417	35683	25997	7907	33904	No	19.77	Si
SLU 71	11.86	372.03	-12875	-10722	-337	3.1007	3.1007	-12349	8591	7459	35683	25997	7907	33904	No	100.65	Si
SLU 71	15.02	1373.26	-3574	-2976	1903	3.1007	3.1007	-3428	7402	6426	35683	25997	7907	33904	No	17.82	Si
SLU 51	11.86	420.37	-11774	-9805	114	3.1007	3.1007	-11293	8450	7336	35683	25997	7907	33904	No	298.34	Si
SLU 51	15.02	1053.83	-3067	-2554	2184	3.1007	3.1007	-2942	7337	6370	35683	25997	7907	33904	No	15.52	Si
SLU 50	11.86	461.94	-11763	-9796	217	3.1007	3.1007	-11283	8449	7335	35683	25997	7907	33904	No	155.91	Si
SLU 50	15.02	1037.61	-3069	-2555	2297	3.1007	3.1007	-2943	7337	6370	35683	25997	7907	33904	No	14.76	Si
SLU 9	11.86	306.02	-9617	-8009	-87	3.1007	3.1007	-9225	8174	7097	35683	25997	7907	33904	No	391.63	Si
SLU 9	15.02	1064.36	-2853	-2376	1757	3.1007	3.1007	-2736	7309	6346	35683	25997	7907	33904	No	19.3	Si
SLU 72	11.86	330.46	-12886	-10731	-441	3.1007	3.1007	-12360	8592	7460	35683	25997	7907	33904	No	76.94	Si
SLU 72	15.02	1389.49	-3573	-2976	1790	3.1007	3.1007	-3427	7401	6426	35683	25997	7907	33904	No	18.94	Si
SLU 58	11.86	227.78	-12007	-9999	-288	3.1007	3.1007	-11517	8480	7362	35683	25997	7907	33904	No	117.82	Si
SLU 58	15.02	1156.32	-3081	-2565	1729	3.1007	3.1007	-2955	7338	6371	35683	25997	7907	33904	No	19.61	Si
SLU 49	11.86	410.2	-12102	-10077	-100	3.1007	3.1007	-11607	8492	7373	35683	25997	7907	33904	No	338.32	Si
SLU 49	15.02	992.93	-2988	-2488	1996	3.1007	3.1007	-2866	7327	6361	35683	25997	7907	33904	No	16.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	11.86	-4838.74	-10097	-8408	-12897	3.1007	3.1007	-9685	12354	10725	35683	38996	7907	46408		3.6	Si
SLV 8	15.02	3477.05	-1103	-919	-14124	3.1007	0	0	16250	0	35683	38996	7907	35683		2.53	Si
SLV 10	11.86	5144.53	-7659	-6378	12177	3.1007	2.636	-7347	11886	8773	35683	38996	7907	44456		3.65	Si
SLV 10	15.02	-2492.48	-1787	-1488	15354	2.4805	0.4666	0	0	0	35683	31197	6325	35683		2.32	Si
SLV 5	11.86	4980.87	-7189	-5986	12512	3.1007	2.5724	-6895	11796	8496	35683	38996	7907	44179		3.53	Si
SLV 5	15.02	-2638.29	-1966	-1637	16668	2.4805	0.6247	0	0	0	35683	31197	6325	35683		2.14	Si
SLV 7	11.86	-4772.85	-10037	-8358	-12714	3.1007	3.1007	-9626	12342	10715	35683	38996	7907	46398		3.65	Si
SLV 7	15.02	3449.14	-1096	-913	-13956	3.1007	0	0	16250	0	35683	38996	7907	35683		2.56	Si
SLV 6	11.86	4914.99	-7249	-6037	12329	3.1007	2.6171	-6953	11807	8652	35683	38996	7907	44335		3.6	Si
SLV 6	15.02	-2610.39	-1973	-1643	16500	2.4805	0.681	0	0	0	35683	31197	6325	35683		2.16	Si
SLV 11	11.86	-4543.3	-10447	-8699	-12867	3.1007	3.1007	-10020	12421	10783	35683	38996	7907	46467		3.61	Si
SLV 11	15.02	3567.05	-911	-758	-15103	3.1007	0	0	16250	0	35683	38996	7907	35683		2.36	Si
SLD 12	11.86	-1933.85	-9578	-7976	-5914	3.1007	3.1007	-9187	12254	10639	35683	38996	7907	46322		7.83	Si
SLD 12	15.02	1854.13	-1211	-1009	-6347	3.1007	0.0592	-26320	15880	263	35683	38996	7907	35946		5.66	Si
SLV 12	11.86	-4609.19	-10507	-8750	-13049	3.1007	3.1007	-10078	12432	10794	35683	38996	7907	46477		3.56	Si
SLV 12	15.02	3594.95	-918	-764	-15271	3.1007	0	0	16250	0	35683	38996	7907	35683		2.34	Si
SLV 9	11.86	5210.42	-7599	-6328	12359	3.1007	2.5939	-7288	11874	8624	35683	38996	7907	44308		3.58	Si
SLV 9	15.02	-2520.39	-1780	-1482	15522	2.4805	0.4036	0	0	0	35683	31197	6325	35683		2.3	Si
SLD 11	11.86	-1905.08	-9551	-7954	-5835	3.1007	3.1007	-9161	12249	10634	35683	38996	7907	46318		7.94	Si
SLD 11	15.02	1841.95	-1208	-1006	-6274	3.1007	0.0782	-24746	15528	340	35683	38996	7907	36023		5.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.53	3314	-2877	358.14	394.01	1.1	Si
SLV 10	179667	0.53	3385	-2939	358.14	402.28	1.12	Si
SLV 5	179667	0.53	3981	-3456	358.14	471.28	1.32	Si
SLV 6	179667	0.53	4052	-3518	358.14	479.47	1.34	Si
SLV 13	179667	0.53	4100	-3559	358.14	484.91	1.35	Si
SLV 14	179667	0.53	4210	-3655	358.14	497.63	1.39	Si
SLV 15	179667	0.53	5458	-4738	358.14	639.67	1.79	Si
SLV 16	179667	0.53	5569	-4835	358.14	652.16	1.82	Si
SLV 1	179667	0.53	6325	-5491	358.14	736.94	2.06	Si
SLV 2	179667	0.53	6436	-5587	358.14	749.27	2.09	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1973	-7249	-508	3.876	627.1	0.89	63.2797	12.56426	Si
SLV 5	-1966	-7189	-508	3.882	626.5	0.89	63.37228	12.56426	Si
SLV 10	-1787	-7659	225	4.109	611.1	0.891	66.9939	12.56426	Si
SLV 9	-1780	-7599	225	4.116	610.5	0.891	67.09574	12.56426	Si
SLV 8	-1103	-10097	-226	4.887	556.5	0.904	78.60526	12.56426	Si
SLV 7	-1096	-10037	-226	4.896	556	0.904	78.73502	12.56426	Si
SLV 12	-918	-10507	507	5.07	543.3	0.91	80.95605	12.56426	Si
SLV 11	-911	-10447	507	5.08	542.8	0.91	81.09292	12.56426	Si
SLV 2	-1887	-7785	-1265	3.778	619.6	0.891	61.63989	7.33323	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-1876	-7690	-1265	3.787	618.7	0.891	61.7821	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.6	SLU 42	Si
V_SLU	14.762	SLU 50	Si
PF_SLV	0.524	SLV 12	No
V_SLV	2.141	SLV 5	Si
PFFP_SLV	1.1	SLV 9	Si
R_SLV	5.036	SLV 6	Si

Maschio 174

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L7	L8	2.105	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 30	12.76	499.47	-4569	-0.0000152	0.0003743	0.0035	2.105	4442.49	4764.93	4764.93	9.54	No	Si
SLU 30	14.56	1252.61	-2570	-0.0000161	0.0003743	0.0035	2.105	2589.03	2847.84	2847.84	2.27	No	Si
SLU 41	12.76	422.71	-4172	-0.0000136	0.0003743	0.0035	2.105	4085.96	4392.71	4392.71	10.39	No	Si
SLU 41	14.56	971.44	-2173	-0.0000127	0.0003743	0.0035	2.105	2204.7	2456.12	2456.12	2.53	No	Si
SLU 42	12.76	416.15	-4153	-0.0000135	0.0003743	0.0035	2.105	4068.14	4374.21	4374.21	10.51	No	Si
SLU 42	14.56	991.38	-2154	-0.0000128	0.0003743	0.0035	2.105	2185.5	2436.66	2436.66	2.46	No	Si
SLU 17	12.76	462.86	-4311	-0.0000143	0.0003743	0.0035	2.105	4211.42	4523.27	4523.27	9.77	No	Si
SLU 17	14.56	1036.02	-2341	-0.0000136	0.0003743	0.0035	2.105	2368.15	2622.26	2622.26	2.53	No	Si
SLU 37	12.76	456.39	-4309	-0.0000142	0.0003743	0.0035	2.105	4209.2	4520.96	4520.96	9.91	No	Si
SLU 37	14.56	1286.82	-2310	-0.0000165	0.0003743	0.0035	2.105	2337.5	2591.05	2591.05	2.01	No	Si
SLU 36	12.76	498.38	-4749	-0.0000157	0.0003743	0.0035	2.105	4602.46	4933.04	4933.04	9.9	No	Si
SLU 36	14.56	1379.66	-2750	-0.0000177	0.0003743	0.0035	2.105	2761.62	3024.9	3024.9	2.19	No	Si
SLU 28	12.76	548.02	-5029	-0.0000168	0.0003743	0.0035	2.105	4848.97	5192.97	5192.97	9.48	No	Si
SLU 28	14.56	1325.51	-3030	-0.0000175	0.0003743	0.0035	2.105	3027.74	3297.58	3297.58	2.49	No	Si
SLU 35	12.76	504.94	-4768	-0.0000158	0.0003743	0.0035	2.105	4619.87	4951.38	4951.38	9.81	No	Si
SLU 35	14.56	1359.72	-2770	-0.0000175	0.0003743	0.0035	2.105	2780.4	3044.22	3044.22	2.24	No	Si
SLU 38	12.76	449.83	-4289	-0.0000141	0.0003743	0.0035	2.105	4191.48	4502.49	4502.49	10.01	No	Si
SLU 38	14.56	1306.76	-2290	-0.0000168	0.0003743	0.0035	2.105	2318.39	2571.61	2571.61	1.97	No	Si
SLU 29	12.76	506.03	-4588	-0.0000153	0.0003743	0.0035	2.105	4460.03	4783.31	4783.31	9.45	No	Si
SLU 29	14.56	1232.67	-2590	-0.0000159	0.0003743	0.0035	2.105	2607.94	2867.2	2867.2	2.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	12.76	771.38	-2622	-0.0000121	0.0005615	0.0035	2.105		2926.03	2926.03	3.79		Si
SLV 8	14.56	1638.25	-1183	-0.0016466	0.0005615	0.0035	2.105		1467.99	1467.99	0.9		No
SLV 7	12.76	901.48	-2450	-0.0000126	0.0005615	0.0035	2.105		2754.06	2754.06	3.06		Si
SLV 7	14.56	1662.94	-1012	-0.0028792	0.0005615	0.0035	2.105		1291.7	1291.7	0.78		No
SLD 2	12.76	728.46	-3543	-0.0000141	0.0005615	0.0035	2.105		3842.61	3842.61	5.28		Si
SLD 2	14.56	844.64	-1560	-0.0000107	0.0005615	0.0035	2.105		1852.74	1852.74	2.19		Si
SLD 1	12.76	815.37	-3429	-0.0000144	0.0005615	0.0035	2.105		3729.62	3729.62	4.57		Si
SLD 1	14.56	861.14	-1445	-0.0000111	0.0005615	0.0035	2.105		1736.31	1736.31	2.02		Si
SLV 4	12.76	1153.39	-1578	-0.0000173	0.0005615	0.0035	2.105		1871.62	1871.62	1.62		Si
SLV 4	14.56	1992.42	110	-0.0140711	0.0005615	0.0035	2.105		0	0	0		No
SLV 2	12.76	1069.91	-2265	-0.0000137	0.0005615	0.0035	2.105		2568.29	2568.29	2.4		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	14.56	1476.29	-278	-0.0073646	0.0005615	0.0035	2.105		534.06	534.06	0.36		No
SLD 4	12.76	765.15	-3245	-0.0000136	0.0005615	0.0035	2.105		3548.03	3548.03	4.64		Si
SLD 4	14.56	1069.2	-1392	-0.0000173	0.0005615	0.0035	2.105		1681.5	1681.5	1.57		Si
SLD 3	12.76	852.07	-3130	-0.0000139	0.0005615	0.0035	2.105		3434.32	3434.32	4.03		Si
SLD 3	14.56	1085.69	-1277	-0.0000223	0.0005615	0.0035	2.105		1564.19	1564.19	1.44		Si
SLV 1	12.76	1272.36	-1998	-0.0000169	0.0005615	0.0035	2.105		2298.8	2298.8	1.81		Si
SLV 1	14.56	1514.71	-11	-0.0098029	0.0005615	0.0035	2.105		255.12	255.12	0.17		No
SLV 3	12.76	1355.84	-1312	-0.0001562	0.0005615	0.0035	2.105		1599.5	1599.5	1.18		Si
SLV 3	14.56	2030.84	377	-0.0144842	0.0005615	0.0035	2.105		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	12.76	651.12	-6130	-5104	-379	2.105	2.105	-8660	8099	4774	35683	17649	5368	23017	No	60.73	Si
SLU 78	14.56	1372.26	-3550	-2956	-379	2.105	1.9978	-5015	7613	4259	35683	17649	5368	23017	No	60.73	Si
SLU 37	12.76	456.39	-4309	-3588	-445	2.105	2.105	-6087	7756	4571	35683	17649	5368	23017	No	51.75	Si
SLU 37	14.56	1286.82	-2310	-1923	-445	2.105	1.4862	-3263	7380	3071	35683	17649	5368	23017	No	51.75	Si
SLU 29	12.76	506.03	-4588	-3821	-387	2.105	2.105	-6483	7809	4602	35683	17649	5368	23017	No	59.46	Si
SLU 29	14.56	1232.67	-2590	-2156	-387	2.105	1.7295	-3659	7432	3599	35683	17649	5368	23017	No	59.46	Si
SLU 27	12.76	554.58	-5048	-4204	-401	2.105	2.105	-7132	7895	4654	35683	17649	5368	23017	No	57.45	Si
SLU 27	14.56	1305.57	-3049	-2539	-401	2.105	1.873	-4308	7519	3943	35683	17649	5368	23017	No	57.45	Si
SLU 35	12.76	504.94	-4768	-3971	-458	2.105	2.105	-6737	7843	4622	35683	17649	5368	23017	No	50.22	Si
SLU 35	14.56	1359.72	-2770	-2306	-458	2.105	1.6846	-3913	7466	3522	35683	17649	5368	23017	No	50.22	Si
SLU 28	12.76	548.02	-5029	-4187	-415	2.105	2.105	-7104	7892	4651	35683	17649	5368	23017	No	55.42	Si
SLU 28	14.56	1325.51	-3030	-2523	-415	2.105	1.845	-4280	7515	3882	35683	17649	5368	23017	No	55.42	Si
SLU 38	12.76	449.83	-4289	-3572	-459	2.105	2.105	-6060	7752	4569	35683	17649	5368	23017	No	50.09	Si
SLU 38	14.56	1306.76	-2290	-1907	-459	2.105	1.4457	-3236	7376	2986	35683	17649	5368	23017	No	50.09	Si
SLU 80	12.76	602.57	-5670	-4721	-365	2.105	2.105	-8011	8013	4723	35683	17649	5368	23017	No	62.97	Si
SLU 80	14.56	1299.36	-3090	-2573	-365	2.105	1.896	-4366	7527	3996	35683	17649	5368	23017	No	62.97	Si
SLU 36	12.76	498.38	-4749	-3954	-473	2.105	2.105	-6709	7839	4620	35683	17649	5368	23017	No	48.66	Si
SLU 36	14.56	1379.66	-2750	-2290	-473	2.105	1.6523	-3885	7462	3453	35683	17649	5368	23017	No	48.66	Si
SLU 30	12.76	499.47	-4569	-3804	-402	2.105	2.105	-6455	7805	4600	35683	17649	5368	23017	No	57.28	Si
SLU 30	14.56	1252.61	-2570	-2140	-402	2.105	1.6953	-3631	7429	3526	35683	17649	5368	23017	No	57.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	12.76	-200.72	-7404	-6166	1105	2.105	2.105	-10461	12509	7373	35683	26474	5368	31841		28.83	Si
SLV 13	14.56	-1237.24	-5137	-4278	74	2.105	2.105	-7258	11868	6995	35683	26474	5368	31841		429.69	Si
SLV 14	12.76	-403.17	-7671	-6388	1013	2.105	2.105	-10838	12584	7417	35683	26474	5368	31841		31.42	Si
SLV 14	14.56	-1275.66	-5404	-4500	-17	2.105	2.105	-7635	11944	7040	35683	26474	5368	31841		1870.82	Si
SLV 4	12.76	1153.39	-1578	-1314	-962	2.105	0.9653	-2230	10863	2936	35683	26474	5368	31841		33.11	Si
SLV 4	14.56	1992.42	110	92	69	2.105	0	0	4761	0	35683	26474	5368	31841		462.28	Si
SLV 2	12.76	1069.91	-2265	-1886	-760	2.105	1.7405	-3200	11057	5388	35683	26474	5368	31841		41.92	Si
SLV 2	14.56	1476.29	-278	-231	107	2.105	0	0	16250	0	35683	26474	5368	31841		297.92	Si
SLV 9	12.76	181.29	-6361	-5297	704	2.105	2.105	-8987	12214	7199	35683	26474	5368	31841		45.26	Si
SLV 9	14.56	-883.07	-3844	-3201	146	2.105	2.105	-5430	11503	6780	35683	26474	5368	31841		218.81	Si
SLV 10	12.76	51.19	-6533	-5440	645	2.105	2.105	-9229	12263	7227	35683	26474	5368	31841		49.37	Si
SLV 10	14.56	-907.76	-4015	-3343	87	2.105	2.105	-5673	11551	6808	35683	26474	5368	31841		366.17	Si
SLV 16	12.76	-319.69	-6985	-5816	811	2.105	2.105	-9868	12390	7303	35683	26474	5368	31841		39.24	Si
SLV 16	14.56	-759.54	-5016	-4177	-55	2.105	2.105	-7087	11834	6975	35683	26474	5368	31841		578.72	Si
SLV 3	12.76	1355.84	-1312	-1092	-870	2.105	0.0562	-38760	16250	256	35683	26474	5368	31841		36.58	Si
SLV 3	14.56	2030.84	377	314	160	2.105	0	0	9604	0	35683	26474	5368	31841		199.01	Si
SLV 1	12.76	1272.36	-1998	-1664	-668	2.105	1.2473	-2823	10981	3835	35683	26474	5368	31841		47.64	Si
SLV 1	14.56	1514.71	-11	-9	198	2.105	0	0	0	0	35683	26474	5368	31841		160.81	Si
SLV 15	12.76	-117.24	-6718	-5594	902	2.105	2.105	-9491	12315	7258	35683	26474	5368	31841		35.28	Si
SLV 15	14.56	-721.12	-4749	-3955	36	2.105	2.105	-6710	11759	6930	35683	26474	5368	31841		881.97	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.53	0	-1341	237.61	0	0	No, e>t/2
SLV 3	179667	0.53	0	-1074	237.61	0	0	No, e>t/2
SLV 1	179667	0.53	0	-1561	237.61	0	0	No, e>t/2
SLV 2	179667	0.53	3101	-1828	237.61	250.72	1.06	Si
SLV 7	179667	0.53	3747	-2208	237.61	301.56	1.27	Si
SLV 8	179667	0.53	4038	-2380	237.61	324.35	1.37	Si
SLV 11	179667	0.53	6153	-3626	237.61	487.24	2.05	Si
SLV 12	179667	0.53	6444	-3798	237.61	509.27	2.14	Si
SLV 5	179667	0.53	6501	-3832	237.61	513.58	2.16	Si
SLV 6	179667	0.53	6792	-4003	237.61	535.5	2.25	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-3549	-6445	689	2.19	634.4	0.902	35.29088	12.56426	Si
SLV 9	-3421	-6231	688	2.243	621.9	0.901	36.20031	12.56426	Si
SLV 6	-2181	-5306	723	2.941	502.3	0.891	48.0005	12.56426	Si
SLV 5	-2054	-5091	723	3.04	490.4	0.89	49.65178	12.56426	Si
SLV 12	-2002	-4359	-737	3.079	485.6	0.89	50.29265	12.56426	Si
SLV 14	-4638	-7104	149	1.905	742.2	0.911	30.38347	7.33323	Si
SLV 11	-1875	-4145	-737	3.187	473.8	0.889	52.09203	12.56426	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-4441	-6770	148	1.965	722.5	0.91	31.40151	7.33323	Si
SLV 16	-4174	-6478	-278	2.03	696.1	0.907	32.52389	7.33323	Si
SLV 15	-3977	-6144	-279	2.1	676.5	0.906	33.69867	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.968	SLU 38	Si
V_SLU	48.661	SLU 36	Si
PF_SLV	0	SLV 3	No
V_SLV	28.826	SLV 13	Si
PFFP_SLV	0	SLV 1	No
R_SLV	2.809	SLV 10	Si

Maschio 175

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	12.76	3658.84	-13078	-0.0000252	0.0003743	0.0035	3.98	23024.75	24323.41	24323.41	6.65	No	Si
SLU 83	14.56	1744.89	-8430	-0.0000148	0.0003743	0.0035	3.98	15528.6	16628.72	16628.72	9.53	No	Si
SLU 40	12.76	2973.27	-9468	-0.0000188	0.0003743	0.0035	3.98	17269.65	18459.36	18459.36	6.21	No	Si
SLU 40	14.56	1164.49	-5857	-0.0000101	0.0003743	0.0035	3.98	11053.51	11983.61	11983.61	10.29	No	Si
SLU 19	12.76	2630.68	-8923	-0.0000173	0.0003743	0.0035	3.98	16360.68	17499.22	17499.22	6.65	No	Si
SLU 19	14.56	810.3	-5373	-0.0000088	0.0003743	0.0035	3.98	10186.13	11094.51	11094.51	13.69	No	Si
SLU 82	12.76	3513.63	-12144	-0.0000236	0.0003743	0.0035	3.98	21579.25	22997.77	22997.77	6.55	No	Si
SLU 82	14.56	1265.3	-7491	-0.0000126	0.0003743	0.0035	3.98	13922.08	14951.73	14951.73	11.82	No	Si
SLU 31	12.76	2813.43	-9603	-0.0000186	0.0003743	0.0035	3.98	17492.55	18695.35	18695.35	6.65	No	Si
SLU 31	14.56	1156.24	-5994	-0.0000103	0.0003743	0.0035	3.98	11297.95	12236.26	12236.26	10.58	No	Si
SLU 42	12.76	3089.04	-10350	-0.0000202	0.0003743	0.0035	3.98	18717.84	19991.46	19991.46	6.47	No	Si
SLU 42	14.56	1657.12	-6744	-0.0000123	0.0003743	0.0035	3.98	12622.4	13601.31	13601.31	8.21	No	Si
SLU 41	12.76	3118.48	-10402	-0.0000204	0.0003743	0.0035	3.98	18802.8	20082.32	20082.32	6.44	No	Si
SLU 41	14.56	1644.09	-6796	-0.0000124	0.0003743	0.0035	3.98	12713.85	13695.84	13695.84	8.33	No	Si
SLU 81	12.76	3543.07	-12196	-0.0000238	0.0003743	0.0035	3.98	21660.93	23071.56	23071.56	6.51	No	Si
SLU 81	14.56	1252.26	-7543	-0.0000126	0.0003743	0.0035	3.98	14012.16	15045.34	15045.34	12.01	No	Si
SLU 18	12.76	2660.12	-8975	-0.0000174	0.0003743	0.0035	3.98	16448.25	17591.22	17591.22	6.61	No	Si
SLU 18	14.56	797.27	-5425	-0.0000088	0.0003743	0.0035	3.98	10280.09	11190.64	11190.64	14.04	No	Si
SLU 39	12.76	3002.71	-9521	-0.0000189	0.0003743	0.0035	3.98	17356.23	18551.02	18551.02	6.18	No	Si
SLU 39	14.56	1151.46	-5909	-0.0000102	0.0003743	0.0035	3.98	11146.58	12079.76	12079.76	10.49	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	12.76	1813.83	-7737	-0.0000139	0.0005615	0.0035	3.98		15624.25	15624.25	8.61		Si
SLD 4	14.56	2892.59	-4573	-0.0000118	0.0005615	0.0035	3.98		9693.75	9693.75	3.35		Si
SLD 3	12.76	2042.32	-7717	-0.0000144	0.0005615	0.0035	3.98		15588.28	15588.28	7.63		Si
SLD 3	14.56	2850.81	-4552	-0.0000117	0.0005615	0.0035	3.98		9652.43	9652.43	3.39		Si
SLD 1	12.76	2046.57	-8696	-0.0000157	0.0005615	0.0035	3.98		17393.3	17393.3	8.5		Si
SLD 1	14.56	2622.69	-5388	-0.0000124	0.0005615	0.0035	3.98		11237.34	11237.34	4.28		Si
SLD 2	12.76	1818.07	-8715	-0.0000153	0.0005615	0.0035	3.98		17428.73	17428.73	9.59		Si
SLD 2	14.56	2664.47	-5410	-0.0000125	0.0005615	0.0035	3.98		11278.53	11278.53	4.23		Si
SLV 4	12.76	1052.53	-5296	-0.0000091	0.0005615	0.0035	3.98		11063.62	11063.62	10.51		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	14.56	5616.48	-2659	-0.000477	0.0005615	0.0035	3.98		6021.28	6021.28	1.07		Si
SLV 7	12.76	2217.66	-4904	-0.0000109	0.0005615	0.0035	3.98		10319.35	10319.35	4.65		Si
SLV 7	14.56	3023.46	-2115	-0.0000133	0.0005615	0.0035	3.98		4970.29	4970.29	1.64		Si
SLV 1	12.76	1596.5	-7474	-0.0000131	0.0005615	0.0035	3.98		15138.4	15138.4	9.48		Si
SLV 1	14.56	5000.2	-4503	-0.000018	0.0005615	0.0035	3.98		9559.75	9559.75	1.91		Si
SLV 3	12.76	1584.75	-5251	-0.0000101	0.0005615	0.0035	3.98		10977.53	10977.53	6.93		Si
SLV 3	14.56	5519.16	-2608	-0.0004742	0.0005615	0.0035	3.98		5922.95	5922.95	1.07		Si
SLV 8	12.76	1875.61	-4933	-0.0000103	0.0005615	0.0035	3.98		10374.56	10374.56	5.53		Si
SLV 8	14.56	3086.01	-2148	-0.0000136	0.0005615	0.0035	3.98		5033.59	5033.59	1.63		Si
SLV 2	12.76	1064.28	-7519	-0.0000121	0.0005615	0.0035	3.98		15222.08	15222.08	14.3		Si
SLV 2	14.56	5097.52	-4553	-0.0000184	0.0005615	0.0035	3.98		9655.96	9655.96	1.89		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	12.76	3353.78	-12278	-10224	1109	3.98	3.98	-9175	8168	9102	35683	33370	10149	43519	No	39.24	Si
SLU 73	14.56	1257.05	-7628	-6352	1116	3.98	3.98	-5700	7704	8586	35683	33370	10149	43519	No	39	Si
SLU 82	12.76	3513.63	-12144	-10112	1194	3.98	3.98	-9074	8154	9087	35683	33370	10149	43519	No	36.44	Si
SLU 82	14.56	1265.3	-7491	-6237	1203	3.98	3.98	-5597	7691	8571	35683	33370	10149	43519	No	36.18	Si
SLU 83	12.76	3658.84	-13078	-10890	1007	3.98	3.98	-9772	8247	9191	35683	33370	10149	43519	No	43.23	Si
SLU 83	14.56	1744.89	-8430	-7019	1012	3.98	3.98	-6299	7784	8675	35683	33370	10149	43519	No	43.01	Si
SLU 53	12.76	3196.74	-13538	-11273	1002	3.98	3.98	-10116	8293	9242	35683	33370	10149	43519	No	43.43	Si
SLU 53	14.56	1286.28	-8958	-7459	1004	3.98	3.98	-6694	7837	8733	35683	33370	10149	43519	No	43.33	Si
SLU 52	12.76	3011.19	-11733	-9770	1117	3.98	3.98	-8767	8113	9042	35683	33370	10149	43519	No	38.98	Si
SLU 52	14.56	902.86	-7144	-5949	1123	3.98	3.98	-5338	7656	8532	35683	33370	10149	43519	No	38.76	Si
SLU 18	12.76	2660.12	-8975	-7474	994	3.98	3.98	-6707	7839	8735	35683	33370	10149	43519	No	43.78	Si
SLU 18	14.56	797.27	-5425	-4518	1001	3.98	3.98	-4054	7485	8341	35683	33370	10149	43519	No	43.46	Si
SLU 81	12.76	3543.07	-12196	-10156	1218	3.98	3.98	-9113	8160	9093	35683	33370	10149	43519	No	35.73	Si
SLU 81	14.56	1252.26	-7543	-6281	1226	3.98	3.98	-5636	7696	8576	35683	33370	10149	43519	No	35.49	Si
SLU 61	12.76	3171.04	-11598	-9658	1202	3.98	3.98	-8667	8100	9027	35683	33370	10149	43519	No	36.22	Si
SLU 61	14.56	911.11	-7007	-5835	1209	3.98	3.98	-5236	7643	8517	35683	33370	10149	43519	No	35.98	Si
SLU 62	12.76	3316.25	-12532	-10436	1014	3.98	3.98	-9365	8193	9130	35683	33370	10149	43519	No	42.91	Si
SLU 62	14.56	1390.71	-7946	-6617	1019	3.98	3.98	-5937	7736	8621	35683	33370	10149	43519	No	42.72	Si
SLU 60	12.76	3200.48	-11651	-9702	1225	3.98	3.98	-8706	8105	9032	35683	33370	10149	43519	No	35.52	Si
SLU 60	14.56	898.08	-7059	-5878	1233	3.98	3.98	-5275	7648	8523	35683	33370	10149	43519	No	35.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	12.76	1596.5	-7474	-6223	-4086	3.98	3.98	-5585	11534	12853	35683	50055	10149	48536		11.88	Si
SLV 1	14.56	5000.2	-4503	-3749	-1810	3.98	2.6384	-3364	11090	8192	35683	50055	10149	43876		24.24	Si
SLV 15	12.76	3703.9	-11647	-9699	6050	3.98	3.98	-8703	12157	13548	35683	50055	10149	49231		8.14	Si
SLV 15	14.56	-3390.94	-7491	-6238	3786	3.98	3.98	-5597	11536	12856	35683	50055	10149	48539		12.82	Si
SLV 2	12.76	1064.28	-7519	-6261	-4437	3.98	3.98	-5618	11540	12861	35683	50055	10149	48544		10.94	Si
SLV 2	14.56	5097.52	-4553	-3792	-2165	3.98	2.6115	-3402	11097	8115	35683	50055	10149	43798		20.23	Si
SLV 14	12.76	3183.43	-13916	-11588	6036	3.98	3.98	-10398	12496	13926	35683	50055	10149	49609		8.22	Si
SLV 14	14.56	-3812.57	-9436	-7858	3921	3.98	3.98	-7051	11827	13180	35683	50055	10149	48863		12.46	Si
SLD 15	12.76	2950.11	-10451	-8703	3048	3.98	3.98	-7809	11979	13349	35683	50055	10149	49032		16.09	Si
SLD 15	14.56	-957.88	-6634	-5525	2081	3.98	3.98	-4957	11408	12713	35683	50055	10149	48396		23.25	Si
SLV 3	12.76	1584.75	-5251	-4372	-4423	3.98	3.98	-3923	11201	12483	35683	50055	10149	48166		10.89	Si
SLV 3	14.56	5519.16	-2608	-2172	-2301	3.98	0	-78332	16250	0	35683	50055	10149	35683		15.51	Si
SLD 13	12.76	2954.36	-11430	-9518	3195	3.98	3.98	-8541	12125	13512	35683	50055	10149	49195		15.4	Si
SLD 13	14.56	-1186	-7471	-6221	2296	3.98	3.98	-5582	11533	12853	35683	50055	10149	48536		21.14	Si
SLV 13	12.76	3715.65	-13871	-11550	6387	3.98	3.98	-10364	12490	13918	35683	50055	10149	49602		7.77	Si
SLV 13	14.56	-3909.89	-9385	-7815	4277	3.98	3.98	-7013	11819	13171	35683	50055	10149	48855		11.42	Si
SLV 4	12.76	1052.53	-5296	-4410	-4774	3.98	3.98	-3957	11208	12490	35683	50055	10149	48174		10.09	Si
SLV 4	14.56	5616.48	-2659	-2214	-2656	3.98	0	-79033	16250	0	35683	50055	10149	35683		13.43	Si
SLV 16	12.76	3171.68	-11693	-9737	5699	3.98	3.98	-8737	12164	13556	35683	50055	10149	49239		8.64	Si
SLV 16	14.56	-3293.62	-7542	-6280	3431	3.98	3.98	-5635	11544	12864	35683	50055	10149	48548		14.15	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.53	3385	-3772	449.25	516.38	1.15	Si
SLV 8	179667	0.53	3414	-3805	449.25	520.76	1.16	Si
SLV 3	179667	0.53	3681	-4102	449.25	560.42	1.25	Si
SLV 4	179667	0.53	3726	-4153	449.25	567.2	1.26	Si
SLV 11	179667	0.53	4973	-5542	449.25	750.58	1.67	Si
SLV 12	179667	0.53	5002	-5574	449.25	754.86	1.68	Si
SLV 1	179667	0.53	5529	-6162	449.25	831.45	1.85	Si
SLV 2	179667	0.53	5575	-6213	449.25	838.05	1.87	Si
SLV 15	179667	0.53	8974	-10001	449.25	1317.83	2.93	Si
SLV 16	179667	0.53	9020	-10052	449.25	1324.11	2.95	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-8691	-13367	1257	1.835	1395.4	0.911	29.28051	12.56426	Si
SLV 9	-8634	-13396	1257	1.844	1389.8	0.911	29.42626	12.56426	Si
SLV 6	-6622	-13695	1210	2.218	1190.9	0.901	35.76616	12.56426	Si
SLV 5	-6565	-13725	1210	2.231	1185.3	0.901	35.98178	12.56426	Si
SLV 14	-8743	-10987	451	1.895	1400.6	0.911	30.2287	7.33323	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-8655	-11033	450	1.909	1391.8	0.911	30.46261	7.33323	Si
SLV 16	-6706	-9283	-288	2.293	1199	0.902	36.95932	7.33323	Si
SLV 15	-6617	-9329	-288	2.314	1190.3	0.901	37.30451	7.33323	Si
SLV 12	-1900	-7687	-1206	4.245	751.7	0.895	68.91391	12.56426	Si
SLV 11	-1843	-7716	-1206	4.292	747.1	0.896	69.631	12.56426	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.178	SLU 39	Si
V_SLU	35.294	SLU 60	Si
PF_SLV	1.072	SLV 4	Si
V_SLV	7.766	SLV 13	Si
PFFP_SLV	1.149	SLV 7	Si
R_SLV	2.33	SLV 10	Si

Maschio 176

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 38	12.76	-859.59	-10944	-0.0000165	0.0003743	0.0035	3.98	19677.27	24708.81	24708.81	28.75	No	Si
SLU 38	14.56	-2725.32	-7357	-0.0000153	0.0003743	0.0035	3.98	13691.74	18442.58	18442.58	6.77	No	Si
SLU 41	12.76	-725.77	-9794	-0.0000146	0.0003743	0.0035	3.98	17806.84	22756.96	22756.96	31.36	No	Si
SLU 41	14.56	-2452.08	-6192	-0.0000132	0.0003743	0.0035	3.98	11649.12	16363.09	16363.09	6.67	No	Si
SLU 42	12.76	-756.79	-9746	-0.0000146	0.0003743	0.0035	3.98	17728.66	22677.14	22677.14	29.97	No	Si
SLU 42	14.56	-2435.1	-6144	-0.0000131	0.0003743	0.0035	3.98	11565.28	16274.37	16274.37	6.68	No	Si
SLU 34	12.76	-785.48	-9969	-0.000015	0.0003743	0.0035	3.98	18094.5	23051.84	23051.84	29.35	No	Si
SLU 34	14.56	-2289.55	-6373	-0.0000131	0.0003743	0.0035	3.98	11969.14	16698.89	16698.89	7.29	No	Si
SLU 37	12.76	-828.57	-10991	-0.0000165	0.0003743	0.0035	3.98	19753.45	24790.29	24790.29	29.92	No	Si
SLU 37	14.56	-2742.3	-7405	-0.0000154	0.0003743	0.0035	3.98	13773.57	18526.01	18526.01	6.76	No	Si
SLU 83	12.76	-871.55	-12393	-0.0000185	0.0003743	0.0035	3.98	21968.31	27208.23	27208.23	31.22	No	Si
SLU 83	14.56	-2619.53	-7750	-0.0000157	0.0003743	0.0035	3.98	14369.31	19137.62	19137.62	7.31	No	Si
SLU 39	12.76	-630.99	-8850	-0.0000132	0.0003743	0.0035	3.98	16237.89	21107.24	21107.24	33.45	No	Si
SLU 39	14.56	-2027.63	-5238	-0.000011	0.0003743	0.0035	3.98	9943.2	14584.68	14584.68	7.19	No	Si
SLU 40	12.76	-662	-8803	-0.0000131	0.0003743	0.0035	3.98	16158.14	21021.45	21021.45	31.75	No	Si
SLU 40	14.56	-2010.65	-5191	-0.0000109	0.0003743	0.0035	3.98	9857.78	14497.08	14497.08	7.21	No	Si
SLU 84	12.76	-902.56	-12346	-0.0000185	0.0003743	0.0035	3.98	21894.46	27130.76	27130.76	30.06	No	Si
SLU 84	14.56	-2602.55	-7703	-0.0000156	0.0003743	0.0035	3.98	14288.06	19053.77	19053.77	7.32	No	Si
SLU 79	12.76	-974.35	-13591	-0.0000204	0.0003743	0.0035	3.98	23805.72	29144.27	29144.27	29.91	No	Si
SLU 79	14.56	-2909.75	-8963	-0.0000179	0.0003743	0.0035	3.98	16427.45	21311.71	21311.71	7.32	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	12.76	4421.49	-8107	-0.0000197	0.0005615	0.0035	3.98		16310.45	16310.45	3.69		Si
SLV 15	14.56	-6621.72	-4616	-0.0000294	0.0005615	0.0035	3.184		13528.54	13528.54	2.04		Si
SLD 15	12.76	1546.03	-8713	-0.0000147	0.0005615	0.0035	3.98		17424.52	17424.52	11.27		Si
SLD 15	14.56	-3592.56	-5182	-0.000014	0.0005615	0.0035	3.98		14594.67	14594.67	4.06		Si
SLV 16	12.76	4136.22	-8151	-0.0000192	0.0005615	0.0035	3.98		16392.11	16392.11	3.96		Si
SLV 16	14.56	-6581.73	-4663	-0.0000285	0.0005615	0.0035	3.184		13618.53	13618.53	2.07		Si
SLV 3	12.76	-5980	-8726	-0.0000237	0.0005615	0.0035	3.98		21133.44	21133.44	3.53		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	14.56	4367.27	-5290	-0.000016	0.0005615	0.0035	3.98		11051.96	11051.96	2.53		Si
SLV 1	12.76	-5326.44	-10216	-0.0000244	0.0005615	0.0035	3.98		23815.91	23815.91	4.47		Si
SLV 1	14.56	3923.71	-6592	-0.0000166	0.0005615	0.0035	3.98		13497.45	13497.45	3.44		Si
SLV 13	12.76	5075.05	-9597	-0.000023	0.0005615	0.0035	3.98		19039.36	19039.36	3.75		Si
SLV 13	14.56	-7065.27	-5918	-0.0000263	0.0005615	0.0035	3.184		15974.57	15974.57	2.26		Si
SLV 14	12.76	4789.78	-9641	-0.0000225	0.0005615	0.0035	3.98		19120.02	19120.02	3.99		Si
SLV 14	14.56	-7025.28	-5966	-0.000026	0.0005615	0.0035	3.184		16063.56	16063.56	2.29		Si
SLV 4	12.76	-6265.27	-8770	-0.0000244	0.0005615	0.0035	3.98		21212.22	21212.22	3.39		Si
SLV 4	14.56	4407.26	-5337	-0.0000161	0.0005615	0.0035	3.98		11142.01	11142.01	2.53		Si
SLD 16	12.76	1423.56	-8732	-0.0000145	0.0005615	0.0035	3.98		17458.97	17458.97	12.26		Si
SLD 16	14.56	-3575.39	-5203	-0.000014	0.0005615	0.0035	3.98		14632.98	14632.98	4.09		Si
SLV 2	12.76	-5611.71	-10260	-0.000025	0.0005615	0.0035	3.98		23895.64	23895.64	4.26		Si
SLV 2	14.56	3963.71	-6640	-0.0000168	0.0005615	0.0035	3.98		13586.49	13586.49	3.43		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 38	12.76	-859.59	-10944	-9113	990	3.98	3.98	-8177	8035	8954	35683	33370	10149	43519	No	43.98	Si
SLU 38	14.56	-2725.32	-7357	-6127	990	3.98	3.98	-5498	7677	8556	35683	33370	10149	43519	No	43.94	Si
SLU 78	12.76	-970.69	-14318	-11923	988	3.98	3.98	-10699	8371	9329	35683	33370	10149	43519	No	44.07	Si
SLU 78	14.56	-2855.03	-9697	-8075	983	3.98	3.98	-7246	7911	8816	35683	33370	10149	43519	No	44.29	Si
SLU 37	12.76	-828.57	-10991	-9152	1016	3.98	3.98	-8213	8039	8959	35683	33370	10149	43519	No	42.83	Si
SLU 37	14.56	-2742.3	-7405	-6166	1017	3.98	3.98	-5533	7682	8561	35683	33370	10149	43519	No	42.78	Si
SLU 41	12.76	-725.77	-9794	-8155	919	3.98	3.98	-7318	7920	8826	35683	33370	10149	43519	No	47.33	Si
SLU 41	14.56	-2452.08	-6192	-5156	928	3.98	3.98	-4627	7561	8426	35683	33370	10149	43519	No	46.88	Si
SLU 36	12.76	-824.91	-11718	-9758	984	3.98	3.98	-8756	8112	9040	35683	33370	10149	43519	No	44.24	Si
SLU 36	14.56	-2687.58	-8138	-6777	983	3.98	3.98	-6081	7755	8642	35683	33370	10149	43519	No	44.29	Si
SLU 83	12.76	-871.55	-12393	-10320	923	3.98	3.98	-9260	8179	9115	35683	33370	10149	43519	No	47.14	Si
SLU 83	14.56	-2619.53	-7750	-6454	928	3.98	3.98	-5791	7717	8599	35683	33370	10149	43519	No	46.88	Si
SLU 35	12.76	-793.9	-11766	-9798	1010	3.98	3.98	-8792	8117	9045	35683	33370	10149	43519	No	43.07	Si
SLU 35	14.56	-2704.56	-8186	-6816	1009	3.98	3.98	-6117	7760	8648	35683	33370	10149	43519	No	43.11	Si
SLU 77	12.76	-939.68	-14365	-11962	1014	3.98	3.98	-10734	8376	9334	35683	33370	10149	43519	No	42.92	Si
SLU 77	14.56	-2872.01	-9744	-8114	1009	3.98	3.98	-7281	7915	8821	35683	33370	10149	43519	No	43.11	Si
SLU 80	12.76	-1005.36	-13543	-11278	993	3.98	3.98	-10120	8294	9243	35683	33370	10149	43519	No	43.81	Si
SLU 80	14.56	-2892.77	-8916	-7424	990	3.98	3.98	-6662	7833	8729	35683	33370	10149	43519	No	43.94	Si
SLU 79	12.76	-974.35	-13591	-11317	1020	3.98	3.98	-10155	8298	9248	35683	33370	10149	43519	No	42.67	Si
SLU 79	14.56	-2909.75	-8963	-7464	1017	3.98	3.98	-6697	7837	8734	35683	33370	10149	43519	No	42.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	12.76	2146.06	-11560	-9626	3487	3.98	3.98	-8638	12144	13534	35683	50055	10149	49217		14.12	Si
SLV 9	14.56	-3729.47	-7682	-6397	2837	3.98	3.98	-5740	11565	12888	35683	50055	10149	48571		17.12	Si
SLV 2	12.76	-5611.71	-10260	-8544	-6067	3.98	3.98	-7667	11950	13317	35683	50055	10149	49000		8.08	Si
SLV 2	14.56	3963.71	-6640	-5529	-4975	3.98	3.98	-4961	11409	12714	35683	50055	10149	48397		9.73	Si
SLV 3	12.76	-5980	-8726	-7267	-6515	3.98	3.9142	-6649	11747	12874	35683	50055	10149	48557		7.45	Si
SLV 3	14.56	4367.27	-5290	-4405	-5248	3.98	3.4931	-3953	11207	10962	35683	50055	10149	46645		8.89	Si
SLV 15	12.76	4421.49	-8107	-6751	6817	3.98	3.98	-6058	11628	12959	35683	50055	10149	48642		7.14	Si
SLV 15	14.56	-6621.72	-4616	-3844	5719	3.184	1.6663	0	0	0	35683	40044	8119	35683		6.24	Si
SLV 14	12.76	4789.78	-9641	-8028	7265	3.98	3.98	-7204	11857	13214	35683	50055	10149	48897		6.73	Si
SLV 14	14.56	-7025.28	-5966	-4968	5991	3.184	2.4372	0	0	0	35683	40044	8119	35683		5.96	Si
SLV 4	12.76	-6265.27	-8770	-7303	-6698	3.98	3.8269	-6836	11784	12627	35683	50055	10149	48310		7.21	Si
SLV 4	14.56	4407.26	-5337	-4444	-5432	3.98	3.4927	-3988	11214	10967	35683	50055	10149	46650		8.59	Si
SLV 16	12.76	4136.22	-8151	-6788	6633	3.98	3.98	-6091	11635	12966	35683	50055	10149	48649		7.33	Si
SLV 16	14.56	-6581.73	-4663	-3883	5535	3.184	1.7359	0	0	0	35683	40044	8119	35683		6.45	Si
SLV 13	12.76	5075.05	-9597	-7992	7448	3.98	3.98	-7171	11851	13207	35683	50055	10149	48890		6.56	Si
SLV 13	14.56	-7065.27	-5918	-4928	6176	3.184	2.3886	0	0	0	35683	40044	8119	35683		5.78	Si
SLV 1	12.76	-5326.44	-10216	-8507	-5883	3.98	3.98	-7634	11943	13310	35683	50055	10149	48993		8.33	Si
SLV 1	14.56	3923.71	-6592	-5489	-4791	3.98	3.98	-4926	11402	12706	35683	50055	10149	48389		10.1	Si
SLD 13	12.76	1832.62	-9369	-7802	3403	3.98	3.98	-7001	11817	13169	35683	50055	10149	48852		14.36	Si
SLD 13	14.56	-3785.49	-5756	-4793	2855	3.98	3.98	-4301	11277	12567	35683	50055	10149	48250		16.9	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.53	4846	-5401	449.25	732.12	1.63	Si
SLV 12	179667	0.53	4874	-5431	449.25	736.13	1.64	Si
SLV 7	179667	0.53	5076	-5657	449.25	765.63	1.7	Si
SLV 8	179667	0.53	5104	-5687	449.25	769.62	1.71	Si
SLV 15	179667	0.53	6157	-6862	449.25	921.93	2.05	Si
SLV 16	179667	0.53	6200	-6909	449.25	928.05	2.07	Si
SLV 3	179667	0.53	6923	-7715	449.25	1031.14	2.3	Si
SLV 4	179667	0.53	6966	-7763	449.25	1037.19	2.31	Si
SLV 13	179667	0.53	7517	-8377	449.25	1115.11	2.48	Si
SLV 14	179667	0.53	7560	-8425	449.25	1121.1	2.5	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-5707	-13356	1325	2.429	1101.5	0.897	39.35953	12.56426	Si
SLV 5	-5668	-13348	1325	2.44	1097.6	0.897	39.54159	12.56426	Si
SLV 10	-5244	-13534	1326	2.56	1056.7	0.895	41.58077	12.56426	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-5205	-13525	1326	2.572	1052.9	0.895	41.78307	12.56426	Si
SLV 8	-1660	-8239	-1333	4.427	732.7	0.899	71.59456	12.56426	Si
SLV 7	-1620	-8230	-1333	4.463	729.6	0.899	72.12623	12.56426	Si
SLV 2	-4842	-11361	393	2.803	1018	0.893	45.61251	7.33323	Si
SLV 12	-1197	-8416	-1331	4.892	698.6	0.91	78.16929	12.56426	Si
SLV 1	-4780	-11348	393	2.825	1012.1	0.893	45.97504	7.33323	Si
SLV 11	-1157	-8408	-1331	4.936	695.9	0.911	78.77086	12.56426	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.673	SLU 41	Si
V_SLU	42.67	SLU 79	Si
PF_SLV	2.043	SLV 15	Si
V_SLV	5.778	SLV 13	Si
PFFP_SLV	1.63	SLV 11	Si
R_SLV	3.133	SLV 6	Si

Maschio 177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.233	6.526	L7	L8	1.825	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	12.76	-111.94	-4217	-0.0000134	0.0003743	0.0035	1.825	3535.88	4474.08	4474.08	39.97	No	Si
SLU 42	14.56	-873.25	-2507	-0.0000157	0.0003743	0.0035	1.825	2177.27	3063.18	3063.18	3.51	No	Si
SLU 41	12.76	-104.68	-4210	-0.0000133	0.0003743	0.0035	1.825	3530.66	4468.58	4468.58	42.69	No	Si
SLU 41	14.56	-891.92	-2500	-0.0000159	0.0003743	0.0035	1.825	2171.27	3056.95	3056.95	3.43	No	Si
SLU 37	12.76	-131.61	-4523	-0.0000145	0.0003743	0.0035	1.825	3768.11	4713.58	4713.58	35.82	No	Si
SLU 37	14.56	-947.46	-2815	-0.0000173	0.0003743	0.0035	1.825	2430.05	3328.52	3328.52	3.51	No	Si
SLU 40	12.76	-121.01	-4019	-0.0000129	0.0003743	0.0035	1.825	3384.23	4314.07	4314.07	35.65	No	Si
SLU 40	14.56	-752.12	-2309	-0.0000139	0.0003743	0.0035	1.825	2013.27	2893.95	2893.95	3.85	No	Si
SLU 39	12.76	-113.75	-4012	-0.0000128	0.0003743	0.0035	1.825	3378.97	4308.5	4308.5	37.88	No	Si
SLU 39	14.56	-770.8	-2301	-0.0000141	0.0003743	0.0035	1.825	2007.23	2887.76	2887.76	3.75	No	Si
SLU 36	12.76	-164.01	-4917	-0.000016	0.0003743	0.0035	1.825	4062.69	5024.13	5024.13	30.63	No	Si
SLU 36	14.56	-1011.7	-3214	-0.0000191	0.0003743	0.0035	1.825	2751.93	3653.44	3653.44	3.61	No	Si
SLU 35	12.76	-156.75	-4910	-0.0000159	0.0003743	0.0035	1.825	4057.64	5018.72	5018.72	32.02	No	Si
SLU 35	14.56	-1030.37	-3207	-0.0000193	0.0003743	0.0035	1.825	2746.12	3647.53	3647.53	3.54	No	Si
SLU 33	12.76	-173.08	-4719	-0.0000155	0.0003743	0.0035	1.825	3915.9	4868.18	4868.18	28.13	No	Si
SLU 33	14.56	-890.57	-3016	-0.0000173	0.0003743	0.0035	1.825	2592.85	3492.95	3492.95	3.92	No	Si
SLU 38	12.76	-138.87	-4529	-0.0000146	0.0003743	0.0035	1.825	3773.25	4718.92	4718.92	33.98	No	Si
SLU 38	14.56	-928.78	-2823	-0.0000172	0.0003743	0.0035	1.825	2435.97	3334.67	3334.67	3.59	No	Si
SLU 32	12.76	-165.82	-4713	-0.0000154	0.0003743	0.0035	1.825	3910.8	4862.81	4862.81	29.33	No	Si
SLU 32	14.56	-909.25	-3009	-0.0000175	0.0003743	0.0035	1.825	2586.98	3487.08	3487.08	3.84	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	12.76	806.49	-433	-0.0019854	0.0005615	0.0035	1.46		577.93	577.93	0.72		No
SLV 16	14.56	-4824.99	1431	0.1383116	0.0005615	0.0035	1.46		0	0	0		No
SLD 16	12.76	200.92	-2631	-0.0000095	0.0005615	0.0035	1.825		2512.27	2512.27	12.5		Si
SLD 16	14.56	-2313.75	-868	-0.000872	0.0005615	0.0035	1.46		1656.8	1656.8	0.72		No
SLD 15	12.76	217.31	-2759	-0.0000101	0.0005615	0.0035	1.825		2622.58	2622.58	12.07		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 15	14.56	-2227.22	-997	-0.0007508	0.0005615	0.0035	1.46		1770.61	1770.61	0.79		No
SLV 15	12.76	844.65	-730	-0.0007482	0.0005615	0.0035	1.46		843.14	843.14	1		No
SLV 15	14.56	-4623.45	1130	0.1104542	0.0005615	0.0035	1.46		0	0	0		No
SLV 12	12.76	-150.9	-2500	-0.0000087	0.0005615	0.0035	1.825		3080.32	3080.32	20.41		Si
SLV 12	14.56	-2128.25	-260	-0.001146	0.0005615	0.0035	1.46		1116.65	1116.65	0.52		No
SLV 13	12.76	983.19	-1104	-0.0001309	0.0005615	0.0035	1.46		1176.46	1176.46	1.2		Si
SLV 13	14.56	-4401.08	425	0.0128073	0.0005615	0.0035	1.46		0	0	0		No
SLD 14	12.76	261.42	-2795	-0.0000106	0.0005615	0.0035	1.825		2654.2	2654.2	10.15		Si
SLD 14	14.56	-2215.65	-1177	-0.0006622	0.0005615	0.0035	1.46		1929.37	1929.37	0.87		No
SLV 14	12.76	945.02	-807	-0.0009128	0.0005615	0.0035	1.46		911.74	911.74	0.96		No
SLV 14	14.56	-4602.62	726	0.0624438	0.0005615	0.0035	1.46		0	0	0		No
SLD 13	12.76	277.8	-2923	-0.0000111	0.0005615	0.0035	1.825		2764.19	2764.19	9.95		Si
SLD 13	14.56	-2129.12	-1306	-0.0005553	0.0005615	0.0035	1.46		2042.74	2042.74	0.96		No
SLV 11	12.76	-126.38	-2691	-0.000009	0.0005615	0.0035	1.825		3244.39	3244.39	25.67		Si
SLV 11	14.56	-1998.72	-453	-0.0008886	0.0005615	0.0035	1.46		1289.07	1289.07	0.64		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 35	12.76	-156.75	-4910	-4089	459	1.825	1.825	-8001	8011	4094	35683	15302	4654	19956	No	43.49	Si
SLU 35	14.56	-1030.37	-3207	-2671	439	1.825	1.7737	-5226	7641	3795	35683	15302	4654	19956	No	45.49	Si
SLU 41	12.76	-104.68	-4210	-3506	413	1.825	1.825	-6860	7859	4016	35683	15302	4654	19956	No	48.33	Si
SLU 41	14.56	-891.92	-2500	-2081	394	1.825	1.667	-4470	7540	3520	35683	15302	4654	19956	No	50.7	Si
SLU 32	12.76	-165.82	-4713	-3924	388	1.825	1.825	-7680	7968	4072	35683	15302	4654	19956	No	51.39	Si
SLU 32	14.56	-909.25	-3009	-2506	367	1.825	1.825	-4903	7598	3883	35683	15302	4654	19956	No	54.44	Si
SLU 79	12.76	-239.5	-5796	-4826	377	1.825	1.825	-9445	8204	4192	35683	15302	4654	19956	No	52.98	Si
SLU 79	14.56	-974.05	-3597	-2995	348	1.825	1.825	-5861	7726	3948	35683	15302	4654	19956	No	57.29	Si
SLU 42	12.76	-111.94	-4217	-3511	399	1.825	1.825	-6871	7861	4017	35683	15302	4654	19956	No	50.04	Si
SLU 42	14.56	-873.25	-2507	-2087	379	1.825	1.6925	-4416	7533	3570	35683	15302	4654	19956	No	52.66	Si
SLU 77	12.76	-264.63	-6184	-5149	408	1.825	1.825	-10077	8288	4235	35683	15302	4654	19956	No	48.89	Si
SLU 77	14.56	-1056.96	-3988	-3321	379	1.825	1.825	-6499	7811	3991	35683	15302	4654	19956	No	52.69	Si
SLU 78	12.76	-271.89	-6190	-5155	394	1.825	1.825	-10088	8289	4236	35683	15302	4654	19956	No	50.64	Si
SLU 78	14.56	-1038.29	-3996	-3327	364	1.825	1.825	-6511	7813	3992	35683	15302	4654	19956	No	54.8	Si
SLU 38	12.76	-138.87	-4529	-3772	413	1.825	1.825	-7381	7929	4052	35683	15302	4654	19956	No	48.29	Si
SLU 38	14.56	-928.78	-2823	-2350	394	1.825	1.7504	-4600	7558	3704	35683	15302	4654	19956	No	50.69	Si
SLU 36	12.76	-164.01	-4917	-4094	445	1.825	1.825	-8012	8013	4095	35683	15302	4654	19956	No	44.87	Si
SLU 36	14.56	-1011.7	-3214	-2677	424	1.825	1.7933	-5238	7643	3838	35683	15302	4654	19956	No	47.05	Si
SLU 37	12.76	-131.61	-4523	-3766	427	1.825	1.825	-7370	7927	4051	35683	15302	4654	19956	No	46.69	Si
SLU 37	14.56	-947.46	-2815	-2344	408	1.825	1.7279	-4860	7592	3673	35683	15302	4654	19956	No	48.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	12.76	983.19	-1104	-920	3369	1.46	0.0668	0	0	0	35683	18362	3723	22085		6.56	Si
SLV 13	14.56	-4401.08	425	354	2724	1.46	0	0	0	0	35683	18362	3723	22085		8.11	Si
SLV 1	12.76	-1309.91	-8105	-6749	-3145	1.825	1.825	-13208	13058	6673	35683	22953	4654	27606		8.78	Si
SLV 1	14.56	3942.24	-6602	-5498	-2797	1.825	0.9462	-10758	12568	3330	35683	22953	4654	27606		9.87	Si
SLV 16	12.76	806.49	-433	-361	3314	1.46	0	0	0	0	35683	18362	3723	22085		6.66	Si
SLV 16	14.56	-4824.99	1431	1192	2914	1.46	0	0	0	0	35683	18362	3723	22085		7.58	Si
SLD 16	12.76	200.92	-2631	-2191	1463	1.825	1.825	-4287	11274	5761	35683	22953	4654	27606		18.86	Si
SLD 16	14.56	-2313.75	-868	-723	1278	1.46	0	0	0	0	35683	18362	3723	22085		17.28	Si
SLV 3	12.76	-1448.44	-7731	-6438	-3287	1.825	1.825	-12599	12936	6611	35683	22953	4654	27606		8.4	Si
SLV 3	14.56	3719.88	-5897	-4910	-2699	1.825	0.8451	-9609	12339	2920	35683	22953	4654	27606		10.23	Si
SLV 15	12.76	844.65	-730	-608	3227	1.46	0	0	0	0	35683	18362	3723	22085		6.84	Si
SLV 15	14.56	-4623.45	1130	941	2821	1.46	0	0	0	0	35683	18362	3723	22085		7.83	Si
SLV 2	12.76	-1348.07	-7808	-6502	-3057	1.825	1.825	-12724	12961	6623	35683	22953	4654	27606		9.03	Si
SLV 2	14.56	3740.7	-6301	-5247	-2705	1.825	0.9566	-10268	12470	3340	35683	22953	4654	27606		10.21	Si
SLD 15	12.76	217.31	-2759	-2297	1426	1.825	1.825	-4495	11316	5782	35683	22953	4654	27606		19.36	Si
SLD 15	14.56	-2227.22	-997	-830	1238	1.46	0	0	0	0	35683	18362	3723	22085		17.83	Si
SLV 14	12.76	945.02	-807	-672	3456	1.46	0	0	0	0	35683	18362	3723	22085		6.39	Si
SLV 14	14.56	-4602.62	726	604	2816	1.46	0	0	0	0	35683	18362	3723	22085		7.84	Si
SLV 4	12.76	-1486.61	-7434	-6190	-3199	1.825	1.825	-12114	12840	6561	35683	22953	4654	27606		8.63	Si
SLV 4	14.56	3518.33	-5596	-4660	-2607	1.825	0.8514	-9119	12241	2918	35683	22953	4654	27606		10.59	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.53	0	-1353	206	0	0	No, e>t/2
SLV 15	179667	0.53	0	133	206	0	0	No, Trazione
SLV 13	179667	0.53	0	-499	206	0	0	No, e>t/2
SLV 16	179667	0.53	0	434	206	0	0	No, Trazione
SLV 14	179667	0.53	0	-198	206	0	0	No, e>t/2
SLV 11	179667	0.53	3027	-1547	206	212.25	1.03	Si
SLV 10	179667	0.53	6772	-3461	206	463	2.25	Si
SLV 8	179667	0.53	6794	-3472	206	464.43	2.25	Si
SLV 9	179667	0.53	7150	-3654	206	487.58	2.37	Si
SLV 7	179667	0.53	7172	-3665	206	489.01	2.37	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-4443	-5650	577	1.696	685.6	0.915	26.93341	12.56426	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-4251	-5507	577	1.751	666.4	0.913	27.86954	12.56426	Si
SLV 1	-6669	-5705	104	1.302	909.3	0.932	20.30503	7.33323	Si
SLV 2	-6370	-5482	105	1.35	879.1	0.93	21.09717	7.33323	Si
SLV 3	-6005	-5223	-257	1.393	842.4	0.927	21.8309	7.33323	Si
SLV 4	-5706	-5000	-257	1.449	812.3	0.925	22.76522	7.33323	Si
SLV 7	-2232	-4043	-629	2.673	467.9	0.893	43.48327	12.56426	Si
SLV 8	-2040	-3900	-629	2.817	449.6	0.892	45.91977	12.56426	Si
SLV 9	-1919	-5155	621	2.919	438.1	0.891	47.63242	12.56426	Si
SLV 10	-1726	-5011	621	3.093	420.1	0.89	50.53258	12.56426	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.427	SLU 41	Si
V_SLU	43.491	SLU 35	Si
PF_SLV	0	SLV 13	No
V_SLV	6.389	SLV 14	Si
PFFP_SLV	0	SLV 16	No
R_SLV	2.144	SLV 5	Si

Maschio 178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.443	1.006	-24.633	1.006	L7	L8	5.19	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 35	11.86	-1917.03	-15382	-0.0000167	0.0004492	0.0035	5.19	36458.7	53240.33	53240.33	27.77	No	Si
SLU 35	13.96	-4338.95	-13911	-0.000018	0.0004492	0.0035	5.19	33270.17	49772.83	49772.83	11.47	No	Si
SLU 74	11.86	-2852.69	-18852	-0.0000211	0.0004492	0.0035	5.19	43727.97	61029.21	61029.21	21.39	No	Si
SLU 74	13.96	-4645.79	-16027	-0.0000204	0.0004492	0.0035	5.19	37836.33	54687.89	54687.89	11.77	No	Si
SLU 33	11.86	-1884.24	-14538	-0.0000159	0.0004492	0.0035	5.19	34637.1	51256.27	51256.27	27.2	No	Si
SLU 33	13.96	-4046.48	-13078	-0.0000168	0.0004492	0.0035	5.19	31437.85	47803.6	47803.6	11.81	No	Si
SLU 77	11.86	-2946.91	-19752	-0.0000221	0.0004492	0.0035	5.19	45555.15	63048.57	63048.57	21.39	No	Si
SLU 77	13.96	-4928.98	-16877	-0.0000215	0.0004492	0.0035	5.19	39633.61	56595.94	56595.94	11.48	No	Si
SLU 32	11.86	-1822.82	-14482	-0.0000157	0.0004492	0.0035	5.19	34516.59	51124.98	51124.98	28.05	No	Si
SLU 32	13.96	-4055.76	-13061	-0.0000168	0.0004492	0.0035	5.19	31399.17	47762.27	47762.27	11.78	No	Si
SLU 36	11.86	-1978.45	-15438	-0.0000168	0.0004492	0.0035	5.19	36577.75	53364.92	53364.92	26.97	No	Si
SLU 36	13.96	-4329.68	-13928	-0.000018	0.0004492	0.0035	5.19	33308.41	49814.16	49814.16	11.51	No	Si
SLU 75	11.86	-2914.11	-18908	-0.0000212	0.0004492	0.0035	5.19	43841.39	61153.8	61153.8	20.99	No	Si
SLU 75	13.96	-4636.52	-16045	-0.0000204	0.0004492	0.0035	5.19	37873.48	54727.11	54727.11	11.8	No	Si
SLU 83	11.86	-2312.4	-17190	-0.0000189	0.0004492	0.0035	5.19	40288.65	57296.98	57296.98	24.78	No	Si
SLU 83	13.96	-4310.86	-14480	-0.0000185	0.0004492	0.0035	5.19	34510.69	51118.56	51118.56	11.86	No	Si
SLU 78	11.86	-3008.32	-19808	-0.0000222	0.0004492	0.0035	5.19	45667.11	63173.16	63173.16	21	No	Si
SLU 78	13.96	-4919.71	-16895	-0.0000215	0.0004492	0.0035	5.19	39670.34	56635.16	56635.16	11.51	No	Si
SLU 41	11.86	-1282.53	-12820	-0.0000135	0.0004492	0.0035	5.19	30864.86	47192.23	47192.23	36.8	No	Si
SLU 41	13.96	-3720.83	-11513	-0.000015	0.0004492	0.0035	5.19	27939.36	44102.66	44102.66	11.85	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	11.86	-1652.38	-15356	-0.0000163	0.0006738	0.0035	5.19		53606.87	53606.87	32.44		Si
SLD 3	13.96	-6525.34	-12468	-0.0000189	0.0006738	0.0035	5.19		46719.31	46719.31	7.16		Si
SLV 4	11.86	-1068.17	-17743	-0.0000179	0.0006738	0.0035	5.19		59209.49	59209.49	55.43		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	13.96	-11399.33	-14839	-0.0000266	0.0006738	0.0035	5.19		52379.21	52379.21	4.59		Si
SLV 14	11.86	-4623.66	-10296	-0.0000147	0.0006738	0.0035	5.19		41489.91	41489.91	8.97		Si
SLV 14	13.96	6215.36	-6516	-0.0000129	0.0006738	0.0035	5.19		19221.93	19221.93	3.09		Si
SLD 1	11.86	-553.97	-14346	-0.0000141	0.0006738	0.0035	5.19		51211.63	51211.63	92.44		Si
SLD 1	13.96	-6558.86	-12323	-0.0000188	0.0006738	0.0035	5.19		46369.52	46369.52	7.07		Si
SLV 3	11.86	-443.74	-17363	-0.0000169	0.0006738	0.0035	5.19		58334.54	58334.54	131.46		Si
SLV 3	13.96	-11637.35	-14853	-0.0000268	0.0006738	0.0035	5.19		52412.85	52412.85	4.5		Si
SLV 1	11.86	2051.27	-15070	-0.0000165	0.0006738	0.0035	5.19		40085.96	40085.96	19.54		Si
SLV 1	13.96	-11707.22	-14520	-0.0000266	0.0006738	0.0035	5.19		51625.14	51625.14	4.41		Si
SLV 2	11.86	1426.83	-15451	-0.0000161	0.0006738	0.0035	5.19		40992.61	40992.61	28.73		Si
SLV 2	13.96	-11469.19	-14506	-0.0000263	0.0006738	0.0035	5.19		51591.51	51591.51	4.5		Si
SLV 16	11.86	-7118.67	-12588	-0.0000197	0.0006738	0.0035	5.19		47007.99	47007.99	6.6		Si
SLV 16	13.96	6285.23	-6848	-0.0000133	0.0006738	0.0035	5.19		20049.54	20049.54	3.19		Si
SLV 13	11.86	-3999.23	-9915	-0.0000137	0.0006738	0.0035	5.19		40564.84	40564.84	10.14		Si
SLV 13	13.96	5977.33	-6530	-0.0000126	0.0006738	0.0035	5.19		19257.27	19257.27	3.22		Si
SLV 15	11.86	-6494.24	-12208	-0.0000186	0.0006738	0.0035	5.19		46093.52	46093.52	7.1		Si
SLV 15	13.96	6047.2	-6862	-0.000013	0.0006738	0.0035	5.19		20084.88	20084.88	3.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	11.86	-1188.32	-11920	-8503	2645	5.19	5.19	-5851	9114	13244	101952	52224	26469	78693	No	29.76	Si
SLU 39	13.96	-3437.63	-10663	-7607	2648	5.19	5.19	-5234	9031	13124	101952	52224	26469	78693	No	29.71	Si
SLU 32	11.86	-1822.82	-14482	-10331	2443	5.19	5.19	-7109	9281	13488	101952	52224	26469	78693	No	32.21	Si
SLU 32	13.96	-4055.76	-13061	-9317	2447	5.19	5.19	-6411	9188	13352	101952	52224	26469	78693	No	32.16	Si
SLU 42	11.86	-1343.94	-12875	-9185	2673	5.19	5.19	-6320	9176	13335	101952	52224	26469	78693	No	29.44	Si
SLU 42	13.96	-3711.55	-11531	-8226	2676	5.19	5.19	-5660	9088	13207	101952	52224	26469	78693	No	29.41	Si
SLU 40	11.86	-1249.73	-11975	-8543	2665	5.19	5.19	-5879	9117	13249	101952	52224	26469	78693	No	29.52	Si
SLU 40	13.96	-3428.36	-10680	-7619	2669	5.19	5.19	-5243	9032	13126	101952	52224	26469	78693	No	29.49	Si
SLU 33	11.86	-1884.24	-14538	-10371	2464	5.19	5.19	-7137	9285	13493	101952	52224	26469	78693	No	31.93	Si
SLU 33	13.96	-4046.48	-13078	-9330	2467	5.19	5.19	-6420	9189	13354	101952	52224	26469	78693	No	31.9	Si
SLU 41	11.86	-1282.53	-12820	-9145	2652	5.19	5.19	-6293	9172	13329	101952	52224	26469	78693	No	29.67	Si
SLU 41	13.96	-3720.83	-11513	-8213	2656	5.19	5.19	-5652	9087	13205	101952	52224	26469	78693	No	29.63	Si
SLU 36	11.86	-1978.45	-15438	-11013	2472	5.19	5.19	-7578	9344	13578	101952	52224	26469	78693	No	31.83	Si
SLU 36	13.96	-4329.68	-13928	-9936	2474	5.19	5.19	-6837	9245	13435	101952	52224	26469	78693	No	31.8	Si
SLU 84	11.86	-2373.82	-17245	-12302	2215	5.19	5.19	-8466	9462	13750	101952	52224	26469	78693	No	35.53	Si
SLU 84	13.96	-4301.59	-14497	-10342	2219	5.19	5.19	-7117	9282	13489	101952	52224	26469	78693	No	35.47	Si
SLU 82	11.86	-2279.61	-16345	-11660	2207	5.19	5.19	-8024	9403	13665	101952	52224	26469	78693	No	35.66	Si
SLU 82	13.96	-4018.39	-13647	-9735	2211	5.19	5.19	-6699	9227	13408	101952	52224	26469	78693	No	35.59	Si
SLU 35	11.86	-1917.03	-15382	-10973	2451	5.19	5.19	-7551	9340	13573	101952	52224	26469	78693	No	32.1	Si
SLU 35	13.96	-4338.95	-13911	-9924	2454	5.19	5.19	-6829	9244	13433	101952	52224	26469	78693	No	32.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	11.86	-6494.24	-12208	-8709	-5355	5.19	5.19	-5993	13699	19907	101952	78337	26469	104806		19.57	Si
SLV 15	13.96	6047.2	-6862	-4895	-1217	5.19	5.1413	-3369	13174	18964	101952	78337	26469	104806		86.14	Si
SLV 4	11.86	-1068.17	-17743	-12658	8237	5.19	5.19	-8710	14242	20697	101952	78337	26469	104806		12.72	Si
SLV 4	13.96	-11399.33	-14839	-10585	4264	5.19	5.19	-7284	13957	20282	101952	78337	26469	104806		24.58	Si
SLV 7	11.86	-5583.81	-18302	-13056	5851	5.19	5.19	-8984	14297	20776	101952	78337	26469	104806		17.91	Si
SLV 7	13.96	-5323.72	-12441	-8875	4901	5.19	5.19	-6107	13721	19940	101952	78337	26469	104806		21.38	Si
SLV 1	11.86	2051.27	-15070	-10750	6069	5.19	5.19	-7398	13980	20315	101952	78337	26469	104806		17.27	Si
SLV 1	13.96	-11707.22	-14520	-10358	1938	5.19	5.19	-7128	13926	20237	101952	78337	26469	104806		54.08	Si
SLV 14	11.86	-4623.66	-10296	-7345	-7330	5.19	5.19	-5054	13511	19634	101952	78337	26469	104806		14.3	Si
SLV 14	13.96	6215.36	-6516	-4648	-3349	5.19	4.9233	-3199	13140	18113	101952	78337	26469	104806		31.29	Si
SLV 16	11.86	-7118.67	-12588	-8980	-5258	5.19	5.19	-6180	13736	19961	101952	78337	26469	104806		19.93	Si
SLV 16	13.96	6285.23	-6848	-4885	-1120	5.19	5.0316	-3362	13172	18558	101952	78337	26469	104806		93.57	Si
SLV 13	11.86	-3999.23	-9915	-7073	-7426	5.19	5.19	-4867	13473	19580	101952	78337	26469	104806		14.11	Si
SLV 13	13.96	5977.33	-6530	-4658	-3446	5.19	5.0388	-3206	13141	18540	101952	78337	26469	104806		30.41	Si
SLV 3	11.86	-443.74	-17363	-12386	8140	5.19	5.19	-8523	14205	20642	101952	78337	26469	104806		12.88	Si
SLV 3	13.96	-11637.35	-14853	-10596	4167	5.19	5.19	-7291	13958	20284	101952	78337	26469	104806		25.15	Si
SLV 8	11.86	-5985.13	-18546	-13230	5913	5.19	5.19	-9104	14321	20811	101952	78337	26469	104806		17.73	Si
SLV 8	13.96	-5170.75	-12432	-8869	4963	5.19	5.19	-6103	13721	19939	101952	78337	26469	104806		21.12	Si
SLV 2	11.86	1426.83	-15451	-11022	6165	5.19	5.19	-7585	14017	20369	101952	78337	26469	104806		17	Si
SLV 2	13.96	-11469.19	-14506	-10348	2035	5.19	5.19	-7121	13924	20235	101952	78337	26469	104806		51.51	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-7129	0.53	599.46	971.35	1758.63	1364.99	2.28	Si
SLV 14	-7204	0.53	599.46	981.25	1770.34	1375.79	2.3	Si
SLV 15	-7896	0.53	599.46	1072.61	1878.32	1475.46	2.46	Si
SLV 16	-7970	0.53	599.46	1082.45	1889.95	1486.2	2.48	Si
SLV 9	-8748	0.53	599.46	1184.48	2010.52	1597.5	2.66	Si
SLV 10	-8796	0.53	599.46	1190.76	2017.97	1604.36	2.68	Si
SLV 5	-10891	0.53	599.46	1462.33	2342.46	1902.4	3.17	Si
SLV 6	-10939	0.53	599.46	1468.5	2349.87	1909.19	3.18	Si
SLV 11	-11303	0.53	599.46	1515.25	2406.12	1960.69	3.27	Si
SLV 12	-11351	0.53	599.46	1521.4	2413.54	1967.47	3.28	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-9028	-10658	-719	2.219	1591.5	0.903	35.7169	12.56426	Si
SLV 6	-8996	-10903	-718	2.224	1588.3	0.903	35.80823	12.56426	Si
SLV 9	-8786	-9112	-637	2.266	1567.7	0.902	36.50922	12.56426	Si
SLV 10	-8754	-9357	-636	2.271	1564.5	0.902	36.60428	12.56426	Si
SLV 7	-8625	-18302	630	2.294	1551.9	0.901	36.99418	12.56426	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-8593	-18546	631	2.3	1548.7	0.901	37.08966	12.56426	Si
SLV 11	-8383	-16755	711	2.331	1528.2	0.9	37.62754	12.56426	Si
SLV 12	-8351	-17000	712	2.337	1525	0.9	37.7265	12.56426	Si
SLV 1	-9179	-15070	-342	2.222	1606.3	0.903	35.75623	7.33323	Si
SLV 2	-9129	-15451	-340	2.231	1601.4	0.903	35.89714	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.471	SLU 35	Si
V_SLU	29.408	SLU 42	Si
PF_SLV	3.093	SLV 14	Si
V_SLV	12.724	SLV 4	Si
PFFP_SLV	2.277	SLV 13	Si
R_SLV	2.843	SLV 5	Si

Maschio 179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.006	-18.643	1.006	L7	L8	3.68	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 28	11.86	-525.9	-14870	-0.0000212	0.0004492	0.0035	3.68	24129.93	32687.43	32687.43	62.16	No	Si
SLU 28	13.96	928.62	-12389	-0.0000186	0.0004492	0.0035	3.68	20552.9	22718.61	22718.61	24.46	No	Si
SLU 9	11.86	-356.15	-13829	-0.0000193	0.0004492	0.0035	3.68	22650.34	31024.45	31024.45	87.11	No	Si
SLU 9	13.96	817.82	-11061	-0.0000166	0.0004492	0.0035	3.68	18563.63	20549.46	20549.46	25.13	No	Si
SLU 68	11.86	-650.3	-16474	-0.0000236	0.0004492	0.0035	3.68	26345.68	35234.13	35234.13	54.18	No	Si
SLU 68	13.96	964.61	-12973	-0.0000195	0.0004492	0.0035	3.68	21410.64	23671.7	23671.7	24.54	No	Si
SLU 27	11.86	-476.85	-14842	-0.000021	0.0004492	0.0035	3.68	24090.3	32642.42	32642.42	68.45	No	Si
SLU 27	13.96	859.59	-12383	-0.0000185	0.0004492	0.0035	3.68	20543.29	22708	22708	26.42	No	Si
SLU 30	11.86	-648.39	-13907	-0.0000201	0.0004492	0.0035	3.68	22762.99	31149.83	31149.83	48.04	No	Si
SLU 30	13.96	1006.83	-11291	-0.0000173	0.0004492	0.0035	3.68	18912.63	20925.99	20925.99	20.78	No	Si
SLU 71	11.86	-582.75	-17405	-0.0000248	0.0004492	0.0035	3.68	27598.52	36643.48	36643.48	62.88	No	Si
SLU 71	13.96	1004.6	-13937	-0.0000209	0.0004492	0.0035	3.68	22805.32	25219.81	25219.81	25.1	No	Si
SLU 26	11.86	-666.89	-12948	-0.0000188	0.0004492	0.0035	3.68	21373.72	29617.43	29617.43	44.41	No	Si
SLU 26	13.96	897.81	-10321	-0.0000158	0.0004492	0.0035	3.68	17433.4	19320.7	19320.7	21.52	No	Si
SLU 72	11.86	-631.8	-17434	-0.0000249	0.0004492	0.0035	3.68	27636.03	36686.12	36686.12	58.07	No	Si
SLU 72	13.96	1073.63	-13943	-0.0000211	0.0004492	0.0035	3.68	22814.63	25230.23	25230.23	23.5	No	Si
SLU 23	11.86	-652.68	-11969	-0.0000175	0.0004492	0.0035	3.68	19929.52	28055.03	28055.03	42.98	No	Si
SLU 23	13.96	742.76	-9346	-0.0000141	0.0004492	0.0035	3.68	15919.85	17700.67	17700.67	23.83	No	Si
SLU 29	11.86	-599.34	-13879	-0.00002	0.0004492	0.0035	3.68	22722.58	31104.82	31104.82	51.9	No	Si
SLU 29	13.96	937.79	-11285	-0.0000172	0.0004492	0.0035	3.68	18902.81	20915.37	20915.37	22.3	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	11.86	-11682.67	-10902	-0.000047	0.0006738	0.0035	2.944		26571.81	26571.81	2.27		Si
SLV 16	13.96	15756.97	-10155	-0.0001221	0.0006738	0.0035	3.68		19285.21	19285.21	1.22		Si
SLV 1	11.86	11078.93	-12160	-0.0000433	0.0006738	0.0035	3.68		22670.73	22670.73	2.05		Si
SLV 1	13.96	-15086.69	-7697	-0.0002566	0.0006738	0.0035	2.944		21133.36	21133.36	1.4		Si
SLV 11	11.86	-7307.25	-14462	-0.0000355	0.0006738	0.0035	3.68		32434.82	32434.82	4.44		Si
SLV 11	13.96	10821.84	-9066	-0.0000465	0.0006738	0.0035	3.68		17423.42	17423.42	1.61		Si
SLV 12	11.86	-7576.17	-14541	-0.0000362	0.0006738	0.0035	3.68		32565.02	32565.02	4.3		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	13.96	11158.5	-9169	-0.0000489	0.0006738	0.0035	3.68		17598.93	17598.93	1.58		Si
SLV 15	11.86	-11264.23	-10778	-0.0000449	0.0006738	0.0035	2.944		26363.01	26363.01	2.34		Si
SLV 15	13.96	15233.14	-9995	-0.0001088	0.0006738	0.0035	3.68		19012.11	19012.11	1.25		Si
SLV 3	11.86	8581.11	-14255	-0.000038	0.0006738	0.0035	3.68		26161.82	26161.82	3.05		Si
SLV 3	13.96	-11060.06	-7596	-0.0000646	0.0006738	0.0035	2.944		20960.86	20960.86	1.9		Si
SLV 4	11.86	8162.67	-14379	-0.0000372	0.0006738	0.0035	3.68		26367.26	26367.26	3.23		Si
SLV 4	13.96	-10536.23	-7756	-0.0000531	0.0006738	0.0035	2.944		21233.27	21233.27	2.02		Si
SLV 14	11.86	-9184.85	-8806	-0.0000364	0.0006738	0.0035	2.944		23025.28	23025.28	2.51		Si
SLV 14	13.96	11730.35	-10256	-0.0000489	0.0006738	0.0035	3.68		19458.14	19458.14	1.66		Si
SLV 13	11.86	-8766.41	-8682	-0.0000344	0.0006738	0.0035	3.68		22813.77	22813.77	2.6		Si
SLV 13	13.96	11206.51	-10096	-0.0000459	0.0006738	0.0035	3.68		19185.05	19185.05	1.71		Si
SLV 2	11.86	10660.49	-12284	-0.0000418	0.0006738	0.0035	3.68		22879.47	22879.47	2.15		Si
SLV 2	13.96	-14562.85	-7857	-0.0002096	0.0006738	0.0035	2.944		21405.77	21405.77	1.47		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 65	11.86	-636.09	-15495	-11054	-2156	3.68	3.68	-10728	9764	10061	101952	37030	18768	55798	No	25.88	Si
SLU 65	13.96	809.56	-11998	-8559	-2156	3.68	3.68	-8307	9441	9728	101952	37030	18768	55798	No	25.88	Si
SLU 70	11.86	-509.31	-18397	-13124	-2283	3.68	3.68	-12737	10032	10336	101952	37030	18768	55798	No	24.44	Si
SLU 70	13.96	995.43	-15041	-10730	-2284	3.68	3.68	-10414	9722	10017	101952	37030	18768	55798	No	24.43	Si
SLU 78	11.86	-298.21	-17223	-12287	-2155	3.68	3.68	-11924	9923	10225	101952	37030	18768	55798	No	25.9	Si
SLU 78	13.96	444.02	-14186	-10120	-2155	3.68	3.68	-9822	9643	9936	101952	37030	18768	55798	No	25.89	Si
SLU 69	11.86	-460.26	-18368	-13104	-2242	3.68	3.68	-12717	10029	10334	101952	37030	18768	55798	No	24.89	Si
SLU 69	13.96	926.39	-15035	-10726	-2243	3.68	3.68	-10409	9721	10017	101952	37030	18768	55798	No	24.88	Si
SLU 67	11.86	-495.1	-17418	-12426	-2213	3.68	3.68	-12059	9941	10243	101952	37030	18768	55798	No	25.21	Si
SLU 67	13.96	840.38	-14067	-10035	-2214	3.68	3.68	-9739	9632	9925	101952	37030	18768	55798	No	25.21	Si
SLU 72	11.86	-631.8	-17434	-12437	-2269	3.68	3.68	-12070	9943	10245	101952	37030	18768	55798	No	24.59	Si
SLU 72	13.96	1073.63	-13943	-9947	-2269	3.68	3.68	-9653	9620	9913	101952	37030	18768	55798	No	24.59	Si
SLU 80	11.86	-420.71	-16260	-11600	-2140	3.68	3.68	-11257	9834	10133	101952	37030	18768	55798	No	26.07	Si
SLU 80	13.96	522.22	-13088	-9337	-2140	3.68	3.68	-9062	9542	9832	101952	37030	18768	55798	No	26.07	Si
SLU 71	11.86	-582.75	-17405	-12417	-2228	3.68	3.68	-12050	9940	10242	101952	37030	18768	55798	No	25.05	Si
SLU 71	13.96	1004.6	-13937	-9942	-2228	3.68	3.68	-9649	9620	9912	101952	37030	18768	55798	No	25.04	Si
SLU 68	11.86	-650.3	-16474	-11752	-2226	3.68	3.68	-11405	9854	10154	101952	37030	18768	55798	No	25.07	Si
SLU 68	13.96	964.61	-12973	-9255	-2226	3.68	3.68	-8982	9531	9821	101952	37030	18768	55798	No	25.06	Si
SLU 66	11.86	-446.05	-17390	-12406	-2172	3.68	3.68	-12040	9939	10241	101952	37030	18768	55798	No	25.69	Si
SLU 66	13.96	771.34	-14060	-10030	-2172	3.68	3.68	-9734	9631	9924	101952	37030	18768	55798	No	25.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	11.86	-7307.25	-14462	-10317	-8908	3.68	3.68	-10012	14502	14943	101952	55545	18768	74313		8.34	Si
SLV 11	13.96	10821.84	-9066	-6467	-8199	3.68	1.939	-6277	13755	7468	101952	55545	18768	74313		9.06	Si
SLV 15	11.86	-11264.23	-10778	-7689	-17169	2.944	2.3846	0	0	0	101952	44436	15014	59450		3.46	Si
SLV 15	13.96	15233.14	-9995	-7130	-15491	3.68	0.9477	-27201	16250	4312	101952	55545	18768	74313		4.8	Si
SLV 2	11.86	10660.49	-12284	-8763	14231	3.68	2.9165	-8504	14201	11597	101952	55545	18768	74313		5.22	Si
SLV 2	13.96	-14562.85	-7857	-5605	12553	2.944	0	0	0	0	101952	44436	15014	59450		4.74	Si
SLV 1	11.86	11078.93	-12160	-8675	14748	3.68	2.7867	-8419	14184	11067	101952	55545	18768	74313		5.04	Si
SLV 1	13.96	-15086.69	-7697	-5491	13069	2.944	0	0	0	0	101952	44436	15014	59450		4.55	Si
SLV 14	11.86	-9184.85	-8806	-6282	-15828	2.944	2.3911	0	0	0	101952	44436	15014	59450		3.76	Si
SLV 14	13.96	11730.35	-10256	-7316	-14286	3.68	2.0886	-7100	13920	8141	101952	55545	18768	74313		5.2	Si
SLV 16	11.86	-11682.67	-10902	-7777	-17686	2.944	2.3051	0	0	0	101952	44436	15014	59450		3.36	Si
SLV 16	13.96	15756.97	-10155	-7244	-16008	3.68	0.8649	-30317	16250	3935	101952	55545	18768	74313		4.64	Si
SLV 12	11.86	-7576.17	-14541	-10373	-9240	3.68	3.68	-10067	14513	14955	101952	55545	18768	74313		8.04	Si
SLV 12	13.96	11158.5	-9169	-6541	-8531	3.68	1.8689	-6348	13770	7205	101952	55545	18768	74313		8.71	Si
SLV 3	11.86	8581.11	-14255	-10169	12890	3.68	3.68	-9869	14474	14914	101952	55545	18768	74313		5.77	Si
SLV 3	13.96	-11060.06	-7596	-5419	11347	2.944	1.152	0	0	0	101952	44436	15014	59450		5.24	Si
SLV 13	11.86	-8766.41	-8682	-6194	-15311	3.68	2.491	-8908	14282	9961	101952	55545	18768	74313		4.85	Si
SLV 13	13.96	11206.51	-10096	-7202	-13769	3.68	2.19	-6990	13898	8522	101952	55545	18768	74313		5.4	Si
SLV 4	11.86	8162.67	-14379	-10258	12373	3.68	3.68	-9955	14491	14932	101952	55545	18768	74313		6.01	Si
SLV 4	13.96	-10536.23	-7756	-5533	10831	2.944	1.4446	0	0	0	101952	44436	15014	59450		5.49	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 5	-8273	0.53	425.05	1107.47	1733.73	1420.6	3.34	Si
SLV 6	-8370	0.53	425.05	1119.82	1748.69	1434.25	3.37	Si
SLV 1	-8434	0.53	425.05	1127.97	1758.56	1443.26	3.4	Si
SLV 9	-8570	0.53	425.05	1145.4	1779.71	1462.56	3.44	Si
SLV 2	-8584	0.53	425.05	1147.15	1781.84	1464.49	3.45	Si
SLV 10	-8667	0.53	425.05	1157.71	1794.67	1476.19	3.47	Si
SLV 3	-8892	0.53	425.05	1186.23	1829.4	1507.82	3.55	Si
SLV 4	-9042	0.53	425.05	1205.31	1852.62	1528.96	3.6	Si
SLV 13	-9425	0.53	425.05	1253.65	1911.36	1582.51	3.72	Si
SLV 14	-9576	0.53	425.05	1272.61	1934.47	1603.54	3.77	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-7171	-7557	-316	2.072	1204.4	0.907	33.21464	12.56426	Si
SLV 9	-7163	-7477	-317	2.074	1203.6	0.907	33.24204	12.56426	Si
SLV 6	-6774	-8600	-424	2.144	1165.1	0.905	34.4442	12.56426	Si
SLV 5	-6766	-8520	-424	2.146	1164.3	0.905	34.47378	12.56426	Si
SLV 12	-6121	-14541	438	2.294	1100.9	0.901	36.98946	12.56426	Si
SLV 11	-6113	-14462	438	2.296	1100.1	0.901	37.02433	12.56426	Si
SLV 8	-5723	-15584	330	2.41	1061.9	0.899	38.94521	12.56426	Si
SLV 7	-5715	-15505	330	2.412	1061.1	0.899	38.98353	12.56426	Si
SLV 14	-7270	-8806	73	2.076	1214.2	0.907	33.26503	7.33323	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-7257	-8682	73	2.079	1212.9	0.907	33.30847	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	20.784	SLU 30	Si
V_SLU	24.433	SLU 70	Si
PF_SLV	1.224	SLV 16	Si
V_SLV	3.362	SLV 16	Si
PFFP_SLV	3.342	SLV 5	Si
R_SLV	2.644	SLV 10	Si

Maschio 180

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-14.163	1.006	L7	L8	1.9	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 54	11.86	134.01	-9834	-0.0000269	0.0004492	0.0035	1.9	7928.67	8890.6	8890.6	66.34	No	Si
SLU 54	14.36	-1556.84	-8868	-0.0000364	0.0004492	0.0035	1.9	7275.33	9469.13	9469.13	6.08	No	Si
SLU 49	11.86	21.33	-10752	-0.0000284	0.0004492	0.0035	1.9	8524.92	9609.46	9609.46	450.42	No	Si
SLU 49	14.36	-1582.87	-9068	-0.0000371	0.0004492	0.0035	1.9	7412.79	9626.7	9626.7	6.08	No	Si
SLU 53	11.86	156.96	-9882	-0.0000272	0.0004492	0.0035	1.9	7960.56	8928.93	8928.93	56.89	No	Si
SLU 53	14.36	-1571.53	-8876	-0.0000365	0.0004492	0.0035	1.9	7280.86	9475.43	9475.43	6.03	No	Si
SLU 46	11.86	60	-10469	-0.000028	0.0004492	0.0035	1.9	8343.55	9388.27	9388.27	156.48	No	Si
SLU 46	14.36	-1600.76	-9002	-0.0000371	0.0004492	0.0035	1.9	7367.31	9574.42	9574.42	5.98	No	Si
SLU 44	11.86	64.21	-9400	-0.0000251	0.0004492	0.0035	1.9	7638.91	8545.93	8545.93	133.09	No	Si
SLU 44	14.36	-1369.29	-7749	-0.0000317	0.0004492	0.0035	1.9	6484.23	8572	8572	6.26	No	Si
SLU 48	11.86	44.28	-10800	-0.0000287	0.0004492	0.0035	1.9	8555.51	9647.05	9647.05	217.87	No	Si
SLU 48	14.36	-1597.56	-9076	-0.0000373	0.0004492	0.0035	1.9	7418.26	9633.01	9633.01	6.03	No	Si
SLU 56	11.86	118.29	-10165	-0.0000276	0.0004492	0.0035	1.9	8146.79	9151.49	9151.49	77.36	No	Si
SLU 56	14.36	-1553.64	-8942	-0.0000365	0.0004492	0.0035	1.9	7326.57	9527.71	9527.71	6.13	No	Si
SLU 57	11.86	95.35	-10117	-0.0000273	0.0004492	0.0035	1.9	8115.31	9113.89	9113.89	95.58	No	Si
SLU 57	14.36	-1538.94	-8934	-0.0000364	0.0004492	0.0035	1.9	7321.07	9521.41	9521.41	6.19	No	Si
SLU 43	11.86	102.45	-9481	-0.0000257	0.0004492	0.0035	1.9	7693.04	8609.81	8609.81	84.04	No	Si
SLU 43	14.36	-1393.77	-7763	-0.0000319	0.0004492	0.0035	1.9	6493.87	8583.05	8583.05	6.16	No	Si
SLU 45	11.86	82.94	-10517	-0.0000283	0.0004492	0.0035	1.9	8374.54	9425.86	9425.86	113.65	No	Si
SLU 45	14.36	-1615.46	-9010	-0.0000372	0.0004492	0.0035	1.9	7372.8	9580.73	9580.73	5.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	11.86	6996.72	-5181	-0.0082117	0.0006738	0.0035	1.52		5119.58	5119.58	0.73		No
SLV 3	14.36	-6249.65	-9374	-0.0001136	0.0006738	0.0035	1.52		10051.36	10051.36	1.61		Si
SLV 12	11.86	-5107.15	-650	-0.0008942	0.0006738	0.0035	1.52		2424.24	2424.24	0.47		No
SLV 12	14.36	3186.5	-4226	-0.0000726	0.0006738	0.0035	1.9		4277.51	4277.51	1.34		Si
SLV 15	11.86	-8645.62	-5281	-0.001471	0.0006738	0.0035	1.52		6570.62	6570.62	0.76		No
SLV 15	14.36	5653.39	-2357	-0.0100766	0.0006738	0.0035	1.52		2593.08	2593.08	0.46		No
SLV 16	11.86	-8729.22	-5207	-0.0015184	0.0006738	0.0035	1.52		6505.6	6505.6	0.75		No
SLV 16	14.36	5679.31	-2393	-0.0100794	0.0006738	0.0035	1.52		2625.69	2625.69	0.46		No
SLV 13	11.86	-7044.74	-9168	-0.0001752	0.0006738	0.0035	1.52		9882.8	9882.8	1.4		Si
SLV 13	14.36	4215.2	-2885	-0.0047917	0.0006738	0.0035	1.52		3073.46	3073.46	0.73		No
SLV 2	11.86	8513.99	-8993	-0.0032497	0.0006738	0.0035	1.52		8387.41	8387.41	0.99		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	14.36	-7661.92	-9937	-0.0001946	0.0006738	0.0035	1.52		10508.18	10508.18	1.37		Si
SLV 14	11.86	-7128.35	-9093	-0.0001894	0.0006738	0.0035	1.52		9819.63	9819.63	1.38		Si
SLV 14	14.36	4241.12	-2920	-0.004792	0.0006738	0.0035	1.52		3106.06	3106.06	0.73		No
SLV 11	11.86	-5053.42	-698	-0.0008776	0.0006738	0.0035	1.52		2468.13	2468.13	0.49		No
SLV 11	14.36	3169.84	-4203	-0.0000723	0.0006738	0.0035	1.9		4256.87	4256.87	1.34		Si
SLV 1	11.86	8597.59	-9067	-0.0034321	0.0006738	0.0035	1.52		8449.97	8449.97	0.98		No
SLV 1	14.36	-7687.84	-9902	-0.0001998	0.0006738	0.0035	1.52		10479.15	10479.15	1.36		Si
SLV 4	11.86	6913.12	-5106	-0.0081261	0.0006738	0.0035	1.52		5053.89	5053.89	0.73		No
SLV 4	14.36	-6223.73	-9410	-0.0001119	0.0006738	0.0035	1.52		10080.4	10080.4	1.62		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	11.86	-144.74	-9928	-7083	843	1.9	1.9	-13313	10108	5378	101952	19119	9690	28809	No	34.18	Si
SLU 74	14.36	-1470.85	-9265	-6610	1674	1.9	1.9	-12424	9990	5315	101952	19119	9690	28809	No	17.2	Si
SLU 75	11.86	-167.69	-9880	-7048	832	1.9	1.9	-13249	10100	5373	101952	19119	9690	28809	No	34.64	Si
SLU 75	14.36	-1456.15	-9257	-6604	1679	1.9	1.9	-12414	9988	5314	101952	19119	9690	28809	No	17.16	Si
SLU 66	11.86	-218.76	-10563	-7536	712	1.9	1.9	-14165	10222	5438	101952	19119	9690	28809	No	40.44	Si
SLU 66	14.36	-1514.77	-9399	-6705	1598	1.9	1.9	-12603	10014	5327	101952	19119	9690	28809	No	18.03	Si
SLU 67	11.86	-241.7	-10515	-7501	701	1.9	1.9	-14100	10213	5433	101952	19119	9690	28809	No	41.08	Si
SLU 67	14.36	-1500.08	-9391	-6699	1603	1.9	1.9	-12593	10012	5327	101952	19119	9690	28809	No	17.97	Si
SLU 77	11.86	-183.41	-10212	-7285	748	1.9	1.9	-13693	10159	5405	101952	19119	9690	28809	No	38.54	Si
SLU 77	14.36	-1452.95	-9332	-6657	1638	1.9	1.9	-12513	10002	5321	101952	19119	9690	28809	No	17.58	Si
SLU 57	11.86	95.35	-10117	-7217	879	1.9	1.9	-13566	10142	5396	101952	19119	9690	28809	No	32.78	Si
SLU 57	14.36	-1538.94	-8934	-6374	1600	1.9	1.9	-11980	9931	5283	101952	19119	9690	28809	No	18.01	Si
SLU 54	11.86	134.01	-9834	-7015	974	1.9	1.9	-13186	10091	5369	101952	19119	9690	28809	No	29.57	Si
SLU 54	14.36	-1556.84	-8868	-6326	1636	1.9	1.9	-11892	9919	5277	101952	19119	9690	28809	No	17.61	Si
SLU 78	11.86	-206.35	-10164	-7250	736	1.9	1.9	-13629	10150	5400	101952	19119	9690	28809	No	39.12	Si
SLU 78	14.36	-1438.26	-9324	-6651	1643	1.9	1.9	-12502	10000	5320	101952	19119	9690	28809	No	17.53	Si
SLU 56	11.86	118.29	-10165	-7252	890	1.9	1.9	-13631	10151	5400	101952	19119	9690	28809	No	32.37	Si
SLU 56	14.36	-1553.64	-8942	-6379	1595	1.9	1.9	-11991	9932	5284	101952	19119	9690	28809	No	18.06	Si
SLU 53	11.86	156.96	-9882	-7049	985	1.9	1.9	-13251	10100	5373	101952	19119	9690	28809	No	29.24	Si
SLU 53	14.36	-1571.53	-8876	-6332	1631	1.9	1.9	-11902	9920	5278	101952	19119	9690	28809	No	17.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	11.86	8513.99	-8993	-6415	8469	1.52	0.0097	0	0	0	101952	22942	7752	30694		3.62	Si
SLV 2	14.36	-7661.92	-9937	-7089	6324	1.52	0.5369	0	0	0	101952	22942	7752	30694		4.85	Si
SLV 14	11.86	-7128.35	-9093	-6487	-6576	1.52	0.4983	0	0	0	101952	22942	7752	30694		4.67	Si
SLV 14	14.36	4241.12	-2920	-2083	-4100	1.52	0	0	0	0	101952	22942	7752	30694		7.49	Si
SLV 5	11.86	4975.53	-13623	-9719	4222	1.9	1.7543	-18268	16154	7935	101952	28678	9690	38368		9.09	Si
SLV 5	14.36	-5195.03	-8068	-5755	2715	1.52	0.9182	0	0	0	101952	22942	7752	30694		11.31	Si
SLV 4	11.86	6913.12	-5106	-3643	7627	1.52	0	0	0	0	101952	22942	7752	30694		4.02	Si
SLV 4	14.36	-6223.73	-9410	-6713	6266	1.52	0.8657	0	0	0	101952	22942	7752	30694		4.9	Si
SLV 15	11.86	-8645.62	-5281	-3767	-7375	1.52	0	0	0	0	101952	22942	7752	30694		4.16	Si
SLV 15	14.36	5653.39	-2357	-1681	-4192	1.52	0	0	0	0	101952	22942	7752	30694		7.32	Si
SLV 16	11.86	-8729.22	-5207	-3714	-7418	1.52	0	0	0	0	101952	22942	7752	30694		4.14	Si
SLV 16	14.36	5679.31	-2393	-1707	-4158	1.52	0	0	0	0	101952	22942	7752	30694		7.38	Si
SLV 1	11.86	8597.59	-9067	-6468	8513	1.52	0.0054	0	0	0	101952	22942	7752	30694		3.61	Si
SLV 1	14.36	-7687.84	-9902	-7064	6289	1.52	0.5207	0	0	0	101952	22942	7752	30694		4.88	Si
SLV 6	11.86	4921.8	-13576	-9685	4193	1.9	1.7624	-18204	16141	7965	101952	28678	9690	38368		9.15	Si
SLV 6	14.36	-5178.37	-8091	-5772	2737	1.52	0.9299	0	0	0	101952	22942	7752	30694		11.21	Si
SLV 13	11.86	-7044.74	-9168	-6540	-6532	1.52	0.5447	0	0	0	101952	22942	7752	30694		4.7	Si
SLV 13	14.36	4215.2	-2885	-2058	-4135	1.52	0	0	0	0	101952	22942	7752	30694		7.42	Si
SLV 3	11.86	6996.72	-5181	-3696	7671	1.52	0	0	0	0	101952	22942	7752	30694		4	Si
SLV 3	14.36	-6249.65	-9374	-6687	6232	1.52	0.8498	0	0	0	101952	22942	7752	30694		4.93	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-3268	0.53	219.46	442.12	723.53	582.82	2.66	Si
SLV 12	-3278	0.53	219.46	443.55	725.21	584.38	2.66	Si
SLV 7	-3705	0.53	219.46	499.03	791.28	645.15	2.94	Si
SLV 8	-3716	0.53	219.46	500.44	792.96	646.7	2.95	Si
SLV 15	-4682	0.53	219.46	623.96	942.39	783.17	3.57	Si
SLV 16	-4699	0.53	219.46	626.1	945.01	785.56	3.58	Si
SLV 3	-6141	0.53	219.46	805.58	1166.29	985.93	4.49	Si
SLV 4	-6158	0.53	219.46	807.65	1168.89	988.27	4.5	Si
SLV 13	-6334	0.53	219.46	829.17	1195.92	1012.55	4.61	Si
SLV 14	-6351	0.53	219.46	831.23	1198.52	1014.88	4.62	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-5124	-13576	-36	1.657	763.6	0.919	26.20138	12.56426	Si
SLV 5	-5117	-13623	-36	1.659	762.9	0.919	26.22797	12.56426	Si
SLV 10	-5010	-13606	-36	1.685	752.2	0.918	26.67405	12.56426	Si
SLV 9	-5003	-13654	-36	1.687	751.5	0.918	26.70162	12.56426	Si
SLV 8	-4865	-620	39	1.722	737.7	0.917	27.29055	12.56426	Si
SLV 7	-4859	-668	39	1.724	737	0.917	27.31999	12.56426	Si
SLV 12	-4751	-650	39	1.753	726.2	0.916	27.80316	12.56426	Si
SLV 11	-4744	-698	39	1.754	725.6	0.916	27.83371	12.56426	Si
SLV 2	-5168	-8993	-10	1.65	768	0.919	26.0837	7.33323	Si
SLV 1	-5158	-9067	-10	1.653	767	0.919	26.12464	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.931	SLU 45	Si
V_SLU	17.155	SLU 75	Si
PF_SLV	0.459	SLV 15	No
V_SLV	3.606	SLV 1	Si
PFFP_SLV	2.656	SLV 11	Si
R_SLV	2.085	SLV 6	Si

Maschio 181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.478	1.006	-11.143	1.006	L7	L8	0.665	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 35	11.86	174.73	-1988	-0.0000266	0.0004492	0.0035	0.6647	602.98	676.43	676.43	3.87	No	Si
SLU 35	14.36	-95.82	-3714	-0.0000345	0.0004492	0.0035	0.6647	1032.84	1269.29	1269.29	13.25	No	Si
SLU 39	11.86	157.5	-1384	-0.0000208	0.0004492	0.0035	0.6647	431.86	493.52	493.52	3.13	No	Si
SLU 39	14.36	-74.64	-3022	-0.0000277	0.0004492	0.0035	0.6647	870.84	1077.3	1077.3	14.43	No	Si
SLU 31	11.86	148.12	-1484	-0.0000209	0.0004492	0.0035	0.6647	461.16	524.3	524.3	3.54	No	Si
SLU 31	14.36	-66.02	-3015	-0.000027	0.0004492	0.0035	0.6647	869.1	1075.29	1075.29	16.29	No	Si
SLU 40	11.86	158.07	-1355	-0.0000206	0.0004492	0.0035	0.6647	423.62	484.92	484.92	3.07	No	Si
SLU 40	14.36	-75.12	-3018	-0.0000277	0.0004492	0.0035	0.6647	869.81	1076.11	1076.11	14.33	No	Si
SLU 42	11.86	175.22	-1495	-0.0000229	0.0004492	0.0035	0.6647	464.29	527.61	527.61	3.01	No	Si
SLU 42	14.36	-103.15	-3176	-0.0000309	0.0004492	0.0035	0.6647	908.17	1121.1	1121.1	10.87	No	Si
SLU 38	11.86	182.04	-1783	-0.0000255	0.0004492	0.0035	0.6647	546.14	614.99	614.99	3.38	No	Si
SLU 38	14.36	-121.77	-3335	-0.0000334	0.0004492	0.0035	0.6647	945.78	1166.07	1166.07	9.58	No	Si
SLU 37	11.86	181.47	-1811	-0.0000257	0.0004492	0.0035	0.6647	554.03	623.43	623.43	3.44	No	Si
SLU 37	14.36	-121.3	-3339	-0.0000334	0.0004492	0.0035	0.6647	946.77	1167.27	1167.27	9.62	No	Si
SLU 34	11.86	165.28	-1624	-0.0000232	0.0004492	0.0035	0.6647	501.3	566.99	566.99	3.43	No	Si
SLU 34	14.36	-94.05	-3173	-0.0000302	0.0004492	0.0035	0.6647	907.48	1120.28	1120.28	11.91	No	Si
SLU 36	11.86	175.3	-1960	-0.0000264	0.0004492	0.0035	0.6647	595.24	667.98	667.98	3.81	No	Si
SLU 36	14.36	-96.3	-3710	-0.0000345	0.0004492	0.0035	0.6647	1031.9	1268.15	1268.15	13.17	No	Si
SLU 41	11.86	174.65	-1524	-0.000023	0.0004492	0.0035	0.6647	472.41	536.21	536.21	3.07	No	Si
SLU 41	14.36	-102.68	-3180	-0.0000309	0.0004492	0.0035	0.6647	909.18	1122.3	1122.3	10.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	11.86	912.13	1780	-0.0239086	0.0006738	0.0035	0.5318		0	0	0		No
SLV 8	14.36	-846.67	-3288	-0.0001538	0.0006738	0.0035	0.5318		1172.11	1172.11	1.38		Si
SLV 1	11.86	2332.1	-2229	-0.0338933	0.0006738	0.0035	0.5318		758.43	758.43	0.33		No
SLV 1	14.36	-1936.25	-3276	-0.0062446	0.0006738	0.0035	0.5318		1168.75	1168.75	0.6		No
SLV 12	11.86	-462.44	1354	-0.0009207	0.0006738	0.0035	0.5318		0	0	0		No
SLV 12	14.36	356.44	-2902	-0.0000459	0.0006738	0.0035	0.6647		960.2	960.2	2.69		Si
SLV 3	11.86	2419.83	-119	-0.0444067	0.0006738	0.0035	0.5318		93.39	93.39	0.04		No
SLV 3	14.36	-2083.5	-3490	-0.0068664	0.0006738	0.0035	0.5318		1230.86	1230.86	0.59		No
SLV 7	11.86	917.13	1832	-0.0242072	0.0006738	0.0035	0.5318		0	0	0		No
SLV 7	14.36	-850.58	-3290	-0.0001562	0.0006738	0.0035	0.5318		1172.67	1172.67	1.38		Si
SLD 7	11.86	440.31	-271	-0.0063404	0.0006738	0.0035	0.5318		142.86	142.86	0.32		No
SLD 7	14.36	-366.6	-2982	-0.0000472	0.0006738	0.0035	0.6647		1083.38	1083.38	2.96		Si
SLV 11	11.86	-457.43	1405	-0.0008945	0.0006738	0.0035	0.5318		0	0	0		No
SLV 11	14.36	352.53	-2904	-0.0000456	0.0006738	0.0035	0.6647		960.77	960.77	2.73		Si
SLV 15	11.86	-2162.05	-1541	-0.0085269	0.0006738	0.0035	0.5318		648.01	648.01	0.3		No
SLV 15	14.36	1926.86	-2206	-0.0263764	0.0006738	0.0035	0.5318		751.2	751.2	0.39		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	11.86	2412.04	-199	-0.0439321	0.0006738	0.0035	0.5318		119.41	119.41	0.05		No
SLV 4	14.36	-2077.42	-3487	-0.0068361	0.0006738	0.0035	0.5318		1229.98	1229.98	0.59		No
SLV 16	11.86	-2169.83	-1621	-0.0085247	0.0006738	0.0035	0.5318		672.72	672.72	0.31		No
SLV 16	14.36	1932.95	-2203	-0.0265045	0.0006738	0.0035	0.5318		750.29	750.29	0.39		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	11.86	168.27	-2655	-1894	324	0.6647	0.6647	-10178	9690	1804	101952	6689	3390	10078	No	31.11	Si
SLU 78	14.36	-66.18	-4363	-3112	316	0.6647	0.6647	-16722	10563	1966	101952	6689	3390	10078	No	31.94	Si
SLU 42	11.86	175.22	-1495	-1067	323	0.6647	0.6455	-5732	9098	1644	101952	6689	3390	10078	No	31.16	Si
SLU 42	14.36	-103.15	-3176	-2266	308	0.6647	0.6647	-12174	9957	1853	101952	6689	3390	10078	No	32.69	Si
SLU 41	11.86	174.65	-1524	-1087	321	0.6647	0.6531	-5840	9112	1666	101952	6689	3390	10078	No	31.38	Si
SLU 41	14.36	-102.68	-3180	-2269	306	0.6647	0.6647	-12191	9959	1853	101952	6689	3390	10078	No	32.93	Si
SLU 77	11.86	167.7	-2684	-1914	322	0.6647	0.6647	-10286	9705	1806	101952	6689	3390	10078	No	31.33	Si
SLU 77	14.36	-65.7	-4367	-3115	313	0.6647	0.6647	-16738	10565	1966	101952	6689	3390	10078	No	32.17	Si
SLU 83	11.86	167.62	-2219	-1583	322	0.6647	0.6647	-8506	9467	1762	101952	6689	3390	10078	No	31.25	Si
SLU 83	14.36	-72.56	-3833	-2734	308	0.6647	0.6647	-14691	10292	1916	101952	6689	3390	10078	No	32.71	Si
SLU 35	11.86	174.73	-1988	-1418	320	0.6647	0.6647	-7620	9349	1740	101952	6689	3390	10078	No	31.46	Si
SLU 35	14.36	-95.82	-3714	-2650	311	0.6647	0.6647	-14237	10232	1904	101952	6689	3390	10078	No	32.39	Si
SLU 38	11.86	182.04	-1783	-1272	320	0.6647	0.6647	-6835	9245	1721	101952	6689	3390	10078	No	31.46	Si
SLU 38	14.36	-121.77	-3335	-2379	310	0.6647	0.6647	-12782	10038	1868	101952	6689	3390	10078	No	32.47	Si
SLU 84	11.86	168.19	-2191	-1563	325	0.6647	0.6647	-8398	9453	1759	101952	6689	3390	10078	No	31.03	Si
SLU 84	14.36	-73.03	-3829	-2731	310	0.6647	0.6647	-14675	10290	1915	101952	6689	3390	10078	No	32.47	Si
SLU 80	11.86	175.02	-2479	-1768	322	0.6647	0.6647	-9501	9600	1787	101952	6689	3390	10078	No	31.33	Si
SLU 80	14.36	-91.65	-3987	-2844	313	0.6647	0.6647	-15283	10371	1930	101952	6689	3390	10078	No	32.25	Si
SLU 36	11.86	175.3	-1960	-1398	323	0.6647	0.6647	-7512	9335	1737	101952	6689	3390	10078	No	31.23	Si
SLU 36	14.36	-96.3	-3710	-2647	313	0.6647	0.6647	-14221	10229	1904	101952	6689	3390	10078	No	32.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	11.86	2412.04	-199	-142	2401	0.5318	0	0	0	0	101952	8026	2712	10738		4.47	Si
SLV 4	14.36	-2077.42	-3487	-2488	1759	0.5318	0	0	0	0	101952	8026	2712	10738		6.11	Si
SLV 7	11.86	917.13	1832	1307	1241	0.5318	0	0	0	0	101952	8026	2712	10738		8.65	Si
SLV 7	14.36	-850.58	-3290	-2347	1026	0.5318	0.2214	0	0	0	101952	8026	2712	10738		10.47	Si
SLV 2	11.86	2324.31	-2309	-1647	2139	0.5318	0	0	0	0	101952	8026	2712	10738		5.02	Si
SLV 2	14.36	-1930.16	-3273	-2335	1510	0.5318	0	0	0	0	101952	8026	2712	10738		7.11	Si
SLV 16	11.86	-2169.83	-1621	-1156	-1816	0.5318	0	0	0	0	101952	8026	2712	10738		5.91	Si
SLV 16	14.36	1932.95	-2203	-1571	-1191	0.5318	0	0	0	0	101952	8026	2712	10738		9.02	Si
SLV 14	11.86	-2257.56	-3732	-2662	-2078	0.5318	0	0	0	0	101952	8026	2712	10738		5.17	Si
SLV 14	14.36	2080.2	-1988	-1419	-1439	0.5318	0	0	0	0	101952	8026	2712	10738		7.46	Si
SLV 15	11.86	-2162.05	-1541	-1099	-1804	0.5318	0	0	0	0	101952	8026	2712	10738		5.95	Si
SLV 15	14.36	1926.86	-2206	-1573	-1179	0.5318	0	0	0	0	101952	8026	2712	10738		9.11	Si
SLV 8	11.86	912.13	1780	1270	1233	0.5318	0	0	0	0	101952	8026	2712	10738		8.71	Si
SLV 8	14.36	-846.67	-3288	-2345	1018	0.5318	0.2245	0	0	0	101952	8026	2712	10738		10.55	Si
SLV 3	11.86	2419.83	-119	-85	2413	0.5318	0	0	0	0	101952	8026	2712	10738		4.45	Si
SLV 3	14.36	-2083.5	-3490	-2490	1771	0.5318	0	0	0	0	101952	8026	2712	10738		6.06	Si
SLV 1	11.86	2332.1	-2229	-1590	2151	0.5318	0	0	0	0	101952	8026	2712	10738		4.99	Si
SLV 1	14.36	-1936.25	-3276	-2337	1522	0.5318	0	0	0	0	101952	8026	2712	10738		7.05	Si
SLV 13	11.86	-2249.78	-3652	-2605	-2066	0.5318	0	0	0	0	101952	8026	2712	10738		5.2	Si
SLV 13	14.36	2074.12	-1992	-1421	-1427	0.5318	0	0	0	0	101952	8026	2712	10738		7.52	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-843	0.53	76.77	115.04	186.16	150.6	1.96	Si
SLV 12	-862	0.53	76.77	117.62	189.19	153.4	2	Si
SLV 7	-1024	0.53	76.77	139.02	214.41	176.72	2.3	Si
SLV 8	-1043	0.53	76.77	141.57	217.43	179.5	2.34	Si
SLV 15	-1488	0.53	76.77	199.18	286.26	242.72	3.16	Si
SLV 16	-1518	0.53	76.77	203.03	290.93	246.98	3.22	Si
SLV 3	-2092	0.53	76.77	274.89	379.31	327.1	4.26	Si
SLV 4	-2122	0.53	76.77	278.59	383.94	331.26	4.31	Si
SLV 13	-2226	0.53	76.77	291.35	399.98	345.66	4.5	Si
SLV 14	-2257	0.53	76.77	295.02	404.6	349.81	4.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-1196	1832	3	2.22	207.8	0.904	35.69176	12.56426	Si, Trazione
SLV 8	-1195	1780	3	2.221	207.7	0.904	35.71332	12.56426	Si, Trazione
SLV 11	-1055	1405	-10	2.409	193.9	0.9	38.9115	12.56426	Si, Trazione
SLV 12	-1054	1354	-10	2.411	193.8	0.9	38.93638	12.56426	Si, Trazione
SLV 5	-1030	-5204	12	2.446	191.5	0.899	39.5273	12.56426	Si
SLV 6	-1029	-5255	12	2.447	191.4	0.899	39.55363	12.56426	Si
SLV 9	-889	-5631	-1	2.693	177.7	0.895	43.71628	12.56426	Si
SLV 10	-888	-5682	-1	2.695	177.6	0.895	43.74738	12.56426	Si
SLV 3	-1303	-119	22	2.083	218.3	0.907	33.37867	7.33323	Si
SLV 4	-1302	-199	22	2.085	218.2	0.907	33.40827	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.011	SLU 42	Si
V_SLU	31.032	SLU 84	Si

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0	SLV 7	No
V_SLV	4.45	SLV 3	Si
PFFP_SLV	1.962	SLV 11	Si
R_SLV	2.841	SLV 7	Si

Maschio 182

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L7	L8	1.935	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	11.86	1480.91	-6499	-0.0000285	0.0004492	0.0035	1.9353	5671.59	6267.75	6267.75	4.23	No	Si
SLU 39	14.36	-1032.67	-2970	-0.0000157	0.0004492	0.0035	1.9353	2745.06	4869.46	4869.46	4.72	No	Si
SLU 42	11.86	1500.79	-7148	-0.0000304	0.0004492	0.0035	1.9353	6169.87	6821.75	6821.75	4.55	No	Si
SLU 42	14.36	-1018.25	-3510	-0.0000169	0.0004492	0.0035	1.9353	3216.25	5346.32	5346.32	5.25	No	Si
SLU 40	11.86	1486.97	-6478	-0.0000285	0.0004492	0.0035	1.9353	5655.12	6249.63	6249.63	4.2	No	Si
SLU 40	14.36	-1042.99	-2951	-0.0000157	0.0004492	0.0035	1.9353	2727.91	4852.26	4852.26	4.65	No	Si
SLU 23	11.86	1406.26	-7404	-0.0000303	0.0004492	0.0035	1.9353	6363.3	7037.08	7037.08	5	No	Si
SLU 23	14.36	-851.63	-3657	-0.000016	0.0004492	0.0035	1.9353	3343.31	5476.41	5476.41	6.43	No	Si
SLU 73	11.86	1663.17	-8856	-0.0000363	0.0004492	0.0035	1.9353	7423.39	8246.45	8246.45	4.96	No	Si
SLU 73	14.36	-1047.24	-4239	-0.0000191	0.0004492	0.0035	1.9353	3838.91	5990.15	5990.15	5.72	No	Si
SLU 34	11.86	1479.41	-7416	-0.0000309	0.0004492	0.0035	1.9353	6372.1	7046.93	7046.93	4.76	No	Si
SLU 34	14.36	-965.66	-3713	-0.000017	0.0004492	0.0035	1.9353	3391.13	5525.53	5525.53	5.72	No	Si
SLU 41	11.86	1494.73	-7169	-0.0000304	0.0004492	0.0035	1.9353	6185.92	6839.54	6839.54	4.58	No	Si
SLU 41	14.36	-1007.93	-3529	-0.0000169	0.0004492	0.0035	1.9353	3233.08	5363.52	5363.52	5.32	No	Si
SLU 31	11.86	1465.59	-6746	-0.000029	0.0004492	0.0035	1.9353	5862.6	6479.01	6479.01	4.42	No	Si
SLU 31	14.36	-990.4	-3153	-0.0000158	0.0004492	0.0035	1.9353	2906.11	5031.48	5031.48	5.08	No	Si
SLU 82	11.86	1684.56	-8588	-0.0000357	0.0004492	0.0035	1.9353	7232.44	8025.47	8025.47	4.76	No	Si
SLU 82	14.36	-1099.83	-4036	-0.0000189	0.0004492	0.0035	1.9353	3667.14	5810.93	5810.93	5.28	No	Si
SLU 81	11.86	1678.49	-8609	-0.0000357	0.0004492	0.0035	1.9353	7247.6	8042.93	8042.93	4.79	No	Si
SLU 81	14.36	-1089.51	-4055	-0.0000189	0.0004492	0.0035	1.9353	3683.68	5828.13	5828.13	5.35	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	11.86	-4668.86	-7303	-0.0000748	0.0006738	0.0035	1.5482		8728.36	8728.36	1.87		Si
SLV 13	14.36	3914.77	-5765	-0.0000671	0.0006738	0.0035	1.9353		5711.3	5711.3	1.46		Si
SLV 8	11.86	3567.37	-5210	-0.0000616	0.0006738	0.0035	1.9353		5213.64	5213.64	1.46		Si
SLV 8	14.36	-2952.85	-1224	-0.0003414	0.0006738	0.0035	1.5482		3281.57	3281.57	1.11		Si
SLV 14	11.86	-4720.49	-7488	-0.0000747	0.0006738	0.0035	1.5482		8887.24	8887.24	1.88		Si
SLV 14	14.36	3937.65	-5931	-0.0000655	0.0006738	0.0035	1.9353		5857.96	5857.96	1.49		Si
SLV 7	11.86	3600.55	-5091	-0.0000656	0.0006738	0.0035	1.9353		5106.89	5106.89	1.42		Si
SLV 7	14.36	-2967.56	-1117	-0.0003498	0.0006738	0.0035	1.5482		3182.93	3182.93	1.07		Si
SLV 1	11.86	6621.09	-7985	-0.000211	0.0006738	0.0035	1.9353		7658.01	7658.01	1.16		Si
SLV 1	14.36	-4645.59	-2202	-0.0005588	0.0006738	0.0035	1.5482		4182.95	4182.95	0.9		No
SLV 3	11.86	7055.01	-6744	-0.0042903	0.0006738	0.0035	1.9353		6576.19	6576.19	0.93		No
SLV 3	14.36	-5255.83	-1112	-0.0007486	0.0006738	0.0035	1.5482		3178.12	3178.12	0.6		No
SLV 2	11.86	6569.46	-8170	-0.0001794	0.0006738	0.0035	1.9353		7818.81	7818.81	1.19		Si
SLV 2	14.36	-4622.71	-2368	-0.0005408	0.0006738	0.0035	1.5482		4335.05	4335.05	0.94		No
SLV 15	11.86	-4234.93	-6062	-0.0000754	0.0006738	0.0035	1.5482		7657.9	7657.9	1.81		Si
SLV 15	14.36	3304.53	-4675	-0.0000599	0.0006738	0.0035	1.9353		4733.54	4733.54	1.43		Si
SLV 4	11.86	7003.38	-6929	-0.0032623	0.0006738	0.0035	1.9353		6739.64	6739.64	0.96		No
SLV 4	14.36	-5232.95	-1278	-0.0007349	0.0006738	0.0035	1.5482		3331.6	3331.6	0.64		No
SLV 16	11.86	-4286.56	-6247	-0.0000743	0.0006738	0.0035	1.5482		7821.64	7821.64	1.82		Si
SLV 16	14.36	3327.41	-4841	-0.0000577	0.0006738	0.0035	1.9353		4882.58	4882.58	1.47		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	11.86	1696.32	-10861	-7748	1755	1.9353	1.9353	-14298	10240	5549	101952	19474	9870	29344	No	16.72	Si
SLU 77	14.36	-989.06	-5949	-4244	1364	1.9353	1.9353	-7832	9378	5082	101952	19474	9870	29344	No	21.51	Si
SLU 70	11.86	1643.06	-11498	-8202	1759	1.9353	1.9353	-15136	10352	5609	101952	19474	9870	29344	No	16.69	Si
SLU 70	14.36	-860.62	-6433	-4589	1212	1.9353	1.9353	-8469	9463	5128	101952	19474	9870	29344	No	24.2	Si
SLU 80	11.86	1686.77	-10210	-7283	1724	1.9353	1.9353	-13441	10125	5487	101952	19474	9870	29344	No	17.03	Si
SLU 80	14.36	-990.87	-5370	-3831	1341	1.9353	1.9353	-7069	9276	5026	101952	19474	9870	29344	No	21.88	Si
SLU 69	11.86	1637	-11519	-8217	1753	1.9353	1.9353	-15164	10355	5611	101952	19474	9870	29344	No	16.74	Si
SLU 69	14.36	-850.3	-6453	-4603	1206	1.9353	1.9353	-8495	9466	5129	101952	19474	9870	29344	No	24.32	Si
SLU 66	11.86	1623.18	-10849	-7739	1719	1.9353	1.9353	-14283	10238	5548	101952	19474	9870	29344	No	17.07	Si
SLU 66	14.36	-875.04	-5893	-4204	1136	1.9353	1.9353	-7758	9368	5076	101952	19474	9870	29344	No	25.84	Si
SLU 78	11.86	1702.38	-10840	-7733	1760	1.9353	1.9353	-14270	10236	5547	101952	19474	9870	29344	No	16.67	Si
SLU 78	14.36	-999.38	-5929	-4230	1370	1.9353	1.9353	-7806	9374	5080	101952	19474	9870	29344	No	21.42	Si
SLU 72	11.86	1627.45	-10868	-7753	1722	1.9353	1.9353	-14307	10241	5549	101952	19474	9870	29344	No	17.04	Si
SLU 72	14.36	-852.11	-5874	-4190	1183	1.9353	1.9353	-7732	9364	5074	101952	19474	9870	29344	No	24.8	Si
SLU 67	11.86	1629.24	-10828	-7724	1725	1.9353	1.9353	-14255	10234	5546	101952	19474	9870	29344	No	17.02	Si
SLU 67	14.36	-885.36	-5874	-4190	1142	1.9353	1.9353	-7733	9364	5074	101952	19474	9870	29344	No	25.71	Si
SLU 75	11.86	1688.56	-10170	-7255	1726	1.9353	1.9353	-13388	10118	5483	101952	19474	9870	29344	No	17	Si
SLU 75	14.36	-1024.12	-5370	-3831	1299	1.9353	1.9353	-7070	9276	5027	101952	19474	9870	29344	No	22.59	Si
SLU 74	11.86	1682.5	-10191	-7270	1721	1.9353	1.9353	-13416	10122	5485	101952	19474	9870	29344	No	17.06	Si
SLU 74	14.36	-1013.81	-5390	-3845	1293	1.9353	1.9353	-7095	9279	5028	101952	19474	9870	29344	No	22.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	11.86	3686.18	-6949	-4957	3603	1.9353	1.3116	-9148	14330	5262	101952	29211	9870	39081		10.85	Si
SLD 3	14.36	-2627.52	-2485	-1773	2158	1.5482	0	0	0	0	101952	23369	7896	31265		14.49	Si
SLV 3	11.86	7055.01	-6744	-4811	6809	1.9353	0	-162303	16250	0	101952	29211	9870	39081		5.74	Si
SLV 3	14.36	-5255.83	-1112	-793	4018	1.5482	0	0	0	0	101952	23369	7896	31265		7.78	Si
SLV 16	11.86	-4286.56	-6247	-4457	-3968	1.5482	0.8446	0	0	0	101952	23369	7896	31265		7.88	Si
SLV 16	14.36	3327.41	-4841	-3454	-1959	1.9353	0.841	-6373	13775	3244	101952	29211	9870	39081		19.95	Si
SLV 15	11.86	-4234.93	-6062	-4325	-3942	1.5482	0.8073	0	0	0	101952	23369	7896	31265		7.93	Si
SLV 15	14.36	3304.53	-4675	-3335	-1960	1.9353	0.7825	-6155	13731	3008	101952	29211	9870	39081		19.94	Si
SLV 1	11.86	6621.09	-7985	-5696	6380	1.9353	0.4153	-50153	16250	1890	101952	29211	9870	39081		6.13	Si
SLV 1	14.36	-4645.59	-2202	-1571	3486	1.5482	0	0	0	0	101952	23369	7896	31265		8.97	Si
SLV 4	11.86	7003.38	-6929	-4943	6784	1.9353	0	-164158	16250	0	101952	29211	9870	39081		5.76	Si
SLV 4	14.36	-5232.95	-1278	-912	4019	1.5482	0	0	0	0	101952	23369	7896	31265		7.78	Si
SLV 13	11.86	-4668.86	-7303	-5210	-4372	1.5482	0.9851	0	0	0	101952	23369	7896	31265		7.15	Si
SLV 13	14.36	3914.77	-5765	-4113	-2492	1.9353	0.8658	-7590	14018	3398	101952	29211	9870	39081		15.68	Si
SLD 4	11.86	3664.01	-7028	-5014	3592	1.9353	1.339	-9253	14351	5380	101952	29211	9870	39081		10.88	Si
SLD 4	14.36	-2617.7	-2556	-1823	2159	1.5482	0	0	0	0	101952	23369	7896	31265		14.48	Si
SLV 2	11.86	6569.46	-8170	-5828	6354	1.9353	0.4906	-43326	16250	2232	101952	29211	9870	39081		6.15	Si
SLV 2	14.36	-4622.71	-2368	-1689	3487	1.5482	0	0	0	0	101952	23369	7896	31265		8.97	Si
SLV 14	11.86	-4720.49	-7488	-5342	-4397	1.5482	1.0118	0	0	0	101952	23369	7896	31265		7.11	Si
SLV 14	14.36	3937.65	-5931	-4231	-2491	1.9353	0.9113	-7808	14062	3588	101952	29211	9870	39081		15.69	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-3097	0.53	223.53	420.05	722.08	571.07	2.55	Si
SLV 12	-3216	0.53	223.53	435.64	740.53	588.08	2.63	Si
SLV 7	-3290	0.53	223.53	445.4	752.09	598.74	2.68	Si
SLV 8	-3409	0.53	223.53	460.92	770.5	615.71	2.75	Si
SLV 15	-4371	0.53	223.53	584.97	919.39	752.18	3.36	Si
SLV 16	-4556	0.53	223.53	608.54	948.05	778.29	3.48	Si
SLV 3	-5016	0.53	223.53	666.74	1018.88	842.81	3.77	Si
SLV 4	-5201	0.53	223.53	689.97	1047.26	868.62	3.89	Si
SLV 13	-5684	0.53	223.53	750.26	1121.45	935.85	4.19	Si
SLV 14	-5869	0.53	223.53	773.14	1149.83	961.49	4.3	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-3138	-9141	-312	2.315	571	0.901	37.36253	12.56426	Si
SLV 6	-3073	-9346	-366	2.336	564.6	0.9	37.72211	12.56426	Si
SLV 9	-3067	-9022	-313	2.351	564	0.9	37.96341	12.56426	Si
SLV 5	-3001	-9227	-366	2.372	557.6	0.899	38.33719	12.56426	Si
SLV 12	-2167	-5005	366	2.895	477.2	0.892	47.18883	12.56426	Si
SLV 11	-2096	-4887	366	2.952	470.4	0.891	48.13541	12.56426	Si
SLV 8	-2102	-5210	312	2.961	471	0.891	48.29158	12.56426	Si
SLV 7	-2030	-5091	312	3.02	464.2	0.891	49.27606	12.56426	Si
SLV 14	-2895	-7488	-12	2.507	547.3	0.898	40.5715	7.33323	Si
SLV 13	-2783	-7303	-12	2.571	536.4	0.897	41.65145	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.203	SLU 40	Si
V_SLU	16.668	SLU 78	Si
PF_SLV	0.605	SLV 3	No
V_SLV	5.74	SLV 3	Si
PFFP_SLV	2.555	SLV 11	Si
R_SLV	2.974	SLV 10	Si

Maschio 183

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L7	L8	1.55	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 23	11.86	729.43	-5513	-0.0000267	0.0004492	0.0035	1.55	3828.59	4260.57	4260.57	5.84	No	Si
SLU 23	13.96	-627.66	-4933	-0.0000235	0.0004492	0.0035	1.55	3467.36	4875.83	4875.83	7.77	No	Si
SLU 22	11.86	722.05	-5544	-0.0000267	0.0004492	0.0035	1.55	3847.57	4281.75	4281.75	5.93	No	Si
SLU 22	13.96	-612.1	-4924	-0.0000233	0.0004492	0.0035	1.55	3462.04	4870.15	4870.15	7.96	No	Si
SLU 2	11.86	720.74	-5559	-0.0000268	0.0004492	0.0035	1.55	3856.46	4291.68	4291.68	5.95	No	Si
SLU 2	13.96	-657.65	-4694	-0.0000231	0.0004492	0.0035	1.55	3315.79	4714.86	4714.86	7.17	No	Si
SLU 65	11.86	940.46	-7206	-0.000035	0.0004492	0.0035	1.55	4825.67	5391.82	5391.82	5.73	No	Si
SLU 65	13.96	-830.57	-6257	-0.0000305	0.0004492	0.0035	1.55	4276.78	5767.62	5767.62	6.94	No	Si
SLU 44	11.86	931.77	-7251	-0.0000351	0.0004492	0.0035	1.55	4851.28	5421.41	5421.41	5.82	No	Si
SLU 44	13.96	-860.55	-6018	-0.00003	0.0004492	0.0035	1.55	4134.46	5606.65	5606.65	6.52	No	Si
SLU 1	11.86	713.36	-5590	-0.0000268	0.0004492	0.0035	1.55	3875.4	4312.87	4312.87	6.05	No	Si
SLU 1	13.96	-642.08	-4685	-0.0000229	0.0004492	0.0035	1.55	3310.42	4709.18	4709.18	7.33	No	Si
SLU 52	11.86	810.16	-6617	-0.0000314	0.0004492	0.0035	1.55	4488.23	5002.36	5002.36	6.17	No	Si
SLU 52	13.96	-719.85	-5741	-0.0000273	0.0004492	0.0035	1.55	3967.74	5420.43	5420.43	7.53	No	Si
SLU 43	11.86	924.39	-7282	-0.0000351	0.0004492	0.0035	1.55	4868.69	5441.55	5441.55	5.89	No	Si
SLU 43	13.96	-844.98	-6009	-0.0000298	0.0004492	0.0035	1.55	4129.41	5600.97	5600.97	6.63	No	Si
SLU 73	11.86	818.85	-6571	-0.0000314	0.0004492	0.0035	1.55	4461.77	4972.26	4972.26	6.07	No	Si
SLU 73	13.96	-689.87	-5980	-0.0000278	0.0004492	0.0035	1.55	4111.99	5581.41	5581.41	8.09	No	Si
SLU 64	11.86	933.08	-7237	-0.000035	0.0004492	0.0035	1.55	4843.11	5411.96	5411.96	5.8	No	Si
SLU 64	13.96	-815	-6248	-0.0000302	0.0004492	0.0035	1.55	4271.78	5761.95	5761.95	7.07	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	11.86	2172.23	-4262	-0.0000535	0.0006738	0.0035	1.55		3439.72	3439.72	1.58		Si
SLD 3	13.96	-2068.38	-4621	-0.0000468	0.0006738	0.0035	1.24		4706.83	4706.83	2.28		Si
SLV 13	11.86	-2739.78	-7698	-0.0000614	0.0006738	0.0035	1.55		6834.08	6834.08	2.49		Si
SLV 13	13.96	2747.73	-4749	-0.0000819	0.0006738	0.0035	1.55		3788.58	3788.58	1.38		Si
SLD 4	11.86	2145.11	-4398	-0.0000509	0.0006738	0.0035	1.55		3537.03	3537.03	1.65		Si
SLD 4	13.96	-2025.25	-4644	-0.0000454	0.0006738	0.0035	1.24		4723.2	4723.2	2.33		Si
SLV 7	11.86	2138.69	-1376	-0.0046901	0.0006738	0.0035	1.24		1326.56	1326.56	0.62		No
SLV 7	13.96	-2493.54	-4656	-0.0000649	0.0006738	0.0035	1.24		4731.79	4731.79	1.9		Si
SLV 14	11.86	-2802.95	-8015	-0.0000631	0.0006738	0.0035	1.55		7043.37	7043.37	2.51		Si
SLV 14	13.96	2848.18	-4803	-0.0000898	0.0006738	0.0035	1.55		3826.88	3826.88	1.34		Si
SLV 1	11.86	3900.39	-4872	-0.0020479	0.0006738	0.0035	1.55		3875.63	3875.63	0.99		No
SLV 1	13.96	-3473.99	-4527	-0.0002774	0.0006738	0.0035	1.24		4640.09	4640.09	1.34		Si
SLV 4	11.86	4101.98	-3093	-0.0092279	0.0006738	0.0035	1.24		2595.47	2595.47	0.63		No
SLV 4	13.96	-3934.36	-4600	-0.0004405	0.0006738	0.0035	1.24		4691.93	4691.93	1.19		Si
SLV 2	11.86	3837.22	-5189	-0.0005709	0.0006738	0.0035	1.55		4099.04	4099.04	1.07		Si
SLV 2	13.96	-3373.54	-4581	-0.0002283	0.0006738	0.0035	1.24		4678.23	4678.23	1.39		Si
SLV 3	11.86	4165.15	-2776	-0.0103327	0.0006738	0.0035	1.24		2363.6	2363.6	0.57		No
SLV 3	13.96	-4034.81	-4547	-0.0004915	0.0006738	0.0035	1.24		4653.79	4653.79	1.15		Si
SLV 8	11.86	2098.09	-1579	-0.0037961	0.0006738	0.0035	1.24		1478.45	1478.45	0.7		No
SLV 8	13.96	-2428.98	-4691	-0.0000608	0.0006738	0.0035	1.24		4756.3	4756.3	1.96		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	11.86	759.35	-6331	-4516	1180	1.55	1.55	-10406	9721	4219	101952	15597	7905	23502	No	19.92	Si
SLU 81	13.96	-614	-5853	-4176	1180	1.55	1.55	-9621	9616	4173	101952	15597	7905	23502	No	19.92	Si
SLU 66	11.86	881.1	-8159	-5821	1156	1.55	1.55	-13411	10122	4393	101952	15597	7905	23502	No	20.33	Si
SLU 66	13.96	-724.45	-7196	-5133	1156	1.55	1.55	-11828	9910	4301	101952	15597	7905	23502	No	20.33	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	11.86	763.91	-7506	-5355	1143	1.55	1.55	-12338	9978	4331	101952	15597	7905	23502	No	20.57	Si
SLU 75	13.96	-593.09	-6925	-4940	1143	1.55	1.55	-11382	9851	4275	101952	15597	7905	23502	No	20.57	Si
SLU 65	11.86	940.46	-7206	-5140	1240	1.55	1.55	-11844	9913	4302	101952	15597	7905	23502	No	18.95	Si
SLU 65	13.96	-830.57	-6257	-4463	1240	1.55	1.55	-10284	9705	4212	101952	15597	7905	23502	No	18.95	Si
SLU 44	11.86	931.77	-7251	-5173	1156	1.55	1.55	-11919	9923	4306	101952	15597	7905	23502	No	20.33	Si
SLU 44	13.96	-860.55	-6018	-4293	1156	1.55	1.55	-9891	9652	4189	101952	15597	7905	23502	No	20.32	Si
SLU 64	11.86	933.08	-7237	-5163	1218	1.55	1.55	-11895	9919	4305	101952	15597	7905	23502	No	19.3	Si
SLU 64	13.96	-815	-6248	-4457	1218	1.55	1.55	-10270	9703	4211	101952	15597	7905	23502	No	19.29	Si
SLU 73	11.86	818.85	-6571	-4688	1214	1.55	1.55	-10802	9774	4242	101952	15597	7905	23502	No	19.37	Si
SLU 73	13.96	-689.87	-5980	-4266	1214	1.55	1.55	-9830	9644	4185	101952	15597	7905	23502	No	19.36	Si
SLU 82	11.86	763.78	-6312	-4503	1193	1.55	1.55	-10375	9717	4217	101952	15597	7905	23502	No	19.7	Si
SLU 82	13.96	-623.34	-5858	-4179	1193	1.55	1.55	-9630	9617	4174	101952	15597	7905	23502	No	19.7	Si
SLU 68	11.86	908.98	-7675	-5475	1164	1.55	1.55	-12615	10015	4347	101952	15597	7905	23502	No	20.19	Si
SLU 68	13.96	-757.97	-6636	-4734	1164	1.55	1.55	-10907	9788	4248	101952	15597	7905	23502	No	20.18	Si
SLU 67	11.86	885.52	-8141	-5807	1169	1.55	1.55	-13381	10117	4391	101952	15597	7905	23502	No	20.1	Si
SLU 67	13.96	-733.79	-7201	-5137	1169	1.55	1.55	-11836	9912	4302	101952	15597	7905	23502	No	20.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	11.86	2172.23	-4262	-3040	2784	1.55	0.7958	-7005	13901	3098	101952	23395	7905	31300		11.24	Si
SLD 3	13.96	-2068.38	-4621	-3297	2468	1.24	0.9823	0	0	0	101952	18716	6324	25040		10.15	Si
SLV 14	11.86	-2802.95	-8015	-5718	-3455	1.55	1.2759	-16120	15724	5617	101952	23395	7905	31300		9.06	Si
SLV 14	13.96	2848.18	-4803	-3426	-2713	1.55	0.546	-7895	14079	2152	101952	23395	7905	31300		11.54	Si
SLV 3	11.86	4165.15	-2776	-1980	5277	1.24	0	0	0	0	101952	18716	6324	25040		4.75	Si
SLV 3	13.96	-4034.81	-4547	-3243	4535	1.24	0	0	0	0	101952	18716	6324	25040		5.52	Si
SLV 13	11.86	-2739.78	-7698	-5492	-3301	1.55	1.2573	-15707	15642	5507	101952	23395	7905	31300		9.48	Si
SLV 13	13.96	2747.73	-4749	-3388	-2559	1.55	0.5894	-7807	14061	2320	101952	23395	7905	31300		12.23	Si
SLV 7	11.86	2138.69	-1376	-981	3735	1.24	0	0	0	0	101952	18716	6324	25040		6.7	Si
SLV 7	13.96	-2493.54	-4656	-3322	3526	1.24	0.7185	0	0	0	101952	18716	6324	25040		7.1	Si
SLV 1	11.86	3900.39	-4872	-3476	4296	1.55	0	-157244	16250	0	101952	23395	7905	31300		7.29	Si
SLV 1	13.96	-3473.99	-4527	-3230	3545	1.24	0.0229	0	0	0	101952	18716	6324	25040		7.06	Si
SLV 16	11.86	-2538.19	-5919	-4222	-2474	1.24	1.0385	0	0	0	101952	18716	6324	25040		10.12	Si
SLV 16	13.96	2287.36	-4822	-3440	-1723	1.55	0.902	-7927	14085	3557	101952	23395	7905	31300		18.16	Si
SLV 2	11.86	3837.22	-5189	-3702	4141	1.55	0.1065	-108801	16250	485	101952	23395	7905	31300		7.56	Si
SLV 2	13.96	-3373.54	-4581	-3268	3391	1.24	0.1157	0	0	0	101952	18716	6324	25040		7.39	Si
SLV 8	11.86	2098.09	-1579	-1127	3636	1.24	0	0	0	0	101952	18716	6324	25040		6.89	Si
SLV 8	13.96	-2428.98	-4691	-3346	3427	1.24	0.7716	0	0	0	101952	18716	6324	25040		7.31	Si
SLV 4	11.86	4101.98	-3093	-2206	5123	1.24	0	0	0	0	101952	18716	6324	25040		4.89	Si
SLV 4	13.96	-3934.36	-4600	-3282	4381	1.24	0	0	0	0	101952	18716	6324	25040		5.72	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-4064	0.53	179.03	539.93	818.96	679.45	3.8	Si
SLV 8	-4132	0.53	179.03	548.42	829.33	688.88	3.85	Si
SLV 3	-4187	0.53	179.03	555.31	837.77	696.54	3.89	Si
SLV 11	-4236	0.53	179.03	561.44	845.3	703.37	3.93	Si
SLV 4	-4292	0.53	179.03	568.45	853.91	711.18	3.97	Si
SLV 12	-4303	0.53	179.03	569.89	855.67	712.78	3.98	Si
SLV 1	-4479	0.53	179.03	591.81	882.7	737.26	4.12	Si
SLV 2	-4585	0.53	179.03	604.85	898.84	751.84	4.2	Si
SLV 15	-4759	0.53	179.03	626.36	925.52	775.94	4.33	Si
SLV 16	-4864	0.53	179.03	639.29	941.63	790.46	4.42	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-3231	-2427	5	2.005	528.2	0.909	32.05217	12.56426	Si
SLV 11	-3228	-2224	6	2.006	527.9	0.909	32.07651	12.56426	Si
SLV 8	-3173	-1579	-6	2.031	522.5	0.908	32.4864	12.56426	Si
SLV 7	-3170	-1376	-6	2.032	522.1	0.908	32.51497	12.56426	Si
SLV 10	-2282	-9415	8	2.533	434.8	0.898	41.00863	12.56426	Si
SLV 9	-2279	-9212	9	2.536	434.4	0.898	41.04858	12.56426	Si
SLV 6	-2224	-8567	-3	2.577	429.1	0.897	41.74244	12.56426	Si
SLV 5	-2221	-8364	-3	2.579	428.8	0.897	41.78838	12.56426	Si
SLV 16	-2968	-5919	20	2.124	502.1	0.906	34.0776	7.33323	Si
SLV 15	-2963	-5602	21	2.127	501.6	0.906	34.12058	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.733	SLU 65	Si
V_SLU	18.947	SLU 65	Si
PF_SLV	0.567	SLV 3	No
V_SLV	4.745	SLV 3	Si
PFFP_SLV	3.795	SLV 7	Si
R_SLV	2.551	SLV 12	Si

Maschio 184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 15	11.86	1547.08	-11692	-0.0000174	0.0004492	0.0035	3.98	21269.22	23543.7	23543.7	15.22	No	Si
SLU 15	13.96	2500.47	-9851	-0.0000168	0.0004492	0.0035	3.98	18185.15	20230.42	20230.42	8.09	No	Si
SLU 35	11.86	1181.27	-11487	-0.0000164	0.0004492	0.0035	3.98	20931.04	23180.3	23180.3	19.62	No	Si
SLU 35	13.96	2682.29	-10278	-0.0000177	0.0004492	0.0035	3.98	18909.29	21001.05	21001.05	7.83	No	Si
SLU 77	11.86	1902.28	-14775	-0.0000219	0.0004492	0.0035	3.98	26212.01	28975.15	28975.15	15.23	No	Si
SLU 77	13.96	3084.1	-12476	-0.0000213	0.0004492	0.0035	3.98	22552.39	24934.73	24934.73	8.08	No	Si
SLU 32	11.86	1156.45	-10782	-0.0000155	0.0004492	0.0035	3.98	19757.04	21910.52	21910.52	18.95	No	Si
SLU 32	13.96	2435.12	-9591	-0.0000164	0.0004492	0.0035	3.98	17741.59	19761.17	19761.17	8.12	No	Si
SLU 28	11.86	1838.83	-12776	-0.0000193	0.0004492	0.0035	3.98	23038.09	25466.4	25466.4	13.85	No	Si
SLU 28	13.96	2654.43	-10729	-0.0000182	0.0004492	0.0035	3.98	19669.29	21816.01	21816.01	8.22	No	Si
SLU 14	11.86	1542.47	-11686	-0.0000174	0.0004492	0.0035	3.98	21258.73	23532.4	23532.4	15.26	No	Si
SLU 14	13.96	2504.68	-9845	-0.0000169	0.0004492	0.0035	3.98	18175.81	20220.52	20220.52	8.07	No	Si
SLU 36	11.86	1185.88	-11494	-0.0000164	0.0004492	0.0035	3.98	20941.57	23191.59	23191.59	19.56	No	Si
SLU 36	13.96	2678.08	-10283	-0.0000177	0.0004492	0.0035	3.98	18918.56	21010.95	21010.95	7.85	No	Si
SLU 78	11.86	1906.89	-14781	-0.000022	0.0004492	0.0035	3.98	26221.92	28986.26	28986.26	15.2	No	Si
SLU 78	13.96	3079.89	-12481	-0.0000213	0.0004492	0.0035	3.98	22561.31	24944.47	24944.47	8.1	No	Si
SLU 27	11.86	1834.22	-12769	-0.0000193	0.0004492	0.0035	3.98	23027.8	25455.1	25455.1	13.88	No	Si
SLU 27	13.96	2658.64	-10724	-0.0000182	0.0004492	0.0035	3.98	19660.09	21806.11	21806.11	8.2	No	Si
SLU 33	11.86	1161.06	-10788	-0.0000155	0.0004492	0.0035	3.98	19767.7	21922.01	21922.01	18.88	No	Si
SLU 33	13.96	2430.91	-9596	-0.0000164	0.0004492	0.0035	3.98	17750.97	19771.07	19771.07	8.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	11.86	1224.05	-13811	-0.0000193	0.0006738	0.0035	3.98		27709	27709	22.64		Si
SLV 13	13.96	6626.7	-11609	-0.0000267	0.0006738	0.0035	3.98		23699.83	23699.83	3.58		Si
SLV 14	11.86	1137.08	-13883	-0.0000192	0.0006738	0.0035	3.98		27839.03	27839.03	24.48		Si
SLV 14	13.96	6822.34	-11721	-0.0000272	0.0006738	0.0035	3.98		23905.02	23905.02	3.5		Si
SLD 14	11.86	1454.74	-11842	-0.0000173	0.0006738	0.0035	3.98		24125.74	24125.74	16.58		Si
SLD 14	13.96	3842.19	-9493	-0.0000188	0.0006738	0.0035	3.98		19795.47	19795.47	5.15		Si
SLD 13	11.86	1492.08	-11811	-0.0000173	0.0006738	0.0035	3.98		24069.06	24069.06	16.13		Si
SLD 13	13.96	3758.2	-9445	-0.0000186	0.0006738	0.0035	3.98		19706.04	19706.04	5.24		Si
SLV 4	11.86	2177.54	-6809	-0.0000124	0.0006738	0.0035	3.98		14773.46	14773.46	6.78		Si
SLV 4	13.96	-3427.02	-4025	-0.0000115	0.0006738	0.0035	3.98		17048.25	17048.25	4.97		Si
SLV 3	11.86	2264.51	-6737	-0.0000125	0.0006738	0.0035	3.98		14637.43	14637.43	6.46		Si
SLV 3	13.96	-3622.65	-3913	-0.000012	0.0006738	0.0035	3.98		16836.82	16836.82	4.65		Si
SLV 10	11.86	1111.94	-11986	-0.0000168	0.0006738	0.0035	3.98		24388.19	24388.19	21.93		Si
SLV 10	13.96	5128.13	-9949	-0.0000218	0.0006738	0.0035	3.98		20641.74	20641.74	4.03		Si
SLV 15	11.86	1490.98	-13421	-0.0000193	0.0006738	0.0035	3.98		27006.86	27006.86	18.11		Si
SLV 15	13.96	5355.48	-10988	-0.0000235	0.0006738	0.0035	3.98		22565.52	22565.52	4.21		Si
SLV 16	11.86	1404.01	-13493	-0.0000192	0.0006738	0.0035	3.98		27136.89	27136.89	19.33		Si
SLV 16	13.96	5551.12	-11101	-0.000024	0.0006738	0.0035	3.98		22770.71	22770.71	4.1		Si
SLV 9	11.86	1167.83	-11939	-0.0000169	0.0006738	0.0035	3.98		24303.33	24303.33	20.81		Si
SLV 9	13.96	5002.4	-9877	-0.0000215	0.0006738	0.0035	3.98		20507.87	20507.87	4.1		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	11.86	726.01	-9415	-6716	-3790	3.98	3.98	-6027	9137	10182	101952	40049	20298	60347	No	15.92	Si
SLU 42	13.96	1996.69	-8309	-5927	-3789	3.98	3.98	-5319	9042	10077	101952	40049	20298	60347	No	15.93	Si
SLU 36	11.86	1185.88	-11494	-8199	-3796	3.98	3.98	-7357	9314	10380	101952	40049	20298	60347	No	15.9	Si
SLU 36	13.96	2678.08	-10283	-7336	-3795	3.98	3.98	-6583	9211	10265	101952	40049	20298	60347	No	15.9	Si
SLU 78	11.86	1906.89	-14781	-10545	-3811	3.98	3.98	-9462	9595	10693	101952	40049	20298	60347	No	15.84	Si
SLU 78	13.96	3079.89	-12481	-8904	-3810	3.98	3.98	-7990	9399	10474	101952	40049	20298	60347	No	15.84	Si
SLU 77	11.86	1902.28	-14775	-10540	-3816	3.98	3.98	-9458	9594	10692	101952	40049	20298	60347	No	15.82	Si
SLU 77	13.96	3084.1	-12476	-8900	-3815	3.98	3.98	-7986	9398	10473	101952	40049	20298	60347	No	15.82	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	11.86	1877.45	-14070	-10037	-3727	3.98	3.98	-9007	9534	10625	101952	40049	20298	60347	No	16.19	Si
SLU 74	13.96	2836.93	-11789	-8410	-3728	3.98	3.98	-7547	9340	10408	101952	40049	20298	60347	No	16.19	Si
SLU 75	11.86	1882.06	-14076	-10042	-3722	3.98	3.98	-9011	9535	10626	101952	40049	20298	60347	No	16.21	Si
SLU 75	13.96	2832.71	-11794	-8414	-3723	3.98	3.98	-7550	9340	10409	101952	40049	20298	60347	No	16.21	Si
SLU 41	11.86	721.4	-9408	-6712	-3795	3.98	3.98	-6023	9136	10182	101952	40049	20298	60347	No	15.9	Si
SLU 41	13.96	2000.91	-8303	-5923	-3794	3.98	3.98	-5315	9042	10076	101952	40049	20298	60347	No	15.9	Si
SLU 84	11.86	1447.01	-12702	-9062	-3804	3.98	3.98	-8131	9418	10495	101952	40049	20298	60347	No	15.86	Si
SLU 84	13.96	2398.5	-10507	-7495	-3804	3.98	3.98	-6726	9230	10286	101952	40049	20298	60347	No	15.86	Si
SLU 35	11.86	1181.27	-11487	-8195	-3802	3.98	3.98	-7353	9314	10379	101952	40049	20298	60347	No	15.87	Si
SLU 35	13.96	2682.29	-10278	-7332	-3800	3.98	3.98	-6579	9211	10264	101952	40049	20298	60347	No	15.88	Si
SLU 83	11.86	1442.4	-12696	-9057	-3809	3.98	3.98	-8127	9417	10494	101952	40049	20298	60347	No	15.84	Si
SLU 83	13.96	2402.71	-10501	-7491	-3809	3.98	3.98	-6722	9230	10286	101952	40049	20298	60347	No	15.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 13	11.86	1492.08	-11811	-8426	-3600	3.98	3.98	-7561	14012	15615	101952	60073	20298	80371		22.33	Si
SLD 13	13.96	3758.2	-9445	-6738	-2338	3.98	3.98	-6046	13709	15278	101952	60073	20298	80371		34.38	Si
SLV 14	11.86	1137.08	-13883	-9904	-6230	3.98	3.98	-8887	14277	15911	101952	60073	20298	80371		12.9	Si
SLV 14	13.96	6822.34	-11721	-8362	-3284	3.98	3.98	-7503	14001	15602	101952	60073	20298	80371		24.47	Si
SLV 10	11.86	1111.94	-11986	-8550	-4908	3.98	3.98	-7673	14035	15640	101952	60073	20298	80371		16.38	Si
SLV 10	13.96	5128.13	-9949	-7097	-4035	3.98	3.98	-6369	13774	15350	101952	60073	20298	80371		19.92	Si
SLV 9	11.86	1167.83	-11939	-8517	-4797	3.98	3.98	-7643	14029	15634	101952	60073	20298	80371		16.75	Si
SLV 9	13.96	5002.4	-9877	-7046	-3924	3.98	3.98	-6323	13765	15339	101952	60073	20298	80371		20.48	Si
SLV 16	11.86	1404.01	-13493	-9625	-5050	3.98	3.98	-8637	14227	15855	101952	60073	20298	80371		15.92	Si
SLV 16	13.96	5551.12	-11101	-7919	-2099	3.98	3.98	-7106	13921	15514	101952	60073	20298	80371		38.29	Si
SLV 6	11.86	1344	-9981	-7120	-2622	3.98	3.98	-6389	13778	15354	101952	60073	20298	80371		30.65	Si
SLV 6	13.96	2434.69	-7826	-5583	-3519	3.98	3.98	-5010	13502	15047	101952	60073	20298	80371		22.84	Si
SLD 14	11.86	1454.74	-11842	-8448	-3674	3.98	3.98	-7581	14016	15620	101952	60073	20298	80371		21.88	Si
SLD 14	13.96	3842.19	-9493	-6772	-2412	3.98	3.98	-6077	13715	15284	101952	60073	20298	80371		33.33	Si
SLV 15	11.86	1490.98	-13421	-9574	-4878	3.98	3.98	-8591	14218	15845	101952	60073	20298	80371		16.48	Si
SLV 15	13.96	5355.48	-10988	-7839	-1927	3.98	3.98	-7034	13907	15498	101952	60073	20298	80371		41.72	Si
SLV 5	11.86	1399.89	-9934	-7087	-2512	3.98	3.98	-6359	13772	15347	101952	60073	20298	80371		32	Si
SLV 5	13.96	2308.96	-7754	-5532	-3408	3.98	3.98	-4964	13493	15036	101952	60073	20298	80371		23.58	Si
SLV 13	11.86	1224.05	-13811	-9852	-6057	3.98	3.98	-8841	14268	15900	101952	60073	20298	80371		13.27	Si
SLV 13	13.96	6626.7	-11609	-8282	-3112	3.98	3.98	-7432	13986	15586	101952	60073	20298	80371		25.83	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-4592	0.53	459.7	628.47	1212.09	920.28	2	Si
SLV 4	-4698	0.53	459.7	642.55	1228.65	935.6	2.04	Si
SLV 1	-5140	0.53	459.7	701.51	1298.11	999.81	2.17	Si
SLV 2	-5246	0.53	459.7	715.52	1314.64	1015.08	2.21	Si
SLV 7	-6287	0.53	459.7	853.14	1476.92	1165.03	2.53	Si
SLV 8	-6355	0.53	459.7	862.04	1487.43	1174.74	2.56	Si
SLV 5	-8114	0.53	459.7	1090.78	1759.93	1425.36	3.1	Si
SLV 6	-8181	0.53	459.7	1099.51	1770.41	1434.96	3.12	Si
SLV 11	-8272	0.53	459.7	1111.19	1784.45	1447.82	3.15	Si
SLV 12	-8340	0.53	459.7	1119.9	1794.93	1457.42	3.17	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-6781	-11986	-779	2.227	1206.4	0.902	35.87715	12.56426	Si
SLV 9	-6770	-11939	-779	2.229	1205.4	0.902	35.91611	12.56426	Si
SLV 6	-6480	-9981	-711	2.302	1176.9	0.901	37.14247	12.56426	Si
SLV 12	-6472	-10685	711	2.304	1176.2	0.901	37.17583	12.56426	Si
SLV 5	-6470	-9934	-711	2.304	1175.9	0.901	37.184	12.56426	Si
SLV 11	-6462	-10639	711	2.306	1175.2	0.901	37.21631	12.56426	Si
SLV 8	-6172	-8680	778	2.369	1146.8	0.899	38.29102	12.56426	Si
SLV 7	-6162	-8634	779	2.372	1145.8	0.899	38.33403	12.56426	Si
SLV 14	-7026	-13883	-337	2.218	1230.5	0.903	35.68473	7.33323	Si
SLV 13	-7010	-13811	-336	2.221	1229	0.903	35.74365	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.83	SLU 35	Si
V_SLU	15.816	SLU 77	Si
PF_SLV	3.504	SLV 14	Si
V_SLV	12.902	SLV 14	Si
PFFP_SLV	2.002	SLV 3	Si
R_SLV	2.855	SLV 10	Si

Maschio 185

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.454	-11.003	-0.676	L7	L8	2.777	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 34	11.86	470.8	-10167	-0.0000218	0.0003743	0.0035	2.7773	12305.65	12888.38	12888.38	27.38	No	Si
SLU 34	15.02	1472.32	-2359	-0.0000109	0.0003743	0.0035	2.7773	3178.62	3603.45	3603.45	2.45	No	Si
SLU 84	11.86	638.14	-12431	-0.0000271	0.0003743	0.0035	2.7773	14552.18	15228.09	15228.09	23.86	No	Si
SLU 84	15.02	1580.84	-2586	-0.0000117	0.0003743	0.0035	2.7773	3473.54	3902.22	3902.22	2.47	No	Si
SLU 42	11.86	475.78	-10355	-0.0000222	0.0003743	0.0035	2.7773	12498.61	13079.07	13079.07	27.49	No	Si
SLU 42	15.02	1501.18	-2355	-0.000011	0.0003743	0.0035	2.7773	3173.56	3598.33	3598.33	2.4	No	Si
SLU 41	11.86	504.83	-10357	-0.0000223	0.0003743	0.0035	2.7773	12500.99	13081.44	13081.44	25.91	No	Si
SLU 41	15.02	1485.9	-2355	-0.0000109	0.0003743	0.0035	2.7773	3172.81	3597.57	3597.57	2.42	No	Si
SLU 80	11.86	683.94	-12767	-0.000028	0.0003743	0.0035	2.7773	14870.38	15582.53	15582.53	22.78	No	Si
SLU 80	15.02	1942.26	-3259	-0.0000145	0.0003743	0.0035	2.7773	4338.83	4782.07	4782.07	2.46	No	Si
SLU 35	11.86	549.48	-10959	-0.0000237	0.0003743	0.0035	2.7773	13111.48	13696.91	13696.91	24.93	No	Si
SLU 35	15.02	1809.05	-2982	-0.0000135	0.0003743	0.0035	2.7773	3985.2	4423.66	4423.66	2.45	No	Si
SLU 37	11.86	550.63	-10693	-0.0000232	0.0003743	0.0035	2.7773	12843.65	13424.59	13424.59	24.38	No	Si
SLU 37	15.02	1847.31	-3028	-0.0000137	0.0003743	0.0035	2.7773	4043.55	4482.48	4482.48	2.43	No	Si
SLU 38	11.86	521.59	-10691	-0.0000231	0.0003743	0.0035	2.7773	12841.3	13422.21	13422.21	25.73	No	Si
SLU 38	15.02	1862.6	-3028	-0.0000138	0.0003743	0.0035	2.7773	4044.28	4483.23	4483.23	2.41	No	Si
SLU 40	11.86	444.36	-9833	-0.000021	0.0003743	0.0035	2.7773	11958.4	12549.68	12549.68	28.24	No	Si
SLU 40	15.02	1100.72	-1686	-0.000008	0.0003743	0.0035	2.7773	2291.6	2708.96	2708.96	2.46	No	Si
SLU 36	11.86	520.43	-10956	-0.0000236	0.0003743	0.0035	2.7773	13109.15	13694.52	13694.52	26.31	No	Si
SLU 36	15.02	1824.33	-2983	-0.0000136	0.0003743	0.0035	2.7773	3985.94	4424.4	4424.4	2.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	11.86	-3257.59	-9242	-0.0000314	0.0005615	0.0035	2.7773		14170.12	14170.12	4.35		Si
SLV 11	15.02	3301.12	-1245	-0.0052631	0.0005615	0.0035	2.7773		2123.08	2123.08	0.64		No
SLD 8	11.86	-1174.54	-8489	-0.0000212	0.0005615	0.0035	2.7773		13258.73	13258.73	11.29		Si
SLD 8	15.02	1580.18	-967	-0.0004525	0.0005615	0.0035	2.2219		1746.37	1746.37	1.11		Si
SLV 8	11.86	-3316.39	-8364	-0.0000299	0.0005615	0.0035	2.7773		13106.34	13106.34	3.95		Si
SLV 8	15.02	2617.78	-426	-0.0070581	0.0005615	0.0035	2.7773		1008.42	1008.42	0.39		No
SLD 11	11.86	-1150.07	-8864	-0.0000218	0.0005615	0.0035	2.7773		13713.86	13713.86	11.92		Si
SLD 11	15.02	1872.62	-1317	-0.0002143	0.0005615	0.0035	2.7773		2221.07	2221.07	1.19		Si
SLD 7	11.86	-1201.33	-8504	-0.0000213	0.0005615	0.0035	2.7773		13277.63	13277.63	11.05		Si
SLD 7	15.02	1591.47	-971	-0.0004618	0.0005615	0.0035	2.2219		1752.19	1752.19	1.1		Si
SLV 3	11.86	-871.29	-7267	-0.0000175	0.0005615	0.0035	2.7773		11720.81	11720.81	13.45		Si
SLV 3	15.02	338.11	120	0.0034021	0.0005615	0.0035	2.2219		0	0	0		No
SLD 12	11.86	-1123.27	-8848	-0.0000217	0.0005615	0.0035	2.7773		13695.24	13695.24	12.19		Si
SLD 12	15.02	1861.33	-1313	-0.0002064	0.0005615	0.0035	2.7773		2215.27	2215.27	1.19		Si
SLV 12	11.86	-3196.21	-9206	-0.000031	0.0005615	0.0035	2.7773		14127.27	14127.27	4.42		Si
SLV 12	15.02	3275.26	-1235	-0.005204	0.0005615	0.0035	2.7773		2109.8	2109.8	0.64		No
SLV 4	11.86	-775.79	-7212	-0.000017	0.0005615	0.0035	2.7773		11650.91	11650.91	15.02		Si
SLV 4	15.02	297.88	136	0.0053084	0.0005615	0.0035	2.2219		0	0	0		No
SLV 7	11.86	-3377.77	-8400	-0.0000302	0.0005615	0.0035	2.7773		13149.81	13149.81	3.89		Si
SLV 7	15.02	2643.64	-436	-0.0071112	0.0005615	0.0035	2.7773		1021.86	1021.86	0.39		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	11.86	682.79	-13033	-10852	-1406	2.7773	2.7773	-13955	8805	6847	35683	23286	7082	30369	No	21.6	Si
SLU 78	15.02	1903.99	-3213	-2676	642	2.7773	2.3883	-3441	7403	4951	35683	23286	7082	30369	No	47.32	Si
SLU 50	11.86	755.81	-11265	-9381	-325	2.7773	2.7773	-12063	8553	6651	35683	23286	7082	30369	No	93.43	Si
SLU 50	15.02	1513.98	-2833	-2359	1671	2.7773	2.5625	-3033	7349	5273	35683	23286	7082	30369	No	18.18	Si
SLU 51	11.86	726.76	-11263	-9379	-400	2.7773	2.7773	-12060	8552	6651	35683	23286	7082	30369	No	75.96	Si
SLU 51	15.02	1529.26	-2833	-2359	1588	2.7773	2.5466	-3034	7349	5240	35683	23286	7082	30369	No	19.13	Si
SLU 71	11.86	746.56	-12335	-10272	-730	2.7773	2.7773	-13209	8706	6770	35683	23286	7082	30369	No	41.62	Si
SLU 71	15.02	1835.84	-3266	-2720	1426	2.7773	2.4798	-3497	7411	5146	35683	23286	7082	30369	No	21.3	Si
SLU 48	11.86	754.66	-11531	-9602	-484	2.7773	2.7773	-12347	8591	6681	35683	23286	7082	30369	No	62.71	Si
SLU 48	15.02	1475.71	-2787	-2321	1535	2.7773	2.5775	-2984	7342	5299	35683	23286	7082	30369	No	19.79	Si
SLU 36	11.86	520.43	-10956	-9123	-1481	2.7773	2.7773	-11732	8509	6617	35683	23286	7082	30369	No	20.5	Si
SLU 36	15.02	1824.33	-2983	-2484	370	2.7773	2.3311	-3194	7370	4811	35683	23286	7082	30369	No	82.01	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 35	11.86	549.48	-10959	-9125	-1407	2.7773	2.7773	-11735	8509	6617	35683	23286	7082	30369	No	21.59	Si
SLU 35	15.02	1809.05	-2982	-2483	453	2.7773	2.3461	-3193	7370	4842	35683	23286	7082	30369	No	66.98	Si
SLU 8	11.86	593.46	-9189	-7652	-400	2.7773	2.7773	-9839	8256	6421	35683	23286	7082	30369	No	75.88	Si
SLU 8	15.02	1434.31	-2602	-2167	1399	2.7773	2.5124	-2786	7316	5147	35683	23286	7082	30369	No	21.7	Si
SLU 42	11.86	475.78	-10355	-8622	-1418	2.7773	2.7773	-11088	8423	6550	35683	23286	7082	30369	No	21.42	Si
SLU 42	15.02	1501.18	-2355	-1961	-123	2.7773	2.254	-2522	7281	4595	35683	23286	7082	30369	No	246.37	Si
SLU 49	11.86	725.61	-11528	-9600	-559	2.7773	2.7773	-12345	8590	6680	35683	23286	7082	30369	No	54.33	Si
SLU 49	15.02	1491	-2788	-2321	1452	2.7773	2.5614	-2985	7342	5266	35683	23286	7082	30369	No	20.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	11.86	4232.98	-7942	-6614	9509	2.7773	2.5671	-8505	12118	8710	35683	34930	7082	42012		4.42	Si
SLV 5	15.02	-1772.5	-1535	-1278	13023	2.2219	0.7019	0	0	0	35683	27944	5666	33609		2.58	Si
SLV 12	11.86	-3196.21	-9206	-7666	-10416	2.7773	2.7773	-9858	12388	9634	35683	34930	7082	42012		4.03	Si
SLV 12	15.02	3275.26	-1235	-1029	-12236	2.7773	0	0	16250	0	35683	34930	7082	35683		2.92	Si
SLV 9	11.86	4353.16	-8784	-7315	8275	2.7773	2.6793	-9406	12298	9226	35683	34930	7082	42012		5.08	Si
SLV 9	15.02	-1115.02	-2344	-1952	13043	2.7773	2.7389	-2510	10919	8374	35683	34930	7082	42012		3.22	Si
SLV 7	11.86	-3377.77	-8400	-6994	-9322	2.7773	2.7773	-8994	12216	9499	35683	34930	7082	42012		4.51	Si
SLV 7	15.02	2643.64	-436	-363	-12368	2.7773	0	0	16250	0	35683	34930	7082	35683		2.89	Si
SLV 6	11.86	4294.36	-7907	-6584	9648	2.7773	2.5366	-8467	12110	8601	35683	34930	7082	42012		4.35	Si
SLV 6	15.02	-1798.36	-1525	-1270	13135	2.2219	0.6288	0	0	0	35683	27944	5666	33609		2.56	Si
SLD 7	11.86	-1201.33	-8504	-7081	-4380	2.7773	2.7773	-9106	12238	9517	35683	34930	7082	42012		9.59	Si
SLD 7	15.02	1591.47	-971	-809	-5242	2.2219	0	0	0	0	35683	27944	5666	33609		6.41	Si
SLD 8	11.86	-1174.54	-8489	-7069	-4319	2.7773	2.7773	-9090	12235	9514	35683	34930	7082	42012		9.73	Si
SLD 8	15.02	1580.18	-967	-805	-5193	2.2219	0	0	0	0	35683	27944	5666	33609		6.47	Si
SLV 10	11.86	4414.54	-8749	-7285	8414	2.7773	2.6523	-9368	12290	9127	35683	34930	7082	42012		4.99	Si
SLV 10	15.02	-1140.88	-2334	-1944	13155	2.7773	2.6997	-2574	10931	8263	35683	34930	7082	42012		3.19	Si
SLV 11	11.86	-3257.59	-9242	-7696	-10556	2.7773	2.7773	-9896	12396	9640	35683	34930	7082	42012		3.98	Si
SLV 11	15.02	3301.12	-1245	-1037	-12348	2.7773	0	0	16250	0	35683	34930	7082	35683		2.89	Si
SLV 8	11.86	-3316.39	-8364	-6965	-9182	2.7773	2.7773	-8956	12208	9494	35683	34930	7082	42012		4.58	Si
SLV 8	15.02	2617.78	-426	-355	-12256	2.7773	0	0	16250	0	35683	34930	7082	35683		2.91	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.53	4794	-3728	320.79	505.54	1.58	Si
SLV 2	179667	0.53	4809	-3740	320.79	507.1	1.58	Si
SLV 3	179667	0.53	4846	-3769	320.79	510.9	1.59	Si
SLV 1	179667	0.53	4862	-3781	320.79	512.45	1.6	Si
SLV 8	179667	0.53	5628	-4377	320.79	590.13	1.84	Si
SLV 7	179667	0.53	5662	-4403	320.79	593.53	1.85	Si
SLV 6	179667	0.53	5679	-4416	320.79	595.27	1.86	Si
SLV 5	179667	0.53	5713	-4442	320.79	598.67	1.87	Si
SLV 12	179667	0.53	6350	-4938	320.79	662.57	2.07	Si
SLV 11	179667	0.53	6384	-4964	320.79	665.94	2.08	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-2344	-8784	191	3.448	613.2	0.889	56.37378	12.56426	Si
SLV 10	-2334	-8749	191	3.456	612.3	0.889	56.49342	12.56426	Si
SLV 5	-1535	-7942	-372	4.135	541.9	0.892	67.36108	12.56426	Si
SLV 6	-1525	-7907	-372	4.146	541	0.892	67.52903	12.56426	Si
SLV 11	-1245	-9242	381	4.476	518.1	0.897	72.5387	12.56426	Si
SLV 12	-1235	-9206	381	4.488	517.3	0.897	72.72484	12.56426	Si
SLV 13	-2906	-9937	914	2.933	665.5	0.891	47.8598	7.33323	Si
SLV 14	-2891	-9882	915	2.942	664	0.891	48.00288	7.33323	Si
SLV 15	-2576	-10074	971	3.12	634.6	0.889	50.98284	7.33323	Si
SLV 16	-2561	-10019	972	3.13	633.2	0.889	51.14432	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.397	SLU 42	Si
V_SLU	18.176	SLU 50	Si
PF_SLV	0	SLV 3	No
V_SLV	2.559	SLV 6	Si
PFFP_SLV	1.576	SLV 4	Si
R_SLV	4.487	SLV 9	Si

Maschio 187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.386	L7	L8	3.21	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 18	11.86	388.83	-6936	-0.0000187	0.0004492	0.0035	3.21	9902.03	11470.94	11470.94	29.5	No	Si
SLU 18	15.02	5249.45	-3844	-0.0000885	0.0004492	0.0035	3.21	5792.19	6944.35	6944.35	1.32	No	Si
SLU 81	11.86	502.86	-9533	-0.0000258	0.0004492	0.0035	3.21	12975.73	15126.99	15126.99	30.08	No	Si
SLU 81	15.02	6726.38	-5415	-0.000082	0.0004492	0.0035	3.21	7941.51	9267.13	9267.13	1.38	No	Si
SLU 43	11.86	395.11	-7480	-0.0000201	0.0004492	0.0035	3.21	10574.08	12244.86	12244.86	30.99	No	Si
SLU 43	15.02	4516.18	-3512	-0.0000594	0.0004492	0.0035	3.21	5320.63	6446.45	6446.45	1.43	No	Si
SLU 19	11.86	358.65	-6999	-0.0000188	0.0004492	0.0035	3.21	9981.08	11562.37	11562.37	32.24	No	Si
SLU 19	15.02	5281.94	-3908	-0.0000848	0.0004492	0.0035	3.21	5881.25	7039.05	7039.05	1.33	No	Si
SLU 52	11.86	398.5	-8195	-0.0000219	0.0004492	0.0035	3.21	11435.04	13258.94	13258.94	33.27	No	Si
SLU 52	15.02	5704.14	-4227	-0.0000915	0.0004492	0.0035	3.21	6326.73	7516.12	7516.12	1.32	No	Si
SLU 82	11.86	472.68	-9596	-0.0000258	0.0004492	0.0035	3.21	13046.36	15215.14	15215.14	32.19	No	Si
SLU 82	15.02	6758.87	-5479	-0.000081	0.0004492	0.0035	3.21	8025.48	9360.19	9360.19	1.38	No	Si
SLU 60	11.86	471.82	-8350	-0.0000227	0.0004492	0.0035	3.21	11619.06	13479.78	13479.78	28.57	No	Si
SLU 60	15.02	6135.92	-4382	-0.0001209	0.0004492	0.0035	3.21	6542.35	7748.51	7748.51	1.26	No	Si
SLU 73	11.86	429.54	-9377	-0.0000251	0.0004492	0.0035	3.21	12801.12	14910.19	14910.19	34.71	No	Si
SLU 73	15.02	6294.61	-5260	-0.0000701	0.0004492	0.0035	3.21	7734.11	9038.23	9038.23	1.44	No	Si
SLU 10	11.86	315.51	-6780	-0.000018	0.0004492	0.0035	3.21	9706.75	11246.08	11246.08	35.64	No	Si
SLU 10	15.02	4817.67	-3689	-0.0000669	0.0004492	0.0035	3.21	5572.28	6711.41	6711.41	1.39	No	Si
SLU 61	11.86	441.64	-8414	-0.0000227	0.0004492	0.0035	3.21	11693.53	13569.13	13569.13	30.72	No	Si
SLU 61	15.02	6168.41	-4446	-0.0001151	0.0004492	0.0035	3.21	6629.67	7841.58	7841.58	1.27	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 11	11.86	-1040.93	-7523	-0.0000231	0.0006738	0.0035	3.21		17130.96	17130.96	16.46		Si
SLD 11	15.02	5905.01	-4357	-0.0000944	0.0006738	0.0035	3.21		7768.15	7768.15	1.32		Si
SLV 7	11.86	-2897.46	-8296	-0.0000336	0.0006738	0.0035	3.21		18230.25	18230.25	6.29		Si
SLV 7	15.02	7327.29	-5091	-0.0001716	0.0006738	0.0035	3.21		8869	8869	1.21		Si
SLV 16	11.86	-325.1	-7862	-0.0000206	0.0006738	0.0035	3.21		17613.81	17613.81	54.18		Si
SLV 16	15.02	6628.56	-4704	-0.0001322	0.0006738	0.0035	3.21		8291.56	8291.56	1.25		Si
SLD 7	11.86	-1086.72	-7340	-0.0000228	0.0006738	0.0035	3.21		16870.96	16870.96	15.52		Si
SLD 7	15.02	5541.43	-4177	-0.0000806	0.0006738	0.0035	3.21		7495.7	7495.7	1.35		Si
SLD 8	11.86	-1034.48	-7324	-0.0000226	0.0006738	0.0035	3.21		16847.58	16847.58	16.29		Si
SLD 8	15.02	5518.61	-4161	-0.0000802	0.0006738	0.0035	3.21		7470.85	7470.85	1.35		Si
SLV 8	11.86	-2777.82	-8258	-0.000033	0.0006738	0.0035	3.21		18176.68	18176.68	6.54		Si
SLV 8	15.02	7275.04	-5053	-0.0001706	0.0006738	0.0035	3.21		8812.98	8812.98	1.21		Si
SLV 15	11.86	-511.26	-7921	-0.0000216	0.0006738	0.0035	3.21		17697.16	17697.16	34.62		Si
SLV 15	15.02	6709.86	-4762	-0.0001338	0.0006738	0.0035	3.21		8380.1	8380.1	1.25		Si
SLV 12	11.86	-2669	-8701	-0.0000336	0.0006738	0.0035	3.21		18806.56	18806.56	7.05		Si
SLV 12	15.02	8152.03	-5494	-0.0002565	0.0006738	0.0035	3.21		9469	9469	1.16		Si
SLV 11	11.86	-2788.64	-8739	-0.0000342	0.0006738	0.0035	3.21		18860.13	18860.13	6.76		Si
SLV 11	15.02	8204.28	-5532	-0.0002573	0.0006738	0.0035	3.21		9525.01	9525.01	1.16		Si
SLD 12	11.86	-988.69	-7507	-0.0000228	0.0006738	0.0035	3.21		17107.58	17107.58	17.3		Si
SLD 12	15.02	5882.2	-4341	-0.0000939	0.0006738	0.0035	3.21		7743.31	7743.31	1.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	11.86	502.86	-9533	-5597	-1969	3.21	3.21	-10898	9786	5026	101952	18458	16371	34829	No	17.68	Si
SLU 81	15.02	6726.38	-5415	-3180	-1969	3.21	1.0887	-18499	10800	1881	101952	18458	16371	34829	No	17.68	Si
SLU 75	11.86	452.92	-10231	-6007	-1763	3.21	3.21	-11697	9893	5081	101952	18458	16371	34829	No	19.75	Si
SLU 75	15.02	6024.35	-6114	-3590	-1763	3.21	1.859	-6990	9265	2756	101952	18458	16371	34829	No	19.75	Si
SLU 60	11.86	471.82	-8350	-4903	-1792	3.21	3.21	-9546	9606	4934	101952	18458	16371	34829	No	19.43	Si
SLU 60	15.02	6135.92	-4382	-2573	-1792	3.21	0.6145	-26536	10833	1065	101952	18458	16371	34829	No	19.43	Si
SLU 84	11.86	437.45	-10502	-6166	-1810	3.21	3.21	-12006	9934	5102	101952	18458	16371	34829	No	19.24	Si
SLU 84	15.02	6158.25	-6384	-3749	-1810	3.21	1.9212	-7299	9306	2861	101952	18458	16371	34829	No	19.24	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	11.86	472.68	-9596	-5634	-1989	3.21	3.21	-10970	9796	5031	101952	18458	16371	34829	No	17.51	Si
SLU 82	15.02	6758.87	-5479	-3217	-1989	3.21	1.1139	-18288	10772	1920	101952	18458	16371	34829	No	17.51	Si
SLU 61	11.86	441.64	-8414	-4940	-1812	3.21	3.21	-9619	9616	4939	101952	18458	16371	34829	No	19.22	Si
SLU 61	15.02	6168.41	-4446	-2610	-1812	3.21	0.6524	-25374	10833	1131	101952	18458	16371	34829	No	19.22	Si
SLU 73	11.86	429.54	-9377	-5506	-1856	3.21	3.21	-10720	9763	5014	101952	18458	16371	34829	No	18.77	Si
SLU 73	15.02	6294.61	-5260	-3088	-1856	3.21	1.2246	-6013	9135	1790	101952	18458	16371	34829	No	18.77	Si
SLU 83	11.86	467.64	-10438	-6129	-1791	3.21	3.21	-11933	9924	5097	101952	18458	16371	34829	No	19.45	Si
SLU 83	15.02	6125.76	-6321	-3711	-1791	3.21	1.9076	-7226	9297	2838	101952	18458	16371	34829	No	19.45	Si
SLU 74	11.86	483.1	-10168	-5970	-1743	3.21	3.21	-11624	9883	5076	101952	18458	16371	34829	No	19.98	Si
SLU 74	15.02	5991.87	-6051	-3553	-1743	3.21	1.8442	-6917	9256	2731	101952	18458	16371	34829	No	19.98	Si
SLU 40	11.86	389.69	-8182	-4804	-1735	3.21	3.21	-9353	9580	4921	101952	18458	16371	34829	No	20.07	Si
SLU 40	15.02	5872.4	-4941	-2901	-1735	3.21	1.2493	-5648	9086	1816	101952	18458	16371	34829	No	20.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 7	11.86	-1086.72	-7340	-4310	-1970	3.21	3.21	-8391	14178	7282	101952	27686	16371	44057		22.36	Si
SLD 7	15.02	5541.43	-4177	-2453	-2360	3.21	0.835	-18505	16202	2165	101952	27686	16371	44057		18.67	Si
SLV 7	11.86	-2897.46	-8296	-4871	-2940	3.21	3.21	-9484	14397	7394	101952	27686	16371	44057		14.99	Si
SLV 7	15.02	7327.29	-5091	-2989	-3842	3.21	0.4972	-37673	16250	1293	101952	27686	16371	44057		11.47	Si
SLD 8	11.86	-1034.48	-7324	-4300	-1946	3.21	3.21	-8373	14175	7280	101952	27686	16371	44057		22.64	Si
SLD 8	15.02	5518.61	-4161	-2443	-2336	3.21	0.8357	-18416	16184	2164	101952	27686	16371	44057		18.86	Si
SLV 15	11.86	-511.26	-7921	-4651	-2231	3.21	3.21	-9055	14311	7350	101952	27686	16371	44057		19.75	Si
SLV 15	15.02	6709.86	-4762	-2796	-2480	3.21	0.5882	-29935	16250	1529	101952	27686	16371	44057		17.77	Si
SLV 11	11.86	-2788.64	-8739	-5131	-3202	3.21	3.21	-9990	14498	7446	101952	27686	16371	44057		13.76	Si
SLV 11	15.02	8204.28	-5532	-3248	-4092	3.21	0.3659	-53933	16250	951	101952	27686	16371	44057		10.77	Si
SLV 12	11.86	-2669	-8701	-5109	-3148	3.21	3.21	-9947	14489	7442	101952	27686	16371	44057		14	Si
SLV 12	15.02	8152.03	-5494	-3226	-4037	3.21	0.3639	-53795	16250	946	101952	27686	16371	44057		10.91	Si
SLD 12	11.86	-988.69	-7507	-4407	-2055	3.21	3.21	-8582	14216	7301	101952	27686	16371	44057		21.44	Si
SLD 12	15.02	5882.2	-4341	-2549	-2439	3.21	0.7498	-21430	16250	1949	101952	27686	16371	44057		18.06	Si
SLV 8	11.86	-2777.82	-8258	-4849	-2886	3.21	3.21	-9441	14388	7390	101952	27686	16371	44057		15.27	Si
SLV 8	15.02	7275.04	-5053	-2967	-3787	3.21	0.496	-37471	16250	1290	101952	27686	16371	44057		11.63	Si
SLV 16	11.86	-325.1	-7862	-4616	-2146	3.21	3.21	-8988	14298	7343	101952	27686	16371	44057		20.53	Si
SLV 16	15.02	6628.56	-4704	-2762	-2395	3.21	0.5874	-29601	16250	1527	101952	27686	16371	44057		18.39	Si
SLD 11	11.86	-1040.93	-7523	-4417	-2078	3.21	3.21	-8600	14220	7303	101952	27686	16371	44057		21.2	Si
SLD 11	15.02	5905.01	-4357	-2558	-2463	3.21	0.7494	-21522	16250	1948	101952	27686	16371	44057		17.89	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-2768	0.53	219.09	214.96	498.66	356.81	1.63	Si
SLV 5	-2806	0.53	219.09	217.79	502.35	360.07	1.64	Si
SLV 10	-3184	0.53	219.09	246.13	539.41	392.77	1.79	Si
SLV 9	-3222	0.53	219.09	248.94	543.1	396.02	1.81	Si
SLV 2	-3672	0.53	219.09	282.32	587.03	434.67	1.98	Si
SLV 1	-3731	0.53	219.09	286.64	592.73	439.68	2.01	Si
SLV 4	-4872	0.53	219.09	369.59	703.13	536.36	2.45	Si
SLV 3	-4931	0.53	219.09	373.79	708.77	541.28	2.47	Si
SLV 14	-5059	0.53	219.09	382.98	721.11	552.04	2.52	Si
SLV 13	-5118	0.53	219.09	387.16	726.75	556.95	2.54	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-5532	-8739	180	2.583	795.9	0.924	40.64679	21.18724	Si
SLV 12	-5494	-8701	180	2.597	792.2	0.923	40.87714	21.18724	Si
SLV 7	-5091	-8296	-194	2.753	751.6	0.92	43.48165	21.18724	Si
SLV 8	-5053	-8258	-194	2.769	747.9	0.92	43.74508	21.18724	Si
SLV 15	-4762	-7921	622	2.829	718.7	0.918	44.80356	11.64352	Si
SLV 16	-4704	-7862	622	2.855	712.8	0.917	45.25012	11.64352	Si
SLV 9	-1833	-4896	194	5.453	431.4	0.89	89.02299	21.18724	Si
SLV 10	-1795	-4859	194	5.515	427.8	0.89	90.07023	21.18724	Si
SLV 13	-3652	-6768	626	3.436	608.1	0.907	55.03823	11.64352	Si
SLV 14	-3594	-6710	626	3.476	602.3	0.907	55.7072	11.64352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.263	SLU 60	Si
V_SLU	17.508	SLU 82	Si
PF_SLV	1.161	SLV 11	Si
V_SLV	10.767	SLV 11	Si
PFFP_SLV	1.629	SLV 6	Si
R_SLV	1.918	SLV 11	Si

Maschio 189

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	1.006	L7	L8	4.32	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	11.86	1534.73	-12353	-0.0000265	0.0004492	0.0035	4.32	22779.55	26441.95	26441.95	17.23	No	Si
SLU 50	15.02	150.53	-3462	-0.0000066	0.0004492	0.0035	4.32	7170.44	9036.84	9036.84	60.03	No	Si
SLU 51	11.86	1504.85	-12352	-0.0000264	0.0004492	0.0035	4.32	22778.53	26440.69	26440.69	17.57	No	Si
SLU 51	15.02	163.1	-3461	-0.0000066	0.0004492	0.0035	4.32	7168.91	9035.26	9035.26	55.4	No	Si
SLU 45	11.86	1563.22	-12016	-0.0000026	0.0004492	0.0035	4.32	22261.82	25808.9	25808.9	16.51	No	Si
SLU 45	15.02	56.09	-2746	-0.0000051	0.0004492	0.0035	4.32	5739.39	7570.89	7570.89	134.97	No	Si
SLU 46	11.86	1533.34	-12015	-0.0000259	0.0004492	0.0035	4.32	22260.79	25807.64	25807.64	16.83	No	Si
SLU 46	15.02	68.67	-2746	-0.0000051	0.0004492	0.0035	4.32	5737.84	7569.32	7569.32	110.23	No	Si
SLU 43	11.86	1410.46	-10983	-0.0000236	0.0004492	0.0035	4.32	20638.36	23864.04	23864.04	16.92	No	Si
SLU 43	15.02	-49.78	-2043	-0.0000038	0.0004492	0.0035	4.32	4306.59	15471.12	15471.12	310.82	No	Si
SLU 47	11.86	1422.79	-11667	-0.0000249	0.0004492	0.0035	4.32	21719.21	25152.9	25152.9	17.68	No	Si
SLU 47	15.02	71.33	-2751	-0.0000051	0.0004492	0.0035	4.32	5748.78	7580.43	7580.43	106.27	No	Si
SLU 49	11.86	1595.47	-12700	-0.0000273	0.0004492	0.0035	4.32	23307.22	27094.59	27094.59	16.98	No	Si
SLU 49	15.02	168.82	-3455	-0.0000066	0.0004492	0.0035	4.32	7157.14	9023.09	9023.09	53.45	No	Si
SLU 44	11.86	1360.66	-10982	-0.0000235	0.0004492	0.0035	4.32	20636.58	23861.9	23861.9	17.54	No	Si
SLU 44	15.02	-28.82	-2042	-0.0000037	0.0004492	0.0035	4.32	4303.95	15468.5	15468.5	536.72	No	Si
SLU 3	11.86	1195.27	-9786	-0.0000208	0.0004492	0.0035	4.32	18688.5	21573.61	21573.61	18.05	No	Si
SLU 3	15.02	117.05	-2404	-0.0000046	0.0004492	0.0035	4.32	5044.33	6868.38	6868.38	58.68	No	Si
SLU 48	11.86	1625.35	-12701	-0.0000274	0.0004492	0.0035	4.32	23308.23	27095.85	27095.85	16.67	No	Si
SLU 48	15.02	156.25	-3456	-0.0000066	0.0004492	0.0035	4.32	7158.67	9024.67	9024.67	57.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	11.86	-461.27	-7832	-0.0000153	0.0006738	0.0035	4.32		27112.22	27112.22	58.78		Si
SLV 3	15.02	1246.57	-1280	-0.0000056	0.0006738	0.0035	4.32		4546.68	4546.68	3.65		Si
SLV 4	11.86	25.6	-7772	-0.0000141	0.0006738	0.0035	4.32		17837	17837	696.72		Si
SLV 4	15.02	1157.07	-1271	-0.0000052	0.0006738	0.0035	4.32		4529.38	4529.38	3.91		Si
SLV 9	11.86	5771.53	-9620	-0.0000321	0.0006738	0.0035	4.32		21497.74	21497.74	3.72		Si
SLV 9	15.02	-2007.86	-2219	-0.0000091	0.0006738	0.0035	4.32		15825.44	15825.44	7.88		Si
SLV 8	11.86	-3949.46	-8896	-0.0000261	0.0006738	0.0035	4.32		29208	29208	7.4		Si
SLV 8	15.02	2187.03	-1500	-0.0000111	0.0006738	0.0035	4.32		5007.97	5007.97	2.29		Si
SLV 12	11.86	-4197.51	-9788	-0.0000284	0.0006738	0.0035	4.32		30921.56	30921.56	7.37		Si
SLV 12	15.02	1874.26	-1814	-0.0000083	0.0006738	0.0035	4.32		5665.94	5665.94	3.02		Si
SLV 5	11.86	6019.59	-8728	-0.000031	0.0006738	0.0035	4.32		19737.7	19737.7	3.28		Si
SLV 5	15.02	-1695.09	-1905	-0.0000077	0.0006738	0.0035	4.32		15182.19	15182.19	8.96		Si
SLV 11	11.86	-4510.42	-9827	-0.0000292	0.0006738	0.0035	4.32		30994.84	30994.84	6.87		Si
SLV 11	15.02	1931.78	-1819	-0.0000086	0.0006738	0.0035	4.32		5677.01	5677.01	2.94		Si
SLV 7	11.86	-4262.37	-8935	-0.0000269	0.0006738	0.0035	4.32		29283.6	29283.6	6.87		Si
SLV 7	15.02	2244.55	-1505	-0.0000117	0.0006738	0.0035	4.32		5019.09	5019.09	2.24		Si
SLV 10	11.86	6084.44	-9581	-0.0000328	0.0006738	0.0035	4.32		21422	21422	3.52		Si
SLV 10	15.02	-2065.38	-2214	-0.0000093	0.0006738	0.0035	4.32		15814.62	15814.62	7.66		Si
SLV 6	11.86	6332.49	-8689	-0.0000318	0.0006738	0.0035	4.32		19661.96	19661.96	3.1		Si
SLV 6	15.02	-1752.61	-1900	-0.0000079	0.0006738	0.0035	4.32		15171.28	15171.28	8.66		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	11.86	454.12	-10782	-6331	-1345	4.32	4.32	-9159	9555	6604	101952	24840	22032	46872	No	34.84	Si
SLU 39	15.02	322.79	-2286	-1342	-1318	4.32	4.32	-1942	8592	5939	101952	24840	22032	46872	No	35.57	Si
SLU 33	11.86	705.22	-11552	-6783	-1255	4.32	4.32	-9813	9642	6664	101952	24840	22032	46872	No	37.35	Si
SLU 33	15.02	404.03	-2960	-1738	-1214	4.32	4.32	-2514	8669	5992	101952	24840	22032	46872	No	38.62	Si
SLU 31	11.86	532.54	-10519	-6176	-1237	4.32	4.32	-8935	9525	6583	101952	24840	22032	46872	No	37.9	Si
SLU 31	15.02	306.54	-2256	-1325	-1209	4.32	4.32	-1916	8589	5937	101952	24840	22032	46872	No	38.76	Si
SLU 34	11.86	594.68	-11204	-6578	-1182	4.32	4.32	-9517	9602	6637	101952	24840	22032	46872	No	39.66	Si
SLU 34	15.02	406.69	-2965	-1741	-1138	4.32	4.32	-2519	8669	5992	101952	24840	22032	46872	No	41.18	Si
SLU 40	11.86	424.24	-10782	-6330	-1410	4.32	4.32	-9159	9554	6604	101952	24840	22032	46872	No	33.24	Si
SLU 40	15.02	335.36	-2285	-1342	-1383	4.32	4.32	-1941	8592	5939	101952	24840	22032	46872	No	33.9	Si
SLU 41	11.86	516.25	-11467	-6733	-1291	4.32	4.32	-9741	9632	6658	101952	24840	22032	46872	No	36.32	Si
SLU 41	15.02	422.94	-2995	-1759	-1247	4.32	4.32	-2545	8673	5995	101952	24840	22032	46872	No	37.6	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	11.86	792.18	-13012	-7640	-1233	4.32	4.32	-11053	9807	6779	101952	24840	22032	46872	No	38.02	Si
SLU 82	15.02	274.41	-2628	-1543	-1204	4.32	4.32	-2233	8631	5966	101952	24840	22032	46872	No	38.94	Si
SLU 36	11.86	767.36	-12237	-7185	-1200	4.32	4.32	-10395	9719	6718	101952	24840	22032	46872	No	39.06	Si
SLU 36	15.02	504.18	-3669	-2154	-1143	4.32	4.32	-3116	8749	6047	101952	24840	22032	46872	No	41.02	Si
SLU 32	11.86	735.1	-11553	-6783	-1190	4.32	4.32	-9814	9642	6664	101952	24840	22032	46872	No	39.39	Si
SLU 32	15.02	391.45	-2960	-1738	-1149	4.32	4.32	-2515	8669	5992	101952	24840	22032	46872	No	40.81	Si
SLU 42	11.86	486.37	-11466	-6733	-1356	4.32	4.32	-9740	9632	6658	101952	24840	22032	46872	No	34.58	Si
SLU 42	15.02	435.52	-2995	-1758	-1312	4.32	4.32	-2544	8673	5994	101952	24840	22032	46872	No	35.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	11.86	-4262.37	-8935	-5246	-11075	4.32	4.32	-7590	14018	9689	101952	37260	22032	59292		5.35	Si
SLV 7	15.02	2244.55	-1505	-884	-11745	4.32	2.0056	-1278	12756	4093	101952	37260	22032	59292		5.05	Si
SLV 12	11.86	-4197.51	-9788	-5747	-9281	4.32	4.32	-8315	14163	9789	101952	37260	22032	59292		6.39	Si
SLV 12	15.02	1874.26	-1814	-1065	-9964	4.32	3.3805	-1541	12808	6928	101952	37260	22032	59292		5.95	Si
SLV 11	11.86	-4510.42	-9827	-5770	-9738	4.32	4.32	-8347	14169	9794	101952	37260	22032	59292		6.09	Si
SLV 11	15.02	1931.78	-1819	-1068	-10421	4.32	3.2947	-1546	12809	6752	101952	37260	22032	59292		5.69	Si
SLV 3	11.86	-461.27	-7832	-4599	-5891	4.32	4.32	-6653	13831	9560	101952	37260	22032	59292		10.07	Si
SLV 3	15.02	1246.57	-1280	-751	-6058	4.32	3.5573	-1087	12717	7238	101952	37260	22032	59292		9.79	Si
SLV 6	11.86	6332.49	-8689	-5102	9013	4.32	4.2937	-7381	13976	9602	101952	37260	22032	59292		6.58	Si
SLV 6	15.02	-1752.61	-1900	-1115	9736	4.32	3.7123	-1879	12876	7648	101952	37260	22032	59292		6.09	Si
SLV 9	11.86	5771.53	-9620	-5648	9894	4.32	4.32	-8172	14134	9770	101952	37260	22032	59292		5.99	Si
SLV 9	15.02	-2007.86	-2219	-1303	10603	4.32	3.766	-2165	12933	7793	101952	37260	22032	59292		5.59	Si
SLV 10	11.86	6084.44	-9581	-5626	10351	4.32	4.32	-8139	14128	9765	101952	37260	22032	59292		5.73	Si
SLV 10	15.02	-2065.38	-2214	-1300	11060	4.32	3.6816	-2209	12942	7623	101952	37260	22032	59292		5.36	Si
SLV 5	11.86	6019.59	-8728	-5124	8557	4.32	4.32	-7414	13983	9665	101952	37260	22032	59292		6.93	Si
SLV 5	15.02	-1695.09	-1905	-1119	9279	4.32	3.8106	-1834	12867	7845	101952	37260	22032	59292		6.39	Si
SLV 8	11.86	-3949.46	-8896	-5223	-10618	4.32	4.32	-7557	14011	9685	101952	37260	22032	59292		5.58	Si
SLV 8	15.02	2187.03	-1500	-881	-11288	4.32	2.1048	-1274	12755	4296	101952	37260	22032	59292		5.25	Si
SLV 14	11.86	2283.34	-10684	-6273	5166	4.32	4.32	-9076	14315	9895	101952	37260	22032	59292		11.48	Si
SLV 14	15.02	-1067.4	-2440	-1432	5373	4.32	4.32	-2072	12914	8926	101952	37260	22032	59292		11.04	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-4523	0.53	294.85	348.94	755.16	552.05	1.87	Si
SLV 3	-4532	0.53	294.85	349.57	755.99	552.78	1.87	Si
SLV 2	-4628	0.53	294.85	356.71	765.41	561.06	1.9	Si
SLV 1	-4636	0.53	294.85	357.34	766.25	561.79	1.91	Si
SLV 8	-5526	0.53	294.85	422.82	853.08	637.95	2.16	Si
SLV 7	-5532	0.53	294.85	423.22	853.61	638.42	2.17	Si
SLV 6	-5875	0.53	294.85	448.23	886.79	667.51	2.26	Si
SLV 5	-5881	0.53	294.85	448.63	887.32	667.97	2.27	Si
SLV 12	-6490	0.53	294.85	492.57	946.07	719.32	2.44	Si
SLV 11	-6495	0.53	294.85	492.97	946.6	719.78	2.44	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-2219	-9620	229	5.78	557.6	0.889	94.46806	21.18724	Si
SLV 10	-2214	-9581	229	5.788	557.1	0.889	94.58898	21.18724	Si
SLV 5	-1905	-8728	-37	6.297	528.9	0.889	102.96116	21.18724	Si
SLV 6	-1900	-8689	-37	6.306	528.4	0.889	103.10122	21.18724	Si
SLV 11	-1819	-9827	38	6.439	521.2	0.889	105.26255	21.18724	Si
SLV 12	-1814	-9788	38	6.448	520.7	0.889	105.40841	21.18724	Si
SLV 7	-1505	-8935	-229	6.965	493.6	0.891	113.65921	21.18724	Si
SLV 8	-1500	-8896	-229	6.976	493.1	0.891	113.82653	21.18724	Si
SLV 13	-2448	-10744	473	5.427	578.8	0.89	88.61846	11.64352	Si
SLV 14	-2440	-10684	473	5.437	578	0.89	88.78738	11.64352	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.51	SLU 45	Si
V_SLU	33.236	SLU 40	Si
PF_SLV	2.236	SLV 7	Si
V_SLV	5.048	SLV 7	Si
PFFP_SLV	1.872	SLV 4	Si
R_SLV	4.459	SLV 9	Si

Maschio 191

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	2.046	-5.163	5.686	L7	L8	3.64	0.16	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 38	11.86	432.08	-6949	-0.0000165	0.0004492	0.0035	3.64	11412.13	13268.99	13268.99	30.71	No	Si
SLU 38	13.96	1891.1	-4014	-0.0000153	0.0004492	0.0035	3.64	6893.99	8366.05	8366.05	4.42	No	Si
SLU 29	11.86	452.36	-6541	-0.0000157	0.0004492	0.0035	3.64	10810.52	12599.13	12599.13	27.85	No	Si
SLU 29	13.96	1662.22	-3673	-0.0000137	0.0004492	0.0035	3.64	6339.64	7785.69	7785.69	4.68	No	Si
SLU 37	11.86	469.71	-6956	-0.0000166	0.0004492	0.0035	3.64	11423.03	13281.21	13281.21	28.28	No	Si
SLU 37	13.96	1902.53	-4022	-0.0000154	0.0004492	0.0035	3.64	6906.93	8379.67	8379.67	4.4	No	Si
SLU 78	11.86	532.78	-8331	-0.0000199	0.0004492	0.0035	3.64	13386.79	15520.02	15520.02	29.13	No	Si
SLU 78	13.96	2019.27	-4688	-0.0000172	0.0004492	0.0035	3.64	7970.57	9511.47	9511.47	4.71	No	Si
SLU 28	11.86	455.53	-6592	-0.0000158	0.0004492	0.0035	3.64	10885.5	12682.1	12682.1	27.84	No	Si
SLU 28	13.96	1683.72	-3712	-0.0000139	0.0004492	0.0035	3.64	6402.76	7851.46	7851.46	4.66	No	Si
SLU 36	11.86	472.88	-7007	-0.0000168	0.0004492	0.0035	3.64	11496.94	13364.18	13364.18	28.26	No	Si
SLU 36	13.96	1924.03	-4061	-0.0000155	0.0004492	0.0035	3.64	6969.35	8445.44	8445.44	4.39	No	Si
SLU 27	11.86	493.17	-6599	-0.0000159	0.0004492	0.0035	3.64	10896.53	12694.32	12694.32	25.74	No	Si
SLU 27	13.96	1695.16	-3720	-0.000014	0.0004492	0.0035	3.64	6415.82	7865.08	7865.08	4.64	No	Si
SLU 30	11.86	414.73	-6534	-0.0000155	0.0004492	0.0035	3.64	10799.46	12586.9	12586.9	30.35	No	Si
SLU 30	13.96	1650.79	-3665	-0.0000137	0.0004492	0.0035	3.64	6326.56	7772.07	7772.07	4.71	No	Si
SLU 35	11.86	510.52	-7014	-0.0000169	0.0004492	0.0035	3.64	11507.81	13376.4	13376.4	26.2	No	Si
SLU 35	13.96	1935.47	-4069	-0.0000156	0.0004492	0.0035	3.64	6982.27	8459.06	8459.06	4.37	No	Si
SLU 77	11.86	570.41	-8338	-0.00002	0.0004492	0.0035	3.64	13397.16	15532.03	15532.03	27.23	No	Si
SLU 77	13.96	2030.7	-4696	-0.0000173	0.0004492	0.0035	3.64	7983.23	9525.09	9525.09	4.69	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	11.86	2904.26	-5156	-0.0000213	0.0006738	0.0035	3.64		10382.17	10382.17	3.57		Si
SLV 4	13.96	-4514.02	942	-0.000204	0.0006738	0.0035	2.912		5940.68	5940.68	1.32		Si
SLV 9	11.86	4214.78	-4473	-0.0000266	0.0006738	0.0035	3.64		9209.98	9209.98	2.19		Si
SLV 9	13.96	2599.01	-2895	-0.0000163	0.0006738	0.0035	3.64		6485.57	6485.57	2.5		Si
SLV 6	11.86	6986.82	-4023	-0.0002312	0.0006738	0.0035	3.64		8438.48	8438.48	1.21		Si
SLV 6	13.96	-553.19	-386	-0.000005	0.0006738	0.0035	2.912		8269.11	8269.11	14.95		Si
SLV 10	11.86	4672.61	-4475	-0.0000302	0.0006738	0.0035	3.64		9213.48	9213.48	1.97		Si
SLV 10	13.96	2724.8	-2928	-0.0000171	0.0006738	0.0035	3.64		6544.04	6544.04	2.4		Si
SLV 2	11.86	6093.37	-4390	-0.0000538	0.0006738	0.0035	3.64		9068.22	9068.22	1.49		Si
SLV 2	13.96	-4434.88	1694	-0.000188	0.0006738	0.0035	2.912		4612.42	4612.42	1.04		Si
SLV 13	11.86	-2333.03	-5892	-0.0000209	0.0006738	0.0035	3.64		17690.68	17690.68	7.58		Si
SLV 13	13.96	6296.03	-6729	-0.00004	0.0006738	0.0035	3.64		13041.05	13041.05	2.07		Si
SLV 14	11.86	-1620.65	-5896	-0.0000184	0.0006738	0.0035	3.64		17696.03	17696.03	10.92		Si
SLV 14	13.96	6491.76	-6781	-0.0000413	0.0006738	0.0035	3.64		13129.3	13129.3	2.02		Si
SLV 3	11.86	2191.89	-5153	-0.0000188	0.0006738	0.0035	3.64		10376.73	10376.73	4.73		Si
SLV 3	13.96	-4709.75	994	-0.0002132	0.0006738	0.0035	2.912		5848.63	5848.63	1.24		Si
SLV 5	11.86	6528.98	-4021	-0.0001108	0.0006738	0.0035	3.64		8434.98	8434.98	1.29		Si
SLV 5	13.96	-678.98	-352	-0.0000144	0.0006738	0.0035	2.912		8210.36	8210.36	12.09		Si
SLV 1	11.86	5381	-4387	-0.0000388	0.0006738	0.0035	3.64		9062.78	9062.78	1.68		Si
SLV 1	13.96	-4630.61	1746	-0.0001973	0.0006738	0.0035	2.912		4519.85	4519.85	0.98		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 38	11.86	432.08	-6949	-4080	-1187	3.64	3.64	-7006	9267	5397	101952	20930	18564	39494	No	33.27	Si
SLU 38	13.96	1891.1	-4014	-2357	-1214	3.64	3.64	-4047	8873	5168	101952	20930	18564	39494	No	32.52	Si
SLU 77	11.86	570.41	-8338	-4896	-1257	3.64	3.64	-8406	9454	5506	101952	20930	18564	39494	No	31.43	Si
SLU 77	13.96	2030.7	-4696	-2757	-1278	3.64	3.64	-4735	8965	5221	101952	20930	18564	39494	No	30.91	Si
SLU 78	11.86	532.78	-8331	-4891	-1271	3.64	3.64	-8399	9453	5506	101952	20930	18564	39494	No	31.08	Si
SLU 78	13.96	2019.27	-4688	-2753	-1288	3.64	3.64	-4727	8964	5220	101952	20930	18564	39494	No	30.65	Si
SLU 35	11.86	510.52	-7014	-4119	-1179	3.64	3.64	-7072	9276	5402	101952	20930	18564	39494	No	33.51	Si
SLU 35	13.96	1935.47	-4069	-2389	-1214	3.64	3.64	-4102	8880	5172	101952	20930	18564	39494	No	32.54	Si
SLU 79	11.86	529.61	-8280	-4862	-1251	3.64	3.64	-8348	9446	5502	101952	20930	18564	39494	No	31.57	Si
SLU 79	13.96	1997.77	-4650	-2730	-1267	3.64	3.64	-4688	8958	5217	101952	20930	18564	39494	No	31.16	Si
SLU 83	11.86	471.44	-8139	-4779	-1160	3.64	3.64	-8205	9427	5490	101952	20930	18564	39494	No	34.04	Si
SLU 83	13.96	1807.04	-4536	-2663	-1201	3.64	3.64	-4573	8943	5208	101952	20930	18564	39494	No	32.88	Si
SLU 37	11.86	469.71	-6956	-4084	-1173	3.64	3.64	-7013	9268	5398	101952	20930	18564	39494	No	33.67	Si
SLU 37	13.96	1902.53	-4022	-2362	-1204	3.64	3.64	-4055	8874	5168	101952	20930	18564	39494	No	32.81	Si
SLU 36	11.86	472.88	-7007	-4114	-1193	3.64	3.64	-7064	9275	5402	101952	20930	18564	39494	No	33.12	Si
SLU 36	13.96	1924.03	-4061	-2384	-1225	3.64	3.64	-4094	8879	5171	101952	20930	18564	39494	No	32.25	Si
SLU 84	11.86	433.81	-8131	-4774	-1174	3.64	3.64	-8198	9426	5490	101952	20930	18564	39494	No	33.64	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	13.96	1795.61	-4528	-2658	-1212	3.64	3.64	-4565	8942	5208	101952	20930	18564	39494	No	32.58	Si
SLU 80	11.86	491.97	-8273	-4857	-1265	3.64	3.64	-8340	9445	5501	101952	20930	18564	39494	No	31.22	Si
SLU 80	13.96	1986.33	-4642	-2725	-1278	3.64	3.64	-4680	8957	5217	101952	20930	18564	39494	No	30.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	11.86	-5522.13	-6658	-3909	-2653	3.64	2.9719	-8251	14150	6728	101952	31395	18564	49959		18.83	Si
SLV 15	13.96	6216.88	-7481	-4393	-3564	3.64	2.9669	-7542	14008	6650	101952	31395	18564	49959		14.02	Si
SLV 5	11.86	6528.98	-4021	-2361	2665	3.64	0.5891	-25030	16250	1532	101952	31395	18564	49959		18.75	Si
SLV 5	13.96	-678.98	-352	-207	3518	2.912	0	0	0	0	101952	25116	14851	39967		11.36	Si
SLV 10	11.86	4672.61	-4475	-2627	2262	3.64	2.3275	-4511	13402	4991	101952	31395	18564	49959		22.09	Si
SLV 10	13.96	2724.8	-2928	-1719	2642	3.64	2.6686	-2952	13090	5589	101952	31395	18564	49959		18.91	Si
SLV 6	11.86	6986.82	-4023	-2362	2854	3.64	0.2502	-48340	16250	651	101952	31395	18564	49959		17.51	Si
SLV 6	13.96	-553.19	-386	-227	3681	2.912	1.1597	0	0	0	101952	25116	14851	39967		10.86	Si
SLV 2	11.86	6093.37	-4390	-2578	1453	3.64	1.2962	-4426	13385	2776	101952	31395	18564	49959		34.39	Si
SLV 2	13.96	-4434.88	1694	994	2362	2.912	0	0	0	0	101952	25116	14851	39967		16.92	Si
SLV 16	11.86	-4809.76	-6661	-3911	-2359	3.64	3.2939	-7441	13988	7372	101952	31395	18564	49959		21.18	Si
SLV 16	13.96	6412.62	-7533	-4423	-3310	3.64	2.9063	-7595	14019	6519	101952	31395	18564	49959		15.09	Si
SLV 8	11.86	-3643.55	-6576	-3861	-3273	3.64	3.64	-6629	13826	8052	101952	31395	18564	49959		15.26	Si
SLV 8	13.96	-817	-2893	-1698	-3681	3.64	3.64	-2916	13083	7620	101952	31395	18564	49959		13.57	Si
SLV 11	11.86	-6415.58	-7025	-4125	-4054	3.64	2.7203	-9514	14403	6269	101952	31395	18564	49959		12.32	Si
SLV 11	13.96	2335.2	-5401	-3171	-4883	3.64	3.64	-5446	13589	7914	101952	31395	18564	49959		10.23	Si
SLV 7	11.86	-4101.38	-6574	-3860	-3462	3.64	3.5882	-6627	13825	7937	101952	31395	18564	49959		14.43	Si
SLV 7	13.96	-942.79	-2859	-1679	-3843	3.64	3.64	-2882	13076	7616	101952	31395	18564	49959		13	Si
SLV 12	11.86	-5957.75	-7027	-4126	-3865	3.64	2.9166	-8875	14275	6661	101952	31395	18564	49959		12.92	Si
SLV 12	13.96	2460.99	-5435	-3191	-4720	3.64	3.64	-5479	13596	7918	101952	31395	18564	49959		10.58	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.44 Ta 0.1 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	2580	0.53	248.44	0	0	0	0	No
SLV 1	2610	0.53	248.44	0	0	0	0	No
SLV 3	2186	0.53	248.44	0	0	0	0	No
SLV 4	2156	0.53	248.44	0	0	0	0	No
SLV 5	-1033	0.53	248.44	0	354.21	177.11	0.71	No
SLV 6	-1052	0.53	248.44	0	356.19	178.1	0.72	No
SLV 7	-2446	0.53	248.44	0	496.29	248.15	1	No
SLV 8	-2465	0.53	248.44	0	498.2	249.1	1	Si
SLD 1	-900	0.22	102.8	0	340.49	170.24	1.66	Si
SLD 2	-913	0.22	102.8	0	341.82	170.91	1.66	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.03 Ta = 0.1042

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-3298	-7027	137	4.133	606.4	0.9	66.74417	21.18724	Si
SLV 11	-3277	-7025	138	4.15	604.3	0.9	67.04551	21.18724	Si
SLV 16	-4294	-6661	372	3.406	704.6	0.909	54.47106	11.64352	Si
SLV 15	-4260	-6658	374	3.425	701.3	0.908	54.7909	11.64352	Si
SLV 8	-1691	-6576	-82	6.121	453.4	0.889	100.07752	21.18724	Si
SLV 7	-1670	-6574	-81	6.161	451.5	0.889	100.73008	21.18724	Si
SLV 14	-3535	-5896	355	3.903	629.6	0.902	62.89201	11.64352	Si
SLV 13	-3502	-5892	357	3.928	626.3	0.902	63.31508	11.64352	Si
SLV 10	-769	-4475	80	8.44	375.4	0.902	135.94628	21.18724	Si
SLV 9	-747	-4473	81	8.515	373.8	0.903	137.01494	21.18724	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.371	SLU 35	Si
V_SLU	30.652	SLU 78	Si
PF_SLV	0.976	SLV 1	No
V_SLV	10.232	SLV 11	Si
PFFP_SLV	0	SLV 1	No
R_SLV	3.15	SLV 12	Si

Maschio 194

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-4.953	5.826	L7	L8	1.99	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	12.76	-16.29	-6373	-0.0000174	0.0003743	0.0035	1.99	5629.02	6866.09	6866.09	421.61	No	Si
SLU 73	14.56	-2766.33	-3906	-0.0000499	0.0003743	0.0035	1.592	3618.56	4736.26	4736.26	1.71	No	Si
SLU 61	12.76	76.39	-5796	-0.0000163	0.0003743	0.0035	1.99	5177.9	5534.55	5534.55	72.45	No	Si
SLU 61	14.56	-2606.69	-3357	-0.0000562	0.0003743	0.0035	1.592	3142.12	4249.98	4249.98	1.63	No	Si
SLU 52	12.76	63.3	-5824	-0.0000162	0.0003743	0.0035	1.99	5199.83	5558.19	5558.19	87.81	No	Si
SLU 52	14.56	-2587.6	-3384	-0.0000537	0.0003743	0.0035	1.592	3166.43	4274.35	4274.35	1.65	No	Si
SLU 19	12.76	45.28	-4553	-0.0000126	0.0003743	0.0035	1.99	4167	4460.67	4460.67	98.52	No	Si
SLU 19	14.56	-2078.49	-2669	-0.0000445	0.0003743	0.0035	1.592	2531.06	3617.83	3617.83	1.74	No	Si
SLU 44	12.76	38.12	-5949	-0.0000164	0.0003743	0.0035	1.99	5298.22	5663.86	5663.86	148.58	No	Si
SLU 44	14.56	-2518.97	-3509	-0.0000462	0.0003743	0.0035	1.592	3275.49	4384.26	4384.26	1.74	No	Si
SLU 55	12.76	-65.16	-6596	-0.0000184	0.0003743	0.0035	1.99	5799.74	7048.34	7048.34	108.18	No	Si
SLU 55	14.56	-2804.78	-4156	-0.0000475	0.0003743	0.0035	1.592	3832.4	4961.2	4961.2	1.77	No	Si
SLU 60	12.76	79.84	-5835	-0.0000164	0.0003743	0.0035	1.99	5208.45	5567.49	5567.49	69.73	No	Si
SLU 60	14.56	-2591.21	-3395	-0.0000535	0.0003743	0.0035	1.592	3175.99	4283.94	4283.94	1.65	No	Si
SLU 81	12.76	0.26	-6384	-0.0000173	0.0003743	0.0035	1.99	5637.43	6028.21	6028.21	23015.24	No	Si
SLU 81	14.56	-2769.94	-3917	-0.0000499	0.0003743	0.0035	1.592	3627.92	4746	4746	1.71	No	Si
SLU 63	12.76	-52.06	-6568	-0.0000182	0.0003743	0.0035	1.99	5778.56	7025.56	7025.56	134.94	No	Si
SLU 63	14.56	-2823.87	-4128	-0.0000486	0.0003743	0.0035	1.592	3808.85	4936.14	4936.14	1.75	No	Si
SLU 82	12.76	-3.19	-6346	-0.0000172	0.0003743	0.0035	1.99	5607.62	6843.46	6843.46	2143.57	No	Si
SLU 82	14.56	-2785.43	-3878	-0.0000514	0.0003743	0.0035	1.592	3594.76	4711.53	4711.53	1.69	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	12.76	-1166.23	1913	0.1564514	0.0005615	0.0035	1.592		0	0	0		No
SLV 3	14.56	-7613.52	3422	0.2884346	0.0005615	0.0035	1.592		0	0	0		No
SLV 2	12.76	-514.44	263	0.0221109	0.0005615	0.0035	1.592		0	0	0		No
SLV 2	14.56	-7364.41	1694	0.1466829	0.0005615	0.0035	1.592		0	0	0		No
SLD 3	12.76	-502.98	-1977	-0.0000092	0.0005615	0.0035	1.99		2992.48	2992.48	5.95		Si
SLD 3	14.56	-4416.87	-249	-0.0028546	0.0005615	0.0035	1.592		1331.96	1331.96	0.3		No
SLV 4	12.76	-1079.12	1241	0.1022498	0.0005615	0.0035	1.592		0	0	0		No
SLV 4	14.56	-7091.85	2750	0.2328251	0.0005615	0.0035	1.592		0	0	0		No
SLV 8	12.76	-1167.19	-1684	-0.0000196	0.0005615	0.0035	1.592		2713.22	2713.22	2.32		Si
SLV 8	14.56	-3049.72	212	0.0000908	0.0005615	0.0035	1.592		0	0	0		No
SLD 4	12.76	-465.58	-2266	-0.0000097	0.0005615	0.0035	1.99		3265.18	3265.18	7.01		Si
SLD 4	14.56	-4192.91	-538	-0.0022088	0.0005615	0.0035	1.592		1612.45	1612.45	0.38		No
SLD 1	12.76	-254.11	-2408	-0.0000084	0.0005615	0.0035	1.99		3399.1	3399.1	13.38		Si
SLD 1	14.56	-4539.66	-713	-0.002375	0.0005615	0.0035	1.592		1781.81	1781.81	0.39		No
SLD 2	12.76	-216.72	-2696	-0.0000089	0.0005615	0.0035	1.99		3671.21	3671.21	16.94		Si
SLD 2	14.56	-4315.69	-1001	-0.0019039	0.0005615	0.0035	1.592		2059.97	2059.97	0.48		No
SLV 1	12.76	-601.55	935	0.0765468	0.0005615	0.0035	1.592		0	0	0		No
SLV 1	14.56	-7886.08	2366	0.20219	0.0005615	0.0035	1.592		0	0	0		No
SLV 7	12.76	-1223.17	-1252	-0.0000698	0.0005615	0.0035	1.592		2300.49	2300.49	1.88		Si
SLV 7	14.56	-3384.99	644	0.0544535	0.0005615	0.0035	1.592		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	12.76	-270.89	-7943	-6614	1569	1.99	1.99	-11871	8527	4751	35683	16685	5074	21759	No	13.87	Si
SLU 80	14.56	-3190.36	-5475	-4559	1569	1.592	1.2369	0	0	0	35683	13348	4060	17407	No	11.1	Si
SLU 75	12.76	-158.09	-7470	-6220	1555	1.99	1.99	-11164	8433	4699	35683	16685	5074	21759	No	13.99	Si
SLU 75	14.56	-3052.83	-5002	-4166	1555	1.592	1.1541	0	0	0	35683	13348	4060	17407	No	11.2	Si
SLU 84	12.76	-131.64	-7118	-5927	1542	1.99	1.99	-10637	8363	4660	35683	16685	5074	21759	No	14.11	Si
SLU 84	14.56	-3002.6	-4650	-3872	1542	1.592	1.0478	0	0	0	35683	13348	4060	17407	No	11.29	Si
SLU 83	12.76	-128.19	-7156	-5959	1535	1.99	1.99	-10695	8370	4664	35683	16685	5074	21759	No	14.18	Si
SLU 83	14.56	-2987.11	-4689	-3904	1535	1.592	1.0736	0	0	0	35683	13348	4060	17407	No	11.34	Si
SLU 77	12.76	-283.09	-8281	-6895	1597	1.99	1.99	-12375	8594	4789	35683	16685	5074	21759	No	13.62	Si
SLU 77	14.56	-3254.52	-5813	-4841	1597	1.592	1.3053	0	0	0	35683	13348	4060	17407	No	10.9	Si
SLU 56	12.76	-203.51	-7731	-6438	1542	1.99	1.99	-11554	8485	4728	35683	16685	5074	21759	No	14.11	Si
SLU 56	14.56	-3075.79	-5292	-4406	1542	1.592	1.2412	0	0	0	35683	13348	4060	17407	No	11.29	Si
SLU 79	12.76	-267.43	-7982	-6646	1562	1.99	1.99	-11928	8535	4756	35683	16685	5074	21759	No	13.93	Si
SLU 79	14.56	-3174.87	-5514	-4592	1562	1.592	1.2576	0	0	0	35683	13348	4060	17407	No	11.15	Si
SLU 74	12.76	-154.64	-7509	-6253	1548	1.99	1.99	-11222	8441	4703	35683	16685	5074	21759	No	14.06	Si
SLU 74	14.56	-3037.35	-5041	-4198	1548	1.592	1.1774	0	0	0	35683	13348	4060	17407	No	11.24	Si
SLU 57	12.76	-206.96	-7693	-6406	1549	1.99	1.99	-11496	8477	4723	35683	16685	5074	21759	No	14.05	Si
SLU 57	14.56	-3091.28	-5253	-4374	1549	1.592	1.2195	0	0	0	35683	13348	4060	17407	No	11.24	Si
SLU 78	12.76	-286.54	-8242	-6863	1604	1.99	1.99	-12318	8587	4785	35683	16685	5074	21759	No	13.56	Si
SLU 78	14.56	-3270.01	-5774	-4808	1604	1.592	1.2861	0	0	0	35683	13348	4060	17407	No	10.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	12.76	-254.11	-2408	-2005	2462	1.99	1.99	-3599	11136	6205	35683	25027	5074	30102		12.22	Si
SLD 1	14.56	-4539.66	-713	-594	2051	1.592	0	0	0	0	35683	20022	4060	24081		11.74	Si
SLD 3	12.76	-502.98	-1977	-1647	2221	1.99	1.99	-2955	11008	6133	35683	25027	5074	30102		13.56	Si
SLD 3	14.56	-4416.87	-249	-207	1851	1.592	0	0	0	0	35683	20022	4060	24081		13.01	Si
SLV 2	12.76	-514.44	263	219	4050	1.592	0	0	0	0	35683	20022	4060	24081		5.95	Si
SLV 2	14.56	-7364.41	1694	1410	3089	1.592	0	0	0	0	35683	20022	4060	24081		7.8	Si
SLV 3	12.76	-1166.23	1913	1593	3745	1.592	1.1561	0	0	0	35683	20022	4060	24081		6.43	Si
SLV 3	14.56	-7613.52	3422	2850	2880	1.592	0	0	0	0	35683	20022	4060	24081		8.36	Si
SLD 4	12.76	-465.58	-2266	-1887	2117	1.99	1.99	-3387	11094	6181	35683	25027	5074	30102		14.22	Si
SLD 4	14.56	-4192.91	-538	-448	1747	1.592	0	0	0	0	35683	20022	4060	24081		13.78	Si
SLV 4	12.76	-1079.12	1241	1033	3503	1.592	0.3762	0	0	0	35683	20022	4060	24081		6.87	Si
SLV 4	14.56	-7091.85	2750	2290	2639	1.592	0	0	0	0	35683	20022	4060	24081		9.13	Si
SLV 5	12.76	659.09	-4512	-3757	2921	1.99	1.99	-6742	11765	6555	35683	25027	5074	30102		10.31	Si
SLV 5	14.56	-4293.54	-2877	-2396	2485	1.592	0	0	0	0	35683	20022	4060	24081		9.69	Si
SLV 6	12.76	715.08	-4944	-4117	2765	1.99	1.99	-7388	11894	6627	35683	25027	5074	30102		10.89	Si
SLV 6	14.56	-3958.27	-3309	-2755	2330	1.592	0	0	0	0	35683	20022	4060	24081		10.34	Si
SLV 1	12.76	-601.55	935	779	4292	1.592	1.0553	0	0	0	35683	20022	4060	24081		5.61	Si
SLV 1	14.56	-7886.08	2366	1970	3330	1.592	0	0	0	0	35683	20022	4060	24081		7.23	Si
SLD 2	12.76	-216.72	-2696	-2245	2359	1.99	1.99	-4030	11223	6253	35683	25027	5074	30102		12.76	Si
SLD 2	14.56	-4315.69	-1001	-834	1947	1.592	0	0	0	0	35683	20022	4060	24081		12.37	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.53	0	2813	224.62	0	0	No, Trazione
SLV 4	179667	0.53	0	2141	224.62	0	0	No, Trazione
SLV 7	179667	0.53	0	-118	224.62	0	0	No, e>t/2
SLV 1	179667	0.53	0	1608	224.62	0	0	No, Trazione
SLV 2	179667	0.53	0	935	224.62	0	0	No, Trazione
SLV 8	179667	0.53	0	-550	224.62	0	0	No, e>t/2
SLV 11	179667	0.53	6700	-3733	224.62	499.71	2.22	Si
SLV 5	179667	0.53	7422	-4136	224.62	550.84	2.45	Si
SLV 12	179667	0.53	7475	-4165	224.62	554.57	2.47	Si
SLV 6	179667	0.53	8197	-4568	224.62	605.13	2.69	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-4988	-9646	-769	1.639	761.8	0.916	25.99403	12.56426	Si
SLV 9	-4574	-9310	-769	1.746	720.5	0.913	27.79541	12.56426	Si
SLV 14	-8532	-11203	-382	1.118	1118.9	0.938	17.32721	7.33323	Si
SLV 13	-7889	-10681	-382	1.191	1053.8	0.935	18.52003	7.33323	Si
SLV 16	-7900	-9777	47	1.225	1055	0.935	19.04523	7.33323	Si
SLV 15	-7257	-9255	47	1.311	990	0.931	20.45652	7.33323	Si
SLV 12	-2882	-4893	662	2.414	553.5	0.897	39.10186	12.56426	Si
SLV 11	-2469	-4557	662	2.656	513.6	0.894	43.19499	12.56426	Si
SLV 6	-1417	-6965	-671	3.568	415.7	0.889	58.31533	12.56426	Si
SLV 5	-1003	-6629	-671	4.131	380.2	0.894	67.16281	12.56426	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.63	SLU 61	Si
V_SLU	10.852	SLU 78	Si
PF_SLV	0	SLV 1	No
V_SLV	5.611	SLV 1	Si
PFFP_SLV	0	SLV 4	No
R_SLV	2.069	SLV 10	Si

Maschio 195

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L7	L8	1.93	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 37	12.76	401.88	-5052	-0.0000175	0.0003743	0.0035	1.93	4427.57	4727.91	4727.91	11.76	No	Si
SLU 37	14.56	1890.6	-4135	-0.0000293	0.0003743	0.0035	1.93	3690.19	3949.89	3949.89	2.09	No	Si
SLU 29	12.76	505.03	-5219	-0.0000189	0.0003743	0.0035	1.93	4558.66	4867.65	4867.65	9.64	No	Si
SLU 29	14.56	1876.14	-4143	-0.0000291	0.0003743	0.0035	1.93	3696.77	3956.82	3956.82	2.11	No	Si
SLU 16	12.76	470.89	-4851	-0.0000175	0.0003743	0.0035	1.93	4268.47	4559.03	4559.03	9.68	No	Si
SLU 16	14.56	1588.45	-3740	-0.0000248	0.0003743	0.0035	1.93	3363.82	3608.29	3608.29	2.27	No	Si
SLU 30	12.76	501.45	-5198	-0.0000188	0.0003743	0.0035	1.93	4542.59	4850.52	4850.52	9.67	No	Si
SLU 30	14.56	1864.67	-4152	-0.0000289	0.0003743	0.0035	1.93	3704.1	3964.54	3964.54	2.13	No	Si
SLU 27	12.76	542.54	-5508	-0.00002	0.0003743	0.0035	1.93	4782.81	5108.39	5108.39	9.42	No	Si
SLU 27	14.56	1905.12	-4487	-0.0000299	0.0003743	0.0035	1.93	3976.75	4251.17	4251.17	2.23	No	Si
SLU 38	12.76	398.29	-5031	-0.0000174	0.0003743	0.0035	1.93	4411.37	4710.68	4710.68	11.83	No	Si
SLU 38	14.56	1879.13	-4144	-0.0000291	0.0003743	0.0035	1.93	3697.52	3957.61	3957.61	2.11	No	Si
SLU 28	12.76	538.95	-5487	-0.0000199	0.0003743	0.0035	1.93	4766.94	5091.3	5091.3	9.45	No	Si
SLU 28	14.56	1893.65	-4496	-0.0000297	0.0003743	0.0035	1.93	3983.97	4258.74	4258.74	2.25	No	Si
SLU 36	12.76	435.8	-5320	-0.0000186	0.0003743	0.0035	1.93	4637.42	4951.92	4951.92	11.36	No	Si
SLU 36	14.56	1908.1	-4488	-0.0000299	0.0003743	0.0035	1.93	3977.49	4251.95	4251.95	2.23	No	Si
SLU 35	12.76	439.39	-5341	-0.0000187	0.0003743	0.0035	1.93	4653.4	4969.1	4969.1	11.31	No	Si
SLU 35	14.56	1919.57	-4479	-0.00003	0.0003743	0.0035	1.93	3970.27	4244.38	4244.38	2.21	No	Si
SLU 79	12.76	575.44	-6281	-0.0000226	0.0003743	0.0035	1.93	5369.19	5719.21	5719.21	9.94	No	Si
SLU 79	14.56	2006.37	-4876	-0.0000318	0.0003743	0.0035	1.93	4288.2	4579.92	4579.92	2.28	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 7	12.76	90.53	-1801	-0.0000057	0.0005615	0.0035	1.93		1891.78	1891.78	20.9		Si
SLD 7	14.56	1264.12	-2807	-0.0000192	0.0005615	0.0035	1.93		2817.61	2817.61	2.23		Si
SLV 3	12.76	247.12	-2245	-0.0000082	0.0005615	0.0035	1.93		2304.2	2304.2	9.32		Si
SLV 3	14.56	1351.95	-2759	-0.0000205	0.0005615	0.0035	1.93		2774.31	2774.31	2.05		Si
SLV 8	12.76	-381.42	1049	0.084809	0.0005615	0.0035	1.544		0	0	0		No
SLV 8	14.56	1822.75	-2594	-0.0000353	0.0005615	0.0035	1.93		2623.73	2623.73	1.44		Si
SLV 7	12.76	-363.26	1411	0.1134468	0.0005615	0.0035	1.544		0	0	0		No
SLV 7	14.56	1828.82	-2518	-0.0000377	0.0005615	0.0035	1.93		2554.33	2554.33	1.4		Si
SLV 4	12.76	218.88	-2808	-0.0000095	0.0005615	0.0035	1.93		2818.63	2818.63	12.88		Si
SLV 4	14.56	1342.49	-2877	-0.0000204	0.0005615	0.0035	1.93		2882.17	2882.17	2.15		Si
SLV 12	12.76	-400.78	957	0.0775668	0.0005615	0.0035	1.544		0	0	0		No
SLV 12	14.56	1674.85	-2641	-0.0000284	0.0005615	0.0035	1.93		2666.32	2666.32	1.59		Si
SLD 8	12.76	82.61	-1959	-0.000006	0.0005615	0.0035	1.93		2038.7	2038.7	24.68		Si
SLD 8	14.56	1261.46	-2840	-0.0000192	0.0005615	0.0035	1.93		2847.88	2847.88	2.26		Si
SLV 11	12.76	-382.63	1319	0.1062281	0.0005615	0.0035	1.544		0	0	0		No
SLV 11	14.56	1680.93	-2565	-0.0000294	0.0005615	0.0035	1.93		2596.94	2596.94	1.54		Si
SLD 11	12.76	82.24	-1840	-0.0000057	0.0005615	0.0035	1.93		1928.05	1928.05	23.44		Si
SLD 11	14.56	1201.03	-2827	-0.0000185	0.0005615	0.0035	1.93		2835.9	2835.9	2.36		Si
SLD 12	12.76	74.31	-1998	-0.0000061	0.0005615	0.0035	1.93		2075	2075	27.92		Si
SLD 12	14.56	1198.38	-2860	-0.0000185	0.0005615	0.0035	1.93		2866.16	2866.16	2.39		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	12.76	575.44	-6281	-5230	-1299	1.93	1.93	-9678	8235	4450	35683	16182	4922	21104	No	16.25	Si
SLU 79	14.56	2006.37	-4876	-4060	-1292	1.93	1.6605	-7513	7946	3695	35683	16182	4922	21104	No	16.33	Si
SLU 80	12.76	571.85	-6260	-5213	-1305	1.93	1.93	-9647	8231	4448	35683	16182	4922	21104	No	16.17	Si
SLU 80	14.56	1994.9	-4885	-4068	-1308	1.93	1.6698	-7527	7948	3716	35683	16182	4922	21104	No	16.14	Si
SLU 28	12.76	538.95	-5487	-4569	-1190	1.93	1.93	-8455	8072	4362	35683	16182	4922	21104	No	17.74	Si
SLU 28	14.56	1893.65	-4496	-3744	-1193	1.93	1.6314	-6928	7868	3594	35683	16182	4922	21104	No	17.69	Si
SLU 77	12.76	612.94	-6569	-5470	-1323	1.93	1.93	-10123	8294	4482	35683	16182	4922	21104	No	15.95	Si
SLU 77	14.56	2035.34	-5220	-4347	-1317	1.93	1.7253	-8043	8017	3873	35683	16182	4922	21104	No	16.02	Si
SLU 27	12.76	542.54	-5508	-4586	-1184	1.93	1.93	-8487	8076	4364	35683	16182	4922	21104	No	17.83	Si
SLU 27	14.56	1905.12	-4487	-3736	-1177	1.93	1.6212	-6914	7866	3571	35683	16182	4922	21104	No	17.92	Si
SLU 78	12.76	609.36	-6549	-5453	-1330	1.93	1.93	-10091	8290	4480	35683	16182	4922	21104	No	15.87	Si
SLU 78	14.56	2023.87	-5229	-4354	-1333	1.93	1.7338	-8057	8019	3893	35683	16182	4922	21104	No	15.83	Si
SLU 36	12.76	435.8	-5320	-4430	-1340	1.93	1.93	-8198	8037	4343	35683	16182	4922	21104	No	15.74	Si
SLU 36	14.56	1908.1	-4488	-3737	-1344	1.93	1.6195	-6915	7866	3567	35683	16182	4922	21104	No	15.71	Si
SLU 35	12.76	439.39	-5341	-4447	-1334	1.93	1.93	-8229	8042	4346	35683	16182	4922	21104	No	15.82	Si
SLU 35	14.56	1919.57	-4479	-3730	-1328	1.93	1.6093	-6901	7865	3544	35683	16182	4922	21104	No	15.89	Si
SLU 38	12.76	398.29	-5031	-4190	-1316	1.93	1.93	-7753	7978	4311	35683	16182	4922	21104	No	16.04	Si
SLU 38	14.56	1879.13	-4144	-3450	-1319	1.93	1.5345	-6385	7796	3350	35683	16182	4922	21104	No	16.01	Si
SLU 37	12.76	401.88	-5052	-4207	-1309	1.93	1.93	-7785	7982	4314	35683	16182	4922	21104	No	16.12	Si
SLU 37	14.56	1890.6	-4135	-3443	-1303	1.93	1.5233	-6371	7794	3324	35683	16182	4922	21104	No	16.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	12.76	1264.22	-10083	-8396	3091	1.93	1.93	-15536	13524	7308	35683	24273	4922	29195		9.45	Si
SLV 10	14.56	-185.49	-3545	-2952	3600	1.93	1.93	-5462	11509	6220	35683	24273	4922	29195		8.11	Si
SLV 5	12.76	1301.74	-9629	-8018	3321	1.93	1.93	-14837	13384	7233	35683	24273	4922	29195		8.79	Si
SLV 5	14.56	-31.51	-3422	-2850	2792	1.93	1.93	-5274	11471	6199	35683	24273	4922	29195		10.46	Si
SLV 8	12.76	-381.42	1049	874	-3884	1.544	1.8045	0	0	0	35683	19419	3937	23356		6.01	Si
SLV 8	14.56	1822.75	-2594	-2160	-4390	1.93	0.7873	-3998	11216	2473	35683	24273	4922	29195		6.65	Si
SLV 4	12.76	218.88	-2808	-2338	-831	1.93	1.93	-4327	11282	6097	35683	24273	4922	29195		35.13	Si
SLV 4	14.56	1342.49	-2877	-2396	-2557	1.93	1.4954	-4434	11303	4733	35683	24273	4922	29195		11.42	Si
SLV 12	12.76	-400.78	957	797	-4260	1.544	1.639	0	0	0	35683	19419	3937	23356		5.48	Si
SLV 12	14.56	1674.85	-2641	-2199	-3728	1.93	0.9925	-4070	11231	3121	35683	24273	4922	29195		7.83	Si
SLV 9	12.76	1282.38	-9721	-8095	2944	1.93	1.93	-14979	13412	7248	35683	24273	4922	29195		9.92	Si
SLV 9	14.56	-179.41	-3469	-2889	3454	1.93	1.93	-5345	11486	6207	35683	24273	4922	29195		8.45	Si
SLV 3	12.76	247.12	-2245	-1870	-1059	1.93	1.93	-3460	11109	6003	35683	24273	4922	29195		27.57	Si
SLV 3	14.56	1351.95	-2759	-2298	-2784	1.93	1.4252	-4252	11267	4496	35683	24273	4922	29195		10.48	Si
SLV 7	12.76	-363.26	1411	1175	-4030	1.544	1.93	0	0	0	35683	19419	3937	23356		5.8	Si
SLV 7	14.56	1828.82	-2518	-2097	-4536	1.93	0.7165	-3881	11193	2246	35683	24273	4922	29195		6.44	Si
SLV 11	12.76	-382.63	1319	1098	-4407	1.544	1.93	0	0	0	35683	19419	3937	23356		5.3	Si
SLV 11	14.56	1680.93	-2565	-2136	-3874	1.93	0.9291	-3953	11207	2916	35683	24273	4922	29195		7.54	Si
SLV 6	12.76	1283.58	-9991	-8319	3467	1.93	1.93	-15394	13496	7293	35683	24273	4922	29195		8.42	Si
SLV 6	14.56	-37.59	-3498	-2913	2938	1.93	1.93	-5391	11495	6212	35683	24273	4922	29195		9.94	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.53	0	-307	217.86	0	0	No, e>t/2
SLV 7	179667	0.53	0	-61	217.86	0	0	No, e>t/2
SLV 11	179667	0.53	0	-420	217.86	0	0	No, e>t/2
SLV 12	179667	0.53	0	-666	217.86	0	0	No, e>t/2
SLV 3	179667	0.53	3643	-1969	217.86	269.06	1.24	Si
SLV 4	179667	0.53	4352	-2352	217.86	319.86	1.47	Si
SLV 15	179667	0.53	5859	-3166	217.86	426.26	1.96	Si
SLV 16	179667	0.53	6568	-3549	217.86	475.51	2.18	Si
SLV 1	179667	0.53	7442	-4022	217.86	535.62	2.46	Si
SLV 2	179667	0.53	8151	-4405	217.86	583.76	2.68	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-2528	-10228	-369	2.637	511	0.895	42.83047	12.56426	Si
SLV 9	-2505	-9754	-368	2.652	508.8	0.895	43.08171	12.56426	Si
SLV 6	-2403	-9683	-226	2.756	498.9	0.894	44.8189	12.56426	Si
SLV 5	-2380	-9209	-225	2.772	496.7	0.893	45.08955	12.56426	Si
SLV 12	-2074	578	223	3.003	467.6	0.891	48.98532	12.56426	Si, Trazione
SLV 11	-2051	1051	224	3.022	465.4	0.891	49.30044	12.56426	Si, Trazione
SLV 8	-1949	1123	366	3.069	455.8	0.89	50.10258	12.56426	Si, Trazione
SLV 7	-1926	1596	367	3.089	453.6	0.89	50.43505	12.56426	Si, Trazione
SLV 14	-2522	-7213	-328	2.651	510.4	0.895	43.05668	7.33323	Si
SLV 13	-2487	-6476	-328	2.674	507	0.894	43.45143	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.089	SLU 37	Si
V_SLU	15.705	SLU 36	Si
PF_SLV	0	SLV 7	No
V_SLV	5.3	SLV 11	Si
PFFP_SLV	0	SLV 7	No
R_SLV	3.409	SLV 10	Si

Maschio 196

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	5.826	L7	L8	9.14	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	11.86	-42.8	-37204	-0.0000221	0.0003743	0.0035	9.14	145743.88	176935.63	176935.63	4134.28	No	Si
SLU 80	15.02	-1659.63	-9042	-0.0000059	0.0003743	0.0035	9.14	39885.92	65273.9	65273.9	39.33	No	Si
SLU 36	11.86	-25.5	-32133	-0.000019	0.0003743	0.0035	9.14	128736.57	158090.29	158090.29	6200.35	No	Si
SLU 36	15.02	-1583.05	-8169	-0.0000053	0.0003743	0.0035	9.14	36161.79	61556.04	61556.04	38.88	No	Si
SLU 77	11.86	433.65	-37866	-0.0000226	0.0003743	0.0035	9.14	147898.12	154491.12	154491.12	356.25	No	Si
SLU 77	15.02	-1694.67	-8983	-0.0000058	0.0003743	0.0035	9.14	39638.61	65026.53	65026.53	38.37	No	Si
SLU 69	11.86	700.79	-35886	-0.0000215	0.0003743	0.0035	9.14	141412.55	147845.86	147845.86	210.97	No	Si
SLU 69	15.02	-1648.02	-8813	-0.0000057	0.0003743	0.0035	9.14	38914.28	64302.39	64302.39	39.02	No	Si
SLU 78	11.86	158.64	-37872	-0.0000225	0.0003743	0.0035	9.14	147919.27	154513.13	154513.13	973.98	No	Si
SLU 78	15.02	-1702.65	-8973	-0.0000058	0.0003743	0.0035	9.14	39595.02	64982.94	64982.94	38.17	No	Si
SLU 35	11.86	249.52	-32126	-0.0000191	0.0003743	0.0035	9.14	128714.11	135393.57	135393.57	542.63	No	Si
SLU 35	15.02	-1575.07	-8179	-0.0000053	0.0003743	0.0035	9.14	36205.66	61599.76	61599.76	39.11	No	Si
SLU 70	11.86	425.78	-35893	-0.0000214	0.0003743	0.0035	9.14	141434.15	147867.67	147867.67	347.29	No	Si
SLU 70	15.02	-1656	-8803	-0.0000057	0.0003743	0.0035	9.14	38870.64	64258.77	64258.77	38.8	No	Si
SLU 79	11.86	232.22	-37197	-0.0000222	0.0003743	0.0035	9.14	145722.57	152239.24	152239.24	655.6	No	Si
SLU 79	15.02	-1651.65	-9052	-0.0000059	0.0003743	0.0035	9.14	39929.48	65317.47	65317.47	39.55	No	Si
SLU 28	11.86	241.64	-30153	-0.0000179	0.0003743	0.0035	9.14	121852.91	128950.01	128950.01	533.65	No	Si
SLU 28	15.02	-1536.4	-7999	-0.0000052	0.0003743	0.0035	9.14	35432.61	60829.69	60829.69	39.59	No	Si
SLU 57	11.86	361.8	-34557	-0.0000206	0.0003743	0.0035	9.14	136981.24	143419.05	143419.05	396.4	No	Si
SLU 57	15.02	-1519.09	-7867	-0.0000051	0.0003743	0.0035	9.14	34866.5	60266.13	60266.13	39.67	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	11.86	47356.49	-24157	-0.000033	0.0005615	0.0035	9.14		108908.51	108908.51	2.3		Si
SLV 5	15.02	-7186.41	-4476	-0.0000053	0.0005615	0.0035	9.14		45526.92	45526.92	6.34		Si
SLD 10	11.86	23615.19	-24429	-0.0000233	0.0005615	0.0035	9.14		110027.09	110027.09	4.66		Si
SLD 10	15.02	-2974	-4143	-0.0000035	0.0005615	0.0035	9.14		44055.47	44055.47	14.81		Si
SLV 11	11.86	-50241.2	-24701	-0.0000348	0.0005615	0.0035	9.14		131668.63	131668.63	2.62		Si
SLV 11	15.02	6182.82	-4143	-0.0000047	0.0005615	0.0035	9.14		22708.19	22708.19	3.67		Si
SLV 12	11.86	-46862.01	-24709	-0.0000329	0.0005615	0.0035	9.14		131702.15	131702.15	2.81		Si
SLV 12	15.02	5837.94	-4142	-0.0000046	0.0005615	0.0035	9.14		22706.28	22706.28	3.89		Si
SLV 8	11.86	-49352.72	-24448	-0.0000342	0.0005615	0.0035	9.14		130614.11	130614.11	2.65		Si
SLV 8	15.02	4187.37	-4694	-0.0000043	0.0005615	0.0035	9.14		25159.79	25159.79	6.01		Si
SLV 10	11.86	53226.4	-24427	-0.0000365	0.0005615	0.0035	9.14		110018.57	110018.57	2.07		Si
SLV 10	15.02	-5880.73	-3925	-0.0000045	0.0005615	0.0035	9.14		43088.38	43088.38	7.33		Si
SLV 7	11.86	-52731.92	-24440	-0.0000362	0.0005615	0.0035	9.14		130580.62	130580.62	2.48		Si
SLV 7	15.02	4532.25	-4694	-0.0000044	0.0005615	0.0035	9.14		25161.7	25161.7	5.55		Si
SLV 6	11.86	50735.69	-24165	-0.0000349	0.0005615	0.0035	9.14		108941.66	108941.66	2.15		Si
SLV 6	15.02	-7531.3	-4476	-0.0000054	0.0005615	0.0035	9.14		45525.01	45525.01	6.04		Si
SLV 9	11.86	49847.21	-24419	-0.0000345	0.0005615	0.0035	9.14		109985.4	109985.4	2.21		Si
SLV 9	15.02	-5535.84	-3925	-0.0000043	0.0005615	0.0035	9.14		43090.29	43090.29	7.78		Si
SLV 15	11.86	-13243.78	-24905	-0.0000196	0.0005615	0.0035	9.14		132518.51	132518.51	10.01		Si
SLV 15	15.02	4102.83	-3424	-0.0000035	0.0005615	0.0035	9.14		19496.87	19496.87	4.75		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	11.86	835.57	-30950	-25773	1430	9.14	9.14	-10071	8287	21209	35683	76634	23307	56892	No	39.77	Si
SLU 45	15.02	-1117.78	-6194	-5158	1429	9.14	9.14	-2015	7213	18460	35683	76634	23307	54143	No	37.88	Si
SLU 58	11.86	435.37	-33882	-28214	1393	9.14	9.14	-11025	8414	21534	35683	76634	23307	57217	No	41.09	Si
SLU 58	15.02	-1468.09	-7946	-6616	1390	9.14	9.14	-2585	7289	18654	35683	76634	23307	54338	No	39.09	Si
SLU 49	11.86	628.93	-32578	-27128	1322	9.14	9.14	-10600	8358	21389	35683	76634	23307	57072	No	43.16	Si
SLU 49	15.02	-1472.44	-7697	-6409	1373	9.14	9.14	-2504	7278	18627	35683	76634	23307	54310	No	39.57	Si
SLU 77	11.86	433.65	-37866	-31531	1507	9.14	9.14	-12321	8587	21976	35683	76634	23307	57660	No	38.27	Si
SLU 77	15.02	-1694.67	-8983	-7481	1504	9.14	9.14	-2923	7334	18770	35683	76634	23307	54453	No	36.21	Si
SLU 56	11.86	636.81	-34551	-28771	1624	9.14	9.14	-11242	8443	21608	35683	76634	23307	57292	No	35.28	Si
SLU 56	15.02	-1511.11	-7877	-6559	1622	9.14	9.14	-2563	7286	18647	35683	76634	23307	54330	No	33.5	Si
SLU 53	11.86	568.43	-32930	-27421	1504	9.14	9.14	-10715	8373	21428	35683	76634	23307	57112	No	37.98	Si
SLU 53	15.02	-1164.43	-6364	-5299	1503	9.14	9.14	-2071	7221	18479	35683	76634	23307	54162	No	36.05	Si
SLU 74	11.86	365.28	-36245	-30181	1387	9.14	9.14	-11793	8517	21796	35683	76634	23307	57480	No	41.45	Si
SLU 74	15.02	-1347.99	-7470	-6220	1385	9.14	9.14	-2431	7269	18602	35683	76634	23307	54285	No	39.2	Si
SLU 48	11.86	903.95	-32571	-27123	1551	9.14	9.14	-10598	8358	21389	35683	76634	23307	57072	No	36.81	Si
SLU 48	15.02	-1464.46	-7707	-6418	1548	9.14	9.14	-2508	7279	18628	35683	76634	23307	54311	No	35.08	Si
SLU 57	11.86	361.8	-34557	-28776	1396	9.14	9.14	-11244	8444	21609	35683	76634	23307	57292	No	41.05	Si
SLU 57	15.02	-1519.09	-7867	-6551	1446	9.14	9.14	-2560	7286	18646	35683	76634	23307	54329	No	37.57	Si
SLU 69	11.86	700.79	-35886	-29883	1433	9.14	9.14	-11677	8501	21757	35683	76634	23307	57440	No	40.07	Si
SLU 69	15.02	-1648.02	-8813	-7339	1431	9.14	9.14	-2868	7327	18751	35683	76634	23307	54434	No	38.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	11.86	50735.69	-24165	-20123	37719	9.14	7.4115	-7863	11989	24880	35683	114951	23307	60563		1.61	Si
SLV 6	15.02	-7531.3	-4476	-3727	39272	9.14	8.6622	-1537	10724	26010	35683	114951	23307	61693		1.57	Si
SLV 5	11.86	47356.49	-24157	-20116	35252	9.14	7.829	-7860	11989	26281	35683	114951	23307	61964		1.76	Si
SLV 5	15.02	-7186.41	-4476	-3728	36804	9.14	8.8938	-1497	10716	26686	35683	114951	23307	62369		1.69	Si
SLV 7	11.86	-52731.92	-24440	-20351	-39023	9.14	7.2371	-10087	12434	25196	35683	114951	23307	60879		1.56	Si
SLV 7	15.02	4532.25	-4694	-3909	-40538	9.14	9.14	-1527	10722	27440	35683	114951	23307	63123		1.56	Si
SLV 9	11.86	49847.21	-24419	-20334	38129	9.14	7.586	-7945	12006	25501	35683	114951	23307	61184		1.6	Si
SLV 9	15.02	-5535.84	-3925	-3269	39642	9.14	9.14	-1277	10672	27312	35683	114951	23307	62995		1.59	Si
SLV 14	11.86	22040.65	-24833	-20679	18642	9.14	9.14	-8080	12033	30794	35683	114951	23307	66477		3.57	Si
SLV 14	15.02	50.6	-3358	-2796	19037	9.14	9.14	-1093	10635	27218	35683	114951	23307	62901		3.3	Si
SLV 12	11.86	-46862.01	-24709	-20576	-33679	9.14	8.0204	-9201	12257	27525	35683	114951	23307	63208		1.88	Si
SLV 12	15.02	5837.94	-4142	-3449	-35232	9.14	9.14	-1348	10686	27348	35683	114951	23307	63031		1.79	Si
SLV 10	11.86	53226.4	-24427	-20341	40596	9.14	7.173	-7948	12006	24114	35683	114951	23307	59797		1.47	Si
SLV 10	15.02	-5880.73	-3925	-3268	42110	9.14	9.14	-1277	10672	27312	35683	114951	23307	62995		1.5	Si
SLV 11	11.86	-50241.2	-24701	-20569	-36146	9.14	7.6081	-9698	12356	26322	35683	114951	23307	62005		1.72	Si
SLV 11	15.02	6182.82	-4143	-3450	-37700	9.14	9.14	-1348	10686	27348	35683	114951	23307	63031		1.67	Si
SLD 10	11.86	23615.19	-24429	-20342	18341	9.14	9.14	-7949	12006	30727	35683	114951	23307	66410		3.62	Si
SLD 10	15.02	-2974	-4143	-3450	19000	9.14	9.14	-1348	10686	27348	35683	114951	23307	63032		3.32	Si
SLV 8	11.86	-49352.72	-24448	-20358	-36555	9.14	7.6539	-9540	12325	26413	35683	114951	23307	62096		1.7	Si
SLV 8	15.02	4187.37	-4694	-3908	-38070	9.14	9.14	-1527	10722	27440	35683	114951	23307	63123		1.66	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.44 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.53	5589	-14304	1067.69	1929.26	1.81	Si
SLV 13	179667	0.53	5590	-14307	1067.69	1929.62	1.81	Si
SLV 16	179667	0.53	5650	-14458	1067.69	1949.28	1.83	Si
SLV 15	179667	0.53	5651	-14461	1067.69	1949.63	1.83	Si
SLV 10	179667	0.53	5688	-14558	1067.69	1962.19	1.84	Si
SLV 9	179667	0.53	5689	-14560	1067.69	1962.41	1.84	Si
SLV 6	179667	0.53	5834	-14929	1067.69	2010.28	1.88	Si
SLV 5	179667	0.53	5834	-14931	1067.69	2010.5	1.88	Si
SLV 12	179667	0.53	5889	-15072	1067.69	2028.74	1.9	Si
SLV 11	179667	0.53	5890	-15074	1067.69	2028.97	1.9	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.44 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-4694	-24440	-1496	4.234	1753.4	0.894	68.87432	12.56426	Si
SLV 8	-4694	-24448	-1497	4.235	1753.4	0.894	68.87642	12.56426	Si
SLV 5	-4476	-24157	-1332	4.326	1735.6	0.895	70.28319	12.56426	Si
SLV 6	-4476	-24165	-1332	4.326	1735.5	0.895	70.28536	12.56426	Si
SLV 11	-4143	-24701	1266	4.457	1708.7	0.896	72.25744	12.56426	Si
SLV 12	-4142	-24709	1266	4.457	1708.7	0.896	72.26014	12.56426	Si
SLV 9	-3925	-24419	1431	4.528	1691.5	0.898	73.29163	12.56426	Si
SLV 10	-3925	-24427	1431	4.528	1691.5	0.898	73.29439	12.56426	Si
SLV 3	-5261	-24033	-4662	3.793	1800.9	0.891	61.82916	7.33323	Si
SLV 4	-5260	-24046	-4663	3.793	1800.8	0.891	61.83199	7.33323	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	38.166	SLU 78	Si
V_SLU	33.504	SLU 56	Si
PF_SLV	2.067	SLV 10	Si
V_SLV	1.473	SLV 10	Si
PFFP_SLV	1.807	SLV 14	Si
R_SLV	5.482	SLV 7	Si

Maschio 198

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.314	-17.203	-3.314	L7	F1	0.87	0.28	3.224	3.224	3.225			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	11.86	-417.67	-5196	-0.0000518	0.0003743	0.0035	0.87	1786.83	2067.55	2067.55	4.95	No	Si
SLU 68	13.96	-16.29	-3766	-0.0000242	0.0003743	0.0035	0.87	1389.49	1602.79	1602.79	98.39	No	Si
SLU 70	11.86	-441.58	-5807	-0.0000572	0.0003743	0.0035	0.87	1934.57	2251.33	2251.33	5.1	No	Si
SLU 70	13.96	-60.62	-4370	-0.0000301	0.0003743	0.0035	0.87	1565.92	1805.19	1805.19	29.78	No	Si
SLU 66	11.86	-420.87	-5447	-0.0000537	0.0003743	0.0035	0.87	1849.1	2144.25	2144.25	5.09	No	Si
SLU 66	13.96	-38.16	-4018	-0.0000268	0.0003743	0.0035	0.87	1464.79	1688.66	1688.66	44.25	No	Si
SLU 72	11.86	-435.17	-5553	-0.0000551	0.0003743	0.0035	0.87	1874.72	2176.33	2176.33	5	No	Si
SLU 72	13.96	-41.72	-4117	-0.0000276	0.0003743	0.0035	0.87	1493.75	1722.12	1722.12	41.28	No	Si
SLU 67	11.86	-422.8	-5449	-0.0000538	0.0003743	0.0035	0.87	1849.55	2144.82	2144.82	5.07	No	Si
SLU 67	13.96	-36.38	-4018	-0.0000268	0.0003743	0.0035	0.87	1464.78	1688.65	1688.65	46.42	No	Si
SLU 44	11.86	-368.88	-4589	-0.0000454	0.0003743	0.0035	0.87	1626.85	1877.11	1877.11	5.09	No	Si
SLU 44	13.96	15.36	-3191	-0.0000205	0.0003743	0.0035	0.87	1209.39	1297.91	1297.91	84.51	No	Si
SLU 71	11.86	-433.24	-5551	-0.000055	0.0003743	0.0035	0.87	1874.28	2175.77	2175.77	5.02	No	Si
SLU 71	13.96	-43.5	-4118	-0.0000277	0.0003743	0.0035	0.87	1493.76	1722.14	1722.14	39.59	No	Si
SLU 64	11.86	-395.68	-4836	-0.0000483	0.0003743	0.0035	0.87	1693.34	1955.4	1955.4	4.94	No	Si
SLU 64	13.96	4.98	-3415	-0.0000215	0.0003743	0.0035	0.87	1280.93	1366.94	1366.94	274.32	No	Si
SLU 65	11.86	-398.89	-4839	-0.0000485	0.0003743	0.0035	0.87	1694.15	1956.36	1956.36	4.9	No	Si
SLU 65	13.96	7.95	-3415	-0.0000216	0.0003743	0.0035	0.87	1280.91	1366.92	1366.92	171.9	No	Si
SLU 23	11.86	-322.42	-3846	-0.0000382	0.0003743	0.0035	0.87	1413.61	1630.13	1630.13	5.06	No	Si
SLU 23	13.96	3.14	-2738	-0.0000171	0.0003743	0.0035	0.87	1059.39	1141.6	1141.6	363.67	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	11.86	-1465.49	-2599	-0.0024614	0.0005615	0.0035	0.696		1211.85	1211.85	0.83		No
SLV 16	13.96	1274.87	-570	-0.028746	0.0005615	0.0035	0.696		291.76	291.76	0.23		No
SLV 15	11.86	-1503.38	-2588	-0.0027894	0.0005615	0.0035	0.696		1207.49	1207.49	0.8		No
SLV 15	13.96	1317.45	-526	-0.0305134	0.0005615	0.0035	0.696		273.19	273.19	0.21		No
SLV 14	11.86	-1463.02	-2897	-0.001767	0.0005615	0.0035	0.696		1327.94	1327.94	0.91		No
SLV 14	13.96	1221.64	-791	-0.0245382	0.0005615	0.0035	0.696		384.89	384.89	0.32		No
SLV 13	11.86	-1500.92	-2886	-0.0020437	0.0005615	0.0035	0.696		1323.61	1323.61	0.88		No
SLV 13	13.96	1264.21	-747	-0.0262564	0.0005615	0.0035	0.696		366.5	366.5	0.29		No
SLD 13	11.86	-805.75	-3315	-0.000063	0.0005615	0.0035	0.87		1486.27	1486.27	1.84		Si
SLD 13	13.96	534.95	-1790	-0.0000474	0.0005615	0.0035	0.87		795.35	795.35	1.49		Si
SLD 16	11.86	-790.65	-3190	-0.0000621	0.0005615	0.0035	0.87		1439.4	1439.4	1.82		Si
SLD 16	13.96	540.08	-1712	-0.0000518	0.0005615	0.0035	0.87		763.74	763.74	1.41		Si
SLD 15	11.86	-806.92	-3185	-0.000064	0.0005615	0.0035	0.87		1437.62	1437.62	1.78		Si
SLD 15	13.96	558.36	-1693	-0.0000585	0.0005615	0.0035	0.87		756.14	756.14	1.35		Si
SLV 1	11.86	892	-4667	-0.0000702	0.0005615	0.0035	0.87		1881.68	1881.68	2.11		Si
SLV 1	13.96	-1293.06	-4565	-0.0001141	0.0005615	0.0035	0.696		1945.41	1945.41	1.5		Si
SLV 4	11.86	927.43	-4381	-0.0000721	0.0005615	0.0035	0.87		1784.08	1784.08	1.92		Si
SLV 4	13.96	-1282.4	-4387	-0.0001168	0.0005615	0.0035	0.696		1881.72	1881.72	1.47		Si
SLV 2	11.86	929.9	-4678	-0.0000728	0.0005615	0.0035	0.87		1885.21	1885.21	2.03		Si
SLV 2	13.96	-1335.64	-4609	-0.000121	0.0005615	0.0035	0.696		1960.89	1960.89	1.47		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	11.86	-382.27	-5337	-4444	-723	0.87	0.87	-18245	9377	2284	35683	7294	2219	9513	No	13.17	Si
SLU 74	13.96	-89.11	-3982	-3316	113	0.87	0.87	-13613	8760	2134	35683	7294	2219	9513	No	84.19	Si
SLU 69	11.86	-439.65	-5805	-4834	-754	0.87	0.87	-19844	9590	2336	35683	7294	2219	9513	No	12.62	Si
SLU 69	13.96	-62.41	-4370	-3639	44	0.87	0.87	-14937	8936	2177	35683	7294	2219	9513	No	216.54	Si
SLU 70	11.86	-441.58	-5807	-4835	-755	0.87	0.87	-19850	9591	2336	35683	7294	2219	9513	No	12.6	Si
SLU 70	13.96	-60.62	-4370	-3639	41	0.87	0.87	-14937	8936	2177	35683	7294	2219	9513	No	233.74	Si
SLU 72	11.86	-435.17	-5553	-4624	-737	0.87	0.87	-18982	9475	2308	35683	7294	2219	9513	No	12.91	Si
SLU 72	13.96	-41.72	-4117	-3429	21	0.87	0.87	-14075	8821	2149	35683	7294	2219	9513	No	453.75	Si
SLU 80	11.86	-396.57	-5443	-4533	-744	0.87	0.87	-18607	9425	2296	35683	7294	2219	9513	No	12.79	Si
SLU 80	13.96	-92.67	-4082	-3399	113	0.87	0.87	-13952	8805	2145	35683	7294	2219	9513	No	84.24	Si
SLU 78	11.86	-402.98	-5697	-4744	-762	0.87	0.87	-19474	9541	2324	35683	7294	2219	9513	No	12.49	Si
SLU 78	13.96	-111.57	-4334	-3609	133	0.87	0.87	-14814	8920	2173	35683	7294	2219	9513	No	71.71	Si
SLU 75	11.86	-384.2	-5339	-4446	-723	0.87	0.87	-18251	9378	2284	35683	7294	2219	9513	No	13.15	Si
SLU 75	13.96	-87.33	-3982	-3316	110	0.87	0.87	-13613	8760	2134	35683	7294	2219	9513	No	86.67	Si
SLU 79	11.86	-394.64	-5441	-4531	-743	0.87	0.87	-18600	9424	2296	35683	7294	2219	9513	No	12.8	Si
SLU 79	13.96	-94.45	-4082	-3399	116	0.87	0.87	-13952	8805	2145	35683	7294	2219	9513	No	81.9	Si
SLU 71	11.86	-433.24	-5551	-4623	-736	0.87	0.87	-18976	9475	2308	35683	7294	2219	9513	No	12.93	Si
SLU 71	13.96	-43.5	-4118	-3429	24	0.87	0.87	-14075	8821	2149	35683	7294	2219	9513	No	393.12	Si
SLU 77	11.86	-401.06	-5695	-4742	-761	0.87	0.87	-19468	9540	2324	35683	7294	2219	9513	No	12.5	Si
SLU 77	13.96	-113.35	-4334	-3609	136	0.87	0.87	-14815	8920	2173	35683	7294	2219	9513	No	70.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	11.86	-1500.92	-2886	-2403	-1362	0.696	0	0	0	0	35683	8753	1775	10528		7.73	Si
SLV 13	13.96	1264.21	-747	-622	-1661	0.696	0	0	0	0	35683	8753	1775	10528		6.34	Si
SLV 2	11.86	929.9	-4678	-3896	350	0.87	0.7087	-15993	13615	2702	35683	10942	2219	13160		37.55	Si
SLV 2	13.96	-1335.64	-4609	-3838	1801	0.696	0.4356	0	0	0	35683	8753	1775	10528		5.84	Si
SLV 14	11.86	-1463.02	-2897	-2412	-1342	0.696	0	0	0	0	35683	8753	1775	10528		7.85	Si
SLV 14	13.96	1221.64	-791	-659	-1598	0.696	0	0	0	0	35683	8753	1775	10528		6.59	Si
SLV 3	11.86	889.53	-4370	-3639	351	0.87	0.6943	-14938	13404	2606	35683	10942	2219	13160		37.46	Si
SLV 3	13.96	-1239.83	-4343	-3617	1611	0.696	0.4486	0	0	0	35683	8753	1775	10528		6.53	Si
SLD 14	11.86	-789.48	-3320	-2765	-857	0.87	0.5916	-16825	13782	2283	35683	10942	2219	13160		15.35	Si
SLD 14	13.96	516.67	-1809	-1507	-678	0.87	0.4483	-6185	11654	1463	35683	10942	2219	13160		19.4	Si
SLV 1	11.86	892	-4667	-3887	330	0.87	0.7317	-15955	13608	2788	35683	10942	2219	13160		39.87	Si
SLV 1	13.96	-1293.06	-4565	-3801	1738	0.696	0.4552	0	0	0	35683	8753	1775	10528		6.06	Si
SLV 15	11.86	-1503.38	-2588	-2155	-1341	0.696	0	0	0	0	35683	8753	1775	10528		7.85	Si
SLV 15	13.96	1317.45	-526	-438	-1788	0.696	0	0	0	0	35683	8753	1775	10528		5.89	Si
SLV 4	11.86	927.43	-4381	-3648	372	0.87	0.6699	-14976	13412	2516	35683	10942	2219	13160		35.42	Si
SLV 4	13.96	-1282.4	-4387	-3653	1674	0.696	0.4281	0	0	0	35683	8753	1775	10528		6.29	Si
SLD 13	11.86	-805.75	-3315	-2761	-866	0.87	0.5758	-17263	13870	2236	35683	10942	2219	13160		15.2	Si
SLD 13	13.96	534.95	-1790	-1491	-705	0.87	0.4087	-6121	11641	1332	35683	10942	2219	13160		18.65	Si
SLV 16	11.86	-1465.49	-2599	-2165	-1321	0.696	0	0	0	0	35683	8753	1775	10528		7.97	Si
SLV 16	13.96	1274.87	-570	-474	-1725	0.696	0	0	0	0	35683	8753	1775	10528		6.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.472 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.53	3818	-930	102.36	126.97	1.24	Si
SLV 16	179667	0.53	3972	-967	102.36	131.92	1.29	Si
SLV 13	179667	0.53	4454	-1085	102.36	147.46	1.44	Si
SLV 14	179667	0.53	4607	-1122	102.36	152.37	1.49	Si
SLV 11	179667	0.53	8224	-2003	102.36	265.38	2.59	Si
SLV 12	179667	0.53	8323	-2027	102.36	268.37	2.62	Si
SLV 9	179667	0.53	10342	-2519	102.36	328.81	3.21	Si
SLV 10	179667	0.53	10440	-2543	102.36	331.71	3.24	Si
SLV 7	179667	0.53	12613	-3072	102.36	394.62	3.86	Si
SLV 8	179667	0.53	12711	-3096	102.36	397.42	3.88	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.472 Wa = 0.05 Ta = 0.062

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-1674	-3858	-66	2.081	285	0.905	33.39803	13.18184	Si
SLV 10	-1655	-3866	-66	2.098	283.1	0.905	33.68361	13.18184	Si
SLV 5	-1335	-4393	-74	2.416	251.7	0.898	39.08773	13.18184	Si
SLV 11	-1323	-2867	73	2.43	250.5	0.898	39.33226	13.18184	Si
SLV 6	-1315	-4400	-74	2.439	249.8	0.898	39.47651	13.18184	Si
SLV 12	-1303	-2874	73	2.454	248.6	0.898	39.72502	13.18184	Si
SLV 7	-983	-3401	65	2.915	217.8	0.892	47.52044	13.18184	Si
SLV 8	-963	-3408	65	2.949	215.9	0.891	48.08352	13.18184	Si
SLV 13	-1953	-2886	-8	1.889	312.7	0.911	30.13483	7.52282	Si
SLV 14	-1923	-2897	-8	1.911	309.7	0.911	30.49501	7.52282	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.904	SLU 65	Si
V_SLU	12.487	SLU 78	Si
PF_SLV	0.207	SLV 15	No
V_SLV	5.844	SLV 2	Si
PFFP_SLV	1.24	SLV 15	Si
R_SLV	2.534	SLV 9	Si

Maschio 199

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L7	F1	1.655	0.28	3.222	3.222	3.223			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 66	11.86	-767.22	-5687	-0.0000277	0.0003743	0.0035	1.655	4138.99	4961.7	4961.7	6.47	No	Si
SLU 66	13.96	1765.77	-6645	-0.0000432	0.0003743	0.0035	1.655	4724.11	4946.38	4946.38	2.8	No	Si
SLU 68	11.86	-751.22	-5482	-0.0000268	0.0003743	0.0035	1.655	4009.13	4819.05	4819.05	6.41	No	Si
SLU 68	13.96	1665.94	-6273	-0.0000407	0.0003743	0.0035	1.655	4500.95	4719.95	4719.95	2.83	No	Si
SLU 67	11.86	-769.81	-5700	-0.0000278	0.0003743	0.0035	1.655	4147.1	4970.7	4970.7	6.46	No	Si
SLU 67	13.96	1767.05	-6654	-0.0000433	0.0003743	0.0035	1.655	4729.69	4952.13	4952.13	2.8	No	Si
SLU 72	11.86	-756.14	-5843	-0.0000281	0.0003743	0.0035	1.655	4236.56	5070.4	5070.4	6.71	No	Si
SLU 72	13.96	1786.85	-6831	-0.0000441	0.0003743	0.0035	1.655	4834.29	5060.88	5060.88	2.83	No	Si
SLU 64	11.86	-740.26	-5090	-0.0000253	0.0003743	0.0035	1.655	3757.57	4549.94	4549.94	6.15	No	Si
SLU 64	13.96	1542.05	-5694	-0.0000371	0.0003743	0.0035	1.655	4142.97	4371.08	4371.08	2.83	No	Si
SLU 65	11.86	-744.57	-5111	-0.0000255	0.0003743	0.0035	1.655	3771.53	4564.63	4564.63	6.13	No	Si
SLU 65	13.96	1544.18	-5709	-0.0000372	0.0003743	0.0035	1.655	4152.78	4380.42	4380.42	2.84	No	Si
SLU 69	11.86	-773.87	-6058	-0.0000291	0.0003743	0.0035	1.655	4369.11	5217.42	5217.42	6.74	No	Si
SLU 69	13.96	1887.53	-7209	-0.0000467	0.0003743	0.0035	1.655	5053.78	5294.62	5294.62	2.81	No	Si
SLU 48	11.86	-643.39	-5886	-0.0000269	0.0003743	0.0035	1.655	4263.33	5100.11	5100.11	7.93	No	Si
SLU 48	13.96	1752.25	-6690	-0.0000432	0.0003743	0.0035	1.655	4750.78	4973.92	4973.92	2.84	No	Si
SLU 70	11.86	-776.46	-6071	-0.0000291	0.0003743	0.0035	1.655	4377.05	5226.23	5226.23	6.73	No	Si
SLU 70	13.96	1888.81	-7218	-0.0000468	0.0003743	0.0035	1.655	5059.17	5300.46	5300.46	2.81	No	Si
SLU 71	11.86	-753.55	-5830	-0.000028	0.0003743	0.0035	1.655	4228.52	5061.46	5061.46	6.72	No	Si
SLU 71	13.96	1785.57	-6822	-0.0000441	0.0003743	0.0035	1.655	4828.77	5055.1	5055.1	2.83	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 15	11.86	-1767.4	-3137	-0.0000425	0.0005615	0.0035	1.324		3175.36	3175.36	1.8		Si
SLD 15	13.96	2060.28	-5325	-0.0000434	0.0005615	0.0035	1.655		4309.44	4309.44	2.09		Si
SLV 13	11.86	-3313.31	-953	-0.0024828	0.0005615	0.0035	1.324		1464.75	1464.75	0.44		No
SLV 13	13.96	3124.31	-6004	-0.0000718	0.0005615	0.0035	1.655		4804.79	4804.79	1.54		Si
SLV 9	11.86	-1226.54	-1025	-0.0003017	0.0005615	0.0035	1.324		1521.79	1521.79	1.24		Si
SLV 9	13.96	1476.26	-3581	-0.0000307	0.0005615	0.0035	1.655		3003.72	3003.72	2.03		Si
SLD 16	11.86	-1741.05	-3171	-0.0000408	0.0005615	0.0035	1.324		3200.95	3200.95	1.84		Si
SLD 16	13.96	2026.45	-5300	-0.0000428	0.0005615	0.0035	1.655		4290.98	4290.98	2.12		Si
SLD 14	11.86	-1695.44	-2615	-0.0000521	0.0005615	0.0035	1.324		2773.95	2773.95	1.64		Si
SLD 14	13.96	1949.11	-4955	-0.0000409	0.0005615	0.0035	1.655		4037.12	4037.12	2.07		Si
SLV 14	11.86	-3251.94	-1031	-0.0023011	0.0005615	0.0035	1.324		1527.19	1527.19	0.47		No
SLV 14	13.96	3045.52	-5945	-0.0000691	0.0005615	0.0035	1.655		4762.59	4762.59	1.56		Si
SLV 16	11.86	-3352.69	-2294	-0.0014161	0.0005615	0.0035	1.324		2524	2524	0.75		No
SLV 16	13.96	3221.73	-6728	-0.0000708	0.0005615	0.0035	1.655		5323.98	5323.98	1.65		Si
SLV 15	11.86	-3414.06	-2216	-0.0015411	0.0005615	0.0035	1.324		2463.15	2463.15	0.72		No
SLV 15	13.96	3300.52	-6787	-0.0000731	0.0005615	0.0035	1.655		5365.55	5365.55	1.63		Si
SLD 13	11.86	-1721.79	-2581	-0.0000573	0.0005615	0.0035	1.324		2747.83	2747.83	1.6		Si
SLD 13	13.96	1982.94	-4980	-0.0000416	0.0005615	0.0035	1.655		4055.75	4055.75	2.05		Si
SLV 10	11.86	-1187.1	-1075	-0.0002582	0.0005615	0.0035	1.324		1561.75	1561.75	1.32		Si
SLV 10	13.96	1425.61	-3543	-0.0000296	0.0005615	0.0035	1.655		2974.99	2974.99	2.09		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 66	11.86	-767.22	-5687	-4736	-2466	1.655	1.655	-10220	8307	3850	35683	13876	4220	18097	No	7.34	Si
SLU 66	13.96	1765.77	-6645	-5533	-2462	1.655	1.655	-11940	8536	3956	35683	13876	4220	18097	No	7.35	Si
SLU 79	11.86	-735.11	-5597	-4660	-2473	1.655	1.655	-10057	8285	3839	35683	13876	4220	18097	No	7.32	Si
SLU 79	13.96	1701.51	-6679	-5562	-2460	1.655	1.655	-12002	8545	3960	35683	13876	4220	18097	No	7.36	Si
SLU 69	11.86	-773.87	-6058	-5044	-2604	1.655	1.655	-10885	8396	3891	35683	13876	4220	18097	No	6.95	Si
SLU 69	13.96	1887.53	-7209	-6003	-2597	1.655	1.655	-12953	8672	4018	35683	13876	4220	18097	No	6.97	Si
SLU 70	11.86	-776.46	-6071	-5055	-2605	1.655	1.655	-10908	8399	3892	35683	13876	4220	18097	No	6.95	Si
SLU 70	13.96	1888.81	-7218	-6011	-2597	1.655	1.655	-12970	8674	4019	35683	13876	4220	18097	No	6.97	Si
SLU 71	11.86	-753.55	-5830	-4855	-2483	1.655	1.655	-10477	8341	3865	35683	13876	4220	18097	No	7.29	Si
SLU 71	13.96	1785.57	-6822	-5680	-2475	1.655	1.655	-12258	8579	3975	35683	13876	4220	18097	No	7.31	Si
SLU 67	11.86	-769.81	-5700	-4747	-2467	1.655	1.655	-10243	8310	3851	35683	13876	4220	18097	No	7.34	Si
SLU 67	13.96	1767.05	-6654	-5541	-2462	1.655	1.655	-11957	8539	3957	35683	13876	4220	18097	No	7.35	Si
SLU 77	11.86	-755.43	-5824	-4850	-2594	1.655	1.655	-10465	8340	3865	35683	13876	4220	18097	No	6.98	Si
SLU 77	13.96	1803.48	-7066	-5884	-2582	1.655	1.655	-12698	8637	4003	35683	13876	4220	18097	No	7.01	Si
SLU 80	11.86	-737.7	-5610	-4671	-2473	1.655	1.655	-10080	8288	3841	35683	13876	4220	18097	No	7.32	Si
SLU 80	13.96	1702.79	-6689	-5570	-2461	1.655	1.655	-12019	8547	3961	35683	13876	4220	18097	No	7.35	Si
SLU 72	11.86	-756.14	-5843	-4866	-2484	1.655	1.655	-10500	8344	3867	35683	13876	4220	18097	No	7.29	Si
SLU 72	13.96	1786.85	-6831	-5688	-2475	1.655	1.655	-12275	8581	3977	35683	13876	4220	18097	No	7.31	Si
SLU 78	11.86	-758.02	-5837	-4860	-2594	1.655	1.655	-10488	8343	3866	35683	13876	4220	18097	No	6.98	Si
SLU 78	13.96	1804.76	-7076	-5892	-2582	1.655	1.655	-12715	8640	4004	35683	13876	4220	18097	No	7.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	11.86	-3251.94	-1031	-859	-6130	1.324	0	0	0	0	35683	16652	3376	20028		3.27	Si
SLV 14	13.96	3045.52	-5945	-4951	-4836	1.655	0.9457	-10683	12553	3324	35683	20815	4220	25035		5.18	Si
SLV 13	11.86	-3313.31	-953	-794	-6251	1.324	0	0	0	0	35683	16652	3376	20028		3.2	Si
SLV 13	13.96	3124.31	-6004	-4999	-4957	1.655	0.9213	-10788	12574	3244	35683	20815	4220	25035		5.05	Si
SLV 10	11.86	-1187.1	-1075	-895	-3088	1.324	0	0	0	0	35683	16652	3376	20028		6.49	Si
SLV 10	13.96	1425.61	-3543	-2950	-2786	1.655	1.2755	-6367	11690	4175	35683	20815	4220	25035		8.99	Si
SLV 9	11.86	-1226.54	-1025	-853	-3165	1.324	0	0	0	0	35683	16652	3376	20028		6.33	Si
SLV 9	13.96	1476.26	-3581	-2982	-2864	1.655	1.2458	-6435	11704	4082	35683	20815	4220	25035		8.74	Si
SLD 13	11.86	-1721.79	-2581	-2150	-3608	1.324	0.4815	0	0	0	35683	16652	3376	20028		5.55	Si
SLD 13	13.96	1982.94	-4980	-4147	-3054	1.655	1.2881	-8950	12207	4402	35683	20815	4220	25035		8.2	Si
SLD 16	11.86	-1741.05	-3171	-2640	-3521	1.324	0.8352	0	0	0	35683	16652	3376	20028		5.69	Si
SLD 16	13.96	2026.45	-5300	-4414	-2941	1.655	1.3355	-9524	12321	4608	35683	20815	4220	25035		8.51	Si
SLD 15	11.86	-1767.4	-3137	-2612	-3573	1.324	0.7924	0	0	0	35683	16652	3376	20028		5.61	Si
SLD 15	13.96	2060.28	-5325	-4434	-2993	1.655	1.3219	-9569	12331	4564	35683	20815	4220	25035		8.36	Si
SLD 14	11.86	-1695.44	-2615	-2177	-3556	1.324	0.5374	0	0	0	35683	16652	3376	20028		5.63	Si
SLD 14	13.96	1949.11	-4955	-4126	-3002	1.655	1.3025	-8904	12198	4448	35683	20815	4220	25035		8.34	Si
SLV 15	11.86	-3414.06	-2216	-1846	-6169	1.324	0	0	0	0	35683	16652	3376	20028		3.25	Si
SLV 15	13.96	3300.52	-6787	-5652	-4816	1.655	1.0236	-12196	12856	3685	35683	20815	4220	25035		5.2	Si
SLV 16	11.86	-3352.69	-2294	-1911	-6048	1.324	0	0	0	0	35683	16652	3376	20028		3.31	Si
SLV 16	13.96	3221.73	-6728	-5603	-4696	1.655	1.046	-12090	12835	3759	35683	20815	4220	25035		5.33	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.471 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.53	4615	-2138	194.49	290.34	1.49	Si
SLV 2	179667	0.53	4615	-2139	194.49	290.37	1.49	Si
SLV 5	179667	0.53	4669	-2164	194.49	293.64	1.51	Si
SLV 1	179667	0.53	4699	-2178	194.49	295.5	1.52	Si
SLV 10	179667	0.53	6664	-3088	194.49	413.46	2.13	Si
SLV 4	179667	0.53	6678	-3094	194.49	414.27	2.13	Si
SLV 9	179667	0.53	6718	-3113	194.49	416.67	2.14	Si
SLV 3	179667	0.53	6762	-3133	194.49	419.26	2.16	Si
SLV 14	179667	0.53	11446	-5304	194.49	686.9	3.53	Si
SLV 8	179667	0.53	11489	-5324	194.49	689.31	3.54	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.471 Wa = 0.05 Ta = 0.0619

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2469	-6597	-9	2.494	471.8	0.898	40.38644	13.16262	Si
SLV 7	-2459	-6547	-9	2.501	470.9	0.897	40.49384	13.16262	Si
SLV 12	-2407	-5285	3	2.537	465.8	0.897	41.10553	13.16262	Si
SLV 11	-2397	-5235	3	2.543	464.8	0.897	41.21597	13.16262	Si
SLV 6	-2054	-2387	-3	2.796	431.7	0.893	45.49363	13.16262	Si
SLV 5	-2044	-2337	-3	2.804	430.8	0.893	45.62837	13.16262	Si
SLV 10	-1991	-1075	10	2.846	425.7	0.893	46.32941	13.16262	Si
SLV 9	-1981	-1025	10	2.854	424.8	0.893	46.46827	13.16262	Si
SLV 4	-2399	-6669	-22	2.537	465	0.897	41.1104	7.51689	Si
SLV 3	-2384	-6591	-22	2.547	463.6	0.897	41.28377	7.51689	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.801	SLU 66	Si
V_SLU	6.948	SLU 70	Si
PF_SLV	0.442	SLV 13	No
V_SLV	3.204	SLV 13	Si
PFFP_SLV	1.493	SLV 6	Si
R_SLV	3.068	SLV 8	Si

Maschio 201

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.454	L7	F1	1.369	0.28	2.766	2.389	3.144			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 35	11.86	-390.36	-4661	-0.0000252	0.0003743	0.0035	1.3693	2809.98	3388.39	3388.39	8.68	No	Si
SLU 35	14.25	276.25	-722	-0.0000084	0.0003743	0.0035	1.3693	484.9	588.23	588.23	2.13	No	Si
SLU 28	11.86	-342.03	-4562	-0.0000239	0.0003743	0.0035	1.3693	2758.42	3331.95	3331.95	9.74	No	Si
SLU 28	14.25	269.19	-668	-0.0000083	0.0003743	0.0035	1.3693	449.33	552.38	552.38	2.05	No	Si
SLU 30	11.86	-334.87	-4492	-0.0000235	0.0003743	0.0035	1.3693	2721.68	3292.09	3292.09	9.83	No	Si
SLU 30	14.25	262.16	-614	-0.0000084	0.0003743	0.0035	1.3693	414.09	516.98	516.98	1.97	No	Si
SLU 38	11.86	-392.52	-4619	-0.000025	0.0003743	0.0035	1.3693	2788.38	3364.67	3364.67	8.57	No	Si
SLU 38	14.25	273.19	-679	-0.0000084	0.0003743	0.0035	1.3693	457.06	560.16	560.16	2.05	No	Si
SLU 9	11.86	-257.65	-4057	-0.0000204	0.0003743	0.0035	1.3693	2488.96	3043.58	3043.58	11.81	No	Si
SLU 9	14.25	211.13	-515	-0.0000066	0.0003743	0.0035	1.3693	347.97	450.87	450.87	2.14	No	Si
SLU 29	11.86	-325.55	-4464	-0.0000232	0.0003743	0.0035	1.3693	2706.66	3275.91	3275.91	10.06	No	Si
SLU 29	14.25	258.19	-603	-0.0000082	0.0003743	0.0035	1.3693	406.77	509.64	509.64	1.97	No	Si
SLU 27	11.86	-332.71	-4534	-0.0000236	0.0003743	0.0035	1.3693	2743.47	3315.7	3315.7	9.97	No	Si
SLU 27	14.25	265.23	-657	-0.0000082	0.0003743	0.0035	1.3693	442.03	545.04	545.04	2.05	No	Si
SLU 37	11.86	-383.2	-4591	-0.0000248	0.0003743	0.0035	1.3693	2773.49	3348.38	3348.38	8.74	No	Si
SLU 37	14.25	269.22	-668	-0.0000083	0.0003743	0.0035	1.3693	449.76	552.81	552.81	2.05	No	Si
SLU 8	11.86	-248.33	-4028	-0.0000201	0.0003743	0.0035	1.3693	2473.51	3027.08	3027.08	12.19	No	Si
SLU 8	14.25	207.17	-504	-0.0000065	0.0003743	0.0035	1.3693	340.6	443.53	443.53	2.14	No	Si
SLU 36	11.86	-399.69	-4689	-0.0000254	0.0003743	0.0035	1.3693	2824.81	3404.73	3404.73	8.52	No	Si
SLU 36	14.25	280.22	-733	-0.0000085	0.0003743	0.0035	1.3693	492.18	595.58	595.58	2.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	11.86	785.67	-878	-0.001669	0.0005615	0.0035	1.0955		694.75	694.75	0.88		No
SLV 5	14.25	-285.41	905	0.1106319	0.0005615	0.0035	1.0955		0	0	0		No
SLV 2	11.86	402.19	-3130	-0.000019	0.0005615	0.0035	1.3693		2151.76	2151.76	5.35		Si
SLV 2	14.25	-143.31	328	0.0403484	0.0005615	0.0035	1.0955		0	0	0		No
SLV 16	11.86	-858.05	-4294	-0.0000314	0.0005615	0.0035	1.3693		3245.24	3245.24	3.78		Si
SLV 16	14.25	392.24	-1419	-0.0000122	0.0005615	0.0035	1.3693		1052.17	1052.17	2.68		Si
SLV 1	11.86	400.08	-3077	-0.0000187	0.0005615	0.0035	1.3693		2119.19	2119.19	5.3		Si
SLV 1	14.25	-148.05	329	0.0405133	0.0005615	0.0035	1.0955		0	0	0		No
SLD 5	11.86	217.55	-2444	-0.0000131	0.0005615	0.0035	1.3693		1716.68	1716.68	7.89		Si
SLD 5	14.25	-57.45	93	0.0116483	0.0005615	0.0035	1.0955		0	0	0		No
SLV 6	11.86	787.02	-912	-0.0014571	0.0005615	0.0035	1.0955		717.08	717.08	0.91		No
SLV 6	14.25	-282.37	904	0.1105237	0.0005615	0.0035	1.0955		0	0	0		No
SLV 10	11.86	572.39	-743	-0.0005309	0.0005615	0.0035	1.0955		604.76	604.76	1.06		Si
SLV 10	14.25	-186.12	615	0.0750865	0.0005615	0.0035	1.0955		0	0	0		No
SLD 6	11.86	218.14	-2459	-0.0000132	0.0005615	0.0035	1.3693		1725.99	1725.99	7.91		Si
SLD 6	14.25	-56.11	93	0.0116048	0.0005615	0.0035	1.0955		0	0	0		No
SLV 12	11.86	-1243.64	-6493	-0.0000472	0.0005615	0.0035	1.3693		4542.99	4542.99	3.65		Si
SLV 12	14.25	529.6	-1994	-0.0000168	0.0005615	0.0035	1.3693		1426.83	1426.83	2.69		Si
SLV 9	11.86	571.04	-710	-0.0006641	0.0005615	0.0035	1.0955		582.38	582.38	1.02		Si
SLV 9	14.25	-189.16	615	0.0751951	0.0005615	0.0035	1.0955		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	11.86	-421.03	-5569	-4637	-1674	1.3693	1.3693	-12095	8557	3281	30925	11481	3492	14973	No	8.94	Si
SLU 77	14.25	290.07	-837	-697	-1720	1.3693	1.0141	-1817	7187	2041	30925	11481	3492	14973	No	8.7	Si
SLU 79	11.86	-413.86	-5499	-4579	-1553	1.3693	1.3693	-11943	8537	3273	30925	11481	3492	14973	No	9.64	Si
SLU 79	14.25	283.03	-784	-653	-1673	1.3693	0.9704	-1702	7171	1949	30925	11481	3492	14973	No	8.95	Si
SLU 78	11.86	-430.35	-5597	-4661	-1713	1.3693	1.3693	-12157	8565	3284	30925	11481	3492	14973	No	8.74	Si
SLU 78	14.25	294.04	-848	-706	-1752	1.3693	1.0136	-1841	7190	2041	30925	11481	3492	14973	No	8.54	Si
SLU 37	11.86	-383.2	-4591	-3823	-1458	1.3693	1.3693	-9971	8274	3172	30925	11481	3492	14973	No	10.27	Si
SLU 37	14.25	269.22	-668	-557	-1656	1.3693	0.8456	-1452	7138	1690	30925	11481	3492	14973	No	9.04	Si
SLU 84	11.86	-418.96	-5330	-4439	-1628	1.3693	1.3693	-11576	8488	3254	30925	11481	3492	14973	No	9.2	Si
SLU 84	14.25	240.33	-819	-682	-1466	1.3693	1.1741	-1780	7182	2361	30925	11481	3492	14973	No	10.22	Si
SLU 75	11.86	-401.41	-5346	-4451	-1645	1.3693	1.3693	-11610	8492	3256	30925	11481	3492	14973	No	9.1	Si
SLU 75	14.25	242.64	-845	-704	-1443	1.3693	1.1924	-1835	7189	2400	30925	11481	3492	14973	No	10.38	Si
SLU 38	11.86	-392.52	-4619	-3847	-1497	1.3693	1.3693	-10032	8282	3175	30925	11481	3492	14973	No	10	Si
SLU 38	14.25	273.19	-679	-566	-1688	1.3693	0.8477	-1476	7141	1695	30925	11481	3492	14973	No	8.87	Si
SLU 35	11.86	-390.36	-4661	-3881	-1579	1.3693	1.3693	-10122	8294	3180	30925	11481	3492	14973	No	9.48	Si
SLU 35	14.25	276.25	-722	-601	-1704	1.3693	0.9054	-1567	7153	1814	30925	11481	3492	14973	No	8.79	Si
SLU 36	11.86	-399.69	-4689	-3905	-1618	1.3693	1.3693	-10184	8302	3183	30925	11481	3492	14973	No	9.25	Si
SLU 36	14.25	280.22	-733	-610	-1736	1.3693	0.9065	-1591	7157	1816	30925	11481	3492	14973	No	8.63	Si
SLU 80	11.86	-423.19	-5528	-4603	-1593	1.3693	1.3693	-12005	8545	3276	30925	11481	3492	14973	No	9.4	Si
SLU 80	14.25	287	-795	-662	-1705	1.3693	0.9705	-1726	7175	1950	30925	11481	3492	14973	No	8.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	11.86	787.02	-912	-759	4617	1.0955	0	0	0	0	30925	13777	2793	16571		3.59	Si
SLV 6	14.25	-282.37	904	753	2886	1.0955	1.1169	0	0	0	30925	13777	2793	16571		5.74	Si
SLV 11	11.86	-1244.99	-6460	-5379	-6407	1.3693	1.3693	-14029	13223	5070	30925	17222	3492	20713		3.23	Si
SLV 11	14.25	526.56	-1994	-1660	-4182	1.3693	1.2616	-4330	11283	3986	30925	17222	3492	20713		4.95	Si
SLV 1	11.86	400.08	-3077	-2563	3625	1.3693	1.3693	-6684	11753	4506	30925	17222	3492	20713		5.71	Si
SLV 1	14.25	-148.05	329	274	2399	1.0955	0.7056	0	0	0	30925	13777	2793	16571		6.91	Si
SLV 8	11.86	-1029.01	-6661	-5547	-4505	1.3693	1.3693	-14467	13310	5103	30925	17222	3492	20713		4.6	Si
SLV 8	14.25	433.35	-1705	-1420	-2874	1.3693	1.2915	-3703	11157	4035	30925	17222	3492	20713		7.21	Si
SLV 5	11.86	785.67	-878	-731	4610	1.0955	0	0	0	0	30925	13777	2793	16571		3.59	Si
SLV 5	14.25	-285.41	905	753	2887	1.0955	1.1075	0	0	0	30925	13777	2793	16571		5.74	Si
SLV 15	11.86	-860.16	-4242	-3532	-5426	1.3693	1.3693	-9212	12259	4700	30925	17222	3492	20713		3.82	Si
SLV 15	14.25	387.5	-1418	-1181	-3693	1.3693	1.2341	-3080	11033	3812	30925	17222	3492	20713		5.61	Si
SLV 7	11.86	-1030.36	-6628	-5519	-4513	1.3693	1.3693	-14395	13296	5098	30925	17222	3492	20713		4.59	Si
SLV 7	14.25	430.31	-1704	-1419	-2873	1.3693	1.2965	-3701	11157	4050	30925	17222	3492	20713		7.21	Si
SLV 12	11.86	-1243.64	-6493	-5407	-6400	1.3693	1.3693	-14102	13237	5075	30925	17222	3492	20713		3.24	Si
SLV 12	14.25	529.6	-1994	-1661	-4183	1.3693	1.2573	-4332	11283	3972	30925	17222	3492	20713		4.95	Si
SLV 2	11.86	402.19	-3130	-2606	3636	1.3693	1.3693	-6797	11776	4515	30925	17222	3492	20713		5.7	Si
SLV 2	14.25	-143.31	328	273	2397	1.0955	0.7442	0	0	0	30925	13777	2793	16571		6.91	Si
SLV 16	11.86	-858.05	-4294	-3575	-5415	1.3693	1.3693	-9325	12282	4709	30925	17222	3492	20713		3.83	Si
SLV 16	14.25	392.24	-1419	-1182	-3695	1.3693	1.2248	-3082	11033	3784	30925	17222	3492	20713		5.61	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.054 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.52	0	740	119.35	0	0	No, Trazione
SLV 9	179667	0.52	0	522	119.35	0	0	No, Trazione
SLV 6	179667	0.52	0	726	119.35	0	0	No, Trazione
SLV 10	179667	0.52	0	507	119.35	0	0	No, Trazione
SLV 2	179667	0.52	0	-833	119.35	0	0	No, e>t/2
SLV 1	179667	0.52	0	-811	119.35	0	0	No, e>t/2
SLV 13	179667	0.52	4015	-1540	119.35	209.87	1.76	Si
SLV 14	179667	0.52	4073	-1562	119.35	212.82	1.78	Si
SLV 3	179667	0.52	6161	-2362	119.35	317.37	2.66	Si
SLV 4	179667	0.52	6219	-2384	119.35	320.23	2.68	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.054 Wa = 0.05 Ta = 0.0456

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-1994	-6493	-130	2.631	358.7	0.901	42.42486	9.44766	Si
SLV 11	-1994	-6460	-130	2.632	358.6	0.901	42.43705	9.44766	Si
SLV 8	-1705	-6661	-82	2.93	330.4	0.897	47.48267	9.44766	Si
SLV 7	-1704	-6628	-81	2.931	330.3	0.897	47.4976	9.44766	Si
SLV 16	-1419	-4294	-112	3.264	302.9	0.893	53.14156	6.31694	Si
SLV 15	-1418	-4242	-111	3.266	302.8	0.893	53.17021	6.31694	Si
SLV 14	-636	-2569	-48	4.885	231.7	0.893	79.51489	6.31694	Si
SLV 13	-635	-2517	-48	4.889	231.6	0.893	79.57237	6.31694	Si
SLV 4	-454	-4854	49	5.509	217.2	0.902	88.8094	6.31694	Si
SLV 3	-453	-4802	49	5.513	217.1	0.902	88.87006	6.31694	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.972	SLU 30	Si
V_SLU	8.544	SLU 78	Si
PF_SLV	0	SLD 5	No
V_SLV	3.233	SLV 11	Si
PFFP_SLV	0	SLV 10	No
R_SLV	4.491	SLV 12	Si

Maschio 202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.454	L7	F1	1.37	0.28	2.764	2.386	3.142			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	11.86	-331.76	-5486	-0.0000275	0.0003743	0.0035	1.37	3230.01	10498.33	10498.33	31.64	No	Si
SLU 80	14.25	352.74	-382	-0.0000267	0.0003743	0.0035	1.37	0	7785.01	7785.01	22.07	No	Si
SLU 71	11.86	-273.86	-5299	-0.0000257	0.0003743	0.0035	1.37	3137.24	10433.84	10433.84	38.1	No	Si
SLU 71	14.25	332.11	-310	-0.0000284	0.0003743	0.0035	1.37	0	7693.3	7693.3	23.16	No	Si
SLU 79	11.86	-323.55	-5465	-0.0000273	0.0003743	0.0035	1.37	3219.45	10490.98	10490.98	32.42	No	Si
SLU 79	14.25	349.13	-374	-0.0000266	0.0003743	0.0035	1.37	0	7777.58	7777.58	22.28	No	Si
SLU 70	11.86	-287.81	-5374	-0.0000263	0.0003743	0.0035	1.37	3174.46	10459.69	10459.69	36.34	No	Si
SLU 70	14.25	338.72	-367	-0.0000256	0.0003743	0.0035	1.37	0	7769.1	7769.1	22.94	No	Si
SLU 77	11.86	-329.3	-5518	-0.0000276	0.0003743	0.0035	1.37	3245.71	10509.27	10509.27	31.91	No	Si
SLU 77	14.25	352.13	-423	-0.000024	0.0003743	0.0035	1.37	0	7823.07	7823.07	22.22	No	Si
SLU 69	11.86	-279.61	-5352	-0.0000261	0.0003743	0.0035	1.37	3163.81	10452.29	10452.29	37.38	No	Si
SLU 69	14.25	335.11	-359	-0.0000255	0.0003743	0.0035	1.37	0	7758.5	7758.5	23.15	No	Si
SLU 72	11.86	-282.07	-5320	-0.000026	0.0003743	0.0035	1.37	3147.92	10441.26	10441.26	37.02	No	Si
SLU 72	14.25	335.72	-318	-0.0000284	0.0003743	0.0035	1.37	0	7703.95	7703.95	22.95	No	Si
SLU 78	11.86	-337.5	-5539	-0.0000279	0.0003743	0.0035	1.37	3256.23	10516.61	10516.61	31.16	No	Si
SLU 78	14.25	355.74	-432	-0.000024	0.0003743	0.0035	1.37	0	7830.47	7830.47	22.01	No	Si
SLU 36	11.86	-318.12	-4662	-0.0000239	0.0003743	0.0035	1.37	2812.25	10198.64	10198.64	32.06	No	Si
SLU 36	14.25	336.21	-347	-0.0000265	0.0003743	0.0035	1.37	0	7742.12	7742.12	23.03	No	Si
SLU 38	11.86	-312.37	-4609	-0.0000236	0.0003743	0.0035	1.37	2784.38	10178.48	10178.48	32.58	No	Si
SLU 38	14.25	333.21	-297	-0.0000295	0.0003743	0.0035	1.37	0	7676.84	7676.84	23.04	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	11.86	460.71	-1289	-0.0000137	0.0005615	0.0035	1.37		9025.13	9025.13	19.59		Si
SLV 6	14.25	189.58	1619	0.0035561	0.0005615	0.0035	1.096		0	0	0		No
SLV 9	11.86	802.59	-1306	-0.0000374	0.0005615	0.0035	1.37		9040.58	9040.58	11.26		Si
SLV 9	14.25	25.97	1809	0.0040566	0.0005615	0.0035	1.096		0	0	0		No
SLV 11	11.86	-794.49	-5953	-0.0000371	0.0005615	0.0035	1.37		11649.77	11649.77	14.66		Si
SLV 11	14.25	111.56	-2341	-0.0000109	0.0005615	0.0035	1.37		9820.95	9820.95	88.03		Si
SLV 7	11.86	-1129.4	-5964	-0.000043	0.0005615	0.0035	1.37		11654.28	11654.28	10.32		Si
SLV 7	14.25	276.42	-2533	-0.0000145	0.0005615	0.0035	1.37		9949.97	9949.97	36		Si
SLV 8	11.86	-1136.37	-5936	-0.000043	0.0005615	0.0035	1.37		11642.92	11642.92	10.25		Si
SLV 8	14.25	275.16	-2531	-0.0000144	0.0005615	0.0035	1.37		9948.67	9948.67	36.16		Si
SLV 10	11.86	795.62	-1278	-0.0000377	0.0005615	0.0035	1.37		9014.95	9014.95	11.33		Si
SLV 10	14.25	24.71	1811	0.0040615	0.0005615	0.0035	1.096		0	0	0		No
SLV 5	11.86	467.68	-1317	-0.0000139	0.0005615	0.0035	1.37		9050.73	9050.73	19.35		Si
SLV 5	14.25	190.83	1617	0.0035512	0.0005615	0.0035	1.096		0	0	0		No
SLV 3	11.86	-959.21	-4358	-0.0000334	0.0005615	0.0035	1.37		10959.74	10959.74	11.43		Si
SLV 3	14.25	439.16	-1304	-0.0000131	0.0005615	0.0035	1.37		9038.71	9038.71	20.58		Si
SLV 4	11.86	-970.06	-4315	-0.0000334	0.0005615	0.0035	1.37		10937.96	10937.96	11.28		Si
SLV 4	14.25	437.2	-1301	-0.000013	0.0005615	0.0035	1.37		9035.93	9035.93	20.67		Si
SLV 12	11.86	-801.46	-5925	-0.0000371	0.0005615	0.0035	1.37		11638.41	11638.41	14.52		Si
SLV 12	14.25	110.3	-2339	-0.0000109	0.0005615	0.0035	1.37		9819.64	9819.64	89.03		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 35	11.86	-309.91	-4641	-3864	-1434	1.37	1.37	-10074	8288	3179	10864	11487	3494	14043	No	9.79	Si
SLU 35	14.25	332.6	-339	-282	-1732	1.37	0	-4271	7750	0	10864	11487	3494	10864	No	6.27	Si
SLU 78	11.86	-337.5	-5539	-4613	-1575	1.37	1.37	-12025	8548	3279	10864	11487	3494	14142	No	8.98	Si
SLU 78	14.25	355.74	-432	-359	-1773	1.37	0	-4568	7711	0	10864	11487	3494	10864	No	6.13	Si
SLU 70	11.86	-287.81	-5374	-4475	-1349	1.37	1.37	-11665	8500	3261	10864	11487	3494	14124	No	10.47	Si
SLU 70	14.25	338.72	-367	-306	-1619	1.37	0	-4370	7733	0	10864	11487	3494	10864	No	6.71	Si
SLU 36	11.86	-318.12	-4662	-3882	-1465	1.37	1.37	-10120	8294	3182	10864	11487	3494	14045	No	9.59	Si
SLU 36	14.25	336.21	-347	-289	-1757	1.37	0	-4323	7752	0	10864	11487	3494	10864	No	6.18	Si
SLU 77	11.86	-329.3	-5518	-4595	-1544	1.37	1.37	-11978	8542	3277	10864	11487	3494	14140	No	9.16	Si
SLU 77	14.25	352.13	-423	-353	-1747	1.37	0	-4527	7708	0	10864	11487	3494	10864	No	6.22	Si
SLU 37	11.86	-304.17	-4587	-3820	-1329	1.37	1.37	-9958	8272	3173	10864	11487	3494	14037	No	10.56	Si
SLU 37	14.25	329.6	-289	-241	-1724	1.37	0	-4124	7812	0	10864	11487	3494	10864	No	6.3	Si
SLU 80	11.86	-331.76	-5486	-4568	-1470	1.37	1.37	-11909	8532	3273	10864	11487	3494	14137	No	9.62	Si
SLU 80	14.25	352.74	-382	-318	-1765	1.37	0	-4550	7766	0	10864	11487	3494	10864	No	6.16	Si
SLU 72	11.86	-282.07	-5320	-4430	-1244	1.37	1.37	-11549	8484	3255	10864	11487	3494	14118	No	11.35	Si
SLU 72	14.25	335.72	-318	-265	-1611	1.37	0	-4266	7792	0	10864	11487	3494	10864	No	6.74	Si
SLU 79	11.86	-323.55	-5465	-4550	-1439	1.37	1.37	-11862	8526	3271	10864	11487	3494	14134	No	9.82	Si
SLU 79	14.25	349.13	-374	-311	-1739	1.37	0	-4501	7764	0	10864	11487	3494	10864	No	6.25	Si
SLU 38	11.86	-312.37	-4609	-3838	-1360	1.37	1.37	-10004	8278	3176	10864	11487	3494	14039	No	10.32	Si
SLU 38	14.25	333.21	-297	-248	-1749	1.37	0	-4185	7814	0	10864	11487	3494	10864	No	6.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	11.86	-959.21	-4358	-3629	-5143	1.37	1.37	-9460	12309	4722	10864	17230	3494	15585		3.03	Si
SLV 3	14.25	439.16	-1304	-1086	-3285	1.37	1.0446	-3703	11158	3264	10864	17230	3494	14127		4.3	Si
SLV 8	11.86	-1136.37	-5936	-4943	-5573	1.37	1.37	-12885	12994	4984	10864	17230	3494	15848		2.84	Si
SLV 8	14.25	275.16	-2531	-2107	-2816	1.37	1.37	-5493	11515	4417	10864	17230	3494	15281		5.43	Si
SLV 9	11.86	802.59	-1306	-1087	3878	1.37	0.2113	-9113	12385	733	10864	17230	3494	11596		2.99	Si
SLV 9	14.25	25.97	1809	1506	1586	1.096	1.37	0	0	0	10864	13784	2795	10864		6.85	Si
SLV 10	11.86	795.62	-1278	-1064	3859	1.37	0.1876	-9116	12396	651	10864	17230	3494	11515		2.98	Si
SLV 10	14.25	24.71	1811	1508	1587	1.096	1.37	0	0	0	10864	13784	2795	10864		6.85	Si
SLV 4	11.86	-970.06	-4315	-3593	-5172	1.37	1.37	0	0	0	10864	17230	3494	10864		2.1	Si
SLV 4	14.25	437.2	-1301	-1083	-3284	1.37	1.0468	-3687	11155	3270	10864	17230	3494	14133		4.3	Si
SLV 13	11.86	636.28	-2927	-2437	3477	1.37	1.37	-6354	11687	4483	10864	17230	3494	15347		4.41	Si
SLV 13	14.25	-136.06	579	482	2054	1.096	1.35	0	0	0	10864	13784	2795	10864		5.29	Si
SLV 12	11.86	-801.46	-5925	-4934	-3664	1.37	1.37	-12861	12989	4983	10864	17230	3494	15846		4.32	Si
SLV 12	14.25	110.3	-2339	-1948	-1491	1.37	1.37	-5078	11432	4385	10864	17230	3494	15249		10.22	Si
SLV 11	11.86	-794.49	-5953	-4957	-3645	1.37	1.37	-12922	13001	4987	10864	17230	3494	15851		4.35	Si
SLV 11	14.25	111.56	-2341	-1950	-1492	1.37	1.37	-5082	11433	4386	10864	17230	3494	15249		10.22	Si
SLV 14	11.86	625.44	-2884	-2401	3448	1.37	1.37	-6260	11669	4476	10864	17230	3494	15340		4.45	Si
SLV 14	14.25	-138.02	582	485	2055	1.096	1.3436	0	0	0	10864	13784	2795	10864		5.29	Si
SLV 7	11.86	-1129.4	-5964	-4966	-5554	1.37	1.37	-12946	13006	4989	10864	17230	3494	15853		2.85	Si
SLV 7	14.25	276.42	-2533	-2109	-2817	1.37	1.37	-5498	11516	4418	10864	17230	3494	15281		5.43	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.053 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.52	0	436	119.21	0	0	No, Trazione
SLV 13	179667	0.52	0	-720	119.21	0	0	No, e>t/2
SLV 14	179667	0.52	0	-707	119.21	0	0	No, e>t/2
SLV 10	179667	0.52	0	678	119.21	0	0	No, Trazione
SLV 9	179667	0.52	0	669	119.21	0	0	No, Trazione
SLV 6	179667	0.52	0	445	119.21	0	0	No, Trazione
SLV 2	179667	0.52	3868	-1484	119.21	202.49	1.7	Si
SLV 1	179667	0.52	3902	-1497	119.21	204.22	1.71	Si
SLV 16	179667	0.52	5548	-2128	119.21	287.14	2.41	Si
SLV 15	179667	0.52	5582	-2141	119.21	288.83	2.42	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.053 Wa = 0.05 Ta = 0.0456

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-2533	-5964	60	2.254	411.8	0.91	36.02007	9.43332	Si
SLV 8	-2531	-5936	59	2.256	411.6	0.91	36.04146	9.43332	Si
SLV 11	-2341	-5953	57	2.383	392.8	0.907	38.197	9.43332	Si
SLV 12	-2339	-5925	57	2.385	392.6	0.907	38.22096	9.43332	Si
SLV 3	-1304	-4358	20	3.471	291.9	0.891	56.59604	6.31208	Si
SLV 4	-1301	-4315	20	3.475	291.6	0.891	56.67453	6.31208	Si
SLV 15	-666	-4321	12	4.822	234.1	0.892	78.56886	6.31208	Si
SLV 16	-663	-4278	12	4.831	233.9	0.892	78.70938	6.31208	Si
SLV 1	-59	-2964	-16	7.677	195.2	0.973	114.63524	6.31208	Si
SLV 2	-56	-2921	-16	7.7	195.2	0.975	114.83299	6.31208	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	22.012	SLU 78	Si
V_SLU	6.128	SLU 78	Si
PF_SLV	0	SLV 5	No
V_SLV	2.1	SLV 4	Si
PFFP_SLV	0	SLV 10	No
R_SLV	3.818	SLV 7	Si

Maschio 204

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L7	F1	1.67	0.28	3.219	3.218	3.219			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	11.86	1099.32	-5594	-0.000031	0.0003743	0.0035	1.67	4122.34	4363.05	4363.05	3.97	No	Si
SLU 74	13.96	-2013.58	-6681	-0.0000459	0.0003743	0.0035	1.67	4795.77	5682.27	5682.27	2.82	No	Si
SLU 66	11.86	1060.09	-5706	-0.0000309	0.0003743	0.0035	1.67	4193.69	4430.27	4430.27	4.18	No	Si
SLU 66	13.96	-2023.94	-6679	-0.000046	0.0003743	0.0035	1.67	4794.39	5680.73	5680.73	2.81	No	Si
SLU 65	11.86	1008.11	-5201	-0.0000286	0.0003743	0.0035	1.67	3868.24	4128.49	4128.49	4.1	No	Si
SLU 65	13.96	-1808.87	-5808	-0.0000404	0.0003743	0.0035	1.67	4257.82	5093.11	5093.11	2.82	No	Si
SLU 75	11.86	1096.03	-5608	-0.000031	0.0003743	0.0035	1.67	4131.14	4371.31	4371.31	3.99	No	Si
SLU 75	13.96	-2012.17	-6686	-0.0000459	0.0003743	0.0035	1.67	4798.94	5685.78	5685.78	2.83	No	Si
SLU 64	11.86	1013.59	-5178	-0.0000285	0.0003743	0.0035	1.67	3853.23	4114.49	4114.49	4.06	No	Si
SLU 64	13.96	-1811.22	-5799	-0.0000404	0.0003743	0.0035	1.67	4252.28	5086.92	5086.92	2.81	No	Si
SLU 69	11.86	1083	-6043	-0.0000323	0.0003743	0.0035	1.67	4405.24	4633.31	4633.31	4.28	No	Si
SLU 69	13.96	-2132.86	-7234	-0.0000493	0.0003743	0.0035	1.67	5122.45	6052.33	6052.33	2.84	No	Si
SLU 81	11.86	1069.63	-5018	-0.0000287	0.0003743	0.0035	1.67	3748.2	4014.5	4014.5	3.75	No	Si
SLU 81	13.96	-1796.42	-5802	-0.0000402	0.0003743	0.0035	1.67	4254.35	5089.24	5089.24	2.83	No	Si
SLU 73	11.86	1047.34	-5089	-0.0000286	0.0003743	0.0035	1.67	3794.9	4059.39	4059.39	3.88	No	Si
SLU 73	13.96	-1798.51	-5810	-0.0000402	0.0003743	0.0035	1.67	4259.27	5094.73	5094.73	2.83	No	Si
SLU 67	11.86	1056.8	-5720	-0.0000309	0.0003743	0.0035	1.67	4202.44	4438.56	4438.56	4.2	No	Si
SLU 67	13.96	-2022.53	-6684	-0.000046	0.0003743	0.0035	1.67	4797.56	5684.25	5684.25	2.81	No	Si
SLU 82	11.86	1066.35	-5031	-0.0000287	0.0003743	0.0035	1.67	3757.28	4023.28	4023.28	3.77	No	Si
SLU 82	13.96	-1795.01	-5807	-0.0000402	0.0003743	0.0035	1.67	4257.67	5092.95	5092.95	2.84	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	11.86	-2269.59	-5506	-0.0000469	0.0005615	0.0035	1.67		4989.54	4989.54	2.2		Si
SLV 13	13.96	1328.87	-1083	-0.0031637	0.0005615	0.0035	1.336		1059.5	1059.5	0.8		No
SLV 6	11.86	2051.72	-893	-0.0122179	0.0005615	0.0035	1.336		904.88	904.88	0.44		No
SLV 6	13.96	-2509.2	-4542	-0.0000583	0.0005615	0.0035	1.336		4277.02	4277.02	1.7		Si
SLV 2	11.86	3975.64	-912	-0.030631	0.0005615	0.0035	1.336		920.72	920.72	0.23		No
SLV 2	13.96	-4206.06	-7139	-0.0001094	0.0005615	0.0035	1.336		6171.36	6171.36	1.47		Si
SLV 4	11.86	3758.84	-2299	-0.0180092	0.0005615	0.0035	1.336		2033.43	2033.43	0.54		No
SLV 4	13.96	-4011.58	-7559	-0.0000926	0.0005615	0.0035	1.336		6469.95	6469.95	1.61		Si
SLV 1	11.86	3923.22	-968	-0.0296598	0.0005615	0.0035	1.336		966.12	966.12	0.25		No
SLV 1	13.96	-4127.42	-7066	-0.0001059	0.0005615	0.0035	1.336		6119.39	6119.39	1.48		Si
SLV 3	11.86	3706.42	-2355	-0.0171322	0.0005615	0.0035	1.336		2077.74	2077.74	0.56		No
SLV 3	13.96	-3932.94	-7485	-0.00009	0.0005615	0.0035	1.336		6417.63	6417.63	1.63		Si
SLV 16	11.86	-2433.96	-6836	-0.0000516	0.0005615	0.0035	1.67		5957.42	5957.42	2.45		Si
SLV 16	13.96	1444.72	-1576	-0.0009535	0.0005615	0.0035	1.336		1457.42	1457.42	1.01		Si
SLV 5	11.86	2018.03	-929	-0.0116151	0.0005615	0.0035	1.336		934.14	934.14	0.46		No
SLV 5	13.96	-2458.66	-4495	-0.0000565	0.0005615	0.0035	1.336		4240.72	4240.72	1.72		Si
SLV 15	11.86	-2486.38	-6892	-0.0000526	0.0005615	0.0035	1.67		5996.82	5996.82	2.41		Si
SLV 15	13.96	1523.35	-1503	-0.0019265	0.0005615	0.0035	1.336		1398.2	1398.2	0.92		No
SLV 14	11.86	-2217.17	-5450	-0.0000458	0.0005615	0.0035	1.67		4948.45	4948.45	2.23		Si
SLV 14	13.96	1250.24	-1157	-0.0018239	0.0005615	0.0035	1.336		1118.66	1118.66	0.89		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 71	11.86	1059.42	-5850	-4872	2789	1.67	1.67	-10418	8334	3897	35683	14002	4259	18261	No	6.55	Si
SLU 71	13.96	-2029.06	-6909	-5753	2783	1.67	1.624	-12304	8585	3904	35683	14002	4259	18261	No	6.56	Si
SLU 78	11.86	1118.94	-5944	-4950	2957	1.67	1.67	-10586	8356	3907	35683	14002	4259	18261	No	6.17	Si
SLU 78	13.96	-2121.09	-7241	-6030	2949	1.67	1.6263	-12895	8664	3945	35683	14002	4259	18261	No	6.19	Si
SLU 77	11.86	1122.23	-5931	-4938	2963	1.67	1.67	-10561	8353	3906	35683	14002	4259	18261	No	6.16	Si
SLU 77	13.96	-2122.5	-7236	-6026	2955	1.67	1.6251	-12886	8663	3942	35683	14002	4259	18261	No	6.18	Si
SLU 69	11.86	1083	-6043	-5032	2902	1.67	1.67	-10761	8379	3918	35683	14002	4259	18261	No	6.29	Si
SLU 69	13.96	-2132.86	-7234	-6024	2897	1.67	1.6205	-12882	8662	3930	35683	14002	4259	18261	No	6.3	Si
SLU 79	11.86	1098.65	-5738	-4778	2850	1.67	1.67	-10219	8307	3884	35683	14002	4259	18261	No	6.41	Si
SLU 79	13.96	-2018.7	-6911	-5755	2841	1.67	1.6288	-12308	8585	3915	35683	14002	4259	18261	No	6.43	Si
SLU 75	11.86	1096.03	-5608	-4670	2807	1.67	1.67	-9987	8276	3870	35683	14002	4259	18261	No	6.51	Si
SLU 75	13.96	-2012.17	-6686	-5568	2801	1.67	1.6022	-11907	8532	3828	35683	14002	4259	18261	No	6.52	Si
SLU 72	11.86	1056.13	-5864	-4883	2784	1.67	1.67	-10443	8337	3898	35683	14002	4259	18261	No	6.56	Si
SLU 72	13.96	-2027.65	-6914	-5758	2778	1.67	1.6253	-12313	8586	3907	35683	14002	4259	18261	No	6.57	Si
SLU 74	11.86	1099.32	-5594	-4658	2813	1.67	1.67	-9962	8273	3868	35683	14002	4259	18261	No	6.49	Si
SLU 74	13.96	-2013.58	-6681	-5563	2807	1.67	1.6009	-11897	8531	3824	35683	14002	4259	18261	No	6.51	Si
SLU 80	11.86	1095.36	-5752	-4790	2844	1.67	1.67	-10244	8310	3886	35683	14002	4259	18261	No	6.42	Si
SLU 80	13.96	-2017.29	-6917	-5760	2836	1.67	1.63	-12317	8587	3919	35683	14002	4259	18261	No	6.44	Si
SLU 70	11.86	1079.71	-6056	-5043	2897	1.67	1.67	-10785	8382	3920	35683	14002	4259	18261	No	6.3	Si
SLU 70	13.96	-2131.45	-7239	-6028	2891	1.67	1.6217	-12891	8663	3934	35683	14002	4259	18261	No	6.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	11.86	3923.22	-968	-806	7521	1.336	0	0	0	0	35683	16803	3407	20209		2.69	Si
SLV 1	13.96	-4127.42	-7066	-5884	6125	1.336	0.7526	0	0	0	35683	16803	3407	20209		3.3	Si
SLD 4	11.86	2031.38	-3226	-2686	4048	1.67	0.616	-5745	11566	1995	35683	21003	4259	25262		6.24	Si
SLD 4	13.96	-2481.66	-5708	-4753	3512	1.67	1.2007	-14233	13263	4459	35683	21003	4259	25262		7.19	Si
SLD 1	11.86	2104.78	-2639	-2198	4276	1.336	0.1124	0	0	0	35683	16803	3407	20209		4.73	Si
SLD 1	13.96	-2532.83	-5491	-4572	3677	1.336	1.1211	0	0	0	35683	16803	3407	20209		5.5	Si
SLV 6	11.86	2051.72	-893	-743	4561	1.336	0	0	0	0	35683	16803	3407	20209		4.43	Si
SLV 6	13.96	-2509.2	-4542	-3782	3925	1.336	0.8478	0	0	0	35683	16803	3407	20209		5.15	Si
SLD 3	11.86	2008.88	-3250	-2706	3999	1.67	0.6507	-5788	11574	2109	35683	21003	4259	25262		6.32	Si
SLD 3	13.96	-2447.9	-5677	-4727	3463	1.67	1.2113	-14029	13223	4485	35683	21003	4259	25262		7.29	Si
SLV 2	11.86	3975.64	-912	-760	7635	1.336	0	0	0	0	35683	16803	3407	20209		2.65	Si
SLV 2	13.96	-4206.06	-7139	-5945	6239	1.336	0.7375	0	0	0	35683	16803	3407	20209		3.24	Si
SLV 3	11.86	3706.42	-2355	-1961	6890	1.336	0	0	0	0	35683	16803	3407	20209		2.93	Si
SLV 3	13.96	-3932.94	-7485	-6233	5637	1.336	0.9288	0	0	0	35683	16803	3407	20209		3.59	Si
SLV 4	11.86	3758.84	-2299	-1914	7004	1.336	0	0	0	0	35683	16803	3407	20209		2.89	Si
SLV 4	13.96	-4011.58	-7559	-6294	5750	1.336	0.9129	0	0	0	35683	16803	3407	20209		3.51	Si
SLV 5	11.86	2018.03	-929	-773	4488	1.336	0	0	0	0	35683	16803	3407	20209		4.5	Si
SLV 5	13.96	-2458.66	-4495	-3743	3851	1.336	0.8642	0	0	0	35683	16803	3407	20209		5.25	Si
SLD 2	11.86	2127.29	-2615	-2178	4325	1.336	0.0647	0	0	0	35683	16803	3407	20209		4.67	Si
SLD 2	13.96	-2566.59	-5522	-4598	3726	1.336	1.1107	0	0	0	35683	16803	3407	20209		5.42	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.469 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.53	3274	-1531	195.8	209.74	1.07	Si
SLV 14	179667	0.53	3391	-1585	195.8	217.03	1.11	Si
SLV 9	179667	0.53	4547	-2126	195.8	288.78	1.47	Si
SLV 10	179667	0.53	4621	-2161	195.8	293.39	1.5	Si
SLV 15	179667	0.53	5172	-2419	195.8	327.15	1.67	Si
SLV 16	179667	0.53	5289	-2473	195.8	334.25	1.71	Si
SLV 5	179667	0.53	7518	-3515	195.8	467.93	2.39	Si
SLV 6	179667	0.53	7593	-3550	195.8	472.35	2.41	Si
SLV 11	179667	0.53	10875	-5085	195.8	661.21	3.38	Si
SLV 12	179667	0.53	10949	-5120	195.8	665.41	3.4	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.469 Wa = 0.05 Ta = 0.0618

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-2142	-5550	292	2.66	442	0.894	43.24123	13.12736	Si
SLV 8	-2139	-5515	292	2.662	441.8	0.894	43.27743	13.12736	Si
SLV 11	-2148	-6912	246	2.668	442.6	0.894	43.37731	13.12736	Si
SLV 12	-2145	-6876	246	2.67	442.4	0.894	43.41356	13.12736	Si
SLV 9	-1571	-2290	-289	3.171	388.1	0.889	51.81483	13.12736	Si
SLV 10	-1568	-2254	-289	3.174	387.8	0.889	51.86528	13.12736	Si
SLV 5	-1565	-929	-243	3.194	387.5	0.889	52.18587	13.12736	Si
SLV 6	-1562	-893	-243	3.197	387.2	0.889	52.23677	13.12736	Si
SLV 3	-1933	-2355	159	2.866	422.1	0.892	46.69799	7.50609	Si
SLV 4	-1929	-2299	159	2.87	421.7	0.892	46.76233	7.50609	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.807	SLU 66	Si
V_SLU	6.163	SLU 77	Si
PF_SLV	0.232	SLV 2	No
V_SLV	2.647	SLV 2	Si
PFFP_SLV	1.071	SLV 13	Si
R_SLV	3.294	SLV 7	Si

Maschio 206

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.314	-8.433	-3.314	L7	F1	1.02	0.28	3.217	3.216	3.217			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 23	12.76	57.79	-3859	-0.0000223	0.0003743	0.0035	1.02	1706.78	1789.17	1789.17	30.96	No	Si
SLU 23	14.56	-162.78	-2531	-0.0000183	0.0003743	0.0035	1.02	1178.36	1443.25	1443.25	8.87	No	Si
SLU 43	12.76	2.23	-4605	-0.0000246	0.0003743	0.0035	1.02	1976.53	2075.56	2075.56	931.74	No	Si
SLU 43	14.56	-185.2	-2881	-0.0000209	0.0003743	0.0035	1.02	1323.55	1598.87	1598.87	8.63	No	Si
SLU 1	12.76	13.28	-3606	-0.0000195	0.0003743	0.0035	1.02	1611.08	1694.37	1694.37	127.57	No	Si
SLU 1	14.56	-146.38	-2280	-0.0000165	0.0003743	0.0035	1.02	1071.79	1331.94	1331.94	9.1	No	Si
SLU 2	12.76	13.92	-3616	-0.0000196	0.0003743	0.0035	1.02	1614.71	1697.9	1697.9	121.95	No	Si
SLU 2	14.56	-147.93	-2286	-0.0000165	0.0003743	0.0035	1.02	1074.19	1334.48	1334.48	9.02	No	Si
SLU 65	12.76	46.73	-4857	-0.0000275	0.0003743	0.0035	1.02	2063.39	2174.78	2174.78	46.54	No	Si
SLU 65	14.56	-201.6	-3131	-0.0000228	0.0003743	0.0035	1.02	1424.85	1705.9	1705.9	8.46	No	Si
SLU 64	12.76	46.09	-4848	-0.0000274	0.0003743	0.0035	1.02	2060.18	2171.03	2171.03	47.1	No	Si
SLU 64	14.56	-200.04	-3125	-0.0000227	0.0003743	0.0035	1.02	1422.62	1703.51	1703.51	8.52	No	Si
SLU 47	12.76	-19.58	-5058	-0.0000277	0.0003743	0.0035	1.02	2130.73	2493.93	2493.93	127.35	No	Si
SLU 47	14.56	-185.56	-3207	-0.0000227	0.0003743	0.0035	1.02	1455.14	1738.44	1738.44	9.37	No	Si
SLU 22	12.76	57.14	-3849	-0.0000222	0.0003743	0.0035	1.02	1703.23	1785.6	1785.6	31.25	No	Si
SLU 22	14.56	-161.22	-2525	-0.0000182	0.0003743	0.0035	1.02	1176.01	1440.76	1440.76	8.94	No	Si
SLU 68	12.76	24.28	-5301	-0.0000292	0.0003743	0.0035	1.02	2210.51	2351.77	2351.77	96.86	No	Si
SLU 68	14.56	-200.4	-3452	-0.0000245	0.0003743	0.0035	1.02	1551.41	1842.95	1842.95	9.2	No	Si
SLU 44	12.76	2.87	-4614	-0.0000247	0.0003743	0.0035	1.02	1979.83	2079.25	2079.25	724.85	No	Si
SLU 44	14.56	-186.76	-2886	-0.000021	0.0003743	0.0035	1.02	1325.83	1601.27	1601.27	8.57	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	12.76	952.42	-2829	-0.0000594	0.0005615	0.0035	1.02		1436.5	1436.5	1.51		Si
SLD 4	14.56	-658.75	-2844	-0.0000365	0.0005615	0.0035	1.02		1609.32	1609.32	2.44		Si
SLV 14	12.76	-2105.09	-5459	-0.0001736	0.0005615	0.0035	0.816		2753.65	2753.65	1.31		Si
SLV 14	14.56	1059.38	-1063	-0.0129882	0.0005615	0.0035	0.816		598.44	598.44	0.56		No
SLV 1	12.76	1942.46	-1800	-0.0258203	0.0005615	0.0035	0.816		954.52	954.52	0.49		No
SLV 1	14.56	-1314.08	-3616	-0.0000917	0.0005615	0.0035	0.816		1959.87	1959.87	1.49		Si
SLV 4	12.76	2206.13	-1737	-0.0328311	0.0005615	0.0035	0.816		924.53	924.53	0.42		No
SLV 4	14.56	-1357.42	-3562	-0.0001034	0.0005615	0.0035	0.816		1935.57	1935.57	1.43		Si
SLV 2	12.76	2012.97	-1709	-0.0285264	0.0005615	0.0035	0.816		910.98	910.98	0.45		No
SLV 2	14.56	-1337.85	-3623	-0.0000959	0.0005615	0.0035	0.816		1963.15	1963.15	1.47		Si
SLV 3	12.76	2135.62	-1828	-0.0301048	0.0005615	0.0035	0.816		968.06	968.06	0.45		No
SLV 3	14.56	-1333.65	-3555	-0.0000983	0.0005615	0.0035	0.816		1932.27	1932.27	1.45		Si
SLV 16	12.76	-1911.93	-5487	-0.0001303	0.0005615	0.0035	0.816		2765.56	2765.56	1.45		Si
SLV 16	14.56	1039.81	-1002	-0.0132003	0.0005615	0.0035	0.816		568.65	568.65	0.55		No
SLV 13	12.76	-2175.6	-5550	-0.0001879	0.0005615	0.0035	0.816		2791.95	2791.95	1.28		Si
SLV 13	14.56	1083.15	-1055	-0.0136428	0.0005615	0.0035	0.816		594.89	594.89	0.55		No
SLV 15	12.76	-1982.43	-5578	-0.0001394	0.0005615	0.0035	0.816		2803.88	2803.88	1.41		Si
SLV 15	14.56	1063.58	-994	-0.0138561	0.0005615	0.0035	0.816		565.1	565.1	0.53		No
SLD 3	12.76	922.15	-2868	-0.0000552	0.0005615	0.0035	1.02		1454.48	1454.48	1.58		Si
SLD 3	14.56	-648.55	-2841	-0.000036	0.0005615	0.0035	1.02		1607.89	1607.89	2.48		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	12.76	-6.65	-4687	-3903	247	1.02	1.02	-13666	8767	2504	35683	8552	2601	11153	No	45.17	Si
SLU 81	14.56	-132.64	-2917	-2429	275	1.02	1.02	-8505	8078	2307	35683	8552	2601	11153	No	40.56	Si
SLU 82	12.76	-6.27	-4693	-3908	247	1.02	1.02	-13682	8769	2504	35683	8552	2601	11153	No	45.09	Si
SLU 82	14.56	-133.58	-2920	-2432	276	1.02	1.02	-8515	8080	2308	35683	8552	2601	11153	No	40.47	Si
SLU 65	12.76	46.73	-4857	-4045	319	1.02	1.02	-14162	8833	2523	35683	8552	2601	11153	No	34.95	Si
SLU 65	14.56	-201.6	-3131	-2607	311	1.02	1.02	-9129	8162	2331	35683	8552	2601	11153	No	35.87	Si
SLU 71	12.76	1.19	-5735	-4775	263	1.02	1.02	-16720	9174	2620	35683	8552	2601	11153	No	42.47	Si
SLU 71	14.56	-197.65	-3767	-3137	267	1.02	1.02	-10983	8409	2402	35683	8552	2601	11153	No	41.71	Si
SLU 64	12.76	46.09	-4848	-4037	318	1.02	1.02	-14135	8829	2522	35683	8552	2601	11153	No	35.03	Si
SLU 64	14.56	-200.04	-3125	-2603	310	1.02	1.02	-9113	8159	2330	35683	8552	2601	11153	No	35.98	Si
SLU 73	12.76	9.81	-4745	-3951	269	1.02	1.02	-13834	8789	2510	35683	8552	2601	11153	No	41.45	Si
SLU 73	14.56	-154.42	-2985	-2486	286	1.02	1.02	-8704	8105	2315	35683	8552	2601	11153	No	38.93	Si
SLU 22	12.76	57.14	-3849	-3205	289	1.02	1.02	-11223	8441	2411	35683	8552	2601	11153	No	38.54	Si
SLU 22	14.56	-161.22	-2525	-2103	273	1.02	1.02	-7363	7926	2264	35683	8552	2601	11153	No	40.9	Si
SLU 72	12.76	1.57	-5740	-4780	263	1.02	1.02	-16736	9176	2621	35683	8552	2601	11153	No	42.4	Si
SLU 72	14.56	-198.58	-3770	-3140	268	1.02	1.02	-10993	8410	2402	35683	8552	2601	11153	No	41.61	Si
SLU 23	12.76	57.79	-3859	-3213	290	1.02	1.02	-11251	8445	2412	35683	8552	2601	11153	No	38.44	Si
SLU 23	14.56	-162.78	-2531	-2107	274	1.02	1.02	-7379	7928	2264	35683	8552	2601	11153	No	40.75	Si
SLU 68	12.76	24.28	-5301	-4414	291	1.02	1.02	-15455	9005	2572	35683	8552	2601	11153	No	38.3	Si
SLU 68	14.56	-200.4	-3452	-2874	290	1.02	1.02	-10064	8286	2367	35683	8552	2601	11153	No	38.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	12.76	838.23	-2855	-2377	1713	1.02	0.6491	-8323	12081	2196	35683	12828	2601	15429		9.01	Si
SLD 1	14.56	-640.15	-2868	-2388	1031	1.02	0.8603	-9958	12408	2989	35683	12828	2601	15429		14.97	Si
SLV 1	12.76	1942.46	-1800	-1499	3725	0.816	0	0	0	0	35683	10263	2081	12343		3.31	Si
SLV 1	14.56	-1314.08	-3616	-3011	2122	0.816	0.4397	0	0	0	35683	10263	2081	12343		5.82	Si
SLV 4	12.76	2206.13	-1737	-1447	3673	0.816	0	0	0	0	35683	10263	2081	12343		3.36	Si
SLV 4	14.56	-1357.42	-3562	-2966	2071	0.816	0.3867	0	0	0	35683	10263	2081	12343		5.96	Si
SLV 2	12.76	2012.97	-1709	-1423	3822	0.816	0	0	0	0	35683	10263	2081	12343		3.23	Si
SLV 2	14.56	-1337.85	-3623	-3017	2184	0.816	0.4222	0	0	0	35683	10263	2081	12343		5.65	Si
SLV 14	12.76	-2105.09	-5459	-4545	-3155	0.816	0.3731	0	0	0	35683	10263	2081	12343		3.91	Si
SLV 14	14.56	1059.38	-1063	-885	-1576	0.816	0	0	0	0	35683	10263	2081	12343		7.83	Si
SLV 16	12.76	-1911.93	-5487	-4569	-3303	0.816	0.4846	0	0	0	35683	10263	2081	12343		3.74	Si
SLV 16	14.56	1039.81	-1002	-834	-1689	0.816	0	0	0	0	35683	10263	2081	12343		7.31	Si
SLV 3	12.76	2135.62	-1828	-1523	3576	0.816	0	0	0	0	35683	10263	2081	12343		3.45	Si
SLV 3	14.56	-1333.65	-3555	-2960	2008	0.816	0.4045	0	0	0	35683	10263	2081	12343		6.15	Si
SLD 2	12.76	868.5	-2816	-2345	1755	1.02	0.6046	-8209	12059	2041	35683	12828	2601	15429		8.79	Si
SLD 2	14.56	-650.35	-2871	-2390	1057	1.02	0.8503	-10086	12434	2960	35683	12828	2601	15429		14.59	Si
SLV 15	12.76	-1982.43	-5578	-4645	-3400	0.816	0.4638	0	0	0	35683	10263	2081	12343		3.63	Si
SLV 15	14.56	1063.58	-994	-828	-1752	0.816	0	0	0	0	35683	10263	2081	12343		7.05	Si
SLV 13	12.76	-2175.6	-5550	-4621	-3252	0.816	0.3539	0	0	0	35683	10263	2081	12343		3.8	Si
SLV 13	14.56	1083.15	-1055	-879	-1639	0.816	0	0	0	0	35683	10263	2081	12343		7.53	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.468 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.53	4558	-1302	119.44	176.79	1.48	Si
SLV 1	179667	0.53	4876	-1393	119.44	188.75	1.58	Si
SLV 4	179667	0.53	4886	-1396	119.44	189.12	1.58	Si
SLV 3	179667	0.53	5205	-1487	119.44	201.03	1.68	Si
SLV 6	179667	0.53	8801	-2513	119.44	331.61	2.78	Si
SLV 5	179667	0.53	9006	-2572	119.44	338.84	2.84	Si
SLV 8	179667	0.53	9897	-2826	119.44	370.06	3.1	Si
SLV 7	179667	0.53	10101	-2885	119.44	377.18	3.16	Si
SLV 10	179667	0.53	12718	-3632	119.44	466.15	3.9	Si
SLV 9	179667	0.53	12922	-3691	119.44	472.97	3.96	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.468 Wa = 0.05 Ta = 0.0617

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-1872	-4097	-75	2.152	324.9	0.904	34.59387	13.10782	Si
SLV 6	-1871	-4126	-75	2.153	324.8	0.904	34.60874	13.10782	Si
SLV 9	-1703	-2819	-84	2.289	308.2	0.901	36.9345	13.10782	Si
SLV 10	-1702	-2848	-84	2.29	308.1	0.901	36.95144	13.10782	Si
SLV 7	-1028	-4674	89	3.103	243.3	0.89	50.67543	13.10782	Si
SLV 8	-1027	-4703	89	3.105	243.2	0.89	50.70774	13.10782	Si
SLV 11	-859	-3396	79	3.417	227.6	0.889	55.86771	13.10782	Si
SLV 12	-857	-3425	79	3.419	227.5	0.889	55.90624	13.10782	Si
SLV 1	-1775	-5782	-7	2.257	315.4	0.902	36.3493	7.50014	Si
SLV 2	-1774	-5827	-7	2.258	315.2	0.902	36.37454	7.50014	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.462	SLU 65	Si
V_SLU	34.95	SLU 65	Si
PF_SLV	0.419	SLV 4	No
V_SLV	3.23	SLV 2	Si
PFFP_SLV	1.48	SLV 2	Si
R_SLV	2.639	SLV 5	Si

Maschio 207

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.513	-3.314	L7	F1	0.55	0.28	3.215	3.215	3.215			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 1	13.86	-15.56	-1324	-0.0000145	0.0003743	0.0035	0.55	333.4	407.84	407.84	26.21	No	Si
SLU 1	14.66	-78.05	-1316	-0.0000211	0.0003743	0.0035	0.55	331.47	405.78	405.78	5.2	No	Si
SLU 43	13.86	-18.51	-1683	-0.0000184	0.0003743	0.0035	0.55	413.25	492.89	492.89	26.62	No	Si
SLU 43	14.66	-98.39	-1661	-0.0000268	0.0003743	0.0035	0.55	408.38	487.73	487.73	4.96	No	Si
SLU 23	13.86	-22.92	-1440	-0.0000165	0.0003743	0.0035	0.55	359.66	436.18	436.18	19.03	No	Si
SLU 23	14.66	-84.71	-1452	-0.0000232	0.0003743	0.0035	0.55	362.27	439.02	439.02	5.18	No	Si
SLU 44	13.86	-20.87	-1689	-0.0000187	0.0003743	0.0035	0.55	414.36	494.07	494.07	23.67	No	Si
SLU 44	14.66	-96.07	-1653	-0.0000265	0.0003743	0.0035	0.55	406.56	485.8	485.8	5.06	No	Si
SLU 66	13.86	-40.65	-2082	-0.0000249	0.0003743	0.0035	0.55	496.46	584.15	584.15	14.37	No	Si
SLU 66	14.66	-109.15	-2148	-0.0000331	0.0003743	0.0035	0.55	509.71	598.62	598.62	5.48	No	Si
SLU 65	13.86	-25.87	-1799	-0.0000204	0.0003743	0.0035	0.55	438.05	519.5	519.5	20.08	No	Si
SLU 65	14.66	-105.05	-1797	-0.000029	0.0003743	0.0035	0.55	437.54	518.95	518.95	4.94	No	Si
SLU 2	13.86	-17.92	-1329	-0.0000148	0.0003743	0.0035	0.55	334.58	409.1	409.1	22.83	No	Si
SLU 2	14.66	-75.73	-1307	-0.0000208	0.0003743	0.0035	0.55	329.55	403.73	403.73	5.33	No	Si
SLU 22	13.86	-20.56	-1435	-0.0000162	0.0003743	0.0035	0.55	358.5	434.92	434.92	21.15	No	Si
SLU 22	14.66	-87.03	-1460	-0.0000236	0.0003743	0.0035	0.55	364.15	441.08	441.08	5.07	No	Si
SLU 64	13.86	-23.51	-1794	-0.0000201	0.0003743	0.0035	0.55	436.96	518.32	518.32	22.04	No	Si
SLU 64	14.66	-107.37	-1805	-0.0000293	0.0003743	0.0035	0.55	439.32	520.88	520.88	4.85	No	Si
SLU 68	13.86	-35.58	-1958	-0.0000231	0.0003743	0.0035	0.55	471.24	555.92	555.92	15.62	No	Si
SLU 68	14.66	-105.35	-2030	-0.0000314	0.0003743	0.0035	0.55	486.08	572.51	572.51	5.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	13.86	-276.87	-2163	-0.0000533	0.0005615	0.0035	0.55		618.51	618.51	2.23		Si
SLV 11	14.66	139.57	-645	-0.0000393	0.0005615	0.0035	0.55		190.96	190.96	1.37		Si
SLV 5	13.86	218.58	-655	-0.003233	0.0005615	0.0035	0.44		193.55	193.55	0.89		No
SLV 5	14.66	-275.66	-2067	-0.0000528	0.0005615	0.0035	0.55		595.37	595.37	2.16		Si
SLV 12	13.86	-259.98	-2079	-0.0000501	0.0005615	0.0035	0.55		598.38	598.38	2.3		Si
SLV 12	14.66	122.61	-643	-0.0000271	0.0005615	0.0035	0.55		190.3	190.3	1.55		Si
SLV 4	13.86	165.64	-91	-0.0117987	0.0005615	0.0035	0.44		42.89	42.89	0.26		No
SLV 4	14.66	-378.22	-519	-0.002395	0.0005615	0.0035	0.44		207.32	207.32	0.55		No
SLV 6	13.86	235.47	-571	-0.0070065	0.0005615	0.0035	0.44		171.55	171.55	0.73		No
SLV 6	14.66	-292.62	-2064	-0.0000562	0.0005615	0.0035	0.55		594.76	594.76	2.03		Si
SLV 2	13.86	273.4	124	-0.0260296	0.0005615	0.0035	0.44		0	0	0		No
SLV 2	14.66	-444.86	-1048	-0.0018218	0.0005615	0.0035	0.44		344.5	344.5	0.77		No
SLV 1	13.86	247.12	-7	-0.0212757	0.0005615	0.0035	0.44		20.01	20.01	0.08		No
SLV 1	14.66	-418.47	-1052	-0.0014835	0.0005615	0.0035	0.44		345.49	345.49	0.83		No
SLV 15	13.86	-314.8	-2858	-0.0000632	0.0005615	0.0035	0.55		779.86	779.86	2.48		Si
SLV 15	14.66	291.81	-1661	-0.0000609	0.0005615	0.0035	0.55		448.92	448.92	1.54		Si
SLD 4	13.86	58.33	-823	-0.000014	0.0005615	0.0035	0.55		237.4	237.4	4.07		Si
SLD 4	14.66	-205.02	-995	-0.0000519	0.0005615	0.0035	0.44		331.07	331.07	1.61		Si
SLV 3	13.86	139.36	-222	-0.0061046	0.0005615	0.0035	0.44		78.17	78.17	0.56		No
SLV 3	14.66	-351.83	-523	-0.0020044	0.0005615	0.0035	0.44		208.36	208.36	0.59		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	13.86	-35.65	-1971	-1641	-88	0.55	0.55	-10656	8365	1288	35683	4612	1403	6014	No	68.01	Si
SLU 45	14.66	-100.18	-2003	-1668	237	0.55	0.55	-10831	8389	1292	35683	4612	1403	6014	No	25.37	Si
SLU 66	13.86	-40.65	-2082	-1733	-82	0.55	0.55	-11255	8445	1301	35683	4612	1403	6014	No	73.24	Si
SLU 66	14.66	-109.15	-2148	-1788	236	0.55	0.55	-11612	8493	1308	35683	4612	1403	6014	No	25.47	Si
SLU 51	13.86	-39.35	-2004	-1669	-96	0.55	0.55	-10835	8389	1292	35683	4612	1403	6014	No	62.4	Si
SLU 51	14.66	-97.62	-2123	-1768	247	0.55	0.55	-11479	8475	1305	35683	4612	1403	6014	No	24.34	Si
SLU 72	13.86	-44.35	-2115	-1761	-90	0.55	0.55	-11434	8469	1304	35683	4612	1403	6014	No	66.77	Si
SLU 72	14.66	-106.59	-2267	-1888	246	0.55	0.55	-12260	8579	1321	35683	4612	1403	6014	No	24.42	Si
SLU 71	13.86	-42.93	-2112	-1758	-86	0.55	0.55	-11418	8467	1304	35683	4612	1403	6014	No	69.73	Si
SLU 71	14.66	-107.98	-2272	-1892	251	0.55	0.55	-12287	8583	1322	35683	4612	1403	6014	No	23.97	Si
SLU 70	13.86	-51.78	-2243	-1868	-114	0.55	0.55	-12130	8562	1319	35683	4612	1403	6014	No	52.58	Si
SLU 70	14.66	-108.07	-2376	-1979	247	0.55	0.55	-12847	8657	1333	35683	4612	1403	6014	No	24.31	Si
SLU 49	13.86	-46.77	-2133	-1776	-121	0.55	0.55	-11531	8482	1306	35683	4612	1403	6014	No	49.83	Si
SLU 49	14.66	-99.09	-2232	-1858	248	0.55	0.55	-12067	8553	1317	35683	4612	1403	6014	No	24.23	Si
SLU 50	13.86	-37.93	-2001	-1666	-93	0.55	0.55	-10819	8387	1292	35683	4612	1403	6014	No	64.97	Si
SLU 50	14.66	-99.01	-2128	-1772	252	0.55	0.55	-11506	8479	1306	35683	4612	1403	6014	No	23.89	Si
SLU 48	13.86	-45.36	-2130	-1773	-117	0.55	0.55	-11515	8480	1306	35683	4612	1403	6014	No	51.46	Si
SLU 48	14.66	-100.49	-2237	-1863	253	0.55	0.55	-12094	8557	1318	35683	4612	1403	6014	No	23.78	Si
SLU 69	13.86	-50.36	-2240	-1866	-111	0.55	0.55	-12114	8560	1318	35683	4612	1403	6014	No	54.4	Si
SLU 69	14.66	-109.46	-2381	-1983	252	0.55	0.55	-12875	8661	1334	35683	4612	1403	6014	No	23.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	13.86	-288.52	-2728	-2271	-1366	0.55	0.5077	-14748	13366	1900	35683	6917	1403	8320		6.09	Si
SLV 16	14.66	265.42	-1657	-1380	57	0.55	0.3446	-8961	12209	1178	35683	6917	1403	8320		146.72	Si
SLV 14	13.86	-180.76	-2512	-2092	-1116	0.55	0.55	-13585	13134	2023	35683	6917	1403	8320		7.46	Si
SLV 14	14.66	198.78	-2186	-1820	403	0.55	0.55	-11820	12781	1968	35683	6917	1403	8320		20.66	Si
SLV 6	13.86	235.47	-571	-476	783	0.44	0	0	0	0	35683	5534	1122	6656		8.5	Si
SLV 6	14.66	-292.62	-2064	-1719	743	0.55	0.3997	-15471	13511	1512	35683	6917	1403	8320		11.2	Si
SLV 3	13.86	139.36	-222	-185	1040	0.44	0	0	0	0	35683	5534	1122	6656		6.4	Si
SLV 3	14.66	-351.83	-523	-436	-80	0.44	0	0	0	0	35683	5534	1122	6656		83.62	Si
SLV 4	13.86	165.64	-91	-76	1133	0.44	0	0	0	0	35683	5534	1122	6656		5.87	Si
SLV 4	14.66	-378.22	-519	-432	-26	0.44	0	0	0	0	35683	5534	1122	6656		259.09	Si
SLV 5	13.86	218.58	-655	-546	723	0.44	0	0	0	0	35683	5534	1122	6656		9.2	Si
SLV 5	14.66	-275.66	-2067	-1721	708	0.55	0.4248	-14560	13329	1586	35683	6917	1403	8320		11.74	Si
SLV 1	13.86	247.12	-7	-6	1290	0.44	0	0	0	0	35683	5534	1122	6656		5.16	Si
SLV 1	14.66	-418.47	-1052	-876	266	0.44	0	0	0	0	35683	5534	1122	6656		24.99	Si
SLV 15	13.86	-314.8	-2858	-2380	-1459	0.55	0.4946	-15454	13507	1871	35683	6917	1403	8320		5.7	Si
SLV 15	14.66	291.81	-1661	-1383	3	0.55	0.2981	-8983	12213	1019	35683	6917	1403	8320		2974.91	Si
SLV 2	13.86	273.4	124	103	1383	0.44	0	0	0	0	35683	5534	1122	6656		4.81	Si
SLV 2	14.66	-444.86	-1048	-873	320	0.44	0	0	0	0	35683	5534	1122	6656		20.78	Si
SLV 13	13.86	-207.04	-2643	-2201	-1209	0.55	0.55	-14291	13275	2044	35683	6917	1403	8320		6.88	Si
SLV 13	14.66	225.17	-2190	-1824	349	0.55	0.5166	-11842	12785	1849	35683	6917	1403	8320		23.86	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.468 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.53	0	-406	64.34	0	0	No, e>t/2
SLV 6	179667	0.53	0	-396	64.34	0	0	No, e>t/2
SLV 9	179667	0.53	0	-180	64.34	0	0	No, e>t/2
SLV 10	179667	0.53	0	-132	64.34	0	0	No, e>t/2
SLV 5	179667	0.53	0	-444	64.34	0	0	No, e>t/2
SLV 13	179667	0.53	3122	-481	64.34	65.93	1.02	Si
SLV 16	179667	0.53	5953	-917	64.34	123.34	1.92	Si
SLV 15	179667	0.53	6436	-991	64.34	132.91	2.07	Si
SLV 2	179667	0.53	8349	-1286	64.34	170.18	2.64	Si
SLV 1	179667	0.53	8832	-1360	64.34	179.42	2.79	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.468 Wa = 0.05 Ta = 0.0617

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-1583	-405	-18	1.567	232.3	0.921	24.72569	13.09305	Si
SLV 10	-1581	-338	-18	1.569	232.1	0.921	24.75949	13.09305	Si
SLV 5	-1206	-382	-11	1.919	194.6	0.91	30.6314	13.09305	Si
SLV 6	-1203	-316	-12	1.922	194.4	0.91	30.68353	13.09305	Si
SLV 13	-1608	-1099	-13	1.551	234.8	0.922	24.45398	7.49562	Si
SLV 14	-1604	-995	-14	1.554	234.4	0.922	24.50536	7.49562	Si
SLV 15	-1252	-1656	-3	1.874	199.1	0.912	29.86511	7.49562	Si
SLV 16	-1247	-1552	-3	1.878	198.7	0.912	29.94206	7.49562	Si
SLV 11	-395	-2261	16	3.724	116.6	0.889	60.85833	13.09305	Si
SLV 12	-392	-2194	16	3.736	116.3	0.889	61.061	13.09305	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.851	SLU 64	Si
V_SLU	23.785	SLU 48	Si
PF_SLV	0	SLV 2	No
V_SLV	4.813	SLV 2	Si
PFFP_SLV	0	SLV 5	No
R_SLV	1.888	SLV 9	Si

Maschio 208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.314	-5.463	-3.314	L7	F1	2.28	0.28	3.213	3.212	3.214			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 8	13.86	70.29	-6601	-0.000016	0.0003743	0.0035	2.28	6760.67	7248.06	7248.06	103.11	No	Si
SLU 8	14.66	-344.65	-5109	-0.0000141	0.0003743	0.0035	2.28	5366.63	6822.72	6822.72	19.8	No	Si
SLU 43	13.86	232.94	-6379	-0.0000165	0.0003743	0.0035	2.28	6558.05	7031.13	7031.13	30.18	No	Si
SLU 43	14.66	-312.75	-4605	-0.0000127	0.0003743	0.0035	2.28	4877.43	6302.38	6302.38	20.15	No	Si
SLU 72	13.86	128.56	-8553	-0.0000211	0.0003743	0.0035	2.28	8467.31	8882.61	8882.61	69.1	No	Si
SLU 72	14.66	-399.2	-6619	-0.0000181	0.0003743	0.0035	2.28	6777.35	8313.1	8313.1	20.82	No	Si
SLU 48	13.86	125.23	-8270	-0.0000204	0.0003743	0.0035	2.28	8227.9	8647.71	8647.71	69.06	No	Si
SLU 48	14.66	-385.85	-6367	-0.0000174	0.0003743	0.0035	2.28	6547.41	8062.82	8062.82	20.9	No	Si
SLU 9	13.86	64.42	-6600	-0.0000159	0.0003743	0.0035	2.28	6759.66	7246.97	7246.97	112.5	No	Si
SLU 9	14.66	-340.62	-5108	-0.0000141	0.0003743	0.0035	2.28	5365.72	6821.77	6821.77	20.03	No	Si
SLU 44	13.86	223.14	-6377	-0.0000164	0.0003743	0.0035	2.28	6556.36	7029.33	7029.33	31.5	No	Si
SLU 44	14.66	-306.04	-4603	-0.0000126	0.0003743	0.0035	2.28	4875.88	6300.74	6300.74	20.59	No	Si
SLU 47	13.86	166.84	-7138	-0.0000179	0.0003743	0.0035	2.28	7243.36	7722.37	7722.37	46.29	No	Si
SLU 47	14.66	-360.51	-5306	-0.0000147	0.0003743	0.0035	2.28	5555.38	7018.37	7018.37	19.47	No	Si
SLU 51	13.86	114.45	-7899	-0.0000194	0.0003743	0.0035	2.28	7910.7	8342.63	8342.63	72.89	No	Si
SLU 51	14.66	-417.67	-6010	-0.0000167	0.0003743	0.0035	2.28	6218.13	7708.63	7708.63	18.46	No	Si
SLU 71	13.86	134.43	-8554	-0.0000211	0.0003743	0.0035	2.28	8468.25	8883.53	8883.53	66.08	No	Si
SLU 71	14.66	-403.22	-6620	-0.0000181	0.0003743	0.0035	2.28	6778.22	8314.04	8314.04	20.62	No	Si
SLU 50	13.86	120.33	-7900	-0.0000194	0.0003743	0.0035	2.28	7911.66	8343.54	8343.54	69.34	No	Si
SLU 50	14.66	-421.69	-6011	-0.0000167	0.0003743	0.0035	2.28	6219.01	7709.57	7709.57	18.28	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	13.86	-828.53	-4411	-0.0000153	0.0005615	0.0035	2.28		6175.93	6175.93	7.45		Si
SLV 16	14.66	478.21	-3432	-0.0000109	0.0005615	0.0035	2.28		4090.12	4090.12	8.55		Si
SLV 4	13.86	829.06	-6832	-0.0000211	0.0005615	0.0035	2.28		7651.17	7651.17	9.23		Si
SLV 4	14.66	-643.28	-5079	-0.0000158	0.0005615	0.0035	2.28		6867.68	6867.68	10.68		Si
SLV 10	13.86	649.88	-3568	-0.0000122	0.0005615	0.0035	2.28		4235.04	4235.04	6.52		Si
SLV 10	14.66	-625.32	-2242	-0.000009	0.0005615	0.0035	2.28		3851.61	3851.61	6.16		Si
SLV 5	13.86	1108.97	-4320	-0.0000168	0.0005615	0.0035	2.28		5037.8	5037.8	4.54		Si
SLV 5	14.66	-898.69	-2774	-0.0000119	0.0005615	0.0035	2.28		4427.96	4427.96	4.93		Si
SLD 6	13.86	602.06	-4823	-0.0000149	0.0005615	0.0035	2.28		5570.03	5570.03	9.25		Si
SLD 6	14.66	-535.22	-3370	-0.0000111	0.0005615	0.0035	2.28		5070.69	5070.69	9.47		Si
SLV 15	13.86	-887.95	-4453	-0.0000158	0.0005615	0.0035	2.28		6219.62	6219.62	7		Si
SLV 15	14.66	576.34	-3491	-0.0000116	0.0005615	0.0035	2.28		4153.45	4153.45	7.21		Si
SLV 1	13.86	1189.11	-6090	-0.0000215	0.0005615	0.0035	2.28		6889.67	6889.67	5.79		Si
SLV 1	14.66	-881.39	-4318	-0.0000154	0.0005615	0.0035	2.28		6077.68	6077.68	6.9		Si
SLV 2	13.86	1248.54	-6048	-0.0000218	0.0005615	0.0035	2.28		6846.72	6846.72	5.48		Si
SLV 2	14.66	-979.53	-4259	-0.0000159	0.0005615	0.0035	2.28		6015.67	6015.67	6.14		Si
SLV 6	13.86	1147.16	-4294	-0.000017	0.0005615	0.0035	2.28		5009.38	5009.38	4.37		Si
SLV 6	14.66	-961.77	-2736	-0.0000122	0.0005615	0.0035	2.28		4386.94	4386.94	4.56		Si
SLV 9	13.86	611.69	-3594	-0.0000121	0.0005615	0.0035	2.28		4263.73	4263.73	6.97		Si
SLV 9	14.66	-562.25	-2280	-0.0000087	0.0005615	0.0035	2.28		3892.89	3892.89	6.92		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	13.86	128.56	-8553	-7122	1737	2.28	2.28	-11157	8432	5383	35683	19116	5814	24930	No	14.36	Si
SLU 72	14.66	-399.2	-6619	-5512	1438	2.28	2.28	-8634	8096	5168	35683	19116	5814	24930	No	17.33	Si
SLU 50	13.86	120.33	-7900	-6579	1711	2.28	2.28	-10305	8318	5310	35683	19116	5814	24930	No	14.57	Si
SLU 50	14.66	-421.69	-6011	-5006	1407	2.28	2.28	-7841	7990	5101	35683	19116	5814	24930	No	17.71	Si
SLU 66	13.86	195.64	-8163	-6797	1650	2.28	2.28	-10647	8364	5340	35683	19116	5814	24930	No	15.11	Si
SLU 66	14.66	-312.91	-6273	-5223	1360	2.28	2.28	-8182	8035	5130	35683	19116	5814	24930	No	18.33	Si
SLU 69	13.86	139.33	-8923	-7431	1729	2.28	2.28	-11640	8496	5424	35683	19116	5814	24930	No	14.42	Si
SLU 69	14.66	-367.39	-6976	-5809	1432	2.28	2.28	-9099	8158	5208	35683	19116	5814	24930	No	17.41	Si
SLU 51	13.86	114.45	-7899	-6578	1698	2.28	2.28	-10304	8318	5310	35683	19116	5814	24930	No	14.68	Si
SLU 51	14.66	-417.67	-6010	-5005	1395	2.28	2.28	-7840	7990	5101	35683	19116	5814	24930	No	17.87	Si
SLU 49	13.86	119.35	-8269	-6885	1678	2.28	2.28	-10785	8383	5351	35683	19116	5814	24930	No	14.86	Si
SLU 49	14.66	-381.83	-6366	-5301	1376	2.28	2.28	-8304	8052	5140	35683	19116	5814	24930	No	18.11	Si
SLU 70	13.86	133.45	-8922	-7430	1716	2.28	2.28	-11638	8496	5424	35683	19116	5814	24930	No	14.53	Si
SLU 70	14.66	-363.36	-6975	-5808	1420	2.28	2.28	-9098	8158	5208	35683	19116	5814	24930	No	17.56	Si
SLU 71	13.86	134.43	-8554	-7123	1749	2.28	2.28	-11158	8432	5383	35683	19116	5814	24930	No	14.25	Si
SLU 71	14.66	-403.22	-6620	-5513	1451	2.28	2.28	-8635	8096	5168	35683	19116	5814	24930	No	17.18	Si
SLU 48	13.86	125.23	-8270	-6886	1690	2.28	2.28	-10787	8383	5351	35683	19116	5814	24930	No	14.75	Si
SLU 48	14.66	-385.85	-6367	-5302	1389	2.28	2.28	-8305	8052	5140	35683	19116	5814	24930	No	17.95	Si
SLU 68	13.86	180.94	-7791	-6488	1649	2.28	2.28	-10163	8300	5298	35683	19116	5814	24930	No	15.12	Si
SLU 68	14.66	-342.04	-5915	-4926	1358	2.28	2.28	-7716	7973	5090	35683	19116	5814	24930	No	18.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	13.86	1189.11	-6090	-5071	4060	2.28	2.28	-7943	12005	7664	35683	28675	5814	34489		8.49	Si
SLV 1	14.66	-881.39	-4318	-3595	3083	2.28	2.28	-5632	11543	7369	35683	28675	5814	34489		11.19	Si
SLV 6	13.86	1147.16	-4294	-3575	3483	2.28	2.28	-5601	11537	7365	35683	28675	5814	34489		9.9	Si
SLV 6	14.66	-961.77	-2736	-2278	2902	2.28	2.28	-3568	11130	7106	35683	28675	5814	34489		11.88	Si
SLD 4	13.86	455.37	-5932	-4940	2105	2.28	2.28	-7738	11964	7638	35683	28675	5814	34489		16.38	Si
SLD 4	14.66	-389.35	-4395	-3660	1599	2.28	2.28	-5733	11563	7382	35683	28675	5814	34489		21.57	Si
SLV 4	13.86	829.06	-6832	-5689	3391	2.28	2.28	-8911	12199	7788	35683	28675	5814	34489		10.17	Si
SLV 4	14.66	-643.28	-5079	-4230	2483	2.28	2.28	-6625	11742	7496	35683	28675	5814	34489		13.89	Si
SLV 5	13.86	1108.97	-4320	-3598	3339	2.28	2.28	-5636	11544	7369	35683	28675	5814	34489		10.33	Si
SLV 5	14.66	-898.69	-2774	-2310	2771	2.28	2.28	-3618	11140	7112	35683	28675	5814	34489		12.45	Si
SLD 6	13.86	602.06	-4823	-4016	2167	2.28	2.28	-6291	11675	7453	35683	28675	5814	34489		15.91	Si
SLD 6	14.66	-535.22	-3370	-2807	1802	2.28	2.28	-4396	11296	7211	35683	28675	5814	34489		19.14	Si
SLV 2	13.86	1248.54	-6048	-5036	4284	2.28	2.28	-7889	11994	7657	35683	28675	5814	34489		8.05	Si
SLV 2	14.66	-979.53	-4259	-3546	3287	2.28	2.28	-5555	11528	7359	35683	28675	5814	34489		10.49	Si
SLD 1	13.86	614.11	-5604	-4667	2402	2.28	2.28	-7310	11879	7583	35683	28675	5814	34489		14.36	Si
SLD 1	14.66	-495.76	-4059	-3380	1866	2.28	2.28	-5295	11476	7326	35683	28675	5814	34489		18.48	Si
SLV 3	13.86	769.63	-6874	-5724	3167	2.28	2.28	-8966	12210	7795	35683	28675	5814	34489		10.89	Si
SLV 3	14.66	-545.14	-5138	-4279	2278	2.28	2.28	-6702	11757	7506	35683	28675	5814	34489		15.14	Si
SLD 2	13.86	639.62	-5586	-4652	2498	2.28	2.28	-7286	11874	7580	35683	28675	5814	34489		13.81	Si
SLD 2	14.66	-537.89	-4034	-3359	1954	2.28	2.28	-5262	11469	7322	35683	28675	5814	34489		17.65	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.466 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.53	4233	-2702	266.42	367.83	1.38	Si
SLV 5	179667	0.53	4380	-2796	266.42	380.2	1.43	Si
SLV 10	179667	0.53	4488	-2865	266.42	389.34	1.46	Si
SLV 9	179667	0.53	4635	-2959	266.42	401.67	1.51	Si
SLV 2	179667	0.53	6200	-3958	266.42	531.6	2	Si
SLV 1	179667	0.53	6428	-4104	266.42	550.32	2.07	Si
SLV 14	179667	0.53	7051	-4501	266.42	601.05	2.26	Si
SLV 13	179667	0.53	7279	-4647	266.42	619.54	2.33	Si
SLV 4	179667	0.53	8176	-5219	266.42	691.58	2.6	Si
SLV 3	179667	0.53	8404	-5365	266.42	709.77	2.66	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.466 Wa = 0.05 Ta = 0.0616

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-3826	-9304	655	2.2	690.6	0.901	35.48676	13.07608	Si
SLV 8	-3818	-9190	655	2.203	689.9	0.901	35.53436	13.07608	Si
SLV 11	-3404	-9608	656	2.373	649.3	0.898	38.42585	13.07608	Si
SLV 12	-3396	-9494	656	2.377	648.6	0.898	38.48137	13.07608	Si
SLV 5	-2501	-2591	-645	2.86	562.6	0.891	46.63674	13.07608	Si
SLV 6	-2494	-2476	-645	2.864	561.9	0.891	46.7165	13.07608	Si
SLV 9	-2079	-2895	-644	3.163	523.2	0.889	51.68971	13.07608	Si
SLV 10	-2071	-2781	-644	3.169	522.5	0.889	51.78622	13.07608	Si
SLV 3	-3856	-6631	198	2.269	693.6	0.901	36.57884	7.49036	Si
SLV 4	-3845	-6454	198	2.273	692.5	0.901	36.65488	7.49036	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.283	SLU 50	Si
V_SLU	14.253	SLU 71	Si
PF_SLV	4.367	SLV 6	Si
V_SLV	8.05	SLV 2	Si
PFFP_SLV	1.381	SLV 6	Si
R_SLV	2.714	SLV 7	Si

Maschio 209

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.283	-3.314	L7	F1	2.15	0.28	3.211	3.21	3.212			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 29	12.76	540.59	-5503	-0.0000175	0.0003743	0.0035	2.15	5384.39	5766.66	5766.66	10.67	No	Si
SLU 29	14.56	1452.64	-4414	-0.0000211	0.0003743	0.0035	2.15	4403.7	4733.97	4733.97	3.26	No	Si
SLU 35	12.76	364.13	-5590	-0.0000165	0.0003743	0.0035	2.15	5461.41	5849.18	5849.18	16.06	No	Si
SLU 35	14.56	1613.47	-4796	-0.0000232	0.0003743	0.0035	2.15	4752.25	5098.31	5098.31	3.16	No	Si
SLU 38	12.76	351.4	-5399	-0.0000159	0.0003743	0.0035	2.15	5292.57	5668.68	5668.68	16.13	No	Si
SLU 38	14.56	1546.31	-4475	-0.0000219	0.0003743	0.0035	2.15	4459.7	4792.3	4792.3	3.1	No	Si
SLU 27	12.76	551.62	-5715	-0.0000181	0.0003743	0.0035	2.15	5570.47	5964.32	5964.32	10.81	No	Si
SLU 27	14.56	1521.35	-4735	-0.0000224	0.0003743	0.0035	2.15	4697.35	5040.71	5040.71	3.31	No	Si
SLU 16	12.76	409.06	-5038	-0.0000154	0.0003743	0.0035	2.15	4970.31	5327.88	5327.88	13.02	No	Si
SLU 16	14.56	1318.73	-4039	-0.0000192	0.0003743	0.0035	2.15	4056.24	4371.42	4371.42	3.31	No	Si
SLU 30	12.76	538.89	-5523	-0.0000175	0.0003743	0.0035	2.15	5402.47	5786.02	5786.02	10.74	No	Si
SLU 30	14.56	1454.19	-4415	-0.0000211	0.0003743	0.0035	2.15	4404.12	4734.41	4734.41	3.26	No	Si
SLU 28	12.76	549.93	-5735	-0.0000181	0.0003743	0.0035	2.15	5588.39	5983.25	5983.25	10.88	No	Si
SLU 28	14.56	1522.9	-4736	-0.0000224	0.0003743	0.0035	2.15	4697.77	5041.15	5041.15	3.31	No	Si
SLU 17	12.76	407.36	-5058	-0.0000154	0.0003743	0.0035	2.15	4988.72	5347.33	5347.33	13.13	No	Si
SLU 17	14.56	1320.28	-4040	-0.0000192	0.0003743	0.0035	2.15	4056.67	4371.87	4371.87	3.31	No	Si
SLU 36	12.76	362.44	-5611	-0.0000165	0.0003743	0.0035	2.15	5479.42	5868.22	5868.22	16.19	No	Si
SLU 36	14.56	1615.02	-4796	-0.0000232	0.0003743	0.0035	2.15	4752.67	5098.74	5098.74	3.16	No	Si
SLU 37	12.76	353.1	-5378	-0.0000158	0.0003743	0.0035	2.15	5274.4	5649.36	5649.36	16	No	Si
SLU 37	14.56	1544.76	-4475	-0.0000219	0.0003743	0.0035	2.15	4459.29	4791.86	4791.86	3.1	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	12.76	201.54	-2502	-0.0000075	0.0005615	0.0035	2.15		2876.02	2876.02	14.27		Si
SLV 14	14.56	1611.45	-4139	-0.0000213	0.0005615	0.0035	2.15		4535.33	4535.33	2.81		Si
SLD 9	12.76	294.34	-2086	-0.0000071	0.0005615	0.0035	2.15		2448.54	2448.54	8.32		Si
SLD 9	14.56	1002.95	-2924	-0.000014	0.0005615	0.0035	2.15		3308.27	3308.27	3.3		Si
SLV 10	12.76	180.32	1195	0.0840751	0.0005615	0.0035	1.72		0	0	0		No
SLV 10	14.56	1353.39	-2524	-0.0000165	0.0005615	0.0035	2.15		2898.64	2898.64	2.14		Si
SLV 6	12.76	296.24	1220	0.0852243	0.0005615	0.0035	1.72		0	0	0		No
SLV 6	14.56	883.11	-1702	-0.0000107	0.0005615	0.0035	2.15		2050.18	2050.18	2.32		Si
SLV 5	12.76	250.04	835	0.0580084	0.0005615	0.0035	1.72		0	0	0		No
SLV 5	14.56	901.77	-1820	-0.000011	0.0005615	0.0035	2.15		2172.27	2172.27	2.41		Si
SLD 10	12.76	314.52	-1918	-0.0000068	0.0005615	0.0035	2.15		2273.82	2273.82	7.23		Si
SLD 10	14.56	994.8	-2873	-0.0000139	0.0005615	0.0035	2.15		3255.78	3255.78	3.27		Si
SLV 9	12.76	134.12	810	0.0568867	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	14.56	1372.05	-2641	-0.0000167	0.0005615	0.0035	2.15		3019	3019	2.2		Si
SLD 14	12.76	324.64	-3551	-0.000011	0.0005615	0.0035	2.15		3944.4	3944.4	12.15		Si
SLD 14	14.56	1102.4	-3574	-0.0000163	0.0005615	0.0035	2.15		3967.29	3967.29	3.6		Si
SLV 13	12.76	129.65	-3101	-0.0000085	0.0005615	0.0035	2.15		3488.65	3488.65	26.91		Si
SLV 13	14.56	1640.49	-4322	-0.000022	0.0005615	0.0035	2.15		4718.73	4718.73	2.88		Si
SLD 13	12.76	293.78	-3808	-0.0000114	0.0005615	0.0035	2.15		4203.06	4203.06	14.31		Si
SLD 13	14.56	1114.86	-3653	-0.0000166	0.0005615	0.0035	2.15		4046.32	4046.32	3.63		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	12.76	528.6	-6788	-5652	-1383	2.15	2.15	-9389	8196	4934	35683	18027	5483	23509	No	16.99	Si
SLU 78	14.56	1726.21	-5552	-4623	-1378	2.15	2.15	-7680	7968	4797	35683	18027	5483	23509	No	17.06	Si
SLU 84	12.76	383.89	-6099	-5079	-1229	2.15	2.15	-8436	8069	4858	35683	18027	5483	23509	No	19.13	Si
SLU 84	14.56	1398.15	-4775	-3977	-1225	2.15	2.15	-6605	7825	4711	35683	18027	5483	23509	No	19.2	Si
SLU 38	12.76	351.4	-5399	-4496	-1243	2.15	2.15	-7468	7940	4780	35683	18027	5483	23509	No	18.92	Si
SLU 38	14.56	1546.31	-4475	-3727	-1237	2.15	2.15	-6190	7770	4677	35683	18027	5483	23509	No	19	Si
SLU 80	12.76	517.56	-6576	-5476	-1286	2.15	2.15	-9096	8157	4911	35683	18027	5483	23509	No	18.28	Si
SLU 80	14.56	1657.5	-5231	-4356	-1280	2.15	2.15	-7236	7909	4761	35683	18027	5483	23509	No	18.36	Si
SLU 37	12.76	353.1	-5378	-4479	-1253	2.15	2.15	-7439	7936	4778	35683	18027	5483	23509	No	18.76	Si
SLU 37	14.56	1544.76	-4475	-3726	-1247	2.15	2.15	-6190	7770	4677	35683	18027	5483	23509	No	18.85	Si
SLU 83	12.76	385.59	-6078	-5061	-1239	2.15	2.15	-8408	8065	4855	35683	18027	5483	23509	No	18.97	Si
SLU 83	14.56	1396.6	-4775	-3976	-1235	2.15	2.15	-6605	7825	4711	35683	18027	5483	23509	No	19.04	Si
SLU 77	12.76	530.3	-6768	-5635	-1394	2.15	2.15	-9361	8193	4932	35683	18027	5483	23509	No	16.87	Si
SLU 77	14.56	1724.66	-5552	-4623	-1388	2.15	2.15	-7679	7968	4797	35683	18027	5483	23509	No	16.94	Si
SLU 35	12.76	364.13	-5590	-4655	-1350	2.15	2.15	-7733	7975	4801	35683	18027	5483	23509	No	17.41	Si
SLU 35	14.56	1613.47	-4796	-3994	-1345	2.15	2.15	-6634	7829	4713	35683	18027	5483	23509	No	17.48	Si
SLU 36	12.76	362.44	-5611	-4672	-1340	2.15	2.15	-7761	7979	4804	35683	18027	5483	23509	No	17.54	Si
SLU 36	14.56	1615.02	-4796	-3994	-1334	2.15	2.15	-6635	7829	4713	35683	18027	5483	23509	No	17.62	Si
SLU 79	12.76	519.26	-6556	-5459	-1296	2.15	2.15	-9068	8154	4908	35683	18027	5483	23509	No	18.13	Si
SLU 79	14.56	1655.95	-5230	-4355	-1291	2.15	2.15	-7235	7909	4761	35683	18027	5483	23509	No	18.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	12.76	250.04	835	696	-2874	1.72	2.15	0	0	0	35683	21632	4386	26018		9.05	Si
SLV 5	14.56	901.77	-1820	-1516	-3249	2.15	1.7386	-2517	10920	5316	35683	27040	5483	32523		10.01	Si
SLV 13	12.76	129.65	-3101	-2582	-3111	2.15	2.15	-4289	11274	6787	35683	27040	5483	32523		10.46	Si
SLV 13	14.56	1640.49	-4322	-3599	-2098	2.15	2.0864	-5979	11612	6784	35683	27040	5483	32523		15.5	Si
SLV 6	12.76	296.24	1220	1016	-2997	1.72	2.15	0	0	0	35683	21632	4386	26018		8.68	Si
SLV 6	14.56	883.11	-1702	-1418	-3373	2.15	1.6688	-2355	10888	5087	35683	27040	5483	32523		9.64	Si
SLV 10	12.76	180.32	1195	995	-4064	1.72	2.15	0	0	0	35683	21632	4386	26018		6.4	Si
SLV 10	14.56	1353.39	-2524	-2101	-3821	2.15	1.6162	-3491	11115	5030	35683	27040	5483	32523		8.51	Si
SLV 7	12.76	660.39	-9946	-8282	2956	2.15	2.15	-13758	13168	7927	35683	27040	5483	32523		11	Si
SLV 7	14.56	86.31	-3792	-3158	2717	2.15	2.15	-5245	11466	6902	35683	27040	5483	32523		11.97	Si
SLV 11	12.76	544.47	-9972	-8304	1889	2.15	2.15	-13793	13175	7932	35683	27040	5483	32523		17.21	Si
SLV 11	14.56	556.58	-4613	-3842	2268	2.15	2.15	-6381	11693	7039	35683	27040	5483	32523		14.34	Si
SLV 3	12.76	639.17	-6250	-5204	2195	2.15	2.15	-8645	12146	7312	35683	27040	5483	32523		14.82	Si
SLV 3	14.56	-171.75	-2176	-1812	1186	2.15	2.15	-3010	11019	6633	35683	27040	5483	32523		27.42	Si
SLV 14	12.76	201.54	-2502	-2083	-3303	2.15	2.15	-3460	11109	6688	35683	27040	5483	32523		9.85	Si
SLV 14	14.56	1611.45	-4139	-3447	-2291	2.15	2.0571	-5726	11562	6660	35683	27040	5483	32523		14.2	Si
SLV 9	12.76	134.12	810	674	-3941	1.72	2.15	0	0	0	35683	21632	4386	26018		6.6	Si
SLV 9	14.56	1372.05	-2641	-2199	-3698	2.15	1.6666	-3653	11147	5202	35683	27040	5483	32523		8.79	Si
SLV 8	12.76	706.6	-9561	-7962	2833	2.15	2.15	-13226	13062	7863	35683	27040	5483	32523		11.48	Si
SLV 8	14.56	67.65	-3674	-3060	2593	2.15	2.15	-5083	11433	6883	35683	27040	5483	32523		12.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.465 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.53	0	-177	250.78	0	0	No, e>t/2
SLV 6	179667	0.53	0	75	250.78	0	0	No, Trazione
SLV 5	179667	0.53	0	-202	250.78	0	0	No, e>t/2
SLV 9	179667	0.53	0	-454	250.78	0	0	No, e>t/2
SLV 2	179667	0.53	3594	-2164	250.78	295.81	1.18	Si
SLV 1	179667	0.53	4309	-2594	250.78	352.91	1.41	Si
SLV 14	179667	0.53	4989	-3003	250.78	406.73	1.62	Si
SLV 13	179667	0.53	5703	-3434	250.78	462.74	1.85	Si
SLV 4	179667	0.53	7309	-4400	250.78	586.56	2.34	Si
SLV 3	179667	0.53	8024	-4830	250.78	640.73	2.55	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.465 Wa = 0.05 Ta = 0.0615

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-3151	-11180	424	2.442	606.4	0.897	39.55301	13.04889	Si
SLV 12	-3104	-10676	424	2.465	601.8	0.897	39.94983	13.04889	Si
SLV 7	-2390	-10670	278	2.919	533.3	0.891	47.59855	13.04889	Si
SLV 8	-2343	-10166	277	2.953	528.8	0.891	48.15732	13.04889	Si
SLV 9	-2242	803	-278	3.026	519.3	0.89	49.38319	13.04889	Si, Trazione
SLV 10	-2195	1308	-278	3.062	514.9	0.89	49.981	13.04889	Si, Trazione
SLV 5	-1481	1313	-424	3.685	449.8	0.89	60.2102	13.04889	Si, Trazione
SLV 6	-1434	1818	-424	3.739	445.6	0.89	61.07574	13.04889	Si, Trazione
SLV 15	-3734	-7721	349	2.2	663.4	0.902	35.4381	7.48203	Si
SLV 16	-3661	-6936	349	2.229	656.2	0.902	35.93642	7.48203	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.099	SLU 38	Si
V_SLU	16.87	SLU 77	Si
PF_SLV	0	SLV 5	No
V_SLV	6.402	SLV 10	Si
PFFP_SLV	0	SLV 6	No
R_SLV	3.031	SLV 11	Si

Maschio 216

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-13.763	-4.784	L2	L3	2.75	0.45	1.98	1.98	1.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-1.58	-3975.87	-14775	-0.0000295	0.0003743	0.0035	2.75	17933.51	20587.52	20587.52	5.18	No	Si
SLU 82	0.4	1442.03	-17929	-0.0000265	0.0003743	0.0035	2.75	21144.47	21817.73	21817.73	15.13	No	Si
SLU 75	-1.58	-3903.69	-14476	-0.0000289	0.0003743	0.0035	2.75	17617.06	20252.87	20252.87	5.19	No	Si
SLU 75	0.4	1525.57	-17308	-0.000026	0.0003743	0.0035	2.75	20529.15	21178.53	21178.53	13.88	No	Si
SLU 80	-1.58	-3922.17	-14543	-0.000029	0.0003743	0.0035	2.75	17688.2	20327.83	20327.83	5.18	No	Si
SLU 80	0.4	1533.01	-17407	-0.0000261	0.0003743	0.0035	2.75	20627.93	21280.37	21280.37	13.88	No	Si
SLU 77	-1.58	-3952.26	-14638	-0.0000292	0.0003743	0.0035	2.75	17788.58	20433.87	20433.87	5.17	No	Si
SLU 77	0.4	1566.36	-17551	-0.0000264	0.0003743	0.0035	2.75	20771.08	21428.46	21428.46	13.68	No	Si
SLU 81	-1.58	-3982.52	-14782	-0.0000295	0.0003743	0.0035	2.75	17940.95	20595.43	20595.43	5.17	No	Si
SLU 81	0.4	1455.66	-17923	-0.0000266	0.0003743	0.0035	2.75	21138.79	21811.78	21811.78	14.98	No	Si
SLU 84	-1.58	-4017.79	-14930	-0.0000298	0.0003743	0.0035	2.75	18096.54	20761.14	20761.14	5.17	No	Si
SLU 84	0.4	1469.18	-18178	-0.0000269	0.0003743	0.0035	2.75	21388.75	22074.76	22074.76	15.03	No	Si
SLU 83	-1.58	-4024.45	-14938	-0.0000298	0.0003743	0.0035	2.75	18103.96	20769.06	20769.06	5.16	No	Si
SLU 83	0.4	1482.82	-18172	-0.000027	0.0003743	0.0035	2.75	21383.1	22068.79	22068.79	14.88	No	Si
SLU 74	-1.58	-3910.34	-14483	-0.0000289	0.0003743	0.0035	2.75	17624.55	20260.75	20260.75	5.18	No	Si
SLU 74	0.4	1539.2	-17302	-0.000026	0.0003743	0.0035	2.75	20523.39	21172.6	21172.6	13.76	No	Si
SLU 78	-1.58	-3945.61	-14631	-0.0000292	0.0003743	0.0035	2.75	17781.12	20425.98	20425.98	5.18	No	Si
SLU 78	0.4	1552.73	-17557	-0.0000264	0.0003743	0.0035	2.75	20776.8	21434.4	21434.4	13.8	No	Si
SLU 79	-1.58	-3928.82	-14550	-0.000029	0.0003743	0.0035	2.75	17695.67	20335.72	20335.72	5.18	No	Si
SLU 79	0.4	1546.64	-17401	-0.0000261	0.0003743	0.0035	2.75	20622.19	21274.44	21274.44	13.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	-1.58	-6343.63	-9761	-0.0000306	0.0005615	0.0035	2.75		14937.34	14937.34	2.35		Si
SLV 15	0.4	17422.69	-11543	-0.0091931	0.0005615	0.0035	2.75		15476.29	15476.29	0.89		No
SLD 15	-1.58	-4276.75	-9957	-0.0000238	0.0005615	0.0035	2.75		15180.36	15180.36	3.55		Si
SLD 15	0.4	8103.11	-11519	-0.0000392	0.0005615	0.0035	2.75		15445.56	15445.56	1.91		Si
SLV 2	-1.58	871.31	-10458	-0.0000152	0.0005615	0.0035	2.75		14123	14123	16.21		Si
SLV 2	0.4	-15119.91	-11449	-0.0003225	0.0005615	0.0035	2.2		17039.41	17039.41	1.13		Si
SLV 13	-1.58	-6475.68	-11385	-0.0000321	0.0005615	0.0035	2.75		16959.34	16959.34	2.62		Si
SLV 13	0.4	17588.85	-11802	-0.0087064	0.0005615	0.0035	2.75		15797.62	15797.62	0.9		No
SLV 14	-1.58	-6146.6	-11423	-0.000031	0.0005615	0.0035	2.75		17006.37	17006.37	2.77		Si
SLV 14	0.4	16595.38	-11963	-0.0048209	0.0005615	0.0035	2.75		15998	15998	0.96		No
SLV 4	-1.58	1003.36	-8833	-0.0000135	0.0005615	0.0035	2.75		12067.92	12067.92	12.03		Si
SLV 4	0.4	-15286.07	-11191	-0.0004105	0.0005615	0.0035	2.2		16716.36	16716.36	1.09		Si
SLD 13	-1.58	-4334.56	-10657	-0.0000248	0.0005615	0.0035	2.75		16051.35	16051.35	3.7		Si
SLD 13	0.4	8177.95	-11627	-0.0000396	0.0005615	0.0035	2.75		15579.93	15579.93	1.91		Si
SLV 16	-1.58	-6014.54	-9799	-0.0000292	0.0005615	0.0035	2.75		14984.03	14984.03	2.49		Si
SLV 16	0.4	16429.22	-11705	-0.0053386	0.0005615	0.0035	2.75		15676.76	15676.76	0.95		No
SLV 1	-1.58	542.22	-10420	-0.0000143	0.0005615	0.0035	2.75		14075.46	14075.46	25.96		Si
SLV 1	0.4	-14126.45	-11288	-0.0002037	0.0005615	0.0035	2.2		16837.84	16837.84	1.19		Si
SLV 3	-1.58	674.28	-8796	-0.0000126	0.0005615	0.0035	2.75		12020.23	12020.23	17.83		Si
SLV 3	0.4	-14292.61	-11029	-0.0002632	0.0005615	0.0035	2.2		16515.02	16515.02	1.16		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-1.58	-4024.45	-14938	-13278	-9755	2.75	2.75	-10730	8375	10364	21410	37056	7013	31774	No	3.26	Si
SLU 83	0.4	1482.82	-18172	-16153	-7480	2.75	2.75	-13053	8685	10748	21410	37056	7013	32157	No	4.3	Si
SLU 75	-1.58	-3903.69	-14476	-12867	-9496	2.75	2.75	-10398	8331	10309	21410	37056	7013	31719	No	3.34	Si
SLU 75	0.4	1525.57	-17308	-15385	-7241	2.75	2.75	-12432	8602	10645	21410	37056	7013	32055	No	4.43	Si
SLU 81	-1.58	-3982.52	-14782	-13140	-9641	2.75	2.75	-10618	8360	10346	21410	37056	7013	31756	No	3.29	Si
SLU 81	0.4	1455.66	-17923	-15932	-7398	2.75	2.75	-12874	8661	10718	21410	37056	7013	32128	No	4.34	Si
SLU 84	-1.58	-4017.79	-14930	-13271	-9722	2.75	2.75	-10724	8374	10363	21410	37056	7013	31773	No	3.27	Si
SLU 84	0.4	1469.18	-18178	-16158	-7457	2.75	2.75	-13057	8685	10748	21410	37056	7013	32158	No	4.31	Si
SLU 74	-1.58	-3910.34	-14483	-12873	-9529	2.75	2.75	-10403	8331	10310	21410	37056	7013	31720	No	3.33	Si
SLU 74	0.4	1539.2	-17302	-15380	-7264	2.75	2.75	-12428	8602	10644	21410	37056	7013	32054	No	4.41	Si
SLU 79	-1.58	-3928.82	-14550	-12933	-9584	2.75	2.75	-10451	8338	10318	21410	37056	7013	31728	No	3.31	Si
SLU 79	0.4	1546.64	-17401	-15468	-7299	2.75	2.75	-12499	8611	10656	21410	37056	7013	32066	No	4.39	Si
SLU 80	-1.58	-3922.17	-14543	-12927	-9551	2.75	2.75	-10446	8337	10317	21410	37056	7013	31727	No	3.32	Si
SLU 80	0.4	1533.01	-17407	-15473	-7276	2.75	2.75	-12503	8612	10657	21410	37056	7013	32067	No	4.41	Si
SLU 78	-1.58	-3945.61	-14631	-13005	-9610	2.75	2.75	-10509	8346	10328	21410	37056	7013	31738	No	3.3	Si
SLU 78	0.4	1552.73	-17557	-15606	-7323	2.75	2.75	-12611	8626	10675	21410	37056	7013	32084	No	4.38	Si
SLU 82	-1.58	-3975.87	-14775	-13134	-9609	2.75	2.75	-10613	8360	10345	21410	37056	7013	31755	No	3.3	Si
SLU 82	0.4	1442.03	-17929	-15937	-7375	2.75	2.75	-12878	8662	10719	21410	37056	7013	32129	No	4.36	Si
SLU 77	-1.58	-3952.26	-14638	-13011	-9642	2.75	2.75	-10514	8346	10329	21410	37056	7013	31739	No	3.29	Si
SLU 77	0.4	1566.36	-17551	-15601	-7346	2.75	2.75	-12607	8625	10674	21410	37056	7013	32084	No	4.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	-1.58	-6146.6	-11423	-10154	-33039	2.75	2.5107	-9020	12221	13807	21410	55584	7013	35217		1.07	Si
SLV 14	0.4	16595.38	-11963	-10634	-26057	2.75	0	-164374	16250	0	21410	55584	7013	21410		0.82	No
SLV 1	-1.58	542.22	-10420	-9262	20107	2.75	2.75	-7485	11914	14743	21410	55584	7013	36153		1.8	Si
SLV 1	0.4	-14126.45	-11288	-10034	16664	2.2	0.3706	0	0	0	21410	44468	5610	21410		1.28	Si
SLV 15	-1.58	-6343.63	-9761	-8676	-35575	2.75	2.1753	-8899	12196	11939	21410	55584	7013	33349		0.94	No
SLV 15	0.4	17422.69	-11543	-10261	-28368	2.75	0	-199967	16250	0	21410	55584	7013	21410		0.75	No
SLV 16	-1.58	-6014.54	-9799	-8710	-33516	2.75	2.2835	-8509	12119	12453	21410	55584	7013	33863		1.01	Si
SLV 16	0.4	16429.22	-11705	-10404	-26792	2.75	0	-167477	16250	0	21410	55584	7013	21410		0.8	No
SLD 13	-1.58	-4334.56	-10657	-9473	-18837	2.75	2.75	-7655	11948	14785	21410	55584	7013	36195		1.92	Si
SLD 13	0.4	8177.95	-11627	-10335	-14703	2.75	2.0149	-8352	12087	10959	21410	55584	7013	32369		2.2	Si
SLV 3	-1.58	674.28	-8796	-7818	19629	2.75	2.75	-6318	11680	14454	21410	55584	7013	35864		1.83	Si
SLV 3	0.4	-14292.61	-11029	-9804	15928	2.2	0.2373	0	0	0	21410	44468	5610	21410		1.34	Si
SLV 4	-1.58	1003.36	-8833	-7852	21688	2.75	2.75	-6345	11686	14461	21410	55584	7013	35871		1.65	Si
SLV 4	0.4	-15286.07	-11191	-9947	17504	2.2	0.0271	0	0	0	21410	44468	5610	21410		1.22	Si
SLV 2	-1.58	871.31	-10458	-9296	22166	2.75	2.75	-7512	11919	14750	21410	55584	7013	36160		1.63	Si
SLV 2	0.4	-15119.91	-11449	-10177	18239	2.2	0.1632	0	0	0	21410	44468	5610	21410		1.17	Si
SLV 13	-1.58	-6475.68	-11385	-10120	-35098	2.75	2.4186	-9340	12285	13370	21410	55584	7013	34780		0.99	No
SLV 13	0.4	17588.85	-11802	-10491	-27632	2.75	0	-197548	16250	0	21410	55584	7013	21410		0.77	No
SLD 15	-1.58	-4276.75	-9957	-8850	-19036	2.75	2.75	-7152	11847	14661	21410	55584	7013	36071		1.89	Si
SLD 15	0.4	8103.11	-11519	-10239	-15019	2.75	2.0146	-8274	12071	10944	21410	55584	7013	32353		2.15	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.59 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.24	6726	-8323	88.9	1790.25	20.14	Si
SLV 12	179667	0.24	6790	-8403	88.9	1806.59	20.32	Si
SLV 7	179667	0.24	6900	-8539	88.9	1834.4	20.64	Si
SLV 8	179667	0.24	6964	-8618	88.9	1850.69	20.82	Si
SLV 15	179667	0.24	7851	-9716	88.9	2073.67	23.33	Si
SLV 16	179667	0.24	7951	-9840	88.9	2098.66	23.61	Si
SLV 3	179667	0.24	8431	-10434	88.9	2218.01	24.95	Si
SLV 4	179667	0.24	8532	-10558	88.9	2242.8	25.23	Si
SLV 13	179667	0.24	9005	-11144	88.9	2359.5	26.54	Si
SLV 14	179667	0.24	9105	-11268	88.9	2384.08	26.82	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.59 Wa = 0.08 Ta = 0.0145

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-12056	-12973	-601	1.172	1575.6	0.939	18.14932	2.94115	Si
SLV 9	-11953	-12949	-601	1.18	1565.1	0.938	18.2758	2.94115	Si
SLV 6	-11902	-12684	-524	1.189	1560	0.938	18.42313	2.94115	Si
SLV 5	-11798	-12659	-524	1.197	1549.5	0.938	18.55317	2.94115	Si
SLV 12	-11194	-7559	-598	1.241	1488.4	0.936	19.26811	2.94115	Si
SLV 11	-11091	-7535	-598	1.249	1477.9	0.935	19.41215	2.94115	Si
SLV 8	-11040	-7270	-521	1.259	1472.8	0.935	19.57402	2.94115	Si
SLV 7	-10936	-7245	-521	1.268	1462.3	0.935	19.72232	2.94115	Si
SLV 14	-11963	-11423	-689	1.173	1566.2	0.938	18.16574	2.62451	Si
SLV 13	-11802	-11385	-690	1.185	1549.9	0.938	18.36492	2.62451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.161	SLU 83	Si
V_SLU	3.257	SLU 83	Si
PF_SLV	0.888	SLV 15	No
V_SLV	0.755	SLV 15	No
PFFP_SLV	20.138	SLV 11	Si
R_SLV	6.171	SLV 10	Si

Maschio 227

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.543	-3.314	-24.633	-3.314	L4	L6	2.09	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 57	2.29	-273.35	-18533	-0.0000524	0.0003743	0.0035	2.09	13342.37	16117.46	16117.46	58.96	No	Si
SLU 57	4.19	-797.88	-18040	-0.0000552	0.0003743	0.0035	2.09	13143.55	15886.49	15886.49	19.91	No	Si
SLU 84	2.29	-258.59	-20451	-0.000058	0.0003743	0.0035	2.09	14035.42	17009.49	17009.49	65.78	No	Si
SLU 84	4.19	-871.39	-20060	-0.0000619	0.0003743	0.0035	2.09	13904.69	16822.81	16822.81	19.31	No	Si
SLU 76	2.29	-280.86	-19807	-0.0000563	0.0003743	0.0035	2.09	13817.02	16703.04	16703.04	59.47	No	Si
SLU 76	4.19	-827.35	-19362	-0.0000595	0.0003743	0.0035	2.09	13657.86	16495.67	16495.67	19.94	No	Si
SLU 79	2.29	-287.91	-20113	-0.0000573	0.0003743	0.0035	2.09	13922.48	16847.62	16847.62	58.52	No	Si
SLU 79	4.19	-854.77	-19638	-0.0000605	0.0003743	0.0035	2.09	13757.44	16623.96	16623.96	19.45	No	Si
SLU 83	2.29	-266.23	-20438	-0.0000581	0.0003743	0.0035	2.09	14031.19	17003.29	17003.29	63.87	No	Si
SLU 83	4.19	-865.77	-20008	-0.0000617	0.0003743	0.0035	2.09	13886.69	16797.87	16797.87	19.4	No	Si
SLU 78	2.29	-281.81	-20319	-0.0000578	0.0003743	0.0035	2.09	13991.73	16945.96	16945.96	60.13	No	Si
SLU 78	4.19	-870.4	-19890	-0.0000614	0.0003743	0.0035	2.09	13845.99	16742.16	16742.16	19.24	No	Si
SLU 80	2.29	-280.26	-20126	-0.0000572	0.0003743	0.0035	2.09	13926.85	16853.75	16853.75	60.14	No	Si
SLU 80	4.19	-860.4	-19691	-0.0000607	0.0003743	0.0035	2.09	13776.13	16648.57	16648.57	19.35	No	Si
SLU 77	2.29	-289.45	-20306	-0.0000579	0.0003743	0.0035	2.09	13987.44	16939.79	16939.79	58.52	No	Si
SLU 77	4.19	-864.77	-19837	-0.0000612	0.0003743	0.0035	2.09	13827.67	16717.37	16717.37	19.33	No	Si
SLU 82	2.29	-264.28	-20124	-0.0000571	0.0003743	0.0035	2.09	13926.31	16852.98	16852.98	63.77	No	Si
SLU 82	4.19	-834.59	-19697	-0.0000605	0.0003743	0.0035	2.09	13778.29	16651.44	16651.44	19.95	No	Si
SLU 75	2.29	-287.5	-19992	-0.0000569	0.0003743	0.0035	2.09	13881.1	16790.17	16790.17	58.4	No	Si
SLU 75	4.19	-833.59	-19526	-0.00006	0.0003743	0.0035	2.09	13717.42	16571.84	16571.84	19.88	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	2.29	3706.94	-10257	-0.0000544	0.0005615	0.0035	2.09		10016.64	10016.64	2.7		Si
SLV 5	4.19	-1509.65	-7100	-0.0000293	0.0005615	0.0035	2.09		8034.97	8034.97	5.32		Si
SLV 16	2.29	-6432.41	-10702	-0.0000897	0.0005615	0.0035	1.672		11243.69	11243.69	1.75		Si
SLV 16	4.19	2865.57	-5043	-0.0000379	0.0005615	0.0035	2.09		5265.1	5265.1	1.84		Si
SLV 14	2.29	-4971.89	-7675	-0.0000708	0.0005615	0.0035	1.672		8566.3	8566.3	1.72		Si
SLV 14	4.19	2841.93	596	-0.0151578	0.0005615	0.0035	1.672		0	0	0		No
SLV 13	2.29	-5560.6	-8074	-0.0000838	0.0005615	0.0035	1.672		8931.83	8931.83	1.61		Si
SLV 13	4.19	3286.76	1423	0.0597773	0.0005615	0.0035	1.672		0	0	0		No
SLV 2	2.29	6502.61	-16576	-0.000095	0.0005615	0.0035	2.09		14869.88	14869.88	2.29		Si
SLV 2	4.19	-4372.48	-22410	-0.0000947	0.0005615	0.0035	2.09		20175.04	20175.04	4.61		Si
SLV 10	2.29	642.95	-7330	-0.0000235	0.0005615	0.0035	2.09		7405.98	7405.98	11.52		Si
SLV 10	4.19	368.78	-729	-0.0000047	0.0005615	0.0035	2.09		993.47	993.47	2.69		Si
SLV 9	2.29	264.59	-7587	-0.0000214	0.0005615	0.0035	2.09		7640.6	7640.6	28.88		Si
SLV 9	4.19	654.67	-198	-0.0014114	0.0005615	0.0035	1.672		447.12	447.12	0.68		No
SLV 6	2.29	4085.3	-10000	-0.0000571	0.0005615	0.0035	2.09		9798.24	9798.24	2.4		Si
SLV 6	4.19	-1795.54	-7631	-0.0000328	0.0005615	0.0035	2.09		8525.61	8525.61	4.75		Si
SLV 1	2.29	5913.91	-16975	-0.0000909	0.0005615	0.0035	2.09		15186.04	15186.04	2.57		Si
SLV 1	4.19	-3927.65	-21583	-0.0000886	0.0005615	0.0035	2.09		19629.85	19629.85	5		Si
SLV 15	2.29	-7021.11	-11101	-0.000101	0.0005615	0.0035	1.672		11580.89	11580.89	1.65		Si
SLV 15	4.19	3310.39	-4216	-0.000059	0.0005615	0.0035	2.09		4469.34	4469.34	1.35		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	2.29	-287.5	-19992	-16647	1382	2.09	2.09	-28447	10737	6283	80882	17523	5329	22853	No	16.53	Si
SLU 75	4.19	-833.59	-19526	-16260	1440	2.09	2.09	-27785	10649	6232	80882	17523	5329	22853	No	15.87	Si
SLU 76	2.29	-280.86	-19807	-16493	1394	2.09	2.09	-28185	10702	6263	80882	17523	5329	22853	No	16.39	Si
SLU 76	4.19	-827.35	-19362	-16123	1452	2.09	2.09	-27552	10618	6214	80882	17523	5329	22853	No	15.74	Si
SLU 77	2.29	-289.45	-20306	-16909	1395	2.09	2.09	-28895	10797	6318	80882	17523	5329	22853	No	16.38	Si
SLU 77	4.19	-864.77	-19837	-16519	1454	2.09	2.09	-28228	10708	6266	80882	17523	5329	22853	No	15.72	Si
SLU 78	2.29	-281.81	-20319	-16920	1424	2.09	2.09	-28913	10800	6320	80882	17523	5329	22853	No	16.05	Si
SLU 78	4.19	-870.4	-19890	-16563	1483	2.09	2.09	-28303	10718	6272	80882	17523	5329	22853	No	15.41	Si
SLU 84	2.29	-258.59	-20451	-17030	1457	2.09	2.09	-29102	10825	6335	80882	17523	5329	22853	No	15.68	Si
SLU 84	4.19	-871.39	-20060	-16705	1517	2.09	2.09	-28545	10750	6291	80882	17523	5329	22853	No	15.07	Si
SLU 83	2.29	-266.23	-20438	-17019	1428	2.09	2.09	-29083	10822	6333	80882	17523	5329	22853	No	16	Si
SLU 83	4.19	-865.77	-20008	-16661	1488	2.09	2.09	-28470	10741	6285	80882	17523	5329	22853	No	15.36	Si
SLU 81	2.29	-271.92	-20111	-16747	1387	2.09	2.09	-28617	10760	6297	80882	17523	5329	22853	No	16.48	Si
SLU 81	4.19	-828.97	-19644	-16358	1446	2.09	2.09	-27953	10672	6245	80882	17523	5329	22853	No	15.81	Si
SLU 79	2.29	-287.91	-20113	-16748	1388	2.09	2.09	-28620	10760	6297	80882	17523	5329	22853	No	16.47	Si
SLU 79	4.19	-854.77	-19638	-16353	1446	2.09	2.09	-27944	10670	6244	80882	17523	5329	22853	No	15.8	Si
SLU 80	2.29	-280.26	-20126	-16759	1417	2.09	2.09	-28638	10763	6298	80882	17523	5329	22853	No	16.13	Si
SLU 80	4.19	-860.4	-19691	-16397	1475	2.09	2.09	-28019	10680	6250	80882	17523	5329	22853	No	15.49	Si
SLU 82	2.29	-264.28	-20124	-16757	1415	2.09	2.09	-28636	10763	6298	80882	17523	5329	22853	No	16.15	Si
SLU 82	4.19	-834.59	-19697	-16402	1474	2.09	2.09	-28028	10682	6251	80882	17523	5329	22853	No	15.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	2.29	-7021.11	-11101	-9244	-7759	1.672	1.2376	0	0	0	80882	21028	4264	25292		3.26	Si
SLV 15	4.19	3310.39	-4216	-3511	-7610	2.09	0.7795	-6000	11617	2535	80882	26285	5329	31614		4.15	Si
SLV 14	2.29	-4971.89	-7675	-6391	-7160	1.672	1.1916	0	0	0	80882	21028	4264	25292		3.53	Si
SLV 14	4.19	2841.93	596	497	-7130	1.672	0	0	0	0	80882	21028	4264	25292		3.55	Si
SLV 4	2.29	5042.09	-19603	-16323	10162	2.09	2.09	-27894	15995	9360	80882	26285	5329	31614		3.11	Si
SLV 4	4.19	-4348.84	-28049	-23357	10214	2.09	2.09	-39913	16250	9509	80882	26285	5329	31614		3.1	Si
SLD 4	2.29	2005.65	-16302	-13575	4851	2.09	2.09	-23197	15056	8811	80882	26285	5329	31614		6.52	Si
SLD 4	4.19	-2163.01	-19612	-16331	4889	2.09	2.09	-27908	15998	9362	80882	26285	5329	31614		6.47	Si
SLV 16	2.29	-6432.41	-10702	-8912	-6542	1.672	1.3318	0	0	0	80882	21028	4264	25292		3.87	Si
SLV 16	4.19	2865.57	-5043	-4199	-6391	2.09	1.4302	-7176	11852	4746	80882	26285	5329	31614		4.95	Si
SLV 8	2.29	-783.1	-20090	-16729	4819	2.09	2.09	-28588	16134	9442	80882	26285	5329	31614		6.56	Si
SLV 8	4.19	-1716.75	-26428	-22007	5046	2.09	2.09	-37607	16250	9509	80882	26285	5329	31614		6.26	Si
SLV 3	2.29	4453.39	-20002	-16656	8945	2.09	2.09	-28462	16109	9427	80882	26285	5329	31614		3.53	Si
SLV 3	4.19	-3904.01	-27222	-22669	8995	2.09	2.09	-38737	16250	9509	80882	26285	5329	31614		3.51	Si
SLV 2	2.29	6502.61	-16576	-13803	9544	2.09	1.9581	-23586	15134	8297	80882	26285	5329	31614		3.31	Si
SLV 2	4.19	-4372.48	-22410	-18661	9475	2.09	2.09	-31889	16250	9509	80882	26285	5329	31614		3.34	Si
SLV 1	2.29	5913.91	-16975	-14135	8327	2.09	2.0898	-24154	15248	8922	80882	26285	5329	31614		3.8	Si
SLV 1	4.19	-3927.65	-21583	-17973	8256	2.09	2.09	-30712	16250	9509	80882	26285	5329	31614		3.83	Si
SLV 13	2.29	-5560.6	-8074	-6723	-8377	1.672	1.0689	0	0	0	80882	21028	4264	25292		3.02	Si
SLV 13	4.19	3286.76	1423	1185	-8349	1.672	0	0	0	0	80882	21028	4264	25292		3.03	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.35	0	-2194	751.4	0	0	No, e>t/2
SLV 5	179667	0.35	0	-4780	751.4	0	0	No, e>t/2
SLV 14	179667	0.35	0	-2658	751.4	0	0	No, e>t/2
SLV 10	179667	0.35	0	-1047	751.4	0	0	No, e>t/2
SLV 9	179667	0.35	0	-749	751.4	0	0	No, e>t/2
SLV 6	179667	0.35	0	-5078	751.4	0	0	No, e>t/2
SLV 15	179667	0.35	12874	-7534	751.4	965.82	1.29	Si
SLV 16	179667	0.35	13667	-7998	751.4	1019.49	1.36	Si
SLV 1	179667	0.35	26709	-15630	751.4	1805.49	2.4	Si
SLV 2	179667	0.35	27502	-16094	751.4	1847.39	2.46	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-19071	-20268	438	0.521	2520	0.937	8.07678	15.31518	No
SLV 3	-18116	-20473	439	0.542	2423.5	0.935	8.43536	15.31518	No
SLV 2	-12803	-19604	358	0.716	1888.1	0.92	11.30451	15.31518	No
SLV 1	-11848	-19809	359	0.759	1792.4	0.917	12.02112	15.31518	No
SLV 16	-8696	-7303	-370	0.946	1478.6	0.906	15.18589	15.31518	No
SLV 15	-7741	-7508	-369	1.024	1384.4	0.902	16.5031	15.31518	Si
SLV 8	-22582	-16542	248	0.461	2875.6	0.943	7.09972	6.0451	Si
SLV 7	-21968	-16674	249	0.471	2813.4	0.942	7.27019	6.0451	Si
SLV 12	-19469	-12652	6	0.531	2560.4	0.938	8.22553	6.0451	Si
SLV 11	-18855	-12784	6	0.545	2498.3	0.936	8.45245	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.235	SLU 78	Si
V_SLU	15.066	SLU 84	Si
PF_SLV	0	SLV 13	No
V_SLV	3.019	SLV 13	Si
PFFP_SLV	0	SLV 5	No
R_SLV	0.527	SLV 4	No

Maschio 228

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.543	-3.314	L4	L6	2.23	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	6.82	-2103.69	-27531	-0.0000886	0.0003743	0.0035	2.23	17403.16	22225.78	22225.78	10.57	No	Si
SLU 80	7.62	-1568.23	-23704	-0.0000729	0.0003743	0.0035	2.23	16575.1	20415.7	20415.7	13.02	No	Si
SLU 69	6.82	-1988.13	-25184	-0.0000805	0.0003743	0.0035	2.23	16956.33	21214.11	21214.11	10.67	No	Si
SLU 69	7.62	-1409.95	-21574	-0.0000655	0.0003743	0.0035	2.23	15891.6	19330.04	19330.04	13.71	No	Si
SLU 84	6.82	-2111.69	-28046	-0.0000903	0.0003743	0.0035	2.23	17475.43	22401.65	22401.65	10.61	No	Si
SLU 84	7.62	-1576.35	-24155	-0.0000743	0.0003743	0.0035	2.23	16699.41	20655.21	20655.21	13.1	No	Si
SLU 75	6.82	-2072.93	-27226	-0.0000874	0.0003743	0.0035	2.23	17356.07	22123.39	22123.39	10.67	No	Si
SLU 75	7.62	-1524.84	-23412	-0.0000717	0.0003743	0.0035	2.23	16490.93	20262.62	20262.62	13.29	No	Si
SLU 79	6.82	-2103.06	-27490	-0.0000884	0.0003743	0.0035	2.23	17397.06	22212.03	22212.03	10.56	No	Si
SLU 79	7.62	-1559.77	-23665	-0.0000727	0.0003743	0.0035	2.23	16563.92	20394.96	20394.96	13.08	No	Si
SLU 70	6.82	-1988.76	-25225	-0.0000806	0.0003743	0.0035	2.23	16965.72	21236.57	21236.57	10.68	No	Si
SLU 70	7.62	-1418.42	-21613	-0.0000657	0.0003743	0.0035	2.23	15905.67	19349.42	19349.42	13.64	No	Si
SLU 74	6.82	-2072.3	-27186	-0.0000873	0.0003743	0.0035	2.23	17349.53	22109.62	22109.62	10.67	No	Si
SLU 74	7.62	-1516.38	-23373	-0.0000715	0.0003743	0.0035	2.23	16479.34	20242.07	20242.07	13.35	No	Si
SLU 83	6.82	-2111.06	-28006	-0.0000901	0.0003743	0.0035	2.23	17470.07	22387.64	22387.64	10.6	No	Si
SLU 83	7.62	-1567.89	-24116	-0.0000741	0.0003743	0.0035	2.23	16688.85	20634.18	20634.18	13.16	No	Si
SLU 77	6.82	-2121.44	-27785	-0.0000895	0.0003743	0.0035	2.23	17439.89	22311.92	22311.92	10.52	No	Si
SLU 77	7.62	-1581.98	-23933	-0.0000737	0.0003743	0.0035	2.23	16639.1	20536.87	20536.87	12.98	No	Si
SLU 78	6.82	-2122.07	-27825	-0.0000896	0.0003743	0.0035	2.23	17445.58	22325.82	22325.82	10.52	No	Si
SLU 78	7.62	-1590.45	-23972	-0.0000738	0.0003743	0.0035	2.23	16649.91	20557.77	20557.77	12.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	6.82	-3091.7	-20489	-0.000072	0.0005615	0.0035	2.23		20506.61	20506.61	6.63		Si
SLV 16	7.62	2423.78	-15470	-0.0000541	0.0005615	0.0035	2.23		15058.92	15058.92	6.21		Si
SLV 2	6.82	372.49	-16023	-0.0000417	0.0005615	0.0035	2.23		15530.82	15530.82	41.69		Si
SLV 2	7.62	-4815.93	-15955	-0.0000716	0.0005615	0.0035	2.23		16861.13	16861.13	3.5		Si
SLD 2	6.82	-661.38	-17316	-0.0000469	0.0005615	0.0035	2.23		17980.63	17980.63	27.19		Si
SLD 2	7.62	-2617.51	-15745	-0.0000561	0.0005615	0.0035	2.23		16684.05	16684.05	6.37		Si
SLV 15	6.82	-3244.2	-20635	-0.0000734	0.0005615	0.0035	2.23		20619.65	20619.65	6.36		Si
SLV 15	7.62	2856.89	-15304	-0.0000565	0.0005615	0.0035	2.23		14918.1	14918.1	5.22		Si
SLV 14	6.82	-2940.41	-16105	-0.0000592	0.0005615	0.0035	2.23		16986.29	16986.29	5.78		Si
SLV 14	7.62	2782.73	-11650	-0.0000466	0.0005615	0.0035	2.23		11861.98	11861.98	4.26		Si
SLV 4	6.82	221.2	-20407	-0.000052	0.0005615	0.0035	2.23		19334.64	19334.64	87.41		Si
SLV 4	7.62	-5174.89	-19776	-0.0000845	0.0005615	0.0035	2.23		19946.52	19946.52	3.85		Si
SLD 4	6.82	-730.37	-19244	-0.0000524	0.0005615	0.0035	2.23		19532.42	19532.42	26.74		Si
SLD 4	7.62	-2772.85	-17425	-0.0000616	0.0005615	0.0035	2.23		18070.82	18070.82	6.52		Si
SLV 1	6.82	220	-16169	-0.000041	0.0005615	0.0035	2.23		15655.99	15655.99	71.16		Si
SLV 1	7.62	-4382.82	-15790	-0.0000682	0.0005615	0.0035	2.23		16721.91	16721.91	3.82		Si
SLV 13	6.82	-3092.9	-16251	-0.0000606	0.0005615	0.0035	2.23		17107.86	17107.86	5.53		Si
SLV 13	7.62	3215.85	-11484	-0.000049	0.0005615	0.0035	2.23		11725.86	11725.86	3.65		Si
SLV 3	6.82	68.7	-20553	-0.0000513	0.0005615	0.0035	2.23		19452.6	19452.6	283.15		Si
SLV 3	7.62	-4741.77	-19610	-0.0000811	0.0005615	0.0035	2.23		19817.1	19817.1	4.18		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	6.82	-2072.93	-27226	-22672	-4835	2.23	2.23	-36309	10833	6764	80882	18697	5687	24384	No	5.04	Si
SLU 75	7.62	-1524.84	-23412	-19496	-3102	2.23	2.23	-31223	10833	6764	80882	18697	5687	24384	No	7.86	Si
SLU 80	6.82	-2103.69	-27531	-22925	-4840	2.23	2.23	-36715	10833	6764	80882	18697	5687	24384	No	5.04	Si
SLU 80	7.62	-1568.23	-23704	-19739	-3103	2.23	2.23	-31612	10833	6764	80882	18697	5687	24384	No	7.86	Si
SLU 77	6.82	-2121.44	-27785	-23137	-4883	2.23	2.23	-37054	10833	6764	80882	18697	5687	24384	No	4.99	Si
SLU 77	7.62	-1581.98	-23933	-19929	-3131	2.23	2.23	-31917	10833	6764	80882	18697	5687	24384	No	7.79	Si
SLU 79	6.82	-2103.06	-27490	-22891	-4847	2.23	2.23	-36661	10833	6764	80882	18697	5687	24384	No	5.03	Si
SLU 79	7.62	-1559.77	-23665	-19706	-3112	2.23	2.23	-31559	10833	6764	80882	18697	5687	24384	No	7.84	Si
SLU 84	6.82	-2111.69	-28046	-23355	-4940	2.23	2.23	-37403	10833	6764	80882	18697	5687	24384	No	4.94	Si
SLU 84	7.62	-1576.35	-24155	-20114	-3162	2.23	2.23	-32213	10833	6764	80882	18697	5687	24384	No	7.71	Si
SLU 81	6.82	-2061.92	-27407	-22822	-4907	2.23	2.23	-36550	10833	6764	80882	18697	5687	24384	No	4.97	Si
SLU 81	7.62	-1502.28	-23556	-19615	-3149	2.23	2.23	-31414	10833	6764	80882	18697	5687	24384	No	7.74	Si
SLU 74	6.82	-2072.3	-27186	-22638	-4843	2.23	2.23	-36255	10833	6764	80882	18697	5687	24384	No	5.03	Si
SLU 74	7.62	-1516.38	-23373	-19463	-3110	2.23	2.23	-31170	10833	6764	80882	18697	5687	24384	No	7.84	Si
SLU 78	6.82	-2122.07	-27825	-23170	-4876	2.23	2.23	-37108	10833	6764	80882	18697	5687	24384	No	5	Si
SLU 78	7.62	-1590.45	-23972	-19962	-3123	2.23	2.23	-31970	10833	6764	80882	18697	5687	24384	No	7.81	Si
SLU 82	6.82	-2062.55	-27447	-22856	-4900	2.23	2.23	-36604	10833	6764	80882	18697	5687	24384	No	4.98	Si
SLU 82	7.62	-1510.75	-23595	-19648	-3141	2.23	2.23	-31467	10833	6764	80882	18697	5687	24384	No	7.76	Si
SLU 83	6.82	-2111.06	-28006	-23321	-4947	2.23	2.23	-37349	10833	6764	80882	18697	5687	24384	No	4.93	Si
SLU 83	7.62	-1567.89	-24116	-20081	-3170	2.23	2.23	-32161	10833	6764	80882	18697	5687	24384	No	7.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	6.82	-3091.7	-20489	-17061	-13399	2.23	2.23	-27324	15881	9916	80882	28046	5687	33733		2.52	Si
SLV 16	7.62	2423.78	-15470	-12882	-9455	2.23	2.23	-20631	14543	9081	80882	28046	5687	33733		3.57	Si
SLV 13	6.82	-3092.9	-16251	-13533	-13835	2.23	2.23	-21673	14751	9211	80882	28046	5687	33733		2.44	Si
SLV 13	7.62	3215.85	-11484	-9563	-10346	2.23	2.23	-15315	13480	8417	80882	28046	5687	33733		3.26	Si
SLD 13	6.82	-2141.34	-17414	-14501	-7855	2.23	2.23	-23224	15061	9404	80882	28046	5687	33733		4.29	Si
SLD 13	7.62	813.81	-13835	-11520	-5678	2.23	2.23	-18450	14107	8808	80882	28046	5687	33733		5.94	Si
SLD 15	6.82	-2210.33	-19342	-16107	-8197	2.23	2.23	-25795	15576	9726	80882	28046	5687	33733		4.12	Si
SLD 15	7.62	658.47	-15515	-12920	-5694	2.23	2.23	-20691	14555	9088	80882	28046	5687	33733		5.92	Si
SLV 2	6.82	372.49	-16023	-13343	7814	2.23	2.23	-21369	14690	9173	80882	28046	5687	33733		4.32	Si
SLV 2	7.62	-4815.93	-15955	-13286	5952	2.23	2.23	-21278	14672	9161	80882	28046	5687	33733		5.67	Si
SLV 14	6.82	-2940.41	-16105	-13411	-12617	2.23	2.23	-21478	14712	9186	80882	28046	5687	33733		2.67	Si
SLV 14	7.62	2782.73	-11650	-9701	-9440	2.23	2.23	-15536	13524	8444	80882	28046	5687	33733		3.57	Si
SLV 15	6.82	-3244.2	-20635	-17183	-14616	2.23	2.23	-27519	15920	9941	80882	28046	5687	33733		2.31	Si
SLV 15	7.62	2856.89	-15304	-12744	-10361	2.23	2.23	-20410	14499	9053	80882	28046	5687	33733		3.26	Si
SLD 16	6.82	-2144.86	-19280	-16054	-7675	2.23	2.23	-25712	15559	9715	80882	28046	5687	33733		4.4	Si
SLD 16	7.62	472.52	-15586	-12979	-5305	2.23	2.23	-20786	14574	9100	80882	28046	5687	33733		6.36	Si
SLV 11	6.82	-2233.95	-25694	-21396	-8160	2.23	2.23	-34266	16250	10147	80882	28046	5687	33733		4.13	Si
SLV 11	7.62	-298.8	-21298	-17735	-4828	2.23	2.23	-28404	16097	10051	80882	28046	5687	33733		6.99	Si
SLV 12	6.82	-2135.95	-25600	-21318	-7377	2.23	2.23	-34141	16250	10147	80882	28046	5687	33733		4.57	Si
SLV 12	7.62	-577.16	-21405	-17824	-4246	2.23	2.23	-28545	16126	10069	80882	28046	5687	33733		7.94	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.35	15870	-9909	801.75	1243.13	1.55	Si
SLV 10	179667	0.35	15898	-9927	801.75	1245.07	1.55	Si
SLV 5	179667	0.35	18590	-11608	801.75	1427.28	1.78	Si
SLV 6	179667	0.35	18618	-11625	801.75	1429.14	1.78	Si
SLV 13	179667	0.35	18944	-11829	801.75	1450.58	1.81	Si
SLV 14	179667	0.35	18987	-11856	801.75	1453.45	1.81	Si
SLV 15	179667	0.35	24306	-15177	801.75	1786.56	2.23	Si
SLV 16	179667	0.35	24349	-15204	801.75	1789.16	2.23	Si
SLV 1	179667	0.35	28012	-17491	801.75	1999.55	2.49	Si
SLV 2	179667	0.35	28055	-17518	801.75	2001.97	2.5	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-16379	-22526	32	0.64	2288	0.928	10.0239	15.31518	No
SLV 3	-16298	-22455	32	0.642	2279.9	0.928	10.06478	15.31518	No
SLV 16	-13976	-10564	256	0.711	2046.3	0.921	11.21093	15.31518	No
SLV 15	-13896	-10492	256	0.714	2038.2	0.921	11.26308	15.31518	No
SLV 2	-13120	-19343	-257	0.745	1960.4	0.919	11.79009	15.31518	No
SLV 1	-13040	-19272	-257	0.749	1952.4	0.919	11.84797	15.31518	No
SLV 14	-10718	-7381	-33	0.88	1720.4	0.911	14.03882	15.31518	No
SLV 13	-10637	-7310	-33	0.885	1712.4	0.911	14.1194	15.31518	No
SLV 8	-19326	-22040	447	0.543	2585.4	0.935	8.45097	6.0451	Si
SLV 7	-19274	-21994	447	0.545	2580.2	0.935	8.47011	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.517	SLU 77	Si
V_SLU	4.929	SLU 83	Si
PF_SLV	3.501	SLV 2	Si
V_SLV	2.308	SLV 15	Si
PFFP_SLV	1.551	SLV 9	Si
R_SLV	0.655	SLV 4	No

Maschio 229

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.313	-3.314	-18.813	-3.314	L4	L6	0.5	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 67	6.82	20.14	-6868	-0.0000849	0.0003743	0.0035	0.5	889.6	1150.78	1150.78	57.15	No	Si
SLU 67	7.62	313.91	-6775	-0.0001309	0.0003743	0.0035	0.5	888.61	1140.38	1140.38	3.63	No	Si
SLU 70	6.82	23.32	-7042	-0.0000879	0.0003743	0.0035	0.5	890.65	1168.27	1168.27	50.11	No	Si
SLU 70	7.62	320.14	-6937	-0.0001345	0.0003743	0.0035	0.5	890.15	1158.08	1158.08	3.62	No	Si
SLU 72	6.82	21.48	-6956	-0.0000864	0.0003743	0.0035	0.5	890.26	1159.97	1159.97	53.99	No	Si
SLU 72	7.62	317.97	-6856	-0.0001329	0.0003743	0.0035	0.5	889.49	1149.39	1149.39	3.61	No	Si
SLU 71	6.82	20.75	-6940	-0.000086	0.0003743	0.0035	0.5	890.17	1158.38	1158.38	55.84	No	Si
SLU 71	7.62	318.14	-6840	-0.0001326	0.0003743	0.0035	0.5	889.34	1147.7	1147.7	3.61	No	Si
SLU 68	6.82	18.8	-6792	-0.0000837	0.0003743	0.0035	0.5	888.82	1142.34	1142.34	60.78	No	Si
SLU 68	7.62	311.62	-6703	-0.0001294	0.0003743	0.0035	0.5	887.64	1132.45	1132.45	3.63	No	Si
SLU 65	6.82	15.62	-6618	-0.0000808	0.0003743	0.0035	0.5	886.25	1122.87	1122.87	71.91	No	Si
SLU 65	7.62	305.39	-6541	-0.0001258	0.0003743	0.0035	0.5	884.77	1114.25	1114.25	3.65	No	Si
SLU 69	6.82	22.58	-7026	-0.0000875	0.0003743	0.0035	0.5	890.6	1166.79	1166.79	51.68	No	Si
SLU 69	7.62	320.32	-6922	-0.0001343	0.0003743	0.0035	0.5	890.04	1156.54	1156.54	3.61	No	Si
SLU 66	6.82	19.4	-6852	-0.0000846	0.0003743	0.0035	0.5	889.46	1149.01	1149.01	59.24	No	Si
SLU 66	7.62	314.09	-6760	-0.0001307	0.0003743	0.0035	0.5	888.42	1138.7	1138.7	3.63	No	Si
SLU 64	6.82	14.39	-6592	-0.0000803	0.0003743	0.0035	0.5	885.77	1119.93	1119.93	77.85	No	Si
SLU 64	7.62	305.69	-6516	-0.0001255	0.0003743	0.0035	0.5	884.24	1111.43	1111.43	3.64	No	Si
SLU 50	6.82	13.16	-6141	-0.000074	0.0003743	0.0035	0.5	873.74	1070.24	1070.24	81.34	No	Si
SLU 50	7.62	286.83	-6040	-0.0001151	0.0003743	0.0035	0.5	870.06	1059.3	1059.3	3.69	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	6.82	-300.74	-3222	-0.0000757	0.0005615	0.0035	0.5		746.84	746.84	2.48		Si
SLD 13	7.62	548.3	-4225	-0.0001358	0.0005615	0.0035	0.5		906.16	906.16	1.65		Si
SLD 15	6.82	-286.9	-3786	-0.0000803	0.0005615	0.0035	0.5		854.64	854.64	2.98		Si
SLD 15	7.62	568.26	-4762	-0.0001415	0.0005615	0.0035	0.5		998.16	998.16	1.76		Si
SLV 16	6.82	-623.79	-2293	-0.0043344	0.0005615	0.0035	0.4		557.71	557.71	0.89		No
SLV 16	7.62	949.43	-4431	-0.0042448	0.0005615	0.0035	0.4		946.36	946.36	1		No
SLV 10	6.82	-225.67	-1991	-0.0000527	0.0005615	0.0035	0.5		493.05	493.05	2.18		Si
SLV 10	7.62	352.7	-2669	-0.000084	0.0005615	0.0035	0.5		604.46	604.46	1.71		Si
SLV 13	6.82	-724.38	-690	-0.0157246	0.0005615	0.0035	0.4		198.5	198.5	0.27		No
SLV 13	7.62	976.22	-3118	-0.0276897	0.0005615	0.0035	0.4		689.72	689.72	0.71		No
SLD 14	6.82	-271.87	-3357	-0.000073	0.0005615	0.0035	0.5		772.84	772.84	2.84		Si
SLD 14	7.62	517.71	-4264	-0.0001273	0.0005615	0.0035	0.5		913.92	913.92	1.77		Si
SLV 9	6.82	-268.89	-1788	-0.0000656	0.0005615	0.0035	0.4		448.88	448.88	1.67		Si
SLV 9	7.62	398.5	-2611	-0.0001008	0.0005615	0.0035	0.5		593.54	593.54	1.49		Si
SLV 15	6.82	-691.05	-1977	-0.0078104	0.0005615	0.0035	0.4		490.06	490.06	0.71		No
SLV 15	7.62	1020.7	-4341	-0.0100592	0.0005615	0.0035	0.4		929.04	929.04	0.91		No
SLD 16	6.82	-258.02	-3922	-0.000078	0.0005615	0.0035	0.5		879.49	879.49	3.41		Si
SLD 16	7.62	537.66	-4801	-0.0001343	0.0005615	0.0035	0.5		1003.92	1003.92	1.87		Si
SLV 14	6.82	-657.12	-1006	-0.0120782	0.0005615	0.0035	0.4		272.15	272.15	0.41		No
SLV 14	7.62	904.95	-3209	-0.0188465	0.0005615	0.0035	0.4		707.06	707.06	0.78		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	6.82	42.38	-7735	-6441	186	0.5	0.5	-46011	10833	1517	80882	4192	1275	5467	No	29.41	Si
SLU 81	7.62	313.53	-7653	-6373	-793	0.5	0.5	-45521	10833	1517	80882	4192	1275	5467	No	6.9	Si
SLU 77	6.82	42.17	-7826	-6517	165	0.5	0.5	-46551	10833	1517	80882	4192	1275	5467	No	33.08	Si
SLU 77	7.62	325.8	-7717	-6426	-776	0.5	0.5	-45905	10833	1517	80882	4192	1275	5467	No	7.04	Si
SLU 78	6.82	42.91	-7842	-6530	168	0.5	0.5	-46645	10833	1517	80882	4192	1275	5467	No	32.48	Si
SLU 78	7.62	325.63	-7733	-6439	-777	0.5	0.5	-45995	10833	1517	80882	4192	1275	5467	No	7.04	Si
SLU 82	6.82	43.12	-7751	-6454	189	0.5	0.5	-46104	10833	1517	80882	4192	1275	5467	No	28.93	Si
SLU 82	7.62	313.35	-7668	-6385	-793	0.5	0.5	-45611	10833	1517	80882	4192	1275	5467	No	6.89	Si
SLU 83	6.82	45.56	-7909	-6586	192	0.5	0.5	-47045	10833	1517	80882	4192	1275	5467	No	28.41	Si
SLU 83	7.62	319.75	-7815	-6508	-799	0.5	0.5	-46485	10833	1517	80882	4192	1275	5467	No	6.84	Si
SLU 84	6.82	46.3	-7925	-6599	195	0.5	0.5	-47139	10833	1517	80882	4192	1275	5467	No	27.97	Si
SLU 84	7.62	319.58	-7830	-6520	-800	0.5	0.5	-46575	10833	1517	80882	4192	1275	5467	No	6.83	Si
SLU 79	6.82	40.34	-7740	-6445	158	0.5	0.5	-46039	10833	1517	80882	4192	1275	5467	No	34.52	Si
SLU 79	7.62	323.63	-7636	-6359	-769	0.5	0.5	-45421	10833	1517	80882	4192	1275	5467	No	7.11	Si
SLU 74	6.82	38.99	-7652	-6372	159	0.5	0.5	-45517	10833	1517	80882	4192	1275	5467	No	34.44	Si
SLU 74	7.62	319.58	-7555	-6291	-770	0.5	0.5	-44940	10833	1517	80882	4192	1275	5467	No	7.1	Si
SLU 75	6.82	39.73	-7668	-6385	162	0.5	0.5	-45611	10833	1517	80882	4192	1275	5467	No	33.79	Si
SLU 75	7.62	319.4	-7570	-6304	-770	0.5	0.5	-45030	10833	1517	80882	4192	1275	5467	No	7.1	Si
SLU 80	6.82	41.08	-7756	-6458	161	0.5	0.5	-46133	10833	1517	80882	4192	1275	5467	No	33.87	Si
SLU 80	7.62	323.45	-7651	-6371	-770	0.5	0.5	-45511	10833	1517	80882	4192	1275	5467	No	7.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	6.82	754.37	-9558	-7959	3166	0.5	0.5	-56850	16250	2275	80882	6288	1275	7563		2.39	Si
SLV 4	7.62	-516.56	-7009	-5837	-111	0.5	0.5	-41691	16250	2275	80882	6288	1275	7563		68.31	Si
SLV 2	6.82	721.04	-8271	-6887	2897	0.5	0.4884	-49196	16250	2222	80882	6288	1275	7563		2.61	Si
SLV 2	7.62	-561.03	-5787	-4819	-41	0.5	0.4591	-34421	16250	2089	80882	6288	1275	7563		185.84	Si
SLV 9	6.82	-268.89	-1788	-1489	-1325	0.4	0.2988	0	0	0	80882	5030	1020	6050		4.56	Si
SLV 9	7.62	398.5	-2611	-2174	-553	0.5	0.2921	-15531	13523	1106	80882	6288	1275	7563		13.67	Si
SLV 1	6.82	653.79	-7955	-6624	2631	0.5	0.5	-47319	16250	2275	80882	6288	1275	7563		2.87	Si
SLV 1	7.62	-489.77	-5696	-4744	-113	0.5	0.492	-33883	16250	2239	80882	6288	1275	7563		67.22	Si
SLV 13	6.82	-724.38	-690	-575	-3046	0.4	0	0	0	0	80882	5030	1020	6050		1.99	Si
SLV 13	7.62	976.22	-3118	-2597	-936	0.4	0	0	0	0	80882	5030	1020	6050		6.46	Si
SLV 3	6.82	687.12	-9242	-7696	2900	0.5	0.5	-54973	16250	2275	80882	6288	1275	7563		2.61	Si
SLV 3	7.62	-445.29	-6919	-5761	-183	0.5	0.5	-41153	16250	2275	80882	6288	1275	7563		41.44	Si
SLV 8	6.82	298.89	-8460	-7045	1446	0.5	0.5	-50321	16250	2275	80882	6288	1275	7563		5.23	Si
SLV 8	7.62	61.16	-7516	-6259	-493	0.5	0.5	-44709	16250	2275	80882	6288	1275	7563		15.33	Si
SLV 16	6.82	-623.79	-2293	-1909	-2511	0.4	0	0	0	0	80882	5030	1020	6050		2.41	Si
SLV 16	7.62	949.43	-4431	-3690	-934	0.4	0.1072	0	0	0	80882	5030	1020	6050		6.48	Si
SLV 15	6.82	-691.05	-1977	-1646	-2777	0.4	0	0	0	0	80882	5030	1020	6050		2.18	Si
SLV 15	7.62	1020.7	-4341	-3614	-1006	0.4	0.0445	0	0	0	80882	5030	1020	6050		6.01	Si
SLV 14	6.82	-657.12	-1006	-838	-2780	0.4	0	0	0	0	80882	5030	1020	6050		2.18	Si
SLV 14	7.62	904.95	-3209	-2672	-864	0.4	0	0	0	0	80882	5030	1020	6050		7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.35	16823	-2355	179.76	293.39	1.63	Si
SLV 9	179667	0.35	17002	-2380	179.76	296.13	1.65	Si
SLV 6	179667	0.35	17193	-2407	179.76	299.03	1.66	Si
SLV 5	179667	0.35	17372	-2432	179.76	301.74	1.68	Si
SLV 14	179667	0.35	23026	-3224	179.76	383.25	2.13	Si
SLV 13	179667	0.35	23305	-3263	179.76	387.05	2.15	Si
SLV 2	179667	0.35	24259	-3396	179.76	399.93	2.22	Si
SLV 1	179667	0.35	24537	-3435	179.76	403.64	2.25	Si
SLV 16	179667	0.35	28755	-4026	179.76	457.46	2.54	Si
SLV 15	179667	0.35	29034	-4065	179.76	460.86	2.56	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-4064	-6388	-5	0.591	552.5	0.932	9.21918	15.31518	No
SLV 3	-3959	-6518	-5	0.604	541.9	0.931	9.4255	15.31518	No
SLV 2	-3392	-6552	-1	0.682	484.7	0.925	10.72242	15.31518	No
SLV 1	-3286	-6682	-1	0.699	474.1	0.923	11.00304	15.31518	No
SLV 16	-2094	-6882	-13	0.967	355.1	0.906	15.52013	15.31518	Si
SLV 15	-1989	-7012	-13	1.002	344.7	0.904	16.11401	15.31518	Si
SLV 14	-1422	-7046	-9	1.246	289.3	0.895	20.24964	15.31518	Si
SLV 13	-1316	-7176	-9	1.306	279.2	0.893	21.25077	15.31518	Si
SLV 8	-4141	-6393	-12	0.581	560.3	0.933	9.05368	6.0451	Si
SLV 7	-4073	-6476	-12	0.589	553.4	0.932	9.18075	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.607	SLU 71	Si
V_SLU	6.833	SLU 84	Si
PF_SLV	0.274	SLV 13	No
V_SLV	1.986	SLV 13	Si
PFFP_SLV	1.632	SLV 10	Si
R_SLV	0.602	SLV 4	No

Maschio 230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.383	-3.314	-17.313	-3.314	L4	L6	0.93	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	2.29	1889.37	-17700	-0.0002264	0.0003743	0.0035	0.93	2735.49	4493.73	4493.73	2.38	No	Si
SLU 78	4.19	735.43	-12605	-0.0001143	0.0003743	0.0035	0.93	3074.55	3950.52	3950.52	5.37	No	Si
SLU 83	2.29	1942.73	-17910	-0.0002324	0.0003743	0.0035	0.93	2701.98	4491.84	4491.84	2.31	No	Si
SLU 83	4.19	726.23	-12665	-0.0001143	0.0003743	0.0035	0.93	3075.85	3963.23	3963.23	5.46	No	Si
SLU 75	2.29	1865.66	-17414	-0.0002214	0.0003743	0.0035	0.93	2778.67	4482.19	4482.19	2.4	No	Si
SLU 75	4.19	719.28	-12365	-0.0001116	0.0003743	0.0035	0.93	3068.07	3899.68	3899.68	5.42	No	Si
SLU 81	2.29	1919.02	-17624	-0.0002273	0.0003743	0.0035	0.93	2747.26	4493.06	4493.06	2.34	No	Si
SLU 81	4.19	710.08	-12425	-0.0001116	0.0003743	0.0035	0.93	3069.87	3912.28	3912.28	5.51	No	Si
SLU 82	2.29	1923.23	-17633	-0.0002277	0.0003743	0.0035	0.93	2745.89	4493.16	4493.16	2.34	No	Si
SLU 82	4.19	708.62	-12426	-0.0001115	0.0003743	0.0035	0.93	3069.89	3912.44	3912.44	5.52	No	Si
SLU 77	2.29	1885.16	-17691	-0.000226	0.0003743	0.0035	0.93	2736.88	4493.67	4493.67	2.38	No	Si
SLU 77	4.19	736.89	-12604	-0.0001143	0.0003743	0.0035	0.93	3074.53	3950.36	3950.36	5.36	No	Si
SLU 74	2.29	1861.45	-17405	-0.0002211	0.0003743	0.0035	0.93	2779.97	4481.22	4481.22	2.41	No	Si
SLU 74	4.19	720.74	-12365	-0.0001116	0.0003743	0.0035	0.93	3068.05	3899.52	3899.52	5.41	No	Si
SLU 84	2.29	1946.94	-17919	-0.0002328	0.0003743	0.0035	0.93	2700.52	4491.75	4491.75	2.31	No	Si
SLU 84	4.19	724.78	-12666	-0.0001142	0.0003743	0.0035	0.93	3075.86	3963.39	3963.39	5.47	No	Si
SLU 79	2.29	1867.29	-17524	-0.0002229	0.0003743	0.0035	0.93	2762.39	4491.49	4491.49	2.41	No	Si
SLU 79	4.19	729.48	-12482	-0.000113	0.0003743	0.0035	0.93	3071.47	3924.33	3924.33	5.38	No	Si
SLU 80	2.29	1871.49	-17533	-0.0002232	0.0003743	0.0035	0.93	2761.05	4491.66	4491.66	2.4	No	Si
SLU 80	4.19	728.02	-12483	-0.0001129	0.0003743	0.0035	0.93	3071.49	3924.49	3924.49	5.39	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	2.29	4764.79	-17846	-0.0004745	0.0005615	0.0035	0.93		5636.54	5636.54	1.18		Si
SLV 2	4.19	-476.4	-4655	-0.000045	0.0005615	0.0035	0.93		2189.38	2189.38	4.6		Si
SLV 5	2.29	3063.18	-12763	-0.0002391	0.0005615	0.0035	0.93		4576.29	4576.29	1.49		Si
SLV 5	4.19	8.45	-5508	-0.0000324	0.0005615	0.0035	0.93		2282.36	2282.36	270.26		Si
SLV 6	2.29	3212.45	-12911	-0.0002553	0.0005615	0.0035	0.93		4620.53	4620.53	1.44		Si
SLV 6	4.19	-52.64	-5257	-0.0000326	0.0005615	0.0035	0.93		2418.49	2418.49	45.95		Si
SLV 16	2.29	-2021.47	-6290	-0.000174	0.0005615	0.0035	0.744		2795.66	2795.66	1.38		Si
SLV 16	4.19	1394.33	-11949	-0.0001308	0.0005615	0.0035	0.93		4334.65	4334.65	3.11		Si
SLV 3	2.29	3962.62	-18176	-0.0003395	0.0005615	0.0035	0.93		5706.19	5706.19	1.44		Si
SLV 3	4.19	-217.87	-6377	-0.0000457	0.0005615	0.0035	0.93		2826.7	2826.7	12.97		Si
SLV 15	2.29	-2253.73	-6060	-0.0002775	0.0005615	0.0035	0.744		2713.06	2713.06	1.2		Si
SLV 15	4.19	1489.37	-12338	-0.0001378	0.0005615	0.0035	0.93		4449.92	4449.92	2.99		Si
SLV 14	2.29	-1451.57	-5730	-0.0001018	0.0005615	0.0035	0.744		2593.78	2593.78	1.79		Si
SLV 14	4.19	1230.83	-10616	-0.0001143	0.0005615	0.0035	0.93		3946.47	3946.47	3.21		Si
SLV 4	2.29	4194.89	-18406	-0.0003678	0.0005615	0.0035	0.93		5754.31	5754.31	1.37		Si
SLV 4	4.19	-312.91	-5987	-0.000047	0.0005615	0.0035	0.93		2686.63	2686.63	8.59		Si
SLV 13	2.29	-1683.83	-5500	-0.0001332	0.0005615	0.0035	0.744		2510.79	2510.79	1.49		Si
SLV 13	4.19	1325.87	-11006	-0.0001211	0.0005615	0.0035	0.93		4059.42	4059.42	3.06		Si
SLV 1	2.29	4532.52	-17616	-0.0004246	0.0005615	0.0035	0.93		5588.25	5588.25	1.23		Si
SLV 1	4.19	-381.36	-5045	-0.0000438	0.0005615	0.0035	0.93		2338.12	2338.12	6.13		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	2.29	1885.16	-17691	-14732	2272	0.93	0.93	-56574	10833	2821	80882	7798	2372	10169	No	4.47	Si
SLU 77	4.19	736.89	-12604	-10496	-438	0.93	0.93	-40307	10833	2821	80882	7798	2372	10169	No	23.24	Si
SLU 75	2.29	1865.66	-17414	-14501	2256	0.93	0.93	-55688	10833	2821	80882	7798	2372	10169	No	4.51	Si
SLU 75	4.19	719.28	-12365	-10297	-421	0.93	0.93	-39543	10833	2821	80882	7798	2372	10169	No	24.14	Si
SLU 83	2.29	1942.73	-17910	-14914	2374	0.93	0.93	-57274	10833	2821	80882	7798	2372	10169	No	4.28	Si
SLU 83	4.19	726.23	-12665	-10546	-410	0.93	0.93	-40500	10833	2821	80882	7798	2372	10169	No	24.8	Si
SLU 82	2.29	1923.23	-17633	-14683	2357	0.93	0.93	-56388	10833	2821	80882	7798	2372	10169	No	4.31	Si
SLU 82	4.19	708.62	-12426	-10347	-394	0.93	0.93	-39736	10833	2821	80882	7798	2372	10169	No	25.84	Si
SLU 80	2.29	1871.49	-17533	-14600	2255	0.93	0.93	-56069	10833	2821	80882	7798	2372	10169	No	4.51	Si
SLU 80	4.19	728.02	-12483	-10395	-431	0.93	0.93	-39918	10833	2821	80882	7798	2372	10169	No	23.59	Si
SLU 84	2.29	1946.94	-17919	-14922	2380	0.93	0.93	-57303	10833	2821	80882	7798	2372	10169	No	4.27	Si
SLU 84	4.19	724.78	-12666	-10547	-407	0.93	0.93	-40502	10833	2821	80882	7798	2372	10169	No	24.97	Si
SLU 74	2.29	1861.45	-17405	-14494	2249	0.93	0.93	-55659	10833	2821	80882	7798	2372	10169	No	4.52	Si
SLU 74	4.19	720.74	-12365	-10296	-424	0.93	0.93	-39540	10833	2821	80882	7798	2372	10169	No	23.98	Si
SLU 78	2.29	1889.37	-17700	-14739	2279	0.93	0.93	-56603	10833	2821	80882	7798	2372	10169	No	4.46	Si
SLU 78	4.19	735.43	-12605	-10497	-435	0.93	0.93	-40309	10833	2821	80882	7798	2372	10169	No	23.39	Si
SLU 79	2.29	1867.29	-17524	-14593	2248	0.93	0.93	-56040	10833	2821	80882	7798	2372	10169	No	4.52	Si
SLU 79	4.19	729.48	-12482	-10394	-434	0.93	0.93	-39915	10833	2821	80882	7798	2372	10169	No	23.43	Si
SLU 81	2.29	1919.02	-17624	-14676	2351	0.93	0.93	-56359	10833	2821	80882	7798	2372	10169	No	4.33	Si
SLU 81	4.19	710.08	-12425	-10347	-396	0.93	0.93	-39733	10833	2821	80882	7798	2372	10169	No	25.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	2.29	3962.62	-18176	-15135	6889	0.93	0.741	-58123	16250	3371	80882	11696	2372	14068		2.04	Si
SLV 3	4.19	-217.87	-6377	-5310	2196	0.93	0.93	-20393	14495	3775	80882	11696	2372	14068		6.41	Si
SLV 2	2.29	4764.79	-17846	-14860	7883	0.93	0.594	-57067	16250	2703	80882	11696	2372	14068		1.78	Si
SLV 2	4.19	-476.4	-4655	-3876	2749	0.93	0.93	-14886	13394	3488	80882	11696	2372	14068		5.12	Si
SLD 2	2.29	2749.86	-14495	-12070	4219	0.93	0.8259	-46352	16250	3758	80882	11696	2372	14068		3.33	Si
SLD 2	4.19	90.59	-6868	-5719	994	0.93	0.93	-21964	14809	3856	80882	11696	2372	14068		14.15	Si
SLV 4	2.29	4194.89	-18406	-15327	7320	0.93	0.7113	-58858	16250	3236	80882	11696	2372	14068		1.92	Si
SLV 4	4.19	-312.91	-5987	-4986	2440	0.93	0.93	-19146	14246	3710	80882	11696	2372	14068		5.77	Si
SLV 15	2.29	-2253.73	-6060	-5046	-4908	0.744	0.2793	0	0	0	80882	9357	1897	11254		2.29	Si
SLV 15	4.19	1489.37	-12338	-10274	-3373	0.93	0.93	-39456	16250	4232	80882	11696	2372	14068		4.17	Si
SLV 16	2.29	-2021.47	-6290	-5238	-4478	0.744	0.4309	0	0	0	80882	9357	1897	11254		2.51	Si
SLV 16	4.19	1394.33	-11949	-9950	-3129	0.93	0.93	-38209	16250	4232	80882	11696	2372	14068		4.5	Si
SLV 13	2.29	-1683.83	-5500	-4580	-4345	0.744	0.4766	0	0	0	80882	9357	1897	11254		2.59	Si
SLV 13	4.19	1325.87	-11006	-9165	-3064	0.93	0.93	-35196	16250	4232	80882	11696	2372	14068		4.59	Si
SLV 14	2.29	-1451.57	-5730	-4771	-3915	0.744	0.635	0	0	0	80882	9357	1897	11254		2.87	Si
SLV 14	4.19	1230.83	-10616	-8840	-2820	0.93	0.93	-33949	16250	4232	80882	11696	2372	14068		4.99	Si
SLV 6	2.29	3212.45	-12911	-10751	4334	0.93	0.6485	-41286	16250	2951	80882	11696	2372	14068		3.25	Si
SLV 6	4.19	-52.64	-5257	-4378	1118	0.93	0.93	-16811	13779	3588	80882	11696	2372	14068		12.59	Si
SLV 1	2.29	4532.52	-17616	-14669	7453	0.93	0.6231	-56332	16250	2835	80882	11696	2372	14068		1.89	Si
SLV 1	4.19	-381.36	-5045	-4201	2505	0.93	0.93	-16133	13643	3553	80882	11696	2372	14068		5.62	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.35	17799	-4635	334.36	573.25	1.71	Si
SLV 1	179667	0.35	18766	-4887	334.36	600.07	1.79	Si
SLV 6	179667	0.35	19240	-5010	334.36	613.06	1.83	Si
SLV 5	179667	0.35	19862	-5172	334.36	629.92	1.88	Si
SLV 4	179667	0.35	22149	-5768	334.36	690.37	2.06	Si
SLV 3	179667	0.35	23117	-6020	334.36	715.18	2.14	Si
SLV 10	179667	0.35	24678	-6426	334.36	754.29	2.26	Si
SLV 9	179667	0.35	25300	-6588	334.36	769.54	2.3	Si
SLV 8	179667	0.35	33742	-8786	334.36	958.32	2.87	Si
SLV 7	179667	0.35	34364	-8948	334.36	970.87	2.9	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-8050	-10268	94	0.554	1077.2	0.935	8.60831	15.31518	No
SLV 16	-7889	-9996	94	0.563	1061	0.934	8.75611	15.31518	No
SLV 13	-7044	-9316	132	0.611	975.7	0.929	9.55775	15.31518	No
SLV 14	-6883	-9045	132	0.622	959.5	0.928	9.7423	15.31518	No
SLV 3	-3817	-8609	-132	0.961	652.8	0.905	15.43282	15.31518	Si
SLV 4	-3656	-8337	-132	0.99	636.9	0.904	15.91911	15.31518	Si
SLV 1	-2812	-7658	-94	1.183	554.3	0.896	19.18444	15.31518	Si
SLV 2	-2651	-7386	-94	1.226	538.8	0.895	19.92523	15.31518	Si
SLV 11	-7712	-10748	-29	0.58	1043.2	0.933	9.03226	6.0451	Si
SLV 12	-7609	-10574	-29	0.586	1032.7	0.932	9.13543	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.307	SLU 84	Si
V_SLU	4.272	SLU 84	Si
PF_SLV	1.183	SLV 2	Si
V_SLV	1.785	SLV 2	Si
PFFP_SLV	1.714	SLV 2	Si
R_SLV	0.562	SLV 15	No

Maschio 231

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L4	L6	3.221	0.16	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	4.82	3569.93	-24691	-0.000081	0.0004492	0.0035	3.2207	24169.01	33478.84	33478.84	9.38	No	Si
SLU 51	6.92	1018.22	-19863	-0.0000549	0.0004492	0.0035	3.2207	21895.99	27924.39	27924.39	27.42	No	Si
SLU 46	4.82	3521.55	-24365	-0.0000798	0.0004492	0.0035	3.2207	24053.08	33103.89	33103.89	9.4	No	Si
SLU 46	6.92	980.96	-19518	-0.0000538	0.0004492	0.0035	3.2207	21687.53	27526.74	27526.74	28.06	No	Si
SLU 43	4.82	3444.79	-23553	-0.0000771	0.0004492	0.0035	3.2207	23740.56	32169.48	32169.48	9.34	No	Si
SLU 43	6.92	987.42	-18732	-0.0000518	0.0004492	0.0035	3.2207	21190.58	26622.13	26622.13	26.96	No	Si
SLU 58	4.82	3823.07	-26872	-0.0000885	0.0004492	0.0035	3.2207	24805.09	35988.66	35988.66	9.41	No	Si
SLU 58	6.92	920.37	-21730	-0.0000594	0.0004492	0.0035	3.2207	22916.4	30072.49	30072.49	32.67	No	Si
SLU 48	4.82	3600.38	-24945	-0.0000819	0.0004492	0.0035	3.2207	24255.73	33771.55	33771.55	9.38	No	Si
SLU 48	6.92	1049.98	-20114	-0.0000558	0.0004492	0.0035	3.2207	22043.43	28212.96	28212.96	26.87	No	Si
SLU 47	4.82	3494.71	-24113	-0.000079	0.0004492	0.0035	3.2207	23959.76	32814.06	32814.06	9.39	No	Si
SLU 47	6.92	961.12	-19274	-0.0000531	0.0004492	0.0035	3.2207	21536.67	27245.97	27245.97	28.35	No	Si
SLU 44	4.82	3426.72	-23540	-0.000077	0.0004492	0.0035	3.2207	23735.47	32155.05	32155.05	9.38	No	Si
SLU 44	6.92	927.84	-18698	-0.0000514	0.0004492	0.0035	3.2207	21168.45	26583.14	26583.14	28.65	No	Si
SLU 45	4.82	3532.39	-24372	-0.0000799	0.0004492	0.0035	3.2207	24055.82	33112.54	33112.54	9.37	No	Si
SLU 45	6.92	1016.7	-19538	-0.000054	0.0004492	0.0035	3.2207	21699.97	27550.13	27550.13	27.1	No	Si
SLU 49	4.82	3589.54	-24938	-0.0000818	0.0004492	0.0035	3.2207	24253.21	33762.9	33762.9	9.41	No	Si
SLU 49	6.92	1014.24	-20094	-0.0000555	0.0004492	0.0035	3.2207	22031.6	28189.56	28189.56	27.79	No	Si
SLU 50	4.82	3580.77	-24698	-0.0000811	0.0004492	0.0035	3.2207	24171.62	33487.5	33487.5	9.35	No	Si
SLU 50	6.92	1053.97	-19884	-0.0000552	0.0004492	0.0035	3.2207	21908.06	27947.79	27947.79	26.52	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	4.82	6737.8	-23695	-0.0000918	0.0006738	0.0035	3.2207		33409.31	33409.31	4.96		Si
SLV 6	6.92	5696.03	-20076	-0.000077	0.0006738	0.0035	3.2207		29201.55	29201.55	5.13		Si
SLV 11	4.82	-1047.52	-16475	-0.0000455	0.0006738	0.0035	3.2207		29480.94	29480.94	28.14		Si
SLV 11	6.92	-4317.35	-12148	-0.0000498	0.0006738	0.0035	3.2207		23696.49	23696.49	5.49		Si
SLV 14	4.82	1871.44	-16187	-0.0000486	0.0006738	0.0035	3.2207		24567.75	24567.75	13.13		Si
SLV 14	6.92	3562.2	-13587	-0.0000499	0.0006738	0.0035	3.2207		21073.1	21073.1	5.92		Si
SLV 7	4.82	120.96	-19173	-0.0000479	0.0006738	0.0035	3.2207		28151.22	28151.22	232.73		Si
SLV 7	6.92	-5139.93	-14157	-0.0000588	0.0006738	0.0035	3.2207		26428.88	26428.88	5.14		Si
SLV 10	4.82	5569.32	-20997	-0.0000788	0.0006738	0.0035	3.2207		30271.92	30271.92	5.44		Si
SLV 10	6.92	6518.61	-18068	-0.0000756	0.0006738	0.0035	3.2207		26865.36	26865.36	4.12		Si
SLV 13	4.82	1917.93	-16385	-0.0000493	0.0006738	0.0035	3.2207		24831.25	24831.25	12.95		Si
SLV 13	6.92	3868.21	-13749	-0.0000518	0.0006738	0.0035	3.2207		21295.72	21295.72	5.51		Si
SLV 5	4.82	6767.67	-23822	-0.0000923	0.0006738	0.0035	3.2207		33557.88	33557.88	4.96		Si
SLV 5	6.92	5892.7	-20181	-0.0000782	0.0006738	0.0035	3.2207		29322.73	29322.73	4.98		Si
SLV 9	4.82	5599.2	-21125	-0.0000793	0.0006738	0.0035	3.2207		30420.49	30420.49	5.43		Si
SLV 9	6.92	6715.28	-18172	-0.0000768	0.0006738	0.0035	3.2207		26986.53	26986.53	4.02		Si
SLV 12	4.82	-1077.39	-16348	-0.0000453	0.0006738	0.0035	3.2207		29315.76	29315.76	27.21		Si
SLV 12	6.92	-4514.02	-12044	-0.0000504	0.0006738	0.0035	3.2207		23554.77	23554.77	5.22		Si
SLV 8	4.82	91.09	-19046	-0.0000475	0.0006738	0.0035	3.2207		28002.65	28002.65	307.43		Si
SLV 8	6.92	-5336.6	-14052	-0.0000595	0.0006738	0.0035	3.2207		26287.15	26287.15	4.93		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	4.82	4020.39	-29109	-17091	3694	3.2207	3.2207	-33167	10833	5583	231091	18519	16426	34945	No	9.46	Si
SLU 81	6.92	738.24	-23509	-13804	3704	3.2207	3.2207	-26787	10833	5583	231091	18519	16426	34945	No	9.43	Si
SLU 77	4.82	4072.14	-29569	-17362	3561	3.2207	3.2207	-33692	10833	5583	231091	18519	16426	34945	No	9.81	Si
SLU 77	6.92	858.07	-24100	-14151	3572	3.2207	3.2207	-27461	10833	5583	231091	18519	16426	34945	No	9.78	Si
SLU 75	4.82	3993.31	-28989	-17021	3569	3.2207	3.2207	-33031	10833	5583	231091	18519	16426	34945	No	9.79	Si
SLU 75	6.92	789.05	-23504	-13801	3579	3.2207	3.2207	-26781	10833	5583	231091	18519	16426	34945	No	9.76	Si
SLU 78	4.82	4061.3	-29562	-17357	3583	3.2207	3.2207	-33684	10833	5583	231091	18519	16426	34945	No	9.75	Si
SLU 78	6.92	822.32	-24080	-14139	3593	3.2207	3.2207	-27437	10833	5583	231091	18519	16426	34945	No	9.72	Si
SLU 84	4.82	4077.54	-29674	-17423	3729	3.2207	3.2207	-33811	10833	5583	231091	18519	16426	34945	No	9.37	Si
SLU 84	6.92	735.78	-24065	-14130	3740	3.2207	3.2207	-27420	10833	5583	231091	18519	16426	34945	No	9.34	Si
SLU 76	4.82	3966.47	-28737	-16873	3560	3.2207	3.2207	-32744	10833	5583	231091	18519	16426	34945	No	9.82	Si
SLU 76	6.92	769.2	-23260	-13657	3570	3.2207	3.2207	-26503	10833	5583	231091	18519	16426	34945	No	9.79	Si
SLU 80	4.82	4041.69	-29315	-17213	3559	3.2207	3.2207	-33402	10833	5583	231091	18519	16426	34945	No	9.82	Si
SLU 80	6.92	826.31	-23850	-14003	3570	3.2207	3.2207	-27175	10833	5583	231091	18519	16426	34945	No	9.79	Si
SLU 74	4.82	4004.15	-28997	-17026	3547	3.2207	3.2207	-33039	10833	5583	231091	18519	16426	34945	No	9.85	Si
SLU 74	6.92	824.79	-23524	-13812	3558	3.2207	3.2207	-26804	10833	5583	231091	18519	16426	34945	No	9.82	Si
SLU 83	4.82	4088.38	-29681	-17428	3707	3.2207	3.2207	-33820	10833	5583	231091	18519	16426	34945	No	9.43	Si
SLU 83	6.92	771.52	-24085	-14142	3718	3.2207	3.2207	-27443	10833	5583	231091	18519	16426	34945	No	9.4	Si
SLU 82	4.82	4009.55	-29101	-17087	3715	3.2207	3.2207	-33159	10833	5583	231091	18519	16426	34945	No	9.41	Si
SLU 82	6.92	702.5	-23489	-13792	3726	3.2207	3.2207	-26764	10833	5583	231091	18519	16426	34945	No	9.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 7	4.82	1631.87	-19674	-11552	3791	3.2207	3.2207	-22417	16250	8374	231091	27778	16426	44204		11.66	Si
SLD 7	6.92	-1875.42	-15237	-8947	3147	3.2207	3.2207	-17362	15972	8231	231091	27778	16426	44204		14.05	Si
SLV 1	4.82	5812.85	-25378	-14901	2805	3.2207	3.2207	-28916	16250	8374	231091	27778	16426	44204		15.76	Si
SLV 1	6.92	1126.27	-20445	-12004	3611	3.2207	3.2207	-23295	16250	8374	231091	27778	16426	44204		12.24	Si
SLV 2	4.82	5766.37	-25179	-14784	2900	3.2207	3.2207	-28690	16250	8374	231091	27778	16426	44204		15.24	Si
SLV 2	6.92	820.26	-20283	-11909	3706	3.2207	3.2207	-23111	16250	8374	231091	27778	16426	44204		11.93	Si
SLV 3	4.82	3818.84	-23983	-14082	4486	3.2207	3.2207	-27327	16250	8374	231091	27778	16426	44204		9.85	Si
SLV 3	6.92	-2183.52	-18638	-10943	4345	3.2207	3.2207	-21236	16250	8374	231091	27778	16426	44204		10.17	Si
SLV 11	4.82	-1047.52	-16475	-9674	4818	3.2207	3.2207	-18772	16250	8374	231091	27778	16426	44204		9.18	Si
SLV 11	6.92	-4317.35	-12148	-7133	3149	3.2207	3.2207	-13841	15268	7868	231091	27778	16426	44204		14.04	Si
SLD 8	4.82	1618.83	-19618	-11519	3818	3.2207	3.2207	-22353	16250	8374	231091	27778	16426	44204		11.58	Si
SLD 8	6.92	-1961.29	-15192	-8920	3173	3.2207	3.2207	-17310	15962	8225	231091	27778	16426	44204		13.93	Si
SLV 8	4.82	91.09	-19046	-11183	5639	3.2207	3.2207	-21701	16250	8374	231091	27778	16426	44204		7.84	Si
SLV 8	6.92	-5336.6	-14052	-8251	4166	3.2207	3.2207	-16012	15702	8092	231091	27778	16426	44204		10.61	Si
SLV 4	4.82	3772.35	-23785	-13965	4581	3.2207	3.2207	-27101	16250	8374	231091	27778	16426	44204		9.65	Si
SLV 4	6.92	-2489.53	-18476	-10848	4440	3.2207	3.2207	-21051	16250	8374	231091	27778	16426	44204		9.95	Si
SLV 12	4.82	-1077.39	-16348	-9599	4879	3.2207	3.2207	-18627	16225	8361	231091	27778	16426	44204		9.06	Si
SLV 12	6.92	-4514.02	-12044	-7071	3211	3.2207	3.2207	-13723	15245	7856	231091	27778	16426	44204		13.77	Si
SLV 7	4.82	120.96	-19173	-11258	5577	3.2207	3.2207	-21846	16250	8374	231091	27778	16426	44204		7.93	Si
SLV 7	6.92	-5139.93	-14157	-8312	4104	3.2207	3.2207	-16130	15726	8104	231091	27778	16426	44204		10.77	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 4.865 Ta 0.5 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-14792	0.35	700.14	998.02	1634.48	1316.25	1.88	Si
SLV 15	-14991	0.35	700.14	1008.91	1652.57	1330.74	1.9	Si
SLV 14	-16187	0.35	700.14	1073	1761.5	1417.25	2.02	Si
SLV 12	-16348	0.35	700.14	1081.45	1776.18	1428.81	2.04	Si
SLV 13	-16385	0.35	700.14	1083.42	1779.62	1431.52	2.04	Si
SLV 11	-16475	0.35	700.14	1088.12	1787.82	1437.97	2.05	Si
SLV 8	-19046	0.35	700.14	1216.39	2017.3	1616.85	2.31	Si
SLV 7	-19173	0.35	700.14	1222.48	2028.67	1625.57	2.32	Si
SLV 10	-20997	0.35	700.14	1306.32	2191.08	1748.7	2.5	Si
SLV 9	-21125	0.35	700.14	1311.98	2202.46	1757.22	2.51	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.03 Ta = 0.5041

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-15575	-25072	-529	0.948	2095.9	0.934	14.75163	7.46298	Si
SLV 2	-15409	-24885	-529	0.956	2079.2	0.933	14.88851	7.46298	Si
SLV 3	-13945	-26392	-469	1.04	1931.3	0.929	16.26907	7.46298	Si
SLV 4	-13778	-26205	-469	1.05	1914.6	0.929	16.43497	7.46298	Si
SLV 13	-10224	-27045	470	1.325	1557.5	0.916	21.00472	7.46298	Si
SLV 14	-10058	-26858	470	1.341	1540.9	0.916	21.2803	7.46298	Si
SLV 15	-8594	-28365	530	1.501	1394.8	0.91	23.97283	7.46298	Si
SLV 16	-8428	-28178	530	1.522	1378.3	0.909	24.33142	7.46298	Si
SLV 5	-15575	-24188	-249	0.963	2095.9	0.934	14.98309	2.39674	Si
SLV 6	-15468	-24068	-249	0.968	2085.1	0.933	15.07215	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.339	SLU 43	Si
V_SLU	9.344	SLU 84	Si
PF_SLV	4.019	SLV 9	Si
V_SLV	7.84	SLV 8	Si
PFFP_SLV	1.88	SLV 16	Si
R_SLV	1.977	SLV 1	Si

Maschio 234

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L4	L6	1.655	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	4.82	1042.23	-20040	-0.0000853	0.0003743	0.0035	1.655	9539.47	11625.41	11625.41	11.15	No	Si
SLU 84	6.92	2051.88	-17893	-0.0000904	0.0003743	0.0035	1.655	9191.23	10893.1	10893.1	5.31	No	Si
SLU 42	4.82	913.15	-17072	-0.0000715	0.0003743	0.0035	1.655	9015.36	10619.45	10619.45	11.63	No	Si
SLU 42	6.92	1835.58	-15326	-0.0000769	0.0003743	0.0035	1.655	8562.62	9801.43	9801.43	5.34	No	Si
SLU 41	4.82	909.98	-17052	-0.0000713	0.0003743	0.0035	1.655	9010.71	10612.76	10612.76	11.66	No	Si
SLU 41	6.92	1839.74	-15309	-0.0000769	0.0003743	0.0035	1.655	8557.6	9792.37	9792.37	5.32	No	Si
SLU 82	4.82	1029.13	-19679	-0.0000836	0.0003743	0.0035	1.655	9492.19	11499.79	11499.79	11.17	No	Si
SLU 82	6.92	2015.25	-17512	-0.0000883	0.0003743	0.0035	1.655	9112.5	10765.33	10765.33	5.34	No	Si
SLU 79	4.82	967.71	-19540	-0.0000822	0.0003743	0.0035	1.655	9472.79	11451.78	11451.78	11.83	No	Si
SLU 79	6.92	1933.11	-17565	-0.0000874	0.0003743	0.0035	1.655	9123.86	10783.2	10783.2	5.58	No	Si
SLU 20	4.82	823.6	-15189	-0.0000629	0.0003743	0.0035	1.655	8522.63	9729.81	9729.81	11.81	No	Si
SLU 20	6.92	1582.92	-13412	-0.0000661	0.0003743	0.0035	1.655	7943.45	8819.5	8819.5	5.57	No	Si
SLU 40	4.82	900.05	-16711	-0.0000699	0.0003743	0.0035	1.655	8930.44	10493.68	10493.68	11.66	No	Si
SLU 40	6.92	1798.96	-14945	-0.0000749	0.0003743	0.0035	1.655	8449.56	9602.42	9602.42	5.34	No	Si
SLU 81	4.82	1025.96	-19659	-0.0000835	0.0003743	0.0035	1.655	9489.4	11492.76	11492.76	11.2	No	Si
SLU 81	6.92	2019.41	-17495	-0.0000883	0.0003743	0.0035	1.655	9108.8	10759.56	10759.56	5.33	No	Si
SLU 83	4.82	1039.06	-20020	-0.0000852	0.0003743	0.0035	1.655	9536.94	11618.33	11618.33	11.18	No	Si
SLU 83	6.92	2056.03	-17876	-0.0000904	0.0003743	0.0035	1.655	9187.77	10887.28	10887.28	5.3	No	Si
SLU 39	4.82	896.87	-16691	-0.0000697	0.0003743	0.0035	1.655	8925.54	10485.01	10485.01	11.69	No	Si
SLU 39	6.92	1803.12	-14927	-0.0000749	0.0003743	0.0035	1.655	8444.31	9593.43	9593.43	5.32	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	4.82	-3610.1	-9457	-0.0000783	0.0005615	0.0035	1.655		7701.76	7701.76	2.13		Si
SLV 14	6.92	6012.79	-15458	-0.0001363	0.0005615	0.0035	1.655		10822.07	10822.07	1.8		Si
SLV 15	4.82	-3860.71	-11299	-0.0000862	0.0005615	0.0035	1.655		8899.37	8899.37	2.31		Si
SLV 15	6.92	6580.06	-18140	-0.000153	0.0005615	0.0035	1.655		12132.13	12132.13	1.84		Si
SLV 1	4.82	4782.49	-14741	-0.000111	0.0005615	0.0035	1.655		10399.39	10399.39	2.17		Si
SLV 1	6.92	-3787.25	-5704	-0.0001318	0.0005615	0.0035	1.324		5088.92	5088.92	1.34		Si
SLV 9	4.82	-868.74	-8842	-0.0000392	0.0005615	0.0035	1.655		7285.95	7285.95	8.39		Si
SLV 9	6.92	2583.31	-9550	-0.0000625	0.0005615	0.0035	1.655		7094.56	7094.56	2.75		Si
SLV 2	4.82	5080.66	-14933	-0.0001166	0.0005615	0.0035	1.655		10525.6	10525.6	2.07		Si
SLV 2	6.92	-4191.62	-5317	-0.0003546	0.0005615	0.0035	1.324		4806.18	4806.18	1.15		Si
SLV 4	4.82	5128.24	-16968	-0.0001236	0.0005615	0.0035	1.655		11555.81	11555.81	2.25		Si
SLV 4	6.92	-4028.71	-7611	-0.0000954	0.0005615	0.0035	1.324		6446.31	6446.31	1.6		Si
SLV 3	4.82	4830.06	-16775	-0.0001185	0.0005615	0.0035	1.655		11461.64	11461.64	2.37		Si
SLV 3	6.92	-3624.35	-7998	-0.0000789	0.0005615	0.0035	1.324		6715.58	6715.58	1.85		Si
SLV 13	4.82	-3908.28	-9264	-0.0000847	0.0005615	0.0035	1.655		7572.17	7572.17	1.94		Si
SLV 13	6.92	6417.15	-15845	-0.0001462	0.0005615	0.0035	1.655		11009.36	11009.36	1.72		Si
SLV 16	4.82	-3562.53	-11492	-0.0000822	0.0005615	0.0035	1.655		9023.04	9023.04	2.53		Si
SLV 16	6.92	6175.69	-17752	-0.000144	0.0005615	0.0035	1.655		11940.7	11940.7	1.93		Si
SLD 13	4.82	-1317.5	-11462	-0.0000538	0.0005615	0.0035	1.655		9004.01	9004.01	6.83		Si
SLD 13	6.92	3425.68	-13473	-0.0000873	0.0005615	0.0035	1.655		9573.3	9573.3	2.79		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 67	4.82	777.29	-17455	-14535	-73	1.655	1.655	-31366	10833	5020	80882	13876	4220	18097	No	248.8	Si
SLU 67	6.92	1525.46	-15793	-13151	-2366	1.655	1.655	-28378	10728	4972	80882	13876	4220	18097	No	7.65	Si
SLU 70	4.82	790.39	-17816	-14836	-82	1.655	1.655	-32015	10833	5020	80882	13876	4220	18097	No	220.92	Si
SLU 70	6.92	1562.08	-16174	-13468	-2433	1.655	1.655	-29063	10820	5014	80882	13876	4220	18097	No	7.44	Si
SLU 71	4.82	770.67	-17577	-14637	-102	1.655	1.655	-31585	10833	5020	80882	13876	4220	18097	No	176.96	Si
SLU 71	6.92	1560.84	-15952	-13283	-2425	1.655	1.655	-28664	10766	4989	80882	13876	4220	18097	No	7.46	Si
SLU 69	4.82	787.22	-17796	-14819	-87	1.655	1.655	-31978	10833	5020	80882	13876	4220	18097	No	208.04	Si
SLU 69	6.92	1566.23	-16157	-13454	-2436	1.655	1.655	-29032	10815	5012	80882	13876	4220	18097	No	7.43	Si
SLU 77	4.82	984.26	-19759	-16454	261	1.655	1.655	-35506	10833	5020	80882	13876	4220	18097	No	69.4	Si
SLU 77	6.92	1938.51	-17770	-14798	-2238	1.655	1.655	-31932	10833	5020	80882	13876	4220	18097	No	8.09	Si
SLU 72	4.82	773.84	-17597	-14653	-97	1.655	1.655	-31621	10833	5020	80882	13876	4220	18097	No	186.2	Si
SLU 72	6.92	1556.68	-15969	-13298	-2422	1.655	1.655	-28695	10770	4991	80882	13876	4220	18097	No	7.47	Si
SLU 66	4.82	774.12	-17435	-14518	-78	1.655	1.655	-31329	10833	5020	80882	13876	4220	18097	No	232.57	Si
SLU 66	6.92	1529.61	-15775	-13136	-2369	1.655	1.655	-28347	10724	4970	80882	13876	4220	18097	No	7.64	Si
SLU 65	4.82	749.75	-16888	-14063	-75	1.655	1.655	-30347	10833	5020	80882	13876	4220	18097	No	239.85	Si
SLU 65	6.92	1480.67	-15218	-12672	-2287	1.655	1.655	-27346	10591	4908	80882	13876	4220	18097	No	7.91	Si
SLU 68	4.82	762.85	-17249	-14364	-85	1.655	1.655	-30996	10833	5020	80882	13876	4220	18097	No	213.84	Si
SLU 68	6.92	1517.29	-15599	-12990	-2353	1.655	1.655	-28031	10682	4950	80882	13876	4220	18097	No	7.69	Si
SLU 64	4.82	744.46	-16854	-14035	-84	1.655	1.655	-30286	10833	5020	80882	13876	4220	18097	No	215.67	Si
SLU 64	6.92	1487.59	-15189	-12648	-2291	1.655	1.655	-27294	10584	4905	80882	13876	4220	18097	No	7.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	4.82	5128.24	-16968	-14130	7934	1.655	1.5758	-30491	16250	7170	80882	20815	4220	25035		3.16	Si
SLV 4	6.92	-4028.71	-7611	-6338	5347	1.324	0.8946	0	0	0	80882	16652	3376	20028		3.75	Si
SLV 13	4.82	-3908.28	-9264	-7715	-7859	1.655	1.217	-22903	14998	5110	80882	20815	4220	25035		3.19	Si
SLV 13	6.92	6417.15	-15845	-13195	-8610	1.655	1.2676	-28473	16111	5718	80882	20815	4220	25035		2.91	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	4.82	-710.16	-15624	-13010	-3802	1.655	1.655	-28075	16032	7429	80882	20815	4220	25035		6.59	Si
SLV 11	6.92	3126.33	-17198	-14321	-5079	1.655	1.655	-30903	16250	7530	80882	20815	4220	25035		4.93	Si
SLV 3	4.82	4830.06	-16775	-13969	7372	1.655	1.6187	-30144	16250	7365	80882	20815	4220	25035		3.4	Si
SLV 3	6.92	-3624.35	-7998	-6660	4771	1.324	1.1231	0	0	0	80882	16652	3376	20028		4.2	Si
SLD 15	4.82	-1303.87	-12348	-10282	-3658	1.655	1.655	-22188	14854	6884	80882	20815	4220	25035		6.84	Si
SLD 15	6.92	3496.23	-14483	-12060	-4912	1.655	1.655	-26025	15622	7239	80882	20815	4220	25035		5.1	Si
SLV 16	4.82	-3562.53	-11492	-9570	-8053	1.655	1.5525	-22248	14866	6462	80882	20815	4220	25035		3.11	Si
SLV 16	6.92	6175.69	-17752	-14782	-8725	1.655	1.4389	-31899	16250	6547	80882	20815	4220	25035		2.87	Si
SLV 2	4.82	5080.66	-14933	-12435	8690	1.655	1.4619	-26835	15784	6461	80882	20815	4220	25035		2.88	Si
SLV 2	6.92	-4191.62	-5317	-4427	6038	1.324	0.1174	0	0	0	80882	16652	3376	20028		3.32	Si
SLV 1	4.82	4782.49	-14741	-12275	8129	1.655	1.5092	-26488	15714	6640	80882	20815	4220	25035		3.08	Si
SLV 1	6.92	-3787.25	-5704	-4750	5462	1.324	0.4907	0	0	0	80882	16652	3376	20028		3.67	Si
SLV 15	4.82	-3860.71	-11299	-9409	-8615	1.655	1.4575	-23267	15070	6150	80882	20815	4220	25035		2.91	Si
SLV 15	6.92	6580.06	-18140	-15105	-9301	1.655	1.3943	-32596	16250	6344	80882	20815	4220	25035		2.69	Si
SLV 14	4.82	-3610.1	-9457	-7875	-7297	1.655	1.3373	-21254	14667	5492	80882	20815	4220	25035		3.43	Si
SLV 14	6.92	6012.79	-15458	-12872	-8034	1.655	1.3156	-27777	15972	5884	80882	20815	4220	25035		3.12	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.35	19080	-8842	595.02	1083.2	1.82	Si
SLV 10	179667	0.35	19348	-8966	595.02	1096.18	1.84	Si
SLV 13	179667	0.35	19992	-9264	595.02	1127.23	1.89	Si
SLV 14	179667	0.35	20408	-9457	595.02	1147.09	1.93	Si
SLV 5	179667	0.35	22625	-10485	595.02	1250.39	2.1	Si
SLV 6	179667	0.35	22893	-10609	595.02	1262.57	2.12	Si
SLV 15	179667	0.35	24383	-11299	595.02	1329.31	2.23	Si
SLV 16	179667	0.35	24799	-11492	595.02	1347.62	2.26	Si
SLV 1	179667	0.35	31809	-14741	595.02	1633.84	2.75	Si
SLV 2	179667	0.35	32225	-14933	595.02	1649.52	2.77	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-11979	-16197	-186	0.636	1680.3	0.927	9.97462	15.31518	No
SLV 3	-11879	-16012	-185	0.641	1670.2	0.927	10.04467	15.31518	No
SLV 2	-9883	-14614	-313	0.727	1469.6	0.919	11.49963	15.31518	No
SLV 1	-9783	-14429	-313	0.733	1459.5	0.919	11.59413	15.31518	No
SLV 16	-8345	-9181	351	0.821	1315.7	0.913	13.07285	15.31518	No
SLV 15	-8245	-8996	351	0.828	1305.7	0.912	13.19317	15.31518	No
SLV 14	-6249	-7597	223	1.018	1108.1	0.902	16.40135	15.31518	Si
SLV 13	-6149	-7412	224	1.029	1098.2	0.902	16.58759	15.31518	Si
SLV 8	-13134	-15556	150	0.594	1796.7	0.931	9.27592	6.0451	Si
SLV 7	-13069	-15437	151	0.597	1790.2	0.931	9.3136	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.295	SLU 83	Si
V_SLU	7.43	SLU 69	Si
PF_SLV	1.147	SLV 2	Si
V_SLV	2.692	SLV 15	Si
PFFP_SLV	1.82	SLV 9	Si
R_SLV	0.651	SLV 4	No

Maschio 239

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.385	L4	L6	1.439	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	1.39	-96.97	-17810	-0.0000744	0.0003743	0.0035	1.4386	7247.5	9204.59	9204.59	94.92	No	Si
SLU 49	8.34	-401.72	-9834	-0.0000447	0.0003743	0.0035	1.4386	5377.37	6363.98	6363.98	15.84	No	Si
SLU 59	1.39	-209.35	-19733	-0.0000856	0.0003743	0.0035	1.4386	7364.47	9677.83	9677.83	46.23	No	Si
SLU 59	8.34	-428.33	-10675	-0.0000486	0.0003743	0.0035	1.4386	5679.99	6757.19	6757.19	15.78	No	Si
SLU 44	1.39	-68.86	-16942	-0.0000699	0.0003743	0.0035	1.4386	7152.23	9004.59	9004.59	130.76	No	Si
SLU 44	8.34	-391.68	-9111	-0.0000415	0.0003743	0.0035	1.4386	5097.7	6007.77	6007.77	15.34	No	Si
SLU 55	1.39	-201.07	-19409	-0.0000839	0.0003743	0.0035	1.4386	7353.86	9595.51	9595.51	47.72	No	Si
SLU 55	8.34	-426.55	-10404	-0.0000475	0.0003743	0.0035	1.4386	5585.24	6629.16	6629.16	15.54	No	Si
SLU 61	1.39	-247.65	-19986	-0.0000876	0.0003743	0.0035	1.4386	7370.21	9743.1	9743.1	39.34	No	Si
SLU 61	8.34	-423.7	-10496	-0.0000478	0.0003743	0.0035	1.4386	5617.62	6672.37	6672.37	15.75	No	Si
SLU 63	1.39	-255.21	-20317	-0.0000893	0.0003743	0.0035	1.4386	7374.32	9829.59	9829.59	38.52	No	Si
SLU 63	8.34	-431.76	-10798	-0.0000492	0.0003743	0.0035	1.4386	5722.06	6815.61	6815.61	15.79	No	Si
SLU 51	1.39	-84.69	-17597	-0.0000732	0.0003743	0.0035	1.4386	7226.57	9154.67	9154.67	108.09	No	Si
SLU 51	8.34	-401.51	-9684	-0.000044	0.0003743	0.0035	1.4386	5320.98	6291.8	6291.8	15.67	No	Si
SLU 47	1.39	-76.42	-17273	-0.0000716	0.0003743	0.0035	1.4386	7191.69	9079.79	9079.79	118.81	No	Si
SLU 47	8.34	-399.74	-9413	-0.0000429	0.0003743	0.0035	1.4386	5216.81	6158.29	6158.29	15.41	No	Si
SLU 52	1.39	-193.52	-19078	-0.0000822	0.0003743	0.0035	1.4386	7339.2	9512.69	9512.69	49.16	No	Si
SLU 52	8.34	-418.49	-10102	-0.0000461	0.0003743	0.0035	1.4386	5476.63	6488.06	6488.06	15.5	No	Si
SLU 46	1.39	-89.41	-17479	-0.0000727	0.0003743	0.0035	1.4386	7214.27	9127.21	9127.21	102.08	No	Si
SLU 46	8.34	-393.65	-9532	-0.0000433	0.0003743	0.0035	1.4386	5262.71	6216.98	6216.98	15.79	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	1.39	469.99	-13222	-0.0000584	0.0005615	0.0035	1.4386		8041.54	8041.54	17.11		Si
SLV 13	8.34	1254.56	-4837	-0.0000376	0.0005615	0.0035	1.4386		3381.34	3381.34	2.7		Si
SLV 3	1.39	-659.85	-16003	-0.0000732	0.0005615	0.0035	1.4386		9805.52	9805.52	14.86		Si
SLV 3	8.34	-1792.31	-10794	-0.0000702	0.0005615	0.0035	1.4386		7238.25	7238.25	4.04		Si
SLV 7	1.39	397.85	-16294	-0.00007	0.0005615	0.0035	1.4386		9415.57	9415.57	23.67		Si
SLV 7	8.34	-1458.6	-14751	-0.0000814	0.0005615	0.0035	1.4386		9231.28	9231.28	6.33		Si
SLV 9	1.39	-621.34	-13006	-0.00006	0.0005615	0.0035	1.4386		8388.51	8388.51	13.5		Si
SLV 9	8.34	893.92	-921	-0.0018618	0.0005615	0.0035	1.1509		769.13	769.13	0.86		No
SLV 1	1.39	-1107.59	-15194	-0.0000773	0.0005615	0.0035	1.4386		9435.54	9435.54	8.52		Si
SLV 1	8.34	-1318.09	-6824	-0.0000464	0.0005615	0.0035	1.4386		4985.66	4985.66	3.78		Si
SLV 4	1.39	-753.97	-16211	-0.0000757	0.0005615	0.0035	1.4386		9899.4	9899.4	13.13		Si
SLV 4	8.34	-1867.7	-10910	-0.0000719	0.0005615	0.0035	1.4386		7300.53	7300.53	3.91		Si
SLV 14	1.39	375.88	-13430	-0.0000577	0.0005615	0.0035	1.4386		8157.1	8157.1	21.7		Si
SLV 14	8.34	1179.17	-4952	-0.0000368	0.0005615	0.0035	1.4386		3454.83	3454.83	2.93		Si
SLV 8	1.39	337.36	-16428	-0.0000695	0.0005615	0.0035	1.4386		9471.23	9471.23	28.07		Si
SLV 8	8.34	-1507.05	-14825	-0.0000825	0.0005615	0.0035	1.4386		9265.75	9265.75	6.15		Si
SLV 2	1.39	-1201.7	-15402	-0.0000798	0.0005615	0.0035	1.4386		9530.12	9530.12	7.93		Si
SLV 2	8.34	-1393.49	-6940	-0.000048	0.0005615	0.0035	1.4386		5055.54	5055.54	3.63		Si
SLV 10	1.39	-681.82	-13139	-0.0000616	0.0005615	0.0035	1.4386		8455.18	8455.18	12.4		Si
SLV 10	8.34	845.46	-995	-0.0009913	0.0005615	0.0035	1.1509		821.06	821.06	0.97		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	1.39	-309.82	-21584	-17973	-3803	1.4386	1.4386	-44619	10833	4364	80882	12062	3668	15731	No	4.14	Si
SLU 74	8.34	-428.71	-11643	-9696	1932	1.4386	1.4386	-24069	10154	4090	80882	12062	3668	15731	No	8.14	Si
SLU 84	1.39	-349.9	-22297	-18567	-3977	1.4386	1.4386	-46094	10833	4364	80882	12062	3668	15731	No	3.96	Si
SLU 84	8.34	-449.43	-11965	-9963	1933	1.4386	1.4386	-24734	10242	4126	80882	12062	3668	15731	No	8.14	Si
SLU 80	1.39	-304.03	-21713	-18081	-3790	1.4386	1.4386	-44886	10833	4364	80882	12062	3668	15731	No	4.15	Si
SLU 80	8.34	-446	-11842	-9861	1989	1.4386	1.4386	-24481	10209	4112	80882	12062	3668	15731	No	7.91	Si
SLU 75	1.39	-308.75	-21595	-17982	-3786	1.4386	1.4386	-44641	10833	4364	80882	12062	3668	15731	No	4.16	Si
SLU 75	8.34	-438.14	-11690	-9734	1951	1.4386	1.4386	-24166	10167	4095	80882	12062	3668	15731	No	8.06	Si
SLU 79	1.39	-305.11	-21702	-18072	-3807	1.4386	1.4386	-44863	10833	4364	80882	12062	3668	15731	No	4.13	Si
SLU 79	8.34	-436.57	-11796	-9822	1969	1.4386	1.4386	-24385	10196	4107	80882	12062	3668	15731	No	7.99	Si
SLU 77	1.39	-317.38	-21915	-18249	-3864	1.4386	1.4386	-45304	10833	4364	80882	12062	3668	15731	No	4.07	Si
SLU 77	8.34	-436.77	-11945	-9947	1979	1.4386	1.4386	-24694	10237	4124	80882	12062	3668	15731	No	7.95	Si
SLU 78	1.39	-316.31	-21926	-18258	-3847	1.4386	1.4386	-45326	10833	4364	80882	12062	3668	15731	No	4.09	Si
SLU 78	8.34	-446.2	-11992	-9986	1999	1.4386	1.4386	-24790	10250	4129	80882	12062	3668	15731	No	7.87	Si
SLU 81	1.39	-343.41	-21955	-18283	-3932	1.4386	1.4386	-45387	10833	4364	80882	12062	3668	15731	No	4	Si
SLU 81	8.34	-431.93	-11617	-9673	1866	1.4386	1.4386	-24014	10146	4087	80882	12062	3668	15731	No	8.43	Si
SLU 82	1.39	-342.34	-21966	-18292	-3915	1.4386	1.4386	-45409	10833	4364	80882	12062	3668	15731	No	4.02	Si
SLU 82	8.34	-441.37	-11663	-9712	1886	1.4386	1.4386	-24110	10159	4092	80882	12062	3668	15731	No	8.34	Si
SLU 83	1.39	-350.97	-22286	-18558	-3994	1.4386	1.4386	-46071	10833	4364	80882	12062	3668	15731	No	3.94	Si
SLU 83	8.34	-440	-11919	-9925	1914	1.4386	1.4386	-24638	10230	4121	80882	12062	3668	15731	No	8.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 14	1.39	76.92	-14154	-11786	-5125	1.4386	1.4386	-29260	16250	6546	80882	18093	3668	21762		4.25	Si
SLD 14	8.34	331.45	-6597	-5493	-93	1.4386	1.4386	-13638	13144	5295	80882	18093	3668	21762		234.69	Si
SLV 14	1.39	375.88	-13430	-11183	-8709	1.4386	1.4386	-27763	15969	6433	80882	18093	3668	21762		2.5	Si
SLV 14	8.34	1179.17	-4952	-4124	-2144	1.4386	1.4386	-10238	12464	5021	80882	18093	3668	21762		10.15	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	1.39	-659.85	-16003	-13326	3832	1.4386	1.4386	-33083	16250	6546	80882	18093	3668	21762		5.68	Si
SLV 3	8.34	-1792.31	-10794	-8989	5020	1.4386	1.4386	-22314	14880	5994	80882	18093	3668	21762		4.33	Si
SLV 10	1.39	-681.82	-13139	-10941	-6794	1.4386	1.4386	-27162	15849	6384	80882	18093	3668	21762		3.2	Si
SLV 10	8.34	845.46	-995	-829	-58	1.1509	0	0	0	0	80882	14474	2935	17409		298.28	Si
SLD 13	1.39	117.33	-14065	-11712	-5249	1.4386	1.4386	-29076	16232	6538	80882	18093	3668	21762		4.15	Si
SLD 13	8.34	363.82	-6547	-5452	-200	1.4386	1.4386	-13535	13124	5286	80882	18093	3668	21762		108.69	Si
SLV 13	1.39	469.99	-13222	-11010	-8997	1.4386	1.4386	-27333	15883	6398	80882	18093	3668	21762		2.42	Si
SLV 13	8.34	1254.56	-4837	-4028	-2394	1.4386	1.3798	-9999	12416	4797	80882	18093	3668	21762		9.09	Si
SLV 4	1.39	-753.97	-16211	-13499	4120	1.4386	1.4386	-33512	16250	6546	80882	18093	3668	21762		5.28	Si
SLV 4	8.34	-1867.7	-10910	-9085	5271	1.4386	1.4386	-22553	14927	6013	80882	18093	3668	21762		4.13	Si
SLV 9	1.39	-621.34	-13006	-10830	-6979	1.4386	1.4386	-26886	15794	6362	80882	18093	3668	21762		3.12	Si
SLV 9	8.34	893.92	-921	-767	-219	1.1509	0	0	0	0	80882	14474	2935	17409		79.39	Si
SLV 16	1.39	823.61	-14239	-11857	-7045	1.4386	1.4386	-29436	16250	6546	80882	18093	3668	21762		3.09	Si
SLV 16	8.34	704.95	-8922	-7430	-1837	1.4386	1.4386	-18445	14106	5682	80882	18093	3668	21762		11.85	Si
SLV 15	1.39	917.73	-14031	-11684	-7334	1.4386	1.4386	-29006	16218	6533	80882	18093	3668	21762		2.97	Si
SLV 15	8.34	780.35	-8807	-7334	-2087	1.4386	1.4386	-18206	14058	5663	80882	18093	3668	21762		10.43	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.35	11453	-4613	529.25	597.44	1.13	Si
SLV 10	179667	0.35	11633	-4686	529.25	606.06	1.15	Si
SLV 5	179667	0.35	11788	-4749	529.25	613.48	1.16	Si
SLV 6	179667	0.35	11969	-4821	529.25	622.06	1.18	Si
SLV 13	179667	0.35	19951	-8036	529.25	978.11	1.85	Si
SLV 14	179667	0.35	20231	-8149	529.25	989.76	1.87	Si
SLV 1	179667	0.35	21069	-8487	529.25	1024.24	1.94	Si
SLV 2	179667	0.35	21349	-8600	529.25	1035.65	1.96	Si
SLV 15	179667	0.35	27613	-11123	529.25	1275.63	2.41	Si
SLV 16	179667	0.35	27893	-11236	529.25	1285.69	2.43	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-10910	-16211	-128	0.616	1510.7	0.929	9.63701	15.31518	No
SLV 3	-10794	-16003	-128	0.621	1499	0.929	9.72147	15.31518	No
SLV 16	-8922	-14239	85	0.723	1310.7	0.921	11.41582	15.31518	No
SLV 15	-8807	-14031	84	0.731	1299.1	0.92	11.53677	15.31518	No
SLV 2	-6940	-15402	-81	0.871	1112.4	0.911	13.89896	15.31518	No
SLV 1	-6824	-15194	-82	0.882	1100.9	0.91	14.07515	15.31518	No
SLV 14	-4952	-13430	132	1.091	916.1	0.899	17.62428	15.31518	Si
SLV 13	-4837	-13222	131	1.108	904.9	0.899	17.9113	15.31518	Si
SLV 8	-14825	-16428	-108	0.483	1906.6	0.942	7.45128	6.0451	Si
SLV 7	-14751	-16294	-108	0.485	1899	0.941	7.48305	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.339	SLU 44	Si
V_SLU	3.939	SLU 83	Si
PF_SLV	0.86	SLV 9	No
V_SLV	2.419	SLV 13	Si
PFFP_SLV	1.129	SLV 9	Si
R_SLV	0.629	SLV 4	No

Maschio 240

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.385	-13.778	-0.354	L4	Z medio 569 cm	3.031	0.28	4.301	5.173	3.43			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	1.39	153.25	-38802	-0.0000761	0.0003743	0.0035	3.0314	32404.24	40328.59	40328.59	263.16	No	Si
SLU 60	4.82	2402.24	-36072	-0.0000793	0.0003743	0.0035	3.0314	31851.54	38597.25	38597.25	16.07	No	Si
SLU 39	1.39	21.29	-35834	-0.000069	0.0003743	0.0035	3.0314	31791.07	38449.49	38449.49	1806.38	No	Si
SLU 39	4.82	2445.6	-33720	-0.0000743	0.0003743	0.0035	3.0314	31165.68	37155.18	37155.18	15.19	No	Si
SLU 81	1.39	83.53	-42510	-0.0000841	0.0003743	0.0035	3.0314	32736.14	42703.94	42703.94	511.22	No	Si
SLU 81	4.82	2689.26	-39719	-0.0000888	0.0003743	0.0035	3.0314	32531.26	40924.22	40924.22	15.22	No	Si
SLU 84	1.39	66.58	-43089	-0.0000854	0.0003743	0.0035	3.0314	32744.44	43038.26	43038.26	646.38	No	Si
SLU 84	4.82	2669.66	-40376	-0.0000902	0.0003743	0.0035	3.0314	32604.02	41354.68	41354.68	15.49	No	Si
SLU 41	1.39	-1.48	-36417	-0.0000702	0.0003743	0.0035	3.0314	31935.78	40691.16	40691.16	27416.99	No	Si
SLU 41	4.82	2448.95	-34368	-0.0000757	0.0003743	0.0035	3.0314	31374.02	37547.93	37547.93	15.33	No	Si
SLU 18	1.39	91	-32127	-0.0000614	0.0003743	0.0035	3.0314	30591.01	36204.66	36204.66	397.87	No	Si
SLU 18	4.82	2158.58	-30072	-0.0000653	0.0003743	0.0035	3.0314	29718.26	34739.04	34739.04	16.09	No	Si
SLU 42	1.39	4.33	-36414	-0.0000702	0.0003743	0.0035	3.0314	31935.03	38810.55	38810.55	8952.98	No	Si
SLU 42	4.82	2425.99	-34376	-0.0000757	0.0003743	0.0035	3.0314	31376.59	37552.97	37552.97	15.48	No	Si
SLU 40	1.39	27.1	-35831	-0.0000691	0.0003743	0.0035	3.0314	31790.26	38447.55	38447.55	1418.5	No	Si
SLU 40	4.82	2422.64	-33728	-0.0000742	0.0003743	0.0035	3.0314	31168.43	37160.18	37160.18	15.34	No	Si
SLU 82	1.39	89.35	-42506	-0.0000842	0.0003743	0.0035	3.0314	32736.06	42702.09	42702.09	477.91	No	Si
SLU 82	4.82	2666.31	-39728	-0.0000887	0.0003743	0.0035	3.0314	32532.27	40929.63	40929.63	15.35	No	Si
SLU 83	1.39	60.76	-43092	-0.0000854	0.0003743	0.0035	3.0314	32744.45	43040.04	43040.04	708.32	No	Si
SLU 83	4.82	2692.61	-40368	-0.0000903	0.0003743	0.0035	3.0314	32603.2	41349.23	41349.23	15.36	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	1.39	-672.36	-26305	-0.0000502	0.0005615	0.0035	3.0314		36332.4	36332.4	54.04		Si
SLV 5	4.82	5064.18	-24191	-0.0000623	0.0005615	0.0035	3.0314		31473.89	31473.89	6.21		Si
SLD 5	1.39	-234.12	-27649	-0.0000512	0.0005615	0.0035	3.0314		37747.31	37747.31	161.23		Si
SLD 5	4.82	3035.92	-25427	-0.0000572	0.0005615	0.0035	3.0314		32923.27	32923.27	10.84		Si
SLV 10	1.39	-658.37	-30519	-0.0000583	0.0005615	0.0035	3.0314		40678.14	40678.14	61.79		Si
SLV 10	4.82	5131.51	-25692	-0.0000655	0.0005615	0.0035	3.0314		33236.42	33236.42	6.48		Si
SLD 6	1.39	-217.1	-27597	-0.000051	0.0005615	0.0035	3.0314		37692.73	37692.73	173.62		Si
SLD 6	4.82	3037.1	-25420	-0.0000572	0.0005615	0.0035	3.0314		32915.06	32915.06	10.84		Si
SLV 2	1.39	-57.25	-21285	-0.0000385	0.0005615	0.0035	3.0314		30767.54	30767.54	537.38		Si
SLV 2	4.82	2421.9	-23415	-0.0000511	0.0005615	0.0035	3.0314		30569.54	30569.54	12.62		Si
SLD 10	1.39	-227.67	-29448	-0.0000546	0.0005615	0.0035	3.0314		39618.84	39618.84	174.02		Si
SLD 10	4.82	3064.5	-26066	-0.0000586	0.0005615	0.0035	3.0314		33677.96	33677.96	10.99		Si
SLV 6	1.39	-633.38	-26187	-0.0000498	0.0005615	0.0035	3.0314		36209.12	36209.12	57.17		Si
SLV 6	4.82	5066.89	-24175	-0.0000623	0.0005615	0.0035	3.0314		31455.23	31455.23	6.21		Si
SLD 9	1.39	-244.68	-29499	-0.0000548	0.0005615	0.0035	3.0314		39669.54	39669.54	162.13		Si
SLD 9	4.82	3063.32	-26073	-0.0000586	0.0005615	0.0035	3.0314		33686.21	33686.21	11		Si
SLV 1	1.39	-117.91	-21468	-0.000039	0.0005615	0.0035	3.0314		30982.51	30982.51	262.77		Si
SLV 1	4.82	2417.68	-23440	-0.0000511	0.0005615	0.0035	3.0314		30598.45	30598.45	12.66		Si
SLV 9	1.39	-697.35	-30637	-0.0000587	0.0005615	0.0035	3.0314		40795.39	40795.39	58.5		Si
SLV 9	4.82	5128.8	-25708	-0.0000655	0.0005615	0.0035	3.0314		33255.27	33255.27	6.48		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	1.39	134.43	-34697	-28893	3562	3.0314	3.0314	-34040	10833	9195	49956	25416	7730	33146	No	9.3	Si
SLU 49	4.82	1406.55	-31912	-26573	4876	3.0314	3.0314	-31308	10833	9195	49956	25416	7730	33146	No	6.8	Si
SLU 50	1.39	144.53	-34329	-28586	3546	3.0314	3.0314	-33679	10833	9195	49956	25416	7730	33146	No	9.35	Si
SLU 50	4.82	1390.6	-31464	-26201	4857	3.0314	3.0314	-30869	10833	9195	49956	25416	7730	33146	No	6.82	Si
SLU 46	1.39	157.2	-34115	-28408	3524	3.0314	3.0314	-33469	10833	9195	49956	25416	7730	33146	No	9.41	Si
SLU 46	4.82	1403.2	-31264	-26034	4808	3.0314	3.0314	-30672	10833	9195	49956	25416	7730	33146	No	6.89	Si
SLU 51	1.39	150.35	-34325	-28583	3604	3.0314	3.0314	-33676	10833	9195	49956	25416	7730	33146	No	9.2	Si
SLU 51	4.82	1367.64	-31473	-26208	4908	3.0314	3.0314	-30877	10833	9195	49956	25416	7730	33146	No	6.75	Si
SLU 70	1.39	64.72	-38405	-31980	3348	3.0314	3.0314	-37677	10833	9195	49956	25416	7730	33146	No	9.9	Si
SLU 70	4.82	1693.57	-35559	-29611	4799	3.0314	3.0314	-34886	10833	9195	49956	25416	7730	33146	No	6.91	Si
SLU 47	1.39	177	-33741	-28097	3603	3.0314	3.0314	-33102	10833	9195	49956	25416	7730	33146	No	9.2	Si
SLU 47	4.82	1348.99	-30830	-25673	4875	3.0314	3.0314	-30246	10833	9195	49956	25416	7730	33146	No	6.8	Si
SLU 72	1.39	80.64	-38033	-31671	3389	3.0314	3.0314	-37313	10833	9195	49956	25416	7730	33146	No	9.78	Si
SLU 72	4.82	1654.67	-35120	-29245	4831	3.0314	3.0314	-34455	10833	9195	49956	25416	7730	33146	No	6.86	Si
SLU 44	1.39	199.77	-33158	-27611	3565	3.0314	3.0314	-32531	10833	9195	49956	25416	7730	33146	No	9.3	Si
SLU 44	4.82	1345.64	-30182	-25133	4807	3.0314	3.0314	-29610	10833	9195	49956	25416	7730	33146	No	6.89	Si
SLU 68	1.39	107.29	-37448	-31184	3389	3.0314	3.0314	-36739	10833	9195	49956	25416	7730	33146	No	9.78	Si
SLU 68	4.82	1636.01	-34478	-28710	4798	3.0314	3.0314	-33825	10833	9195	49956	25416	7730	33146	No	6.91	Si
SLU 48	1.39	128.61	-34700	-28895	3505	3.0314	3.0314	-34043	10833	9195	49956	25416	7730	33146	No	9.46	Si
SLU 48	4.82	1429.51	-31904	-26567	4824	3.0314	3.0314	-31300	10833	9195	49956	25416	7730	33146	No	6.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	1.39	859.45	-26832	-22343	12877	3.0314	3.0314	-26324	15681	13310	49956	38125	7730	45855		3.56	Si
SLV 7	4.82	-2279.69	-27090	-22558	10597	3.0314	3.0314	-26577	15732	13353	49956	38125	7730	45855		4.33	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	1.39	-658.37	-30519	-25414	-7935	3.0314	3.0314	-29941	16250	13793	49956	38125	7730	45855		5.78	Si
SLV 10	4.82	5131.51	-25692	-21394	-3527	3.0314	3.0314	-25206	15458	13120	49956	38125	7730	45855		13	Si
SLV 8	1.39	898.43	-26714	-22245	12845	3.0314	3.0314	-26208	15658	13290	49956	38125	7730	45855		3.57	Si
SLV 8	4.82	-2276.98	-27074	-22545	10544	3.0314	3.0314	-26562	15729	13350	49956	38125	7730	45855		4.35	Si
SLV 6	1.39	-633.38	-26187	-21806	-7806	3.0314	3.0314	-25691	15555	13203	49956	38125	7730	45855		5.87	Si
SLV 6	4.82	5066.89	-24175	-20131	-3782	3.0314	3.0314	-23717	15160	12868	49956	38125	7730	45855		12.13	Si
SLV 5	1.39	-672.36	-26305	-21904	-7773	3.0314	3.0314	-25807	15578	13222	49956	38125	7730	45855		5.9	Si
SLV 5	4.82	5064.18	-24191	-20144	-3729	3.0314	3.0314	-23733	15163	12870	49956	38125	7730	45855		12.3	Si
SLV 12	1.39	873.44	-31046	-25852	12715	3.0314	3.0314	-30458	16250	13793	49956	38125	7730	45855		3.61	Si
SLV 12	4.82	-2212.36	-28591	-23808	10798	3.0314	3.0314	-28050	16027	13603	49956	38125	7730	45855		4.25	Si
SLD 7	1.39	428.75	-27903	-23235	7063	3.0314	3.0314	-27374	15892	13488	49956	38125	7730	45855		6.49	Si
SLD 7	4.82	-212.68	-26716	-22247	6644	3.0314	3.0314	-26210	15659	13291	49956	38125	7730	45855		6.9	Si
SLV 9	1.39	-697.35	-30637	-25512	-7902	3.0314	3.0314	-30057	16250	13793	49956	38125	7730	45855		5.8	Si
SLV 9	4.82	5128.8	-25708	-21408	-3474	3.0314	3.0314	-25221	15461	13123	49956	38125	7730	45855		13.2	Si
SLV 11	1.39	834.46	-31164	-25950	12748	3.0314	3.0314	-30574	16250	13793	49956	38125	7730	45855		3.6	Si
SLV 11	4.82	-2215.07	-28607	-23822	10851	3.0314	3.0314	-28066	16030	13606	49956	38125	7730	45855		4.23	Si
SLD 8	1.39	445.77	-27851	-23192	7049	3.0314	3.0314	-27324	15881	13480	49956	38125	7730	45855		6.51	Si
SLD 8	4.82	-211.49	-26709	-22241	6621	3.0314	3.0314	-26204	15657	13290	49956	38125	7730	45855		6.93	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.105 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.31	29098	-24698	381.7	2798.88	7.33	Si
SLV 1	179667	0.31	29133	-24728	381.7	2801.46	7.34	Si
SLV 4	179667	0.31	29621	-25142	381.7	2837.12	7.43	Si
SLV 3	179667	0.31	29656	-25171	381.7	2839.67	7.44	Si
SLV 6	179667	0.31	31250	-26525	381.7	2953.59	7.74	Si
SLV 5	179667	0.31	31273	-26544	381.7	2955.17	7.74	Si
SLV 8	179667	0.31	32993	-28004	381.7	3073.56	8.05	Si
SLV 7	179667	0.31	33016	-28023	381.7	3075.08	8.06	Si
SLV 10	179667	0.31	33613	-28530	381.7	3115.09	8.16	Si
SLV 9	179667	0.31	33636	-28549	381.7	3116.59	8.17	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.105 Wa = 0.05 Ta = 0.1103

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-28607	-31164	284	0.561	3427.7	0.956	8.52815	14.10995	No
SLV 12	-28591	-31046	284	0.561	3426	0.956	8.5323	14.10995	No
SLV 7	-27090	-26832	-55	0.595	3273.5	0.954	9.06158	14.10995	No
SLV 8	-27074	-26714	-55	0.595	3271.9	0.954	9.06632	14.10995	No
SLV 9	-25708	-30637	39	0.622	3133.1	0.952	9.49621	14.10995	No
SLV 10	-25692	-30519	39	0.622	3131.5	0.952	9.50134	14.10995	No
SLV 5	-24191	-26305	-299	0.645	2979	0.95	9.87107	14.10995	No
SLV 6	-24175	-26187	-299	0.646	2977.4	0.95	9.87682	14.10995	No
SLV 15	-29367	-36066	593	0.539	3504.9	0.957	8.18965	8.26464	No
SLV 16	-29342	-35883	593	0.539	3502.4	0.957	8.19569	8.26464	No

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.193	SLU 39	Si
V_SLU	6.753	SLU 51	Si
PF_SLV	6.208	SLV 6	Si
V_SLV	3.561	SLV 7	Si
PFFP_SLV	7.333	SLV 2	Si
R_SLV	0.604	SLV 11	No

Maschio 241

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-0.354	-13.778	1.006	L5	L8	1.36	0.28	10.2	10.2	10.2			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	4.82	337.04	-18759	-0.0000893	0.0003743	0.0035	1.36	6584.03	13024.37	13024.37	38.64	No	Si
SLU 82	15.02	548.27	-583	-0.0000434	0.0003743	0.0035	1.36	0	7858.49	7858.49	14.33	No	Si
SLU 78	4.82	269.12	-18941	-0.0000888	0.0003743	0.0035	1.36	6587.45	13016.2	13016.2	48.37	No	Si
SLU 78	15.02	580.55	-723	-0.0000393	0.0003743	0.0035	1.36	0	7983.71	7983.71	13.75	No	Si
SLU 81	4.82	336.68	-18776	-0.0000894	0.0003743	0.0035	1.36	6584.39	13025.68	13025.68	38.69	No	Si
SLU 81	15.02	539.48	-584	-0.000042	0.0003743	0.0035	1.36	0	7858.84	7858.84	14.57	No	Si
SLU 66	4.82	90.84	-17135	-0.000076	0.0003743	0.0035	1.36	6502.1	12874.96	12874.96	141.72	No	Si
SLU 66	15.02	550.31	-705	-0.000036	0.0003743	0.0035	1.36	0	7968.37	7968.37	14.48	No	Si
SLU 67	4.82	91.2	-17118	-0.0000759	0.0003743	0.0035	1.36	6500.78	12873.18	12873.18	141.15	No	Si
SLU 67	15.02	559.1	-705	-0.0000373	0.0003743	0.0035	1.36	0	7968.03	7968.03	14.25	No	Si
SLU 77	4.82	268.76	-18958	-0.0000889	0.0003743	0.0035	1.36	6587.7	13014.22	13014.22	48.42	No	Si
SLU 77	15.02	571.76	-723	-0.000038	0.0003743	0.0035	1.36	0	7984.05	7984.05	13.96	No	Si
SLU 75	4.82	263.91	-18639	-0.0000872	0.0003743	0.0035	1.36	6581.13	13014.77	13014.77	49.31	No	Si
SLU 75	15.02	599.61	-694	-0.0000439	0.0003743	0.0035	1.36	0	7957.98	7957.98	13.27	No	Si
SLU 74	4.82	263.56	-18655	-0.0000872	0.0003743	0.0035	1.36	6581.56	13016.11	13016.11	49.39	No	Si
SLU 74	15.02	590.82	-694	-0.0000425	0.0003743	0.0035	1.36	0	7958.33	7958.33	13.47	No	Si
SLU 73	4.82	263.26	-18096	-0.0000844	0.0003743	0.0035	1.36	6561.77	12969.13	12969.13	49.26	No	Si
SLU 73	15.02	536.77	-588	-0.0000413	0.0003743	0.0035	1.36	0	7862.61	7862.61	14.65	No	Si
SLU 33	4.82	214.78	-15640	-0.0000712	0.0003743	0.0035	1.36	6344.92	12696.68	12696.68	59.12	No	Si
SLU 33	15.02	532.25	-587	-0.0000407	0.0003743	0.0035	1.36	0	7861.39	7861.39	14.77	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 12	4.82	-39.1	-11584	-0.0000475	0.0005615	0.0035	1.36		13461.26	13461.26	344.29		Si
SLD 12	15.02	898.36	-511	-0.0001057	0.0005615	0.0035	1.36		8109.43	8109.43	9.03		Si
SLV 8	4.82	64.35	-10185	-0.0000421	0.0005615	0.0035	1.36		13012.15	13012.15	202.21		Si
SLV 8	15.02	1399.81	-430	-0.0002119	0.0005615	0.0035	1.36		7998.55	7998.55	5.71		Si
SLV 16	4.82	-480.36	-11686	-0.000056	0.0005615	0.0035	1.36		13492.4	13492.4	28.09		Si
SLV 16	15.02	1009.1	-746	-0.0001044	0.0005615	0.0035	1.36		8395.01	8395.01	8.32		Si
SLV 15	4.82	-473.23	-11722	-0.0000561	0.0005615	0.0035	1.36		13503.37	13503.37	28.53		Si
SLV 15	15.02	981.3	-742	-0.0001001	0.0005615	0.0035	1.36		8391.22	8391.22	8.55		Si
SLV 6	4.82	517.37	-15652	-0.0000741	0.0005615	0.0035	1.36		14569.88	14569.88	28.16		Si
SLV 6	15.02	-835.19	-294	-0.000118	0.0005615	0.0035	1.36		7821.05	7821.05	9.36		Si
SLV 12	4.82	-259.65	-9997	-0.0000448	0.0005615	0.0035	1.36		12961.37	12961.37	49.92		Si
SLV 12	15.02	1578.23	-597	-0.0002242	0.0005615	0.0035	1.36		8226.32	8226.32	5.21		Si
SLV 5	4.82	521.95	-15675	-0.0000743	0.0005615	0.0035	1.36		14575.13	14575.13	27.92		Si
SLV 5	15.02	-853.06	-291	-0.0001218	0.0005615	0.0035	1.36		7817.54	7817.54	9.16		Si
SLD 11	4.82	-37.1	-11594	-0.0000475	0.0005615	0.0035	1.36		13464.35	13464.35	362.93		Si
SLD 11	15.02	890.56	-510	-0.0001044	0.0005615	0.0035	1.36		8107.93	8107.93	9.1		Si
SLV 11	4.82	-255.07	-10020	-0.0000448	0.0005615	0.0035	1.36		12968.85	12968.85	50.84		Si
SLV 11	15.02	1560.36	-595	-0.0002209	0.0005615	0.0035	1.36		8222.9	8222.9	5.27		Si
SLV 7	4.82	68.93	-10208	-0.0000422	0.0005615	0.0035	1.36		13019.59	13019.59	188.88		Si
SLV 7	15.02	1381.94	-427	-0.0002086	0.0005615	0.0035	1.36		7995.08	7995.08	5.79		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	4.82	263.91	-18639	-15521	527	1.36	1.36	-40758	10833	4125	10784	11403	3468	14871	No	28.21	Si
SLU 75	15.02	599.61	-694	-578	-2248	1.36	0	-7818	8303	0	10784	11403	3468	10784	No	4.8	Si
SLU 33	4.82	214.78	-15640	-13024	273	1.36	1.36	-34201	10833	4125	10784	11403	3468	14871	No	54.55	Si
SLU 33	15.02	532.25	-587	-488	-2054	1.36	0	-6947	8191	0	10784	11403	3468	10784	No	5.25	Si
SLU 73	4.82	263.26	-18096	-15069	523	1.36	1.36	-39572	10833	4125	10784	11403	3468	14871	No	28.42	Si
SLU 73	15.02	536.77	-588	-490	-2051	1.36	0	-7004	8207	0	10784	11403	3468	10784	No	5.26	Si
SLU 82	4.82	337.04	-18759	-15621	538	1.36	1.36	-41021	10833	4125	10784	11403	3468	14871	No	27.64	Si
SLU 82	15.02	548.27	-583	-486	-2122	1.36	0	-7141	8258	0	10784	11403	3468	10784	No	5.08	Si
SLU 78	4.82	269.12	-18941	-15773	560	1.36	1.36	-41419	10833	4125	10784	11403	3468	14871	No	26.54	Si
SLU 78	15.02	580.55	-723	-602	-2159	1.36	0	-7522	8192	0	10784	11403	3468	10784	No	5	Si
SLU 74	4.82	263.56	-18655	-15534	516	1.36	1.36	-40794	10833	4125	10784	11403	3468	14871	No	28.83	Si
SLU 74	15.02	590.82	-694	-578	-2203	1.36	0	-7699	8269	0	10784	11403	3468	10784	No	4.9	Si
SLU 84	4.82	342.25	-19062	-15873	571	1.36	1.36	-41683	10833	4125	10784	11403	3468	14871	No	26.04	Si
SLU 84	15.02	529.21	-612	-510	-2032	1.36	0	-6907	8145	0	10784	11403	3468	10784	No	5.31	Si
SLU 77	4.82	268.76	-18958	-15786	549	1.36	1.36	-41456	10833	4125	10784	11403	3468	14871	No	27.09	Si
SLU 77	15.02	571.76	-723	-602	-2113	1.36	0	-7390	8158	0	10784	11403	3468	10784	No	5.1	Si
SLU 67	4.82	91.2	-17118	-14255	475	1.36	1.36	-37433	10833	4125	10784	11403	3468	14871	No	31.29	Si
SLU 67	15.02	559.1	-705	-587	-2013	1.36	0	-7231	8134	0	10784	11403	3468	10784	No	5.36	Si
SLU 81	4.82	336.68	-18776	-15635	527	1.36	1.36	-41057	10833	4125	10784	11403	3468	14871	No	28.24	Si
SLU 81	15.02	539.48	-584	-486	-2077	1.36	0	-7035	8223	0	10784	11403	3468	10784	No	5.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	4.82	193.38	-15465	-12878	-841	1.36	1.36	-33817	16250	6188	10784	17104	3468	16972		20.19	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	15.02	-656.77	-462	-384	4248	1.36	0	-7778	13354	0	10784	17104	3468	10784		2.54	Si
SLV 9	4.82	197.96	-15488	-12897	-827	1.36	1.36	-33867	16250	6188	10784	17104	3468	16972		20.53	Si
SLV 9	15.02	-674.64	-459	-382	4339	1.36	0	-7901	13480	0	10784	17104	3468	10784		2.49	Si
SLV 7	4.82	68.93	-10208	-8500	1700	1.36	1.36	-22322	14881	5667	10784	17104	3468	16451		9.68	Si
SLV 7	15.02	1381.94	-427	-356	-6876	1.36	0	0	16250	0	10784	17104	3468	10784		1.57	Si
SLV 12	4.82	-259.65	-9997	-8325	1945	1.36	1.36	-21862	14789	5632	10784	17104	3468	16416		8.44	Si
SLV 12	15.02	1578.23	-597	-497	-7338	1.36	0	0	16250	0	10784	17104	3468	10784		1.47	Si
SLV 11	4.82	-255.07	-10020	-8344	1959	1.36	1.36	-21912	14799	5636	10784	17104	3468	16420		8.38	Si
SLV 11	15.02	1560.36	-595	-495	-7247	1.36	0	0	16250	0	10784	17104	3468	10784		1.49	Si
SLV 5	4.82	521.95	-15675	-13053	-1086	1.36	1.36	-34277	16250	6188	10784	17104	3468	16972		15.63	Si
SLV 5	15.02	-853.06	-291	-243	4711	1.36	0	0	16250	0	10784	17104	3468	10784		2.29	Si
SLD 12	4.82	-39.1	-11584	-9646	1092	1.36	1.36	-25331	15483	5896	10784	17104	3468	16680		15.27	Si
SLD 12	15.02	898.36	-511	-425	-3972	1.36	0	-9866	14861	0	10784	17104	3468	10784		2.71	Si
SLV 8	4.82	64.35	-10185	-8481	1686	1.36	1.36	-22271	14871	5663	10784	17104	3468	16447		9.76	Si
SLV 8	15.02	1399.81	-430	-358	-6967	1.36	0	0	16250	0	10784	17104	3468	10784		1.55	Si
SLV 6	4.82	517.37	-15652	-13034	-1100	1.36	1.36	-34227	16250	6188	10784	17104	3468	16972		15.43	Si
SLV 6	15.02	-835.19	-294	-245	4620	1.36	0	0	16250	0	10784	17104	3468	10784		2.33	Si
SLD 11	4.82	-37.1	-11594	-9655	1098	1.36	1.36	-25353	15487	5898	10784	17104	3468	16682		15.19	Si
SLD 11	15.02	890.56	-510	-424	-3933	1.36	0	-9803	14809	0	10784	17104	3468	10784		2.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.92 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.45	0	-4754	1407.2	0	0	No, e>t/2
SLV 12	179667	0.45	0	-3689	1407.2	0	0	No, e>t/2
SLV 1	179667	0.45	0	-7122	1407.2	0	0	No, e>t/2
SLV 4	179667	0.45	0	-4766	1407.2	0	0	No, e>t/2
SLV 7	179667	0.45	0	-2903	1407.2	0	0	No, e>t/2
SLV 13	179667	0.45	0	-9719	1407.2	0	0	No, e>t/2
SLV 14	179667	0.45	0	-9730	1407.2	0	0	No, e>t/2
SLV 11	179667	0.45	0	-3682	1407.2	0	0	No, e>t/2
SLV 8	179667	0.45	0	-2910	1407.2	0	0	No, e>t/2
SLV 2	179667	0.45	0	-7134	1407.2	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 9.92 Wa = 0.05 Ta = 0.6205

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-746	-11686	29	1.819	735.4	0.932	28.35375	4.72654	Si
SLV 15	-742	-11722	29	1.821	735.2	0.933	28.37328	4.72654	Si
SLV 14	-705	-13326	-2	1.843	733.4	0.935	28.65575	4.72654	Si
SLV 13	-701	-13362	-2	1.845	733.2	0.935	28.67552	4.72654	Si
SLV 4	-187	-12310	-1	2.101	714.5	0.976	31.26558	4.72654	Si
SLV 3	-183	-12346	-1	2.103	714.5	0.977	31.28492	4.72654	Si
SLV 2	-146	-13951	-32	2.115	713.8	0.981	31.33706	4.72654	Si
SLV 1	-143	-13987	-32	2.118	713.8	0.982	31.35609	4.72654	Si
SLV 12	-597	-9997	55	1.878	728.2	0.941	29.00175	2.39674	Si
SLV 11	-595	-10020	55	1.88	728.1	0.942	29.01442	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.272	SLU 75	Si
V_SLU	4.798	SLU 75	Si
PF_SLV	5.212	SLV 12	Si
V_SLV	1.47	SLV 12	Si
PFFP_SLV	0	SLV 1	No
R_SLV	5.999	SLV 16	Si

Maschio 243

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.638	-4.824	-13.143	-4.824	L3	F1	0.495	0.3	13.848	13.848	13.848			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	0.4	-220.8	-7073	-0.0001128	0.0003743	0.0035	0.495	931.54	1194.3	1194.3	5.41	No	Si
SLU 82	2.9	53.46	-6912	-0.0000852	0.0003743	0.0035	0.495	928.55	1162.9	1162.9	21.75	No	Si
SLU 80	0.4	-212.37	-7020	-0.0001107	0.0003743	0.0035	0.495	930.65	1190.86	1190.86	5.61	No	Si
SLU 80	2.9	52.08	-6858	-0.0000843	0.0003743	0.0035	0.495	927.36	1156.98	1156.98	22.21	No	Si
SLU 75	0.4	-212.06	-6980	-0.0001101	0.0003743	0.0035	0.495	929.92	1187.2	1187.2	5.6	No	Si
SLU 75	2.9	51.67	-6811	-0.0000836	0.0003743	0.0035	0.495	926.24	1151.88	1151.88	22.29	No	Si
SLU 83	0.4	-223.07	-7183	-0.0001147	0.0003743	0.0035	0.495	933.1	1201.09	1201.09	5.38	No	Si
SLU 83	2.9	52.51	-7010	-0.0000864	0.0003743	0.0035	0.495	930.47	1173.62	1173.62	22.35	No	Si
SLU 42	0.4	-194.57	-6085	-0.0000952	0.0003743	0.0035	0.495	899.82	1088.96	1088.96	5.6	No	Si
SLU 42	2.9	45.13	-5965	-0.0000719	0.0003743	0.0035	0.495	893.78	1061.78	1061.78	23.53	No	Si
SLU 78	0.4	-215.24	-7089	-0.0001122	0.0003743	0.0035	0.495	931.79	1195.29	1195.29	5.55	No	Si
SLU 78	2.9	52.44	-6927	-0.0000853	0.0003743	0.0035	0.495	928.88	1164.58	1164.58	22.21	No	Si
SLU 84	0.4	-223.98	-7182	-0.0001149	0.0003743	0.0035	0.495	933.08	1201	1201	5.36	No	Si
SLU 84	2.9	54.23	-7029	-0.0000869	0.0003743	0.0035	0.495	930.8	1175.68	1175.68	21.68	No	Si
SLU 63	0.4	-203.84	-6521	-0.0001025	0.0003743	0.0035	0.495	917.76	1138.18	1138.18	5.58	No	Si
SLU 63	2.9	53.05	-6411	-0.0000787	0.0003743	0.0035	0.495	913.84	1109.17	1109.17	20.91	No	Si
SLU 81	0.4	-219.89	-7074	-0.0001127	0.0003743	0.0035	0.495	931.56	1194.38	1194.38	5.43	No	Si
SLU 81	2.9	51.74	-6893	-0.0000847	0.0003743	0.0035	0.495	928.15	1160.85	1160.85	22.44	No	Si
SLU 77	0.4	-214.33	-7091	-0.0001121	0.0003743	0.0035	0.495	931.82	1195.38	1195.38	5.58	No	Si
SLU 77	2.9	50.72	-6909	-0.0000848	0.0003743	0.0035	0.495	928.48	1162.53	1162.53	22.92	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	0.4	351.16	-9758	-0.0001602	0.0005615	0.0035	0.495		1657.64	1657.64	4.72		Si
SLV 16	2.9	-1703.1	3147	2.5589504	0.0005615	0.0035	0.396		0	0	0		No
SLV 2	0.4	-672.93	449	0.3411658	0.0005615	0.0035	0.396		0	0	0		No
SLV 2	2.9	1887.32	-13036	-0.0033304	0.0005615	0.0035	0.495		1885.27	1885.27	1		No
SLV 4	0.4	-592.39	-53	-0.0166069	0.0005615	0.0035	0.396		44.17	44.17	0.07		No
SLV 4	2.9	1978.17	-15011	-0.0044779	0.0005615	0.0035	0.495		1936.74	1936.74	0.98		No
SLD 13	0.4	57.33	-6802	-0.0000804	0.0005615	0.0035	0.495		1309.85	1309.85	22.85		Si
SLD 13	2.9	-797.57	-167	-0.0216426	0.0005615	0.0035	0.396		71.78	71.78	0.09		No
SLV 10	0.4	-144.93	-5319	-0.000075	0.0005615	0.0035	0.495		1115.59	1115.59	7.7		Si
SLV 10	2.9	-632.26	1188	0.9652583	0.0005615	0.0035	0.396		0	0	0		No
SLV 14	0.4	270.62	-9256	-0.0001413	0.0005615	0.0035	0.495		1602.96	1602.96	5.92		Si
SLV 14	2.9	-1793.95	5122	4.1277571	0.0005615	0.0035	0.396		0	0	0		No
SLV 1	0.4	-624.48	193	-0.0015014	0.0005615	0.0035	0.396		0	0	0		No
SLV 1	2.9	1771.09	-12389	-0.0010936	0.0005615	0.0035	0.495		1847.56	1847.56	1.04		Si
SLV 15	0.4	399.61	-10014	-0.0001712	0.0005615	0.0035	0.495		1685.8	1685.8	4.22		Si
SLV 15	2.9	-1819.33	3794	3.0757883	0.0005615	0.0035	0.396		0	0	0		No
SLV 9	0.4	-113.79	-5483	-0.0000727	0.0005615	0.0035	0.495		1138.55	1138.55	10.01		Si
SLV 9	2.9	-706.96	1603	1.2974296	0.0005615	0.0035	0.396		0	0	0		No
SLV 13	0.4	319.07	-9512	-0.000152	0.0005615	0.0035	0.495		1630.75	1630.75	5.11		Si
SLV 13	2.9	-1910.18	5769	4.6446251	0.0005615	0.0035	0.396		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	0.4	-214.33	-7091	-5971	43	0.495	0.495	-40210	10833	1609	161764	4447	1262	5709	No	132.02	Si
SLU 77	2.9	50.72	-6909	-5818	-455	0.495	0.495	-39179	10833	1609	161764	4447	1262	5709	No	12.54	Si
SLU 82	0.4	-220.8	-7073	-5956	31	0.495	0.495	-40110	10833	1609	161764	4447	1262	5709	No	182.27	Si
SLU 82	2.9	53.46	-6912	-5821	-459	0.495	0.495	-39198	10833	1609	161764	4447	1262	5709	No	12.43	Si
SLU 79	0.4	-211.46	-7021	-5913	45	0.495	0.495	-39818	10833	1609	161764	4447	1262	5709	No	128.27	Si
SLU 79	2.9	50.36	-6839	-5759	-453	0.495	0.495	-38783	10833	1609	161764	4447	1262	5709	No	12.62	Si
SLU 80	0.4	-212.37	-7020	-5912	43	0.495	0.495	-39810	10833	1609	161764	4447	1262	5709	No	131.33	Si
SLU 80	2.9	52.08	-6858	-5775	-459	0.495	0.495	-38890	10833	1609	161764	4447	1262	5709	No	12.45	Si
SLU 78	0.4	-215.24	-7089	-5970	42	0.495	0.495	-40202	10833	1609	161764	4447	1262	5709	No	135.26	Si
SLU 78	2.9	52.44	-6927	-5834	-461	0.495	0.495	-39285	10833	1609	161764	4447	1262	5709	No	12.37	Si
SLU 75	0.4	-212.06	-6980	-5878	41	0.495	0.495	-39584	10833	1609	161764	4447	1262	5709	No	138.07	Si
SLU 75	2.9	51.67	-6811	-5735	-455	0.495	0.495	-38623	10833	1609	161764	4447	1262	5709	No	12.56	Si
SLU 81	0.4	-219.89	-7074	-5957	32	0.495	0.495	-40118	10833	1609	161764	4447	1262	5709	No	176.44	Si
SLU 81	2.9	51.74	-6893	-5805	-453	0.495	0.495	-39091	10833	1609	161764	4447	1262	5709	No	12.6	Si
SLU 84	0.4	-223.98	-7182	-6048	32	0.495	0.495	-40728	10833	1609	161764	4447	1262	5709	No	177.4	Si
SLU 84	2.9	54.23	-7029	-5919	-466	0.495	0.495	-39859	10833	1609	161764	4447	1262	5709	No	12.25	Si
SLU 83	0.4	-223.07	-7183	-6049	33	0.495	0.495	-40736	10833	1609	161764	4447	1262	5709	No	171.87	Si
SLU 83	2.9	52.51	-7010	-5903	-460	0.495	0.495	-39753	10833	1609	161764	4447	1262	5709	No	12.41	Si
SLU 76	0.4	-209.8	-6910	-5819	42	0.495	0.495	-39187	10833	1609	161764	4447	1262	5709	No	136.18	Si
SLU 76	2.9	52.46	-6754	-5687	-456	0.495	0.495	-38299	10833	1609	161764	4447	1262	5709	No	12.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	0.4	-543.94	-309	-261	-78	0.396	0	0	0	0	161764	5336	1010	6346		81.19	Si
SLV 3	2.9	1861.94	-14364	-12096	-4917	0.495	0.3536	-81461	16250	1724	161764	6670	1262	7932		1.61	Si
SLV 4	0.4	-592.39	-53	-45	-115	0.396	0	0	0	0	161764	5336	1010	6346		55.2	Si
SLV 4	2.9	1978.17	-15011	-12641	-5240	0.495	0.3471	-85128	16250	1692	161764	6670	1262	7932		1.51	Si
SLV 2	0.4	-672.93	449	378	64	0.396	0	0	0	0	161764	5336	1010	6346		99.59	Si
SLV 2	2.9	1887.32	-13036	-10977	-5709	0.495	0.3081	-73925	16250	1502	161764	6670	1262	7932		1.39	Si
SLD 2	0.4	-366.1	-2545	-2143	54	0.396	0.311	0	0	0	161764	5336	1010	6346		117.96	Si
SLD 2	2.9	826.3	-8208	-6912	-2624	0.495	0.4405	-46547	16250	2147	161764	6670	1262	7932		3.02	Si
SLV 13	0.4	319.07	-9512	-8010	203	0.495	0.495	-53941	16250	2413	161764	6670	1262	7932		39.13	Si
SLV 13	2.9	-1910.18	5769	4858	4606	0.396	0	0	0	0	161764	5336	1010	6346		1.38	Si
SLV 15	0.4	399.61	-10014	-8433	24	0.495	0.495	-56789	16250	2413	161764	6670	1262	7932		330.2	Si
SLV 15	2.9	-1819.33	3794	3195	5075	0.396	0	0	0	0	161764	5336	1010	6346		1.25	Si
SLV 6	0.4	-427.99	-2407	-2027	315	0.396	0.2091	0	0	0	161764	5336	1010	6346		20.18	Si
SLV 6	2.9	472.12	-4260	-3587	-2702	0.495	0.41	-24158	15248	1875	161764	6670	1262	7932		2.94	Si
SLV 16	0.4	351.16	-9758	-8217	-13	0.495	0.495	-55336	16250	2413	161764	6670	1262	7932		620.53	Si
SLV 16	2.9	-1703.1	3147	2650	4752	0.396	0	0	0	0	161764	5336	1010	6346		1.34	Si
SLV 1	0.4	-624.48	193	162	101	0.396	0	0	0	0	161764	5336	1010	6346		63.13	Si
SLV 1	2.9	1771.09	-12389	-10433	-5386	0.495	0.3136	-70257	16250	1529	161764	6670	1262	7932		1.47	Si
SLV 14	0.4	270.62	-9256	-7794	166	0.495	0.495	-52488	16250	2413	161764	6670	1262	7932		47.81	Si
SLV 14	2.9	-1793.95	5122	4314	4283	0.396	0	0	0	0	161764	5336	1010	6346		1.48	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.324 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.4	0	-5748	868.27	0	0	No, e>t/2
SLV 15	179667	0.4	0	-3505	868.27	0	0	No, e>t/2
SLV 2	179667	0.4	0	-3606	868.27	0	0	No, e>t/2
SLV 10	179667	0.4	0	513	868.27	0	0	No, Trazione
SLV 14	179667	0.4	0	-1363	868.27	0	0	No, e>t/2
SLV 5	179667	0.4	0	-83	868.27	0	0	No, e>t/2
SLV 1	179667	0.4	0	-3486	868.27	0	0	No, e>t/2
SLV 9	179667	0.4	0	589	868.27	0	0	No, Trazione
SLV 6	179667	0.4	0	-160	868.27	0	0	No, e>t/2
SLV 13	179667	0.4	0	-1243	868.27	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.324 Wa = 0.05 Ta = 1.0675

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-687	-53	-37	1.1	407.2	0.91	17.55958	2.39674	Si
SLV 3	-676	-309	-37	1.105	406.4	0.911	17.6278	2.39674	Si
SLV 8	-627	-4082	-35	1.127	403.2	0.914	17.92456	2.39674	Si
SLV 7	-620	-4246	-35	1.13	402.7	0.914	17.96947	2.39674	Si
SLV 2	-528	449	-28	1.176	396.9	0.921	18.57441	2.39674	Si, Trazione
SLV 1	-516	193	-27	1.182	396.2	0.921	18.64711	2.39674	Si, Trazione
SLV 12	-419	-6993	-24	1.234	390.6	0.93	19.28911	2.39674	Si
SLV 11	-411	-7158	-24	1.238	390.2	0.931	19.33737	2.39674	Si
SLV 6	-97	-2407	-4	1.447	378.2	0.977	21.52506	2.39674	Si
SLV 5	-89	-2572	-4	1.453	378.1	0.979	21.5729	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.362	SLU 84	Si
V_SLU	12.245	SLU 84	Si
PF_SLV	0	SLV 1	No
V_SLV	1.25	SLV 15	Si
PFFP_SLV	0	SLV 10	No
R_SLV	7.326	SLV 4	Si

Maschio 244

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.743	-4.824	-11.143	-4.824	L3	F1	0.6	0.3	13.846	13.847	13.846			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	0.4	703.32	-6165	-0.0001254	0.0003743	0.0035	0.6	1227.41	1415.71	1415.71	2.01	No	Si
SLU 79	2.9	-368.27	-9416	-0.0001277	0.0003743	0.0035	0.6	1373.5	1843.38	1843.38	5.01	No	Si
SLU 80	0.4	702.4	-6173	-0.0001254	0.0003743	0.0035	0.6	1228.13	1417.09	1417.09	2.02	No	Si
SLU 80	2.9	-366.41	-9418	-0.0001275	0.0003743	0.0035	0.6	1373.48	1843.54	1843.54	5.03	No	Si
SLU 83	0.4	724.26	-6300	-0.0001294	0.0003743	0.0035	0.6	1240.37	1441.34	1441.34	1.99	No	Si
SLU 83	2.9	-375.76	-9634	-0.0001312	0.0003743	0.0035	0.6	1370.92	1856.66	1856.66	4.94	No	Si
SLU 74	0.4	699.58	-6127	-0.0001246	0.0003743	0.0035	0.6	1223.65	1408.52	1408.52	2.01	No	Si
SLU 74	2.9	-366.44	-9349	-0.0001266	0.0003743	0.0035	0.6	1373.98	1839.39	1839.39	5.02	No	Si
SLU 84	0.4	723.35	-6308	-0.0001294	0.0003743	0.0035	0.6	1241.05	1442.73	1442.73	1.99	No	Si
SLU 84	2.9	-373.91	-9636	-0.000131	0.0003743	0.0035	0.6	1370.88	1856.82	1856.82	4.97	No	Si
SLU 77	0.4	709.65	-6223	-0.0001268	0.0003743	0.0035	0.6	1233.04	1426.67	1426.67	2.01	No	Si
SLU 77	2.9	-372.03	-9507	-0.0001292	0.0003743	0.0035	0.6	1372.61	1848.89	1848.89	4.97	No	Si
SLU 81	0.4	714.19	-6204	-0.0001272	0.0003743	0.0035	0.6	1231.23	1423.11	1423.11	1.99	No	Si
SLU 81	2.9	-370.18	-9476	-0.0001286	0.0003743	0.0035	0.6	1372.95	1847	1847	4.99	No	Si
SLU 82	0.4	713.27	-6212	-0.0001272	0.0003743	0.0035	0.6	1231.93	1424.5	1424.5	2	No	Si
SLU 82	2.9	-368.32	-9478	-0.0001284	0.0003743	0.0035	0.6	1372.92	1847.16	1847.16	5.02	No	Si
SLU 78	0.4	708.74	-6231	-0.0001268	0.0003743	0.0035	0.6	1233.74	1428.05	1428.05	2.01	No	Si
SLU 78	2.9	-370.17	-9509	-0.000129	0.0003743	0.0035	0.6	1372.58	1849.05	1849.05	5	No	Si
SLU 62	0.4	664.53	-5754	-0.0001167	0.0003743	0.0035	0.6	1184.24	1338.8	1338.8	2.01	No	Si
SLU 62	2.9	-339.34	-8778	-0.0001168	0.0003743	0.0035	0.6	1372.12	1785.88	1785.88	5.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	0.4	1510.69	857	-0.0957295	0.0005615	0.0035	0.48		0	0	0		No
SLV 15	2.9	-2838.79	-17163	-0.0032972	0.0005615	0.0035	0.48		2847.87	2847.87	1		Si
SLV 6	0.4	157.54	-6992	-0.0000751	0.0005615	0.0035	0.6		1697.09	1697.09	10.77		Si
SLV 6	2.9	746.4	-219	-0.0467638	0.0005615	0.0035	0.48		86.64	86.64	0.12		No
SLV 4	0.4	-557.76	-8497	-0.0001278	0.0005615	0.0035	0.6		2015.32	2015.32	3.61		Si
SLV 4	2.9	2205.46	2520	0.5299643	0.0005615	0.0035	0.48		0	0	0		No
SLV 16	0.4	1436.52	503	-0.1083702	0.0005615	0.0035	0.48		0	0	0		No
SLV 16	2.9	-2687.39	-16580	-0.0012487	0.0005615	0.0035	0.48		2840.8	2840.8	1.06		Si
SLV 3	0.4	-483.6	-8143	-0.000117	0.0005615	0.0035	0.6		1961.09	1961.09	4.06		Si
SLV 3	2.9	2054.06	1936	0.1891933	0.0005615	0.0035	0.48		0	0	0		No
SLV 1	0.4	-481.73	-8932	-0.000125	0.0005615	0.0035	0.6		2082.96	2082.96	4.32		Si
SLV 1	2.9	2183.52	3806	1.266966	0.0005615	0.0035	0.48		0	0	0		No
SLV 2	0.4	-555.89	-9286	-0.000136	0.0005615	0.0035	0.6		2139.05	2139.05	3.85		Si
SLV 2	2.9	2334.91	4389	1.5012652	0.0005615	0.0035	0.48		0	0	0		No
SLV 5	0.4	205.2	-6764	-0.0000773	0.0005615	0.0035	0.6		1656.91	1656.91	8.07		Si
SLV 5	2.9	649.1	-594	-0.0318101	0.0005615	0.0035	0.48		196.05	196.05	0.3		No
SLV 14	0.4	1438.39	-285	-0.0934368	0.0005615	0.0035	0.48		106.08	106.08	0.07		No
SLV 14	2.9	-2557.94	-14710	-0.0009425	0.0005615	0.0035	0.48		2719.54	2719.54	1.06		Si
SLV 13	0.4	1512.55	69	-0.1068527	0.0005615	0.0035	0.48		0	0	0		No
SLV 13	2.9	-2709.33	-15293	-0.0019563	0.0005615	0.0035	0.48		2759.12	2759.12	1.02		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	0.4	708.74	-6231	-5247	592	0.6	0.5588	-29148	10831	1816	161764	5390	1530	6920	No	11.69	Si
SLU 78	2.9	-370.17	-9509	-8008	1373	0.6	0.6	-44487	10833	1950	161764	5390	1530	6920	No	5.04	Si
SLU 75	0.4	698.66	-6135	-5166	584	0.6	0.5584	-28699	10771	1804	161764	5390	1530	6920	No	11.84	Si
SLU 75	2.9	-364.58	-9351	-7875	1352	0.6	0.6	-43748	10833	1950	161764	5390	1530	6920	No	5.12	Si
SLU 79	0.4	703.32	-6165	-5192	588	0.6	0.5578	-28843	10790	1806	161764	5390	1530	6920	No	11.77	Si
SLU 79	2.9	-368.27	-9416	-7929	1364	0.6	0.6	-44048	10833	1950	161764	5390	1530	6920	No	5.07	Si
SLU 81	0.4	714.19	-6204	-5225	601	0.6	0.5547	-29026	10815	1800	161764	5390	1530	6920	No	11.52	Si
SLU 81	2.9	-370.18	-9476	-7979	1369	0.6	0.6	-44329	10833	1950	161764	5390	1530	6920	No	5.06	Si
SLU 77	0.4	709.65	-6223	-5241	593	0.6	0.5579	-29113	10826	1812	161764	5390	1530	6920	No	11.67	Si
SLU 77	2.9	-372.03	-9507	-8006	1376	0.6	0.6	-44475	10833	1950	161764	5390	1530	6920	No	5.03	Si
SLU 84	0.4	723.35	-6308	-5312	607	0.6	0.556	-29509	10833	1807	161764	5390	1530	6920	No	11.4	Si
SLU 84	2.9	-373.91	-9636	-8115	1387	0.6	0.6	-45081	10833	1950	161764	5390	1530	6920	No	4.99	Si
SLU 83	0.4	724.26	-6300	-5306	608	0.6	0.5552	-29475	10833	1804	161764	5390	1530	6920	No	11.38	Si
SLU 83	2.9	-375.76	-9634	-8113	1390	0.6	0.6	-45069	10833	1950	161764	5390	1530	6920	No	4.98	Si
SLU 80	0.4	702.4	-6173	-5198	587	0.6	0.5587	-28877	10795	1809	161764	5390	1530	6920	No	11.79	Si
SLU 80	2.9	-366.41	-9418	-7931	1362	0.6	0.6	-44060	10833	1950	161764	5390	1530	6920	No	5.08	Si
SLU 74	0.4	699.58	-6127	-5160	585	0.6	0.5575	-28665	10766	1801	161764	5390	1530	6920	No	11.82	Si
SLU 74	2.9	-366.44	-9349	-7873	1355	0.6	0.6	-43735	10833	1950	161764	5390	1530	6920	No	5.11	Si
SLU 82	0.4	713.27	-6212	-5231	600	0.6	0.5556	-29060	10819	1803	161764	5390	1530	6920	No	11.54	Si
SLU 82	2.9	-368.32	-9478	-7982	1366	0.6	0.6	-44341	10833	1950	161764	5390	1530	6920	No	5.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	0.4	1436.52	503	424	559	0.48	0	0	0	0	161764	6468	1224	7692		13.75	Si
SLV 16	2.9	-2687.39	-16580	-13962	7043	0.48	0.4138	0	0	0	161764	6468	1224	7692		1.09	Si
SLV 14	0.4	1438.39	-285	-240	664	0.48	0	0	0	0	161764	6468	1224	7692		11.59	Si
SLV 14	2.9	-2557.94	-14710	-12388	6361	0.48	0.3784	0	0	0	161764	6468	1224	7692		1.21	Si
SLV 3	0.4	-483.6	-8143	-6858	136	0.6	0.6	-38096	16250	2925	161764	8085	1530	9615		70.55	Si
SLV 3	2.9	2054.06	1936	1631	-4482	0.48	0	0	0	0	161764	6468	1224	7692		1.72	Si
SLV 1	0.4	-481.73	-8932	-7521	241	0.6	0.6	-41784	16250	2925	161764	8085	1530	9615		39.97	Si
SLV 1	2.9	2183.52	3806	3205	-5164	0.48	0	0	0	0	161764	6468	1224	7692		1.49	Si
SLV 15	0.4	1510.69	857	722	636	0.48	0	0	0	0	161764	6468	1224	7692		12.1	Si
SLV 15	2.9	-2838.79	-17163	-14453	7419	0.48	0.4038	0	0	0	161764	6468	1224	7692		1.04	Si
SLV 12	0.4	749.59	-1664	-1401	277	0.48	0	0	0	0	161764	6468	1224	7692		27.82	Si
SLV 12	2.9	-1152.97	-12180	-10257	3741	0.6	0.6	-56981	16250	2925	161764	8085	1530	9615		2.57	Si
SLV 4	0.4	-557.76	-8497	-7156	60	0.6	0.6	-39753	16250	2925	161764	8085	1530	9615		160.29	Si
SLV 4	2.9	2205.46	2520	2122	-4858	0.48	0	0	0	0	161764	6468	1224	7692		1.58	Si
SLV 13	0.4	1512.55	69	58	740	0.48	0	0	0	0	161764	6468	1224	7692		10.4	Si
SLV 13	2.9	-2709.33	-15293	-12879	6737	0.48	0.3686	0	0	0	161764	6468	1224	7692		1.14	Si
SLV 2	0.4	-555.89	-9286	-7820	164	0.6	0.6	-43441	16250	2925	161764	8085	1530	9615		58.53	Si
SLV 2	2.9	2334.91	4389	3696	-5540	0.48	0	0	0	0	161764	6468	1224	7692		1.39	Si
SLV 11	0.4	797.26	-1436	-1210	326	0.48	0	0	0	0	161764	6468	1224	7692		23.63	Si
SLV 11	2.9	-1250.27	-12555	-10573	3982	0.6	0.6	-58735	16250	2925	161764	8085	1530	9615		2.41	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.323 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.4	0	1767	1052.21	0	0	No, Trazione
SLV 7	179667	0.4	0	-5511	1052.21	0	0	No, e>t/2
SLV 3	179667	0.4	0	-251	1052.21	0	0	No, e>t/2
SLV 5	179667	0.4	0	1218	1052.21	0	0	No, Trazione
SLV 2	179667	0.4	0	2084	1052.21	0	0	No, Trazione
SLV 6	179667	0.4	0	1422	1052.21	0	0	No, Trazione
SLV 4	179667	0.4	0	66	1052.21	0	0	No, Trazione
SLV 8	179667	0.4	0	-5307	1052.21	0	0	No, e>t/2
SLV 9	179667	0.4	0	-1320	1052.21	0	0	No, e>t/2
SLV 10	179667	0.4	0	-1116	1052.21	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.323 Wa = 0.05 Ta = 1.0672

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-769	857	-58	1.119	489.2	0.913	17.80348	2.39674	Si, Trazione
SLV 16	-757	503	-58	1.123	488.4	0.914	17.85992	2.39674	Si, Trazione
SLV 11	-701	-1436	-57	1.144	484.8	0.917	18.14095	2.39674	Si
SLV 12	-694	-1664	-57	1.147	484.3	0.917	18.17798	2.39674	Si
SLV 13	-621	69	-42	1.181	479.9	0.922	18.6254	2.39674	Si, Trazione
SLV 14	-609	-285	-42	1.186	479.2	0.923	18.68464	2.39674	Si
SLV 7	-497	-4137	-41	1.235	472.9	0.931	19.27723	2.39674	Si
SLV 8	-490	-4364	-41	1.238	472.5	0.931	19.3164	2.39674	Si
SLV 9	-209	-4064	-5	1.393	460.7	0.963	21.0374	2.39674	Si
SLV 10	-201	-4292	-5	1.397	460.5	0.964	21.07737	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.99	SLU 83	Si
V_SLU	4.979	SLU 83	Si
PF_SLV	0	SLV 1	No
V_SLV	1.037	SLV 15	Si
PFFP_SLV	0	SLV 6	No
R_SLV	7.428	SLV 15	Si

Maschio 246

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.384	L4	L6	1.439	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	1.39	86.47	-24186	-0.0001055	0.0003743	0.0035	1.4393	7145.71	10286.48	10286.48	118.96	No	Si
SLU 82	8.34	-556.85	-12221	-0.0000574	0.0003743	0.0035	1.4393	6175.35	7431.63	7431.63	13.35	No	Si
SLU 61	1.39	135.68	-22084	-0.0000957	0.0003743	0.0035	1.4393	7338.85	10006.6	10006.6	73.75	No	Si
SLU 61	8.34	-520.94	-11007	-0.0000516	0.0003743	0.0035	1.4393	5796.18	6913.87	6913.87	13.27	No	Si
SLU 52	1.39	164.22	-21076	-0.0000913	0.0003743	0.0035	1.4393	7376.52	9870.08	9870.08	60.1	No	Si
SLU 52	8.34	-504.7	-10572	-0.0000495	0.0003743	0.0035	1.4393	5647.78	6711.95	6711.95	13.3	No	Si
SLU 80	1.39	103.03	-23883	-0.0001043	0.0003743	0.0035	1.4393	7183.15	10244.72	10244.72	99.43	No	Si
SLU 80	8.34	-558.15	-12388	-0.0000582	0.0003743	0.0035	1.4393	6223.41	7489.24	7489.24	13.42	No	Si
SLU 84	1.39	81.5	-24541	-0.0001073	0.0003743	0.0035	1.4393	7097.83	10335.89	10335.89	126.82	No	Si
SLU 84	8.34	-568.05	-12534	-0.000059	0.0003743	0.0035	1.4393	6264.73	7536.77	7536.77	13.27	No	Si
SLU 55	1.39	159.25	-21431	-0.0000929	0.0003743	0.0035	1.4393	7367.34	9923.54	9923.54	62.31	No	Si
SLU 55	8.34	-515.89	-10885	-0.000051	0.0003743	0.0035	1.4393	5755.28	6860.53	6860.53	13.3	No	Si
SLU 63	1.39	130.71	-22439	-0.0000974	0.0003743	0.0035	1.4393	7317.12	10052.29	10052.29	76.91	No	Si
SLU 63	8.34	-532.13	-11320	-0.0000531	0.0003743	0.0035	1.4393	5898.9	7049.38	7049.38	13.25	No	Si
SLU 59	1.39	152.24	-21781	-0.0000945	0.0003743	0.0035	1.4393	7353.93	9968.02	9968.02	65.48	No	Si
SLU 59	8.34	-522.24	-11173	-0.0000523	0.0003743	0.0035	1.4393	5851.34	6985.87	6985.87	13.38	No	Si
SLU 76	1.39	110.04	-23532	-0.0001026	0.0003743	0.0035	1.4393	7222.41	10197.03	10197.03	92.67	No	Si
SLU 76	8.34	-551.8	-12099	-0.0000568	0.0003743	0.0035	1.4393	6139.64	7387.6	7387.6	13.39	No	Si
SLU 62	1.39	127.65	-22433	-0.0000973	0.0003743	0.0035	1.4393	7317.54	10051.49	10051.49	78.74	No	Si
SLU 62	8.34	-524.87	-11283	-0.0000528	0.0003743	0.0035	1.4393	5887.06	7033.45	7033.45	13.4	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	1.39	-405.16	-14497	-0.0000626	0.0005615	0.0035	1.4393		9117.8	9117.8	22.5		Si
SLV 5	8.34	705.31	-2652	-0.0000206	0.0005615	0.0035	1.4393		1955.59	1955.59	2.77		Si
SLV 16	1.39	-524.09	-18407	-0.0000811	0.0005615	0.0035	1.4393		10823.13	10823.13	20.65		Si
SLV 16	8.34	-1415.31	-9844	-0.0000601	0.0005615	0.0035	1.4393		6729.12	6729.12	4.75		Si
SLV 11	1.39	615.48	-17939	-0.0000806	0.0005615	0.0035	1.4393		10113.36	10113.36	16.43		Si
SLV 11	8.34	-1491.76	-13833	-0.000078	0.0005615	0.0035	1.4393		8793.86	8793.86	5.89		Si
SLV 12	1.39	655.68	-17935	-0.0000813	0.0005615	0.0035	1.4393		10111.67	10111.67	15.42		Si
SLV 12	8.34	-1455.02	-13816	-0.0000773	0.0005615	0.0035	1.4393		8785.81	8785.81	6.04		Si
SLV 13	1.39	-1057.75	-17713	-0.0000873	0.0005615	0.0035	1.4393		10556.68	10556.68	9.98		Si
SLV 13	8.34	-959.62	-6505	-0.0000394	0.0005615	0.0035	1.4393		4793.54	4793.54	5		Si
SLV 14	1.39	-995.2	-17707	-0.0000862	0.0005615	0.0035	1.4393		10554.01	10554.01	10.6		Si
SLV 14	8.34	-902.46	-6479	-0.0000384	0.0005615	0.0035	1.4393		4777.7	4777.7	5.29		Si
SLV 2	1.39	837.17	-14019	-0.0000678	0.0005615	0.0035	1.4393		8483.38	8483.38	10.13		Si
SLV 2	8.34	722.76	-6598	-0.000036	0.0005615	0.0035	1.4393		4476.83	4476.83	6.19		Si
SLV 4	1.39	1308.28	-14720	-0.0000786	0.0005615	0.0035	1.4393		8770.56	8770.56	6.7		Si
SLV 4	8.34	209.91	-9963	-0.0000411	0.0005615	0.0035	1.4393		6275.17	6275.17	29.89		Si
SLV 6	1.39	-364.95	-14493	-0.0000619	0.0005615	0.0035	1.4393		9115.86	9115.86	24.98		Si
SLV 6	8.34	742.05	-2635	-0.0000213	0.0005615	0.0035	1.4393		1944.49	1944.49	2.62		Si
SLV 15	1.39	-586.65	-18414	-0.0000822	0.0005615	0.0035	1.4393		10825.13	10825.13	18.45		Si
SLV 15	8.34	-1472.47	-9870	-0.0000611	0.0005615	0.0035	1.4393		6743.28	6743.28	4.58		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	1.39	78.44	-24535	-20430	-2418	1.4393	1.4393	-50694	10833	4366	80882	12068	3670	15738	No	6.51	Si
SLU 83	8.34	-560.78	-12497	-10407	2812	1.4393	1.4393	-25823	10387	4186	80882	12068	3670	15738	No	5.6	Si
SLU 78	1.39	93.14	-24100	-20068	-2299	1.4393	1.4393	-49796	10833	4366	80882	12068	3670	15738	No	6.84	Si
SLU 78	8.34	-558.47	-12528	-10433	2871	1.4393	1.4393	-25887	10396	4190	80882	12068	3670	15738	No	5.48	Si
SLU 84	1.39	81.5	-24541	-20435	-2409	1.4393	1.4393	-50707	10833	4366	80882	12068	3670	15738	No	6.53	Si
SLU 84	8.34	-568.05	-12534	-10437	2824	1.4393	1.4393	-25898	10398	4190	80882	12068	3670	15738	No	5.57	Si
SLU 77	1.39	90.08	-24093	-20063	-2308	1.4393	1.4393	-49783	10833	4366	80882	12068	3670	15738	No	6.82	Si
SLU 77	8.34	-551.21	-12492	-10402	2860	1.4393	1.4393	-25811	10386	4186	80882	12068	3670	15738	No	5.5	Si
SLU 79	1.39	99.97	-23877	-19882	-2267	1.4393	1.4393	-49335	10833	4366	80882	12068	3670	15738	No	6.94	Si
SLU 79	8.34	-550.89	-12351	-10285	2846	1.4393	1.4393	-25520	10347	4170	80882	12068	3670	15738	No	5.53	Si
SLU 74	1.39	95.05	-23739	-19768	-2270	1.4393	1.4393	-49050	10833	4366	80882	12068	3670	15738	No	6.93	Si
SLU 74	8.34	-540.01	-12179	-10141	2795	1.4393	1.4393	-25164	10300	4151	80882	12068	3670	15738	No	5.63	Si
SLU 76	1.39	110.04	-23532	-19596	-2215	1.4393	1.4393	-48623	10833	4366	80882	12068	3670	15738	No	7.1	Si
SLU 76	8.34	-551.8	-12099	-10075	2799	1.4393	1.4393	-25000	10278	4142	80882	12068	3670	15738	No	5.62	Si
SLU 70	1.39	154.98	-21737	-18100	-1861	1.4393	1.4393	-44913	10833	4366	80882	12068	3670	15738	No	8.46	Si
SLU 70	8.34	-509.27	-11457	-9540	2797	1.4393	1.4393	-23672	10101	4071	80882	12068	3670	15738	No	5.63	Si
SLU 75	1.39	98.11	-23745	-19773	-2262	1.4393	1.4393	-49063	10833	4366	80882	12068	3670	15738	No	6.96	Si
SLU 75	8.34	-547.28	-12215	-10172	2806	1.4393	1.4393	-25240	10310	4155	80882	12068	3670	15738	No	5.61	Si
SLU 80	1.39	103.03	-23883	-19887	-2259	1.4393	1.4393	-49347	10833	4366	80882	12068	3670	15738	No	6.97	Si
SLU 80	8.34	-558.15	-12388	-10315	2857	1.4393	1.4393	-25596	10357	4174	80882	12068	3670	15738	No	5.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.39	-1057.75	-17713	-14750	2968	1.4393	1.4393	-36599	16250	6549	80882	18102	3670	21772		7.34	Si
SLV 13	8.34	-959.62	-6505	-5417	5528	1.4393	1.4393	-13440	13105	5281	80882	18102	3670	21772		3.94	Si
SLV 2	1.39	837.17	-14019	-11674	-7470	1.4393	1.4393	-28967	16210	6533	80882	18102	3670	21772		2.91	Si
SLV 2	8.34	722.76	-6598	-5495	-2298	1.4393	1.4393	-13634	13143	5297	80882	18102	3670	21772		9.48	Si
SLV 3	1.39	1245.72	-14726	-12263	-5392	1.4393	1.4393	-30428	16250	6549	80882	18102	3670	21772		4.04	Si
SLV 3	8.34	152.75	-9989	-8318	-1194	1.4393	1.4393	-20640	14545	5862	80882	18102	3670	21772		18.23	Si
SLV 16	1.39	-524.09	-18407	-15328	4306	1.4393	1.4393	-38034	16250	6549	80882	18102	3670	21772		5.06	Si
SLV 16	8.34	-1415.31	-9844	-8197	6039	1.4393	1.4393	-20340	14485	5837	80882	18102	3670	21772		3.6	Si
SLV 14	1.39	-995.2	-17707	-14745	2597	1.4393	1.4393	-36586	16250	6549	80882	18102	3670	21772		8.38	Si
SLV 14	8.34	-902.46	-6479	-5395	5232	1.4393	1.4393	-13387	13094	5277	80882	18102	3670	21772		4.16	Si
SLV 5	1.39	-405.16	-14497	-12072	-5636	1.4393	1.4393	-29955	16250	6549	80882	18102	3670	21772		3.86	Si
SLV 5	8.34	705.31	-2652	-2208	-361	1.4393	1.3611	-5480	11513	4388	80882	18102	3670	21772		60.36	Si
SLV 6	1.39	-364.95	-14493	-12069	-5874	1.4393	1.4393	-29947	16250	6549	80882	18102	3670	21772		3.71	Si
SLV 6	8.34	742.05	-2635	-2195	-551	1.4393	1.3143	-5445	11506	4234	80882	18102	3670	21772		39.52	Si
SLV 15	1.39	-586.65	-18414	-15333	4676	1.4393	1.4393	-38047	16250	6549	80882	18102	3670	21772		4.66	Si
SLV 15	8.34	-1472.47	-9870	-8219	6335	1.4393	1.4393	-20393	14495	5842	80882	18102	3670	21772		3.44	Si
SLV 4	1.39	1308.28	-14720	-12258	-5762	1.4393	1.4393	-30415	16250	6549	80882	18102	3670	21772		3.78	Si
SLV 4	8.34	209.91	-9963	-8297	-1490	1.4393	1.4393	-20587	14534	5857	80882	18102	3670	21772		14.61	Si
SLV 1	1.39	774.62	-14025	-11679	-7100	1.4393	1.4393	-28980	16213	6534	80882	18102	3670	21772		3.07	Si
SLV 1	8.34	665.6	-6624	-5516	-2002	1.4393	1.4393	-13687	13154	5301	80882	18102	3670	21772		10.88	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.35	16335	-6583	529.51	823.04	1.55	Si
SLV 10	179667	0.35	16360	-6593	529.51	824.19	1.56	Si
SLV 5	179667	0.35	16527	-6660	529.51	831.54	1.57	Si
SLV 6	179667	0.35	16552	-6671	529.51	832.68	1.57	Si
SLV 13	179667	0.35	23030	-9281	529.51	1103.42	2.08	Si
SLV 14	179667	0.35	23070	-9297	529.51	1105.01	2.09	Si
SLV 1	179667	0.35	23670	-9539	529.51	1128.49	2.13	Si
SLV 2	179667	0.35	23710	-9555	529.51	1130.06	2.13	Si
SLV 15	179667	0.35	28967	-11674	529.51	1324.34	2.5	Si
SLV 16	179667	0.35	29007	-11690	529.51	1325.75	2.5	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-9989	-14726	-83	0.664	1418.1	0.926	10.42336	15.31518	No
SLV 4	-9963	-14720	-82	0.665	1415.5	0.925	10.44688	15.31518	No
SLV 15	-9870	-18414	131	0.666	1406.1	0.925	10.46585	15.31518	No
SLV 16	-9844	-18407	132	0.667	1403.5	0.925	10.48691	15.31518	No
SLV 1	-6624	-14025	-140	0.894	1081.2	0.909	14.29725	15.31518	No
SLV 2	-6598	-14019	-139	0.897	1078.7	0.909	14.3411	15.31518	No
SLV 13	-6505	-17713	75	0.913	1069.4	0.909	14.60845	15.31518	No
SLV 14	-6479	-17707	76	0.916	1066.8	0.908	14.6499	15.31518	No
SLV 11	-13833	-17939	122	0.51	1806.2	0.939	7.8975	6.0451	Si
SLV 12	-13816	-17935	123	0.511	1804.6	0.939	7.90495	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.247	SLU 63	Si
V_SLU	5.481	SLU 78	Si
PF_SLV	2.62	SLV 6	Si
V_SLV	2.914	SLV 2	Si
PFFP_SLV	1.554	SLV 9	Si
R_SLV	0.681	SLV 3	No

Maschio 248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	-0.354	Z medio 397 cm	Z medio 747 cm	2.96	0.28	3.502	1.784	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	4.82	3041.18	-42273	-0.0000994	0.0003743	0.0035	2.96	31220.77	41189.62	41189.62	13.54	No	Si
SLU 84	6.6	3261.41	-34189	-0.0000812	0.0003743	0.0035	2.96	30098.06	36171.21	36171.21	11.09	No	Si
SLU 81	4.82	3002.24	-41565	-0.0000974	0.0003743	0.0035	2.96	31214.02	40781.46	40781.46	13.58	No	Si
SLU 81	6.6	3260.39	-33524	-0.0000796	0.0003743	0.0035	2.96	29903.44	35772.97	35772.97	10.97	No	Si
SLU 19	4.82	2129.78	-31310	-0.0000699	0.0003743	0.0035	2.96	29144.49	34467.06	34467.06	16.18	No	Si
SLU 19	6.6	2580.3	-25140	-0.0000584	0.0003743	0.0035	2.96	26122.08	29232.63	29232.63	11.33	No	Si
SLU 82	4.82	2992.24	-41565	-0.0000974	0.0003743	0.0035	2.96	31214.04	40781.89	40781.89	13.63	No	Si
SLU 82	6.6	3240.31	-33513	-0.0000795	0.0003743	0.0035	2.96	29900.15	35766.53	35766.53	11.04	No	Si
SLU 39	4.82	2346.46	-34983	-0.000079	0.0003743	0.0035	2.96	30309.74	36650.72	36650.72	15.62	No	Si
SLU 39	6.6	2864.15	-28229	-0.0000662	0.0003743	0.0035	2.96	27801.9	32067.57	32067.57	11.2	No	Si
SLU 40	4.82	2336.46	-34984	-0.000079	0.0003743	0.0035	2.96	30309.92	36651.16	36651.16	15.69	No	Si
SLU 40	6.6	2844.07	-28218	-0.0000661	0.0003743	0.0035	2.96	27796.61	32057.48	32057.48	11.27	No	Si
SLU 83	4.82	3051.18	-42273	-0.0000994	0.0003743	0.0035	2.96	31220.77	41189.21	41189.21	13.5	No	Si
SLU 83	6.6	3281.49	-34200	-0.0000813	0.0003743	0.0035	2.96	30101.09	36177.7	36177.7	11.02	No	Si
SLU 69	4.82	3417.84	-38238	-0.0000913	0.0003743	0.0035	2.96	30946.82	38672.01	38672.01	11.31	No	Si
SLU 69	6.6	2365.6	-31304	-0.0000708	0.0003743	0.0035	2.96	29142.27	34463.61	34463.61	14.57	No	Si
SLU 18	4.82	2139.78	-31309	-0.0000699	0.0003743	0.0035	2.96	29144.22	34466.63	34466.63	16.11	No	Si
SLU 18	6.6	2600.38	-25151	-0.0000585	0.0003743	0.0035	2.96	26128.54	29242.39	29242.39	11.25	No	Si
SLU 60	4.82	2795.56	-37891	-0.0000877	0.0003743	0.0035	2.96	30896.67	38452.63	38452.63	13.75	No	Si
SLU 60	6.6	2996.61	-30446	-0.0000716	0.0003743	0.0035	2.96	28801.7	33932.58	33932.58	11.32	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	4.82	3468.94	-27647	-0.0000651	0.0005615	0.0035	2.96		34647.94	34647.94	9.99		Si
SLV 5	6.6	4662.14	-22707	-0.0000599	0.0005615	0.0035	2.96		28968.87	28968.87	6.21		Si
SLV 6	4.82	3433.75	-27732	-0.0000651	0.0005615	0.0035	2.96		34739.22	34739.22	10.12		Si
SLV 6	6.6	4712.46	-22708	-0.0000601	0.0005615	0.0035	2.96		28970.07	28970.07	6.15		Si
SLD 9	4.82	3383.4	-28427	-0.0000663	0.0005615	0.0035	2.96		35340.55	35340.55	10.45		Si
SLD 9	6.6	3189.27	-23650	-0.000056	0.0005615	0.0035	2.96		30045.83	30045.83	9.42		Si
SLD 5	4.82	2900.12	-27975	-0.0000635	0.0005615	0.0035	2.96		34954.06	34954.06	12.05		Si
SLD 5	6.6	3118.54	-22794	-0.0000541	0.0005615	0.0035	2.96		29068.01	29068.01	9.32		Si
SLD 10	4.82	3368.04	-28464	-0.0000664	0.0005615	0.0035	2.96		35372.4	35372.4	10.5		Si
SLD 10	6.6	3211.24	-23651	-0.0000561	0.0005615	0.0035	2.96		30046.36	30046.36	9.36		Si
SLV 10	4.82	4565.21	-28792	-0.0000717	0.0005615	0.0035	2.96		35653.57	35653.57	7.81		Si
SLV 10	6.6	4879.59	-24714	-0.0000647	0.0005615	0.0035	2.96		31267.96	31267.96	6.41		Si
SLV 9	4.82	4600.4	-28706	-0.0000717	0.0005615	0.0035	2.96		35580.47	35580.47	7.73		Si
SLV 9	6.6	4829.27	-24713	-0.0000645	0.0005615	0.0035	2.96		31266.74	31266.74	6.47		Si
SLV 14	4.82	4760.82	-30053	-0.0000751	0.0005615	0.0035	2.96		36741.18	36741.18	7.72		Si
SLV 14	6.6	3074.22	-26447	-0.0000612	0.0005615	0.0035	2.96		33277.66	33277.66	10.82		Si
SLV 13	4.82	4815.58	-29920	-0.000075	0.0005615	0.0035	2.96		36626.59	36626.59	7.61		Si
SLV 13	6.6	2995.92	-26445	-0.0000608	0.0005615	0.0035	2.96		33275.74	33275.74	11.11		Si
SLD 6	4.82	2884.75	-28013	-0.0000636	0.0005615	0.0035	2.96		34985.83	34985.83	12.13		Si
SLD 6	6.6	3140.51	-22795	-0.0000542	0.0005615	0.0035	2.96		29068.53	29068.53	9.26		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	4.82	3174.84	-41430	-34499	3268	2.96	2.96	-41625	10833	8979	40441	24818	7548	32366	No	9.9	Si
SLU 80	6.6	2989.07	-33671	-28038	3860	2.96	2.96	-33830	10833	8979	40441	24818	7548	32366	No	8.39	Si
SLU 55	4.82	2912.55	-37049	-30851	3332	2.96	2.96	-37224	10833	8979	40441	24818	7548	32366	No	9.71	Si
SLU 55	6.6	2690.81	-29909	-24906	3861	2.96	2.96	-30051	10833	8979	40441	24818	7548	32366	No	8.38	Si
SLU 84	4.82	3041.18	-42273	-35202	3105	2.96	2.96	-42473	10833	8979	40441	24818	7548	32366	No	10.42	Si
SLU 84	6.6	3261.41	-34189	-28470	3828	2.96	2.96	-34351	10833	8979	40441	24818	7548	32366	No	8.46	Si
SLU 56	4.82	3013.49	-38184	-31796	3289	2.96	2.96	-38364	10833	8979	40441	24818	7548	32366	No	9.84	Si
SLU 56	6.6	2786.52	-31016	-25827	3837	2.96	2.96	-31162	10833	8979	40441	24818	7548	32366	No	8.44	Si
SLU 63	4.82	2834.5	-38600	-32142	3204	2.96	2.96	-38782	10833	8979	40441	24818	7548	32366	No	10.1	Si
SLU 63	6.6	2997.64	-31112	-25907	3878	2.96	2.96	-31259	10833	8979	40441	24818	7548	32366	No	8.35	Si
SLU 57	4.82	3003.49	-38185	-31797	3329	2.96	2.96	-38365	10833	8979	40441	24818	7548	32366	No	9.72	Si
SLU 57	6.6	2766.44	-31005	-25818	3871	2.96	2.96	-31151	10833	8979	40441	24818	7548	32366	No	8.36	Si
SLU 79	4.82	3184.83	-41429	-34498	3228	2.96	2.96	-41625	10833	8979	40441	24818	7548	32366	No	10.03	Si
SLU 79	6.6	3009.15	-33681	-28047	3825	2.96	2.96	-33841	10833	8979	40441	24818	7548	32366	No	8.46	Si
SLU 59	4.82	2968.15	-37756	-31440	3367	2.96	2.96	-37934	10833	8979	40441	24818	7548	32366	No	9.61	Si
SLU 59	6.6	2725.3	-30593	-25475	3910	2.96	2.96	-30738	10833	8979	40441	24818	7548	32366	No	8.28	Si
SLU 62	4.82	2844.5	-38599	-32142	3164	2.96	2.96	-38781	10833	8979	40441	24818	7548	32366	No	10.23	Si
SLU 62	6.6	3017.72	-31123	-25916	3843	2.96	2.96	-31270	10833	8979	40441	24818	7548	32366	No	8.42	Si
SLU 58	4.82	2978.15	-37755	-31439	3327	2.96	2.96	-37934	10833	8979	40441	24818	7548	32366	No	9.73	Si
SLU 58	6.6	2745.38	-30604	-25484	3875	2.96	2.96	-30749	10833	8979	40441	24818	7548	32366	No	8.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	4.82	1466.06	-28016	-23329	5470	2.96	2.96	-28149	16046	13299	40441	37227	7548	44775		8.19	Si
SLD 8	6.6	597.19	-22036	-18350	4330	2.96	2.96	-22140	14845	12303	40441	37227	7548	44775		10.34	Si
SLV 12	4.82	1380.53	-28796	-23979	8072	2.96	2.96	-28932	16203	13429	40441	37227	7548	44775		5.55	Si
SLV 12	6.6	-875.67	-22979	-19135	5297	2.96	2.96	-23088	15034	12460	40441	37227	7548	44775		8.45	Si
SLV 3	4.82	88.64	-26390	-21976	6358	2.96	2.96	-26515	15720	13028	40441	37227	7548	44775		7.04	Si
SLV 3	6.6	712.25	-19239	-16021	5437	2.96	2.96	-19330	14283	11838	40441	37227	7548	44775		8.24	Si
SLV 8	4.82	249.07	-27737	-23097	9243	2.96	2.96	-27868	15990	13253	40441	37227	7548	44775		4.84	Si
SLV 8	6.6	-1042.8	-20974	-17465	6306	2.96	2.96	-21073	14631	12126	40441	37227	7548	44775		7.1	Si
SLD 12	4.82	1949.35	-28468	-23705	4970	2.96	2.96	-28602	16137	13374	40441	37227	7548	44775		9.01	Si
SLD 12	6.6	667.92	-22892	-19063	3899	2.96	2.96	-23000	15017	12446	40441	37227	7548	44775		11.48	Si
SLD 7	4.82	1481.43	-27979	-23299	5490	2.96	2.96	-28111	16039	13293	40441	37227	7548	44775		8.16	Si
SLD 7	6.6	575.22	-22036	-18349	4356	2.96	2.96	-22140	14845	12303	40441	37227	7548	44775		10.28	Si
SLV 7	4.82	284.26	-27651	-23026	9288	2.96	2.96	-27782	15973	13238	40441	37227	7548	44775		4.82	Si
SLV 7	6.6	-1093.12	-20972	-17464	6366	2.96	2.96	-21072	14631	12126	40441	37227	7548	44775		7.03	Si
SLV 4	4.82	33.89	-26523	-22086	6287	2.96	2.96	-26648	15746	13050	40441	37227	7548	44775		7.12	Si
SLV 4	6.6	790.54	-19241	-16022	5343	2.96	2.96	-19332	14283	11838	40441	37227	7548	44775		8.38	Si
SLV 11	4.82	1415.72	-28711	-23908	8117	2.96	2.96	-28846	16186	13415	40441	37227	7548	44775		5.52	Si
SLV 11	6.6	-925.99	-22978	-19134	5357	2.96	2.96	-23087	15034	12460	40441	37227	7548	44775		8.36	Si
SLD 11	4.82	1964.71	-28430	-23674	4990	2.96	2.96	-28565	16130	13368	40441	37227	7548	44775		8.97	Si
SLD 11	6.6	645.95	-22892	-19062	3925	2.96	2.96	-23000	15017	12446	40441	37227	7548	44775		11.41	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 5.712 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.36	28287	-23444	290.67	2674.26	9.2	Si
SLV 4	179667	0.36	28383	-23523	290.67	2681.22	9.22	Si
SLV 1	179667	0.36	28504	-23624	290.67	2690.05	9.25	Si
SLV 2	179667	0.36	28599	-23703	290.67	2696.98	9.28	Si
SLV 7	179667	0.36	29866	-24753	290.67	2787.7	9.59	Si
SLV 8	179667	0.36	29927	-24804	290.67	2792.03	9.61	Si
SLV 5	179667	0.36	30588	-25352	290.67	2838.33	9.76	Si
SLV 6	179667	0.36	30650	-25402	290.67	2842.59	9.78	Si
SLV 11	179667	0.36	31422	-26042	290.67	2895.75	9.96	Si
SLV 12	179667	0.36	31483	-26093	290.67	2899.94	9.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 5.712 Wa = 0.05 Ta = 0.0731

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-24714	-28792	31	0.651	2925.4	0.959	9.87164	12.09005	No
SLV 9	-24713	-28706	31	0.651	2925.3	0.959	9.87208	12.09005	No
SLV 12	-22979	-28796	-132	0.689	2749	0.956	10.46597	12.09005	No
SLV 11	-22978	-28711	-132	0.689	2748.9	0.956	10.46632	12.09005	No
SLV 6	-22708	-27732	110	0.696	2721.5	0.956	10.58886	12.09005	No
SLV 5	-22707	-27647	110	0.696	2721.4	0.956	10.58936	12.09005	No
SLV 8	-20974	-27737	-53	0.747	2545.2	0.953	11.39239	12.09005	No
SLV 7	-20972	-27651	-53	0.747	2545.1	0.953	11.39281	12.09005	No
SLV 14	-26447	-30053	-118	0.612	3101.6	0.961	9.253	6.31492	Si
SLV 13	-26445	-29920	-118	0.612	3101.4	0.961	9.25341	6.31492	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.972	SLU 81	Si
V_SLU	8.279	SLU 59	Si
PF_SLV	6.148	SLV 6	Si
V_SLV	4.821	SLV 7	Si
PFFP_SLV	9.2	SLV 3	Si
R_SLV	0.817	SLV 10	No

Maschio 251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-0.354	-11.003	1.006	L5	L8	1.36	0.28	10.2	10.2	10.2			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	4.82	656.92	-16961	-0.0000868	0.0003743	0.0035	1.36	6487.88	7990.76	7990.76	12.16	No	Si
SLU 39	15.02	622.87	-936	-0.0001658	0.0003743	0.0035	1.088	620.93	723.61	723.61	1.16	No	Si
SLU 82	4.82	783.67	-20201	-0.0001067	0.0003743	0.0035	1.36	6579.23	8844.55	8844.55	11.29	No	Si
SLU 82	15.02	736.03	-1158	-0.0000974	0.0003743	0.0035	1.36	763.89	867.44	867.44	1.18	No	Si
SLU 75	4.82	725.21	-20039	-0.0001045	0.0003743	0.0035	1.36	6583.41	8824.26	8824.26	12.17	No	Si
SLU 75	15.02	791.65	-1317	-0.0000622	0.0003743	0.0035	1.36	864.94	970.21	970.21	1.23	No	Si
SLU 33	4.82	596.18	-16776	-0.0000846	0.0003743	0.0035	1.36	6471.52	7939.23	7939.23	13.32	No	Si
SLU 33	15.02	684.43	-1092	-0.0000765	0.0003743	0.0035	1.36	721.37	824.46	824.46	1.2	No	Si
SLU 32	4.82	598.46	-16799	-0.0000848	0.0003743	0.0035	1.36	6473.63	7945.64	7945.64	13.28	No	Si
SLU 32	15.02	678.49	-1094	-0.0000676	0.0003743	0.0035	1.36	723.21	826.32	826.32	1.22	No	Si
SLU 73	4.82	705.2	-19466	-0.000101	0.0003743	0.0035	1.36	6590.79	8707.84	8707.84	12.35	No	Si
SLU 73	15.02	718.18	-1155	-0.0000743	0.0003743	0.0035	1.36	761.72	865.24	865.24	1.2	No	Si
SLU 31	4.82	576.16	-16204	-0.0000813	0.0003743	0.0035	1.36	6413.41	7781.87	7781.87	13.51	No	Si
SLU 31	15.02	610.95	-929	-0.0001309	0.0003743	0.0035	1.36	616.87	719.55	719.55	1.18	No	Si
SLU 40	4.82	654.63	-16938	-0.0000867	0.0003743	0.0035	1.36	6485.9	7984.32	7984.32	12.2	No	Si
SLU 40	15.02	628.81	-933	-0.0002055	0.0003743	0.0035	1.088	619.07	721.75	721.75	1.15	No	Si
SLU 74	4.82	727.5	-20062	-0.0001047	0.0003743	0.0035	1.36	6582.87	8827.14	8827.14	12.13	No	Si
SLU 74	15.02	785.72	-1320	-0.0000578	0.0003743	0.0035	1.36	866.76	972.07	972.07	1.24	No	Si
SLU 81	4.82	785.95	-20224	-0.0001068	0.0003743	0.0035	1.36	6578.56	8847.45	8847.45	11.26	No	Si
SLU 81	15.02	730.1	-1161	-0.000085	0.0003743	0.0035	1.36	765.73	869.3	869.3	1.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	4.82	119.33	-13879	-0.0000589	0.0005615	0.0035	1.36		7809.2	7809.2	65.44		Si
SLD 16	15.02	940.81	-644	-0.0066555	0.0005615	0.0035	1.088		533.37	533.37	0.57		No
SLV 8	4.82	321.08	-8745	-0.0000407	0.0005615	0.0035	1.36		5260.22	5260.22	16.38		Si
SLV 8	15.02	1137.37	-851	-0.0076888	0.0005615	0.0035	1.088		670.64	670.64	0.59		No
SLV 14	4.82	-128.85	-16779	-0.0000718	0.0005615	0.0035	1.36		9467.95	9467.95	73.48		Si
SLV 14	15.02	998.77	-442	-0.0095314	0.0005615	0.0035	1.088		399.08	399.08	0.4		No
SLV 13	4.82	-119.65	-16754	-0.0000715	0.0005615	0.0035	1.36		9458.24	9458.24	79.05		Si
SLV 13	15.02	1016.64	-437	-0.009853	0.0005615	0.0035	1.088		395.52	395.52	0.39		No
SLV 7	4.82	326.99	-8729	-0.0000407	0.0005615	0.0035	1.36		5252.39	5252.39	16.06		Si
SLV 7	15.02	1148.85	-847	-0.0078926	0.0005615	0.0035	1.088		668.36	668.36	0.58		No
SLV 16	4.82	-335.45	-14015	-0.0000635	0.0005615	0.0035	1.36		8309.66	8309.66	24.77		Si
SLV 16	15.02	1522.83	-341	-0.0182815	0.0005615	0.0035	1.088		332.19	332.19	0.22		No
SLV 15	4.82	-326.25	-13991	-0.0000632	0.0005615	0.0035	1.36		8298.88	8298.88	25.44		Si
SLV 15	15.02	1540.7	-336	-0.0185989	0.0005615	0.0035	1.088		328.63	328.63	0.21		No
SLV 12	4.82	-92.42	-9687	-0.0000405	0.0005615	0.0035	1.36		6237.41	6237.41	67.49		Si
SLV 12	15.02	1598.93	-561	-0.0171535	0.0005615	0.0035	1.088		478.29	478.29	0.3		No
SLD 15	4.82	123.28	-13869	-0.0000589	0.0005615	0.0035	1.36		7805.13	7805.13	63.31		Si
SLD 15	15.02	948.49	-641	-0.006798	0.0005615	0.0035	1.088		531.84	531.84	0.56		No
SLV 11	4.82	-86.51	-9671	-0.0000403	0.0005615	0.0035	1.36		6229.38	6229.38	72		Si
SLV 11	15.02	1610.42	-557	-0.0173542	0.0005615	0.0035	1.088		476.01	476.01	0.3		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	4.82	783.67	-20201	-16821	370	1.36	1.36	-44174	10833	4125	118944	11403	3468	14871	No	40.14	Si
SLU 82	15.02	736.03	-1158	-964	-2653	1.36	0.1331	-25350	10344	386	118944	11403	3468	14871	No	5.61	Si
SLU 77	4.82	743.55	-20398	-16986	387	1.36	1.36	-44606	10833	4125	118944	11403	3468	14871	No	38.38	Si
SLU 77	15.02	761.03	-1362	-1134	-2709	1.36	0.3639	-11221	8441	860	118944	11403	3468	14871	No	5.49	Si
SLU 84	4.82	799.72	-20537	-17102	402	1.36	1.36	-44910	10833	4125	118944	11403	3468	14871	No	37.01	Si
SLU 84	15.02	711.34	-1200	-1000	-2595	1.36	0.2624	-13715	8774	645	118944	11403	3468	14871	No	5.73	Si
SLU 75	4.82	725.21	-20039	-16686	359	1.36	1.36	-43819	10833	4125	118944	11403	3468	14871	No	41.39	Si
SLU 75	15.02	791.65	-1317	-1096	-2794	1.36	0.2363	-16719	9176	607	118944	11403	3468	14871	No	5.32	Si
SLU 39	4.82	656.92	-16961	-14124	170	1.36	1.36	-37090	10833	4125	118944	11403	3468	14871	No	87.4	Si
SLU 39	15.02	622.87	-936	-779	-2297	1.088	0.043	0	0	0	118944	9122	2774	11897	No	5.18	Si
SLU 73	4.82	705.2	-19466	-16210	348	1.36	1.36	-42568	10833	4125	118944	11403	3468	14871	No	42.79	Si
SLU 73	15.02	718.18	-1155	-961	-2569	1.36	0.1739	-19752	9585	467	118944	11403	3468	14871	No	5.79	Si
SLU 81	4.82	785.95	-20224	-16841	367	1.36	1.36	-44224	10833	4125	118944	11403	3468	14871	No	40.5	Si
SLU 81	15.02	730.1	-1161	-967	-2626	1.36	0.1532	-22383	9941	426	118944	11403	3468	14871	No	5.66	Si
SLU 40	4.82	654.63	-16938	-14105	173	1.36	1.36	-37039	10833	4125	118944	11403	3468	14871	No	85.75	Si
SLU 40	15.02	628.81	-933	-777	-2324	1.088	0.0178	0	0	0	118944	9122	2774	11897	No	5.12	Si
SLU 74	4.82	727.5	-20062	-16706	356	1.36	1.36	-43870	10833	4125	118944	11403	3468	14871	No	41.77	Si
SLU 74	15.02	785.72	-1320	-1099	-2767	1.36	0.2537	-15610	9027	641	118944	11403	3468	14871	No	5.37	Si
SLU 78	4.82	741.26	-20375	-16967	391	1.36	1.36	-44555	10833	4125	118944	11403	3468	14871	No	38.06	Si
SLU 78	15.02	766.96	-1359	-1132	-2736	1.36	0.3472	-11737	8510	827	118944	11403	3468	14871	No	5.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 7	4.82	398.51	-11577	-9640	955	1.36	1.36	-25316	15480	5895	118944	17104	3468	20572		21.55	Si
SLD 7	15.02	789.48	-859	-715	-3281	1.088	0	0	0	0	118944	13683	2774	16458		5.02	Si
SLV 15	4.82	-326.25	-13991	-11650	-156	1.36	1.36	-30594	16250	6188	118944	17104	3468	20572		131.71	Si
SLV 15	15.02	1540.7	-336	-280	-4923	1.088	0	0	0	0	118944	13683	2774	16458		3.34	Si
SLD 12	4.82	219.23	-11986	-9981	729	1.36	1.36	-26209	15659	5963	118944	17104	3468	20572		28.2	Si
SLD 12	15.02	981.65	-736	-613	-3754	1.088	0	0	0	0	118944	13683	2774	16458		4.38	Si
SLV 12	4.82	-92.42	-9687	-8066	1276	1.36	1.36	-21183	14653	5580	118944	17104	3468	20572		16.12	Si
SLV 12	15.02	1598.93	-561	-467	-6320	1.088	0	0	0	0	118944	13683	2774	16458		2.6	Si
SLV 16	4.82	-335.45	-14015	-11670	-191	1.36	1.36	-30647	16250	6188	118944	17104	3468	20572		107.85	Si
SLV 16	15.02	1522.83	-341	-284	-4842	1.088	0	0	0	0	118944	13683	2774	16458		3.4	Si
SLV 11	4.82	-86.51	-9671	-8053	1298	1.36	1.36	-21148	14646	5577	118944	17104	3468	20572		15.84	Si
SLV 11	15.02	1610.42	-557	-464	-6372	1.088	0	0	0	0	118944	13683	2774	16458		2.58	Si
SLV 8	4.82	321.08	-8745	-7282	1781	1.36	1.36	-19122	14241	5423	118944	17104	3468	20572		11.55	Si
SLV 8	15.02	1137.37	-851	-708	-5159	1.088	0	0	0	0	118944	13683	2774	16458		3.19	Si
SLD 8	4.82	395.93	-11584	-9646	945	1.36	1.36	-25331	15483	5896	118944	17104	3468	20572		21.77	Si
SLD 8	15.02	784.46	-860	-716	-3258	1.088	0	0	0	0	118944	13683	2774	16458		5.05	Si
SLD 11	4.82	221.81	-11979	-9975	739	1.36	1.36	-26194	15656	5962	118944	17104	3468	20572		27.83	Si
SLD 11	15.02	986.67	-735	-612	-3777	1.088	0	0	0	0	118944	13683	2774	16458		4.36	Si
SLV 7	4.82	326.99	-8729	-7269	1803	1.36	1.36	-19088	14234	5420	118944	17104	3468	20572		11.41	Si
SLV 7	15.02	1148.85	-847	-705	-5211	1.088	0	0	0	0	118944	13683	2774	16458		3.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.92 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.45	0	-7301	1407.2	0	0	No, e>t/2
SLV 3	179667	0.45	0	-4093	1407.2	0	0	No, e>t/2
SLV 4	179667	0.45	0	-4180	1407.2	0	0	No, e>t/2
SLV 8	179667	0.45	0	-1990	1407.2	0	0	No, e>t/2
SLV 7	179667	0.45	0	-1934	1407.2	0	0	No, e>t/2
SLV 11	179667	0.45	0	-3277	1407.2	0	0	No, e>t/2
SLV 12	179667	0.45	0	-3333	1407.2	0	0	No, e>t/2
SLV 2	179667	0.45	0	-7388	1407.2	0	0	No, e>t/2
SLV 16	179667	0.45	0	-8659	1407.2	0	0	No, e>t/2
SLV 15	179667	0.45	0	-8571	1407.2	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 9.92 Wa = 0.05 Ta = 0.6205

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-1407	-13638	-523	1.475	776.7	0.907	23.6283	4.72654	Si
SLV 1	-1402	-13613	-523	1.477	776.3	0.907	23.65078	4.72654	Si
SLV 4	-1307	-10874	-542	1.501	769.7	0.91	23.98158	4.72654	Si
SLV 3	-1301	-10849	-542	1.503	769.3	0.91	24.00452	4.72654	Si
SLV 14	-442	-16779	499	1.839	721.8	0.953	28.06032	4.72654	Si
SLV 13	-437	-16754	499	1.842	721.6	0.953	28.08513	4.72654	Si
SLV 16	-341	-14015	480	1.892	718.4	0.961	28.61228	4.72654	Si
SLV 15	-336	-13991	480	1.895	718.2	0.962	28.63698	4.72654	Si
SLV 6	-1186	-17957	-142	1.625	761.6	0.914	25.85521	2.39674	Si
SLV 5	-1182	-17941	-142	1.627	761.3	0.914	25.87117	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.148	SLU 40	Si
V_SLU	5.12	SLU 40	Si
PF_SLV	0.213	SLV 15	No
V_SLV	2.583	SLV 11	Si
PFFP_SLV	0	SLV 1	No
R_SLV	4.999	SLV 2	Si

Maschio 258

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L4	L6	1.67	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	4.82	-369.02	-20197	-0.0000757	0.0003743	0.0035	1.67	9710.03	12281.67	12281.67	33.28	No	Si
SLU 82	6.92	-2490.39	-18638	-0.0000984	0.0003743	0.0035	1.67	9470.15	11779.2	11779.2	4.73	No	Si
SLU 83	4.82	-386.84	-20561	-0.0000774	0.0003743	0.0035	1.67	9753.75	12379.37	12379.37	32	No	Si
SLU 83	6.92	-2513.42	-19001	-0.0001003	0.0003743	0.0035	1.67	9533.68	11936.29	11936.29	4.75	No	Si
SLU 40	4.82	-329.63	-17108	-0.0000631	0.0003743	0.0035	1.67	9151.78	11141.21	11141.21	33.8	No	Si
SLU 40	6.92	-2223.55	-15871	-0.0000833	0.0003743	0.0035	1.67	8834.43	10653.57	10653.57	4.79	No	Si
SLU 42	4.82	-342.25	-17484	-0.0000647	0.0003743	0.0035	1.67	9237.63	11294.46	11294.46	33	No	Si
SLU 42	6.92	-2254.21	-16260	-0.0000853	0.0003743	0.0035	1.67	8939.98	10804.16	10804.16	4.79	No	Si
SLU 41	4.82	-347.45	-17472	-0.0000647	0.0003743	0.0035	1.67	9234.95	11289.49	11289.49	32.49	No	Si
SLU 41	6.92	-2246.58	-16234	-0.0000851	0.0003743	0.0035	1.67	8933.23	10794.22	10794.22	4.8	No	Si
SLU 39	4.82	-334.83	-17096	-0.0000631	0.0003743	0.0035	1.67	9148.93	11136.31	11136.31	33.26	No	Si
SLU 39	6.92	-2215.93	-15845	-0.0000831	0.0003743	0.0035	1.67	8827.33	10643.79	10643.79	4.8	No	Si
SLU 76	4.82	-319.34	-19725	-0.0000732	0.0003743	0.0035	1.67	9646.39	12157.36	12157.36	38.07	No	Si
SLU 76	6.92	-2339.94	-18315	-0.0000949	0.0003743	0.0035	1.67	9409.85	11641.51	11641.51	4.98	No	Si
SLU 84	4.82	-381.64	-20573	-0.0000774	0.0003743	0.0035	1.67	9755.13	12382.64	12382.64	32.45	No	Si
SLU 84	6.92	-2521.04	-19027	-0.0001005	0.0003743	0.0035	1.67	9537.96	11947.39	11947.39	4.74	No	Si
SLU 81	4.82	-374.22	-20185	-0.0000758	0.0003743	0.0035	1.67	9708.5	12278.44	12278.44	32.81	No	Si
SLU 81	6.92	-2482.76	-18613	-0.0000982	0.0003743	0.0035	1.67	9465.52	11768.27	11768.27	4.74	No	Si
SLU 73	4.82	-306.72	-19349	-0.0000715	0.0003743	0.0035	1.67	9590.11	12060.29	12060.29	39.32	No	Si
SLU 73	6.92	-2309.28	-17927	-0.0000929	0.0003743	0.0035	1.67	9332.34	11477.83	11477.83	4.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	4.82	5122.17	-8685	-0.000137	0.0005615	0.0035	1.67		6637.91	6637.91	1.3		Si
SLV 2	6.92	-7283.83	-16806	-0.0001657	0.0005615	0.0035	1.67		12271.64	12271.64	1.68		Si
SLV 14	4.82	-4923.37	-16300	-0.0001164	0.0005615	0.0035	1.67		11986.8	11986.8	2.43		Si
SLV 14	6.92	3972.44	-6730	-0.0001035	0.0005615	0.0035	1.67		5378.91	5378.91	1.35		Si
SLD 2	4.82	2087.14	-11434	-0.0000623	0.0005615	0.0035	1.67		8356.37	8356.37	4		Si
SLD 2	6.92	-3963.42	-14332	-0.0000961	0.0005615	0.0035	1.67		10854.01	10854.01	2.74		Si
SLV 1	4.82	4787.9	-8826	-0.0001146	0.0005615	0.0035	1.67		6724.42	6724.42	1.4		Si
SLV 1	6.92	-6859.96	-16339	-0.0001544	0.0005615	0.0035	1.67		12008.83	12008.83	1.75		Si
SLV 4	4.82	4906.7	-10555	-0.0001077	0.0005615	0.0035	1.67		7800.6	7800.6	1.59		Si
SLV 4	6.92	-7364.59	-18746	-0.0001682	0.0005615	0.0035	1.67		13310.02	13310.02	1.81		Si
SLV 3	4.82	4572.43	-10696	-0.0000984	0.0005615	0.0035	1.67		7889.08	7889.08	1.73		Si
SLV 3	6.92	-6940.73	-18280	-0.000158	0.0005615	0.0035	1.67		13061.96	13061.96	1.88		Si
SLV 16	4.82	-5138.84	-18170	-0.0001262	0.0005615	0.0035	1.67		13003.56	13003.56	2.53		Si
SLV 16	6.92	3891.67	-8671	-0.0000832	0.0005615	0.0035	1.67		6629.28	6629.28	1.7		Si
SLV 13	4.82	-5257.63	-16441	-0.000122	0.0005615	0.0035	1.67		12066.12	12066.12	2.29		Si
SLV 13	6.92	4396.31	-6264	-0.00019	0.0005615	0.0035	1.67		5041.99	5041.99	1.15		Si
SLV 15	4.82	-5473.1	-18311	-0.0001315	0.0005615	0.0035	1.67		13078.27	13078.27	2.39		Si
SLV 15	6.92	4315.54	-8205	-0.0000997	0.0005615	0.0035	1.67		6343.4	6343.4	1.47		Si
SLV 6	4.82	1797.9	-9194	-0.000051	0.0005615	0.0035	1.67		6951.55	6951.55	3.87		Si
SLV 6	6.92	-3174.18	-10931	-0.0000738	0.0005615	0.0035	1.67		8747.36	8747.36	2.76		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	4.82	-341.57	-20301	-16905	487	1.67	1.67	-36151	10833	5066	80882	14002	4259	18261	No	37.47	Si
SLU 78	6.92	-2384.58	-18897	-15736	2999	1.67	1.67	-33651	10833	5066	80882	14002	4259	18261	No	6.09	Si
SLU 70	4.82	-204.29	-18303	-15241	761	1.67	1.67	-32593	10833	5066	80882	14002	4259	18261	No	23.98	Si
SLU 70	6.92	-1950.15	-17197	-14320	3119	1.67	1.67	-30624	10833	5066	80882	14002	4259	18261	No	5.85	Si
SLU 72	4.82	-198.15	-18095	-15068	759	1.67	1.67	-32224	10833	5066	80882	14002	4259	18261	No	24.06	Si
SLU 72	6.92	-1931.08	-16987	-14146	3091	1.67	1.67	-30251	10833	5066	80882	14002	4259	18261	No	5.91	Si
SLU 67	4.82	-191.67	-17926	-14928	758	1.67	1.67	-31924	10833	5066	80882	14002	4259	18261	No	24.1	Si
SLU 67	6.92	-1919.49	-16808	-13996	3058	1.67	1.67	-29932	10833	5066	80882	14002	4259	18261	No	5.97	Si
SLU 65	4.82	-169.44	-17351	-14449	759	1.67	1.67	-30899	10833	5066	80882	14002	4259	18261	No	24.06	Si
SLU 65	6.92	-1874.85	-16227	-13512	2977	1.67	1.67	-28897	10797	5049	80882	14002	4259	18261	No	6.13	Si
SLU 69	4.82	-209.49	-18290	-15231	750	1.67	1.67	-32572	10833	5066	80882	14002	4259	18261	No	24.33	Si
SLU 69	6.92	-1942.52	-17171	-14299	3106	1.67	1.67	-30579	10833	5066	80882	14002	4259	18261	No	5.88	Si
SLU 71	4.82	-203.35	-18083	-15058	748	1.67	1.67	-32202	10833	5066	80882	14002	4259	18261	No	24.42	Si
SLU 71	6.92	-1923.45	-16962	-14124	3078	1.67	1.67	-30206	10833	5066	80882	14002	4259	18261	No	5.93	Si
SLU 66	4.82	-196.87	-17914	-14918	747	1.67	1.67	-31902	10833	5066	80882	14002	4259	18261	No	24.45	Si
SLU 66	6.92	-1911.87	-16783	-13975	3045	1.67	1.67	-29887	10833	5066	80882	14002	4259	18261	No	6	Si
SLU 77	4.82	-346.77	-20288	-16894	476	1.67	1.67	-36130	10833	5066	80882	14002	4259	18261	No	38.34	Si
SLU 77	6.92	-2376.95	-18871	-15714	2986	1.67	1.67	-33606	10833	5066	80882	14002	4259	18261	No	6.12	Si
SLU 68	4.82	-182.06	-17727	-14762	763	1.67	1.67	-31569	10833	5066	80882	14002	4259	18261	No	23.94	Si
SLU 68	6.92	-1905.5	-16616	-13836	3038	1.67	1.67	-29589	10833	5066	80882	14002	4259	18261	No	6.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	4.82	5122.17	-8685	-7232	10166	1.67	0.7357	-15467	13510	2783	80882	21003	4259	25262		2.48	Si
SLV 2	6.92	-7283.83	-16806	-13994	10510	1.67	1.2048	-42491	16250	5482	80882	21003	4259	25262		2.4	Si
SLV 16	4.82	-5138.84	-18170	-15130	-8630	1.67	1.6566	-32357	16250	7537	80882	21003	4259	25262		2.93	Si
SLV 16	6.92	3891.67	-8671	-7221	-5638	1.67	1.1586	-15442	13505	4381	80882	21003	4259	25262		4.48	Si
SLD 2	4.82	2087.14	-11434	-9522	4610	1.67	1.67	-20362	14489	6775	80882	21003	4259	25262		5.48	Si
SLD 2	6.92	-3963.42	-14332	-11934	5716	1.67	1.67	-25522	15521	7258	80882	21003	4259	25262		4.42	Si
SLV 14	4.82	-4923.37	-16300	-13573	-7941	1.67	1.5989	-29027	16222	7262	80882	21003	4259	25262		3.18	Si
SLV 14	6.92	3972.44	-6730	-5604	-5537	1.67	0.7343	-11985	12814	2635	80882	21003	4259	25262		4.56	Si
SLV 4	4.82	4906.7	-10555	-8789	9478	1.67	1.1104	-18797	14176	4408	80882	21003	4259	25262		2.67	Si
SLV 4	6.92	-7364.59	-18746	-15610	10409	1.67	1.3265	-43049	16250	6035	80882	21003	4259	25262		2.43	Si
SLV 1	4.82	4787.9	-8826	-7349	9560	1.67	0.8776	-15717	13560	3332	80882	21003	4259	25262		2.64	Si
SLV 1	6.92	-6859.96	-16339	-13606	9918	1.67	1.2455	-39892	16250	5667	80882	21003	4259	25262		2.55	Si
SLV 15	4.82	-5473.1	-18311	-15247	-9236	1.67	1.6083	-32608	16250	7318	80882	21003	4259	25262		2.74	Si
SLV 15	6.92	4315.54	-8205	-6832	-6229	1.67	0.927	-14611	13339	3462	80882	21003	4259	25262		4.06	Si
SLV 13	4.82	-5257.63	-16441	-13690	-8548	1.67	1.5456	-32187	16250	7033	80882	21003	4259	25262		2.96	Si
SLV 13	6.92	4396.31	-6264	-5216	-6128	1.67	0.3994	-47933	16250	1817	80882	21003	4259	25262		4.12	Si
SLD 4	4.82	1998.01	-12248	-10199	4319	1.67	1.67	-21811	14779	6911	80882	21003	4259	25262		5.85	Si
SLD 4	6.92	-3996.07	-15184	-12644	5674	1.67	1.67	-27040	15825	7400	80882	21003	4259	25262		4.45	Si
SLV 3	4.82	4572.43	-10696	-8907	8872	1.67	1.2225	-19047	14226	4870	80882	21003	4259	25262		2.85	Si
SLV 3	6.92	-6940.73	-18280	-15222	9818	1.67	1.366	-40711	16250	6215	80882	21003	4259	25262		2.57	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.35	18574	-8685	600.42	1068.04	1.78	Si
SLV 1	179667	0.35	18874	-8826	600.42	1082.9	1.8	Si
SLV 6	179667	0.35	19661	-9194	600.42	1121.42	1.87	Si
SLV 5	179667	0.35	19855	-9284	600.42	1130.8	1.88	Si
SLV 4	179667	0.35	22573	-10555	600.42	1259.3	2.1	Si
SLV 3	179667	0.35	22873	-10696	600.42	1273.13	2.12	Si
SLV 10	179667	0.35	24547	-11478	600.42	1348.66	2.25	Si
SLV 9	179667	0.35	24740	-11569	600.42	1357.23	2.26	Si
SLV 8	179667	0.35	32992	-15427	600.42	1693.21	2.82	Si
SLV 7	179667	0.35	33185	-15517	600.42	1700.38	2.83	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-12009	-18614	-80	0.647	1687.6	0.927	10.14127	15.31518	No
SLV 16	-11952	-18450	-79	0.649	1681.9	0.927	10.18182	15.31518	No
SLV 13	-10014	-17965	-209	0.734	1487	0.92	11.59419	15.31518	No
SLV 14	-9957	-17801	-208	0.737	1481.3	0.919	11.64787	15.31518	No
SLV 3	-8134	-7866	243	0.852	1299.1	0.911	13.58164	15.31518	No
SLV 4	-8077	-7702	244	0.856	1293.5	0.911	13.65298	15.31518	No
SLV 1	-6139	-7217	115	1.049	1101.7	0.901	16.91049	15.31518	Si
SLV 2	-6082	-7053	116	1.055	1096.1	0.901	17.01924	15.31518	Si
SLV 11	-12971	-15580	183	0.602	1784.6	0.93	9.41298	6.0451	Si
SLV 12	-12934	-15474	184	0.604	1780.9	0.93	9.4346	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.73	SLU 82	Si
V_SLU	5.854	SLU 70	Si
PF_SLV	1.147	SLV 13	Si
V_SLV	2.404	SLV 2	Si
PFFP_SLV	1.779	SLV 2	Si
R_SLV	0.662	SLV 15	No

Maschio 260

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	1.006	L4	L6	4.32	0.16	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	1.39	12722.33	-67027	-0.0001805	0.0004492	0.0035	4.32	29877.63	99108.44	99108.44	7.79	No	Si
SLU 77	8.34	1774.56	-28384	-0.0000582	0.0004492	0.0035	4.32	40704.57	52875.01	52875.01	29.8	No	Si
SLU 74	1.39	12608.12	-66149	-0.0001778	0.0004492	0.0035	4.32	30971.2	98378.87	98378.87	7.8	No	Si
SLU 74	8.34	1760.13	-27729	-0.0000569	0.0004492	0.0035	4.32	40229.43	51857.6	51857.6	29.46	No	Si
SLU 82	1.39	12922.02	-67203	-0.0001817	0.0004492	0.0035	4.32	29653.51	99254.8	99254.8	7.68	No	Si
SLU 82	8.34	1698.72	-27688	-0.0000566	0.0004492	0.0035	4.32	40199.08	51794.16	51794.16	30.49	No	Si
SLU 78	1.39	12710.17	-67029	-0.0001805	0.0004492	0.0035	4.32	29874.83	99110.27	99110.27	7.8	No	Si
SLU 78	8.34	1743.95	-28383	-0.0000582	0.0004492	0.0035	4.32	40704.14	52874.06	52874.06	30.32	No	Si
SLU 80	1.39	12629.86	-66475	-0.0001787	0.0004492	0.0035	4.32	30569.45	98649.96	98649.96	7.81	No	Si
SLU 80	8.34	1677.82	-27963	-0.0000571	0.0004492	0.0035	4.32	40401.89	52221.48	52221.48	31.12	No	Si
SLU 84	1.39	13036.23	-68081	-0.0001845	0.0004492	0.0035	4.32	28512.64	99984.37	99984.37	7.67	No	Si
SLU 84	8.34	1713.15	-28343	-0.000058	0.0004492	0.0035	4.32	40675.59	52811.57	52811.57	30.83	No	Si
SLU 81	1.39	12934.18	-67201	-0.0001817	0.0004492	0.0035	4.32	29656.33	99252.96	99252.96	7.67	No	Si
SLU 81	8.34	1729.34	-27688	-0.0000567	0.0004492	0.0035	4.32	40199.53	51795.11	51795.11	29.95	No	Si
SLU 79	1.39	12642.02	-66473	-0.0001788	0.0004492	0.0035	4.32	30572.18	98648.13	98648.13	7.8	No	Si
SLU 79	8.34	1708.43	-27964	-0.0000572	0.0004492	0.0035	4.32	40402.34	52222.43	52222.43	30.57	No	Si
SLU 83	1.39	13048.38	-68078	-0.0001845	0.0004492	0.0035	4.32	28515.56	99982.54	99982.54	7.66	No	Si
SLU 83	8.34	1743.77	-28344	-0.0000581	0.0004492	0.0035	4.32	40676.02	52812.52	52812.52	30.29	No	Si
SLU 75	1.39	12595.97	-66152	-0.0001778	0.0004492	0.0035	4.32	30968.5	98380.7	98380.7	7.81	No	Si
SLU 75	8.34	1729.52	-27728	-0.0000568	0.0004492	0.0035	4.32	40228.98	51856.65	51856.65	29.98	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	1.39	9665.96	-47853	-0.000118	0.0006738	0.0035	4.32		84563.72	84563.72	8.75		Si
SLV 9	8.34	6407.11	-19488	-0.0000523	0.0006738	0.0035	4.32		40147.64	40147.64	6.27		Si
SLV 10	1.39	9426.24	-48254	-0.0001182	0.0006738	0.0035	4.32		85053.72	85053.72	9.02		Si
SLV 10	8.34	6676.19	-19479	-0.000053	0.0006738	0.0035	4.32		40130.59	40130.59	6.01		Si
SLV 2	1.39	7655.06	-43293	-0.0001029	0.0006738	0.0035	4.32		78087.88	78087.88	10.2		Si
SLV 2	8.34	5264.94	-15997	-0.0000427	0.0006738	0.0035	4.32		33729.61	33729.61	6.41		Si
SLV 13	1.39	10092.54	-48893	-0.0001214	0.0006738	0.0035	4.32		85835.55	85835.55	8.5		Si
SLV 13	8.34	704.38	-21422	-0.0000411	0.0006738	0.0035	4.32		43622	43622	61.93		Si
SLV 15	1.39	9781.72	-48013	-0.0001187	0.0006738	0.0035	4.32		84759.25	84759.25	8.67		Si
SLV 15	8.34	-2877	-21454	-0.0000468	0.0006738	0.0035	4.32		52481.32	52481.32	18.24		Si
SLV 1	1.39	8028.06	-42670	-0.0001026	0.0006738	0.0035	4.32		77110.07	77110.07	9.61		Si
SLV 1	8.34	4846.25	-16012	-0.0000417	0.0006738	0.0035	4.32		33757.05	33757.05	6.97		Si
SLV 14	1.39	9719.55	-49517	-0.0001217	0.0006738	0.0035	4.32		86597.98	86597.98	8.91		Si
SLV 14	8.34	1123.07	-21407	-0.0000422	0.0006738	0.0035	4.32		43595.93	43595.93	38.82		Si
SLV 5	1.39	9046.61	-45986	-0.0001123	0.0006738	0.0035	4.32		82280.52	82280.52	9.1		Si
SLV 5	8.34	7649.67	-17865	-0.0000525	0.0006738	0.0035	4.32		37188.48	37188.48	4.86		Si
SLV 11	1.39	8629.89	-44920	-0.000109	0.0006738	0.0035	4.32		80638.43	80638.43	9.34		Si
SLV 11	8.34	-5530.81	-19595	-0.0000502	0.0006738	0.0035	4.32		49197.87	49197.87	8.9		Si
SLV 6	1.39	8806.89	-46387	-0.0001125	0.0006738	0.0035	4.32		82770.51	82770.51	9.4		Si
SLV 6	8.34	7918.75	-17856	-0.0000532	0.0006738	0.0035	4.32		37171.14	37171.14	4.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	1.39	10072	-52883	-31051	1077	4.32	4.32	-44923	10833	7488	231091	24840	22032	46872	No	43.52	Si
SLU 44	8.34	1321.98	-21468	-12605	3178	4.32	4.32	-18236	10765	7441	231091	24840	22032	46872	No	14.75	Si
SLU 48	1.39	10400.98	-55189	-32404	998	4.32	4.32	-46881	10833	7488	231091	24840	22032	46872	No	46.95	Si
SLU 48	8.34	1467.99	-23200	-13622	3259	4.32	4.32	-19708	10833	7488	231091	24840	22032	46872	No	14.38	Si
SLU 46	1.39	10274.62	-54313	-31890	1024	4.32	4.32	-46138	10833	7488	231091	24840	22032	46872	No	45.76	Si
SLU 46	8.34	1422.95	-22544	-13237	3216	4.32	4.32	-19150	10833	7488	231091	24840	22032	46872	No	14.58	Si
SLU 51	1.39	10308.51	-54637	-32081	1068	4.32	4.32	-46413	10833	7488	231091	24840	22032	46872	No	43.91	Si
SLU 51	8.34	1371.25	-22779	-13375	3293	4.32	4.32	-19350	10833	7488	231091	24840	22032	46872	No	14.23	Si
SLU 47	1.39	10186.2	-53761	-31566	1083	4.32	4.32	-45669	10833	7488	231091	24840	22032	46872	No	43.28	Si
SLU 47	8.34	1336.41	-22123	-12990	3242	4.32	4.32	-18793	10833	7488	231091	24840	22032	46872	No	14.46	Si
SLU 49	1.39	10388.82	-55191	-32406	1030	4.32	4.32	-46883	10833	7488	231091	24840	22032	46872	No	45.5	Si
SLU 49	8.34	1437.38	-23199	-13622	3280	4.32	4.32	-19707	10833	7488	231091	24840	22032	46872	No	14.29	Si
SLU 50	1.39	10320.66	-54635	-32079	1036	4.32	4.32	-46411	10833	7488	231091	24840	22032	46872	No	45.25	Si
SLU 50	8.34	1401.86	-22780	-13375	3272	4.32	4.32	-19351	10833	7488	231091	24840	22032	46872	No	14.33	Si
SLU 45	1.39	10286.77	-54311	-31889	992	4.32	4.32	-46136	10833	7488	231091	24840	22032	46872	No	47.23	Si
SLU 45	8.34	1453.56	-22545	-13237	3195	4.32	4.32	-19151	10833	7488	231091	24840	22032	46872	No	14.67	Si
SLU 43	1.39	10092.26	-52880	-31049	1024	4.32	4.32	-44920	10833	7488	231091	24840	22032	46872	No	45.76	Si
SLU 43	8.34	1373	-21469	-12605	3143	4.32	4.32	-18237	10765	7441	231091	24840	22032	46872	No	14.91	Si
SLU 59	1.39	11523.17	-60430	-35482	649	4.32	4.32	-51334	10833	7488	231091	24840	22032	46872	No	72.19	Si
SLU 59	8.34	1487.37	-25195	-14794	3085	4.32	4.32	-21403	10833	7488	231091	24840	22032	46872	No	15.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	1.39	7770.83	-43453	-25514	7774	4.32	4.32	-36912	16250	11232	231091	37260	22032	59292		7.63	Si
SLV 8	8.34	-4019.17	-17963	-10547	3127	4.32	4.32	-15259	15552	10749	231091	37260	22032	59292		18.96	Si
SLV 16	1.39	9408.73	-48637	-28557	4263	4.32	4.32	-41316	16250	11232	231091	37260	22032	59292		13.91	Si
SLV 16	8.34	-2458.31	-21439	-12588	4198	4.32	4.32	-18212	16142	11158	231091	37260	22032	59292		14.12	Si
SLV 9	1.39	9665.96	-47853	-28097	-6967	4.32	4.32	-40650	16250	11232	231091	37260	22032	59292		8.51	Si
SLV 9	8.34	6407.11	-19488	-11442	1316	4.32	4.32	-16555	15811	10928	231091	37260	22032	59292		45.05	Si
SLV 10	1.39	9426.24	-48254	-28333	-7296	4.32	4.32	-40991	16250	11232	231091	37260	22032	59292		8.13	Si
SLV 10	8.34	6676.19	-19479	-11437	1030	4.32	4.32	-16547	15809	10927	231091	37260	22032	59292		57.55	Si
SLV 11	1.39	8629.89	-44920	-26375	9125	4.32	4.32	-38158	16250	11232	231091	37260	22032	59292		6.5	Si
SLV 11	8.34	-5530.81	-19595	-11505	4450	4.32	4.32	-16646	15829	10941	231091	37260	22032	59292		13.32	Si
SLV 7	1.39	8010.55	-43053	-25279	8104	4.32	4.32	-36572	16250	11232	231091	37260	22032	59292		7.32	Si
SLV 7	8.34	-4288.25	-17972	-10553	3413	4.32	4.32	-15267	15553	10751	231091	37260	22032	59292		17.37	Si
SLV 5	1.39	9046.61	-45986	-27001	-7988	4.32	4.32	-39064	16250	11232	231091	37260	22032	59292		7.42	Si
SLV 5	8.34	7649.67	-17865	-10490	279	4.32	4.32	-15176	15535	10738	231091	37260	22032	59292		212.72	Si
SLV 6	1.39	8806.89	-46387	-27236	-8318	4.32	4.32	-39405	16250	11232	231091	37260	22032	59292		7.13	Si
SLV 6	8.34	7918.75	-17856	-10484	-7	4.32	4.32	-15168	15534	10737	231091	37260	22032	59292		8388.73	Si
SLV 15	1.39	9781.72	-48013	-28191	4776	4.32	4.32	-40786	16250	11232	231091	37260	22032	59292		12.41	Si
SLV 15	8.34	-2877	-21454	-12597	4643	4.32	4.32	-18224	16145	11159	231091	37260	22032	59292		12.77	Si
SLV 12	1.39	8390.17	-45320	-26610	8796	4.32	4.32	-38498	16250	11232	231091	37260	22032	59292		6.74	Si
SLV 12	8.34	-5261.73	-19586	-11500	4164	4.32	4.32	-16638	15828	10940	231091	37260	22032	59292		14.24	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 4.865 Ta 0.5 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-27306	0.35	939.12	1713.63	2865.22	2289.43	2.44	Si
SLV 3	-27426	0.35	939.12	1719.09	2875.93	2297.51	2.45	Si
SLV 2	-27536	0.35	939.12	1724.08	2885.74	2304.91	2.45	Si
SLV 4	-27656	0.35	939.12	1729.5	2896.45	2312.97	2.46	Si
SLV 5	-29204	0.35	939.12	1797.74	3034.45	2416.1	2.57	Si
SLV 6	-29352	0.35	939.12	1804.11	3047.65	2425.88	2.58	Si
SLV 7	-29604	0.35	939.12	1814.9	3070.17	2442.53	2.6	Si
SLV 8	-29752	0.35	939.12	1821.19	3083.37	2452.28	2.61	Si
SLV 9	-30916	0.35	939.12	1869.69	3187.18	2528.44	2.69	Si
SLV 10	-31064	0.35	939.12	1875.74	3200.39	2538.06	2.7	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.03 Ta = 0.5041

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-21422	-48893	514	0.936	2864.9	0.935	14.55397	7.46298	Si
SLV 14	-21407	-49517	514	0.937	2863.5	0.935	14.56257	7.46298	Si
SLV 15	-21454	-48013	458	0.937	2868.2	0.935	14.5686	7.46298	Si
SLV 16	-21439	-48637	458	0.938	2866.7	0.935	14.57719	7.46298	Si
SLV 3	-16044	-41790	-515	1.18	2322.7	0.923	18.58425	7.46298	Si
SLV 4	-16029	-42413	-515	1.181	2321.2	0.923	18.59819	7.46298	Si
SLV 1	-16012	-42670	-459	1.185	2319.5	0.923	18.65808	7.46298	Si
SLV 2	-15997	-43293	-459	1.185	2318	0.923	18.6721	7.46298	Si
SLV 9	-19488	-47853	238	1.023	2669.6	0.931	15.96723	2.39674	Si
SLV 10	-19479	-48254	238	1.023	2668.7	0.931	15.9738	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.662	SLU 83	Si
V_SLU	14.235	SLU 51	Si
PF_SLV	4.694	SLV 6	Si
V_SLV	6.497	SLV 11	Si
PFFP_SLV	2.438	SLV 1	Si
R_SLV	1.95	SLV 13	Si

Maschio 261

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	-3.314	-8.433	-3.314	L4	L6	0.97	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	4.82	1183.4	-12239	-0.0001237	0.0003743	0.0035	0.97	3308.72	4098.05	4098.05	3.46	No	Si
SLU 79	6.92	-71.86	-12886	-0.0000817	0.0003743	0.0035	0.97	3337.43	4328.94	4328.94	60.24	No	Si
SLU 70	4.82	1120.69	-11265	-0.0001134	0.0003743	0.0035	0.97	3237.84	3894.02	3894.02	3.47	No	Si
SLU 70	6.92	-137.92	-11556	-0.0000751	0.0003743	0.0035	0.97	3262.57	4113.23	4113.23	29.82	No	Si
SLU 74	4.82	1175.08	-12141	-0.0001225	0.0003743	0.0035	0.97	3303.11	4077.23	4077.23	3.47	No	Si
SLU 74	6.92	-73.87	-12768	-0.0000809	0.0003743	0.0035	0.97	3333.29	4308.93	4308.93	58.33	No	Si
SLU 75	4.82	1178.62	-12153	-0.0001228	0.0003743	0.0035	0.97	3303.85	4079.91	4079.91	3.46	No	Si
SLU 75	6.92	-77.76	-12775	-0.0000811	0.0003743	0.0035	0.97	3333.53	4310.03	4310.03	55.43	No	Si
SLU 76	4.82	1168.51	-12027	-0.0001213	0.0003743	0.0035	0.97	3296.17	4053.13	4053.13	3.47	No	Si
SLU 76	6.92	-78.2	-12626	-0.0000801	0.0003743	0.0035	0.97	3327.67	4285.13	4285.13	54.8	No	Si
SLU 83	4.82	1196.35	-12487	-0.0001262	0.0003743	0.0035	0.97	3321.46	4151.28	4151.28	3.47	No	Si
SLU 83	6.92	-45.99	-13254	-0.0000832	0.0003743	0.0035	0.97	3347.18	4392.2	4392.2	95.51	No	Si
SLU 78	4.82	1199.42	-12386	-0.0001255	0.0003743	0.0035	0.97	3316.54	4129.57	4129.57	3.44	No	Si
SLU 78	6.92	-77.9	-13046	-0.000083	0.0003743	0.0035	0.97	3342.24	4356.2	4356.2	55.92	No	Si
SLU 80	4.82	1186.94	-12251	-0.0001239	0.0003743	0.0035	0.97	3309.42	4100.75	4100.75	3.45	No	Si
SLU 80	6.92	-75.75	-12893	-0.0000819	0.0003743	0.0035	0.97	3337.65	4330.06	4330.06	57.17	No	Si
SLU 77	4.82	1195.88	-12373	-0.0001253	0.0003743	0.0035	0.97	3315.9	4126.86	4126.86	3.45	No	Si
SLU 77	6.92	-74.01	-13039	-0.0000828	0.0003743	0.0035	0.97	3342.06	4355.07	4355.07	58.85	No	Si
SLU 84	4.82	1199.89	-12499	-0.0001265	0.0003743	0.0035	0.97	3322.05	4154	4154	3.46	No	Si
SLU 84	6.92	-49.88	-13260	-0.0000834	0.0003743	0.0035	0.97	3347.31	4393.34	4393.34	88.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	4.82	3358.91	-10829	-0.0002677	0.0005615	0.0035	0.97		4221.58	4221.58	1.26		Si
SLV 2	6.92	-4259.58	-2069	-0.0147849	0.0005615	0.0035	0.776		1189.46	1189.46	0.28		No
SLV 5	4.82	1391.11	-7344	-0.0000928	0.0005615	0.0035	0.97		3086.66	3086.66	2.22		Si
SLV 5	6.92	-1558.02	-4510	-0.0001231	0.0005615	0.0035	0.776		2230.51	2230.51	1.43		Si
SLV 14	4.82	-1622.98	-4971	-0.0001193	0.0005615	0.0035	0.776		2416.32	2416.32	1.49		Si
SLV 14	6.92	3578.28	-13103	-0.0002671	0.0005615	0.0035	0.97		4909.74	4909.74	1.37		Si
SLV 3	4.82	3241.29	-11502	-0.0002384	0.0005615	0.0035	0.97		4422.65	4422.65	1.36		Si
SLV 3	6.92	-3727.55	-3842	-0.0096399	0.0005615	0.0035	0.776		1956.32	1956.32	0.52		No
SLV 13	4.82	-1804.76	-4644	-0.0001911	0.0005615	0.0035	0.776		2284.84	2284.84	1.27		Si
SLV 13	6.92	3869.53	-13428	-0.0003048	0.0005615	0.0035	0.97		5010.46	5010.46	1.29		Si
SLV 16	4.82	-1558.83	-5971	-0.0001001	0.0005615	0.0035	0.776		2807.29	2807.29	1.8		Si
SLV 16	6.92	3819.05	-14549	-0.0002877	0.0005615	0.0035	0.97		5269.09	5269.09	1.38		Si
SLV 1	4.82	3177.14	-10502	-0.0002435	0.0005615	0.0035	0.97		4124.6	4124.6	1.3		Si
SLV 1	6.92	-3968.33	-2395	-0.0129662	0.0005615	0.0035	0.776		1334.02	1334.02	0.34		No
SLV 4	4.82	3423.06	-11829	-0.0002594	0.0005615	0.0035	0.97		4520.98	4520.98	1.32		Si
SLV 4	6.92	-4018.8	-3516	-0.0114138	0.0005615	0.0035	0.776		1819.17	1819.17	0.45		No
SLV 6	4.82	1507.93	-7554	-0.0000993	0.0005615	0.0035	0.97		3166.98	3166.98	2.1		Si
SLV 6	6.92	-1745.2	-4301	-0.0002159	0.0005615	0.0035	0.776		2145.45	2145.45	1.23		Si
SLV 15	4.82	-1740.6	-5644	-0.0001219	0.0005615	0.0035	0.776		2684.2	2684.2	1.54		Si
SLV 15	6.92	4110.3	-14875	-0.0003242	0.0005615	0.0035	0.97		5336.28	5336.28	1.3		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	4.82	1168.51	-12027	-10015	773	0.97	0.97	-36874	10833	2942	80882	8133	2474	10607	No	13.72	Si
SLU 76	6.92	-78.2	-12626	-10514	-186	0.97	0.97	-38711	10833	2942	80882	8133	2474	10607	No	57.16	Si
SLU 82	4.82	1179.1	-12267	-10215	772	0.97	0.97	-37609	10833	2942	80882	8133	2474	10607	No	13.75	Si
SLU 82	6.92	-49.74	-12989	-10816	-248	0.97	0.97	-39823	10833	2942	80882	8133	2474	10607	No	42.74	Si
SLU 79	4.82	1183.4	-12239	-10191	779	0.97	0.97	-37522	10833	2942	80882	8133	2474	10607	No	13.61	Si
SLU 79	6.92	-71.86	-12886	-10731	-201	0.97	0.97	-39508	10833	2942	80882	8133	2474	10607	No	52.71	Si
SLU 80	4.82	1186.94	-12251	-10202	783	0.97	0.97	-37561	10833	2942	80882	8133	2474	10607	No	13.55	Si
SLU 80	6.92	-75.75	-12893	-10736	-195	0.97	0.97	-39528	10833	2942	80882	8133	2474	10607	No	54.41	Si
SLU 77	4.82	1195.88	-12373	-10303	786	0.97	0.97	-37935	10833	2942	80882	8133	2474	10607	No	13.49	Si
SLU 77	6.92	-74.01	-13039	-10858	-201	0.97	0.97	-39977	10833	2942	80882	8133	2474	10607	No	52.88	Si
SLU 84	4.82	1199.89	-12499	-10408	784	0.97	0.97	-38322	10833	2942	80882	8133	2474	10607	No	13.53	Si
SLU 84	6.92	-49.88	-13260	-11042	-253	0.97	0.97	-40654	10833	2942	80882	8133	2474	10607	No	41.87	Si
SLU 74	4.82	1175.08	-12141	-10110	774	0.97	0.97	-37223	10833	2942	80882	8133	2474	10607	No	13.71	Si
SLU 74	6.92	-73.87	-12768	-10632	-195	0.97	0.97	-39146	10833	2942	80882	8133	2474	10607	No	54.27	Si
SLU 83	4.82	1196.35	-12487	-10398	780	0.97	0.97	-38283	10833	2942	80882	8133	2474	10607	No	13.59	Si
SLU 83	6.92	-45.99	-13254	-11036	-260	0.97	0.97	-40634	10833	2942	80882	8133	2474	10607	No	40.85	Si
SLU 78	4.82	1199.42	-12386	-10314	790	0.97	0.97	-37974	10833	2942	80882	8133	2474	10607	No	13.43	Si
SLU 78	6.92	-77.9	-13046	-10863	-194	0.97	0.97	-39997	10833	2942	80882	8133	2474	10607	No	54.59	Si
SLU 75	4.82	1178.62	-12153	-10120	777	0.97	0.97	-37261	10833	2942	80882	8133	2474	10607	No	13.64	Si
SLU 75	6.92	-77.76	-12775	-10638	-189	0.97	0.97	-39166	10833	2942	80882	8133	2474	10607	No	56.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	4.82	-1622.98	-4971	-4140	-2146	0.776	0.4756	0	0	0	80882	9760	1979	11739		5.47	Si
SLV 14	6.92	3578.28	-13103	-10911	-6367	0.97	0.6357	-40171	16250	2893	80882	12200	2474	14673		2.3	Si
SLV 13	4.82	-1804.76	-4644	-3868	-2321	0.776	0.2893	0	0	0	80882	9760	1979	11739		5.06	Si
SLV 13	6.92	3869.53	-13428	-11182	-6903	0.97	0.5905	-41170	16250	2687	80882	12200	2474	14673		2.13	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	4.82	-1740.6	-5644	-4700	-2106	0.776	0.5299	0	0	0	80882	9760	1979	11739		5.57	Si
SLV 15	6.92	4110.3	-14875	-12387	-7471	0.97	0.6261	-45606	16250	2849	80882	12200	2474	14673		1.96	Si
SLV 3	4.82	3241.29	-11502	-9578	3233	0.97	0.6096	-35264	16250	2774	80882	12200	2474	14673		4.54	Si
SLV 3	6.92	-3727.55	-3842	-3199	6199	0.776	0	0	0	0	80882	9760	1979	11739		1.89	Si
SLD 2	4.82	1898.23	-9342	-7779	1677	0.97	0.8455	-28642	16145	3822	80882	12200	2474	14673		8.75	Si
SLD 2	6.92	-1863.67	-5728	-4770	3074	0.776	0.479	0	0	0	80882	9760	1979	11739		3.82	Si
SLV 1	4.82	3177.14	-10502	-8745	3018	0.97	0.5475	-32198	16250	2491	80882	12200	2474	14673		4.86	Si
SLV 1	6.92	-3968.33	-2395	-1994	6767	0.776	0	0	0	0	80882	9760	1979	11739		1.73	Si
SLV 6	4.82	1507.93	-7554	-6290	1042	0.97	0.8561	-23159	15048	3607	80882	12200	2474	14673		14.08	Si
SLV 6	6.92	-1745.2	-4301	-3581	3085	0.776	0.2377	0	0	0	80882	9760	1979	11739		3.8	Si
SLV 16	4.82	-1558.83	-5971	-4972	-1931	0.776	0.6718	0	0	0	80882	9760	1979	11739		6.08	Si
SLV 16	6.92	3819.05	-14549	-12116	-6935	0.97	0.6676	-44607	16250	3037	80882	12200	2474	14673		2.12	Si
SLV 2	4.82	3358.91	-10829	-9017	3193	0.97	0.5245	-33200	16250	2386	80882	12200	2474	14673		4.6	Si
SLV 2	6.92	-4259.58	-2069	-1723	7303	0.776	0	0	0	0	80882	9760	1979	11739		1.61	Si
SLV 4	4.82	3423.06	-11829	-9850	3408	0.97	0.5869	-36266	16250	2670	80882	12200	2474	14673		4.31	Si
SLV 4	6.92	-4018.8	-3516	-2928	6735	0.776	0	0	0	0	80882	9760	1979	11739		1.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.35	17100	-4644	348.75	577.42	1.66	Si
SLV 14	179667	0.35	18303	-4971	348.75	612.55	1.76	Si
SLV 9	179667	0.35	20568	-5586	348.75	676.76	1.94	Si
SLV 15	179667	0.35	20782	-5644	348.75	682.68	1.96	Si
SLV 10	179667	0.35	21341	-5796	348.75	698.09	2	Si
SLV 16	179667	0.35	21985	-5971	348.75	715.62	2.05	Si
SLV 5	179667	0.35	27038	-7344	348.75	846.09	2.43	Si
SLV 6	179667	0.35	27811	-7554	348.75	864.93	2.48	Si
SLV 11	179667	0.35	32840	-8920	348.75	980.21	2.81	Si
SLV 12	179667	0.35	33613	-9130	348.75	996.82	2.86	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-8965	-11545	76	0.527	1181.2	0.937	8.17465	15.31518	No
SLV 3	-8787	-11137	76	0.536	1163.1	0.936	8.31498	15.31518	No
SLV 2	-8067	-10368	117	0.57	1090.4	0.933	8.87317	15.31518	No
SLV 1	-7889	-9960	117	0.58	1072.4	0.932	9.04061	15.31518	No
SLV 16	-3838	-7030	-117	0.989	666.7	0.904	15.90432	15.31518	Si
SLV 15	-3660	-6622	-117	1.021	649.2	0.902	16.45143	15.31518	Si
SLV 14	-2940	-5853	-76	1.186	578.9	0.896	19.22985	15.31518	Si
SLV 13	-2762	-5445	-76	1.232	561.7	0.895	20.01871	15.31518	Si
SLV 8	-8187	-11265	-39	0.571	1102.5	0.934	8.88534	6.0451	Si
SLV 7	-8073	-11003	-39	0.577	1090.9	0.933	8.99156	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.443	SLU 78	Si
V_SLU	13.431	SLU 78	Si
PF_SLV	0.279	SLV 2	No
V_SLV	1.607	SLV 2	Si
PFFP_SLV	1.656	SLV 13	Si
R_SLV	0.534	SLV 4	No

Maschio 262

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.463	-3.314	L4	L6	0.5	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 66	6.82	58.65	-6878	-0.0000911	0.0003743	0.0035	0.5	889.77	1152.02	1152.02	19.64	No	Si
SLU 66	7.62	-391.87	-7099	-0.0001494	0.0003743	0.0035	0.5	890.83	1193.06	1193.06	3.04	No	Si
SLU 65	6.82	63.13	-6626	-0.0000883	0.0003743	0.0035	0.5	886.45	1123.77	1123.77	17.8	No	Si
SLU 65	7.62	-383.95	-6862	-0.0001441	0.0003743	0.0035	0.5	889.62	1171.05	1171.05	3.05	No	Si
SLU 68	6.82	61.67	-6794	-0.0000904	0.0003743	0.0035	0.5	888.91	1142.6	1142.6	18.53	No	Si
SLU 68	7.62	-391.08	-7028	-0.0001481	0.0003743	0.0035	0.5	890.68	1186.43	1186.43	3.03	No	Si
SLU 72	6.82	59.58	-6958	-0.0000924	0.0003743	0.0035	0.5	890.35	1160.27	1160.27	19.47	No	Si
SLU 72	7.62	-397.18	-7188	-0.0001519	0.0003743	0.0035	0.5	890.78	1201.27	1201.27	3.02	No	Si
SLU 67	6.82	59.61	-6885	-0.0000914	0.0003743	0.0035	0.5	889.82	1152.73	1152.73	19.34	No	Si
SLU 67	7.62	-393.42	-7110	-0.0001499	0.0003743	0.0035	0.5	890.84	1194.08	1194.08	3.04	No	Si
SLU 69	6.82	57.2	-7047	-0.0000933	0.0003743	0.0035	0.5	890.73	1168.79	1168.79	20.43	No	Si
SLU 69	7.62	-399	-7266	-0.0001535	0.0003743	0.0035	0.5	890.51	1207.75	1207.75	3.03	No	Si
SLU 78	6.82	40.28	-7893	-0.0001029	0.0003743	0.0035	0.5	880.55	1214.55	1214.55	30.15	No	Si
SLU 78	7.62	-410.07	-8098	-0.0001703	0.0003743	0.0035	0.5	874.31	1250.82	1250.82	3.05	No	Si
SLU 77	6.82	39.33	-7887	-0.0001026	0.0003743	0.0035	0.5	880.72	1214.22	1214.22	30.88	No	Si
SLU 77	7.62	-408.52	-8087	-0.0001698	0.0003743	0.0035	0.5	874.68	1250.31	1250.31	3.06	No	Si
SLU 71	6.82	58.63	-6952	-0.0000922	0.0003743	0.0035	0.5	890.31	1159.64	1159.64	19.78	No	Si
SLU 71	7.62	-395.62	-7177	-0.0001514	0.0003743	0.0035	0.5	890.8	1200.33	1200.33	3.03	No	Si
SLU 70	6.82	58.16	-7053	-0.0000935	0.0003743	0.0035	0.5	890.75	1169.37	1169.37	20.11	No	Si
SLU 70	7.62	-400.55	-7277	-0.000154	0.0003743	0.0035	0.5	890.45	1208.62	1208.62	3.02	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	6.82	751.62	-2107	-0.0285274	0.0005615	0.0035	0.4		498.26	498.26	0.66		No
SLV 4	7.62	-1119.34	-4848	-0.0044896	0.0005615	0.0035	0.4		1071.24	1071.24	0.96		No
SLV 1	6.82	741.96	-1020	-0.0540564	0.0005615	0.0035	0.4		259.08	259.08	0.35		No
SLV 1	7.62	-1041.62	-3657	-0.00571	0.0005615	0.0035	0.4		859.43	859.43	0.83		No
SLD 1	6.82	341.93	-3374	-0.0000842	0.0005615	0.0035	0.5		738.99	738.99	2.16		Si
SLD 1	7.62	-609.85	-4599	-0.0001536	0.0005615	0.0035	0.4		1028.65	1028.65	1.69		Si
SLD 3	6.82	317.06	-3991	-0.000087	0.0005615	0.0035	0.5		859.66	859.66	2.71		Si
SLD 3	7.62	-611.01	-5164	-0.0001537	0.0005615	0.0035	0.5		1123.72	1123.72	1.84		Si
SLD 2	6.82	370.8	-3239	-0.000089	0.0005615	0.0035	0.5		713.01	713.01	1.92		Si
SLD 2	7.62	-642.19	-4560	-0.0001653	0.0005615	0.0035	0.4		1021.91	1021.91	1.59		Si
SLD 4	6.82	345.92	-3856	-0.0000896	0.0005615	0.0035	0.5		833.03	833.03	2.41		Si
SLD 4	7.62	-643.35	-5125	-0.0001626	0.0005615	0.0035	0.5		1117.46	1117.46	1.74		Si
SLV 5	6.82	328.71	-1837	-0.0000968	0.0005615	0.0035	0.5		442.85	442.85	1.35		Si
SLV 5	7.62	-497.55	-2890	-0.000144	0.0005615	0.0035	0.4		711.23	711.23	1.43		Si
SLV 3	6.82	684.38	-2421	-0.0145166	0.0005615	0.0035	0.4		558.34	558.34	0.82		No
SLV 3	7.62	-1044.02	-4939	-0.0013196	0.0005615	0.0035	0.4		1086.82	1086.82	1.04		Si
SLV 2	6.82	809.19	-706	-0.0701033	0.0005615	0.0035	0.4		185.76	185.76	0.23		No
SLV 2	7.62	-1116.94	-3565	-0.0070388	0.0005615	0.0035	0.4		842.43	842.43	0.75		No
SLV 6	6.82	371.93	-1636	-0.0003246	0.0005615	0.0035	0.5		398.43	398.43	1.07		Si
SLV 6	7.62	-545.95	-2831	-0.0001993	0.0005615	0.0035	0.4		699.25	699.25	1.28		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	6.82	35.99	-7816	-6508	120	0.5	0.5	-46486	10833	1517	80882	4192	1275	5467	No	45.73	Si
SLU 81	7.62	-394.96	-8017	-6676	906	0.5	0.5	-47682	10833	1517	80882	4192	1275	5467	No	6.04	Si
SLU 79	6.82	40.75	-7792	-6488	146	0.5	0.5	-46346	10833	1517	80882	4192	1275	5467	No	37.36	Si
SLU 79	7.62	-405.14	-7998	-6660	904	0.5	0.5	-47569	10833	1517	80882	4192	1275	5467	No	6.05	Si
SLU 74	6.82	40.78	-7719	-6427	146	0.5	0.5	-45910	10833	1517	80882	4192	1275	5467	No	37.43	Si
SLU 74	7.62	-401.39	-7920	-6595	895	0.5	0.5	-47110	10833	1517	80882	4192	1275	5467	No	6.11	Si
SLU 84	6.82	35.5	-7990	-6653	121	0.5	0.5	-47524	10833	1517	80882	4192	1275	5467	No	45.36	Si
SLU 84	7.62	-403.65	-8194	-6823	921	0.5	0.5	-48737	10833	1517	80882	4192	1275	5467	No	5.93	Si
SLU 77	6.82	39.33	-7887	-6567	143	0.5	0.5	-46910	10833	1517	80882	4192	1275	5467	No	38.17	Si
SLU 77	7.62	-408.52	-8087	-6734	909	0.5	0.5	-48100	10833	1517	80882	4192	1275	5467	No	6.02	Si
SLU 78	6.82	40.28	-7893	-6573	147	0.5	0.5	-46948	10833	1517	80882	4192	1275	5467	No	37.18	Si
SLU 78	7.62	-410.07	-8098	-6743	911	0.5	0.5	-48165	10833	1517	80882	4192	1275	5467	No	6	Si
SLU 83	6.82	34.54	-7984	-6648	117	0.5	0.5	-47487	10833	1517	80882	4192	1275	5467	No	46.85	Si
SLU 83	7.62	-402.09	-8183	-6814	919	0.5	0.5	-48672	10833	1517	80882	4192	1275	5467	No	5.95	Si
SLU 75	6.82	41.74	-7725	-6433	150	0.5	0.5	-45947	10833	1517	80882	4192	1275	5467	No	36.47	Si
SLU 75	7.62	-402.94	-7931	-6604	898	0.5	0.5	-47175	10833	1517	80882	4192	1275	5467	No	6.09	Si
SLU 80	6.82	41.71	-7798	-6494	150	0.5	0.5	-46383	10833	1517	80882	4192	1275	5467	No	36.41	Si
SLU 80	7.62	-406.7	-8008	-6669	907	0.5	0.5	-47634	10833	1517	80882	4192	1275	5467	No	6.03	Si
SLU 82	6.82	36.95	-7822	-6513	123	0.5	0.5	-46524	10833	1517	80882	4192	1275	5467	No	44.31	Si
SLU 82	7.62	-396.52	-8027	-6685	908	0.5	0.5	-47747	10833	1517	80882	4192	1275	5467	No	6.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	6.82	-722.54	-9585	-7982	-3114	0.5	0.5	-57013	16250	2275	80882	6288	1275	7563		2.43	Si
SLV 15	7.62	540.93	-7068	-5886	90	0.5	0.5	-42042	16250	2275	80882	6288	1275	7563		83.76	Si
SLV 2	6.82	809.19	-706	-588	3424	0.4	0	0	0	0	80882	5031	1020	6051		1.77	Si
SLV 2	7.62	-1116.94	-3565	-2969	1169	0.4	0	0	0	0	80882	5031	1020	6051		5.17	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	6.82	741.96	-1020	-850	3148	0.4	0	0	0	0	80882	5031	1020	6051		1.92	Si
SLV 1	7.62	-1041.62	-3657	-3045	1096	0.4	0	0	0	0	80882	5031	1020	6051		5.52	Si
SLV 6	6.82	371.93	-1636	-1362	1595	0.5	0.0678	-74512	16250	308	80882	6288	1275	7563		4.74	Si
SLV 6	7.62	-545.95	-2831	-2357	796	0.4	0.1714	0	0	0	80882	5031	1020	6051		7.6	Si
SLV 14	6.82	-597.73	-7870	-6554	-2567	0.5	0.5	-46813	16250	2275	80882	6288	1275	7563		2.95	Si
SLV 14	7.62	468.01	-5695	-4742	158	0.5	0.5	-33871	16250	2275	80882	6288	1275	7563		47.83	Si
SLV 13	6.82	-664.97	-8184	-6815	-2842	0.5	0.5	-48681	16250	2275	80882	6288	1275	7563		2.66	Si
SLV 13	7.62	543.33	-5786	-4818	85	0.5	0.4683	-34415	16250	2131	80882	6288	1275	7563		89.33	Si
SLD 2	6.82	370.8	-3239	-2697	1551	0.5	0.4066	-19265	14270	1624	80882	6288	1275	7563		4.88	Si
SLD 2	7.62	-642.19	-4560	-3797	860	0.4	0.3275	0	0	0	80882	5031	1020	6051		7.03	Si
SLV 4	6.82	751.62	-2107	-1754	3152	0.4	0	0	0	0	80882	5031	1020	6051		1.92	Si
SLV 4	7.62	-1119.34	-4848	-4037	1175	0.4	0.0573	0	0	0	80882	5031	1020	6051		5.15	Si
SLV 3	6.82	684.38	-2421	-2016	2876	0.4	0	0	0	0	80882	5031	1020	6051		2.1	Si
SLV 3	7.62	-1044.02	-4939	-4113	1101	0.4	0.1159	0	0	0	80882	5031	1020	6051		5.49	Si
SLV 16	6.82	-655.3	-9271	-7720	-2838	0.5	0.5	-55144	16250	2275	80882	6288	1275	7563		2.66	Si
SLV 16	7.62	465.61	-6977	-5810	164	0.5	0.5	-41498	16250	2275	80882	6288	1275	7563		46.18	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.35	21492	-3009	179.76	361.96	2.01	Si
SLV 10	179667	0.35	21847	-3059	179.76	366.95	2.04	Si
SLV 5	179667	0.35	21945	-3072	179.76	368.31	2.05	Si
SLV 6	179667	0.35	22300	-3122	179.76	373.25	2.08	Si
SLV 13	179667	0.35	25605	-3585	179.76	417.71	2.32	Si
SLV 14	179667	0.35	26157	-3662	179.76	424.87	2.36	Si
SLV 1	179667	0.35	27113	-3796	179.76	437.07	2.43	Si
SLV 2	179667	0.35	27666	-3873	179.76	444.02	2.47	Si
SLV 15	179667	0.35	29667	-4153	179.76	468.52	2.61	Si
SLV 16	179667	0.35	30220	-4231	179.76	475.1	2.64	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-4492	-6965	-6	0.545	595.8	0.936	8.46896	15.31518	No
SLV 16	-4366	-7183	-6	0.558	583	0.935	8.67775	15.31518	No
SLV 13	-3670	-7613	-2	0.641	512.8	0.928	10.04469	15.31518	No
SLV 14	-3544	-7831	-2	0.659	500	0.926	10.34078	15.31518	No
SLV 3	-2209	-7243	-13	0.932	366.5	0.908	14.91928	15.31518	No
SLV 4	-2083	-7461	-13	0.971	354	0.906	15.58187	15.31518	Si
SLV 1	-1387	-7890	-10	1.265	286	0.894	20.55872	15.31518	Si
SLV 11	-4630	-6345	-13	0.531	609.7	0.937	8.2358	6.0451	Si
SLV 12	-4548	-6486	-13	0.539	601.5	0.937	8.36167	6.0451	Si
SLV 2	-1261	-8109	-9	1.339	273.9	0.892	21.8056	15.31518	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.017	SLU 70	Si
V_SLU	5.934	SLU 84	Si
PF_SLV	0.23	SLV 2	No
V_SLV	1.767	SLV 2	Si
PFFP_SLV	2.014	SLV 9	Si
R_SLV	0.553	SLV 15	No

Maschio 263

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.233	-3.314	-5.463	-3.314	L4	L6	2.23	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	6.82	2485.72	-27885	-0.0000927	0.0003743	0.0035	2.23	17453.23	21518.44	21518.44	8.66	No	Si
SLU 79	7.62	729.06	-24268	-0.0000683	0.0003743	0.0035	2.23	16728.98	19846.56	19846.56	27.22	No	Si
SLU 80	6.82	2490.09	-27924	-0.0000928	0.0003743	0.0035	2.23	17458.6	21537.11	21537.11	8.65	No	Si
SLU 80	7.62	723.25	-24301	-0.0000683	0.0003743	0.0035	2.23	16737.63	19861.42	19861.42	27.46	No	Si
SLU 75	6.82	2469.15	-27651	-0.0000918	0.0003743	0.0035	2.23	17420.31	21408.18	21408.18	8.67	No	Si
SLU 75	7.62	713.33	-24047	-0.0000675	0.0003743	0.0035	2.23	16669.89	19746.88	19746.88	27.68	No	Si
SLU 84	6.82	2519.3	-28486	-0.0000948	0.0003743	0.0035	2.23	17529.12	21804.25	21804.25	8.65	No	Si
SLU 84	7.62	769.07	-24833	-0.0000702	0.0003743	0.0035	2.23	16872.33	20103.34	20103.34	26.14	No	Si
SLU 78	6.82	2517.72	-28246	-0.0000941	0.0003743	0.0035	2.23	17500.32	21689.7	21689.7	8.61	No	Si
SLU 78	7.62	750.2	-24605	-0.0000694	0.0003743	0.0035	2.23	16815.92	19999.56	19999.56	26.66	No	Si
SLU 82	6.82	2470.72	-27891	-0.0000926	0.0003743	0.0035	2.23	17454.13	21521.54	21521.54	8.71	No	Si
SLU 82	7.62	732.2	-24275	-0.0000683	0.0003743	0.0035	2.23	16730.76	19849.61	19849.61	27.11	No	Si
SLU 76	6.82	2444.43	-27356	-0.0000907	0.0003743	0.0035	2.23	17375.99	21269.5	21269.5	8.7	No	Si
SLU 76	7.62	682.5	-23765	-0.0000665	0.0003743	0.0035	2.23	16591.81	19619.96	19619.96	28.75	No	Si
SLU 74	6.82	2464.77	-27612	-0.0000916	0.0003743	0.0035	2.23	17414.57	21389.6	21389.6	8.68	No	Si
SLU 74	7.62	719.15	-24014	-0.0000675	0.0003743	0.0035	2.23	16660.95	19732.09	19732.09	27.44	No	Si
SLU 83	6.82	2514.93	-28446	-0.0000947	0.0003743	0.0035	2.23	17524.53	21785.4	21785.4	8.66	No	Si
SLU 83	7.62	774.89	-24800	-0.0000702	0.0003743	0.0035	2.23	16864.3	20088.33	20088.33	25.92	No	Si
SLU 77	6.82	2513.35	-28206	-0.0000939	0.0003743	0.0035	2.23	17495.4	21670.93	21670.93	8.62	No	Si
SLU 77	7.62	756.02	-24573	-0.0000694	0.0003743	0.0035	2.23	16807.63	19984.62	19984.62	26.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	6.82	2070.42	-11390	-0.0000412	0.0005615	0.0035	2.23		11648.06	11648.06	5.63		Si
SLV 6	7.62	-1832.42	-8447	-0.0000322	0.0005615	0.0035	2.23		10071.28	10071.28	5.5		Si
SLV 2	6.82	3452.65	-16878	-0.0000648	0.0005615	0.0035	2.23		16264.34	16264.34	4.71		Si
SLV 2	7.62	-4524.51	-12067	-0.0000593	0.0005615	0.0035	2.23		13451.89	13451.89	2.97		Si
SLV 4	6.82	3570.92	-21303	-0.0000775	0.0005615	0.0035	2.23		19957.03	19957.03	5.59		Si
SLV 4	7.62	-4098.77	-16245	-0.0000675	0.0005615	0.0035	2.23		17102.68	17102.68	4.17		Si
SLV 13	6.82	-175.3	-15845	-0.0000399	0.0005615	0.0035	2.23		16768.43	16768.43	95.66		Si
SLV 13	7.62	4855.56	-15695	-0.0000712	0.0005615	0.0035	2.23		15250.35	15250.35	3.14		Si
SLV 3	6.82	3421.95	-21098	-0.0000759	0.0005615	0.0035	2.23		19823.71	19823.71	5.79		Si
SLV 3	7.62	-3548.7	-16337	-0.000064	0.0005615	0.0035	2.23		17178.58	17178.58	4.84		Si
SLV 1	6.82	3303.69	-16673	-0.0000632	0.0005615	0.0035	2.23		16087.95	16087.95	4.87		Si
SLV 1	7.62	-3974.43	-12159	-0.0000558	0.0005615	0.0035	2.23		13534.39	13534.39	3.41		Si
SLV 5	6.82	1974.68	-11258	-0.0000402	0.0005615	0.0035	2.23		11540.08	11540.08	5.84		Si
SLV 5	7.62	-1478.9	-8506	-0.00003	0.0005615	0.0035	2.23		10128.61	10128.61	6.85		Si
SLV 15	6.82	-57.04	-20270	-0.0000505	0.0005615	0.0035	2.23		20333.86	20333.86	356.51		Si
SLV 15	7.62	5281.3	-19873	-0.0000855	0.0005615	0.0035	2.23		18878.78	18878.78	3.57		Si
SLV 16	6.82	91.93	-20475	-0.0000513	0.0005615	0.0035	2.23		19389.37	19389.37	210.91		Si
SLV 16	7.62	4731.22	-19782	-0.0000814	0.0005615	0.0035	2.23		18797.76	18797.76	3.97		Si
SLV 14	6.82	-26.33	-16050	-0.0000394	0.0005615	0.0035	2.23		16940.17	16940.17	643.35		Si
SLV 14	7.62	4305.49	-15603	-0.0000672	0.0005615	0.0035	2.23		15172.18	15172.18	3.52		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	6.82	2464.77	-27612	-22993	5625	2.23	2.23	-36824	10833	6764	80882	18697	5686	24384	No	4.33	Si
SLU 74	7.62	719.15	-24014	-19997	4050	2.23	2.23	-32026	10833	6764	80882	18697	5686	24384	No	6.02	Si
SLU 77	6.82	2513.35	-28206	-23488	5696	2.23	2.23	-37617	10833	6764	80882	18697	5686	24384	No	4.28	Si
SLU 77	7.62	756.02	-24573	-20462	4097	2.23	2.23	-32771	10833	6764	80882	18697	5686	24384	No	5.95	Si
SLU 83	6.82	2514.93	-28446	-23688	5693	2.23	2.23	-37937	10833	6764	80882	18697	5686	24384	No	4.28	Si
SLU 83	7.62	774.89	-24800	-20651	4092	2.23	2.23	-33074	10833	6764	80882	18697	5686	24384	No	5.96	Si
SLU 78	6.82	2517.72	-28246	-23521	5719	2.23	2.23	-37669	10833	6764	80882	18697	5686	24384	No	4.26	Si
SLU 78	7.62	750.2	-24605	-20489	4114	2.23	2.23	-32815	10833	6764	80882	18697	5686	24384	No	5.93	Si
SLU 82	6.82	2470.72	-27891	-23225	5645	2.23	2.23	-37197	10833	6764	80882	18697	5686	24384	No	4.32	Si
SLU 82	7.62	732.2	-24275	-20214	4062	2.23	2.23	-32374	10833	6764	80882	18697	5686	24384	No	6	Si
SLU 84	6.82	2519.3	-28486	-23720	5716	2.23	2.23	-37990	10833	6764	80882	18697	5686	24384	No	4.27	Si
SLU 84	7.62	769.07	-24833	-20679	4109	2.23	2.23	-33118	10833	6764	80882	18697	5686	24384	No	5.93	Si
SLU 76	6.82	2444.43	-27356	-22780	5637	2.23	2.23	-36483	10833	6764	80882	18697	5686	24384	No	4.33	Si
SLU 76	7.62	682.5	-23765	-19789	4062	2.23	2.23	-31693	10833	6764	80882	18697	5686	24384	No	6	Si
SLU 80	6.82	2490.09	-27924	-23253	5692	2.23	2.23	-37241	10833	6764	80882	18697	5686	24384	No	4.28	Si
SLU 80	7.62	723.25	-24301	-20236	4097	2.23	2.23	-32409	10833	6764	80882	18697	5686	24384	No	5.95	Si
SLU 79	6.82	2485.72	-27885	-23220	5669	2.23	2.23	-37188	10833	6764	80882	18697	5686	24384	No	4.3	Si
SLU 79	7.62	729.06	-24268	-20208	4080	2.23	2.23	-32365	10833	6764	80882	18697	5686	24384	No	5.98	Si
SLU 75	6.82	2469.15	-27651	-23025	5648	2.23	2.23	-36877	10833	6764	80882	18697	5686	24384	No	4.32	Si
SLU 75	7.62	713.33	-24047	-20025	4067	2.23	2.23	-32070	10833	6764	80882	18697	5686	24384	No	6	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	6.82	3452.65	-16878	-14055	16373	2.23	2.23	-22509	14918	9315	80882	28046	5686	33732		2.06	Si
SLV 2	7.62	-4524.51	-12067	-10048	12774	2.23	2.2201	-16093	13635	8476	80882	28046	5686	33732		2.64	Si
SLD 2	6.82	2445.98	-17823	-14842	9316	2.23	2.23	-23770	15171	9472	80882	28046	5686	33732		3.62	Si
SLD 2	7.62	-1720.08	-14276	-11888	7141	2.23	2.23	-19040	14225	8882	80882	28046	5686	33732		4.72	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	6.82	2382.02	-17735	-14768	8743	2.23	2.23	-23652	15147	9458	80882	28046	5686	33732		3.86	Si
SLD 1	7.62	-1483.92	-14316	-11921	6694	2.23	2.23	-19092	14235	8888	80882	28046	5686	33732		5.04	Si
SLD 4	6.82	2499.48	-19765	-16458	8835	2.23	2.23	-26359	15688	9796	80882	28046	5686	33732		3.82	Si
SLD 4	7.62	-1531.97	-16113	-13417	6688	2.23	2.23	-21489	14714	9188	80882	28046	5686	33732		5.04	Si
SLV 1	6.82	3303.69	-16673	-13884	15039	2.23	2.23	-22236	14864	9281	80882	28046	5686	33732		2.24	Si
SLV 1	7.62	-3974.43	-12159	-10125	11732	2.23	2.23	-16215	13660	8529	80882	28046	5686	33732		2.88	Si
SLV 5	6.82	1974.68	-11258	-9375	8831	2.23	2.23	-15014	13419	8379	80882	28046	5686	33732		3.82	Si
SLV 5	7.62	-1478.9	-8506	-7083	6996	2.23	2.23	-11343	12685	7921	80882	28046	5686	33732		4.82	Si
SLV 4	6.82	3570.92	-21303	-17739	15244	2.23	2.23	-28410	16099	10052	80882	28046	5686	33732		2.21	Si
SLV 4	7.62	-4098.77	-16245	-13528	11719	2.23	2.23	-21665	14750	9210	80882	28046	5686	33732		2.88	Si
SLV 15	6.82	-57.04	-20270	-16879	-8272	2.23	2.23	-27033	15823	9880	80882	28046	5686	33732		4.08	Si
SLV 15	7.62	5281.3	-19873	-16549	-6903	2.23	2.23	-26504	15717	9814	80882	28046	5686	33732		4.89	Si
SLV 6	6.82	2070.42	-11390	-9484	9689	2.23	2.23	-15190	13455	8401	80882	28046	5686	33732		3.48	Si
SLV 6	7.62	-1832.42	-8447	-7034	7666	2.23	2.23	-11265	12670	7911	80882	28046	5686	33732		4.4	Si
SLV 3	6.82	3421.95	-21098	-17568	13910	2.23	2.23	-28137	16044	10018	80882	28046	5686	33732		2.43	Si
SLV 3	7.62	-3548.7	-16337	-13604	10677	2.23	2.23	-21788	14774	9225	80882	28046	5686	33732		3.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.35	13980	-8729	801.74	1110.21	1.38	Si
SLV 6	179667	0.35	13994	-8738	801.74	1111.2	1.39	Si
SLV 1	179667	0.35	16763	-10467	801.74	1304.51	1.63	Si
SLV 2	179667	0.35	16785	-10480	801.74	1305.97	1.63	Si
SLV 9	179667	0.35	17142	-10703	801.74	1330.25	1.66	Si
SLV 10	179667	0.35	17155	-10712	801.74	1331.19	1.66	Si
SLV 3	179667	0.35	22313	-13932	801.74	1665.53	2.08	Si
SLV 4	179667	0.35	22335	-13946	801.74	1666.85	2.08	Si
SLV 13	179667	0.35	27301	-17047	801.74	1959.91	2.44	Si
SLV 14	179667	0.35	27323	-17060	801.74	1961.11	2.45	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-15958	-19224	-3	0.655	2245.6	0.927	10.26432	15.31518	No
SLV 16	-15868	-19260	-3	0.657	2236.5	0.927	10.31215	15.31518	No
SLV 3	-13200	-8493	398	0.734	1968.5	0.919	11.60282	15.31518	No
SLV 4	-13111	-8528	398	0.737	1959.5	0.919	11.66565	15.31518	No
SLV 13	-12581	-15988	-401	0.76	1906.4	0.917	12.04922	15.31518	No
SLV 14	-12491	-16023	-401	0.764	1897.4	0.917	12.11732	15.31518	No
SLV 1	-9824	-5256	0	0.938	1631.6	0.908	15.02283	15.31518	No
SLV 2	-9734	-5292	0	0.944	1622.7	0.907	15.12519	15.31518	No
SLV 11	-18916	-19250	602	0.546	2544.1	0.934	8.49891	6.0451	Si
SLV 12	-18859	-19273	602	0.547	2538.3	0.934	8.5207	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.615	SLU 78	Si
V_SLU	4.263	SLU 78	Si
PF_SLV	2.973	SLV 2	Si
V_SLV	2.06	SLV 2	Si
PFFP_SLV	1.385	SLV 5	Si
R_SLV	0.67	SLV 15	No

Maschio 264

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.233	-3.314	L4	L6	2.1	0.28	6.95	6.95	6.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	2.29	269.24	-17129	-0.000048	0.0003743	0.0035	2.1	12839.42	14262.27	14262.27	52.97	No	Si
SLU 42	4.19	871.36	-17045	-0.0000526	0.0003743	0.0035	2.1	12801.43	14207.87	14207.87	16.31	No	Si
SLU 41	2.29	261.09	-17107	-0.0000479	0.0003743	0.0035	2.1	12829.41	14247.89	14247.89	54.57	No	Si
SLU 41	4.19	878.37	-17020	-0.0000526	0.0003743	0.0035	2.1	12790.26	14191.97	14191.97	16.16	No	Si
SLU 35	2.29	306.55	-17043	-0.0000481	0.0003743	0.0035	2.1	12800.68	14206.82	14206.82	46.34	No	Si
SLU 35	4.19	838.72	-16871	-0.0000518	0.0003743	0.0035	2.1	12722.31	14095.99	14095.99	16.81	No	Si
SLU 40	2.29	269.63	-16779	-0.000047	0.0003743	0.0035	2.1	12680.16	14037.13	14037.13	52.06	No	Si
SLU 40	4.19	843.99	-16662	-0.0000512	0.0003743	0.0035	2.1	12626.04	13962.29	13962.29	16.54	No	Si
SLU 39	2.29	261.48	-16757	-0.0000469	0.0003743	0.0035	2.1	12669.88	14022.84	14022.84	53.63	No	Si
SLU 39	4.19	851	-16638	-0.0000512	0.0003743	0.0035	2.1	12614.55	13946.5	13946.5	16.39	No	Si
SLU 37	2.29	306.98	-16861	-0.0000475	0.0003743	0.0035	2.1	12717.77	14089.62	14089.62	45.9	No	Si
SLU 37	4.19	819.49	-16673	-0.0000511	0.0003743	0.0035	2.1	12630.95	13969.04	13969.04	17.05	No	Si
SLU 32	2.29	306.94	-16693	-0.0000471	0.0003743	0.0035	2.1	12640.37	13982.03	13982.03	45.55	No	Si
SLU 32	4.19	811.35	-16488	-0.0000505	0.0003743	0.0035	2.1	12544.6	13851.19	13851.19	17.07	No	Si
SLU 84	2.29	406.45	-20475	-0.000059	0.0003743	0.0035	2.1	14146	16482.32	16482.32	40.55	No	Si
SLU 84	4.19	951.7	-20104	-0.0000624	0.0003743	0.0035	2.1	14020.33	16229.74	16229.74	17.05	No	Si
SLU 83	2.29	398.3	-20453	-0.0000589	0.0003743	0.0035	2.1	14138.6	16467.13	16467.13	41.34	No	Si
SLU 83	4.19	958.72	-20079	-0.0000623	0.0003743	0.0035	2.1	14011.81	16213.02	16213.02	16.91	No	Si
SLU 36	2.29	314.69	-17065	-0.0000482	0.0003743	0.0035	2.1	12810.75	14221.18	14221.18	45.19	No	Si
SLU 36	4.19	831.7	-16895	-0.0000518	0.0003743	0.0035	2.1	12733.61	14111.85	14111.85	16.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	2.29	7479.28	-10040	-0.0001262	0.0005615	0.0035	2.1		9758.23	9758.23	1.3		Si
SLV 4	4.19	-3510.78	-4648	-0.0000569	0.0005615	0.0035	1.68		5925.51	5925.51	1.69		Si
SLV 6	2.29	37.32	-7711	-0.0000199	0.0005615	0.0035	2.1		7793.55	7793.55	208.81		Si
SLV 6	4.19	-1085.95	-1138	-0.0000355	0.0005615	0.0035	1.68		2462.71	2462.71	2.27		Si
SLV 8	2.29	4814.77	-17218	-0.0000822	0.0005615	0.0035	2.1		15517.5	15517.5	3.22		Si
SLV 8	4.19	-520.81	-18558	-0.0000527	0.0005615	0.0035	2.1		17730	17730	34.04		Si
SLV 2	2.29	6046.05	-7188	-0.0001327	0.0005615	0.0035	2.1		7311.65	7311.65	1.21		Si
SLV 2	4.19	-3680.32	578	0.0426651	0.0005615	0.0035	1.68		0	0	0		No
SLV 10	2.29	-3574.24	-11107	-0.0000553	0.0005615	0.0035	2.1		11808.17	11808.17	3.3		Si
SLV 10	4.19	1226.54	-7735	-0.0000287	0.0005615	0.0035	2.1		7815.43	7815.43	6.37		Si
SLV 13	2.29	-6681.69	-17886	-0.0000992	0.0005615	0.0035	2.1		17239.55	17239.55	2.58		Si
SLV 13	4.19	4555.63	-22065	-0.0000945	0.0005615	0.0035	2.1		18915.49	18915.49	4.15		Si
SLV 9	2.29	-4017.18	-10707	-0.0000576	0.0005615	0.0035	2.1		11464.23	11464.23	2.85		Si
SLV 9	4.19	1565.67	-8154	-0.0000323	0.0005615	0.0035	2.1		8198.39	8198.39	5.24		Si
SLV 3	2.29	6790.08	-9418	-0.0001082	0.0005615	0.0035	2.1		9277.29	9277.29	1.37		Si
SLV 3	4.19	-2983.12	-5300	-0.0000389	0.0005615	0.0035	1.68		6544.56	6544.56	2.19		Si
SLV 1	2.29	5356.85	-6566	-0.0001058	0.0005615	0.0035	2.1		6735.04	6735.04	1.26		Si
SLV 1	4.19	-3152.66	-74	-0.0014266	0.0005615	0.0035	1.68		1374.66	1374.66	0.44		No
SLV 14	2.29	-5992.49	-18508	-0.0000953	0.0005615	0.0035	2.1		17693.36	17693.36	2.95		Si
SLV 14	4.19	4027.97	-21412	-0.0000883	0.0005615	0.0035	2.1		18506.06	18506.06	4.59		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	2.29	398.7	-20103	-16740	-1526	2.1	2.1	-28469	10740	6315	80882	17607	5355	22963	No	15.04	Si
SLU 81	4.19	931.35	-19697	-16402	-1543	2.1	2.1	-27894	10664	6270	80882	17607	5355	22963	No	14.88	Si
SLU 74	2.29	444.16	-20039	-16687	-1435	2.1	2.1	-28379	10728	6308	80882	17607	5355	22963	No	16.01	Si
SLU 74	4.19	891.69	-19548	-16278	-1451	2.1	2.1	-27683	10635	6254	80882	17607	5355	22963	No	15.83	Si
SLU 77	2.29	443.76	-20389	-16978	-1467	2.1	2.1	-28875	10794	6347	80882	17607	5355	22963	No	15.65	Si
SLU 77	4.19	919.06	-19930	-16596	-1483	2.1	2.1	-28224	10708	6296	80882	17607	5355	22963	No	15.48	Si
SLU 80	2.29	452.35	-20229	-16845	-1441	2.1	2.1	-28648	10764	6329	80882	17607	5355	22963	No	15.93	Si
SLU 80	4.19	892.81	-19757	-16452	-1457	2.1	2.1	-27979	10675	6277	80882	17607	5355	22963	No	15.76	Si
SLU 84	2.29	406.45	-20475	-17050	-1552	2.1	2.1	-28996	10811	6357	80882	17607	5355	22963	No	14.79	Si
SLU 84	4.19	951.7	-20104	-16741	-1569	2.1	2.1	-28470	10740	6315	80882	17607	5355	22963	No	14.64	Si
SLU 79	2.29	444.2	-20207	-16827	-1448	2.1	2.1	-28617	10760	6327	80882	17607	5355	22963	No	15.86	Si
SLU 79	4.19	899.83	-19732	-16431	-1464	2.1	2.1	-27944	10670	6274	80882	17607	5355	22963	No	15.68	Si
SLU 83	2.29	398.3	-20453	-17031	-1559	2.1	2.1	-28965	10806	6354	80882	17607	5355	22963	No	14.73	Si
SLU 83	4.19	958.72	-20079	-16720	-1575	2.1	2.1	-28435	10736	6313	80882	17607	5355	22963	No	14.58	Si
SLU 78	2.29	451.91	-20411	-16997	-1460	2.1	2.1	-28906	10799	6350	80882	17607	5355	22963	No	15.72	Si
SLU 78	4.19	912.05	-19955	-16616	-1477	2.1	2.1	-28259	10712	6299	80882	17607	5355	22963	No	15.55	Si
SLU 75	2.29	452.31	-20062	-16706	-1428	2.1	2.1	-28411	10733	6311	80882	17607	5355	22963	No	16.08	Si
SLU 75	4.19	884.68	-19572	-16298	-1444	2.1	2.1	-27718	10640	6256	80882	17607	5355	22963	No	15.9	Si
SLU 82	2.29	406.85	-20125	-16759	-1520	2.1	2.1	-28501	10745	6318	80882	17607	5355	22963	No	15.11	Si
SLU 82	4.19	924.33	-19721	-16422	-1536	2.1	2.1	-27929	10668	6273	80882	17607	5355	22963	No	14.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	2.29	-5248.46	-20738	-17269	-10813	2.1	2.1	-29368	16250	9555	80882	26411	5355	31766		2.94	Si
SLV 15	4.19	4725.17	-27291	-22725	-10720	2.1	2.1	-38648	16250	9555	80882	26411	5355	31766		2.96	Si
SLV 6	2.29	37.32	-7711	-6421	4757	2.1	2.1	-10920	12601	7409	80882	26411	5355	31766		6.68	Si
SLV 6	4.19	-1085.95	-1138	-948	5335	1.68	0.2869	0	0	0	80882	21129	4284	25413		4.76	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	2.29	6046.05	-7188	-5985	9096	2.1	0.6266	-34768	16250	2851	80882	26411	5355	31766		3.49	Si
SLV 2	4.19	-3680.32	578	481	8981	1.68	0	0	0	0	80882	21129	4284	25413		2.83	Si
SLV 3	2.29	6790.08	-9418	-7843	6171	2.1	0.9872	-13338	13084	3617	80882	26411	5355	31766		5.15	Si
SLV 3	4.19	-2983.12	-5300	-4414	5646	1.68	1.4615	0	0	0	80882	21129	4284	25413		4.5	Si
SLV 11	2.29	760.26	-20215	-16833	-6474	2.1	2.1	-28627	16142	9492	80882	26411	5355	31766		4.91	Si
SLV 11	4.19	2130.8	-25575	-21296	-7074	2.1	2.1	-36218	16250	9555	80882	26411	5355	31766		4.49	Si
SLV 14	2.29	-5992.49	-18508	-15412	-7887	2.1	2.1	-26210	15659	9207	80882	26411	5355	31766		4.03	Si
SLV 14	4.19	4027.97	-21412	-17830	-7385	2.1	2.1	-30324	16250	9555	80882	26411	5355	31766		4.3	Si
SLV 13	2.29	-6681.69	-17886	-14894	-9231	2.1	2.0293	-26578	15732	8939	80882	26411	5355	31766		3.44	Si
SLV 13	4.19	4555.63	-22065	-18373	-8729	2.1	2.1	-31247	16250	9555	80882	26411	5355	31766		3.64	Si
SLV 4	2.29	7479.28	-10040	-8360	7514	2.1	0.9152	-14218	13260	3398	80882	26411	5355	31766		4.23	Si
SLV 4	4.19	-3510.78	-4648	-3870	6991	1.68	0.8841	0	0	0	80882	21129	4284	25413		3.64	Si
SLV 16	2.29	-4559.26	-21360	-17787	-9469	2.1	2.1	-30249	16250	9555	80882	26411	5355	31766		3.35	Si
SLV 16	4.19	4197.51	-26639	-22182	-9376	2.1	2.1	-37725	16250	9555	80882	26411	5355	31766		3.39	Si
SLV 1	2.29	5356.85	-6566	-5468	7752	2.1	0.7025	-9299	12276	2415	80882	26411	5355	31766		4.1	Si
SLV 1	4.19	-3152.66	-74	-62	7637	1.68	0	0	0	0	80882	21129	4284	25413		3.33	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.865 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.35	0	-3039	755.01	0	0	No, e>t/2
SLV 6	179667	0.35	0	-1747	755.01	0	0	No, e>t/2
SLV 2	179667	0.35	0	-2716	755.01	0	0	No, e>t/2
SLV 5	179667	0.35	0	-1955	755.01	0	0	No, e>t/2
SLV 10	179667	0.35	9935	-5842	755.01	764.65	1.01	Si
SLV 9	179667	0.35	10289	-6050	755.01	789.91	1.05	Si
SLV 4	179667	0.35	13079	-7691	755.01	984.5	1.3	Si
SLV 3	179667	0.35	13630	-8014	755.01	1021.87	1.35	Si
SLV 14	179667	0.35	27832	-16365	755.01	1873.6	2.48	Si
SLV 13	179667	0.35	28382	-16689	755.01	1902.22	2.52	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.865 Wa = 0.05 Ta = 0.2881

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-18334	-20916	355	0.543	2448.3	0.935	8.44481	15.31518	No
SLV 16	-17367	-21301	356	0.567	2350.7	0.933	8.83841	15.31518	No
SLV 13	-12166	-20706	201	0.757	1827.2	0.918	11.97567	15.31518	No
SLV 14	-11200	-21091	202	0.804	1730.5	0.915	12.77788	15.31518	No
SLV 3	-9912	-5838	-211	0.878	1602.1	0.91	14.01992	15.31518	No
SLV 4	-8946	-6222	-210	0.944	1506.2	0.906	15.1323	15.31518	No
SLV 11	-22408	-15953	337	0.462	2860.8	0.943	7.12504	6.0451	Si
SLV 12	-21787	-16200	337	0.473	2797.9	0.942	7.29935	6.0451	Si
SLV 7	-19882	-11429	167	0.517	2605	0.938	8.00689	6.0451	Si
SLV 8	-19261	-11677	167	0.53	2542.1	0.937	8.226	6.0451	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.157	SLU 41	Si
V_SLU	14.576	SLU 83	Si
PF_SLV	0	SLV 2	No
V_SLV	2.83	SLV 2	Si
PFFP_SLV	0	SLV 1	No
R_SLV	0.551	SLV 15	No

1.9 Verifiche travi di accoppiamento in muratura

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

X ini.: *coordinata punto iniziale. [m]*
Y ini.: *coordinata punto iniziale. [m]*
Z ini.inf.: *coordinata punto iniziale. [m]*
Z ini.sup.: *coordinata punto iniziale. [m]*
H ini.: *altezza della sezione iniziale. [m]*
X fin.: *coordinata punto finale. [m]*
Y fin.: *coordinata punto finale. [m]*
Z fin.inf.: *coordinata punto finale. [m]*
Z fin.sup: *coordinata punto finale. [m]*
H fin.: *altezza della sezione finale. [m]*
Luce: *lunghezza della trave. [m]*
Spessore: *spessore. [m]*

***R. Trazione**: resistenza a trazione dell'elemento teso disposto orizzontalmente. [daN]*
***fb_**: resistenza normalizzata a compressione in direzione orizzontale dei blocchi. [daN/m²]*
***fhk**: resistenza caratteristica a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]*
***fvk0**: resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]*
***fhmedio**: resistenza media a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]*
***τ0**: resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]*
***fv0**: resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]*
***μ**: coefficiente di attrito [C8.7.1.17].*
***φ**: coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.*
***fvk,lim**: valore caratteristico massimo della resistenza a taglio che può essere impiegata nel calcolo (§11.10.3.3). [daN/m²]*
***E**: modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]*
***G**: modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]*
***FC**: fattore di confidenza della muratura.*
***Materiale**: descrizione del materiale.*
***Fu Verticale**: carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
***Fu Orizzontale**: carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
***tfv**: spessore di calcolo equivalente verticale di uno strato di rinforzo.*
***tfo**: spessore di calcolo equivalente orizzontale di uno strato di rinforzo.*
***E**: modulo di elasticità longitudinale. [daN/m²]*
***εu**: dilatazione a rottura.*
***Tipo fibra**: natura della fibra.*
***materiale**: materiale fibra del rinforzo.*
***lato applicazione**: lato di applicazione del rinforzo.*
***esposizione**: condizione di esposizione secondo CNR-DT 215 §3.2.*
***ancoraggio verticale iniziale**: grado di ancoraggio iniziale dei rinforzi verticali.*
***ancoraggio verticale finale**: grado di ancoraggio finale dei rinforzi verticali.*
***ancoraggio orizzontale iniziale**: grado di ancoraggio iniziale dei rinforzi orizzontali.*
***ancoraggio orizzontale finale**: grado di ancoraggio finale dei rinforzi orizzontali.*
***strati**: numero strati del rinforzo.*
***verifica taglio**: tipo di verifica a taglio.*
***εlim,conv / ε,CNR DT-200**: dati relativi ai parametri per il calcolo della deformazione di progetto.*
***αt**: coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a tagliosecondo CNR-DT 215 §4.1.1.*
***α**: coeffiicente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.*
***εlim,conv**: deformazione limite convenzionale del rinforzo FRCM.*
***ε,fd**: deformazione di progetto del rinforzo FRCM ovvero CRM.*
***γF,d**: fattore parziali di sicurezza per stato limite di distacco secondo CNR-DT 200 R1/2013 §3.4.1.*
***connettori**: presenza di connettori per la prevenzione del distacco del rinforzo.*
***tipo di muratura**: tipo di muratura per stato limite di distacco di estremità secondo CNR-DT 200 R1/2013 §5.3.2.*
***CRM / Fibrenet?**: dati relativi ai parametri per il calcolo secondo metodo Fibrenet? ovvero se il materiale è di tipo CRM.*
***CRM**: stabilisce se il rinforzo è di tipo CRM secondo le Linee Guida del C.S.L.P. Ottobre 2019.*
***intonaco**: materiale intonaco FRCM ovvero CRM.*
***spessore intonaco**: spessore intonaco. [m]*
***tipo blocco fibrenet**: tipo blocco muratura per verifica a tglio tipo Fibrenet.*
***Comb.**: combinazione.*
***Sez.**: sezione di verifica.*
***M**: momento flettente nel piano. [daN*m]*
***N**: sforzo normale. [daN]*
***εm**: deformazione della muratura.*
***εm_**: deformazione elastica della muratura.*
***εmu**: deformazione ultima della muratura.*
***df**: distanza tra il lembo compresso e la fibra tesa più lontana. [m]*
***M0d**: momento resistente della sezione non rinforzata. [daN*m]*
***M1d**: momento resistente della sezione rinforzata. [daN*m]*
***MRd**: momento resistente della sezione. [daN*m]*
***incremento > 50%**: incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
***c.s.**: coefficiente di sicurezza.*
***Verifica**: stato di verifica.*
***V**: taglio nel piano. [daN]*
***df**: distanza tra lembo compresso e baricentro dell'armatura tesa. [m]*
***fvd**: resistenza a taglio di calcolo. [daN/m²]*
***Vt**: resistenza a taglio della muratura non rinforzata. [daN]*
***Vt,f**: resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]*
***Vt,c**: resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]*
***Vt,c int.**: contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]*
***Vt,R**: resistenza a taglio della sezione rinforzata. [daN]*
***Stato limite**: pF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche.*
***Coeff.s.**: coefficiente di sicurezza.*

Trave di accoppiamento 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.763	5.876	-1.58	0.42	2	-22.763	5.876	-1.58	0.42	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	214.69	-4340	-0.0000214	0.0001872	0.0035	2		10722.86	10722.86	No	49.94	Si
SLU 83	fin.	4408.27	-6018	-0.0005477	0.0001872	0.0035	2		10722.86	10722.86	No	2.43	Si
SLU 80	ini.	161.97	-4406	-0.0000161	0.0001872	0.0035	2		10722.86	10722.86	No	66.2	Si
SLU 80	fin.	4326.82	-6105	-0.0005354	0.0001872	0.0035	2		10722.86	10722.86	No	2.48	Si
SLU 78	ini.	165.09	-4430	-0.0000164	0.0001872	0.0035	2		10722.86	10722.86	No	64.95	Si
SLU 78	fin.	4347.36	-6141	-0.0005385	0.0001872	0.0035	2		10722.86	10722.86	No	2.47	Si
SLU 81	ini.	215.53	-4264	-0.0000215	0.0001872	0.0035	2		10722.86	10722.86	No	49.75	Si
SLU 81	fin.	4352.79	-5919	-0.0005393	0.0001872	0.0035	2		10722.86	10722.86	No	2.46	Si
SLU 79	ini.	170.97	-4305	-0.000017	0.0001872	0.0035	2		10722.86	10722.86	No	62.72	Si
SLU 79	fin.	4328.47	-5987	-0.0005356	0.0001872	0.0035	2		10722.86	10722.86	No	2.48	Si
SLU 74	ini.	174.93	-4255	-0.0000174	0.0001872	0.0035	2		10722.86	10722.86	No	61.3	Si
SLU 74	fin.	4293.53	-5924	-0.0005303	0.0001872	0.0035	2		10722.86	10722.86	No	2.5	Si
SLU 75	ini.	165.93	-4355	-0.0000165	0.0001872	0.0035	2		10722.86	10722.86	No	64.62	Si
SLU 75	fin.	4291.88	-6042	-0.0005301	0.0001872	0.0035	2		10722.86	10722.86	No	2.5	Si
SLU 82	ini.	206.54	-4365	-0.0000206	0.0001872	0.0035	2		10722.86	10722.86	No	51.92	Si
SLU 82	fin.	4351.14	-6038	-0.0005391	0.0001872	0.0035	2		10722.86	10722.86	No	2.46	Si
SLU 77	ini.	174.09	-4330	-0.0000173	0.0001872	0.0035	2		10722.86	10722.86	No	61.6	Si
SLU 77	fin.	4349.01	-6023	-0.0005387	0.0001872	0.0035	2		10722.86	10722.86	No	2.47	Si
SLU 84	ini.	205.7	-4440	-0.0000205	0.0001872	0.0035	2		10722.86	10722.86	No	52.13	Si
SLU 84	fin.	4406.62	-6137	-0.0005475	0.0001872	0.0035	2		10722.86	10722.86	No	2.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	214.69	4706	2	0	1304	7930	13475	5100	9234	No	1.96	Si
SLU 83	fin.	4408.27	7509	2	0	1304	7930	13475	5100	9234	No	1.23	Si
SLU 79	ini.	170.97	4725	2	0	1304	7930	13475	5100	9234	No	1.95	Si
SLU 79	fin.	4328.47	7411	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 77	ini.	174.09	4741	2	0	1304	7930	13475	5100	9234	No	1.95	Si
SLU 77	fin.	4349.01	7455	2	0	1304	7930	13475	5100	9234	No	1.24	Si
SLU 82	ini.	206.54	4673	2	0	1304	7930	13475	5100	9234	No	1.98	Si
SLU 82	fin.	4351.14	7423	2	0	1304	7930	13475	5100	9234	No	1.24	Si
SLU 81	ini.	215.53	4644	2	0	1304	7930	13475	5100	9234	No	1.99	Si
SLU 81	fin.	4352.79	7402	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 75	ini.	165.93	4708	2	0	1304	7930	13475	5100	9234	No	1.96	Si
SLU 75	fin.	4291.88	7370	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 74	ini.	174.93	4679	2	0	1304	7930	13475	5100	9234	No	1.97	Si
SLU 74	fin.	4293.53	7348	2	0	1304	7930	13475	5100	9234	No	1.26	Si
SLU 80	ini.	161.97	4754	2	0	1304	7930	13475	5100	9234	No	1.94	Si
SLU 80	fin.	4326.82	7433	2	0	1304	7930	13475	5100	9234	No	1.24	Si
SLU 78	ini.	165.09	4770	2	0	1304	7930	13475	5100	9234	No	1.94	Si
SLU 78	fin.	4347.36	7477	2	0	1304	7930	13475	5100	9234	No	1.24	Si
SLU 84	ini.	205.7	4735	2	0	1304	7930	13475	5100	9234	No	1.95	Si
SLU 84	fin.	4406.62	7530	2	0	1304	7930	13475	5100	9234	No	1.23	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	851.5	409	-0.0000864	0.0002807	0.0035	2		15635.95	15635.95		18.36	Si
SLV 10	fin.	4777.35	-2217	-0.000569	0.0002807	0.0035	2		15635.95	15635.95		3.27	Si
SLD 14	ini.	162.7	-1912	-0.0000162	0.0002807	0.0035	2		15635.95	15635.95		96.1	Si
SLD 14	fin.	3961.66	-4368	-0.0004544	0.0002807	0.0035	2		15635.95	15635.95		3.95	Si
SLV 15	ini.	87.42	-1753	-0.0000087	0.0002807	0.0035	2		15635.95	15635.95		178.85	Si
SLV 15	fin.	4325.13	-5102	-0.0005045	0.0002807	0.0035	2		15635.95	15635.95		3.62	Si
SLV 16	ini.	-233.45	-2287	-0.0000232	0.0002807	0.0035	2		15648.46	15648.46		67.03	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	fin.	4508.73	-6085	-0.0005304	0.0002807	0.0035	2		15635.95	15635.95		3.47	Si
SLV 13	ini.	599.85	58	-0.0000604	0.0002807	0.0035	2		15635.95	15635.95		26.07	Si
SLV 13	fin.	5030.32	-3597	-0.0006061	0.0002807	0.0035	2		15635.95	15635.95		3.11	Si
SLD 9	ini.	508.73	-1363	-0.0000511	0.0002807	0.0035	2		15635.95	15635.95		30.74	Si
SLD 9	fin.	3735.74	-3061	-0.000424	0.0002807	0.0035	2		15635.95	15635.95		4.19	Si
SLD 13	ini.	300.46	-1683	-0.00003	0.0002807	0.0035	2		15635.95	15635.95		52.04	Si
SLD 13	fin.	3882.84	-3946	-0.0004437	0.0002807	0.0035	2		15635.95	15635.95		4.03	Si
SLV 9	ini.	1057.72	752	-0.000108	0.0002807	0.0035	2		15635.95	15635.95		14.78	Si
SLV 9	fin.	4659.35	-1585	-0.0005519	0.0002807	0.0035	2		15635.95	15635.95		3.36	Si
SLV 14	ini.	278.97	-476	-0.0000278	0.0002807	0.0035	2		15635.95	15635.95		56.05	Si
SLV 14	fin.	5213.93	-4579	-0.0006335	0.0002807	0.0035	2		15635.95	15635.95		3	Si
SLD 10	ini.	418.69	-1513	-0.0000419	0.0002807	0.0035	2		15635.95	15635.95		37.35	Si
SLD 10	fin.	3787.26	-3336	-0.0004309	0.0002807	0.0035	2		15635.95	15635.95		4.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-650.36	4162	2	0	1957	7930	20213	5100	9886		2.38	Si
SLV 11	fin.	2308.71	6198	2	0	1957	7930	20213	5100	9886		1.6	Si
SLV 14	ini.	278.97	7711	2	0	1957	7930	20213	5100	9886		1.28	Si
SLV 14	fin.	5213.93	7975	2	0	1957	7930	20213	5100	9886		1.24	Si
SLV 16	ini.	-233.45	7641	2	0	1957	7930	20213	5100	9886		1.29	Si
SLV 16	fin.	4508.73	8326	2	0	1957	7930	20213	5100	9886		1.19	Si
SLV 12	ini.	-856.58	4768	2	0	1957	7930	20213	5100	9886		2.07	Si
SLV 12	fin.	2426.71	6842	2	0	1957	7930	20213	5100	9886		1.45	Si
SLV 15	ini.	87.42	6698	2	0	1957	7930	20213	5100	9886		1.48	Si
SLV 15	fin.	4325.13	7324	2	0	1957	7930	20213	5100	9886		1.35	Si
SLD 16	ini.	-67.16	5242	2	0	1957	7930	20213	5100	9886		1.89	Si
SLD 16	fin.	3650.03	6533	2	0	1957	7930	20213	5100	9886		1.51	Si
SLD 13	ini.	300.46	4867	2	0	1957	7930	20213	5100	9886		2.03	Si
SLD 13	fin.	3882.84	5955	2	0	1957	7930	20213	5100	9886		1.66	Si
SLD 14	ini.	162.7	5272	2	0	1957	7930	20213	5100	9886		1.88	Si
SLD 14	fin.	3961.66	6385	2	0	1957	7930	20213	5100	9886		1.55	Si
SLV 13	ini.	599.85	6768	2	0	1957	7930	20213	5100	9886		1.46	Si
SLV 13	fin.	5030.32	6973	2	0	1957	7930	20213	5100	9886		1.42	Si
SLD 15	ini.	70.6	4837	2	0	1957	7930	20213	5100	9886		2.04	Si
SLD 15	fin.	3571.2	6103	2	0	1957	7930	20213	5100	9886		1.62	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.999	SLV 14	Si
V_SLV	1.187	SLV 16	Si
PF_SLU	2.432	SLU 83	Si
V_SLU	1.226	SLU 84	Si

Trave di accoppiamento 6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.284	-1.58	0.42	2	-22.543	-3.284	-1.58	0.42	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-414.16	-2545	-0.0000416	0.0001872	0.0035	2		10737.13	10737.13	No	25.93	Si
SLU 81	fin.	2525.31	-5019	-0.0002825	0.0001872	0.0035	2		10722.86	10722.86	No	4.25	Si
SLU 84	ini.	-409.95	-2572	-0.0000412	0.0001872	0.0035	2		10737.13	10737.13	No	26.19	Si
SLU 84	fin.	2557.31	-5071	-0.0002867	0.0001872	0.0035	2		10722.86	10722.86	No	4.19	Si
SLU 74	ini.	-410.63	-2504	-0.0000412	0.0001872	0.0035	2		10737.13	10737.13	No	26.15	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	fin.	2491.23	-4963	-0.0002781	0.0001872	0.0035	2		10722.86	10722.86	No	4.3	Si
SLU 75	ini.	-403.14	-2487	-0.0000405	0.0001872	0.0035	2		10737.13	10737.13	No	26.63	Si
SLU 75	fin.	2494.01	-4943	-0.0002785	0.0001872	0.0035	2		10722.86	10722.86	No	4.3	Si
SLU 80	ini.	-401.2	-2507	-0.0000403	0.0001872	0.0035	2		10737.13	10737.13	No	26.76	Si
SLU 80	fin.	2504.44	-4969	-0.0002798	0.0001872	0.0035	2		10722.86	10722.86	No	4.28	Si
SLU 83	ini.	-417.45	-2590	-0.0000419	0.0001872	0.0035	2		10737.13	10737.13	No	25.72	Si
SLU 83	fin.	2554.53	-5091	-0.0002863	0.0001872	0.0035	2		10722.86	10722.86	No	4.2	Si
SLU 78	ini.	-406.43	-2531	-0.0000408	0.0001872	0.0035	2		10737.13	10737.13	No	26.42	Si
SLU 78	fin.	2523.23	-5015	-0.0002823	0.0001872	0.0035	2		10722.86	10722.86	No	4.25	Si
SLU 79	ini.	-408.69	-2525	-0.000041	0.0001872	0.0035	2		10737.13	10737.13	No	26.27	Si
SLU 79	fin.	2501.65	-4989	-0.0002795	0.0001872	0.0035	2		10722.86	10722.86	No	4.29	Si
SLU 77	ini.	-413.92	-2549	-0.0000416	0.0001872	0.0035	2		10737.13	10737.13	No	25.94	Si
SLU 77	fin.	2520.45	-5035	-0.0002819	0.0001872	0.0035	2		10722.86	10722.86	No	4.25	Si
SLU 82	ini.	-406.67	-2527	-0.0000408	0.0001872	0.0035	2		10737.13	10737.13	No	26.4	Si
SLU 82	fin.	2528.09	-4999	-0.0002829	0.0001872	0.0035	2		10722.86	10722.86	No	4.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-414.16	563	2	0	1304	7930	13475	5100	9234	No	16.39	Si
SLU 81	fin.	2525.31	8295	2	0	1304	7930	13475	5100	9234	No	1.11	Si
SLU 75	ini.	-403.14	607	2	0	1304	7930	13475	5100	9234	No	15.22	Si
SLU 75	fin.	2494.01	8166	2	0	1304	7930	13475	5100	9234	No	1.13	Si
SLU 77	ini.	-413.92	607	2	0	1304	7930	13475	5100	9234	No	15.21	Si
SLU 77	fin.	2520.45	8279	2	0	1304	7930	13475	5100	9234	No	1.12	Si
SLU 83	ini.	-417.45	559	2	0	1304	7930	13475	5100	9234	No	16.52	Si
SLU 83	fin.	2554.53	8400	2	0	1304	7930	13475	5100	9234	No	1.1	Si
SLU 74	ini.	-410.63	611	2	0	1304	7930	13475	5100	9234	No	15.1	Si
SLU 74	fin.	2491.23	8174	2	0	1304	7930	13475	5100	9234	No	1.13	Si
SLU 84	ini.	-409.95	554	2	0	1304	7930	13475	5100	9234	No	16.67	Si
SLU 84	fin.	2557.31	8391	2	0	1304	7930	13475	5100	9234	No	1.1	Si
SLU 82	ini.	-406.67	558	2	0	1304	7930	13475	5100	9234	No	16.54	Si
SLU 82	fin.	2528.09	8287	2	0	1304	7930	13475	5100	9234	No	1.11	Si
SLU 80	ini.	-401.2	593	2	0	1304	7930	13475	5100	9234	No	15.57	Si
SLU 80	fin.	2504.44	8199	2	0	1304	7930	13475	5100	9234	No	1.13	Si
SLU 79	ini.	-408.69	598	2	0	1304	7930	13475	5100	9234	No	15.44	Si
SLU 79	fin.	2501.65	8208	2	0	1304	7930	13475	5100	9234	No	1.13	Si
SLU 78	ini.	-406.43	602	2	0	1304	7930	13475	5100	9234	No	15.33	Si
SLU 78	fin.	2523.23	8270	2	0	1304	7930	13475	5100	9234	No	1.12	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	-617.44	7	-0.0000621	0.0002807	0.0035	2		15648.46	15648.46		25.34	Si
SLD 16	fin.	2398.63	-3191	-0.0002567	0.0002807	0.0035	2		15635.95	15635.95		6.52	Si
SLV 16	ini.	-1067.91	2268	-0.000109	0.0002807	0.0035	2		15648.46	15648.46		14.65	Si
SLV 16	fin.	3265.01	-2878	-0.0003626	0.0002807	0.0035	2		15635.95	15635.95		4.79	Si
SLV 13	ini.	-1739.38	-33	-0.0001815	0.0002807	0.0035	2		15648.46	15648.46		9	Si
SLV 13	fin.	3176.3	-5720	-0.0003514	0.0002807	0.0035	2		15635.95	15635.95		4.92	Si
SLD 13	ini.	-912.81	-990	-0.0000927	0.0002807	0.0035	2		15648.46	15648.46		17.14	Si
SLD 13	fin.	2351.6	-4414	-0.0002512	0.0002807	0.0035	2		15635.95	15635.95		6.65	Si
SLV 15	ini.	-1350.74	2013	-0.0001391	0.0002807	0.0035	2		15648.46	15648.46		11.59	Si
SLV 15	fin.	3347.46	-3564	-0.0003732	0.0002807	0.0035	2		15635.95	15635.95		4.67	Si
SLD 15	ini.	-738.87	-102	-0.0000746	0.0002807	0.0035	2		15648.46	15648.46		21.18	Si
SLD 15	fin.	2434.03	-3485	-0.0002609	0.0002807	0.0035	2		15635.95	15635.95		6.42	Si
SLV 14	ini.	-1456.55	222	-0.0001505	0.0002807	0.0035	2		15648.46	15648.46		10.74	Si
SLV 14	fin.	3093.84	-5034	-0.000341	0.0002807	0.0035	2		15635.95	15635.95		5.05	Si
SLV 11	ini.	-64.27	2477	-0.0000064	0.0002807	0.0035	2		15648.46	15648.46		243.47	Si
SLV 11	fin.	2495.61	-317	-0.0002682	0.0002807	0.0035	2		15635.95	15635.95		6.27	Si
SLV 12	ini.	117.5	2641	-0.0000117	0.0002807	0.0035	2		15635.95	15635.95		133.07	Si
SLV 12	fin.	2442.62	124	-0.0002619	0.0002807	0.0035	2		15635.95	15635.95		6.4	Si
SLD 14	ini.	-791.38	-880	-0.0000801	0.0002807	0.0035	2		15648.46	15648.46		19.77	Si
SLD 14	fin.	2316.2	-4119	-0.0002471	0.0002807	0.0035	2		15635.95	15635.95		6.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1350.74	7389	2	0	1957	7930	20213	5100	9886		1.34	Si
SLV 15	fin.	3347.46	8574	2	0	1957	7930	20213	5100	9886		1.15	Si
SLV 14	ini.	-1456.55	7006	2	0	1957	7930	20213	5100	9886		1.41	Si
SLV 14	fin.	3093.84	8440	2	0	1957	7930	20213	5100	9886		1.17	Si
SLV 16	ini.	-1067.91	6673	2	0	1957	7930	20213	5100	9886		1.48	Si
SLV 16	fin.	3265.01	7725	2	0	1957	7930	20213	5100	9886		1.28	Si
SLV 4	ini.	1167.85	-6698	2	0	1957	7930	20213	5100	9886		1.48	Si
SLV 4	fin.	302.69	2001	2	0	1957	7930	20213	5100	9886		4.94	Si
SLV 13	ini.	-1739.38	7723	2	0	1957	7930	20213	5100	9886		1.28	Si
SLV 13	fin.	3176.3	9289	2	0	1957	7930	20213	5100	9886		1.06	Si
SLV 9	ini.	-1359.75	3304	2	0	1957	7930	20213	5100	9886		2.99	Si
SLV 9	fin.	1925.06	7968	2	0	1957	7930	20213	5100	9886		1.24	Si
SLD 13	ini.	-912.81	3591	2	0	1957	7930	20213	5100	9886		2.75	Si
SLD 13	fin.	2351.6	7198	2	0	1957	7930	20213	5100	9886		1.37	Si
SLD 14	ini.	-791.38	3283	2	0	1957	7930	20213	5100	9886		3.01	Si
SLD 14	fin.	2316.2	6834	2	0	1957	7930	20213	5100	9886		1.45	Si
SLD 15	ini.	-738.87	3453	2	0	1957	7930	20213	5100	9886		2.86	Si
SLD 15	fin.	2434.03	6898	2	0	1957	7930	20213	5100	9886		1.43	Si
SLV 10	ini.	-1177.98	2843	2	0	1957	7930	20213	5100	9886		3.48	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	fin.	1872.07	7422	2	0	1957	7930	20213	5100	9886		1.33	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.671	SLV 15	Si
V_SLV	1.064	SLV 13	Si
PF_SLU	4.193	SLU 84	Si
V_SLU	1.099	SLU 83	Si

Trave di accoppiamento 8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.284	-1.58	0.42	2	-18.313	-3.284	-1.58	0.42	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 42	ini.	422.12	-15195	-0.0000424	0.0001872	0.0035	2		10722.86	10722.86	No	25.4	Si
SLU 42	fin.	303.48	-10969	-0.0000304	0.0001872	0.0035	2		10722.86	10722.86	No	35.33	Si
SLU 82	ini.	452.73	-17882	-0.0000456	0.0001872	0.0035	2		10722.86	10722.86	No	23.68	Si
SLU 82	fin.	277.14	-12809	-0.0000277	0.0001872	0.0035	2		10722.86	10722.86	No	38.69	Si
SLU 39	ini.	424.41	-15010	-0.0000427	0.0001872	0.0035	2		10722.86	10722.86	No	25.27	Si
SLU 39	fin.	296.21	-10830	-0.0000296	0.0001872	0.0035	2		10722.86	10722.86	No	36.2	Si
SLU 63	ini.	428.49	-16650	-0.0000431	0.0001872	0.0035	2		10722.86	10722.86	No	25.02	Si
SLU 63	fin.	187.06	-11794	-0.0000186	0.0001872	0.0035	2		10722.86	10722.86	No	57.32	Si
SLU 83	ini.	435.76	-18052	-0.0000438	0.0001872	0.0035	2		10722.86	10722.86	No	24.61	Si
SLU 83	fin.	302.65	-12971	-0.0000303	0.0001872	0.0035	2		10722.86	10722.86	No	35.43	Si
SLU 81	ini.	445.39	-17875	-0.0000448	0.0001872	0.0035	2		10722.86	10722.86	No	24.08	Si
SLU 81	fin.	286.26	-12821	-0.0000286	0.0001872	0.0035	2		10722.86	10722.86	No	37.46	Si
SLU 61	ini.	438.11	-16473	-0.0000441	0.0001872	0.0035	2		10722.86	10722.86	No	24.48	Si
SLU 61	fin.	170.66	-11643	-0.000017	0.0001872	0.0035	2		10722.86	10722.86	No	62.83	Si
SLU 40	ini.	431.75	-15018	-0.0000434	0.0001872	0.0035	2		10722.86	10722.86	No	24.84	Si
SLU 40	fin.	287.09	-10818	-0.0000287	0.0001872	0.0035	2		10722.86	10722.86	No	37.35	Si
SLU 60	ini.	430.77	-16466	-0.0000433	0.0001872	0.0035	2		10722.86	10722.86	No	24.89	Si
SLU 60	fin.	179.78	-11655	-0.0000179	0.0001872	0.0035	2		10722.86	10722.86	No	59.64	Si
SLU 84	ini.	443.1	-18060	-0.0000446	0.0001872	0.0035	2		10722.86	10722.86	No	24.2	Si
SLU 84	fin.	293.53	-12959	-0.0000294	0.0001872	0.0035	2		10722.86	10722.86	No	36.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	340.78	-5710	2	0	1304	7930	13475	5100	9234	No	1.62	Si
SLU 78	fin.	287.06	-4641	2	0	1304	7930	13475	5100	9234	No	1.99	Si
SLU 63	ini.	428.49	-5738	2	0	1304	7930	13475	5100	9234	No	1.61	Si
SLU 63	fin.	187.06	-4813	2	0	1304	7930	13475	5100	9234	No	1.92	Si
SLU 83	ini.	435.76	-5972	2	0	1304	7930	13475	5100	9234	No	1.55	Si
SLU 83	fin.	302.65	-4851	2	0	1304	7930	13475	5100	9234	No	1.9	Si
SLU 62	ini.	421.15	-5704	2	0	1304	7930	13475	5100	9234	No	1.62	Si
SLU 62	fin.	196.18	-4778	2	0	1304	7930	13475	5100	9234	No	1.93	Si
SLU 84	ini.	443.1	-6006	2	0	1304	7930	13475	5100	9234	No	1.54	Si
SLU 84	fin.	293.53	-4886	2	0	1304	7930	13475	5100	9234	No	1.89	Si
SLU 81	ini.	445.39	-5955	2	0	1304	7930	13475	5100	9234	No	1.55	Si
SLU 81	fin.	286.26	-4861	2	0	1304	7930	13475	5100	9234	No	1.9	Si
SLU 82	ini.	452.73	-5989	2	0	1304	7930	13475	5100	9234	No	1.54	Si
SLU 82	fin.	277.14	-4897	2	0	1304	7930	13475	5100	9234	No	1.89	Si
SLU 75	ini.	350.41	-5693	2	0	1304	7930	13475	5100	9234	No	1.62	Si
SLU 75	fin.	270.66	-4652	2	0	1304	7930	13475	5100	9234	No	1.99	Si
SLU 61	ini.	438.11	-5721	2	0	1304	7930	13475	5100	9234	No	1.61	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 61	fin.	170.66	-4824	2	0	1304	7930	13475	5100	9234	No	1.91	Si
SLU 60	ini.	430.77	-5687	2	0	1304	7930	13475	5100	9234	No	1.62	Si
SLU 60	fin.	179.78	-4789	2	0	1304	7930	13475	5100	9234	No	1.93	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	2830.05	-15833	-0.0003083	0.0002807	0.0035	2		15635.95	15635.95		5.52	Si
SLV 8	fin.	-2225.21	-7670	-0.0002364	0.0002807	0.0035	2		15648.46	15648.46		7.03	Si
SLV 15	ini.	-4897.99	-2971	-0.000586	0.0002807	0.0035	2		15648.46	15648.46		3.19	Si
SLV 15	fin.	2052.39	-9462	-0.0002168	0.0002807	0.0035	2		15635.95	15635.95		7.62	Si
SLV 1	ini.	4887.8	-20657	-0.0005851	0.0002807	0.0035	2		15635.95	15635.95		3.2	Si
SLV 1	fin.	-1595.96	-8264	-0.0001657	0.0002807	0.0035	2		15648.46	15648.46		9.81	Si
SLV 3	ini.	5495.26	-21195	-0.0006762	0.0002807	0.0035	2		15635.95	15635.95		2.85	Si
SLV 3	fin.	-2564.74	-7909	-0.0002761	0.0002807	0.0035	2		15648.46	15648.46		6.1	Si
SLV 4	ini.	5816.34	-21669	-0.0007262	0.0002807	0.0035	2		15635.95	15635.95		2.69	Si
SLV 4	fin.	-2742.77	-7461	-0.0002975	0.0002807	0.0035	2		15648.46	15648.46		5.71	Si
SLV 7	ini.	2623.69	-15529	-0.0002834	0.0002807	0.0035	2		15635.95	15635.95		5.96	Si
SLV 7	fin.	-2110.79	-7958	-0.0002232	0.0002807	0.0035	2		15648.46	15648.46		7.41	Si
SLV 16	ini.	-4576.91	-3445	-0.0005396	0.0002807	0.0035	2		15648.46	15648.46		3.42	Si
SLV 16	fin.	1874.36	-9014	-0.0001967	0.0002807	0.0035	2		15635.95	15635.95		8.34	Si
SLV 14	ini.	-5184.37	-2908	-0.0006284	0.0002807	0.0035	2		15648.46	15648.46		3.02	Si
SLV 14	fin.	2843.14	-9370	-0.0003099	0.0002807	0.0035	2		15635.95	15635.95		5.5	Si
SLV 13	ini.	-5505.45	-2433	-0.0006771	0.0002807	0.0035	2		15648.46	15648.46		2.84	Si
SLV 13	fin.	3021.17	-9818	-0.0003319	0.0002807	0.0035	2		15635.95	15635.95		5.18	Si
SLV 2	ini.	5208.88	-21131	-0.0006328	0.0002807	0.0035	2		15635.95	15635.95		3	Si
SLV 2	fin.	-1773.99	-7816	-0.0001853	0.0002807	0.0035	2		15648.46	15648.46		8.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-4897.99	12923	2	0	1957	7930	20213	5100	9886		0.76	No
SLV 15	fin.	2052.39	13464	2	0	1957	7930	20213	5100	9886		0.73	No
SLD 4	ini.	2574.37	-12078	2	0	1957	7930	20213	5100	9886		0.82	No
SLD 4	fin.	-1096.35	-11222	2	0	1957	7930	20213	5100	9886		0.88	No
SLV 2	ini.	5208.88	-20662	2	0	1957	7930	20213	5100	9886		0.48	No
SLV 2	fin.	-1773.99	-19963	2	0	1957	7930	20213	5100	9886		0.5	No
SLV 7	ini.	2623.69	-12619	2	0	1957	7930	20213	5100	9886		0.78	No
SLV 7	fin.	-2110.79	-11093	2	0	1957	7930	20213	5100	9886		0.89	No
SLV 1	ini.	4887.8	-19258	2	0	1957	7930	20213	5100	9886		0.51	No
SLV 1	fin.	-1595.96	-18549	2	0	1957	7930	20213	5100	9886		0.53	No
SLV 14	ini.	-5184.37	13926	2	0	1957	7930	20213	5100	9886		0.71	No
SLV 14	fin.	2843.14	13975	2	0	1957	7930	20213	5100	9886		0.71	No
SLV 3	ini.	5495.26	-21665	2	0	1957	7930	20213	5100	9886		0.46	No
SLV 3	fin.	-2564.74	-20474	2	0	1957	7930	20213	5100	9886		0.48	No
SLV 13	ini.	-5505.45	15331	2	0	1957	7930	20213	5100	9886		0.64	No
SLV 13	fin.	3021.17	15389	2	0	1957	7930	20213	5100	9886		0.64	No
SLV 8	ini.	2830.05	-13522	2	0	1957	7930	20213	5100	9886		0.73	No
SLV 8	fin.	-2225.21	-12002	2	0	1957	7930	20213	5100	9886		0.82	No
SLV 4	ini.	5816.34	-23070	2	0	1957	7930	20213	5100	9886		0.43	No
SLV 4	fin.	-2742.77	-21887	2	0	1957	7930	20213	5100	9886		0.45	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.688	SLV 4	Si
V_SLV	0.429	SLV 4	No
PF_SLU	23.685	SLU 82	Si
V_SLU	1.537	SLU 84	Si

Trave di accoppiamento 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.223	-3.284	0.52	1.39	0.87	-16.523	-3.284	0.52	1.39	0.87	2.3	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-924.87	-1290	-0.0006206	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.28	Si
SLU 83	fin.	-430.36	-5378	-0.0002501	0.0001872	0.0035	0.87		2112.5	2112.5	No	4.91	Si
SLU 79	ini.	-904.78	-1332	-0.000604	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.33	Si
SLU 79	fin.	-416.82	-5206	-0.0002412	0.0001872	0.0035	0.87		2112.5	2112.5	No	5.07	Si
SLU 75	ini.	-900.87	-1318	-0.0006008	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.34	Si
SLU 75	fin.	-415.73	-5183	-0.0002405	0.0001872	0.0035	0.87		2112.5	2112.5	No	5.08	Si
SLU 84	ini.	-925.88	-1292	-0.0006215	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.28	Si
SLU 84	fin.	-430.38	-5376	-0.0002502	0.0001872	0.0035	0.87		2112.5	2112.5	No	4.91	Si
SLU 78	ini.	-909.29	-1341	-0.0006077	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.32	Si
SLU 78	fin.	-421.22	-5250	-0.0002441	0.0001872	0.0035	0.87		2112.5	2112.5	No	5.02	Si
SLU 81	ini.	-916.45	-1268	-0.0006136	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.31	Si
SLU 81	fin.	-424.86	-5310	-0.0002465	0.0001872	0.0035	0.87		2112.5	2112.5	No	4.97	Si
SLU 77	ini.	-908.27	-1339	-0.0006069	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.33	Si
SLU 77	fin.	-421.21	-5252	-0.0002441	0.0001872	0.0035	0.87		2112.5	2112.5	No	5.02	Si
SLU 74	ini.	-899.86	-1316	-0.0005999	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.35	Si
SLU 74	fin.	-415.71	-5184	-0.0002405	0.0001872	0.0035	0.87		2112.5	2112.5	No	5.08	Si
SLU 80	ini.	-905.8	-1334	-0.0006048	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.33	Si
SLU 80	fin.	-416.84	-5205	-0.0002413	0.0001872	0.0035	0.87		2112.5	2112.5	No	5.07	Si
SLU 82	ini.	-917.47	-1269	-0.0006145	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.3	Si
SLU 82	fin.	-424.88	-5309	-0.0002465	0.0001872	0.0035	0.87		2112.5	2112.5	No	4.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-909.29	4523	0.87	0	378	6899	5862	2219	7277	No	1.61	Si
SLU 78	fin.	-421.22	-4833	0.87	0	378	6899	5862	2219	7277	No	1.51	Si
SLU 74	ini.	-899.86	4480	0.87	0	378	6899	5862	2219	7277	No	1.62	Si
SLU 74	fin.	-415.71	-4787	0.87	0	378	6899	5862	2219	7277	No	1.52	Si
SLU 82	ini.	-917.47	4601	0.87	0	378	6899	5862	2219	7277	No	1.58	Si
SLU 82	fin.	-424.88	-4998	0.87	0	378	6899	5862	2219	7277	No	1.46	Si
SLU 77	ini.	-908.27	4519	0.87	0	378	6899	5862	2219	7277	No	1.61	Si
SLU 77	fin.	-421.21	-4831	0.87	0	378	6899	5862	2219	7277	No	1.51	Si
SLU 75	ini.	-900.87	4484	0.87	0	378	6899	5862	2219	7277	No	1.62	Si
SLU 75	fin.	-415.73	-4788	0.87	0	378	6899	5862	2219	7277	No	1.52	Si
SLU 80	ini.	-905.8	4502	0.87	0	378	6899	5862	2219	7277	No	1.62	Si
SLU 80	fin.	-416.84	-4801	0.87	0	378	6899	5862	2219	7277	No	1.52	Si
SLU 83	ini.	-924.87	4635	0.87	0	378	6899	5862	2219	7277	No	1.57	Si
SLU 83	fin.	-430.36	-5041	0.87	0	378	6899	5862	2219	7277	No	1.44	Si
SLU 84	ini.	-925.88	4639	0.87	0	378	6899	5862	2219	7277	No	1.57	Si
SLU 84	fin.	-430.38	-5043	0.87	0	378	6899	5862	2219	7277	No	1.44	Si
SLU 81	ini.	-916.45	4596	0.87	0	378	6899	5862	2219	7277	No	1.58	Si
SLU 81	fin.	-424.86	-4997	0.87	0	378	6899	5862	2219	7277	No	1.46	Si
SLU 79	ini.	-904.78	4498	0.87	0	378	6899	5862	2219	7277	No	1.62	Si
SLU 79	fin.	-416.82	-4800	0.87	0	378	6899	5862	2219	7277	No	1.52	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1616.96	-5394	-0.0012033	0.0002807	0.0035	0.87		2977.34	2977.34		1.84	Si
SLV 16	fin.	266.19	-281	-0.0001453	0.0002807	0.0035	0.87		2971.81	2971.81		11.16	Si
SLV 15	ini.	-1654	-5628	-0.0012422	0.0002807	0.0035	0.87		2977.34	2977.34		1.8	Si
SLV 15	fin.	283.85	-247	-0.0001554	0.0002807	0.0035	0.87		2971.81	2971.81		10.47	Si
SLV 13	ini.	-1404.97	-5279	-0.0009935	0.0002807	0.0035	0.87		2977.34	2977.34		2.12	Si
SLV 13	fin.	203.1	-639	-0.0001096	0.0002807	0.0035	0.87		2971.81	2971.81		14.63	Si
SLV 14	ini.	-1367.94	-5045	-0.0009589	0.0002807	0.0035	0.87		2977.34	2977.34		2.18	Si
SLV 14	fin.	185.43	-673	-0.0000998	0.0002807	0.0035	0.87		2971.81	2971.81		16.03	Si
SLD 16	ini.	-1050.38	-2868	-0.0006833	0.0002807	0.0035	0.87		2977.34	2977.34		2.83	Si
SLD 16	fin.	-49.9	-2145	-0.0000262	0.0002807	0.0035	0.87		2977.34	2977.34		59.67	Si
SLV 12	ini.	-1297.62	-2797	-0.0008947	0.0002807	0.0035	0.87		2977.34	2977.34		2.29	Si
SLV 12	fin.	0.64	-1964	-0.0000003	0.0002807	0.0035	0.87		2971.81	2971.81		4663.08	Si
SLD 14	ini.	-948	-2711	-0.0006018	0.0002807	0.0035	0.87		2977.34	2977.34		3.14	Si
SLD 14	fin.	-83.09	-2305	-0.0000439	0.0002807	0.0035	0.87		2977.34	2977.34		35.83	Si
SLV 11	ini.	-1321.42	-2948	-0.0009162	0.0002807	0.0035	0.87		2977.34	2977.34		2.25	Si
SLV 11	fin.	11.99	-1942	-0.0000063	0.0002807	0.0035	0.87		2971.81	2971.81		247.87	Si
SLD 13	ini.	-963.9	-2811	-0.0006142	0.0002807	0.0035	0.87		2977.34	2977.34		3.09	Si
SLD 13	fin.	-75.51	-2291	-0.0000399	0.0002807	0.0035	0.87		2977.34	2977.34		39.43	Si
SLD 15	ini.	-1066.28	-2968	-0.0006962	0.0002807	0.0035	0.87		2977.34	2977.34		2.79	Si
SLD 15	fin.	-42.31	-2130	-0.0000222	0.0002807	0.0035	0.87		2977.34	2977.34		70.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1616.96	4926	0.87	0	567	6899	8792	2219	7466		1.52	Si
SLV 16	fin.	266.19	99	0.87	0	567	6899	8792	2219	7466		75.44	Si
SLV 1	ini.	356.43	1286	0.87	0	567	6899	8792	2219	7466		5.8	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	fin.	-833.81	-6479	0.87	0	567	6899	8792	2219	7466		1.15	Si
SLV 15	ini.	-1654	4953	0.87	0	567	6899	8792	2219	7466		1.51	Si
SLV 15	fin.	283.85	250	0.87	0	567	6899	8792	2219	7466		29.91	Si
SLV 11	ini.	-1321.42	4888	0.87	0	567	6899	8792	2219	7466		1.53	Si
SLV 11	fin.	11.99	-2746	0.87	0	567	6899	8792	2219	7466		2.72	Si
SLV 2	ini.	393.46	1260	0.87	0	567	6899	8792	2219	7466		5.93	Si
SLV 2	fin.	-851.47	-6630	0.87	0	567	6899	8792	2219	7466		1.13	Si
SLV 4	ini.	144.44	2066	0.87	0	567	6899	8792	2219	7466		3.61	Si
SLV 4	fin.	-770.72	-7035	0.87	0	567	6899	8792	2219	7466		1.06	Si
SLV 12	ini.	-1297.62	4871	0.87	0	567	6899	8792	2219	7466		1.53	Si
SLV 12	fin.	0.64	-2843	0.87	0	567	6899	8792	2219	7466		2.63	Si
SLV 3	ini.	107.41	2093	0.87	0	567	6899	8792	2219	7466		3.57	Si
SLV 3	fin.	-753.05	-6884	0.87	0	567	6899	8792	2219	7466		1.08	Si
SLV 8	ini.	-769.2	4013	0.87	0	567	6899	8792	2219	7466		1.86	Si
SLV 8	fin.	-310.43	-4983	0.87	0	567	6899	8792	2219	7466		1.5	Si
SLV 7	ini.	-793	4030	0.87	0	567	6899	8792	2219	7466		1.85	Si
SLV 7	fin.	-299.08	-4886	0.87	0	567	6899	8792	2219	7466		1.53	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.8	SLV 15	Si
V_SLV	1.061	SLV 4	Si
PF_SLU	2.282	SLU 84	Si
V_SLU	1.443	SLU 84	Si

Trave di accoppiamento 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.576	-1.58	0.42	2	-16.768	6.576	-1.58	0.42	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	4661.04	-6790	-0.0005866	0.0001872	0.0035	2		10722.86	10722.86	No	2.3	Si
SLU 79	fin.	-2054.05	-4540	-0.0002233	0.0001872	0.0035	2		10737.13	10737.13	No	5.23	Si
SLU 84	ini.	4784.54	-6943	-0.0006058	0.0001872	0.0035	2		10722.86	10722.86	No	2.24	Si
SLU 84	fin.	-2082.28	-4641	-0.0002267	0.0001872	0.0035	2		10737.13	10737.13	No	5.16	Si
SLU 81	ini.	4768.1	-6917	-0.0006032	0.0001872	0.0035	2		10722.86	10722.86	No	2.25	Si
SLU 81	fin.	-2052.32	-4622	-0.000223	0.0001872	0.0035	2		10737.13	10737.13	No	5.23	Si
SLU 80	ini.	4643.44	-6753	-0.0005838	0.0001872	0.0035	2		10722.86	10722.86	No	2.31	Si
SLU 80	fin.	-2066.58	-4507	-0.0002248	0.0001872	0.0035	2		10737.13	10737.13	No	5.2	Si
SLU 75	ini.	4650.96	-6746	-0.000585	0.0001872	0.0035	2		10722.86	10722.86	No	2.31	Si
SLU 75	fin.	-2058.02	-4494	-0.0002237	0.0001872	0.0035	2		10737.13	10737.13	No	5.22	Si
SLU 82	ini.	4750.49	-6880	-0.0006005	0.0001872	0.0035	2		10722.86	10722.86	No	2.26	Si
SLU 82	fin.	-2064.85	-4589	-0.0002246	0.0001872	0.0035	2		10737.13	10737.13	No	5.2	Si
SLU 83	ini.	4802.15	-6980	-0.0006086	0.0001872	0.0035	2		10722.86	10722.86	No	2.23	Si
SLU 83	fin.	-2069.75	-4674	-0.0002252	0.0001872	0.0035	2		10737.13	10737.13	No	5.19	Si
SLU 74	ini.	4668.57	-6783	-0.0005877	0.0001872	0.0035	2		10722.86	10722.86	No	2.3	Si
SLU 74	fin.	-2045.49	-4528	-0.0002222	0.0001872	0.0035	2		10737.13	10737.13	No	5.25	Si
SLU 78	ini.	4685.01	-6810	-0.0005903	0.0001872	0.0035	2		10722.86	10722.86	No	2.29	Si
SLU 78	fin.	-2075.46	-4546	-0.0002259	0.0001872	0.0035	2		10737.13	10737.13	No	5.17	Si
SLU 77	ini.	4702.62	-6847	-0.000593	0.0001872	0.0035	2		10722.86	10722.86	No	2.28	Si
SLU 77	fin.	-2062.93	-4579	-0.0002243	0.0001872	0.0035	2		10737.13	10737.13	No	5.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	4802.15	-10617	2	0	1304	7930	13475	5100	9234	No	0.87	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	fin.	-2069.75	-8723	2	0	1304	7930	13475	5100	9234	No	1.06	Si
SLU 84	ini.	4784.54	-10612	2	0	1304	7930	13475	5100	9234	No	0.87	No
SLU 84	fin.	-2082.28	-8709	2	0	1304	7930	13475	5100	9234	No	1.06	Si
SLU 77	ini.	4702.62	-10416	2	0	1304	7930	13475	5100	9234	No	0.89	No
SLU 77	fin.	-2062.93	-8609	2	0	1304	7930	13475	5100	9234	No	1.07	Si
SLU 81	ini.	4768.1	-10535	2	0	1304	7930	13475	5100	9234	No	0.88	No
SLU 81	fin.	-2052.32	-8675	2	0	1304	7930	13475	5100	9234	No	1.06	Si
SLU 80	ini.	4643.44	-10324	2	0	1304	7930	13475	5100	9234	No	0.89	No
SLU 80	fin.	-2066.58	-8539	2	0	1304	7930	13475	5100	9234	No	1.08	Si
SLU 75	ini.	4650.96	-10328	2	0	1304	7930	13475	5100	9234	No	0.89	No
SLU 75	fin.	-2058.02	-8548	2	0	1304	7930	13475	5100	9234	No	1.08	Si
SLU 78	ini.	4685.01	-10411	2	0	1304	7930	13475	5100	9234	No	0.89	No
SLU 78	fin.	-2075.46	-8595	2	0	1304	7930	13475	5100	9234	No	1.07	Si
SLU 82	ini.	4750.49	-10530	2	0	1304	7930	13475	5100	9234	No	0.88	No
SLU 82	fin.	-2064.85	-8662	2	0	1304	7930	13475	5100	9234	No	1.07	Si
SLU 79	ini.	4661.04	-10329	2	0	1304	7930	13475	5100	9234	No	0.89	No
SLU 79	fin.	-2054.05	-8552	2	0	1304	7930	13475	5100	9234	No	1.08	Si
SLU 74	ini.	4668.57	-10333	2	0	1304	7930	13475	5100	9234	No	0.89	No
SLU 74	fin.	-2045.49	-8562	2	0	1304	7930	13475	5100	9234	No	1.08	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	4825.15	49	-0.000576	0.0002807	0.0035	2		15635.95	15635.95		3.24	Si
SLV 14	fin.	-3765.17	3987	-0.0004275	0.0002807	0.0035	2		15648.46	15648.46		4.16	Si
SLV 13	ini.	4781.02	-139	-0.0005695	0.0002807	0.0035	2		15635.95	15635.95		3.27	Si
SLV 13	fin.	-3589.28	3575	-0.0004042	0.0002807	0.0035	2		15648.46	15648.46		4.36	Si
SLV 10	ini.	4340.18	-1923	-0.0005066	0.0002807	0.0035	2		15635.95	15635.95		3.6	Si
SLV 10	fin.	-2719.52	545	-0.0002946	0.0002807	0.0035	2		15648.46	15648.46		5.75	Si
SLV 9	ini.	4311.81	-2043	-0.0005026	0.0002807	0.0035	2		15635.95	15635.95		3.63	Si
SLV 9	fin.	-2606.48	280	-0.0002811	0.0002807	0.0035	2		15648.46	15648.46		6	Si
SLD 13	ini.	3901.53	-2750	-0.0004462	0.0002807	0.0035	2		15635.95	15635.95		4.01	Si
SLD 13	fin.	-2389.44	-248	-0.0002554	0.0002807	0.0035	2		15648.46	15648.46		6.55	Si
SLD 15	ini.	3724.78	-3130	-0.0004225	0.0002807	0.0035	2		15635.95	15635.95		4.2	Si
SLD 15	fin.	-2241.35	-664	-0.0002382	0.0002807	0.0035	2		15648.46	15648.46		6.98	Si
SLD 16	ini.	3743.72	-3049	-0.0004251	0.0002807	0.0035	2		15635.95	15635.95		4.18	Si
SLD 16	fin.	-2316.86	-488	-0.000247	0.0002807	0.0035	2		15648.46	15648.46		6.75	Si
SLV 16	ini.	4420.29	-825	-0.0005179	0.0002807	0.0035	2		15635.95	15635.95		3.54	Si
SLV 16	fin.	-3425.8	3029	-0.0003829	0.0002807	0.0035	2		15648.46	15648.46		4.57	Si
SLV 15	ini.	4376.16	-1013	-0.0005117	0.0002807	0.0035	2		15635.95	15635.95		3.57	Si
SLV 15	fin.	-3249.91	2617	-0.0003604	0.0002807	0.0035	2		15648.46	15648.46		4.82	Si
SLD 14	ini.	3920.48	-2670	-0.0004488	0.0002807	0.0035	2		15635.95	15635.95		3.99	Si
SLD 14	fin.	-2464.95	-71	-0.0002643	0.0002807	0.0035	2		15648.46	15648.46		6.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	4376.16	-11708	2	0	1957	7930	20213	5100	9886		0.84	No
SLV 15	fin.	-3249.91	-11268	2	0	1957	7930	20213	5100	9886		0.88	No
SLD 16	ini.	3743.72	-9282	2	0	1957	7930	20213	5100	9886		1.07	Si
SLD 16	fin.	-2316.86	-8511	2	0	1957	7930	20213	5100	9886		1.16	Si
SLV 13	ini.	4781.02	-12263	2	0	1957	7930	20213	5100	9886		0.81	No
SLV 13	fin.	-3589.28	-12229	2	0	1957	7930	20213	5100	9886		0.81	No
SLV 14	ini.	4825.15	-12627	2	0	1957	7930	20213	5100	9886		0.78	No
SLV 14	fin.	-3765.17	-12657	2	0	1957	7930	20213	5100	9886		0.78	No
SLV 9	ini.	4311.81	-9501	2	0	1957	7930	20213	5100	9886		1.04	Si
SLV 9	fin.	-2606.48	-9352	2	0	1957	7930	20213	5100	9886		1.06	Si
SLD 15	ini.	3724.78	-9126	2	0	1957	7930	20213	5100	9886		1.08	Si
SLD 15	fin.	-2241.35	-8327	2	0	1957	7930	20213	5100	9886		1.19	Si
SLD 14	ini.	3920.48	-9523	2	0	1957	7930	20213	5100	9886		1.04	Si
SLD 14	fin.	-2464.95	-8928	2	0	1957	7930	20213	5100	9886		1.11	Si
SLD 13	ini.	3901.53	-9367	2	0	1957	7930	20213	5100	9886		1.06	Si
SLD 13	fin.	-2389.44	-8744	2	0	1957	7930	20213	5100	9886		1.13	Si
SLV 16	ini.	4420.29	-12071	2	0	1957	7930	20213	5100	9886		0.82	No
SLV 16	fin.	-3425.8	-11696	2	0	1957	7930	20213	5100	9886		0.85	No
SLV 10	ini.	4340.18	-9734	2	0	1957	7930	20213	5100	9886		1.02	Si
SLV 10	fin.	-2719.52	-9627	2	0	1957	7930	20213	5100	9886		1.03	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.241	SLV 14	Si
V_SLV	0.781	SLV 14	No
PF_SLU	2.233	SLU 83	Si
V_SLU	0.87	SLU 83	No

Trave di accoppiamento 15

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.163	1.046	0.52	1.39	0.87	-14.963	1.046	0.52	1.39	0.87	0.8	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	1957.36	-227	-0.0016667	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.07	Si
SLU 81	fin.	-736.48	-5528	-0.0004575	0.0002246	0.0035	0.87		2102.07	2102.07	No	2.85	Si
SLU 79	ini.	1924.42	-219	-0.0016223	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.09	Si
SLU 79	fin.	-713.67	-5426	-0.0004406	0.0002246	0.0035	0.87		2102.07	2102.07	No	2.95	Si
SLU 77	ini.	1940.11	-219	-0.0016433	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.08	Si
SLU 77	fin.	-716.16	-5466	-0.0004424	0.0002246	0.0035	0.87		2102.07	2102.07	No	2.94	Si
SLU 75	ini.	1922.37	-216	-0.0016195	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.09	Si
SLU 75	fin.	-722.78	-5419	-0.0004473	0.0002246	0.0035	0.87		2102.07	2102.07	No	2.91	Si
SLU 80	ini.	1930.05	-216	-0.0016298	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.09	Si
SLU 80	fin.	-724.68	-5439	-0.0004487	0.0002246	0.0035	0.87		2102.07	2102.07	No	2.9	Si
SLU 74	ini.	1916.74	-219	-0.0016121	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.09	Si
SLU 74	fin.	-711.77	-5406	-0.0004392	0.0002246	0.0035	0.87		2102.07	2102.07	No	2.95	Si
SLU 84	ini.	1986.35	-223	-0.0017069	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.05	Si
SLU 84	fin.	-751.89	-5601	-0.000469	0.0002246	0.0035	0.87		2102.07	2102.07	No	2.8	Si
SLU 83	ini.	1980.72	-226	-0.001699	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.06	Si
SLU 83	fin.	-740.88	-5588	-0.0004608	0.0002246	0.0035	0.87		2102.07	2102.07	No	2.84	Si
SLU 78	ini.	1945.74	-215	-0.0016509	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.08	Si
SLU 78	fin.	-727.17	-5479	-0.0004506	0.0002246	0.0035	0.87		2102.07	2102.07	No	2.89	Si
SLU 82	ini.	1962.98	-224	-0.0016744	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.07	Si
SLU 82	fin.	-747.49	-5541	-0.0004657	0.0002246	0.0035	0.87		2102.07	2102.07	No	2.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	1957.36	-5315	0.87	0	567	6344	7035	2219	6911	No	1.3	Si
SLU 81	fin.	-736.48	-7178	0.87	0	567	6344	7035	2219	6911	No	0.96	No
SLU 63	ini.	1895.26	-5396	0.87	0	567	6344	7035	2219	6911	No	1.28	Si
SLU 63	fin.	-846.76	-7065	0.87	0	567	6344	7035	2219	6911	No	0.98	No
SLU 62	ini.	1889.64	-5366	0.87	0	567	6344	7035	2219	6911	No	1.29	Si
SLU 62	fin.	-835.75	-7035	0.87	0	567	6344	7035	2219	6911	No	0.98	No
SLU 82	ini.	1962.98	-5345	0.87	0	567	6344	7035	2219	6911	No	1.29	Si
SLU 82	fin.	-747.49	-7208	0.87	0	567	6344	7035	2219	6911	No	0.96	No
SLU 83	ini.	1980.72	-5383	0.87	0	567	6344	7035	2219	6911	No	1.28	Si
SLU 83	fin.	-740.88	-7245	0.87	0	567	6344	7035	2219	6911	No	0.95	No
SLU 78	ini.	1945.74	-5321	0.87	0	567	6344	7035	2219	6911	No	1.3	Si
SLU 78	fin.	-727.17	-7080	0.87	0	567	6344	7035	2219	6911	No	0.98	No
SLU 75	ini.	1922.37	-5253	0.87	0	567	6344	7035	2219	6911	No	1.32	Si
SLU 75	fin.	-722.78	-7012	0.87	0	567	6344	7035	2219	6911	No	0.99	No
SLU 80	ini.	1930.05	-5276	0.87	0	567	6344	7035	2219	6911	No	1.31	Si
SLU 80	fin.	-724.68	-7035	0.87	0	567	6344	7035	2219	6911	No	0.98	No
SLU 77	ini.	1940.11	-5291	0.87	0	567	6344	7035	2219	6911	No	1.31	Si
SLU 77	fin.	-716.16	-7050	0.87	0	567	6344	7035	2219	6911	No	0.98	No
SLU 84	ini.	1986.35	-5412	0.87	0	567	6344	7035	2219	6911	No	1.28	Si
SLU 84	fin.	-751.89	-7275	0.87	0	567	6344	7035	2219	6911	No	0.95	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-666.1	3961	-0.0003873	0.0003369	0.0035	0.87		2471.01	2471.01		3.71	Si
SLV 13	fin.	5417.9	8425	-0.008172	0.0003369	0.0035	0.87		2465.18	2465.18		0.46	No
SLV 16	ini.	-132.73	4283	-0.0000705	0.0003369	0.0035	0.87		2471.01	2471.01		18.62	Si
SLV 16	fin.	4468.04	7270	-0.0064925	0.0003369	0.0035	0.87		2465.18	2465.18		0.55	No
SLV 1	ini.	2801.67	-4591	-0.0030856	0.0003369	0.0035	0.87		2465.18	2465.18		0.88	No
SLV 1	fin.	-5522.85	-14823	-0.0083353	0.0003369	0.0035	0.87		2471.01	2471.01		0.45	No
SLV 2	ini.	2798.46	-4545	-0.0030774	0.0003369	0.0035	0.87		2465.18	2465.18		0.88	No
SLV 2	fin.	-5507.32	-14745	-0.0083086	0.0003369	0.0035	0.87		2471.01	2471.01		0.45	No
SLV 14	ini.	-669.32	4007	-0.0003894	0.0003369	0.0035	0.87		2471.01	2471.01		3.69	Si
SLV 14	fin.	5433.43	8503	-0.0081989	0.0003369	0.0035	0.87		2465.18	2465.18		0.45	No
SLV 3	ini.	3338.26	-4315	-0.0043272	0.0003369	0.0035	0.87		2465.18	2465.18		0.74	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-6488.25	-16055	-0.0099755	0.0003369	0.0035	0.87		2471.01	2471.01		0.38	No
SLV 7	ini.	2749.98	-991	-0.0029551	0.0003369	0.0035	0.87		2465.18	2465.18		0.9	No
SLV 7	fin.	-3782.51	-9343	-0.0052014	0.0003369	0.0035	0.87		2471.01	2471.01		0.65	No
SLV 8	ini.	2747.92	-962	-0.0029499	0.0003369	0.0035	0.87		2465.18	2465.18		0.9	No
SLV 8	fin.	-3772.52	-9293	-0.0051822	0.0003369	0.0035	0.87		2471.01	2471.01		0.66	No
SLV 15	ini.	-129.51	4237	-0.0000688	0.0003369	0.0035	0.87		2471.01	2471.01		19.08	Si
SLV 15	fin.	4452.5	7192	-0.0064642	0.0003369	0.0035	0.87		2465.18	2465.18		0.55	No
SLV 4	ini.	3335.05	-4269	-0.0043204	0.0003369	0.0035	0.87		2465.18	2465.18		0.74	No
SLV 4	fin.	-6472.71	-15978	-0.0099494	0.0003369	0.0035	0.87		2471.01	2471.01		0.38	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	2194.34	-9862	0.87	0	851	6344	10552	2219	7195		0.73	No
SLD 3	fin.	-3078.42	-11188	0.87	0	851	6344	10552	2219	7195		0.64	No
SLV 8	ini.	2747.92	-12292	0.87	0	851	6344	10552	2219	7195		0.59	No
SLV 8	fin.	-3772.52	-13743	0.87	0	851	6344	10552	2219	7195		0.52	No
SLV 1	ini.	2801.67	-15255	0.87	0	851	6344	10552	2219	7195		0.47	No
SLV 1	fin.	-5522.85	-16665	0.87	0	851	6344	10552	2219	7195		0.43	No
SLV 3	ini.	3338.26	-18088	0.87	0	851	6344	10552	2219	7195		0.4	No
SLV 3	fin.	-6488.25	-19603	0.87	0	851	6344	10552	2219	7195		0.37	No
SLV 2	ini.	2798.46	-15215	0.87	0	851	6344	10552	2219	7195		0.47	No
SLV 2	fin.	-5507.32	-16624	0.87	0	851	6344	10552	2219	7195		0.43	No
SLV 14	ini.	-669.32	10692	0.87	0	851	6344	10552	2219	7195		0.67	No
SLV 14	fin.	5433.43	9821	0.87	0	851	6344	10552	2219	7195		0.73	No
SLD 4	ini.	2192.96	-9845	0.87	0	851	6344	10552	2219	7195		0.73	No
SLD 4	fin.	-3071.75	-11171	0.87	0	851	6344	10552	2219	7195		0.64	No
SLV 4	ini.	3335.05	-18047	0.87	0	851	6344	10552	2219	7195		0.4	No
SLV 4	fin.	-6472.71	-19563	0.87	0	851	6344	10552	2219	7195		0.37	No
SLV 7	ini.	2749.98	-12318	0.87	0	851	6344	10552	2219	7195		0.58	No
SLV 7	fin.	-3782.51	-13769	0.87	0	851	6344	10552	2219	7195		0.52	No
SLV 13	ini.	-666.1	10651	0.87	0	851	6344	10552	2219	7195		0.68	No
SLV 13	fin.	5417.9	9780	0.87	0	851	6344	10552	2219	7195		0.74	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.381	SLV 3	No
V_SLV	0.367	SLV 3	No
PF_SLU	1.055	SLU 84	Si
V_SLU	0.95	SLU 84	No

Trave di accoppiamento 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.613	1.046	0.58	1.39	0.81	-13.583	1.046	0.58	1.39	0.81	0.97	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	224.5	-2672	-0.0001425	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.4	Si
SLU 78	fin.	6.47	-753	-0.0000039	0.0002246	0.0035	0.81		1886.61	1886.61	No	291.5	Si
SLU 75	ini.	221.39	-2640	-0.0001404	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.52	Si
SLU 75	fin.	3.5	-752	-0.0000021	0.0002246	0.0035	0.81		1886.61	1886.61	No	538.72	Si
SLU 83	ini.	229.5	-2722	-0.0001458	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.22	Si
SLU 83	fin.	1.78	-786	-0.0000011	0.0002246	0.0035	0.81		1886.61	1886.61	No	1057.23	Si
SLU 84	ini.	229.81	-2717	-0.000146	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.21	Si
SLU 84	fin.	2.9	-778	-0.0000018	0.0002246	0.0035	0.81		1886.61	1886.61	No	649.56	Si
SLU 81	ini.	226.39	-2691	-0.0001437	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.33	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-1.19	-785	-0.0000007	0.0002246	0.0035	0.81		1892.63	1892.63	No	1596.44	Si
SLU 80	ini.	222.45	-2649	-0.0001411	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.48	Si
SLU 80	fin.	4.65	-751	-0.0000028	0.0002246	0.0035	0.81		1886.61	1886.61	No	405.49	Si
SLU 74	ini.	221.08	-2646	-0.0001402	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.53	Si
SLU 74	fin.	2.38	-760	-0.0000014	0.0002246	0.0035	0.81		1886.61	1886.61	No	792.02	Si
SLU 79	ini.	222.14	-2655	-0.0001409	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.49	Si
SLU 79	fin.	3.53	-760	-0.0000021	0.0002246	0.0035	0.81		1886.61	1886.61	No	534.04	Si
SLU 77	ini.	224.19	-2678	-0.0001423	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.42	Si
SLU 77	fin.	5.35	-761	-0.0000032	0.0002246	0.0035	0.81		1886.61	1886.61	No	352.5	Si
SLU 82	ini.	226.7	-2685	-0.0001439	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.32	Si
SLU 82	fin.	-0.07	-777	0	0.0002246	0.0035	0.81		1892.63	1892.63	No	28863.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	226.7	7989	0.81	0	441	6423	6550	2066	6864	No	0.86	No
SLU 82	fin.	-0.07	-3386	0.81	0	441	6423	6550	2066	6864	No	2.03	Si
SLU 84	ini.	229.81	8092	0.81	0	441	6423	6550	2066	6864	No	0.85	No
SLU 84	fin.	2.9	-3416	0.81	0	441	6423	6550	2066	6864	No	2.01	Si
SLU 77	ini.	224.19	7944	0.81	0	441	6423	6550	2066	6864	No	0.86	No
SLU 77	fin.	5.35	-3315	0.81	0	441	6423	6550	2066	6864	No	2.07	Si
SLU 81	ini.	226.39	7993	0.81	0	441	6423	6550	2066	6864	No	0.86	No
SLU 81	fin.	-1.19	-3386	0.81	0	441	6423	6550	2066	6864	No	2.03	Si
SLU 75	ini.	221.39	7838	0.81	0	441	6423	6550	2066	6864	No	0.88	No
SLU 75	fin.	3.5	-3285	0.81	0	441	6423	6550	2066	6864	No	2.09	Si
SLU 78	ini.	224.5	7941	0.81	0	441	6423	6550	2066	6864	No	0.86	No
SLU 78	fin.	6.47	-3316	0.81	0	441	6423	6550	2066	6864	No	2.07	Si
SLU 80	ini.	222.45	7871	0.81	0	441	6423	6550	2066	6864	No	0.87	No
SLU 80	fin.	4.65	-3295	0.81	0	441	6423	6550	2066	6864	No	2.08	Si
SLU 79	ini.	222.14	7875	0.81	0	441	6423	6550	2066	6864	No	0.87	No
SLU 79	fin.	3.53	-3295	0.81	0	441	6423	6550	2066	6864	No	2.08	Si
SLU 74	ini.	221.08	7842	0.81	0	441	6423	6550	2066	6864	No	0.88	No
SLU 74	fin.	2.38	-3285	0.81	0	441	6423	6550	2066	6864	No	2.09	Si
SLU 83	ini.	229.5	8096	0.81	0	441	6423	6550	2066	6864	No	0.85	No
SLU 83	fin.	1.78	-3416	0.81	0	441	6423	6550	2066	6864	No	2.01	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	552.72	-71	-0.0003698	0.0003369	0.0035	0.81		2160.1	2160.1		3.91	Si
SLV 16	fin.	1228.97	3460	-0.0009792	0.0003369	0.0035	0.81		2160.1	2160.1		1.76	Si
SLV 2	ini.	-249.47	-3553	-0.0001566	0.0003369	0.0035	0.81		2165.48	2165.48		8.68	Si
SLV 2	fin.	-1216.06	-4450	-0.000963	0.0003369	0.0035	0.81		2165.48	2165.48		1.78	Si
SLV 3	ini.	-277.67	-2879	-0.0001751	0.0003369	0.0035	0.81		2165.48	2165.48		7.8	Si
SLV 3	fin.	-1064.18	-3402	-0.0008097	0.0003369	0.0035	0.81		2165.48	2165.48		2.03	Si
SLV 1	ini.	-249.9	-3541	-0.0001568	0.0003369	0.0035	0.81		2165.48	2165.48		8.67	Si
SLV 1	fin.	-1230.27	-4484	-0.000978	0.0003369	0.0035	0.81		2165.48	2165.48		1.76	Si
SLV 5	ini.	73.08	-3328	-0.0000446	0.0003369	0.0035	0.81		2160.1	2160.1		29.56	Si
SLV 5	fin.	-623.86	-3350	-0.0004236	0.0003369	0.0035	0.81		2165.48	2165.48		3.47	Si
SLV 12	ini.	229.75	-284	-0.000144	0.0003369	0.0035	0.81		2160.1	2160.1		9.4	Si
SLV 12	fin.	622.57	2326	-0.0004236	0.0003369	0.0035	0.81		2160.1	2160.1		3.47	Si
SLV 13	ini.	580.07	-721	-0.0003906	0.0003369	0.0035	0.81		2160.1	2160.1		3.72	Si
SLV 13	fin.	1048.68	2344	-0.0007968	0.0003369	0.0035	0.81		2160.1	2160.1		2.06	Si
SLV 14	ini.	580.5	-734	-0.0003909	0.0003369	0.0035	0.81		2160.1	2160.1		3.72	Si
SLV 14	fin.	1062.89	2378	-0.0008106	0.0003369	0.0035	0.81		2160.1	2160.1		2.03	Si
SLV 15	ini.	552.3	-59	-0.0003695	0.0003369	0.0035	0.81		2160.1	2160.1		3.91	Si
SLV 15	fin.	1214.76	3426	-0.0009643	0.0003369	0.0035	0.81		2160.1	2160.1		1.78	Si
SLV 4	ini.	-277.25	-2891	-0.0001749	0.0003369	0.0035	0.81		2165.48	2165.48		7.81	Si
SLV 4	fin.	-1049.98	-3369	-0.000796	0.0003369	0.0035	0.81		2165.48	2165.48		2.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	334.49	7304	0.81	0	662	6423	9824	2066	7085		0.97	No
SLD 13	fin.	446.77	-881	0.81	0	662	6423	9824	2066	7085		8.05	Si
SLV 14	ini.	580.5	9937	0.81	0	662	6423	9824	2066	7085		0.71	No
SLV 14	fin.	1062.89	1065	0.81	0	662	6423	9824	2066	7085		6.65	Si
SLV 9	ini.	322.07	7499	0.81	0	662	6423	9824	2066	7085		0.94	No
SLV 9	fin.	59.82	-628	0.81	0	662	6423	9824	2066	7085		11.28	Si
SLV 13	ini.	580.07	9894	0.81	0	662	6423	9824	2066	7085		0.72	No
SLV 13	fin.	1048.68	986	0.81	0	662	6423	9824	2066	7085		7.18	Si
SLD 15	ini.	322.8	7078	0.81	0	662	6423	9824	2066	7085		1	Si
SLD 15	fin.	519.22	-1072	0.81	0	662	6423	9824	2066	7085		6.61	Si
SLV 16	ini.	552.72	9422	0.81	0	662	6423	9824	2066	7085		0.75	No
SLV 16	fin.	1228.97	617	0.81	0	662	6423	9824	2066	7085		11.49	Si
SLV 15	ini.	552.3	9379	0.81	0	662	6423	9824	2066	7085		0.76	No
SLV 15	fin.	1214.76	538	0.81	0	662	6423	9824	2066	7085		13.18	Si
SLD 14	ini.	334.67	7322	0.81	0	662	6423	9824	2066	7085		0.97	No
SLD 14	fin.	452.87	-847	0.81	0	662	6423	9824	2066	7085		8.37	Si
SLV 10	ini.	322.34	7526	0.81	0	662	6423	9824	2066	7085		0.94	No
SLV 10	fin.	68.96	-578	0.81	0	662	6423	9824	2066	7085		12.27	Si
SLD 16	ini.	322.98	7096	0.81	0	662	6423	9824	2066	7085		1	No
SLD 16	fin.	525.32	-1038	0.81	0	662	6423	9824	2066	7085		6.83	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.758	SLV 16	Si
V_SLV	0.713	SLV 14	No
PF_SLU	8.21	SLU 84	Si
V_SLU	0.848	SLU 83	No

Trave di accoppiamento 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.238	1.046	0.58	1.39	0.81	-12.238	1.046	0.58	1.39	0.81	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-223.14	-3999	-0.0001413	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.48	Si
SLU 84	fin.	-1289.51	-6162	-0.0011148	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.47	Si
SLU 80	ini.	-208.2	-3876	-0.0001313	0.0002246	0.0035	0.81		1892.63	1892.63	No	9.09	Si
SLU 80	fin.	-1261.56	-6008	-0.0010821	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.5	Si
SLU 77	ini.	-210.21	-3914	-0.0001326	0.0002246	0.0035	0.81		1892.63	1892.63	No	9	Si
SLU 77	fin.	-1274.51	-6070	-0.0010972	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.48	Si
SLU 83	ini.	-224.37	-4006	-0.0001421	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.44	Si
SLU 83	fin.	-1291.57	-6172	-0.0011172	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.47	Si
SLU 81	ini.	-222.83	-3961	-0.000141	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.49	Si
SLU 81	fin.	-1276.43	-6098	-0.0010994	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.48	Si
SLU 78	ini.	-208.99	-3906	-0.0001318	0.0002246	0.0035	0.81		1892.63	1892.63	No	9.06	Si
SLU 78	fin.	-1272.45	-6060	-0.0010948	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.49	Si
SLU 82	ini.	-221.6	-3953	-0.0001402	0.0002246	0.0035	0.81		1892.63	1892.63	No	8.54	Si
SLU 82	fin.	-1274.37	-6088	-0.001097	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.49	Si
SLU 75	ini.	-207.45	-3861	-0.0001308	0.0002246	0.0035	0.81		1892.63	1892.63	No	9.12	Si
SLU 75	fin.	-1257.31	-5986	-0.0010771	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.51	Si
SLU 74	ini.	-208.67	-3868	-0.0001316	0.0002246	0.0035	0.81		1892.63	1892.63	No	9.07	Si
SLU 74	fin.	-1259.37	-5996	-0.0010795	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.5	Si
SLU 79	ini.	-209.42	-3883	-0.0001321	0.0002246	0.0035	0.81		1892.63	1892.63	No	9.04	Si
SLU 79	fin.	-1263.62	-6018	-0.0010845	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-207.45	-1992	0.81	0	428	6423	6550	2066	6851	No	3.44	Si
SLU 75	fin.	-1257.31	-2434	0.81	0	428	6423	6550	2066	6851	No	2.81	Si
SLU 81	ini.	-222.83	-1979	0.81	0	428	6423	6550	2066	6851	No	3.46	Si
SLU 81	fin.	-1276.43	-2466	0.81	0	428	6423	6550	2066	6851	No	2.78	Si
SLU 83	ini.	-224.37	-2012	0.81	0	428	6423	6550	2066	6851	No	3.41	Si
SLU 83	fin.	-1291.57	-2490	0.81	0	428	6423	6550	2066	6851	No	2.75	Si
SLU 82	ini.	-221.6	-1977	0.81	0	428	6423	6550	2066	6851	No	3.47	Si
SLU 82	fin.	-1274.37	-2464	0.81	0	428	6423	6550	2066	6851	No	2.78	Si
SLU 77	ini.	-210.21	-2028	0.81	0	428	6423	6550	2066	6851	No	3.38	Si
SLU 77	fin.	-1274.51	-2460	0.81	0	428	6423	6550	2066	6851	No	2.79	Si
SLU 84	ini.	-223.14	-2010	0.81	0	428	6423	6550	2066	6851	No	3.41	Si
SLU 84	fin.	-1289.51	-2488	0.81	0	428	6423	6550	2066	6851	No	2.75	Si
SLU 78	ini.	-208.99	-2026	0.81	0	428	6423	6550	2066	6851	No	3.38	Si
SLU 78	fin.	-1272.45	-2458	0.81	0	428	6423	6550	2066	6851	No	2.79	Si
SLU 74	ini.	-208.67	-1994	0.81	0	428	6423	6550	2066	6851	No	3.44	Si
SLU 74	fin.	-1259.37	-2436	0.81	0	428	6423	6550	2066	6851	No	2.81	Si
SLU 80	ini.	-208.2	-2001	0.81	0	428	6423	6550	2066	6851	No	3.42	Si
SLU 80	fin.	-1261.56	-2440	0.81	0	428	6423	6550	2066	6851	No	2.81	Si
SLU 79	ini.	-209.42	-2004	0.81	0	428	6423	6550	2066	6851	No	3.42	Si
SLU 79	fin.	-1263.62	-2442	0.81	0	428	6423	6550	2066	6851	No	2.81	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-4002.24	-9830	-0.0067537	0.0003369	0.0035	0.81		2165.48	2165.48		0.54	No
SLV 16	fin.	1840.89	-2878	-0.0017654	0.0003369	0.0035	0.81		2160.1	2160.1		1.17	Si
SLD 1	ini.	1520.43	450	-0.0013133	0.0003369	0.0035	0.81		2160.1	2160.1		1.42	Si
SLD 1	fin.	-2026.54	-4631	-0.0020902	0.0003369	0.0035	0.81		2165.48	2165.48		1.07	Si
SLV 3	ini.	4040.4	5474	-0.0068496	0.0003369	0.0035	0.81		2160.1	2160.1		0.53	No
SLV 3	fin.	-3380.35	-4239	-0.0054314	0.0003369	0.0035	0.81		2165.48	2165.48		0.64	No
SLV 15	ini.	-3985.29	-9794	-0.0067185	0.0003369	0.0035	0.81		2165.48	2165.48		0.54	No
SLV 15	fin.	1835.71	-2862	-0.001757	0.0003369	0.0035	0.81		2160.1	2160.1		1.18	Si
SLV 1	ini.	3739.08	4585	-0.0062181	0.0003369	0.0035	0.81		2160.1	2160.1		0.58	No
SLV 1	fin.	-3577.52	-5327	-0.0058567	0.0003369	0.0035	0.81		2165.48	2165.48		0.61	No
SLV 14	ini.	-4303.56	-10719	-0.007372	0.0003369	0.0035	0.81		2165.48	2165.48		0.5	No
SLV 14	fin.	1643.71	-3966	-0.0014736	0.0003369	0.0035	0.81		2160.1	2160.1		1.31	Si
SLV 4	ini.	4023.45	5437	-0.0068145	0.0003369	0.0035	0.81		2160.1	2160.1		0.54	No
SLV 4	fin.	-3375.18	-4256	-0.0054201	0.0003369	0.0035	0.81		2165.48	2165.48		0.64	No
SLV 2	ini.	3722.13	4548	-0.006182	0.0003369	0.0035	0.81		2160.1	2160.1		0.58	No
SLV 2	fin.	-3572.35	-5343	-0.0058457	0.0003369	0.0035	0.81		2165.48	2165.48		0.61	No
SLD 2	ini.	1513.16	434	-0.0013042	0.0003369	0.0035	0.81		2160.1	2160.1		1.43	Si
SLD 2	fin.	-2024.32	-4638	-0.0020859	0.0003369	0.0035	0.81		2165.48	2165.48		1.07	Si
SLV 13	ini.	-4286.61	-10683	-0.0073376	0.0003369	0.0035	0.81		2165.48	2165.48		0.51	No
SLV 13	fin.	1638.54	-3949	-0.0014666	0.0003369	0.0035	0.81		2160.1	2160.1		1.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-4303.56	9104	0.81	0	642	6423	9824	2066	7065		0.78	No
SLV 14	fin.	1643.71	9119	0.81	0	642	6423	9824	2066	7065		0.77	No
SLV 15	ini.	-3985.29	9887	0.81	0	642	6423	9824	2066	7065		0.71	No
SLV 15	fin.	1835.71	8932	0.81	0	642	6423	9824	2066	7065		0.79	No
SLV 1	ini.	3739.08	-12696	0.81	0	642	6423	9824	2066	7065		0.56	No
SLV 1	fin.	-3577.52	-12396	0.81	0	642	6423	9824	2066	7065		0.57	No
SLV 2	ini.	3722.13	-12662	0.81	0	642	6423	9824	2066	7065		0.56	No
SLV 2	fin.	-3572.35	-12362	0.81	0	642	6423	9824	2066	7065		0.57	No
SLV 3	ini.	4040.4	-11879	0.81	0	642	6423	9824	2066	7065		0.59	No
SLV 3	fin.	-3380.35	-12549	0.81	0	642	6423	9824	2066	7065		0.56	No
SLD 3	ini.	1651.34	-5867	0.81	0	642	6423	9824	2066	7065		1.2	Si
SLD 3	fin.	-1940.34	-6343	0.81	0	642	6423	9824	2066	7065		1.11	Si
SLV 4	ini.	4023.45	-11844	0.81	0	642	6423	9824	2066	7065		0.6	No
SLV 4	fin.	-3375.18	-12515	0.81	0	642	6423	9824	2066	7065		0.56	No
SLV 13	ini.	-4286.61	9069	0.81	0	642	6423	9824	2066	7065		0.78	No
SLV 13	fin.	1638.54	9085	0.81	0	642	6423	9824	2066	7065		0.78	No
SLV 16	ini.	-4002.24	9922	0.81	0	642	6423	9824	2066	7065		0.71	No
SLV 16	fin.	1840.89	8966	0.81	0	642	6423	9824	2066	7065		0.79	No
SLD 4	ini.	1644.06	-5852	0.81	0	642	6423	9824	2066	7065		1.21	Si
SLD 4	fin.	-1938.12	-6328	0.81	0	642	6423	9824	2066	7065		1.12	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.503	SLV 14	No
V_SLV	0.556	SLV 1	No
PF_SLU	1.465	SLU 83	Si
V_SLU	2.751	SLU 83	Si

Trave di accoppiamento 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.528	1.046	0.52	1.39	0.87	-7.428	1.046	0.52	1.39	0.87	0.9	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-119.5	-3463	-0.0000637	0.0002246	0.0035	0.87		2102.07	2102.07	No	17.59	Si
SLU 77	fin.	-2016.9	-7572	-0.0017448	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.04	Si
SLU 81	ini.	-161.23	-3584	-0.0000867	0.0002246	0.0035	0.87		2102.07	2102.07	No	13.04	Si
SLU 81	fin.	-2008.52	-7629	-0.0017329	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.05	Si
SLU 79	ini.	-120.56	-3446	-0.0000643	0.0002246	0.0035	0.87		2102.07	2102.07	No	17.44	Si
SLU 79	fin.	-2005.84	-7525	-0.001729	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.05	Si
SLU 78	ini.	-115.99	-3455	-0.0000618	0.0002246	0.0035	0.87		2102.07	2102.07	No	18.12	Si
SLU 78	fin.	-2019.71	-7574	-0.0017488	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.04	Si
SLU 84	ini.	-153.07	-3606	-0.0000821	0.0002246	0.0035	0.87		2102.07	2102.07	No	13.73	Si
SLU 84	fin.	-2039.19	-7726	-0.0017771	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.03	Si
SLU 75	ini.	-120.65	-3426	-0.0000643	0.0002246	0.0035	0.87		2102.07	2102.07	No	17.42	Si
SLU 75	fin.	-1991.86	-7480	-0.0017093	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.06	Si
SLU 82	ini.	-157.73	-3577	-0.0000847	0.0002246	0.0035	0.87		2102.07	2102.07	No	13.33	Si
SLU 82	fin.	-2011.34	-7632	-0.0017369	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.05	Si
SLU 80	ini.	-117.06	-3439	-0.0000624	0.0002246	0.0035	0.87		2102.07	2102.07	No	17.96	Si
SLU 80	fin.	-2008.66	-7528	-0.001733	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.05	Si
SLU 83	ini.	-156.57	-3613	-0.0000841	0.0002246	0.0035	0.87		2102.07	2102.07	No	13.43	Si
SLU 83	fin.	-2036.38	-7724	-0.001773	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.03	Si
SLU 74	ini.	-124.15	-3434	-0.0000663	0.0002246	0.0035	0.87		2102.07	2102.07	No	16.93	Si
SLU 74	fin.	-1989.04	-7477	-0.0017054	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-119.5	-3082	0.87	0	548	6899	7035	2219	7447	No	2.42	Si
SLU 77	fin.	-2016.9	-5246	0.87	0	548	6899	7035	2219	7447	No	1.42	Si
SLU 80	ini.	-117.06	-3066	0.87	0	548	6899	7035	2219	7447	No	2.43	Si
SLU 80	fin.	-2008.66	-5230	0.87	0	548	6899	7035	2219	7447	No	1.42	Si
SLU 78	ini.	-115.99	-3094	0.87	0	548	6899	7035	2219	7447	No	2.41	Si
SLU 78	fin.	-2019.71	-5258	0.87	0	548	6899	7035	2219	7447	No	1.42	Si
SLU 83	ini.	-156.57	-2997	0.87	0	548	6899	7035	2219	7447	No	2.49	Si
SLU 83	fin.	-2036.38	-5290	0.87	0	548	6899	7035	2219	7447	No	1.41	Si
SLU 82	ini.	-157.73	-2941	0.87	0	548	6899	7035	2219	7447	No	2.53	Si
SLU 82	fin.	-2011.34	-5234	0.87	0	548	6899	7035	2219	7447	No	1.42	Si
SLU 79	ini.	-120.56	-3055	0.87	0	548	6899	7035	2219	7447	No	2.44	Si
SLU 79	fin.	-2005.84	-5218	0.87	0	548	6899	7035	2219	7447	No	1.43	Si
SLU 81	ini.	-161.23	-2929	0.87	0	548	6899	7035	2219	7447	No	2.54	Si
SLU 81	fin.	-2008.52	-5223	0.87	0	548	6899	7035	2219	7447	No	1.43	Si
SLU 75	ini.	-120.65	-3026	0.87	0	548	6899	7035	2219	7447	No	2.46	Si
SLU 75	fin.	-1991.86	-5190	0.87	0	548	6899	7035	2219	7447	No	1.43	Si
SLU 74	ini.	-124.15	-3015	0.87	0	548	6899	7035	2219	7447	No	2.47	Si
SLU 74	fin.	-1989.04	-5178	0.87	0	548	6899	7035	2219	7447	No	1.44	Si
SLU 84	ini.	-153.07	-3008	0.87	0	548	6899	7035	2219	7447	No	2.48	Si
SLU 84	fin.	-2039.19	-5302	0.87	0	548	6899	7035	2219	7447	No	1.4	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	2267.54	-811	-0.0019778	0.0003369	0.0035	0.87		2465.18	2465.18		1.09	Si
SLV 1	fin.	-6075.63	-13036	-0.0092792	0.0003369	0.0035	0.87		2471.01	2471.01		0.41	No
SLD 4	ini.	1059.41	-1217	-0.0006735	0.0003369	0.0035	0.87		2465.18	2465.18		2.33	Si
SLD 4	fin.	-3568.31	-8629	-0.0047829	0.0003369	0.0035	0.87		2471.01	2471.01		0.69	No
SLV 4	ini.	2558.04	227	-0.0025128	0.0003369	0.0035	0.87		2465.18	2465.18		0.96	No
SLV 4	fin.	-6484.97	-13293	-0.00997	0.0003369	0.0035	0.87		2471.01	2471.01		0.38	No
SLD 3	ini.	1094.61	-1143	-0.0007014	0.0003369	0.0035	0.87		2465.18	2465.18		2.25	Si
SLD 3	fin.	-3599.38	-8658	-0.0048445	0.0003369	0.0035	0.87		2471.01	2471.01		0.69	No
SLV 7	ini.	1327.69	372	-0.000897	0.0003369	0.0035	0.87		2465.18	2465.18		1.86	Si
SLV 7	fin.	-3682.71	-8114	-0.0050082	0.0003369	0.0035	0.87		2471.01	2471.01		0.67	No
SLV 13	ini.	-2681.81	-4842	-0.0027773	0.0003369	0.0035	0.87		2471.01	2471.01		0.92	No
SLV 13	fin.	3706.35	2995	-0.0050678	0.0003369	0.0035	0.87		2465.18	2465.18		0.67	No
SLV 14	ini.	-2763.8	-5015	-0.0029768	0.0003369	0.0035	0.87		2471.01	2471.01		0.89	No
SLV 14	fin.	3778.71	3062	-0.0052078	0.0003369	0.0035	0.87		2465.18	2465.18		0.65	No
SLV 8	ini.	1275	261	-0.0008511	0.0003369	0.0035	0.87		2465.18	2465.18		1.93	Si
SLV 8	fin.	-3636.2	-8071	-0.0049171	0.0003369	0.0035	0.87		2471.01	2471.01		0.68	No
SLV 2	ini.	2185.55	-984	-0.0018514	0.0003369	0.0035	0.87		2465.18	2465.18		1.13	Si
SLV 2	fin.	-6003.27	-12969	-0.0091565	0.0003369	0.0035	0.87		2471.01	2471.01		0.41	No
SLV 3	ini.	2640.03	400	-0.0026921	0.0003369	0.0035	0.87		2465.18	2465.18		0.93	No
SLV 3	fin.	-6557.34	-13359	-0.0100916	0.0003369	0.0035	0.87		2471.01	2471.01		0.38	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	2640.03	-15703	0.87	0	823	6899	10552	2219	7721		0.49	No
SLV 3	fin.	-6557.34	-17763	0.87	0	823	6899	10552	2219	7721		0.43	No
SLV 2	ini.	2185.55	-13596	0.87	0	823	6899	10552	2219	7721		0.57	No
SLV 2	fin.	-6003.27	-15659	0.87	0	823	6899	10552	2219	7721		0.49	No
SLV 1	ini.	2267.54	-13884	0.87	0	823	6899	10552	2219	7721		0.56	No
SLV 1	fin.	-6075.63	-15946	0.87	0	823	6899	10552	2219	7721		0.48	No
SLD 4	ini.	1059.41	-7839	0.87	0	823	6899	10552	2219	7721		0.99	No
SLD 4	fin.	-3568.31	-9558	0.87	0	823	6899	10552	2219	7721		0.81	No
SLV 13	ini.	-2681.81	11069	0.87	0	823	6899	10552	2219	7721		0.7	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	fin.	3706.35	10200	0.87	0	823	6899	10552	2219	7721		0.76	No
SLV 4	ini.	2558.04	-15416	0.87	0	823	6899	10552	2219	7721		0.5	No
SLV 4	fin.	-6484.97	-17476	0.87	0	823	6899	10552	2219	7721		0.44	No
SLV 8	ini.	1275	-8856	0.87	0	823	6899	10552	2219	7721		0.87	No
SLV 8	fin.	-3636.2	-10496	0.87	0	823	6899	10552	2219	7721		0.74	No
SLV 7	ini.	1327.69	-9041	0.87	0	823	6899	10552	2219	7721		0.85	No
SLV 7	fin.	-3682.71	-10681	0.87	0	823	6899	10552	2219	7721		0.72	No
SLV 14	ini.	-2763.8	11357	0.87	0	823	6899	10552	2219	7721		0.68	No
SLV 14	fin.	3778.71	10487	0.87	0	823	6899	10552	2219	7721		0.74	No
SLD 3	ini.	1094.61	-7962	0.87	0	823	6899	10552	2219	7721		0.97	No
SLD 3	fin.	-3599.38	-9681	0.87	0	823	6899	10552	2219	7721		0.8	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.377	SLV 3	No
V_SLV	0.435	SLV 3	No
PF_SLU	1.031	SLU 84	Si
V_SLU	1.405	SLU 84	Si

Trave di accoppiamento 21

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.758	3.431	0.52	1.39	0.87	-13.958	3.431	0.52	1.39	0.87	0.8	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	431.94	-1134	-0.0002473	0.0002246	0.0035	0.87		2829.67	2829.67	No	6.55	Si
SLU 79	fin.	-434.25	-743	-0.0002482	0.0002246	0.0035	0.87		2835.07	2835.07	No	6.53	Si
SLU 77	ini.	435.2	-1143	-0.0002494	0.0002246	0.0035	0.87		2829.67	2829.67	No	6.5	Si
SLU 77	fin.	-436.56	-745	-0.0002497	0.0002246	0.0035	0.87		2835.07	2835.07	No	6.49	Si
SLU 84	ini.	442.23	-1164	-0.0002539	0.0002246	0.0035	0.87		2829.67	2829.67	No	6.4	Si
SLU 84	fin.	-442.36	-752	-0.0002534	0.0002246	0.0035	0.87		2835.07	2835.07	No	6.41	Si
SLU 80	ini.	431.77	-1133	-0.0002472	0.0002246	0.0035	0.87		2829.67	2829.67	No	6.55	Si
SLU 80	fin.	-434.15	-743	-0.0002482	0.0002246	0.0035	0.87		2835.07	2835.07	No	6.53	Si
SLU 82	ini.	437.49	-1150	-0.0002508	0.0002246	0.0035	0.87		2829.67	2829.67	No	6.47	Si
SLU 82	fin.	-439.06	-749	-0.0002513	0.0002246	0.0035	0.87		2835.07	2835.07	No	6.46	Si
SLU 78	ini.	435.03	-1142	-0.0002493	0.0002246	0.0035	0.87		2829.67	2829.67	No	6.5	Si
SLU 78	fin.	-436.46	-745	-0.0002496	0.0002246	0.0035	0.87		2835.07	2835.07	No	6.5	Si
SLU 83	ini.	442.4	-1164	-0.000254	0.0002246	0.0035	0.87		2829.67	2829.67	No	6.4	Si
SLU 83	fin.	-442.46	-753	-0.0002535	0.0002246	0.0035	0.87		2835.07	2835.07	No	6.41	Si
SLU 74	ini.	430.47	-1130	-0.0002464	0.0002246	0.0035	0.87		2829.67	2829.67	No	6.57	Si
SLU 74	fin.	-433.26	-741	-0.0002476	0.0002246	0.0035	0.87		2835.07	2835.07	No	6.54	Si
SLU 81	ini.	437.67	-1151	-0.0002509	0.0002246	0.0035	0.87		2829.67	2829.67	No	6.47	Si
SLU 81	fin.	-439.16	-749	-0.0002514	0.0002246	0.0035	0.87		2835.07	2835.07	No	6.46	Si
SLU 75	ini.	430.3	-1129	-0.0002462	0.0002246	0.0035	0.87		2829.67	2829.67	No	6.58	Si
SLU 75	fin.	-433.16	-741	-0.0002475	0.0002246	0.0035	0.87		2835.07	2835.07	No	6.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	431.94	-664	0.87	0	378	6344	4690	2219	6722	No	10.12	Si
SLU 79	fin.	-434.25	-1157	0.87	0	378	6344	4690	2219	6722	No	5.81	Si
SLU 74	ini.	430.47	-663	0.87	0	378	6344	4690	2219	6722	No	10.14	Si
SLU 74	fin.	-433.26	-1156	0.87	0	378	6344	4690	2219	6722	No	5.82	Si
SLU 77	ini.	435.2	-668	0.87	0	378	6344	4690	2219	6722	No	10.07	Si
SLU 77	fin.	-436.56	-1161	0.87	0	378	6344	4690	2219	6722	No	5.79	Si
SLU 80	ini.	431.77	-664	0.87	0	378	6344	4690	2219	6722	No	10.12	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	fin.	-434.15	-1157	0.87	0	378	6344	4690	2219	6722	No	5.81	Si
SLU 81	ini.	437.67	-672	0.87	0	378	6344	4690	2219	6722	No	10.01	Si
SLU 81	fin.	-439.16	-1164	0.87	0	378	6344	4690	2219	6722	No	5.77	Si
SLU 83	ini.	442.4	-676	0.87	0	378	6344	4690	2219	6722	No	9.94	Si
SLU 83	fin.	-442.46	-1169	0.87	0	378	6344	4690	2219	6722	No	5.75	Si
SLU 78	ini.	435.03	-667	0.87	0	378	6344	4690	2219	6722	No	10.07	Si
SLU 78	fin.	-436.46	-1160	0.87	0	378	6344	4690	2219	6722	No	5.79	Si
SLU 75	ini.	430.3	-663	0.87	0	378	6344	4690	2219	6722	No	10.14	Si
SLU 75	fin.	-433.16	-1156	0.87	0	378	6344	4690	2219	6722	No	5.82	Si
SLU 82	ini.	437.49	-671	0.87	0	378	6344	4690	2219	6722	No	10.01	Si
SLU 82	fin.	-439.06	-1164	0.87	0	378	6344	4690	2219	6722	No	5.77	Si
SLU 84	ini.	442.23	-676	0.87	0	378	6344	4690	2219	6722	No	9.94	Si
SLU 84	fin.	-442.36	-1169	0.87	0	378	6344	4690	2219	6722	No	5.75	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	317.75	-946	-0.0001738	0.0003369	0.0035	0.87		2790.57	2790.57		8.78	Si
SLD 13	fin.	-341.63	-629	-0.0001873	0.0003369	0.0035	0.87		2796.22	2796.22		8.18	Si
SLV 13	ini.	345.61	-1179	-0.0001899	0.0003369	0.0035	0.87		2790.57	2790.57		8.07	Si
SLV 13	fin.	-384.49	-746	-0.0002122	0.0003369	0.0035	0.87		2796.22	2796.22		7.27	Si
SLV 16	ini.	360.73	-1188	-0.0001987	0.0003369	0.0035	0.87		2790.57	2790.57		7.74	Si
SLV 16	fin.	-401.84	-752	-0.0002224	0.0003369	0.0035	0.87		2796.22	2796.22		6.96	Si
SLV 15	ini.	359.24	-1184	-0.0001979	0.0003369	0.0035	0.87		2790.57	2790.57		7.77	Si
SLV 15	fin.	-400.73	-751	-0.0002218	0.0003369	0.0035	0.87		2796.22	2796.22		6.98	Si
SLD 15	ini.	323.64	-948	-0.0001772	0.0003369	0.0035	0.87		2790.57	2790.57		8.62	Si
SLD 15	fin.	-348.66	-632	-0.0001913	0.0003369	0.0035	0.87		2796.22	2796.22		8.02	Si
SLD 16	ini.	324.28	-950	-0.0001776	0.0003369	0.0035	0.87		2790.57	2790.57		8.61	Si
SLD 16	fin.	-349.13	-632	-0.0001916	0.0003369	0.0035	0.87		2796.22	2796.22		8.01	Si
SLV 11	ini.	338.2	-908	-0.0001856	0.0003369	0.0035	0.87		2790.57	2790.57		8.25	Si
SLV 11	fin.	-361.77	-612	-0.0001989	0.0003369	0.0035	0.87		2796.22	2796.22		7.73	Si
SLV 12	ini.	339.16	-911	-0.0001862	0.0003369	0.0035	0.87		2790.57	2790.57		8.23	Si
SLV 12	fin.	-362.49	-613	-0.0001994	0.0003369	0.0035	0.87		2796.22	2796.22		7.71	Si
SLV 14	ini.	347.1	-1183	-0.0001908	0.0003369	0.0035	0.87		2790.57	2790.57		8.04	Si
SLV 14	fin.	-385.6	-748	-0.0002129	0.0003369	0.0035	0.87		2796.22	2796.22		7.25	Si
SLD 14	ini.	318.39	-948	-0.0001742	0.0003369	0.0035	0.87		2790.57	2790.57		8.76	Si
SLD 14	fin.	-342.11	-630	-0.0001875	0.0003369	0.0035	0.87		2796.22	2796.22		8.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	345.61	-613	0.87	0	567	6344	7035	2219	6911		11.28	Si
SLV 13	fin.	-384.49	-1004	0.87	0	567	6344	7035	2219	6911		6.88	Si
SLV 12	ini.	339.16	-550	0.87	0	567	6344	7035	2219	6911		12.57	Si
SLV 12	fin.	-362.49	-912	0.87	0	567	6344	7035	2219	6911		7.58	Si
SLV 16	ini.	360.73	-632	0.87	0	567	6344	7035	2219	6911		10.93	Si
SLV 16	fin.	-401.84	-1012	0.87	0	567	6344	7035	2219	6911		6.83	Si
SLD 14	ini.	318.39	-534	0.87	0	567	6344	7035	2219	6911		12.95	Si
SLD 14	fin.	-342.11	-917	0.87	0	567	6344	7035	2219	6911		7.53	Si
SLV 11	ini.	338.2	-549	0.87	0	567	6344	7035	2219	6911		12.6	Si
SLV 11	fin.	-361.77	-911	0.87	0	567	6344	7035	2219	6911		7.59	Si
SLD 13	ini.	317.75	-533	0.87	0	567	6344	7035	2219	6911		12.97	Si
SLD 13	fin.	-341.63	-917	0.87	0	567	6344	7035	2219	6911		7.54	Si
SLV 14	ini.	347.1	-615	0.87	0	567	6344	7035	2219	6911		11.25	Si
SLV 14	fin.	-385.6	-1006	0.87	0	567	6344	7035	2219	6911		6.87	Si
SLD 15	ini.	323.64	-541	0.87	0	567	6344	7035	2219	6911		12.78	Si
SLD 15	fin.	-348.66	-919	0.87	0	567	6344	7035	2219	6911		7.52	Si
SLV 15	ini.	359.24	-630	0.87	0	567	6344	7035	2219	6911		10.96	Si
SLV 15	fin.	-400.73	-1010	0.87	0	567	6344	7035	2219	6911		6.84	Si
SLD 16	ini.	324.28	-541	0.87	0	567	6344	7035	2219	6911		12.77	Si
SLD 16	fin.	-349.13	-920	0.87	0	567	6344	7035	2219	6911		7.51	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.958	SLV 16	Si
V_SLV	6.828	SLV 16	Si
PF_SLU	6.396	SLU 83	Si
V_SLU	5.749	SLU 83	Si

Trave di accoppiamento 22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.576	-1.58	0.42	2	-11.888	6.576	-1.58	0.42	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	2088.36	-10118	-0.0002276	0.0001872	0.0035	2		10722.86	10722.86	No	5.13	Si
SLU 79	fin.	431.85	-9087	-0.0000434	0.0001872	0.0035	2		10722.86	10722.86	No	24.83	Si
SLU 75	ini.	2096.01	-10054	-0.0002286	0.0001872	0.0035	2		10722.86	10722.86	No	5.12	Si
SLU 75	fin.	400.3	-8996	-0.0000402	0.0001872	0.0035	2		10722.86	10722.86	No	26.79	Si
SLU 82	ini.	2166.41	-10245	-0.0002372	0.0001872	0.0035	2		10722.86	10722.86	No	4.95	Si
SLU 82	fin.	397.12	-9135	-0.0000399	0.0001872	0.0035	2		10722.86	10722.86	No	27	Si
SLU 77	ini.	2114.88	-10197	-0.0002309	0.0001872	0.0035	2		10722.86	10722.86	No	5.07	Si
SLU 77	fin.	430.25	-9147	-0.0000433	0.0001872	0.0035	2		10722.86	10722.86	No	24.92	Si
SLU 78	ini.	2109.07	-10155	-0.0002302	0.0001872	0.0035	2		10722.86	10722.86	No	5.08	Si
SLU 78	fin.	417.83	-9101	-0.000042	0.0001872	0.0035	2		10722.86	10722.86	No	25.66	Si
SLU 80	ini.	2082.55	-10076	-0.0002269	0.0001872	0.0035	2		10722.86	10722.86	No	5.15	Si
SLU 80	fin.	419.44	-9041	-0.0000422	0.0001872	0.0035	2		10722.86	10722.86	No	25.56	Si
SLU 84	ini.	2179.47	-10347	-0.0002389	0.0001872	0.0035	2		10722.86	10722.86	No	4.92	Si
SLU 84	fin.	414.65	-9240	-0.0000417	0.0001872	0.0035	2		10722.86	10722.86	No	25.86	Si
SLU 81	ini.	2172.22	-10287	-0.000238	0.0001872	0.0035	2		10722.86	10722.86	No	4.94	Si
SLU 81	fin.	409.54	-9181	-0.0000412	0.0001872	0.0035	2		10722.86	10722.86	No	26.18	Si
SLU 74	ini.	2101.82	-10095	-0.0002293	0.0001872	0.0035	2		10722.86	10722.86	No	5.1	Si
SLU 74	fin.	412.72	-9042	-0.0000415	0.0001872	0.0035	2		10722.86	10722.86	No	25.98	Si
SLU 83	ini.	2185.28	-10388	-0.0002396	0.0001872	0.0035	2		10722.86	10722.86	No	4.91	Si
SLU 83	fin.	427.07	-9286	-0.000043	0.0001872	0.0035	2		10722.86	10722.86	No	25.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	2172.22	-4073	2	0	1304	7930	13475	5100	9234	No	2.27	Si
SLU 81	fin.	409.54	-1725	2	0	1304	7930	13475	5100	9234	No	5.35	Si
SLU 74	ini.	2101.82	-3897	2	0	1304	7930	13475	5100	9234	No	2.37	Si
SLU 74	fin.	412.72	-1649	2	0	1304	7930	13475	5100	9234	No	5.6	Si
SLU 84	ini.	2179.47	-4105	2	0	1304	7930	13475	5100	9234	No	2.25	Si
SLU 84	fin.	414.65	-1700	2	0	1304	7930	13475	5100	9234	No	5.43	Si
SLU 83	ini.	2185.28	-4088	2	0	1304	7930	13475	5100	9234	No	2.26	Si
SLU 83	fin.	427.07	-1695	2	0	1304	7930	13475	5100	9234	No	5.45	Si
SLU 82	ini.	2166.41	-4090	2	0	1304	7930	13475	5100	9234	No	2.26	Si
SLU 82	fin.	397.12	-1729	2	0	1304	7930	13475	5100	9234	No	5.34	Si
SLU 78	ini.	2109.07	-3929	2	0	1304	7930	13475	5100	9234	No	2.35	Si
SLU 78	fin.	417.83	-1624	2	0	1304	7930	13475	5100	9234	No	5.69	Si
SLU 80	ini.	2082.55	-3866	2	0	1304	7930	13475	5100	9234	No	2.39	Si
SLU 80	fin.	419.44	-1594	2	0	1304	7930	13475	5100	9234	No	5.79	Si
SLU 77	ini.	2114.88	-3912	2	0	1304	7930	13475	5100	9234	No	2.36	Si
SLU 77	fin.	430.25	-1619	2	0	1304	7930	13475	5100	9234	No	5.7	Si
SLU 75	ini.	2096.01	-3914	2	0	1304	7930	13475	5100	9234	No	2.36	Si
SLU 75	fin.	400.3	-1653	2	0	1304	7930	13475	5100	9234	No	5.58	Si
SLU 76	ini.	2065.61	-3863	2	0	1304	7930	13475	5100	9234	No	2.39	Si
SLU 76	fin.	393.63	-1627	2	0	1304	7930	13475	5100	9234	No	5.68	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	3661.84	-6538	-0.0004142	0.0002807	0.0035	2		15635.95	15635.95		4.27	Si
SLV 10	fin.	-989.32	-3626	-0.0001007	0.0002807	0.0035	2		15648.46	15648.46		15.82	Si
SLV 15	ini.	5343	-9071	-0.000653	0.0002807	0.0035	2		15635.95	15635.95		2.93	Si
SLV 15	fin.	-3990.56	-3328	-0.0004579	0.0002807	0.0035	2		15648.46	15648.46		3.92	Si
SLV 13	ini.	5863.93	-8443	-0.0007337	0.0002807	0.0035	2		15635.95	15635.95		2.67	Si
SLV 13	fin.	-3915.88	-2423	-0.0004477	0.0002807	0.0035	2		15648.46	15648.46		4	Si
SLV 4	ini.	-3040.92	-5586	-0.0003341	0.0002807	0.0035	2		15648.46	15648.46		5.15	Si
SLV 4	fin.	4471.05	-10211	-0.0005251	0.0002807	0.0035	2		15635.95	15635.95		3.5	Si
SLV 9	ini.	3492.03	-6474	-0.0003919	0.0002807	0.0035	2		15635.95	15635.95		4.48	Si
SLV 9	fin.	-822.8	-3831	-0.0000833	0.0002807	0.0035	2		15648.46	15648.46		19.02	Si
SLV 16	ini.	5607.22	-9171	-0.0006935	0.0002807	0.0035	2		15635.95	15635.95		2.79	Si
SLV 16	fin.	-4249.67	-3009	-0.0004935	0.0002807	0.0035	2		15648.46	15648.46		3.68	Si
SLV 3	ini.	-3305.14	-5487	-0.0003674	0.0002807	0.0035	2		15648.46	15648.46		4.73	Si
SLV 3	fin.	4730.16	-10530	-0.0005622	0.0002807	0.0035	2		15635.95	15635.95		3.31	Si
SLV 1	ini.	-2784.22	-4859	-0.0003025	0.0002807	0.0035	2		15648.46	15648.46		5.62	Si
SLV 1	fin.	4804.83	-9626	-0.000573	0.0002807	0.0035	2		15635.95	15635.95		3.25	Si
SLV 2	ini.	-2520	-4959	-0.0002708	0.0002807	0.0035	2		15648.46	15648.46		6.21	Si
SLV 2	fin.	4545.73	-9307	-0.0005357	0.0002807	0.0035	2		15635.95	15635.95		3.44	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	6128.15	-8543	-0.0007758	0.0002807	0.0035	2		15635.95	15635.95		2.55	Si
SLV 14	fin.	-4174.99	-2104	-0.0004831	0.0002807	0.0035	2		15648.46	15648.46		3.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-3040.92	10840	2	0	1957	7930	20213	5100	9886		0.91	No
SLV 4	fin.	4471.05	12406	2	0	1957	7930	20213	5100	9886		0.8	No
SLV 16	ini.	5607.22	-17212	2	0	1957	7930	20213	5100	9886		0.57	No
SLV 16	fin.	-4249.67	-15444	2	0	1957	7930	20213	5100	9886		0.64	No
SLV 3	ini.	-3305.14	11759	2	0	1957	7930	20213	5100	9886		0.84	No
SLV 3	fin.	4730.16	13344	2	0	1957	7930	20213	5100	9886		0.74	No
SLV 2	ini.	-2520	11209	2	0	1957	7930	20213	5100	9886		0.88	No
SLV 2	fin.	4545.73	12179	2	0	1957	7930	20213	5100	9886		0.81	No
SLD 14	ini.	3428.08	-8655	2	0	1957	7930	20213	5100	9886		1.14	Si
SLD 14	fin.	-1624.93	-7365	2	0	1957	7930	20213	5100	9886		1.34	Si
SLV 13	ini.	5863.93	-15924	2	0	1957	7930	20213	5100	9886		0.62	No
SLV 13	fin.	-3915.88	-14733	2	0	1957	7930	20213	5100	9886		0.67	No
SLV 14	ini.	6128.15	-16843	2	0	1957	7930	20213	5100	9886		0.59	No
SLV 14	fin.	-4174.99	-15671	2	0	1957	7930	20213	5100	9886		0.63	No
SLV 15	ini.	5343	-16293	2	0	1957	7930	20213	5100	9886		0.61	No
SLV 15	fin.	-3990.56	-14506	2	0	1957	7930	20213	5100	9886		0.68	No
SLV 1	ini.	-2784.22	12128	2	0	1957	7930	20213	5100	9886		0.82	No
SLV 1	fin.	4804.83	13117	2	0	1957	7930	20213	5100	9886		0.75	No
SLD 16	ini.	3203.66	-8813	2	0	1957	7930	20213	5100	9886		1.12	Si
SLD 16	fin.	-1658.87	-7268	2	0	1957	7930	20213	5100	9886		1.36	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.551	SLV 14	Si
V_SLV	0.574	SLV 16	No
PF_SLU	4.907	SLU 83	Si
V_SLU	2.25	SLU 84	Si

Trave di accoppiamento 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.576	-1.58	0.42	2	-7.008	6.576	-1.58	0.42	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-1954.93	-5924	-0.0002113	0.0001872	0.0035	2		10737.13	10737.13	No	5.49	Si
SLU 74	fin.	4034.29	-7523	-0.0004916	0.0001872	0.0035	2		10722.86	10722.86	No	2.66	Si
SLU 78	ini.	-1977.24	-5954	-0.000214	0.0001872	0.0035	2		10737.13	10737.13	No	5.43	Si
SLU 78	fin.	4047.84	-7546	-0.0004936	0.0001872	0.0035	2		10722.86	10722.86	No	2.65	Si
SLU 75	ini.	-1967.8	-5884	-0.0002128	0.0001872	0.0035	2		10737.13	10737.13	No	5.46	Si
SLU 75	fin.	4013.25	-7469	-0.0004885	0.0001872	0.0035	2		10722.86	10722.86	No	2.67	Si
SLU 84	ini.	-1993.69	-6080	-0.0002159	0.0001872	0.0035	2		10737.13	10737.13	No	5.39	Si
SLU 84	fin.	4115.46	-7687	-0.0005037	0.0001872	0.0035	2		10722.86	10722.86	No	2.61	Si
SLU 77	ini.	-1964.38	-5994	-0.0002124	0.0001872	0.0035	2		10737.13	10737.13	No	5.47	Si
SLU 77	fin.	4068.88	-7600	-0.0004968	0.0001872	0.0035	2		10722.86	10722.86	No	2.64	Si
SLU 79	ini.	-1953.79	-5945	-0.0002111	0.0001872	0.0035	2		10737.13	10737.13	No	5.5	Si
SLU 79	fin.	4040.17	-7543	-0.0004925	0.0001872	0.0035	2		10722.86	10722.86	No	2.65	Si
SLU 83	ini.	-1980.83	-6119	-0.0002144	0.0001872	0.0035	2		10737.13	10737.13	No	5.42	Si
SLU 83	fin.	4136.5	-7741	-0.0005068	0.0001872	0.0035	2		10722.86	10722.86	No	2.59	Si
SLU 80	ini.	-1966.65	-5906	-0.0002127	0.0001872	0.0035	2		10737.13	10737.13	No	5.46	Si
SLU 80	fin.	4019.13	-7489	-0.0004894	0.0001872	0.0035	2		10722.86	10722.86	No	2.67	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1971.38	-6049	-0.0002133	0.0001872	0.0035	2		10737.13	10737.13	No	5.45	Si
SLU 81	fin.	4101.91	-7664	-0.0005017	0.0001872	0.0035	2		10722.86	10722.86	No	2.61	Si
SLU 82	ini.	-1984.25	-6009	-0.0002148	0.0001872	0.0035	2		10737.13	10737.13	No	5.41	Si
SLU 82	fin.	4080.87	-7609	-0.0004985	0.0001872	0.0035	2		10722.86	10722.86	No	2.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-1977.24	6939	2	0	1304	7930	13475	5100	9234	No	1.33	Si
SLU 78	fin.	4047.84	8659	2	0	1304	7930	13475	5100	9234	No	1.07	Si
SLU 79	ini.	-1953.79	6932	2	0	1304	7930	13475	5100	9234	No	1.33	Si
SLU 79	fin.	4040.17	8615	2	0	1304	7930	13475	5100	9234	No	1.07	Si
SLU 84	ini.	-1993.69	7003	2	0	1304	7930	13475	5100	9234	No	1.32	Si
SLU 84	fin.	4115.46	8802	2	0	1304	7930	13475	5100	9234	No	1.05	Si
SLU 77	ini.	-1964.38	6966	2	0	1304	7930	13475	5100	9234	No	1.33	Si
SLU 77	fin.	4068.88	8677	2	0	1304	7930	13475	5100	9234	No	1.06	Si
SLU 83	ini.	-1980.83	7030	2	0	1304	7930	13475	5100	9234	No	1.31	Si
SLU 83	fin.	4136.5	8820	2	0	1304	7930	13475	5100	9234	No	1.05	Si
SLU 75	ini.	-1967.8	6907	2	0	1304	7930	13475	5100	9234	No	1.34	Si
SLU 75	fin.	4013.25	8587	2	0	1304	7930	13475	5100	9234	No	1.08	Si
SLU 80	ini.	-1966.65	6905	2	0	1304	7930	13475	5100	9234	No	1.34	Si
SLU 80	fin.	4019.13	8597	2	0	1304	7930	13475	5100	9234	No	1.07	Si
SLU 74	ini.	-1954.93	6934	2	0	1304	7930	13475	5100	9234	No	1.33	Si
SLU 74	fin.	4034.29	8605	2	0	1304	7930	13475	5100	9234	No	1.07	Si
SLU 81	ini.	-1971.38	6997	2	0	1304	7930	13475	5100	9234	No	1.32	Si
SLU 81	fin.	4101.91	8749	2	0	1304	7930	13475	5100	9234	No	1.06	Si
SLU 82	ini.	-1984.25	6971	2	0	1304	7930	13475	5100	9234	No	1.32	Si
SLU 82	fin.	4080.87	8731	2	0	1304	7930	13475	5100	9234	No	1.06	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	ini.	-2627.17	-2004	-0.0002835	0.0002807	0.0035	2		15648.46	15648.46		5.96	Si
SLD 2	fin.	4294.37	-5079	-0.0005002	0.0002807	0.0035	2		15635.95	15635.95		3.64	Si
SLD 3	ini.	-2945.78	-2086	-0.0003223	0.0002807	0.0035	2		15648.46	15648.46		5.31	Si
SLD 3	fin.	4316	-5252	-0.0005032	0.0002807	0.0035	2		15635.95	15635.95		3.62	Si
SLD 1	ini.	-2746.92	-1901	-0.000298	0.0002807	0.0035	2		15648.46	15648.46		5.7	Si
SLD 1	fin.	4403.03	-5143	-0.0005154	0.0002807	0.0035	2		15635.95	15635.95		3.55	Si
SLV 2	ini.	-4239.98	754	-0.0004921	0.0002807	0.0035	2		15648.46	15648.46		3.69	Si
SLV 2	fin.	6246.37	-4877	-0.000795	0.0002807	0.0035	2		15635.95	15635.95		2.5	Si
SLV 6	ini.	-1525.14	-2019	-0.000158	0.0002807	0.0035	2		15648.46	15648.46		10.26	Si
SLV 6	fin.	4116.88	-4722	-0.0004756	0.0002807	0.0035	2		15635.95	15635.95		3.8	Si
SLD 4	ini.	-2826.03	-2189	-0.0003076	0.0002807	0.0035	2		15648.46	15648.46		5.54	Si
SLD 4	fin.	4207.34	-5188	-0.0004881	0.0002807	0.0035	2		15635.95	15635.95		3.72	Si
SLV 1	ini.	-4518.9	995	-0.0005313	0.0002807	0.0035	2		15648.46	15648.46		3.46	Si
SLV 1	fin.	6499.45	-5026	-0.0008366	0.0002807	0.0035	2		15635.95	15635.95		2.41	Si
SLV 3	ini.	-4979.1	573	-0.0005979	0.0002807	0.0035	2		15648.46	15648.46		3.14	Si
SLV 3	fin.	6300.82	-5275	-0.0008039	0.0002807	0.0035	2		15635.95	15635.95		2.48	Si
SLV 5	ini.	-1704.4	-1865	-0.0001776	0.0002807	0.0035	2		15648.46	15648.46		9.18	Si
SLV 5	fin.	4279.54	-4818	-0.0004981	0.0002807	0.0035	2		15635.95	15635.95		3.65	Si
SLV 4	ini.	-4700.17	332	-0.0005573	0.0002807	0.0035	2		15648.46	15648.46		3.33	Si
SLV 4	fin.	6047.74	-5125	-0.0007629	0.0002807	0.0035	2		15635.95	15635.95		2.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-4700.17	15575	2	0	1957	7930	20213	5100	9886		0.63	No
SLV 4	fin.	6047.74	16084	2	0	1957	7930	20213	5100	9886		0.61	No
SLD 4	ini.	-2826.03	9550	2	0	1957	7930	20213	5100	9886		1.04	Si
SLD 4	fin.	4207.34	10339	2	0	1957	7930	20213	5100	9886		0.96	No
SLV 8	ini.	-3059.12	7892	2	0	1957	7930	20213	5100	9886		1.25	Si
SLV 8	fin.	3454.79	9544	2	0	1957	7930	20213	5100	9886		1.04	Si
SLV 3	ini.	-4979.1	16453	2	0	1957	7930	20213	5100	9886		0.6	No
SLV 3	fin.	6300.82	16975	2	0	1957	7930	20213	5100	9886		0.58	No
SLD 1	ini.	-2746.92	9978	2	0	1957	7930	20213	5100	9886		0.99	No
SLD 1	fin.	4403.03	10545	2	0	1957	7930	20213	5100	9886		0.94	No
SLV 1	ini.	-4518.9	16567	2	0	1957	7930	20213	5100	9886		0.6	No
SLV 1	fin.	6499.45	16558	2	0	1957	7930	20213	5100	9886		0.6	No
SLD 2	ini.	-2627.17	9601	2	0	1957	7930	20213	5100	9886		1.03	Si
SLD 2	fin.	4294.37	10162	2	0	1957	7930	20213	5100	9886		0.97	No
SLV 7	ini.	-3238.38	8456	2	0	1957	7930	20213	5100	9886		1.17	Si
SLV 7	fin.	3617.45	10117	2	0	1957	7930	20213	5100	9886		0.98	No
SLV 2	ini.	-4239.98	15689	2	0	1957	7930	20213	5100	9886		0.63	No
SLV 2	fin.	6246.37	15666	2	0	1957	7930	20213	5100	9886		0.63	No
SLD 3	ini.	-2945.78	9927	2	0	1957	7930	20213	5100	9886		1	No
SLD 3	fin.	4316	10722	2	0	1957	7930	20213	5100	9886		0.92	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.406	SLV 1	Si
V_SLV	0.582	SLV 3	No
PF_SLU	2.592	SLU 83	Si
V_SLU	1.047	SLU 83	Si

Trave di accoppiamento 27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-10.553	-3.284	0.47	1.39	0.92	-8.253	-3.284	0.47	1.39	0.92	2.3	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-813.23	-1392	-0.0004619	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.85	Si
SLU 74	fin.	-1652.05	-5533	-0.0011339	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.4	Si
SLU 81	ini.	-836.37	-1415	-0.0004779	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.77	Si
SLU 81	fin.	-1709.14	-5699	-0.0011881	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.36	Si
SLU 83	ini.	-840.85	-1423	-0.0004809	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.76	Si
SLU 83	fin.	-1730.32	-5774	-0.0012085	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.34	Si
SLU 82	ini.	-838.23	-1421	-0.0004791	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.76	Si
SLU 82	fin.	-1707.04	-5694	-0.001186	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.36	Si
SLU 77	ini.	-817.7	-1399	-0.000465	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.83	Si
SLU 77	fin.	-1673.23	-5609	-0.0011538	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.38	Si
SLU 75	ini.	-815.08	-1397	-0.0004632	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.84	Si
SLU 75	fin.	-1649.96	-5528	-0.001132	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.4	Si
SLU 80	ini.	-818.4	-1404	-0.0004655	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.83	Si
SLU 80	fin.	-1658.11	-5557	-0.0011396	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.4	Si
SLU 84	ini.	-842.7	-1428	-0.0004822	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.75	Si
SLU 84	fin.	-1728.22	-5770	-0.0012065	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.34	Si
SLU 78	ini.	-819.56	-1405	-0.0004663	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.83	Si
SLU 78	fin.	-1671.14	-5604	-0.0011519	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.39	Si
SLU 79	ini.	-816.55	-1398	-0.0004642	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.84	Si
SLU 79	fin.	-1660.21	-5562	-0.0011416	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-815.08	5721	0.92	0	400	7295	6199	2346	7695	No	1.35	Si
SLU 75	fin.	-1649.96	-9066	0.92	0	400	7295	6199	2346	7695	No	0.85	No
SLU 83	ini.	-840.85	5936	0.92	0	400	7295	6199	2346	7695	No	1.3	Si
SLU 83	fin.	-1730.32	-9466	0.92	0	400	7295	6199	2346	7695	No	0.81	No
SLU 80	ini.	-818.4	5747	0.92	0	400	7295	6199	2346	7695	No	1.34	Si
SLU 80	fin.	-1658.11	-9109	0.92	0	400	7295	6199	2346	7695	No	0.84	No
SLU 82	ini.	-838.23	5885	0.92	0	400	7295	6199	2346	7695	No	1.31	Si
SLU 82	fin.	-1707.04	-9355	0.92	0	400	7295	6199	2346	7695	No	0.82	No
SLU 78	ini.	-819.56	5775	0.92	0	400	7295	6199	2346	7695	No	1.33	Si
SLU 78	fin.	-1671.14	-9174	0.92	0	400	7295	6199	2346	7695	No	0.84	No
SLU 77	ini.	-817.7	5773	0.92	0	400	7295	6199	2346	7695	No	1.33	Si
SLU 77	fin.	-1673.23	-9177	0.92	0	400	7295	6199	2346	7695	No	0.84	No
SLU 81	ini.	-836.37	5882	0.92	0	400	7295	6199	2346	7695	No	1.31	Si
SLU 81	fin.	-1709.14	-9358	0.92	0	400	7295	6199	2346	7695	No	0.82	No
SLU 79	ini.	-816.55	5744	0.92	0	400	7295	6199	2346	7695	No	1.34	Si
SLU 79	fin.	-1660.21	-9112	0.92	0	400	7295	6199	2346	7695	No	0.84	No
SLU 84	ini.	-842.7	5939	0.92	0	400	7295	6199	2346	7695	No	1.3	Si
SLU 84	fin.	-1728.22	-9463	0.92	0	400	7295	6199	2346	7695	No	0.81	No
SLU 74	ini.	-813.23	5718	0.92	0	400	7295	6199	2346	7695	No	1.35	Si
SLU 74	fin.	-1652.05	-9069	0.92	0	400	7295	6199	2346	7695	No	0.85	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1166.57	5333	-0.0006779	0.0002807	0.0035	0.92		3322.54	3322.54		2.85	Si
SLV 15	fin.	-3528.77	-9319	-0.0040723	0.0002807	0.0035	0.92		3328.52	3328.52		0.94	No
SLV 16	ini.	1085.4	4980	-0.0006199	0.0002807	0.0035	0.92		3322.54	3322.54		3.06	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	fin.	-3439.11	-9191	-0.0038914	0.0002807	0.0035	0.92		3328.52	3328.52		0.97	No
SLD 14	ini.	236.16	1653	-0.000114	0.0002807	0.0035	0.92		3322.54	3322.54		14.07	Si
SLD 14	fin.	-2183.58	-6257	-0.0015856	0.0002807	0.0035	0.92		3328.52	3328.52		1.52	Si
SLD 13	ini.	271	1805	-0.0001315	0.0002807	0.0035	0.92		3322.54	3322.54		12.26	Si
SLD 13	fin.	-2222.07	-6311	-0.00163	0.0002807	0.0035	0.92		3328.52	3328.52		1.5	Si
SLV 3	ini.	-2458.3	-7181	-0.0019335	0.0002807	0.0035	0.92		3328.52	3328.52		1.35	Si
SLV 3	fin.	1388.97	2179	-0.000846	0.0002807	0.0035	0.92		3322.54	3322.54		2.39	Si
SLV 13	ini.	1402.71	5559	-0.0008568	0.0002807	0.0035	0.92		3322.54	3322.54		2.37	Si
SLV 13	fin.	-3705.75	-9771	-0.0044155	0.0002807	0.0035	0.92		3328.52	3328.52		0.9	No
SLV 1	ini.	-2222.16	-6954	-0.0016301	0.0002807	0.0035	0.92		3328.52	3328.52		1.5	Si
SLV 1	fin.	1211.98	1726	-0.0007111	0.0002807	0.0035	0.92		3322.54	3322.54		2.74	Si
SLV 14	ini.	1321.54	5207	-0.0007936	0.0002807	0.0035	0.92		3322.54	3322.54		2.51	Si
SLV 14	fin.	-3616.09	-9644	-0.0042437	0.0002807	0.0035	0.92		3328.52	3328.52		0.92	No
SLV 4	ini.	-2539.47	-7534	-0.0020525	0.0002807	0.0035	0.92		3328.52	3328.52		1.31	Si
SLV 4	fin.	1478.62	2306	-0.0009177	0.0002807	0.0035	0.92		3322.54	3322.54		2.25	Si
SLV 2	ini.	-2303.33	-7307	-0.001728	0.0002807	0.0035	0.92		3328.52	3328.52		1.45	Si
SLV 2	fin.	1301.64	1854	-0.0007783	0.0002807	0.0035	0.92		3322.54	3322.54		2.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	271	3030	0.92	0	600	7295	9298	2346	7895		2.61	Si
SLD 13	fin.	-2222.07	-8932	0.92	0	600	7295	9298	2346	7895		0.88	No
SLV 16	ini.	1085.4	2692	0.92	0	600	7295	9298	2346	7895		2.93	Si
SLV 16	fin.	-3439.11	-11576	0.92	0	600	7295	9298	2346	7895		0.68	No
SLV 14	ini.	1321.54	1836	0.92	0	600	7295	9298	2346	7895		4.3	Si
SLV 14	fin.	-3616.09	-12518	0.92	0	600	7295	9298	2346	7895		0.63	No
SLV 10	ini.	342.84	2021	0.92	0	600	7295	9298	2346	7895		3.91	Si
SLV 10	fin.	-2117.39	-9448	0.92	0	600	7295	9298	2346	7895		0.84	No
SLV 9	ini.	395.01	1984	0.92	0	600	7295	9298	2346	7895		3.98	Si
SLV 9	fin.	-2175	-9567	0.92	0	600	7295	9298	2346	7895		0.83	No
SLV 15	ini.	1166.57	2635	0.92	0	600	7295	9298	2346	7895		3	Si
SLV 15	fin.	-3528.77	-11761	0.92	0	600	7295	9298	2346	7895		0.67	No
SLD 16	ini.	140.03	3401	0.92	0	600	7295	9298	2346	7895		2.32	Si
SLD 16	fin.	-2105.68	-8467	0.92	0	600	7295	9298	2346	7895		0.93	No
SLD 14	ini.	236.16	3055	0.92	0	600	7295	9298	2346	7895		2.58	Si
SLD 14	fin.	-2183.58	-8853	0.92	0	600	7295	9298	2346	7895		0.89	No
SLD 15	ini.	174.88	3377	0.92	0	600	7295	9298	2346	7895		2.34	Si
SLD 15	fin.	-2144.17	-8546	0.92	0	600	7295	9298	2346	7895		0.92	No
SLV 13	ini.	1402.71	1778	0.92	0	600	7295	9298	2346	7895		4.44	Si
SLV 13	fin.	-3705.75	-12702	0.92	0	600	7295	9298	2346	7895		0.62	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.898	SLV 13	No
V_SLV	0.622	SLV 13	No
PF_SLU	1.339	SLU 83	Si
V_SLU	0.813	SLU 83	No

Trave di accoppiamento 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.463	-3.284	-1.58	0.42	2	-6.463	-3.284	-1.58	0.42	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	756.9	-15326	-0.0000772	0.0001872	0.0035	2		10722.86	10722.86	No	14.17	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	273.29	-9763	-0.0000273	0.0001872	0.0035	2		10722.86	10722.86	No	39.24	Si
SLU 60	ini.	761.69	-14188	-0.0000777	0.0001872	0.0035	2		10722.86	10722.86	No	14.08	Si
SLU 60	fin.	150.35	-8859	-0.000015	0.0001872	0.0035	2		10722.86	10722.86	No	71.32	Si
SLU 63	ini.	763.53	-14350	-0.0000779	0.0001872	0.0035	2		10722.86	10722.86	No	14.04	Si
SLU 63	fin.	161.59	-8979	-0.0000161	0.0001872	0.0035	2		10722.86	10722.86	No	66.36	Si
SLU 82	ini.	754.9	-15321	-0.000077	0.0001872	0.0035	2		10722.86	10722.86	No	14.2	Si
SLU 82	fin.	271.14	-9762	-0.0000271	0.0001872	0.0035	2		10722.86	10722.86	No	39.55	Si
SLU 61	ini.	759.7	-14183	-0.0000775	0.0001872	0.0035	2		10722.86	10722.86	No	14.11	Si
SLU 61	fin.	148.21	-8858	-0.0000147	0.0001872	0.0035	2		10722.86	10722.86	No	72.35	Si
SLU 62	ini.	765.52	-14354	-0.0000781	0.0001872	0.0035	2		10722.86	10722.86	No	14.01	Si
SLU 62	fin.	163.74	-8980	-0.0000163	0.0001872	0.0035	2		10722.86	10722.86	No	65.49	Si
SLU 56	ini.	683.39	-14003	-0.0000695	0.0001872	0.0035	2		10722.86	10722.86	No	15.69	Si
SLU 56	fin.	155.18	-8780	-0.0000154	0.0001872	0.0035	2		10722.86	10722.86	No	69.1	Si
SLU 57	ini.	681.4	-13999	-0.0000693	0.0001872	0.0035	2		10722.86	10722.86	No	15.74	Si
SLU 57	fin.	153.03	-8779	-0.0000152	0.0001872	0.0035	2		10722.86	10722.86	No	70.07	Si
SLU 84	ini.	758.73	-15488	-0.0000774	0.0001872	0.0035	2		10722.86	10722.86	No	14.13	Si
SLU 84	fin.	284.53	-9883	-0.0000285	0.0001872	0.0035	2		10722.86	10722.86	No	37.69	Si
SLU 83	ini.	760.72	-15492	-0.0000776	0.0001872	0.0035	2		10722.86	10722.86	No	14.1	Si
SLU 83	fin.	286.67	-9884	-0.0000287	0.0001872	0.0035	2		10722.86	10722.86	No	37.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	756.9	-6271	2	0	1304	7930	13475	5100	9234	No	1.47	Si
SLU 81	fin.	273.29	-5249	2	0	1304	7930	13475	5100	9234	No	1.76	Si
SLU 84	ini.	758.73	-6315	2	0	1304	7930	13475	5100	9234	No	1.46	Si
SLU 84	fin.	284.53	-5265	2	0	1304	7930	13475	5100	9234	No	1.75	Si
SLU 63	ini.	763.53	-6122	2	0	1304	7930	13475	5100	9234	No	1.51	Si
SLU 63	fin.	161.59	-5271	2	0	1304	7930	13475	5100	9234	No	1.75	Si
SLU 77	ini.	678.59	-6073	2	0	1304	7930	13475	5100	9234	No	1.52	Si
SLU 77	fin.	278.11	-5076	2	0	1304	7930	13475	5100	9234	No	1.82	Si
SLU 78	ini.	676.6	-6069	2	0	1304	7930	13475	5100	9234	No	1.52	Si
SLU 78	fin.	275.97	-5072	2	0	1304	7930	13475	5100	9234	No	1.82	Si
SLU 82	ini.	754.9	-6266	2	0	1304	7930	13475	5100	9234	No	1.47	Si
SLU 82	fin.	271.14	-5245	2	0	1304	7930	13475	5100	9234	No	1.76	Si
SLU 60	ini.	761.69	-6078	2	0	1304	7930	13475	5100	9234	No	1.52	Si
SLU 60	fin.	150.35	-5255	2	0	1304	7930	13475	5100	9234	No	1.76	Si
SLU 61	ini.	759.7	-6074	2	0	1304	7930	13475	5100	9234	No	1.52	Si
SLU 61	fin.	148.21	-5251	2	0	1304	7930	13475	5100	9234	No	1.76	Si
SLU 83	ini.	760.72	-6319	2	0	1304	7930	13475	5100	9234	No	1.46	Si
SLU 83	fin.	286.67	-5269	2	0	1304	7930	13475	5100	9234	No	1.75	Si
SLU 62	ini.	765.52	-6127	2	0	1304	7930	13475	5100	9234	No	1.51	Si
SLU 62	fin.	163.74	-5275	2	0	1304	7930	13475	5100	9234	No	1.75	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-4857.33	-756	-0.0005801	0.0002807	0.0035	2		15648.46	15648.46		3.22	Si
SLV 1	fin.	2562.19	-7308	-0.0002761	0.0002807	0.0035	2		15635.95	15635.95		6.1	Si
SLV 4	ini.	-4693.12	-795	-0.0005563	0.0002807	0.0035	2		15648.46	15648.46		3.33	Si
SLV 4	fin.	2288.45	-6909	-0.0002439	0.0002807	0.0035	2		15635.95	15635.95		6.83	Si
SLV 11	ini.	2920.08	-14115	-0.0003194	0.0002807	0.0035	2		15635.95	15635.95		5.35	Si
SLV 11	fin.	-1502.88	-4895	-0.0001555	0.0002807	0.0035	2		15648.46	15648.46		10.41	Si
SLV 14	ini.	5184.64	-19566	-0.0006291	0.0002807	0.0035	2		15635.95	15635.95		3.02	Si
SLV 14	fin.	-1808.47	-6643	-0.0001892	0.0002807	0.0035	2		15648.46	15648.46		8.65	Si
SLV 16	ini.	5687.87	-20002	-0.000706	0.0002807	0.0035	2		15635.95	15635.95		2.75	Si
SLV 16	fin.	-2321.42	-5821	-0.0002475	0.0002807	0.0035	2		15648.46	15648.46		6.74	Si
SLV 3	ini.	-4354.1	-1192	-0.0005081	0.0002807	0.0035	2		15648.46	15648.46		3.59	Si
SLV 3	fin.	2049.24	-6486	-0.0002164	0.0002807	0.0035	2		15635.95	15635.95		7.63	Si
SLV 13	ini.	5523.66	-19963	-0.0006806	0.0002807	0.0035	2		15635.95	15635.95		2.83	Si
SLV 13	fin.	-2047.68	-6219	-0.0002161	0.0002807	0.0035	2		15648.46	15648.46		7.64	Si
SLV 15	ini.	6026.9	-20400	-0.0007596	0.0002807	0.0035	2		15635.95	15635.95		2.59	Si
SLV 15	fin.	-2560.63	-5397	-0.0002756	0.0002807	0.0035	2		15648.46	15648.46		6.11	Si
SLD 15	ini.	2814.77	-14661	-0.0003065	0.0002807	0.0035	2		15635.95	15635.95		5.55	Si
SLD 15	fin.	-1026.41	-6065	-0.0001046	0.0002807	0.0035	2		15648.46	15648.46		15.25	Si
SLV 2	ini.	-5196.36	-358	-0.0006302	0.0002807	0.0035	2		15648.46	15648.46		3.01	Si
SLV 2	fin.	2801.4	-7731	-0.0003048	0.0002807	0.0035	2		15635.95	15635.95		5.58	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-4857.33	13749	2	0	1957	7930	20213	5100	9886		0.72	No
SLV 1	fin.	2562.19	13644	2	0	1957	7930	20213	5100	9886		0.72	No
SLV 11	ini.	2920.08	-13656	2	0	1957	7930	20213	5100	9886		0.72	No
SLV 11	fin.	-1502.88	-11770	2	0	1957	7930	20213	5100	9886		0.84	No
SLV 4	ini.	-4693.12	12861	2	0	1957	7930	20213	5100	9886		0.77	No
SLV 4	fin.	2288.45	13522	2	0	1957	7930	20213	5100	9886		0.73	No
SLV 13	ini.	5523.66	-21234	2	0	1957	7930	20213	5100	9886		0.47	No
SLV 13	fin.	-2047.68	-20777	2	0	1957	7930	20213	5100	9886		0.48	No
SLV 2	ini.	-5196.36	15128	2	0	1957	7930	20213	5100	9886		0.65	No
SLV 2	fin.	2801.4	15041	2	0	1957	7930	20213	5100	9886		0.66	No
SLV 14	ini.	5184.64	-19856	2	0	1957	7930	20213	5100	9886		0.5	No
SLV 14	fin.	-1808.47	-19380	2	0	1957	7930	20213	5100	9886		0.51	No
SLD 15	ini.	2814.77	-12438	2	0	1957	7930	20213	5100	9886		0.79	No
SLD 15	fin.	-1026.41	-11608	2	0	1957	7930	20213	5100	9886		0.85	No
SLV 15	ini.	6026.9	-23502	2	0	1957	7930	20213	5100	9886		0.42	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	fin.	-2560.63	-22295	2	0	1957	7930	20213	5100	9886		0.44	No
SLV 12	ini.	2702.2	-12770	2	0	1957	7930	20213	5100	9886		0.77	No
SLV 12	fin.	-1349.15	-10872	2	0	1957	7930	20213	5100	9886		0.91	No
SLV 16	ini.	5687.87	-22123	2	0	1957	7930	20213	5100	9886		0.45	No
SLV 16	fin.	-2321.42	-20899	2	0	1957	7930	20213	5100	9886		0.47	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.594	SLV 15	Si
V_SLV	0.421	SLV 15	No
PF_SLU	14.007	SLU 62	Si
V_SLU	1.461	SLU 83	Si

Trave di accoppiamento 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-3.233	-3.284	-1.58	0.42	2	-2.233	-3.284	-1.58	0.42	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-10.8	-3078	-0.0000011	0.0001872	0.0035	2		10737.13	10737.13	No	994.46	Si
SLU 75	fin.	1953.73	-3863	-0.0002113	0.0001872	0.0035	2		10722.86	10722.86	No	5.49	Si
SLU 78	ini.	-11.7	-3124	-0.0000012	0.0001872	0.0035	2		10737.13	10737.13	No	917.59	Si
SLU 78	fin.	1982.03	-3922	-0.0002147	0.0001872	0.0035	2		10722.86	10722.86	No	5.41	Si
SLU 74	ini.	-8.34	-3086	-0.0000008	0.0001872	0.0035	2		10737.13	10737.13	No	1288	Si
SLU 74	fin.	1947.89	-3862	-0.0002106	0.0001872	0.0035	2		10722.86	10722.86	No	5.5	Si
SLU 77	ini.	-9.24	-3132	-0.0000009	0.0001872	0.0035	2		10737.13	10737.13	No	1161.93	Si
SLU 77	fin.	1976.2	-3921	-0.000214	0.0001872	0.0035	2		10722.86	10722.86	No	5.43	Si
SLU 84	ini.	15.55	-3182	-0.0000015	0.0001872	0.0035	2		10722.86	10722.86	No	689.42	Si
SLU 84	fin.	1981.13	-3948	-0.0002146	0.0001872	0.0035	2		10722.86	10722.86	No	5.41	Si
SLU 83	ini.	18.01	-3190	-0.0000018	0.0001872	0.0035	2		10722.86	10722.86	No	595.25	Si
SLU 83	fin.	1975.3	-3948	-0.0002139	0.0001872	0.0035	2		10722.86	10722.86	No	5.43	Si
SLU 80	ini.	-10.94	-3093	-0.0000011	0.0001872	0.0035	2		10737.13	10737.13	No	981.17	Si
SLU 80	fin.	1968.74	-3884	-0.0002131	0.0001872	0.0035	2		10722.86	10722.86	No	5.45	Si
SLU 79	ini.	-8.48	-3101	-0.0000008	0.0001872	0.0035	2		10737.13	10737.13	No	1265.8	Si
SLU 79	fin.	1962.91	-3884	-0.0002124	0.0001872	0.0035	2		10722.86	10722.86	No	5.46	Si
SLU 81	ini.	18.92	-3144	-0.0000019	0.0001872	0.0035	2		10722.86	10722.86	No	566.79	Si
SLU 81	fin.	1946.99	-3889	-0.0002105	0.0001872	0.0035	2		10722.86	10722.86	No	5.51	Si
SLU 82	ini.	16.46	-3136	-0.0000016	0.0001872	0.0035	2		10722.86	10722.86	No	651.53	Si
SLU 82	fin.	1952.83	-3889	-0.0002112	0.0001872	0.0035	2		10722.86	10722.86	No	5.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	18.01	28	2	0	1304	7930	13475	5100	9234	No	334.13	Si
SLU 83	fin.	1975.3	4662	2	0	1304	7930	13475	5100	9234	No	1.98	Si
SLU 80	ini.	-10.94	173	2	0	1304	7930	13475	5100	9234	No	53.42	Si
SLU 80	fin.	1968.74	4641	2	0	1304	7930	13475	5100	9234	No	1.99	Si
SLU 82	ini.	16.46	42	2	0	1304	7930	13475	5100	9234	No	217.97	Si
SLU 82	fin.	1952.83	4601	2	0	1304	7930	13475	5100	9234	No	2.01	Si
SLU 81	ini.	18.92	26	2	0	1304	7930	13475	5100	9234	No	352.17	Si
SLU 81	fin.	1946.99	4584	2	0	1304	7930	13475	5100	9234	No	2.01	Si
SLU 84	ini.	15.55	44	2	0	1304	7930	13475	5100	9234	No	210.93	Si
SLU 84	fin.	1981.13	4678	2	0	1304	7930	13475	5100	9234	No	1.97	Si
SLU 79	ini.	-8.48	157	2	0	1304	7930	13475	5100	9234	No	58.92	Si
SLU 79	fin.	1962.91	4625	2	0	1304	7930	13475	5100	9234	No	2	Si
SLU 75	ini.	-10.8	167	2	0	1304	7930	13475	5100	9234	No	55.16	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	fin.	1953.73	4604	2	0	1304	7930	13475	5100	9234	No	2.01	Si
SLU 77	ini.	-9.24	153	2	0	1304	7930	13475	5100	9234	No	60.48	Si
SLU 77	fin.	1976.2	4666	2	0	1304	7930	13475	5100	9234	No	1.98	Si
SLU 78	ini.	-11.7	169	2	0	1304	7930	13475	5100	9234	No	54.7	Si
SLU 78	fin.	1982.03	4682	2	0	1304	7930	13475	5100	9234	No	1.97	Si
SLU 74	ini.	-8.34	151	2	0	1304	7930	13475	5100	9234	No	61.04	Si
SLU 74	fin.	1947.89	4588	2	0	1304	7930	13475	5100	9234	No	2.01	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	135.32	781	-0.0000134	0.0002807	0.0035	2		15635.95	15635.95		115.55	Si
SLV 8	fin.	2184.36	-118	-0.0002319	0.0002807	0.0035	2		15635.95	15635.95		7.16	Si
SLV 7	ini.	361.4	1006	-0.0000361	0.0002807	0.0035	2		15635.95	15635.95		43.27	Si
SLV 7	fin.	2090.34	290	-0.0002211	0.0002807	0.0035	2		15635.95	15635.95		7.48	Si
SLD 3	ini.	-614.68	-689	-0.0000618	0.0002807	0.0035	2		15648.46	15648.46		25.46	Si
SLD 3	fin.	1984.17	-1840	-0.0002091	0.0002807	0.0035	2		15635.95	15635.95		7.88	Si
SLV 15	ini.	2156.14	-3677	-0.0002286	0.0002807	0.0035	2		15635.95	15635.95		7.25	Si
SLV 15	fin.	72.1	-2528	-0.0000071	0.0002807	0.0035	2		15635.95	15635.95		216.87	Si
SLV 3	ini.	-1389.35	1191	-0.0001432	0.0002807	0.0035	2		15648.46	15648.46		11.26	Si
SLV 3	fin.	2766.37	-705	-0.0003006	0.0002807	0.0035	2		15635.95	15635.95		5.65	Si
SLD 2	ini.	-979.26	-1421	-0.0000996	0.0002807	0.0035	2		15648.46	15648.46		15.98	Si
SLD 2	fin.	1948.11	-2744	-0.000205	0.0002807	0.0035	2		15635.95	15635.95		8.03	Si
SLV 2	ini.	-2231.97	-514	-0.0002371	0.0002807	0.0035	2		15648.46	15648.46		7.01	Si
SLV 2	fin.	2706.24	-2838	-0.0002933	0.0002807	0.0035	2		15635.95	15635.95		5.78	Si
SLV 1	ini.	-1880.21	-165	-0.0001972	0.0002807	0.0035	2		15648.46	15648.46		8.32	Si
SLV 1	fin.	2559.95	-2203	-0.0002758	0.0002807	0.0035	2		15635.95	15635.95		6.11	Si
SLD 4	ini.	-765.7	-839	-0.0000774	0.0002807	0.0035	2		15648.46	15648.46		20.44	Si
SLD 4	fin.	2046.98	-2113	-0.0002162	0.0002807	0.0035	2		15635.95	15635.95		7.64	Si
SLV 4	ini.	-1741.11	841	-0.0001817	0.0002807	0.0035	2		15648.46	15648.46		8.99	Si
SLV 4	fin.	2912.66	-1341	-0.0003185	0.0002807	0.0035	2		15635.95	15635.95		5.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	2156.14	-5795	2	0	1957	7930	20213	5100	9886		1.71	Si
SLV 15	fin.	72.1	-236	2	0	1957	7930	20213	5100	9886		41.93	Si
SLV 5	ini.	-1274.8	2478	2	0	1957	7930	20213	5100	9886		3.99	Si
SLV 5	fin.	1402.26	4890	2	0	1957	7930	20213	5100	9886		2.02	Si
SLV 13	ini.	1665.28	-5337	2	0	1957	7930	20213	5100	9886		1.85	Si
SLV 13	fin.	-134.32	446	2	0	1957	7930	20213	5100	9886		22.16	Si
SLV 6	ini.	-1500.87	2936	2	0	1957	7930	20213	5100	9886		3.37	Si
SLV 6	fin.	1496.28	5433	2	0	1957	7930	20213	5100	9886		1.82	Si
SLV 3	ini.	-1389.35	5209	2	0	1957	7930	20213	5100	9886		1.9	Si
SLV 3	fin.	2766.37	5145	2	0	1957	7930	20213	5100	9886		1.92	Si
SLV 2	ini.	-2231.97	6380	2	0	1957	7930	20213	5100	9886		1.55	Si
SLV 2	fin.	2706.24	6672	2	0	1957	7930	20213	5100	9886		1.48	Si
SLV 1	ini.	-1880.21	5668	2	0	1957	7930	20213	5100	9886		1.74	Si
SLV 1	fin.	2559.95	5827	2	0	1957	7930	20213	5100	9886		1.7	Si
SLD 2	ini.	-979.26	2885	2	0	1957	7930	20213	5100	9886		3.43	Si
SLD 2	fin.	1948.11	4688	2	0	1957	7930	20213	5100	9886		2.11	Si
SLV 4	ini.	-1741.11	5921	2	0	1957	7930	20213	5100	9886		1.67	Si
SLV 4	fin.	2912.66	5990	2	0	1957	7930	20213	5100	9886		1.65	Si
SLV 16	ini.	1804.38	-5083	2	0	1957	7930	20213	5100	9886		1.94	Si
SLV 16	fin.	218.39	609	2	0	1957	7930	20213	5100	9886		16.23	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.368	SLV 4	Si
V_SLV	1.482	SLV 2	Si
PF_SLU	5.41	SLU 78	Si
V_SLU	1.972	SLU 78	Si

Trave di accoppiamento 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.158	1.471	0.52	1.39	0.87	-5.158	2.271	0.52	1.39	0.87	0.8	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	41.17	-1669	-0.0000217	0.0002246	0.0035	0.87		2829.67	2829.67	No	68.73	Si
SLU 77	fin.	-295.45	-1196	-0.0001633	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.6	Si
SLU 73	ini.	39.16	-1610	-0.0000206	0.0002246	0.0035	0.87		2829.67	2829.67	No	72.26	Si
SLU 73	fin.	-294.61	-1186	-0.0001628	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.62	Si
SLU 75	ini.	40.46	-1647	-0.0000213	0.0002246	0.0035	0.87		2829.67	2829.67	No	69.94	Si
SLU 75	fin.	-295.88	-1195	-0.0001636	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.58	Si
SLU 83	ini.	41	-1692	-0.0000216	0.0002246	0.0035	0.87		2829.67	2829.67	No	69.01	Si
SLU 83	fin.	-315.9	-1269	-0.0001754	0.0002246	0.0035	0.87		2835.07	2835.07	No	8.97	Si
SLU 84	ini.	41.03	-1692	-0.0000216	0.0002246	0.0035	0.87		2829.67	2829.67	No	68.96	Si
SLU 84	fin.	-317.36	-1274	-0.0001763	0.0002246	0.0035	0.87		2835.07	2835.07	No	8.93	Si
SLU 78	ini.	41.2	-1669	-0.0000217	0.0002246	0.0035	0.87		2829.67	2829.67	No	68.68	Si
SLU 78	fin.	-296.92	-1201	-0.0001642	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.55	Si
SLU 80	ini.	40.62	-1654	-0.0000214	0.0002246	0.0035	0.87		2829.67	2829.67	No	69.66	Si
SLU 80	fin.	-295.7	-1195	-0.0001635	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.59	Si
SLU 81	ini.	40.26	-1669	-0.0000212	0.0002246	0.0035	0.87		2829.67	2829.67	No	70.29	Si
SLU 81	fin.	-314.86	-1262	-0.0001748	0.0002246	0.0035	0.87		2835.07	2835.07	No	9	Si
SLU 82	ini.	40.29	-1670	-0.0000212	0.0002246	0.0035	0.87		2829.67	2829.67	No	70.23	Si
SLU 82	fin.	-316.33	-1268	-0.0001757	0.0002246	0.0035	0.87		2835.07	2835.07	No	8.96	Si
SLU 76	ini.	39.9	-1632	-0.000021	0.0002246	0.0035	0.87		2829.67	2829.67	No	70.92	Si
SLU 76	fin.	-295.64	-1192	-0.0001634	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	40.46	2171	0.87	0	378	6344	4690	2219	6722	No	3.1	Si
SLU 75	fin.	-295.88	-3706	0.87	0	378	6344	4690	2219	6722	No	1.81	Si
SLU 74	ini.	40.43	2175	0.87	0	378	6344	4690	2219	6722	No	3.09	Si
SLU 74	fin.	-294.42	-3700	0.87	0	378	6344	4690	2219	6722	No	1.82	Si
SLU 82	ini.	40.29	2226	0.87	0	378	6344	4690	2219	6722	No	3.02	Si
SLU 82	fin.	-316.33	-3839	0.87	0	378	6344	4690	2219	6722	No	1.75	Si
SLU 81	ini.	40.26	2231	0.87	0	378	6344	4690	2219	6722	No	3.01	Si
SLU 81	fin.	-314.86	-3833	0.87	0	378	6344	4690	2219	6722	No	1.75	Si
SLU 84	ini.	41.03	2249	0.87	0	378	6344	4690	2219	6722	No	2.99	Si
SLU 84	fin.	-317.36	-3870	0.87	0	378	6344	4690	2219	6722	No	1.74	Si
SLU 83	ini.	41	2253	0.87	0	378	6344	4690	2219	6722	No	2.98	Si
SLU 83	fin.	-315.9	-3864	0.87	0	378	6344	4690	2219	6722	No	1.74	Si
SLU 79	ini.	40.59	2187	0.87	0	378	6344	4690	2219	6722	No	3.07	Si
SLU 79	fin.	-294.23	-3715	0.87	0	378	6344	4690	2219	6722	No	1.81	Si
SLU 80	ini.	40.62	2183	0.87	0	378	6344	4690	2219	6722	No	3.08	Si
SLU 80	fin.	-295.7	-3721	0.87	0	378	6344	4690	2219	6722	No	1.81	Si
SLU 77	ini.	41.17	2197	0.87	0	378	6344	4690	2219	6722	No	3.06	Si
SLU 77	fin.	-295.45	-3732	0.87	0	378	6344	4690	2219	6722	No	1.8	Si
SLU 78	ini.	41.2	2193	0.87	0	378	6344	4690	2219	6722	No	3.07	Si
SLU 78	fin.	-296.92	-3738	0.87	0	378	6344	4690	2219	6722	No	1.8	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 8	ini.	72.11	-931	-0.0000381	0.0003369	0.0035	0.87		2790.57	2790.57		38.7	Si
SLD 8	fin.	-361.01	-1320	-0.0001985	0.0003369	0.0035	0.87		2796.22	2796.22		7.75	Si
SLV 7	ini.	131.27	-658	-0.0000699	0.0003369	0.0035	0.87		2790.57	2790.57		21.26	Si
SLV 7	fin.	-606.37	-2109	-0.0003483	0.0003369	0.0035	0.87		2796.22	2796.22		4.61	Si
SLV 12	ini.	186.57	-1164	-0.0001001	0.0003369	0.0035	0.87		2790.57	2790.57		14.96	Si
SLV 12	fin.	-662.6	-2274	-0.0003849	0.0003369	0.0035	0.87		2796.22	2796.22		4.22	Si
SLD 7	ini.	72.52	-933	-0.0000383	0.0003369	0.0035	0.87		2790.57	2790.57		38.48	Si
SLD 7	fin.	-373.08	-1362	-0.0002055	0.0003369	0.0035	0.87		2796.22	2796.22		7.49	Si
SLV 15	ini.	161.92	-1922	-0.0000866	0.0003369	0.0035	0.87		2790.57	2790.57		17.23	Si
SLV 15	fin.	-484.61	-1707	-0.0002721	0.0003369	0.0035	0.87		2796.22	2796.22		5.77	Si
SLV 8	ini.	130.32	-655	-0.0000693	0.0003369	0.0035	0.87		2790.57	2790.57		21.41	Si
SLV 8	fin.	-578.74	-2013	-0.0003306	0.0003369	0.0035	0.87		2796.22	2796.22		4.83	Si
SLD 11	ini.	96.52	-1151	-0.0000511	0.0003369	0.0035	0.87		2790.57	2790.57		28.91	Si
SLD 11	fin.	-408.42	-1471	-0.0002263	0.0003369	0.0035	0.87		2796.22	2796.22		6.85	Si
SLD 12	ini.	96.1	-1149	-0.0000509	0.0003369	0.0035	0.87		2790.57	2790.57		29.04	Si
SLD 12	fin.	-396.35	-1429	-0.0002192	0.0003369	0.0035	0.87		2796.22	2796.22		7.05	Si
SLV 11	ini.	187.52	-1167	-0.0001006	0.0003369	0.0035	0.87		2790.57	2790.57		14.88	Si
SLV 11	fin.	-690.23	-2369	-0.0004033	0.0003369	0.0035	0.87		2796.22	2796.22		4.05	Si
SLV 16	ini.	160.45	-1918	-0.0000857	0.0003369	0.0035	0.87		2790.57	2790.57		17.39	Si
SLV 16	fin.	-441.61	-1558	-0.0002461	0.0003369	0.0035	0.87		2796.22	2796.22		6.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 7	ini.	72.52	971	0.87	0	567	6344	7035	2219	6911		7.12	Si
SLD 7	fin.	-373.08	-3208	0.87	0	567	6344	7035	2219	6911		2.15	Si
SLD 11	ini.	96.52	1080	0.87	0	567	6344	7035	2219	6911		6.4	Si
SLD 11	fin.	-408.42	-3257	0.87	0	567	6344	7035	2219	6911		2.12	Si
SLV 12	ini.	186.57	626	0.87	0	567	6344	7035	2219	6911		11.04	Si
SLV 12	fin.	-662.6	-4095	0.87	0	567	6344	7035	2219	6911		1.69	Si
SLV 11	ini.	187.52	552	0.87	0	567	6344	7035	2219	6911		12.52	Si
SLV 11	fin.	-690.23	-4209	0.87	0	567	6344	7035	2219	6911		1.64	Si
SLV 8	ini.	130.32	362	0.87	0	567	6344	7035	2219	6911		19.09	Si
SLV 8	fin.	-578.74	-3983	0.87	0	567	6344	7035	2219	6911		1.74	Si
SLV 15	ini.	161.92	1571	0.87	0	567	6344	7035	2219	6911		4.4	Si
SLV 15	fin.	-484.61	-3267	0.87	0	567	6344	7035	2219	6911		2.12	Si
SLD 12	ini.	96.1	1112	0.87	0	567	6344	7035	2219	6911		6.22	Si
SLD 12	fin.	-396.35	-3207	0.87	0	567	6344	7035	2219	6911		2.16	Si
SLV 16	ini.	160.45	1685	0.87	0	567	6344	7035	2219	6911		4.1	Si
SLV 16	fin.	-441.61	-3090	0.87	0	567	6344	7035	2219	6911		2.24	Si
SLV 7	ini.	131.27	288	0.87	0	567	6344	7035	2219	6911		23.96	Si
SLV 7	fin.	-606.37	-4097	0.87	0	567	6344	7035	2219	6911		1.69	Si
SLD 8	ini.	72.11	1003	0.87	0	567	6344	7035	2219	6911		6.89	Si
SLD 8	fin.	-361.01	-3158	0.87	0	567	6344	7035	2219	6911		2.19	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.051	SLV 11	Si
V_SLV	1.642	SLV 11	Si
PF_SLU	8.933	SLU 84	Si
V_SLU	1.737	SLU 84	Si

Trave di accoppiamento 33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-3.013	5.876	-1.58	0.42	2	-2.013	5.876	-1.58	0.42	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-2320.71	-3207	-0.0002562	0.0001872	0.0035	2		10737.13	10737.13	No	4.63	Si
SLU 78	fin.	2768.95	-4894	-0.0003143	0.0001872	0.0035	2		10722.86	10722.86	No	3.87	Si
SLU 83	ini.	-2325.29	-3161	-0.0002568	0.0001872	0.0035	2		10737.13	10737.13	No	4.62	Si
SLU 83	fin.	2797.3	-4826	-0.0003181	0.0001872	0.0035	2		10722.86	10722.86	No	3.83	Si
SLU 82	ini.	-2291.83	-3188	-0.0002526	0.0001872	0.0035	2		10737.13	10737.13	No	4.68	Si
SLU 82	fin.	2771.05	-4839	-0.0003146	0.0001872	0.0035	2		10722.86	10722.86	No	3.87	Si
SLU 80	ini.	-2303.63	-3181	-0.0002541	0.0001872	0.0035	2		10737.13	10737.13	No	4.66	Si
SLU 80	fin.	2750.31	-4855	-0.0003119	0.0001872	0.0035	2		10722.86	10722.86	No	3.9	Si
SLU 74	ini.	-2298.33	-3094	-0.0002534	0.0001872	0.0035	2		10737.13	10737.13	No	4.67	Si
SLU 74	fin.	2734.48	-4748	-0.0003098	0.0001872	0.0035	2		10722.86	10722.86	No	3.92	Si
SLU 79	ini.	-2309.18	-3111	-0.0002548	0.0001872	0.0035	2		10737.13	10737.13	No	4.65	Si
SLU 79	fin.	2746.2	-4775	-0.0003113	0.0001872	0.0035	2		10722.86	10722.86	No	3.9	Si
SLU 77	ini.	-2326.25	-3137	-0.0002569	0.0001872	0.0035	2		10737.13	10737.13	No	4.62	Si
SLU 77	fin.	2764.84	-4815	-0.0003138	0.0001872	0.0035	2		10722.86	10722.86	No	3.88	Si
SLU 81	ini.	-2297.37	-3118	-0.0002533	0.0001872	0.0035	2		10737.13	10737.13	No	4.67	Si
SLU 81	fin.	2766.93	-4759	-0.0003141	0.0001872	0.0035	2		10722.86	10722.86	No	3.88	Si
SLU 84	ini.	-2319.75	-3231	-0.0002561	0.0001872	0.0035	2		10737.13	10737.13	No	4.63	Si
SLU 84	fin.	2801.41	-4905	-0.0003186	0.0001872	0.0035	2		10722.86	10722.86	No	3.83	Si
SLU 75	ini.	-2292.79	-3164	-0.0002527	0.0001872	0.0035	2		10737.13	10737.13	No	4.68	Si
SLU 75	fin.	2738.59	-4828	-0.0003103	0.0001872	0.0035	2		10722.86	10722.86	No	3.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-2320.71	6193	2	0	1304	7930	13475	5100	9234	No	1.49	Si
SLU 78	fin.	2768.95	10724	2	0	1304	7930	13475	5100	9234	No	0.86	No
SLU 77	ini.	-2326.25	6180	2	0	1304	7930	13475	5100	9234	No	1.49	Si
SLU 77	fin.	2764.84	10721	2	0	1304	7930	13475	5100	9234	No	0.86	No
SLU 83	ini.	-2325.29	6168	2	0	1304	7930	13475	5100	9234	No	1.5	Si
SLU 83	fin.	2797.3	10832	2	0	1304	7930	13475	5100	9234	No	0.85	No
SLU 74	ini.	-2298.33	6113	2	0	1304	7930	13475	5100	9234	No	1.51	Si
SLU 74	fin.	2734.48	10592	2	0	1304	7930	13475	5100	9234	No	0.87	No
SLU 82	ini.	-2291.83	6114	2	0	1304	7930	13475	5100	9234	No	1.51	Si
SLU 82	fin.	2771.05	10706	2	0	1304	7930	13475	5100	9234	No	0.86	No
SLU 84	ini.	-2319.75	6181	2	0	1304	7930	13475	5100	9234	No	1.49	Si
SLU 84	fin.	2801.41	10835	2	0	1304	7930	13475	5100	9234	No	0.85	No
SLU 80	ini.	-2303.63	6154	2	0	1304	7930	13475	5100	9234	No	1.5	Si
SLU 80	fin.	2750.31	10645	2	0	1304	7930	13475	5100	9234	No	0.87	No
SLU 79	ini.	-2309.18	6140	2	0	1304	7930	13475	5100	9234	No	1.5	Si
SLU 79	fin.	2746.2	10643	2	0	1304	7930	13475	5100	9234	No	0.87	No
SLU 75	ini.	-2292.79	6126	2	0	1304	7930	13475	5100	9234	No	1.51	Si
SLU 75	fin.	2738.59	10594	2	0	1304	7930	13475	5100	9234	No	0.87	No
SLU 81	ini.	-2297.37	6101	2	0	1304	7930	13475	5100	9234	No	1.51	Si
SLU 81	fin.	2766.93	10703	2	0	1304	7930	13475	5100	9234	No	0.86	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	-563.55	555	-0.0000566	0.0002807	0.0035	2		15648.46	15648.46		27.77	Si
SLV 6	fin.	2784.3	-93	-0.0003028	0.0002807	0.0035	2		15635.95	15635.95		5.62	Si
SLV 2	ini.	-2116.24	303	-0.0002239	0.0002807	0.0035	2		15648.46	15648.46		7.39	Si
SLV 2	fin.	3717.75	-1935	-0.0004216	0.0002807	0.0035	2		15635.95	15635.95		4.21	Si
SLV 5	ini.	-898.97	327	-0.0000912	0.0002807	0.0035	2		15648.46	15648.46		17.41	Si
SLV 5	fin.	2914.26	-613	-0.0003187	0.0002807	0.0035	2		15635.95	15635.95		5.37	Si
SLV 4	ini.	-2870.26	-964	-0.000313	0.0002807	0.0035	2		15648.46	15648.46		5.45	Si
SLV 4	fin.	3485.61	-3720	-0.0003911	0.0002807	0.0035	2		15635.95	15635.95		4.49	Si
SLV 7	ini.	-3412.36	-3898	-0.0003812	0.0002807	0.0035	2		15648.46	15648.46		4.59	Si
SLV 7	fin.	2140.46	-6563	-0.0002268	0.0002807	0.0035	2		15635.95	15635.95		7.3	Si
SLV 11	ini.	-2755.59	-4895	-0.000299	0.0002807	0.0035	2		15648.46	15648.46		5.68	Si
SLV 11	fin.	1077.26	-6645	-0.00011	0.0002807	0.0035	2		15635.95	15635.95		14.51	Si
SLV 3	ini.	-3392.15	-1318	-0.0003786	0.0002807	0.0035	2		15648.46	15648.46		4.61	Si
SLV 3	fin.	3687.83	-4530	-0.0004176	0.0002807	0.0035	2		15635.95	15635.95		4.24	Si
SLD 1	ini.	-2075.81	-1259	-0.0002193	0.0002807	0.0035	2		15648.46	15648.46		7.54	Si
SLD 1	fin.	2782.17	-3096	-0.0003025	0.0002807	0.0035	2		15635.95	15635.95		5.62	Si
SLV 8	ini.	-3076.95	-3670	-0.0003386	0.0002807	0.0035	2		15648.46	15648.46		5.09	Si
SLV 8	fin.	2010.5	-6043	-0.000212	0.0002807	0.0035	2		15635.95	15635.95		7.78	Si
SLV 1	ini.	-2638.13	-51	-0.0002849	0.0002807	0.0035	2		15648.46	15648.46		5.93	Si
SLV 1	fin.	3919.97	-2745	-0.0004487	0.0002807	0.0035	2		15635.95	15635.95		3.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-2638.13	8390	2	0	1957	7930	20213	5100	9886		1.18	Si
SLV 1	fin.	3919.97	9591	2	0	1957	7930	20213	5100	9886		1.03	Si
SLV 2	ini.	-2116.24	7253	2	0	1957	7930	20213	5100	9886		1.36	Si
SLV 2	fin.	3717.75	8317	2	0	1957	7930	20213	5100	9886		1.19	Si
SLV 3	ini.	-3392.15	10495	2	0	1957	7930	20213	5100	9886		0.94	No
SLV 3	fin.	3687.83	9733	2	0	1957	7930	20213	5100	9886		1.02	Si
SLV 8	ini.	-3076.95	8926	2	0	1957	7930	20213	5100	9886		1.11	Si
SLV 8	fin.	2010.5	7757	2	0	1957	7930	20213	5100	9886		1.27	Si
SLV 4	ini.	-2870.26	9357	2	0	1957	7930	20213	5100	9886		1.06	Si
SLV 4	fin.	3485.61	8459	2	0	1957	7930	20213	5100	9886		1.17	Si
SLV 5	ini.	-898.97	2642	2	0	1957	7930	20213	5100	9886		3.74	Si
SLV 5	fin.	2914.26	8102	2	0	1957	7930	20213	5100	9886		1.22	Si
SLD 7	ini.	-2420.94	6691	2	0	1957	7930	20213	5100	9886		1.48	Si
SLD 7	fin.	2013.96	7947	2	0	1957	7930	20213	5100	9886		1.24	Si
SLV 7	ini.	-3412.36	9658	2	0	1957	7930	20213	5100	9886		1.02	Si
SLV 7	fin.	2140.46	8576	2	0	1957	7930	20213	5100	9886		1.15	Si
SLD 1	ini.	-2075.81	6136	2	0	1957	7930	20213	5100	9886		1.61	Si
SLD 1	fin.	2782.17	8365	2	0	1957	7930	20213	5100	9886		1.18	Si
SLD 3	ini.	-2404.37	7040	2	0	1957	7930	20213	5100	9886		1.4	Si
SLD 3	fin.	2678.91	8430	2	0	1957	7930	20213	5100	9886		1.17	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.989	SLV 1	Si
V_SLV	0.942	SLV 3	No
PF_SLU	3.828	SLU 84	Si
V_SLU	0.852	SLU 84	No

Trave di accoppiamento 35

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.763	5.826	1.39	2.29	0.9	-22.763	5.826	1.39	2.29	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	10.75	-1654	-0.0000053	0.0001872	0.0035	0.9		2959	2959	No	275.24	Si
SLU 78	fin.	753.98	-2809	-0.000447	0.0001872	0.0035	0.9		2959	2959	No	3.92	Si
SLU 79	ini.	8.15	-1616	-0.000004	0.0001872	0.0035	0.9		2959	2959	No	362.9	Si
SLU 79	fin.	746.04	-2763	-0.0004414	0.0001872	0.0035	0.9		2959	2959	No	3.97	Si
SLU 76	ini.	4.67	-1622	-0.0000023	0.0001872	0.0035	0.9		2959	2959	No	633.3	Si
SLU 76	fin.	741.96	-2767	-0.0004385	0.0001872	0.0035	0.9		2959	2959	No	3.99	Si
SLU 83	ini.	19.53	-1656	-0.0000096	0.0001872	0.0035	0.9		2959	2959	No	151.52	Si
SLU 83	fin.	743.75	-2785	-0.0004398	0.0001872	0.0035	0.9		2959	2959	No	3.98	Si
SLU 75	ini.	6.97	-1623	-0.0000034	0.0001872	0.0035	0.9		2959	2959	No	424.31	Si
SLU 75	fin.	743.9	-2768	-0.0004399	0.0001872	0.0035	0.9		2959	2959	No	3.98	Si
SLU 77	ini.	10.57	-1632	-0.0000052	0.0001872	0.0035	0.9		2959	2959	No	279.86	Si
SLU 77	fin.	750.38	-2782	-0.0004445	0.0001872	0.0035	0.9		2959	2959	No	3.94	Si
SLU 84	ini.	19.71	-1678	-0.0000097	0.0001872	0.0035	0.9		2959	2959	No	150.15	Si
SLU 84	fin.	747.36	-2812	-0.0004423	0.0001872	0.0035	0.9		2959	2959	No	3.96	Si
SLU 74	ini.	6.8	-1601	-0.0000033	0.0001872	0.0035	0.9		2959	2959	No	435.37	Si
SLU 74	fin.	740.29	-2741	-0.0004373	0.0001872	0.0035	0.9		2959	2959	No	4	Si
SLU 80	ini.	8.33	-1638	-0.0000041	0.0001872	0.0035	0.9		2959	2959	No	355.18	Si
SLU 80	fin.	749.64	-2790	-0.0004439	0.0001872	0.0035	0.9		2959	2959	No	3.95	Si
SLU 82	ini.	15.93	-1648	-0.0000078	0.0001872	0.0035	0.9		2959	2959	No	185.75	Si
SLU 82	fin.	737.27	-2771	-0.0004352	0.0001872	0.0035	0.9		2959	2959	No	4.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	19.53	382	0.9	0	329	7137	3773	2295	6068	No	15.89	Si
SLU 83	fin.	743.75	1943	0.9	0	329	7137	3773	2295	6068	No	3.12	Si
SLU 81	ini.	15.75	394	0.9	0	329	7137	3773	2295	6068	No	15.39	Si
SLU 81	fin.	733.67	1912	0.9	0	329	7137	3773	2295	6068	No	3.17	Si
SLU 69	ini.	-24.78	506	0.9	0	329	7137	3773	2295	6068	No	11.99	Si
SLU 69	fin.	732.17	1938	0.9	0	329	7137	3773	2295	6068	No	3.13	Si
SLU 66	ini.	-28.56	518	0.9	0	329	7137	3773	2295	6068	No	11.71	Si
SLU 66	fin.	722.09	1906	0.9	0	329	7137	3773	2295	6068	No	3.18	Si
SLU 71	ini.	-27.2	513	0.9	0	329	7137	3773	2295	6068	No	11.83	Si
SLU 71	fin.	727.83	1925	0.9	0	329	7137	3773	2295	6068	No	3.15	Si
SLU 79	ini.	8.15	413	0.9	0	329	7137	3773	2295	6068	No	14.71	Si
SLU 79	fin.	746.04	1959	0.9	0	329	7137	3773	2295	6068	No	3.1	Si
SLU 77	ini.	10.57	406	0.9	0	329	7137	3773	2295	6068	No	14.96	Si
SLU 77	fin.	750.38	1972	0.9	0	329	7137	3773	2295	6068	No	3.08	Si
SLU 74	ini.	6.8	418	0.9	0	329	7137	3773	2295	6068	No	14.52	Si
SLU 74	fin.	740.29	1941	0.9	0	329	7137	3773	2295	6068	No	3.13	Si
SLU 78	ini.	10.75	464	0.9	0	329	7137	3773	2295	6068	No	13.09	Si
SLU 78	fin.	753.98	1924	0.9	0	329	7137	3773	2295	6068	No	3.15	Si
SLU 80	ini.	8.33	471	0.9	0	329	7137	3773	2295	6068	No	12.89	Si
SLU 80	fin.	749.64	1911	0.9	0	329	7137	3773	2295	6068	No	3.18	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-454.36	-604	-0.0002386	0.0002807	0.0035	0.9		2995.37	2995.37		6.59	Si
SLD 14	fin.	939.25	-2706	-0.0005498	0.0002807	0.0035	0.9		2989.59	2989.59		3.18	Si
SLV 16	ini.	-1040.76	1036	-0.000622	0.0002807	0.0035	0.9		2995.37	2995.37		2.88	Si
SLV 16	fin.	1481.2	-2558	-0.0009781	0.0002807	0.0035	0.9		2989.59	2989.59		2.02	Si
SLV 15	ini.	-886.35	837	-0.0005115	0.0002807	0.0035	0.9		2995.37	2995.37		3.38	Si
SLV 15	fin.	1308.59	-2277	-0.0008319	0.0002807	0.0035	0.9		2989.59	2989.59		2.28	Si
SLV 3	ini.	983.25	-2191	-0.0005814	0.0002807	0.0035	0.9		2989.59	2989.59		3.04	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-382.25	-201	-0.0001981	0.0002807	0.0035	0.9		2995.37	2995.37		7.84	Si
SLV 12	ini.	-370.07	1107	-0.0001914	0.0002807	0.0035	0.9		2995.37	2995.37		8.09	Si
SLV 12	fin.	872.63	-440	-0.0005031	0.0002807	0.0035	0.9		2989.59	2989.59		3.43	Si
SLV 1	ini.	992.9	-3191	-0.0005884	0.0002807	0.0035	0.9		2989.59	2989.59		3.01	Si
SLV 1	fin.	-394.3	-1350	-0.0002048	0.0002807	0.0035	0.9		2995.37	2995.37		7.6	Si
SLV 13	ini.	-876.7	-163	-0.0005048	0.0002807	0.0035	0.9		2995.37	2995.37		3.42	Si
SLV 13	fin.	1296.54	-3426	-0.0008221	0.0002807	0.0035	0.9		2989.59	2989.59		2.31	Si
SLV 14	ini.	-1031.1	36	-0.0006149	0.0002807	0.0035	0.9		2995.37	2995.37		2.91	Si
SLV 14	fin.	1469.15	-3707	-0.0009676	0.0002807	0.0035	0.9		2989.59	2989.59		2.03	Si
SLD 16	ini.	-458.33	-173	-0.0002409	0.0002807	0.0035	0.9		2995.37	2995.37		6.54	Si
SLD 16	fin.	944.12	-2210	-0.0005533	0.0002807	0.0035	0.9		2989.59	2989.59		3.17	Si
SLD 15	ini.	-392.04	-258	-0.0002035	0.0002807	0.0035	0.9		2995.37	2995.37		7.64	Si
SLD 15	fin.	870.01	-2089	-0.0005013	0.0002807	0.0035	0.9		2989.59	2989.59		3.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-454.36	1616	0.9	0	493	7137	5660	2295	7630		4.72	Si
SLD 14	fin.	939.25	3175	0.9	0	493	7137	5660	2295	7630		2.4	Si
SLD 13	ini.	-388.07	1400	0.9	0	493	7137	5660	2295	7630		5.45	Si
SLD 13	fin.	865.14	2930	0.9	0	493	7137	5660	2295	7630		2.6	Si
SLV 14	ini.	-1031.1	3241	0.9	0	493	7137	5660	2295	7630		2.35	Si
SLV 14	fin.	1469.15	5513	0.9	0	493	7137	5660	2295	7630		1.38	Si
SLV 1	ini.	992.9	-2858	0.9	0	493	7137	5660	2295	7630		2.67	Si
SLV 1	fin.	-394.3	-1925	0.9	0	493	7137	5660	2295	7630		3.96	Si
SLD 16	ini.	-458.33	1803	0.9	0	493	7137	5660	2295	7630		4.23	Si
SLD 16	fin.	944.12	2858	0.9	0	493	7137	5660	2295	7630		2.67	Si
SLV 16	ini.	-1040.76	3669	0.9	0	493	7137	5660	2295	7630		2.08	Si
SLV 16	fin.	1481.2	4781	0.9	0	493	7137	5660	2295	7630		1.6	Si
SLV 10	ini.	-337.89	692	0.9	0	493	7137	5660	2295	7630		11.02	Si
SLV 10	fin.	832.46	3863	0.9	0	493	7137	5660	2295	7630		1.98	Si
SLV 15	ini.	-886.35	3165	0.9	0	493	7137	5660	2295	7630		2.41	Si
SLV 15	fin.	1308.59	4209	0.9	0	493	7137	5660	2295	7630		1.81	Si
SLV 13	ini.	-876.7	2737	0.9	0	493	7137	5660	2295	7630		2.79	Si
SLV 13	fin.	1296.54	4941	0.9	0	493	7137	5660	2295	7630		1.54	Si
SLV 9	ini.	-238.66	369	0.9	0	493	7137	5660	2295	7630		20.7	Si
SLV 9	fin.	721.52	3495	0.9	0	493	7137	5660	2295	7630		2.18	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.018	SLV 16	Si
V_SLV	1.384	SLV 14	Si
PF_SLU	3.924	SLU 78	Si
V_SLU	3.077	SLU 77	Si

Trave di accoppiamento 36

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.763	5.826	4.19	4.82	0.63	-22.763	5.826	4.19	4.82	0.63	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-584.72	-1389	-0.0007844	0.0001872	0.0035	0.63		1459.35	1459.35	No	2.5	Si
SLU 77	fin.	-47.37	-634	-0.000048	0.0001872	0.0035	0.63		1459.35	1459.35	No	30.81	Si
SLU 81	ini.	-574.27	-1359	-0.0007666	0.0001872	0.0035	0.63		1459.35	1459.35	No	2.54	Si
SLU 81	fin.	-55.53	-631	-0.0000565	0.0001872	0.0035	0.63		1459.35	1459.35	No	26.28	Si
SLU 80	ini.	-581.04	-1388	-0.0007781	0.0001872	0.0035	0.63		1459.35	1459.35	No	2.51	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	fin.	-48.83	-641	-0.0000495	0.0001872	0.0035	0.63		1459.35	1459.35	No	29.88	Si
SLU 74	ini.	-577.2	-1365	-0.0007716	0.0001872	0.0035	0.63		1459.35	1459.35	No	2.53	Si
SLU 74	fin.	-43.52	-616	-0.000044	0.0001872	0.0035	0.63		1459.35	1459.35	No	33.53	Si
SLU 84	ini.	-581.29	-1394	-0.0007785	0.0001872	0.0035	0.63		1459.35	1459.35	No	2.51	Si
SLU 84	fin.	-62.86	-665	-0.0000641	0.0001872	0.0035	0.63		1459.35	1459.35	No	23.22	Si
SLU 83	ini.	-581.78	-1383	-0.0007794	0.0001872	0.0035	0.63		1459.35	1459.35	No	2.51	Si
SLU 83	fin.	-59.38	-649	-0.0000605	0.0001872	0.0035	0.63		1459.35	1459.35	No	24.58	Si
SLU 79	ini.	-581.53	-1378	-0.0007789	0.0001872	0.0035	0.63		1459.35	1459.35	No	2.51	Si
SLU 79	fin.	-45.35	-625	-0.0000459	0.0001872	0.0035	0.63		1459.35	1459.35	No	32.18	Si
SLU 78	ini.	-584.23	-1399	-0.0007835	0.0001872	0.0035	0.63		1459.35	1459.35	No	2.5	Si
SLU 78	fin.	-50.85	-650	-0.0000516	0.0001872	0.0035	0.63		1459.35	1459.35	No	28.7	Si
SLU 82	ini.	-573.78	-1370	-0.0007658	0.0001872	0.0035	0.63		1459.35	1459.35	No	2.54	Si
SLU 82	fin.	-59.01	-647	-0.0000601	0.0001872	0.0035	0.63		1459.35	1459.35	No	24.73	Si
SLU 75	ini.	-576.71	-1375	-0.0007707	0.0001872	0.0035	0.63		1459.35	1459.35	No	2.53	Si
SLU 75	fin.	-47	-632	-0.0000476	0.0001872	0.0035	0.63		1459.35	1459.35	No	31.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-581.04	2202	0.63	0	170	4996	2641	1607	4248	No	1.93	Si
SLU 80	fin.	-48.83	-674	0.63	0	170	4996	2641	1607	4248	No	6.3	Si
SLU 83	ini.	-581.78	2228	0.63	0	170	4996	2641	1607	4248	No	1.91	Si
SLU 83	fin.	-59.38	-727	0.63	0	170	4996	2641	1607	4248	No	5.84	Si
SLU 79	ini.	-581.53	2211	0.63	0	170	4996	2641	1607	4248	No	1.92	Si
SLU 79	fin.	-45.35	-671	0.63	0	170	4996	2641	1607	4248	No	6.33	Si
SLU 84	ini.	-581.29	2219	0.63	0	170	4996	2641	1607	4248	No	1.91	Si
SLU 84	fin.	-62.86	-730	0.63	0	170	4996	2641	1607	4248	No	5.82	Si
SLU 82	ini.	-573.78	2190	0.63	0	170	4996	2641	1607	4248	No	1.94	Si
SLU 82	fin.	-59.01	-712	0.63	0	170	4996	2641	1607	4248	No	5.97	Si
SLU 78	ini.	-584.23	2215	0.63	0	170	4996	2641	1607	4248	No	1.92	Si
SLU 78	fin.	-50.85	-682	0.63	0	170	4996	2641	1607	4248	No	6.22	Si
SLU 75	ini.	-576.71	2185	0.63	0	170	4996	2641	1607	4248	No	1.94	Si
SLU 75	fin.	-47	-664	0.63	0	170	4996	2641	1607	4248	No	6.39	Si
SLU 77	ini.	-584.72	2223	0.63	0	170	4996	2641	1607	4248	No	1.91	Si
SLU 77	fin.	-47.37	-680	0.63	0	170	4996	2641	1607	4248	No	6.25	Si
SLU 81	ini.	-574.27	2199	0.63	0	170	4996	2641	1607	4248	No	1.93	Si
SLU 81	fin.	-55.53	-709	0.63	0	170	4996	2641	1607	4248	No	5.99	Si
SLU 74	ini.	-577.2	2194	0.63	0	170	4996	2641	1607	4248	No	1.94	Si
SLU 74	fin.	-43.52	-661	0.63	0	170	4996	2641	1607	4248	No	6.42	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1031.81	-1649	-0.0016066	0.0002807	0.0035	0.63		1469.89	1469.89		1.42	Si
SLV 15	fin.	813.03	895	-0.0011385	0.0002807	0.0035	0.63		1465.76	1465.76		1.8	Si
SLV 1	ini.	326.63	-104	-0.0003662	0.0002807	0.0035	0.63		1465.76	1465.76		4.49	Si
SLV 1	fin.	-954.08	-1849	-0.001425	0.0002807	0.0035	0.63		1469.89	1469.89		1.54	Si
SLV 14	ini.	-1290.55	-2007	-0.0024105	0.0002807	0.0035	0.63		1469.89	1469.89		1.14	Si
SLV 14	fin.	837.14	858	-0.0011855	0.0002807	0.0035	0.63		1465.76	1465.76		1.75	Si
SLD 14	ini.	-793.35	-1415	-0.0010969	0.0002807	0.0035	0.63		1469.89	1469.89		1.85	Si
SLD 14	fin.	357.4	146	-0.0004064	0.0002807	0.0035	0.63		1465.76	1465.76		4.1	Si
SLV 3	ini.	447.21	64	-0.0005303	0.0002807	0.0035	0.63		1465.76	1465.76		3.28	Si
SLV 3	fin.	-837.64	-1627	-0.0011822	0.0002807	0.0035	0.63		1469.89	1469.89		1.75	Si
SLV 10	ini.	-888.89	-1570	-0.0012854	0.0002807	0.0035	0.63		1469.89	1469.89		1.65	Si
SLV 10	fin.	98.44	-318	-0.0001011	0.0002807	0.0035	0.63		1465.76	1465.76		14.89	Si
SLV 16	ini.	-1169.97	-1839	-0.0019888	0.0002807	0.0035	0.63		1469.89	1469.89		1.26	Si
SLV 16	fin.	953.58	1081	-0.0014294	0.0002807	0.0035	0.63		1465.76	1465.76		1.54	Si
SLV 9	ini.	-800.1	-1448	-0.0011097	0.0002807	0.0035	0.63		1469.89	1469.89		1.84	Si
SLV 9	fin.	8.12	-437	-0.0000081	0.0002807	0.0035	0.63		1465.76	1465.76		180.54	Si
SLV 2	ini.	188.47	-294	-0.0001996	0.0002807	0.0035	0.63		1465.76	1465.76		7.78	Si
SLV 2	fin.	-813.54	-1664	-0.0011354	0.0002807	0.0035	0.63		1469.89	1469.89		1.81	Si
SLV 13	ini.	-1152.39	-1817	-0.0019348	0.0002807	0.0035	0.63		1469.89	1469.89		1.28	Si
SLV 13	fin.	696.59	672	-0.0009251	0.0002807	0.0035	0.63		1465.76	1465.76		2.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	188.47	-135	0.63	0	256	4996	3962	1607	5251		39.02	Si
SLV 2	fin.	-813.54	-2682	0.63	0	256	4996	3962	1607	5251		1.96	Si
SLV 15	ini.	-1031.81	3286	0.63	0	256	4996	3962	1607	5251		1.6	Si
SLV 15	fin.	813.03	1947	0.63	0	256	4996	3962	1607	5251		2.7	Si
SLV 3	ini.	447.21	-900	0.63	0	256	4996	3962	1607	5251		5.84	Si
SLV 3	fin.	-837.64	-2799	0.63	0	256	4996	3962	1607	5251		1.88	Si
SLV 9	ini.	-800.1	2710	0.63	0	256	4996	3962	1607	5251		1.94	Si
SLV 9	fin.	8.12	-270	0.63	0	256	4996	3962	1607	5251		19.46	Si
SLV 13	ini.	-1152.39	3665	0.63	0	256	4996	3962	1607	5251		1.43	Si
SLV 13	fin.	696.59	1657	0.63	0	256	4996	3962	1607	5251		3.17	Si
SLV 1	ini.	326.63	-521	0.63	0	256	4996	3962	1607	5251		10.08	Si
SLV 1	fin.	-954.08	-3089	0.63	0	256	4996	3962	1607	5251		1.7	Si
SLD 14	ini.	-793.35	2636	0.63	0	256	4996	3962	1607	5251		1.99	Si
SLD 14	fin.	357.4	670	0.63	0	256	4996	3962	1607	5251		7.84	Si
SLV 10	ini.	-888.89	2959	0.63	0	256	4996	3962	1607	5251		1.77	Si
SLV 10	fin.	98.44	-8	0.63	0	256	4996	3962	1607	5251		635.61	Si
SLV 14	ini.	-1290.55	4051	0.63	0	256	4996	3962	1607	5251		1.3	Si
SLV 14	fin.	837.14	2064	0.63	0	256	4996	3962	1607	5251		2.54	Si
SLV 16	ini.	-1169.97	3673	0.63	0	256	4996	3962	1607	5251		1.43	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	fin.	953.58	2354	0.63	0	256	4996	3962	1607	5251		2.23	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.139	SLV 14	Si
V_SLV	1.296	SLV 14	Si
PF_SLU	2.496	SLU 77	Si
V_SLU	1.906	SLU 83	Si

Trave di accoppiamento 37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.314	1.39	2.29	0.9	-22.543	-3.314	1.39	2.29	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	230.26	-1701	-0.0001181	0.0001872	0.0035	0.9		2959	2959	No	12.85	Si
SLU 77	fin.	412.71	-1840	-0.0002219	0.0001872	0.0035	0.9		2959	2959	No	7.17	Si
SLU 75	ini.	225.45	-1668	-0.0001155	0.0001872	0.0035	0.9		2959	2959	No	13.12	Si
SLU 75	fin.	409.31	-1820	-0.0002198	0.0001872	0.0035	0.9		2959	2959	No	7.23	Si
SLU 78	ini.	232.29	-1708	-0.0001192	0.0001872	0.0035	0.9		2959	2959	No	12.74	Si
SLU 78	fin.	410.41	-1835	-0.0002205	0.0001872	0.0035	0.9		2959	2959	No	7.21	Si
SLU 80	ini.	230.27	-1693	-0.0001181	0.0001872	0.0035	0.9		2959	2959	No	12.85	Si
SLU 80	fin.	407.45	-1821	-0.0002187	0.0001872	0.0035	0.9		2959	2959	No	7.26	Si
SLU 82	ini.	229.97	-1682	-0.0001179	0.0001872	0.0035	0.9		2959	2959	No	12.87	Si
SLU 82	fin.	413.01	-1841	-0.000222	0.0001872	0.0035	0.9		2959	2959	No	7.16	Si
SLU 83	ini.	234.78	-1715	-0.0001205	0.0001872	0.0035	0.9		2959	2959	No	12.6	Si
SLU 83	fin.	416.41	-1861	-0.0002241	0.0001872	0.0035	0.9		2959	2959	No	7.11	Si
SLU 81	ini.	227.95	-1675	-0.0001169	0.0001872	0.0035	0.9		2959	2959	No	12.98	Si
SLU 81	fin.	415.31	-1846	-0.0002234	0.0001872	0.0035	0.9		2959	2959	No	7.12	Si
SLU 84	ini.	236.81	-1722	-0.0001216	0.0001872	0.0035	0.9		2959	2959	No	12.5	Si
SLU 84	fin.	414.11	-1856	-0.0002227	0.0001872	0.0035	0.9		2959	2959	No	7.15	Si
SLU 74	ini.	223.42	-1661	-0.0001144	0.0001872	0.0035	0.9		2959	2959	No	13.24	Si
SLU 74	fin.	411.61	-1825	-0.0002212	0.0001872	0.0035	0.9		2959	2959	No	7.19	Si
SLU 79	ini.	228.25	-1686	-0.000117	0.0001872	0.0035	0.9		2959	2959	No	12.96	Si
SLU 79	fin.	409.75	-1826	-0.0002201	0.0001872	0.0035	0.9		2959	2959	No	7.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	234.78	-2951	0.9	0	329	7137	3773	2295	6068	No	2.06	Si
SLU 83	fin.	416.41	1970	0.9	0	329	7137	3773	2295	6068	No	3.08	Si
SLU 84	ini.	236.81	-2962	0.9	0	329	7137	3773	2295	6068	No	2.05	Si
SLU 84	fin.	414.11	1962	0.9	0	329	7137	3773	2295	6068	No	3.09	Si
SLU 80	ini.	230.27	-2936	0.9	0	329	7137	3773	2295	6068	No	2.07	Si
SLU 80	fin.	407.45	1944	0.9	0	329	7137	3773	2295	6068	No	3.12	Si
SLU 78	ini.	232.29	-2969	0.9	0	329	7137	3773	2295	6068	No	2.04	Si
SLU 78	fin.	410.41	1965	0.9	0	329	7137	3773	2295	6068	No	3.09	Si
SLU 74	ini.	223.42	-2880	0.9	0	329	7137	3773	2295	6068	No	2.11	Si
SLU 74	fin.	411.61	1954	0.9	0	329	7137	3773	2295	6068	No	3.11	Si
SLU 75	ini.	225.45	-2892	0.9	0	329	7137	3773	2295	6068	No	2.1	Si
SLU 75	fin.	409.31	1945	0.9	0	329	7137	3773	2295	6068	No	3.12	Si
SLU 79	ini.	228.25	-2925	0.9	0	329	7137	3773	2295	6068	No	2.07	Si
SLU 79	fin.	409.75	1953	0.9	0	329	7137	3773	2295	6068	No	3.11	Si
SLU 82	ini.	229.97	-2885	0.9	0	329	7137	3773	2295	6068	No	2.1	Si
SLU 82	fin.	413.01	1942	0.9	0	329	7137	3773	2295	6068	No	3.12	Si
SLU 77	ini.	230.26	-2957	0.9	0	329	7137	3773	2295	6068	No	2.05	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	fin.	412.71	1973	0.9	0	329	7137	3773	2295	6068	No	3.07	Si
SLU 81	ini.	227.95	-2874	0.9	0	329	7137	3773	2295	6068	No	2.11	Si
SLU 81	fin.	415.31	1951	0.9	0	329	7137	3773	2295	6068	No	3.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1132.02	-5100	-0.0006921	0.0002807	0.0035	0.9		2989.59	2989.59		2.64	Si
SLV 3	fin.	-834.14	959	-0.0004757	0.0002807	0.0035	0.9		2995.37	2995.37		3.59	Si
SLV 1	ini.	1069.75	-4076	-0.000645	0.0002807	0.0035	0.9		2989.59	2989.59		2.79	Si
SLV 1	fin.	-958.79	1618	-0.0005625	0.0002807	0.0035	0.9		2995.37	2995.37		3.12	Si
SLV 2	ini.	1193.28	-4492	-0.0007396	0.0002807	0.0035	0.9		2989.59	2989.59		2.51	Si
SLV 2	fin.	-1127.39	1996	-0.000687	0.0002807	0.0035	0.9		2995.37	2995.37		2.66	Si
SLD 15	ini.	-300.36	309	-0.0001535	0.0002807	0.0035	0.9		2995.37	2995.37		9.97	Si
SLD 15	fin.	902.86	-2684	-0.0005242	0.0002807	0.0035	0.9		2989.59	2989.59		3.31	Si
SLV 13	ini.	-963.96	3257	-0.0005662	0.0002807	0.0035	0.9		2995.37	2995.37		3.11	Si
SLV 13	fin.	1595.3	-3914	-0.0010806	0.0002807	0.0035	0.9		2989.59	2989.59		1.87	Si
SLV 11	ini.	-95.18	-1603	-0.0000471	0.0002807	0.0035	0.9		2995.37	2995.37		31.47	Si
SLV 11	fin.	941.32	-3339	-0.0005513	0.0002807	0.0035	0.9		2989.59	2989.59		3.18	Si
SLV 14	ini.	-840.43	2841	-0.0004799	0.0002807	0.0035	0.9		2995.37	2995.37		3.56	Si
SLV 14	fin.	1426.7	-3536	-0.0009309	0.0002807	0.0035	0.9		2989.59	2989.59		2.1	Si
SLV 4	ini.	1255.54	-5516	-0.0007889	0.0002807	0.0035	0.9		2989.59	2989.59		2.38	Si
SLV 4	fin.	-1002.74	1337	-0.0005942	0.0002807	0.0035	0.9		2995.37	2995.37		2.99	Si
SLV 16	ini.	-778.16	1816	-0.0004381	0.0002807	0.0035	0.9		2995.37	2995.37		3.85	Si
SLV 16	fin.	1551.35	-4196	-0.0010405	0.0002807	0.0035	0.9		2989.59	2989.59		1.93	Si
SLV 15	ini.	-901.69	2233	-0.0005222	0.0002807	0.0035	0.9		2995.37	2995.37		3.32	Si
SLV 15	fin.	1719.95	-4573	-0.0011985	0.0002807	0.0035	0.9		2989.59	2989.59		1.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-901.69	3810	0.9	0	493	7137	5660	2295	7630		2	Si
SLV 15	fin.	1719.95	6896	0.9	0	493	7137	5660	2295	7630		1.11	Si
SLV 8	ini.	594.32	-6039	0.9	0	493	7137	5660	2295	7630		1.26	Si
SLV 8	fin.	66.74	997	0.9	0	493	7137	5660	2295	7630		7.65	Si
SLV 2	ini.	1193.28	-7745	0.9	0	493	7137	5660	2295	7630		0.99	No
SLV 2	fin.	-1127.39	-4114	0.9	0	493	7137	5660	2295	7630		1.85	Si
SLV 1	ini.	1069.75	-7116	0.9	0	493	7137	5660	2295	7630		1.07	Si
SLV 1	fin.	-958.79	-3453	0.9	0	493	7137	5660	2295	7630		2.21	Si
SLV 14	ini.	-840.43	4409	0.9	0	493	7137	5660	2295	7630		1.73	Si
SLV 14	fin.	1426.7	5480	0.9	0	493	7137	5660	2295	7630		1.39	Si
SLV 4	ini.	1255.54	-8973	0.9	0	493	7137	5660	2295	7630		0.85	No
SLV 4	fin.	-1002.74	-3360	0.9	0	493	7137	5660	2295	7630		2.27	Si
SLV 7	ini.	514.93	-5634	0.9	0	493	7137	5660	2295	7630		1.35	Si
SLV 7	fin.	175.1	1422	0.9	0	493	7137	5660	2295	7630		5.36	Si
SLV 3	ini.	1132.02	-8343	0.9	0	493	7137	5660	2295	7630		0.91	No
SLV 3	fin.	-834.14	-2698	0.9	0	493	7137	5660	2295	7630		2.83	Si
SLV 16	ini.	-778.16	3181	0.9	0	493	7137	5660	2295	7630		2.4	Si
SLV 16	fin.	1551.35	6235	0.9	0	493	7137	5660	2295	7630		1.22	Si
SLV 13	ini.	-963.96	5038	0.9	0	493	7137	5660	2295	7630		1.51	Si
SLV 13	fin.	1595.3	6141	0.9	0	493	7137	5660	2295	7630		1.24	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.738	SLV 15	Si
V_SLV	0.85	SLV 4	No
PF_SLU	7.106	SLU 83	Si
V_SLU	2.044	SLU 78	Si

Trave di accoppiamento 39

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.314	1.39	2.29	0.9	-18.313	-3.314	1.39	2.29	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	609.36	-1816	-0.000347	0.0001872	0.0035	0.9		2959	2959	No	4.86	Si
SLU 81	fin.	-665.44	-2635	-0.0003842	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.46	Si
SLU 79	ini.	571.98	-1764	-0.0003222	0.0001872	0.0035	0.9		2959	2959	No	5.17	Si
SLU 79	fin.	-639.59	-2716	-0.0003666	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.64	Si
SLU 82	ini.	612.46	-1822	-0.0003491	0.0001872	0.0035	0.9		2959	2959	No	4.83	Si
SLU 82	fin.	-667.88	-2629	-0.0003859	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.44	Si
SLU 78	ini.	581.23	-1789	-0.0003283	0.0001872	0.0035	0.9		2959	2959	No	5.09	Si
SLU 78	fin.	-647.07	-2737	-0.0003717	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.58	Si
SLU 84	ini.	616.27	-1843	-0.0003516	0.0001872	0.0035	0.9		2959	2959	No	4.8	Si
SLU 84	fin.	-673.68	-2688	-0.0003899	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.4	Si
SLU 77	ini.	578.13	-1783	-0.0003263	0.0001872	0.0035	0.9		2959	2959	No	5.12	Si
SLU 77	fin.	-644.63	-2743	-0.00037	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.6	Si
SLU 74	ini.	574.31	-1762	-0.0003237	0.0001872	0.0035	0.9		2959	2959	No	5.15	Si
SLU 74	fin.	-638.84	-2683	-0.0003661	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.64	Si
SLU 75	ini.	577.42	-1769	-0.0003258	0.0001872	0.0035	0.9		2959	2959	No	5.12	Si
SLU 75	fin.	-641.28	-2677	-0.0003677	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.62	Si
SLU 83	ini.	613.17	-1837	-0.0003496	0.0001872	0.0035	0.9		2959	2959	No	4.83	Si
SLU 83	fin.	-671.23	-2694	-0.0003882	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.42	Si
SLU 80	ini.	575.08	-1771	-0.0003243	0.0001872	0.0035	0.9		2959	2959	No	5.15	Si
SLU 80	fin.	-642.03	-2710	-0.0003683	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	575.08	-4471	0.9	0	329	7137	3773	2295	6068	No	1.36	Si
SLU 80	fin.	-642.03	4881	0.9	0	329	7137	3773	2295	6068	No	1.24	Si
SLU 79	ini.	571.98	-4460	0.9	0	329	7137	3773	2295	6068	No	1.36	Si
SLU 79	fin.	-639.59	4890	0.9	0	329	7137	3773	2295	6068	No	1.24	Si
SLU 75	ini.	577.42	-4456	0.9	0	329	7137	3773	2295	6068	No	1.36	Si
SLU 75	fin.	-641.28	4821	0.9	0	329	7137	3773	2295	6068	No	1.26	Si
SLU 69	ini.	473.11	-3959	0.9	0	329	7137	3773	2295	6068	No	1.53	Si
SLU 69	fin.	-557.28	4765	0.9	0	329	7137	3773	2295	6068	No	1.27	Si
SLU 84	ini.	616.27	-4645	0.9	0	329	7137	3773	2295	6068	No	1.31	Si
SLU 84	fin.	-673.68	4850	0.9	0	329	7137	3773	2295	6068	No	1.25	Si
SLU 77	ini.	578.13	-4504	0.9	0	329	7137	3773	2295	6068	No	1.35	Si
SLU 77	fin.	-644.63	4935	0.9	0	329	7137	3773	2295	6068	No	1.23	Si
SLU 78	ini.	581.23	-4515	0.9	0	329	7137	3773	2295	6068	No	1.34	Si
SLU 78	fin.	-647.07	4926	0.9	0	329	7137	3773	2295	6068	No	1.23	Si
SLU 74	ini.	574.31	-4445	0.9	0	329	7137	3773	2295	6068	No	1.37	Si
SLU 74	fin.	-638.84	4830	0.9	0	329	7137	3773	2295	6068	No	1.26	Si
SLU 76	ini.	573.34	-4418	0.9	0	329	7137	3773	2295	6068	No	1.37	Si
SLU 76	fin.	-637.87	4771	0.9	0	329	7137	3773	2295	6068	No	1.27	Si
SLU 83	ini.	613.17	-4634	0.9	0	329	7137	3773	2295	6068	No	1.31	Si
SLU 83	fin.	-671.23	4859	0.9	0	329	7137	3773	2295	6068	No	1.25	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-2118.68	2938	-0.0016272	0.0002807	0.0035	0.9		2995.37	2995.37		1.41	Si
SLV 15	fin.	1268.37	-5800	-0.0007992	0.0002807	0.0035	0.9		2989.59	2989.59		2.36	Si
SLV 4	ini.	2674.59	-4875	-0.0025099	0.0002807	0.0035	0.9		2989.59	2989.59		1.12	Si
SLV 4	fin.	-1873.42	2198	-0.0013502	0.0002807	0.0035	0.9		2995.37	2995.37		1.6	Si
SLD 2	ini.	1441.4	-2963	-0.0009435	0.0002807	0.0035	0.9		2989.59	2989.59		2.07	Si
SLD 2	fin.	-1154.57	-233	-0.0007078	0.0002807	0.0035	0.9		2995.37	2995.37		2.59	Si
SLV 16	ini.	-1934.91	2627	-0.0014158	0.0002807	0.0035	0.9		2995.37	2995.37		1.55	Si
SLV 16	fin.	1145.57	-5407	-0.0007025	0.0002807	0.0035	0.9		2989.59	2989.59		2.61	Si
SLV 6	ini.	1451.46	-3178	-0.0009522	0.0002807	0.0035	0.9		2989.59	2989.59		2.06	Si
SLV 6	fin.	-1350.76	-965	-0.0008646	0.0002807	0.0035	0.9		2995.37	2995.37		2.22	Si
SLV 3	ini.	2490.82	-4564	-0.0021699	0.0002807	0.0035	0.9		2989.59	2989.59		1.2	Si
SLV 3	fin.	-1750.62	1805	-0.0012254	0.0002807	0.0035	0.9		2995.37	2995.37		1.71	Si
SLV 1	ini.	2686.06	-5018	-0.002533	0.0002807	0.0035	0.9		2989.59	2989.59		1.11	Si
SLV 1	fin.	-2007.2	1606	-0.001496	0.0002807	0.0035	0.9		2995.37	2995.37		1.49	Si
SLV 2	ini.	2869.83	-5330	-0.0029384	0.0002807	0.0035	0.9		2989.59	2989.59		1.04	Si
SLV 2	fin.	-2130	1999	-0.0016411	0.0002807	0.0035	0.9		2995.37	2995.37		1.41	Si
SLV 13	ini.	-1923.44	2484	-0.0014034	0.0002807	0.0035	0.9		2995.37	2995.37		1.56	Si
SLV 13	fin.	1011.79	-5999	-0.0006021	0.0002807	0.0035	0.9		2989.59	2989.59		2.95	Si
SLV 14	ini.	-1739.67	2172	-0.0012147	0.0002807	0.0035	0.9		2995.37	2995.37		1.72	Si
SLV 14	fin.	888.99	-5606	-0.0005145	0.0002807	0.0035	0.9		2989.59	2989.59		3.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1934.91	4691	0.9	0	493	7137	5660	2295	7630		1.63	Si
SLV 16	fin.	1145.57	9517	0.9	0	493	7137	5660	2295	7630		0.8	No
SLV 1	ini.	2686.06	-10690	0.9	0	493	7137	5660	2295	7630		0.71	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	fin.	-2007.2	-2670	0.9	0	493	7137	5660	2295	7630		2.86	Si
SLD 13	ini.	-607.2	273	0.9	0	493	7137	5660	2295	7630		27.91	Si
SLD 13	fin.	187.14	6559	0.9	0	493	7137	5660	2295	7630		1.16	Si
SLV 2	ini.	2869.83	-11272	0.9	0	493	7137	5660	2295	7630		0.68	No
SLV 2	fin.	-2130	-3315	0.9	0	493	7137	5660	2295	7630		2.3	Si
SLV 4	ini.	2674.59	-10666	0.9	0	493	7137	5660	2295	7630		0.72	No
SLV 4	fin.	-1873.42	-3925	0.9	0	493	7137	5660	2295	7630		1.94	Si
SLV 9	ini.	-49.5	-1518	0.9	0	493	7137	5660	2295	7630		5.03	Si
SLV 9	fin.	-366.14	6664	0.9	0	493	7137	5660	2295	7630		1.14	Si
SLV 14	ini.	-1739.67	4085	0.9	0	493	7137	5660	2295	7630		1.87	Si
SLV 14	fin.	888.99	10127	0.9	0	493	7137	5660	2295	7630		0.75	No
SLV 13	ini.	-1923.44	4667	0.9	0	493	7137	5660	2295	7630		1.63	Si
SLV 13	fin.	1011.79	10773	0.9	0	493	7137	5660	2295	7630		0.71	No
SLV 15	ini.	-2118.68	5272	0.9	0	493	7137	5660	2295	7630		1.45	Si
SLV 15	fin.	1268.37	10163	0.9	0	493	7137	5660	2295	7630		0.75	No
SLV 3	ini.	2490.82	-10084	0.9	0	493	7137	5660	2295	7630		0.76	No
SLV 3	fin.	-1750.62	-3280	0.9	0	493	7137	5660	2295	7630		2.33	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.042	SLV 2	Si
V_SLV	0.677	SLV 2	No
PF_SLU	4.401	SLU 84	Si
V_SLU	1.23	SLU 77	Si

Trave di accoppiamento 40

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	3.49	4.82	1.33	-18.518	0.706	3.49	4.82	1.33	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	550.13	39	-0.0001286	0.0002246	0.0035	1.33		6664.01	6664.01	No	12.11	Si
SLU 83	fin.	-468.25	39	-0.0001085	0.0002246	0.0035	1.33		6672.28	6672.28	No	14.25	Si
SLU 84	ini.	551.99	41	-0.0001291	0.0002246	0.0035	1.33		6664.01	6664.01	No	12.07	Si
SLU 84	fin.	-469.46	41	-0.0001088	0.0002246	0.0035	1.33		6672.28	6672.28	No	14.21	Si
SLU 82	ini.	542.48	44	-0.0001267	0.0002246	0.0035	1.33		6664.01	6664.01	No	12.28	Si
SLU 82	fin.	-465.86	44	-0.0001079	0.0002246	0.0035	1.33		6672.28	6672.28	No	14.32	Si
SLU 78	ini.	540.35	49	-0.0001262	0.0002246	0.0035	1.33		6664.01	6664.01	No	12.33	Si
SLU 78	fin.	-464.56	49	-0.0001076	0.0002246	0.0035	1.33		6672.28	6672.28	No	14.36	Si
SLU 79	ini.	533.69	51	-0.0001246	0.0002246	0.0035	1.33		6664.01	6664.01	No	12.49	Si
SLU 79	fin.	-461.74	51	-0.000107	0.0002246	0.0035	1.33		6672.28	6672.28	No	14.45	Si
SLU 77	ini.	538.48	47	-0.0001257	0.0002246	0.0035	1.33		6664.01	6664.01	No	12.38	Si
SLU 77	fin.	-463.34	47	-0.0001073	0.0002246	0.0035	1.33		6672.28	6672.28	No	14.4	Si
SLU 81	ini.	540.62	41	-0.0001263	0.0002246	0.0035	1.33		6664.01	6664.01	No	12.33	Si
SLU 81	fin.	-464.65	41	-0.0001077	0.0002246	0.0035	1.33		6672.28	6672.28	No	14.36	Si
SLU 80	ini.	535.56	53	-0.000125	0.0002246	0.0035	1.33		6664.01	6664.01	No	12.44	Si
SLU 80	fin.	-462.95	53	-0.0001072	0.0002246	0.0035	1.33		6672.28	6672.28	No	14.41	Si
SLU 75	ini.	530.84	52	-0.0001239	0.0002246	0.0035	1.33		6664.01	6664.01	No	12.55	Si
SLU 75	fin.	-460.96	52	-0.0001068	0.0002246	0.0035	1.33		6672.28	6672.28	No	14.47	Si
SLU 74	ini.	528.97	49	-0.0001234	0.0002246	0.0035	1.33		6664.01	6664.01	No	12.6	Si
SLU 74	fin.	-459.75	49	-0.0001065	0.0002246	0.0035	1.33		6672.28	6672.28	No	14.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	533.69	-1031	1.33	0	308	6344	3824	3392	6652	No	6.45	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-461.74	-1448	1.33	0	308	6344	3824	3392	6652	No	4.6	Si
SLU 77	ini.	538.48	-1039	1.33	0	308	6344	3824	3392	6652	No	6.4	Si
SLU 77	fin.	-463.34	-1456	1.33	0	308	6344	3824	3392	6652	No	4.57	Si
SLU 78	ini.	540.35	-1043	1.33	0	308	6344	3824	3392	6652	No	6.38	Si
SLU 78	fin.	-464.56	-1459	1.33	0	308	6344	3824	3392	6652	No	4.56	Si
SLU 80	ini.	535.56	-1035	1.33	0	308	6344	3824	3392	6652	No	6.43	Si
SLU 80	fin.	-462.95	-1451	1.33	0	308	6344	3824	3392	6652	No	4.58	Si
SLU 75	ini.	530.84	-1026	1.33	0	308	6344	3824	3392	6652	No	6.48	Si
SLU 75	fin.	-460.96	-1443	1.33	0	308	6344	3824	3392	6652	No	4.61	Si
SLU 81	ini.	540.62	-1043	1.33	0	308	6344	3824	3392	6652	No	6.38	Si
SLU 81	fin.	-464.65	-1460	1.33	0	308	6344	3824	3392	6652	No	4.56	Si
SLU 83	ini.	550.13	-1059	1.33	0	308	6344	3824	3392	6652	No	6.28	Si
SLU 83	fin.	-468.25	-1476	1.33	0	308	6344	3824	3392	6652	No	4.51	Si
SLU 82	ini.	542.48	-1047	1.33	0	308	6344	3824	3392	6652	No	6.35	Si
SLU 82	fin.	-465.86	-1464	1.33	0	308	6344	3824	3392	6652	No	4.54	Si
SLU 74	ini.	528.97	-1022	1.33	0	308	6344	3824	3392	6652	No	6.51	Si
SLU 74	fin.	-459.75	-1439	1.33	0	308	6344	3824	3392	6652	No	4.62	Si
SLU 84	ini.	551.99	-1063	1.33	0	308	6344	3824	3392	6652	No	6.26	Si
SLU 84	fin.	-469.46	-1480	1.33	0	308	6344	3824	3392	6652	No	4.49	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	862.25	551	-0.0002034	0.0003369	0.0035	1.33		6848.53	6848.53		7.94	Si
SLV 11	fin.	-9.31	715	-0.0000021	0.0003369	0.0035	1.33		6857.15	6857.15		736.15	Si
SLV 12	ini.	869.55	559	-0.0002052	0.0003369	0.0035	1.33		6848.53	6848.53		7.88	Si
SLV 12	fin.	-12.77	723	-0.0000029	0.0003369	0.0035	1.33		6857.15	6857.15		537.04	Si
SLV 5	ini.	-159.05	-428	-0.0000358	0.0003369	0.0035	1.33		6857.15	6857.15		43.11	Si
SLV 5	fin.	-654.02	-592	-0.0001519	0.0003369	0.0035	1.33		6857.15	6857.15		10.48	Si
SLD 7	ini.	660.15	366	-0.0001536	0.0003369	0.0035	1.33		6848.53	6848.53		10.37	Si
SLD 7	fin.	-253.23	269	-0.0000574	0.0003369	0.0035	1.33		6857.15	6857.15		27.08	Si
SLD 8	ini.	663.34	369	-0.0001544	0.0003369	0.0035	1.33		6848.53	6848.53		10.32	Si
SLD 8	fin.	-254.74	273	-0.0000577	0.0003369	0.0035	1.33		6857.15	6857.15		26.92	Si
SLV 7	ini.	1065.12	738	-0.0002549	0.0003369	0.0035	1.33		6848.53	6848.53		6.43	Si
SLV 7	fin.	-143.73	547	-0.0000324	0.0003369	0.0035	1.33		6857.15	6857.15		47.71	Si
SLV 3	ini.	871.32	546	-0.0002056	0.0003369	0.0035	1.33		6848.53	6848.53		7.86	Si
SLV 3	fin.	-478.19	-50	-0.0001098	0.0003369	0.0035	1.33		6857.15	6857.15		14.34	Si
SLV 6	ini.	-151.75	-419	-0.0000342	0.0003369	0.0035	1.33		6857.15	6857.15		45.19	Si
SLV 6	fin.	-657.47	-583	-0.0001527	0.0003369	0.0035	1.33		6857.15	6857.15		10.43	Si
SLV 4	ini.	882.68	559	-0.0002085	0.0003369	0.0035	1.33		6848.53	6848.53		7.76	Si
SLV 4	fin.	-483.57	-37	-0.0001111	0.0003369	0.0035	1.33		6857.15	6857.15		14.18	Si
SLV 8	ini.	1072.43	747	-0.0002568	0.0003369	0.0035	1.33		6848.53	6848.53		6.39	Si
SLV 8	fin.	-147.19	555	-0.0000331	0.0003369	0.0035	1.33		6857.15	6857.15		46.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	577.52	-1307	1.33	0	463	6344	5736	3392	6806		5.21	Si
SLD 4	fin.	-399.23	-1193	1.33	0	463	6344	5736	3392	6806		5.71	Si
SLD 3	ini.	572.64	-1298	1.33	0	463	6344	5736	3392	6806		5.24	Si
SLD 3	fin.	-396.92	-1184	1.33	0	463	6344	5736	3392	6806		5.75	Si
SLV 2	ini.	515.43	-1847	1.33	0	463	6344	5736	3392	6806		3.69	Si
SLV 2	fin.	-636.65	-1176	1.33	0	463	6344	5736	3392	6806		5.79	Si
SLV 7	ini.	1065.12	-1548	1.33	0	463	6344	5736	3392	6806		4.4	Si
SLV 7	fin.	-143.73	-1509	1.33	0	463	6344	5736	3392	6806		4.51	Si
SLV 12	ini.	869.55	-793	1.33	0	463	6344	5736	3392	6806		8.58	Si
SLV 12	fin.	-12.77	-1357	1.33	0	463	6344	5736	3392	6806		5.02	Si
SLV 11	ini.	862.25	-779	1.33	0	463	6344	5736	3392	6806		8.73	Si
SLV 11	fin.	-9.31	-1343	1.33	0	463	6344	5736	3392	6806		5.07	Si
SLV 3	ini.	871.32	-2109	1.33	0	463	6344	5736	3392	6806		3.23	Si
SLV 3	fin.	-478.19	-1406	1.33	0	463	6344	5736	3392	6806		4.84	Si
SLV 8	ini.	1072.43	-1561	1.33	0	463	6344	5736	3392	6806		4.36	Si
SLV 8	fin.	-147.19	-1522	1.33	0	463	6344	5736	3392	6806		4.47	Si
SLV 4	ini.	882.68	-2130	1.33	0	463	6344	5736	3392	6806		3.19	Si
SLV 4	fin.	-483.57	-1427	1.33	0	463	6344	5736	3392	6806		4.77	Si
SLV 1	ini.	504.06	-1826	1.33	0	463	6344	5736	3392	6806		3.73	Si
SLV 1	fin.	-631.28	-1155	1.33	0	463	6344	5736	3392	6806		5.89	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.386	SLV 8	Si
V_SLV	3.195	SLV 4	Si
PF_SLU	12.073	SLU 84	Si
V_SLU	4.494	SLU 84	Si

Trave di accoppiamento 42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.483	-3.314	3.49	4.82	1.33	-16.333	-3.314	3.49	4.82	1.33	0.85	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	-7.98	-2790	-0.0000018	0.0001872	0.0035	1.33		6470.54	6470.54	No	811.35	Si
SLU 63	fin.	-925	-2790	-0.0002276	0.0001872	0.0035	1.33		6470.54	6470.54	No	7	Si
SLU 62	ini.	-12.55	-2786	-0.0000028	0.0001872	0.0035	1.33		6470.54	6470.54	No	515.74	Si
SLU 62	fin.	-922.59	-2786	-0.0002269	0.0001872	0.0035	1.33		6470.54	6470.54	No	7.01	Si
SLU 83	ini.	-57.57	-3064	-0.0000129	0.0001872	0.0035	1.33		6470.54	6470.54	No	112.4	Si
SLU 83	fin.	-982.54	-3064	-0.0002436	0.0001872	0.0035	1.33		6470.54	6470.54	No	6.59	Si
SLU 78	ini.	-151.27	-3012	-0.0000342	0.0001872	0.0035	1.33		6470.54	6470.54	No	42.77	Si
SLU 78	fin.	-934.21	-3012	-0.0002301	0.0001872	0.0035	1.33		6470.54	6470.54	No	6.93	Si
SLU 82	ini.	-35.39	-3020	-0.0000079	0.0001872	0.0035	1.33		6470.54	6470.54	No	182.83	Si
SLU 82	fin.	-978.45	-3020	-0.0002424	0.0001872	0.0035	1.33		6470.54	6470.54	No	6.61	Si
SLU 75	ini.	-133.67	-2965	-0.0000302	0.0001872	0.0035	1.33		6470.54	6470.54	No	48.41	Si
SLU 75	fin.	-927.72	-2965	-0.0002283	0.0001872	0.0035	1.33		6470.54	6470.54	No	6.97	Si
SLU 74	ini.	-138.24	-2961	-0.0000312	0.0001872	0.0035	1.33		6470.54	6470.54	No	46.81	Si
SLU 74	fin.	-925.32	-2961	-0.0002277	0.0001872	0.0035	1.33		6470.54	6470.54	No	6.99	Si
SLU 77	ini.	-155.84	-3009	-0.0000353	0.0001872	0.0035	1.33		6470.54	6470.54	No	41.52	Si
SLU 77	fin.	-931.81	-3009	-0.0002294	0.0001872	0.0035	1.33		6470.54	6470.54	No	6.94	Si
SLU 81	ini.	-39.96	-3017	-0.000009	0.0001872	0.0035	1.33		6470.54	6470.54	No	161.92	Si
SLU 81	fin.	-976.05	-3017	-0.0002418	0.0001872	0.0035	1.33		6470.54	6470.54	No	6.63	Si
SLU 84	ini.	-52.99	-3068	-0.0000119	0.0001872	0.0035	1.33		6470.54	6470.54	No	122.1	Si
SLU 84	fin.	-984.94	-3068	-0.0002442	0.0001872	0.0035	1.33		6470.54	6470.54	No	6.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-133.67	-546	1.33	0	540	6740	5576	3392	7280	No	13.34	Si
SLU 75	fin.	-927.72	-1324	1.33	0	540	6740	5576	3392	7280	No	5.5	Si
SLU 61	ini.	9.63	-706	1.33	0	540	6740	5576	3392	7280	No	10.31	Si
SLU 61	fin.	-918.5	-1479	1.33	0	540	6740	5576	3392	7280	No	4.92	Si
SLU 84	ini.	-52.99	-708	1.33	0	540	6740	5576	3392	7280	No	10.28	Si
SLU 84	fin.	-984.94	-1486	1.33	0	540	6740	5576	3392	7280	No	4.9	Si
SLU 62	ini.	-12.55	-685	1.33	0	540	6740	5576	3392	7280	No	10.63	Si
SLU 62	fin.	-922.59	-1458	1.33	0	540	6740	5576	3392	7280	No	4.99	Si
SLU 83	ini.	-57.57	-700	1.33	0	540	6740	5576	3392	7280	No	10.4	Si
SLU 83	fin.	-982.54	-1478	1.33	0	540	6740	5576	3392	7280	No	4.93	Si
SLU 81	ini.	-39.96	-713	1.33	0	540	6740	5576	3392	7280	No	10.21	Si
SLU 81	fin.	-976.05	-1491	1.33	0	540	6740	5576	3392	7280	No	4.88	Si
SLU 82	ini.	-35.39	-721	1.33	0	540	6740	5576	3392	7280	No	10.1	Si
SLU 82	fin.	-978.45	-1499	1.33	0	540	6740	5576	3392	7280	No	4.86	Si
SLU 63	ini.	-7.98	-693	1.33	0	540	6740	5576	3392	7280	No	10.51	Si
SLU 63	fin.	-925	-1466	1.33	0	540	6740	5576	3392	7280	No	4.97	Si
SLU 73	ini.	-118.72	-542	1.33	0	540	6740	5576	3392	7280	No	13.42	Si
SLU 73	fin.	-909.89	-1320	1.33	0	540	6740	5576	3392	7280	No	5.51	Si
SLU 60	ini.	5.06	-698	1.33	0	540	6740	5576	3392	7280	No	10.43	Si
SLU 60	fin.	-916.1	-1471	1.33	0	540	6740	5576	3392	7280	No	4.95	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-3169.47	-2594	-0.0009479	0.0002807	0.0035	1.33		6468.36	6468.36		2.04	Si
SLV 11	fin.	1565.78	-2557	-0.0003979	0.0002807	0.0035	1.33		6459.41	6459.41		4.13	Si
SLV 13	ini.	-6691.68	-2858	-0.0033873	0.0002807	0.0035	1.33		6468.36	6468.36		0.97	No
SLV 13	fin.	3832.36	-2810	-0.0012292	0.0002807	0.0035	1.33		6459.41	6459.41		1.69	Si
SLV 4	ini.	6322.18	-1168	-0.0029844	0.0002807	0.0035	1.33		6459.41	6459.41		1.02	Si
SLV 4	fin.	-5041.35	-1216	-0.0018733	0.0002807	0.0035	1.33		6468.36	6468.36		1.28	Si
SLV 16	ini.	-6751.74	-2960	-0.0034525	0.0002807	0.0035	1.33		6468.36	6468.36		0.96	No
SLV 16	fin.	3960.24	-2899	-0.0012878	0.0002807	0.0035	1.33		6459.41	6459.41		1.63	Si
SLV 15	ini.	-7216.29	-3032	-0.0039274	0.0002807	0.0035	1.33		6468.36	6468.36		0.9	No
SLV 15	fin.	4265.52	-2971	-0.0014352	0.0002807	0.0035	1.33		6459.41	6459.41		1.51	Si
SLV 1	ini.	6382.24	-1067	-0.0030512	0.0002807	0.0035	1.33		6459.41	6459.41		1.01	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	fin.	-5169.24	-1127	-0.001959	0.0002807	0.0035	1.33		6468.36	6468.36		1.25	Si
SLV 3	ini.	5857.63	-1240	-0.0025141	0.0002807	0.0035	1.33		6459.41	6459.41		1.1	Si
SLV 3	fin.	-4736.07	-1288	-0.0016855	0.0002807	0.0035	1.33		6468.36	6468.36		1.37	Si
SLD 15	ini.	-3190.71	-2448	-0.0009563	0.0002807	0.0035	1.33		6468.36	6468.36		2.03	Si
SLD 15	fin.	1476.78	-2422	-0.0003719	0.0002807	0.0035	1.33		6459.41	6459.41		4.37	Si
SLV 14	ini.	-6227.13	-2786	-0.0028727	0.0002807	0.0035	1.33		6468.36	6468.36		1.04	Si
SLV 14	fin.	3527.08	-2738	-0.0010957	0.0002807	0.0035	1.33		6459.41	6459.41		1.83	Si
SLV 2	ini.	6846.8	-995	-0.0035627	0.0002807	0.0035	1.33		6459.41	6459.41		0.94	No
SLV 2	fin.	-5474.52	-1055	-0.0021831	0.0002807	0.0035	1.33		6468.36	6468.36		1.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	6382.24	-12803	1.33	0	810	6740	8363	3392	7550		0.59	No
SLV 1	fin.	-5169.24	-13947	1.33	0	810	6740	8363	3392	7550		0.54	No
SLV 6	ini.	2799.98	-4666	1.33	0	810	6740	8363	3392	7550		1.62	Si
SLV 6	fin.	-2774.77	-6943	1.33	0	810	6740	8363	3392	7550		1.09	Si
SLV 14	ini.	-6227.13	12240	1.33	0	810	6740	8363	3392	7550		0.62	No
SLV 14	fin.	3527.08	11190	1.33	0	810	6740	8363	3392	7550		0.67	No
SLV 4	ini.	6322.18	-13536	1.33	0	810	6740	8363	3392	7550		0.56	No
SLV 4	fin.	-5041.35	-13681	1.33	0	810	6740	8363	3392	7550		0.55	No
SLV 13	ini.	-6691.68	13145	1.33	0	810	6740	8363	3392	7550		0.57	No
SLV 13	fin.	3832.36	12095	1.33	0	810	6740	8363	3392	7550		0.62	No
SLV 15	ini.	-7216.29	13317	1.33	0	810	6740	8363	3392	7550		0.57	No
SLV 15	fin.	4265.52	13267	1.33	0	810	6740	8363	3392	7550		0.57	No
SLV 2	ini.	6846.8	-13709	1.33	0	810	6740	8363	3392	7550		0.55	No
SLV 2	fin.	-5474.52	-14853	1.33	0	810	6740	8363	3392	7550		0.51	No
SLV 16	ini.	-6751.74	12412	1.33	0	810	6740	8363	3392	7550		0.61	No
SLV 16	fin.	3960.24	12361	1.33	0	810	6740	8363	3392	7550		0.61	No
SLV 3	ini.	5857.63	-12631	1.33	0	810	6740	8363	3392	7550		0.6	No
SLV 3	fin.	-4736.07	-12775	1.33	0	810	6740	8363	3392	7550		0.59	No
SLD 2	ini.	2821.21	-5975	1.33	0	810	6740	8363	3392	7550		1.26	Si
SLD 2	fin.	-2685.78	-6804	1.33	0	810	6740	8363	3392	7550		1.11	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.896	SLV 15	No
V_SLV	0.508	SLV 2	No
PF_SLU	6.569	SLU 84	Si
V_SLU	4.857	SLU 82	Si

Trave di accoppiamento 45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.526	1.39	2.29	0.9	-16.768	6.526	1.39	2.29	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	1461.11	-3988	-0.0010257	0.0001872	0.0035	0.9		2959	2959	No	2.03	Si
SLU 78	fin.	-470.38	-1407	-0.0002566	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.3	Si
SLU 74	ini.	1467.04	-4002	-0.0010312	0.0001872	0.0035	0.9		2959	2959	No	2.02	Si
SLU 74	fin.	-482.93	-1393	-0.0002644	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.14	Si
SLU 79	ini.	1459.38	-3991	-0.001024	0.0001872	0.0035	0.9		2959	2959	No	2.03	Si
SLU 79	fin.	-474.99	-1405	-0.0002595	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.24	Si
SLU 77	ini.	1474.78	-4033	-0.0010385	0.0001872	0.0035	0.9		2959	2959	No	2.01	Si
SLU 77	fin.	-479.29	-1420	-0.0002622	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.19	Si
SLU 84	ini.	1496.55	-4082	-0.0010591	0.0001872	0.0035	0.9		2959	2959	No	1.98	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-481.43	-1437	-0.0002635	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.16	Si
SLU 82	ini.	1488.81	-4051	-0.0010517	0.0001872	0.0035	0.9		2959	2959	No	1.99	Si
SLU 82	fin.	-485.07	-1410	-0.0002658	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.11	Si
SLU 81	ini.	1502.47	-4095	-0.0010647	0.0001872	0.0035	0.9		2959	2959	No	1.97	Si
SLU 81	fin.	-493.98	-1424	-0.0002714	0.0001872	0.0035	0.9		2964.67	2964.67	No	6	Si
SLU 83	ini.	1510.21	-4126	-0.0010721	0.0001872	0.0035	0.9		2959	2959	No	1.96	Si
SLU 83	fin.	-490.33	-1451	-0.0002691	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.05	Si
SLU 75	ini.	1453.38	-3957	-0.0010184	0.0001872	0.0035	0.9		2959	2959	No	2.04	Si
SLU 75	fin.	-474.03	-1379	-0.0002589	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.25	Si
SLU 80	ini.	1445.72	-3946	-0.0010113	0.0001872	0.0035	0.9		2959	2959	No	2.05	Si
SLU 80	fin.	-466.09	-1392	-0.000254	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	1488.81	-4755	0.9	0	329	7137	3773	2295	6068	No	1.28	Si
SLU 82	fin.	-485.07	-1547	0.9	0	329	7137	3773	2295	6068	No	3.92	Si
SLU 81	ini.	1502.47	-4747	0.9	0	329	7137	3773	2295	6068	No	1.28	Si
SLU 81	fin.	-493.98	-1631	0.9	0	329	7137	3773	2295	6068	No	3.72	Si
SLU 84	ini.	1496.55	-4779	0.9	0	329	7137	3773	2295	6068	No	1.27	Si
SLU 84	fin.	-481.43	-1534	0.9	0	329	7137	3773	2295	6068	No	3.96	Si
SLU 77	ini.	1474.78	-4647	0.9	0	329	7137	3773	2295	6068	No	1.31	Si
SLU 77	fin.	-479.29	-1588	0.9	0	329	7137	3773	2295	6068	No	3.82	Si
SLU 80	ini.	1445.72	-4603	0.9	0	329	7137	3773	2295	6068	No	1.32	Si
SLU 80	fin.	-466.09	-1492	0.9	0	329	7137	3773	2295	6068	No	4.07	Si
SLU 78	ini.	1461.11	-4655	0.9	0	329	7137	3773	2295	6068	No	1.3	Si
SLU 78	fin.	-470.38	-1505	0.9	0	329	7137	3773	2295	6068	No	4.03	Si
SLU 79	ini.	1459.38	-4595	0.9	0	329	7137	3773	2295	6068	No	1.32	Si
SLU 79	fin.	-474.99	-1576	0.9	0	329	7137	3773	2295	6068	No	3.85	Si
SLU 74	ini.	1467.04	-4623	0.9	0	329	7137	3773	2295	6068	No	1.31	Si
SLU 74	fin.	-482.93	-1602	0.9	0	329	7137	3773	2295	6068	No	3.79	Si
SLU 83	ini.	1510.21	-4771	0.9	0	329	7137	3773	2295	6068	No	1.27	Si
SLU 83	fin.	-490.33	-1617	0.9	0	329	7137	3773	2295	6068	No	3.75	Si
SLU 75	ini.	1453.38	-4631	0.9	0	329	7137	3773	2295	6068	No	1.31	Si
SLU 75	fin.	-474.03	-1519	0.9	0	329	7137	3773	2295	6068	No	4	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	1325.85	-2933	-0.0008461	0.0002807	0.0035	0.9		2989.59	2989.59		2.25	Si
SLD 15	fin.	-800.72	43	-0.0004531	0.0002807	0.0035	0.9		2995.37	2995.37		3.74	Si
SLV 9	ini.	1607.79	-3116	-0.0010921	0.0002807	0.0035	0.9		2989.59	2989.59		1.86	Si
SLV 9	fin.	-982.91	-22	-0.0005798	0.0002807	0.0035	0.9		2995.37	2995.37		3.05	Si
SLV 16	ini.	1822.12	-3245	-0.0013005	0.0002807	0.0035	0.9		2989.59	2989.59		1.64	Si
SLV 16	fin.	-1507.79	1521	-0.0009991	0.0002807	0.0035	0.9		2995.37	2995.37		1.99	Si
SLD 16	ini.	1359.35	-2959	-0.0008739	0.0002807	0.0035	0.9		2989.59	2989.59		2.2	Si
SLD 16	fin.	-845.42	125	-0.0004833	0.0002807	0.0035	0.9		2995.37	2995.37		3.54	Si
SLV 14	ini.	2035.8	-3381	-0.001533	0.0002807	0.0035	0.9		2989.59	2989.59		1.47	Si
SLV 14	fin.	-1691.6	1661	-0.0011681	0.0002807	0.0035	0.9		2995.37	2995.37		1.77	Si
SLD 13	ini.	1418.49	-2993	-0.0009238	0.0002807	0.0035	0.9		2989.59	2989.59		2.11	Si
SLD 13	fin.	-880.35	104	-0.0005074	0.0002807	0.0035	0.9		2995.37	2995.37		3.4	Si
SLV 15	ini.	1744.1	-3183	-0.0012222	0.0002807	0.0035	0.9		2989.59	2989.59		1.71	Si
SLV 15	fin.	-1403.68	1330	-0.000909	0.0002807	0.0035	0.9		2995.37	2995.37		2.13	Si
SLV 13	ini.	1957.78	-3319	-0.0014447	0.0002807	0.0035	0.9		2989.59	2989.59		1.53	Si
SLV 13	fin.	-1587.48	1471	-0.0010707	0.0002807	0.0035	0.9		2995.37	2995.37		1.89	Si
SLV 10	ini.	1657.93	-3155	-0.001139	0.0002807	0.0035	0.9		2989.59	2989.59		1.8	Si
SLV 10	fin.	-1049.82	101	-0.0006287	0.0002807	0.0035	0.9		2995.37	2995.37		2.85	Si
SLD 14	ini.	1451.99	-3019	-0.0009527	0.0002807	0.0035	0.9		2989.59	2989.59		2.06	Si
SLD 14	fin.	-925.05	186	-0.0005386	0.0002807	0.0035	0.9		2995.37	2995.37		3.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 10	ini.	1291.75	-4220	0.9	0	493	7137	5660	2295	7630		1.81	Si
SLD 10	fin.	-651.91	-2465	0.9	0	493	7137	5660	2295	7630		3.09	Si
SLV 14	ini.	2035.8	-6721	0.9	0	493	7137	5660	2295	7630		1.14	Si
SLV 14	fin.	-1691.6	-5721	0.9	0	493	7137	5660	2295	7630		1.33	Si
SLV 10	ini.	1657.93	-5608	0.9	0	493	7137	5660	2295	7630		1.36	Si
SLV 10	fin.	-1049.82	-4158	0.9	0	493	7137	5660	2295	7630		1.83	Si
SLD 13	ini.	1418.49	-4587	0.9	0	493	7137	5660	2295	7630		1.66	Si
SLD 13	fin.	-880.35	-2987	0.9	0	493	7137	5660	2295	7630		2.55	Si
SLV 15	ini.	1744.1	-5601	0.9	0	493	7137	5660	2295	7630		1.36	Si
SLV 15	fin.	-1403.68	-4363	0.9	0	493	7137	5660	2295	7630		1.75	Si
SLV 16	ini.	1822.12	-5843	0.9	0	493	7137	5660	2295	7630		1.31	Si
SLV 16	fin.	-1507.79	-4695	0.9	0	493	7137	5660	2295	7630		1.62	Si
SLD 14	ini.	1451.99	-4691	0.9	0	493	7137	5660	2295	7630		1.63	Si
SLD 14	fin.	-925.05	-3130	0.9	0	493	7137	5660	2295	7630		2.44	Si
SLV 13	ini.	1957.78	-6480	0.9	0	493	7137	5660	2295	7630		1.18	Si
SLV 13	fin.	-1587.48	-5389	0.9	0	493	7137	5660	2295	7630		1.42	Si
SLV 9	ini.	1607.79	-5453	0.9	0	493	7137	5660	2295	7630		1.4	Si
SLV 9	fin.	-982.91	-3944	0.9	0	493	7137	5660	2295	7630		1.93	Si
SLD 16	ini.	1359.35	-4311	0.9	0	493	7137	5660	2295	7630		1.77	Si
SLD 16	fin.	-845.42	-2687	0.9	0	493	7137	5660	2295	7630		2.84	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.469	SLV 14	Si
V_SLV	1.135	SLV 14	Si
PF_SLU	1.959	SLU 83	Si
V_SLU	1.27	SLU 84	Si

Trave di accoppiamento 46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.526	4.19	4.82	0.63	-16.768	6.526	4.19	4.82	0.63	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	258.23	176	-0.0002926	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.64	Si
SLU 75	fin.	-1216.16	-3276	-0.0023345	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.2	Si
SLU 82	ini.	263.25	180	-0.0002992	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.53	Si
SLU 82	fin.	-1250.55	-3362	-0.0024732	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.17	Si
SLU 74	ini.	255.58	161	-0.0002891	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.69	Si
SLU 74	fin.	-1218.55	-3290	-0.0023438	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.2	Si
SLU 78	ini.	255.83	165	-0.0002895	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.69	Si
SLU 78	fin.	-1223.1	-3299	-0.0023617	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.19	Si
SLU 77	ini.	253.19	150	-0.000286	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.75	Si
SLU 77	fin.	-1225.48	-3313	-0.0023712	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.19	Si
SLU 79	ini.	250.71	151	-0.0002828	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.8	Si
SLU 79	fin.	-1211.81	-3275	-0.0023175	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.2	Si
SLU 81	ini.	260.61	166	-0.0002957	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.58	Si
SLU 81	fin.	-1252.93	-3377	-0.0024832	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.16	Si
SLU 80	ini.	253.36	166	-0.0002862	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.74	Si
SLU 80	fin.	-1209.42	-3260	-0.0023083	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.21	Si
SLU 83	ini.	258.21	155	-0.0002926	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.64	Si
SLU 83	fin.	-1259.87	-3400	-0.0025125	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.16	Si
SLU 84	ini.	260.85	169	-0.000296	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.58	Si
SLU 84	fin.	-1257.48	-3385	-0.0025024	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	253.19	-136	0.63	0	170	4996	2641	1607	4248	No	31.26	Si
SLU 77	fin.	-1225.48	-5150	0.63	0	170	4996	2641	1607	4248	No	0.82	No
SLU 75	ini.	258.23	-153	0.63	0	170	4996	2641	1607	4248	No	27.69	Si
SLU 75	fin.	-1216.16	-5115	0.63	0	170	4996	2641	1607	4248	No	0.83	No
SLU 79	ini.	250.71	-135	0.63	0	170	4996	2641	1607	4248	No	31.43	Si
SLU 79	fin.	-1211.81	-5094	0.63	0	170	4996	2641	1607	4248	No	0.83	No
SLU 74	ini.	255.58	-149	0.63	0	170	4996	2641	1607	4248	No	28.47	Si
SLU 74	fin.	-1218.55	-5119	0.63	0	170	4996	2641	1607	4248	No	0.83	No
SLU 84	ini.	260.85	-128	0.63	0	170	4996	2641	1607	4248	No	33.15	Si
SLU 84	fin.	-1257.48	-5298	0.63	0	170	4996	2641	1607	4248	No	0.8	No
SLU 83	ini.	258.21	-124	0.63	0	170	4996	2641	1607	4248	No	34.27	Si
SLU 83	fin.	-1259.87	-5301	0.63	0	170	4996	2641	1607	4248	No	0.8	No
SLU 78	ini.	255.83	-140	0.63	0	170	4996	2641	1607	4248	No	30.32	Si
SLU 78	fin.	-1223.1	-5146	0.63	0	170	4996	2641	1607	4248	No	0.83	No
SLU 82	ini.	263.25	-141	0.63	0	170	4996	2641	1607	4248	No	30.03	Si
SLU 82	fin.	-1250.55	-5266	0.63	0	170	4996	2641	1607	4248	No	0.81	No
SLU 80	ini.	253.36	-139	0.63	0	170	4996	2641	1607	4248	No	30.49	Si
SLU 80	fin.	-1209.42	-5090	0.63	0	170	4996	2641	1607	4248	No	0.83	No
SLU 81	ini.	260.61	-137	0.63	0	170	4996	2641	1607	4248	No	30.94	Si
SLU 81	fin.	-1252.93	-5270	0.63	0	170	4996	2641	1607	4248	No	0.81	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	ini.	571.84	1093	-0.0007181	0.0002807	0.0035	0.63		1465.76	1465.76		2.56	Si
SLD 14	fin.	-1121.35	-2859	-0.0018436	0.0002807	0.0035	0.63		1469.89	1469.89		1.31	Si
SLV 14	ini.	1085.1	2361	-0.001751	0.0002807	0.0035	0.63		1465.76	1465.76		1.35	Si
SLV 14	fin.	-1508.24	-3683	-0.0034172	0.0002807	0.0035	0.63		1469.89	1469.89		0.97	No
SLD 13	ini.	541.81	1020	-0.0006711	0.0002807	0.0035	0.63		1465.76	1465.76		2.71	Si
SLD 13	fin.	-1097.31	-2809	-0.0017764	0.0002807	0.0035	0.63		1469.89	1469.89		1.34	Si
SLV 9	ini.	588.49	1082	-0.0007446	0.0002807	0.0035	0.63		1465.76	1465.76		2.49	Si
SLV 9	fin.	-1187.01	-3027	-0.0020429	0.0002807	0.0035	0.63		1469.89	1469.89		1.24	Si
SLV 16	ini.	976.69	2129	-0.0014818	0.0002807	0.0035	0.63		1465.76	1465.76		1.5	Si
SLV 16	fin.	-1390.21	-3413	-0.0028369	0.0002807	0.0035	0.63		1469.89	1469.89		1.06	Si
SLV 10	ini.	633.46	1192	-0.0008178	0.0002807	0.0035	0.63		1465.76	1465.76		2.31	Si
SLV 10	fin.	-1223	-3103	-0.0021628	0.0002807	0.0035	0.63		1469.89	1469.89		1.2	Si
SLV 15	ini.	906.73	1958	-0.0013276	0.0002807	0.0035	0.63		1465.76	1465.76		1.62	Si
SLV 15	fin.	-1334.21	-3296	-0.0025878	0.0002807	0.0035	0.63		1469.89	1469.89		1.1	Si
SLD 15	ini.	494.7	919	-0.0005997	0.0002807	0.0035	0.63		1465.76	1465.76		2.96	Si
SLD 15	fin.	-1045.78	-2691	-0.0016413	0.0002807	0.0035	0.63		1469.89	1469.89		1.41	Si
SLV 13	ini.	1015.14	2190	-0.0015724	0.0002807	0.0035	0.63		1465.76	1465.76		1.44	Si
SLV 13	fin.	-1452.24	-3565	-0.0031403	0.0002807	0.0035	0.63		1469.89	1469.89		1.01	Si
SLD 16	ini.	524.74	993	-0.0006449	0.0002807	0.0035	0.63		1465.76	1465.76		2.79	Si
SLD 16	fin.	-1069.82	-2741	-0.0017029	0.0002807	0.0035	0.63		1469.89	1469.89		1.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	ini.	524.74	-1418	0.63	0	256	4996	3962	1607	5251		3.7	Si
SLD 16	fin.	-1069.82	-4324	0.63	0	256	4996	3962	1607	5251		1.21	Si
SLV 10	ini.	633.46	-1774	0.63	0	256	4996	3962	1607	5251		2.96	Si
SLV 10	fin.	-1223	-4886	0.63	0	256	4996	3962	1607	5251		1.07	Si
SLD 15	ini.	494.7	-1309	0.63	0	256	4996	3962	1607	5251		4.01	Si
SLD 15	fin.	-1045.78	-4243	0.63	0	256	4996	3962	1607	5251		1.24	Si
SLD 13	ini.	541.81	-1473	0.63	0	256	4996	3962	1607	5251		3.56	Si
SLD 13	fin.	-1097.31	-4431	0.63	0	256	4996	3962	1607	5251		1.19	Si
SLV 9	ini.	588.49	-1611	0.63	0	256	4996	3962	1607	5251		3.26	Si
SLV 9	fin.	-1187.01	-4765	0.63	0	256	4996	3962	1607	5251		1.1	Si
SLV 13	ini.	1015.14	-3226	0.63	0	256	4996	3962	1607	5251		1.63	Si
SLV 13	fin.	-1452.24	-5699	0.63	0	256	4996	3962	1607	5251		0.92	No
SLV 15	ini.	906.73	-2848	0.63	0	256	4996	3962	1607	5251		1.84	Si
SLV 15	fin.	-1334.21	-5269	0.63	0	256	4996	3962	1607	5251		1	No
SLD 14	ini.	571.84	-1582	0.63	0	256	4996	3962	1607	5251		3.32	Si
SLD 14	fin.	-1121.35	-4512	0.63	0	256	4996	3962	1607	5251		1.16	Si
SLV 14	ini.	1085.1	-3480	0.63	0	256	4996	3962	1607	5251		1.51	Si
SLV 14	fin.	-1508.24	-5887	0.63	0	256	4996	3962	1607	5251		0.89	No
SLV 16	ini.	976.69	-3102	0.63	0	256	4996	3962	1607	5251		1.69	Si
SLV 16	fin.	-1390.21	-5458	0.63	0	256	4996	3962	1607	5251		0.96	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.975	SLV 14	No
V_SLV	0.892	SLV 14	No
PF_SLU	1.158	SLU 83	Si
V_SLU	0.801	SLU 83	No

Trave di accoppiamento 47

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.526	1.39	2.29	0.9	-11.888	6.526	1.39	2.29	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	1050.65	-4301	-0.0006712	0.0001872	0.0035	0.9		2959	2959	No	2.82	Si
SLU 82	fin.	367.32	-3296	-0.000195	0.0001872	0.0035	0.9		2959	2959	No	8.06	Si
SLU 74	ini.	1015.68	-4204	-0.0006434	0.0001872	0.0035	0.9		2959	2959	No	2.91	Si
SLU 74	fin.	368.5	-3251	-0.0001957	0.0001872	0.0035	0.9		2959	2959	No	8.03	Si
SLU 78	ini.	1026.44	-4244	-0.0006519	0.0001872	0.0035	0.9		2959	2959	No	2.88	Si
SLU 78	fin.	379.51	-3292	-0.0002021	0.0001872	0.0035	0.9		2959	2959	No	7.8	Si
SLU 84	ini.	1057.26	-4345	-0.0006765	0.0001872	0.0035	0.9		2959	2959	No	2.8	Si
SLU 84	fin.	379.15	-3347	-0.0002019	0.0001872	0.0035	0.9		2959	2959	No	7.8	Si
SLU 80	ini.	1012.56	-4197	-0.000641	0.0001872	0.0035	0.9		2959	2959	No	2.92	Si
SLU 80	fin.	379.33	-3266	-0.000202	0.0001872	0.0035	0.9		2959	2959	No	7.8	Si
SLU 77	ini.	1022.3	-4247	-0.0006487	0.0001872	0.0035	0.9		2959	2959	No	2.89	Si
SLU 77	fin.	380.32	-3302	-0.0002026	0.0001872	0.0035	0.9		2959	2959	No	7.78	Si
SLU 76	ini.	1008.7	-4152	-0.0006379	0.0001872	0.0035	0.9		2959	2959	No	2.93	Si
SLU 76	fin.	366.96	-3208	-0.0001948	0.0001872	0.0035	0.9		2959	2959	No	8.06	Si
SLU 83	ini.	1053.13	-4348	-0.0006731	0.0001872	0.0035	0.9		2959	2959	No	2.81	Si
SLU 83	fin.	379.96	-3357	-0.0002024	0.0001872	0.0035	0.9		2959	2959	No	7.79	Si
SLU 75	ini.	1019.82	-4200	-0.0006467	0.0001872	0.0035	0.9		2959	2959	No	2.9	Si
SLU 75	fin.	367.68	-3241	-0.0001952	0.0001872	0.0035	0.9		2959	2959	No	8.05	Si
SLU 81	ini.	1046.51	-4305	-0.0006679	0.0001872	0.0035	0.9		2959	2959	No	2.83	Si
SLU 81	fin.	368.14	-3306	-0.0001954	0.0001872	0.0035	0.9		2959	2959	No	8.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 76	ini.	1008.7	-2804	0.9	0	329	7137	3773	2295	6068	No	2.16	Si
SLU 76	fin.	366.96	710	0.9	0	329	7137	3773	2295	6068	No	8.55	Si
SLU 81	ini.	1046.51	-2843	0.9	0	329	7137	3773	2295	6068	No	2.13	Si
SLU 81	fin.	368.14	623	0.9	0	329	7137	3773	2295	6068	No	9.74	Si
SLU 78	ini.	1026.44	-2822	0.9	0	329	7137	3773	2295	6068	No	2.15	Si
SLU 78	fin.	379.51	709	0.9	0	329	7137	3773	2295	6068	No	8.55	Si
SLU 83	ini.	1053.13	-2858	0.9	0	329	7137	3773	2295	6068	No	2.12	Si
SLU 83	fin.	379.96	656	0.9	0	329	7137	3773	2295	6068	No	9.25	Si
SLU 77	ini.	1022.3	-2761	0.9	0	329	7137	3773	2295	6068	No	2.2	Si
SLU 77	fin.	380.32	664	0.9	0	329	7137	3773	2295	6068	No	9.14	Si
SLU 84	ini.	1057.26	-2918	0.9	0	329	7137	3773	2295	6068	No	2.08	Si
SLU 84	fin.	379.15	702	0.9	0	329	7137	3773	2295	6068	No	8.65	Si
SLU 82	ini.	1050.65	-2903	0.9	0	329	7137	3773	2295	6068	No	2.09	Si
SLU 82	fin.	367.32	668	0.9	0	329	7137	3773	2295	6068	No	9.08	Si
SLU 80	ini.	1012.56	-2779	0.9	0	329	7137	3773	2295	6068	No	2.18	Si
SLU 80	fin.	379.33	713	0.9	0	329	7137	3773	2295	6068	No	8.51	Si
SLU 73	ini.	1002.08	-2789	0.9	0	329	7137	3773	2295	6068	No	2.18	Si
SLU 73	fin.	355.13	676	0.9	0	329	7137	3773	2295	6068	No	8.97	Si
SLU 75	ini.	1019.82	-2806	0.9	0	329	7137	3773	2295	6068	No	2.16	Si
SLU 75	fin.	367.68	676	0.9	0	329	7137	3773	2295	6068	No	8.98	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	3180.57	-6484	-0.0036805	0.0002807	0.0035	0.9		2989.59	2989.59		0.94	No
SLV 16	fin.	-2286.69	1559	-0.0018473	0.0002807	0.0035	0.9		2995.37	2995.37		1.31	Si
SLV 1	ini.	-1812.85	778	-0.0012877	0.0002807	0.0035	0.9		2995.37	2995.37		1.65	Si
SLV 1	fin.	2790.41	-5993	-0.002755	0.0002807	0.0035	0.9		2989.59	2989.59		1.07	Si
SLV 10	ini.	1878.77	-4570	-0.0013594	0.0002807	0.0035	0.9		2989.59	2989.59		1.59	Si
SLV 10	fin.	-907.33	-735	-0.0005261	0.0002807	0.0035	0.9		2995.37	2995.37		3.3	Si
SLV 15	ini.	2995.36	-6220	-0.0032451	0.0002807	0.0035	0.9		2989.59	2989.59		1	No
SLV 15	fin.	-2095.82	1272	-0.0015995	0.0002807	0.0035	0.9		2995.37	2995.37		1.43	Si
SLV 4	ini.	-1855.61	834	-0.0013316	0.0002807	0.0035	0.9		2995.37	2995.37		1.61	Si
SLV 4	fin.	2800.41	-5871	-0.0027774	0.0002807	0.0035	0.9		2989.59	2989.59		1.07	Si
SLV 2	ini.	-1627.63	514	-0.0011078	0.0002807	0.0035	0.9		2995.37	2995.37		1.84	Si
SLV 2	fin.	2599.54	-5706	-0.0023642	0.0002807	0.0035	0.9		2989.59	2989.59		1.15	Si
SLD 14	ini.	1848.69	-4542	-0.0013279	0.0002807	0.0035	0.9		2989.59	2989.59		1.62	Si
SLD 14	fin.	-919.4	-531	-0.0005346	0.0002807	0.0035	0.9		2995.37	2995.37		3.26	Si
SLV 3	ini.	-2040.82	1098	-0.0015345	0.0002807	0.0035	0.9		2995.37	2995.37		1.47	Si
SLV 3	fin.	2991.28	-6157	-0.0032351	0.0002807	0.0035	0.9		2989.59	2989.59		1	No
SLV 14	ini.	3408.55	-6805	-0.0041685	0.0002807	0.0035	0.9		2989.59	2989.59		0.88	No
SLV 14	fin.	-2487.56	1724	-0.0021567	0.0002807	0.0035	0.9		2995.37	2995.37		1.2	Si
SLV 13	ini.	3223.34	-6541	-0.0037754	0.0002807	0.0035	0.9		2989.59	2989.59		0.93	No
SLV 13	fin.	-2296.69	1437	-0.0018614	0.0002807	0.0035	0.9		2995.37	2995.37		1.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-1812.85	6110	0.9	0	493	7137	5660	2295	7630		1.25	Si
SLV 1	fin.	2790.41	8505	0.9	0	493	7137	5660	2295	7630		0.9	No
SLV 10	ini.	1878.77	-7739	0.9	0	493	7137	5660	2295	7630		0.99	No
SLV 10	fin.	-907.33	-4344	0.9	0	493	7137	5660	2295	7630		1.76	Si
SLV 3	ini.	-2040.82	7998	0.9	0	493	7137	5660	2295	7630		0.95	No
SLV 3	fin.	2991.28	9729	0.9	0	493	7137	5660	2295	7630		0.78	No
SLV 4	ini.	-1855.61	7382	0.9	0	493	7137	5660	2295	7630		1.03	Si
SLV 4	fin.	2800.41	9095	0.9	0	493	7137	5660	2295	7630		0.84	No
SLV 16	ini.	3180.57	-9759	0.9	0	493	7137	5660	2295	7630		0.78	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	fin.	-2286.69	-7673	0.9	0	493	7137	5660	2295	7630		0.99	No
SLV 15	ini.	2995.36	-9143	0.9	0	493	7137	5660	2295	7630		0.83	No
SLV 15	fin.	-2095.82	-7039	0.9	0	493	7137	5660	2295	7630		1.08	Si
SLV 9	ini.	1759.73	-7343	0.9	0	493	7137	5660	2295	7630		1.04	Si
SLV 9	fin.	-784.66	-3937	0.9	0	493	7137	5660	2295	7630		1.94	Si
SLV 13	ini.	3223.34	-11031	0.9	0	493	7137	5660	2295	7630		0.69	No
SLV 13	fin.	-2296.69	-8264	0.9	0	493	7137	5660	2295	7630		0.92	No
SLV 14	ini.	3408.55	-11646	0.9	0	493	7137	5660	2295	7630		0.66	No
SLV 14	fin.	-2487.56	-8898	0.9	0	493	7137	5660	2295	7630		0.86	No
SLV 2	ini.	-1627.63	5495	0.9	0	493	7137	5660	2295	7630		1.39	Si
SLV 2	fin.	2599.54	7871	0.9	0	493	7137	5660	2295	7630		0.97	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.877	SLV 14	No
V_SLV	0.655	SLV 14	No
PF_SLU	2.799	SLU 84	Si
V_SLU	2.079	SLU 84	Si

Trave di accoppiamento 48

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.526	4.19	4.82	0.63	-11.888	6.526	4.19	4.82	0.63	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-442.01	-1857	-0.0005532	0.0001872	0.0035	0.63		1459.35	1459.35	No	3.3	Si
SLU 84	fin.	-852.08	-2811	-0.0012956	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.71	Si
SLU 77	ini.	-437.09	-1834	-0.0005457	0.0001872	0.0035	0.63		1459.35	1459.35	No	3.34	Si
SLU 77	fin.	-825.33	-2738	-0.0012387	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.77	Si
SLU 75	ini.	-425.7	-1792	-0.0005283	0.0001872	0.0035	0.63		1459.35	1459.35	No	3.43	Si
SLU 75	fin.	-820.21	-2710	-0.001228	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.78	Si
SLU 78	ini.	-434.42	-1824	-0.0005416	0.0001872	0.0035	0.63		1459.35	1459.35	No	3.36	Si
SLU 78	fin.	-825.95	-2735	-0.00124	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.77	Si
SLU 81	ini.	-435.96	-1835	-0.0005439	0.0001872	0.0035	0.63		1459.35	1459.35	No	3.35	Si
SLU 81	fin.	-845.71	-2788	-0.0012819	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.73	Si
SLU 83	ini.	-444.68	-1867	-0.0005573	0.0001872	0.0035	0.63		1459.35	1459.35	No	3.28	Si
SLU 83	fin.	-851.46	-2813	-0.0012943	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.71	Si
SLU 82	ini.	-433.29	-1825	-0.0005399	0.0001872	0.0035	0.63		1459.35	1459.35	No	3.37	Si
SLU 82	fin.	-846.33	-2786	-0.0012833	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.72	Si
SLU 79	ini.	-434.55	-1818	-0.0005418	0.0001872	0.0035	0.63		1459.35	1459.35	No	3.36	Si
SLU 79	fin.	-814.29	-2702	-0.0012157	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.79	Si
SLU 80	ini.	-431.88	-1808	-0.0005377	0.0001872	0.0035	0.63		1459.35	1459.35	No	3.38	Si
SLU 80	fin.	-814.91	-2700	-0.001217	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.79	Si
SLU 74	ini.	-428.36	-1802	-0.0005324	0.0001872	0.0035	0.63		1459.35	1459.35	No	3.41	Si
SLU 74	fin.	-819.58	-2712	-0.0012267	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-444.68	2358	0.63	0	170	4996	2641	1607	4248	No	1.8	Si
SLU 83	fin.	-851.46	-3801	0.63	0	170	4996	2641	1607	4248	No	1.12	Si
SLU 81	ini.	-435.96	2321	0.63	0	170	4996	2641	1607	4248	No	1.83	Si
SLU 81	fin.	-845.71	-3774	0.63	0	170	4996	2641	1607	4248	No	1.13	Si
SLU 84	ini.	-442.01	2351	0.63	0	170	4996	2641	1607	4248	No	1.81	Si
SLU 84	fin.	-852.08	-3806	0.63	0	170	4996	2641	1607	4248	No	1.12	Si
SLU 74	ini.	-428.36	2268	0.63	0	170	4996	2641	1607	4248	No	1.87	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	fin.	-819.58	-3656	0.63	0	170	4996	2641	1607	4248	No	1.16	Si
SLU 79	ini.	-434.55	2288	0.63	0	170	4996	2641	1607	4248	No	1.86	Si
SLU 79	fin.	-814.29	-3636	0.63	0	170	4996	2641	1607	4248	No	1.17	Si
SLU 82	ini.	-433.29	2314	0.63	0	170	4996	2641	1607	4248	No	1.84	Si
SLU 82	fin.	-846.33	-3779	0.63	0	170	4996	2641	1607	4248	No	1.12	Si
SLU 80	ini.	-431.88	2282	0.63	0	170	4996	2641	1607	4248	No	1.86	Si
SLU 80	fin.	-814.91	-3641	0.63	0	170	4996	2641	1607	4248	No	1.17	Si
SLU 77	ini.	-437.09	2305	0.63	0	170	4996	2641	1607	4248	No	1.84	Si
SLU 77	fin.	-825.33	-3682	0.63	0	170	4996	2641	1607	4248	No	1.15	Si
SLU 78	ini.	-434.42	2298	0.63	0	170	4996	2641	1607	4248	No	1.85	Si
SLU 78	fin.	-825.95	-3687	0.63	0	170	4996	2641	1607	4248	No	1.15	Si
SLU 75	ini.	-425.7	2261	0.63	0	170	4996	2641	1607	4248	No	1.88	Si
SLU 75	fin.	-820.21	-3660	0.63	0	170	4996	2641	1607	4248	No	1.16	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1312.35	2542	-0.0025112	0.0002807	0.0035	0.63		1465.76	1465.76		1.12	Si
SLV 15	fin.	-2092.65	-5411	-0.005767	0.0002807	0.0035	0.63		1469.89	1469.89		0.7	No
SLV 4	ini.	-2037.91	-5288	-0.0055678	0.0002807	0.0035	0.63		1469.89	1469.89		0.72	No
SLV 4	fin.	1165.31	2179	-0.0019838	0.0002807	0.0035	0.63		1465.76	1465.76		1.26	Si
SLV 2	ini.	-1888.55	-4966	-0.0050109	0.0002807	0.0035	0.63		1469.89	1469.89		0.78	No
SLV 2	fin.	994.71	1771	-0.0015237	0.0002807	0.0035	0.63		1465.76	1465.76		1.47	Si
SLV 14	ini.	1594.73	3175	-0.0038356	0.0002807	0.0035	0.63		1465.76	1465.76		0.92	No
SLV 14	fin.	-2390.93	-6114	-0.0068287	0.0002807	0.0035	0.63		1469.89	1469.89		0.61	No
SLV 13	ini.	1461.7	2863	-0.0032067	0.0002807	0.0035	0.63		1465.76	1465.76		1	Si
SLV 13	fin.	-2263.25	-5819	-0.0063791	0.0002807	0.0035	0.63		1469.89	1469.89		0.65	No
SLD 14	ini.	516.95	664	-0.0006331	0.0002807	0.0035	0.63		1465.76	1465.76		2.84	Si
SLD 14	fin.	-1336.58	-3656	-0.0025978	0.0002807	0.0035	0.63		1469.89	1469.89		1.1	Si
SLV 16	ini.	1445.37	2854	-0.0031248	0.0002807	0.0035	0.63		1465.76	1465.76		1.01	Si
SLV 16	fin.	-2220.33	-5705	-0.0062261	0.0002807	0.0035	0.63		1469.89	1469.89		0.66	No
SLV 10	ini.	526.06	645	-0.000647	0.0002807	0.0035	0.63		1465.76	1465.76		2.79	Si
SLV 10	fin.	-1382.18	-3778	-0.0027996	0.0002807	0.0035	0.63		1469.89	1469.89		1.06	Si
SLV 3	ini.	-2170.93	-5600	-0.0060484	0.0002807	0.0035	0.63		1469.89	1469.89		0.68	No
SLV 3	fin.	1292.99	2474	-0.0024333	0.0002807	0.0035	0.63		1465.76	1465.76		1.13	Si
SLV 1	ini.	-2021.57	-5278	-0.0055079	0.0002807	0.0035	0.63		1469.89	1469.89		0.73	No
SLV 1	fin.	1122.39	2065	-0.001855	0.0002807	0.0035	0.63		1465.76	1465.76		1.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1888.55	7243	0.63	0	256	4996	3962	1607	5251		0.72	No
SLV 2	fin.	994.71	2936	0.63	0	256	4996	3962	1607	5251		1.79	Si
SLV 4	ini.	-2037.91	7798	0.63	0	256	4996	3962	1607	5251		0.67	No
SLV 4	fin.	1165.31	3558	0.63	0	256	4996	3962	1607	5251		1.48	Si
SLV 13	ini.	1461.7	-4753	0.63	0	256	4996	3962	1607	5251		1.1	Si
SLV 13	fin.	-2263.25	-8455	0.63	0	256	4996	3962	1607	5251		0.62	No
SLV 10	ini.	526.06	-1426	0.63	0	256	4996	3962	1607	5251		3.68	Si
SLV 10	fin.	-1382.18	-5404	0.63	0	256	4996	3962	1607	5251		0.97	No
SLD 14	ini.	516.95	-1364	0.63	0	256	4996	3962	1607	5251		3.85	Si
SLD 14	fin.	-1336.58	-5208	0.63	0	256	4996	3962	1607	5251		1.01	Si
SLV 1	ini.	-2021.57	7720	0.63	0	256	4996	3962	1607	5251		0.68	No
SLV 1	fin.	1122.39	3383	0.63	0	256	4996	3962	1607	5251		1.55	Si
SLV 3	ini.	-2170.93	8274	0.63	0	256	4996	3962	1607	5251		0.63	No
SLV 3	fin.	1292.99	4004	0.63	0	256	4996	3962	1607	5251		1.31	Si
SLV 14	ini.	1594.73	-5229	0.63	0	256	4996	3962	1607	5251		1	Si
SLV 14	fin.	-2390.93	-8901	0.63	0	256	4996	3962	1607	5251		0.59	No
SLV 16	ini.	1445.37	-4674	0.63	0	256	4996	3962	1607	5251		1.12	Si
SLV 16	fin.	-2220.33	-8280	0.63	0	256	4996	3962	1607	5251		0.63	No
SLV 15	ini.	1312.35	-4198	0.63	0	256	4996	3962	1607	5251		1.25	Si
SLV 15	fin.	-2092.65	-7833	0.63	0	256	4996	3962	1607	5251		0.67	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.615	SLV 14	No
V_SLV	0.59	SLV 14	No
PF_SLU	1.713	SLU 84	Si
V_SLU	1.116	SLU 84	Si

Trave di accoppiamento 49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.526	1.39	2.29	0.9	-7.008	6.526	1.39	2.29	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-272.09	-2054	-0.0001407	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.9	Si
SLU 77	fin.	1471.74	-4368	-0.0010356	0.0001872	0.0035	0.9		2959	2959	No	2.01	Si
SLU 75	ini.	-265.28	-2004	-0.0001369	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.18	Si
SLU 75	fin.	1443.58	-4274	-0.0010093	0.0001872	0.0035	0.9		2959	2959	No	2.05	Si
SLU 78	ini.	-259.67	-2045	-0.0001338	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.42	Si
SLU 78	fin.	1455.04	-4320	-0.00102	0.0001872	0.0035	0.9		2959	2959	No	2.03	Si
SLU 84	ini.	-262.05	-2086	-0.0001352	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.31	Si
SLU 84	fin.	1481.66	-4400	-0.001045	0.0001872	0.0035	0.9		2959	2959	No	2	Si
SLU 81	ini.	-280.09	-2055	-0.0001451	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.58	Si
SLU 81	fin.	1486.9	-4402	-0.0010499	0.0001872	0.0035	0.9		2959	2959	No	1.99	Si
SLU 80	ini.	-259.31	-2021	-0.0001336	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.43	Si
SLU 80	fin.	1442.01	-4279	-0.0010079	0.0001872	0.0035	0.9		2959	2959	No	2.05	Si
SLU 74	ini.	-277.7	-2013	-0.0001438	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.68	Si
SLU 74	fin.	1460.28	-4322	-0.0010249	0.0001872	0.0035	0.9		2959	2959	No	2.03	Si
SLU 82	ini.	-267.67	-2046	-0.0001382	0.0001872	0.0035	0.9		2964.67	2964.67	No	11.08	Si
SLU 82	fin.	1470.2	-4354	-0.0010342	0.0001872	0.0035	0.9		2959	2959	No	2.01	Si
SLU 79	ini.	-271.73	-2031	-0.0001405	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.91	Si
SLU 79	fin.	1458.71	-4327	-0.0010234	0.0001872	0.0035	0.9		2959	2959	No	2.03	Si
SLU 83	ini.	-274.48	-2095	-0.000142	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.8	Si
SLU 83	fin.	1498.35	-4448	-0.0010608	0.0001872	0.0035	0.9		2959	2959	No	1.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-277.7	1264	0.9	0	329	7137	3773	2295	6068	No	4.8	Si
SLU 74	fin.	1460.28	4214	0.9	0	329	7137	3773	2295	6068	No	1.44	Si
SLU 77	ini.	-272.09	1249	0.9	0	329	7137	3773	2295	6068	No	4.86	Si
SLU 77	fin.	1471.74	4244	0.9	0	329	7137	3773	2295	6068	No	1.43	Si
SLU 83	ini.	-274.48	1256	0.9	0	329	7137	3773	2295	6068	No	4.83	Si
SLU 83	fin.	1498.35	4330	0.9	0	329	7137	3773	2295	6068	No	1.4	Si
SLU 79	ini.	-271.73	1245	0.9	0	329	7137	3773	2295	6068	No	4.87	Si
SLU 79	fin.	1458.71	4206	0.9	0	329	7137	3773	2295	6068	No	1.44	Si
SLU 80	ini.	-259.31	1147	0.9	0	329	7137	3773	2295	6068	No	5.29	Si
SLU 80	fin.	1442.01	4209	0.9	0	329	7137	3773	2295	6068	No	1.44	Si
SLU 82	ini.	-267.67	1173	0.9	0	329	7137	3773	2295	6068	No	5.17	Si
SLU 82	fin.	1470.2	4302	0.9	0	329	7137	3773	2295	6068	No	1.41	Si
SLU 75	ini.	-265.28	1166	0.9	0	329	7137	3773	2295	6068	No	5.2	Si
SLU 75	fin.	1443.58	4217	0.9	0	329	7137	3773	2295	6068	No	1.44	Si
SLU 84	ini.	-262.05	1158	0.9	0	329	7137	3773	2295	6068	No	5.24	Si
SLU 84	fin.	1481.66	4333	0.9	0	329	7137	3773	2295	6068	No	1.4	Si
SLU 81	ini.	-280.09	1271	0.9	0	329	7137	3773	2295	6068	No	4.77	Si
SLU 81	fin.	1486.9	4299	0.9	0	329	7137	3773	2295	6068	No	1.41	Si
SLU 78	ini.	-259.67	1151	0.9	0	329	7137	3773	2295	6068	No	5.27	Si
SLU 78	fin.	1455.04	4247	0.9	0	329	7137	3773	2295	6068	No	1.43	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	2018.46	-5642	-0.001513	0.0002807	0.0035	0.9		2989.59	2989.59		1.48	Si
SLV 13	fin.	-688.52	-1703	-0.0003798	0.0002807	0.0035	0.9		2995.37	2995.37		4.35	Si
SLD 3	ini.	-1259.39	659	-0.0007901	0.0002807	0.0035	0.9		2995.37	2995.37		2.38	Si
SLD 3	fin.	1812.72	-3584	-0.0012909	0.0002807	0.0035	0.9		2989.59	2989.59		1.65	Si
SLV 8	ini.	-1247.48	916	-0.0007806	0.0002807	0.0035	0.9		2995.37	2995.37		2.4	Si
SLV 8	fin.	1920.11	-3612	-0.0014036	0.0002807	0.0035	0.9		2989.59	2989.59		1.56	Si
SLV 1	ini.	-2396.26	2659	-0.0020091	0.0002807	0.0035	0.9		2995.37	2995.37		1.25	Si
SLV 1	fin.	2602.82	-4211	-0.0023704	0.0002807	0.0035	0.9		2989.59	2989.59		1.15	Si
SLV 4	ini.	-2464.26	2994	-0.0021179	0.0002807	0.0035	0.9		2995.37	2995.37		1.22	Si
SLV 4	fin.	2728.44	-4255	-0.0026207	0.0002807	0.0035	0.9		2989.59	2989.59		1.1	Si
SLV 14	ini.	2203.58	-5967	-0.0017399	0.0002807	0.0035	0.9		2989.59	2989.59		1.36	Si
SLV 14	fin.	-835.01	-1567	-0.0004763	0.0002807	0.0035	0.9		2995.37	2995.37		3.59	Si
SLV 7	ini.	-1366.46	1126	-0.0008777	0.0002807	0.0035	0.9		2995.37	2995.37		2.19	Si
SLV 7	fin.	2014.26	-3700	-0.0015082	0.0002807	0.0035	0.9		2989.59	2989.59		1.48	Si
SLV 3	ini.	-2649.38	3319	-0.0024504	0.0002807	0.0035	0.9		2995.37	2995.37		1.13	Si
SLV 3	fin.	2874.93	-4391	-0.0029506	0.0002807	0.0035	0.9		2989.59	2989.59		1.04	Si
SLV 2	ini.	-2211.14	2334	-0.0017445	0.0002807	0.0035	0.9		2995.37	2995.37		1.35	Si
SLV 2	fin.	2456.33	-4074	-0.0021122	0.0002807	0.0035	0.9		2989.59	2989.59		1.22	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	1950.46	-5308	-0.0014367	0.0002807	0.0035	0.9		2989.59	2989.59		1.53	Si
SLV 16	fin.	-562.9	-1747	-0.0003021	0.0002807	0.0035	0.9		2995.37	2995.37		5.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	2203.58	-6727	0.9	0	493	7137	5660	2295	7630		1.13	Si
SLV 14	fin.	-835.01	-3649	0.9	0	493	7137	5660	2295	7630		2.09	Si
SLV 13	ini.	2018.46	-6171	0.9	0	493	7137	5660	2295	7630		1.24	Si
SLV 13	fin.	-688.52	-3134	0.9	0	493	7137	5660	2295	7630		2.43	Si
SLV 3	ini.	-2649.38	8703	0.9	0	493	7137	5660	2295	7630		0.88	No
SLV 3	fin.	2874.93	9515	0.9	0	493	7137	5660	2295	7630		0.8	No
SLD 3	ini.	-1259.39	4285	0.9	0	493	7137	5660	2295	7630		1.78	Si
SLD 3	fin.	1812.72	5745	0.9	0	493	7137	5660	2295	7630		1.33	Si
SLV 7	ini.	-1366.46	5638	0.9	0	493	7137	5660	2295	7630		1.35	Si
SLV 7	fin.	2014.26	6576	0.9	0	493	7137	5660	2295	7630		1.16	Si
SLV 2	ini.	-2211.14	6670	0.9	0	493	7137	5660	2295	7630		1.14	Si
SLV 2	fin.	2456.33	7958	0.9	0	493	7137	5660	2295	7630		0.96	No
SLD 4	ini.	-1179.91	4047	0.9	0	493	7137	5660	2295	7630		1.89	Si
SLD 4	fin.	1749.83	5524	0.9	0	493	7137	5660	2295	7630		1.38	Si
SLV 4	ini.	-2464.26	8147	0.9	0	493	7137	5660	2295	7630		0.94	No
SLV 4	fin.	2728.44	9000	0.9	0	493	7137	5660	2295	7630		0.85	No
SLV 1	ini.	-2396.26	7225	0.9	0	493	7137	5660	2295	7630		1.06	Si
SLV 1	fin.	2602.82	8473	0.9	0	493	7137	5660	2295	7630		0.9	No
SLV 8	ini.	-1247.48	5281	0.9	0	493	7137	5660	2295	7630		1.44	Si
SLV 8	fin.	1920.11	6245	0.9	0	493	7137	5660	2295	7630		1.22	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.04	SLV 3	Si
V_SLV	0.802	SLV 3	No
PF_SLU	1.975	SLU 83	Si
V_SLU	1.4	SLU 84	Si

Trave di accoppiamento 50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.526	4.19	4.82	0.63	-7.008	6.526	4.19	4.82	0.63	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1032.22	-3079	-0.0017307	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.41	Si
SLU 75	fin.	-75.91	-806	-0.0000778	0.0001872	0.0035	0.63		1459.35	1459.35	No	19.23	Si
SLU 83	ini.	-1067.23	-3190	-0.0018299	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.37	Si
SLU 83	fin.	-88.55	-863	-0.0000913	0.0001872	0.0035	0.63		1459.35	1459.35	No	16.48	Si
SLU 79	ini.	-1033.8	-3093	-0.0017351	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.41	Si
SLU 79	fin.	-80.1	-826	-0.0000823	0.0001872	0.0035	0.63		1459.35	1459.35	No	18.22	Si
SLU 74	ini.	-1035.64	-3096	-0.0017402	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.41	Si
SLU 74	fin.	-77.23	-817	-0.0000792	0.0001872	0.0035	0.63		1459.35	1459.35	No	18.9	Si
SLU 82	ini.	-1056.17	-3145	-0.0017979	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.38	Si
SLU 82	fin.	-81.3	-827	-0.0000836	0.0001872	0.0035	0.63		1459.35	1459.35	No	17.95	Si
SLU 80	ini.	-1030.38	-3077	-0.0017257	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.42	Si
SLU 80	fin.	-78.78	-814	-0.0000809	0.0001872	0.0035	0.63		1459.35	1459.35	No	18.52	Si
SLU 84	ini.	-1063.81	-3174	-0.0018199	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.37	Si
SLU 84	fin.	-87.22	-851	-0.0000899	0.0001872	0.0035	0.63		1459.35	1459.35	No	16.73	Si
SLU 77	ini.	-1043.28	-3125	-0.0017614	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.4	Si
SLU 77	fin.	-83.16	-842	-0.0000855	0.0001872	0.0035	0.63		1459.35	1459.35	No	17.55	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-1039.86	-3108	-0.0017518	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.4	Si
SLU 78	fin.	-81.83	-830	-0.0000841	0.0001872	0.0035	0.63		1459.35	1459.35	No	17.83	Si
SLU 81	ini.	-1059.6	-3161	-0.0018077	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.38	Si
SLU 81	fin.	-82.62	-839	-0.000085	0.0001872	0.0035	0.63		1459.35	1459.35	No	17.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-1039.86	4444	0.63	0	170	4996	2641	1607	4248	No	0.96	No
SLU 78	fin.	-81.83	-986	0.63	0	170	4996	2641	1607	4248	No	4.31	Si
SLU 80	ini.	-1030.38	4404	0.63	0	170	4996	2641	1607	4248	No	0.96	No
SLU 80	fin.	-78.78	-969	0.63	0	170	4996	2641	1607	4248	No	4.38	Si
SLU 79	ini.	-1033.8	4411	0.63	0	170	4996	2641	1607	4248	No	0.96	No
SLU 79	fin.	-80.1	-968	0.63	0	170	4996	2641	1607	4248	No	4.39	Si
SLU 74	ini.	-1035.64	4418	0.63	0	170	4996	2641	1607	4248	No	0.96	No
SLU 74	fin.	-77.23	-959	0.63	0	170	4996	2641	1607	4248	No	4.43	Si
SLU 83	ini.	-1067.23	4564	0.63	0	170	4996	2641	1607	4248	No	0.93	No
SLU 83	fin.	-88.55	-1031	0.63	0	170	4996	2641	1607	4248	No	4.12	Si
SLU 77	ini.	-1043.28	4451	0.63	0	170	4996	2641	1607	4248	No	0.95	No
SLU 77	fin.	-83.16	-986	0.63	0	170	4996	2641	1607	4248	No	4.31	Si
SLU 75	ini.	-1032.22	4411	0.63	0	170	4996	2641	1607	4248	No	0.96	No
SLU 75	fin.	-75.91	-960	0.63	0	170	4996	2641	1607	4248	No	4.42	Si
SLU 81	ini.	-1059.6	4530	0.63	0	170	4996	2641	1607	4248	No	0.94	No
SLU 81	fin.	-82.62	-1004	0.63	0	170	4996	2641	1607	4248	No	4.23	Si
SLU 82	ini.	-1056.17	4523	0.63	0	170	4996	2641	1607	4248	No	0.94	No
SLU 82	fin.	-81.3	-1005	0.63	0	170	4996	2641	1607	4248	No	4.23	Si
SLU 84	ini.	-1063.81	4556	0.63	0	170	4996	2641	1607	4248	No	0.93	No
SLU 84	fin.	-87.22	-1031	0.63	0	170	4996	2641	1607	4248	No	4.12	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	679.17	646	-0.000895	0.0002807	0.0035	0.63		1465.76	1465.76		2.16	Si
SLV 14	fin.	-1814.34	-5147	-0.0047247	0.0002807	0.0035	0.63		1469.89	1469.89		0.81	No
SLD 3	ini.	-1312.27	-3313	-0.0024969	0.0002807	0.0035	0.63		1469.89	1469.89		1.12	Si
SLD 3	fin.	733.93	1490	-0.0009913	0.0002807	0.0035	0.63		1465.76	1465.76		2	Si
SLV 2	ini.	-1873.14	-4431	-0.0049521	0.0002807	0.0035	0.63		1469.89	1469.89		0.78	No
SLV 2	fin.	1465.12	3350	-0.0032237	0.0002807	0.0035	0.63		1465.76	1465.76		1	Si
SLV 1	ini.	-1987.72	-4665	-0.0053831	0.0002807	0.0035	0.63		1469.89	1469.89		0.74	No
SLV 1	fin.	1604.17	3704	-0.0038773	0.0002807	0.0035	0.63		1465.76	1465.76		0.91	No
SLV 16	ini.	555.51	409	-0.0006924	0.0002807	0.0035	0.63		1465.76	1465.76		2.64	Si
SLV 16	fin.	-1661.9	-4697	-0.0041075	0.0002807	0.0035	0.63		1469.89	1469.89		0.88	No
SLV 13	ini.	564.59	412	-0.0007066	0.0002807	0.0035	0.63		1465.76	1465.76		2.6	Si
SLV 13	fin.	-1675.29	-4793	-0.0041637	0.0002807	0.0035	0.63		1469.89	1469.89		0.88	No
SLV 15	ini.	440.93	175	-0.0005214	0.0002807	0.0035	0.63		1465.76	1465.76		3.32	Si
SLV 15	fin.	-1522.85	-4344	-0.0034874	0.0002807	0.0035	0.63		1469.89	1469.89		0.97	No
SLV 3	ini.	-2111.38	-4901	-0.0058346	0.0002807	0.0035	0.63		1469.89	1469.89		0.7	No
SLV 3	fin.	1756.61	4153	-0.0045147	0.0002807	0.0035	0.63		1465.76	1465.76		0.83	No
SLV 7	ini.	-1341.87	-3358	-0.0026204	0.0002807	0.0035	0.63		1469.89	1469.89		1.1	Si
SLV 7	fin.	761.8	1640	-0.001042	0.0002807	0.0035	0.63		1465.76	1465.76		1.92	Si
SLV 4	ini.	-1996.8	-4667	-0.0054166	0.0002807	0.0035	0.63		1469.89	1469.89		0.74	No
SLV 4	fin.	1617.56	3800	-0.0039359	0.0002807	0.0035	0.63		1465.76	1465.76		0.91	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	440.93	-1089	0.63	0	256	4996	3962	1607	5251		4.82	Si
SLV 15	fin.	-1522.85	-5847	0.63	0	256	4996	3962	1607	5251		0.9	No
SLV 7	ini.	-1341.87	5320	0.63	0	256	4996	3962	1607	5251		0.99	No
SLV 7	fin.	761.8	2156	0.63	0	256	4996	3962	1607	5251		2.44	Si
SLV 3	ini.	-2111.38	8042	0.63	0	256	4996	3962	1607	5251		0.65	No
SLV 3	fin.	1756.61	5709	0.63	0	256	4996	3962	1607	5251		0.92	No
SLV 4	ini.	-1996.8	7632	0.63	0	256	4996	3962	1607	5251		0.69	No
SLV 4	fin.	1617.56	5223	0.63	0	256	4996	3962	1607	5251		1.01	Si
SLV 16	ini.	555.51	-1499	0.63	0	256	4996	3962	1607	5251		3.5	Si
SLV 16	fin.	-1661.9	-6333	0.63	0	256	4996	3962	1607	5251		0.83	No
SLV 2	ini.	-1873.14	7163	0.63	0	256	4996	3962	1607	5251		0.73	No
SLV 2	fin.	1465.12	4727	0.63	0	256	4996	3962	1607	5251		1.11	Si
SLV 14	ini.	679.17	-1968	0.63	0	256	4996	3962	1607	5251		2.67	Si
SLV 14	fin.	-1814.34	-6828	0.63	0	256	4996	3962	1607	5251		0.77	No
SLD 3	ini.	-1312.27	5176	0.63	0	256	4996	3962	1607	5251		1.01	Si
SLD 3	fin.	733.93	2118	0.63	0	256	4996	3962	1607	5251		2.48	Si
SLV 1	ini.	-1987.72	7574	0.63	0	256	4996	3962	1607	5251		0.69	No
SLV 1	fin.	1604.17	5213	0.63	0	256	4996	3962	1607	5251		1.01	Si
SLV 13	ini.	564.59	-1558	0.63	0	256	4996	3962	1607	5251		3.37	Si
SLV 13	fin.	-1675.29	-6342	0.63	0	256	4996	3962	1607	5251		0.83	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.696	SLV 3	No
V_SLV	0.653	SLV 3	No
PF_SLU	1.367	SLU 83	Si
V_SLU	0.931	SLU 83	No

Trave di accoppiamento 51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.643	1.006	3.49	4.82	1.33	-19.443	1.006	3.49	4.82	1.33	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	-355.49	-5005	-0.0000816	0.0002246	0.0035	1.33		6616.69	6616.69	No	18.61	Si
SLU 48	fin.	104.43	-4682	-0.0000235	0.0002246	0.0035	1.33		6608.39	6608.39	No	63.28	Si
SLU 72	ini.	-333.09	-5503	-0.0000763	0.0002246	0.0035	1.33		6616.69	6616.69	No	19.86	Si
SLU 72	fin.	63.28	-5213	-0.0000142	0.0002246	0.0035	1.33		6608.39	6608.39	No	104.43	Si
SLU 50	ini.	-367.83	-4952	-0.0000845	0.0002246	0.0035	1.33		6616.69	6616.69	No	17.99	Si
SLU 50	fin.	117.76	-4615	-0.0000266	0.0002246	0.0035	1.33		6608.39	6608.39	No	56.12	Si
SLU 51	ini.	-368.66	-4955	-0.0000847	0.0002246	0.0035	1.33		6616.69	6616.69	No	17.95	Si
SLU 51	fin.	117.83	-4617	-0.0000266	0.0002246	0.0035	1.33		6608.39	6608.39	No	56.08	Si
SLU 45	ini.	-348.2	-4915	-0.0000799	0.0002246	0.0035	1.33		6616.69	6616.69	No	19	Si
SLU 45	fin.	99.54	-4600	-0.0000224	0.0002246	0.0035	1.33		6608.39	6608.39	No	66.39	Si
SLU 49	ini.	-356.31	-5008	-0.0000818	0.0002246	0.0035	1.33		6616.69	6616.69	No	18.57	Si
SLU 49	fin.	104.5	-4685	-0.0000235	0.0002246	0.0035	1.33		6608.39	6608.39	No	63.24	Si
SLU 43	ini.	-353.26	-4771	-0.0000811	0.0002246	0.0035	1.33		6616.69	6616.69	No	18.73	Si
SLU 43	fin.	107.97	-4450	-0.0000243	0.0002246	0.0035	1.33		6608.39	6608.39	No	61.21	Si
SLU 44	ini.	-354.64	-4776	-0.0000814	0.0002246	0.0035	1.33		6616.69	6616.69	No	18.66	Si
SLU 44	fin.	108.09	-4454	-0.0000244	0.0002246	0.0035	1.33		6608.39	6608.39	No	61.14	Si
SLU 47	ini.	-361.92	-4867	-0.0000831	0.0002246	0.0035	1.33		6616.69	6616.69	No	18.28	Si
SLU 47	fin.	112.99	-4536	-0.0000255	0.0002246	0.0035	1.33		6608.39	6608.39	No	58.49	Si
SLU 46	ini.	-349.03	-4918	-0.0000801	0.0002246	0.0035	1.33		6616.69	6616.69	No	18.96	Si
SLU 46	fin.	99.61	-4602	-0.0000224	0.0002246	0.0035	1.33		6608.39	6608.39	No	66.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	ini.	-333.09	1424	1.33	0	540	6344	6692	3392	6883	No	4.83	Si
SLU 72	fin.	63.28	142	1.33	0	540	6344	6692	3392	6883	No	48.53	Si
SLU 47	ini.	-361.92	1447	1.33	0	540	6344	6692	3392	6883	No	4.76	Si
SLU 47	fin.	112.99	386	1.33	0	540	6344	6692	3392	6883	No	17.83	Si
SLU 68	ini.	-326.35	1403	1.33	0	540	6344	6692	3392	6883	No	4.9	Si
SLU 68	fin.	58.43	121	1.33	0	540	6344	6692	3392	6883	No	56.9	Si
SLU 50	ini.	-367.83	1466	1.33	0	540	6344	6692	3392	6883	No	4.7	Si
SLU 50	fin.	117.76	405	1.33	0	540	6344	6692	3392	6883	No	16.98	Si
SLU 48	ini.	-355.49	1422	1.33	0	540	6344	6692	3392	6883	No	4.84	Si
SLU 48	fin.	104.43	361	1.33	0	540	6344	6692	3392	6883	No	19.05	Si
SLU 49	ini.	-356.31	1424	1.33	0	540	6344	6692	3392	6883	No	4.84	Si
SLU 49	fin.	104.5	363	1.33	0	540	6344	6692	3392	6883	No	18.96	Si
SLU 51	ini.	-368.66	1467	1.33	0	540	6344	6692	3392	6883	No	4.69	Si
SLU 51	fin.	117.83	407	1.33	0	540	6344	6692	3392	6883	No	16.91	Si
SLU 44	ini.	-354.64	1425	1.33	0	540	6344	6692	3392	6883	No	4.83	Si
SLU 44	fin.	108.09	364	1.33	0	540	6344	6692	3392	6883	No	18.9	Si
SLU 43	ini.	-353.26	1422	1.33	0	540	6344	6692	3392	6883	No	4.84	Si
SLU 43	fin.	107.97	361	1.33	0	540	6344	6692	3392	6883	No	19.05	Si
SLU 71	ini.	-332.26	1423	1.33	0	540	6344	6692	3392	6883	No	4.84	Si
SLU 71	fin.	63.21	140	1.33	0	540	6344	6692	3392	6883	No	49.12	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	5299.15	-2318	-0.0019748	0.0003369	0.0035	1.33		6415.92	6415.92		1.21	Si
SLV 2	fin.	-5838.6	-8737	-0.0023807	0.0003369	0.0035	1.33		6424.82	6424.82		1.1	Si
SLV 1	ini.	5325.65	-2291	-0.001993	0.0003369	0.0035	1.33		6415.92	6415.92		1.2	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	fin.	-5861.55	-8742	-0.0024002	0.0003369	0.0035	1.33		6424.82	6424.82		1.1	Si
SLV 14	ini.	-6228.9	-5964	-0.002738	0.0003369	0.0035	1.33		6424.82	6424.82		1.03	Si
SLV 14	fin.	6419.49	1384	-0.0029422	0.0003369	0.0035	1.33		6415.92	6415.92		1	No
SLD 13	ini.	-2776.26	-4893	-0.0007755	0.0003369	0.0035	1.33		6424.82	6424.82		2.31	Si
SLD 13	fin.	2740	-1664	-0.000764	0.0003369	0.0035	1.33		6415.92	6415.92		2.34	Si
SLV 16	ini.	-5758.99	-5936	-0.0023144	0.0003369	0.0035	1.33		6424.82	6424.82		1.12	Si
SLV 16	fin.	5877.93	864	-0.0024204	0.0003369	0.0035	1.33		6415.92	6415.92		1.09	Si
SLV 3	ini.	5795.56	-2262	-0.0023505	0.0003369	0.0035	1.33		6415.92	6415.92		1.11	Si
SLV 3	fin.	-6403.1	-9262	-0.0029164	0.0003369	0.0035	1.33		6424.82	6424.82		1	Si
SLV 13	ini.	-6202.41	-5937	-0.002712	0.0003369	0.0035	1.33		6424.82	6424.82		1.04	Si
SLV 13	fin.	6396.54	1380	-0.0029178	0.0003369	0.0035	1.33		6415.92	6415.92		1	Si
SLV 4	ini.	5769.06	-2289	-0.0023285	0.0003369	0.0035	1.33		6415.92	6415.92		1.11	Si
SLV 4	fin.	-6380.16	-9258	-0.0028922	0.0003369	0.0035	1.33		6424.82	6424.82		1.01	Si
SLV 15	ini.	-5732.5	-5908	-0.0022928	0.0003369	0.0035	1.33		6424.82	6424.82		1.12	Si
SLV 15	fin.	5854.99	859	-0.0024007	0.0003369	0.0035	1.33		6415.92	6415.92		1.1	Si
SLD 14	ini.	-2787.63	-4905	-0.0007796	0.0003369	0.0035	1.33		6424.82	6424.82		2.3	Si
SLD 14	fin.	2749.86	-1662	-0.0007674	0.0003369	0.0035	1.33		6415.92	6415.92		2.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	5299.15	-18730	1.33	0	810	6344	10037	3392	7153		0.38	No
SLV 2	fin.	-5838.6	-19720	1.33	0	810	6344	10037	3392	7153		0.36	No
SLV 13	ini.	-6202.41	22428	1.33	0	810	6344	10037	3392	7153		0.32	No
SLV 13	fin.	6396.54	21420	1.33	0	810	6344	10037	3392	7153		0.33	No
SLV 3	ini.	5795.56	-20583	1.33	0	810	6344	10037	3392	7153		0.35	No
SLV 3	fin.	-6403.1	-21590	1.33	0	810	6344	10037	3392	7153		0.33	No
SLD 14	ini.	-2787.63	10181	1.33	0	810	6344	10037	3392	7153		0.7	No
SLD 14	fin.	2749.86	9174	1.33	0	810	6344	10037	3392	7153		0.78	No
SLV 15	ini.	-5732.5	20662	1.33	0	810	6344	10037	3392	7153		0.35	No
SLV 15	fin.	5854.99	19638	1.33	0	810	6344	10037	3392	7153		0.36	No
SLD 13	ini.	-2776.26	10143	1.33	0	810	6344	10037	3392	7153		0.71	No
SLD 13	fin.	2740	9136	1.33	0	810	6344	10037	3392	7153		0.78	No
SLV 14	ini.	-6228.9	22516	1.33	0	810	6344	10037	3392	7153		0.32	No
SLV 14	fin.	6419.49	21508	1.33	0	810	6344	10037	3392	7153		0.33	No
SLV 1	ini.	5325.65	-18818	1.33	0	810	6344	10037	3392	7153		0.38	No
SLV 1	fin.	-5861.55	-19808	1.33	0	810	6344	10037	3392	7153		0.36	No
SLV 16	ini.	-5758.99	20750	1.33	0	810	6344	10037	3392	7153		0.34	No
SLV 16	fin.	5877.93	19726	1.33	0	810	6344	10037	3392	7153		0.36	No
SLV 4	ini.	5769.06	-20495	1.33	0	810	6344	10037	3392	7153		0.35	No
SLV 4	fin.	-6380.16	-21502	1.33	0	810	6344	10037	3392	7153		0.33	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.999	SLV 14	No
V_SLV	0.318	SLV 14	No
PF_SLU	17.948	SLU 51	Si
V_SLU	4.691	SLU 51	Si

Trave di accoppiamento 52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.163	1.006	3.49	4.82	1.33	-14.963	1.006	3.49	4.82	1.33	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 52	ini.	438.26	-4483	-0.0001014	0.0002246	0.0035	1.33		6608.39	6608.39	No	15.08	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 52	fin.	-747.2	-5185	-0.0001777	0.0002246	0.0035	1.33		6616.69	6616.69	No	8.86	Si
SLU 55	ini.	437.44	-4559	-0.0001012	0.0002246	0.0035	1.33		6608.39	6608.39	No	15.11	Si
SLU 55	fin.	-745.08	-5259	-0.0001771	0.0002246	0.0035	1.33		6616.69	6616.69	No	8.88	Si
SLU 62	ini.	443.44	-4814	-0.0001027	0.0002246	0.0035	1.33		6608.39	6608.39	No	14.9	Si
SLU 62	fin.	-781.15	-5543	-0.0001864	0.0002246	0.0035	1.33		6616.69	6616.69	No	8.47	Si
SLU 63	ini.	452.37	-4808	-0.0001048	0.0002246	0.0035	1.33		6608.39	6608.39	No	14.61	Si
SLU 63	fin.	-790.43	-5547	-0.0001888	0.0002246	0.0035	1.33		6616.69	6616.69	No	8.37	Si
SLU 59	ini.	430.68	-4639	-0.0000996	0.0002246	0.0035	1.33		6608.39	6608.39	No	15.34	Si
SLU 59	fin.	-736.77	-5330	-0.000175	0.0002246	0.0035	1.33		6616.69	6616.69	No	8.98	Si
SLU 61	ini.	453.18	-4732	-0.000105	0.0002246	0.0035	1.33		6608.39	6608.39	No	14.58	Si
SLU 61	fin.	-792.55	-5474	-0.0001893	0.0002246	0.0035	1.33		6616.69	6616.69	No	8.35	Si
SLU 54	ini.	432.73	-4617	-0.0001001	0.0002246	0.0035	1.33		6608.39	6608.39	No	15.27	Si
SLU 54	fin.	-739.12	-5310	-0.0001756	0.0002246	0.0035	1.33		6616.69	6616.69	No	8.95	Si
SLU 53	ini.	423.81	-4623	-0.000098	0.0002246	0.0035	1.33		6608.39	6608.39	No	15.59	Si
SLU 53	fin.	-729.83	-5306	-0.0001733	0.0002246	0.0035	1.33		6616.69	6616.69	No	9.07	Si
SLU 60	ini.	444.26	-4738	-0.0001029	0.0002246	0.0035	1.33		6608.39	6608.39	No	14.88	Si
SLU 60	fin.	-783.27	-5470	-0.0001869	0.0002246	0.0035	1.33		6616.69	6616.69	No	8.45	Si
SLU 57	ini.	431.92	-4692	-0.0000999	0.0002246	0.0035	1.33		6608.39	6608.39	No	15.3	Si
SLU 57	fin.	-736.99	-5384	-0.0001751	0.0002246	0.0035	1.33		6616.69	6616.69	No	8.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 61	ini.	453.18	-1454	1.33	0	540	6344	6692	3392	6883	No	4.73	Si
SLU 61	fin.	-792.55	-2897	1.33	0	540	6344	6692	3392	6883	No	2.38	Si
SLU 57	ini.	431.92	-1373	1.33	0	540	6344	6692	3392	6883	No	5.02	Si
SLU 57	fin.	-736.99	-2703	1.33	0	540	6344	6692	3392	6883	No	2.55	Si
SLU 54	ini.	432.73	-1378	1.33	0	540	6344	6692	3392	6883	No	4.99	Si
SLU 54	fin.	-739.12	-2708	1.33	0	540	6344	6692	3392	6883	No	2.54	Si
SLU 55	ini.	437.44	-1397	1.33	0	540	6344	6692	3392	6883	No	4.93	Si
SLU 55	fin.	-745.08	-2727	1.33	0	540	6344	6692	3392	6883	No	2.52	Si
SLU 62	ini.	443.44	-1417	1.33	0	540	6344	6692	3392	6883	No	4.86	Si
SLU 62	fin.	-781.15	-2861	1.33	0	540	6344	6692	3392	6883	No	2.41	Si
SLU 60	ini.	444.26	-1423	1.33	0	540	6344	6692	3392	6883	No	4.84	Si
SLU 60	fin.	-783.27	-2866	1.33	0	540	6344	6692	3392	6883	No	2.4	Si
SLU 59	ini.	430.68	-1370	1.33	0	540	6344	6692	3392	6883	No	5.02	Si
SLU 59	fin.	-736.77	-2700	1.33	0	540	6344	6692	3392	6883	No	2.55	Si
SLU 63	ini.	452.37	-1448	1.33	0	540	6344	6692	3392	6883	No	4.75	Si
SLU 63	fin.	-790.43	-2892	1.33	0	540	6344	6692	3392	6883	No	2.38	Si
SLU 52	ini.	438.26	-1402	1.33	0	540	6344	6692	3392	6883	No	4.91	Si
SLU 52	fin.	-747.2	-2732	1.33	0	540	6344	6692	3392	6883	No	2.52	Si
SLU 53	ini.	423.81	-1347	1.33	0	540	6344	6692	3392	6883	No	5.11	Si
SLU 53	fin.	-729.83	-2677	1.33	0	540	6344	6692	3392	6883	No	2.57	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-3583.45	-2669	-0.0010835	0.0003369	0.0035	1.33		6424.82	6424.82		1.79	Si
SLV 15	fin.	4637.5	1724	-0.0015762	0.0003369	0.0035	1.33		6415.92	6415.92		1.38	Si
SLV 3	ini.	4752.95	-3969	-0.001639	0.0003369	0.0035	1.33		6415.92	6415.92		1.35	Si
SLV 3	fin.	-6317.26	-9935	-0.002827	0.0003369	0.0035	1.33		6424.82	6424.82		1.02	Si
SLV 7	ini.	2693.9	-3019	-0.0007477	0.0003369	0.0035	1.33		6415.92	6415.92		2.38	Si
SLV 7	fin.	-3399.87	-6261	-0.0010093	0.0003369	0.0035	1.33		6424.82	6424.82		1.89	Si
SLV 2	ini.	4018.6	-4384	-0.0012731	0.0003369	0.0035	1.33		6415.92	6415.92		1.6	Si
SLV 2	fin.	-5530.26	-9575	-0.0021353	0.0003369	0.0035	1.33		6424.82	6424.82		1.16	Si
SLV 16	ini.	-3582	-2661	-0.0010829	0.0003369	0.0035	1.33		6424.82	6424.82		1.79	Si
SLV 16	fin.	4638.53	1734	-0.0015767	0.0003369	0.0035	1.33		6415.92	6415.92		1.38	Si
SLV 8	ini.	2694.83	-3014	-0.000748	0.0003369	0.0035	1.33		6415.92	6415.92		2.38	Si
SLV 8	fin.	-3399.21	-6255	-0.0010091	0.0003369	0.0035	1.33		6424.82	6424.82		1.89	Si
SLV 14	ini.	-4317.8	-3084	-0.0014108	0.0003369	0.0035	1.33		6424.82	6424.82		1.49	Si
SLV 14	fin.	5424.5	2084	-0.0020627	0.0003369	0.0035	1.33		6415.92	6415.92		1.18	Si
SLV 4	ini.	4754.4	-3961	-0.0016398	0.0003369	0.0035	1.33		6415.92	6415.92		1.35	Si
SLV 4	fin.	-6316.23	-9925	-0.0028259	0.0003369	0.0035	1.33		6424.82	6424.82		1.02	Si
SLV 13	ini.	-4319.25	-3092	-0.0014115	0.0003369	0.0035	1.33		6424.82	6424.82		1.49	Si
SLV 13	fin.	5423.47	2074	-0.002062	0.0003369	0.0035	1.33		6415.92	6415.92		1.18	Si
SLV 1	ini.	4017.16	-4392	-0.0012724	0.0003369	0.0035	1.33		6415.92	6415.92		1.6	Si
SLV 1	fin.	-5531.29	-9585	-0.0021361	0.0003369	0.0035	1.33		6424.82	6424.82		1.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	4754.4	-18322	1.33	0	810	6344	10037	3392	7153		0.39	No
SLV 4	fin.	-6316.23	-19266	1.33	0	810	6344	10037	3392	7153		0.37	No
SLV 13	ini.	-4319.25	17019	1.33	0	810	6344	10037	3392	7153		0.42	No
SLV 13	fin.	5423.47	15917	1.33	0	810	6344	10037	3392	7153		0.45	No
SLV 2	ini.	4018.6	-15628	1.33	0	810	6344	10037	3392	7153		0.46	No
SLV 2	fin.	-5530.26	-16723	1.33	0	810	6344	10037	3392	7153		0.43	No
SLV 15	ini.	-3583.45	14325	1.33	0	810	6344	10037	3392	7153		0.5	No
SLV 15	fin.	4637.5	13373	1.33	0	810	6344	10037	3392	7153		0.53	No
SLV 8	ini.	2694.83	-10039	1.33	0	810	6344	10037	3392	7153		0.71	No
SLV 8	fin.	-3399.21	-10809	1.33	0	810	6344	10037	3392	7153		0.66	No
SLV 16	ini.	-3582	14326	1.33	0	810	6344	10037	3392	7153		0.5	No
SLV 16	fin.	4638.53	13374	1.33	0	810	6344	10037	3392	7153		0.53	No
SLV 7	ini.	2693.9	-10039	1.33	0	810	6344	10037	3392	7153		0.71	No
SLV 7	fin.	-3399.87	-10810	1.33	0	810	6344	10037	3392	7153		0.66	No
SLV 3	ini.	4752.95	-18323	1.33	0	810	6344	10037	3392	7153		0.39	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-6317.26	-19267	1.33	0	810	6344	10037	3392	7153		0.37	No
SLV 1	ini.	4017.16	-15628	1.33	0	810	6344	10037	3392	7153		0.46	No
SLV 1	fin.	-5531.29	-16723	1.33	0	810	6344	10037	3392	7153		0.43	No
SLV 14	ini.	-4317.8	17020	1.33	0	810	6344	10037	3392	7153		0.42	No
SLV 14	fin.	5424.5	15918	1.33	0	810	6344	10037	3392	7153		0.45	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.017	SLV 3	Si
V_SLV	0.371	SLV 3	No
PF_SLU	8.349	SLU 61	Si
V_SLU	2.376	SLU 61	Si

Trave di accoppiamento 53

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	3.89	4.82	0.93	-12.263	1.006	3.89	4.82	0.93	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1254	-4651	-0.0007468	0.0002246	0.0035	0.93		3241.18	3241.18	No	2.58	Si
SLU 75	fin.	328.57	-2443	-0.0001588	0.0002246	0.0035	0.93		3235.38	3235.38	No	9.85	Si
SLU 74	ini.	-1254.83	-4656	-0.0007474	0.0002246	0.0035	0.93		3241.18	3241.18	No	2.58	Si
SLU 74	fin.	328.73	-2447	-0.0001589	0.0002246	0.0035	0.93		3235.38	3235.38	No	9.84	Si
SLU 84	ini.	-1310.21	-4800	-0.0007897	0.0002246	0.0035	0.93		3241.18	3241.18	No	2.47	Si
SLU 84	fin.	334.09	-2505	-0.0001617	0.0002246	0.0035	0.93		3235.38	3235.38	No	9.68	Si
SLU 81	ini.	-1294.05	-4734	-0.0007773	0.0002246	0.0035	0.93		3241.18	3241.18	No	2.5	Si
SLU 81	fin.	326.12	-2473	-0.0001576	0.0002246	0.0035	0.93		3235.38	3235.38	No	9.92	Si
SLU 79	ini.	-1260.09	-4679	-0.0007514	0.0002246	0.0035	0.93		3241.18	3241.18	No	2.57	Si
SLU 79	fin.	331.36	-2457	-0.0001603	0.0002246	0.0035	0.93		3235.38	3235.38	No	9.76	Si
SLU 82	ini.	-1293.22	-4728	-0.0007766	0.0002246	0.0035	0.93		3241.18	3241.18	No	2.51	Si
SLU 82	fin.	325.96	-2469	-0.0001575	0.0002246	0.0035	0.93		3235.38	3235.38	No	9.93	Si
SLU 78	ini.	-1270.99	-4723	-0.0007597	0.0002246	0.0035	0.93		3241.18	3241.18	No	2.55	Si
SLU 78	fin.	336.7	-2479	-0.000163	0.0002246	0.0035	0.93		3235.38	3235.38	No	9.61	Si
SLU 83	ini.	-1311.04	-4805	-0.0007903	0.0002246	0.0035	0.93		3241.18	3241.18	No	2.47	Si
SLU 83	fin.	334.25	-2509	-0.0001618	0.0002246	0.0035	0.93		3235.38	3235.38	No	9.68	Si
SLU 77	ini.	-1271.82	-4728	-0.0007603	0.0002246	0.0035	0.93		3241.18	3241.18	No	2.55	Si
SLU 77	fin.	336.86	-2483	-0.0001631	0.0002246	0.0035	0.93		3235.38	3235.38	No	9.6	Si
SLU 80	ini.	-1259.26	-4674	-0.0007508	0.0002246	0.0035	0.93		3241.18	3241.18	No	2.57	Si
SLU 80	fin.	331.2	-2453	-0.0001602	0.0002246	0.0035	0.93		3235.38	3235.38	No	9.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1294.05	3735	0.93	0	313	7375	4679	2372	7051	No	1.89	Si
SLU 81	fin.	326.12	1034	0.93	0	313	7375	4679	2372	7051	No	6.82	Si
SLU 80	ini.	-1259.26	3558	0.93	0	313	7375	4679	2372	7051	No	1.98	Si
SLU 80	fin.	331.2	1125	0.93	0	313	7375	4679	2372	7051	No	6.27	Si
SLU 84	ini.	-1310.21	3771	0.93	0	313	7375	4679	2372	7051	No	1.87	Si
SLU 84	fin.	334.09	1070	0.93	0	313	7375	4679	2372	7051	No	6.59	Si
SLU 79	ini.	-1260.09	3560	0.93	0	313	7375	4679	2372	7051	No	1.98	Si
SLU 79	fin.	331.36	1126	0.93	0	313	7375	4679	2372	7051	No	6.26	Si
SLU 77	ini.	-1271.82	3585	0.93	0	313	7375	4679	2372	7051	No	1.97	Si
SLU 77	fin.	336.86	1151	0.93	0	313	7375	4679	2372	7051	No	6.12	Si
SLU 74	ini.	-1254.83	3547	0.93	0	313	7375	4679	2372	7051	No	1.99	Si
SLU 74	fin.	328.73	1114	0.93	0	313	7375	4679	2372	7051	No	6.33	Si
SLU 83	ini.	-1311.04	3772	0.93	0	313	7375	4679	2372	7051	No	1.87	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	fin.	334.25	1072	0.93	0	313	7375	4679	2372	7051	No	6.58	Si
SLU 78	ini.	-1270.99	3583	0.93	0	313	7375	4679	2372	7051	No	1.97	Si
SLU 78	fin.	336.7	1150	0.93	0	313	7375	4679	2372	7051	No	6.13	Si
SLU 75	ini.	-1254	3546	0.93	0	313	7375	4679	2372	7051	No	1.99	Si
SLU 75	fin.	328.57	1113	0.93	0	313	7375	4679	2372	7051	No	6.34	Si
SLU 82	ini.	-1293.22	3734	0.93	0	313	7375	4679	2372	7051	No	1.89	Si
SLU 82	fin.	325.96	1033	0.93	0	313	7375	4679	2372	7051	No	6.83	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	4928.2	6064	-0.0062015	0.0003369	0.0035	0.93		3204.48	3204.48		0.65	No
SLV 3	fin.	-5261.24	-8349	-0.0067168	0.0003369	0.0035	0.93		3210.89	3210.89		0.61	No
SLV 4	ini.	4913.97	6050	-0.0061789	0.0003369	0.0035	0.93		3204.48	3204.48		0.65	No
SLV 4	fin.	-5242.33	-8314	-0.0066871	0.0003369	0.0035	0.93		3210.89	3210.89		0.61	No
SLD 14	ini.	-3290.84	-7085	-0.0032648	0.0003369	0.0035	0.93		3210.89	3210.89		0.98	No
SLD 14	fin.	2566.97	1175	-0.0019411	0.0003369	0.0035	0.93		3204.48	3204.48		1.25	Si
SLV 15	ini.	-6270.71	-11743	-0.0082675	0.0003369	0.0035	0.93		3210.89	3210.89		0.51	No
SLV 15	fin.	5771.85	5792	-0.0075251	0.0003369	0.0035	0.93		3204.48	3204.48		0.56	No
SLV 2	ini.	4608.77	5444	-0.0056833	0.0003369	0.0035	0.93		3204.48	3204.48		0.7	No
SLV 2	fin.	-5323.68	-9142	-0.0068148	0.0003369	0.0035	0.93		3210.89	3210.89		0.6	No
SLV 1	ini.	4623.01	5458	-0.0057065	0.0003369	0.0035	0.93		3204.48	3204.48		0.69	No
SLV 1	fin.	-5342.6	-9178	-0.0068445	0.0003369	0.0035	0.93		3210.89	3210.89		0.6	No
SLD 13	ini.	-3284.73	-7079	-0.0032513	0.0003369	0.0035	0.93		3210.89	3210.89		0.98	No
SLD 13	fin.	2558.85	1159	-0.0019301	0.0003369	0.0035	0.93		3204.48	3204.48		1.25	Si
SLV 14	ini.	-6590.13	-12363	-0.0087468	0.0003369	0.0035	0.93		3210.89	3210.89		0.49	No
SLV 14	fin.	5709.41	4998	-0.0074291	0.0003369	0.0035	0.93		3204.48	3204.48		0.56	No
SLV 16	ini.	-6284.94	-11757	-0.0082889	0.0003369	0.0035	0.93		3210.89	3210.89		0.51	No
SLV 16	fin.	5790.77	5827	-0.0075541	0.0003369	0.0035	0.93		3204.48	3204.48		0.55	No
SLV 13	ini.	-6575.9	-12349	-0.0087256	0.0003369	0.0035	0.93		3210.89	3210.89		0.49	No
SLV 13	fin.	5690.5	4963	-0.0074	0.0003369	0.0035	0.93		3204.48	3204.48		0.56	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-6270.71	18615	0.93	0	470	7375	7019	2372	7845		0.42	No
SLV 15	fin.	5771.85	17372	0.93	0	470	7375	7019	2372	7845		0.45	No
SLV 13	ini.	-6575.9	18955	0.93	0	470	7375	7019	2372	7845		0.41	No
SLV 13	fin.	5690.5	17223	0.93	0	470	7375	7019	2372	7845		0.46	No
SLV 4	ini.	4913.97	-14370	0.93	0	470	7375	7019	2372	7845		0.55	No
SLV 4	fin.	-5242.33	-15593	0.93	0	470	7375	7019	2372	7845		0.5	No
SLD 13	ini.	-3284.73	9409	0.93	0	470	7375	7019	2372	7845		0.83	No
SLD 13	fin.	2558.85	7823	0.93	0	470	7375	7019	2372	7845		1	Si
SLV 14	ini.	-6590.13	19006	0.93	0	470	7375	7019	2372	7845		0.41	No
SLV 14	fin.	5709.41	17273	0.93	0	470	7375	7019	2372	7845		0.45	No
SLV 3	ini.	4928.2	-14420	0.93	0	470	7375	7019	2372	7845		0.54	No
SLV 3	fin.	-5261.24	-15643	0.93	0	470	7375	7019	2372	7845		0.5	No
SLV 1	ini.	4623.01	-14080	0.93	0	470	7375	7019	2372	7845		0.56	No
SLV 1	fin.	-5342.6	-15792	0.93	0	470	7375	7019	2372	7845		0.5	No
SLD 14	ini.	-3290.84	9430	0.93	0	470	7375	7019	2372	7845		0.83	No
SLD 14	fin.	2566.97	7845	0.93	0	470	7375	7019	2372	7845		1	No
SLV 2	ini.	4608.77	-14030	0.93	0	470	7375	7019	2372	7845		0.56	No
SLV 2	fin.	-5323.68	-15742	0.93	0	470	7375	7019	2372	7845		0.5	No
SLV 16	ini.	-6284.94	18665	0.93	0	470	7375	7019	2372	7845		0.42	No
SLV 16	fin.	5790.77	17422	0.93	0	470	7375	7019	2372	7845		0.45	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.487	SLV 14	No
V_SLV	0.413	SLV 14	No
PF_SLU	2.472	SLU 83	Si
V_SLU	1.869	SLU 83	Si

Trave di accoppiamento 54

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	3.49	4.82	1.33	-7.463	1.006	3.49	4.82	1.33	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	ini.	-660.38	-6186	-0.0001557	0.0002246	0.0035	1.33		6616.69	6616.69	No	10.02	Si
SLU 62	fin.	-419.65	-6007	-0.0000969	0.0002246	0.0035	1.33		6616.69	6616.69	No	15.77	Si
SLU 81	ini.	-722.59	-6747	-0.0001714	0.0002246	0.0035	1.33		6616.69	6616.69	No	9.16	Si
SLU 81	fin.	-444.96	-6543	-0.0001029	0.0002246	0.0035	1.33		6616.69	6616.69	No	14.87	Si
SLU 84	ini.	-726.38	-6833	-0.0001724	0.0002246	0.0035	1.33		6616.69	6616.69	No	9.11	Si
SLU 84	fin.	-452.14	-6632	-0.0001046	0.0002246	0.0035	1.33		6616.69	6616.69	No	14.63	Si
SLU 75	ini.	-661.06	-6594	-0.0001559	0.0002246	0.0035	1.33		6616.69	6616.69	No	10.01	Si
SLU 75	fin.	-488.57	-6481	-0.0001134	0.0002246	0.0035	1.33		6616.69	6616.69	No	13.54	Si
SLU 78	ini.	-666.91	-6684	-0.0001574	0.0002246	0.0035	1.33		6616.69	6616.69	No	9.92	Si
SLU 78	fin.	-493.5	-6571	-0.0001146	0.0002246	0.0035	1.33		6616.69	6616.69	No	13.41	Si
SLU 82	ini.	-720.53	-6742	-0.0001709	0.0002246	0.0035	1.33		6616.69	6616.69	No	9.18	Si
SLU 82	fin.	-447.22	-6542	-0.0001035	0.0002246	0.0035	1.33		6616.69	6616.69	No	14.8	Si
SLU 77	ini.	-668.97	-6689	-0.0001579	0.0002246	0.0035	1.33		6616.69	6616.69	No	9.89	Si
SLU 77	fin.	-491.23	-6572	-0.0001141	0.0002246	0.0035	1.33		6616.69	6616.69	No	13.47	Si
SLU 83	ini.	-728.44	-6837	-0.0001729	0.0002246	0.0035	1.33		6616.69	6616.69	No	9.08	Si
SLU 83	fin.	-449.88	-6633	-0.0001041	0.0002246	0.0035	1.33		6616.69	6616.69	No	14.71	Si
SLU 74	ini.	-663.12	-6598	-0.0001564	0.0002246	0.0035	1.33		6616.69	6616.69	No	9.98	Si
SLU 74	fin.	-486.31	-6481	-0.0001129	0.0002246	0.0035	1.33		6616.69	6616.69	No	13.61	Si
SLU 79	ini.	-660.99	-6624	-0.0001559	0.0002246	0.0035	1.33		6616.69	6616.69	No	10.01	Si
SLU 79	fin.	-493.89	-6515	-0.0001147	0.0002246	0.0035	1.33		6616.69	6616.69	No	13.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 41	ini.	-651.73	1537	1.33	0	540	7930	6692	3392	8469	No	5.51	Si
SLU 41	fin.	-332.08	-596	1.33	0	540	7930	6692	3392	8469	No	14.2	Si
SLU 81	ini.	-722.59	1581	1.33	0	540	7930	6692	3392	8469	No	5.36	Si
SLU 81	fin.	-444.96	-785	1.33	0	540	7930	6692	3392	8469	No	10.78	Si
SLU 42	ini.	-649.67	1530	1.33	0	540	7930	6692	3392	8469	No	5.54	Si
SLU 42	fin.	-334.34	-603	1.33	0	540	7930	6692	3392	8469	No	14.04	Si
SLU 84	ini.	-726.38	1575	1.33	0	540	7930	6692	3392	8469	No	5.38	Si
SLU 84	fin.	-452.14	-791	1.33	0	540	7930	6692	3392	8469	No	10.7	Si
SLU 39	ini.	-645.88	1536	1.33	0	540	7930	6692	3392	8469	No	5.51	Si
SLU 39	fin.	-327.15	-597	1.33	0	540	7930	6692	3392	8469	No	14.18	Si
SLU 82	ini.	-720.53	1574	1.33	0	540	7930	6692	3392	8469	No	5.38	Si
SLU 82	fin.	-447.22	-792	1.33	0	540	7930	6692	3392	8469	No	10.69	Si
SLU 83	ini.	-728.44	1582	1.33	0	540	7930	6692	3392	8469	No	5.35	Si
SLU 83	fin.	-449.88	-784	1.33	0	540	7930	6692	3392	8469	No	10.8	Si
SLU 62	ini.	-660.38	1344	1.33	0	540	7930	6692	3392	8469	No	6.3	Si
SLU 62	fin.	-419.65	-660	1.33	0	540	7930	6692	3392	8469	No	12.84	Si
SLU 40	ini.	-643.82	1529	1.33	0	540	7930	6692	3392	8469	No	5.54	Si
SLU 40	fin.	-329.42	-604	1.33	0	540	7930	6692	3392	8469	No	14.02	Si
SLU 60	ini.	-654.53	1343	1.33	0	540	7930	6692	3392	8469	No	6.31	Si
SLU 60	fin.	-414.73	-661	1.33	0	540	7930	6692	3392	8469	No	12.82	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	1880.85	-2355	-0.0004827	0.0003369	0.0035	1.33		6415.92	6415.92		3.41	Si
SLV 7	fin.	-2956.79	-6734	-0.0008405	0.0003369	0.0035	1.33		6424.82	6424.82		2.17	Si
SLV 4	ini.	4635.26	-1142	-0.001575	0.0003369	0.0035	1.33		6415.92	6415.92		1.38	Si
SLV 4	fin.	-6248.64	-10681	-0.0027576	0.0003369	0.0035	1.33		6424.82	6424.82		1.03	Si
SLV 13	ini.	-5438.87	-7801	-0.0020682	0.0003369	0.0035	1.33		6424.82	6424.82		1.18	Si
SLV 13	fin.	5429.04	1678	-0.002066	0.0003369	0.0035	1.33		6415.92	6415.92		1.18	Si
SLV 3	ini.	4686.48	-1073	-0.0016025	0.0003369	0.0035	1.33		6415.92	6415.92		1.37	Si
SLV 3	fin.	-6296.59	-10704	-0.0028059	0.0003369	0.0035	1.33		6424.82	6424.82		1.02	Si
SLV 15	ini.	-4946.08	-7085	-0.0017462	0.0003369	0.0035	1.33		6424.82	6424.82		1.3	Si
SLV 15	fin.	4919.54	1436	-0.0017341	0.0003369	0.0035	1.33		6415.92	6415.92		1.3	Si
SLV 2	ini.	4142.47	-1857	-0.0013299	0.0003369	0.0035	1.33		6415.92	6415.92		1.55	Si
SLV 2	fin.	-5739.15	-10439	-0.0022982	0.0003369	0.0035	1.33		6424.82	6424.82		1.12	Si
SLV 14	ini.	-5490.08	-7869	-0.0021055	0.0003369	0.0035	1.33		6424.82	6424.82		1.17	Si
SLV 14	fin.	5476.98	1701	-0.0021009	0.0003369	0.0035	1.33		6415.92	6415.92		1.17	Si
SLV 16	ini.	-4997.3	-7154	-0.0017768	0.0003369	0.0035	1.33		6424.82	6424.82		1.29	Si
SLV 16	fin.	4967.49	1458	-0.0017626	0.0003369	0.0035	1.33		6415.92	6415.92		1.29	Si
SLV 1	ini.	4193.69	-1789	-0.0013539	0.0003369	0.0035	1.33		6415.92	6415.92		1.53	Si
SLV 1	fin.	-5787.1	-10462	-0.0023375	0.0003369	0.0035	1.33		6424.82	6424.82		1.11	Si
SLV 8	ini.	1847.93	-2399	-0.0004728	0.0003369	0.0035	1.33		6415.92	6415.92		3.47	Si
SLV 8	fin.	-2925.97	-6719	-0.0008293	0.0003369	0.0035	1.33		6424.82	6424.82		2.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	4142.47	-14766	1.33	0	810	7930	10037	3392	8739		0.59	No
SLV 2	fin.	-5739.15	-16166	1.33	0	810	7930	10037	3392	8739		0.54	No
SLV 4	ini.	4635.26	-16471	1.33	0	810	7930	10037	3392	8739		0.53	No
SLV 4	fin.	-6248.64	-17898	1.33	0	810	7930	10037	3392	8739		0.49	No
SLV 15	ini.	-4946.08	16095	1.33	0	810	7930	10037	3392	8739		0.54	No
SLV 15	fin.	4919.54	14674	1.33	0	810	7930	10037	3392	8739		0.6	No
SLV 13	ini.	-5438.87	17800	1.33	0	810	7930	10037	3392	8739		0.49	No
SLV 13	fin.	5429.04	16406	1.33	0	810	7930	10037	3392	8739		0.53	No
SLV 14	ini.	-5490.08	17960	1.33	0	810	7930	10037	3392	8739		0.49	No
SLV 14	fin.	5476.98	16566	1.33	0	810	7930	10037	3392	8739		0.53	No
SLV 7	ini.	1880.85	-7138	1.33	0	810	7930	10037	3392	8739		1.22	Si
SLV 7	fin.	-2956.79	-8594	1.33	0	810	7930	10037	3392	8739		1.02	Si
SLV 8	ini.	1847.93	-7035	1.33	0	810	7930	10037	3392	8739		1.24	Si
SLV 8	fin.	-2925.97	-8491	1.33	0	810	7930	10037	3392	8739		1.03	Si
SLV 3	ini.	4686.48	-16631	1.33	0	810	7930	10037	3392	8739		0.53	No
SLV 3	fin.	-6296.59	-18058	1.33	0	810	7930	10037	3392	8739		0.48	No
SLV 16	ini.	-4997.3	16255	1.33	0	810	7930	10037	3392	8739		0.54	No
SLV 16	fin.	4967.49	14834	1.33	0	810	7930	10037	3392	8739		0.59	No
SLV 1	ini.	4193.69	-14926	1.33	0	810	7930	10037	3392	8739		0.59	No
SLV 1	fin.	-5787.1	-16326	1.33	0	810	7930	10037	3392	8739		0.54	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.02	SLV 3	Si
V_SLV	0.484	SLV 3	No
PF_SLU	9.083	SLU 83	Si
V_SLU	5.354	SLU 83	Si

Trave di accoppiamento 57

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	3.49	4.82	1.33	-9.333	-3.314	3.49	4.82	1.33	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	ini.	-199.44	-2702	-0.0000453	0.0001872	0.0035	1.33		6470.54	6470.54	No	32.44	Si
SLU 66	fin.	-769.31	-2702	-0.0001855	0.0001872	0.0035	1.33		6470.54	6470.54	No	8.41	Si
SLU 67	ini.	-193.67	-2705	-0.000044	0.0001872	0.0035	1.33		6470.54	6470.54	No	33.41	Si
SLU 67	fin.	-777.19	-2705	-0.0001876	0.0001872	0.0035	1.33		6470.54	6470.54	No	8.33	Si
SLU 28	ini.	-145.21	-2281	-0.0000328	0.0001872	0.0035	1.33		6470.54	6470.54	No	44.56	Si
SLU 28	fin.	-676.19	-2281	-0.0001613	0.0001872	0.0035	1.33		6470.54	6470.54	No	9.57	Si
SLU 65	ini.	-181.09	-2635	-0.0000411	0.0001872	0.0035	1.33		6470.54	6470.54	No	35.73	Si
SLU 65	fin.	-765.74	-2635	-0.0001846	0.0001872	0.0035	1.33		6470.54	6470.54	No	8.45	Si
SLU 71	ini.	-201.24	-2725	-0.0000457	0.0001872	0.0035	1.33		6470.54	6470.54	No	32.15	Si
SLU 71	fin.	-771.89	-2725	-0.0001862	0.0001872	0.0035	1.33		6470.54	6470.54	No	8.38	Si
SLU 72	ini.	-195.48	-2728	-0.0000444	0.0001872	0.0035	1.33		6470.54	6470.54	No	33.1	Si
SLU 72	fin.	-779.77	-2728	-0.0001883	0.0001872	0.0035	1.33		6470.54	6470.54	No	8.3	Si
SLU 64	ini.	-190.7	-2630	-0.0000433	0.0001872	0.0035	1.33		6470.54	6470.54	No	33.93	Si
SLU 64	fin.	-752.6	-2630	-0.0001812	0.0001872	0.0035	1.33		6470.54	6470.54	No	8.6	Si
SLU 68	ini.	-186.36	-2683	-0.0000423	0.0001872	0.0035	1.33		6470.54	6470.54	No	34.72	Si
SLU 68	fin.	-775.38	-2683	-0.0001872	0.0001872	0.0035	1.33		6470.54	6470.54	No	8.34	Si
SLU 69	ini.	-204.71	-2750	-0.0000465	0.0001872	0.0035	1.33		6470.54	6470.54	No	31.61	Si
SLU 69	fin.	-778.95	-2750	-0.0001881	0.0001872	0.0035	1.33		6470.54	6470.54	No	8.31	Si
SLU 70	ini.	-198.94	-2753	-0.0000452	0.0001872	0.0035	1.33		6470.54	6470.54	No	32.53	Si
SLU 70	fin.	-786.84	-2753	-0.0001902	0.0001872	0.0035	1.33		6470.54	6470.54	No	8.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 64	ini.	-190.7	-232	1.33	0	540	7137	5576	3392	7676	No	33.15	Si
SLU 64	fin.	-752.6	-1018	1.33	0	540	7137	5576	3392	7676	No	7.54	Si
SLU 67	ini.	-193.67	-256	1.33	0	540	7137	5576	3392	7676	No	30.03	Si
SLU 67	fin.	-777.19	-1042	1.33	0	540	7137	5576	3392	7676	No	7.37	Si
SLU 65	ini.	-181.09	-257	1.33	0	540	7137	5576	3392	7676	No	29.88	Si
SLU 65	fin.	-765.74	-1044	1.33	0	540	7137	5576	3392	7676	No	7.36	Si
SLU 26	ini.	-132.64	-288	1.33	0	540	7137	5576	3392	7676	No	26.67	Si
SLU 26	fin.	-664.74	-897	1.33	0	540	7137	5576	3392	7676	No	8.56	Si
SLU 68	ini.	-186.36	-262	1.33	0	540	7137	5576	3392	7676	No	29.33	Si
SLU 68	fin.	-775.38	-1048	1.33	0	540	7137	5576	3392	7676	No	7.32	Si
SLU 70	ini.	-198.94	-260	1.33	0	540	7137	5576	3392	7676	No	29.47	Si
SLU 70	fin.	-786.84	-1047	1.33	0	540	7137	5576	3392	7676	No	7.33	Si
SLU 71	ini.	-201.24	-241	1.33	0	540	7137	5576	3392	7676	No	31.81	Si
SLU 71	fin.	-771.89	-1028	1.33	0	540	7137	5576	3392	7676	No	7.47	Si
SLU 72	ini.	-195.48	-256	1.33	0	540	7137	5576	3392	7676	No	29.93	Si
SLU 72	fin.	-779.77	-1043	1.33	0	540	7137	5576	3392	7676	No	7.36	Si
SLU 66	ini.	-199.44	-240	1.33	0	540	7137	5576	3392	7676	No	31.92	Si
SLU 66	fin.	-769.31	-1027	1.33	0	540	7137	5576	3392	7676	No	7.47	Si
SLU 69	ini.	-204.71	-245	1.33	0	540	7137	5576	3392	7676	No	31.29	Si
SLU 69	fin.	-778.95	-1032	1.33	0	540	7137	5576	3392	7676	No	7.44	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	4887.44	-1519	-0.0017795	0.0002807	0.0035	1.33		6459.41	6459.41		1.32	Si
SLV 1	fin.	-7530.44	-1933	-0.0042265	0.0002807	0.0035	1.33		6468.36	6468.36		0.86	No
SLD 2	ini.	2130.03	-1834	-0.0005742	0.0002807	0.0035	1.33		6459.41	6459.41		3.03	Si
SLD 2	fin.	-3721.35	-2007	-0.0011776	0.0002807	0.0035	1.33		6468.36	6468.36		1.74	Si
SLV 6	ini.	1703.81	-1091	-0.0004393	0.0002807	0.0035	1.33		6459.41	6459.41		3.79	Si
SLV 6	fin.	-3574.01	-2212	-0.0011138	0.0002807	0.0035	1.33		6468.36	6468.36		1.81	Si
SLV 2	ini.	5222.63	-1535	-0.0020007	0.0002807	0.0035	1.33		6459.41	6459.41		1.24	Si
SLV 2	fin.	-8013.96	-1950	-0.0046642	0.0002807	0.0035	1.33		6468.36	6468.36		0.81	No
SLV 14	ini.	-5111.35	-2055	-0.0019196	0.0002807	0.0035	1.33		6468.36	6468.36		1.27	Si
SLV 14	fin.	6018.5	-2298	-0.0026669	0.0002807	0.0035	1.33		6459.41	6459.41		1.07	Si
SLV 4	ini.	5087.23	-2070	-0.0019077	0.0002807	0.0035	1.33		6459.41	6459.41		1.27	Si
SLV 4	fin.	-7535.85	-1827	-0.0042315	0.0002807	0.0035	1.33		6468.36	6468.36		0.86	No
SLV 13	ini.	-5446.54	-2039	-0.0021614	0.0002807	0.0035	1.33		6468.36	6468.36		1.19	Si
SLV 13	fin.	6502.02	-2281	-0.0031856	0.0002807	0.0035	1.33		6459.41	6459.41		0.99	No
SLV 3	ini.	4752.04	-2053	-0.0016982	0.0002807	0.0035	1.33		6459.41	6459.41		1.36	Si
SLV 3	fin.	-7052.33	-1810	-0.0037651	0.0002807	0.0035	1.33		6468.36	6468.36		0.92	No
SLV 15	ini.	-5581.94	-2573	-0.0022689	0.0002807	0.0035	1.33		6468.36	6468.36		1.16	Si
SLV 15	fin.	6980.13	-2159	-0.0037007	0.0002807	0.0035	1.33		6459.41	6459.41		0.93	No
SLV 16	ini.	-5246.75	-2590	-0.0020132	0.0002807	0.0035	1.33		6468.36	6468.36		1.23	Si
SLV 16	fin.	6496.61	-2175	-0.0031795	0.0002807	0.0035	1.33		6459.41	6459.41		0.99	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-5581.94	14137	1.33	0	810	7137	8363	3392	7946		0.56	No
SLV 15	fin.	6980.13	13305	1.33	0	810	7137	8363	3392	7946		0.6	No
SLV 1	ini.	4887.44	-13373	1.33	0	810	7137	8363	3392	7946		0.59	No
SLV 1	fin.	-7530.44	-13748	1.33	0	810	7137	8363	3392	7946		0.58	No
SLV 2	ini.	5222.63	-14283	1.33	0	810	7137	8363	3392	7946		0.56	No
SLV 2	fin.	-8013.96	-14657	1.33	0	810	7137	8363	3392	7946		0.54	No
SLD 2	ini.	2130.03	-6144	1.33	0	810	7137	8363	3392	7946		1.29	Si
SLD 2	fin.	-3721.35	-6647	1.33	0	810	7137	8363	3392	7946		1.2	Si
SLV 4	ini.	5087.23	-13919	1.33	0	810	7137	8363	3392	7946		0.57	No
SLV 4	fin.	-7535.85	-14542	1.33	0	810	7137	8363	3392	7946		0.55	No
SLV 3	ini.	4752.04	-13009	1.33	0	810	7137	8363	3392	7946		0.61	No
SLV 3	fin.	-7052.33	-13633	1.33	0	810	7137	8363	3392	7946		0.58	No
SLV 16	ini.	-5246.75	13227	1.33	0	810	7137	8363	3392	7946		0.6	No
SLV 16	fin.	6496.61	12395	1.33	0	810	7137	8363	3392	7946		0.64	No
SLV 13	ini.	-5446.54	13773	1.33	0	810	7137	8363	3392	7946		0.58	No
SLV 13	fin.	6502.02	13190	1.33	0	810	7137	8363	3392	7946		0.6	No
SLD 4	ini.	2070	-5992	1.33	0	810	7137	8363	3392	7946		1.33	Si
SLD 4	fin.	-3515.59	-6606	1.33	0	810	7137	8363	3392	7946		1.2	Si
SLV 14	ini.	-5111.35	12863	1.33	0	810	7137	8363	3392	7946		0.62	No
SLV 14	fin.	6018.5	12280	1.33	0	810	7137	8363	3392	7946		0.65	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.807	SLV 2	No
V_SLV	0.542	SLV 2	No
PF_SLU	8.223	SLU 70	Si
V_SLU	7.322	SLU 68	Si

Trave di accoppiamento 59

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.163	1.246	3.49	4.82	1.33	-5.163	2.046	3.49	4.82	1.33	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	258.93	-687	-0.000059	0.0002246	0.0035	1.33		6664.01	6664.01	No	25.74	Si
SLU 80	fin.	-196.65	-1908	-0.0000446	0.0002246	0.0035	1.33		6672.28	6672.28	No	33.93	Si
SLU 77	ini.	259.15	-695	-0.0000591	0.0002246	0.0035	1.33		6664.01	6664.01	No	25.71	Si
SLU 77	fin.	-202.53	-1933	-0.0000459	0.0002246	0.0035	1.33		6672.28	6672.28	No	32.95	Si
SLU 78	ini.	259.76	-697	-0.0000592	0.0002246	0.0035	1.33		6664.01	6664.01	No	25.65	Si
SLU 78	fin.	-204.12	-1936	-0.0000463	0.0002246	0.0035	1.33		6672.28	6672.28	No	32.69	Si
SLU 84	ini.	256.5	-717	-0.0000585	0.0002246	0.0035	1.33		6664.01	6664.01	No	25.98	Si
SLU 84	fin.	-234.73	-2009	-0.0000534	0.0002246	0.0035	1.33		6672.28	6672.28	No	28.43	Si
SLU 70	ini.	256.48	-606	-0.0000585	0.0002246	0.0035	1.33		6664.01	6664.01	No	25.98	Si
SLU 70	fin.	-116.01	-1646	-0.0000261	0.0002246	0.0035	1.33		6672.28	6672.28	No	57.51	Si
SLU 72	ini.	255.65	-597	-0.0000583	0.0002246	0.0035	1.33		6664.01	6664.01	No	26.07	Si
SLU 72	fin.	-108.54	-1618	-0.0000244	0.0002246	0.0035	1.33		6672.28	6672.28	No	61.47	Si
SLU 79	ini.	258.32	-686	-0.0000589	0.0002246	0.0035	1.33		6664.01	6664.01	No	25.8	Si
SLU 79	fin.	-195.06	-1905	-0.0000442	0.0002246	0.0035	1.33		6672.28	6672.28	No	34.21	Si
SLU 83	ini.	255.9	-716	-0.0000583	0.0002246	0.0035	1.33		6664.01	6664.01	No	26.04	Si
SLU 83	fin.	-233.14	-2006	-0.000053	0.0002246	0.0035	1.33		6672.28	6672.28	No	28.62	Si
SLU 69	ini.	255.88	-604	-0.0000583	0.0002246	0.0035	1.33		6664.01	6664.01	No	26.04	Si
SLU 69	fin.	-114.42	-1643	-0.0000258	0.0002246	0.0035	1.33		6672.28	6672.28	No	58.31	Si
SLU 75	ini.	255.93	-687	-0.0000584	0.0002246	0.0035	1.33		6664.01	6664.01	No	26.04	Si
SLU 75	fin.	-204.44	-1913	-0.0000464	0.0002246	0.0035	1.33		6672.28	6672.28	No	32.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	256.5	-1452	1.33	0	308	6344	3824	3392	6652	No	4.58	Si
SLU 84	fin.	-234.73	-1895	1.33	0	308	6344	3824	3392	6652	No	3.51	Si
SLU 78	ini.	259.76	-1375	1.33	0	308	6344	3824	3392	6652	No	4.84	Si
SLU 78	fin.	-204.12	-1818	1.33	0	308	6344	3824	3392	6652	No	3.66	Si
SLU 81	ini.	252.07	-1432	1.33	0	308	6344	3824	3392	6652	No	4.64	Si
SLU 81	fin.	-233.46	-1875	1.33	0	308	6344	3824	3392	6652	No	3.55	Si
SLU 75	ini.	255.93	-1359	1.33	0	308	6344	3824	3392	6652	No	4.9	Si
SLU 75	fin.	-204.44	-1802	1.33	0	308	6344	3824	3392	6652	No	3.69	Si
SLU 83	ini.	255.9	-1448	1.33	0	308	6344	3824	3392	6652	No	4.59	Si
SLU 83	fin.	-233.14	-1891	1.33	0	308	6344	3824	3392	6652	No	3.52	Si
SLU 79	ini.	258.32	-1345	1.33	0	308	6344	3824	3392	6652	No	4.95	Si
SLU 79	fin.	-195.06	-1788	1.33	0	308	6344	3824	3392	6652	No	3.72	Si
SLU 74	ini.	255.33	-1355	1.33	0	308	6344	3824	3392	6652	No	4.91	Si
SLU 74	fin.	-202.85	-1798	1.33	0	308	6344	3824	3392	6652	No	3.7	Si
SLU 80	ini.	258.93	-1349	1.33	0	308	6344	3824	3392	6652	No	4.93	Si
SLU 80	fin.	-196.65	-1792	1.33	0	308	6344	3824	3392	6652	No	3.71	Si
SLU 82	ini.	252.67	-1436	1.33	0	308	6344	3824	3392	6652	No	4.63	Si
SLU 82	fin.	-235.05	-1879	1.33	0	308	6344	3824	3392	6652	No	3.54	Si
SLU 77	ini.	259.15	-1371	1.33	0	308	6344	3824	3392	6652	No	4.85	Si
SLU 77	fin.	-202.53	-1814	1.33	0	308	6344	3824	3392	6652	No	3.67	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	459.43	713	-0.0001055	0.0003369	0.0035	1.33		6848.53	6848.53		14.91	Si
SLV 10	fin.	796.53	590	-0.000187	0.0003369	0.0035	1.33		6848.53	6848.53		8.6	Si
SLV 16	ini.	252.61	-930	-0.0000573	0.0003369	0.0035	1.33		6848.53	6848.53		27.11	Si
SLV 16	fin.	-689.71	-2753	-0.0001606	0.0003369	0.0035	1.33		6857.15	6857.15		9.94	Si
SLV 6	ini.	380.12	807	-0.0000869	0.0003369	0.0035	1.33		6848.53	6848.53		18.02	Si
SLV 6	fin.	1010.07	1194	-0.0002408	0.0003369	0.0035	1.33		6848.53	6848.53		6.78	Si
SLV 8	ini.	-81.38	-1574	-0.0000183	0.0003369	0.0035	1.33		6857.15	6857.15		84.26	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	fin.	-922.92	-2928	-0.0002183	0.0003369	0.0035	1.33		6857.15	6857.15		7.43	Si
SLV 9	ini.	457.13	666	-0.000105	0.0003369	0.0035	1.33		6848.53	6848.53		14.98	Si
SLV 9	fin.	726.96	445	-0.0001699	0.0003369	0.0035	1.33		6848.53	6848.53		9.42	Si
SLV 5	ini.	377.83	760	-0.0000863	0.0003369	0.0035	1.33		6848.53	6848.53		18.13	Si
SLV 5	fin.	940.5	1049	-0.0002231	0.0003369	0.0035	1.33		6848.53	6848.53		7.28	Si
SLV 12	ini.	-2.07	-1668	-0.0000005	0.0003369	0.0035	1.33		6857.15	6857.15		3308.19	Si
SLV 12	fin.	-1136.46	-3532	-0.0002731	0.0003369	0.0035	1.33		6857.15	6857.15		6.03	Si
SLV 11	ini.	-4.37	-1715	-0.000001	0.0003369	0.0035	1.33		6857.15	6857.15		1569.9	Si
SLV 11	fin.	-1206.02	-3676	-0.0002913	0.0003369	0.0035	1.33		6857.15	6857.15		5.69	Si
SLV 15	ini.	249.04	-1004	-0.0000565	0.0003369	0.0035	1.33		6848.53	6848.53		27.5	Si
SLV 15	fin.	-797.94	-2978	-0.0001871	0.0003369	0.0035	1.33		6857.15	6857.15		8.59	Si
SLV 7	ini.	-83.67	-1621	-0.0000188	0.0003369	0.0035	1.33		6857.15	6857.15		81.95	Si
SLV 7	fin.	-992.48	-3072	-0.0002359	0.0003369	0.0035	1.33		6857.15	6857.15		6.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	252.61	-2117	1.33	0	463	6344	5736	3392	6806		3.22	Si
SLV 16	fin.	-689.71	-2575	1.33	0	463	6344	5736	3392	6806		2.64	Si
SLV 8	ini.	-81.38	-2174	1.33	0	463	6344	5736	3392	6806		3.13	Si
SLV 8	fin.	-922.92	-3043	1.33	0	463	6344	5736	3392	6806		2.24	Si
SLV 11	ini.	-4.37	-2881	1.33	0	463	6344	5736	3392	6806		2.36	Si
SLV 11	fin.	-1206.02	-3729	1.33	0	463	6344	5736	3392	6806		1.83	Si
SLV 15	ini.	249.04	-2374	1.33	0	463	6344	5736	3392	6806		2.87	Si
SLV 15	fin.	-797.94	-2832	1.33	0	463	6344	5736	3392	6806		2.4	Si
SLV 12	ini.	-2.07	-2716	1.33	0	463	6344	5736	3392	6806		2.51	Si
SLV 12	fin.	-1136.46	-3564	1.33	0	463	6344	5736	3392	6806		1.91	Si
SLV 7	ini.	-83.67	-2339	1.33	0	463	6344	5736	3392	6806		2.91	Si
SLV 7	fin.	-992.48	-3208	1.33	0	463	6344	5736	3392	6806		2.12	Si
SLD 11	ini.	103.93	-1730	1.33	0	463	6344	5736	3392	6806		3.93	Si
SLD 11	fin.	-584.46	-2293	1.33	0	463	6344	5736	3392	6806		2.97	Si
SLD 12	ini.	104.93	-1658	1.33	0	463	6344	5736	3392	6806		4.1	Si
SLD 12	fin.	-554.09	-2221	1.33	0	463	6344	5736	3392	6806		3.06	Si
SLD 8	ini.	71.34	-1434	1.33	0	463	6344	5736	3392	6806		4.75	Si
SLD 8	fin.	-465.05	-2004	1.33	0	463	6344	5736	3392	6806		3.4	Si
SLD 7	ini.	70.34	-1506	1.33	0	463	6344	5736	3392	6806		4.52	Si
SLD 7	fin.	-495.42	-2076	1.33	0	463	6344	5736	3392	6806		3.28	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.686	SLV 11	Si
V_SLV	1.825	SLV 11	Si
PF_SLU	25.655	SLU 78	Si
V_SLU	3.509	SLU 84	Si

Trave di accoppiamento 60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	1.39	3.39	2	-5.093	6.506	1.39	3.39	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	1228.12	1507	-0.0001279	0.0001872	0.0035	2		14344.28	14344.28	No	11.68	Si
SLU 81	fin.	-208.51	-1031	-0.0000208	0.0001872	0.0035	2		14357.01	14357.01	No	68.86	Si
SLU 77	ini.	1227.47	1484	-0.0001278	0.0001872	0.0035	2		14344.28	14344.28	No	11.69	Si
SLU 77	fin.	-215.98	-1030	-0.0000215	0.0001872	0.0035	2		14357.01	14357.01	No	66.47	Si
SLU 75	ini.	1209.99	1597	-0.0001259	0.0001872	0.0035	2		14344.28	14344.28	No	11.85	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	fin.	-203.98	-908	-0.0000203	0.0001872	0.0035	2		14357.01	14357.01	No	70.38	Si
SLU 82	ini.	1224.78	1637	-0.0001275	0.0001872	0.0035	2		14344.28	14344.28	No	11.71	Si
SLU 82	fin.	-200.84	-922	-0.00002	0.0001872	0.0035	2		14357.01	14357.01	No	71.48	Si
SLU 80	ini.	1215.85	1584	-0.0001266	0.0001872	0.0035	2		14344.28	14344.28	No	11.8	Si
SLU 80	fin.	-213.61	-920	-0.0000213	0.0001872	0.0035	2		14357.01	14357.01	No	67.21	Si
SLU 83	ini.	1242.26	1524	-0.0001295	0.0001872	0.0035	2		14344.28	14344.28	No	11.55	Si
SLU 83	fin.	-212.85	-1045	-0.0000212	0.0001872	0.0035	2		14357.01	14357.01	No	67.45	Si
SLU 84	ini.	1238.92	1654	-0.0001291	0.0001872	0.0035	2		14344.28	14344.28	No	11.58	Si
SLU 84	fin.	-205.18	-936	-0.0000204	0.0001872	0.0035	2		14357.01	14357.01	No	69.97	Si
SLU 78	ini.	1224.13	1614	-0.0001275	0.0001872	0.0035	2		14344.28	14344.28	No	11.72	Si
SLU 78	fin.	-208.32	-922	-0.0000208	0.0001872	0.0035	2		14357.01	14357.01	No	68.92	Si
SLU 79	ini.	1219.19	1454	-0.0001269	0.0001872	0.0035	2		14344.28	14344.28	No	11.77	Si
SLU 79	fin.	-221.27	-1028	-0.0000221	0.0001872	0.0035	2		14357.01	14357.01	No	64.88	Si
SLU 74	ini.	1213.33	1467	-0.0001263	0.0001872	0.0035	2		14344.28	14344.28	No	11.82	Si
SLU 74	fin.	-211.64	-1016	-0.0000211	0.0001872	0.0035	2		14357.01	14357.01	No	67.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 42	ini.	1030.2	874	2	0	812	3965	8384	5100	4776	No	5.47	Si
SLU 42	fin.	-154.34	2120	2	0	812	3965	8384	5100	4776	No	2.25	Si
SLU 77	ini.	1227.47	731	2	0	812	3965	8384	5100	4776	No	6.53	Si
SLU 77	fin.	-215.98	2143	2	0	812	3965	8384	5100	4776	No	2.23	Si
SLU 84	ini.	1238.92	874	2	0	812	3965	8384	5100	4776	No	5.47	Si
SLU 84	fin.	-205.18	2287	2	0	812	3965	8384	5100	4776	No	2.09	Si
SLU 75	ini.	1209.99	793	2	0	812	3965	8384	5100	4776	No	6.02	Si
SLU 75	fin.	-203.98	2168	2	0	812	3965	8384	5100	4776	No	2.2	Si
SLU 76	ini.	1199.48	798	2	0	812	3965	8384	5100	4776	No	5.99	Si
SLU 76	fin.	-204.16	2142	2	0	812	3965	8384	5100	4776	No	2.23	Si
SLU 78	ini.	1224.13	785	2	0	812	3965	8384	5100	4776	No	6.08	Si
SLU 78	fin.	-208.32	2201	2	0	812	3965	8384	5100	4776	No	2.17	Si
SLU 81	ini.	1228.12	828	2	0	812	3965	8384	5100	4776	No	5.77	Si
SLU 81	fin.	-208.51	2197	2	0	812	3965	8384	5100	4776	No	2.17	Si
SLU 80	ini.	1215.85	754	2	0	812	3965	8384	5100	4776	No	6.33	Si
SLU 80	fin.	-213.61	2137	2	0	812	3965	8384	5100	4776	No	2.24	Si
SLU 83	ini.	1242.26	820	2	0	812	3965	8384	5100	4776	No	5.83	Si
SLU 83	fin.	-212.85	2230	2	0	812	3965	8384	5100	4776	No	2.14	Si
SLU 82	ini.	1224.78	882	2	0	812	3965	8384	5100	4776	No	5.42	Si
SLU 82	fin.	-200.84	2255	2	0	812	3965	8384	5100	4776	No	2.12	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	995.2	-7245	-0.0001014	0.0002807	0.0035	2		14202.07	14202.07		14.27	Si
SLV 1	fin.	-3663.86	-4424	-0.000414	0.0002807	0.0035	2		14215.41	14215.41		3.88	Si
SLV 3	ini.	837.89	-8409	-0.0000849	0.0002807	0.0035	2		14202.07	14202.07		16.95	Si
SLV 3	fin.	-4463.15	-4931	-0.0005234	0.0002807	0.0035	2		14215.41	14215.41		3.19	Si
SLV 14	ini.	869.36	10309	-0.0000882	0.0002807	0.0035	2		14202.07	14202.07		16.34	Si
SLV 14	fin.	4127.25	3497	-0.000477	0.0002807	0.0035	2		14202.07	14202.07		3.44	Si
SLV 13	ini.	893.53	9487	-0.0000907	0.0002807	0.0035	2		14202.07	14202.07		15.89	Si
SLV 13	fin.	3741.86	3087	-0.0004248	0.0002807	0.0035	2		14202.07	14202.07		3.8	Si
SLV 2	ini.	971.03	-6423	-0.0000989	0.0002807	0.0035	2		14202.07	14202.07		14.63	Si
SLV 2	fin.	-3278.47	-4014	-0.000364	0.0002807	0.0035	2		14215.41	14215.41		4.34	Si
SLV 16	ini.	712.05	9146	-0.0000719	0.0002807	0.0035	2		14202.07	14202.07		19.95	Si
SLV 16	fin.	3327.96	2989	-0.0003707	0.0002807	0.0035	2		14202.07	14202.07		4.27	Si
SLV 4	ini.	813.71	-7587	-0.0000824	0.0002807	0.0035	2		14202.07	14202.07		17.45	Si
SLV 4	fin.	-4077.77	-4521	-0.0004698	0.0002807	0.0035	2		14215.41	14215.41		3.49	Si
SLV 7	ini.	614.46	-3763	-0.0000619	0.0002807	0.0035	2		14202.07	14202.07		23.11	Si
SLV 7	fin.	-2734.81	-2822	-0.0002965	0.0002807	0.0035	2		14215.41	14215.41		5.2	Si
SLV 15	ini.	736.22	8323	-0.0000744	0.0002807	0.0035	2		14202.07	14202.07		19.29	Si
SLV 15	fin.	2942.57	2579	-0.0003222	0.0002807	0.0035	2		14202.07	14202.07		4.83	Si
SLV 8	ini.	598.92	-3235	-0.0000603	0.0002807	0.0035	2		14202.07	14202.07		23.71	Si
SLV 8	fin.	-2487.12	-2558	-0.0002669	0.0002807	0.0035	2		14215.41	14215.41		5.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	736.22	12485	2	0	1217	3965	12577	5100	5182		0.42	No
SLV 15	fin.	2942.57	15283	2	0	1217	3965	12577	5100	5182		0.34	No
SLV 13	ini.	893.53	14535	2	0	1217	3965	12577	5100	5182		0.36	No
SLV 13	fin.	3741.86	20119	2	0	1217	3965	12577	5100	5182		0.26	No
SLV 4	ini.	813.71	-13779	2	0	1217	3965	12577	5100	5182		0.38	No
SLV 4	fin.	-4077.77	-17610	2	0	1217	3965	12577	5100	5182		0.29	No
SLV 16	ini.	712.05	13910	2	0	1217	3965	12577	5100	5182		0.37	No
SLV 16	fin.	3327.96	16970	2	0	1217	3965	12577	5100	5182		0.31	No
SLV 10	ini.	1092.79	8408	2	0	1217	3965	12577	5100	5182		0.62	No
SLV 10	fin.	2398.9	15044	2	0	1217	3965	12577	5100	5182		0.34	No
SLV 1	ini.	995.2	-13154	2	0	1217	3965	12577	5100	5182		0.39	No
SLV 1	fin.	-3663.86	-14461	2	0	1217	3965	12577	5100	5182		0.36	No
SLV 14	ini.	869.36	15961	2	0	1217	3965	12577	5100	5182		0.32	No
SLV 14	fin.	4127.25	21807	2	0	1217	3965	12577	5100	5182		0.24	No
SLV 9	ini.	1108.33	7491	2	0	1217	3965	12577	5100	5182		0.69	No
SLV 9	fin.	2151.22	13960	2	0	1217	3965	12577	5100	5182		0.37	No
SLV 2	ini.	971.03	-11728	2	0	1217	3965	12577	5100	5182		0.44	No
SLV 2	fin.	-3278.47	-12774	2	0	1217	3965	12577	5100	5182		0.41	No
SLV 3	ini.	837.89	-15205	2	0	1217	3965	12577	5100	5182		0.34	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-4463.15	-19297	2	0	1217	3965	12577	5100	5182		0.27	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.185	SLV 3	Si
V_SLV	0.238	SLV 14	No
PF_SLU	11.547	SLU 83	Si
V_SLU	2.089	SLU 84	Si

Trave di accoppiamento 61

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	4.19	4.82	0.63	-5.093	6.506	4.19	4.82	0.63	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-57.87	-174	-0.0000589	0.0001872	0.0035	0.63		1459.35	1459.35	No	25.22	Si
SLU 82	fin.	90.47	-255	-0.0000936	0.0001872	0.0035	0.63		1455.38	1455.38	No	16.09	Si
SLU 79	ini.	-73.85	-236	-0.0000757	0.0001872	0.0035	0.63		1459.35	1459.35	No	19.76	Si
SLU 79	fin.	89.53	-273	-0.0000926	0.0001872	0.0035	0.63		1455.38	1455.38	No	16.26	Si
SLU 80	ini.	-55.64	-161	-0.0000566	0.0001872	0.0035	0.63		1459.35	1459.35	No	26.23	Si
SLU 80	fin.	86.78	-240	-0.0000897	0.0001872	0.0035	0.63		1455.38	1455.38	No	16.77	Si
SLU 84	ini.	-58.84	-176	-0.0000599	0.0001872	0.0035	0.63		1459.35	1459.35	No	24.8	Si
SLU 84	fin.	91.41	-258	-0.0000946	0.0001872	0.0035	0.63		1455.38	1455.38	No	15.92	Si
SLU 74	ini.	-73.56	-237	-0.0000754	0.0001872	0.0035	0.63		1459.35	1459.35	No	19.84	Si
SLU 74	fin.	90.02	-274	-0.0000931	0.0001872	0.0035	0.63		1455.38	1455.38	No	16.17	Si
SLU 78	ini.	-56.33	-164	-0.0000573	0.0001872	0.0035	0.63		1459.35	1459.35	No	25.91	Si
SLU 78	fin.	88.2	-244	-0.0000912	0.0001872	0.0035	0.63		1455.38	1455.38	No	16.5	Si
SLU 83	ini.	-77.05	-251	-0.0000791	0.0001872	0.0035	0.63		1459.35	1459.35	No	18.94	Si
SLU 83	fin.	94.17	-290	-0.0000976	0.0001872	0.0035	0.63		1455.38	1455.38	No	15.45	Si
SLU 77	ini.	-74.54	-239	-0.0000764	0.0001872	0.0035	0.63		1459.35	1459.35	No	19.58	Si
SLU 77	fin.	90.96	-277	-0.0000942	0.0001872	0.0035	0.63		1455.38	1455.38	No	16	Si
SLU 81	ini.	-76.08	-249	-0.000078	0.0001872	0.0035	0.63		1459.35	1459.35	No	19.18	Si
SLU 81	fin.	93.23	-288	-0.0000966	0.0001872	0.0035	0.63		1455.38	1455.38	No	15.61	Si
SLU 75	ini.	-55.35	-162	-0.0000563	0.0001872	0.0035	0.63		1459.35	1459.35	No	26.36	Si
SLU 75	fin.	87.26	-242	-0.0000902	0.0001872	0.0035	0.63		1455.38	1455.38	No	16.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-74.54	2652	0.63	0	256	3965	2641	1607	4220	No	1.59	Si
SLU 77	fin.	90.96	-1443	0.63	0	256	3965	2641	1607	4220	No	2.93	Si
SLU 84	ini.	-58.84	2680	0.63	0	256	3965	2641	1607	4220	No	1.57	Si
SLU 84	fin.	91.41	-1534	0.63	0	256	3965	2641	1607	4220	No	2.75	Si
SLU 81	ini.	-76.08	2674	0.63	0	256	3965	2641	1607	4220	No	1.58	Si
SLU 81	fin.	93.23	-1443	0.63	0	256	3965	2641	1607	4220	No	2.93	Si
SLU 79	ini.	-73.85	2617	0.63	0	256	3965	2641	1607	4220	No	1.61	Si
SLU 79	fin.	89.53	-1424	0.63	0	256	3965	2641	1607	4220	No	2.96	Si
SLU 75	ini.	-55.35	2588	0.63	0	256	3965	2641	1607	4220	No	1.63	Si
SLU 75	fin.	87.26	-1496	0.63	0	256	3965	2641	1607	4220	No	2.82	Si
SLU 80	ini.	-55.64	2588	0.63	0	256	3965	2641	1607	4220	No	1.63	Si
SLU 80	fin.	86.78	-1496	0.63	0	256	3965	2641	1607	4220	No	2.82	Si
SLU 83	ini.	-77.05	2709	0.63	0	256	3965	2641	1607	4220	No	1.56	Si
SLU 83	fin.	94.17	-1462	0.63	0	256	3965	2641	1607	4220	No	2.89	Si
SLU 78	ini.	-56.33	2623	0.63	0	256	3965	2641	1607	4220	No	1.61	Si
SLU 78	fin.	88.2	-1515	0.63	0	256	3965	2641	1607	4220	No	2.79	Si
SLU 82	ini.	-57.87	2645	0.63	0	256	3965	2641	1607	4220	No	1.6	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	fin.	90.47	-1515	0.63	0	256	3965	2641	1607	4220	No	2.79	Si
SLU 74	ini.	-73.56	2617	0.63	0	256	3965	2641	1607	4220	No	1.61	Si
SLU 74	fin.	90.02	-1424	0.63	0	256	3965	2641	1607	4220	No	2.96	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-304.94	-1328	-0.0003375	0.0002807	0.0035	0.63		1469.89	1469.89		4.82	Si
SLV 12	fin.	227.72	-574	-0.0002447	0.0002807	0.0035	0.63		1465.76	1465.76		6.44	Si
SLV 1	ini.	253.21	1600	-0.0002749	0.0002807	0.0035	0.63		1465.76	1465.76		5.79	Si
SLV 1	fin.	-252.49	710	-0.0002733	0.0002807	0.0035	0.63		1469.89	1469.89		5.82	Si
SLV 16	ini.	-350.15	-1902	-0.0003956	0.0002807	0.0035	0.63		1469.89	1469.89		4.2	Si
SLV 16	fin.	369.32	-1057	-0.0004223	0.0002807	0.0035	0.63		1465.76	1465.76		3.97	Si
SLV 2	ini.	240.08	1496	-0.0002593	0.0002807	0.0035	0.63		1465.76	1465.76		6.11	Si
SLV 2	fin.	-229.67	644	-0.0002463	0.0002807	0.0035	0.63		1469.89	1469.89		6.4	Si
SLV 15	ini.	-337.02	-1799	-0.0003785	0.0002807	0.0035	0.63		1469.89	1469.89		4.36	Si
SLV 15	fin.	346.5	-991	-0.000392	0.0002807	0.0035	0.63		1465.76	1465.76		4.23	Si
SLV 3	ini.	145.26	1182	-0.0001515	0.0002807	0.0035	0.63		1465.76	1465.76		10.09	Si
SLV 3	fin.	-204.93	628	-0.0002177	0.0002807	0.0035	0.63		1469.89	1469.89		7.17	Si
SLV 11	ini.	-296.51	-1261	-0.000327	0.0002807	0.0035	0.63		1469.89	1469.89		4.96	Si
SLV 11	fin.	213.05	-531	-0.0002277	0.0002807	0.0035	0.63		1465.76	1465.76		6.88	Si
SLV 5	ini.	208.01	1025	-0.0002219	0.0002807	0.0035	0.63		1465.76	1465.76		7.05	Si
SLV 5	fin.	-110.89	227	-0.000114	0.0002807	0.0035	0.63		1469.89	1469.89		13.26	Si
SLV 14	ini.	-242.2	-1485	-0.000261	0.0002807	0.0035	0.63		1469.89	1469.89		6.07	Si
SLV 14	fin.	321.76	-975	-0.0003599	0.0002807	0.0035	0.63		1465.76	1465.76		4.56	Si
SLV 13	ini.	-229.07	-1381	-0.0002456	0.0002807	0.0035	0.63		1469.89	1469.89		6.42	Si
SLV 13	fin.	298.95	-909	-0.000331	0.0002807	0.0035	0.63		1465.76	1465.76		4.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-129.75	3138	0.63	0	383	3965	3962	1607	4348		1.39	Si
SLD 14	fin.	170.33	-1034	0.63	0	383	3965	3962	1607	4348		4.21	Si
SLV 9	ini.	63.32	2889	0.63	0	383	3965	3962	1607	4348		1.5	Si
SLV 9	fin.	54.54	-1945	0.63	0	383	3965	3962	1607	4348		2.24	Si
SLD 16	ini.	-176.07	3060	0.63	0	383	3965	3962	1607	4348		1.42	Si
SLD 16	fin.	190.98	-769	0.63	0	383	3965	3962	1607	4348		5.66	Si
SLV 15	ini.	-337.02	4578	0.63	0	383	3965	3962	1607	4348		0.95	No
SLV 15	fin.	346.5	-490	0.63	0	383	3965	3962	1607	4348		8.87	Si
SLV 14	ini.	-242.2	5002	0.63	0	383	3965	3962	1607	4348		0.87	No
SLV 14	fin.	321.76	-1104	0.63	0	383	3965	3962	1607	4348		3.94	Si
SLV 16	ini.	-350.15	4818	0.63	0	383	3965	3962	1607	4348		0.9	No
SLV 16	fin.	369.32	-488	0.63	0	383	3965	3962	1607	4348		8.9	Si
SLV 13	ini.	-229.07	4761	0.63	0	383	3965	3962	1607	4348		0.91	No
SLV 13	fin.	298.95	-1106	0.63	0	383	3965	3962	1607	4348		3.93	Si
SLD 13	ini.	-124.12	3034	0.63	0	383	3965	3962	1607	4348		1.43	Si
SLD 13	fin.	160.53	-1035	0.63	0	383	3965	3962	1607	4348		4.2	Si
SLV 10	ini.	54.89	3044	0.63	0	383	3965	3962	1607	4348		1.43	Si
SLV 10	fin.	69.21	-1944	0.63	0	383	3965	3962	1607	4348		2.24	Si
SLD 15	ini.	-170.43	2956	0.63	0	383	3965	3962	1607	4348		1.47	Si
SLD 15	fin.	181.18	-770	0.63	0	383	3965	3962	1607	4348		5.65	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.969	SLV 16	Si
V_SLV	0.869	SLV 14	No
PF_SLU	15.455	SLU 83	Si
V_SLU	1.558	SLU 83	Si

Trave di accoppiamento 62

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	-3.314	1.39	2.29	0.9	-7.463	-3.314	1.39	2.29	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-238.44	-2769	-0.0001223	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.43	Si
SLU 81	fin.	371.42	-2786	-0.0001974	0.0001872	0.0035	0.9		2959	2959	No	7.97	Si
SLU 84	ini.	-237.58	-2830	-0.0001218	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.48	Si
SLU 84	fin.	373.39	-2825	-0.0001985	0.0001872	0.0035	0.9		2959	2959	No	7.92	Si
SLU 61	ini.	-240.51	-2482	-0.0001234	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.33	Si
SLU 61	fin.	373.43	-2592	-0.0001985	0.0001872	0.0035	0.9		2959	2959	No	7.92	Si
SLU 62	ini.	-241.99	-2535	-0.0001242	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.25	Si
SLU 62	fin.	379.17	-2636	-0.0002019	0.0001872	0.0035	0.9		2959	2959	No	7.8	Si
SLU 82	ini.	-237.27	-2773	-0.0001217	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.49	Si
SLU 82	fin.	369.54	-2784	-0.0001963	0.0001872	0.0035	0.9		2959	2959	No	8.01	Si
SLU 83	ini.	-238.75	-2826	-0.0001225	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.42	Si
SLU 83	fin.	375.28	-2828	-0.0001996	0.0001872	0.0035	0.9		2959	2959	No	7.88	Si
SLU 60	ini.	-241.68	-2478	-0.000124	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.27	Si
SLU 60	fin.	375.31	-2595	-0.0001996	0.0001872	0.0035	0.9		2959	2959	No	7.88	Si
SLU 63	ini.	-240.82	-2539	-0.0001236	0.0001872	0.0035	0.9		2964.67	2964.67	No	12.31	Si
SLU 63	fin.	377.29	-2634	-0.0002008	0.0001872	0.0035	0.9		2959	2959	No	7.84	Si
SLU 56	ini.	-220.57	-2565	-0.0001127	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.44	Si
SLU 56	fin.	355.31	-2568	-0.000188	0.0001872	0.0035	0.9		2959	2959	No	8.33	Si
SLU 58	ini.	-221.17	-2530	-0.000113	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.4	Si
SLU 58	fin.	354.21	-2545	-0.0001873	0.0001872	0.0035	0.9		2959	2959	No	8.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-216.16	-3665	0.9	0	329	7137	3773	2295	6068	No	1.66	Si
SLU 78	fin.	349.54	3116	0.9	0	329	7137	3773	2295	6068	No	1.95	Si
SLU 84	ini.	-237.58	-3602	0.9	0	329	7137	3773	2295	6068	No	1.68	Si
SLU 84	fin.	373.39	3218	0.9	0	329	7137	3773	2295	6068	No	1.89	Si
SLU 75	ini.	-215.86	-3589	0.9	0	329	7137	3773	2295	6068	No	1.69	Si
SLU 75	fin.	345.69	3069	0.9	0	329	7137	3773	2295	6068	No	1.98	Si
SLU 74	ini.	-217.02	-3581	0.9	0	329	7137	3773	2295	6068	No	1.69	Si
SLU 74	fin.	347.57	3074	0.9	0	329	7137	3773	2295	6068	No	1.97	Si
SLU 82	ini.	-237.27	-3526	0.9	0	329	7137	3773	2295	6068	No	1.72	Si
SLU 82	fin.	369.54	3170	0.9	0	329	7137	3773	2295	6068	No	1.91	Si
SLU 77	ini.	-217.33	-3657	0.9	0	329	7137	3773	2295	6068	No	1.66	Si
SLU 77	fin.	351.42	3122	0.9	0	329	7137	3773	2295	6068	No	1.94	Si
SLU 83	ini.	-238.75	-3594	0.9	0	329	7137	3773	2295	6068	No	1.69	Si
SLU 83	fin.	375.28	3223	0.9	0	329	7137	3773	2295	6068	No	1.88	Si
SLU 76	ini.	-215.68	-3546	0.9	0	329	7137	3773	2295	6068	No	1.71	Si
SLU 76	fin.	343.33	3040	0.9	0	329	7137	3773	2295	6068	No	2	Si
SLU 80	ini.	-216.77	-3617	0.9	0	329	7137	3773	2295	6068	No	1.68	Si
SLU 80	fin.	348.44	3091	0.9	0	329	7137	3773	2295	6068	No	1.96	Si
SLU 79	ini.	-217.93	-3608	0.9	0	329	7137	3773	2295	6068	No	1.68	Si
SLU 79	fin.	350.32	3097	0.9	0	329	7137	3773	2295	6068	No	1.96	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1813.33	1224	-0.0012882	0.0002807	0.0035	0.9		2995.37	2995.37		1.65	Si
SLV 14	fin.	2518.28	-6061	-0.0022172	0.0002807	0.0035	0.9		2989.59	2989.59		1.19	Si
SLV 3	ini.	1525.24	-5121	-0.0010171	0.0002807	0.0035	0.9		2989.59	2989.59		1.96	Si
SLV 3	fin.	-2054.48	2360	-0.0015504	0.0002807	0.0035	0.9		2995.37	2995.37		1.46	Si
SLV 4	ini.	1689.37	-5562	-0.001169	0.0002807	0.0035	0.9		2989.59	2989.59		1.77	Si
SLV 4	fin.	-2262.31	2670	-0.0018134	0.0002807	0.0035	0.9		2995.37	2995.37		1.32	Si
SLV 16	ini.	-2074.53	2422	-0.001574	0.0002807	0.0035	0.9		2995.37	2995.37		1.44	Si
SLV 16	fin.	2900.45	-6406	-0.0030123	0.0002807	0.0035	0.9		2989.59	2989.59		1.03	Si
SLV 15	ini.	-2238.66	2863	-0.0017812	0.0002807	0.0035	0.9		2995.37	2995.37		1.34	Si
SLV 15	fin.	3108.28	-6716	-0.0035154	0.0002807	0.0035	0.9		2989.59	2989.59		0.96	No
SLV 11	ini.	-1196.71	1388	-0.0007405	0.0002807	0.0035	0.9		2995.37	2995.37		2.5	Si
SLV 11	fin.	1710.05	-3886	-0.0011889	0.0002807	0.0035	0.9		2989.59	2989.59		1.75	Si
SLV 13	ini.	-1977.46	1664	-0.0014626	0.0002807	0.0035	0.9		2995.37	2995.37		1.51	Si
SLV 13	fin.	2726.11	-6371	-0.0026157	0.0002807	0.0035	0.9		2989.59	2989.59		1.1	Si
SLV 12	ini.	-1091.23	1104	-0.0006596	0.0002807	0.0035	0.9		2995.37	2995.37		2.74	Si
SLV 12	fin.	1576.48	-3687	-0.0010633	0.0002807	0.0035	0.9		2989.59	2989.59		1.9	Si
SLV 2	ini.	1950.58	-6760	-0.0014368	0.0002807	0.0035	0.9		2989.59	2989.59		1.53	Si
SLV 2	fin.	-2644.48	3015	-0.0024409	0.0002807	0.0035	0.9		2995.37	2995.37		1.13	Si
SLV 1	ini.	1786.44	-6320	-0.0012643	0.0002807	0.0035	0.9		2989.59	2989.59		1.67	Si
SLV 1	fin.	-2436.65	2705	-0.0020729	0.0002807	0.0035	0.9		2995.37	2995.37		1.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-2238.66	5939	0.9	0	493	7137	5660	2295	7630		1.28	Si
SLV 15	fin.	3108.28	11618	0.9	0	493	7137	5660	2295	7630		0.66	No
SLV 4	ini.	1689.37	-10549	0.9	0	493	7137	5660	2295	7630		0.72	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-2262.31	-6843	0.9	0	493	7137	5660	2295	7630		1.11	Si
SLD 15	ini.	-1038.85	1092	0.9	0	493	7137	5660	2295	7630		6.99	Si
SLD 15	fin.	1456.88	6153	0.9	0	493	7137	5660	2295	7630		1.24	Si
SLV 1	ini.	1786.44	-10193	0.9	0	493	7137	5660	2295	7630		0.75	No
SLV 1	fin.	-2436.65	-6805	0.9	0	493	7137	5660	2295	7630		1.12	Si
SLV 3	ini.	1525.24	-9801	0.9	0	493	7137	5660	2295	7630		0.78	No
SLV 3	fin.	-2054.48	-6179	0.9	0	493	7137	5660	2295	7630		1.23	Si
SLD 2	ini.	750.76	-6094	0.9	0	493	7137	5660	2295	7630		1.25	Si
SLD 2	fin.	-993.09	-2004	0.9	0	493	7137	5660	2295	7630		3.81	Si
SLV 13	ini.	-1977.46	5547	0.9	0	493	7137	5660	2295	7630		1.38	Si
SLV 13	fin.	2726.11	10992	0.9	0	493	7137	5660	2295	7630		0.69	No
SLV 14	ini.	-1813.33	4800	0.9	0	493	7137	5660	2295	7630		1.59	Si
SLV 14	fin.	2518.28	10328	0.9	0	493	7137	5660	2295	7630		0.74	No
SLV 16	ini.	-2074.53	5192	0.9	0	493	7137	5660	2295	7630		1.47	Si
SLV 16	fin.	2900.45	10954	0.9	0	493	7137	5660	2295	7630		0.7	No
SLV 2	ini.	1950.58	-10941	0.9	0	493	7137	5660	2295	7630		0.7	No
SLV 2	fin.	-2644.48	-7469	0.9	0	493	7137	5660	2295	7630		1.02	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.962	SLV 15	No
V_SLV	0.657	SLV 15	No
PF_SLU	7.804	SLU 62	Si
V_SLU	1.656	SLU 78	Si

Trave di accoppiamento 64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.233	-3.314	1.39	2.29	0.9	-3.233	-3.314	1.39	2.29	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 64	ini.	373.14	-1487	-0.0001984	0.0001872	0.0035	0.9		2959	2959	No	7.93	Si
SLU 64	fin.	172.14	-1073	-0.0000872	0.0001872	0.0035	0.9		2959	2959	No	17.19	Si
SLU 65	ini.	377.94	-1495	-0.0002012	0.0001872	0.0035	0.9		2959	2959	No	7.83	Si
SLU 65	fin.	168.37	-1068	-0.0000852	0.0001872	0.0035	0.9		2959	2959	No	17.57	Si
SLU 67	ini.	378.25	-1516	-0.0002014	0.0001872	0.0035	0.9		2959	2959	No	7.82	Si
SLU 67	fin.	181.93	-1109	-0.0000923	0.0001872	0.0035	0.9		2959	2959	No	16.26	Si
SLU 69	ini.	377.42	-1529	-0.0002009	0.0001872	0.0035	0.9		2959	2959	No	7.84	Si
SLU 69	fin.	191.25	-1136	-0.0000972	0.0001872	0.0035	0.9		2959	2959	No	15.47	Si
SLU 71	ini.	377.24	-1520	-0.0002008	0.0001872	0.0035	0.9		2959	2959	No	7.84	Si
SLU 71	fin.	186.25	-1121	-0.0000946	0.0001872	0.0035	0.9		2959	2959	No	15.89	Si
SLU 68	ini.	379.99	-1511	-0.0002024	0.0001872	0.0035	0.9		2959	2959	No	7.79	Si
SLU 68	fin.	175.42	-1092	-0.0000889	0.0001872	0.0035	0.9		2959	2959	No	16.87	Si
SLU 72	ini.	380.12	-1525	-0.0002025	0.0001872	0.0035	0.9		2959	2959	No	7.78	Si
SLU 72	fin.	183.99	-1118	-0.0000934	0.0001872	0.0035	0.9		2959	2959	No	16.08	Si
SLU 49	ini.	366	-1414	-0.0001942	0.0001872	0.0035	0.9		2959	2959	No	8.08	Si
SLU 49	fin.	151.95	-995	-0.0000766	0.0001872	0.0035	0.9		2959	2959	No	19.47	Si
SLU 66	ini.	375.37	-1512	-0.0001997	0.0001872	0.0035	0.9		2959	2959	No	7.88	Si
SLU 66	fin.	184.19	-1112	-0.0000935	0.0001872	0.0035	0.9		2959	2959	No	16.07	Si
SLU 70	ini.	380.3	-1533	-0.0002026	0.0001872	0.0035	0.9		2959	2959	No	7.78	Si
SLU 70	fin.	188.98	-1133	-0.000096	0.0001872	0.0035	0.9		2959	2959	No	15.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	363.57	-1124	0.9	0	329	7137	3773	2295	6068	No	5.4	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	250.89	1368	0.9	0	329	7137	3773	2295	6068	No	4.44	Si
SLU 75	ini.	361.52	-1109	0.9	0	329	7137	3773	2295	6068	No	5.47	Si
SLU 75	fin.	243.84	1324	0.9	0	329	7137	3773	2295	6068	No	4.58	Si
SLU 80	ini.	363.39	-1119	0.9	0	329	7137	3773	2295	6068	No	5.42	Si
SLU 80	fin.	245.9	1340	0.9	0	329	7137	3773	2295	6068	No	4.53	Si
SLU 74	ini.	358.64	-1100	0.9	0	329	7137	3773	2295	6068	No	5.51	Si
SLU 74	fin.	246.1	1331	0.9	0	329	7137	3773	2295	6068	No	4.56	Si
SLU 77	ini.	360.69	-1115	0.9	0	329	7137	3773	2295	6068	No	5.44	Si
SLU 77	fin.	253.15	1375	0.9	0	329	7137	3773	2295	6068	No	4.41	Si
SLU 84	ini.	354.17	-1071	0.9	0	329	7137	3773	2295	6068	No	5.67	Si
SLU 84	fin.	265.37	1398	0.9	0	329	7137	3773	2295	6068	No	4.34	Si
SLU 83	ini.	351.29	-1061	0.9	0	329	7137	3773	2295	6068	No	5.72	Si
SLU 83	fin.	267.63	1405	0.9	0	329	7137	3773	2295	6068	No	4.32	Si
SLU 82	ini.	352.12	-1056	0.9	0	329	7137	3773	2295	6068	No	5.75	Si
SLU 82	fin.	258.32	1354	0.9	0	329	7137	3773	2295	6068	No	4.48	Si
SLU 79	ini.	360.51	-1110	0.9	0	329	7137	3773	2295	6068	No	5.47	Si
SLU 79	fin.	248.16	1347	0.9	0	329	7137	3773	2295	6068	No	4.5	Si
SLU 81	ini.	349.24	-1047	0.9	0	329	7137	3773	2295	6068	No	5.8	Si
SLU 81	fin.	260.58	1361	0.9	0	329	7137	3773	2295	6068	No	4.46	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1284.62	746	-0.0008104	0.0002807	0.0035	0.9		2995.37	2995.37		2.33	Si
SLV 14	fin.	1639.43	-3133	-0.0011216	0.0002807	0.0035	0.9		2989.59	2989.59		1.82	Si
SLD 2	ini.	1139.83	-2012	-0.0006981	0.0002807	0.0035	0.9		2989.59	2989.59		2.62	Si
SLD 2	fin.	-676.7	701	-0.0003723	0.0002807	0.0035	0.9		2995.37	2995.37		4.43	Si
SLV 1	ini.	2066.78	-2837	-0.0015693	0.0002807	0.0035	0.9		2989.59	2989.59		1.45	Si
SLV 1	fin.	-1562.57	2457	-0.0010481	0.0002807	0.0035	0.9		2995.37	2995.37		1.92	Si
SLV 2	ini.	2301.7	-3165	-0.0018745	0.0002807	0.0035	0.9		2989.59	2989.59		1.3	Si
SLV 2	fin.	-1774.27	2784	-0.0012489	0.0002807	0.0035	0.9		2995.37	2995.37		1.69	Si
SLV 13	ini.	-1519.54	1074	-0.0010095	0.0002807	0.0035	0.9		2995.37	2995.37		1.97	Si
SLV 13	fin.	1851.13	-3461	-0.0013305	0.0002807	0.0035	0.9		2989.59	2989.59		1.62	Si
SLV 15	ini.	-1743.47	886	-0.0012184	0.0002807	0.0035	0.9		2995.37	2995.37		1.72	Si
SLV 15	fin.	2058.2	-4474	-0.0015592	0.0002807	0.0035	0.9		2989.59	2989.59		1.45	Si
SLV 6	ini.	1265.78	-1518	-0.0007971	0.0002807	0.0035	0.9		2989.59	2989.59		2.36	Si
SLV 6	fin.	-783.23	1837	-0.0004415	0.0002807	0.0035	0.9		2995.37	2995.37		3.82	Si
SLV 16	ini.	-1508.55	558	-0.0009998	0.0002807	0.0035	0.9		2995.37	2995.37		1.99	Si
SLV 16	fin.	1846.5	-4146	-0.0013256	0.0002807	0.0035	0.9		2989.59	2989.59		1.62	Si
SLV 4	ini.	2077.76	-3353	-0.0015824	0.0002807	0.0035	0.9		2989.59	2989.59		1.44	Si
SLV 4	fin.	-1567.21	1771	-0.0010523	0.0002807	0.0035	0.9		2995.37	2995.37		1.91	Si
SLV 3	ini.	1842.84	-3025	-0.0013219	0.0002807	0.0035	0.9		2989.59	2989.59		1.62	Si
SLV 3	fin.	-1355.51	1444	-0.0008686	0.0002807	0.0035	0.9		2995.37	2995.37		2.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-581.61	1471	0.9	0	493	7137	5660	2295	7630		5.19	Si
SLD 15	fin.	960.63	3927	0.9	0	493	7137	5660	2295	7630		1.94	Si
SLV 16	ini.	-1508.55	3856	0.9	0	493	7137	5660	2295	7630		1.98	Si
SLV 16	fin.	1846.5	7397	0.9	0	493	7137	5660	2295	7630		1.03	Si
SLV 11	ini.	-707.55	-99	0.9	0	493	7137	5660	2295	7630		76.69	Si
SLV 11	fin.	1067.16	4214	0.9	0	493	7137	5660	2295	7630		1.81	Si
SLV 15	ini.	-1743.47	4603	0.9	0	493	7137	5660	2295	7630		1.66	Si
SLV 15	fin.	2058.2	8103	0.9	0	493	7137	5660	2295	7630		0.94	No
SLV 13	ini.	-1519.54	5266	0.9	0	493	7137	5660	2295	7630		1.45	Si
SLV 13	fin.	1851.13	7383	0.9	0	493	7137	5660	2295	7630		1.03	Si
SLV 1	ini.	2066.78	-5579	0.9	0	493	7137	5660	2295	7630		1.37	Si
SLV 1	fin.	-1562.57	-5767	0.9	0	493	7137	5660	2295	7630		1.32	Si
SLV 2	ini.	2301.7	-6327	0.9	0	493	7137	5660	2295	7630		1.21	Si
SLV 2	fin.	-1774.27	-6472	0.9	0	493	7137	5660	2295	7630		1.18	Si
SLV 14	ini.	-1284.62	4518	0.9	0	493	7137	5660	2295	7630		1.69	Si
SLV 14	fin.	1639.43	6677	0.9	0	493	7137	5660	2295	7630		1.14	Si
SLV 3	ini.	1842.84	-6242	0.9	0	493	7137	5660	2295	7630		1.22	Si
SLV 3	fin.	-1355.51	-5047	0.9	0	493	7137	5660	2295	7630		1.51	Si
SLV 4	ini.	2077.76	-6990	0.9	0	493	7137	5660	2295	7630		1.09	Si
SLV 4	fin.	-1567.21	-5752	0.9	0	493	7137	5660	2295	7630		1.33	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.299	SLV 2	Si
V_SLV	0.942	SLV 15	No
PF_SLU	7.781	SLU 70	Si
V_SLU	4.318	SLU 83	Si

Trave di accoppiamento 65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.013	5.826	1.39	2.29	0.9	-3.013	5.826	1.39	2.29	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	1147.04	-2875	-0.0007495	0.0001872	0.0035	0.9		2959	2959	No	2.58	Si
SLU 77	fin.	-419.29	-1620	-0.0002254	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.07	Si
SLU 75	ini.	1131.96	-2860	-0.0007371	0.0001872	0.0035	0.9		2959	2959	No	2.61	Si
SLU 75	fin.	-411.07	-1623	-0.0002204	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.21	Si
SLU 78	ini.	1145.33	-2898	-0.0007481	0.0001872	0.0035	0.9		2959	2959	No	2.58	Si
SLU 78	fin.	-412.89	-1649	-0.0002215	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.18	Si
SLU 80	ini.	1134.97	-2875	-0.0007395	0.0001872	0.0035	0.9		2959	2959	No	2.61	Si
SLU 80	fin.	-408.44	-1638	-0.0002189	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.26	Si
SLU 74	ini.	1133.68	-2837	-0.0007385	0.0001872	0.0035	0.9		2959	2959	No	2.61	Si
SLU 74	fin.	-417.47	-1594	-0.0002243	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.1	Si
SLU 84	ini.	1147.77	-2915	-0.0007501	0.0001872	0.0035	0.9		2959	2959	No	2.58	Si
SLU 84	fin.	-411.98	-1665	-0.000221	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.2	Si
SLU 81	ini.	1136.11	-2854	-0.0007405	0.0001872	0.0035	0.9		2959	2959	No	2.6	Si
SLU 81	fin.	-416.56	-1611	-0.0002237	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.12	Si
SLU 79	ini.	1136.68	-2853	-0.000741	0.0001872	0.0035	0.9		2959	2959	No	2.6	Si
SLU 79	fin.	-414.84	-1610	-0.0002227	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.15	Si
SLU 82	ini.	1134.4	-2877	-0.0007391	0.0001872	0.0035	0.9		2959	2959	No	2.61	Si
SLU 82	fin.	-410.16	-1639	-0.0002199	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.23	Si
SLU 83	ini.	1149.48	-2892	-0.0007515	0.0001872	0.0035	0.9		2959	2959	No	2.57	Si
SLU 83	fin.	-418.38	-1636	-0.0002248	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	1149.48	-2558	0.9	0	329	7137	3773	2295	6068	No	2.37	Si
SLU 83	fin.	-418.38	-1623	0.9	0	329	7137	3773	2295	6068	No	3.74	Si
SLU 78	ini.	1145.33	-2501	0.9	0	329	7137	3773	2295	6068	No	2.43	Si
SLU 78	fin.	-412.89	-1654	0.9	0	329	7137	3773	2295	6068	No	3.67	Si
SLU 84	ini.	1147.77	-2501	0.9	0	329	7137	3773	2295	6068	No	2.43	Si
SLU 84	fin.	-411.98	-1656	0.9	0	329	7137	3773	2295	6068	No	3.66	Si
SLU 82	ini.	1134.4	-2468	0.9	0	329	7137	3773	2295	6068	No	2.46	Si
SLU 82	fin.	-410.16	-1649	0.9	0	329	7137	3773	2295	6068	No	3.68	Si
SLU 75	ini.	1131.96	-2467	0.9	0	329	7137	3773	2295	6068	No	2.46	Si
SLU 75	fin.	-411.07	-1647	0.9	0	329	7137	3773	2295	6068	No	3.68	Si
SLU 81	ini.	1136.11	-2525	0.9	0	329	7137	3773	2295	6068	No	2.4	Si
SLU 81	fin.	-416.56	-1616	0.9	0	329	7137	3773	2295	6068	No	3.76	Si
SLU 77	ini.	1147.04	-2557	0.9	0	329	7137	3773	2295	6068	No	2.37	Si
SLU 77	fin.	-419.29	-1621	0.9	0	329	7137	3773	2295	6068	No	3.74	Si
SLU 79	ini.	1136.68	-2530	0.9	0	329	7137	3773	2295	6068	No	2.4	Si
SLU 79	fin.	-414.84	-1608	0.9	0	329	7137	3773	2295	6068	No	3.77	Si
SLU 74	ini.	1133.68	-2524	0.9	0	329	7137	3773	2295	6068	No	2.4	Si
SLU 74	fin.	-417.47	-1614	0.9	0	329	7137	3773	2295	6068	No	3.76	Si
SLU 80	ini.	1134.97	-2473	0.9	0	329	7137	3773	2295	6068	No	2.45	Si
SLU 80	fin.	-408.44	-1642	0.9	0	329	7137	3773	2295	6068	No	3.7	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	2257.61	-3640	-0.0018126	0.0002807	0.0035	0.9		2989.59	2989.59		1.32	Si
SLV 1	fin.	-1557.22	-498	-0.0010433	0.0002807	0.0035	0.9		2995.37	2995.37		1.92	Si
SLD 3	ini.	1548.63	-2738	-0.0010381	0.0002807	0.0035	0.9		2989.59	2989.59		1.93	Si
SLD 3	fin.	-971.12	-757	-0.0005714	0.0002807	0.0035	0.9		2995.37	2995.37		3.08	Si
SLV 7	ini.	1793.07	-2692	-0.001271	0.0002807	0.0035	0.9		2989.59	2989.59		1.67	Si
SLV 7	fin.	-1262.02	-534	-0.0007922	0.0002807	0.0035	0.9		2995.37	2995.37		2.37	Si
SLD 4	ini.	1430.97	-2597	-0.0009345	0.0002807	0.0035	0.9		2989.59	2989.59		2.09	Si
SLD 4	fin.	-873.13	-794	-0.0005024	0.0002807	0.0035	0.9		2995.37	2995.37		3.43	Si
SLV 2	ini.	1983.56	-3313	-0.0014734	0.0002807	0.0035	0.9		2989.59	2989.59		1.51	Si
SLV 2	fin.	-1328.99	-584	-0.0008467	0.0002807	0.0035	0.9		2995.37	2995.37		2.25	Si
SLV 3	ini.	2533.38	-3718	-0.0022437	0.0002807	0.0035	0.9		2989.59	2989.59		1.18	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-1853.84	-291	-0.0013298	0.0002807	0.0035	0.9		2995.37	2995.37		1.62	Si
SLD 2	ini.	1310.49	-2562	-0.0008335	0.0002807	0.0035	0.9		2989.59	2989.59		2.28	Si
SLD 2	fin.	-743.77	-884	-0.0004154	0.0002807	0.0035	0.9		2995.37	2995.37		4.03	Si
SLV 8	ini.	1616.94	-2481	-0.0011006	0.0002807	0.0035	0.9		2989.59	2989.59		1.85	Si
SLV 8	fin.	-1115.33	-589	-0.0006778	0.0002807	0.0035	0.9		2995.37	2995.37		2.69	Si
SLD 1	ini.	1428.15	-2703	-0.0009321	0.0002807	0.0035	0.9		2989.59	2989.59		2.09	Si
SLD 1	fin.	-841.76	-848	-0.0004809	0.0002807	0.0035	0.9		2995.37	2995.37		3.56	Si
SLV 4	ini.	2259.33	-3390	-0.001815	0.0002807	0.0035	0.9		2989.59	2989.59		1.32	Si
SLV 4	fin.	-1625.61	-377	-0.0011059	0.0002807	0.0035	0.9		2995.37	2995.37		1.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-910.95	3042	0.9	0	493	7137	5660	2295	7630		2.51	Si
SLV 14	fin.	1234.18	3770	0.9	0	493	7137	5660	2295	7630		2.02	Si
SLD 4	ini.	1430.97	-3561	0.9	0	493	7137	5660	2295	7630		2.14	Si
SLD 4	fin.	-873.13	-3041	0.9	0	493	7137	5660	2295	7630		2.51	Si
SLV 7	ini.	1793.07	-5487	0.9	0	493	7137	5660	2295	7630		1.39	Si
SLV 7	fin.	-1262.02	-5380	0.9	0	493	7137	5660	2295	7630		1.42	Si
SLV 1	ini.	2257.61	-5236	0.9	0	493	7137	5660	2295	7630		1.46	Si
SLV 1	fin.	-1557.22	-4463	0.9	0	493	7137	5660	2295	7630		1.71	Si
SLV 2	ini.	1983.56	-4527	0.9	0	493	7137	5660	2295	7630		1.69	Si
SLV 2	fin.	-1328.99	-3803	0.9	0	493	7137	5660	2295	7630		2.01	Si
SLD 7	ini.	1235.97	-3383	0.9	0	493	7137	5660	2295	7630		2.26	Si
SLD 7	fin.	-721.73	-3002	0.9	0	493	7137	5660	2295	7630		2.54	Si
SLV 8	ini.	1616.94	-5031	0.9	0	493	7137	5660	2295	7630		1.52	Si
SLV 8	fin.	-1115.33	-4955	0.9	0	493	7137	5660	2295	7630		1.54	Si
SLV 4	ini.	2259.33	-5924	0.9	0	493	7137	5660	2295	7630		1.29	Si
SLV 4	fin.	-1625.61	-5503	0.9	0	493	7137	5660	2295	7630		1.39	Si
SLV 3	ini.	2533.38	-6633	0.9	0	493	7137	5660	2295	7630		1.15	Si
SLV 3	fin.	-1853.84	-6164	0.9	0	493	7137	5660	2295	7630		1.24	Si
SLD 3	ini.	1548.63	-3865	0.9	0	493	7137	5660	2295	7630		1.97	Si
SLD 3	fin.	-971.12	-3325	0.9	0	493	7137	5660	2295	7630		2.29	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.18	SLV 3	Si
V_SLV	1.15	SLV 3	Si
PF_SLU	2.574	SLU 83	Si
V_SLU	2.372	SLU 83	Si

Trave di accoppiamento 66

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.013	5.826	4.19	4.82	0.63	-3.013	5.826	4.19	4.82	0.63	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	236.83	-487	-0.0002649	0.0001872	0.0035	0.63		1455.38	1455.38	No	6.15	Si
SLU 78	fin.	-981.23	-2190	-0.0015965	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.49	Si
SLU 81	ini.	239.44	-458	-0.0002682	0.0001872	0.0035	0.63		1455.38	1455.38	No	6.08	Si
SLU 81	fin.	-980.4	-2163	-0.0015944	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.49	Si
SLU 75	ini.	236.73	-473	-0.0002648	0.0001872	0.0035	0.63		1455.38	1455.38	No	6.15	Si
SLU 75	fin.	-969.87	-2159	-0.001568	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.5	Si
SLU 82	ini.	231.87	-482	-0.0002586	0.0001872	0.0035	0.63		1455.38	1455.38	No	6.28	Si
SLU 82	fin.	-976.65	-2172	-0.0015849	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.49	Si
SLU 77	ini.	244.4	-463	-0.0002746	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.95	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-984.98	-2181	-0.001606	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.48	Si
SLU 84	ini.	231.97	-496	-0.0002587	0.0001872	0.0035	0.63		1455.38	1455.38	No	6.27	Si
SLU 84	fin.	-988.01	-2202	-0.0016137	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.48	Si
SLU 74	ini.	244.3	-449	-0.0002745	0.0001872	0.0035	0.63		1455.38	1455.38	No	5.96	Si
SLU 74	fin.	-973.62	-2151	-0.0015773	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.5	Si
SLU 83	ini.	239.54	-471	-0.0002684	0.0001872	0.0035	0.63		1455.38	1455.38	No	6.08	Si
SLU 83	fin.	-991.76	-2193	-0.0016233	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.47	Si
SLU 80	ini.	234.75	-483	-0.0002622	0.0001872	0.0035	0.63		1455.38	1455.38	No	6.2	Si
SLU 80	fin.	-973.32	-2172	-0.0015766	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.5	Si
SLU 79	ini.	242.32	-458	-0.0002719	0.0001872	0.0035	0.63		1455.38	1455.38	No	6.01	Si
SLU 79	fin.	-977.07	-2163	-0.001586	0.0001872	0.0035	0.63		1459.35	1459.35	No	1.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	236.83	-193	0.63	0	170	4996	2641	1607	4248	No	21.99	Si
SLU 78	fin.	-981.23	-3297	0.63	0	170	4996	2641	1607	4248	No	1.29	Si
SLU 77	ini.	244.4	-207	0.63	0	170	4996	2641	1607	4248	No	20.55	Si
SLU 77	fin.	-984.98	-3316	0.63	0	170	4996	2641	1607	4248	No	1.28	Si
SLU 83	ini.	239.54	-179	0.63	0	170	4996	2641	1607	4248	No	23.72	Si
SLU 83	fin.	-991.76	-3349	0.63	0	170	4996	2641	1607	4248	No	1.27	Si
SLU 82	ini.	231.87	-171	0.63	0	170	4996	2641	1607	4248	No	24.85	Si
SLU 82	fin.	-976.65	-3292	0.63	0	170	4996	2641	1607	4248	No	1.29	Si
SLU 81	ini.	239.44	-185	0.63	0	170	4996	2641	1607	4248	No	23.02	Si
SLU 81	fin.	-980.4	-3311	0.63	0	170	4996	2641	1607	4248	No	1.28	Si
SLU 80	ini.	234.75	-191	0.63	0	170	4996	2641	1607	4248	No	22.29	Si
SLU 80	fin.	-973.32	-3271	0.63	0	170	4996	2641	1607	4248	No	1.3	Si
SLU 79	ini.	242.32	-204	0.63	0	170	4996	2641	1607	4248	No	20.81	Si
SLU 79	fin.	-977.07	-3290	0.63	0	170	4996	2641	1607	4248	No	1.29	Si
SLU 75	ini.	236.73	-199	0.63	0	170	4996	2641	1607	4248	No	21.39	Si
SLU 75	fin.	-969.87	-3259	0.63	0	170	4996	2641	1607	4248	No	1.3	Si
SLU 84	ini.	231.97	-166	0.63	0	170	4996	2641	1607	4248	No	25.66	Si
SLU 84	fin.	-988.01	-3331	0.63	0	170	4996	2641	1607	4248	No	1.28	Si
SLU 74	ini.	244.3	-212	0.63	0	170	4996	2641	1607	4248	No	20.02	Si
SLU 74	fin.	-973.62	-3278	0.63	0	170	4996	2641	1607	4248	No	1.3	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1125.16	753	-0.001863	0.0002807	0.0035	0.63		1465.76	1465.76		1.3	Si
SLV 2	fin.	-1720.03	-3157	-0.0043486	0.0002807	0.0035	0.63		1469.89	1469.89		0.85	No
SLD 4	ini.	680.72	314	-0.0008977	0.0002807	0.0035	0.63		1465.76	1465.76		2.15	Si
SLD 4	fin.	-1191.95	-2267	-0.0020589	0.0002807	0.0035	0.63		1469.89	1469.89		1.23	Si
SLV 3	ini.	1516.89	1310	-0.0034778	0.0002807	0.0035	0.63		1465.76	1465.76		0.97	No
SLV 3	fin.	-2063.58	-3594	-0.0056615	0.0002807	0.0035	0.63		1469.89	1469.89		0.71	No
SLV 7	ini.	938.18	772	-0.0013954	0.0002807	0.0035	0.63		1465.76	1465.76		1.56	Si
SLV 7	fin.	-1353.59	-2373	-0.0026711	0.0002807	0.0035	0.63		1469.89	1469.89		1.09	Si
SLV 1	ini.	1307.41	952	-0.0024911	0.0002807	0.0035	0.63		1465.76	1465.76		1.12	Si
SLV 1	fin.	-1921.12	-3477	-0.0051343	0.0002807	0.0035	0.63		1469.89	1469.89		0.77	No
SLV 14	ini.	-1133.49	-1877	-0.0018787	0.0002807	0.0035	0.63		1469.89	1469.89		1.3	Si
SLV 14	fin.	680.76	561	-0.0008977	0.0002807	0.0035	0.63		1465.76	1465.76		2.15	Si
SLD 1	ini.	667.55	243	-0.0008751	0.0002807	0.0035	0.63		1465.76	1465.76		2.2	Si
SLD 1	fin.	-1216.49	-2354	-0.0021405	0.0002807	0.0035	0.63		1469.89	1469.89		1.21	Si
SLV 8	ini.	821.05	645	-0.001154	0.0002807	0.0035	0.63		1465.76	1465.76		1.79	Si
SLV 8	fin.	-1224.35	-2167	-0.0021675	0.0002807	0.0035	0.63		1469.89	1469.89		1.2	Si
SLD 3	ini.	758.97	399	-0.0010368	0.0002807	0.0035	0.63		1465.76	1465.76		1.93	Si
SLD 3	fin.	-1278.28	-2405	-0.0023632	0.0002807	0.0035	0.63		1469.89	1469.89		1.15	Si
SLV 4	ini.	1334.63	1112	-0.0026043	0.0002807	0.0035	0.63		1465.76	1465.76		1.1	Si
SLV 4	fin.	-1862.5	-3275	-0.0049113	0.0002807	0.0035	0.63		1469.89	1469.89		0.79	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	667.55	-1615	0.63	0	256	4996	3962	1607	5251		3.25	Si
SLD 1	fin.	-1216.49	-3752	0.63	0	256	4996	3962	1607	5251		1.4	Si
SLV 1	ini.	1307.41	-3496	0.63	0	256	4996	3962	1607	5251		1.5	Si
SLV 1	fin.	-1921.12	-5685	0.63	0	256	4996	3962	1607	5251		0.92	No
SLV 14	ini.	-1133.49	3688	0.63	0	256	4996	3962	1607	5251		1.42	Si
SLV 14	fin.	680.76	1485	0.63	0	256	4996	3962	1607	5251		3.54	Si
SLV 8	ini.	821.05	-2091	0.63	0	256	4996	3962	1607	5251		2.51	Si
SLV 8	fin.	-1224.35	-3830	0.63	0	256	4996	3962	1607	5251		1.37	Si
SLD 3	ini.	758.97	-1891	0.63	0	256	4996	3962	1607	5251		2.78	Si
SLD 3	fin.	-1278.28	-3936	0.63	0	256	4996	3962	1607	5251		1.33	Si
SLV 2	ini.	1125.16	-2963	0.63	0	256	4996	3962	1607	5251		1.77	Si
SLV 2	fin.	-1720.03	-5126	0.63	0	256	4996	3962	1607	5251		1.02	Si
SLV 3	ini.	1516.89	-4124	0.63	0	256	4996	3962	1607	5251		1.27	Si
SLV 3	fin.	-2063.58	-6108	0.63	0	256	4996	3962	1607	5251		0.86	No
SLV 4	ini.	1334.63	-3591	0.63	0	256	4996	3962	1607	5251		1.46	Si
SLV 4	fin.	-1862.5	-5550	0.63	0	256	4996	3962	1607	5251		0.95	No
SLD 4	ini.	680.72	-1662	0.63	0	256	4996	3962	1607	5251		3.16	Si
SLD 4	fin.	-1191.95	-3696	0.63	0	256	4996	3962	1607	5251		1.42	Si
SLV 7	ini.	938.18	-2433	0.63	0	256	4996	3962	1607	5251		2.16	Si
SLV 7	fin.	-1353.59	-4189	0.63	0	256	4996	3962	1607	5251		1.25	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.712	SLV 3	No
V_SLV	0.86	SLV 3	No
PF_SLU	1.471	SLU 83	Si
V_SLU	1.268	SLU 83	Si

Trave di accoppiamento 67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-24.633	1.266	6.92	8.34	1.42	-24.633	2.066	6.92	8.34	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	ini.	-291.32	-2432	-0.0000584	0.0001872	0.0035	1.42		7359.91	7359.91	No	25.26	Si
SLU 66	fin.	367.86	-1543	-0.0000743	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.98	Si
SLU 50	ini.	-296.36	-2286	-0.0000594	0.0001872	0.0035	1.42		7359.91	7359.91	No	24.83	Si
SLU 50	fin.	383.04	-1367	-0.0000775	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.19	Si
SLU 51	ini.	-289.11	-2274	-0.0000579	0.0001872	0.0035	1.42		7359.91	7359.91	No	25.46	Si
SLU 51	fin.	369.96	-1378	-0.0000747	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.87	Si
SLU 45	ini.	-286.13	-2241	-0.0000573	0.0001872	0.0035	1.42		7359.91	7359.91	No	25.72	Si
SLU 45	fin.	375.2	-1344	-0.0000758	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.59	Si
SLU 48	ini.	-296.58	-2314	-0.0000595	0.0001872	0.0035	1.42		7359.91	7359.91	No	24.82	Si
SLU 48	fin.	383.03	-1393	-0.0000775	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.19	Si
SLU 72	ini.	-294.31	-2465	-0.000059	0.0001872	0.0035	1.42		7359.91	7359.91	No	25.01	Si
SLU 72	fin.	362.62	-1577	-0.0000732	0.0001872	0.0035	1.42		7350.79	7350.79	No	20.27	Si
SLU 49	ini.	-289.33	-2301	-0.000058	0.0001872	0.0035	1.42		7359.91	7359.91	No	25.44	Si
SLU 49	fin.	369.95	-1404	-0.0000747	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.87	Si
SLU 69	ini.	-301.78	-2506	-0.0000605	0.0001872	0.0035	1.42		7359.91	7359.91	No	24.39	Si
SLU 69	fin.	375.69	-1592	-0.0000759	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.57	Si
SLU 43	ini.	-275.45	-2140	-0.0000551	0.0001872	0.0035	1.42		7359.91	7359.91	No	26.72	Si
SLU 43	fin.	367.38	-1269	-0.0000742	0.0001872	0.0035	1.42		7350.79	7350.79	No	20.01	Si
SLU 71	ini.	-301.56	-2478	-0.0000605	0.0001872	0.0035	1.42		7359.91	7359.91	No	24.41	Si
SLU 71	fin.	375.7	-1566	-0.0000759	0.0001872	0.0035	1.42		7350.79	7350.79	No	19.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-291.78	5182	1.42	0	576	6344	5953	3621	6920	No	1.34	Si
SLU 77	fin.	348.82	-696	1.42	0	576	6344	5953	3621	6920	No	9.95	Si
SLU 75	ini.	-274.07	5013	1.42	0	576	6344	5953	3621	6920	No	1.38	Si
SLU 75	fin.	327.91	-742	1.42	0	576	6344	5953	3621	6920	No	9.33	Si
SLU 80	ini.	-284.3	5089	1.42	0	576	6344	5953	3621	6920	No	1.36	Si
SLU 80	fin.	335.75	-718	1.42	0	576	6344	5953	3621	6920	No	9.64	Si
SLU 74	ini.	-281.32	5059	1.42	0	576	6344	5953	3621	6920	No	1.37	Si
SLU 74	fin.	340.99	-696	1.42	0	576	6344	5953	3621	6920	No	9.95	Si
SLU 83	ini.	-276.81	5081	1.42	0	576	6344	5953	3621	6920	No	1.36	Si
SLU 83	fin.	329.49	-774	1.42	0	576	6344	5953	3621	6920	No	8.94	Si
SLU 78	ini.	-284.52	5136	1.42	0	576	6344	5953	3621	6920	No	1.35	Si
SLU 78	fin.	335.74	-742	1.42	0	576	6344	5953	3621	6920	No	9.33	Si
SLU 79	ini.	-291.56	5134	1.42	0	576	6344	5953	3621	6920	No	1.35	Si
SLU 79	fin.	348.83	-671	1.42	0	576	6344	5953	3621	6920	No	10.31	Si
SLU 84	ini.	-269.56	5035	1.42	0	576	6344	5953	3621	6920	No	1.37	Si
SLU 84	fin.	316.41	-820	1.42	0	576	6344	5953	3621	6920	No	8.44	Si
SLU 69	ini.	-301.78	5019	1.42	0	576	6344	5953	3621	6920	No	1.38	Si
SLU 69	fin.	375.69	-456	1.42	0	576	6344	5953	3621	6920	No	15.18	Si
SLU 70	ini.	-294.53	4973	1.42	0	576	6344	5953	3621	6920	No	1.39	Si
SLU 70	fin.	362.61	-502	1.42	0	576	6344	5953	3621	6920	No	13.78	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-497.49	-2200	-0.0001004	0.0002807	0.0035	1.42		7346.34	7346.34		14.77	Si
SLD 13	fin.	627.92	-814	-0.0001279	0.0002807	0.0035	1.42		7337.02	7337.02		11.68	Si
SLD 15	ini.	-371.3	-1964	-0.0000743	0.0002807	0.0035	1.42		7346.34	7346.34		19.79	Si
SLD 15	fin.	568.62	-762	-0.0001154	0.0002807	0.0035	1.42		7337.02	7337.02		12.9	Si
SLV 15	ini.	-588.23	-2205	-0.0001193	0.0002807	0.0035	1.42		7346.34	7346.34		12.49	Si
SLV 15	fin.	967.02	-262	-0.0002015	0.0002807	0.0035	1.42		7337.02	7337.02		7.59	Si
SLV 14	ini.	-695.55	-2390	-0.0001421	0.0002807	0.0035	1.42		7346.34	7346.34		10.56	Si
SLV 14	fin.	833.23	-558	-0.000172	0.0002807	0.0035	1.42		7337.02	7337.02		8.81	Si
SLV 10	ini.	-761.49	-2723	-0.0001563	0.0002807	0.0035	1.42		7346.34	7346.34		9.65	Si
SLV 10	fin.	601.68	-1170	-0.0001223	0.0002807	0.0035	1.42		7337.02	7337.02		12.19	Si
SLV 16	ini.	-408.54	-1853	-0.000082	0.0002807	0.0035	1.42		7346.34	7346.34		17.98	Si
SLV 16	fin.	695.71	-443	-0.0001423	0.0002807	0.0035	1.42		7337.02	7337.02		10.55	Si
SLV 5	ini.	-618.96	-2643	-0.0001258	0.0002807	0.0035	1.42		7346.34	7346.34		11.87	Si
SLV 5	fin.	398.5	-1491	-0.00008	0.0002807	0.0035	1.42		7337.02	7337.02		18.41	Si
SLV 4	ini.	451.48	-833	-0.0000909	0.0002807	0.0035	1.42		7337.02	7337.02		16.25	Si
SLV 4	fin.	-562.75	-1898	-0.000114	0.0002807	0.0035	1.42		7346.34	7346.34		13.05	Si
SLV 9	ini.	-876.97	-2949	-0.0001814	0.0002807	0.0035	1.42		7346.34	7346.34		8.38	Si
SLV 9	fin.	776.04	-1055	-0.0001596	0.0002807	0.0035	1.42		7337.02	7337.02		9.45	Si
SLV 13	ini.	-875.24	-2742	-0.000181	0.0002807	0.0035	1.42		7346.34	7346.34		8.39	Si
SLV 13	fin.	1104.53	-378	-0.0002326	0.0002807	0.0035	1.42		7337.02	7337.02		6.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-761.49	5467	1.42	0	864	6344	8929	3621	7208		1.32	Si
SLV 10	fin.	601.68	1276	1.42	0	864	6344	8929	3621	7208		5.65	Si
SLV 13	ini.	-875.24	6865	1.42	0	864	6344	8929	3621	7208		1.05	Si
SLV 13	fin.	1104.53	2918	1.42	0	864	6344	8929	3621	7208		2.47	Si
SLV 16	ini.	-408.54	4930	1.42	0	864	6344	8929	3621	7208		1.46	Si
SLV 16	fin.	695.71	1130	1.42	0	864	6344	8929	3621	7208		6.38	Si
SLV 14	ini.	-695.55	5829	1.42	0	864	6344	8929	3621	7208		1.24	Si
SLV 14	fin.	833.23	1882	1.42	0	864	6344	8929	3621	7208		3.83	Si
SLD 9	ini.	-502.58	4709	1.42	0	864	6344	8929	3621	7208		1.53	Si
SLD 9	fin.	488.54	636	1.42	0	864	6344	8929	3621	7208		11.33	Si
SLV 5	ini.	-618.96	4763	1.42	0	864	6344	8929	3621	7208		1.51	Si
SLV 5	fin.	398.5	511	1.42	0	864	6344	8929	3621	7208		14.09	Si
SLV 9	ini.	-876.97	6132	1.42	0	864	6344	8929	3621	7208		1.18	Si
SLV 9	fin.	776.04	1942	1.42	0	864	6344	8929	3621	7208		3.71	Si
SLD 13	ini.	-497.49	5012	1.42	0	864	6344	8929	3621	7208		1.44	Si
SLD 13	fin.	627.92	1044	1.42	0	864	6344	8929	3621	7208		6.9	Si
SLV 15	ini.	-588.23	5965	1.42	0	864	6344	8929	3621	7208		1.21	Si
SLV 15	fin.	967.02	2166	1.42	0	864	6344	8929	3621	7208		3.33	Si
SLD 15	ini.	-371.3	4619	1.42	0	864	6344	8929	3621	7208		1.56	Si
SLD 15	fin.	568.62	717	1.42	0	864	6344	8929	3621	7208		10.05	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.643	SLV 13	Si
V_SLV	1.05	SLV 13	Si
PF_SLU	19.191	SLU 50	Si
V_SLU	1.335	SLU 77	Si

Trave di accoppiamento 68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	4.82	5.72	0.9	-22.713	5.826	4.82	5.72	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-120.01	-1055	-0.00006	0.0001872	0.0035	0.9		2964.67	2964.67	No	24.7	Si
SLU 69	fin.	485.98	-1635	-0.0002669	0.0001872	0.0035	0.9		2959	2959	No	6.09	Si
SLU 45	ini.	-163.93	-884	-0.0000827	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.08	Si
SLU 45	fin.	493.7	-1518	-0.0002718	0.0001872	0.0035	0.9		2959	2959	No	5.99	Si
SLU 46	ini.	-164.27	-879	-0.0000829	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.05	Si
SLU 46	fin.	493.63	-1513	-0.0002717	0.0001872	0.0035	0.9		2959	2959	No	5.99	Si
SLU 49	ini.	-158.79	-912	-0.00008	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.67	Si
SLU 49	fin.	498.33	-1544	-0.0002747	0.0001872	0.0035	0.9		2959	2959	No	5.94	Si
SLU 47	ini.	-167.07	-861	-0.0000843	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.74	Si
SLU 47	fin.	491.55	-1495	-0.0002704	0.0001872	0.0035	0.9		2959	2959	No	6.02	Si
SLU 51	ini.	-161.37	-897	-0.0000814	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.37	Si
SLU 51	fin.	496.29	-1530	-0.0002734	0.0001872	0.0035	0.9		2959	2959	No	5.96	Si
SLU 43	ini.	-172	-837	-0.0000869	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.24	Si
SLU 43	fin.	486.96	-1472	-0.0002675	0.0001872	0.0035	0.9		2959	2959	No	6.08	Si
SLU 44	ini.	-172.56	-828	-0.0000872	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.18	Si
SLU 44	fin.	486.85	-1464	-0.0002675	0.0001872	0.0035	0.9		2959	2959	No	6.08	Si
SLU 50	ini.	-161.03	-903	-0.0000812	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.41	Si
SLU 50	fin.	496.36	-1535	-0.0002735	0.0001872	0.0035	0.9		2959	2959	No	5.96	Si
SLU 48	ini.	-158.45	-918	-0.0000798	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.71	Si
SLU 48	fin.	498.4	-1549	-0.0002747	0.0001872	0.0035	0.9		2959	2959	No	5.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 46	ini.	-164.27	578	0.9	0	365	7137	3773	2295	6068	No	10.5	Si
SLU 46	fin.	493.63	1535	0.9	0	365	7137	3773	2295	6068	No	3.95	Si
SLU 45	ini.	-163.93	575	0.9	0	365	7137	3773	2295	6068	No	10.56	Si
SLU 45	fin.	493.7	1538	0.9	0	365	7137	3773	2295	6068	No	3.95	Si
SLU 51	ini.	-161.37	564	0.9	0	365	7137	3773	2295	6068	No	10.76	Si
SLU 51	fin.	496.29	1548	0.9	0	365	7137	3773	2295	6068	No	3.92	Si
SLU 50	ini.	-161.03	561	0.9	0	365	7137	3773	2295	6068	No	10.82	Si
SLU 50	fin.	496.36	1550	0.9	0	365	7137	3773	2295	6068	No	3.91	Si
SLU 70	ini.	-120.35	442	0.9	0	365	7137	3773	2295	6068	No	13.73	Si
SLU 70	fin.	485.91	1502	0.9	0	365	7137	3773	2295	6068	No	4.04	Si
SLU 43	ini.	-172	611	0.9	0	365	7137	3773	2295	6068	No	9.93	Si
SLU 43	fin.	486.96	1506	0.9	0	365	7137	3773	2295	6068	No	4.03	Si
SLU 69	ini.	-120.01	439	0.9	0	365	7137	3773	2295	6068	No	13.83	Si
SLU 69	fin.	485.98	1505	0.9	0	365	7137	3773	2295	6068	No	4.03	Si
SLU 48	ini.	-158.45	549	0.9	0	365	7137	3773	2295	6068	No	11.04	Si
SLU 48	fin.	498.4	1560	0.9	0	365	7137	3773	2295	6068	No	3.89	Si
SLU 49	ini.	-158.79	553	0.9	0	365	7137	3773	2295	6068	No	10.98	Si
SLU 49	fin.	498.33	1558	0.9	0	365	7137	3773	2295	6068	No	3.9	Si
SLU 47	ini.	-167.07	592	0.9	0	365	7137	3773	2295	6068	No	10.26	Si
SLU 47	fin.	491.55	1524	0.9	0	365	7137	3773	2295	6068	No	3.98	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1213.6	777	-0.0007538	0.0002807	0.0035	0.9		2995.37	2995.37		2.47	Si
SLV 15	fin.	1285.66	-1693	-0.0008132	0.0002807	0.0035	0.9		2989.59	2989.59		2.33	Si
SLV 4	ini.	960.96	-1664	-0.0005653	0.0002807	0.0035	0.9		2989.59	2989.59		3.11	Si
SLV 4	fin.	-767.66	-42	-0.0004311	0.0002807	0.0035	0.9		2995.37	2995.37		3.9	Si
SLV 13	ini.	-1162.8	158	-0.0007141	0.0002807	0.0035	0.9		2995.37	2995.37		2.58	Si
SLV 13	fin.	1493.2	-2354	-0.0009887	0.0002807	0.0035	0.9		2989.59	2989.59		2	Si
SLV 16	ini.	-1411.16	1002	-0.0009154	0.0002807	0.0035	0.9		2995.37	2995.37		2.12	Si
SLV 16	fin.	1471.28	-1845	-0.0009694	0.0002807	0.0035	0.9		2989.59	2989.59		2.03	Si
SLV 14	ini.	-1360.36	383	-0.0008726	0.0002807	0.0035	0.9		2995.37	2995.37		2.2	Si
SLV 14	fin.	1678.83	-2506	-0.0011589	0.0002807	0.0035	0.9		2989.59	2989.59		1.78	Si
SLV 10	ini.	-435.55	-1313	-0.0002279	0.0002807	0.0035	0.9		2995.37	2995.37		6.88	Si
SLV 10	fin.	1104.17	-2619	-0.0006709	0.0002807	0.0035	0.9		2989.59	2989.59		2.71	Si
SLV 2	ini.	1011.76	-2283	-0.0006021	0.0002807	0.0035	0.9		2989.59	2989.59		2.95	Si
SLV 2	fin.	-560.12	-703	-0.0003004	0.0002807	0.0035	0.9		2995.37	2995.37		5.35	Si
SLV 1	ini.	1209.32	-2507	-0.0007522	0.0002807	0.0035	0.9		2989.59	2989.59		2.47	Si
SLV 1	fin.	-745.74	-551	-0.0004167	0.0002807	0.0035	0.9		2995.37	2995.37		4.02	Si
SLV 3	ini.	1158.52	-1888	-0.0007125	0.0002807	0.0035	0.9		2989.59	2989.59		2.58	Si
SLV 3	fin.	-953.29	110	-0.0005586	0.0002807	0.0035	0.9		2995.37	2995.37		3.14	Si
SLV 9	ini.	-308.58	-1457	-0.0001579	0.0002807	0.0035	0.9		2995.37	2995.37		9.71	Si
SLV 9	fin.	984.88	-2522	-0.0005826	0.0002807	0.0035	0.9		2989.59	2989.59		3.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1011.76	-3197	0.9	0	548	7137	5660	2295	7684		2.4	Si
SLV 2	fin.	-560.12	-1966	0.9	0	548	7137	5660	2295	7684		3.91	Si
SLV 15	ini.	-1213.6	3962	0.9	0	548	7137	5660	2295	7684		1.94	Si
SLV 15	fin.	1285.66	4177	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 1	ini.	1209.32	-3821	0.9	0	548	7137	5660	2295	7684		2.01	Si
SLV 1	fin.	-745.74	-2570	0.9	0	548	7137	5660	2295	7684		2.99	Si
SLV 4	ini.	960.96	-3120	0.9	0	548	7137	5660	2295	7684		2.46	Si
SLV 4	fin.	-767.66	-2480	0.9	0	548	7137	5660	2295	7684		3.1	Si
SLD 14	ini.	-639.24	2147	0.9	0	548	7137	5660	2295	7684		3.58	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	fin.	926.55	2901	0.9	0	548	7137	5660	2295	7684		2.65	Si
SLV 13	ini.	-1162.8	3885	0.9	0	548	7137	5660	2295	7684		1.98	Si
SLV 13	fin.	1493.2	4691	0.9	0	548	7137	5660	2295	7684		1.64	Si
SLV 3	ini.	1158.52	-3744	0.9	0	548	7137	5660	2295	7684		2.05	Si
SLV 3	fin.	-953.29	-3084	0.9	0	548	7137	5660	2295	7684		2.49	Si
SLV 16	ini.	-1411.16	4587	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 16	fin.	1471.28	4781	0.9	0	548	7137	5660	2295	7684		1.61	Si
SLV 14	ini.	-1360.36	4510	0.9	0	548	7137	5660	2295	7684		1.7	Si
SLV 14	fin.	1678.83	5295	0.9	0	548	7137	5660	2295	7684		1.45	Si
SLV 10	ini.	-435.55	1612	0.9	0	548	7137	5660	2295	7684		4.77	Si
SLV 10	fin.	1104.17	3245	0.9	0	548	7137	5660	2295	7684		2.37	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.781	SLV 14	Si
V_SLV	1.451	SLV 14	Si
PF_SLU	5.937	SLU 48	Si
V_SLU	3.89	SLU 48	Si

Trave di accoppiamento 69

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	7.52	8.34	0.82	-22.713	5.826	7.52	8.34	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-518.61	-1631	-0.0003566	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.74	Si
SLU 83	fin.	-79.22	-702	-0.0000475	0.0001872	0.0035	0.82		2460.51	2460.51	No	31.06	Si
SLU 74	ini.	-519.34	-1611	-0.0003572	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.74	Si
SLU 74	fin.	-68.45	-649	-0.0000409	0.0001872	0.0035	0.82		2460.51	2460.51	No	35.95	Si
SLU 75	ini.	-518.12	-1607	-0.0003562	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.75	Si
SLU 75	fin.	-68.19	-647	-0.0000407	0.0001872	0.0035	0.82		2460.51	2460.51	No	36.08	Si
SLU 56	ini.	-517.61	-1548	-0.0003558	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.75	Si
SLU 56	fin.	-40.64	-510	-0.0000241	0.0001872	0.0035	0.82		2460.51	2460.51	No	60.55	Si
SLU 78	ini.	-523.47	-1641	-0.0003605	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.7	Si
SLU 78	fin.	-75.32	-684	-0.0000451	0.0001872	0.0035	0.82		2460.51	2460.51	No	32.67	Si
SLU 77	ini.	-524.68	-1644	-0.0003615	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.69	Si
SLU 77	fin.	-75.58	-685	-0.0000452	0.0001872	0.0035	0.82		2460.51	2460.51	No	32.55	Si
SLU 70	ini.	-518.71	-1561	-0.0003567	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.74	Si
SLU 70	fin.	-44.03	-525	-0.0000262	0.0001872	0.0035	0.82		2460.51	2460.51	No	55.88	Si
SLU 79	ini.	-521.92	-1630	-0.0003593	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.71	Si
SLU 79	fin.	-72.94	-671	-0.0000436	0.0001872	0.0035	0.82		2460.51	2460.51	No	33.73	Si
SLU 69	ini.	-519.92	-1565	-0.0003576	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.73	Si
SLU 69	fin.	-44.29	-527	-0.0000263	0.0001872	0.0035	0.82		2460.51	2460.51	No	55.56	Si
SLU 80	ini.	-520.7	-1626	-0.0003583	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.73	Si
SLU 80	fin.	-72.68	-669	-0.0000435	0.0001872	0.0035	0.82		2460.51	2460.51	No	33.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-513.27	2680	0.82	0	303	6502	3438	2091	5529	No	2.06	Si
SLU 81	fin.	-72.08	-1674	0.82	0	303	6502	3438	2091	5529	No	3.3	Si
SLU 74	ini.	-519.34	2692	0.82	0	303	6502	3438	2091	5529	No	2.05	Si
SLU 74	fin.	-68.45	-1628	0.82	0	303	6502	3438	2091	5529	No	3.4	Si
SLU 80	ini.	-520.7	2703	0.82	0	303	6502	3438	2091	5529	No	2.05	Si
SLU 80	fin.	-72.68	-1657	0.82	0	303	6502	3438	2091	5529	No	3.34	Si
SLU 75	ini.	-518.12	2681	0.82	0	303	6502	3438	2091	5529	No	2.06	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	fin.	-68.19	-1615	0.82	0	303	6502	3438	2091	5529	No	3.42	Si
SLU 79	ini.	-521.92	2714	0.82	0	303	6502	3438	2091	5529	No	2.04	Si
SLU 79	fin.	-72.94	-1670	0.82	0	303	6502	3438	2091	5529	No	3.31	Si
SLU 78	ini.	-523.47	2720	0.82	0	303	6502	3438	2091	5529	No	2.03	Si
SLU 78	fin.	-75.32	-1684	0.82	0	303	6502	3438	2091	5529	No	3.28	Si
SLU 82	ini.	-512.05	2669	0.82	0	303	6502	3438	2091	5529	No	2.07	Si
SLU 82	fin.	-71.82	-1661	0.82	0	303	6502	3438	2091	5529	No	3.33	Si
SLU 77	ini.	-524.68	2731	0.82	0	303	6502	3438	2091	5529	No	2.02	Si
SLU 77	fin.	-75.58	-1696	0.82	0	303	6502	3438	2091	5529	No	3.26	Si
SLU 83	ini.	-518.61	2718	0.82	0	303	6502	3438	2091	5529	No	2.03	Si
SLU 83	fin.	-79.22	-1742	0.82	0	303	6502	3438	2091	5529	No	3.17	Si
SLU 84	ini.	-517.39	2708	0.82	0	303	6502	3438	2091	5529	No	2.04	Si
SLU 84	fin.	-78.96	-1729	0.82	0	303	6502	3438	2091	5529	No	3.2	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 10	ini.	-653.76	-1744	-0.0004443	0.0002807	0.0035	0.82		2487.45	2487.45		3.8	Si
SLD 10	fin.	5.15	-401	-0.000003	0.0002807	0.0035	0.82		2482.11	2482.11		482.36	Si
SLV 14	ini.	-1289.84	-2509	-0.0010402	0.0002807	0.0035	0.82		2487.45	2487.45		1.93	Si
SLV 14	fin.	493.34	1490	-0.0003218	0.0002807	0.0035	0.82		2482.11	2482.11		5.03	Si
SLV 13	ini.	-1163.13	-2366	-0.0009069	0.0002807	0.0035	0.82		2487.45	2487.45		2.14	Si
SLV 13	fin.	395.14	1096	-0.0002516	0.0002807	0.0035	0.82		2482.11	2482.11		6.28	Si
SLD 14	ini.	-775.92	-1732	-0.0005454	0.0002807	0.0035	0.82		2487.45	2487.45		3.21	Si
SLD 14	fin.	197.92	437	-0.0001209	0.0002807	0.0035	0.82		2482.11	2482.11		12.54	Si
SLV 15	ini.	-955.31	-1751	-0.0007049	0.0002807	0.0035	0.82		2487.45	2487.45		2.6	Si
SLV 15	fin.	464.78	1579	-0.0003009	0.0002807	0.0035	0.82		2482.11	2482.11		5.34	Si
SLV 10	ini.	-996.43	-2510	-0.0007434	0.0002807	0.0035	0.82		2487.45	2487.45		2.5	Si
SLV 10	fin.	43.59	-460	-0.0000259	0.0002807	0.0035	0.82		2482.11	2482.11		56.95	Si
SLD 13	ini.	-721.52	-1671	-0.0004996	0.0002807	0.0035	0.82		2487.45	2487.45		3.45	Si
SLD 13	fin.	155.76	268	-0.0000944	0.0002807	0.0035	0.82		2482.11	2482.11		15.94	Si
SLD 16	ini.	-684.41	-1460	-0.0004691	0.0002807	0.0035	0.82		2487.45	2487.45		3.63	Si
SLD 16	fin.	228.29	648	-0.0001402	0.0002807	0.0035	0.82		2482.11	2482.11		10.87	Si
SLV 9	ini.	-914.99	-2418	-0.0006679	0.0002807	0.0035	0.82		2487.45	2487.45		2.72	Si
SLV 9	fin.	-19.52	-713	-0.0000115	0.0002807	0.0035	0.82		2487.45	2487.45		127.42	Si
SLV 16	ini.	-1082.03	-1895	-0.0008257	0.0002807	0.0035	0.82		2487.45	2487.45		2.3	Si
SLV 16	fin.	562.97	1973	-0.0003741	0.0002807	0.0035	0.82		2482.11	2482.11		4.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1289.84	5089	0.82	0	455	6502	5156	2091	6957		1.37	Si
SLV 14	fin.	493.34	1937	0.82	0	455	6502	5156	2091	6957		3.59	Si
SLV 16	ini.	-1082.03	4305	0.82	0	455	6502	5156	2091	6957		1.62	Si
SLV 16	fin.	562.97	2571	0.82	0	455	6502	5156	2091	6957		2.71	Si
SLV 2	ini.	176.52	38	0.82	0	455	6502	5156	2091	6957		184.49	Si
SLV 2	fin.	-509.42	-3850	0.82	0	455	6502	5156	2091	6957		1.81	Si
SLV 3	ini.	511.05	-1181	0.82	0	455	6502	5156	2091	6957		5.89	Si
SLV 3	fin.	-537.98	-3823	0.82	0	455	6502	5156	2091	6957		1.82	Si
SLV 1	ini.	303.24	-397	0.82	0	455	6502	5156	2091	6957		17.51	Si
SLV 1	fin.	-607.62	-4457	0.82	0	455	6502	5156	2091	6957		1.56	Si
SLV 10	ini.	-996.43	4157	0.82	0	455	6502	5156	2091	6957		1.67	Si
SLV 10	fin.	43.59	-937	0.82	0	455	6502	5156	2091	6957		7.43	Si
SLV 9	ini.	-914.99	3877	0.82	0	455	6502	5156	2091	6957		1.79	Si
SLV 9	fin.	-19.52	-1327	0.82	0	455	6502	5156	2091	6957		5.24	Si
SLV 13	ini.	-1163.13	4654	0.82	0	455	6502	5156	2091	6957		1.49	Si
SLV 13	fin.	395.14	1330	0.82	0	455	6502	5156	2091	6957		5.23	Si
SLV 15	ini.	-955.31	3870	0.82	0	455	6502	5156	2091	6957		1.8	Si
SLV 15	fin.	464.78	1964	0.82	0	455	6502	5156	2091	6957		3.54	Si
SLD 14	ini.	-775.92	3301	0.82	0	455	6502	5156	2091	6957		2.11	Si
SLD 14	fin.	197.92	285	0.82	0	455	6502	5156	2091	6957		24.44	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.928	SLV 14	Si
V_SLV	1.367	SLV 14	Si
PF_SLU	4.69	SLU 77	Si
V_SLU	2.025	SLU 77	Si

Trave di accoppiamento 70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	7.52	8.34	0.82	-22.493	-3.314	7.52	8.34	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-636.67	-2785	-0.0004553	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.86	Si
SLU 77	fin.	81.04	-396	-0.0000487	0.0001872	0.0035	0.82		2455.37	2455.37	No	30.3	Si
SLU 83	ini.	-645.5	-2820	-0.0004629	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.81	Si
SLU 83	fin.	84.55	-392	-0.0000508	0.0001872	0.0035	0.82		2455.37	2455.37	No	29.04	Si
SLU 79	ini.	-630.62	-2757	-0.0004501	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.9	Si
SLU 79	fin.	81.51	-388	-0.000049	0.0001872	0.0035	0.82		2455.37	2455.37	No	30.13	Si
SLU 78	ini.	-636.67	-2788	-0.0004553	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.86	Si
SLU 78	fin.	78.67	-404	-0.0000472	0.0001872	0.0035	0.82		2455.37	2455.37	No	31.21	Si
SLU 84	ini.	-645.5	-2823	-0.0004629	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.81	Si
SLU 84	fin.	82.18	-399	-0.0000494	0.0001872	0.0035	0.82		2455.37	2455.37	No	29.88	Si
SLU 80	ini.	-630.62	-2760	-0.0004501	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.9	Si
SLU 80	fin.	79.13	-396	-0.0000475	0.0001872	0.0035	0.82		2455.37	2455.37	No	31.03	Si
SLU 82	ini.	-639.31	-2783	-0.0004576	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.85	Si
SLU 82	fin.	89.05	-372	-0.0000536	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.57	Si
SLU 81	ini.	-639.31	-2781	-0.0004576	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.85	Si
SLU 81	fin.	91.42	-365	-0.000055	0.0001872	0.0035	0.82		2455.37	2455.37	No	26.86	Si
SLU 74	ini.	-630.48	-2745	-0.00045	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.9	Si
SLU 74	fin.	87.9	-369	-0.0000529	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.93	Si
SLU 75	ini.	-630.48	-2748	-0.00045	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.9	Si
SLU 75	fin.	85.53	-377	-0.0000514	0.0001872	0.0035	0.82		2455.37	2455.37	No	28.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-630.48	4764	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 74	fin.	87.9	-326	0.82	0	303	6502	3438	2091	5529	No	16.95	Si
SLU 84	ini.	-645.5	4904	0.82	0	303	6502	3438	2091	5529	No	1.13	Si
SLU 84	fin.	82.18	-373	0.82	0	303	6502	3438	2091	5529	No	14.82	Si
SLU 79	ini.	-630.62	4782	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 79	fin.	81.51	-356	0.82	0	303	6502	3438	2091	5529	No	15.55	Si
SLU 77	ini.	-636.67	4827	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 77	fin.	81.04	-361	0.82	0	303	6502	3438	2091	5529	No	15.31	Si
SLU 78	ini.	-636.67	4828	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 78	fin.	78.67	-372	0.82	0	303	6502	3438	2091	5529	No	14.87	Si
SLU 82	ini.	-639.31	4841	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 82	fin.	89.05	-338	0.82	0	303	6502	3438	2091	5529	No	16.36	Si
SLU 80	ini.	-630.62	4783	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 80	fin.	79.13	-366	0.82	0	303	6502	3438	2091	5529	No	15.1	Si
SLU 83	ini.	-645.5	4902	0.82	0	303	6502	3438	2091	5529	No	1.13	Si
SLU 83	fin.	84.55	-363	0.82	0	303	6502	3438	2091	5529	No	15.25	Si
SLU 81	ini.	-639.31	4839	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 81	fin.	91.42	-328	0.82	0	303	6502	3438	2091	5529	No	16.88	Si
SLU 75	ini.	-630.48	4765	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 75	fin.	85.53	-337	0.82	0	303	6502	3438	2091	5529	No	16.42	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-1055.14	-3874	-0.0007995	0.0002807	0.0035	0.82		2487.45	2487.45		2.36	Si
SLV 12	fin.	468.41	70	-0.0003036	0.0002807	0.0035	0.82		2482.11	2482.11		5.3	Si
SLV 1	ini.	592.97	1024	-0.0003972	0.0002807	0.0035	0.82		2482.11	2482.11		4.19	Si
SLV 1	fin.	-1020.57	-2306	-0.0007663	0.0002807	0.0035	0.82		2487.45	2487.45		2.44	Si
SLV 16	ini.	-1466.96	-4778	-0.0012418	0.0002807	0.0035	0.82		2487.45	2487.45		1.7	Si
SLV 16	fin.	1173.26	1880	-0.0009197	0.0002807	0.0035	0.82		2482.11	2482.11		2.12	Si
SLV 4	ini.	506.69	594	-0.0003316	0.0002807	0.0035	0.82		2482.11	2482.11		4.9	Si
SLV 4	fin.	-1125.48	-2846	-0.0008688	0.0002807	0.0035	0.82		2487.45	2487.45		2.21	Si
SLV 2	ini.	725.5	1377	-0.0005042	0.0002807	0.0035	0.82		2482.11	2482.11		3.42	Si
SLV 2	fin.	-1185.67	-2658	-0.00093	0.0002807	0.0035	0.82		2487.45	2487.45		2.1	Si
SLV 14	ini.	-1248.15	-3995	-0.0009954	0.0002807	0.0035	0.82		2487.45	2487.45		1.99	Si
SLV 14	fin.	1113.07	2068	-0.0008587	0.0002807	0.0035	0.82		2482.11	2482.11		2.23	Si
SLV 11	ini.	-1140.31	-4101	-0.0008837	0.0002807	0.0035	0.82		2487.45	2487.45		2.18	Si
SLV 11	fin.	574.52	296	-0.0003829	0.0002807	0.0035	0.82		2482.11	2482.11		4.32	Si
SLV 15	ini.	-1599.49	-5131	-0.001407	0.0002807	0.0035	0.82		2487.45	2487.45		1.56	Si
SLV 15	fin.	1338.35	2232	-0.0010965	0.0002807	0.0035	0.82		2482.11	2482.11		1.85	Si
SLV 3	ini.	374.16	241	-0.0002371	0.0002807	0.0035	0.82		2482.11	2482.11		6.63	Si
SLV 3	fin.	-960.39	-2494	-0.0007096	0.0002807	0.0035	0.82		2487.45	2487.45		2.59	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1380.68	-4348	-0.0011411	0.0002807	0.0035	0.82		2487.45	2487.45		1.8	Si
SLV 13	fin.	1278.17	2420	-0.0010303	0.0002807	0.0035	0.82		2482.11	2482.11		1.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1599.49	8778	0.82	0	455	6502	5156	2091	6957		0.79	No
SLV 15	fin.	1338.35	4810	0.82	0	455	6502	5156	2091	6957		1.45	Si
SLD 13	ini.	-838.83	5177	0.82	0	455	6502	5156	2091	6957		1.34	Si
SLD 13	fin.	589.81	2029	0.82	0	455	6502	5156	2091	6957		3.43	Si
SLV 16	ini.	-1466.96	8146	0.82	0	455	6502	5156	2091	6957		0.85	No
SLV 16	fin.	1173.26	4131	0.82	0	455	6502	5156	2091	6957		1.68	Si
SLV 11	ini.	-1140.31	6562	0.82	0	455	6502	5156	2091	6957		1.06	Si
SLV 11	fin.	574.52	1199	0.82	0	455	6502	5156	2091	6957		5.8	Si
SLD 16	ini.	-878.02	5354	0.82	0	455	6502	5156	2091	6957		1.3	Si
SLD 16	fin.	544.72	1671	0.82	0	455	6502	5156	2091	6957		4.16	Si
SLV 4	ini.	506.69	-1242	0.82	0	455	6502	5156	2091	6957		5.6	Si
SLV 4	fin.	-1125.48	-5300	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLD 15	ini.	-934.92	5625	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLD 15	fin.	615.6	1962	0.82	0	455	6502	5156	2091	6957		3.55	Si
SLV 12	ini.	-1055.14	6156	0.82	0	455	6502	5156	2091	6957		1.13	Si
SLV 12	fin.	468.41	763	0.82	0	455	6502	5156	2091	6957		9.12	Si
SLV 14	ini.	-1248.15	7132	0.82	0	455	6502	5156	2091	6957		0.98	No
SLV 14	fin.	1113.07	4293	0.82	0	455	6502	5156	2091	6957		1.62	Si
SLV 13	ini.	-1380.68	7763	0.82	0	455	6502	5156	2091	6957		0.9	No
SLV 13	fin.	1278.17	4972	0.82	0	455	6502	5156	2091	6957		1.4	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.555	SLV 15	Si
V_SLV	0.793	SLV 15	No
PF_SLU	3.812	SLU 84	Si
V_SLU	1.127	SLU 84	Si

Trave di accoppiamento 71

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	7.62	8.34	0.72	-19.313	-3.314	7.62	8.34	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-300.9	-2018	-0.0002562	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.32	Si
SLU 74	fin.	211.42	-1473	-0.0001735	0.0001872	0.0035	0.72		1897.3	1897.3	No	8.97	Si
SLU 75	ini.	-301.48	-2024	-0.0002567	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.31	Si
SLU 75	fin.	210.64	-1479	-0.0001728	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.01	Si
SLU 79	ini.	-300.04	-2016	-0.0002553	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.34	Si
SLU 79	fin.	212.02	-1476	-0.000174	0.0001872	0.0035	0.72		1897.3	1897.3	No	8.95	Si
SLU 80	ini.	-300.62	-2022	-0.0002559	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.33	Si
SLU 80	fin.	211.24	-1483	-0.0001733	0.0001872	0.0035	0.72		1897.3	1897.3	No	8.98	Si
SLU 81	ini.	-313.7	-2108	-0.0002686	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.06	Si
SLU 81	fin.	210.41	-1542	-0.0001726	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.02	Si
SLU 82	ini.	-314.29	-2115	-0.0002692	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.05	Si
SLU 82	fin.	209.63	-1548	-0.0001719	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.05	Si
SLU 83	ini.	-316.38	-2133	-0.0002713	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.01	Si
SLU 83	fin.	211.57	-1568	-0.0001736	0.0001872	0.0035	0.72		1897.3	1897.3	No	8.97	Si
SLU 84	ini.	-316.97	-2140	-0.0002718	0.0001872	0.0035	0.72		1901.86	1901.86	No	6	Si
SLU 84	fin.	210.78	-1574	-0.0001729	0.0001872	0.0035	0.72		1897.3	1897.3	No	9	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-304.16	-2049	-0.0002593	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.25	Si
SLU 78	fin.	211.8	-1505	-0.0001738	0.0001872	0.0035	0.72		1897.3	1897.3	No	8.96	Si
SLU 77	ini.	-303.58	-2043	-0.0002588	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.26	Si
SLU 77	fin.	212.58	-1499	-0.0001745	0.0001872	0.0035	0.72		1897.3	1897.3	No	8.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-301.48	4150	0.72	0	292	3965	3018	1836	4257	No	1.03	Si
SLU 75	fin.	210.64	523	0.72	0	292	3965	3018	1836	4257	No	8.13	Si
SLU 82	ini.	-314.29	4212	0.72	0	292	3965	3018	1836	4257	No	1.01	Si
SLU 82	fin.	209.63	556	0.72	0	292	3965	3018	1836	4257	No	7.66	Si
SLU 83	ini.	-316.38	4279	0.72	0	292	3965	3018	1836	4257	No	0.99	No
SLU 83	fin.	211.57	546	0.72	0	292	3965	3018	1836	4257	No	7.8	Si
SLU 74	ini.	-300.9	4144	0.72	0	292	3965	3018	1836	4257	No	1.03	Si
SLU 74	fin.	211.42	526	0.72	0	292	3965	3018	1836	4257	No	8.1	Si
SLU 84	ini.	-316.97	4285	0.72	0	292	3965	3018	1836	4257	No	0.99	No
SLU 84	fin.	210.78	544	0.72	0	292	3965	3018	1836	4257	No	7.83	Si
SLU 79	ini.	-300.04	4175	0.72	0	292	3965	3018	1836	4257	No	1.02	Si
SLU 79	fin.	212.02	511	0.72	0	292	3965	3018	1836	4257	No	8.33	Si
SLU 78	ini.	-304.16	4223	0.72	0	292	3965	3018	1836	4257	No	1.01	Si
SLU 78	fin.	211.8	511	0.72	0	292	3965	3018	1836	4257	No	8.33	Si
SLU 77	ini.	-303.58	4217	0.72	0	292	3965	3018	1836	4257	No	1.01	Si
SLU 77	fin.	212.58	514	0.72	0	292	3965	3018	1836	4257	No	8.29	Si
SLU 81	ini.	-313.7	4205	0.72	0	292	3965	3018	1836	4257	No	1.01	Si
SLU 81	fin.	210.41	558	0.72	0	292	3965	3018	1836	4257	No	7.62	Si
SLU 80	ini.	-300.62	4182	0.72	0	292	3965	3018	1836	4257	No	1.02	Si
SLU 80	fin.	211.24	509	0.72	0	292	3965	3018	1836	4257	No	8.37	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-369.75	-3896	-0.0003106	0.0002807	0.0035	0.72		1917.1	1917.1		5.18	Si
SLV 2	fin.	-777.55	-4241	-0.0007537	0.0002807	0.0035	0.72		1917.1	1917.1		2.47	Si
SLV 16	ini.	-30.65	1097	-0.0000235	0.0002807	0.0035	0.72		1917.1	1917.1		62.54	Si
SLV 16	fin.	998.33	2100	-0.0010473	0.0002807	0.0035	0.72		1912.43	1912.43		1.92	Si
SLV 15	ini.	-26.46	1291	-0.0000203	0.0002807	0.0035	0.72		1917.1	1917.1		72.45	Si
SLV 15	fin.	1090.74	2392	-0.0011822	0.0002807	0.0035	0.72		1912.43	1912.43		1.75	Si
SLD 15	ini.	-125.03	-194	-0.000098	0.0002807	0.0035	0.72		1917.1	1917.1		15.33	Si
SLD 15	fin.	555.9	494	-0.0004999	0.0002807	0.0035	0.72		1912.43	1912.43		3.44	Si
SLV 3	ini.	-399.58	-4024	-0.0003391	0.0002807	0.0035	0.72		1917.1	1917.1		4.8	Si
SLV 3	fin.	-733.63	-4413	-0.0007005	0.0002807	0.0035	0.72		1917.1	1917.1		2.61	Si
SLV 4	ini.	-403.77	-4219	-0.0003431	0.0002807	0.0035	0.72		1917.1	1917.1		4.75	Si
SLV 4	fin.	-826.04	-4705	-0.0008142	0.0002807	0.0035	0.72		1917.1	1917.1		2.32	Si
SLD 13	ini.	-110.2	-55	-0.0000861	0.0002807	0.0035	0.72		1917.1	1917.1		17.4	Si
SLD 13	fin.	576.1	691	-0.0005219	0.0002807	0.0035	0.72		1912.43	1912.43		3.32	Si
SLV 14	ini.	3.36	1420	-0.0000026	0.0002807	0.0035	0.72		1912.43	1912.43		568.62	Si
SLV 14	fin.	1046.82	2564	-0.001117	0.0002807	0.0035	0.72		1912.43	1912.43		1.83	Si
SLV 1	ini.	-365.56	-3701	-0.0003067	0.0002807	0.0035	0.72		1917.1	1917.1		5.24	Si
SLV 1	fin.	-685.14	-3948	-0.0006432	0.0002807	0.0035	0.72		1917.1	1917.1		2.8	Si
SLV 13	ini.	7.56	1614	-0.0000058	0.0002807	0.0035	0.72		1912.43	1912.43		253.11	Si
SLV 13	fin.	1139.23	2856	-0.0012567	0.0002807	0.0035	0.72		1912.43	1912.43		1.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	ini.	-126.83	3547	0.72	0	438	3965	4528	1836	4403		1.24	Si
SLD 16	fin.	516.23	1223	0.72	0	438	3965	4528	1836	4403		3.6	Si
SLD 13	ini.	-110.2	3394	0.72	0	438	3965	4528	1836	4403		1.3	Si
SLD 13	fin.	576.1	1399	0.72	0	438	3965	4528	1836	4403		3.15	Si
SLV 16	ini.	-30.65	4539	0.72	0	438	3965	4528	1836	4403		0.97	No
SLV 16	fin.	998.33	2359	0.72	0	438	3965	4528	1836	4403		1.87	Si
SLD 15	ini.	-125.03	3622	0.72	0	438	3965	4528	1836	4403		1.22	Si
SLD 15	fin.	555.9	1336	0.72	0	438	3965	4528	1836	4403		3.3	Si
SLV 11	ini.	-197.49	4188	0.72	0	438	3965	4528	1836	4403		1.05	Si
SLV 11	fin.	379.12	863	0.72	0	438	3965	4528	1836	4403		5.1	Si
SLV 15	ini.	-26.46	4714	0.72	0	438	3965	4528	1836	4403		0.93	No
SLV 15	fin.	1090.74	2621	0.72	0	438	3965	4528	1836	4403		1.68	Si
SLV 12	ini.	-200.18	4076	0.72	0	438	3965	4528	1836	4403		1.08	Si
SLV 12	fin.	319.73	694	0.72	0	438	3965	4528	1836	4403		6.34	Si
SLD 11	ini.	-198.36	3408	0.72	0	438	3965	4528	1836	4403		1.29	Si
SLD 11	fin.	252.77	587	0.72	0	438	3965	4528	1836	4403		7.5	Si
SLV 13	ini.	7.56	4198	0.72	0	438	3965	4528	1836	4403		1.05	Si
SLV 13	fin.	1139.23	2774	0.72	0	438	3965	4528	1836	4403		1.59	Si
SLV 14	ini.	3.36	4024	0.72	0	438	3965	4528	1836	4403		1.09	Si
SLV 14	fin.	1046.82	2512	0.72	0	438	3965	4528	1836	4403		1.75	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.679	SLV 13	Si
V_SLV	0.934	SLV 15	No
PF_SLU	6	SLU 84	Si
V_SLU	0.993	SLU 84	No

Trave di accoppiamento 72

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	7.52	8.34	0.82	-18.263	-3.314	7.52	8.34	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-144.67	-983	-0.0000881	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.01	Si
SLU 79	fin.	-294.99	-2033	-0.0001876	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.34	Si
SLU 77	ini.	-145.18	-993	-0.0000884	0.0001872	0.0035	0.82		2460.51	2460.51	No	16.95	Si
SLU 77	fin.	-300.29	-2063	-0.0001913	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.19	Si
SLU 82	ini.	-127.89	-946	-0.0000776	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.24	Si
SLU 82	fin.	-318.44	-2154	-0.0002041	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.73	Si
SLU 81	ini.	-128.37	-945	-0.0000779	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.17	Si
SLU 81	fin.	-316.78	-2146	-0.0002029	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.77	Si
SLU 78	ini.	-144.71	-993	-0.0000881	0.0001872	0.0035	0.82		2460.51	2460.51	No	17	Si
SLU 78	fin.	-301.95	-2071	-0.0001925	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.15	Si
SLU 84	ini.	-133.7	-974	-0.0000812	0.0001872	0.0035	0.82		2460.51	2460.51	No	18.4	Si
SLU 84	fin.	-322.03	-2180	-0.0002067	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.64	Si
SLU 80	ini.	-144.2	-984	-0.0000878	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.06	Si
SLU 80	fin.	-296.65	-2041	-0.0001888	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.29	Si
SLU 83	ini.	-134.17	-974	-0.0000815	0.0001872	0.0035	0.82		2460.51	2460.51	No	18.34	Si
SLU 83	fin.	-320.37	-2172	-0.0002055	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.68	Si
SLU 74	ini.	-139.37	-964	-0.0000848	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.65	Si
SLU 74	fin.	-296.71	-2037	-0.0001888	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.29	Si
SLU 75	ini.	-138.9	-965	-0.0000845	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.71	Si
SLU 75	fin.	-298.37	-2045	-0.00019	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-139.37	2206	0.82	0	303	6502	3438	2091	5529	No	2.51	Si
SLU 74	fin.	-296.71	-4199	0.82	0	303	6502	3438	2091	5529	No	1.32	Si
SLU 84	ini.	-133.7	2212	0.82	0	303	6502	3438	2091	5529	No	2.5	Si
SLU 84	fin.	-322.03	-4434	0.82	0	303	6502	3438	2091	5529	No	1.25	Si
SLU 79	ini.	-144.67	2253	0.82	0	303	6502	3438	2091	5529	No	2.45	Si
SLU 79	fin.	-294.99	-4220	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 83	ini.	-134.17	2214	0.82	0	303	6502	3438	2091	5529	No	2.5	Si
SLU 83	fin.	-320.37	-4421	0.82	0	303	6502	3438	2091	5529	No	1.25	Si
SLU 77	ini.	-145.18	2271	0.82	0	303	6502	3438	2091	5529	No	2.43	Si
SLU 77	fin.	-300.29	-4274	0.82	0	303	6502	3438	2091	5529	No	1.29	Si
SLU 78	ini.	-144.71	2269	0.82	0	303	6502	3438	2091	5529	No	2.44	Si
SLU 78	fin.	-301.95	-4287	0.82	0	303	6502	3438	2091	5529	No	1.29	Si
SLU 75	ini.	-138.9	2204	0.82	0	303	6502	3438	2091	5529	No	2.51	Si
SLU 75	fin.	-298.37	-4212	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 80	ini.	-144.2	2251	0.82	0	303	6502	3438	2091	5529	No	2.46	Si
SLU 80	fin.	-296.65	-4233	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 82	ini.	-127.89	2148	0.82	0	303	6502	3438	2091	5529	No	2.57	Si
SLU 82	fin.	-318.44	-4359	0.82	0	303	6502	3438	2091	5529	No	1.27	Si
SLU 81	ini.	-128.37	2149	0.82	0	303	6502	3438	2091	5529	No	2.57	Si
SLU 81	fin.	-316.78	-4346	0.82	0	303	6502	3438	2091	5529	No	1.27	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-891.54	-2316	-0.0006467	0.0002807	0.0035	0.82		2487.45	2487.45		2.79	Si
SLV 15	fin.	967.66	3165	-0.0007182	0.0002807	0.0035	0.82		2482.11	2482.11		2.57	Si
SLV 13	ini.	-851.97	-2111	-0.0006114	0.0002807	0.0035	0.82		2487.45	2487.45		2.92	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	fin.	1046.29	3563	-0.000793	0.0002807	0.0035	0.82		2482.11	2482.11		2.37	Si
SLV 2	ini.	682.48	981	-0.0004687	0.0002807	0.0035	0.82		2482.11	2482.11		3.64	Si
SLV 2	fin.	-1330.57	-5734	-0.0010848	0.0002807	0.0035	0.82		2487.45	2487.45		1.87	Si
SLD 4	ini.	215.11	-51	-0.0001318	0.0002807	0.0035	0.82		2482.11	2482.11		11.54	Si
SLD 4	fin.	-705.93	-3355	-0.0004867	0.0002807	0.0035	0.82		2487.45	2487.45		3.52	Si
SLV 1	ini.	614.84	829	-0.0004144	0.0002807	0.0035	0.82		2482.11	2482.11		4.04	Si
SLV 1	fin.	-1234.84	-5377	-0.0009813	0.0002807	0.0035	0.82		2487.45	2487.45		2.01	Si
SLV 8	ini.	71.27	-519	-0.0000425	0.0002807	0.0035	0.82		2482.11	2482.11		34.83	Si
SLV 8	fin.	-685.43	-3403	-0.0004699	0.0002807	0.0035	0.82		2487.45	2487.45		3.63	Si
SLV 14	ini.	-784.33	-1959	-0.0005526	0.0002807	0.0035	0.82		2487.45	2487.45		3.17	Si
SLV 14	fin.	950.57	3205	-0.0007023	0.0002807	0.0035	0.82		2482.11	2482.11		2.61	Si
SLV 16	ini.	-823.9	-2164	-0.0005868	0.0002807	0.0035	0.82		2487.45	2487.45		3.02	Si
SLV 16	fin.	871.94	2808	-0.0006307	0.0002807	0.0035	0.82		2482.11	2482.11		2.85	Si
SLV 3	ini.	575.26	624	-0.0003835	0.0002807	0.0035	0.82		2482.11	2482.11		4.31	Si
SLV 3	fin.	-1313.47	-5774	-0.001066	0.0002807	0.0035	0.82		2487.45	2487.45		1.89	Si
SLV 4	ini.	642.91	776	-0.0004367	0.0002807	0.0035	0.82		2482.11	2482.11		3.86	Si
SLV 4	fin.	-1409.2	-6132	-0.0011739	0.0002807	0.0035	0.82		2487.45	2487.45		1.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	682.48	-3108	0.82	0	455	6502	5156	2091	6957		2.24	Si
SLV 2	fin.	-1330.57	-8440	0.82	0	455	6502	5156	2091	6957		0.82	No
SLD 4	ini.	215.11	-222	0.82	0	455	6502	5156	2091	6957		31.36	Si
SLD 4	fin.	-705.93	-5386	0.82	0	455	6502	5156	2091	6957		1.29	Si
SLV 16	ini.	-823.9	5835	0.82	0	455	6502	5156	2091	6957		1.19	Si
SLV 16	fin.	871.94	2512	0.82	0	455	6502	5156	2091	6957		2.77	Si
SLV 13	ini.	-851.97	5715	0.82	0	455	6502	5156	2091	6957		1.22	Si
SLV 13	fin.	1046.29	3528	0.82	0	455	6502	5156	2091	6957		1.97	Si
SLV 14	ini.	-784.33	5334	0.82	0	455	6502	5156	2091	6957		1.3	Si
SLV 14	fin.	950.57	3033	0.82	0	455	6502	5156	2091	6957		2.29	Si
SLV 4	ini.	642.91	-2606	0.82	0	455	6502	5156	2091	6957		2.67	Si
SLV 4	fin.	-1409.2	-8961	0.82	0	455	6502	5156	2091	6957		0.78	No
SLV 15	ini.	-891.54	6216	0.82	0	455	6502	5156	2091	6957		1.12	Si
SLV 15	fin.	967.66	3007	0.82	0	455	6502	5156	2091	6957		2.31	Si
SLV 3	ini.	575.26	-2226	0.82	0	455	6502	5156	2091	6957		3.13	Si
SLV 3	fin.	-1313.47	-8466	0.82	0	455	6502	5156	2091	6957		0.82	No
SLV 8	ini.	71.27	1001	0.82	0	455	6502	5156	2091	6957		6.95	Si
SLV 8	fin.	-685.43	-5464	0.82	0	455	6502	5156	2091	6957		1.27	Si
SLV 1	ini.	614.84	-2727	0.82	0	455	6502	5156	2091	6957		2.55	Si
SLV 1	fin.	-1234.84	-7946	0.82	0	455	6502	5156	2091	6957		0.88	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.765	SLV 4	Si
V_SLV	0.776	SLV 4	No
PF_SLU	7.641	SLU 84	Si
V_SLU	1.247	SLU 84	Si

Trave di accoppiamento 73

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	6.92	8.34	1.42	-18.518	0.706	6.92	8.34	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	318.79	-299	-0.0000639	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.82	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	fin.	196.61	-289	-0.0000391	0.0002246	0.0035	1.42		7594.91	7594.91	No	38.63	Si
SLU 82	ini.	319.15	-294	-0.000064	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.8	Si
SLU 82	fin.	195.02	-292	-0.0000388	0.0002246	0.0035	1.42		7594.91	7594.91	No	38.94	Si
SLU 77	ini.	321.63	-307	-0.0000645	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.61	Si
SLU 77	fin.	201.23	-296	-0.00004	0.0002246	0.0035	1.42		7594.91	7594.91	No	37.74	Si
SLU 79	ini.	318.64	-301	-0.0000639	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.84	Si
SLU 79	fin.	197.96	-291	-0.0000394	0.0002246	0.0035	1.42		7594.91	7594.91	No	38.37	Si
SLU 83	ini.	326.62	-305	-0.0000655	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.25	Si
SLU 83	fin.	201.83	-301	-0.0000401	0.0002246	0.0035	1.42		7594.91	7594.91	No	37.63	Si
SLU 84	ini.	326.77	-303	-0.0000655	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.24	Si
SLU 84	fin.	200.48	-299	-0.0000399	0.0002246	0.0035	1.42		7594.91	7594.91	No	37.88	Si
SLU 74	ini.	314.01	-298	-0.0000629	0.0002246	0.0035	1.42		7594.91	7594.91	No	24.19	Si
SLU 74	fin.	195.76	-289	-0.0000389	0.0002246	0.0035	1.42		7594.91	7594.91	No	38.8	Si
SLU 75	ini.	314.17	-296	-0.000063	0.0002246	0.0035	1.42		7594.91	7594.91	No	24.17	Si
SLU 75	fin.	194.42	-287	-0.0000386	0.0002246	0.0035	1.42		7594.91	7594.91	No	39.07	Si
SLU 81	ini.	319	-296	-0.0000639	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.81	Si
SLU 81	fin.	196.37	-294	-0.000039	0.0002246	0.0035	1.42		7594.91	7594.91	No	38.68	Si
SLU 78	ini.	321.78	-305	-0.0000645	0.0002246	0.0035	1.42		7594.91	7594.91	No	23.6	Si
SLU 78	fin.	199.88	-294	-0.0000397	0.0002246	0.0035	1.42		7594.91	7594.91	No	38	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	314.17	86	1.42	0	329	6344	4083	3621	6673	No	77.68	Si
SLU 75	fin.	194.42	-359	1.42	0	329	6344	4083	3621	6673	No	18.58	Si
SLU 83	ini.	326.62	76	1.42	0	329	6344	4083	3621	6673	No	87.63	Si
SLU 83	fin.	201.83	-369	1.42	0	329	6344	4083	3621	6673	No	18.09	Si
SLU 79	ini.	318.64	87	1.42	0	329	6344	4083	3621	6673	No	76.96	Si
SLU 79	fin.	197.96	-358	1.42	0	329	6344	4083	3621	6673	No	18.62	Si
SLU 76	ini.	311.28	84	1.42	0	329	6344	4083	3621	6673	No	79.72	Si
SLU 76	fin.	190.25	-361	1.42	0	329	6344	4083	3621	6673	No	18.47	Si
SLU 78	ini.	321.78	85	1.42	0	329	6344	4083	3621	6673	No	78.53	Si
SLU 78	fin.	199.88	-360	1.42	0	329	6344	4083	3621	6673	No	18.53	Si
SLU 82	ini.	319.15	75	1.42	0	329	6344	4083	3621	6673	No	89.3	Si
SLU 82	fin.	195.02	-370	1.42	0	329	6344	4083	3621	6673	No	18.02	Si
SLU 81	ini.	319	77	1.42	0	329	6344	4083	3621	6673	No	86.57	Si
SLU 81	fin.	196.37	-368	1.42	0	329	6344	4083	3621	6673	No	18.13	Si
SLU 80	ini.	318.79	84	1.42	0	329	6344	4083	3621	6673	No	79.11	Si
SLU 80	fin.	196.61	-361	1.42	0	329	6344	4083	3621	6673	No	18.5	Si
SLU 73	ini.	303.66	85	1.42	0	329	6344	4083	3621	6673	No	78.84	Si
SLU 73	fin.	184.79	-360	1.42	0	329	6344	4083	3621	6673	No	18.51	Si
SLU 84	ini.	326.77	74	1.42	0	329	6344	4083	3621	6673	No	90.42	Si
SLU 84	fin.	200.48	-371	1.42	0	329	6344	4083	3621	6673	No	17.97	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	442.23	840	-0.0000887	0.0003369	0.0035	1.42		7808.98	7808.98		17.66	Si
SLV 8	fin.	482.35	313	-0.000097	0.0003369	0.0035	1.42		7808.98	7808.98		16.19	Si
SLV 12	ini.	319.78	855	-0.0000638	0.0003369	0.0035	1.42		7808.98	7808.98		24.42	Si
SLV 12	fin.	353.07	211	-0.0000705	0.0003369	0.0035	1.42		7808.98	7808.98		22.12	Si
SLV 7	ini.	441.76	830	-0.0000886	0.0003369	0.0035	1.42		7808.98	7808.98		17.68	Si
SLV 7	fin.	488.19	305	-0.0000982	0.0003369	0.0035	1.42		7808.98	7808.98		16	Si
SLV 11	ini.	319.3	845	-0.0000637	0.0003369	0.0035	1.42		7808.98	7808.98		24.46	Si
SLV 11	fin.	358.91	203	-0.0000717	0.0003369	0.0035	1.42		7808.98	7808.98		21.76	Si
SLV 2	ini.	361.95	-521	-0.0000723	0.0003369	0.0035	1.42		7808.98	7808.98		21.57	Si
SLV 2	fin.	250.72	-140	-0.0000498	0.0003369	0.0035	1.42		7808.98	7808.98		31.15	Si
SLV 1	ini.	361.21	-537	-0.0000722	0.0003369	0.0035	1.42		7808.98	7808.98		21.62	Si
SLV 1	fin.	259.81	-153	-0.0000516	0.0003369	0.0035	1.42		7808.98	7808.98		30.06	Si
SLV 3	ini.	464.26	85	-0.0000933	0.0003369	0.0035	1.42		7808.98	7808.98		16.82	Si
SLV 3	fin.	435.58	112	-0.0000874	0.0003369	0.0035	1.42		7808.98	7808.98		17.93	Si
SLV 4	ini.	465	101	-0.0000934	0.0003369	0.0035	1.42		7808.98	7808.98		16.79	Si
SLV 4	fin.	426.49	124	-0.0000855	0.0003369	0.0035	1.42		7808.98	7808.98		18.31	Si
SLD 3	ini.	317.56	-71	-0.0000633	0.0003369	0.0035	1.42		7808.98	7808.98		24.59	Si
SLD 3	fin.	258.71	-56	-0.0000514	0.0003369	0.0035	1.42		7808.98	7808.98		30.18	Si
SLD 4	ini.	317.88	-65	-0.0000634	0.0003369	0.0035	1.42		7808.98	7808.98		24.57	Si
SLD 4	fin.	254.81	-51	-0.0000506	0.0003369	0.0035	1.42		7808.98	7808.98		30.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	98.25	-159	1.42	0	494	6344	6124	3621	6838		43.11	Si
SLV 5	fin.	-97.7	-447	1.42	0	494	6344	6124	3621	6838		15.28	Si
SLV 14	ini.	-46.24	564	1.42	0	494	6344	6124	3621	6838		12.12	Si
SLV 14	fin.	-180.21	-15	1.42	0	494	6344	6124	3621	6838		456.42	Si
SLV 3	ini.	464.26	-401	1.42	0	494	6344	6124	3621	6838		17.06	Si
SLV 3	fin.	435.58	-499	1.42	0	494	6344	6124	3621	6838		13.69	Si
SLV 1	ini.	361.21	-455	1.42	0	494	6344	6124	3621	6838		15.03	Si
SLV 1	fin.	259.81	-566	1.42	0	494	6344	6124	3621	6838		12.09	Si
SLV 15	ini.	56.08	634	1.42	0	494	6344	6124	3621	6838		10.79	Si
SLV 15	fin.	4.65	67	1.42	0	494	6344	6124	3621	6838		102.72	Si
SLV 16	ini.	56.82	618	1.42	0	494	6344	6124	3621	6838		11.06	Si
SLV 16	fin.	-4.44	51	1.42	0	494	6344	6124	3621	6838		133.49	Si
SLV 4	ini.	465	-416	1.42	0	494	6344	6124	3621	6838		16.43	Si
SLV 4	fin.	426.49	-515	1.42	0	494	6344	6124	3621	6838		13.28	Si
SLV 2	ini.	361.95	-470	1.42	0	494	6344	6124	3621	6838		14.54	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	fin.	250.72	-581	1.42	0	494	6344	6124	3621	6838		11.77	Si
SLV 6	ini.	98.73	-168	1.42	0	494	6344	6124	3621	6838		40.59	Si
SLV 6	fin.	-103.54	-457	1.42	0	494	6344	6124	3621	6838		14.95	Si
SLV 13	ini.	-46.97	580	1.42	0	494	6344	6124	3621	6838		11.8	Si
SLV 13	fin.	-171.12	0	1.42	0	494	6344	6124	3621	6838		18912.42	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	15.996	SLV 7	Si
V_SLV	10.791	SLV 15	Si
PF_SLU	23.243	SLU 84	Si
V_SLU	17.974	SLU 84	Si

Trave di accoppiamento 75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	6.92	8.34	1.42	-16.333	-3.314	6.92	8.34	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	ini.	-395.29	-2592	-0.0000799	0.0001872	0.0035	1.42		7359.91	7359.91	No	18.62	Si
SLU 50	fin.	217.95	-2223	-0.0000435	0.0001872	0.0035	1.42		7350.79	7350.79	No	33.73	Si
SLU 69	ini.	-448.26	-2954	-0.000091	0.0001872	0.0035	1.42		7359.91	7359.91	No	16.42	Si
SLU 69	fin.	259.51	-2524	-0.0000519	0.0001872	0.0035	1.42		7350.79	7350.79	No	28.33	Si
SLU 72	ini.	-448.94	-2922	-0.0000912	0.0001872	0.0035	1.42		7359.91	7359.91	No	16.39	Si
SLU 72	fin.	257.43	-2494	-0.0000515	0.0001872	0.0035	1.42		7350.79	7350.79	No	28.55	Si
SLU 65	ini.	-408	-2744	-0.0000826	0.0001872	0.0035	1.42		7359.91	7359.91	No	18.04	Si
SLU 65	fin.	222.08	-2356	-0.0000443	0.0001872	0.0035	1.42		7350.79	7350.79	No	33.1	Si
SLU 71	ini.	-451.19	-2918	-0.0000917	0.0001872	0.0035	1.42		7359.91	7359.91	No	16.31	Si
SLU 71	fin.	261.26	-2488	-0.0000523	0.0001872	0.0035	1.42		7350.79	7350.79	No	28.14	Si
SLU 68	ini.	-427.72	-2834	-0.0000867	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.21	Si
SLU 68	fin.	238.48	-2427	-0.0000477	0.0001872	0.0035	1.42		7350.79	7350.79	No	30.82	Si
SLU 64	ini.	-411.75	-2737	-0.0000834	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.87	Si
SLU 64	fin.	228.47	-2346	-0.0000456	0.0001872	0.0035	1.42		7350.79	7350.79	No	32.17	Si
SLU 70	ini.	-446.01	-2958	-0.0000906	0.0001872	0.0035	1.42		7359.91	7359.91	No	16.5	Si
SLU 70	fin.	255.68	-2530	-0.0000512	0.0001872	0.0035	1.42		7350.79	7350.79	No	28.75	Si
SLU 67	ini.	-426.29	-2867	-0.0000864	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.27	Si
SLU 67	fin.	239.29	-2459	-0.0000478	0.0001872	0.0035	1.42		7350.79	7350.79	No	30.72	Si
SLU 66	ini.	-428.54	-2863	-0.0000869	0.0001872	0.0035	1.42		7359.91	7359.91	No	17.17	Si
SLU 66	fin.	243.12	-2453	-0.0000486	0.0001872	0.0035	1.42		7350.79	7350.79	No	30.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 68	ini.	-427.72	1785	1.42	0	576	7137	5953	3621	7713	No	4.32	Si
SLU 68	fin.	238.48	336	1.42	0	576	7137	5953	3621	7713	No	22.99	Si
SLU 69	ini.	-448.26	1849	1.42	0	576	7137	5953	3621	7713	No	4.17	Si
SLU 69	fin.	259.51	399	1.42	0	576	7137	5953	3621	7713	No	19.31	Si
SLU 64	ini.	-411.75	1743	1.42	0	576	7137	5953	3621	7713	No	4.43	Si
SLU 64	fin.	228.47	294	1.42	0	576	7137	5953	3621	7713	No	26.24	Si
SLU 70	ini.	-446.01	1840	1.42	0	576	7137	5953	3621	7713	No	4.19	Si
SLU 70	fin.	255.68	391	1.42	0	576	7137	5953	3621	7713	No	19.71	Si
SLU 72	ini.	-448.94	1845	1.42	0	576	7137	5953	3621	7713	No	4.18	Si
SLU 72	fin.	257.43	396	1.42	0	576	7137	5953	3621	7713	No	19.46	Si
SLU 66	ini.	-428.54	1793	1.42	0	576	7137	5953	3621	7713	No	4.3	Si
SLU 66	fin.	243.12	344	1.42	0	576	7137	5953	3621	7713	No	22.41	Si
SLU 79	ini.	-312.34	1672	1.42	0	576	7137	5953	3621	7713	No	4.61	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	fin.	164.36	-52	1.42	0	576	7137	5953	3621	7713	No	148.28	Si
SLU 67	ini.	-426.29	1785	1.42	0	576	7137	5953	3621	7713	No	4.32	Si
SLU 67	fin.	239.29	336	1.42	0	576	7137	5953	3621	7713	No	22.96	Si
SLU 71	ini.	-451.19	1854	1.42	0	576	7137	5953	3621	7713	No	4.16	Si
SLU 71	fin.	261.26	405	1.42	0	576	7137	5953	3621	7713	No	19.06	Si
SLU 65	ini.	-408	1729	1.42	0	576	7137	5953	3621	7713	No	4.46	Si
SLU 65	fin.	222.08	280	1.42	0	576	7137	5953	3621	7713	No	27.53	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-4251.65	-4490	-0.001182	0.0002807	0.0035	1.42		7346.34	7346.34		1.73	Si
SLV 14	fin.	4196.28	-723	-0.0011625	0.0002807	0.0035	1.42		7337.02	7337.02		1.75	Si
SLV 1	ini.	3885.05	1495	-0.0010464	0.0002807	0.0035	1.42		7337.02	7337.02		1.89	Si
SLV 1	fin.	-3768.19	-1776	-0.0010028	0.0002807	0.0035	1.42		7346.34	7346.34		1.95	Si
SLV 15	ini.	-4727.62	-5817	-0.0013751	0.0002807	0.0035	1.42		7346.34	7346.34		1.55	Si
SLV 15	fin.	4356.25	-1763	-0.0012248	0.0002807	0.0035	1.42		7337.02	7337.02		1.68	Si
SLD 13	ini.	-2101.28	-3189	-0.0004818	0.0002807	0.0035	1.42		7346.34	7346.34		3.5	Si
SLD 13	fin.	2004.85	-1319	-0.0004563	0.0002807	0.0035	1.42		7337.02	7337.02		3.66	Si
SLV 16	ini.	-4414.6	-5582	-0.001246	0.0002807	0.0035	1.42		7346.34	7346.34		1.66	Si
SLV 16	fin.	4045.27	-1777	-0.0011054	0.0002807	0.0035	1.42		7337.02	7337.02		1.81	Si
SLV 4	ini.	4035.12	638	-0.0011016	0.0002807	0.0035	1.42		7337.02	7337.02		1.82	Si
SLV 4	fin.	-4230.19	-2845	-0.0011737	0.0002807	0.0035	1.42		7346.34	7346.34		1.74	Si
SLV 2	ini.	4198.07	1730	-0.0011632	0.0002807	0.0035	1.42		7337.02	7337.02		1.75	Si
SLV 2	fin.	-4079.18	-1790	-0.0011163	0.0002807	0.0035	1.42		7346.34	7346.34		1.8	Si
SLV 13	ini.	-4564.67	-4725	-0.0013068	0.0002807	0.0035	1.42		7346.34	7346.34		1.61	Si
SLV 13	fin.	4507.27	-708	-0.0012855	0.0002807	0.0035	1.42		7337.02	7337.02		1.63	Si
SLD 15	ini.	-2173.4	-3658	-0.0005017	0.0002807	0.0035	1.42		7346.34	7346.34		3.38	Si
SLD 15	fin.	1941.59	-1773	-0.0004393	0.0002807	0.0035	1.42		7337.02	7337.02		3.78	Si
SLV 3	ini.	3722.1	403	-0.0009881	0.0002807	0.0035	1.42		7337.02	7337.02		1.97	Si
SLV 3	fin.	-3919.21	-2830	-0.0010572	0.0002807	0.0035	1.42		7346.34	7346.34		1.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-2173.4	6658	1.42	0	864	7137	8929	3621	8001		1.2	Si
SLD 15	fin.	1941.59	5426	1.42	0	864	7137	8929	3621	8001		1.47	Si
SLV 1	ini.	3885.05	-10584	1.42	0	864	7137	8929	3621	8001		0.76	No
SLV 1	fin.	-3768.19	-11504	1.42	0	864	7137	8929	3621	8001		0.7	No
SLV 3	ini.	3722.1	-10355	1.42	0	864	7137	8929	3621	8001		0.77	No
SLV 3	fin.	-3919.21	-11586	1.42	0	864	7137	8929	3621	8001		0.69	No
SLV 2	ini.	4198.07	-11474	1.42	0	864	7137	8929	3621	8001		0.7	No
SLV 2	fin.	-4079.18	-12394	1.42	0	864	7137	8929	3621	8001		0.65	No
SLV 16	ini.	-4414.6	13038	1.42	0	864	7137	8929	3621	8001		0.61	No
SLV 16	fin.	4045.27	11678	1.42	0	864	7137	8929	3621	8001		0.69	No
SLV 14	ini.	-4251.65	12809	1.42	0	864	7137	8929	3621	8001		0.62	No
SLV 14	fin.	4196.28	11761	1.42	0	864	7137	8929	3621	8001		0.68	No
SLV 13	ini.	-4564.67	13699	1.42	0	864	7137	8929	3621	8001		0.58	No
SLV 13	fin.	4507.27	12651	1.42	0	864	7137	8929	3621	8001		0.63	No
SLV 15	ini.	-4727.62	13928	1.42	0	864	7137	8929	3621	8001		0.57	No
SLV 15	fin.	4356.25	12568	1.42	0	864	7137	8929	3621	8001		0.64	No
SLD 13	ini.	-2101.28	6555	1.42	0	864	7137	8929	3621	8001		1.22	Si
SLD 13	fin.	2004.85	5452	1.42	0	864	7137	8929	3621	8001		1.47	Si
SLV 4	ini.	4035.12	-11245	1.42	0	864	7137	8929	3621	8001		0.71	No
SLV 4	fin.	-4230.19	-12476	1.42	0	864	7137	8929	3621	8001		0.64	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.554	SLV 15	Si
V_SLV	0.574	SLV 15	No
PF_SLU	16.312	SLU 71	Si
V_SLU	4.161	SLU 71	Si

Trave di accoppiamento 77

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	4.82	5.72	0.9	-16.818	6.526	4.82	5.72	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	955.59	-3137	-0.0005966	0.0001872	0.0035	0.9		2959	2959	No	3.1	Si
SLU 83	fin.	-296.78	-1550	-0.0001544	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.99	Si
SLU 74	ini.	930.87	-3052	-0.0005776	0.0001872	0.0035	0.9		2959	2959	No	3.18	Si
SLU 74	fin.	-288.46	-1507	-0.0001497	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.28	Si
SLU 77	ini.	930.79	-3071	-0.0005776	0.0001872	0.0035	0.9		2959	2959	No	3.18	Si
SLU 77	fin.	-280.48	-1542	-0.0001453	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.57	Si
SLU 78	ini.	929.01	-3069	-0.0005762	0.0001872	0.0035	0.9		2959	2959	No	3.19	Si
SLU 78	fin.	-279.06	-1544	-0.0001445	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.62	Si
SLU 82	ini.	953.89	-3117	-0.0005953	0.0001872	0.0035	0.9		2959	2959	No	3.1	Si
SLU 82	fin.	-303.34	-1517	-0.000158	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.77	Si
SLU 84	ini.	953.81	-3135	-0.0005952	0.0001872	0.0035	0.9		2959	2959	No	3.1	Si
SLU 84	fin.	-295.36	-1552	-0.0001536	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.04	Si
SLU 79	ini.	918.07	-3027	-0.0005679	0.0001872	0.0035	0.9		2959	2959	No	3.22	Si
SLU 79	fin.	-278.46	-1516	-0.0001442	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.65	Si
SLU 75	ini.	929.09	-3050	-0.0005763	0.0001872	0.0035	0.9		2959	2959	No	3.18	Si
SLU 75	fin.	-287.04	-1509	-0.0001489	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.33	Si
SLU 80	ini.	916.29	-3025	-0.0005665	0.0001872	0.0035	0.9		2959	2959	No	3.23	Si
SLU 80	fin.	-277.04	-1518	-0.0001434	0.0001872	0.0035	0.9		2964.67	2964.67	No	10.7	Si
SLU 81	ini.	955.67	-3119	-0.0005967	0.0001872	0.0035	0.9		2959	2959	No	3.1	Si
SLU 81	fin.	-304.76	-1515	-0.0001588	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	916.29	-3361	0.9	0	365	7137	3773	2295	6068	No	1.81	Si
SLU 80	fin.	-277.04	-674	0.9	0	365	7137	3773	2295	6068	No	9.01	Si
SLU 78	ini.	929.01	-3414	0.9	0	365	7137	3773	2295	6068	No	1.78	Si
SLU 78	fin.	-279.06	-671	0.9	0	365	7137	3773	2295	6068	No	9.05	Si
SLU 77	ini.	930.79	-3423	0.9	0	365	7137	3773	2295	6068	No	1.77	Si
SLU 77	fin.	-280.48	-672	0.9	0	365	7137	3773	2295	6068	No	9.03	Si
SLU 82	ini.	953.89	-3477	0.9	0	365	7137	3773	2295	6068	No	1.75	Si
SLU 82	fin.	-303.34	-790	0.9	0	365	7137	3773	2295	6068	No	7.69	Si
SLU 84	ini.	953.81	-3482	0.9	0	365	7137	3773	2295	6068	No	1.74	Si
SLU 84	fin.	-295.36	-749	0.9	0	365	7137	3773	2295	6068	No	8.1	Si
SLU 81	ini.	955.67	-3487	0.9	0	365	7137	3773	2295	6068	No	1.74	Si
SLU 81	fin.	-304.76	-791	0.9	0	365	7137	3773	2295	6068	No	7.67	Si
SLU 83	ini.	955.59	-3491	0.9	0	365	7137	3773	2295	6068	No	1.74	Si
SLU 83	fin.	-296.78	-751	0.9	0	365	7137	3773	2295	6068	No	8.08	Si
SLU 79	ini.	918.07	-3371	0.9	0	365	7137	3773	2295	6068	No	1.8	Si
SLU 79	fin.	-278.46	-675	0.9	0	365	7137	3773	2295	6068	No	8.99	Si
SLU 74	ini.	930.87	-3419	0.9	0	365	7137	3773	2295	6068	No	1.77	Si
SLU 74	fin.	-288.46	-712	0.9	0	365	7137	3773	2295	6068	No	8.52	Si
SLU 75	ini.	929.09	-3409	0.9	0	365	7137	3773	2295	6068	No	1.78	Si
SLU 75	fin.	-287.04	-711	0.9	0	365	7137	3773	2295	6068	No	8.54	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	1085.45	-2568	-0.0006568	0.0002807	0.0035	0.9		2989.59	2989.59		2.75	Si
SLD 13	fin.	-713.2	-8	-0.0003956	0.0002807	0.0035	0.9		2995.37	2995.37		4.2	Si
SLV 3	ini.	-475.67	-854	-0.0002508	0.0002807	0.0035	0.9		2995.37	2995.37		6.3	Si
SLV 3	fin.	1064.01	-3497	-0.0006407	0.0002807	0.0035	0.9		2989.59	2989.59		2.81	Si
SLD 16	ini.	1074.23	-2538	-0.0006484	0.0002807	0.0035	0.9		2989.59	2989.59		2.78	Si
SLD 16	fin.	-709.1	3	-0.000393	0.0002807	0.0035	0.9		2995.37	2995.37		4.22	Si
SLV 10	ini.	1175.2	-2755	-0.0007255	0.0002807	0.0035	0.9		2989.59	2989.59		2.54	Si
SLV 10	fin.	-775.72	26	-0.0004365	0.0002807	0.0035	0.9		2995.37	2995.37		3.86	Si
SLV 14	ini.	1766.26	-3323	-0.0012441	0.0002807	0.0035	0.9		2989.59	2989.59		1.69	Si
SLV 14	fin.	-1485.64	1502	-0.0009796	0.0002807	0.0035	0.9		2995.37	2995.37		2.02	Si
SLD 14	ini.	1125.03	-2618	-0.0006868	0.0002807	0.0035	0.9		2989.59	2989.59		2.66	Si
SLD 14	fin.	-756.13	71	-0.0004235	0.0002807	0.0035	0.9		2995.37	2995.37		3.96	Si
SLV 16	ini.	1649.02	-3141	-0.0011306	0.0002807	0.0035	0.9		2989.59	2989.59		1.81	Si
SLV 16	fin.	-1376.63	1342	-0.0008862	0.0002807	0.0035	0.9		2995.37	2995.37		2.18	Si
SLV 9	ini.	1115.95	-2681	-0.0006799	0.0002807	0.0035	0.9		2989.59	2989.59		2.68	Si
SLV 9	fin.	-711.45	-92	-0.0003945	0.0002807	0.0035	0.9		2995.37	2995.37		4.21	Si
SLV 13	ini.	1674.07	-3208	-0.0011543	0.0002807	0.0035	0.9		2989.59	2989.59		1.79	Si
SLV 13	fin.	-1385.64	1318	-0.0008938	0.0002807	0.0035	0.9		2995.37	2995.37		2.16	Si
SLV 15	ini.	1556.82	-3026	-0.0010455	0.0002807	0.0035	0.9		2989.59	2989.59		1.92	Si
SLV 15	fin.	-1276.64	1159	-0.000804	0.0002807	0.0035	0.9		2995.37	2995.37		2.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	1649.02	-5884	0.9	0	548	7137	5660	2295	7684		1.31	Si
SLV 16	fin.	-1376.63	-5310	0.9	0	548	7137	5660	2295	7684		1.45	Si
SLV 13	ini.	1674.07	-6000	0.9	0	548	7137	5660	2295	7684		1.28	Si
SLV 13	fin.	-1385.64	-5365	0.9	0	548	7137	5660	2295	7684		1.43	Si
SLV 1	ini.	-358.43	1122	0.9	0	548	7137	5660	2295	7684		6.85	Si
SLV 1	fin.	955.01	4250	0.9	0	548	7137	5660	2295	7684		1.81	Si
SLD 14	ini.	1125.03	-4069	0.9	0	548	7137	5660	2295	7684		1.89	Si
SLD 14	fin.	-756.13	-2766	0.9	0	548	7137	5660	2295	7684		2.78	Si
SLV 15	ini.	1556.82	-5558	0.9	0	548	7137	5660	2295	7684		1.38	Si
SLV 15	fin.	-1276.64	-4920	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 4	ini.	-383.48	1239	0.9	0	548	7137	5660	2295	7684		6.2	Si
SLV 4	fin.	964.02	4304	0.9	0	548	7137	5660	2295	7684		1.79	Si
SLV 14	ini.	1766.26	-6326	0.9	0	548	7137	5660	2295	7684		1.21	Si
SLV 14	fin.	-1485.64	-5756	0.9	0	548	7137	5660	2295	7684		1.34	Si
SLV 10	ini.	1175.2	-4291	0.9	0	548	7137	5660	2295	7684		1.79	Si
SLV 10	fin.	-775.72	-2840	0.9	0	548	7137	5660	2295	7684		2.71	Si
SLV 3	ini.	-475.67	1565	0.9	0	548	7137	5660	2295	7684		4.91	Si
SLV 3	fin.	1064.01	4695	0.9	0	548	7137	5660	2295	7684		1.64	Si
SLV 9	ini.	1115.95	-4082	0.9	0	548	7137	5660	2295	7684		1.88	Si
SLV 9	fin.	-711.45	-2589	0.9	0	548	7137	5660	2295	7684		2.97	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.693	SLV 14	Si
V_SLV	1.215	SLV 14	Si
PF_SLU	3.096	SLU 81	Si
V_SLU	1.738	SLU 83	Si

Trave di accoppiamento 78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	7.52	8.34	0.82	-16.818	6.526	7.52	8.34	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 73	ini.	67.96	-273	-0.0000407	0.0001872	0.0035	0.82		2455.37	2455.37	No	36.13	Si
SLU 73	fin.	-933.6	-2452	-0.0007294	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.64	Si
SLU 83	ini.	62.22	-324	-0.0000372	0.0001872	0.0035	0.82		2455.37	2455.37	No	39.46	Si
SLU 83	fin.	-976.64	-2589	-0.0007722	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.52	Si
SLU 82	ini.	68.3	-298	-0.0000409	0.0001872	0.0035	0.82		2455.37	2455.37	No	35.95	Si
SLU 82	fin.	-975.79	-2570	-0.0007714	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.52	Si
SLU 77	ini.	55.17	-337	-0.0000329	0.0001872	0.0035	0.82		2455.37	2455.37	No	44.5	Si
SLU 77	fin.	-949.45	-2534	-0.0007451	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.59	Si
SLU 75	ini.	61.26	-311	-0.0000366	0.0001872	0.0035	0.82		2455.37	2455.37	No	40.08	Si
SLU 75	fin.	-948.6	-2514	-0.0007442	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.59	Si
SLU 84	ini.	61.25	-328	-0.0000366	0.0001872	0.0035	0.82		2455.37	2455.37	No	40.09	Si
SLU 84	fin.	-975.09	-2587	-0.0007707	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.52	Si
SLU 74	ini.	62.23	-308	-0.0000372	0.0001872	0.0035	0.82		2455.37	2455.37	No	39.46	Si
SLU 74	fin.	-950.15	-2516	-0.0007458	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.59	Si
SLU 79	ini.	55.47	-326	-0.0000331	0.0001872	0.0035	0.82		2455.37	2455.37	No	44.26	Si
SLU 79	fin.	-934.78	-2490	-0.0007305	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.63	Si
SLU 78	ini.	54.21	-341	-0.0000324	0.0001872	0.0035	0.82		2455.37	2455.37	No	45.3	Si
SLU 78	fin.	-947.89	-2532	-0.0007435	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.6	Si
SLU 81	ini.	69.27	-295	-0.0000415	0.0001872	0.0035	0.82		2455.37	2455.37	No	35.45	Si
SLU 81	fin.	-977.34	-2572	-0.0007729	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	61.25	797	0.82	0	303	6502	3438	2091	5529	No	6.94	Si
SLU 84	fin.	-975.09	-4211	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 79	ini.	55.47	774	0.82	0	303	6502	3438	2091	5529	No	7.15	Si
SLU 79	fin.	-934.78	-4042	0.82	0	303	6502	3438	2091	5529	No	1.37	Si
SLU 82	ini.	68.3	753	0.82	0	303	6502	3438	2091	5529	No	7.34	Si
SLU 82	fin.	-975.79	-4205	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 83	ini.	62.22	793	0.82	0	303	6502	3438	2091	5529	No	6.97	Si
SLU 83	fin.	-976.64	-4217	0.82	0	303	6502	3438	2091	5529	No	1.31	Si
SLU 77	ini.	55.17	792	0.82	0	303	6502	3438	2091	5529	No	6.98	Si
SLU 77	fin.	-949.45	-4103	0.82	0	303	6502	3438	2091	5529	No	1.35	Si
SLU 75	ini.	61.26	752	0.82	0	303	6502	3438	2091	5529	No	7.35	Si
SLU 75	fin.	-948.6	-4091	0.82	0	303	6502	3438	2091	5529	No	1.35	Si
SLU 80	ini.	54.5	777	0.82	0	303	6502	3438	2091	5529	No	7.11	Si
SLU 80	fin.	-933.23	-4035	0.82	0	303	6502	3438	2091	5529	No	1.37	Si
SLU 78	ini.	54.21	796	0.82	0	303	6502	3438	2091	5529	No	6.94	Si
SLU 78	fin.	-947.89	-4097	0.82	0	303	6502	3438	2091	5529	No	1.35	Si
SLU 74	ini.	62.23	748	0.82	0	303	6502	3438	2091	5529	No	7.39	Si
SLU 74	fin.	-950.15	-4097	0.82	0	303	6502	3438	2091	5529	No	1.35	Si
SLU 81	ini.	69.27	749	0.82	0	303	6502	3438	2091	5529	No	7.38	Si
SLU 81	fin.	-977.34	-4211	0.82	0	303	6502	3438	2091	5529	No	1.31	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	671.34	1882	-0.0004596	0.0002807	0.0035	0.82		2482.11	2482.11		3.7	Si
SLV 13	fin.	-1518.3	-2642	-0.0013042	0.0002807	0.0035	0.82		2487.45	2487.45		1.64	Si
SLD 15	ini.	298.37	655	-0.0001859	0.0002807	0.0035	0.82		2482.11	2482.11		8.32	Si
SLD 15	fin.	-989.68	-2048	-0.000737	0.0002807	0.0035	0.82		2487.45	2487.45		2.51	Si
SLV 16	ini.	676.31	1906	-0.0004636	0.0002807	0.0035	0.82		2482.11	2482.11		3.67	Si
SLV 16	fin.	-1520.93	-2620	-0.0013074	0.0002807	0.0035	0.82		2487.45	2487.45		1.64	Si
SLV 14	ini.	723.26	2046	-0.0005023	0.0002807	0.0035	0.82		2482.11	2482.11		3.43	Si
SLV 14	fin.	-1599.01	-2744	-0.0014064	0.0002807	0.0035	0.82		2487.45	2487.45		1.56	Si
SLV 10	ini.	335.57	744	-0.0002108	0.0002807	0.0035	0.82		2482.11	2482.11		7.4	Si
SLV 10	fin.	-1069.41	-2217	-0.0008134	0.0002807	0.0035	0.82		2487.45	2487.45		2.33	Si
SLV 9	ini.	302.21	639	-0.0001885	0.0002807	0.0035	0.82		2482.11	2482.11		8.21	Si
SLV 9	fin.	-1017.54	-2151	-0.0007634	0.0002807	0.0035	0.82		2487.45	2487.45		2.44	Si
SLV 15	ini.	624.39	1742	-0.0004219	0.0002807	0.0035	0.82		2482.11	2482.11		3.98	Si
SLV 15	fin.	-1440.23	-2518	-0.0012101	0.0002807	0.0035	0.82		2487.45	2487.45		1.73	Si
SLD 16	ini.	320.66	725	-0.0002008	0.0002807	0.0035	0.82		2482.11	2482.11		7.74	Si
SLD 16	fin.	-1024.33	-2092	-0.0007698	0.0002807	0.0035	0.82		2487.45	2487.45		2.43	Si
SLD 14	ini.	340.81	785	-0.0002143	0.0002807	0.0035	0.82		2482.11	2482.11		7.28	Si
SLD 14	fin.	-1058.02	-2146	-0.0008023	0.0002807	0.0035	0.82		2487.45	2487.45		2.35	Si
SLD 13	ini.	318.52	715	-0.0001993	0.0002807	0.0035	0.82		2482.11	2482.11		7.79	Si
SLD 13	fin.	-1023.37	-2102	-0.0007689	0.0002807	0.0035	0.82		2487.45	2487.45		2.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	335.57	-1090	0.82	0	455	6502	5156	2091	6957		6.38	Si
SLV 10	fin.	-1069.41	-4215	0.82	0	455	6502	5156	2091	6957		1.65	Si
SLV 3	ini.	-613.29	4008	0.82	0	455	6502	5156	2091	6957		1.74	Si
SLV 3	fin.	291.97	301	0.82	0	455	6502	5156	2091	6957		23.09	Si
SLD 14	ini.	340.81	-1116	0.82	0	455	6502	5156	2091	6957		6.23	Si
SLD 14	fin.	-1058.02	-4133	0.82	0	455	6502	5156	2091	6957		1.68	Si
SLV 13	ini.	671.34	-2897	0.82	0	455	6502	5156	2091	6957		2.4	Si
SLV 13	fin.	-1518.3	-5641	0.82	0	455	6502	5156	2091	6957		1.23	Si
SLD 13	ini.	318.52	-999	0.82	0	455	6502	5156	2091	6957		6.96	Si
SLD 13	fin.	-1023.37	-4018	0.82	0	455	6502	5156	2091	6957		1.73	Si
SLV 15	ini.	624.39	-2642	0.82	0	455	6502	5156	2091	6957		2.63	Si
SLV 15	fin.	-1440.23	-5356	0.82	0	455	6502	5156	2091	6957		1.3	Si
SLV 16	ini.	676.31	-2916	0.82	0	455	6502	5156	2091	6957		2.39	Si
SLV 16	fin.	-1520.93	-5624	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLV 9	ini.	302.21	-915	0.82	0	455	6502	5156	2091	6957		7.61	Si
SLV 9	fin.	-1017.54	-4043	0.82	0	455	6502	5156	2091	6957		1.72	Si
SLD 16	ini.	320.66	-1007	0.82	0	455	6502	5156	2091	6957		6.91	Si
SLD 16	fin.	-1024.33	-4009	0.82	0	455	6502	5156	2091	6957		1.74	Si
SLV 14	ini.	723.26	-3170	0.82	0	455	6502	5156	2091	6957		2.19	Si
SLV 14	fin.	-1599.01	-5910	0.82	0	455	6502	5156	2091	6957		1.18	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.556	SLV 14	Si
V_SLV	1.177	SLV 14	Si
PF_SLU	2.518	SLU 81	Si
V_SLU	1.311	SLU 83	Si

Trave di accoppiamento 79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	4.82	5.72	0.9	-11.938	6.526	4.82	5.72	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	835.64	-3901	-0.0005062	0.0001872	0.0035	0.9		2959	2959	No	3.54	Si
SLU 82	fin.	250.53	-3135	-0.0001291	0.0001872	0.0035	0.9		2959	2959	No	11.81	Si
SLU 80	ini.	803.26	-3802	-0.0004825	0.0001872	0.0035	0.9		2959	2959	No	3.68	Si
SLU 80	fin.	264.32	-3106	-0.0001367	0.0001872	0.0035	0.9		2959	2959	No	11.19	Si
SLU 79	ini.	801.63	-3802	-0.0004813	0.0001872	0.0035	0.9		2959	2959	No	3.69	Si
SLU 79	fin.	267.36	-3113	-0.0001383	0.0001872	0.0035	0.9		2959	2959	No	11.07	Si
SLU 81	ini.	834.01	-3900	-0.000505	0.0001872	0.0035	0.9		2959	2959	No	3.55	Si
SLU 81	fin.	253.57	-3141	-0.0001308	0.0001872	0.0035	0.9		2959	2959	No	11.67	Si
SLU 77	ini.	816.8	-3862	-0.0004924	0.0001872	0.0035	0.9		2959	2959	No	3.62	Si
SLU 77	fin.	268.8	-3154	-0.0001391	0.0001872	0.0035	0.9		2959	2959	No	11.01	Si
SLU 78	ini.	818.43	-3862	-0.0004936	0.0001872	0.0035	0.9		2959	2959	No	3.62	Si
SLU 78	fin.	265.76	-3147	-0.0001375	0.0001872	0.0035	0.9		2959	2959	No	11.13	Si
SLU 84	ini.	839.49	-3937	-0.0005091	0.0001872	0.0035	0.9		2959	2959	No	3.52	Si
SLU 84	fin.	260.02	-3182	-0.0001343	0.0001872	0.0035	0.9		2959	2959	No	11.38	Si
SLU 83	ini.	837.86	-3937	-0.0005078	0.0001872	0.0035	0.9		2959	2959	No	3.53	Si
SLU 83	fin.	263.06	-3188	-0.000136	0.0001872	0.0035	0.9		2959	2959	No	11.25	Si
SLU 74	ini.	812.95	-3825	-0.0004896	0.0001872	0.0035	0.9		2959	2959	No	3.64	Si
SLU 74	fin.	259.31	-3107	-0.0001339	0.0001872	0.0035	0.9		2959	2959	No	11.41	Si
SLU 75	ini.	814.58	-3826	-0.0004908	0.0001872	0.0035	0.9		2959	2959	No	3.63	Si
SLU 75	fin.	256.27	-3100	-0.0001322	0.0001872	0.0035	0.9		2959	2959	No	11.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	835.64	-2795	0.9	0	365	7137	3773	2295	6068	No	2.17	Si
SLU 82	fin.	250.53	801	0.9	0	365	7137	3773	2295	6068	No	7.58	Si
SLU 75	ini.	814.58	-2747	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 75	fin.	256.27	851	0.9	0	365	7137	3773	2295	6068	No	7.13	Si
SLU 77	ini.	816.8	-2759	0.9	0	365	7137	3773	2295	6068	No	2.2	Si
SLU 77	fin.	268.8	904	0.9	0	365	7137	3773	2295	6068	No	6.71	Si
SLU 78	ini.	818.43	-2767	0.9	0	365	7137	3773	2295	6068	No	2.19	Si
SLU 78	fin.	265.76	895	0.9	0	365	7137	3773	2295	6068	No	6.78	Si
SLU 83	ini.	837.86	-2807	0.9	0	365	7137	3773	2295	6068	No	2.16	Si
SLU 83	fin.	263.06	854	0.9	0	365	7137	3773	2295	6068	No	7.11	Si
SLU 79	ini.	801.63	-2703	0.9	0	365	7137	3773	2295	6068	No	2.24	Si
SLU 79	fin.	267.36	897	0.9	0	365	7137	3773	2295	6068	No	6.76	Si
SLU 81	ini.	834.01	-2787	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 81	fin.	253.57	810	0.9	0	365	7137	3773	2295	6068	No	7.49	Si
SLU 80	ini.	803.26	-2711	0.9	0	365	7137	3773	2295	6068	No	2.24	Si
SLU 80	fin.	264.32	888	0.9	0	365	7137	3773	2295	6068	No	6.84	Si
SLU 84	ini.	839.49	-2815	0.9	0	365	7137	3773	2295	6068	No	2.16	Si
SLU 84	fin.	260.02	844	0.9	0	365	7137	3773	2295	6068	No	7.19	Si
SLU 74	ini.	812.95	-2739	0.9	0	365	7137	3773	2295	6068	No	2.22	Si
SLU 74	fin.	259.31	861	0.9	0	365	7137	3773	2295	6068	No	7.05	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	3248.01	-6444	-0.0038294	0.0002807	0.0035	0.9		2989.59	2989.59		0.92	No
SLV 14	fin.	-2557.07	2304	-0.0022776	0.0002807	0.0035	0.9		2995.37	2995.37		1.17	Si
SLV 4	ini.	-1964.14	995	-0.0014478	0.0002807	0.0035	0.9		2995.37	2995.37		1.53	Si
SLV 4	fin.	2722.97	-6218	-0.0026092	0.0002807	0.0035	0.9		2989.59	2989.59		1.1	Si
SLV 1	ini.	-1935.12	910	-0.001416	0.0002807	0.0035	0.9		2995.37	2995.37		1.55	Si
SLV 1	fin.	2722.48	-6268	-0.0026081	0.0002807	0.0035	0.9		2989.59	2989.59		1.1	Si
SLD 14	ini.	1702.3	-4238	-0.0011814	0.0002807	0.0035	0.9		2989.59	2989.59		1.76	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	fin.	-990.79	-225	-0.0005855	0.0002807	0.0035	0.9		2995.37	2995.37		3.02	Si
SLV 2	ini.	-1746.64	640	-0.0012215	0.0002807	0.0035	0.9		2995.37	2995.37		1.71	Si
SLV 2	fin.	2530.89	-5956	-0.0022393	0.0002807	0.0035	0.9		2989.59	2989.59		1.18	Si
SLV 3	ini.	-2152.62	1265	-0.0016693	0.0002807	0.0035	0.9		2995.37	2995.37		1.39	Si
SLV 3	fin.	2914.56	-6531	-0.0030467	0.0002807	0.0035	0.9		2989.59	2989.59		1.03	Si
SLV 16	ini.	3030.51	-6089	-0.0033306	0.0002807	0.0035	0.9		2989.59	2989.59		0.99	No
SLV 16	fin.	-2364.99	2042	-0.0019612	0.0002807	0.0035	0.9		2995.37	2995.37		1.27	Si
SLV 10	ini.	1719.97	-4330	-0.0011985	0.0002807	0.0035	0.9		2989.59	2989.59		1.74	Si
SLV 10	fin.	-966.15	-337	-0.0005678	0.0002807	0.0035	0.9		2995.37	2995.37		3.1	Si
SLV 15	ini.	2842.03	-5819	-0.0028727	0.0002807	0.0035	0.9		2989.59	2989.59		1.05	Si
SLV 15	fin.	-2173.39	1729	-0.0016956	0.0002807	0.0035	0.9		2995.37	2995.37		1.38	Si
SLV 13	ini.	3059.54	-6174	-0.0034004	0.0002807	0.0035	0.9		2989.59	2989.59		0.98	No
SLV 13	fin.	-2365.48	1991	-0.001962	0.0002807	0.0035	0.9		2995.37	2995.37		1.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1746.64	6602	0.9	0	548	7137	5660	2295	7684		1.16	Si
SLV 2	fin.	2530.89	9343	0.9	0	548	7137	5660	2295	7684		0.82	No
SLV 15	ini.	2842.03	-10304	0.9	0	548	7137	5660	2295	7684		0.75	No
SLV 15	fin.	-2173.39	-8130	0.9	0	548	7137	5660	2295	7684		0.95	No
SLV 4	ini.	-1964.14	7351	0.9	0	548	7137	5660	2295	7684		1.05	Si
SLV 4	fin.	2722.97	10117	0.9	0	548	7137	5660	2295	7684		0.76	No
SLV 14	ini.	3248.01	-11742	0.9	0	548	7137	5660	2295	7684		0.65	No
SLV 14	fin.	-2557.07	-9623	0.9	0	548	7137	5660	2295	7684		0.8	No
SLV 16	ini.	3030.51	-10992	0.9	0	548	7137	5660	2295	7684		0.7	No
SLV 16	fin.	-2364.99	-8848	0.9	0	548	7137	5660	2295	7684		0.87	No
SLV 13	ini.	3059.54	-11054	0.9	0	548	7137	5660	2295	7684		0.7	No
SLV 13	fin.	-2365.48	-8905	0.9	0	548	7137	5660	2295	7684		0.86	No
SLV 3	ini.	-2152.62	8039	0.9	0	548	7137	5660	2295	7684		0.96	No
SLV 3	fin.	2914.56	10835	0.9	0	548	7137	5660	2295	7684		0.71	No
SLV 1	ini.	-1935.12	7290	0.9	0	548	7137	5660	2295	7684		1.05	Si
SLV 1	fin.	2722.48	10060	0.9	0	548	7137	5660	2295	7684		0.76	No
SLD 14	ini.	1702.3	-6081	0.9	0	548	7137	5660	2295	7684		1.26	Si
SLD 14	fin.	-990.79	-3767	0.9	0	548	7137	5660	2295	7684		2.04	Si
SLV 10	ini.	1719.97	-6073	0.9	0	548	7137	5660	2295	7684		1.27	Si
SLV 10	fin.	-966.15	-3761	0.9	0	548	7137	5660	2295	7684		2.04	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.92	SLV 14	No
V_SLV	0.654	SLV 14	No
PF_SLU	3.525	SLU 84	Si
V_SLU	2.156	SLU 84	Si

Trave di accoppiamento 80

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	7.52	8.34	0.82	-11.938	6.526	7.52	8.34	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-397.27	-2258	-0.0002617	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.19	Si
SLU 84	fin.	-743.97	-3066	-0.0005501	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.31	Si
SLU 77	ini.	-398.1	-2246	-0.0002623	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.18	Si
SLU 77	fin.	-722.63	-3007	-0.0005309	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.4	Si
SLU 79	ini.	-393.34	-2213	-0.0002588	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.26	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-708.85	-2955	-0.0005185	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.47	Si
SLU 78	ini.	-396.11	-2238	-0.0002608	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.21	Si
SLU 78	fin.	-723.68	-3006	-0.0005318	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.4	Si
SLU 75	ini.	-386.55	-2194	-0.0002537	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.37	Si
SLU 75	fin.	-719.76	-2973	-0.0005283	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.42	Si
SLU 81	ini.	-389.7	-2222	-0.000256	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.31	Si
SLU 81	fin.	-739	-3034	-0.0005456	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.33	Si
SLU 83	ini.	-399.26	-2266	-0.0002632	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.16	Si
SLU 83	fin.	-742.92	-3067	-0.0005491	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.31	Si
SLU 74	ini.	-388.54	-2202	-0.0002552	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.33	Si
SLU 74	fin.	-718.71	-2974	-0.0005273	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.42	Si
SLU 80	ini.	-391.35	-2206	-0.0002573	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.29	Si
SLU 80	fin.	-709.9	-2954	-0.0005195	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.47	Si
SLU 82	ini.	-387.71	-2215	-0.0002546	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.35	Si
SLU 82	fin.	-740.05	-3033	-0.0005465	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-393.34	2690	0.82	0	303	6502	3438	2091	5529	No	2.05	Si
SLU 79	fin.	-708.85	-3257	0.82	0	303	6502	3438	2091	5529	No	1.7	Si
SLU 75	ini.	-386.55	2654	0.82	0	303	6502	3438	2091	5529	No	2.08	Si
SLU 75	fin.	-719.76	-3294	0.82	0	303	6502	3438	2091	5529	No	1.68	Si
SLU 81	ini.	-389.7	2689	0.82	0	303	6502	3438	2091	5529	No	2.06	Si
SLU 81	fin.	-739	-3376	0.82	0	303	6502	3438	2091	5529	No	1.64	Si
SLU 77	ini.	-398.1	2724	0.82	0	303	6502	3438	2091	5529	No	2.03	Si
SLU 77	fin.	-722.63	-3314	0.82	0	303	6502	3438	2091	5529	No	1.67	Si
SLU 74	ini.	-388.54	2664	0.82	0	303	6502	3438	2091	5529	No	2.08	Si
SLU 74	fin.	-718.71	-3289	0.82	0	303	6502	3438	2091	5529	No	1.68	Si
SLU 82	ini.	-387.71	2680	0.82	0	303	6502	3438	2091	5529	No	2.06	Si
SLU 82	fin.	-740.05	-3381	0.82	0	303	6502	3438	2091	5529	No	1.64	Si
SLU 83	ini.	-399.26	2749	0.82	0	303	6502	3438	2091	5529	No	2.01	Si
SLU 83	fin.	-742.92	-3401	0.82	0	303	6502	3438	2091	5529	No	1.63	Si
SLU 84	ini.	-397.27	2739	0.82	0	303	6502	3438	2091	5529	No	2.02	Si
SLU 84	fin.	-743.97	-3405	0.82	0	303	6502	3438	2091	5529	No	1.62	Si
SLU 78	ini.	-396.11	2714	0.82	0	303	6502	3438	2091	5529	No	2.04	Si
SLU 78	fin.	-723.68	-3318	0.82	0	303	6502	3438	2091	5529	No	1.67	Si
SLU 80	ini.	-391.35	2681	0.82	0	303	6502	3438	2091	5529	No	2.06	Si
SLU 80	fin.	-709.9	-3261	0.82	0	303	6502	3438	2091	5529	No	1.7	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-1841.22	-6354	-0.0017536	0.0002807	0.0035	0.82		2487.45	2487.45		1.35	Si
SLV 1	fin.	1644.83	1029	-0.0014714	0.0002807	0.0035	0.82		2482.11	2482.11		1.51	Si
SLV 3	ini.	-1949.25	-6657	-0.001936	0.0002807	0.0035	0.82		2487.45	2487.45		1.28	Si
SLV 3	fin.	1812.36	1316	-0.0017138	0.0002807	0.0035	0.82		2482.11	2482.11		1.37	Si
SLV 10	ini.	430.83	608	-0.0002766	0.0002807	0.0035	0.82		2482.11	2482.11		5.76	Si
SLV 10	fin.	-1448.22	-3446	-0.0012195	0.0002807	0.0035	0.82		2487.45	2487.45		1.72	Si
SLV 15	ini.	1205.71	3059	-0.0009533	0.0002807	0.0035	0.82		2482.11	2482.11		2.06	Si
SLV 15	fin.	-2447.78	-4772	-0.0031172	0.0002807	0.0035	0.82		2487.45	2487.45		1.02	Si
SLV 13	ini.	1313.74	3362	-0.0010692	0.0002807	0.0035	0.82		2482.11	2482.11		1.89	Si
SLV 13	fin.	-2615.31	-5058	-0.0035995	0.0002807	0.0035	0.82		2487.45	2487.45		0.95	No
SLV 4	ini.	-1833.25	-6301	-0.0017409	0.0002807	0.0035	0.82		2487.45	2487.45		1.36	Si
SLV 4	fin.	1655.91	1092	-0.0014864	0.0002807	0.0035	0.82		2482.11	2482.11		1.5	Si
SLV 2	ini.	-1725.21	-5997	-0.0015785	0.0002807	0.0035	0.82		2487.45	2487.45		1.44	Si
SLV 2	fin.	1488.38	805	-0.0012712	0.0002807	0.0035	0.82		2482.11	2482.11		1.67	Si
SLV 16	ini.	1321.71	3415	-0.001078	0.0002807	0.0035	0.82		2482.11	2482.11		1.88	Si
SLV 16	fin.	-2604.23	-4996	-0.003569	0.0002807	0.0035	0.82		2487.45	2487.45		0.96	No
SLD 14	ini.	462.46	748	-0.0002993	0.0002807	0.0035	0.82		2482.11	2482.11		5.37	Si
SLD 14	fin.	-1459.76	-3394	-0.0012332	0.0002807	0.0035	0.82		2487.45	2487.45		1.7	Si
SLV 14	ini.	1429.75	3718	-0.0012011	0.0002807	0.0035	0.82		2482.11	2482.11		1.74	Si
SLV 14	fin.	-2771.76	-5282	-0.0040111	0.0002807	0.0035	0.82		2487.45	2487.45		0.9	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1205.71	-5593	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLV 15	fin.	-2447.78	-9239	0.82	0	455	6502	5156	2091	6957		0.75	No
SLV 2	ini.	-1725.21	9132	0.82	0	455	6502	5156	2091	6957		0.76	No
SLV 2	fin.	1488.38	4842	0.82	0	455	6502	5156	2091	6957		1.44	Si
SLV 10	ini.	430.83	-1698	0.82	0	455	6502	5156	2091	6957		4.1	Si
SLV 10	fin.	-1448.22	-5681	0.82	0	455	6502	5156	2091	6957		1.22	Si
SLV 3	ini.	-1949.25	10261	0.82	0	455	6502	5156	2091	6957		0.68	No
SLV 3	fin.	1812.36	6011	0.82	0	455	6502	5156	2091	6957		1.16	Si
SLV 14	ini.	1429.75	-6722	0.82	0	455	6502	5156	2091	6957		1.03	Si
SLV 14	fin.	-2771.76	-10408	0.82	0	455	6502	5156	2091	6957		0.67	No
SLD 14	ini.	462.46	-1860	0.82	0	455	6502	5156	2091	6957		3.74	Si
SLD 14	fin.	-1459.76	-5709	0.82	0	455	6502	5156	2091	6957		1.22	Si
SLV 13	ini.	1313.74	-6133	0.82	0	455	6502	5156	2091	6957		1.13	Si
SLV 13	fin.	-2615.31	-9848	0.82	0	455	6502	5156	2091	6957		0.71	No
SLV 4	ini.	-1833.25	9672	0.82	0	455	6502	5156	2091	6957		0.72	No
SLV 4	fin.	1655.91	5450	0.82	0	455	6502	5156	2091	6957		1.28	Si
SLV 16	ini.	1321.71	-6182	0.82	0	455	6502	5156	2091	6957		1.13	Si
SLV 16	fin.	-2604.23	-9800	0.82	0	455	6502	5156	2091	6957		0.71	No
SLV 1	ini.	-1841.22	9721	0.82	0	455	6502	5156	2091	6957		0.72	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	fin.	1644.83	5402	0.82	0	455	6502	5156	2091	6957		1.29	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.897	SLV 14	No
V_SLV	0.668	SLV 14	No
PF_SLU	3.307	SLU 84	Si
V_SLU	1.623	SLU 84	Si

Trave di accoppiamento 81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	4.82	5.72	0.9	-7.058	6.526	4.82	5.72	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-40.43	-2130	-0.0000199	0.0001872	0.0035	0.9		2964.67	2964.67	No	73.34	Si
SLU 84	fin.	793.21	-3096	-0.0004752	0.0001872	0.0035	0.9		2959	2959	No	3.73	Si
SLU 74	ini.	-47.84	-2062	-0.0000236	0.0001872	0.0035	0.9		2964.67	2964.67	No	61.97	Si
SLU 74	fin.	784.19	-3033	-0.0004687	0.0001872	0.0035	0.9		2959	2959	No	3.77	Si
SLU 79	ini.	-43.75	-2065	-0.0000215	0.0001872	0.0035	0.9		2964.67	2964.67	No	67.76	Si
SLU 79	fin.	778.53	-3022	-0.0004646	0.0001872	0.0035	0.9		2959	2959	No	3.8	Si
SLU 80	ini.	-40.4	-2068	-0.0000199	0.0001872	0.0035	0.9		2964.67	2964.67	No	73.38	Si
SLU 80	fin.	773.21	-3011	-0.0004608	0.0001872	0.0035	0.9		2959	2959	No	3.83	Si
SLU 82	ini.	-48.59	-2091	-0.0000239	0.0001872	0.0035	0.9		2964.67	2964.67	No	61.01	Si
SLU 82	fin.	791.15	-3069	-0.0004737	0.0001872	0.0035	0.9		2959	2959	No	3.74	Si
SLU 81	ini.	-51.94	-2088	-0.0000256	0.0001872	0.0035	0.9		2964.67	2964.67	No	57.08	Si
SLU 81	fin.	796.47	-3079	-0.0004776	0.0001872	0.0035	0.9		2959	2959	No	3.72	Si
SLU 77	ini.	-39.68	-2102	-0.0000195	0.0001872	0.0035	0.9		2964.67	2964.67	No	74.72	Si
SLU 77	fin.	786.25	-3060	-0.0004702	0.0001872	0.0035	0.9		2959	2959	No	3.76	Si
SLU 83	ini.	-43.78	-2128	-0.0000216	0.0001872	0.0035	0.9		2964.67	2964.67	No	67.72	Si
SLU 83	fin.	798.52	-3106	-0.0004791	0.0001872	0.0035	0.9		2959	2959	No	3.71	Si
SLU 75	ini.	-44.49	-2065	-0.0000219	0.0001872	0.0035	0.9		2964.67	2964.67	No	66.63	Si
SLU 75	fin.	778.88	-3022	-0.0004649	0.0001872	0.0035	0.9		2959	2959	No	3.8	Si
SLU 78	ini.	-36.33	-2104	-0.0000179	0.0001872	0.0035	0.9		2964.67	2964.67	No	81.61	Si
SLU 78	fin.	780.93	-3049	-0.0004664	0.0001872	0.0035	0.9		2959	2959	No	3.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-48.59	-164	0.9	0	365	7137	3773	2295	6068	No	37.09	Si
SLU 82	fin.	791.15	2858	0.9	0	365	7137	3773	2295	6068	No	2.12	Si
SLU 80	ini.	-40.4	-218	0.9	0	365	7137	3773	2295	6068	No	27.83	Si
SLU 80	fin.	773.21	2823	0.9	0	365	7137	3773	2295	6068	No	2.15	Si
SLU 84	ini.	-40.43	-207	0.9	0	365	7137	3773	2295	6068	No	29.32	Si
SLU 84	fin.	793.21	2875	0.9	0	365	7137	3773	2295	6068	No	2.11	Si
SLU 77	ini.	-39.68	-230	0.9	0	365	7137	3773	2295	6068	No	26.38	Si
SLU 77	fin.	786.25	2876	0.9	0	365	7137	3773	2295	6068	No	2.11	Si
SLU 75	ini.	-44.49	-199	0.9	0	365	7137	3773	2295	6068	No	30.45	Si
SLU 75	fin.	778.88	2840	0.9	0	365	7137	3773	2295	6068	No	2.14	Si
SLU 81	ini.	-51.94	-151	0.9	0	365	7137	3773	2295	6068	No	40.21	Si
SLU 81	fin.	796.47	2878	0.9	0	365	7137	3773	2295	6068	No	2.11	Si
SLU 79	ini.	-43.75	-205	0.9	0	365	7137	3773	2295	6068	No	29.55	Si
SLU 79	fin.	778.53	2842	0.9	0	365	7137	3773	2295	6068	No	2.13	Si
SLU 78	ini.	-36.33	-243	0.9	0	365	7137	3773	2295	6068	No	25	Si
SLU 78	fin.	780.93	2856	0.9	0	365	7137	3773	2295	6068	No	2.12	Si
SLU 74	ini.	-47.84	-187	0.9	0	365	7137	3773	2295	6068	No	32.52	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	fin.	784.19	2859	0.9	0	365	7137	3773	2295	6068	No	2.12	Si
SLU 83	ini.	-43.78	-194	0.9	0	365	7137	3773	2295	6068	No	31.23	Si
SLU 83	fin.	798.52	2894	0.9	0	365	7137	3773	2295	6068	No	2.1	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1957.45	1972	-0.0014404	0.0002807	0.0035	0.9		2995.37	2995.37		1.53	Si
SLV 2	fin.	2313.17	-4326	-0.001891	0.0002807	0.0035	0.9		2989.59	2989.59		1.29	Si
SLV 13	ini.	2009.48	-5005	-0.0015027	0.0002807	0.0035	0.9		2989.59	2989.59		1.49	Si
SLV 13	fin.	-1358.83	307	-0.0008714	0.0002807	0.0035	0.9		2995.37	2995.37		2.2	Si
SLD 3	ini.	-1017.14	326	-0.0006047	0.0002807	0.0035	0.9		2995.37	2995.37		2.94	Si
SLD 3	fin.	1447.36	-3217	-0.0009487	0.0002807	0.0035	0.9		2989.59	2989.59		2.07	Si
SLV 14	ini.	2181.48	-5297	-0.0017111	0.0002807	0.0035	0.9		2989.59	2989.59		1.37	Si
SLV 14	fin.	-1521.17	523	-0.001011	0.0002807	0.0035	0.9		2995.37	2995.37		1.97	Si
SLV 16	ini.	2010.3	-4979	-0.0015037	0.0002807	0.0035	0.9		2989.59	2989.59		1.49	Si
SLV 16	fin.	-1358.01	347	-0.0008707	0.0002807	0.0035	0.9		2995.37	2995.37		2.21	Si
SLV 15	ini.	1838.3	-4687	-0.0013172	0.0002807	0.0035	0.9		2989.59	2989.59		1.63	Si
SLV 15	fin.	-1195.67	131	-0.0007397	0.0002807	0.0035	0.9		2995.37	2995.37		2.51	Si
SLV 3	ini.	-2300.63	2582	-0.001867	0.0002807	0.0035	0.9		2995.37	2995.37		1.3	Si
SLV 3	fin.	2638.67	-4718	-0.0024389	0.0002807	0.0035	0.9		2989.59	2989.59		1.13	Si
SLV 7	ini.	-1020.99	357	-0.0006075	0.0002807	0.0035	0.9		2995.37	2995.37		2.93	Si
SLV 7	fin.	1458.01	-3188	-0.0009579	0.0002807	0.0035	0.9		2989.59	2989.59		2.05	Si
SLV 1	ini.	-2129.45	2264	-0.0016404	0.0002807	0.0035	0.9		2995.37	2995.37		1.41	Si
SLV 1	fin.	2475.51	-4542	-0.0021441	0.0002807	0.0035	0.9		2989.59	2989.59		1.21	Si
SLV 4	ini.	-2128.63	2290	-0.0016394	0.0002807	0.0035	0.9		2995.37	2995.37		1.41	Si
SLV 4	fin.	2476.33	-4502	-0.0021455	0.0002807	0.0035	0.9		2989.59	2989.59		1.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	2181.48	-8684	0.9	0	548	7137	5660	2295	7684		0.88	No
SLV 14	fin.	-1521.17	-5055	0.9	0	548	7137	5660	2295	7684		1.52	Si
SLV 1	ini.	-2129.45	8037	0.9	0	548	7137	5660	2295	7684		0.96	No
SLV 1	fin.	2475.51	8985	0.9	0	548	7137	5660	2295	7684		0.86	No
SLV 15	ini.	1838.3	-7453	0.9	0	548	7137	5660	2295	7684		1.03	Si
SLV 15	fin.	-1195.67	-4323	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLV 3	ini.	-2300.63	8615	0.9	0	548	7137	5660	2295	7684		0.89	No
SLV 3	fin.	2638.67	9140	0.9	0	548	7137	5660	2295	7684		0.84	No
SLV 2	ini.	-1957.45	7384	0.9	0	548	7137	5660	2295	7684		1.04	Si
SLV 2	fin.	2313.17	8408	0.9	0	548	7137	5660	2295	7684		0.91	No
SLD 3	ini.	-1017.14	3661	0.9	0	548	7137	5660	2295	7684		2.1	Si
SLD 3	fin.	1447.36	5075	0.9	0	548	7137	5660	2295	7684		1.51	Si
SLV 16	ini.	2010.3	-8106	0.9	0	548	7137	5660	2295	7684		0.95	No
SLV 16	fin.	-1358.01	-4900	0.9	0	548	7137	5660	2295	7684		1.57	Si
SLV 4	ini.	-2128.63	7962	0.9	0	548	7137	5660	2295	7684		0.97	No
SLV 4	fin.	2476.33	8563	0.9	0	548	7137	5660	2295	7684		0.9	No
SLV 13	ini.	2009.48	-8031	0.9	0	548	7137	5660	2295	7684		0.96	No
SLV 13	fin.	-1358.83	-4478	0.9	0	548	7137	5660	2295	7684		1.72	Si
SLD 1	ini.	-943.56	3412	0.9	0	548	7137	5660	2295	7684		2.25	Si
SLD 1	fin.	1377.43	5008	0.9	0	548	7137	5660	2295	7684		1.53	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.133	SLV 3	Si
V_SLV	0.841	SLV 3	No
PF_SLU	3.706	SLU 83	Si
V_SLU	2.097	SLU 83	Si

Trave di accoppiamento 82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	7.52	8.34	0.82	-7.058	6.526	7.52	8.34	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-728.77	-3041	-0.0005364	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.38	Si
SLU 75	fin.	-72.53	-1047	-0.0000434	0.0001872	0.0035	0.82		2460.51	2460.51	No	33.92	Si
SLU 83	ini.	-747.3	-3125	-0.0005531	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.29	Si
SLU 83	fin.	-79.91	-1086	-0.0000479	0.0001872	0.0035	0.82		2460.51	2460.51	No	30.79	Si
SLU 77	ini.	-734.75	-3077	-0.0005418	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.35	Si
SLU 77	fin.	-79.75	-1077	-0.0000478	0.0001872	0.0035	0.82		2460.51	2460.51	No	30.85	Si
SLU 80	ini.	-723.74	-3027	-0.0005319	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.4	Si
SLU 80	fin.	-76.56	-1053	-0.0000458	0.0001872	0.0035	0.82		2460.51	2460.51	No	32.14	Si
SLU 84	ini.	-745.27	-3119	-0.0005513	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.3	Si
SLU 84	fin.	-81.18	-1087	-0.0000487	0.0001872	0.0035	0.82		2460.51	2460.51	No	30.31	Si
SLU 74	ini.	-730.8	-3047	-0.0005382	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.37	Si
SLU 74	fin.	-71.26	-1045	-0.0000426	0.0001872	0.0035	0.82		2460.51	2460.51	No	34.53	Si
SLU 78	ini.	-732.72	-3071	-0.0005399	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.36	Si
SLU 78	fin.	-81.02	-1078	-0.0000486	0.0001872	0.0035	0.82		2460.51	2460.51	No	30.37	Si
SLU 79	ini.	-725.77	-3033	-0.0005337	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.39	Si
SLU 79	fin.	-75.28	-1052	-0.0000451	0.0001872	0.0035	0.82		2460.51	2460.51	No	32.68	Si
SLU 81	ini.	-743.35	-3095	-0.0005495	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.31	Si
SLU 81	fin.	-71.42	-1054	-0.0000427	0.0001872	0.0035	0.82		2460.51	2460.51	No	34.45	Si
SLU 82	ini.	-741.32	-3089	-0.0005477	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.32	Si
SLU 82	fin.	-72.7	-1056	-0.0000435	0.0001872	0.0035	0.82		2460.51	2460.51	No	33.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-734.75	4706	0.82	0	303	6502	3438	2091	5529	No	1.17	Si
SLU 77	fin.	-79.75	-939	0.82	0	303	6502	3438	2091	5529	No	5.89	Si
SLU 81	ini.	-743.35	4761	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 81	fin.	-71.42	-918	0.82	0	303	6502	3438	2091	5529	No	6.02	Si
SLU 84	ini.	-745.27	4788	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 84	fin.	-81.18	-962	0.82	0	303	6502	3438	2091	5529	No	5.75	Si
SLU 78	ini.	-732.72	4697	0.82	0	303	6502	3438	2091	5529	No	1.18	Si
SLU 78	fin.	-81.02	-945	0.82	0	303	6502	3438	2091	5529	No	5.85	Si
SLU 75	ini.	-728.77	4661	0.82	0	303	6502	3438	2091	5529	No	1.19	Si
SLU 75	fin.	-72.53	-906	0.82	0	303	6502	3438	2091	5529	No	6.1	Si
SLU 83	ini.	-747.3	4798	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 83	fin.	-79.91	-956	0.82	0	303	6502	3438	2091	5529	No	5.78	Si
SLU 79	ini.	-725.77	4648	0.82	0	303	6502	3438	2091	5529	No	1.19	Si
SLU 79	fin.	-75.28	-916	0.82	0	303	6502	3438	2091	5529	No	6.03	Si
SLU 80	ini.	-723.74	4639	0.82	0	303	6502	3438	2091	5529	No	1.19	Si
SLU 80	fin.	-76.56	-922	0.82	0	303	6502	3438	2091	5529	No	5.99	Si
SLU 74	ini.	-730.8	4670	0.82	0	303	6502	3438	2091	5529	No	1.18	Si
SLU 74	fin.	-71.26	-900	0.82	0	303	6502	3438	2091	5529	No	6.14	Si
SLU 82	ini.	-741.32	4752	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 82	fin.	-72.7	-924	0.82	0	303	6502	3438	2091	5529	No	5.99	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-1111.82	-3483	-0.0008552	0.0002807	0.0035	0.82		2487.45	2487.45		2.24	Si
SLD 3	fin.	642.63	659	-0.0004364	0.0002807	0.0035	0.82		2482.11	2482.11		3.86	Si
SLV 1	ini.	-1837.32	-5182	-0.0017474	0.0002807	0.0035	0.82		2487.45	2487.45		1.35	Si
SLV 1	fin.	1420.41	2169	-0.0011902	0.0002807	0.0035	0.82		2482.11	2482.11		1.75	Si
SLV 14	ini.	900.34	1192	-0.0006563	0.0002807	0.0035	0.82		2482.11	2482.11		2.76	Si
SLV 14	fin.	-1582.51	-3720	-0.001385	0.0002807	0.0035	0.82		2487.45	2487.45		1.57	Si
SLV 13	ini.	787.87	923	-0.000557	0.0002807	0.0035	0.82		2482.11	2482.11		3.15	Si
SLV 13	fin.	-1463.61	-3494	-0.0012378	0.0002807	0.0035	0.82		2487.45	2487.45		1.7	Si
SLV 4	ini.	-1806.96	-5090	-0.0016999	0.0002807	0.0035	0.82		2487.45	2487.45		1.38	Si
SLV 4	fin.	1416.58	2190	-0.0011857	0.0002807	0.0035	0.82		2482.11	2482.11		1.75	Si
SLV 3	ini.	-1919.43	-5359	-0.0018835	0.0002807	0.0035	0.82		2487.45	2487.45		1.3	Si
SLV 3	fin.	1535.48	2416	-0.0013293	0.0002807	0.0035	0.82		2482.11	2482.11		1.62	Si
SLV 15	ini.	705.76	746	-0.0004878	0.0002807	0.0035	0.82		2482.11	2482.11		3.52	Si
SLV 15	fin.	-1348.54	-3247	-0.0011048	0.0002807	0.0035	0.82		2487.45	2487.45		1.84	Si
SLV 2	ini.	-1724.85	-4913	-0.0015779	0.0002807	0.0035	0.82		2487.45	2487.45		1.44	Si
SLV 2	fin.	1301.51	1943	-0.0010557	0.0002807	0.0035	0.82		2482.11	2482.11		1.91	Si
SLV 16	ini.	818.23	1015	-0.0005833	0.0002807	0.0035	0.82		2482.11	2482.11		3.03	Si
SLV 16	fin.	-1467.44	-3473	-0.0012424	0.0002807	0.0035	0.82		2487.45	2487.45		1.7	Si
SLD 1	ini.	-1076.76	-3407	-0.0008206	0.0002807	0.0035	0.82		2487.45	2487.45		2.31	Si
SLD 1	fin.	593.18	553	-0.0003974	0.0002807	0.0035	0.82		2482.11	2482.11		4.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-1919.43	9367	0.82	0	455	6502	5156	2091	6957		0.74	No
SLV 3	fin.	1535.48	5704	0.82	0	455	6502	5156	2091	6957		1.22	Si
SLD 3	ini.	-1111.82	5843	0.82	0	455	6502	5156	2091	6957		1.19	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	fin.	642.63	2140	0.82	0	455	6502	5156	2091	6957		3.25	Si
SLV 1	ini.	-1837.32	8918	0.82	0	455	6502	5156	2091	6957		0.78	No
SLV 1	fin.	1420.41	5324	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLV 15	ini.	705.76	-1994	0.82	0	455	6502	5156	2091	6957		3.49	Si
SLV 15	fin.	-1348.54	-5887	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLV 4	ini.	-1806.96	8868	0.82	0	455	6502	5156	2091	6957		0.78	No
SLV 4	fin.	1416.58	5231	0.82	0	455	6502	5156	2091	6957		1.33	Si
SLV 7	ini.	-1076.32	5825	0.82	0	455	6502	5156	2091	6957		1.19	Si
SLV 7	fin.	639.09	2006	0.82	0	455	6502	5156	2091	6957		3.47	Si
SLV 14	ini.	900.34	-2941	0.82	0	455	6502	5156	2091	6957		2.37	Si
SLV 14	fin.	-1582.51	-6740	0.82	0	455	6502	5156	2091	6957		1.03	Si
SLV 13	ini.	787.87	-2443	0.82	0	455	6502	5156	2091	6957		2.85	Si
SLV 13	fin.	-1463.61	-6267	0.82	0	455	6502	5156	2091	6957		1.11	Si
SLV 2	ini.	-1724.85	8419	0.82	0	455	6502	5156	2091	6957		0.83	No
SLV 2	fin.	1301.51	4851	0.82	0	455	6502	5156	2091	6957		1.43	Si
SLV 16	ini.	818.23	-2492	0.82	0	455	6502	5156	2091	6957		2.79	Si
SLV 16	fin.	-1467.44	-6360	0.82	0	455	6502	5156	2091	6957		1.09	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.296	SLV 3	Si
V_SLV	0.743	SLV 3	No
PF_SLU	3.293	SLU 83	Si
V_SLU	1.152	SLU 83	Si

Trave di accoppiamento 83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.643	1.006	6.92	8.34	1.42	-19.443	1.006	6.92	8.34	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	ini.	-584.91	-4224	-0.0001194	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.9	Si
SLU 43	fin.	-57.39	-3937	-0.0000113	0.0002246	0.0035	1.42		7545.1	7545.1	No	131.46	Si
SLU 49	ini.	-595.92	-4500	-0.0001218	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.66	Si
SLU 49	fin.	-74.47	-4217	-0.0000147	0.0002246	0.0035	1.42		7545.1	7545.1	No	101.32	Si
SLU 48	ini.	-592.5	-4494	-0.0001211	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.73	Si
SLU 48	fin.	-78.57	-4216	-0.0000155	0.0002246	0.0035	1.42		7545.1	7545.1	No	96.03	Si
SLU 47	ini.	-601.64	-4335	-0.000123	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.54	Si
SLU 47	fin.	-50.24	-4035	-0.0000099	0.0002246	0.0035	1.42		7545.1	7545.1	No	150.19	Si
SLU 46	ini.	-584.88	-4399	-0.0001194	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.9	Si
SLU 46	fin.	-74.78	-4122	-0.0000147	0.0002246	0.0035	1.42		7545.1	7545.1	No	100.89	Si
SLU 72	ini.	-561.43	-4913	-0.0001144	0.0002246	0.0035	1.42		7545.1	7545.1	No	13.44	Si
SLU 72	fin.	-177.35	-4707	-0.0000352	0.0002246	0.0035	1.42		7545.1	7545.1	No	42.54	Si
SLU 50	ini.	-606.99	-4426	-0.0001242	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.43	Si
SLU 50	fin.	-56.76	-4127	-0.0000112	0.0002246	0.0035	1.42		7545.1	7545.1	No	132.93	Si
SLU 44	ini.	-590.6	-4234	-0.0001207	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.78	Si
SLU 44	fin.	-50.56	-3939	-0.0000099	0.0002246	0.0035	1.42		7545.1	7545.1	No	149.24	Si
SLU 51	ini.	-610.41	-4432	-0.0001249	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.36	Si
SLU 51	fin.	-52.66	-4129	-0.0000104	0.0002246	0.0035	1.42		7545.1	7545.1	No	143.29	Si
SLU 45	ini.	-581.46	-4393	-0.0001187	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.98	Si
SLU 45	fin.	-78.89	-4121	-0.0000155	0.0002246	0.0035	1.42		7545.1	7545.1	No	95.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 40	ini.	-182.81	422	1.42	0	576	6344	7144	3621	6920	No	16.39	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 40	fin.	-539.32	-1614	1.42	0	576	6344	7144	3621	6920	No	4.29	Si
SLU 51	ini.	-610.41	1642	1.42	0	576	6344	7144	3621	6920	No	4.21	Si
SLU 51	fin.	-52.66	366	1.42	0	576	6344	7144	3621	6920	No	18.9	Si
SLU 41	ini.	-190.43	428	1.42	0	576	6344	7144	3621	6920	No	16.16	Si
SLU 41	fin.	-543.11	-1608	1.42	0	576	6344	7144	3621	6920	No	4.3	Si
SLU 47	ini.	-601.64	1631	1.42	0	576	6344	7144	3621	6920	No	4.24	Si
SLU 47	fin.	-50.24	356	1.42	0	576	6344	7144	3621	6920	No	19.46	Si
SLU 42	ini.	-193.85	442	1.42	0	576	6344	7144	3621	6920	No	15.67	Si
SLU 42	fin.	-539	-1595	1.42	0	576	6344	7144	3621	6920	No	4.34	Si
SLU 39	ini.	-179.39	409	1.42	0	576	6344	7144	3621	6920	No	16.93	Si
SLU 39	fin.	-543.42	-1628	1.42	0	576	6344	7144	3621	6920	No	4.25	Si
SLU 44	ini.	-590.6	1612	1.42	0	576	6344	7144	3621	6920	No	4.29	Si
SLU 44	fin.	-50.56	336	1.42	0	576	6344	7144	3621	6920	No	20.59	Si
SLU 50	ini.	-606.99	1628	1.42	0	576	6344	7144	3621	6920	No	4.25	Si
SLU 50	fin.	-56.76	353	1.42	0	576	6344	7144	3621	6920	No	19.63	Si
SLU 43	ini.	-584.91	1589	1.42	0	576	6344	7144	3621	6920	No	4.35	Si
SLU 43	fin.	-57.39	314	1.42	0	576	6344	7144	3621	6920	No	22.06	Si
SLU 49	ini.	-595.92	1579	1.42	0	576	6344	7144	3621	6920	No	4.38	Si
SLU 49	fin.	-74.47	303	1.42	0	576	6344	7144	3621	6920	No	22.85	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-5471.54	-5260	-0.0016629	0.0003369	0.0035	1.42		7279.66	7279.66		1.33	Si
SLV 15	fin.	5678.79	770	-0.0017721	0.0003369	0.0035	1.42		7270.13	7270.13		1.28	Si
SLV 14	ini.	-5964.09	-4902	-0.0019266	0.0003369	0.0035	1.42		7279.66	7279.66		1.22	Si
SLV 14	fin.	5769.86	1470	-0.001821	0.0003369	0.0035	1.42		7270.13	7270.13		1.26	Si
SLD 14	ini.	-2767.9	-4175	-0.0006561	0.0003369	0.0035	1.42		7279.66	7279.66		2.63	Si
SLD 14	fin.	2361.93	-1391	-0.0005417	0.0003369	0.0035	1.42		7270.13	7270.13		3.08	Si
SLV 13	ini.	-5890.58	-4845	-0.0018844	0.0003369	0.0035	1.42		7279.66	7279.66		1.24	Si
SLV 13	fin.	5683.8	1435	-0.0017747	0.0003369	0.0035	1.42		7270.13	7270.13		1.28	Si
SLV 4	ini.	5128	-2424	-0.0015043	0.0003369	0.0035	1.42		7270.13	7270.13		1.42	Si
SLV 4	fin.	-6045.8	-8491	-0.0019749	0.0003369	0.0035	1.42		7279.66	7279.66		1.2	Si
SLV 1	ini.	4782.46	-1951	-0.0013553	0.0003369	0.0035	1.42		7270.13	7270.13		1.52	Si
SLV 1	fin.	-6126.86	-7862	-0.0020241	0.0003369	0.0035	1.42		7279.66	7279.66		1.19	Si
SLV 16	ini.	-5545.04	-5317	-0.0016996	0.0003369	0.0035	1.42		7279.66	7279.66		1.31	Si
SLV 16	fin.	5764.86	806	-0.0018183	0.0003369	0.0035	1.42		7270.13	7270.13		1.26	Si
SLV 3	ini.	5201.5	-2367	-0.0015376	0.0003369	0.0035	1.42		7270.13	7270.13		1.4	Si
SLV 3	fin.	-6131.86	-8527	-0.0020272	0.0003369	0.0035	1.42		7279.66	7279.66		1.19	Si
SLV 2	ini.	4708.95	-2008	-0.0013251	0.0003369	0.0035	1.42		7270.13	7270.13		1.54	Si
SLV 2	fin.	-6040.8	-7827	-0.0019719	0.0003369	0.0035	1.42		7279.66	7279.66		1.21	Si
SLD 13	ini.	-2736.34	-4151	-0.0006469	0.0003369	0.0035	1.42		7279.66	7279.66		2.66	Si
SLD 13	fin.	2324.98	-1406	-0.0005316	0.0003369	0.0035	1.42		7270.13	7270.13		3.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-5471.54	19679	1.42	0	864	6344	10717	3621	7208		0.37	No
SLV 15	fin.	5678.79	18967	1.42	0	864	6344	10717	3621	7208		0.38	No
SLV 13	ini.	-5890.58	20739	1.42	0	864	6344	10717	3621	7208		0.35	No
SLV 13	fin.	5683.8	18914	1.42	0	864	6344	10717	3621	7208		0.38	No
SLV 4	ini.	5128	-18691	1.42	0	864	6344	10717	3621	7208		0.39	No
SLV 4	fin.	-6045.8	-19469	1.42	0	864	6344	10717	3621	7208		0.37	No
SLD 13	ini.	-2736.34	9452	1.42	0	864	6344	10717	3621	7208		0.76	No
SLD 13	fin.	2324.98	7923	1.42	0	864	6344	10717	3621	7208		0.91	No
SLV 14	ini.	-5964.09	21021	1.42	0	864	6344	10717	3621	7208		0.34	No
SLV 14	fin.	5769.86	19195	1.42	0	864	6344	10717	3621	7208		0.38	No
SLV 3	ini.	5201.5	-18972	1.42	0	864	6344	10717	3621	7208		0.38	No
SLV 3	fin.	-6131.86	-19750	1.42	0	864	6344	10717	3621	7208		0.36	No
SLV 1	ini.	4782.46	-17912	1.42	0	864	6344	10717	3621	7208		0.4	No
SLV 1	fin.	-6126.86	-19803	1.42	0	864	6344	10717	3621	7208		0.36	No
SLV 2	ini.	4708.95	-17631	1.42	0	864	6344	10717	3621	7208		0.41	No
SLV 2	fin.	-6040.8	-19521	1.42	0	864	6344	10717	3621	7208		0.37	No
SLD 14	ini.	-2767.9	9572	1.42	0	864	6344	10717	3621	7208		0.75	No
SLD 14	fin.	2361.93	8043	1.42	0	864	6344	10717	3621	7208		0.9	No
SLV 16	ini.	-5545.04	19960	1.42	0	864	6344	10717	3621	7208		0.36	No
SLV 16	fin.	5764.86	19248	1.42	0	864	6344	10717	3621	7208		0.37	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.187	SLV 3	Si
V_SLV	0.343	SLV 14	No
PF_SLU	12.361	SLU 51	Si
V_SLU	4.215	SLU 51	Si

Trave di accoppiamento 84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.163	1.006	6.92	8.34	1.42	-14.963	1.006	6.92	8.34	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 55	ini.	22.76	-3983	-0.0000045	0.0002246	0.0035	1.42		7536.27	7536.27	No	331.1	Si
SLU 55	fin.	-592.35	-4321	-0.000121	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.74	Si
SLU 54	ini.	20.98	-4054	-0.0000041	0.0002246	0.0035	1.42		7536.27	7536.27	No	359.29	Si
SLU 54	fin.	-593.06	-4393	-0.0001212	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.72	Si
SLU 57	ini.	6.82	-4147	-0.0000013	0.0002246	0.0035	1.42		7536.27	7536.27	No	1105.29	Si
SLU 57	fin.	-583.51	-4472	-0.0001191	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.93	Si
SLU 53	ini.	19.39	-4056	-0.0000038	0.0002246	0.0035	1.42		7536.27	7536.27	No	388.76	Si
SLU 53	fin.	-591.29	-4394	-0.0001208	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.76	Si
SLU 52	ini.	36.92	-3890	-0.0000073	0.0002246	0.0035	1.42		7536.27	7536.27	No	204.13	Si
SLU 52	fin.	-601.9	-4242	-0.0001231	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.54	Si
SLU 56	ini.	5.23	-4149	-0.000001	0.0002246	0.0035	1.42		7536.27	7536.27	No	1441.5	Si
SLU 56	fin.	-581.73	-4473	-0.0001188	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.97	Si
SLU 62	ini.	34.63	-4161	-0.0000068	0.0002246	0.0035	1.42		7536.27	7536.27	No	217.6	Si
SLU 62	fin.	-633.19	-4531	-0.0001298	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.92	Si
SLU 60	ini.	48.79	-4068	-0.0000096	0.0002246	0.0035	1.42		7536.27	7536.27	No	154.46	Si
SLU 60	fin.	-642.75	-4452	-0.0001318	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.74	Si
SLU 61	ini.	50.38	-4066	-0.0000099	0.0002246	0.0035	1.42		7536.27	7536.27	No	149.59	Si
SLU 61	fin.	-644.52	-4450	-0.0001322	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.71	Si
SLU 63	ini.	36.22	-4159	-0.0000071	0.0002246	0.0035	1.42		7536.27	7536.27	No	208.05	Si
SLU 63	fin.	-634.97	-4529	-0.0001302	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 60	ini.	48.79	-255	1.42	0	576	6344	7144	3621	6920	No	27.19	Si
SLU 60	fin.	-642.75	-2159	1.42	0	576	6344	7144	3621	6920	No	3.2	Si
SLU 53	ini.	19.39	-202	1.42	0	576	6344	7144	3621	6920	No	34.34	Si
SLU 53	fin.	-591.29	-1929	1.42	0	576	6344	7144	3621	6920	No	3.59	Si
SLU 52	ini.	36.92	-249	1.42	0	576	6344	7144	3621	6920	No	27.77	Si
SLU 52	fin.	-601.9	-1977	1.42	0	576	6344	7144	3621	6920	No	3.5	Si
SLU 55	ini.	22.76	-207	1.42	0	576	6344	7144	3621	6920	No	33.38	Si
SLU 55	fin.	-592.35	-1935	1.42	0	576	6344	7144	3621	6920	No	3.58	Si
SLU 61	ini.	50.38	-259	1.42	0	576	6344	7144	3621	6920	No	26.67	Si
SLU 61	fin.	-644.52	-2164	1.42	0	576	6344	7144	3621	6920	No	3.2	Si
SLU 59	ini.	7.54	-162	1.42	0	576	6344	7144	3621	6920	No	42.69	Si
SLU 59	fin.	-581.61	-1890	1.42	0	576	6344	7144	3621	6920	No	3.66	Si
SLU 62	ini.	34.63	-213	1.42	0	576	6344	7144	3621	6920	No	32.55	Si
SLU 62	fin.	-633.19	-2117	1.42	0	576	6344	7144	3621	6920	No	3.27	Si
SLU 54	ini.	20.98	-206	1.42	0	576	6344	7144	3621	6920	No	33.52	Si
SLU 54	fin.	-593.06	-1934	1.42	0	576	6344	7144	3621	6920	No	3.58	Si
SLU 57	ini.	6.82	-165	1.42	0	576	6344	7144	3621	6920	No	42.06	Si
SLU 57	fin.	-583.51	-1892	1.42	0	576	6344	7144	3621	6920	No	3.66	Si
SLU 63	ini.	36.22	-218	1.42	0	576	6344	7144	3621	6920	No	31.81	Si
SLU 63	fin.	-634.97	-2122	1.42	0	576	6344	7144	3621	6920	No	3.26	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	3557.57	-5098	-0.0009033	0.0003369	0.0035	1.42		7270.13	7270.13		2.04	Si
SLV 1	fin.	-5461.78	-8984	-0.0016581	0.0003369	0.0035	1.42		7279.66	7279.66		1.33	Si
SLV 3	ini.	3427.65	-4689	-0.0008607	0.0003369	0.0035	1.42		7270.13	7270.13		2.12	Si
SLV 3	fin.	-5896.49	-9686	-0.0018877	0.0003369	0.0035	1.42		7279.66	7279.66		1.23	Si
SLD 3	ini.	1403.31	-3766	-0.0002985	0.0003369	0.0035	1.42		7270.13	7270.13		5.18	Si
SLD 3	fin.	-2705.88	-5981	-0.0006381	0.0003369	0.0035	1.42		7279.66	7279.66		2.69	Si
SLV 15	ini.	-3733.51	-1043	-0.0009609	0.0003369	0.0035	1.42		7279.66	7279.66		1.95	Si
SLV 15	fin.	4785.4	2555	-0.0013566	0.0003369	0.0035	1.42		7270.13	7270.13		1.52	Si
SLV 2	ini.	3531.93	-5119	-0.0008948	0.0003369	0.0035	1.42		7270.13	7270.13		2.06	Si
SLV 2	fin.	-5434.99	-8975	-0.001645	0.0003369	0.0035	1.42		7279.66	7279.66		1.34	Si
SLV 16	ini.	-3759.15	-1064	-0.0009697	0.0003369	0.0035	1.42		7279.66	7279.66		1.94	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	fin.	4812.19	2564	-0.0013677	0.0003369	0.0035	1.42		7270.13	7270.13		1.51	Si
SLV 13	ini.	-3603.6	-1452	-0.0009172	0.0003369	0.0035	1.42		7279.66	7279.66		2.02	Si
SLV 13	fin.	5220.1	3257	-0.0015462	0.0003369	0.0035	1.42		7270.13	7270.13		1.39	Si
SLV 4	ini.	3402.02	-4710	-0.0008524	0.0003369	0.0035	1.42		7270.13	7270.13		2.14	Si
SLV 4	fin.	-5869.69	-9677	-0.0018726	0.0003369	0.0035	1.42		7279.66	7279.66		1.24	Si
SLD 4	ini.	1392.3	-3775	-0.0002959	0.0003369	0.0035	1.42		7270.13	7270.13		5.22	Si
SLD 4	fin.	-2694.38	-5977	-0.0006347	0.0003369	0.0035	1.42		7279.66	7279.66		2.7	Si
SLV 14	ini.	-3629.24	-1473	-0.0009258	0.0003369	0.0035	1.42		7279.66	7279.66		2.01	Si
SLV 14	fin.	5246.9	3266	-0.0015585	0.0003369	0.0035	1.42		7270.13	7270.13		1.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	3427.65	-14269	1.42	0	864	6344	10717	3621	7208		0.51	No
SLV 3	fin.	-5896.49	-16060	1.42	0	864	6344	10717	3621	7208		0.45	No
SLD 1	ini.	1462.01	-6309	1.42	0	864	6344	10717	3621	7208		1.14	Si
SLD 1	fin.	-2516.08	-7426	1.42	0	864	6344	10717	3621	7208		0.97	No
SLV 1	ini.	3557.57	-15116	1.42	0	864	6344	10717	3621	7208		0.48	No
SLV 1	fin.	-5461.78	-15968	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 15	ini.	-3733.51	15557	1.42	0	864	6344	10717	3621	7208		0.46	No
SLV 15	fin.	4785.4	13757	1.42	0	864	6344	10717	3621	7208		0.52	No
SLD 3	ini.	1403.31	-5928	1.42	0	864	6344	10717	3621	7208		1.22	Si
SLD 3	fin.	-2705.88	-7460	1.42	0	864	6344	10717	3621	7208		0.97	No
SLV 4	ini.	3402.02	-14177	1.42	0	864	6344	10717	3621	7208		0.51	No
SLV 4	fin.	-5869.69	-15968	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 13	ini.	-3603.6	14711	1.42	0	864	6344	10717	3621	7208		0.49	No
SLV 13	fin.	5220.1	13849	1.42	0	864	6344	10717	3621	7208		0.52	No
SLV 2	ini.	3531.93	-15023	1.42	0	864	6344	10717	3621	7208		0.48	No
SLV 2	fin.	-5434.99	-15876	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 14	ini.	-3629.24	14803	1.42	0	864	6344	10717	3621	7208		0.49	No
SLV 14	fin.	5246.9	13941	1.42	0	864	6344	10717	3621	7208		0.52	No
SLV 16	ini.	-3759.15	15650	1.42	0	864	6344	10717	3621	7208		0.46	No
SLV 16	fin.	4812.19	13849	1.42	0	864	6344	10717	3621	7208		0.52	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.235	SLV 3	Si
V_SLV	0.449	SLV 3	No
PF_SLU	11.707	SLU 61	Si
V_SLU	3.197	SLU 61	Si

Trave di accoppiamento 85

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	7.32	8.34	1.02	-12.263	1.006	7.32	8.34	1.02	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-975.25	-3574	-0.0004374	0.0002246	0.0035	1.02		3900.37	3900.37	No	4	Si
SLU 79	fin.	27.83	-2507	-0.0000106	0.0002246	0.0035	1.02		3893.98	3893.98	No	139.93	Si
SLU 83	ini.	-1021.37	-3662	-0.0004623	0.0002246	0.0035	1.02		3900.37	3900.37	No	3.82	Si
SLU 83	fin.	21.66	-2549	-0.0000083	0.0002246	0.0035	1.02		3893.98	3893.98	No	179.8	Si
SLU 84	ini.	-1021.84	-3659	-0.0004626	0.0002246	0.0035	1.02		3900.37	3900.37	No	3.82	Si
SLU 84	fin.	22.03	-2545	-0.0000084	0.0002246	0.0035	1.02		3893.98	3893.98	No	176.76	Si
SLU 82	ini.	-1010.65	-3597	-0.0004565	0.0002246	0.0035	1.02		3900.37	3900.37	No	3.86	Si
SLU 82	fin.	20.83	-2495	-0.0000079	0.0002246	0.0035	1.02		3893.98	3893.98	No	186.91	Si
SLU 77	ini.	-991.23	-3638	-0.000446	0.0002246	0.0035	1.02		3900.37	3900.37	No	3.93	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	fin.	34.49	-2546	-0.0000132	0.0002246	0.0035	1.02		3893.98	3893.98	No	112.91	Si
SLU 81	ini.	-1010.17	-3600	-0.0004562	0.0002246	0.0035	1.02		3900.37	3900.37	No	3.86	Si
SLU 81	fin.	20.46	-2500	-0.0000078	0.0002246	0.0035	1.02		3893.98	3893.98	No	190.32	Si
SLU 80	ini.	-975.72	-3572	-0.0004377	0.0002246	0.0035	1.02		3900.37	3900.37	No	4	Si
SLU 80	fin.	28.2	-2503	-0.0000108	0.0002246	0.0035	1.02		3893.98	3893.98	No	138.09	Si
SLU 75	ini.	-980.51	-3574	-0.0004403	0.0002246	0.0035	1.02		3900.37	3900.37	No	3.98	Si
SLU 75	fin.	33.66	-2492	-0.0000129	0.0002246	0.0035	1.02		3893.98	3893.98	No	115.68	Si
SLU 74	ini.	-980.03	-3577	-0.00044	0.0002246	0.0035	1.02		3900.37	3900.37	No	3.98	Si
SLU 74	fin.	33.29	-2496	-0.0000127	0.0002246	0.0035	1.02		3893.98	3893.98	No	116.97	Si
SLU 78	ini.	-991.7	-3635	-0.0004463	0.0002246	0.0035	1.02		3900.37	3900.37	No	3.93	Si
SLU 78	fin.	34.86	-2542	-0.0000133	0.0002246	0.0035	1.02		3893.98	3893.98	No	111.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1010.17	2829	1.02	0	377	8088	5132	2601	7733	No	2.73	Si
SLU 81	fin.	20.46	29	1.02	0	377	8088	5132	2601	7733	No	263.94	Si
SLU 74	ini.	-980.03	2666	1.02	0	377	8088	5132	2601	7733	No	2.9	Si
SLU 74	fin.	33.29	143	1.02	0	377	8088	5132	2601	7733	No	54.15	Si
SLU 75	ini.	-980.51	2668	1.02	0	377	8088	5132	2601	7733	No	2.9	Si
SLU 75	fin.	33.66	144	1.02	0	377	8088	5132	2601	7733	No	53.63	Si
SLU 84	ini.	-1021.84	2847	1.02	0	377	8088	5132	2601	7733	No	2.72	Si
SLU 84	fin.	22.03	47	1.02	0	377	8088	5132	2601	7733	No	163.9	Si
SLU 78	ini.	-991.7	2684	1.02	0	377	8088	5132	2601	7733	No	2.88	Si
SLU 78	fin.	34.86	161	1.02	0	377	8088	5132	2601	7733	No	48.13	Si
SLU 80	ini.	-975.72	2653	1.02	0	377	8088	5132	2601	7733	No	2.92	Si
SLU 80	fin.	28.2	129	1.02	0	377	8088	5132	2601	7733	No	59.92	Si
SLU 77	ini.	-991.23	2683	1.02	0	377	8088	5132	2601	7733	No	2.88	Si
SLU 77	fin.	34.49	159	1.02	0	377	8088	5132	2601	7733	No	48.55	Si
SLU 79	ini.	-975.25	2651	1.02	0	377	8088	5132	2601	7733	No	2.92	Si
SLU 79	fin.	27.83	128	1.02	0	377	8088	5132	2601	7733	No	60.58	Si
SLU 82	ini.	-1010.65	2830	1.02	0	377	8088	5132	2601	7733	No	2.73	Si
SLU 82	fin.	20.83	31	1.02	0	377	8088	5132	2601	7733	No	251.95	Si
SLU 83	ini.	-1021.37	2845	1.02	0	377	8088	5132	2601	7733	No	2.72	Si
SLU 83	fin.	21.66	46	1.02	0	377	8088	5132	2601	7733	No	168.89	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	2456.39	-2196	-0.0013464	0.0003369	0.0035	1.02		3838.12	3838.12		1.56	Si
SLV 1	fin.	-5509.05	-12759	-0.005627	0.0003369	0.0035	1.02		3845.03	3845.03		0.7	No
SLV 15	ini.	-3700.11	-2500	-0.0027998	0.0003369	0.0035	1.02		3845.03	3845.03		1.04	Si
SLV 15	fin.	5547.22	9409	-0.0056909	0.0003369	0.0035	1.02		3838.12	3838.12		0.69	No
SLV 3	ini.	2384.33	-1728	-0.0012897	0.0003369	0.0035	1.02		3838.12	3838.12		1.61	Si
SLV 3	fin.	-5326.36	-11824	-0.0053766	0.0003369	0.0035	1.02		3845.03	3845.03		0.72	No
SLV 4	ini.	2377.03	-1733	-0.001284	0.0003369	0.0035	1.02		3838.12	3838.12		1.61	Si
SLV 4	fin.	-5311.27	-11797	-0.0053557	0.0003369	0.0035	1.02		3845.03	3845.03		0.72	No
SLD 16	ini.	-1942.66	-2414	-0.0009711	0.0003369	0.0035	1.02		3845.03	3845.03		1.98	Si
SLD 16	fin.	2392.08	3082	-0.0012957	0.0003369	0.0035	1.02		3838.12	3838.12		1.6	Si
SLV 2	ini.	2449.09	-2200	-0.0013406	0.0003369	0.0035	1.02		3838.12	3838.12		1.57	Si
SLV 2	fin.	-5493.96	-12732	-0.0056064	0.0003369	0.0035	1.02		3845.03	3845.03		0.7	No
SLV 13	ini.	-3628.05	-2967	-0.0026786	0.0003369	0.0035	1.02		3845.03	3845.03		1.06	Si
SLV 13	fin.	5364.53	8474	-0.0054411	0.0003369	0.0035	1.02		3838.12	3838.12		0.72	No
SLV 16	ini.	-3707.41	-2505	-0.0028124	0.0003369	0.0035	1.02		3845.03	3845.03		1.04	Si
SLV 16	fin.	5562.31	9436	-0.0057114	0.0003369	0.0035	1.02		3838.12	3838.12		0.69	No
SLD 15	ini.	-1939.53	-2412	-0.0009691	0.0003369	0.0035	1.02		3845.03	3845.03		1.98	Si
SLD 15	fin.	2385.6	3071	-0.0012906	0.0003369	0.0035	1.02		3838.12	3838.12		1.61	Si
SLV 14	ini.	-3635.35	-2972	-0.0026906	0.0003369	0.0035	1.02		3845.03	3845.03		1.06	Si
SLV 14	fin.	5379.62	8501	-0.0054619	0.0003369	0.0035	1.02		3838.12	3838.12		0.71	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	2384.33	-10691	1.02	0	565	8088	7698	2601	8654		0.81	No
SLV 3	fin.	-5326.36	-12266	1.02	0	565	8088	7698	2601	8654		0.71	No
SLV 2	ini.	2449.09	-11025	1.02	0	565	8088	7698	2601	8654		0.78	No
SLV 2	fin.	-5493.96	-12592	1.02	0	565	8088	7698	2601	8654		0.69	No
SLV 15	ini.	-3700.11	14365	1.02	0	565	8088	7698	2601	8654		0.6	No
SLV 15	fin.	5547.22	12861	1.02	0	565	8088	7698	2601	8654		0.67	No
SLV 13	ini.	-3628.05	13996	1.02	0	565	8088	7698	2601	8654		0.62	No
SLV 13	fin.	5364.53	12500	1.02	0	565	8088	7698	2601	8654		0.69	No
SLV 4	ini.	2377.03	-10657	1.02	0	565	8088	7698	2601	8654		0.81	No
SLV 4	fin.	-5311.27	-12232	1.02	0	565	8088	7698	2601	8654		0.71	No
SLD 15	ini.	-1939.53	7097	1.02	0	565	8088	7698	2601	8654		1.22	Si
SLD 15	fin.	2385.6	5574	1.02	0	565	8088	7698	2601	8654		1.55	Si
SLD 16	ini.	-1942.66	7111	1.02	0	565	8088	7698	2601	8654		1.22	Si
SLD 16	fin.	2392.08	5588	1.02	0	565	8088	7698	2601	8654		1.55	Si
SLV 16	ini.	-3707.41	14399	1.02	0	565	8088	7698	2601	8654		0.6	No
SLV 16	fin.	5562.31	12895	1.02	0	565	8088	7698	2601	8654		0.67	No
SLV 14	ini.	-3635.35	14030	1.02	0	565	8088	7698	2601	8654		0.62	No
SLV 14	fin.	5379.62	12534	1.02	0	565	8088	7698	2601	8654		0.69	No
SLV 1	ini.	2456.39	-11059	1.02	0	565	8088	7698	2601	8654		0.78	No
SLV 1	fin.	-5509.05	-12626	1.02	0	565	8088	7698	2601	8654		0.69	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.69	SLV 16	No
V_SLV	0.601	SLV 16	No
PF_SLU	3.817	SLU 84	Si
V_SLU	2.716	SLU 84	Si

Trave di accoppiamento 86

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	7.32	8.34	1.02	-10.478	1.006	7.32	8.34	1.02	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-104.58	-2658	-0.0000402	0.0002246	0.0035	1.02		3900.37	3900.37	No	37.3	Si
SLU 77	fin.	-738.58	-3666	-0.0003158	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.28	Si
SLU 81	ini.	-109.03	-2615	-0.000042	0.0002246	0.0035	1.02		3900.37	3900.37	No	35.77	Si
SLU 81	fin.	-749.13	-3639	-0.000321	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.21	Si
SLU 79	ini.	-111.21	-2628	-0.0000428	0.0002246	0.0035	1.02		3900.37	3900.37	No	35.07	Si
SLU 79	fin.	-724.49	-3604	-0.0003089	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.38	Si
SLU 74	ini.	-102.99	-2606	-0.0000396	0.0002246	0.0035	1.02		3900.37	3900.37	No	37.87	Si
SLU 74	fin.	-730.39	-3604	-0.0003118	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.34	Si
SLU 75	ini.	-102.04	-2601	-0.0000392	0.0002246	0.0035	1.02		3900.37	3900.37	No	38.22	Si
SLU 75	fin.	-731.01	-3601	-0.0003121	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.34	Si
SLU 84	ini.	-109.67	-2663	-0.0000422	0.0002246	0.0035	1.02		3900.37	3900.37	No	35.56	Si
SLU 84	fin.	-757.94	-3698	-0.0003254	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.15	Si
SLU 78	ini.	-103.63	-2653	-0.0000399	0.0002246	0.0035	1.02		3900.37	3900.37	No	37.64	Si
SLU 78	fin.	-739.2	-3663	-0.0003161	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.28	Si
SLU 82	ini.	-108.08	-2611	-0.0000416	0.0002246	0.0035	1.02		3900.37	3900.37	No	36.09	Si
SLU 82	fin.	-749.75	-3637	-0.0003213	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.2	Si
SLU 83	ini.	-110.62	-2667	-0.0000426	0.0002246	0.0035	1.02		3900.37	3900.37	No	35.26	Si
SLU 83	fin.	-757.33	-3701	-0.0003251	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.15	Si
SLU 80	ini.	-110.26	-2623	-0.0000425	0.0002246	0.0035	1.02		3900.37	3900.37	No	35.37	Si
SLU 80	fin.	-725.11	-3601	-0.0003092	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-110.62	240	1.02	0	391	8088	5132	2601	7733	No	32.18	Si
SLU 83	fin.	-757.33	-2374	1.02	0	391	8088	5132	2601	7733	No	3.26	Si
SLU 39	ini.	-36.99	91	1.02	0	391	8088	5132	2601	7733	No	85.08	Si
SLU 39	fin.	-703.79	-2303	1.02	0	391	8088	5132	2601	7733	No	3.36	Si
SLU 81	ini.	-109.03	251	1.02	0	391	8088	5132	2601	7733	No	30.82	Si
SLU 81	fin.	-749.13	-2364	1.02	0	391	8088	5132	2601	7733	No	3.27	Si
SLU 42	ini.	-37.63	78	1.02	0	391	8088	5132	2601	7733	No	99.23	Si
SLU 42	fin.	-712.6	-2316	1.02	0	391	8088	5132	2601	7733	No	3.34	Si
SLU 82	ini.	-108.08	249	1.02	0	391	8088	5132	2601	7733	No	31.11	Si
SLU 82	fin.	-749.75	-2366	1.02	0	391	8088	5132	2601	7733	No	3.27	Si
SLU 40	ini.	-36.05	89	1.02	0	391	8088	5132	2601	7733	No	87.32	Si
SLU 40	fin.	-704.41	-2305	1.02	0	391	8088	5132	2601	7733	No	3.35	Si
SLU 77	ini.	-104.58	157	1.02	0	391	8088	5132	2601	7733	No	49.32	Si
SLU 77	fin.	-738.58	-2243	1.02	0	391	8088	5132	2601	7733	No	3.45	Si
SLU 78	ini.	-103.63	154	1.02	0	391	8088	5132	2601	7733	No	50.06	Si
SLU 78	fin.	-739.2	-2246	1.02	0	391	8088	5132	2601	7733	No	3.44	Si
SLU 84	ini.	-109.67	238	1.02	0	391	8088	5132	2601	7733	No	32.5	Si
SLU 84	fin.	-757.94	-2377	1.02	0	391	8088	5132	2601	7733	No	3.25	Si
SLU 41	ini.	-38.58	80	1.02	0	391	8088	5132	2601	7733	No	96.35	Si
SLU 41	fin.	-711.98	-2313	1.02	0	391	8088	5132	2601	7733	No	3.34	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3452.19	-10841	-0.0024066	0.0003369	0.0035	1.02		3845.03	3845.03		1.11	Si
SLV 16	fin.	236.63	-5988	-0.0000921	0.0003369	0.0035	1.02		3838.12	3838.12		16.22	Si
SLV 4	ini.	3386.5	7871	-0.0023207	0.0003369	0.0035	1.02		3838.12	3838.12		1.13	Si
SLV 4	fin.	-1210.78	1448	-0.0005365	0.0003369	0.0035	1.02		3845.03	3845.03		3.18	Si
SLV 1	ini.	3245.89	7206	-0.002133	0.0003369	0.0035	1.02		3838.12	3838.12		1.18	Si
SLV 1	fin.	-1148.15	1235	-0.0005036	0.0003369	0.0035	1.02		3845.03	3845.03		3.35	Si
SLV 3	ini.	3398.92	7908	-0.0023381	0.0003369	0.0035	1.02		3838.12	3838.12		1.13	Si
SLV 3	fin.	-1215.92	1460	-0.0005392	0.0003369	0.0035	1.02		3845.03	3845.03		3.16	Si
SLV 14	ini.	-3605.22	-11543	-0.0026414	0.0003369	0.0035	1.02		3845.03	3845.03		1.07	Si
SLV 14	fin.	304.4	-6213	-0.0001193	0.0003369	0.0035	1.02		3838.12	3838.12		12.61	Si
SLV 13	ini.	-3592.79	-11506	-0.0026214	0.0003369	0.0035	1.02		3845.03	3845.03		1.07	Si
SLV 13	fin.	299.26	-6200	-0.0001173	0.0003369	0.0035	1.02		3838.12	3838.12		12.83	Si
SLD 14	ini.	-1599.69	-5974	-0.0007555	0.0003369	0.0035	1.02		3845.03	3845.03		2.4	Si
SLD 14	fin.	-130.25	-4016	-0.0000501	0.0003369	0.0035	1.02		3845.03	3845.03		29.52	Si
SLV 15	ini.	-3439.76	-10804	-0.0023886	0.0003369	0.0035	1.02		3845.03	3845.03		1.12	Si
SLV 15	fin.	231.49	-5975	-0.0000901	0.0003369	0.0035	1.02		3838.12	3838.12		16.58	Si
SLD 13	ini.	-1594.35	-5958	-0.0007524	0.0003369	0.0035	1.02		3845.03	3845.03		2.41	Si
SLD 13	fin.	-132.46	-4010	-0.0000509	0.0003369	0.0035	1.02		3845.03	3845.03		29.03	Si
SLV 2	ini.	3233.46	7169	-0.0021173	0.0003369	0.0035	1.02		3838.12	3838.12		1.19	Si
SLV 2	fin.	-1143.01	1223	-0.0005009	0.0003369	0.0035	1.02		3845.03	3845.03		3.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	3386.5	-6406	1.02	0	586	8088	7698	2601	8675		1.35	Si
SLV 4	fin.	-1210.78	-7845	1.02	0	586	8088	7698	2601	8675		1.11	Si
SLV 2	ini.	3233.46	-6102	1.02	0	586	8088	7698	2601	8675		1.42	Si
SLV 2	fin.	-1143.01	-7557	1.02	0	586	8088	7698	2601	8675		1.15	Si
SLV 3	ini.	3398.92	-6434	1.02	0	586	8088	7698	2601	8675		1.35	Si
SLV 3	fin.	-1215.92	-7873	1.02	0	586	8088	7698	2601	8675		1.1	Si
SLV 14	ini.	-3605.22	6791	1.02	0	586	8088	7698	2601	8675		1.28	Si
SLV 14	fin.	304.4	5215	1.02	0	586	8088	7698	2601	8675		1.66	Si
SLV 1	ini.	3245.89	-6130	1.02	0	586	8088	7698	2601	8675		1.42	Si
SLV 1	fin.	-1148.15	-7585	1.02	0	586	8088	7698	2601	8675		1.14	Si
SLD 4	ini.	1388.05	-2637	1.02	0	586	8088	7698	2601	8675		3.29	Si
SLD 4	fin.	-779.05	-4116	1.02	0	586	8088	7698	2601	8675		2.11	Si
SLV 15	ini.	-3439.76	6459	1.02	0	586	8088	7698	2601	8675		1.34	Si
SLV 15	fin.	231.49	4899	1.02	0	586	8088	7698	2601	8675		1.77	Si
SLD 3	ini.	1393.39	-2649	1.02	0	586	8088	7698	2601	8675		3.27	Si
SLD 3	fin.	-781.26	-4128	1.02	0	586	8088	7698	2601	8675		2.1	Si
SLV 13	ini.	-3592.79	6763	1.02	0	586	8088	7698	2601	8675		1.28	Si
SLV 13	fin.	299.26	5187	1.02	0	586	8088	7698	2601	8675		1.67	Si
SLV 16	ini.	-3452.19	6487	1.02	0	586	8088	7698	2601	8675		1.34	Si
SLV 16	fin.	236.63	4927	1.02	0	586	8088	7698	2601	8675		1.76	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.067	SLV 14	Si
V_SLV	1.102	SLV 3	Si
PF_SLU	5.146	SLU 84	Si
V_SLU	3.253	SLU 84	Si

Trave di accoppiamento 87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	6.92	8.34	1.42	-7.463	1.006	6.92	8.34	1.42	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-29.32	-4398	-0.0000058	0.0002246	0.0035	1.42		7545.1	7545.1	No	257.33	Si
SLU 69	fin.	-898.76	-4996	-0.0001883	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.4	Si
SLU 66	ini.	-29.58	-4312	-0.0000058	0.0002246	0.0035	1.42		7545.1	7545.1	No	255.11	Si
SLU 66	fin.	-891.3	-4904	-0.0001867	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.47	Si
SLU 65	ini.	-20.29	-4147	-0.000004	0.0002246	0.0035	1.42		7545.1	7545.1	No	371.91	Si
SLU 65	fin.	-891.64	-4749	-0.0001867	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.46	Si
SLU 51	ini.	31.09	-3842	-0.0000061	0.0002246	0.0035	1.42		7536.27	7536.27	No	242.42	Si
SLU 51	fin.	-882.63	-4503	-0.0001847	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.55	Si
SLU 70	ini.	-27.52	-4393	-0.0000054	0.0002246	0.0035	1.42		7545.1	7545.1	No	274.14	Si
SLU 70	fin.	-900.96	-4994	-0.0001888	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.37	Si
SLU 72	ini.	-20.98	-4323	-0.0000041	0.0002246	0.0035	1.42		7545.1	7545.1	No	359.71	Si
SLU 72	fin.	-905.08	-4934	-0.0001898	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.34	Si
SLU 64	ini.	-23.28	-4155	-0.0000046	0.0002246	0.0035	1.42		7545.1	7545.1	No	324.04	Si
SLU 64	fin.	-887.97	-4753	-0.0001859	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.5	Si
SLU 68	ini.	-20.03	-4233	-0.0000039	0.0002246	0.0035	1.42		7545.1	7545.1	No	376.65	Si
SLU 68	fin.	-899.1	-4841	-0.0001884	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.39	Si
SLU 71	ini.	-22.77	-4328	-0.0000045	0.0002246	0.0035	1.42		7545.1	7545.1	No	331.31	Si
SLU 71	fin.	-902.88	-4936	-0.0001893	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.36	Si
SLU 67	ini.	-27.78	-4306	-0.0000055	0.0002246	0.0035	1.42		7545.1	7545.1	No	271.62	Si
SLU 67	fin.	-893.51	-4902	-0.0001872	0.0002246	0.0035	1.42		7545.1	7545.1	No	8.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 64	ini.	-23.28	-82	1.42	0	576	7930	7144	3621	8506	No	103.63	Si
SLU 64	fin.	-887.97	-2555	1.42	0	576	7930	7144	3621	8506	No	3.33	Si
SLU 70	ini.	-27.52	-93	1.42	0	576	7930	7144	3621	8506	No	91.15	Si
SLU 70	fin.	-900.96	-2567	1.42	0	576	7930	7144	3621	8506	No	3.31	Si
SLU 71	ini.	-22.77	-105	1.42	0	576	7930	7144	3621	8506	No	81.03	Si
SLU 71	fin.	-902.88	-2578	1.42	0	576	7930	7144	3621	8506	No	3.3	Si
SLU 66	ini.	-29.58	-76	1.42	0	576	7930	7144	3621	8506	No	112.3	Si
SLU 66	fin.	-891.3	-2549	1.42	0	576	7930	7144	3621	8506	No	3.34	Si
SLU 72	ini.	-20.98	-111	1.42	0	576	7930	7144	3621	8506	No	76.56	Si
SLU 72	fin.	-905.08	-2584	1.42	0	576	7930	7144	3621	8506	No	3.29	Si
SLU 68	ini.	-20.03	-104	1.42	0	576	7930	7144	3621	8506	No	82	Si
SLU 68	fin.	-899.1	-2577	1.42	0	576	7930	7144	3621	8506	No	3.3	Si
SLU 67	ini.	-27.78	-82	1.42	0	576	7930	7144	3621	8506	No	103.9	Si
SLU 67	fin.	-893.51	-2555	1.42	0	576	7930	7144	3621	8506	No	3.33	Si
SLU 80	ini.	-195.78	661	1.42	0	576	7930	7144	3621	8506	No	12.86	Si
SLU 80	fin.	-816.13	-2501	1.42	0	576	7930	7144	3621	8506	No	3.4	Si
SLU 69	ini.	-29.32	-87	1.42	0	576	7930	7144	3621	8506	No	97.55	Si
SLU 69	fin.	-898.76	-2560	1.42	0	576	7930	7144	3621	8506	No	3.32	Si
SLU 65	ini.	-20.29	-92	1.42	0	576	7930	7144	3621	8506	No	92.17	Si
SLU 65	fin.	-891.64	-2566	1.42	0	576	7930	7144	3621	8506	No	3.32	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	4014.37	662	-0.0010605	0.0003369	0.0035	1.42		7270.13	7270.13		1.81	Si
SLV 3	fin.	-4828.39	-6062	-0.0013721	0.0003369	0.0035	1.42		7279.66	7279.66		1.51	Si
SLV 4	ini.	3976.55	598	-0.001047	0.0003369	0.0035	1.42		7270.13	7270.13		1.83	Si
SLV 4	fin.	-4783.42	-6055	-0.0013534	0.0003369	0.0035	1.42		7279.66	7279.66		1.52	Si
SLV 15	ini.	-4035.96	-6396	-0.0010665	0.0003369	0.0035	1.42		7279.66	7279.66		1.8	Si
SLV 15	fin.	3225.99	-1023	-0.0007963	0.0003369	0.0035	1.42		7270.13	7270.13		2.25	Si
SLV 13	ini.	-4089.37	-7106	-0.0010857	0.0003369	0.0035	1.42		7279.66	7279.66		1.78	Si
SLV 13	fin.	3478.01	-1262	-0.0008771	0.0003369	0.0035	1.42		7270.13	7270.13		2.09	Si
SLV 2	ini.	3923.13	-112	-0.0010281	0.0003369	0.0035	1.42		7270.13	7270.13		1.85	Si
SLV 2	fin.	-4531.4	-6293	-0.001252	0.0003369	0.0035	1.42		7279.66	7279.66		1.61	Si
SLV 16	ini.	-4073.78	-6459	-0.0010801	0.0003369	0.0035	1.42		7279.66	7279.66		1.79	Si
SLV 16	fin.	3270.95	-1016	-0.0008105	0.0003369	0.0035	1.42		7270.13	7270.13		2.22	Si
SLD 3	ini.	1682.65	-1579	-0.0003652	0.0003369	0.0035	1.42		7270.13	7270.13		4.32	Si
SLD 3	fin.	-2437.44	-4684	-0.0005619	0.0003369	0.0035	1.42		7279.66	7279.66		2.99	Si
SLD 4	ini.	1666.41	-1606	-0.0003612	0.0003369	0.0035	1.42		7270.13	7270.13		4.36	Si
SLD 4	fin.	-2418.13	-4681	-0.0005565	0.0003369	0.0035	1.42		7279.66	7279.66		3.01	Si
SLV 1	ini.	3960.95	-48	-0.0010415	0.0003369	0.0035	1.42		7270.13	7270.13		1.84	Si
SLV 1	fin.	-4576.36	-6300	-0.0012697	0.0003369	0.0035	1.42		7279.66	7279.66		1.59	Si
SLV 14	ini.	-4127.19	-7169	-0.0010994	0.0003369	0.0035	1.42		7279.66	7279.66		1.76	Si
SLV 14	fin.	3522.97	-1254	-0.0008919	0.0003369	0.0035	1.42		7270.13	7270.13		2.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	1660.35	-5165	1.42	0	864	7930	10717	3621	8794		1.7	Si
SLD 1	fin.	-2328.63	-7178	1.42	0	864	7930	10717	3621	8794		1.23	Si
SLV 15	ini.	-4035.96	12210	1.42	0	864	7930	10717	3621	8794		0.72	No
SLV 15	fin.	3225.99	10354	1.42	0	864	7930	10717	3621	8794		0.85	No
SLV 3	ini.	4014.37	-12316	1.42	0	864	7930	10717	3621	8794		0.71	No
SLV 3	fin.	-4828.39	-14177	1.42	0	864	7930	10717	3621	8794		0.62	No
SLV 16	ini.	-4073.78	12343	1.42	0	864	7930	10717	3621	8794		0.71	No
SLV 16	fin.	3270.95	10487	1.42	0	864	7930	10717	3621	8794		0.84	No
SLV 2	ini.	3923.13	-12057	1.42	0	864	7930	10717	3621	8794		0.73	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	fin.	-4531.4	-14134	1.42	0	864	7930	10717	3621	8794		0.62	No
SLD 3	ini.	1682.65	-5218	1.42	0	864	7930	10717	3621	8794		1.69	Si
SLD 3	fin.	-2437.44	-7141	1.42	0	864	7930	10717	3621	8794		1.23	Si
SLV 13	ini.	-4089.37	12336	1.42	0	864	7930	10717	3621	8794		0.71	No
SLV 13	fin.	3478.01	10264	1.42	0	864	7930	10717	3621	8794		0.86	No
SLV 1	ini.	3960.95	-12190	1.42	0	864	7930	10717	3621	8794		0.72	No
SLV 1	fin.	-4576.36	-14267	1.42	0	864	7930	10717	3621	8794		0.62	No
SLV 4	ini.	3976.55	-12183	1.42	0	864	7930	10717	3621	8794		0.72	No
SLV 4	fin.	-4783.42	-14044	1.42	0	864	7930	10717	3621	8794		0.63	No
SLV 14	ini.	-4127.19	12469	1.42	0	864	7930	10717	3621	8794		0.71	No
SLV 14	fin.	3522.97	10397	1.42	0	864	7930	10717	3621	8794		0.85	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.508	SLV 3	Si
V_SLV	0.616	SLV 1	No
PF_SLU	8.336	SLU 72	Si
V_SLU	3.291	SLU 72	Si

Trave di accoppiamento 88

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-4.113	1.006	6.92	8.34	1.42	-4.913	1.006	6.92	8.34	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	969.4	-3924	-0.0002047	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.77	Si
SLU 81	fin.	-1430.5	-5142	-0.0003158	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.27	Si
SLU 78	ini.	984.14	-3936	-0.0002081	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.66	Si
SLU 78	fin.	-1418.58	-5152	-0.0003127	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.32	Si
SLU 82	ini.	971.48	-3919	-0.0002052	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.76	Si
SLU 82	fin.	-1431.52	-5138	-0.000316	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.27	Si
SLU 79	ini.	984.95	-3867	-0.0002083	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.65	Si
SLU 79	fin.	-1415.91	-5083	-0.0003121	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.33	Si
SLU 76	ini.	989.56	-3769	-0.0002093	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.62	Si
SLU 76	fin.	-1411.81	-4985	-0.000311	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.34	Si
SLU 80	ini.	987.03	-3862	-0.0002087	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.64	Si
SLU 80	fin.	-1416.93	-5079	-0.0003123	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.32	Si
SLU 84	ini.	970.34	-4009	-0.0002049	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.77	Si
SLU 84	fin.	-1437.32	-5230	-0.0003175	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.25	Si
SLU 75	ini.	985.28	-3846	-0.0002083	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.65	Si
SLU 75	fin.	-1412.78	-5060	-0.0003113	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.34	Si
SLU 83	ini.	968.26	-4014	-0.0002044	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.78	Si
SLU 83	fin.	-1436.3	-5233	-0.0003172	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.25	Si
SLU 77	ini.	982.06	-3941	-0.0002076	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.67	Si
SLU 77	fin.	-1417.56	-5155	-0.0003125	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	970.34	-3003	1.42	0	576	6344	7144	3621	6920	No	2.3	Si
SLU 84	fin.	-1437.32	-5138	1.42	0	576	6344	7144	3621	6920	No	1.35	Si
SLU 82	ini.	971.48	-2996	1.42	0	576	6344	7144	3621	6920	No	2.31	Si
SLU 82	fin.	-1431.52	-5131	1.42	0	576	6344	7144	3621	6920	No	1.35	Si
SLU 78	ini.	984.14	-3074	1.42	0	576	6344	7144	3621	6920	No	2.25	Si
SLU 78	fin.	-1418.58	-5045	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 77	ini.	982.06	-3069	1.42	0	576	6344	7144	3621	6920	No	2.25	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-1417.56	-5040	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 80	ini.	987.03	-3077	1.42	0	576	6344	7144	3621	6920	No	2.25	Si
SLU 80	fin.	-1416.93	-5047	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 79	ini.	984.95	-3071	1.42	0	576	6344	7144	3621	6920	No	2.25	Si
SLU 79	fin.	-1415.91	-5042	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 76	ini.	989.56	-3073	1.42	0	576	6344	7144	3621	6920	No	2.25	Si
SLU 76	fin.	-1411.81	-5044	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 81	ini.	969.4	-2991	1.42	0	576	6344	7144	3621	6920	No	2.31	Si
SLU 81	fin.	-1430.5	-5126	1.42	0	576	6344	7144	3621	6920	No	1.35	Si
SLU 75	ini.	985.28	-3068	1.42	0	576	6344	7144	3621	6920	No	2.26	Si
SLU 75	fin.	-1412.78	-5038	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 83	ini.	968.26	-2998	1.42	0	576	6344	7144	3621	6920	No	2.31	Si
SLU 83	fin.	-1436.3	-5133	1.42	0	576	6344	7144	3621	6920	No	1.35	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	5120.69	3050	-0.001501	0.0003369	0.0035	1.42		7270.13	7270.13		1.42	Si
SLV 2	fin.	-3523.05	-1173	-0.0008905	0.0003369	0.0035	1.42		7279.66	7279.66		2.07	Si
SLD 4	ini.	2688.33	289	-0.0006339	0.0003369	0.0035	1.42		7270.13	7270.13		2.7	Si
SLD 4	fin.	-2094.4	-2125	-0.0004691	0.0003369	0.0035	1.42		7279.66	7279.66		3.48	Si
SLV 1	ini.	5137.03	3127	-0.0015083	0.0003369	0.0035	1.42		7270.13	7270.13		1.42	Si
SLV 1	fin.	-3513.88	-1103	-0.0008875	0.0003369	0.0035	1.42		7279.66	7279.66		2.07	Si
SLV 3	ini.	5273.89	4056	-0.0015711	0.0003369	0.0035	1.42		7270.13	7270.13		1.38	Si
SLV 3	fin.	-3511.96	-378	-0.0008869	0.0003369	0.0035	1.42		7279.66	7279.66		2.07	Si
SLV 4	ini.	5257.55	3980	-0.0015635	0.0003369	0.0035	1.42		7270.13	7270.13		1.38	Si
SLV 4	fin.	-3521.14	-448	-0.0008899	0.0003369	0.0035	1.42		7279.66	7279.66		2.07	Si
SLV 13	ini.	-3717.49	-8917	-0.0009555	0.0003369	0.0035	1.42		7279.66	7279.66		1.96	Si
SLV 13	fin.	1463.42	-6311	-0.0003126	0.0003369	0.0035	1.42		7270.13	7270.13		4.97	Si
SLV 15	ini.	-3580.63	-7987	-0.0009096	0.0003369	0.0035	1.42		7279.66	7279.66		2.03	Si
SLV 15	fin.	1465.34	-5586	-0.000313	0.0003369	0.0035	1.42		7270.13	7270.13		4.96	Si
SLV 16	ini.	-3596.97	-8064	-0.000915	0.0003369	0.0035	1.42		7279.66	7279.66		2.02	Si
SLV 16	fin.	1456.16	-5656	-0.0003109	0.0003369	0.0035	1.42		7270.13	7270.13		4.99	Si
SLV 14	ini.	-3733.83	-8993	-0.0009611	0.0003369	0.0035	1.42		7279.66	7279.66		1.95	Si
SLV 14	fin.	1454.25	-6381	-0.0003104	0.0003369	0.0035	1.42		7270.13	7270.13		5	Si
SLD 3	ini.	2695.34	322	-0.0006359	0.0003369	0.0035	1.42		7270.13	7270.13		2.7	Si
SLD 3	fin.	-2090.46	-2095	-0.0004681	0.0003369	0.0035	1.42		7279.66	7279.66		3.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	2695.34	-7418	1.42	0	864	6344	10717	3621	7208		0.97	No
SLD 3	fin.	-2090.46	-8660	1.42	0	864	6344	10717	3621	7208		0.83	No
SLV 4	ini.	5257.55	-14109	1.42	0	864	6344	10717	3621	7208		0.51	No
SLV 4	fin.	-3521.14	-15329	1.42	0	864	6344	10717	3621	7208		0.47	No
SLV 2	ini.	5120.69	-13885	1.42	0	864	6344	10717	3621	7208		0.52	No
SLV 2	fin.	-3523.05	-15177	1.42	0	864	6344	10717	3621	7208		0.47	No
SLV 15	ini.	-3580.63	9062	1.42	0	864	6344	10717	3621	7208		0.8	No
SLV 15	fin.	1465.34	7843	1.42	0	864	6344	10717	3621	7208		0.92	No
SLV 1	ini.	5137.03	-13900	1.42	0	864	6344	10717	3621	7208		0.52	No
SLV 1	fin.	-3513.88	-15192	1.42	0	864	6344	10717	3621	7208		0.47	No
SLV 13	ini.	-3717.49	9286	1.42	0	864	6344	10717	3621	7208		0.78	No
SLV 13	fin.	1463.42	7995	1.42	0	864	6344	10717	3621	7208		0.9	No
SLD 4	ini.	2688.33	-7412	1.42	0	864	6344	10717	3621	7208		0.97	No
SLD 4	fin.	-2094.4	-8653	1.42	0	864	6344	10717	3621	7208		0.83	No
SLV 16	ini.	-3596.97	9077	1.42	0	864	6344	10717	3621	7208		0.79	No
SLV 16	fin.	1456.16	7858	1.42	0	864	6344	10717	3621	7208		0.92	No
SLV 3	ini.	5273.89	-14124	1.42	0	864	6344	10717	3621	7208		0.51	No
SLV 3	fin.	-3511.96	-15344	1.42	0	864	6344	10717	3621	7208		0.47	No
SLV 14	ini.	-3733.83	9301	1.42	0	864	6344	10717	3621	7208		0.77	No
SLV 14	fin.	1454.25	8010	1.42	0	864	6344	10717	3621	7208		0.9	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.379	SLV 3	Si
V_SLV	0.47	SLV 3	No
PF_SLU	5.249	SLU 84	Si
V_SLU	1.347	SLU 84	Si

Trave di accoppiamento 90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	6.92	8.34	1.42	-9.333	-3.314	6.92	8.34	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 65	ini.	533.91	-2584	-0.0001094	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.77	Si
SLU 65	fin.	-912.08	-3357	-0.0001938	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.07	Si
SLU 78	ini.	532.6	-2894	-0.0001091	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.8	Si
SLU 78	fin.	-908.74	-3718	-0.000193	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.1	Si
SLU 67	ini.	550.41	-2694	-0.000113	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.36	Si
SLU 67	fin.	-935.06	-3490	-0.0001992	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.87	Si
SLU 70	ini.	561.11	-2770	-0.0001153	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.1	Si
SLU 70	fin.	-951.21	-3581	-0.000203	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.74	Si
SLU 77	ini.	528.34	-2889	-0.0001082	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.91	Si
SLU 77	fin.	-903.48	-3709	-0.0001918	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.15	Si
SLU 66	ini.	546.14	-2690	-0.000112	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.46	Si
SLU 66	fin.	-929.8	-3482	-0.0001979	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.92	Si
SLU 72	ini.	552.48	-2732	-0.0001134	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.31	Si
SLU 72	fin.	-940.87	-3532	-0.0002005	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.82	Si
SLU 69	ini.	556.85	-2765	-0.0001143	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.2	Si
SLU 69	fin.	-945.95	-3572	-0.0002017	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.78	Si
SLU 71	ini.	548.22	-2727	-0.0001125	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.41	Si
SLU 71	fin.	-935.61	-3524	-0.0001993	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.87	Si
SLU 68	ini.	544.62	-2660	-0.0001117	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.5	Si
SLU 68	fin.	-928.23	-3448	-0.0001976	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	496.79	-1227	1.42	0	576	7137	5953	3621	7713	No	6.29	Si
SLU 83	fin.	-858.8	-3050	1.42	0	576	7137	5953	3621	7713	No	2.53	Si
SLU 79	ini.	519.71	-1356	1.42	0	576	7137	5953	3621	7713	No	5.69	Si
SLU 79	fin.	-893.14	-3063	1.42	0	576	7137	5953	3621	7713	No	2.52	Si
SLU 77	ini.	528.34	-1385	1.42	0	576	7137	5953	3621	7713	No	5.57	Si
SLU 77	fin.	-903.48	-3093	1.42	0	576	7137	5953	3621	7713	No	2.49	Si
SLU 76	ini.	516.11	-1336	1.42	0	576	7137	5953	3621	7713	No	5.77	Si
SLU 76	fin.	-885.76	-3044	1.42	0	576	7137	5953	3621	7713	No	2.53	Si
SLU 84	ini.	501.05	-1240	1.42	0	576	7137	5953	3621	7713	No	6.22	Si
SLU 84	fin.	-864.06	-3064	1.42	0	576	7137	5953	3621	7713	No	2.52	Si
SLU 70	ini.	561.11	-1602	1.42	0	576	7137	5953	3621	7713	No	4.81	Si
SLU 70	fin.	-951.21	-3040	1.42	0	576	7137	5953	3621	7713	No	2.54	Si
SLU 75	ini.	521.9	-1357	1.42	0	576	7137	5953	3621	7713	No	5.69	Si
SLU 75	fin.	-892.59	-3064	1.42	0	576	7137	5953	3621	7713	No	2.52	Si
SLU 78	ini.	532.6	-1399	1.42	0	576	7137	5953	3621	7713	No	5.52	Si
SLU 78	fin.	-908.74	-3106	1.42	0	576	7137	5953	3621	7713	No	2.48	Si
SLU 74	ini.	517.63	-1343	1.42	0	576	7137	5953	3621	7713	No	5.74	Si
SLU 74	fin.	-887.33	-3051	1.42	0	576	7137	5953	3621	7713	No	2.53	Si
SLU 80	ini.	523.97	-1369	1.42	0	576	7137	5953	3621	7713	No	5.63	Si
SLU 80	fin.	-898.4	-3077	1.42	0	576	7137	5953	3621	7713	No	2.51	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	4855.75	-1510	-0.001433	0.0002807	0.0035	1.42		7337.02	7337.02		1.51	Si
SLV 4	fin.	-5263.22	-6027	-0.0016189	0.0002807	0.0035	1.42		7346.34	7346.34		1.4	Si
SLV 1	ini.	4874.8	-1302	-0.0014414	0.0002807	0.0035	1.42		7337.02	7337.02		1.51	Si
SLV 1	fin.	-5280.29	-5860	-0.0016273	0.0002807	0.0035	1.42		7346.34	7346.34		1.39	Si
SLV 13	ini.	-4111.79	-2398	-0.0011286	0.0002807	0.0035	1.42		7346.34	7346.34		1.79	Si
SLV 13	fin.	3967.65	995	-0.0010766	0.0002807	0.0035	1.42		7337.02	7337.02		1.85	Si
SLV 14	ini.	-3790.55	-2395	-0.0010108	0.0002807	0.0035	1.42		7346.34	7346.34		1.94	Si
SLV 14	fin.	3645.29	746	-0.0009611	0.0002807	0.0035	1.42		7337.02	7337.02		2.01	Si
SLV 16	ini.	-4130.84	-2606	-0.0011357	0.0002807	0.0035	1.42		7346.34	7346.34		1.78	Si
SLV 16	fin.	3984.72	829	-0.0010829	0.0002807	0.0035	1.42		7337.02	7337.02		1.84	Si
SLV 15	ini.	-4452.08	-2610	-0.001261	0.0002807	0.0035	1.42		7346.34	7346.34		1.65	Si
SLV 15	fin.	4307.08	1078	-0.0012055	0.0002807	0.0035	1.42		7337.02	7337.02		1.7	Si
SLD 2	ini.	2434.39	-1671	-0.0005763	0.0002807	0.0035	1.42		7337.02	7337.02		3.01	Si
SLD 2	fin.	-2765.27	-4048	-0.0006735	0.0002807	0.0035	1.42		7346.34	7346.34		2.66	Si
SLV 2	ini.	5196.04	-1299	-0.0015893	0.0002807	0.0035	1.42		7337.02	7337.02		1.41	Si
SLV 2	fin.	-5602.64	-6109	-0.0017939	0.0002807	0.0035	1.42		7346.34	7346.34		1.31	Si
SLV 3	ini.	4534.51	-1513	-0.0012966	0.0002807	0.0035	1.42		7337.02	7337.02		1.62	Si
SLV 3	fin.	-4940.86	-5778	-0.0014682	0.0002807	0.0035	1.42		7346.34	7346.34		1.49	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	2390.35	-1436	-0.0005636	0.0002807	0.0035	1.42		7337.02	7337.02		3.07	Si
SLV 6	fin.	-2704.27	-3761	-0.000655	0.0002807	0.0035	1.42		7346.34	7346.34		2.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	4855.75	-14397	1.42	0	864	7137	8929	3621	8001		0.56	No
SLV 4	fin.	-5263.22	-15482	1.42	0	864	7137	8929	3621	8001		0.52	No
SLV 2	ini.	5196.04	-14900	1.42	0	864	7137	8929	3621	8001		0.54	No
SLV 2	fin.	-5602.64	-16137	1.42	0	864	7137	8929	3621	8001		0.5	No
SLD 2	ini.	2434.39	-6948	1.42	0	864	7137	8929	3621	8001		1.15	Si
SLD 2	fin.	-2765.27	-8126	1.42	0	864	7137	8929	3621	8001		0.98	No
SLV 13	ini.	-4111.79	12376	1.42	0	864	7137	8929	3621	8001		0.65	No
SLV 13	fin.	3967.65	11200	1.42	0	864	7137	8929	3621	8001		0.71	No
SLV 14	ini.	-3790.55	11461	1.42	0	864	7137	8929	3621	8001		0.7	No
SLV 14	fin.	3645.29	10285	1.42	0	864	7137	8929	3621	8001		0.78	No
SLV 16	ini.	-4130.84	11964	1.42	0	864	7137	8929	3621	8001		0.67	No
SLV 16	fin.	3984.72	10940	1.42	0	864	7137	8929	3621	8001		0.73	No
SLV 15	ini.	-4452.08	12878	1.42	0	864	7137	8929	3621	8001		0.62	No
SLV 15	fin.	4307.08	11855	1.42	0	864	7137	8929	3621	8001		0.67	No
SLD 4	ini.	2287.13	-6730	1.42	0	864	7137	8929	3621	8001		1.19	Si
SLD 4	fin.	-2620.13	-7839	1.42	0	864	7137	8929	3621	8001		1.02	Si
SLV 1	ini.	4874.8	-13985	1.42	0	864	7137	8929	3621	8001		0.57	No
SLV 1	fin.	-5280.29	-15223	1.42	0	864	7137	8929	3621	8001		0.53	No
SLV 3	ini.	4534.51	-13483	1.42	0	864	7137	8929	3621	8001		0.59	No
SLV 3	fin.	-4940.86	-14568	1.42	0	864	7137	8929	3621	8001		0.55	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.311	SLV 2	Si
V_SLV	0.496	SLV 2	No
PF_SLU	7.737	SLU 70	Si
V_SLU	2.483	SLU 78	Si

Trave di accoppiamento 92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.163	1.246	6.92	8.34	1.42	-5.163	2.046	6.92	8.34	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	229	-473	-0.0000456	0.0002246	0.0035	1.42		7594.91	7594.91	No	33.17	Si
SLU 79	fin.	121.28	-536	-0.000024	0.0002246	0.0035	1.42		7594.91	7594.91	No	62.62	Si
SLU 83	ini.	237.96	-495	-0.0000474	0.0002246	0.0035	1.42		7594.91	7594.91	No	31.92	Si
SLU 83	fin.	117.36	-559	-0.0000232	0.0002246	0.0035	1.42		7594.91	7594.91	No	64.71	Si
SLU 77	ini.	233.15	-482	-0.0000465	0.0002246	0.0035	1.42		7594.91	7594.91	No	32.58	Si
SLU 77	fin.	120.69	-546	-0.0000239	0.0002246	0.0035	1.42		7594.91	7594.91	No	62.93	Si
SLU 75	ini.	228.98	-473	-0.0000456	0.0002246	0.0035	1.42		7594.91	7594.91	No	33.17	Si
SLU 75	fin.	117.38	-536	-0.0000232	0.0002246	0.0035	1.42		7594.91	7594.91	No	64.71	Si
SLU 81	ini.	233.98	-487	-0.0000466	0.0002246	0.0035	1.42		7594.91	7594.91	No	32.46	Si
SLU 81	fin.	113.27	-551	-0.0000224	0.0002246	0.0035	1.42		7594.91	7594.91	No	67.05	Si
SLU 78	ini.	232.96	-481	-0.0000464	0.0002246	0.0035	1.42		7594.91	7594.91	No	32.6	Si
SLU 78	fin.	121.47	-544	-0.000024	0.0002246	0.0035	1.42		7594.91	7594.91	No	62.53	Si
SLU 84	ini.	237.77	-494	-0.0000474	0.0002246	0.0035	1.42		7594.91	7594.91	No	31.94	Si
SLU 84	fin.	118.15	-558	-0.0000234	0.0002246	0.0035	1.42		7594.91	7594.91	No	64.28	Si
SLU 74	ini.	229.16	-474	-0.0000457	0.0002246	0.0035	1.42		7594.91	7594.91	No	33.14	Si
SLU 74	fin.	116.6	-538	-0.000023	0.0002246	0.0035	1.42		7594.91	7594.91	No	65.14	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	228.81	-472	-0.0000456	0.0002246	0.0035	1.42		7594.91	7594.91	No	33.19	Si
SLU 80	fin.	122.06	-534	-0.0000241	0.0002246	0.0035	1.42		7594.91	7594.91	No	62.22	Si
SLU 82	ini.	233.79	-486	-0.0000466	0.0002246	0.0035	1.42		7594.91	7594.91	No	32.49	Si
SLU 82	fin.	114.05	-550	-0.0000225	0.0002246	0.0035	1.42		7594.91	7594.91	No	66.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	237.77	-2	1.42	0	329	6344	4083	3621	6673	No	4390.77	Si
SLU 84	fin.	118.15	-437	1.42	0	329	6344	4083	3621	6673	No	15.27	Si
SLU 79	ini.	229	14	1.42	0	329	6344	4083	3621	6673	No	465.09	Si
SLU 79	fin.	121.28	-421	1.42	0	329	6344	4083	3621	6673	No	15.85	Si
SLU 82	ini.	233.79	-1	1.42	0	329	6344	4083	3621	6673	No	5515.02	Si
SLU 82	fin.	114.05	-437	1.42	0	329	6344	4083	3621	6673	No	15.28	Si
SLU 81	ini.	233.98	-3	1.42	0	329	6344	4083	3621	6673	No	2172.31	Si
SLU 81	fin.	113.27	-439	1.42	0	329	6344	4083	3621	6673	No	15.22	Si
SLU 83	ini.	237.96	-3	1.42	0	329	6344	4083	3621	6673	No	1973.29	Si
SLU 83	fin.	117.36	-439	1.42	0	329	6344	4083	3621	6673	No	15.21	Si
SLU 74	ini.	229.16	7	1.42	0	329	6344	4083	3621	6673	No	918.89	Si
SLU 74	fin.	116.6	-428	1.42	0	329	6344	4083	3621	6673	No	15.58	Si
SLU 80	ini.	228.81	16	1.42	0	329	6344	4083	3621	6673	No	411.67	Si
SLU 80	fin.	122.06	-419	1.42	0	329	6344	4083	3621	6673	No	15.92	Si
SLU 77	ini.	233.15	7	1.42	0	329	6344	4083	3621	6673	No	959.83	Si
SLU 77	fin.	120.69	-428	1.42	0	329	6344	4083	3621	6673	No	15.57	Si
SLU 75	ini.	228.98	9	1.42	0	329	6344	4083	3621	6673	No	731.37	Si
SLU 75	fin.	117.38	-426	1.42	0	329	6344	4083	3621	6673	No	15.65	Si
SLU 78	ini.	232.96	9	1.42	0	329	6344	4083	3621	6673	No	757.08	Si
SLU 78	fin.	121.47	-427	1.42	0	329	6344	4083	3621	6673	No	15.64	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	595.52	164	-0.0001205	0.0003369	0.0035	1.42		7808.98	7808.98		13.11	Si
SLV 5	fin.	298.17	754	-0.0000594	0.0003369	0.0035	1.42		7808.98	7808.98		26.19	Si
SLV 6	ini.	584.29	183	-0.0001182	0.0003369	0.0035	1.42		7808.98	7808.98		13.37	Si
SLV 6	fin.	305.24	780	-0.0000608	0.0003369	0.0035	1.42		7808.98	7808.98		25.58	Si
SLV 2	ini.	319.65	114	-0.0000637	0.0003369	0.0035	1.42		7808.98	7808.98		24.43	Si
SLV 2	fin.	238.88	316	-0.0000474	0.0003369	0.0035	1.42		7808.98	7808.98		32.69	Si
SLV 10	ini.	553.62	11	-0.0001118	0.0003369	0.0035	1.42		7808.98	7808.98		14.11	Si
SLV 10	fin.	250.24	575	-0.0000497	0.0003369	0.0035	1.42		7808.98	7808.98		31.21	Si
SLV 9	ini.	564.85	-8	-0.0001141	0.0003369	0.0035	1.42		7808.98	7808.98		13.82	Si
SLV 9	fin.	243.17	549	-0.0000483	0.0003369	0.0035	1.42		7808.98	7808.98		32.11	Si
SLD 9	ini.	328.98	-173	-0.0000656	0.0003369	0.0035	1.42		7808.98	7808.98		23.74	Si
SLD 9	fin.	154.18	46	-0.0000305	0.0003369	0.0035	1.42		7808.98	7808.98		50.65	Si
SLV 1	ini.	337.13	84	-0.0000673	0.0003369	0.0035	1.42		7808.98	7808.98		23.16	Si
SLV 1	fin.	227.88	276	-0.0000452	0.0003369	0.0035	1.42		7808.98	7808.98		34.27	Si
SLD 10	ini.	324.08	-164	-0.0000646	0.0003369	0.0035	1.42		7808.98	7808.98		24.1	Si
SLD 10	fin.	157.27	57	-0.0000311	0.0003369	0.0035	1.42		7808.98	7808.98		49.65	Si
SLD 5	ini.	340.61	-101	-0.000068	0.0003369	0.0035	1.42		7808.98	7808.98		22.93	Si
SLD 5	fin.	176.95	132	-0.000035	0.0003369	0.0035	1.42		7808.98	7808.98		44.13	Si
SLD 6	ini.	335.71	-93	-0.000067	0.0003369	0.0035	1.42		7808.98	7808.98		23.26	Si
SLD 6	fin.	180.04	143	-0.0000356	0.0003369	0.0035	1.42		7808.98	7808.98		43.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	564.85	-882	1.42	0	494	6344	6124	3621	6838		7.75	Si
SLV 9	fin.	243.17	-373	1.42	0	494	6344	6124	3621	6838		18.32	Si
SLV 5	ini.	595.52	-728	1.42	0	494	6344	6124	3621	6838		9.39	Si
SLV 5	fin.	298.17	-258	1.42	0	494	6344	6124	3621	6838		26.46	Si
SLV 11	ini.	-284.53	770	1.42	0	494	6344	6124	3621	6838		8.88	Si
SLV 11	fin.	-135.38	-363	1.42	0	494	6344	6124	3621	6838		18.83	Si
SLV 7	ini.	-253.86	924	1.42	0	494	6344	6124	3621	6838		7.4	Si
SLV 7	fin.	-80.38	-248	1.42	0	494	6344	6124	3621	6838		27.53	Si
SLV 8	ini.	-265.1	953	1.42	0	494	6344	6124	3621	6838		7.18	Si
SLV 8	fin.	-73.3	-220	1.42	0	494	6344	6124	3621	6838		31.12	Si
SLV 4	ini.	64.84	563	1.42	0	494	6344	6124	3621	6838		12.15	Si
SLV 4	fin.	125.32	-81	1.42	0	494	6344	6124	3621	6838		84.1	Si
SLV 12	ini.	-295.76	798	1.42	0	494	6344	6124	3621	6838		8.57	Si
SLV 12	fin.	-128.31	-335	1.42	0	494	6344	6124	3621	6838		20.44	Si
SLV 3	ini.	82.32	518	1.42	0	494	6344	6124	3621	6838		13.2	Si
SLV 3	fin.	114.32	-126	1.42	0	494	6344	6124	3621	6838		54.33	Si
SLV 10	ini.	553.62	-854	1.42	0	494	6344	6124	3621	6838		8.01	Si
SLV 10	fin.	250.24	-345	1.42	0	494	6344	6124	3621	6838		19.84	Si
SLV 6	ini.	584.29	-699	1.42	0	494	6344	6124	3621	6838		9.78	Si
SLV 6	fin.	305.24	-230	1.42	0	494	6344	6124	3621	6838		29.75	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	13.113	SLV 5	Si
V_SLV	7.177	SLV 8	Si
PF_SLU	31.917	SLU 83	Si
V_SLU	15.207	SLU 83	Si

Trave di accoppiamento 93

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	4.82	6.82	2	-5.093	6.506	4.82	6.82	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-384.37	-92	-0.0000386	0.0001872	0.0035	2		14357.01	14357.01	No	37.35	Si
SLU 84	fin.	-424	-335	-0.0000426	0.0001872	0.0035	2		14357.01	14357.01	No	33.86	Si
SLU 77	ini.	-334.69	-191	-0.0000335	0.0001872	0.0035	2		14357.01	14357.01	No	42.9	Si
SLU 77	fin.	-401.98	-403	-0.0000404	0.0001872	0.0035	2		14357.01	14357.01	No	35.72	Si
SLU 73	ini.	-378.05	-45	-0.0000379	0.0001872	0.0035	2		14357.01	14357.01	No	37.98	Si
SLU 73	fin.	-421.15	-274	-0.0000423	0.0001872	0.0035	2		14357.01	14357.01	No	34.09	Si
SLU 76	ini.	-382.39	-49	-0.0000384	0.0001872	0.0035	2		14357.01	14357.01	No	37.55	Si
SLU 76	fin.	-427.73	-280	-0.000043	0.0001872	0.0035	2		14357.01	14357.01	No	33.57	Si
SLU 83	ini.	-349.69	-176	-0.000035	0.0001872	0.0035	2		14357.01	14357.01	No	41.06	Si
SLU 83	fin.	-401.51	-401	-0.0000403	0.0001872	0.0035	2		14357.01	14357.01	No	35.76	Si
SLU 80	ini.	-363.61	-108	-0.0000364	0.0001872	0.0035	2		14357.01	14357.01	No	39.48	Si
SLU 80	fin.	-419.32	-331	-0.0000421	0.0001872	0.0035	2		14357.01	14357.01	No	34.24	Si
SLU 75	ini.	-365.03	-104	-0.0000366	0.0001872	0.0035	2		14357.01	14357.01	No	39.33	Si
SLU 75	fin.	-417.89	-330	-0.000042	0.0001872	0.0035	2		14357.01	14357.01	No	34.36	Si
SLU 82	ini.	-380.03	-89	-0.0000381	0.0001872	0.0035	2		14357.01	14357.01	No	37.78	Si
SLU 82	fin.	-417.41	-328	-0.0000419	0.0001872	0.0035	2		14357.01	14357.01	No	34.4	Si
SLU 78	ini.	-369.36	-108	-0.000037	0.0001872	0.0035	2		14357.01	14357.01	No	38.87	Si
SLU 78	fin.	-424.47	-336	-0.0000427	0.0001872	0.0035	2		14357.01	14357.01	No	33.82	Si
SLU 68	ini.	-323.84	-77	-0.0000324	0.0001872	0.0035	2		14357.01	14357.01	No	44.33	Si
SLU 68	fin.	-401.47	-257	-0.0000403	0.0001872	0.0035	2		14357.01	14357.01	No	35.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-328.93	-1676	2	0	812	3965	8384	5100	4776	No	2.85	Si
SLU 79	fin.	-396.84	1505	2	0	812	3965	8384	5100	4776	No	3.17	Si
SLU 77	ini.	-334.69	-1695	2	0	812	3965	8384	5100	4776	No	2.82	Si
SLU 77	fin.	-401.98	1540	2	0	812	3965	8384	5100	4776	No	3.1	Si
SLU 81	ini.	-345.35	-1652	2	0	812	3965	8384	5100	4776	No	2.89	Si
SLU 81	fin.	-394.93	1605	2	0	812	3965	8384	5100	4776	No	2.98	Si
SLU 74	ini.	-330.35	-1664	2	0	812	3965	8384	5100	4776	No	2.87	Si
SLU 74	fin.	-395.4	1517	2	0	812	3965	8384	5100	4776	No	3.15	Si
SLU 80	ini.	-363.61	-1658	2	0	812	3965	8384	5100	4776	No	2.88	Si
SLU 80	fin.	-419.32	1567	2	0	812	3965	8384	5100	4776	No	3.05	Si
SLU 78	ini.	-369.36	-1677	2	0	812	3965	8384	5100	4776	No	2.85	Si
SLU 78	fin.	-424.47	1602	2	0	812	3965	8384	5100	4776	No	2.98	Si
SLU 82	ini.	-380.03	-1633	2	0	812	3965	8384	5100	4776	No	2.92	Si
SLU 82	fin.	-417.41	1667	2	0	812	3965	8384	5100	4776	No	2.86	Si
SLU 75	ini.	-365.03	-1646	2	0	812	3965	8384	5100	4776	No	2.9	Si
SLU 75	fin.	-417.89	1579	2	0	812	3965	8384	5100	4776	No	3.03	Si
SLU 83	ini.	-349.69	-1683	2	0	812	3965	8384	5100	4776	No	2.84	Si
SLU 83	fin.	-401.51	1629	2	0	812	3965	8384	5100	4776	No	2.93	Si
SLU 84	ini.	-384.37	-1664	2	0	812	3965	8384	5100	4776	No	2.87	Si
SLU 84	fin.	-424	1690	2	0	812	3965	8384	5100	4776	No	2.83	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	558.14	-563	-0.0000561	0.0002807	0.0035	2		14202.07	14202.07		25.45	Si
SLV 1	fin.	-55.8	-258	-0.0000055	0.0002807	0.0035	2		14215.41	14215.41		254.75	Si
SLV 12	ini.	-596.13	-74	-0.0000599	0.0002807	0.0035	2		14215.41	14215.41		23.85	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	fin.	-563.3	-194	-0.0000566	0.0002807	0.0035	2		14215.41	14215.41		25.24	Si
SLV 13	ini.	-815.62	204	-0.0000826	0.0002807	0.0035	2		14215.41	14215.41		17.43	Si
SLV 13	fin.	-354.51	-362	-0.0000354	0.0002807	0.0035	2		14215.41	14215.41		40.1	Si
SLV 11	ini.	-560.43	-122	-0.0000563	0.0002807	0.0035	2		14215.41	14215.41		25.37	Si
SLV 11	fin.	-567.58	-198	-0.000057	0.0002807	0.0035	2		14215.41	14215.41		25.05	Si
SLD 15	ini.	-508.52	-13	-0.000051	0.0002807	0.0035	2		14215.41	14215.41		27.95	Si
SLD 15	fin.	-371.67	-288	-0.0000371	0.0002807	0.0035	2		14215.41	14215.41		38.25	Si
SLV 2	ini.	502.59	-488	-0.0000504	0.0002807	0.0035	2		14202.07	14202.07		28.26	Si
SLV 2	fin.	-49.15	-252	-0.0000049	0.0002807	0.0035	2		14215.41	14215.41		289.23	Si
SLV 16	ini.	-970.72	246	-0.0000987	0.0002807	0.0035	2		14215.41	14215.41		14.64	Si
SLV 16	fin.	-495	-297	-0.0000496	0.0002807	0.0035	2		14215.41	14215.41		28.72	Si
SLD 16	ini.	-532.36	19	-0.0000534	0.0002807	0.0035	2		14215.41	14215.41		26.7	Si
SLD 16	fin.	-368.82	-286	-0.0000368	0.0002807	0.0035	2		14215.41	14215.41		38.54	Si
SLV 14	ini.	-871.17	279	-0.0000883	0.0002807	0.0035	2		14215.41	14215.41		16.32	Si
SLV 14	fin.	-347.86	-356	-0.0000347	0.0002807	0.0035	2		14215.41	14215.41		40.87	Si
SLV 15	ini.	-915.17	172	-0.0000929	0.0002807	0.0035	2		14215.41	14215.41		15.53	Si
SLV 15	fin.	-501.65	-304	-0.0000503	0.0002807	0.0035	2		14215.41	14215.41		28.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-970.72	-547	2	0	1217	3965	12577	5100	5182		9.47	Si
SLV 16	fin.	-495	4567	2	0	1217	3965	12577	5100	5182		1.13	Si
SLV 13	ini.	-815.62	-394	2	0	1217	3965	12577	5100	5182		13.16	Si
SLV 13	fin.	-354.51	5115	2	0	1217	3965	12577	5100	5182		1.01	Si
SLV 4	ini.	403.04	-1952	2	0	1217	3965	12577	5100	5182		2.66	Si
SLV 4	fin.	-196.29	-3336	2	0	1217	3965	12577	5100	5182		1.55	Si
SLV 14	ini.	-871.17	-278	2	0	1217	3965	12577	5100	5182		18.64	Si
SLV 14	fin.	-347.86	5470	2	0	1217	3965	12577	5100	5182		0.95	No
SLV 9	ini.	-228.58	-551	2	0	1217	3965	12577	5100	5182		9.41	Si
SLV 9	fin.	-77.11	3466	2	0	1217	3965	12577	5100	5182		1.5	Si
SLV 15	ini.	-915.17	-663	2	0	1217	3965	12577	5100	5182		7.82	Si
SLV 15	fin.	-501.65	4212	2	0	1217	3965	12577	5100	5182		1.23	Si
SLV 10	ini.	-264.28	-476	2	0	1217	3965	12577	5100	5182		10.88	Si
SLV 10	fin.	-72.83	3694	2	0	1217	3965	12577	5100	5182		1.4	Si
SLD 14	ini.	-489.66	-792	2	0	1217	3965	12577	5100	5182		6.55	Si
SLD 14	fin.	-305.67	2850	2	0	1217	3965	12577	5100	5182		1.82	Si
SLV 1	ini.	558.14	-1798	2	0	1217	3965	12577	5100	5182		2.88	Si
SLV 1	fin.	-55.8	-2788	2	0	1217	3965	12577	5100	5182		1.86	Si
SLV 3	ini.	458.59	-2068	2	0	1217	3965	12577	5100	5182		2.51	Si
SLV 3	fin.	-202.94	-3691	2	0	1217	3965	12577	5100	5182		1.4	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	14.644	SLV 16	Si
V_SLV	0.947	SLV 14	No
PF_SLU	33.566	SLU 76	Si
V_SLU	2.818	SLU 77	Si

Trave di accoppiamento 94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	7.62	8.34	0.72	-5.093	6.506	7.62	8.34	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 41	ini.	-31.09	-138	-0.0000239	0.0001872	0.0035	0.72		1901.86	1901.86	No	61.17	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 41	fin.	98.83	-369	-0.0000778	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.2	Si
SLU 84	ini.	-13.06	-142	-0.00001	0.0001872	0.0035	0.72		1901.86	1901.86	No	145.58	Si
SLU 84	fin.	101.11	-416	-0.0000797	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.77	Si
SLU 77	ini.	-23.69	-108	-0.0000182	0.0001872	0.0035	0.72		1901.86	1901.86	No	80.29	Si
SLU 77	fin.	95.73	-397	-0.0000753	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.82	Si
SLU 81	ini.	-28.04	-127	-0.0000216	0.0001872	0.0035	0.72		1901.86	1901.86	No	67.82	Si
SLU 81	fin.	102.05	-406	-0.0000805	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.59	Si
SLU 40	ini.	-15.51	-152	-0.0000119	0.0001872	0.0035	0.72		1901.86	1901.86	No	122.61	Si
SLU 40	fin.	95.79	-369	-0.0000754	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.81	Si
SLU 42	ini.	-15.81	-153	-0.0000121	0.0001872	0.0035	0.72		1901.86	1901.86	No	120.28	Si
SLU 42	fin.	96.84	-374	-0.0000762	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.59	Si
SLU 83	ini.	-28.34	-128	-0.0000218	0.0001872	0.0035	0.72		1901.86	1901.86	No	67.1	Si
SLU 83	fin.	103.1	-411	-0.0000813	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.4	Si
SLU 39	ini.	-30.79	-137	-0.0000237	0.0001872	0.0035	0.72		1901.86	1901.86	No	61.77	Si
SLU 39	fin.	97.78	-364	-0.000077	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.4	Si
SLU 82	ini.	-12.76	-141	-0.0000098	0.0001872	0.0035	0.72		1901.86	1901.86	No	149	Si
SLU 82	fin.	100.06	-411	-0.0000788	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.96	Si
SLU 74	ini.	-23.39	-107	-0.0000179	0.0001872	0.0035	0.72		1901.86	1901.86	No	81.31	Si
SLU 74	fin.	94.68	-392	-0.0000745	0.0001872	0.0035	0.72		1897.3	1897.3	No	20.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-7.88	1748	0.72	0	292	3965	3018	1836	4257	No	2.44	Si
SLU 80	fin.	91.24	-1367	0.72	0	292	3965	3018	1836	4257	No	3.11	Si
SLU 75	ini.	-8.11	1746	0.72	0	292	3965	3018	1836	4257	No	2.44	Si
SLU 75	fin.	92.69	-1361	0.72	0	292	3965	3018	1836	4257	No	3.13	Si
SLU 77	ini.	-23.69	1802	0.72	0	292	3965	3018	1836	4257	No	2.36	Si
SLU 77	fin.	95.73	-1340	0.72	0	292	3965	3018	1836	4257	No	3.18	Si
SLU 83	ini.	-28.34	1808	0.72	0	292	3965	3018	1836	4257	No	2.35	Si
SLU 83	fin.	103.1	-1281	0.72	0	292	3965	3018	1836	4257	No	3.32	Si
SLU 81	ini.	-28.04	1776	0.72	0	292	3965	3018	1836	4257	No	2.4	Si
SLU 81	fin.	102.05	-1258	0.72	0	292	3965	3018	1836	4257	No	3.38	Si
SLU 79	ini.	-23.16	1772	0.72	0	292	3965	3018	1836	4257	No	2.4	Si
SLU 79	fin.	93.23	-1323	0.72	0	292	3965	3018	1836	4257	No	3.22	Si
SLU 78	ini.	-8.41	1778	0.72	0	292	3965	3018	1836	4257	No	2.39	Si
SLU 78	fin.	93.74	-1384	0.72	0	292	3965	3018	1836	4257	No	3.08	Si
SLU 82	ini.	-12.76	1752	0.72	0	292	3965	3018	1836	4257	No	2.43	Si
SLU 82	fin.	100.06	-1302	0.72	0	292	3965	3018	1836	4257	No	3.27	Si
SLU 74	ini.	-23.39	1770	0.72	0	292	3965	3018	1836	4257	No	2.41	Si
SLU 74	fin.	94.68	-1317	0.72	0	292	3965	3018	1836	4257	No	3.23	Si
SLU 84	ini.	-13.06	1784	0.72	0	292	3965	3018	1836	4257	No	2.39	Si
SLU 84	fin.	101.11	-1324	0.72	0	292	3965	3018	1836	4257	No	3.21	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	158.91	1113	-0.000126	0.0002807	0.0035	0.72		1912.43	1912.43		12.03	Si
SLV 3	fin.	-477.39	759	-0.0004163	0.0002807	0.0035	0.72		1917.1	1917.1		4.02	Si
SLV 2	ini.	290.84	1106	-0.000239	0.0002807	0.0035	0.72		1912.43	1912.43		6.58	Si
SLV 2	fin.	-379.95	617	-0.0003203	0.0002807	0.0035	0.72		1917.1	1917.1		5.05	Si
SLV 13	ini.	-163.59	-1117	-0.0001295	0.0002807	0.0035	0.72		1917.1	1917.1		11.72	Si
SLV 13	fin.	553.94	-1183	-0.0004978	0.0002807	0.0035	0.72		1912.43	1912.43		3.45	Si
SLV 16	ini.	-321.95	-1277	-0.0002663	0.0002807	0.0035	0.72		1917.1	1917.1		5.95	Si
SLV 16	fin.	515.23	-1180	-0.0004567	0.0002807	0.0035	0.72		1912.43	1912.43		3.71	Si
SLV 15	ini.	-308.73	-1194	-0.0002544	0.0002807	0.0035	0.72		1917.1	1917.1		6.21	Si
SLV 15	fin.	485.87	-1111	-0.0004261	0.0002807	0.0035	0.72		1912.43	1912.43		3.94	Si
SLV 12	ini.	-325.24	-545	-0.0002693	0.0002807	0.0035	0.72		1917.1	1917.1		5.89	Si
SLV 12	fin.	93.43	-429	-0.0000729	0.0002807	0.0035	0.72		1912.43	1912.43		20.47	Si
SLV 10	ini.	158.56	-289	-0.0001257	0.0002807	0.0035	0.72		1912.43	1912.43		12.06	Si
SLV 10	fin.	320.33	-669	-0.0002655	0.0002807	0.0035	0.72		1912.43	1912.43		5.97	Si
SLV 1	ini.	304.05	1190	-0.0002508	0.0002807	0.0035	0.72		1912.43	1912.43		6.29	Si
SLV 1	fin.	-409.32	687	-0.0003485	0.0002807	0.0035	0.72		1917.1	1917.1		4.68	Si
SLV 4	ini.	145.69	1029	-0.0001151	0.0002807	0.0035	0.72		1912.43	1912.43		13.13	Si
SLV 4	fin.	-448.02	689	-0.0003866	0.0002807	0.0035	0.72		1917.1	1917.1		4.28	Si
SLV 14	ini.	-176.8	-1201	-0.0001404	0.0002807	0.0035	0.72		1917.1	1917.1		10.84	Si
SLV 14	fin.	583.3	-1252	-0.0005297	0.0002807	0.0035	0.72		1912.43	1912.43		3.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-163.59	2703	0.72	0	438	3965	4528	1836	4403		1.63	Si
SLV 13	fin.	553.94	779	0.72	0	438	3965	4528	1836	4403		5.65	Si
SLV 16	ini.	-321.95	2561	0.72	0	438	3965	4528	1836	4403		1.72	Si
SLV 16	fin.	515.23	771	0.72	0	438	3965	4528	1836	4403		5.71	Si
SLV 1	ini.	304.05	-164	0.72	0	438	3965	4528	1836	4403		26.89	Si
SLV 1	fin.	-409.32	-2776	0.72	0	438	3965	4528	1836	4403		1.59	Si
SLV 4	ini.	145.69	-306	0.72	0	438	3965	4528	1836	4403		14.4	Si
SLV 4	fin.	-448.02	-2784	0.72	0	438	3965	4528	1836	4403		1.58	Si
SLV 14	ini.	-176.8	2780	0.72	0	438	3965	4528	1836	4403		1.58	Si
SLV 14	fin.	583.3	960	0.72	0	438	3965	4528	1836	4403		4.59	Si
SLV 9	ini.	167.06	1969	0.72	0	438	3965	4528	1836	4403		2.24	Si
SLV 9	fin.	301.46	-213	0.72	0	438	3965	4528	1836	4403		20.72	Si
SLV 2	ini.	290.84	-87	0.72	0	438	3965	4528	1836	4403		50.6	Si
SLV 2	fin.	-379.95	-2595	0.72	0	438	3965	4528	1836	4403		1.7	Si
SLV 3	ini.	158.91	-382	0.72	0	438	3965	4528	1836	4403		11.51	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-477.39	-2965	0.72	0	438	3965	4528	1836	4403		1.48	Si
SLV 15	ini.	-308.73	2484	0.72	0	438	3965	4528	1836	4403		1.77	Si
SLV 15	fin.	485.87	590	0.72	0	438	3965	4528	1836	4403		7.47	Si
SLV 10	ini.	158.56	2018	0.72	0	438	3965	4528	1836	4403		2.18	Si
SLV 10	fin.	320.33	-96	0.72	0	438	3965	4528	1836	4403		45.9	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.279	SLV 14	Si
V_SLV	1.485	SLV 3	Si
PF_SLU	18.403	SLU 83	Si
V_SLU	2.355	SLU 83	Si

Trave di accoppiamento 95

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	7.52	8.34	0.82	-7.413	-3.314	7.52	8.34	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-161.37	-1427	-0.0000987	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.25	Si
SLU 69	fin.	-215.75	-1115	-0.000134	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.4	Si
SLU 84	ini.	-223.71	-1790	-0.0001392	0.0001872	0.0035	0.82		2460.51	2460.51	No	11	Si
SLU 84	fin.	-214.09	-1172	-0.0001329	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.49	Si
SLU 81	ini.	-219.61	-1756	-0.0001365	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.2	Si
SLU 81	fin.	-207.49	-1138	-0.0001285	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.86	Si
SLU 79	ini.	-208.61	-1703	-0.0001293	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.79	Si
SLU 79	fin.	-216.6	-1168	-0.0001345	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.36	Si
SLU 77	ini.	-210.77	-1718	-0.0001307	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.67	Si
SLU 77	fin.	-219.51	-1183	-0.0001365	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.21	Si
SLU 80	ini.	-207.63	-1701	-0.0001286	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.85	Si
SLU 80	fin.	-217.83	-1172	-0.0001353	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.3	Si
SLU 70	ini.	-160.39	-1424	-0.0000981	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.34	Si
SLU 70	fin.	-216.98	-1119	-0.0001348	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.34	Si
SLU 83	ini.	-224.7	-1792	-0.0001399	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.95	Si
SLU 83	fin.	-212.85	-1168	-0.0001321	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.56	Si
SLU 82	ini.	-218.62	-1754	-0.0001359	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.25	Si
SLU 82	fin.	-208.73	-1142	-0.0001294	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.79	Si
SLU 78	ini.	-209.78	-1716	-0.00013	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.73	Si
SLU 78	fin.	-220.74	-1187	-0.0001373	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-210.77	3886	0.82	0	303	6502	3438	2091	5529	No	1.42	Si
SLU 77	fin.	-219.51	-2747	0.82	0	303	6502	3438	2091	5529	No	2.01	Si
SLU 80	ini.	-207.63	3844	0.82	0	303	6502	3438	2091	5529	No	1.44	Si
SLU 80	fin.	-217.83	-2721	0.82	0	303	6502	3438	2091	5529	No	2.03	Si
SLU 75	ini.	-204.7	3806	0.82	0	303	6502	3438	2091	5529	No	1.45	Si
SLU 75	fin.	-215.38	-2697	0.82	0	303	6502	3438	2091	5529	No	2.05	Si
SLU 74	ini.	-205.68	3807	0.82	0	303	6502	3438	2091	5529	No	1.45	Si
SLU 74	fin.	-214.15	-2689	0.82	0	303	6502	3438	2091	5529	No	2.06	Si
SLU 79	ini.	-208.61	3845	0.82	0	303	6502	3438	2091	5529	No	1.44	Si
SLU 79	fin.	-216.6	-2712	0.82	0	303	6502	3438	2091	5529	No	2.04	Si
SLU 84	ini.	-223.71	4007	0.82	0	303	6502	3438	2091	5529	No	1.38	Si
SLU 84	fin.	-214.09	-2731	0.82	0	303	6502	3438	2091	5529	No	2.02	Si
SLU 82	ini.	-218.62	3928	0.82	0	303	6502	3438	2091	5529	No	1.41	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	fin.	-208.73	-2673	0.82	0	303	6502	3438	2091	5529	No	2.07	Si
SLU 83	ini.	-224.7	4008	0.82	0	303	6502	3438	2091	5529	No	1.38	Si
SLU 83	fin.	-212.85	-2723	0.82	0	303	6502	3438	2091	5529	No	2.03	Si
SLU 78	ini.	-209.78	3885	0.82	0	303	6502	3438	2091	5529	No	1.42	Si
SLU 78	fin.	-220.74	-2755	0.82	0	303	6502	3438	2091	5529	No	2.01	Si
SLU 81	ini.	-219.61	3928	0.82	0	303	6502	3438	2091	5529	No	1.41	Si
SLU 81	fin.	-207.49	-2665	0.82	0	303	6502	3438	2091	5529	No	2.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1342.84	-5684	-0.0010985	0.0002807	0.0035	0.82		2487.45	2487.45		1.85	Si
SLV 13	fin.	576.08	832	-0.0003841	0.0002807	0.0035	0.82		2482.11	2482.11		4.31	Si
SLV 16	ini.	-1345.21	-5747	-0.0011011	0.0002807	0.0035	0.82		2487.45	2487.45		1.85	Si
SLV 16	fin.	589.42	549	-0.0003945	0.0002807	0.0035	0.82		2482.11	2482.11		4.21	Si
SLV 2	ini.	1195.69	3951	-0.0009428	0.0002807	0.0035	0.82		2482.11	2482.11		2.08	Si
SLV 2	fin.	-964.11	-2302	-0.0007131	0.0002807	0.0035	0.82		2487.45	2487.45		2.58	Si
SLV 4	ini.	1092.15	3520	-0.0008379	0.0002807	0.0035	0.82		2482.11	2482.11		2.27	Si
SLV 4	fin.	-877.76	-2415	-0.0006343	0.0002807	0.0035	0.82		2487.45	2487.45		2.83	Si
SLV 15	ini.	-1446.37	-6115	-0.0012173	0.0002807	0.0035	0.82		2487.45	2487.45		1.72	Si
SLV 15	fin.	662.43	719	-0.0004524	0.0002807	0.0035	0.82		2482.11	2482.11		3.75	Si
SLV 1	ini.	1094.53	3583	-0.0008402	0.0002807	0.0035	0.82		2482.11	2482.11		2.27	Si
SLV 1	fin.	-891.1	-2133	-0.0006463	0.0002807	0.0035	0.82		2487.45	2487.45		2.79	Si
SLV 11	ini.	-696.02	-3309	-0.0004786	0.0002807	0.0035	0.82		2487.45	2487.45		3.57	Si
SLV 11	fin.	236.62	-481	-0.0001456	0.0002807	0.0035	0.82		2482.11	2482.11		10.49	Si
SLV 14	ini.	-1241.68	-5316	-0.0009885	0.0002807	0.0035	0.82		2487.45	2487.45		2	Si
SLV 14	fin.	503.07	662	-0.000329	0.0002807	0.0035	0.82		2482.11	2482.11		4.93	Si
SLD 15	ini.	-690.13	-3235	-0.0004738	0.0002807	0.0035	0.82		2487.45	2487.45		3.6	Si
SLD 15	fin.	196.26	-145	-0.0001198	0.0002807	0.0035	0.82		2482.11	2482.11		12.65	Si
SLV 3	ini.	990.99	3152	-0.0007401	0.0002807	0.0035	0.82		2482.11	2482.11		2.5	Si
SLV 3	fin.	-804.75	-2246	-0.0005702	0.0002807	0.0035	0.82		2487.45	2487.45		3.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1195.69	-4124	0.82	0	455	6502	5156	2091	6957		1.69	Si
SLV 2	fin.	-964.11	-6518	0.82	0	455	6502	5156	2091	6957		1.07	Si
SLV 15	ini.	-1446.37	9074	0.82	0	455	6502	5156	2091	6957		0.77	No
SLV 15	fin.	662.43	2821	0.82	0	455	6502	5156	2091	6957		2.47	Si
SLV 3	ini.	990.99	-2758	0.82	0	455	6502	5156	2091	6957		2.52	Si
SLV 3	fin.	-804.75	-6021	0.82	0	455	6502	5156	2091	6957		1.16	Si
SLV 4	ini.	1092.15	-3285	0.82	0	455	6502	5156	2091	6957		2.12	Si
SLV 4	fin.	-877.76	-6425	0.82	0	455	6502	5156	2091	6957		1.08	Si
SLV 14	ini.	-1241.68	7708	0.82	0	455	6502	5156	2091	6957		0.9	No
SLV 14	fin.	503.07	2324	0.82	0	455	6502	5156	2091	6957		2.99	Si
SLV 1	ini.	1094.53	-3597	0.82	0	455	6502	5156	2091	6957		1.93	Si
SLV 1	fin.	-891.1	-6113	0.82	0	455	6502	5156	2091	6957		1.14	Si
SLV 16	ini.	-1345.21	8547	0.82	0	455	6502	5156	2091	6957		0.81	No
SLV 16	fin.	589.42	2417	0.82	0	455	6502	5156	2091	6957		2.88	Si
SLV 13	ini.	-1342.84	8235	0.82	0	455	6502	5156	2091	6957		0.84	No
SLV 13	fin.	576.08	2729	0.82	0	455	6502	5156	2091	6957		2.55	Si
SLV 11	ini.	-696.02	5817	0.82	0	455	6502	5156	2091	6957		1.2	Si
SLV 11	fin.	236.62	-237	0.82	0	455	6502	5156	2091	6957		29.31	Si
SLV 12	ini.	-631	5478	0.82	0	455	6502	5156	2091	6957		1.27	Si
SLV 12	fin.	189.7	-497	0.82	0	455	6502	5156	2091	6957		13.98	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.72	SLV 15	Si
V_SLV	0.767	SLV 15	No
PF_SLU	10.95	SLU 83	Si
V_SLU	1.38	SLU 83	Si

Trave di accoppiamento 96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	7.62	8.34	0.72	-5.963	-3.314	7.62	8.34	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	337.29	-1267	-0.0002928	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.63	Si
SLU 77	fin.	-296.29	-1879	-0.0002517	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.42	Si
SLU 75	ini.	334.92	-1235	-0.0002904	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.66	Si
SLU 75	fin.	-292.08	-1844	-0.0002476	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.51	Si
SLU 84	ini.	335.94	-1320	-0.0002914	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.65	Si
SLU 84	fin.	-303.83	-1937	-0.000259	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.26	Si
SLU 83	ini.	334.4	-1322	-0.0002899	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.67	Si
SLU 83	fin.	-303.42	-1936	-0.0002586	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.27	Si
SLU 76	ini.	334.91	-1220	-0.0002904	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.67	Si
SLU 76	fin.	-290.66	-1830	-0.0002463	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.54	Si
SLU 70	ini.	334.03	-1033	-0.0002895	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.68	Si
SLU 70	fin.	-265.31	-1630	-0.0002222	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.17	Si
SLU 74	ini.	333.38	-1237	-0.0002888	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.69	Si
SLU 74	fin.	-291.67	-1844	-0.0002473	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.52	Si
SLU 79	ini.	336.25	-1252	-0.0002917	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.64	Si
SLU 79	fin.	-294.59	-1865	-0.0002501	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.46	Si
SLU 78	ini.	338.84	-1265	-0.0002943	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.6	Si
SLU 78	fin.	-296.69	-1880	-0.0002521	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.41	Si
SLU 80	ini.	337.8	-1250	-0.0002933	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.62	Si
SLU 80	fin.	-295	-1865	-0.0002505	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	337.8	-819	0.72	0	292	3965	3018	1836	4257	No	5.2	Si
SLU 80	fin.	-295	-4647	0.72	0	292	3965	3018	1836	4257	No	0.92	No
SLU 74	ini.	333.38	-806	0.72	0	292	3965	3018	1836	4257	No	5.28	Si
SLU 74	fin.	-291.67	-4591	0.72	0	292	3965	3018	1836	4257	No	0.93	No
SLU 82	ini.	332.02	-813	0.72	0	292	3965	3018	1836	4257	No	5.23	Si
SLU 82	fin.	-299.22	-4640	0.72	0	292	3965	3018	1836	4257	No	0.92	No
SLU 83	ini.	334.4	-813	0.72	0	292	3965	3018	1836	4257	No	5.24	Si
SLU 83	fin.	-303.42	-4720	0.72	0	292	3965	3018	1836	4257	No	0.9	No
SLU 84	ini.	335.94	-817	0.72	0	292	3965	3018	1836	4257	No	5.21	Si
SLU 84	fin.	-303.83	-4729	0.72	0	292	3965	3018	1836	4257	No	0.9	No
SLU 79	ini.	336.25	-814	0.72	0	292	3965	3018	1836	4257	No	5.23	Si
SLU 79	fin.	-294.59	-4638	0.72	0	292	3965	3018	1836	4257	No	0.92	No
SLU 81	ini.	330.48	-809	0.72	0	292	3965	3018	1836	4257	No	5.26	Si
SLU 81	fin.	-298.81	-4631	0.72	0	292	3965	3018	1836	4257	No	0.92	No
SLU 77	ini.	337.29	-810	0.72	0	292	3965	3018	1836	4257	No	5.26	Si
SLU 77	fin.	-296.29	-4680	0.72	0	292	3965	3018	1836	4257	No	0.91	No
SLU 75	ini.	334.92	-810	0.72	0	292	3965	3018	1836	4257	No	5.25	Si
SLU 75	fin.	-292.08	-4600	0.72	0	292	3965	3018	1836	4257	No	0.93	No
SLU 78	ini.	338.84	-814	0.72	0	292	3965	3018	1836	4257	No	5.23	Si
SLU 78	fin.	-296.69	-4689	0.72	0	292	3965	3018	1836	4257	No	0.91	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1119.46	2422	-0.001226	0.0002807	0.0035	0.72		1912.43	1912.43		1.71	Si
SLV 3	fin.	-60.5	1356	-0.0000467	0.0002807	0.0035	0.72		1917.1	1917.1		31.69	Si
SLD 2	ini.	690.42	943	-0.0006512	0.0002807	0.0035	0.72		1912.43	1912.43		2.77	Si
SLD 2	fin.	-127.12	122	-0.0000997	0.0002807	0.0035	0.72		1917.1	1917.1		15.08	Si
SLD 4	ini.	659.79	721	-0.0006157	0.0002807	0.0035	0.72		1912.43	1912.43		2.9	Si
SLD 4	fin.	-139.14	-37	-0.0001095	0.0002807	0.0035	0.72		1917.1	1917.1		13.78	Si
SLV 6	ini.	681.78	1273	-0.0006411	0.0002807	0.0035	0.72		1912.43	1912.43		2.81	Si
SLV 6	fin.	-107.78	311	-0.0000842	0.0002807	0.0035	0.72		1917.1	1917.1		17.79	Si
SLV 4	ini.	1215.14	2727	-0.0013792	0.0002807	0.0035	0.72		1912.43	1912.43		1.57	Si
SLV 4	fin.	-57.59	1557	-0.0000444	0.0002807	0.0035	0.72		1917.1	1917.1		33.29	Si
SLV 15	ini.	-794.86	-4802	-0.0007751	0.0002807	0.0035	0.72		1917.1	1917.1		2.41	Si
SLV 15	fin.	-368.41	-4374	-0.0003093	0.0002807	0.0035	0.72		1917.1	1917.1		5.2	Si
SLV 1	ini.	1190.42	2943	-0.0013385	0.0002807	0.0035	0.72		1912.43	1912.43		1.61	Si
SLV 1	fin.	-33.68	1723	-0.0000259	0.0002807	0.0035	0.72		1917.1	1917.1		56.92	Si
SLV 16	ini.	-699.18	-4496	-0.0006596	0.0002807	0.0035	0.72		1917.1	1917.1		2.74	Si
SLV 16	fin.	-365.5	-4172	-0.0003066	0.0002807	0.0035	0.72		1917.1	1917.1		5.25	Si
SLV 13	ini.	-723.9	-4281	-0.0006888	0.0002807	0.0035	0.72		1917.1	1917.1		2.65	Si
SLV 13	fin.	-341.59	-4007	-0.0002843	0.0002807	0.0035	0.72		1917.1	1917.1		5.61	Si
SLV 2	ini.	1286.1	3248	-0.0015013	0.0002807	0.0035	0.72		1912.43	1912.43		1.49	Si
SLV 2	fin.	-30.77	1924	-0.0000236	0.0002807	0.0035	0.72		1917.1	1917.1		62.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 8	ini.	330.69	-732	0.72	0	438	3965	4528	1836	4403		6.01	Si
SLD 8	fin.	-199.47	-3662	0.72	0	438	3965	4528	1836	4403		1.2	Si
SLV 8	ini.	445.25	-895	0.72	0	438	3965	4528	1836	4403		4.92	Si
SLV 8	fin.	-197.16	-4334	0.72	0	438	3965	4528	1836	4403		1.02	Si
SLD 3	ini.	618.72	-1458	0.72	0	438	3965	4528	1836	4403		3.02	Si
SLD 3	fin.	-140.39	-3802	0.72	0	438	3965	4528	1836	4403		1.16	Si
SLD 4	ini.	659.79	-1577	0.72	0	438	3965	4528	1836	4403		2.79	Si
SLD 4	fin.	-139.14	-3876	0.72	0	438	3965	4528	1836	4403		1.14	Si
SLV 4	ini.	1215.14	-2869	0.72	0	438	3965	4528	1836	4403		1.53	Si
SLV 4	fin.	-57.59	-4852	0.72	0	438	3965	4528	1836	4403		0.91	No
SLV 7	ini.	383.75	-717	0.72	0	438	3965	4528	1836	4403		6.14	Si
SLV 7	fin.	-199.03	-4223	0.72	0	438	3965	4528	1836	4403		1.04	Si
SLV 1	ini.	1190.42	-2884	0.72	0	438	3965	4528	1836	4403		1.53	Si
SLV 1	fin.	-33.68	-4251	0.72	0	438	3965	4528	1836	4403		1.04	Si
SLV 2	ini.	1286.1	-3161	0.72	0	438	3965	4528	1836	4403		1.39	Si
SLV 2	fin.	-30.77	-4424	0.72	0	438	3965	4528	1836	4403		1	No
SLV 3	ini.	1119.46	-2592	0.72	0	438	3965	4528	1836	4403		1.7	Si
SLV 3	fin.	-60.5	-4679	0.72	0	438	3965	4528	1836	4403		0.94	No
SLD 2	ini.	690.42	-1703	0.72	0	438	3965	4528	1836	4403		2.59	Si
SLD 2	fin.	-127.12	-3688	0.72	0	438	3965	4528	1836	4403		1.19	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.487	SLV 2	Si
V_SLV	0.908	SLV 4	No
PF_SLU	5.599	SLU 78	Si
V_SLU	0.9	SLU 84	No

Trave di accoppiamento 97

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	7.52	8.34	0.82	-3.183	-3.314	7.52	8.34	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	213.8	-626	-0.000133	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.48	Si
SLU 84	fin.	-707.38	-3011	-0.0005172	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.48	Si
SLU 74	ini.	219.32	-584	-0.0001366	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.2	Si
SLU 74	fin.	-693.2	-2943	-0.0005046	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.55	Si
SLU 82	ini.	215.58	-600	-0.0001341	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.39	Si
SLU 82	fin.	-696.72	-2960	-0.0005078	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.53	Si
SLU 79	ini.	219.68	-595	-0.0001369	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.18	Si
SLU 79	fin.	-699.21	-2970	-0.00051	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.52	Si
SLU 78	ini.	219.54	-609	-0.0001368	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.18	Si
SLU 78	fin.	-706.52	-3003	-0.0005165	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.48	Si
SLU 80	ini.	221.68	-594	-0.0001382	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.08	Si
SLU 80	fin.	-701.87	-2980	-0.0005123	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.51	Si
SLU 77	ini.	217.54	-610	-0.0001354	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.29	Si
SLU 77	fin.	-703.86	-2993	-0.0005141	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.5	Si
SLU 81	ini.	213.59	-601	-0.0001328	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.5	Si
SLU 81	fin.	-694.06	-2950	-0.0005054	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.55	Si
SLU 83	ini.	211.81	-627	-0.0001317	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.59	Si
SLU 83	fin.	-704.72	-3000	-0.0005149	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.49	Si
SLU 75	ini.	221.32	-583	-0.0001379	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.09	Si
SLU 75	fin.	-695.86	-2953	-0.000507	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	221.68	31	0.82	0	303	6502	3438	2091	5529	No	179.14	Si
SLU 80	fin.	-701.87	-4867	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 74	ini.	219.32	32	0.82	0	303	6502	3438	2091	5529	No	175.08	Si
SLU 74	fin.	-693.2	-4810	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 83	ini.	211.81	96	0.82	0	303	6502	3438	2091	5529	No	57.67	Si
SLU 83	fin.	-704.72	-4922	0.82	0	303	6502	3438	2091	5529	No	1.12	Si
SLU 82	ini.	215.58	68	0.82	0	303	6502	3438	2091	5529	No	81.76	Si
SLU 82	fin.	-696.72	-4857	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 81	ini.	213.59	75	0.82	0	303	6502	3438	2091	5529	No	74.12	Si
SLU 81	fin.	-694.06	-4843	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 78	ini.	219.54	46	0.82	0	303	6502	3438	2091	5529	No	120.49	Si
SLU 78	fin.	-706.52	-4903	0.82	0	303	6502	3438	2091	5529	No	1.13	Si
SLU 77	ini.	217.54	53	0.82	0	303	6502	3438	2091	5529	No	104.61	Si
SLU 77	fin.	-703.86	-4889	0.82	0	303	6502	3438	2091	5529	No	1.13	Si
SLU 79	ini.	219.68	38	0.82	0	303	6502	3438	2091	5529	No	146.14	Si
SLU 79	fin.	-699.21	-4852	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 75	ini.	221.32	25	0.82	0	303	6502	3438	2091	5529	No	224.65	Si
SLU 75	fin.	-695.86	-4825	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 84	ini.	213.8	89	0.82	0	303	6502	3438	2091	5529	No	62.19	Si
SLU 84	fin.	-707.38	-4936	0.82	0	303	6502	3438	2091	5529	No	1.12	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	976.68	1384	-0.0007267	0.0002807	0.0035	0.82		2482.11	2482.11		2.54	Si
SLV 6	fin.	-958.63	-3181	-0.000708	0.0002807	0.0035	0.82		2487.45	2487.45		2.59	Si
SLV 15	ini.	-1330.36	-3144	-0.0010846	0.0002807	0.0035	0.82		2487.45	2487.45		1.87	Si
SLV 15	fin.	560.07	1317	-0.0003718	0.0002807	0.0035	0.82		2482.11	2482.11		4.43	Si
SLV 2	ini.	1695.2	2489	-0.0015408	0.0002807	0.0035	0.82		2482.11	2482.11		1.46	Si
SLV 2	fin.	-1540.47	-5432	-0.0013317	0.0002807	0.0035	0.82		2487.45	2487.45		1.61	Si
SLV 4	ini.	1492.74	1959	-0.0012765	0.0002807	0.0035	0.82		2482.11	2482.11		1.66	Si
SLV 4	fin.	-1454.12	-5407	-0.0012265	0.0002807	0.0035	0.82		2487.45	2487.45		1.71	Si
SLD 2	ini.	829.96	880	-0.0005935	0.0002807	0.0035	0.82		2482.11	2482.11		2.99	Si
SLD 2	fin.	-939.16	-3499	-0.00069	0.0002807	0.0035	0.82		2487.45	2487.45		2.65	Si
SLV 13	ini.	-1127.91	-2615	-0.0008713	0.0002807	0.0035	0.82		2487.45	2487.45		2.21	Si
SLV 13	fin.	473.72	1292	-0.0003074	0.0002807	0.0035	0.82		2482.11	2482.11		5.24	Si
SLV 16	ini.	-1135.62	-2773	-0.000879	0.0002807	0.0035	0.82		2487.45	2487.45		2.19	Si
SLV 16	fin.	429.44	888	-0.0002756	0.0002807	0.0035	0.82		2482.11	2482.11		5.78	Si
SLV 1	ini.	1500.46	2117	-0.0012859	0.0002807	0.0035	0.82		2482.11	2482.11		1.65	Si
SLV 1	fin.	-1409.84	-5002	-0.0011746	0.0002807	0.0035	0.82		2487.45	2487.45		1.76	Si
SLV 3	ini.	1298.01	1587	-0.0010519	0.0002807	0.0035	0.82		2482.11	2482.11		1.91	Si
SLV 3	fin.	-1323.49	-4977	-0.001077	0.0002807	0.0035	0.82		2487.45	2487.45		1.88	Si
SLV 14	ini.	-933.17	-2243	-0.0006845	0.0002807	0.0035	0.82		2487.45	2487.45		2.67	Si
SLV 14	fin.	343.09	863	-0.0002159	0.0002807	0.0035	0.82		2482.11	2482.11		7.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1330.36	5794	0.82	0	455	6502	5156	2091	6957		1.2	Si
SLV 15	fin.	560.07	1492	0.82	0	455	6502	5156	2091	6957		4.66	Si
SLD 2	ini.	829.96	-2645	0.82	0	455	6502	5156	2091	6957		2.63	Si
SLD 2	fin.	-939.16	-5407	0.82	0	455	6502	5156	2091	6957		1.29	Si
SLV 7	ini.	176.67	-213	0.82	0	455	6502	5156	2091	6957		32.69	Si
SLV 7	fin.	-586.84	-5386	0.82	0	455	6502	5156	2091	6957		1.29	Si
SLD 4	ini.	741.54	-2328	0.82	0	455	6502	5156	2091	6957		2.99	Si
SLD 4	fin.	-901.88	-5626	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLV 8	ini.	301.82	-711	0.82	0	455	6502	5156	2091	6957		9.79	Si
SLV 8	fin.	-670.79	-5825	0.82	0	455	6502	5156	2091	6957		1.19	Si
SLV 2	ini.	1695.2	-6024	0.82	0	455	6502	5156	2091	6957		1.15	Si
SLV 2	fin.	-1540.47	-8178	0.82	0	455	6502	5156	2091	6957		0.85	No
SLV 3	ini.	1298.01	-4528	0.82	0	455	6502	5156	2091	6957		1.54	Si
SLV 3	fin.	-1323.49	-7999	0.82	0	455	6502	5156	2091	6957		0.87	No
SLV 1	ini.	1500.46	-5249	0.82	0	455	6502	5156	2091	6957		1.33	Si
SLV 1	fin.	-1409.84	-7496	0.82	0	455	6502	5156	2091	6957		0.93	No
SLV 4	ini.	1492.74	-5303	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLV 4	fin.	-1454.12	-8681	0.82	0	455	6502	5156	2091	6957		0.8	No
SLD 3	ini.	657.94	-1995	0.82	0	455	6502	5156	2091	6957		3.49	Si
SLD 3	fin.	-845.79	-5333	0.82	0	455	6502	5156	2091	6957		1.3	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.464	SLV 2	Si
V_SLV	0.801	SLV 4	No
PF_SLU	3.478	SLU 84	Si
V_SLU	1.12	SLU 84	Si

Trave di accoppiamento 98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	4.82	5.72	0.9	-2.963	5.826	4.82	5.72	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	853.78	-1854	-0.0005196	0.0001872	0.0035	0.9		2959	2959	No	3.47	Si
SLU 82	fin.	-541.69	-645	-0.0003018	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.47	Si
SLU 74	ini.	860.28	-1872	-0.0005244	0.0001872	0.0035	0.9		2959	2959	No	3.44	Si
SLU 74	fin.	-539.55	-660	-0.0003004	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.49	Si
SLU 79	ini.	858.74	-1881	-0.0005233	0.0001872	0.0035	0.9		2959	2959	No	3.45	Si
SLU 79	fin.	-534.26	-675	-0.000297	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.55	Si
SLU 84	ini.	861.57	-1883	-0.0005254	0.0001872	0.0035	0.9		2959	2959	No	3.43	Si
SLU 84	fin.	-541.96	-667	-0.000302	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.47	Si
SLU 83	ini.	867.86	-1898	-0.0005301	0.0001872	0.0035	0.9		2959	2959	No	3.41	Si
SLU 83	fin.	-544.98	-676	-0.0003039	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.44	Si
SLU 81	ini.	860.07	-1870	-0.0005243	0.0001872	0.0035	0.9		2959	2959	No	3.44	Si
SLU 81	fin.	-544.71	-654	-0.0003038	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.44	Si
SLU 80	ini.	852.45	-1865	-0.0005186	0.0001872	0.0035	0.9		2959	2959	No	3.47	Si
SLU 80	fin.	-531.25	-667	-0.0002951	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.58	Si
SLU 78	ini.	861.78	-1884	-0.0005256	0.0001872	0.0035	0.9		2959	2959	No	3.43	Si
SLU 78	fin.	-536.8	-673	-0.0002987	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.52	Si
SLU 77	ini.	868.07	-1900	-0.0005302	0.0001872	0.0035	0.9		2959	2959	No	3.41	Si
SLU 77	fin.	-539.82	-681	-0.0003006	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.49	Si
SLU 75	ini.	853.99	-1856	-0.0005198	0.0001872	0.0035	0.9		2959	2959	No	3.46	Si
SLU 75	fin.	-536.53	-651	-0.0002985	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	858.74	-2789	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 79	fin.	-534.26	-1537	0.9	0	365	7137	3773	2295	6068	No	3.95	Si
SLU 80	ini.	852.45	-2772	0.9	0	365	7137	3773	2295	6068	No	2.19	Si
SLU 80	fin.	-531.25	-1526	0.9	0	365	7137	3773	2295	6068	No	3.98	Si
SLU 78	ini.	861.78	-2807	0.9	0	365	7137	3773	2295	6068	No	2.16	Si
SLU 78	fin.	-536.8	-1537	0.9	0	365	7137	3773	2295	6068	No	3.95	Si
SLU 75	ini.	853.99	-2772	0.9	0	365	7137	3773	2295	6068	No	2.19	Si
SLU 75	fin.	-536.53	-1547	0.9	0	365	7137	3773	2295	6068	No	3.92	Si
SLU 84	ini.	861.57	-2788	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 84	fin.	-541.96	-1571	0.9	0	365	7137	3773	2295	6068	No	3.86	Si
SLU 81	ini.	860.07	-2770	0.9	0	365	7137	3773	2295	6068	No	2.19	Si
SLU 81	fin.	-544.71	-1592	0.9	0	365	7137	3773	2295	6068	No	3.81	Si
SLU 77	ini.	868.07	-2824	0.9	0	365	7137	3773	2295	6068	No	2.15	Si
SLU 77	fin.	-539.82	-1549	0.9	0	365	7137	3773	2295	6068	No	3.92	Si
SLU 74	ini.	860.28	-2789	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 74	fin.	-539.55	-1558	0.9	0	365	7137	3773	2295	6068	No	3.89	Si
SLU 82	ini.	853.78	-2753	0.9	0	365	7137	3773	2295	6068	No	2.2	Si
SLU 82	fin.	-541.69	-1581	0.9	0	365	7137	3773	2295	6068	No	3.84	Si
SLU 83	ini.	867.86	-2804	0.9	0	365	7137	3773	2295	6068	No	2.16	Si
SLU 83	fin.	-544.98	-1583	0.9	0	365	7137	3773	2295	6068	No	3.83	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	2226.68	-2598	-0.0017705	0.0002807	0.0035	0.9		2989.59	2989.59		1.34	Si
SLV 1	fin.	-2041.09	1065	-0.0015348	0.0002807	0.0035	0.9		2995.37	2995.37		1.47	Si
SLV 16	ini.	-983.55	-50	-0.0005803	0.0002807	0.0035	0.9		2995.37	2995.37		3.05	Si
SLV 16	fin.	1251.14	-1954	-0.0007854	0.0002807	0.0035	0.9		2989.59	2989.59		2.39	Si
SLD 1	ini.	1307.33	-1870	-0.0008309	0.0002807	0.0035	0.9		2989.59	2989.59		2.29	Si
SLD 1	fin.	-1097.74	198	-0.0006645	0.0002807	0.0035	0.9		2995.37	2995.37		2.73	Si
SLV 2	ini.	1975.23	-2402	-0.0014641	0.0002807	0.0035	0.9		2989.59	2989.59		1.51	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	fin.	-1779.71	812	-0.0012543	0.0002807	0.0035	0.9		2995.37	2995.37		1.68	Si
SLV 4	ini.	2119.64	-2375	-0.0016331	0.0002807	0.0035	0.9		2989.59	2989.59		1.41	Si
SLV 4	fin.	-1995.08	1224	-0.0014823	0.0002807	0.0035	0.9		2995.37	2995.37		1.5	Si
SLV 7	ini.	1408.51	-1690	-0.0009153	0.0002807	0.0035	0.9		2989.59	2989.59		2.12	Si
SLV 7	fin.	-1324.84	801	-0.0008432	0.0002807	0.0035	0.9		2995.37	2995.37		2.26	Si
SLV 14	ini.	-1127.96	-77	-0.0006874	0.0002807	0.0035	0.9		2995.37	2995.37		2.66	Si
SLV 14	fin.	1466.51	-2366	-0.0009653	0.0002807	0.0035	0.9		2989.59	2989.59		2.04	Si
SLV 3	ini.	2371.08	-2571	-0.001977	0.0002807	0.0035	0.9		2989.59	2989.59		1.26	Si
SLV 3	fin.	-2256.46	1478	-0.0018053	0.0002807	0.0035	0.9		2995.37	2995.37		1.33	Si
SLD 3	ini.	1370	-1857	-0.0008828	0.0002807	0.0035	0.9		2989.59	2989.59		2.18	Si
SLD 3	fin.	-1191.58	380	-0.0007365	0.0002807	0.0035	0.9		2995.37	2995.37		2.51	Si
SLD 4	ini.	1262.05	-1773	-0.0007941	0.0002807	0.0035	0.9		2989.59	2989.59		2.37	Si
SLD 4	fin.	-1079.36	271	-0.0006507	0.0002807	0.0035	0.9		2995.37	2995.37		2.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	1370	-4403	0.9	0	548	7137	5660	2295	7684		1.75	Si
SLD 3	fin.	-1191.58	-3584	0.9	0	548	7137	5660	2295	7684		2.14	Si
SLV 3	ini.	2371.08	-7599	0.9	0	548	7137	5660	2295	7684		1.01	Si
SLV 3	fin.	-2256.46	-6839	0.9	0	548	7137	5660	2295	7684		1.12	Si
SLV 1	ini.	2226.68	-7067	0.9	0	548	7137	5660	2295	7684		1.09	Si
SLV 1	fin.	-2041.09	-6118	0.9	0	548	7137	5660	2295	7684		1.26	Si
SLV 14	ini.	-1127.96	3580	0.9	0	548	7137	5660	2295	7684		2.15	Si
SLV 14	fin.	1466.51	4546	0.9	0	548	7137	5660	2295	7684		1.69	Si
SLV 2	ini.	1975.23	-6258	0.9	0	548	7137	5660	2295	7684		1.23	Si
SLV 2	fin.	-1779.71	-5335	0.9	0	548	7137	5660	2295	7684		1.44	Si
SLD 1	ini.	1307.33	-4169	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLD 1	fin.	-1097.74	-3268	0.9	0	548	7137	5660	2295	7684		2.35	Si
SLV 7	ini.	1408.51	-4633	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 7	fin.	-1324.84	-4083	0.9	0	548	7137	5660	2295	7684		1.88	Si
SLV 8	ini.	1246.91	-4113	0.9	0	548	7137	5660	2295	7684		1.87	Si
SLV 8	fin.	-1156.85	-3580	0.9	0	548	7137	5660	2295	7684		2.15	Si
SLV 4	ini.	2119.64	-6791	0.9	0	548	7137	5660	2295	7684		1.13	Si
SLV 4	fin.	-1995.08	-6056	0.9	0	548	7137	5660	2295	7684		1.27	Si
SLD 4	ini.	1262.05	-4056	0.9	0	548	7137	5660	2295	7684		1.89	Si
SLD 4	fin.	-1079.36	-3248	0.9	0	548	7137	5660	2295	7684		2.37	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.261	SLV 3	Si
V_SLV	1.011	SLV 3	Si
PF_SLU	3.409	SLU 77	Si
V_SLU	2.149	SLU 77	Si

Trave di accoppiamento 99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	7.52	8.34	0.82	-2.963	5.826	7.52	8.34	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	68.32	-304	-0.0000409	0.0001872	0.0035	0.82		2455.37	2455.37	No	35.94	Si
SLU 77	fin.	-672.3	-1862	-0.0004862	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.66	Si
SLU 75	ini.	71.15	-280	-0.0000426	0.0001872	0.0035	0.82		2455.37	2455.37	No	34.51	Si
SLU 75	fin.	-660.15	-1817	-0.0004756	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.73	Si
SLU 79	ini.	67.81	-299	-0.0000406	0.0001872	0.0035	0.82		2455.37	2455.37	No	36.21	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-664.66	-1839	-0.0004796	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.7	Si
SLU 84	ini.	67.42	-310	-0.0000404	0.0001872	0.0035	0.82		2455.37	2455.37	No	36.42	Si
SLU 84	fin.	-669.71	-1852	-0.000484	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.67	Si
SLU 78	ini.	66.34	-309	-0.0000397	0.0001872	0.0035	0.82		2455.37	2455.37	No	37.01	Si
SLU 78	fin.	-665.7	-1847	-0.0004805	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.7	Si
SLU 80	ini.	65.83	-304	-0.0000394	0.0001872	0.0035	0.82		2455.37	2455.37	No	37.3	Si
SLU 80	fin.	-658.06	-1824	-0.0004738	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.74	Si
SLU 74	ini.	73.12	-274	-0.0000438	0.0001872	0.0035	0.82		2455.37	2455.37	No	33.58	Si
SLU 74	fin.	-666.76	-1832	-0.0004814	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.69	Si
SLU 82	ini.	72.23	-281	-0.0000433	0.0001872	0.0035	0.82		2455.37	2455.37	No	34	Si
SLU 82	fin.	-664.17	-1822	-0.0004791	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.7	Si
SLU 83	ini.	69.4	-305	-0.0000416	0.0001872	0.0035	0.82		2455.37	2455.37	No	35.38	Si
SLU 83	fin.	-676.31	-1868	-0.0004898	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.64	Si
SLU 81	ini.	74.2	-276	-0.0000445	0.0001872	0.0035	0.82		2455.37	2455.37	No	33.09	Si
SLU 81	fin.	-670.77	-1838	-0.0004849	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	67.81	1260	0.82	0	303	6502	3438	2091	5529	No	4.39	Si
SLU 79	fin.	-664.66	-3396	0.82	0	303	6502	3438	2091	5529	No	1.63	Si
SLU 81	ini.	74.2	1244	0.82	0	303	6502	3438	2091	5529	No	4.44	Si
SLU 81	fin.	-670.77	-3424	0.82	0	303	6502	3438	2091	5529	No	1.61	Si
SLU 74	ini.	73.12	1218	0.82	0	303	6502	3438	2091	5529	No	4.54	Si
SLU 74	fin.	-666.76	-3395	0.82	0	303	6502	3438	2091	5529	No	1.63	Si
SLU 83	ini.	69.4	1302	0.82	0	303	6502	3438	2091	5529	No	4.24	Si
SLU 83	fin.	-676.31	-3462	0.82	0	303	6502	3438	2091	5529	No	1.6	Si
SLU 78	ini.	66.34	1288	0.82	0	303	6502	3438	2091	5529	No	4.29	Si
SLU 78	fin.	-665.7	-3410	0.82	0	303	6502	3438	2091	5529	No	1.62	Si
SLU 84	ini.	67.42	1314	0.82	0	303	6502	3438	2091	5529	No	4.21	Si
SLU 84	fin.	-669.71	-3438	0.82	0	303	6502	3438	2091	5529	No	1.61	Si
SLU 77	ini.	68.32	1276	0.82	0	303	6502	3438	2091	5529	No	4.33	Si
SLU 77	fin.	-672.3	-3434	0.82	0	303	6502	3438	2091	5529	No	1.61	Si
SLU 80	ini.	65.83	1272	0.82	0	303	6502	3438	2091	5529	No	4.35	Si
SLU 80	fin.	-658.06	-3372	0.82	0	303	6502	3438	2091	5529	No	1.64	Si
SLU 82	ini.	72.23	1256	0.82	0	303	6502	3438	2091	5529	No	4.4	Si
SLU 82	fin.	-664.17	-3400	0.82	0	303	6502	3438	2091	5529	No	1.63	Si
SLU 75	ini.	71.15	1230	0.82	0	303	6502	3438	2091	5529	No	4.5	Si
SLU 75	fin.	-660.15	-3371	0.82	0	303	6502	3438	2091	5529	No	1.64	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 4	ini.	341.71	902	-0.0002149	0.0002807	0.0035	0.82		2482.11	2482.11		7.26	Si
SLD 4	fin.	-808.76	-1690	-0.0005736	0.0002807	0.0035	0.82		2487.45	2487.45		3.08	Si
SLD 3	ini.	391.87	1094	-0.0002493	0.0002807	0.0035	0.82		2482.11	2482.11		6.33	Si
SLD 3	fin.	-873.66	-1774	-0.0006307	0.0002807	0.0035	0.82		2487.45	2487.45		2.85	Si
SLV 4	ini.	709.81	2267	-0.0004911	0.0002807	0.0035	0.82		2482.11	2482.11		3.5	Si
SLV 4	fin.	-1257.45	-2253	-0.0010053	0.0002807	0.0035	0.82		2487.45	2487.45		1.98	Si
SLV 6	ini.	62.83	-333	-0.0000374	0.0002807	0.0035	0.82		2482.11	2482.11		39.5	Si
SLV 6	fin.	-834.96	-2083	-0.0005964	0.0002807	0.0035	0.82		2487.45	2487.45		2.98	Si
SLV 1	ini.	729.5	2244	-0.0005075	0.0002807	0.0035	0.82		2482.11	2482.11		3.4	Si
SLV 1	fin.	-1491.71	-2751	-0.0012716	0.0002807	0.0035	0.82		2487.45	2487.45		1.67	Si
SLD 2	ini.	299.16	696	-0.0001864	0.0002807	0.0035	0.82		2482.11	2482.11		8.3	Si
SLD 2	fin.	-845.73	-1822	-0.0006059	0.0002807	0.0035	0.82		2487.45	2487.45		2.94	Si
SLV 3	ini.	826.64	2713	-0.0005906	0.0002807	0.0035	0.82		2482.11	2482.11		3	Si
SLV 3	fin.	-1408.59	-2448	-0.0011732	0.0002807	0.0035	0.82		2487.45	2487.45		1.77	Si
SLV 2	ini.	612.67	1798	-0.0004127	0.0002807	0.0035	0.82		2482.11	2482.11		4.05	Si
SLV 2	fin.	-1340.57	-2556	-0.0010959	0.0002807	0.0035	0.82		2487.45	2487.45		1.86	Si
SLV 5	ini.	137.92	-46	-0.0000833	0.0002807	0.0035	0.82		2482.11	2482.11		18	Si
SLV 5	fin.	-932.1	-2208	-0.0006835	0.0002807	0.0035	0.82		2487.45	2487.45		2.67	Si
SLD 1	ini.	349.32	887	-0.0002201	0.0002807	0.0035	0.82		2482.11	2482.11		7.11	Si
SLD 1	fin.	-910.62	-1906	-0.0006639	0.0002807	0.0035	0.82		2487.45	2487.45		2.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-597.01	4337	0.82	0	455	6502	5156	2091	6957		1.6	Si
SLV 16	fin.	541.34	1273	0.82	0	455	6502	5156	2091	6957		5.46	Si
SLV 13	ini.	-577.31	4382	0.82	0	455	6502	5156	2091	6957		1.59	Si
SLV 13	fin.	307.08	400	0.82	0	455	6502	5156	2091	6957		17.38	Si
SLV 1	ini.	729.5	-2924	0.82	0	455	6502	5156	2091	6957		2.38	Si
SLV 1	fin.	-1491.71	-6039	0.82	0	455	6502	5156	2091	6957		1.15	Si
SLV 2	ini.	612.67	-2239	0.82	0	455	6502	5156	2091	6957		3.11	Si
SLV 2	fin.	-1340.57	-5484	0.82	0	455	6502	5156	2091	6957		1.27	Si
SLD 3	ini.	391.87	-1163	0.82	0	455	6502	5156	2091	6957		5.98	Si
SLD 3	fin.	-873.66	-3808	0.82	0	455	6502	5156	2091	6957		1.83	Si
SLV 14	ini.	-694.14	5068	0.82	0	455	6502	5156	2091	6957		1.37	Si
SLV 14	fin.	458.22	955	0.82	0	455	6502	5156	2091	6957		7.28	Si
SLV 5	ini.	137.92	608	0.82	0	455	6502	5156	2091	6957		11.43	Si
SLV 5	fin.	-932.1	-4057	0.82	0	455	6502	5156	2091	6957		1.71	Si
SLD 1	ini.	349.32	-842	0.82	0	455	6502	5156	2091	6957		8.27	Si
SLD 1	fin.	-910.62	-3949	0.82	0	455	6502	5156	2091	6957		1.76	Si
SLV 3	ini.	826.64	-3655	0.82	0	455	6502	5156	2091	6957		1.9	Si
SLV 3	fin.	-1408.59	-5721	0.82	0	455	6502	5156	2091	6957		1.22	Si
SLV 4	ini.	709.81	-2970	0.82	0	455	6502	5156	2091	6957		2.34	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-1257.45	-5166	0.82	0	455	6502	5156	2091	6957		1.35	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.668	SLV 1	Si
V_SLV	1.152	SLV 1	Si
PF_SLU	3.638	SLU 83	Si
V_SLU	1.597	SLU 83	Si

Trave di accoppiamento 100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-0.133	1.266	6.92	8.34	1.42	-0.133	2.066	6.92	8.34	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	ini.	-244.36	-2079	-0.0000488	0.0001872	0.0035	1.42		7359.91	7359.91	No	30.12	Si
SLU 50	fin.	229.89	-1345	-0.0000459	0.0001872	0.0035	1.42		7350.79	7350.79	No	31.97	Si
SLU 72	ini.	-232.25	-2236	-0.0000463	0.0001872	0.0035	1.42		7359.91	7359.91	No	31.69	Si
SLU 72	fin.	194.39	-1572	-0.0000387	0.0001872	0.0035	1.42		7350.79	7350.79	No	37.81	Si
SLU 48	ini.	-243.21	-2104	-0.0000486	0.0001872	0.0035	1.42		7359.91	7359.91	No	30.26	Si
SLU 48	fin.	226.57	-1376	-0.0000452	0.0001872	0.0035	1.42		7350.79	7350.79	No	32.44	Si
SLU 46	ini.	-235.45	-2038	-0.000047	0.0001872	0.0035	1.42		7359.91	7359.91	No	31.26	Si
SLU 46	fin.	225.4	-1325	-0.000045	0.0001872	0.0035	1.42		7350.79	7350.79	No	32.61	Si
SLU 51	ini.	-244.79	-2080	-0.0000489	0.0001872	0.0035	1.42		7359.91	7359.91	No	30.07	Si
SLU 51	fin.	231.73	-1342	-0.0000463	0.0001872	0.0035	1.42		7350.79	7350.79	No	31.72	Si
SLU 47	ini.	-236.88	-2013	-0.0000473	0.0001872	0.0035	1.42		7359.91	7359.91	No	31.07	Si
SLU 47	fin.	229.94	-1292	-0.0000459	0.0001872	0.0035	1.42		7350.79	7350.79	No	31.97	Si
SLU 70	ini.	-231.1	-2261	-0.0000461	0.0001872	0.0035	1.42		7359.91	7359.91	No	31.85	Si
SLU 70	fin.	191.07	-1603	-0.000038	0.0001872	0.0035	1.42		7350.79	7350.79	No	38.47	Si
SLU 71	ini.	-231.82	-2235	-0.0000462	0.0001872	0.0035	1.42		7359.91	7359.91	No	31.75	Si
SLU 71	fin.	192.55	-1575	-0.0000383	0.0001872	0.0035	1.42		7350.79	7350.79	No	38.18	Si
SLU 45	ini.	-235.02	-2037	-0.0000469	0.0001872	0.0035	1.42		7359.91	7359.91	No	31.32	Si
SLU 45	fin.	223.56	-1328	-0.0000446	0.0001872	0.0035	1.42		7350.79	7350.79	No	32.88	Si
SLU 49	ini.	-243.64	-2105	-0.0000486	0.0001872	0.0035	1.42		7359.91	7359.91	No	30.21	Si
SLU 49	fin.	228.41	-1374	-0.0000456	0.0001872	0.0035	1.42		7350.79	7350.79	No	32.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 66	ini.	-222.48	4269	1.42	0	576	6344	5953	3621	6920	No	1.62	Si
SLU 66	fin.	186.22	-1478	1.42	0	576	6344	5953	3621	6920	No	4.68	Si
SLU 67	ini.	-222.91	4276	1.42	0	576	6344	5953	3621	6920	No	1.62	Si
SLU 67	fin.	188.06	-1472	1.42	0	576	6344	5953	3621	6920	No	4.7	Si
SLU 79	ini.	-196.73	4334	1.42	0	576	6344	5953	3621	6920	No	1.6	Si
SLU 79	fin.	126.87	-1903	1.42	0	576	6344	5953	3621	6920	No	3.64	Si
SLU 78	ini.	-196.02	4377	1.42	0	576	6344	5953	3621	6920	No	1.58	Si
SLU 78	fin.	125.38	-1941	1.42	0	576	6344	5953	3621	6920	No	3.56	Si
SLU 69	ini.	-230.67	4379	1.42	0	576	6344	5953	3621	6920	No	1.58	Si
SLU 69	fin.	189.23	-1505	1.42	0	576	6344	5953	3621	6920	No	4.6	Si
SLU 72	ini.	-232.25	4349	1.42	0	576	6344	5953	3621	6920	No	1.59	Si
SLU 72	fin.	194.39	-1454	1.42	0	576	6344	5953	3621	6920	No	4.76	Si
SLU 80	ini.	-197.16	4341	1.42	0	576	6344	5953	3621	6920	No	1.59	Si
SLU 80	fin.	128.7	-1896	1.42	0	576	6344	5953	3621	6920	No	3.65	Si
SLU 77	ini.	-195.59	4370	1.42	0	576	6344	5953	3621	6920	No	1.58	Si
SLU 77	fin.	123.55	-1948	1.42	0	576	6344	5953	3621	6920	No	3.55	Si
SLU 71	ini.	-231.82	4342	1.42	0	576	6344	5953	3621	6920	No	1.59	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	fin.	192.55	-1460	1.42	0	576	6344	5953	3621	6920	No	4.74	Si
SLU 70	ini.	-231.1	4385	1.42	0	576	6344	5953	3621	6920	No	1.58	Si
SLU 70	fin.	191.07	-1499	1.42	0	576	6344	5953	3621	6920	No	4.62	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-610.21	-2445	-0.000124	0.0002807	0.0035	1.42		7346.34	7346.34		12.04	Si
SLV 9	fin.	344.92	-1356	-0.000069	0.0002807	0.0035	1.42		7337.02	7337.02		21.27	Si
SLV 6	ini.	-826.37	-2762	-0.0001703	0.0002807	0.0035	1.42		7346.34	7346.34		8.89	Si
SLV 6	fin.	745.12	-759	-0.0001529	0.0002807	0.0035	1.42		7337.02	7337.02		9.85	Si
SLV 4	ini.	-231.35	-1614	-0.0000459	0.0002807	0.0035	1.42		7346.34	7346.34		31.75	Si
SLV 4	fin.	522.91	-338	-0.0001058	0.0002807	0.0035	1.42		7337.02	7337.02		14.03	Si
SLV 2	ini.	-567.26	-2213	-0.0001149	0.0002807	0.0035	1.42		7346.34	7346.34		12.95	Si
SLV 2	fin.	770.17	-282	-0.0001583	0.0002807	0.0035	1.42		7337.02	7337.02		9.53	Si
SLV 10	ini.	-744.58	-2693	-0.0001526	0.0002807	0.0035	1.42		7346.34	7346.34		9.87	Si
SLV 10	fin.	517.52	-1185	-0.0001047	0.0002807	0.0035	1.42		7337.02	7337.02		14.18	Si
SLD 6	ini.	-452.41	-2115	-0.000091	0.0002807	0.0035	1.42		7346.34	7346.34		16.24	Si
SLD 6	fin.	400.9	-983	-0.0000805	0.0002807	0.0035	1.42		7337.02	7337.02		18.3	Si
SLV 1	ini.	-358.18	-1828	-0.0000716	0.0002807	0.0035	1.42		7346.34	7346.34		20.51	Si
SLV 1	fin.	501.62	-548	-0.0001013	0.0002807	0.0035	1.42		7337.02	7337.02		14.63	Si
SLV 5	ini.	-692	-2515	-0.0001414	0.0002807	0.0035	1.42		7346.34	7346.34		10.62	Si
SLV 5	fin.	572.53	-930	-0.0001162	0.0002807	0.0035	1.42		7337.02	7337.02		12.82	Si
SLV 11	ini.	509.48	-447	-0.000103	0.0002807	0.0035	1.42		7337.02	7337.02		14.4	Si
SLV 11	fin.	-479.27	-1545	-0.0000966	0.0002807	0.0035	1.42		7346.34	7346.34		15.33	Si
SLV 15	ini.	250.36	-997	-0.0000498	0.0002807	0.0035	1.42		7337.02	7337.02		29.31	Si
SLV 15	fin.	-504.32	-2022	-0.0001018	0.0002807	0.0035	1.42		7346.34	7346.34		14.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-744.58	5458	1.42	0	864	6344	8929	3621	7208		1.32	Si
SLV 10	fin.	517.52	650	1.42	0	864	6344	8929	3621	7208		11.1	Si
SLV 15	ini.	250.36	1597	1.42	0	864	6344	8929	3621	7208		4.51	Si
SLV 15	fin.	-504.32	-3926	1.42	0	864	6344	8929	3621	7208		1.84	Si
SLV 5	ini.	-692	4900	1.42	0	864	6344	8929	3621	7208		1.47	Si
SLV 5	fin.	572.53	878	1.42	0	864	6344	8929	3621	7208		8.21	Si
SLV 14	ini.	-294.62	4003	1.42	0	864	6344	8929	3621	7208		1.8	Si
SLV 14	fin.	11.49	-1614	1.42	0	864	6344	8929	3621	7208		4.47	Si
SLV 6	ini.	-826.37	5656	1.42	0	864	6344	8929	3621	7208		1.27	Si
SLV 6	fin.	745.12	1633	1.42	0	864	6344	8929	3621	7208		4.41	Si
SLD 10	ini.	-417.52	4156	1.42	0	864	6344	8929	3621	7208		1.73	Si
SLD 10	fin.	303.54	-343	1.42	0	864	6344	8929	3621	7208		21.02	Si
SLV 2	ini.	-567.26	4664	1.42	0	864	6344	8929	3621	7208		1.55	Si
SLV 2	fin.	770.17	1664	1.42	0	864	6344	8929	3621	7208		4.33	Si
SLD 5	ini.	-393.74	3910	1.42	0	864	6344	8929	3621	7208		1.84	Si
SLD 5	fin.	325.54	-252	1.42	0	864	6344	8929	3621	7208		28.57	Si
SLV 9	ini.	-610.21	4701	1.42	0	864	6344	8929	3621	7208		1.53	Si
SLV 9	fin.	344.92	-106	1.42	0	864	6344	8929	3621	7208		68.11	Si
SLD 6	ini.	-452.41	4241	1.42	0	864	6344	8929	3621	7208		1.7	Si
SLD 6	fin.	400.9	78	1.42	0	864	6344	8929	3621	7208		92.98	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.89	SLV 6	Si
V_SLV	1.274	SLV 6	Si
PF_SLU	30.067	SLU 51	Si
V_SLU	1.578	SLU 70	Si

Trave di accoppiamento 101

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-22.713	5.826	8.34	9.24	0.9	-21.813	5.826	8.34	9.24	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 45	ini.	291.66	-1299	-0.0001518	0.0001872	0.0035	0.9		2959	2959	No	10.15	Si
SLU 45	fin.	-99.47	-576	-0.0000495	0.0001872	0.0035	0.9		2964.67	2964.67	No	29.81	Si
SLU 43	ini.	289.4	-1268	-0.0001505	0.0001872	0.0035	0.9		2959	2959	No	10.22	Si
SLU 43	fin.	-115.31	-517	-0.0000576	0.0001872	0.0035	0.9		2964.67	2964.67	No	25.71	Si
SLU 46	ini.	287.23	-1278	-0.0001493	0.0001872	0.0035	0.9		2959	2959	No	10.3	Si
SLU 46	fin.	-99.91	-564	-0.0000497	0.0001872	0.0035	0.9		2964.67	2964.67	No	29.67	Si
SLU 50	ini.	291.51	-1309	-0.0001517	0.0001872	0.0035	0.9		2959	2959	No	10.15	Si
SLU 50	fin.	-90.46	-606	-0.0000449	0.0001872	0.0035	0.9		2964.67	2964.67	No	32.77	Si
SLU 56	ini.	282.68	-1299	-0.0001468	0.0001872	0.0035	0.9		2959	2959	No	10.47	Si
SLU 56	fin.	-55.08	-703	-0.0000272	0.0001872	0.0035	0.9		2964.67	2964.67	No	53.83	Si
SLU 69	ini.	283.47	-1316	-0.0001472	0.0001872	0.0035	0.9		2959	2959	No	10.44	Si
SLU 69	fin.	-46.28	-736	-0.0000228	0.0001872	0.0035	0.9		2964.67	2964.67	No	64.05	Si
SLU 49	ini.	288.29	-1298	-0.0001499	0.0001872	0.0035	0.9		2959	2959	No	10.26	Si
SLU 49	fin.	-87.48	-609	-0.0000434	0.0001872	0.0035	0.9		2964.67	2964.67	No	33.89	Si
SLU 47	ini.	283.07	-1252	-0.000147	0.0001872	0.0035	0.9		2959	2959	No	10.45	Si
SLU 47	fin.	-103.62	-541	-0.0000516	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.61	Si
SLU 48	ini.	292.72	-1320	-0.0001524	0.0001872	0.0035	0.9		2959	2959	No	10.11	Si
SLU 48	fin.	-87.04	-621	-0.0000432	0.0001872	0.0035	0.9		2964.67	2964.67	No	34.06	Si
SLU 51	ini.	287.08	-1288	-0.0001492	0.0001872	0.0035	0.9		2959	2959	No	10.31	Si
SLU 51	fin.	-90.9	-594	-0.0000452	0.0001872	0.0035	0.9		2964.67	2964.67	No	32.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	282.26	-1972	0.9	0	365	7137	3773	2295	6068	No	3.08	Si
SLU 71	fin.	-49.7	22	0.9	0	365	7137	3773	2295	6068	No	278.19	Si
SLU 51	ini.	287.08	-2012	0.9	0	365	7137	3773	2295	6068	No	3.02	Si
SLU 51	fin.	-90.9	-126	0.9	0	365	7137	3773	2295	6068	No	48.33	Si
SLU 69	ini.	283.47	-1994	0.9	0	365	7137	3773	2295	6068	No	3.04	Si
SLU 69	fin.	-46.28	43	0.9	0	365	7137	3773	2295	6068	No	140.92	Si
SLU 46	ini.	287.23	-1994	0.9	0	365	7137	3773	2295	6068	No	3.04	Si
SLU 46	fin.	-99.91	-171	0.9	0	365	7137	3773	2295	6068	No	35.46	Si
SLU 45	ini.	291.66	-2018	0.9	0	365	7137	3773	2295	6068	No	3.01	Si
SLU 45	fin.	-99.47	-171	0.9	0	365	7137	3773	2295	6068	No	35.41	Si
SLU 47	ini.	283.07	-1956	0.9	0	365	7137	3773	2295	6068	No	3.1	Si
SLU 47	fin.	-103.62	-192	0.9	0	365	7137	3773	2295	6068	No	31.57	Si
SLU 50	ini.	291.51	-2036	0.9	0	365	7137	3773	2295	6068	No	2.98	Si
SLU 50	fin.	-90.46	-126	0.9	0	365	7137	3773	2295	6068	No	48.24	Si
SLU 48	ini.	292.72	-2058	0.9	0	365	7137	3773	2295	6068	No	2.95	Si
SLU 48	fin.	-87.04	-105	0.9	0	365	7137	3773	2295	6068	No	58.04	Si
SLU 70	ini.	279.04	-1970	0.9	0	365	7137	3773	2295	6068	No	3.08	Si
SLU 70	fin.	-46.72	43	0.9	0	365	7137	3773	2295	6068	No	140.15	Si
SLU 49	ini.	288.29	-2034	0.9	0	365	7137	3773	2295	6068	No	2.98	Si
SLU 49	fin.	-87.48	-104	0.9	0	365	7137	3773	2295	6068	No	58.17	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	741.1	-2640	-0.0004146	0.0002807	0.0035	0.9		2989.59	2989.59		4.03	Si
SLV 14	fin.	-785.45	461	-0.0004429	0.0002807	0.0035	0.9		2995.37	2995.37		3.81	Si
SLV 4	ini.	-261.9	591	-0.000133	0.0002807	0.0035	0.9		2995.37	2995.37		11.44	Si
SLV 4	fin.	563.01	-1224	-0.0003028	0.0002807	0.0035	0.9		2989.59	2989.59		5.31	Si
SLV 3	ini.	-311.78	706	-0.0001596	0.0002807	0.0035	0.9		2995.37	2995.37		9.61	Si
SLV 3	fin.	671.11	-1428	-0.0003695	0.0002807	0.0035	0.9		2989.59	2989.59		4.45	Si
SLV 2	ini.	-73.61	-291	-0.0000363	0.0002807	0.0035	0.9		2995.37	2995.37		40.69	Si
SLV 2	fin.	481.98	-1461	-0.000255	0.0002807	0.0035	0.9		2989.59	2989.59		6.2	Si
SLV 1	ini.	-123.49	-177	-0.0000614	0.0002807	0.0035	0.9		2995.37	2995.37		24.26	Si
SLV 1	fin.	590.08	-1665	-0.0003191	0.0002807	0.0035	0.9		2989.59	2989.59		5.07	Si
SLV 13	ini.	691.23	-2526	-0.0003823	0.0002807	0.0035	0.9		2989.59	2989.59		4.33	Si
SLV 13	fin.	-677.35	256	-0.0003727	0.0002807	0.0035	0.9		2995.37	2995.37		4.42	Si
SLV 10	ini.	666.72	-2827	-0.0003667	0.0002807	0.0035	0.9		2989.59	2989.59		4.48	Si
SLV 10	fin.	-417.08	-524	-0.0002175	0.0002807	0.0035	0.9		2995.37	2995.37		7.18	Si
SLV 9	ini.	634.67	-2753	-0.0003466	0.0002807	0.0035	0.9		2989.59	2989.59		4.71	Si
SLV 9	fin.	-347.6	-656	-0.0001791	0.0002807	0.0035	0.9		2995.37	2995.37		8.62	Si
SLV 15	ini.	502.93	-1643	-0.0002671	0.0002807	0.0035	0.9		2989.59	2989.59		5.94	Si
SLV 15	fin.	-596.32	493	-0.0003223	0.0002807	0.0035	0.9		2995.37	2995.37		5.02	Si
SLV 16	ini.	552.81	-1758	-0.0002966	0.0002807	0.0035	0.9		2989.59	2989.59		5.41	Si
SLV 16	fin.	-704.42	697	-0.00039	0.0002807	0.0035	0.9		2995.37	2995.37		4.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	441.4	-2740	0.9	0	548	7137	5660	2295	7684		2.8	Si
SLD 14	fin.	-369.36	-1192	0.9	0	548	7137	5660	2295	7684		6.45	Si
SLV 6	ini.	422.31	-3188	0.9	0	548	7137	5660	2295	7684		2.41	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	fin.	-36.85	490	0.9	0	548	7137	5660	2295	7684		15.7	Si
SLV 14	ini.	741.1	-4456	0.9	0	548	7137	5660	2295	7684		1.72	Si
SLV 14	fin.	-785.45	-2661	0.9	0	548	7137	5660	2295	7684		2.89	Si
SLV 5	ini.	390.25	-3045	0.9	0	548	7137	5660	2295	7684		2.52	Si
SLV 5	fin.	32.63	743	0.9	0	548	7137	5660	2295	7684		10.34	Si
SLV 15	ini.	502.93	-2829	0.9	0	548	7137	5660	2295	7684		2.72	Si
SLV 15	fin.	-596.32	-2265	0.9	0	548	7137	5660	2295	7684		3.39	Si
SLV 16	ini.	552.81	-3052	0.9	0	548	7137	5660	2295	7684		2.52	Si
SLV 16	fin.	-704.42	-2659	0.9	0	548	7137	5660	2295	7684		2.89	Si
SLV 13	ini.	691.23	-4233	0.9	0	548	7137	5660	2295	7684		1.82	Si
SLV 13	fin.	-677.35	-2267	0.9	0	548	7137	5660	2295	7684		3.39	Si
SLD 10	ini.	412.71	-2787	0.9	0	548	7137	5660	2295	7684		2.76	Si
SLD 10	fin.	-213.08	-454	0.9	0	548	7137	5660	2295	7684		16.92	Si
SLV 9	ini.	634.67	-4368	0.9	0	548	7137	5660	2295	7684		1.76	Si
SLV 9	fin.	-347.6	-680	0.9	0	548	7137	5660	2295	7684		11.3	Si
SLV 10	ini.	666.72	-4511	0.9	0	548	7137	5660	2295	7684		1.7	Si
SLV 10	fin.	-417.08	-933	0.9	0	548	7137	5660	2295	7684		8.23	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.814	SLV 14	Si
V_SLV	1.704	SLV 10	Si
PF_SLU	10.109	SLU 48	Si
V_SLU	2.948	SLU 48	Si

Trave di accoppiamento 102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-22.713	5.826	11.04	11.86	0.82	-21.813	5.826	11.04	11.86	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 46	ini.	17.23	-187	-0.0000102	0.0001872	0.0035	0.82		2455.37	2455.37	No	142.47	Si
SLU 46	fin.	-232.03	-1024	-0.0001448	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.6	Si
SLU 44	ini.	38.99	-113	-0.0000232	0.0001872	0.0035	0.82		2455.37	2455.37	No	62.97	Si
SLU 44	fin.	-229.29	-981	-0.0001429	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.73	Si
SLU 43	ini.	37.42	-128	-0.0000222	0.0001872	0.0035	0.82		2455.37	2455.37	No	65.62	Si
SLU 43	fin.	-235.2	-1007	-0.0001469	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.46	Si
SLU 45	ini.	16.29	-196	-0.0000096	0.0001872	0.0035	0.82		2455.37	2455.37	No	150.72	Si
SLU 45	fin.	-235.58	-1040	-0.0001471	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.44	Si
SLU 48	ini.	-1.09	-250	-0.0000006	0.0001872	0.0035	0.82		2460.51	2460.51	No	2257.31	Si
SLU 48	fin.	-234.39	-1061	-0.0001463	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.5	Si
SLU 53	ini.	-20.69	-299	-0.0000122	0.0001872	0.0035	0.82		2460.51	2460.51	No	118.91	Si
SLU 53	fin.	-228.41	-1053	-0.0001424	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.77	Si
SLU 47	ini.	21.61	-167	-0.0000128	0.0001872	0.0035	0.82		2455.37	2455.37	No	113.61	Si
SLU 47	fin.	-228.11	-1002	-0.0001422	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.79	Si
SLU 49	ini.	-0.15	-241	-0.0000001	0.0001872	0.0035	0.82		2460.51	2460.51	No	16808.18	Si
SLU 49	fin.	-230.85	-1045	-0.000144	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.66	Si
SLU 50	ini.	2.66	-237	-0.0000016	0.0001872	0.0035	0.82		2455.37	2455.37	No	923.75	Si
SLU 50	fin.	-232.83	-1049	-0.0001453	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.57	Si
SLU 51	ini.	3.6	-228	-0.0000021	0.0001872	0.0035	0.82		2455.37	2455.37	No	681.73	Si
SLU 51	fin.	-229.29	-1033	-0.0001429	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-81.04	1103	0.82	0	303	6502	3438	2091	5529	No	5.01	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	fin.	-213.83	-2305	0.82	0	303	6502	3438	2091	5529	No	2.4	Si
SLU 78	ini.	-84.78	1128	0.82	0	303	6502	3438	2091	5529	No	4.9	Si
SLU 78	fin.	-215.4	-2327	0.82	0	303	6502	3438	2091	5529	No	2.38	Si
SLU 79	ini.	-81.98	1104	0.82	0	303	6502	3438	2091	5529	No	5.01	Si
SLU 79	fin.	-217.38	-2319	0.82	0	303	6502	3438	2091	5529	No	2.38	Si
SLU 83	ini.	-80.45	1107	0.82	0	303	6502	3438	2091	5529	No	4.99	Si
SLU 83	fin.	-215.49	-2310	0.82	0	303	6502	3438	2091	5529	No	2.39	Si
SLU 74	ini.	-68.35	1036	0.82	0	303	6502	3438	2091	5529	No	5.34	Si
SLU 74	fin.	-220.12	-2303	0.82	0	303	6502	3438	2091	5529	No	2.4	Si
SLU 69	ini.	-48.74	904	0.82	0	303	6502	3438	2091	5529	No	6.12	Si
SLU 69	fin.	-226.11	-2272	0.82	0	303	6502	3438	2091	5529	No	2.43	Si
SLU 77	ini.	-85.73	1129	0.82	0	303	6502	3438	2091	5529	No	4.9	Si
SLU 77	fin.	-218.94	-2341	0.82	0	303	6502	3438	2091	5529	No	2.36	Si
SLU 75	ini.	-67.4	1035	0.82	0	303	6502	3438	2091	5529	No	5.34	Si
SLU 75	fin.	-216.58	-2289	0.82	0	303	6502	3438	2091	5529	No	2.42	Si
SLU 81	ini.	-63.07	1014	0.82	0	303	6502	3438	2091	5529	No	5.45	Si
SLU 81	fin.	-216.67	-2273	0.82	0	303	6502	3438	2091	5529	No	2.43	Si
SLU 84	ini.	-79.51	1106	0.82	0	303	6502	3438	2091	5529	No	5	Si
SLU 84	fin.	-211.95	-2296	0.82	0	303	6502	3438	2091	5529	No	2.41	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-39.89	-449	-0.0000236	0.0002807	0.0035	0.82		2487.45	2487.45		62.36	Si
SLV 5	fin.	-384.01	-1653	-0.0002433	0.0002807	0.0035	0.82		2487.45	2487.45		6.48	Si
SLV 9	ini.	164.34	-37	-0.0000997	0.0002807	0.0035	0.82		2482.11	2482.11		15.1	Si
SLV 9	fin.	-541.24	-2103	-0.0003567	0.0002807	0.0035	0.82		2487.45	2487.45		4.6	Si
SLV 14	ini.	393.95	578	-0.0002507	0.0002807	0.0035	0.82		2482.11	2482.11		6.3	Si
SLV 14	fin.	-542.56	-1906	-0.0003577	0.0002807	0.0035	0.82		2487.45	2487.45		4.58	Si
SLV 16	ini.	338.75	568	-0.0002129	0.0002807	0.0035	0.82		2482.11	2482.11		7.33	Si
SLV 16	fin.	-363.21	-1242	-0.000229	0.0002807	0.0035	0.82		2487.45	2487.45		6.85	Si
SLV 6	ini.	3.73	-333	-0.0000022	0.0002807	0.0035	0.82		2482.11	2482.11		665.7	Si
SLV 6	fin.	-405.22	-1695	-0.000258	0.0002807	0.0035	0.82		2487.45	2487.45		6.14	Si
SLV 10	ini.	207.96	78	-0.0001272	0.0002807	0.0035	0.82		2482.11	2482.11		11.94	Si
SLV 10	fin.	-562.46	-2145	-0.0003728	0.0002807	0.0035	0.82		2487.45	2487.45		4.42	Si
SLV 1	ini.	-354.68	-972	-0.0002232	0.0002807	0.0035	0.82		2487.45	2487.45		7.01	Si
SLV 1	fin.	14.57	-342	-0.0000086	0.0002807	0.0035	0.82		2482.11	2482.11		170.35	Si
SLV 13	ini.	326.08	398	-0.0002044	0.0002807	0.0035	0.82		2482.11	2482.11		7.61	Si
SLV 13	fin.	-509.54	-1840	-0.000333	0.0002807	0.0035	0.82		2487.45	2487.45		4.88	Si
SLV 3	ini.	-409.88	-982	-0.0002613	0.0002807	0.0035	0.82		2487.45	2487.45		6.07	Si
SLV 3	fin.	193.92	322	-0.0001183	0.0002807	0.0035	0.82		2482.11	2482.11		12.8	Si
SLD 10	ini.	86.06	-82	-0.0000515	0.0002807	0.0035	0.82		2482.11	2482.11		28.84	Si
SLD 10	fin.	-344.76	-1387	-0.0002165	0.0002807	0.0035	0.82		2487.45	2487.45		7.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	207.96	-21	0.82	0	455	6502	5156	2091	6957		333.14	Si
SLV 10	fin.	-562.46	-3738	0.82	0	455	6502	5156	2091	6957		1.86	Si
SLV 6	ini.	3.73	726	0.82	0	455	6502	5156	2091	6957		9.58	Si
SLV 6	fin.	-405.22	-2975	0.82	0	455	6502	5156	2091	6957		2.34	Si
SLV 9	ini.	164.34	169	0.82	0	455	6502	5156	2091	6957		41.17	Si
SLV 9	fin.	-541.24	-3635	0.82	0	455	6502	5156	2091	6957		1.91	Si
SLD 9	ini.	67.01	377	0.82	0	455	6502	5156	2091	6957		18.47	Si
SLD 9	fin.	-335.5	-2536	0.82	0	455	6502	5156	2091	6957		2.74	Si
SLV 16	ini.	338.75	-831	0.82	0	455	6502	5156	2091	6957		8.38	Si
SLV 16	fin.	-363.21	-2536	0.82	0	455	6502	5156	2091	6957		2.74	Si
SLV 14	ini.	393.95	-883	0.82	0	455	6502	5156	2091	6957		7.88	Si
SLV 14	fin.	-542.56	-3514	0.82	0	455	6502	5156	2091	6957		1.98	Si
SLV 5	ini.	-39.89	916	0.82	0	455	6502	5156	2091	6957		7.6	Si
SLV 5	fin.	-384.01	-2872	0.82	0	455	6502	5156	2091	6957		2.42	Si
SLD 10	ini.	86.06	294	0.82	0	455	6502	5156	2091	6957		23.68	Si
SLD 10	fin.	-344.76	-2581	0.82	0	455	6502	5156	2091	6957		2.7	Si
SLD 14	ini.	164.75	-74	0.82	0	455	6502	5156	2091	6957		94.6	Si
SLD 14	fin.	-333.41	-2470	0.82	0	455	6502	5156	2091	6957		2.82	Si
SLV 13	ini.	326.08	-588	0.82	0	455	6502	5156	2091	6957		11.83	Si
SLV 13	fin.	-509.54	-3354	0.82	0	455	6502	5156	2091	6957		2.07	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.422	SLV 10	Si
V_SLV	1.861	SLV 10	Si
PF_SLU	10.445	SLU 45	Si
V_SLU	2.362	SLU 77	Si

Trave di accoppiamento 103

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	8.34	9.24	0.9	-22.493	-3.314	8.34	9.24	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	237.8	-1389	-0.0001222	0.0001872	0.0035	0.9		2959	2959	No	12.44	Si
SLU 84	fin.	265.12	-1442	-0.0001371	0.0001872	0.0035	0.9		2959	2959	No	11.16	Si
SLU 74	ini.	233.17	-1366	-0.0001197	0.0001872	0.0035	0.9		2959	2959	No	12.69	Si
SLU 74	fin.	261.87	-1418	-0.0001353	0.0001872	0.0035	0.9		2959	2959	No	11.3	Si
SLU 65	ini.	189.27	-1182	-0.0000962	0.0001872	0.0035	0.9		2959	2959	No	15.63	Si
SLU 65	fin.	263.2	-1326	-0.000136	0.0001872	0.0035	0.9		2959	2959	No	11.24	Si
SLU 81	ini.	220.73	-1318	-0.000113	0.0001872	0.0035	0.9		2959	2959	No	13.41	Si
SLU 81	fin.	266.75	-1411	-0.000138	0.0001872	0.0035	0.9		2959	2959	No	11.09	Si
SLU 76	ini.	228.33	-1349	-0.0001171	0.0001872	0.0035	0.9		2959	2959	No	12.96	Si
SLU 76	fin.	264.56	-1418	-0.0001368	0.0001872	0.0035	0.9		2959	2959	No	11.18	Si
SLU 82	ini.	220.55	-1321	-0.0001129	0.0001872	0.0035	0.9		2959	2959	No	13.42	Si
SLU 82	fin.	269.77	-1422	-0.0001397	0.0001872	0.0035	0.9		2959	2959	No	10.97	Si
SLU 75	ini.	232.99	-1369	-0.0001196	0.0001872	0.0035	0.9		2959	2959	No	12.7	Si
SLU 75	fin.	264.89	-1428	-0.000137	0.0001872	0.0035	0.9		2959	2959	No	11.17	Si
SLU 73	ini.	211.08	-1281	-0.0001078	0.0001872	0.0035	0.9		2959	2959	No	14.02	Si
SLU 73	fin.	269.21	-1398	-0.0001393	0.0001872	0.0035	0.9		2959	2959	No	10.99	Si
SLU 78	ini.	250.24	-1437	-0.0001289	0.0001872	0.0035	0.9		2959	2959	No	11.82	Si
SLU 78	fin.	260.25	-1448	-0.0001344	0.0001872	0.0035	0.9		2959	2959	No	11.37	Si
SLU 83	ini.	237.98	-1386	-0.0001223	0.0001872	0.0035	0.9		2959	2959	No	12.43	Si
SLU 83	fin.	262.1	-1431	-0.0001354	0.0001872	0.0035	0.9		2959	2959	No	11.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 56	ini.	232.06	-1597	0.9	0	365	7137	3773	2295	6068	No	3.8	Si
SLU 56	fin.	231.52	948	0.9	0	365	7137	3773	2295	6068	No	6.4	Si
SLU 69	ini.	228.61	-1597	0.9	0	365	7137	3773	2295	6068	No	3.8	Si
SLU 69	fin.	251.22	1032	0.9	0	365	7137	3773	2295	6068	No	5.88	Si
SLU 74	ini.	233.17	-1604	0.9	0	365	7137	3773	2295	6068	No	3.78	Si
SLU 74	fin.	261.87	1059	0.9	0	365	7137	3773	2295	6068	No	5.73	Si
SLU 79	ini.	245.88	-1675	0.9	0	365	7137	3773	2295	6068	No	3.62	Si
SLU 79	fin.	254.88	1035	0.9	0	365	7137	3773	2295	6068	No	5.86	Si
SLU 83	ini.	237.98	-1618	0.9	0	365	7137	3773	2295	6068	No	3.75	Si
SLU 83	fin.	262.1	1051	0.9	0	365	7137	3773	2295	6068	No	5.77	Si
SLU 80	ini.	245.7	-1675	0.9	0	365	7137	3773	2295	6068	No	3.62	Si
SLU 80	fin.	257.9	1048	0.9	0	365	7137	3773	2295	6068	No	5.79	Si
SLU 78	ini.	250.24	-1709	0.9	0	365	7137	3773	2295	6068	No	3.55	Si
SLU 78	fin.	260.25	1064	0.9	0	365	7137	3773	2295	6068	No	5.71	Si
SLU 84	ini.	237.8	-1617	0.9	0	365	7137	3773	2295	6068	No	3.75	Si
SLU 84	fin.	265.12	1064	0.9	0	365	7137	3773	2295	6068	No	5.7	Si
SLU 75	ini.	232.99	-1603	0.9	0	365	7137	3773	2295	6068	No	3.79	Si
SLU 75	fin.	264.89	1072	0.9	0	365	7137	3773	2295	6068	No	5.66	Si
SLU 77	ini.	250.42	-1710	0.9	0	365	7137	3773	2295	6068	No	3.55	Si
SLU 77	fin.	257.23	1051	0.9	0	365	7137	3773	2295	6068	No	5.77	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-248.59	-197	-0.000126	0.0002807	0.0035	0.9		2995.37	2995.37		12.05	Si
SLV 12	fin.	1086.92	-3082	-0.0006579	0.0002807	0.0035	0.9		2989.59	2989.59		2.75	Si
SLV 14	ini.	-443.11	707	-0.0002322	0.0002807	0.0035	0.9		2995.37	2995.37		6.76	Si
SLV 14	fin.	914.79	-2000	-0.0005325	0.0002807	0.0035	0.9		2989.59	2989.59		3.27	Si
SLV 2	ini.	954.83	-2922	-0.0005609	0.0002807	0.0035	0.9		2989.59	2989.59		3.13	Si
SLV 2	fin.	-1001.74	1108	-0.0005935	0.0002807	0.0035	0.9		2995.37	2995.37		2.99	Si
SLV 6	ini.	600.41	-1780	-0.0003254	0.0002807	0.0035	0.9		2989.59	2989.59		4.98	Si
SLV 6	fin.	-758.7	1157	-0.0004252	0.0002807	0.0035	0.9		2995.37	2995.37		3.95	Si
SLV 13	ini.	-529.9	956	-0.0002824	0.0002807	0.0035	0.9		2995.37	2995.37		5.65	Si
SLV 13	fin.	1009.85	-2113	-0.0006007	0.0002807	0.0035	0.9		2989.59	2989.59		2.96	Si
SLV 4	ini.	825.94	-2773	-0.0004711	0.0002807	0.0035	0.9		2989.59	2989.59		3.62	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-620.54	116	-0.0003371	0.0002807	0.0035	0.9		2995.37	2995.37		4.83	Si
SLV 1	ini.	868.03	-2672	-0.0004999	0.0002807	0.0035	0.9		2989.59	2989.59		3.44	Si
SLV 1	fin.	-906.69	995	-0.0005257	0.0002807	0.0035	0.9		2995.37	2995.37		3.3	Si
SLV 15	ini.	-658.78	1104	-0.000361	0.0002807	0.0035	0.9		2995.37	2995.37		4.55	Si
SLV 15	fin.	1391.05	-3105	-0.0009005	0.0002807	0.0035	0.9		2989.59	2989.59		2.15	Si
SLV 11	ini.	-304.37	-37	-0.0001556	0.0002807	0.0035	0.9		2995.37	2995.37		9.84	Si
SLV 11	fin.	1148.01	-3155	-0.0007044	0.0002807	0.0035	0.9		2989.59	2989.59		2.6	Si
SLV 16	ini.	-571.99	855	-0.0003075	0.0002807	0.0035	0.9		2995.37	2995.37		5.24	Si
SLV 16	fin.	1295.99	-2992	-0.0008216	0.0002807	0.0035	0.9		2989.59	2989.59		2.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-443.11	2072	0.9	0	548	7137	5660	2295	7684		3.71	Si
SLV 14	fin.	914.79	3327	0.9	0	548	7137	5660	2295	7684		2.31	Si
SLV 3	ini.	739.15	-4165	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 3	fin.	-525.49	-1773	0.9	0	548	7137	5660	2295	7684		4.33	Si
SLV 11	ini.	-304.37	1011	0.9	0	548	7137	5660	2295	7684		7.6	Si
SLV 11	fin.	1148.01	4545	0.9	0	548	7137	5660	2295	7684		1.69	Si
SLV 2	ini.	954.83	-5081	0.9	0	548	7137	5660	2295	7684		1.51	Si
SLV 2	fin.	-1001.74	-3690	0.9	0	548	7137	5660	2295	7684		2.08	Si
SLV 4	ini.	825.94	-4568	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 4	fin.	-620.54	-2129	0.9	0	548	7137	5660	2295	7684		3.61	Si
SLV 16	ini.	-571.99	2585	0.9	0	548	7137	5660	2295	7684		2.97	Si
SLV 16	fin.	1295.99	4888	0.9	0	548	7137	5660	2295	7684		1.57	Si
SLV 15	ini.	-658.78	2989	0.9	0	548	7137	5660	2295	7684		2.57	Si
SLV 15	fin.	1391.05	5244	0.9	0	548	7137	5660	2295	7684		1.47	Si
SLV 12	ini.	-248.59	752	0.9	0	548	7137	5660	2295	7684		10.22	Si
SLV 12	fin.	1086.92	4316	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLV 1	ini.	868.03	-4678	0.9	0	548	7137	5660	2295	7684		1.64	Si
SLV 1	fin.	-906.69	-3334	0.9	0	548	7137	5660	2295	7684		2.3	Si
SLV 13	ini.	-529.9	2476	0.9	0	548	7137	5660	2295	7684		3.1	Si
SLV 13	fin.	1009.85	3683	0.9	0	548	7137	5660	2295	7684		2.09	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.149	SLV 15	Si
V_SLV	1.466	SLV 15	Si
PF_SLU	10.969	SLU 82	Si
V_SLU	3.549	SLU 77	Si

Trave di accoppiamento 104

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	11.04	11.86	0.82	-22.493	-3.314	11.04	11.86	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-248.37	-1149	-0.0001557	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.91	Si
SLU 82	fin.	-153.75	-875	-0.0000939	0.0001872	0.0035	0.82		2460.51	2460.51	No	16	Si
SLU 83	ini.	-244.95	-1151	-0.0001534	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.04	Si
SLU 83	fin.	-174.2	-931	-0.0001069	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.12	Si
SLU 78	ini.	-247.39	-1172	-0.000155	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.95	Si
SLU 78	fin.	-182.36	-965	-0.0001122	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.49	Si
SLU 73	ini.	-246.06	-1131	-0.0001542	0.0001872	0.0035	0.82		2460.51	2460.51	No	10	Si
SLU 73	fin.	-140.6	-833	-0.0000855	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.5	Si
SLU 81	ini.	-245.07	-1136	-0.0001535	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.04	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-155.85	-874	-0.0000952	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.79	Si
SLU 75	ini.	-247.5	-1157	-0.0001551	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.94	Si
SLU 75	fin.	-164.01	-908	-0.0001004	0.0001872	0.0035	0.82		2460.51	2460.51	No	15	Si
SLU 74	ini.	-244.21	-1145	-0.0001529	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.08	Si
SLU 74	fin.	-166.1	-907	-0.0001017	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.81	Si
SLU 77	ini.	-244.09	-1160	-0.0001528	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.08	Si
SLU 77	fin.	-184.45	-964	-0.0001135	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.34	Si
SLU 84	ini.	-248.25	-1164	-0.0001556	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.91	Si
SLU 84	fin.	-172.11	-931	-0.0001056	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.3	Si
SLU 76	ini.	-245.94	-1146	-0.0001541	0.0001872	0.0035	0.82		2460.51	2460.51	No	10	Si
SLU 76	fin.	-158.95	-890	-0.0000972	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-244.95	1987	0.82	0	303	6502	3438	2091	5529	No	2.78	Si
SLU 83	fin.	-174.2	-1291	0.82	0	303	6502	3438	2091	5529	No	4.28	Si
SLU 77	ini.	-244.09	1980	0.82	0	303	6502	3438	2091	5529	No	2.79	Si
SLU 77	fin.	-184.45	-1324	0.82	0	303	6502	3438	2091	5529	No	4.18	Si
SLU 78	ini.	-247.39	1996	0.82	0	303	6502	3438	2091	5529	No	2.77	Si
SLU 78	fin.	-182.36	-1316	0.82	0	303	6502	3438	2091	5529	No	4.2	Si
SLU 84	ini.	-248.25	2003	0.82	0	303	6502	3438	2091	5529	No	2.76	Si
SLU 84	fin.	-172.11	-1284	0.82	0	303	6502	3438	2091	5529	No	4.31	Si
SLU 82	ini.	-248.37	1983	0.82	0	303	6502	3438	2091	5529	No	2.79	Si
SLU 82	fin.	-153.75	-1202	0.82	0	303	6502	3438	2091	5529	No	4.6	Si
SLU 76	ini.	-245.94	1955	0.82	0	303	6502	3438	2091	5529	No	2.83	Si
SLU 76	fin.	-158.95	-1207	0.82	0	303	6502	3438	2091	5529	No	4.58	Si
SLU 74	ini.	-244.21	1960	0.82	0	303	6502	3438	2091	5529	No	2.82	Si
SLU 74	fin.	-166.1	-1242	0.82	0	303	6502	3438	2091	5529	No	4.45	Si
SLU 80	ini.	-243.63	1964	0.82	0	303	6502	3438	2091	5529	No	2.81	Si
SLU 80	fin.	-178.7	-1294	0.82	0	303	6502	3438	2091	5529	No	4.27	Si
SLU 75	ini.	-247.5	1976	0.82	0	303	6502	3438	2091	5529	No	2.8	Si
SLU 75	fin.	-164.01	-1235	0.82	0	303	6502	3438	2091	5529	No	4.48	Si
SLU 81	ini.	-245.07	1967	0.82	0	303	6502	3438	2091	5529	No	2.81	Si
SLU 81	fin.	-155.85	-1209	0.82	0	303	6502	3438	2091	5529	No	4.57	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	518.39	1503	-0.0003403	0.0002807	0.0035	0.82		2482.11	2482.11		4.79	Si
SLV 1	fin.	-869.47	-1697	-0.0006269	0.0002807	0.0035	0.82		2487.45	2487.45		2.86	Si
SLV 5	ini.	511.65	1595	-0.0003353	0.0002807	0.0035	0.82		2482.11	2482.11		4.85	Si
SLV 5	fin.	-739.11	-1249	-0.0005143	0.0002807	0.0035	0.82		2487.45	2487.45		3.37	Si
SLV 16	ini.	-866.06	-3096	-0.0006239	0.0002807	0.0035	0.82		2487.45	2487.45		2.87	Si
SLV 16	fin.	681.91	555	-0.0004682	0.0002807	0.0035	0.82		2482.11	2482.11		3.64	Si
SLV 15	ini.	-911.35	-3228	-0.0006646	0.0002807	0.0035	0.82		2487.45	2487.45		2.73	Si
SLV 15	fin.	759.93	721	-0.0005331	0.0002807	0.0035	0.82		2482.11	2482.11		3.27	Si
SLV 13	ini.	-591.19	-2091	-0.0003949	0.0002807	0.0035	0.82		2487.45	2487.45		4.21	Si
SLV 13	fin.	479.05	479	-0.0003113	0.0002807	0.0035	0.82		2482.11	2482.11		5.18	Si
SLV 6	ini.	540.75	1680	-0.0003571	0.0002807	0.0035	0.82		2482.11	2482.11		4.59	Si
SLV 6	fin.	-789.26	-1356	-0.0005568	0.0002807	0.0035	0.82		2487.45	2487.45		3.15	Si
SLV 4	ini.	243.52	498	-0.00015	0.0002807	0.0035	0.82		2482.11	2482.11		10.19	Si
SLV 4	fin.	-666.61	-1621	-0.0004547	0.0002807	0.0035	0.82		2487.45	2487.45		3.73	Si
SLV 12	ini.	-859.32	-3189	-0.0006179	0.0002807	0.0035	0.82		2487.45	2487.45		2.89	Si
SLV 12	fin.	551.56	106	-0.0003653	0.0002807	0.0035	0.82		2482.11	2482.11		4.5	Si
SLV 11	ini.	-888.42	-3273	-0.0006439	0.0002807	0.0035	0.82		2487.45	2487.45		2.8	Si
SLV 11	fin.	601.7	213	-0.0004041	0.0002807	0.0035	0.82		2482.11	2482.11		4.13	Si
SLV 2	ini.	563.67	1635	-0.0003746	0.0002807	0.0035	0.82		2482.11	2482.11		4.4	Si
SLV 2	fin.	-947.49	-1864	-0.0006977	0.0002807	0.0035	0.82		2487.45	2487.45		2.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-888.42	4917	0.82	0	455	6502	5156	2091	6957		1.41	Si
SLV 11	fin.	601.7	1901	0.82	0	455	6502	5156	2091	6957		3.66	Si
SLV 12	ini.	-859.32	4763	0.82	0	455	6502	5156	2091	6957		1.46	Si
SLV 12	fin.	551.56	1700	0.82	0	455	6502	5156	2091	6957		4.09	Si
SLV 6	ini.	540.75	-2214	0.82	0	455	6502	5156	2091	6957		3.14	Si
SLV 6	fin.	-789.26	-3435	0.82	0	455	6502	5156	2091	6957		2.03	Si
SLV 5	ini.	511.65	-2060	0.82	0	455	6502	5156	2091	6957		3.38	Si
SLV 5	fin.	-739.11	-3234	0.82	0	455	6502	5156	2091	6957		2.15	Si
SLV 1	ini.	518.39	-2063	0.82	0	455	6502	5156	2091	6957		3.37	Si
SLV 1	fin.	-869.47	-3806	0.82	0	455	6502	5156	2091	6957		1.83	Si
SLV 13	ini.	-591.19	3405	0.82	0	455	6502	5156	2091	6957		2.04	Si
SLV 13	fin.	479.05	1525	0.82	0	455	6502	5156	2091	6957		4.56	Si
SLV 2	ini.	563.67	-2303	0.82	0	455	6502	5156	2091	6957		3.02	Si
SLV 2	fin.	-947.49	-4119	0.82	0	455	6502	5156	2091	6957		1.69	Si
SLV 16	ini.	-866.06	4767	0.82	0	455	6502	5156	2091	6957		1.46	Si
SLV 16	fin.	681.91	2273	0.82	0	455	6502	5156	2091	6957		3.06	Si
SLV 15	ini.	-911.35	5006	0.82	0	455	6502	5156	2091	6957		1.39	Si
SLV 15	fin.	759.93	2586	0.82	0	455	6502	5156	2091	6957		2.69	Si
SLV 7	ini.	-555.55	3276	0.82	0	455	6502	5156	2091	6957		2.12	Si
SLV 7	fin.	197.14	302	0.82	0	455	6502	5156	2091	6957		23.05	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.625	SLV 2	Si
V_SLV	1.39	SLV 15	Si
PF_SLU	9.907	SLU 82	Si
V_SLU	2.761	SLU 84	Si

Trave di accoppiamento 105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	8.34	10.34	2	-19.313	-3.314	8.34	10.34	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 39	ini.	213.99	-1371	-0.0000213	0.0001872	0.0035	2		14344.28	14344.28	No	67.03	Si
SLU 39	fin.	207.38	-1850	-0.0000207	0.0001872	0.0035	2		14344.28	14344.28	No	69.17	Si
SLU 81	ini.	213.99	-1723	-0.0000213	0.0001872	0.0035	2		14344.28	14344.28	No	67.03	Si
SLU 81	fin.	224.72	-2279	-0.0000224	0.0001872	0.0035	2		14344.28	14344.28	No	63.83	Si
SLU 75	ini.	175.48	-1882	-0.0000175	0.0001872	0.0035	2		14344.28	14344.28	No	81.74	Si
SLU 75	fin.	197.97	-2421	-0.0000197	0.0001872	0.0035	2		14344.28	14344.28	No	72.46	Si
SLU 82	ini.	213.55	-1729	-0.0000213	0.0001872	0.0035	2		14344.28	14344.28	No	67.17	Si
SLU 82	fin.	225.18	-2286	-0.0000225	0.0001872	0.0035	2		14344.28	14344.28	No	63.7	Si
SLU 83	ini.	212.8	-1816	-0.0000212	0.0001872	0.0035	2		14344.28	14344.28	No	67.41	Si
SLU 83	fin.	209.73	-2374	-0.0000209	0.0001872	0.0035	2		14344.28	14344.28	No	68.4	Si
SLU 40	ini.	213.56	-1377	-0.0000213	0.0001872	0.0035	2		14344.28	14344.28	No	67.17	Si
SLU 40	fin.	207.84	-1857	-0.0000207	0.0001872	0.0035	2		14344.28	14344.28	No	69.02	Si
SLU 73	ini.	167.74	-1765	-0.0000167	0.0001872	0.0035	2		14344.28	14344.28	No	85.52	Si
SLU 73	fin.	207.14	-2296	-0.0000207	0.0001872	0.0035	2		14344.28	14344.28	No	69.25	Si
SLU 42	ini.	212.38	-1470	-0.0000212	0.0001872	0.0035	2		14344.28	14344.28	No	67.54	Si
SLU 42	fin.	192.85	-1952	-0.0000192	0.0001872	0.0035	2		14344.28	14344.28	No	74.38	Si
SLU 84	ini.	212.37	-1822	-0.0000212	0.0001872	0.0035	2		14344.28	14344.28	No	67.54	Si
SLU 84	fin.	210.19	-2381	-0.000021	0.0001872	0.0035	2		14344.28	14344.28	No	68.25	Si
SLU 41	ini.	212.81	-1465	-0.0000212	0.0001872	0.0035	2		14344.28	14344.28	No	67.4	Si
SLU 41	fin.	192.38	-1945	-0.0000192	0.0001872	0.0035	2		14344.28	14344.28	No	74.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	213.99	-738	2	0	812	3965	8384	5100	4776	No	6.48	Si
SLU 81	fin.	224.72	1422	2	0	812	3965	8384	5100	4776	No	3.36	Si
SLU 78	ini.	174.3	-886	2	0	812	3965	8384	5100	4776	No	5.39	Si
SLU 78	fin.	182.98	1423	2	0	812	3965	8384	5100	4776	No	3.36	Si
SLU 82	ini.	213.55	-739	2	0	812	3965	8384	5100	4776	No	6.46	Si
SLU 82	fin.	225.18	1429	2	0	812	3965	8384	5100	4776	No	3.34	Si
SLU 76	ini.	166.56	-777	2	0	812	3965	8384	5100	4776	No	6.15	Si
SLU 76	fin.	192.14	1413	2	0	812	3965	8384	5100	4776	No	3.38	Si
SLU 77	ini.	174.73	-884	2	0	812	3965	8384	5100	4776	No	5.4	Si
SLU 77	fin.	182.52	1416	2	0	812	3965	8384	5100	4776	No	3.37	Si
SLU 75	ini.	175.48	-795	2	0	812	3965	8384	5100	4776	No	6.01	Si
SLU 75	fin.	197.97	1428	2	0	812	3965	8384	5100	4776	No	3.34	Si
SLU 74	ini.	175.91	-794	2	0	812	3965	8384	5100	4776	No	6.02	Si
SLU 74	fin.	197.51	1421	2	0	812	3965	8384	5100	4776	No	3.36	Si
SLU 84	ini.	212.37	-830	2	0	812	3965	8384	5100	4776	No	5.76	Si
SLU 84	fin.	210.19	1424	2	0	812	3965	8384	5100	4776	No	3.35	Si
SLU 73	ini.	167.74	-686	2	0	812	3965	8384	5100	4776	No	6.96	Si
SLU 73	fin.	207.14	1418	2	0	812	3965	8384	5100	4776	No	3.37	Si
SLU 83	ini.	212.8	-828	2	0	812	3965	8384	5100	4776	No	5.77	Si
SLU 83	fin.	209.73	1417	2	0	812	3965	8384	5100	4776	No	3.37	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1686.4	1352	-0.0001758	0.0002807	0.0035	2		14202.07	14202.07		8.42	Si
SLV 4	fin.	-1099.19	1330	-0.0001123	0.0002807	0.0035	2		14215.41	14215.41		12.93	Si
SLV 1	ini.	1764.03	1872	-0.0001844	0.0002807	0.0035	2		14202.07	14202.07		8.05	Si
SLV 1	fin.	-1195.03	1930	-0.0001224	0.0002807	0.0035	2		14215.41	14215.41		11.9	Si
SLV 6	ini.	917.97	755	-0.0000933	0.0002807	0.0035	2		14202.07	14202.07		15.47	Si
SLV 6	fin.	-630.44	719	-0.0000635	0.0002807	0.0035	2		14215.41	14215.41		22.55	Si
SLV 3	ini.	1575.37	1174	-0.0001636	0.0002807	0.0035	2		14202.07	14202.07		9.02	Si
SLV 3	fin.	-990.11	1112	-0.0001008	0.0002807	0.0035	2		14215.41	14215.41		14.36	Si
SLV 13	ini.	-1542.73	-4064	-0.0001599	0.0002807	0.0035	2		14215.41	14215.41		9.21	Si
SLV 13	fin.	1357.15	-4766	-0.0001399	0.0002807	0.0035	2		14202.07	14202.07		10.46	Si
SLV 14	ini.	-1431.69	-3886	-0.0001478	0.0002807	0.0035	2		14215.41	14215.41		9.93	Si
SLV 14	fin.	1248.06	-4549	-0.0001282	0.0002807	0.0035	2		14202.07	14202.07		11.38	Si
SLV 16	ini.	-1620.36	-4585	-0.0001684	0.0002807	0.0035	2		14215.41	14215.41		8.77	Si
SLV 16	fin.	1452.98	-5367	-0.0001503	0.0002807	0.0035	2		14202.07	14202.07		9.77	Si
SLV 2	ini.	1875.07	2050	-0.0001968	0.0002807	0.0035	2		14202.07	14202.07		7.57	Si
SLV 2	fin.	-1304.11	2147	-0.0001341	0.0002807	0.0035	2		14215.41	14215.41		10.9	Si
SLV 11	ini.	-774.3	-3468	-0.0000783	0.0002807	0.0035	2		14215.41	14215.41		18.36	Si
SLV 11	fin.	888.39	-4156	-0.0000902	0.0002807	0.0035	2		14202.07	14202.07		15.99	Si
SLV 15	ini.	-1731.4	-4762	-0.0001806	0.0002807	0.0035	2		14215.41	14215.41		8.21	Si
SLV 15	fin.	1562.07	-5584	-0.0001621	0.0002807	0.0035	2		14202.07	14202.07		9.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-702.94	2098	2	0	1217	3965	12577	5100	5182		2.47	Si
SLV 12	fin.	818.28	4447	2	0	1217	3965	12577	5100	5182		1.17	Si
SLV 4	ini.	1686.4	-8212	2	0	1217	3965	12577	5100	5182		0.63	No
SLV 4	fin.	-1099.19	-5552	2	0	1217	3965	12577	5100	5182		0.93	No
SLV 16	ini.	-1620.36	6981	2	0	1217	3965	12577	5100	5182		0.74	No
SLV 16	fin.	1452.98	8022	2	0	1217	3965	12577	5100	5182		0.65	No
SLV 2	ini.	1875.07	-8495	2	0	1217	3965	12577	5100	5182		0.61	No
SLV 2	fin.	-1304.11	-6483	2	0	1217	3965	12577	5100	5182		0.8	No
SLV 11	ini.	-774.3	2478	2	0	1217	3965	12577	5100	5182		2.09	Si
SLV 11	fin.	888.39	4771	2	0	1217	3965	12577	5100	5182		1.09	Si
SLV 1	ini.	1764.03	-7903	2	0	1217	3965	12577	5100	5182		0.66	No
SLV 1	fin.	-1195.03	-5979	2	0	1217	3965	12577	5100	5182		0.87	No
SLV 13	ini.	-1542.73	7291	2	0	1217	3965	12577	5100	5182		0.71	No
SLV 13	fin.	1357.15	7595	2	0	1217	3965	12577	5100	5182		0.68	No
SLV 15	ini.	-1731.4	7573	2	0	1217	3965	12577	5100	5182		0.68	No
SLV 15	fin.	1562.07	8526	2	0	1217	3965	12577	5100	5182		0.61	No
SLV 3	ini.	1575.37	-7621	2	0	1217	3965	12577	5100	5182		0.68	No
SLV 3	fin.	-990.11	-5048	2	0	1217	3965	12577	5100	5182		1.03	Si
SLV 14	ini.	-1431.69	6699	2	0	1217	3965	12577	5100	5182		0.77	No
SLV 14	fin.	1248.06	7091	2	0	1217	3965	12577	5100	5182		0.73	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.574	SLV 2	Si
V_SLV	0.608	SLV 15	No
PF_SLU	63.701	SLU 82	Si
V_SLU	3.343	SLU 82	Si

Trave di accoppiamento 106

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	11.14	11.86	0.72	-19.313	-3.314	11.14	11.86	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-174.28	-1433	-0.0001406	0.0001872	0.0035	0.72		1901.86	1901.86	No	10.91	Si
SLU 84	fin.	-19.32	-1281	-0.0000148	0.0001872	0.0035	0.72		1901.86	1901.86	No	98.46	Si
SLU 80	ini.	-162.36	-1347	-0.0001304	0.0001872	0.0035	0.72		1901.86	1901.86	No	11.71	Si
SLU 80	fin.	-18.4	-1225	-0.0000141	0.0001872	0.0035	0.72		1901.86	1901.86	No	103.36	Si
SLU 78	ini.	-167.24	-1387	-0.0001346	0.0001872	0.0035	0.72		1901.86	1901.86	No	11.37	Si
SLU 78	fin.	-18.95	-1258	-0.0000145	0.0001872	0.0035	0.72		1901.86	1901.86	No	100.35	Si
SLU 75	ini.	-165.91	-1362	-0.0001334	0.0001872	0.0035	0.72		1901.86	1901.86	No	11.46	Si
SLU 75	fin.	-14.16	-1221	-0.0000108	0.0001872	0.0035	0.72		1901.86	1901.86	No	134.29	Si
SLU 81	ini.	-173.02	-1408	-0.0001395	0.0001872	0.0035	0.72		1901.86	1901.86	No	10.99	Si
SLU 81	fin.	-14.12	-1242	-0.0000108	0.0001872	0.0035	0.72		1901.86	1901.86	No	134.67	Si
SLU 83	ini.	-174.36	-1433	-0.0001407	0.0001872	0.0035	0.72		1901.86	1901.86	No	10.91	Si
SLU 83	fin.	-18.91	-1279	-0.0000145	0.0001872	0.0035	0.72		1901.86	1901.86	No	100.57	Si
SLU 77	ini.	-167.32	-1388	-0.0001347	0.0001872	0.0035	0.72		1901.86	1901.86	No	11.37	Si
SLU 77	fin.	-18.55	-1256	-0.0000142	0.0001872	0.0035	0.72		1901.86	1901.86	No	102.54	Si
SLU 82	ini.	-172.94	-1408	-0.0001395	0.0001872	0.0035	0.72		1901.86	1901.86	No	11	Si
SLU 82	fin.	-14.53	-1244	-0.0000111	0.0001872	0.0035	0.72		1901.86	1901.86	No	130.92	Si
SLU 74	ini.	-165.99	-1362	-0.0001335	0.0001872	0.0035	0.72		1901.86	1901.86	No	11.46	Si
SLU 74	fin.	-13.76	-1219	-0.0000105	0.0001872	0.0035	0.72		1901.86	1901.86	No	138.23	Si
SLU 79	ini.	-162.43	-1348	-0.0001305	0.0001872	0.0035	0.72		1901.86	1901.86	No	11.71	Si
SLU 79	fin.	-18	-1223	-0.0000138	0.0001872	0.0035	0.72		1901.86	1901.86	No	105.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-167.32	2128	0.72	0	292	3965	3018	1836	4257	No	2	Si
SLU 77	fin.	-18.55	-193	0.72	0	292	3965	3018	1836	4257	No	22.02	Si
SLU 74	ini.	-165.99	2076	0.72	0	292	3965	3018	1836	4257	No	2.05	Si
SLU 74	fin.	-13.76	-159	0.72	0	292	3965	3018	1836	4257	No	26.78	Si
SLU 79	ini.	-162.43	2082	0.72	0	292	3965	3018	1836	4257	No	2.04	Si
SLU 79	fin.	-18	-198	0.72	0	292	3965	3018	1836	4257	No	21.55	Si
SLU 75	ini.	-165.91	2079	0.72	0	292	3965	3018	1836	4257	No	2.05	Si
SLU 75	fin.	-14.16	-162	0.72	0	292	3965	3018	1836	4257	No	26.21	Si
SLU 84	ini.	-174.28	2124	0.72	0	292	3965	3018	1836	4257	No	2	Si
SLU 84	fin.	-19.32	-158	0.72	0	292	3965	3018	1836	4257	No	27.01	Si
SLU 80	ini.	-162.36	2084	0.72	0	292	3965	3018	1836	4257	No	2.04	Si
SLU 80	fin.	-18.4	-201	0.72	0	292	3965	3018	1836	4257	No	21.17	Si
SLU 81	ini.	-173.02	2069	0.72	0	292	3965	3018	1836	4257	No	2.06	Si
SLU 81	fin.	-14.12	-120	0.72	0	292	3965	3018	1836	4257	No	35.55	Si
SLU 78	ini.	-167.24	2131	0.72	0	292	3965	3018	1836	4257	No	2	Si
SLU 78	fin.	-18.95	-197	0.72	0	292	3965	3018	1836	4257	No	21.63	Si
SLU 83	ini.	-174.36	2121	0.72	0	292	3965	3018	1836	4257	No	2.01	Si
SLU 83	fin.	-18.91	-154	0.72	0	292	3965	3018	1836	4257	No	27.62	Si
SLU 82	ini.	-172.94	2072	0.72	0	292	3965	3018	1836	4257	No	2.05	Si
SLU 82	fin.	-14.53	-123	0.72	0	292	3965	3018	1836	4257	No	34.55	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-242.26	-3056	-0.0001958	0.0002807	0.0035	0.72		1917.1	1917.1		7.91	Si
SLV 1	fin.	-643.1	-3246	-0.0005949	0.0002807	0.0035	0.72		1917.1	1917.1		2.98	Si
SLV 14	ini.	25.55	1248	-0.0000196	0.0002807	0.0035	0.72		1912.43	1912.43		74.86	Si
SLV 14	fin.	594.46	1606	-0.000542	0.0002807	0.0035	0.72		1912.43	1912.43		3.22	Si
SLD 2	ini.	-163.53	-1836	-0.0001295	0.0002807	0.0035	0.72		1917.1	1917.1		11.72	Si
SLD 2	fin.	-298.87	-1892	-0.0002455	0.0002807	0.0035	0.72		1917.1	1917.1		6.41	Si
SLV 16	ini.	35.49	1381	-0.0000273	0.0002807	0.0035	0.72		1912.43	1912.43		53.89	Si
SLV 16	fin.	642.55	1752	-0.000596	0.0002807	0.0035	0.72		1912.43	1912.43		2.98	Si
SLD 15	ini.	-43.25	160	-0.0000333	0.0002807	0.0035	0.72		1917.1	1917.1		44.33	Si
SLD 15	fin.	298.31	398	-0.0002456	0.0002807	0.0035	0.72		1912.43	1912.43		6.41	Si
SLV 4	ini.	-234.01	-3038	-0.0001887	0.0002807	0.0035	0.72		1917.1	1917.1		8.19	Si
SLV 4	fin.	-650.45	-3279	-0.0006033	0.0002807	0.0035	0.72		1917.1	1917.1		2.95	Si
SLV 3	ini.	-232.32	-2923	-0.0001873	0.0002807	0.0035	0.72		1917.1	1917.1		8.25	Si
SLV 3	fin.	-595.02	-3101	-0.0005412	0.0002807	0.0035	0.72		1917.1	1917.1		3.22	Si
SLV 15	ini.	37.17	1495	-0.0000286	0.0002807	0.0035	0.72		1912.43	1912.43		51.45	Si
SLV 15	fin.	697.98	1929	-0.0006601	0.0002807	0.0035	0.72		1912.43	1912.43		2.74	Si
SLV 2	ini.	-243.95	-3170	-0.0001973	0.0002807	0.0035	0.72		1917.1	1917.1		7.86	Si
SLV 2	fin.	-698.53	-3424	-0.0006589	0.0002807	0.0035	0.72		1917.1	1917.1		2.74	Si
SLV 13	ini.	27.23	1363	-0.0000209	0.0002807	0.0035	0.72		1912.43	1912.43		70.23	Si
SLV 13	fin.	649.89	1784	-0.0006043	0.0002807	0.0035	0.72		1912.43	1912.43		2.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-47.61	1664	0.72	0	438	3965	4528	1836	4403		2.65	Si
SLD 13	fin.	277.39	547	0.72	0	438	3965	4528	1836	4403		8.05	Si
SLD 16	ini.	-43.97	1727	0.72	0	438	3965	4528	1836	4403		2.55	Si
SLD 16	fin.	274.52	428	0.72	0	438	3965	4528	1836	4403		10.28	Si
SLV 13	ini.	27.23	2070	0.72	0	438	3965	4528	1836	4403		2.13	Si
SLV 13	fin.	649.89	1429	0.72	0	438	3965	4528	1836	4403		3.08	Si
SLV 15	ini.	37.17	2292	0.72	0	438	3965	4528	1836	4403		1.92	Si
SLV 15	fin.	697.98	1321	0.72	0	438	3965	4528	1836	4403		3.33	Si
SLV 16	ini.	35.49	2208	0.72	0	438	3965	4528	1836	4403		1.99	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	fin.	642.55	1152	0.72	0	438	3965	4528	1836	4403		3.82	Si
SLV 14	ini.	25.55	1987	0.72	0	438	3965	4528	1836	4403		2.22	Si
SLV 14	fin.	594.46	1260	0.72	0	438	3965	4528	1836	4403		3.5	Si
SLV 11	ini.	-45.85	1993	0.72	0	438	3965	4528	1836	4403		2.21	Si
SLV 11	fin.	291.62	185	0.72	0	438	3965	4528	1836	4403		23.86	Si
SLD 15	ini.	-43.25	1762	0.72	0	438	3965	4528	1836	4403		2.5	Si
SLD 15	fin.	298.31	501	0.72	0	438	3965	4528	1836	4403		8.79	Si
SLV 12	ini.	-46.94	1940	0.72	0	438	3965	4528	1836	4403		2.27	Si
SLV 12	fin.	256	76	0.72	0	438	3965	4528	1836	4403		58.04	Si
SLV 4	ini.	-234.01	659	0.72	0	438	3965	4528	1836	4403		6.68	Si
SLV 4	fin.	-650.45	-1651	0.72	0	438	3965	4528	1836	4403		2.67	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.74	SLV 15	Si
V_SLV	1.921	SLV 15	Si
PF_SLU	10.908	SLU 83	Si
V_SLU	1.998	SLU 78	Si

Trave di accoppiamento 107

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	8.34	9.24	0.9	-18.263	-3.314	8.34	9.24	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 41	ini.	292.24	-1251	-0.0001521	0.0001872	0.0035	0.9		2959	2959	No	10.13	Si
SLU 41	fin.	-1.39	-661	-0.0000007	0.0001872	0.0035	0.9		2964.67	2964.67	No	2132.04	Si
SLU 82	ini.	320.61	-1412	-0.0001681	0.0001872	0.0035	0.9		2959	2959	No	9.23	Si
SLU 82	fin.	10.39	-822	-0.0000051	0.0001872	0.0035	0.9		2959	2959	No	284.77	Si
SLU 42	ini.	292.42	-1252	-0.0001522	0.0001872	0.0035	0.9		2959	2959	No	10.12	Si
SLU 42	fin.	-1.07	-665	-0.0000005	0.0001872	0.0035	0.9		2964.67	2964.67	No	2782.18	Si
SLU 63	ini.	294.02	-1317	-0.0001531	0.0001872	0.0035	0.9		2959	2959	No	10.06	Si
SLU 63	fin.	18.53	-821	-0.0000091	0.0001872	0.0035	0.9		2959	2959	No	159.7	Si
SLU 61	ini.	293	-1290	-0.0001525	0.0001872	0.0035	0.9		2959	2959	No	10.1	Si
SLU 61	fin.	10.29	-763	-0.000005	0.0001872	0.0035	0.9		2959	2959	No	287.5	Si
SLU 60	ini.	292.82	-1289	-0.0001524	0.0001872	0.0035	0.9		2959	2959	No	10.11	Si
SLU 60	fin.	9.97	-759	-0.0000049	0.0001872	0.0035	0.9		2959	2959	No	296.88	Si
SLU 62	ini.	293.84	-1315	-0.000153	0.0001872	0.0035	0.9		2959	2959	No	10.07	Si
SLU 62	fin.	18.2	-818	-0.0000089	0.0001872	0.0035	0.9		2959	2959	No	162.55	Si
SLU 81	ini.	320.43	-1410	-0.000168	0.0001872	0.0035	0.9		2959	2959	No	9.23	Si
SLU 81	fin.	10.07	-818	-0.0000049	0.0001872	0.0035	0.9		2959	2959	No	293.96	Si
SLU 83	ini.	321.45	-1437	-0.0001686	0.0001872	0.0035	0.9		2959	2959	No	9.21	Si
SLU 83	fin.	18.3	-876	-0.000009	0.0001872	0.0035	0.9		2959	2959	No	161.68	Si
SLU 84	ini.	321.63	-1439	-0.0001687	0.0001872	0.0035	0.9		2959	2959	No	9.2	Si
SLU 84	fin.	18.63	-880	-0.0000091	0.0001872	0.0035	0.9		2959	2959	No	158.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	290.13	-2083	0.9	0	365	7137	3773	2295	6068	No	2.91	Si
SLU 78	fin.	48.16	1864	0.9	0	365	7137	3773	2295	6068	No	3.25	Si
SLU 77	ini.	289.95	-2080	0.9	0	365	7137	3773	2295	6068	No	2.92	Si
SLU 77	fin.	47.84	1856	0.9	0	365	7137	3773	2295	6068	No	3.27	Si
SLU 72	ini.	187.96	-1573	0.9	0	365	7137	3773	2295	6068	No	3.86	Si
SLU 72	fin.	102.34	2078	0.9	0	365	7137	3773	2295	6068	No	2.92	Si
SLU 84	ini.	321.63	-2188	0.9	0	365	7137	3773	2295	6068	No	2.77	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	fin.	18.63	1645	0.9	0	365	7137	3773	2295	6068	No	3.69	Si
SLU 70	ini.	195.85	-1626	0.9	0	365	7137	3773	2295	6068	No	3.73	Si
SLU 70	fin.	101	2096	0.9	0	365	7137	3773	2295	6068	No	2.89	Si
SLU 81	ini.	320.43	-2148	0.9	0	365	7137	3773	2295	6068	No	2.83	Si
SLU 81	fin.	10.07	1535	0.9	0	365	7137	3773	2295	6068	No	3.95	Si
SLU 69	ini.	195.67	-1623	0.9	0	365	7137	3773	2295	6068	No	3.74	Si
SLU 69	fin.	100.67	2088	0.9	0	365	7137	3773	2295	6068	No	2.91	Si
SLU 71	ini.	187.78	-1570	0.9	0	365	7137	3773	2295	6068	No	3.87	Si
SLU 71	fin.	102.02	2070	0.9	0	365	7137	3773	2295	6068	No	2.93	Si
SLU 82	ini.	320.61	-2151	0.9	0	365	7137	3773	2295	6068	No	2.82	Si
SLU 82	fin.	10.39	1543	0.9	0	365	7137	3773	2295	6068	No	3.93	Si
SLU 83	ini.	321.45	-2185	0.9	0	365	7137	3773	2295	6068	No	2.78	Si
SLU 83	fin.	18.3	1637	0.9	0	365	7137	3773	2295	6068	No	3.71	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1565.89	2850	-0.0010511	0.0002807	0.0035	0.9		2995.37	2995.37		1.91	Si
SLV 15	fin.	1250.67	-5202	-0.000785	0.0002807	0.0035	0.9		2989.59	2989.59		2.39	Si
SLV 4	ini.	1748.19	-4550	-0.0012262	0.0002807	0.0035	0.9		2989.59	2989.59		1.71	Si
SLV 4	fin.	-1005.77	2997	-0.0005964	0.0002807	0.0035	0.9		2995.37	2995.37		2.98	Si
SLV 3	ini.	1646.12	-4323	-0.0011279	0.0002807	0.0035	0.9		2989.59	2989.59		1.82	Si
SLV 3	fin.	-934.17	2742	-0.000545	0.0002807	0.0035	0.9		2995.37	2995.37		3.21	Si
SLV 2	ini.	1893.39	-4578	-0.0013749	0.0002807	0.0035	0.9		2989.59	2989.59		1.58	Si
SLV 2	fin.	-1149.29	3696	-0.0007037	0.0002807	0.0035	0.9		2995.37	2995.37		2.61	Si
SLV 1	ini.	1791.32	-4351	-0.0012692	0.0002807	0.0035	0.9		2989.59	2989.59		1.67	Si
SLV 1	fin.	-1077.69	3440	-0.0006495	0.0002807	0.0035	0.9		2995.37	2995.37		2.78	Si
SLV 14	ini.	-1318.62	2596	-0.0008381	0.0002807	0.0035	0.9		2995.37	2995.37		2.27	Si
SLV 14	fin.	1035.54	-4248	-0.0006196	0.0002807	0.0035	0.9		2989.59	2989.59		2.89	Si
SLD 2	ini.	903.38	-2451	-0.0005245	0.0002807	0.0035	0.9		2989.59	2989.59		3.31	Si
SLD 2	fin.	-462.96	1152	-0.0002435	0.0002807	0.0035	0.9		2995.37	2995.37		6.47	Si
SLV 6	ini.	920.35	-2058	-0.0005365	0.0002807	0.0035	0.9		2989.59	2989.59		3.25	Si
SLV 6	fin.	-539.25	1685	-0.000288	0.0002807	0.0035	0.9		2995.37	2995.37		5.55	Si
SLV 13	ini.	-1420.69	2823	-0.0009235	0.0002807	0.0035	0.9		2995.37	2995.37		2.11	Si
SLV 13	fin.	1107.15	-4504	-0.0006732	0.0002807	0.0035	0.9		2989.59	2989.59		2.7	Si
SLV 16	ini.	-1463.82	2623	-0.0009606	0.0002807	0.0035	0.9		2995.37	2995.37		2.05	Si
SLV 16	fin.	1179.06	-4947	-0.0007285	0.0002807	0.0035	0.9		2989.59	2989.59		2.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1420.69	6147	0.9	0	548	7137	5660	2295	7684		1.25	Si
SLV 13	fin.	1107.15	6784	0.9	0	548	7137	5660	2295	7684		1.13	Si
SLV 4	ini.	1748.19	-8627	0.9	0	548	7137	5660	2295	7684		0.89	No
SLV 4	fin.	-1005.77	-4092	0.9	0	548	7137	5660	2295	7684		1.88	Si
SLV 14	ini.	-1318.62	5680	0.9	0	548	7137	5660	2295	7684		1.35	Si
SLV 14	fin.	1035.54	6431	0.9	0	548	7137	5660	2295	7684		1.19	Si
SLV 2	ini.	1893.39	-8966	0.9	0	548	7137	5660	2295	7684		0.86	No
SLV 2	fin.	-1149.29	-5197	0.9	0	548	7137	5660	2295	7684		1.48	Si
SLV 16	ini.	-1463.82	6019	0.9	0	548	7137	5660	2295	7684		1.28	Si
SLV 16	fin.	1179.06	7537	0.9	0	548	7137	5660	2295	7684		1.02	Si
SLV 11	ini.	-592.85	1672	0.9	0	548	7137	5660	2295	7684		4.6	Si
SLV 11	fin.	640.62	5046	0.9	0	548	7137	5660	2295	7684		1.52	Si
SLV 3	ini.	1646.12	-8160	0.9	0	548	7137	5660	2295	7684		0.94	No
SLV 3	fin.	-934.17	-3739	0.9	0	548	7137	5660	2295	7684		2.06	Si
SLV 1	ini.	1791.32	-8499	0.9	0	548	7137	5660	2295	7684		0.9	No
SLV 1	fin.	-1077.69	-4844	0.9	0	548	7137	5660	2295	7684		1.59	Si
SLV 12	ini.	-527.25	1372	0.9	0	548	7137	5660	2295	7684		5.6	Si
SLV 12	fin.	594.6	4820	0.9	0	548	7137	5660	2295	7684		1.59	Si
SLV 15	ini.	-1565.89	6486	0.9	0	548	7137	5660	2295	7684		1.18	Si
SLV 15	fin.	1250.67	7890	0.9	0	548	7137	5660	2295	7684		0.97	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.579	SLV 2	Si
V_SLV	0.857	SLV 2	No
PF_SLU	9.2	SLU 84	Si
V_SLU	2.773	SLU 84	Si

Trave di accoppiamento 108

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	11.04	11.86	0.82	-18.263	-3.314	11.04	11.86	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	65.69	-154	-0.0000393	0.0001872	0.0035	0.82		2455.37	2455.37	No	37.38	Si
SLU 79	fin.	-294.79	-1579	-0.0001875	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.35	Si
SLU 84	ini.	83.63	-108	-0.0000503	0.0001872	0.0035	0.82		2455.37	2455.37	No	29.36	Si
SLU 84	fin.	-316.09	-1682	-0.0002025	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.78	Si
SLU 75	ini.	71.81	-135	-0.000043	0.0001872	0.0035	0.82		2455.37	2455.37	No	34.19	Si
SLU 75	fin.	-297.66	-1592	-0.0001895	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.27	Si
SLU 77	ini.	71.79	-147	-0.000043	0.0001872	0.0035	0.82		2455.37	2455.37	No	34.2	Si
SLU 77	fin.	-304.95	-1628	-0.0001946	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.07	Si
SLU 74	ini.	73.08	-130	-0.0000438	0.0001872	0.0035	0.82		2455.37	2455.37	No	33.6	Si
SLU 74	fin.	-297.85	-1593	-0.0001896	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.26	Si
SLU 81	ini.	86.19	-87	-0.0000518	0.0001872	0.0035	0.82		2455.37	2455.37	No	28.49	Si
SLU 81	fin.	-309.2	-1647	-0.0001976	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.96	Si
SLU 82	ini.	84.93	-92	-0.0000511	0.0001872	0.0035	0.82		2455.37	2455.37	No	28.91	Si
SLU 82	fin.	-309	-1647	-0.0001974	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.96	Si
SLU 78	ini.	70.52	-151	-0.0000422	0.0001872	0.0035	0.82		2455.37	2455.37	No	34.82	Si
SLU 78	fin.	-304.75	-1627	-0.0001945	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.07	Si
SLU 83	ini.	84.9	-104	-0.000051	0.0001872	0.0035	0.82		2455.37	2455.37	No	28.92	Si
SLU 83	fin.	-316.29	-1682	-0.0002026	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.78	Si
SLU 80	ini.	64.42	-159	-0.0000385	0.0001872	0.0035	0.82		2455.37	2455.37	No	38.12	Si
SLU 80	fin.	-294.59	-1579	-0.0001874	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	71.81	250	0.82	0	303	6502	3438	2091	5529	No	22.08	Si
SLU 75	fin.	-297.66	-3052	0.82	0	303	6502	3438	2091	5529	No	1.81	Si
SLU 84	ini.	83.63	160	0.82	0	303	6502	3438	2091	5529	No	34.58	Si
SLU 84	fin.	-316.09	-3180	0.82	0	303	6502	3438	2091	5529	No	1.74	Si
SLU 77	ini.	71.79	268	0.82	0	303	6502	3438	2091	5529	No	20.63	Si
SLU 77	fin.	-304.95	-3136	0.82	0	303	6502	3438	2091	5529	No	1.76	Si
SLU 81	ini.	86.19	120	0.82	0	303	6502	3438	2091	5529	No	45.92	Si
SLU 81	fin.	-309.2	-3090	0.82	0	303	6502	3438	2091	5529	No	1.79	Si
SLU 83	ini.	84.9	149	0.82	0	303	6502	3438	2091	5529	No	37.12	Si
SLU 83	fin.	-316.29	-3177	0.82	0	303	6502	3438	2091	5529	No	1.74	Si
SLU 79	ini.	65.69	312	0.82	0	303	6502	3438	2091	5529	No	17.71	Si
SLU 79	fin.	-294.79	-3068	0.82	0	303	6502	3438	2091	5529	No	1.8	Si
SLU 80	ini.	64.42	323	0.82	0	303	6502	3438	2091	5529	No	17.11	Si
SLU 80	fin.	-294.59	-3071	0.82	0	303	6502	3438	2091	5529	No	1.8	Si
SLU 74	ini.	73.08	240	0.82	0	303	6502	3438	2091	5529	No	23.08	Si
SLU 74	fin.	-297.85	-3048	0.82	0	303	6502	3438	2091	5529	No	1.81	Si
SLU 78	ini.	70.52	279	0.82	0	303	6502	3438	2091	5529	No	19.82	Si
SLU 78	fin.	-304.75	-3139	0.82	0	303	6502	3438	2091	5529	No	1.76	Si
SLU 82	ini.	84.93	131	0.82	0	303	6502	3438	2091	5529	No	42.1	Si
SLU 82	fin.	-309	-3093	0.82	0	303	6502	3438	2091	5529	No	1.79	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	ini.	347.64	525	-0.0002189	0.0002807	0.0035	0.82		2482.11	2482.11		7.14	Si
SLD 2	fin.	-625.42	-2629	-0.0004218	0.0002807	0.0035	0.82		2487.45	2487.45		3.98	Si
SLV 1	ini.	730.45	1312	-0.0005083	0.0002807	0.0035	0.82		2482.11	2482.11		3.4	Si
SLV 1	fin.	-1164.57	-4638	-0.0009083	0.0002807	0.0035	0.82		2487.45	2487.45		2.14	Si
SLV 14	ini.	-506.6	-977	-0.0003308	0.0002807	0.0035	0.82		2487.45	2487.45		4.91	Si
SLV 14	fin.	726.37	2365	-0.0005049	0.0002807	0.0035	0.82		2482.11	2482.11		3.42	Si
SLV 4	ini.	607.12	798	-0.0004083	0.0002807	0.0035	0.82		2482.11	2482.11		4.09	Si
SLV 4	fin.	-1140.53	-4512	-0.000884	0.0002807	0.0035	0.82		2487.45	2487.45		2.18	Si
SLV 15	ini.	-710.24	-1654	-0.0004903	0.0002807	0.0035	0.82		2487.45	2487.45		3.5	Si
SLV 15	fin.	871.16	2923	-0.00063	0.0002807	0.0035	0.82		2482.11	2482.11		2.85	Si
SLV 6	ini.	507.14	1244	-0.000332	0.0002807	0.0035	0.82		2482.11	2482.11		4.89	Si
SLV 6	fin.	-629.68	-2687	-0.0004251	0.0002807	0.0035	0.82		2487.45	2487.45		3.95	Si
SLV 16	ini.	-670.09	-1572	-0.0004575	0.0002807	0.0035	0.82		2487.45	2487.45		3.71	Si
SLV 16	fin.	810.78	2707	-0.0005768	0.0002807	0.0035	0.82		2482.11	2482.11		3.06	Si
SLV 2	ini.	770.6	1394	-0.0005422	0.0002807	0.0035	0.82		2482.11	2482.11		3.22	Si
SLV 2	fin.	-1224.94	-4854	-0.0009709	0.0002807	0.0035	0.82		2487.45	2487.45		2.03	Si
SLV 3	ini.	566.97	716	-0.0003771	0.0002807	0.0035	0.82		2482.11	2482.11		4.38	Si
SLV 3	fin.	-1080.16	-4296	-0.0008239	0.0002807	0.0035	0.82		2487.45	2487.45		2.3	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-546.76	-1059	-0.0003609	0.0002807	0.0035	0.82		2487.45	2487.45		4.55	Si
SLV 13	fin.	786.75	2581	-0.000556	0.0002807	0.0035	0.82		2482.11	2482.11		3.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	566.97	-5010	0.82	0	455	6502	5156	2091	6957		1.39	Si
SLV 3	fin.	-1080.16	-5189	0.82	0	455	6502	5156	2091	6957		1.34	Si
SLV 2	ini.	770.6	-6521	0.82	0	455	6502	5156	2091	6957		1.07	Si
SLV 2	fin.	-1224.94	-5386	0.82	0	455	6502	5156	2091	6957		1.29	Si
SLV 4	ini.	607.12	-5323	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLV 4	fin.	-1140.53	-5461	0.82	0	455	6502	5156	2091	6957		1.27	Si
SLV 15	ini.	-710.24	7207	0.82	0	455	6502	5156	2091	6957		0.97	No
SLV 15	fin.	871.16	1533	0.82	0	455	6502	5156	2091	6957		4.54	Si
SLV 13	ini.	-546.76	6009	0.82	0	455	6502	5156	2091	6957		1.16	Si
SLV 13	fin.	786.75	1608	0.82	0	455	6502	5156	2091	6957		4.33	Si
SLV 16	ini.	-670.09	6894	0.82	0	455	6502	5156	2091	6957		1.01	Si
SLV 16	fin.	810.78	1261	0.82	0	455	6502	5156	2091	6957		5.52	Si
SLV 14	ini.	-506.6	5696	0.82	0	455	6502	5156	2091	6957		1.22	Si
SLV 14	fin.	726.37	1336	0.82	0	455	6502	5156	2091	6957		5.21	Si
SLV 12	ini.	-420.97	4072	0.82	0	455	6502	5156	2091	6957		1.71	Si
SLV 12	fin.	237.09	-1131	0.82	0	455	6502	5156	2091	6957		6.15	Si
SLV 1	ini.	730.45	-6208	0.82	0	455	6502	5156	2091	6957		1.12	Si
SLV 1	fin.	-1164.57	-5114	0.82	0	455	6502	5156	2091	6957		1.36	Si
SLV 11	ini.	-446.77	4273	0.82	0	455	6502	5156	2091	6957		1.63	Si
SLV 11	fin.	275.89	-956	0.82	0	455	6502	5156	2091	6957		7.28	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.031	SLV 2	Si
V_SLV	0.965	SLV 15	No
PF_SLU	7.779	SLU 83	Si
V_SLU	1.739	SLU 84	Si

Trave di accoppiamento 109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	10.44	11.86	1.42	-18.518	0.706	10.44	11.86	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	129.35	-222	-0.0000256	0.0002246	0.0035	1.42		7594.91	7594.91	No	58.72	Si
SLU 80	fin.	117.85	-194	-0.0000233	0.0002246	0.0035	1.42		7594.91	7594.91	No	64.45	Si
SLU 79	ini.	131.13	-221	-0.0000259	0.0002246	0.0035	1.42		7594.91	7594.91	No	57.92	Si
SLU 79	fin.	117.48	-193	-0.0000232	0.0002246	0.0035	1.42		7594.91	7594.91	No	64.65	Si
SLU 83	ini.	132.26	-222	-0.0000262	0.0002246	0.0035	1.42		7594.91	7594.91	No	57.43	Si
SLU 83	fin.	118.94	-201	-0.0000235	0.0002246	0.0035	1.42		7594.91	7594.91	No	63.86	Si
SLU 81	ini.	123.58	-214	-0.0000244	0.0002246	0.0035	1.42		7594.91	7594.91	No	61.46	Si
SLU 81	fin.	114.12	-194	-0.0000226	0.0002246	0.0035	1.42		7594.91	7594.91	No	66.55	Si
SLU 84	ini.	130.47	-224	-0.0000258	0.0002246	0.0035	1.42		7594.91	7594.91	No	58.21	Si
SLU 84	fin.	119.3	-201	-0.0000236	0.0002246	0.0035	1.42		7594.91	7594.91	No	63.66	Si
SLU 78	ini.	131.32	-228	-0.000026	0.0002246	0.0035	1.42		7594.91	7594.91	No	57.83	Si
SLU 78	fin.	120.93	-199	-0.0000239	0.0002246	0.0035	1.42		7594.91	7594.91	No	62.8	Si
SLU 77	ini.	133.1	-227	-0.0000263	0.0002246	0.0035	1.42		7594.91	7594.91	No	57.06	Si
SLU 77	fin.	120.57	-199	-0.0000238	0.0002246	0.0035	1.42		7594.91	7594.91	No	62.99	Si
SLU 74	ini.	124.43	-219	-0.0000246	0.0002246	0.0035	1.42		7594.91	7594.91	No	61.04	Si
SLU 74	fin.	115.75	-193	-0.0000229	0.0002246	0.0035	1.42		7594.91	7594.91	No	65.61	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	122.64	-220	-0.0000243	0.0002246	0.0035	1.42		7594.91	7594.91	No	61.93	Si
SLU 75	fin.	116.11	-193	-0.000023	0.0002246	0.0035	1.42		7594.91	7594.91	No	65.41	Si
SLU 82	ini.	121.8	-216	-0.0000241	0.0002246	0.0035	1.42		7594.91	7594.91	No	62.36	Si
SLU 82	fin.	114.48	-195	-0.0000226	0.0002246	0.0035	1.42		7594.91	7594.91	No	66.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 68	ini.	96.62	264	1.42	0	329	6344	4083	3621	6673	No	25.26	Si
SLU 68	fin.	98.62	-181	1.42	0	329	6344	4083	3621	6673	No	36.9	Si
SLU 72	ini.	106.49	259	1.42	0	329	6344	4083	3621	6673	No	25.81	Si
SLU 72	fin.	103.2	-187	1.42	0	329	6344	4083	3621	6673	No	35.77	Si
SLU 47	ini.	78.28	260	1.42	0	329	6344	4083	3621	6673	No	25.68	Si
SLU 47	fin.	79.43	-169	1.42	0	329	6344	4083	3621	6673	No	39.37	Si
SLU 67	ini.	99.78	263	1.42	0	329	6344	4083	3621	6673	No	25.36	Si
SLU 67	fin.	101.47	-182	1.42	0	329	6344	4083	3621	6673	No	36.69	Si
SLU 70	ini.	108.46	260	1.42	0	329	6344	4083	3621	6673	No	25.68	Si
SLU 70	fin.	106.29	-185	1.42	0	329	6344	4083	3621	6673	No	36.03	Si
SLU 44	ini.	69.6	263	1.42	0	329	6344	4083	3621	6673	No	25.36	Si
SLU 44	fin.	74.61	-166	1.42	0	329	6344	4083	3621	6673	No	40.15	Si
SLU 65	ini.	87.94	268	1.42	0	329	6344	4083	3621	6673	No	24.94	Si
SLU 65	fin.	93.8	-178	1.42	0	329	6344	4083	3621	6673	No	37.59	Si
SLU 46	ini.	81.44	259	1.42	0	329	6344	4083	3621	6673	No	25.78	Si
SLU 46	fin.	82.28	-171	1.42	0	329	6344	4083	3621	6673	No	39.12	Si
SLU 64	ini.	90.91	261	1.42	0	329	6344	4083	3621	6673	No	25.52	Si
SLU 64	fin.	93.2	-184	1.42	0	329	6344	4083	3621	6673	No	36.35	Si
SLU 66	ini.	101.56	260	1.42	0	329	6344	4083	3621	6673	No	25.71	Si
SLU 66	fin.	101.11	-186	1.42	0	329	6344	4083	3621	6673	No	35.97	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	195.32	415	-0.0000387	0.0003369	0.0035	1.42		7808.98	7808.98		39.98	Si
SLV 8	fin.	569.26	53	-0.000115	0.0003369	0.0035	1.42		7808.98	7808.98		13.72	Si
SLV 6	ini.	6.74	-668	-0.0000013	0.0003369	0.0035	1.42		7808.98	7808.98		1158.39	Si
SLV 6	fin.	-331.9	-209	-0.0000661	0.0003369	0.0035	1.42		7818.07	7818.07		23.56	Si
SLV 12	ini.	130.32	381	-0.0000257	0.0003369	0.0035	1.42		7808.98	7808.98		59.92	Si
SLV 12	fin.	475.4	-25	-0.0000956	0.0003369	0.0035	1.42		7808.98	7808.98		16.43	Si
SLV 3	ini.	215.14	84	-0.0000427	0.0003369	0.0035	1.42		7808.98	7808.98		36.3	Si
SLV 3	fin.	363.13	55	-0.0000726	0.0003369	0.0035	1.42		7808.98	7808.98		21.5	Si
SLV 9	ini.	-50.44	-695	-0.0000099	0.0003369	0.0035	1.42		7818.07	7818.07		154.98	Si
SLV 9	fin.	-425.95	-285	-0.0000853	0.0003369	0.0035	1.42		7818.07	7818.07		18.35	Si
SLV 5	ini.	14.56	-662	-0.0000029	0.0003369	0.0035	1.42		7808.98	7808.98		536.44	Si
SLV 5	fin.	-332.08	-207	-0.0000662	0.0003369	0.0035	1.42		7818.07	7818.07		23.54	Si
SLV 4	ini.	202.98	74	-0.0000402	0.0003369	0.0035	1.42		7808.98	7808.98		38.47	Si
SLV 4	fin.	363.42	52	-0.0000726	0.0003369	0.0035	1.42		7808.98	7808.98		21.49	Si
SLV 7	ini.	203.13	422	-0.0000403	0.0003369	0.0035	1.42		7808.98	7808.98		38.44	Si
SLV 7	fin.	569.08	55	-0.000115	0.0003369	0.0035	1.42		7808.98	7808.98		13.72	Si
SLV 10	ini.	-58.26	-702	-0.0000114	0.0003369	0.0035	1.42		7818.07	7818.07		134.19	Si
SLV 10	fin.	-425.77	-287	-0.0000853	0.0003369	0.0035	1.42		7818.07	7818.07		18.36	Si
SLV 11	ini.	138.13	388	-0.0000273	0.0003369	0.0035	1.42		7808.98	7808.98		56.53	Si
SLV 11	fin.	475.21	-23	-0.0000955	0.0003369	0.0035	1.42		7808.98	7808.98		16.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 11	ini.	99.57	450	1.42	0	494	6344	6124	3621	6838		15.19	Si
SLD 11	fin.	246.03	96	1.42	0	494	6344	6124	3621	6838		70.98	Si
SLV 6	ini.	6.74	-383	1.42	0	494	6344	6124	3621	6838		17.84	Si
SLV 6	fin.	-331.9	-688	1.42	0	494	6344	6124	3621	6838		9.94	Si
SLV 7	ini.	203.13	753	1.42	0	494	6344	6124	3621	6838		9.08	Si
SLV 7	fin.	569.08	454	1.42	0	494	6344	6124	3621	6838		15.07	Si
SLV 10	ini.	-58.26	-364	1.42	0	494	6344	6124	3621	6838		18.8	Si
SLV 10	fin.	-425.77	-742	1.42	0	494	6344	6124	3621	6838		9.21	Si
SLV 9	ini.	-50.44	-378	1.42	0	494	6344	6124	3621	6838		18.1	Si
SLV 9	fin.	-425.95	-756	1.42	0	494	6344	6124	3621	6838		9.04	Si
SLV 12	ini.	130.32	787	1.42	0	494	6344	6124	3621	6838		8.69	Si
SLV 12	fin.	475.4	413	1.42	0	494	6344	6124	3621	6838		16.55	Si
SLV 8	ini.	195.32	767	1.42	0	494	6344	6124	3621	6838		8.91	Si
SLV 8	fin.	569.26	468	1.42	0	494	6344	6124	3621	6838		14.62	Si
SLV 5	ini.	14.56	-397	1.42	0	494	6344	6124	3621	6838		17.21	Si
SLV 5	fin.	-332.08	-702	1.42	0	494	6344	6124	3621	6838		9.75	Si
SLD 12	ini.	96.16	456	1.42	0	494	6344	6124	3621	6838		14.99	Si
SLD 12	fin.	246.11	102	1.42	0	494	6344	6124	3621	6838		66.77	Si
SLV 11	ini.	138.13	773	1.42	0	494	6344	6124	3621	6838		8.85	Si
SLV 11	fin.	475.21	399	1.42	0	494	6344	6124	3621	6838		17.12	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	13.718	SLV 8	Si
V_SLV	8.692	SLV 12	Si
PF_SLU	57.06	SLU 77	Si
V_SLU	24.943	SLU 65	Si

Trave di accoppiamento 111

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	10.44	11.86	1.42	-16.333	-3.314	10.44	11.86	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 67	ini.	-834.13	-2346	-0.0001758	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.82	Si
SLU 67	fin.	523.38	-1530	-0.0001071	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.04	Si
SLU 71	ini.	-862.1	-2403	-0.0001822	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.54	Si
SLU 71	fin.	543.72	-1570	-0.0001115	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.52	Si
SLU 72	ini.	-863.33	-2410	-0.0001825	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.53	Si
SLU 72	fin.	542.26	-1578	-0.0001112	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.56	Si
SLU 69	ini.	-870.48	-2450	-0.0001841	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.46	Si
SLU 69	fin.	556.89	-1599	-0.0001144	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.2	Si
SLU 64	ini.	-786.98	-2180	-0.000165	0.0001872	0.0035	1.42		7359.91	7359.91	No	9.35	Si
SLU 64	fin.	479.62	-1418	-0.0000978	0.0001872	0.0035	1.42		7350.79	7350.79	No	15.33	Si
SLU 49	ini.	-776.16	-2222	-0.0001626	0.0001872	0.0035	1.42		7359.91	7359.91	No	9.48	Si
SLU 49	fin.	487.61	-1474	-0.0000995	0.0001872	0.0035	1.42		7350.79	7350.79	No	15.08	Si
SLU 66	ini.	-832.91	-2338	-0.0001755	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.84	Si
SLU 66	fin.	524.84	-1523	-0.0001075	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.01	Si
SLU 68	ini.	-826.58	-2304	-0.000174	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.9	Si
SLU 68	fin.	509.23	-1507	-0.0001041	0.0001872	0.0035	1.42		7350.79	7350.79	No	14.44	Si
SLU 70	ini.	-871.7	-2457	-0.0001844	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.44	Si
SLU 70	fin.	555.43	-1607	-0.000114	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.23	Si
SLU 65	ini.	-789.01	-2193	-0.0001655	0.0001872	0.0035	1.42		7359.91	7359.91	No	9.33	Si
SLU 65	fin.	477.18	-1430	-0.0000973	0.0001872	0.0035	1.42		7350.79	7350.79	No	15.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	ini.	-863.33	2941	1.42	0	576	7137	5953	3621	7713	No	2.62	Si
SLU 72	fin.	542.26	1492	1.42	0	576	7137	5953	3621	7713	No	5.17	Si
SLU 71	ini.	-862.1	2942	1.42	0	576	7137	5953	3621	7713	No	2.62	Si
SLU 71	fin.	543.72	1493	1.42	0	576	7137	5953	3621	7713	No	5.17	Si
SLU 79	ini.	-703.3	2827	1.42	0	576	7137	5953	3621	7713	No	2.73	Si
SLU 79	fin.	477.87	1103	1.42	0	576	7137	5953	3621	7713	No	6.99	Si
SLU 68	ini.	-826.58	2836	1.42	0	576	7137	5953	3621	7713	No	2.72	Si
SLU 68	fin.	509.23	1387	1.42	0	576	7137	5953	3621	7713	No	5.56	Si
SLU 67	ini.	-834.13	2874	1.42	0	576	7137	5953	3621	7713	No	2.68	Si
SLU 67	fin.	523.38	1425	1.42	0	576	7137	5953	3621	7713	No	5.41	Si
SLU 77	ini.	-711.67	2865	1.42	0	576	7137	5953	3621	7713	No	2.69	Si
SLU 77	fin.	491.04	1141	1.42	0	576	7137	5953	3621	7713	No	6.76	Si
SLU 70	ini.	-871.7	2979	1.42	0	576	7137	5953	3621	7713	No	2.59	Si
SLU 70	fin.	555.43	1530	1.42	0	576	7137	5953	3621	7713	No	5.04	Si
SLU 66	ini.	-832.91	2875	1.42	0	576	7137	5953	3621	7713	No	2.68	Si
SLU 66	fin.	524.84	1426	1.42	0	576	7137	5953	3621	7713	No	5.41	Si
SLU 78	ini.	-712.89	2865	1.42	0	576	7137	5953	3621	7713	No	2.69	Si
SLU 78	fin.	489.58	1140	1.42	0	576	7137	5953	3621	7713	No	6.76	Si
SLU 69	ini.	-870.48	2980	1.42	0	576	7137	5953	3621	7713	No	2.59	Si
SLU 69	fin.	556.89	1531	1.42	0	576	7137	5953	3621	7713	No	5.04	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	2579.53	618	-0.0006188	0.0002807	0.0035	1.42		7337.02	7337.02		2.84	Si
SLV 3	fin.	-2685.24	-1392	-0.0006493	0.0002807	0.0035	1.42		7346.34	7346.34		2.74	Si
SLV 15	ini.	-4097.24	-4716	-0.0011231	0.0002807	0.0035	1.42		7346.34	7346.34		1.79	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	fin.	3328.94	-1468	-0.0008535	0.0002807	0.0035	1.42		7337.02	7337.02		2.2	Si
SLV 2	ini.	3019.25	1522	-0.0007532	0.0002807	0.0035	1.42		7337.02	7337.02		2.43	Si
SLV 2	fin.	-2658.51	-600	-0.0006413	0.0002807	0.0035	1.42		7346.34	7346.34		2.76	Si
SLV 11	ini.	-2009.75	-3711	-0.0004569	0.0002807	0.0035	1.42		7346.34	7346.34		3.66	Si
SLV 11	fin.	939.05	-2369	-0.0001953	0.0002807	0.0035	1.42		7337.02	7337.02		7.81	Si
SLV 16	ini.	-3901.29	-4573	-0.0010507	0.0002807	0.0035	1.42		7346.34	7346.34		1.88	Si
SLV 16	fin.	3140.33	-1470	-0.0007919	0.0002807	0.0035	1.42		7337.02	7337.02		2.34	Si
SLV 14	ini.	-3657.53	-3812	-0.0009639	0.0002807	0.0035	1.42		7346.34	7346.34		2.01	Si
SLV 14	fin.	3355.67	-676	-0.0008624	0.0002807	0.0035	1.42		7337.02	7337.02		2.19	Si
SLV 13	ini.	-3853.49	-3956	-0.0010334	0.0002807	0.0035	1.42		7346.34	7346.34		1.91	Si
SLV 13	fin.	3544.28	-674	-0.0009262	0.0002807	0.0035	1.42		7337.02	7337.02		2.07	Si
SLD 15	ini.	-2061.69	-2934	-0.000471	0.0002807	0.0035	1.42		7346.34	7346.34		3.56	Si
SLD 15	fin.	1614.23	-1223	-0.0003545	0.0002807	0.0035	1.42		7337.02	7337.02		4.55	Si
SLV 4	ini.	2775.49	762	-0.0006776	0.0002807	0.0035	1.42		7337.02	7337.02		2.64	Si
SLV 4	fin.	-2873.85	-1394	-0.0007067	0.0002807	0.0035	1.42		7346.34	7346.34		2.56	Si
SLV 1	ini.	2823.29	1378	-0.0006922	0.0002807	0.0035	1.42		7337.02	7337.02		2.6	Si
SLV 1	fin.	-2469.9	-598	-0.0005857	0.0002807	0.0035	1.42		7346.34	7346.34		2.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	3019.25	-7435	1.42	0	864	7137	8929	3621	8001		1.08	Si
SLV 2	fin.	-2658.51	-8421	1.42	0	864	7137	8929	3621	8001		0.95	No
SLV 3	ini.	2579.53	-6599	1.42	0	864	7137	8929	3621	8001		1.21	Si
SLV 3	fin.	-2685.24	-7862	1.42	0	864	7137	8929	3621	8001		1.02	Si
SLD 15	ini.	-2061.69	6013	1.42	0	864	7137	8929	3621	8001		1.33	Si
SLD 15	fin.	1614.23	4804	1.42	0	864	7137	8929	3621	8001		1.67	Si
SLV 13	ini.	-3853.49	11109	1.42	0	864	7137	8929	3621	8001		0.72	No
SLV 13	fin.	3544.28	10092	1.42	0	864	7137	8929	3621	8001		0.79	No
SLV 16	ini.	-3901.29	10861	1.42	0	864	7137	8929	3621	8001		0.74	No
SLV 16	fin.	3140.33	9568	1.42	0	864	7137	8929	3621	8001		0.84	No
SLV 14	ini.	-3657.53	10567	1.42	0	864	7137	8929	3621	8001		0.76	No
SLV 14	fin.	3355.67	9550	1.42	0	864	7137	8929	3621	8001		0.84	No
SLV 15	ini.	-4097.24	11403	1.42	0	864	7137	8929	3621	8001		0.7	No
SLV 15	fin.	3328.94	10109	1.42	0	864	7137	8929	3621	8001		0.79	No
SLV 4	ini.	2775.49	-7141	1.42	0	864	7137	8929	3621	8001		1.12	Si
SLV 4	fin.	-2873.85	-8404	1.42	0	864	7137	8929	3621	8001		0.95	No
SLD 13	ini.	-1954.01	5882	1.42	0	864	7137	8929	3621	8001		1.36	Si
SLD 13	fin.	1707.42	4797	1.42	0	864	7137	8929	3621	8001		1.67	Si
SLV 1	ini.	2823.29	-6893	1.42	0	864	7137	8929	3621	8001		1.16	Si
SLV 1	fin.	-2469.9	-7880	1.42	0	864	7137	8929	3621	8001		1.02	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.793	SLV 15	Si
V_SLV	0.702	SLV 15	No
PF_SLU	8.443	SLU 70	Si
V_SLU	2.588	SLU 69	Si

Trave di accoppiamento 113

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	8.34	9.24	0.9	-16.818	6.526	8.34	9.24	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	462.23	-2063	-0.0002521	0.0001872	0.0035	0.9		2959	2959	No	6.4	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	fin.	-100.28	-1163	-0.0000499	0.0001872	0.0035	0.9		2964.67	2964.67	No	29.56	Si
SLU 73	ini.	454.3	-2007	-0.0002472	0.0001872	0.0035	0.9		2959	2959	No	6.51	Si
SLU 73	fin.	-116.29	-1089	-0.0000581	0.0001872	0.0035	0.9		2964.67	2964.67	No	25.49	Si
SLU 77	ini.	458.36	-2066	-0.0002497	0.0001872	0.0035	0.9		2959	2959	No	6.46	Si
SLU 77	fin.	-82.93	-1207	-0.0000411	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.75	Si
SLU 78	ini.	457.13	-2062	-0.0002489	0.0001872	0.0035	0.9		2959	2959	No	6.47	Si
SLU 78	fin.	-81.47	-1208	-0.0000404	0.0001872	0.0035	0.9		2964.67	2964.67	No	36.39	Si
SLU 83	ini.	468.35	-2081	-0.0002559	0.0001872	0.0035	0.9		2959	2959	No	6.32	Si
SLU 83	fin.	-107.75	-1163	-0.0000537	0.0001872	0.0035	0.9		2964.67	2964.67	No	27.51	Si
SLU 75	ini.	461	-2059	-0.0002513	0.0001872	0.0035	0.9		2959	2959	No	6.42	Si
SLU 75	fin.	-98.82	-1164	-0.0000492	0.0001872	0.0035	0.9		2964.67	2964.67	No	30	Si
SLU 76	ini.	450.43	-2009	-0.0002448	0.0001872	0.0035	0.9		2959	2959	No	6.57	Si
SLU 76	fin.	-98.95	-1133	-0.0000492	0.0001872	0.0035	0.9		2964.67	2964.67	No	29.96	Si
SLU 81	ini.	472.22	-2078	-0.0002583	0.0001872	0.0035	0.9		2959	2959	No	6.27	Si
SLU 81	fin.	-125.09	-1119	-0.0000626	0.0001872	0.0035	0.9		2964.67	2964.67	No	23.7	Si
SLU 82	ini.	470.99	-2075	-0.0002575	0.0001872	0.0035	0.9		2959	2959	No	6.28	Si
SLU 82	fin.	-123.63	-1120	-0.0000618	0.0001872	0.0035	0.9		2964.67	2964.67	No	23.98	Si
SLU 84	ini.	467.12	-2077	-0.0002551	0.0001872	0.0035	0.9		2959	2959	No	6.33	Si
SLU 84	fin.	-106.29	-1164	-0.000053	0.0001872	0.0035	0.9		2964.67	2964.67	No	27.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	458.36	-2625	0.9	0	365	7137	3773	2295	6068	No	2.31	Si
SLU 77	fin.	-82.93	-106	0.9	0	365	7137	3773	2295	6068	No	57.11	Si
SLU 76	ini.	450.43	-2562	0.9	0	365	7137	3773	2295	6068	No	2.37	Si
SLU 76	fin.	-98.95	-177	0.9	0	365	7137	3773	2295	6068	No	34.23	Si
SLU 82	ini.	470.99	-2652	0.9	0	365	7137	3773	2295	6068	No	2.29	Si
SLU 82	fin.	-123.63	-267	0.9	0	365	7137	3773	2295	6068	No	22.72	Si
SLU 84	ini.	467.12	-2637	0.9	0	365	7137	3773	2295	6068	No	2.3	Si
SLU 84	fin.	-106.29	-202	0.9	0	365	7137	3773	2295	6068	No	29.97	Si
SLU 81	ini.	472.22	-2658	0.9	0	365	7137	3773	2295	6068	No	2.28	Si
SLU 81	fin.	-125.09	-271	0.9	0	365	7137	3773	2295	6068	No	22.36	Si
SLU 78	ini.	457.13	-2619	0.9	0	365	7137	3773	2295	6068	No	2.32	Si
SLU 78	fin.	-81.47	-102	0.9	0	365	7137	3773	2295	6068	No	59.48	Si
SLU 83	ini.	468.35	-2644	0.9	0	365	7137	3773	2295	6068	No	2.3	Si
SLU 83	fin.	-107.75	-207	0.9	0	365	7137	3773	2295	6068	No	29.36	Si
SLU 73	ini.	454.3	-2576	0.9	0	365	7137	3773	2295	6068	No	2.36	Si
SLU 73	fin.	-116.29	-242	0.9	0	365	7137	3773	2295	6068	No	25.08	Si
SLU 75	ini.	461	-2633	0.9	0	365	7137	3773	2295	6068	No	2.3	Si
SLU 75	fin.	-98.82	-167	0.9	0	365	7137	3773	2295	6068	No	36.41	Si
SLU 74	ini.	462.23	-2640	0.9	0	365	7137	3773	2295	6068	No	2.3	Si
SLU 74	fin.	-100.28	-171	0.9	0	365	7137	3773	2295	6068	No	35.51	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	854.22	-2879	-0.0004904	0.0002807	0.0035	0.9		2989.59	2989.59		3.5	Si
SLV 14	fin.	-917.46	286	-0.0005333	0.0002807	0.0035	0.9		2995.37	2995.37		3.26	Si
SLV 1	ini.	-161.28	-117	-0.0000806	0.0002807	0.0035	0.9		2995.37	2995.37		18.57	Si
SLV 1	fin.	683.47	-1758	-0.0003774	0.0002807	0.0035	0.9		2989.59	2989.59		4.37	Si
SLV 16	ini.	812.18	-2762	-0.0004618	0.0002807	0.0035	0.9		2989.59	2989.59		3.68	Si
SLV 16	fin.	-851.25	204	-0.0004873	0.0002807	0.0035	0.9		2995.37	2995.37		3.52	Si
SLV 2	ini.	-127.72	-222	-0.0000635	0.0002807	0.0035	0.9		2995.37	2995.37		23.45	Si
SLV 2	fin.	639.09	-1715	-0.0003494	0.0002807	0.0035	0.9		2989.59	2989.59		4.68	Si
SLV 3	ini.	-203.31	0	-0.0001023	0.0002807	0.0035	0.9		2995.37	2995.37		14.73	Si
SLV 3	fin.	749.69	-1841	-0.0004202	0.0002807	0.0035	0.9		2989.59	2989.59		3.99	Si
SLV 15	ini.	778.62	-2657	-0.0004393	0.0002807	0.0035	0.9		2989.59	2989.59		3.84	Si
SLV 15	fin.	-806.87	161	-0.0004572	0.0002807	0.0035	0.9		2995.37	2995.37		3.71	Si
SLV 10	ini.	553.59	-2067	-0.0002971	0.0002807	0.0035	0.9		2989.59	2989.59		5.4	Si
SLV 10	fin.	-441.99	-326	-0.0002316	0.0002807	0.0035	0.9		2995.37	2995.37		6.78	Si
SLV 13	ini.	820.66	-2774	-0.0004675	0.0002807	0.0035	0.9		2989.59	2989.59		3.64	Si
SLV 13	fin.	-873.08	243	-0.0005023	0.0002807	0.0035	0.9		2995.37	2995.37		3.43	Si
SLD 14	ini.	551.69	-2055	-0.000296	0.0002807	0.0035	0.9		2989.59	2989.59		5.42	Si
SLD 14	fin.	-440.64	-322	-0.0002308	0.0002807	0.0035	0.9		2995.37	2995.37		6.8	Si
SLV 4	ini.	-169.76	-105	-0.000085	0.0002807	0.0035	0.9		2995.37	2995.37		17.65	Si
SLV 4	fin.	705.3	-1798	-0.0003913	0.0002807	0.0035	0.9		2989.59	2989.59		4.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	532.02	-2836	0.9	0	548	7137	5660	2295	7684		2.71	Si
SLV 9	fin.	-413.46	-1409	0.9	0	548	7137	5660	2295	7684		5.45	Si
SLD 13	ini.	537.29	-2839	0.9	0	548	7137	5660	2295	7684		2.71	Si
SLD 13	fin.	-421.58	-1434	0.9	0	548	7137	5660	2295	7684		5.36	Si
SLV 3	ini.	-203.31	542	0.9	0	548	7137	5660	2295	7684		14.18	Si
SLV 3	fin.	749.69	2953	0.9	0	548	7137	5660	2295	7684		2.6	Si
SLV 15	ini.	778.62	-3926	0.9	0	548	7137	5660	2295	7684		1.96	Si
SLV 15	fin.	-806.87	-2874	0.9	0	548	7137	5660	2295	7684		2.67	Si
SLV 14	ini.	854.22	-4288	0.9	0	548	7137	5660	2295	7684		1.79	Si
SLV 14	fin.	-917.46	-3287	0.9	0	548	7137	5660	2295	7684		2.34	Si
SLD 14	ini.	551.69	-2906	0.9	0	548	7137	5660	2295	7684		2.64	Si
SLD 14	fin.	-440.64	-1503	0.9	0	548	7137	5660	2295	7684		5.11	Si
SLV 16	ini.	812.18	-4082	0.9	0	548	7137	5660	2295	7684		1.88	Si
SLV 16	fin.	-851.25	-3035	0.9	0	548	7137	5660	2295	7684		2.53	Si
SLD 16	ini.	533.51	-2817	0.9	0	548	7137	5660	2295	7684		2.73	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	fin.	-411.96	-1393	0.9	0	548	7137	5660	2295	7684		5.52	Si
SLV 13	ini.	820.66	-4132	0.9	0	548	7137	5660	2295	7684		1.86	Si
SLV 13	fin.	-873.08	-3126	0.9	0	548	7137	5660	2295	7684		2.46	Si
SLV 10	ini.	553.59	-2936	0.9	0	548	7137	5660	2295	7684		2.62	Si
SLV 10	fin.	-441.99	-1513	0.9	0	548	7137	5660	2295	7684		5.08	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.265	SLV 14	Si
V_SLV	1.792	SLV 14	Si
PF_SLU	6.266	SLU 81	Si
V_SLU	2.283	SLU 81	Si

Trave di accoppiamento 114

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	11.04	11.86	0.82	-16.818	6.526	11.04	11.86	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	86.86	-460	-0.0000522	0.0001872	0.0035	0.82		2455.37	2455.37	No	28.27	Si
SLU 83	fin.	-492.76	-1723	-0.0003358	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.99	Si
SLU 78	ini.	67.72	-513	-0.0000405	0.0001872	0.0035	0.82		2455.37	2455.37	No	36.26	Si
SLU 78	fin.	-480.67	-1704	-0.0003262	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.12	Si
SLU 76	ini.	81.84	-446	-0.0000492	0.0001872	0.0035	0.82		2455.37	2455.37	No	30	Si
SLU 76	fin.	-471.66	-1652	-0.000319	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.22	Si
SLU 84	ini.	85.6	-462	-0.0000515	0.0001872	0.0035	0.82		2455.37	2455.37	No	28.69	Si
SLU 84	fin.	-491.24	-1718	-0.0003346	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.01	Si
SLU 73	ini.	96.58	-402	-0.0000582	0.0001872	0.0035	0.82		2455.37	2455.37	No	25.42	Si
SLU 73	fin.	-476.22	-1652	-0.0003226	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.17	Si
SLU 77	ini.	68.98	-511	-0.0000413	0.0001872	0.0035	0.82		2455.37	2455.37	No	35.6	Si
SLU 77	fin.	-482.19	-1708	-0.0003274	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.1	Si
SLU 82	ini.	100.33	-418	-0.0000605	0.0001872	0.0035	0.82		2455.37	2455.37	No	24.47	Si
SLU 82	fin.	-495.8	-1718	-0.0003382	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.96	Si
SLU 75	ini.	82.45	-469	-0.0000495	0.0001872	0.0035	0.82		2455.37	2455.37	No	29.78	Si
SLU 75	fin.	-485.23	-1704	-0.0003298	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.07	Si
SLU 74	ini.	83.72	-467	-0.0000503	0.0001872	0.0035	0.82		2455.37	2455.37	No	29.33	Si
SLU 74	fin.	-486.74	-1708	-0.000331	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.06	Si
SLU 81	ini.	101.6	-416	-0.0000613	0.0001872	0.0035	0.82		2455.37	2455.37	No	24.17	Si
SLU 81	fin.	-497.32	-1723	-0.0003394	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	101.6	376	0.82	0	303	6502	3438	2091	5529	No	14.72	Si
SLU 81	fin.	-497.32	-2849	0.82	0	303	6502	3438	2091	5529	No	1.94	Si
SLU 78	ini.	67.72	495	0.82	0	303	6502	3438	2091	5529	No	11.16	Si
SLU 78	fin.	-480.67	-2758	0.82	0	303	6502	3438	2091	5529	No	2	Si
SLU 84	ini.	85.6	441	0.82	0	303	6502	3438	2091	5529	No	12.54	Si
SLU 84	fin.	-491.24	-2823	0.82	0	303	6502	3438	2091	5529	No	1.96	Si
SLU 76	ini.	81.84	420	0.82	0	303	6502	3438	2091	5529	No	13.18	Si
SLU 76	fin.	-471.66	-2702	0.82	0	303	6502	3438	2091	5529	No	2.05	Si
SLU 73	ini.	96.58	358	0.82	0	303	6502	3438	2091	5529	No	15.43	Si
SLU 73	fin.	-476.22	-2720	0.82	0	303	6502	3438	2091	5529	No	2.03	Si
SLU 82	ini.	100.33	380	0.82	0	303	6502	3438	2091	5529	No	14.56	Si
SLU 82	fin.	-495.8	-2841	0.82	0	303	6502	3438	2091	5529	No	1.95	Si
SLU 77	ini.	68.98	491	0.82	0	303	6502	3438	2091	5529	No	11.26	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-482.19	-2766	0.82	0	303	6502	3438	2091	5529	No	2	Si
SLU 75	ini.	82.45	434	0.82	0	303	6502	3438	2091	5529	No	12.74	Si
SLU 75	fin.	-485.23	-2775	0.82	0	303	6502	3438	2091	5529	No	1.99	Si
SLU 83	ini.	86.86	437	0.82	0	303	6502	3438	2091	5529	No	12.66	Si
SLU 83	fin.	-492.76	-2831	0.82	0	303	6502	3438	2091	5529	No	1.95	Si
SLU 74	ini.	83.72	430	0.82	0	303	6502	3438	2091	5529	No	12.86	Si
SLU 74	fin.	-486.74	-2783	0.82	0	303	6502	3438	2091	5529	No	1.99	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	459.71	445	-0.0002973	0.0002807	0.0035	0.82		2482.11	2482.11		5.4	Si
SLV 16	fin.	-720.92	-2256	-0.0004991	0.0002807	0.0035	0.82		2487.45	2487.45		3.45	Si
SLV 13	ini.	492.2	547	-0.0003209	0.0002807	0.0035	0.82		2482.11	2482.11		5.04	Si
SLV 13	fin.	-739.08	-2312	-0.0005143	0.0002807	0.0035	0.82		2487.45	2487.45		3.37	Si
SLV 14	ini.	505.98	558	-0.0003311	0.0002807	0.0035	0.82		2482.11	2482.11		4.91	Si
SLV 14	fin.	-760.8	-2379	-0.0005326	0.0002807	0.0035	0.82		2487.45	2487.45		3.27	Si
SLV 15	ini.	445.93	434	-0.0002874	0.0002807	0.0035	0.82		2482.11	2482.11		5.57	Si
SLV 15	fin.	-699.2	-2189	-0.0004812	0.0002807	0.0035	0.82		2487.45	2487.45		3.56	Si
SLD 13	ini.	252.78	79	-0.000156	0.0002807	0.0035	0.82		2482.11	2482.11		9.82	Si
SLD 13	fin.	-509.88	-1660	-0.0003332	0.0002807	0.0035	0.82		2487.45	2487.45		4.88	Si
SLD 15	ini.	232.62	30	-0.000143	0.0002807	0.0035	0.82		2482.11	2482.11		10.67	Si
SLD 15	fin.	-492.6	-1607	-0.0003205	0.0002807	0.0035	0.82		2487.45	2487.45		5.05	Si
SLD 14	ini.	258.7	84	-0.0001599	0.0002807	0.0035	0.82		2482.11	2482.11		9.59	Si
SLD 14	fin.	-519.2	-1689	-0.0003402	0.0002807	0.0035	0.82		2487.45	2487.45		4.79	Si
SLD 16	ini.	238.54	34	-0.0001468	0.0002807	0.0035	0.82		2482.11	2482.11		10.41	Si
SLD 16	fin.	-501.93	-1636	-0.0003274	0.0002807	0.0035	0.82		2487.45	2487.45		4.96	Si
SLV 10	ini.	275.68	150	-0.000171	0.0002807	0.0035	0.82		2482.11	2482.11		9	Si
SLV 10	fin.	-529.31	-1732	-0.0003477	0.0002807	0.0035	0.82		2487.45	2487.45		4.7	Si
SLV 9	ini.	266.82	144	-0.0001652	0.0002807	0.0035	0.82		2482.11	2482.11		9.3	Si
SLV 9	fin.	-515.35	-1689	-0.0003373	0.0002807	0.0035	0.82		2487.45	2487.45		4.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	ini.	238.54	-447	0.82	0	455	6502	5156	2091	6957		15.56	Si
SLD 16	fin.	-501.93	-2643	0.82	0	455	6502	5156	2091	6957		2.63	Si
SLD 14	ini.	258.7	-555	0.82	0	455	6502	5156	2091	6957		12.53	Si
SLD 14	fin.	-519.2	-2721	0.82	0	455	6502	5156	2091	6957		2.56	Si
SLV 15	ini.	445.93	-1288	0.82	0	455	6502	5156	2091	6957		5.4	Si
SLV 15	fin.	-699.2	-3518	0.82	0	455	6502	5156	2091	6957		1.98	Si
SLV 14	ini.	505.98	-1592	0.82	0	455	6502	5156	2091	6957		4.37	Si
SLV 14	fin.	-760.8	-3797	0.82	0	455	6502	5156	2091	6957		1.83	Si
SLV 13	ini.	492.2	-1536	0.82	0	455	6502	5156	2091	6957		4.53	Si
SLV 13	fin.	-739.08	-3697	0.82	0	455	6502	5156	2091	6957		1.88	Si
SLD 15	ini.	232.62	-423	0.82	0	455	6502	5156	2091	6957		16.45	Si
SLD 15	fin.	-492.6	-2600	0.82	0	455	6502	5156	2091	6957		2.68	Si
SLV 9	ini.	266.82	-671	0.82	0	455	6502	5156	2091	6957		10.37	Si
SLV 9	fin.	-515.35	-2704	0.82	0	455	6502	5156	2091	6957		2.57	Si
SLV 10	ini.	275.68	-707	0.82	0	455	6502	5156	2091	6957		9.84	Si
SLV 10	fin.	-529.31	-2768	0.82	0	455	6502	5156	2091	6957		2.51	Si
SLV 16	ini.	459.71	-1345	0.82	0	455	6502	5156	2091	6957		5.17	Si
SLV 16	fin.	-720.92	-3618	0.82	0	455	6502	5156	2091	6957		1.92	Si
SLD 13	ini.	252.78	-531	0.82	0	455	6502	5156	2091	6957		13.1	Si
SLD 13	fin.	-509.88	-2678	0.82	0	455	6502	5156	2091	6957		2.6	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.27	SLV 14	Si
V_SLV	1.832	SLV 14	Si
PF_SLU	4.948	SLU 81	Si
V_SLU	1.941	SLU 81	Si

Trave di accoppiamento 115

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	8.34	9.24	0.9	-11.938	6.526	8.34	9.24	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	522.52	-2511	-0.0002901	0.0001872	0.0035	0.9		2959	2959	No	5.66	Si
SLU 82	fin.	101.48	-1731	-0.0000506	0.0001872	0.0035	0.9		2959	2959	No	29.16	Si
SLU 74	ini.	519.66	-2520	-0.0002883	0.0001872	0.0035	0.9		2959	2959	No	5.69	Si
SLU 74	fin.	118.43	-1774	-0.0000593	0.0001872	0.0035	0.9		2959	2959	No	24.99	Si
SLU 79	ini.	511.78	-2496	-0.0002832	0.0001872	0.0035	0.9		2959	2959	No	5.78	Si
SLU 79	fin.	125.94	-1781	-0.0000631	0.0001872	0.0035	0.9		2959	2959	No	23.49	Si
SLU 78	ini.	524.21	-2553	-0.0002912	0.0001872	0.0035	0.9		2959	2959	No	5.64	Si
SLU 78	fin.	128.08	-1818	-0.0000642	0.0001872	0.0035	0.9		2959	2959	No	23.1	Si
SLU 75	ini.	519.08	-2517	-0.0002879	0.0001872	0.0035	0.9		2959	2959	No	5.7	Si
SLU 75	fin.	118.04	-1772	-0.0000591	0.0001872	0.0035	0.9		2959	2959	No	25.07	Si
SLU 80	ini.	511.2	-2493	-0.0002829	0.0001872	0.0035	0.9		2959	2959	No	5.79	Si
SLU 80	fin.	125.56	-1778	-0.000063	0.0001872	0.0035	0.9		2959	2959	No	23.57	Si
SLU 81	ini.	523.1	-2514	-0.0002905	0.0001872	0.0035	0.9		2959	2959	No	5.66	Si
SLU 81	fin.	101.86	-1733	-0.0000508	0.0001872	0.0035	0.9		2959	2959	No	29.05	Si
SLU 77	ini.	524.78	-2556	-0.0002916	0.0001872	0.0035	0.9		2959	2959	No	5.64	Si
SLU 77	fin.	128.46	-1820	-0.0000644	0.0001872	0.0035	0.9		2959	2959	No	23.03	Si
SLU 83	ini.	528.22	-2550	-0.0002938	0.0001872	0.0035	0.9		2959	2959	No	5.6	Si
SLU 83	fin.	111.89	-1779	-0.0000559	0.0001872	0.0035	0.9		2959	2959	No	26.45	Si
SLU 84	ini.	527.65	-2547	-0.0002934	0.0001872	0.0035	0.9		2959	2959	No	5.61	Si
SLU 84	fin.	111.51	-1776	-0.0000557	0.0001872	0.0035	0.9		2959	2959	No	26.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	523.1	-2941	0.9	0	365	7137	3773	2295	6068	No	2.06	Si
SLU 81	fin.	101.86	552	0.9	0	365	7137	3773	2295	6068	No	11	Si
SLU 84	ini.	527.65	-2976	0.9	0	365	7137	3773	2295	6068	No	2.04	Si
SLU 84	fin.	111.51	596	0.9	0	365	7137	3773	2295	6068	No	10.18	Si
SLU 80	ini.	511.2	-2910	0.9	0	365	7137	3773	2295	6068	No	2.09	Si
SLU 80	fin.	125.56	655	0.9	0	365	7137	3773	2295	6068	No	9.26	Si
SLU 75	ini.	519.08	-2946	0.9	0	365	7137	3773	2295	6068	No	2.06	Si
SLU 75	fin.	118.04	626	0.9	0	365	7137	3773	2295	6068	No	9.7	Si
SLU 78	ini.	524.21	-2985	0.9	0	365	7137	3773	2295	6068	No	2.03	Si
SLU 78	fin.	128.08	671	0.9	0	365	7137	3773	2295	6068	No	9.04	Si
SLU 79	ini.	511.78	-2914	0.9	0	365	7137	3773	2295	6068	No	2.08	Si
SLU 79	fin.	125.94	657	0.9	0	365	7137	3773	2295	6068	No	9.24	Si
SLU 83	ini.	528.22	-2980	0.9	0	365	7137	3773	2295	6068	No	2.04	Si
SLU 83	fin.	111.89	598	0.9	0	365	7137	3773	2295	6068	No	10.15	Si
SLU 74	ini.	519.66	-2950	0.9	0	365	7137	3773	2295	6068	No	2.06	Si
SLU 74	fin.	118.43	627	0.9	0	365	7137	3773	2295	6068	No	9.67	Si
SLU 82	ini.	522.52	-2937	0.9	0	365	7137	3773	2295	6068	No	2.07	Si
SLU 82	fin.	101.48	550	0.9	0	365	7137	3773	2295	6068	No	11.03	Si
SLU 77	ini.	524.78	-2989	0.9	0	365	7137	3773	2295	6068	No	2.03	Si
SLU 77	fin.	128.46	673	0.9	0	365	7137	3773	2295	6068	No	9.02	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-1073.82	1804	-0.0006466	0.0002807	0.0035	0.9		2995.37	2995.37		2.79	Si
SLV 3	fin.	1980.16	-3882	-0.0014696	0.0002807	0.0035	0.9		2989.59	2989.59		1.51	Si
SLV 16	ini.	1665.44	-4922	-0.0011461	0.0002807	0.0035	0.9		2989.59	2989.59		1.8	Si
SLV 16	fin.	-1688.71	1325	-0.0011654	0.0002807	0.0035	0.9		2995.37	2995.37		1.77	Si
SLD 14	ini.	960.96	-3217	-0.0005653	0.0002807	0.0035	0.9		2989.59	2989.59		3.11	Si
SLD 14	fin.	-727.12	-76	-0.0004046	0.0002807	0.0035	0.9		2995.37	2995.37		4.12	Si
SLV 1	ini.	-962.76	1496	-0.0005654	0.0002807	0.0035	0.9		2995.37	2995.37		3.11	Si
SLV 1	fin.	1856.29	-3756	-0.0013358	0.0002807	0.0035	0.9		2989.59	2989.59		1.61	Si
SLV 14	ini.	1776.5	-5230	-0.0012543	0.0002807	0.0035	0.9		2989.59	2989.59		1.68	Si
SLV 14	fin.	-1812.59	1451	-0.0012874	0.0002807	0.0035	0.9		2995.37	2995.37		1.65	Si
SLV 4	ini.	-996.45	1613	-0.0005896	0.0002807	0.0035	0.9		2995.37	2995.37		3.01	Si
SLV 4	fin.	1874.68	-3730	-0.0013551	0.0002807	0.0035	0.9		2989.59	2989.59		1.59	Si
SLV 10	ini.	960.58	-3268	-0.0005651	0.0002807	0.0035	0.9		2989.59	2989.59		3.11	Si
SLV 10	fin.	-691.07	-199	-0.0003814	0.0002807	0.0035	0.9		2995.37	2995.37		4.33	Si
SLV 13	ini.	1699.13	-5039	-0.0011783	0.0002807	0.0035	0.9		2989.59	2989.59		1.76	Si
SLV 13	fin.	-1707.1	1299	-0.001183	0.0002807	0.0035	0.9		2995.37	2995.37		1.75	Si
SLV 15	ini.	1588.07	-4731	-0.0010739	0.0002807	0.0035	0.9		2989.59	2989.59		1.88	Si
SLV 15	fin.	-1583.23	1173	-0.0010668	0.0002807	0.0035	0.9		2995.37	2995.37		1.89	Si
SLV 2	ini.	-885.39	1305	-0.0005109	0.0002807	0.0035	0.9		2995.37	2995.37		3.38	Si
SLV 2	fin.	1750.81	-3604	-0.0012288	0.0002807	0.0035	0.9		2989.59	2989.59		1.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	960.58	-4867	0.9	0	548	7137	5660	2295	7684		1.58	Si
SLV 10	fin.	-691.07	-2530	0.9	0	548	7137	5660	2295	7684		3.04	Si
SLV 13	ini.	1699.13	-8304	0.9	0	548	7137	5660	2295	7684		0.93	No
SLV 13	fin.	-1707.1	-6119	0.9	0	548	7137	5660	2295	7684		1.26	Si
SLV 15	ini.	1588.07	-7775	0.9	0	548	7137	5660	2295	7684		0.99	No
SLV 15	fin.	-1583.23	-5576	0.9	0	548	7137	5660	2295	7684		1.38	Si
SLV 14	ini.	1776.5	-8657	0.9	0	548	7137	5660	2295	7684		0.89	No
SLV 14	fin.	-1812.59	-6500	0.9	0	548	7137	5660	2295	7684		1.18	Si
SLV 2	ini.	-885.39	3753	0.9	0	548	7137	5660	2295	7684		2.05	Si
SLV 2	fin.	1750.81	6456	0.9	0	548	7137	5660	2295	7684		1.19	Si
SLD 14	ini.	960.96	-4854	0.9	0	548	7137	5660	2295	7684		1.58	Si
SLD 14	fin.	-727.12	-2528	0.9	0	548	7137	5660	2295	7684		3.04	Si
SLV 1	ini.	-962.76	4106	0.9	0	548	7137	5660	2295	7684		1.87	Si
SLV 1	fin.	1856.29	6837	0.9	0	548	7137	5660	2295	7684		1.12	Si
SLV 16	ini.	1665.44	-8128	0.9	0	548	7137	5660	2295	7684		0.95	No
SLV 16	fin.	-1688.71	-5957	0.9	0	548	7137	5660	2295	7684		1.29	Si
SLV 4	ini.	-996.45	4282	0.9	0	548	7137	5660	2295	7684		1.79	Si
SLV 4	fin.	1874.68	6999	0.9	0	548	7137	5660	2295	7684		1.1	Si
SLV 3	ini.	-1073.82	4635	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 3	fin.	1980.16	7380	0.9	0	548	7137	5660	2295	7684		1.04	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.51	SLV 3	Si
V_SLV	0.888	SLV 14	No
PF_SLU	5.602	SLU 83	Si
V_SLU	2.03	SLU 77	Si

Trave di accoppiamento 116

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	11.04	11.86	0.82	-11.938	6.526	11.04	11.86	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-144.7	-1187	-0.0000881	0.0001872	0.0035	0.82		2460.51	2460.51	No	17	Si
SLU 78	fin.	-458.89	-1647	-0.000309	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.36	Si
SLU 84	ini.	-133.83	-1132	-0.0000813	0.0001872	0.0035	0.82		2460.51	2460.51	No	18.38	Si
SLU 84	fin.	-466.36	-1628	-0.0003149	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.28	Si
SLU 82	ini.	-125.95	-1082	-0.0000763	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.54	Si
SLU 82	fin.	-462.82	-1592	-0.0003121	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.32	Si
SLU 81	ini.	-125.86	-1082	-0.0000763	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.55	Si
SLU 81	fin.	-464.15	-1595	-0.0003131	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.3	Si
SLU 77	ini.	-144.61	-1187	-0.0000881	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.01	Si
SLU 77	fin.	-460.21	-1650	-0.00031	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.35	Si
SLU 74	ini.	-136.73	-1137	-0.0000831	0.0001872	0.0035	0.82		2460.51	2460.51	No	18	Si
SLU 74	fin.	-456.67	-1613	-0.0003073	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.39	Si
SLU 80	ini.	-140.6	-1153	-0.0000855	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.5	Si
SLU 80	fin.	-446.8	-1600	-0.0002996	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.51	Si
SLU 79	ini.	-140.51	-1154	-0.0000855	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.51	Si
SLU 79	fin.	-448.13	-1603	-0.0003006	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.49	Si
SLU 75	ini.	-136.82	-1137	-0.0000832	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.98	Si
SLU 75	fin.	-455.35	-1610	-0.0003062	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.4	Si
SLU 83	ini.	-133.74	-1132	-0.0000812	0.0001872	0.0035	0.82		2460.51	2460.51	No	18.4	Si
SLU 83	fin.	-467.69	-1631	-0.0003159	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-140.51	1913	0.82	0	303	6502	3438	2091	5529	No	2.89	Si
SLU 79	fin.	-448.13	-1932	0.82	0	303	6502	3438	2091	5529	No	2.86	Si
SLU 78	ini.	-144.7	1958	0.82	0	303	6502	3438	2091	5529	No	2.82	Si
SLU 78	fin.	-458.89	-1973	0.82	0	303	6502	3438	2091	5529	No	2.8	Si
SLU 75	ini.	-136.82	1878	0.82	0	303	6502	3438	2091	5529	No	2.94	Si
SLU 75	fin.	-455.35	-1950	0.82	0	303	6502	3438	2091	5529	No	2.84	Si
SLU 74	ini.	-136.73	1880	0.82	0	303	6502	3438	2091	5529	No	2.94	Si
SLU 74	fin.	-456.67	-1955	0.82	0	303	6502	3438	2091	5529	No	2.83	Si
SLU 84	ini.	-133.83	1894	0.82	0	303	6502	3438	2091	5529	No	2.92	Si
SLU 84	fin.	-466.36	-1998	0.82	0	303	6502	3438	2091	5529	No	2.77	Si
SLU 82	ini.	-125.95	1815	0.82	0	303	6502	3438	2091	5529	No	3.05	Si
SLU 82	fin.	-462.82	-1975	0.82	0	303	6502	3438	2091	5529	No	2.8	Si
SLU 83	ini.	-133.74	1895	0.82	0	303	6502	3438	2091	5529	No	2.92	Si
SLU 83	fin.	-467.69	-2003	0.82	0	303	6502	3438	2091	5529	No	2.76	Si
SLU 80	ini.	-140.6	1912	0.82	0	303	6502	3438	2091	5529	No	2.89	Si
SLU 80	fin.	-446.8	-1927	0.82	0	303	6502	3438	2091	5529	No	2.87	Si
SLU 77	ini.	-144.61	1959	0.82	0	303	6502	3438	2091	5529	No	2.82	Si
SLU 77	fin.	-460.21	-1978	0.82	0	303	6502	3438	2091	5529	No	2.79	Si
SLU 81	ini.	-125.86	1816	0.82	0	303	6502	3438	2091	5529	No	3.04	Si
SLU 81	fin.	-464.15	-1980	0.82	0	303	6502	3438	2091	5529	No	2.79	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	718.3	2703	-0.0004982	0.0002807	0.0035	0.82		2482.11	2482.11		3.46	Si
SLV 16	fin.	-1795.11	-2690	-0.0016817	0.0002807	0.0035	0.82		2487.45	2487.45		1.39	Si
SLV 13	ini.	735.56	2761	-0.0005126	0.0002807	0.0035	0.82		2482.11	2482.11		3.37	Si
SLV 13	fin.	-1853.65	-2797	-0.0017735	0.0002807	0.0035	0.82		2487.45	2487.45		1.34	Si
SLV 1	ini.	-901.3	-4204	-0.0006555	0.0002807	0.0035	0.82		2487.45	2487.45		2.76	Si
SLV 1	fin.	1188.31	555	-0.0009352	0.0002807	0.0035	0.82		2482.11	2482.11		2.09	Si
SLV 4	ini.	-918.56	-4263	-0.0006711	0.0002807	0.0035	0.82		2487.45	2487.45		2.71	Si
SLV 4	fin.	1246.85	661	-0.0009967	0.0002807	0.0035	0.82		2482.11	2482.11		1.99	Si
SLV 15	ini.	678.7	2530	-0.0004656	0.0002807	0.0035	0.82		2482.11	2482.11		3.66	Si
SLV 15	fin.	-1723.31	-2610	-0.0015757	0.0002807	0.0035	0.82		2487.45	2487.45		1.44	Si
SLV 2	ini.	-861.7	-4032	-0.00062	0.0002807	0.0035	0.82		2487.45	2487.45		2.89	Si
SLV 2	fin.	1116.51	474	-0.0008621	0.0002807	0.0035	0.82		2482.11	2482.11		2.22	Si
SLV 14	ini.	775.16	2934	-0.0005461	0.0002807	0.0035	0.82		2482.11	2482.11		3.2	Si
SLV 14	fin.	-1925.45	-2877	-0.001894	0.0002807	0.0035	0.82		2487.45	2487.45		1.29	Si
SLD 14	ini.	279.19	825	-0.0001733	0.0002807	0.0035	0.82		2482.11	2482.11		8.89	Si
SLD 14	fin.	-997.35	-1842	-0.0007442	0.0002807	0.0035	0.82		2487.45	2487.45		2.49	Si
SLV 3	ini.	-958.16	-4436	-0.0007075	0.0002807	0.0035	0.82		2487.45	2487.45		2.6	Si
SLV 3	fin.	1318.65	742	-0.0010746	0.0002807	0.0035	0.82		2482.11	2482.11		1.88	Si
SLV 10	ini.	261.52	735	-0.0001617	0.0002807	0.0035	0.82		2482.11	2482.11		9.49	Si
SLV 10	fin.	-1000	-1908	-0.0007467	0.0002807	0.0035	0.82		2487.45	2487.45		2.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-861.7	5976	0.82	0	455	6502	5156	2091	6957		1.16	Si
SLV 2	fin.	1116.51	3286	0.82	0	455	6502	5156	2091	6957		2.12	Si
SLV 15	ini.	678.7	-3515	0.82	0	455	6502	5156	2091	6957		1.98	Si
SLV 15	fin.	-1723.31	-5888	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLV 13	ini.	735.56	-3874	0.82	0	455	6502	5156	2091	6957		1.8	Si
SLV 13	fin.	-1853.65	-6318	0.82	0	455	6502	5156	2091	6957		1.1	Si
SLV 14	ini.	775.16	-4141	0.82	0	455	6502	5156	2091	6957		1.68	Si
SLV 14	fin.	-1925.45	-6551	0.82	0	455	6502	5156	2091	6957		1.06	Si
SLV 1	ini.	-901.3	6243	0.82	0	455	6502	5156	2091	6957		1.11	Si
SLV 1	fin.	1188.31	3520	0.82	0	455	6502	5156	2091	6957		1.98	Si
SLV 16	ini.	718.3	-3782	0.82	0	455	6502	5156	2091	6957		1.84	Si
SLV 16	fin.	-1795.11	-6122	0.82	0	455	6502	5156	2091	6957		1.14	Si
SLV 3	ini.	-958.16	6602	0.82	0	455	6502	5156	2091	6957		1.05	Si
SLV 3	fin.	1318.65	3949	0.82	0	455	6502	5156	2091	6957		1.76	Si
SLD 14	ini.	279.19	-1067	0.82	0	455	6502	5156	2091	6957		6.52	Si
SLD 14	fin.	-997.35	-3547	0.82	0	455	6502	5156	2091	6957		1.96	Si
SLV 10	ini.	261.52	-971	0.82	0	455	6502	5156	2091	6957		7.16	Si
SLV 10	fin.	-1000	-3567	0.82	0	455	6502	5156	2091	6957		1.95	Si
SLV 4	ini.	-918.56	6335	0.82	0	455	6502	5156	2091	6957		1.1	Si
SLV 4	fin.	1246.85	3716	0.82	0	455	6502	5156	2091	6957		1.87	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.292	SLV 14	Si
V_SLV	1.054	SLV 3	Si
PF_SLU	5.261	SLU 83	Si
V_SLU	2.76	SLU 83	Si

Trave di accoppiamento 117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	8.34	9.24	0.9	-7.058	6.526	8.34	9.24	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	142.95	-1440	-0.0000719	0.0001872	0.0035	0.9		2959	2959	No	20.7	Si
SLU 78	fin.	377.88	-1678	-0.0002012	0.0001872	0.0035	0.9		2959	2959	No	7.83	Si
SLU 76	ini.	123.81	-1348	-0.000062	0.0001872	0.0035	0.9		2959	2959	No	23.9	Si
SLU 76	fin.	374.54	-1626	-0.0001992	0.0001872	0.0035	0.9		2959	2959	No	7.9	Si
SLU 81	ini.	120.88	-1353	-0.0000605	0.0001872	0.0035	0.9		2959	2959	No	24.48	Si
SLU 81	fin.	381.72	-1649	-0.0002034	0.0001872	0.0035	0.9		2959	2959	No	7.75	Si
SLU 83	ini.	133.39	-1405	-0.000067	0.0001872	0.0035	0.9		2959	2959	No	22.18	Si
SLU 83	fin.	379.88	-1670	-0.0002023	0.0001872	0.0035	0.9		2959	2959	No	7.79	Si
SLU 73	ini.	111.3	-1296	-0.0000556	0.0001872	0.0035	0.9		2959	2959	No	26.59	Si
SLU 73	fin.	376.38	-1605	-0.0002003	0.0001872	0.0035	0.9		2959	2959	No	7.86	Si
SLU 82	ini.	120.48	-1351	-0.0000603	0.0001872	0.0035	0.9		2959	2959	No	24.56	Si
SLU 82	fin.	381.63	-1648	-0.0002034	0.0001872	0.0035	0.9		2959	2959	No	7.75	Si
SLU 75	ini.	130.44	-1388	-0.0000655	0.0001872	0.0035	0.9		2959	2959	No	22.69	Si
SLU 75	fin.	379.72	-1657	-0.0002022	0.0001872	0.0035	0.9		2959	2959	No	7.79	Si
SLU 84	ini.	132.99	-1403	-0.0000668	0.0001872	0.0035	0.9		2959	2959	No	22.25	Si
SLU 84	fin.	379.79	-1669	-0.0002023	0.0001872	0.0035	0.9		2959	2959	No	7.79	Si
SLU 74	ini.	130.84	-1390	-0.0000657	0.0001872	0.0035	0.9		2959	2959	No	22.62	Si
SLU 74	fin.	379.81	-1658	-0.0002023	0.0001872	0.0035	0.9		2959	2959	No	7.79	Si
SLU 77	ini.	143.35	-1442	-0.0000721	0.0001872	0.0035	0.9		2959	2959	No	20.64	Si
SLU 77	fin.	377.97	-1679	-0.0002012	0.0001872	0.0035	0.9		2959	2959	No	7.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	142.95	-1315	0.9	0	365	7137	3773	2295	6068	No	4.61	Si
SLU 78	fin.	377.88	1662	0.9	0	365	7137	3773	2295	6068	No	3.65	Si
SLU 77	ini.	143.35	-1318	0.9	0	365	7137	3773	2295	6068	No	4.6	Si
SLU 77	fin.	377.97	1662	0.9	0	365	7137	3773	2295	6068	No	3.65	Si
SLU 80	ini.	136.59	-1265	0.9	0	365	7137	3773	2295	6068	No	4.8	Si
SLU 80	fin.	372.75	1631	0.9	0	365	7137	3773	2295	6068	No	3.72	Si
SLU 82	ini.	120.48	-1167	0.9	0	365	7137	3773	2295	6068	No	5.2	Si
SLU 82	fin.	381.63	1646	0.9	0	365	7137	3773	2295	6068	No	3.69	Si
SLU 84	ini.	132.99	-1240	0.9	0	365	7137	3773	2295	6068	No	4.89	Si
SLU 84	fin.	379.79	1648	0.9	0	365	7137	3773	2295	6068	No	3.68	Si
SLU 81	ini.	120.88	-1170	0.9	0	365	7137	3773	2295	6068	No	5.19	Si
SLU 81	fin.	381.72	1647	0.9	0	365	7137	3773	2295	6068	No	3.68	Si
SLU 74	ini.	130.84	-1245	0.9	0	365	7137	3773	2295	6068	No	4.88	Si
SLU 74	fin.	379.81	1661	0.9	0	365	7137	3773	2295	6068	No	3.65	Si
SLU 79	ini.	136.99	-1268	0.9	0	365	7137	3773	2295	6068	No	4.78	Si
SLU 79	fin.	372.84	1631	0.9	0	365	7137	3773	2295	6068	No	3.72	Si
SLU 83	ini.	133.39	-1243	0.9	0	365	7137	3773	2295	6068	No	4.88	Si
SLU 83	fin.	379.88	1648	0.9	0	365	7137	3773	2295	6068	No	3.68	Si
SLU 75	ini.	130.44	-1242	0.9	0	365	7137	3773	2295	6068	No	4.89	Si
SLU 75	fin.	379.72	1660	0.9	0	365	7137	3773	2295	6068	No	3.65	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-435.18	292	-0.0002277	0.0002807	0.0035	0.9		2995.37	2995.37		6.88	Si
SLD 3	fin.	884.06	-2016	-0.0005111	0.0002807	0.0035	0.9		2989.59	2989.59		3.38	Si
SLV 7	ini.	-430.26	265	-0.0002249	0.0002807	0.0035	0.9		2995.37	2995.37		6.96	Si
SLV 7	fin.	889.84	-1958	-0.0005151	0.0002807	0.0035	0.9		2989.59	2989.59		3.36	Si
SLV 1	ini.	-1024.54	1695	-0.0006101	0.0002807	0.0035	0.9		2995.37	2995.37		2.92	Si
SLV 1	fin.	1580.84	-3050	-0.0010673	0.0002807	0.0035	0.9		2989.59	2989.59		1.89	Si
SLV 14	ini.	1253.78	-3706	-0.0007875	0.0002807	0.0035	0.9		2989.59	2989.59		2.38	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	fin.	-1133.08	842	-0.0006913	0.0002807	0.0035	0.9		2995.37	2995.37		2.64	Si
SLV 3	ini.	-1112.64	1895	-0.0006758	0.0002807	0.0035	0.9		2995.37	2995.37		2.69	Si
SLV 3	fin.	1693.13	-3163	-0.0011726	0.0002807	0.0035	0.9		2989.59	2989.59		1.77	Si
SLV 16	ini.	1165.68	-3506	-0.0007181	0.0002807	0.0035	0.9		2989.59	2989.59		2.56	Si
SLV 16	fin.	-1020.79	729	-0.0006074	0.0002807	0.0035	0.9		2995.37	2995.37		2.93	Si
SLV 4	ini.	-1041.13	1734	-0.0006223	0.0002807	0.0035	0.9		2995.37	2995.37		2.88	Si
SLV 4	fin.	1602.32	-3021	-0.001087	0.0002807	0.0035	0.9		2989.59	2989.59		1.87	Si
SLV 15	ini.	1094.17	-3345	-0.0006634	0.0002807	0.0035	0.9		2989.59	2989.59		2.73	Si
SLV 15	fin.	-929.97	587	-0.0005421	0.0002807	0.0035	0.9		2995.37	2995.37		3.22	Si
SLV 13	ini.	1182.27	-3545	-0.000731	0.0002807	0.0035	0.9		2989.59	2989.59		2.53	Si
SLV 13	fin.	-1042.27	700	-0.0006231	0.0002807	0.0035	0.9		2995.37	2995.37		2.87	Si
SLV 2	ini.	-953.03	1534	-0.0005584	0.0002807	0.0035	0.9		2995.37	2995.37		3.14	Si
SLV 2	fin.	1490.02	-2908	-0.0009859	0.0002807	0.0035	0.9		2989.59	2989.59		2.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-953.03	4046	0.9	0	548	7137	5660	2295	7684		1.9	Si
SLV 2	fin.	1490.02	5790	0.9	0	548	7137	5660	2295	7684		1.33	Si
SLV 15	ini.	1094.17	-5596	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 15	fin.	-929.97	-3358	0.9	0	548	7137	5660	2295	7684		2.29	Si
SLV 4	ini.	-1041.13	4318	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLV 4	fin.	1602.32	6085	0.9	0	548	7137	5660	2295	7684		1.26	Si
SLV 3	ini.	-1112.64	4634	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 3	fin.	1693.13	6426	0.9	0	548	7137	5660	2295	7684		1.2	Si
SLV 13	ini.	1182.27	-5869	0.9	0	548	7137	5660	2295	7684		1.31	Si
SLV 13	fin.	-1042.27	-3653	0.9	0	548	7137	5660	2295	7684		2.1	Si
SLV 1	ini.	-1024.54	4362	0.9	0	548	7137	5660	2295	7684		1.76	Si
SLV 1	fin.	1580.84	6131	0.9	0	548	7137	5660	2295	7684		1.25	Si
SLV 14	ini.	1253.78	-6184	0.9	0	548	7137	5660	2295	7684		1.24	Si
SLV 14	fin.	-1133.08	-3995	0.9	0	548	7137	5660	2295	7684		1.92	Si
SLV 16	ini.	1165.68	-5912	0.9	0	548	7137	5660	2295	7684		1.3	Si
SLV 16	fin.	-1020.79	-3700	0.9	0	548	7137	5660	2295	7684		2.08	Si
SLD 1	ini.	-397.21	1419	0.9	0	548	7137	5660	2295	7684		5.42	Si
SLD 1	fin.	835.61	3315	0.9	0	548	7137	5660	2295	7684		2.32	Si
SLD 3	ini.	-435.18	1537	0.9	0	548	7137	5660	2295	7684		5	Si
SLD 3	fin.	884.06	3443	0.9	0	548	7137	5660	2295	7684		2.23	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.766	SLV 3	Si
V_SLV	1.196	SLV 3	Si
PF_SLU	7.752	SLU 81	Si
V_SLU	3.651	SLU 77	Si

Trave di accoppiamento 118

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	11.04	11.86	0.82	-7.058	6.526	11.04	11.86	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-431.1	-1277	-0.0002874	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.71	Si
SLU 81	fin.	-36.71	-448	-0.0000218	0.0001872	0.0035	0.82		2460.51	2460.51	No	67.03	Si
SLU 84	ini.	-430.08	-1298	-0.0002867	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.72	Si
SLU 84	fin.	-45.19	-488	-0.0000269	0.0001872	0.0035	0.82		2460.51	2460.51	No	54.45	Si
SLU 82	ini.	-432.16	-1277	-0.0002883	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.69	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	fin.	-35.88	-445	-0.0000213	0.0001872	0.0035	0.82		2460.51	2460.51	No	68.58	Si
SLU 73	ini.	-424.65	-1243	-0.0002825	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.79	Si
SLU 73	fin.	-29.67	-411	-0.0000176	0.0001872	0.0035	0.82		2460.51	2460.51	No	82.93	Si
SLU 78	ini.	-427.95	-1318	-0.000285	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.75	Si
SLU 78	fin.	-52.13	-521	-0.000031	0.0001872	0.0035	0.82		2460.51	2460.51	No	47.2	Si
SLU 74	ini.	-428.97	-1296	-0.0002858	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.74	Si
SLU 74	fin.	-43.65	-481	-0.0000259	0.0001872	0.0035	0.82		2460.51	2460.51	No	56.37	Si
SLU 77	ini.	-426.89	-1317	-0.0002842	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.76	Si
SLU 77	fin.	-52.97	-524	-0.0000315	0.0001872	0.0035	0.82		2460.51	2460.51	No	46.45	Si
SLU 76	ini.	-422.58	-1264	-0.0002809	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.82	Si
SLU 76	fin.	-38.98	-454	-0.0000231	0.0001872	0.0035	0.82		2460.51	2460.51	No	63.12	Si
SLU 83	ini.	-429.03	-1298	-0.0002859	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.74	Si
SLU 83	fin.	-46.02	-491	-0.0000274	0.0001872	0.0035	0.82		2460.51	2460.51	No	53.46	Si
SLU 75	ini.	-430.02	-1297	-0.0002866	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.72	Si
SLU 75	fin.	-42.82	-478	-0.0000254	0.0001872	0.0035	0.82		2460.51	2460.51	No	57.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-428.97	2134	0.82	0	303	6502	3438	2091	5529	No	2.59	Si
SLU 74	fin.	-43.65	-1183	0.82	0	303	6502	3438	2091	5529	No	4.67	Si
SLU 80	ini.	-419.8	2099	0.82	0	303	6502	3438	2091	5529	No	2.63	Si
SLU 80	fin.	-48.85	-1202	0.82	0	303	6502	3438	2091	5529	No	4.6	Si
SLU 75	ini.	-430.02	2137	0.82	0	303	6502	3438	2091	5529	No	2.59	Si
SLU 75	fin.	-42.82	-1179	0.82	0	303	6502	3438	2091	5529	No	4.69	Si
SLU 76	ini.	-422.58	2099	0.82	0	303	6502	3438	2091	5529	No	2.63	Si
SLU 76	fin.	-38.98	-1137	0.82	0	303	6502	3438	2091	5529	No	4.86	Si
SLU 82	ini.	-432.16	2152	0.82	0	303	6502	3438	2091	5529	No	2.57	Si
SLU 82	fin.	-35.88	-1159	0.82	0	303	6502	3438	2091	5529	No	4.77	Si
SLU 81	ini.	-431.1	2149	0.82	0	303	6502	3438	2091	5529	No	2.57	Si
SLU 81	fin.	-36.71	-1164	0.82	0	303	6502	3438	2091	5529	No	4.75	Si
SLU 83	ini.	-429.03	2151	0.82	0	303	6502	3438	2091	5529	No	2.57	Si
SLU 83	fin.	-46.02	-1225	0.82	0	303	6502	3438	2091	5529	No	4.51	Si
SLU 84	ini.	-430.08	2154	0.82	0	303	6502	3438	2091	5529	No	2.57	Si
SLU 84	fin.	-45.19	-1221	0.82	0	303	6502	3438	2091	5529	No	4.53	Si
SLU 77	ini.	-426.89	2136	0.82	0	303	6502	3438	2091	5529	No	2.59	Si
SLU 77	fin.	-52.97	-1245	0.82	0	303	6502	3438	2091	5529	No	4.44	Si
SLU 78	ini.	-427.95	2139	0.82	0	303	6502	3438	2091	5529	No	2.58	Si
SLU 78	fin.	-52.13	-1241	0.82	0	303	6502	3438	2091	5529	No	4.46	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-831.05	-1691	-0.000593	0.0002807	0.0035	0.82		2487.45	2487.45		2.99	Si
SLD 3	fin.	269.34	695	-0.0001668	0.0002807	0.0035	0.82		2482.11	2482.11		9.22	Si
SLD 4	ini.	-800.36	-1640	-0.0005664	0.0002807	0.0035	0.82		2487.45	2487.45		3.11	Si
SLD 4	fin.	254.02	647	-0.0001568	0.0002807	0.0035	0.82		2482.11	2482.11		9.77	Si
SLV 3	ini.	-1527.87	-2760	-0.001316	0.0002807	0.0035	0.82		2487.45	2487.45		1.63	Si
SLV 3	fin.	648.62	1978	-0.0004412	0.0002807	0.0035	0.82		2482.11	2482.11		3.83	Si
SLV 16	ini.	829.3	863	-0.0005929	0.0002807	0.0035	0.82		2482.11	2482.11		2.99	Si
SLV 16	fin.	-629.35	-2324	-0.0004249	0.0002807	0.0035	0.82		2487.45	2487.45		3.95	Si
SLV 13	ini.	835.01	856	-0.000598	0.0002807	0.0035	0.82		2482.11	2482.11		2.97	Si
SLV 13	fin.	-640.84	-2391	-0.000434	0.0002807	0.0035	0.82		2487.45	2487.45		3.88	Si
SLV 14	ini.	906.49	975	-0.0006619	0.0002807	0.0035	0.82		2482.11	2482.11		2.74	Si
SLV 14	fin.	-676.54	-2505	-0.0004627	0.0002807	0.0035	0.82		2487.45	2487.45		3.68	Si
SLV 1	ini.	-1450.67	-2648	-0.0012224	0.0002807	0.0035	0.82		2487.45	2487.45		1.71	Si
SLV 1	fin.	601.43	1797	-0.0004038	0.0002807	0.0035	0.82		2482.11	2482.11		4.13	Si
SLV 4	ini.	-1456.38	-2641	-0.0012292	0.0002807	0.0035	0.82		2487.45	2487.45		1.71	Si
SLV 4	fin.	612.92	1865	-0.0004129	0.0002807	0.0035	0.82		2482.11	2482.11		4.05	Si
SLV 2	ini.	-1379.18	-2529	-0.0011394	0.0002807	0.0035	0.82		2487.45	2487.45		1.8	Si
SLV 2	fin.	565.73	1684	-0.0003762	0.0002807	0.0035	0.82		2482.11	2482.11		4.39	Si
SLV 7	ini.	-805.17	-1644	-0.0005705	0.0002807	0.0035	0.82		2487.45	2487.45		3.09	Si
SLV 7	fin.	262.51	703	-0.0001624	0.0002807	0.0035	0.82		2482.11	2482.11		9.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-805.17	3270	0.82	0	455	6502	5156	2091	6957		2.13	Si
SLV 7	fin.	262.51	854	0.82	0	455	6502	5156	2091	6957		8.15	Si
SLD 3	ini.	-831.05	3280	0.82	0	455	6502	5156	2091	6957		2.12	Si
SLD 3	fin.	269.34	882	0.82	0	455	6502	5156	2091	6957		7.89	Si
SLV 14	ini.	906.49	-2626	0.82	0	455	6502	5156	2091	6957		2.65	Si
SLV 14	fin.	-676.54	-4387	0.82	0	455	6502	5156	2091	6957		1.59	Si
SLV 3	ini.	-1527.87	5647	0.82	0	455	6502	5156	2091	6957		1.23	Si
SLV 3	fin.	648.62	2994	0.82	0	455	6502	5156	2091	6957		2.32	Si
SLV 16	ini.	829.3	-2311	0.82	0	455	6502	5156	2091	6957		3.01	Si
SLV 16	fin.	-629.35	-4117	0.82	0	455	6502	5156	2091	6957		1.69	Si
SLV 2	ini.	-1379.18	5089	0.82	0	455	6502	5156	2091	6957		1.37	Si
SLV 2	fin.	565.73	2524	0.82	0	455	6502	5156	2091	6957		2.76	Si
SLV 13	ini.	835.01	-2382	0.82	0	455	6502	5156	2091	6957		2.92	Si
SLV 13	fin.	-640.84	-4186	0.82	0	455	6502	5156	2091	6957		1.66	Si
SLV 4	ini.	-1456.38	5404	0.82	0	455	6502	5156	2091	6957		1.29	Si
SLV 4	fin.	612.92	2793	0.82	0	455	6502	5156	2091	6957		2.49	Si
SLV 1	ini.	-1450.67	5333	0.82	0	455	6502	5156	2091	6957		1.3	Si
SLV 1	fin.	601.43	2725	0.82	0	455	6502	5156	2091	6957		2.55	Si
SLV 15	ini.	757.81	-2068	0.82	0	455	6502	5156	2091	6957		3.36	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	fin.	-593.65	-3916	0.82	0	455	6502	5156	2091	6957		1.78	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.628	SLV 3	Si
V_SLV	1.232	SLV 3	Si
PF_SLU	5.694	SLU 82	Si
V_SLU	2.567	SLU 84	Si

Trave di accoppiamento 119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.643	1.006	10.44	11.86	1.42	-19.443	1.006	10.44	11.86	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 36	ini.	-10.8	-2556	-0.0000021	0.0002246	0.0035	1.42		7545.1	7545.1	No	698.62	Si
SLU 36	fin.	-492.1	-2829	-0.0000998	0.0002246	0.0035	1.42		7545.1	7545.1	No	15.33	Si
SLU 40	ini.	38.65	-2346	-0.0000076	0.0002246	0.0035	1.42		7536.27	7536.27	No	195.01	Si
SLU 40	fin.	-538.12	-2669	-0.0001095	0.0002246	0.0035	1.42		7545.1	7545.1	No	14.02	Si
SLU 35	ini.	-2.13	-2549	-0.0000004	0.0002246	0.0035	1.42		7545.1	7545.1	No	3546.49	Si
SLU 35	fin.	-502.67	-2834	-0.000102	0.0002246	0.0035	1.42		7545.1	7545.1	No	15.01	Si
SLU 84	ini.	-77	-2966	-0.0000152	0.0002246	0.0035	1.42		7545.1	7545.1	No	97.98	Si
SLU 84	fin.	-528.2	-3223	-0.0001074	0.0002246	0.0035	1.42		7545.1	7545.1	No	14.28	Si
SLU 39	ini.	47.32	-2339	-0.0000093	0.0002246	0.0035	1.42		7536.27	7536.27	No	159.27	Si
SLU 39	fin.	-548.69	-2673	-0.0001117	0.0002246	0.0035	1.42		7545.1	7545.1	No	13.75	Si
SLU 41	ini.	48.75	-2427	-0.0000096	0.0002246	0.0035	1.42		7536.27	7536.27	No	154.59	Si
SLU 41	fin.	-559.72	-2768	-0.0001141	0.0002246	0.0035	1.42		7545.1	7545.1	No	13.48	Si
SLU 81	ini.	-69.76	-2872	-0.0000137	0.0002246	0.0035	1.42		7545.1	7545.1	No	108.15	Si
SLU 81	fin.	-527.74	-3131	-0.0001073	0.0002246	0.0035	1.42		7545.1	7545.1	No	14.3	Si
SLU 83	ini.	-68.33	-2960	-0.0000134	0.0002246	0.0035	1.42		7545.1	7545.1	No	110.42	Si
SLU 83	fin.	-538.76	-3227	-0.0001096	0.0002246	0.0035	1.42		7545.1	7545.1	No	14	Si
SLU 82	ini.	-78.44	-2879	-0.0000154	0.0002246	0.0035	1.42		7545.1	7545.1	No	96.19	Si
SLU 82	fin.	-517.17	-3127	-0.0001051	0.0002246	0.0035	1.42		7545.1	7545.1	No	14.59	Si
SLU 42	ini.	40.08	-2434	-0.0000079	0.0002246	0.0035	1.42		7536.27	7536.27	No	188.04	Si
SLU 42	fin.	-549.15	-2764	-0.0001118	0.0002246	0.0035	1.42		7545.1	7545.1	No	13.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 39	ini.	47.32	6	1.42	0	576	6344	7144	3621	6920	No	1201.7	Si
SLU 39	fin.	-548.69	-2031	1.42	0	576	6344	7144	3621	6920	No	3.41	Si
SLU 40	ini.	38.65	40	1.42	0	576	6344	7144	3621	6920	No	174.76	Si
SLU 40	fin.	-538.12	-1997	1.42	0	576	6344	7144	3621	6920	No	3.47	Si
SLU 84	ini.	-77	363	1.42	0	576	6344	7144	3621	6920	No	19.06	Si
SLU 84	fin.	-528.2	-1871	1.42	0	576	6344	7144	3621	6920	No	3.7	Si
SLU 42	ini.	40.08	17	1.42	0	576	6344	7144	3621	6920	No	406.38	Si
SLU 42	fin.	-549.15	-2019	1.42	0	576	6344	7144	3621	6920	No	3.43	Si
SLU 82	ini.	-78.44	386	1.42	0	576	6344	7144	3621	6920	No	17.94	Si
SLU 82	fin.	-517.17	-1848	1.42	0	576	6344	7144	3621	6920	No	3.74	Si
SLU 41	ini.	48.75	-17	1.42	0	576	6344	7144	3621	6920	No	411.68	Si
SLU 41	fin.	-559.72	-2053	1.42	0	576	6344	7144	3621	6920	No	3.37	Si
SLU 32	ini.	-3.56	103	1.42	0	576	6344	7144	3621	6920	No	67.28	Si
SLU 32	fin.	-491.64	-1756	1.42	0	576	6344	7144	3621	6920	No	3.94	Si
SLU 81	ini.	-69.76	352	1.42	0	576	6344	7144	3621	6920	No	19.67	Si
SLU 81	fin.	-527.74	-1882	1.42	0	576	6344	7144	3621	6920	No	3.68	Si
SLU 35	ini.	-2.13	80	1.42	0	576	6344	7144	3621	6920	No	86.2	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 35	fin.	-502.67	-1779	1.42	0	576	6344	7144	3621	6920	No	3.89	Si
SLU 83	ini.	-68.33	329	1.42	0	576	6344	7144	3621	6920	No	21.02	Si
SLU 83	fin.	-538.76	-1905	1.42	0	576	6344	7144	3621	6920	No	3.63	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-4042.01	-3199	-0.0010687	0.0003369	0.0035	1.42		7279.66	7279.66		1.8	Si
SLV 14	fin.	4018	1026	-0.0010618	0.0003369	0.0035	1.42		7270.13	7270.13		1.81	Si
SLV 16	ini.	-4397.15	-3501	-0.0012	0.0003369	0.0035	1.42		7279.66	7279.66		1.66	Si
SLV 16	fin.	4486.25	1437	-0.0012364	0.0003369	0.0035	1.42		7270.13	7270.13		1.62	Si
SLV 6	ini.	1515.41	-1238	-0.0003249	0.0003369	0.0035	1.42		7270.13	7270.13		4.8	Si
SLV 6	fin.	-2229.95	-3716	-0.0005051	0.0003369	0.0035	1.42		7279.66	7279.66		3.26	Si
SLV 15	ini.	-4273.4	-3420	-0.0011533	0.0003369	0.0035	1.42		7279.66	7279.66		1.7	Si
SLV 15	fin.	4347.59	1371	-0.0011831	0.0003369	0.0035	1.42		7270.13	7270.13		1.67	Si
SLV 5	ini.	1594.94	-1186	-0.0003439	0.0003369	0.0035	1.42		7270.13	7270.13		4.56	Si
SLV 5	fin.	-2319.06	-3758	-0.0005293	0.0003369	0.0035	1.42		7279.66	7279.66		3.14	Si
SLV 1	ini.	3960.19	-666	-0.0010412	0.0003369	0.0035	1.42		7270.13	7270.13		1.84	Si
SLV 1	fin.	-4854.34	-5580	-0.001383	0.0003369	0.0035	1.42		7279.66	7279.66		1.5	Si
SLV 3	ini.	3605.06	-969	-0.0009191	0.0003369	0.0035	1.42		7270.13	7270.13		2.02	Si
SLV 3	fin.	-4386.09	-5169	-0.0011958	0.0003369	0.0035	1.42		7279.66	7279.66		1.66	Si
SLV 13	ini.	-3918.27	-3118	-0.0010248	0.0003369	0.0035	1.42		7279.66	7279.66		1.86	Si
SLV 13	fin.	3879.35	960	-0.0010128	0.0003369	0.0035	1.42		7270.13	7270.13		1.87	Si
SLV 2	ini.	3836.45	-747	-0.0009978	0.0003369	0.0035	1.42		7270.13	7270.13		1.9	Si
SLV 2	fin.	-4715.68	-5514	-0.0013257	0.0003369	0.0035	1.42		7279.66	7279.66		1.54	Si
SLV 4	ini.	3481.32	-1050	-0.0008782	0.0003369	0.0035	1.42		7270.13	7270.13		2.09	Si
SLV 4	fin.	-4247.43	-5103	-0.0011436	0.0003369	0.0035	1.42		7279.66	7279.66		1.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-4273.4	15473	1.42	0	864	6344	10717	3621	7208		0.47	No
SLV 15	fin.	4347.59	13641	1.42	0	864	6344	10717	3621	7208		0.53	No
SLV 3	ini.	3605.06	-12979	1.42	0	864	6344	10717	3621	7208		0.56	No
SLV 3	fin.	-4386.09	-14799	1.42	0	864	6344	10717	3621	7208		0.49	No
SLV 14	ini.	-4042.01	14446	1.42	0	864	6344	10717	3621	7208		0.5	No
SLV 14	fin.	4018	13663	1.42	0	864	6344	10717	3621	7208		0.53	No
SLV 16	ini.	-4397.15	15931	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 16	fin.	4486.25	14099	1.42	0	864	6344	10717	3621	7208		0.51	No
SLV 1	ini.	3960.19	-14465	1.42	0	864	6344	10717	3621	7208		0.5	No
SLV 1	fin.	-4854.34	-15235	1.42	0	864	6344	10717	3621	7208		0.47	No
SLV 13	ini.	-3918.27	13987	1.42	0	864	6344	10717	3621	7208		0.52	No
SLV 13	fin.	3879.35	13204	1.42	0	864	6344	10717	3621	7208		0.55	No
SLV 11	ini.	-1952.37	7330	1.42	0	864	6344	10717	3621	7208		0.98	No
SLV 11	fin.	1861.86	4278	1.42	0	864	6344	10717	3621	7208		1.68	Si
SLV 4	ini.	3481.32	-12520	1.42	0	864	6344	10717	3621	7208		0.58	No
SLV 4	fin.	-4247.43	-14340	1.42	0	864	6344	10717	3621	7208		0.5	No
SLV 12	ini.	-2031.89	7625	1.42	0	864	6344	10717	3621	7208		0.95	No
SLV 12	fin.	1950.97	4573	1.42	0	864	6344	10717	3621	7208		1.58	Si
SLV 2	ini.	3836.45	-14006	1.42	0	864	6344	10717	3621	7208		0.51	No
SLV 2	fin.	-4715.68	-14777	1.42	0	864	6344	10717	3621	7208		0.49	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.5	SLV 1	Si
V_SLV	0.452	SLV 16	No
PF_SLU	13.48	SLU 41	Si
V_SLU	3.37	SLU 41	Si

Trave di accoppiamento 120

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.163	1.006	10.44	11.86	1.42	-14.963	1.006	10.44	11.86	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 55	ini.	-30.37	-2434	-0.000006	0.0002246	0.0035	1.42		7545.1	7545.1	No	248.45	Si
SLU 55	fin.	-441.18	-2717	-0.0000891	0.0002246	0.0035	1.42		7545.1	7545.1	No	17.1	Si
SLU 56	ini.	-27.59	-2608	-0.0000054	0.0002246	0.0035	1.42		7545.1	7545.1	No	273.42	Si
SLU 56	fin.	-456.97	-2903	-0.0000924	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.51	Si
SLU 53	ini.	2.24	-2512	-0.0000004	0.0002246	0.0035	1.42		7536.27	7536.27	No	3371.2	Si
SLU 53	fin.	-480.06	-2838	-0.0000972	0.0002246	0.0035	1.42		7545.1	7545.1	No	15.72	Si
SLU 62	ini.	-5.08	-2497	-0.000001	0.0002246	0.0035	1.42		7545.1	7545.1	No	1485.07	Si
SLU 62	fin.	-487.75	-2830	-0.0000989	0.0002246	0.0035	1.42		7545.1	7545.1	No	15.47	Si
SLU 60	ini.	24.75	-2402	-0.0000049	0.0002246	0.0035	1.42		7536.27	7536.27	No	304.5	Si
SLU 60	fin.	-510.84	-2765	-0.0001037	0.0002246	0.0035	1.42		7545.1	7545.1	No	14.77	Si
SLU 57	ini.	-38.95	-2610	-0.0000077	0.0002246	0.0035	1.42		7545.1	7545.1	No	193.72	Si
SLU 57	fin.	-444.18	-2891	-0.0000897	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.99	Si
SLU 52	ini.	-0.54	-2338	-0.0000001	0.0002246	0.0035	1.42		7545.1	7545.1	No	14018.32	Si
SLU 52	fin.	-464.27	-2652	-0.0000939	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.25	Si
SLU 63	ini.	-16.43	-2500	-0.0000032	0.0002246	0.0035	1.42		7545.1	7545.1	No	459.13	Si
SLU 63	fin.	-474.96	-2818	-0.0000962	0.0002246	0.0035	1.42		7545.1	7545.1	No	15.89	Si
SLU 61	ini.	13.4	-2404	-0.0000026	0.0002246	0.0035	1.42		7536.27	7536.27	No	562.55	Si
SLU 61	fin.	-498.05	-2753	-0.000101	0.0002246	0.0035	1.42		7545.1	7545.1	No	15.15	Si
SLU 54	ini.	-9.12	-2515	-0.0000018	0.0002246	0.0035	1.42		7545.1	7545.1	No	827.54	Si
SLU 54	fin.	-467.27	-2826	-0.0000946	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 61	ini.	13.4	51	1.42	0	576	6344	7144	3621	6920	No	134.89	Si
SLU 61	fin.	-498.05	-1954	1.42	0	576	6344	7144	3621	6920	No	3.54	Si
SLU 63	ini.	-16.43	145	1.42	0	576	6344	7144	3621	6920	No	47.84	Si
SLU 63	fin.	-474.96	-1861	1.42	0	576	6344	7144	3621	6920	No	3.72	Si
SLU 52	ini.	-0.54	46	1.42	0	576	6344	7144	3621	6920	No	149.44	Si
SLU 52	fin.	-464.27	-1767	1.42	0	576	6344	7144	3621	6920	No	3.92	Si
SLU 53	ini.	2.24	13	1.42	0	576	6344	7144	3621	6920	No	552.87	Si
SLU 53	fin.	-480.06	-1801	1.42	0	576	6344	7144	3621	6920	No	3.84	Si
SLU 62	ini.	-5.08	102	1.42	0	576	6344	7144	3621	6920	No	67.68	Si
SLU 62	fin.	-487.75	-1903	1.42	0	576	6344	7144	3621	6920	No	3.64	Si
SLU 54	ini.	-9.12	55	1.42	0	576	6344	7144	3621	6920	No	126.04	Si
SLU 54	fin.	-467.27	-1758	1.42	0	576	6344	7144	3621	6920	No	3.94	Si
SLU 55	ini.	-30.37	140	1.42	0	576	6344	7144	3621	6920	No	49.56	Si
SLU 55	fin.	-441.18	-1673	1.42	0	576	6344	7144	3621	6920	No	4.14	Si
SLU 60	ini.	24.75	9	1.42	0	576	6344	7144	3621	6920	No	776.07	Si
SLU 60	fin.	-510.84	-1997	1.42	0	576	6344	7144	3621	6920	No	3.47	Si
SLU 56	ini.	-27.59	106	1.42	0	576	6344	7144	3621	6920	No	65.37	Si
SLU 56	fin.	-456.97	-1707	1.42	0	576	6344	7144	3621	6920	No	4.05	Si
SLU 57	ini.	-38.95	148	1.42	0	576	6344	7144	3621	6920	No	46.68	Si
SLU 57	fin.	-444.18	-1665	1.42	0	576	6344	7144	3621	6920	No	4.16	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1773.5	-4222	-0.0003876	0.0003369	0.0035	1.42		7270.13	7270.13		4.1	Si
SLV 3	fin.	-3786.59	-6758	-0.0009791	0.0003369	0.0035	1.42		7279.66	7279.66		1.92	Si
SLV 5	ini.	2568.87	-2449	-0.0005996	0.0003369	0.0035	1.42		7270.13	7270.13		2.83	Si
SLV 5	fin.	-3819.73	-5846	-0.0009905	0.0003369	0.0035	1.42		7279.66	7279.66		1.91	Si
SLV 6	ini.	2526.29	-2480	-0.0005875	0.0003369	0.0035	1.42		7270.13	7270.13		2.88	Si
SLV 6	fin.	-3779.46	-5833	-0.0009766	0.0003369	0.0035	1.42		7279.66	7279.66		1.93	Si
SLV 2	ini.	2867.25	-4197	-0.0006864	0.0003369	0.0035	1.42		7270.13	7270.13		2.54	Si
SLV 2	fin.	-5104.15	-8061	-0.001491	0.0003369	0.0035	1.42		7279.66	7279.66		1.43	Si
SLV 1	ini.	2933.5	-4148	-0.0007062	0.0003369	0.0035	1.42		7270.13	7270.13		2.48	Si
SLV 1	fin.	-5166.81	-8083	-0.0015191	0.0003369	0.0035	1.42		7279.66	7279.66		1.41	Si
SLV 4	ini.	1707.24	-4271	-0.0003712	0.0003369	0.0035	1.42		7270.13	7270.13		4.26	Si
SLV 4	fin.	-3723.93	-6736	-0.0009577	0.0003369	0.0035	1.42		7279.66	7279.66		1.95	Si
SLV 15	ini.	-3101.2	410	-0.0007562	0.0003369	0.0035	1.42		7279.66	7279.66		2.35	Si
SLV 15	fin.	4630.93	4039	-0.0012936	0.0003369	0.0035	1.42		7270.13	7270.13		1.57	Si
SLV 14	ini.	-2007.44	436	-0.0004464	0.0003369	0.0035	1.42		7279.66	7279.66		3.63	Si
SLV 14	fin.	3313.38	2735	-0.0008239	0.0003369	0.0035	1.42		7270.13	7270.13		2.19	Si
SLV 12	ini.	-2802.81	-1338	-0.0006664	0.0003369	0.0035	1.42		7279.66	7279.66		2.6	Si
SLV 12	fin.	3346.51	1824	-0.0008345	0.0003369	0.0035	1.42		7270.13	7270.13		2.17	Si
SLV 16	ini.	-3167.45	362	-0.0007767	0.0003369	0.0035	1.42		7279.66	7279.66		2.3	Si
SLV 16	fin.	4693.59	4061	-0.0013189	0.0003369	0.0035	1.42		7270.13	7270.13		1.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3167.45	13672	1.42	0	864	6344	10717	3621	7208		0.53	No
SLV 16	fin.	4693.59	12277	1.42	0	864	6344	10717	3621	7208		0.59	No
SLV 12	ini.	-2802.81	11163	1.42	0	864	6344	10717	3621	7208		0.65	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	fin.	3346.51	9757	1.42	0	864	6344	10717	3621	7208		0.74	No
SLV 4	ini.	1707.24	-8142	1.42	0	864	6344	10717	3621	7208		0.89	No
SLV 4	fin.	-3723.93	-9538	1.42	0	864	6344	10717	3621	7208		0.76	No
SLV 1	ini.	2933.5	-12793	1.42	0	864	6344	10717	3621	7208		0.56	No
SLV 1	fin.	-5166.81	-14180	1.42	0	864	6344	10717	3621	7208		0.51	No
SLV 5	ini.	2568.87	-10283	1.42	0	864	6344	10717	3621	7208		0.7	No
SLV 5	fin.	-3819.73	-11660	1.42	0	864	6344	10717	3621	7208		0.62	No
SLV 15	ini.	-3101.2	13449	1.42	0	864	6344	10717	3621	7208		0.54	No
SLV 15	fin.	4630.93	12053	1.42	0	864	6344	10717	3621	7208		0.6	No
SLV 6	ini.	2526.29	-10139	1.42	0	864	6344	10717	3621	7208		0.71	No
SLV 6	fin.	-3779.46	-11517	1.42	0	864	6344	10717	3621	7208		0.63	No
SLV 11	ini.	-2760.24	11019	1.42	0	864	6344	10717	3621	7208		0.65	No
SLV 11	fin.	3306.24	9613	1.42	0	864	6344	10717	3621	7208		0.75	No
SLV 2	ini.	2867.25	-12569	1.42	0	864	6344	10717	3621	7208		0.57	No
SLV 2	fin.	-5104.15	-13957	1.42	0	864	6344	10717	3621	7208		0.52	No
SLV 3	ini.	1773.5	-8365	1.42	0	864	6344	10717	3621	7208		0.86	No
SLV 3	fin.	-3786.59	-9761	1.42	0	864	6344	10717	3621	7208		0.74	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.409	SLV 1	Si
V_SLV	0.508	SLV 1	No
PF_SLU	14.77	SLU 60	Si
V_SLU	3.466	SLU 60	Si

Trave di accoppiamento 121

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	10.84	11.86	1.02	-12.263	1.006	10.84	11.86	1.02	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-896.33	-2911	-0.0003957	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.35	Si
SLU 78	fin.	25.05	-1759	-0.0000096	0.0002246	0.0035	1.02		3893.98	3893.98	No	155.44	Si
SLU 83	ini.	-905.15	-2840	-0.0004004	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.31	Si
SLU 83	fin.	10.13	-1691	-0.0000039	0.0002246	0.0035	1.02		3893.98	3893.98	No	384.37	Si
SLU 74	ini.	-884.1	-2839	-0.0003894	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.41	Si
SLU 74	fin.	31.95	-1693	-0.0000122	0.0002246	0.0035	1.02		3893.98	3893.98	No	121.87	Si
SLU 75	ini.	-888.27	-2847	-0.0003916	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.39	Si
SLU 75	fin.	33.51	-1693	-0.0000128	0.0002246	0.0035	1.02		3893.98	3893.98	No	116.22	Si
SLU 80	ini.	-868.15	-2813	-0.0003811	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.49	Si
SLU 80	fin.	8.7	-1715	-0.0000033	0.0002246	0.0035	1.02		3893.98	3893.98	No	447.35	Si
SLU 82	ini.	-901.25	-2783	-0.0003983	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.33	Si
SLU 82	fin.	20.14	-1625	-0.0000077	0.0002246	0.0035	1.02		3893.98	3893.98	No	193.35	Si
SLU 84	ini.	-909.32	-2847	-0.0004025	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.29	Si
SLU 84	fin.	11.68	-1691	-0.0000044	0.0002246	0.0035	1.02		3893.98	3893.98	No	333.25	Si
SLU 79	ini.	-863.98	-2806	-0.000379	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.51	Si
SLU 79	fin.	7.15	-1715	-0.0000027	0.0002246	0.0035	1.02		3893.98	3893.98	No	544.58	Si
SLU 81	ini.	-897.09	-2775	-0.0003961	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.35	Si
SLU 81	fin.	18.59	-1625	-0.0000071	0.0002246	0.0035	1.02		3893.98	3893.98	No	209.52	Si
SLU 77	ini.	-892.17	-2904	-0.0003936	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.37	Si
SLU 77	fin.	23.5	-1759	-0.000009	0.0002246	0.0035	1.02		3893.98	3893.98	No	165.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-892.17	2610	1.02	0	377	8088	5132	2601	7733	No	2.96	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	fin.	23.5	69	1.02	0	377	8088	5132	2601	7733	No	112.34	Si
SLU 76	ini.	-862.86	2561	1.02	0	377	8088	5132	2601	7733	No	3.02	Si
SLU 76	fin.	18.19	20	1.02	0	377	8088	5132	2601	7733	No	384.15	Si
SLU 75	ini.	-888.27	2620	1.02	0	377	8088	5132	2601	7733	No	2.95	Si
SLU 75	fin.	33.51	78	1.02	0	377	8088	5132	2601	7733	No	98.55	Si
SLU 73	ini.	-854.8	2563	1.02	0	377	8088	5132	2601	7733	No	3.02	Si
SLU 73	fin.	26.65	21	1.02	0	377	8088	5132	2601	7733	No	363.81	Si
SLU 83	ini.	-905.15	2750	1.02	0	377	8088	5132	2601	7733	No	2.81	Si
SLU 83	fin.	10.13	-67	1.02	0	377	8088	5132	2601	7733	No	114.6	Si
SLU 84	ini.	-909.32	2758	1.02	0	377	8088	5132	2601	7733	No	2.8	Si
SLU 84	fin.	11.68	-59	1.02	0	377	8088	5132	2601	7733	No	131.13	Si
SLU 82	ini.	-901.25	2759	1.02	0	377	8088	5132	2601	7733	No	2.8	Si
SLU 82	fin.	20.14	-58	1.02	0	377	8088	5132	2601	7733	No	133.68	Si
SLU 74	ini.	-884.1	2611	1.02	0	377	8088	5132	2601	7733	No	2.96	Si
SLU 74	fin.	31.95	70	1.02	0	377	8088	5132	2601	7733	No	110.53	Si
SLU 78	ini.	-896.33	2619	1.02	0	377	8088	5132	2601	7733	No	2.95	Si
SLU 78	fin.	25.05	77	1.02	0	377	8088	5132	2601	7733	No	99.99	Si
SLU 81	ini.	-897.09	2751	1.02	0	377	8088	5132	2601	7733	No	2.81	Si
SLU 81	fin.	18.59	-66	1.02	0	377	8088	5132	2601	7733	No	116.55	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-2883.59	-1126	-0.0017205	0.0003369	0.0035	1.02		3845.03	3845.03		1.33	Si
SLV 14	fin.	4581.1	8298	-0.0043124	0.0003369	0.0035	1.02		3838.12	3838.12		0.84	No
SLV 2	ini.	2273.59	-1663	-0.0012056	0.0003369	0.0035	1.02		3838.12	3838.12		1.69	Si
SLV 2	fin.	-4868.46	-10809	-0.0047287	0.0003369	0.0035	1.02		3845.03	3845.03		0.79	No
SLV 16	ini.	-3380.09	-1979	-0.0023041	0.0003369	0.0035	1.02		3845.03	3845.03		1.14	Si
SLV 16	fin.	4920.6	8612	-0.0048157	0.0003369	0.0035	1.02		3838.12	3838.12		0.78	No
SLV 11	ini.	-2158.27	-3170	-0.0011191	0.0003369	0.0035	1.02		3845.03	3845.03		1.78	Si
SLV 11	fin.	2009.57	2291	-0.0010182	0.0003369	0.0035	1.02		3838.12	3838.12		1.91	Si
SLV 4	ini.	1777.09	-2517	-0.0008661	0.0003369	0.0035	1.02		3838.12	3838.12		2.16	Si
SLV 4	fin.	-4528.95	-10494	-0.0042212	0.0003369	0.0035	1.02		3845.03	3845.03		0.85	No
SLV 15	ini.	-3384.9	-1988	-0.0023108	0.0003369	0.0035	1.02		3845.03	3845.03		1.14	Si
SLV 15	fin.	4920.87	8611	-0.0048161	0.0003369	0.0035	1.02		3838.12	3838.12		0.78	No
SLV 3	ini.	1772.29	-2525	-0.0008631	0.0003369	0.0035	1.02		3838.12	3838.12		2.17	Si
SLV 3	fin.	-4528.68	-10496	-0.0042208	0.0003369	0.0035	1.02		3845.03	3845.03		0.85	No
SLV 12	ini.	-2155.18	-3164	-0.0011169	0.0003369	0.0035	1.02		3845.03	3845.03		1.78	Si
SLV 12	fin.	2009.39	2292	-0.001018	0.0003369	0.0035	1.02		3838.12	3838.12		1.91	Si
SLV 1	ini.	2268.79	-1672	-0.001202	0.0003369	0.0035	1.02		3838.12	3838.12		1.69	Si
SLV 1	fin.	-4868.19	-10811	-0.0047283	0.0003369	0.0035	1.02		3845.03	3845.03		0.79	No
SLV 13	ini.	-2888.39	-1135	-0.0017253	0.0003369	0.0035	1.02		3845.03	3845.03		1.33	Si
SLV 13	fin.	4581.36	8296	-0.0043128	0.0003369	0.0035	1.02		3838.12	3838.12		0.84	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-2888.39	11968	1.02	0	565	8088	7698	2601	8654		0.72	No
SLV 13	fin.	4581.36	10213	1.02	0	565	8088	7698	2601	8654		0.85	No
SLV 16	ini.	-3380.09	12647	1.02	0	565	8088	7698	2601	8654		0.68	No
SLV 16	fin.	4920.6	11261	1.02	0	565	8088	7698	2601	8654		0.77	No
SLV 14	ini.	-2883.59	11960	1.02	0	565	8088	7698	2601	8654		0.72	No
SLV 14	fin.	4581.1	10205	1.02	0	565	8088	7698	2601	8654		0.85	No
SLV 15	ini.	-3384.9	12654	1.02	0	565	8088	7698	2601	8654		0.68	No
SLV 15	fin.	4920.87	11269	1.02	0	565	8088	7698	2601	8654		0.77	No
SLV 4	ini.	1777.09	-8716	1.02	0	565	8088	7698	2601	8654		0.99	No
SLV 4	fin.	-4528.95	-10059	1.02	0	565	8088	7698	2601	8654		0.86	No
SLV 2	ini.	2273.59	-9403	1.02	0	565	8088	7698	2601	8654		0.92	No
SLV 2	fin.	-4868.46	-11115	1.02	0	565	8088	7698	2601	8654		0.78	No
SLD 15	ini.	-1767.59	6344	1.02	0	565	8088	7698	2601	8654		1.36	Si
SLD 15	fin.	2118.83	4865	1.02	0	565	8088	7698	2601	8654		1.78	Si
SLV 3	ini.	1772.29	-8708	1.02	0	565	8088	7698	2601	8654		0.99	No
SLV 3	fin.	-4528.68	-10051	1.02	0	565	8088	7698	2601	8654		0.86	No
SLD 16	ini.	-1765.53	6340	1.02	0	565	8088	7698	2601	8654		1.36	Si
SLD 16	fin.	2118.71	4862	1.02	0	565	8088	7698	2601	8654		1.78	Si
SLV 1	ini.	2268.79	-9395	1.02	0	565	8088	7698	2601	8654		0.92	No
SLV 1	fin.	-4868.19	-11107	1.02	0	565	8088	7698	2601	8654		0.78	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.78	SLV 15	No
V_SLV	0.684	SLV 15	No
PF_SLU	4.289	SLU 84	Si
V_SLU	2.802	SLU 82	Si

Trave di accoppiamento 122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	10.84	11.86	1.02	-10.478	1.006	10.84	11.86	1.02	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	268.82	-1199	-0.000106	0.0002246	0.0035	1.02		3893.98	3893.98	No	14.49	Si
SLU 77	fin.	-890.49	-2680	-0.0003927	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.38	Si
SLU 79	ini.	253.38	-1166	-0.0000997	0.0002246	0.0035	1.02		3893.98	3893.98	No	15.37	Si
SLU 79	fin.	-867.5	-2599	-0.0003808	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.5	Si
SLU 82	ini.	252.26	-1100	-0.0000992	0.0002246	0.0035	1.02		3893.98	3893.98	No	15.44	Si
SLU 82	fin.	-888.99	-2568	-0.0003919	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.39	Si
SLU 75	ini.	261.02	-1162	-0.0001028	0.0002246	0.0035	1.02		3893.98	3893.98	No	14.92	Si
SLU 75	fin.	-878.82	-2622	-0.0003866	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.44	Si
SLU 81	ini.	248.28	-1106	-0.0000976	0.0002246	0.0035	1.02		3893.98	3893.98	No	15.68	Si
SLU 81	fin.	-884.6	-2564	-0.0003896	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.41	Si
SLU 84	ini.	264.04	-1130	-0.000104	0.0002246	0.0035	1.02		3893.98	3893.98	No	14.75	Si
SLU 84	fin.	-905.05	-2631	-0.0004003	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.31	Si
SLU 74	ini.	257.04	-1169	-0.0001012	0.0002246	0.0035	1.02		3893.98	3893.98	No	15.15	Si
SLU 74	fin.	-874.43	-2617	-0.0003844	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.46	Si
SLU 78	ini.	272.8	-1193	-0.0001076	0.0002246	0.0035	1.02		3893.98	3893.98	No	14.27	Si
SLU 78	fin.	-894.88	-2685	-0.000395	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.36	Si
SLU 80	ini.	257.36	-1160	-0.0001013	0.0002246	0.0035	1.02		3893.98	3893.98	No	15.13	Si
SLU 80	fin.	-871.89	-2603	-0.0003831	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.47	Si
SLU 83	ini.	260.06	-1136	-0.0001024	0.0002246	0.0035	1.02		3893.98	3893.98	No	14.97	Si
SLU 83	fin.	-900.67	-2627	-0.000398	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	272.8	-696	1.02	0	391	8088	5132	2601	7733	No	11.11	Si
SLU 78	fin.	-894.88	-2877	1.02	0	391	8088	5132	2601	7733	No	2.69	Si
SLU 84	ini.	264.04	-606	1.02	0	391	8088	5132	2601	7733	No	12.76	Si
SLU 84	fin.	-905.05	-2979	1.02	0	391	8088	5132	2601	7733	No	2.6	Si
SLU 83	ini.	260.06	-593	1.02	0	391	8088	5132	2601	7733	No	13.03	Si
SLU 83	fin.	-900.67	-2966	1.02	0	391	8088	5132	2601	7733	No	2.61	Si
SLU 81	ini.	248.28	-552	1.02	0	391	8088	5132	2601	7733	No	14.01	Si
SLU 81	fin.	-884.6	-2925	1.02	0	391	8088	5132	2601	7733	No	2.64	Si
SLU 74	ini.	257.04	-642	1.02	0	391	8088	5132	2601	7733	No	12.05	Si
SLU 74	fin.	-874.43	-2823	1.02	0	391	8088	5132	2601	7733	No	2.74	Si
SLU 77	ini.	268.82	-683	1.02	0	391	8088	5132	2601	7733	No	11.32	Si
SLU 77	fin.	-890.49	-2865	1.02	0	391	8088	5132	2601	7733	No	2.7	Si
SLU 41	ini.	297.57	-679	1.02	0	391	8088	5132	2601	7733	No	11.38	Si
SLU 41	fin.	-850.71	-2846	1.02	0	391	8088	5132	2601	7733	No	2.72	Si
SLU 42	ini.	301.55	-692	1.02	0	391	8088	5132	2601	7733	No	11.17	Si
SLU 42	fin.	-855.1	-2858	1.02	0	391	8088	5132	2601	7733	No	2.71	Si
SLU 75	ini.	261.02	-655	1.02	0	391	8088	5132	2601	7733	No	11.81	Si
SLU 75	fin.	-878.82	-2836	1.02	0	391	8088	5132	2601	7733	No	2.73	Si
SLU 82	ini.	252.26	-565	1.02	0	391	8088	5132	2601	7733	No	13.69	Si
SLU 82	fin.	-888.99	-2937	1.02	0	391	8088	5132	2601	7733	No	2.63	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	3770.74	7995	-0.0029353	0.0003369	0.0035	1.02		3838.12	3838.12		1.02	Si
SLV 4	fin.	-1746.66	1472	-0.0008452	0.0003369	0.0035	1.02		3845.03	3845.03		2.2	Si
SLV 14	ini.	-3552.88	-9782	-0.0025583	0.0003369	0.0035	1.02		3845.03	3845.03		1.08	Si
SLV 14	fin.	691.89	-4886	-0.000284	0.0003369	0.0035	1.02		3838.12	3838.12		5.55	Si
SLV 2	ini.	3326.59	7276	-0.0022385	0.0003369	0.0035	1.02		3838.12	3838.12		1.15	Si
SLV 2	fin.	-1295.8	2057	-0.0005822	0.0003369	0.0035	1.02		3845.03	3845.03		2.97	Si
SLV 7	ini.	1899.52	2904	-0.0009448	0.0003369	0.0035	1.02		3838.12	3838.12		2.02	Si
SLV 7	fin.	-1590.07	-1638	-0.0007498	0.0003369	0.0035	1.02		3845.03	3845.03		2.42	Si
SLV 1	ini.	3349	7325	-0.0022688	0.0003369	0.0035	1.02		3838.12	3838.12		1.15	Si
SLV 1	fin.	-1311.76	2058	-0.0005909	0.0003369	0.0035	1.02		3845.03	3845.03		2.93	Si
SLV 15	ini.	-3086.31	-9014	-0.0019353	0.0003369	0.0035	1.02		3845.03	3845.03		1.25	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	fin.	225.07	-5469	-0.0000875	0.0003369	0.0035	1.02		3838.12	3838.12		17.05	Si
SLV 13	ini.	-3530.46	-9733	-0.0025236	0.0003369	0.0035	1.02		3845.03	3845.03		1.09	Si
SLV 13	fin.	675.93	-4885	-0.0002769	0.0003369	0.0035	1.02		3838.12	3838.12		5.68	Si
SLV 3	ini.	3793.16	8044	-0.002976	0.0003369	0.0035	1.02		3838.12	3838.12		1.01	Si
SLV 3	fin.	-1762.62	1474	-0.0008552	0.0003369	0.0035	1.02		3845.03	3845.03		2.18	Si
SLV 16	ini.	-3108.72	-9063	-0.0019609	0.0003369	0.0035	1.02		3845.03	3845.03		1.24	Si
SLV 16	fin.	241.03	-5471	-0.0000939	0.0003369	0.0035	1.02		3838.12	3838.12		15.92	Si
SLV 8	ini.	1885.12	2872	-0.0009354	0.0003369	0.0035	1.02		3838.12	3838.12		2.04	Si
SLV 8	fin.	-1579.82	-1639	-0.0007437	0.0003369	0.0035	1.02		3845.03	3845.03		2.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-3086.31	5388	1.02	0	586	8088	7698	2601	8675		1.61	Si
SLV 15	fin.	225.07	4082	1.02	0	586	8088	7698	2601	8675		2.13	Si
SLV 16	ini.	-3108.72	5446	1.02	0	586	8088	7698	2601	8675		1.59	Si
SLV 16	fin.	241.03	4140	1.02	0	586	8088	7698	2601	8675		2.1	Si
SLV 4	ini.	3770.74	-7341	1.02	0	586	8088	7698	2601	8675		1.18	Si
SLV 4	fin.	-1746.66	-8630	1.02	0	586	8088	7698	2601	8675		1.01	Si
SLV 14	ini.	-3552.88	6770	1.02	0	586	8088	7698	2601	8675		1.28	Si
SLV 14	fin.	691.89	5306	1.02	0	586	8088	7698	2601	8675		1.63	Si
SLV 7	ini.	1899.52	-4458	1.02	0	586	8088	7698	2601	8675		1.95	Si
SLV 7	fin.	-1590.07	-5569	1.02	0	586	8088	7698	2601	8675		1.56	Si
SLV 1	ini.	3349	-6075	1.02	0	586	8088	7698	2601	8675		1.43	Si
SLV 1	fin.	-1311.76	-7521	1.02	0	586	8088	7698	2601	8675		1.15	Si
SLV 2	ini.	3326.59	-6017	1.02	0	586	8088	7698	2601	8675		1.44	Si
SLV 2	fin.	-1295.8	-7463	1.02	0	586	8088	7698	2601	8675		1.16	Si
SLV 3	ini.	3793.16	-7399	1.02	0	586	8088	7698	2601	8675		1.17	Si
SLV 3	fin.	-1762.62	-8688	1.02	0	586	8088	7698	2601	8675		1	No
SLV 13	ini.	-3530.46	6712	1.02	0	586	8088	7698	2601	8675		1.29	Si
SLV 13	fin.	675.93	5248	1.02	0	586	8088	7698	2601	8675		1.65	Si
SLV 8	ini.	1885.12	-4420	1.02	0	586	8088	7698	2601	8675		1.96	Si
SLV 8	fin.	-1579.82	-5532	1.02	0	586	8088	7698	2601	8675		1.57	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.012	SLV 3	Si
V_SLV	0.998	SLV 3	No
PF_SLU	4.31	SLU 84	Si
V_SLU	2.596	SLU 84	Si

Trave di accoppiamento 123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	10.44	11.86	1.42	-7.463	1.006	10.44	11.86	1.42	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 49	ini.	106.98	-2146	-0.0000211	0.0002246	0.0035	1.42		7536.27	7536.27	No	70.44	Si
SLU 49	fin.	-611.53	-2618	-0.0001251	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.34	Si
SLU 50	ini.	119.36	-2068	-0.0000236	0.0002246	0.0035	1.42		7536.27	7536.27	No	63.14	Si
SLU 50	fin.	-624.39	-2564	-0.0001279	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.08	Si
SLU 65	ini.	81.07	-2103	-0.000016	0.0002246	0.0035	1.42		7536.27	7536.27	No	92.96	Si
SLU 65	fin.	-614.2	-2532	-0.0001257	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.28	Si
SLU 47	ini.	121.3	-1989	-0.000024	0.0002246	0.0035	1.42		7536.27	7536.27	No	62.13	Si
SLU 47	fin.	-630.83	-2494	-0.0001293	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.96	Si
SLU 43	ini.	121.9	-1921	-0.0000241	0.0002246	0.0035	1.42		7536.27	7536.27	No	61.83	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	fin.	-635.59	-2434	-0.0001303	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.87	Si
SLU 46	ini.	108.25	-2072	-0.0000214	0.0002246	0.0035	1.42		7536.27	7536.27	No	69.62	Si
SLU 46	fin.	-617.13	-2553	-0.0001263	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.23	Si
SLU 51	ini.	119.76	-2064	-0.0000237	0.0002246	0.0035	1.42		7536.27	7536.27	No	62.93	Si
SLU 51	fin.	-624.9	-2561	-0.000128	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.07	Si
SLU 64	ini.	80.39	-2109	-0.0000159	0.0002246	0.0035	1.42		7536.27	7536.27	No	93.74	Si
SLU 64	fin.	-613.36	-2537	-0.0001255	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.3	Si
SLU 44	ini.	122.57	-1915	-0.0000242	0.0002246	0.0035	1.42		7536.27	7536.27	No	61.49	Si
SLU 44	fin.	-636.43	-2429	-0.0001305	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.86	Si
SLU 45	ini.	107.85	-2076	-0.0000213	0.0002246	0.0035	1.42		7536.27	7536.27	No	69.88	Si
SLU 45	fin.	-616.62	-2556	-0.0001262	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 66	ini.	66.35	264	1.42	0	576	7930	7144	3621	8506	No	32.19	Si
SLU 66	fin.	-594.4	-2218	1.42	0	576	7930	7144	3621	8506	No	3.84	Si
SLU 71	ini.	77.86	233	1.42	0	576	7930	7144	3621	8506	No	36.45	Si
SLU 71	fin.	-602.17	-2248	1.42	0	576	7930	7144	3621	8506	No	3.78	Si
SLU 67	ini.	66.75	263	1.42	0	576	7930	7144	3621	8506	No	32.3	Si
SLU 67	fin.	-594.9	-2218	1.42	0	576	7930	7144	3621	8506	No	3.83	Si
SLU 70	ini.	65.48	276	1.42	0	576	7930	7144	3621	8506	No	30.83	Si
SLU 70	fin.	-589.31	-2206	1.42	0	576	7930	7144	3621	8506	No	3.86	Si
SLU 65	ini.	81.07	206	1.42	0	576	7930	7144	3621	8506	No	41.2	Si
SLU 65	fin.	-614.2	-2275	1.42	0	576	7930	7144	3621	8506	No	3.74	Si
SLU 64	ini.	80.39	208	1.42	0	576	7930	7144	3621	8506	No	40.88	Si
SLU 64	fin.	-613.36	-2274	1.42	0	576	7930	7144	3621	8506	No	3.74	Si
SLU 69	ini.	65.08	277	1.42	0	576	7930	7144	3621	8506	No	30.72	Si
SLU 69	fin.	-588.8	-2205	1.42	0	576	7930	7144	3621	8506	No	3.86	Si
SLU 68	ini.	79.8	219	1.42	0	576	7930	7144	3621	8506	No	38.82	Si
SLU 68	fin.	-608.6	-2263	1.42	0	576	7930	7144	3621	8506	No	3.76	Si
SLU 72	ini.	78.26	232	1.42	0	576	7930	7144	3621	8506	No	36.6	Si
SLU 72	fin.	-602.67	-2249	1.42	0	576	7930	7144	3621	8506	No	3.78	Si
SLU 73	ini.	-71.83	996	1.42	0	576	7930	7144	3621	8506	No	8.54	Si
SLU 73	fin.	-494.53	-2175	1.42	0	576	7930	7144	3621	8506	No	3.91	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-2793.29	-4597	-0.0006636	0.0003369	0.0035	1.42		7279.66	7279.66		2.61	Si
SLV 16	fin.	1994.31	-979	-0.0004437	0.0003369	0.0035	1.42		7270.13	7270.13		3.65	Si
SLD 1	ini.	1233.47	-391	-0.0002594	0.0003369	0.0035	1.42		7270.13	7270.13		5.89	Si
SLD 1	fin.	-1484.73	-2337	-0.0003172	0.0003369	0.0035	1.42		7279.66	7279.66		4.9	Si
SLV 13	ini.	-2780.64	-4948	-0.0006599	0.0003369	0.0035	1.42		7279.66	7279.66		2.62	Si
SLV 13	fin.	1875.11	-1738	-0.0004131	0.0003369	0.0035	1.42		7270.13	7270.13		3.88	Si
SLV 4	ini.	2835.2	1650	-0.0006769	0.0003369	0.0035	1.42		7270.13	7270.13		2.56	Si
SLV 4	fin.	-2760.13	-2117	-0.0006539	0.0003369	0.0035	1.42		7279.66	7279.66		2.64	Si
SLV 3	ini.	2846.94	1678	-0.0006804	0.0003369	0.0035	1.42		7270.13	7270.13		2.55	Si
SLV 3	fin.	-2786.22	-2115	-0.0006615	0.0003369	0.0035	1.42		7279.66	7279.66		2.61	Si
SLV 15	ini.	-2781.55	-4569	-0.0006601	0.0003369	0.0035	1.42		7279.66	7279.66		2.62	Si
SLV 15	fin.	1968.23	-978	-0.0004369	0.0003369	0.0035	1.42		7270.13	7270.13		3.69	Si
SLV 14	ini.	-2792.38	-4976	-0.0006633	0.0003369	0.0035	1.42		7279.66	7279.66		2.61	Si
SLV 14	fin.	1901.2	-1740	-0.0004198	0.0003369	0.0035	1.42		7270.13	7270.13		3.82	Si
SLV 1	ini.	2847.85	1299	-0.0006807	0.0003369	0.0035	1.42		7270.13	7270.13		2.55	Si
SLV 1	fin.	-2879.33	-2876	-0.000689	0.0003369	0.0035	1.42		7279.66	7279.66		2.53	Si
SLV 2	ini.	2836.11	1271	-0.0006772	0.0003369	0.0035	1.42		7270.13	7270.13		2.56	Si
SLV 2	fin.	-2853.25	-2878	-0.0006813	0.0003369	0.0035	1.42		7279.66	7279.66		2.55	Si
SLD 2	ini.	1228.43	-403	-0.0002582	0.0003369	0.0035	1.42		7270.13	7270.13		5.92	Si
SLD 2	fin.	-1473.53	-2338	-0.0003146	0.0003369	0.0035	1.42		7279.66	7279.66		4.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 2	ini.	1228.43	-3073	1.42	0	864	7930	10717	3621	8794		2.86	Si
SLD 2	fin.	-1473.53	-5063	1.42	0	864	7930	10717	3621	8794		1.74	Si
SLV 16	ini.	-2793.29	8211	1.42	0	864	7930	10717	3621	8794		1.07	Si
SLV 16	fin.	1994.31	6278	1.42	0	864	7930	10717	3621	8794		1.4	Si
SLV 14	ini.	-2792.38	7795	1.42	0	864	7930	10717	3621	8794		1.13	Si
SLV 14	fin.	1901.2	5749	1.42	0	864	7930	10717	3621	8794		1.53	Si
SLV 3	ini.	2846.94	-7212	1.42	0	864	7930	10717	3621	8794		1.22	Si
SLV 3	fin.	-2786.22	-9112	1.42	0	864	7930	10717	3621	8794		0.97	No
SLV 13	ini.	-2780.64	7738	1.42	0	864	7930	10717	3621	8794		1.14	Si
SLV 13	fin.	1875.11	5693	1.42	0	864	7930	10717	3621	8794		1.54	Si
SLD 1	ini.	1233.47	-3097	1.42	0	864	7930	10717	3621	8794		2.84	Si
SLD 1	fin.	-1484.73	-5087	1.42	0	864	7930	10717	3621	8794		1.73	Si
SLV 15	ini.	-2781.55	8154	1.42	0	864	7930	10717	3621	8794		1.08	Si
SLV 15	fin.	1968.23	6221	1.42	0	864	7930	10717	3621	8794		1.41	Si
SLV 1	ini.	2847.85	-7627	1.42	0	864	7930	10717	3621	8794		1.15	Si
SLV 1	fin.	-2879.33	-9641	1.42	0	864	7930	10717	3621	8794		0.91	No
SLV 4	ini.	2835.2	-7155	1.42	0	864	7930	10717	3621	8794		1.23	Si
SLV 4	fin.	-2760.13	-9056	1.42	0	864	7930	10717	3621	8794		0.97	No
SLV 2	ini.	2836.11	-7571	1.42	0	864	7930	10717	3621	8794		1.16	Si
SLV 2	fin.	-2853.25	-9584	1.42	0	864	7930	10717	3621	8794		0.92	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.528	SLV 1	Si
V_SLV	0.912	SLV 1	No
PF_SLU	11.855	SLU 44	Si
V_SLU	3.738	SLU 65	Si

Trave di accoppiamento 124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-4.113	1.006	10.44	11.86	1.42	-4.913	1.006	10.44	11.86	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 68	ini.	576.95	-1754	-0.0001179	0.0002246	0.0035	1.42		7536.27	7536.27	No	13.06	Si
SLU 68	fin.	-717.72	-2418	-0.0001481	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.51	Si
SLU 76	ini.	496.56	-2061	-0.0001008	0.0002246	0.0035	1.42		7536.27	7536.27	No	15.18	Si
SLU 76	fin.	-728.34	-2694	-0.0001504	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.36	Si
SLU 84	ini.	459.38	-2196	-0.000093	0.0002246	0.0035	1.42		7536.27	7536.27	No	16.41	Si
SLU 84	fin.	-731.05	-2814	-0.000151	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.32	Si
SLU 82	ini.	479.56	-2098	-0.0000973	0.0002246	0.0035	1.42		7536.27	7536.27	No	15.72	Si
SLU 82	fin.	-743.48	-2734	-0.0001538	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.15	Si
SLU 73	ini.	516.74	-1963	-0.0001051	0.0002246	0.0035	1.42		7536.27	7536.27	No	14.58	Si
SLU 73	fin.	-740.77	-2614	-0.0001532	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.19	Si
SLU 65	ini.	597.13	-1656	-0.0001222	0.0002246	0.0035	1.42		7536.27	7536.27	No	12.62	Si
SLU 65	fin.	-730.15	-2339	-0.0001508	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.33	Si
SLU 83	ini.	455.29	-2202	-0.0000922	0.0002246	0.0035	1.42		7536.27	7536.27	No	16.55	Si
SLU 83	fin.	-728.29	-2816	-0.0001504	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.36	Si
SLU 81	ini.	475.47	-2104	-0.0000964	0.0002246	0.0035	1.42		7536.27	7536.27	No	15.85	Si
SLU 81	fin.	-740.72	-2737	-0.0001532	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.19	Si
SLU 75	ini.	485.61	-2155	-0.0000985	0.0002246	0.0035	1.42		7536.27	7536.27	No	15.52	Si
SLU 75	fin.	-720.18	-2779	-0.0001487	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.48	Si
SLU 64	ini.	590.32	-1666	-0.0001207	0.0002246	0.0035	1.42		7536.27	7536.27	No	12.77	Si
SLU 64	fin.	-725.55	-2343	-0.0001498	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 65	ini.	597.13	-1449	1.42	0	576	6344	7144	3621	6920	No	4.78	Si
SLU 65	fin.	-730.15	-3035	1.42	0	576	6344	7144	3621	6920	No	2.28	Si
SLU 83	ini.	455.29	-935	1.42	0	576	6344	7144	3621	6920	No	7.4	Si
SLU 83	fin.	-728.29	-3070	1.42	0	576	6344	7144	3621	6920	No	2.25	Si
SLU 74	ini.	481.52	-1042	1.42	0	576	6344	7144	3621	6920	No	6.64	Si
SLU 74	fin.	-717.42	-3012	1.42	0	576	6344	7144	3621	6920	No	2.3	Si
SLU 76	ini.	496.56	-1085	1.42	0	576	6344	7144	3621	6920	No	6.38	Si
SLU 76	fin.	-728.34	-3056	1.42	0	576	6344	7144	3621	6920	No	2.26	Si
SLU 84	ini.	459.38	-946	1.42	0	576	6344	7144	3621	6920	No	7.31	Si
SLU 84	fin.	-731.05	-3082	1.42	0	576	6344	7144	3621	6920	No	2.25	Si
SLU 73	ini.	516.74	-1142	1.42	0	576	6344	7144	3621	6920	No	6.06	Si
SLU 73	fin.	-740.77	-3113	1.42	0	576	6344	7144	3621	6920	No	2.22	Si
SLU 64	ini.	590.32	-1429	1.42	0	576	6344	7144	3621	6920	No	4.84	Si
SLU 64	fin.	-725.55	-3016	1.42	0	576	6344	7144	3621	6920	No	2.29	Si
SLU 75	ini.	485.61	-1053	1.42	0	576	6344	7144	3621	6920	No	6.57	Si
SLU 75	fin.	-720.18	-3024	1.42	0	576	6344	7144	3621	6920	No	2.29	Si
SLU 81	ini.	475.47	-991	1.42	0	576	6344	7144	3621	6920	No	6.98	Si
SLU 81	fin.	-740.72	-3127	1.42	0	576	6344	7144	3621	6920	No	2.21	Si
SLU 82	ini.	479.56	-1003	1.42	0	576	6344	7144	3621	6920	No	6.9	Si
SLU 82	fin.	-743.48	-3138	1.42	0	576	6344	7144	3621	6920	No	2.2	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-2627.44	-5587	-0.0006155	0.0003369	0.0035	1.42		7279.66	7279.66		2.77	Si
SLV 13	fin.	1086.63	-3804	-0.0002263	0.0003369	0.0035	1.42		7270.13	7270.13		6.69	Si
SLV 1	ini.	3181.73	2533	-0.0007824	0.0003369	0.0035	1.42		7270.13	7270.13		2.28	Si
SLV 1	fin.	-1955.11	14	-0.000433	0.0003369	0.0035	1.42		7279.66	7279.66		3.72	Si
SLV 3	ini.	3548.61	3050	-0.0009004	0.0003369	0.0035	1.42		7270.13	7270.13		2.05	Si
SLV 3	fin.	-2228.87	202	-0.0005049	0.0003369	0.0035	1.42		7279.66	7279.66		3.27	Si
SLV 2	ini.	3125.57	2444	-0.0007649	0.0003369	0.0035	1.42		7270.13	7270.13		2.33	Si
SLV 2	fin.	-1918.38	-26	-0.0004236	0.0003369	0.0035	1.42		7279.66	7279.66		3.79	Si
SLV 14	ini.	-2683.6	-5677	-0.0006316	0.0003369	0.0035	1.42		7279.66	7279.66		2.71	Si
SLV 14	fin.	1123.37	-3844	-0.0002345	0.0003369	0.0035	1.42		7270.13	7270.13		6.47	Si
SLV 7	ini.	1933.39	796	-0.000428	0.0003369	0.0035	1.42		7270.13	7270.13		3.76	Si
SLV 7	fin.	-1477.08	-923	-0.0003154	0.0003369	0.0035	1.42		7279.66	7279.66		4.93	Si
SLV 8	ini.	1897.29	738	-0.0004188	0.0003369	0.0035	1.42		7270.13	7270.13		3.83	Si
SLV 8	fin.	-1453.47	-949	-0.0003098	0.0003369	0.0035	1.42		7279.66	7279.66		5.01	Si
SLV 16	ini.	-2316.72	-5159	-0.0005286	0.0003369	0.0035	1.42		7279.66	7279.66		3.14	Si
SLV 16	fin.	849.61	-3657	-0.0001744	0.0003369	0.0035	1.42		7270.13	7270.13		8.56	Si
SLV 4	ini.	3492.44	2961	-0.0008819	0.0003369	0.0035	1.42		7270.13	7270.13		2.08	Si
SLV 4	fin.	-2192.14	162	-0.000495	0.0003369	0.0035	1.42		7279.66	7279.66		3.32	Si
SLV 15	ini.	-2260.56	-5070	-0.0005134	0.0003369	0.0035	1.42		7279.66	7279.66		3.22	Si
SLV 15	fin.	812.87	-3617	-0.0001665	0.0003369	0.0035	1.42		7270.13	7270.13		8.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-2683.6	6908	1.42	0	864	6344	10717	3621	7208		1.04	Si
SLV 14	fin.	1123.37	5582	1.42	0	864	6344	10717	3621	7208		1.29	Si
SLV 7	ini.	1933.39	-5144	1.42	0	864	6344	10717	3621	7208		1.4	Si
SLV 7	fin.	-1477.08	-6245	1.42	0	864	6344	10717	3621	7208		1.15	Si
SLV 1	ini.	3181.73	-7864	1.42	0	864	6344	10717	3621	7208		0.92	No
SLV 1	fin.	-1955.11	-9136	1.42	0	864	6344	10717	3621	7208		0.79	No
SLV 8	ini.	1897.29	-5041	1.42	0	864	6344	10717	3621	7208		1.43	Si
SLV 8	fin.	-1453.47	-6142	1.42	0	864	6344	10717	3621	7208		1.17	Si
SLV 16	ini.	-2316.72	5790	1.42	0	864	6344	10717	3621	7208		1.24	Si
SLV 16	fin.	849.61	4551	1.42	0	864	6344	10717	3621	7208		1.58	Si
SLV 2	ini.	3125.57	-7704	1.42	0	864	6344	10717	3621	7208		0.94	No
SLV 2	fin.	-1918.38	-8976	1.42	0	864	6344	10717	3621	7208		0.8	No
SLD 3	ini.	1766.8	-4441	1.42	0	864	6344	10717	3621	7208		1.62	Si
SLD 3	fin.	-1271.49	-5666	1.42	0	864	6344	10717	3621	7208		1.27	Si
SLV 13	ini.	-2627.44	6749	1.42	0	864	6344	10717	3621	7208		1.07	Si
SLV 13	fin.	1086.63	5422	1.42	0	864	6344	10717	3621	7208		1.33	Si
SLV 4	ini.	3492.44	-8822	1.42	0	864	6344	10717	3621	7208		0.82	No
SLV 4	fin.	-2192.14	-10007	1.42	0	864	6344	10717	3621	7208		0.72	No
SLV 3	ini.	3548.61	-8982	1.42	0	864	6344	10717	3621	7208		0.8	No
SLV 3	fin.	-2228.87	-10167	1.42	0	864	6344	10717	3621	7208		0.71	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.049	SLV 3	Si
V_SLV	0.709	SLV 3	No
PF_SLU	10.148	SLU 82	Si
V_SLU	2.205	SLU 82	Si

Trave di accoppiamento 126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	10.44	11.86	1.42	-9.333	-3.314	10.44	11.86	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	ini.	844.78	-1719	-0.0001784	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.7	Si
SLU 66	fin.	-1306.43	-2861	-0.0002906	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.63	Si
SLU 72	ini.	851.25	-1766	-0.0001799	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.64	Si
SLU 72	fin.	-1321.2	-2918	-0.0002944	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.57	Si
SLU 71	ini.	850.2	-1761	-0.0001797	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.65	Si
SLU 71	fin.	-1319.34	-2913	-0.0002939	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.58	Si
SLU 80	ini.	857.56	-1713	-0.0001814	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.57	Si
SLU 80	fin.	-1274.68	-2943	-0.0002824	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.77	Si
SLU 78	ini.	878.48	-1751	-0.0001862	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.37	Si
SLU 78	fin.	-1298.42	-3006	-0.0002885	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.67	Si
SLU 70	ini.	872.17	-1804	-0.0001848	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.43	Si
SLU 70	fin.	-1344.95	-2981	-0.0003005	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.47	Si
SLU 68	ini.	825.62	-1690	-0.000174	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.9	Si
SLU 68	fin.	-1285.79	-2807	-0.0002853	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.72	Si
SLU 77	ini.	877.43	-1746	-0.000186	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.38	Si
SLU 77	fin.	-1296.56	-3001	-0.000288	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.68	Si
SLU 69	ini.	871.12	-1799	-0.0001845	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.44	Si
SLU 69	fin.	-1343.09	-2975	-0.0003	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.48	Si
SLU 67	ini.	845.83	-1724	-0.0001787	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.69	Si
SLU 67	fin.	-1308.29	-2866	-0.0002911	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	871.12	-2670	1.42	0	576	7137	5953	3621	7713	No	2.89	Si
SLU 69	fin.	-1343.09	-4108	1.42	0	576	7137	5953	3621	7713	No	1.88	Si
SLU 79	ini.	856.51	-2483	1.42	0	576	7137	5953	3621	7713	No	3.11	Si
SLU 79	fin.	-1272.81	-4190	1.42	0	576	7137	5953	3621	7713	No	1.84	Si
SLU 75	ini.	852.14	-2458	1.42	0	576	7137	5953	3621	7713	No	3.14	Si
SLU 75	fin.	-1261.77	-4166	1.42	0	576	7137	5953	3621	7713	No	1.85	Si
SLU 70	ini.	872.17	-2674	1.42	0	576	7137	5953	3621	7713	No	2.88	Si
SLU 70	fin.	-1344.95	-4111	1.42	0	576	7137	5953	3621	7713	No	1.88	Si
SLU 78	ini.	878.48	-2556	1.42	0	576	7137	5953	3621	7713	No	3.02	Si
SLU 78	fin.	-1298.42	-4263	1.42	0	576	7137	5953	3621	7713	No	1.81	Si
SLU 74	ini.	851.09	-2454	1.42	0	576	7137	5953	3621	7713	No	3.14	Si
SLU 74	fin.	-1259.9	-4162	1.42	0	576	7137	5953	3621	7713	No	1.85	Si
SLU 77	ini.	877.43	-2552	1.42	0	576	7137	5953	3621	7713	No	3.02	Si
SLU 77	fin.	-1296.56	-4260	1.42	0	576	7137	5953	3621	7713	No	1.81	Si
SLU 84	ini.	833.93	-2338	1.42	0	576	7137	5953	3621	7713	No	3.3	Si
SLU 84	fin.	-1218.08	-4161	1.42	0	576	7137	5953	3621	7713	No	1.85	Si
SLU 83	ini.	832.87	-2334	1.42	0	576	7137	5953	3621	7713	No	3.3	Si
SLU 83	fin.	-1216.21	-4158	1.42	0	576	7137	5953	3621	7713	No	1.86	Si
SLU 80	ini.	857.56	-2486	1.42	0	576	7137	5953	3621	7713	No	3.1	Si
SLU 80	fin.	-1274.68	-4194	1.42	0	576	7137	5953	3621	7713	No	1.84	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3037.19	-1442	-0.0007578	0.0002807	0.0035	1.42		7346.34	7346.34		2.42	Si
SLV 16	fin.	2936.91	940	-0.0007274	0.0002807	0.0035	1.42		7337.02	7337.02		2.5	Si
SLV 6	ini.	2205.5	-670	-0.0005113	0.0002807	0.0035	1.42		7337.02	7337.02		3.33	Si
SLV 6	fin.	-2561.5	-2889	-0.0006125	0.0002807	0.0035	1.42		7346.34	7346.34		2.87	Si
SLV 13	ini.	-2935.02	-1170	-0.0007257	0.0002807	0.0035	1.42		7346.34	7346.34		2.5	Si
SLV 13	fin.	2848.6	1105	-0.0007	0.0002807	0.0035	1.42		7337.02	7337.02		2.58	Si
SLD 2	ini.	2211.18	-1063	-0.0005129	0.0002807	0.0035	1.42		7337.02	7337.02		3.32	Si
SLD 2	fin.	-2619.38	-3303	-0.0006296	0.0002807	0.0035	1.42		7346.34	7346.34		2.8	Si
SLV 3	ini.	3903.57	-1204	-0.0010531	0.0002807	0.0035	1.42		7337.02	7337.02		1.88	Si
SLV 3	fin.	-4453.7	-4959	-0.0012617	0.0002807	0.0035	1.42		7346.34	7346.34		1.65	Si
SLV 1	ini.	4199	-922	-0.0011636	0.0002807	0.0035	1.42		7337.02	7337.02		1.75	Si
SLV 1	fin.	-4732.75	-4927	-0.0013773	0.0002807	0.0035	1.42		7346.34	7346.34		1.55	Si
SLV 4	ini.	4096.84	-1194	-0.0011247	0.0002807	0.0035	1.42		7337.02	7337.02		1.79	Si
SLV 4	fin.	-4644.44	-5092	-0.0013399	0.0002807	0.0035	1.42		7346.34	7346.34		1.58	Si
SLV 14	ini.	-2741.76	-1159	-0.0006663	0.0002807	0.0035	1.42		7346.34	7346.34		2.68	Si
SLV 14	fin.	2657.85	972	-0.0006421	0.0002807	0.0035	1.42		7337.02	7337.02		2.76	Si
SLV 2	ini.	4392.27	-911	-0.0012391	0.0002807	0.0035	1.42		7337.02	7337.02		1.67	Si
SLV 2	fin.	-4923.49	-5060	-0.0014605	0.0002807	0.0035	1.42		7346.34	7346.34		1.49	Si
SLV 15	ini.	-3230.45	-1453	-0.0008199	0.0002807	0.0035	1.42		7346.34	7346.34		2.27	Si
SLV 15	fin.	3127.65	1073	-0.0007878	0.0002807	0.0035	1.42		7337.02	7337.02		2.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-2935.02	8665	1.42	0	864	7137	8929	3621	8001		0.92	No
SLV 13	fin.	2848.6	7632	1.42	0	864	7137	8929	3621	8001		1.05	Si
SLV 2	ini.	4392.27	-12900	1.42	0	864	7137	8929	3621	8001		0.62	No
SLV 2	fin.	-4923.49	-13944	1.42	0	864	7137	8929	3621	8001		0.57	No
SLV 3	ini.	3903.57	-11562	1.42	0	864	7137	8929	3621	8001		0.69	No
SLV 3	fin.	-4453.7	-12789	1.42	0	864	7137	8929	3621	8001		0.63	No
SLD 1	ini.	2128.2	-6269	1.42	0	864	7137	8929	3621	8001		1.28	Si
SLD 1	fin.	-2537.49	-7363	1.42	0	864	7137	8929	3621	8001		1.09	Si
SLV 4	ini.	4096.84	-12102	1.42	0	864	7137	8929	3621	8001		0.66	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-4644.44	-13329	1.42	0	864	7137	8929	3621	8001		0.6	No
SLV 1	ini.	4199	-12360	1.42	0	864	7137	8929	3621	8001		0.65	No
SLV 1	fin.	-4732.75	-13404	1.42	0	864	7137	8929	3621	8001		0.6	No
SLV 14	ini.	-2741.76	8125	1.42	0	864	7137	8929	3621	8001		0.98	No
SLV 14	fin.	2657.85	7091	1.42	0	864	7137	8929	3621	8001		1.13	Si
SLV 16	ini.	-3037.19	8923	1.42	0	864	7137	8929	3621	8001		0.9	No
SLV 16	fin.	2936.91	7706	1.42	0	864	7137	8929	3621	8001		1.04	Si
SLD 2	ini.	2211.18	-6501	1.42	0	864	7137	8929	3621	8001		1.23	Si
SLD 2	fin.	-2619.38	-7595	1.42	0	864	7137	8929	3621	8001		1.05	Si
SLV 15	ini.	-3230.45	9463	1.42	0	864	7137	8929	3621	8001		0.85	No
SLV 15	fin.	3127.65	8247	1.42	0	864	7137	8929	3621	8001		0.97	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.492	SLV 2	Si
V_SLV	0.574	SLV 2	No
PF_SLU	5.472	SLU 70	Si
V_SLU	1.809	SLU 78	Si

Trave di accoppiamento 128

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.163	1.246	10.44	11.86	1.42	-5.163	2.046	10.44	11.86	1.42	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	208.96	-419	-0.0000416	0.0002246	0.0035	1.42		7594.91	7594.91	No	36.35	Si
SLU 77	fin.	-47.26	-507	-0.0000093	0.0002246	0.0035	1.42		7603.79	7603.79	No	160.89	Si
SLU 82	ini.	204.97	-415	-0.0000408	0.0002246	0.0035	1.42		7594.91	7594.91	No	37.05	Si
SLU 82	fin.	-49.62	-500	-0.0000098	0.0002246	0.0035	1.42		7603.79	7603.79	No	153.24	Si
SLU 75	ini.	203.68	-408	-0.0000405	0.0002246	0.0035	1.42		7594.91	7594.91	No	37.29	Si
SLU 75	fin.	-48.47	-496	-0.0000095	0.0002246	0.0035	1.42		7603.79	7603.79	No	156.88	Si
SLU 81	ini.	206.03	-417	-0.000041	0.0002246	0.0035	1.42		7594.91	7594.91	No	36.86	Si
SLU 81	fin.	-50.99	-503	-0.00001	0.0002246	0.0035	1.42		7603.79	7603.79	No	149.12	Si
SLU 83	ini.	210.26	-426	-0.0000418	0.0002246	0.0035	1.42		7594.91	7594.91	No	36.12	Si
SLU 83	fin.	-48.41	-512	-0.0000095	0.0002246	0.0035	1.42		7603.79	7603.79	No	157.06	Si
SLU 80	ini.	201.28	-404	-0.00004	0.0002246	0.0035	1.42		7594.91	7594.91	No	37.73	Si
SLU 80	fin.	-42.22	-487	-0.0000083	0.0002246	0.0035	1.42		7603.79	7603.79	No	180.08	Si
SLU 78	ini.	207.91	-417	-0.0000414	0.0002246	0.0035	1.42		7594.91	7594.91	No	36.53	Si
SLU 78	fin.	-45.89	-504	-0.000009	0.0002246	0.0035	1.42		7603.79	7603.79	No	165.7	Si
SLU 79	ini.	202.33	-406	-0.0000402	0.0002246	0.0035	1.42		7594.91	7594.91	No	37.54	Si
SLU 79	fin.	-43.6	-490	-0.0000086	0.0002246	0.0035	1.42		7603.79	7603.79	No	174.42	Si
SLU 84	ini.	209.21	-423	-0.0000416	0.0002246	0.0035	1.42		7594.91	7594.91	No	36.3	Si
SLU 84	fin.	-47.04	-508	-0.0000092	0.0002246	0.0035	1.42		7603.79	7603.79	No	161.64	Si
SLU 74	ini.	204.73	-411	-0.0000407	0.0002246	0.0035	1.42		7594.91	7594.91	No	37.1	Si
SLU 74	fin.	-49.84	-499	-0.0000098	0.0002246	0.0035	1.42		7603.79	7603.79	No	152.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	210.26	-195	1.42	0	329	6344	4083	3621	6673	No	34.19	Si
SLU 83	fin.	-48.41	-631	1.42	0	329	6344	4083	3621	6673	No	10.58	Si
SLU 79	ini.	202.33	-178	1.42	0	329	6344	4083	3621	6673	No	37.57	Si
SLU 79	fin.	-43.6	-613	1.42	0	329	6344	4083	3621	6673	No	10.88	Si
SLU 75	ini.	203.68	-188	1.42	0	329	6344	4083	3621	6673	No	35.52	Si
SLU 75	fin.	-48.47	-623	1.42	0	329	6344	4083	3621	6673	No	10.71	Si
SLU 81	ini.	206.03	-193	1.42	0	329	6344	4083	3621	6673	No	34.52	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-50.99	-629	1.42	0	329	6344	4083	3621	6673	No	10.61	Si
SLU 78	ini.	207.91	-190	1.42	0	329	6344	4083	3621	6673	No	35.16	Si
SLU 78	fin.	-45.89	-625	1.42	0	329	6344	4083	3621	6673	No	10.67	Si
SLU 74	ini.	204.73	-192	1.42	0	329	6344	4083	3621	6673	No	34.8	Si
SLU 74	fin.	-49.84	-627	1.42	0	329	6344	4083	3621	6673	No	10.64	Si
SLU 84	ini.	209.21	-191	1.42	0	329	6344	4083	3621	6673	No	34.88	Si
SLU 84	fin.	-47.04	-627	1.42	0	329	6344	4083	3621	6673	No	10.65	Si
SLU 77	ini.	208.96	-194	1.42	0	329	6344	4083	3621	6673	No	34.46	Si
SLU 77	fin.	-47.26	-629	1.42	0	329	6344	4083	3621	6673	No	10.61	Si
SLU 82	ini.	204.97	-189	1.42	0	329	6344	4083	3621	6673	No	35.23	Si
SLU 82	fin.	-49.62	-625	1.42	0	329	6344	4083	3621	6673	No	10.68	Si
SLU 80	ini.	201.28	-174	1.42	0	329	6344	4083	3621	6673	No	38.41	Si
SLU 80	fin.	-42.22	-609	1.42	0	329	6344	4083	3621	6673	No	10.95	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	702.1	-302	-0.0001429	0.0003369	0.0035	1.42		7808.98	7808.98		11.12	Si
SLV 9	fin.	87.6	63	-0.0000173	0.0003369	0.0035	1.42		7808.98	7808.98		89.14	Si
SLD 5	ini.	382.24	-227	-0.0000765	0.0003369	0.0035	1.42		7808.98	7808.98		20.43	Si
SLD 5	fin.	32.02	-71	-0.0000063	0.0003369	0.0035	1.42		7808.98	7808.98		243.91	Si
SLV 11	ini.	-451.42	-326	-0.0000905	0.0003369	0.0035	1.42		7818.07	7818.07		17.32	Si
SLV 11	fin.	-183.64	-886	-0.0000363	0.0003369	0.0035	1.42		7818.07	7818.07		42.57	Si
SLV 8	ini.	-441.28	-210	-0.0000884	0.0003369	0.0035	1.42		7818.07	7818.07		17.72	Si
SLV 8	fin.	-156.77	-700	-0.000031	0.0003369	0.0035	1.42		7818.07	7818.07		49.87	Si
SLV 12	ini.	-451.57	-327	-0.0000905	0.0003369	0.0035	1.42		7818.07	7818.07		17.31	Si
SLV 12	fin.	-192.31	-895	-0.000038	0.0003369	0.0035	1.42		7818.07	7818.07		40.65	Si
SLD 6	ini.	382.18	-228	-0.0000764	0.0003369	0.0035	1.42		7808.98	7808.98		20.43	Si
SLD 6	fin.	28.23	-75	-0.0000055	0.0003369	0.0035	1.42		7808.98	7808.98		276.58	Si
SLV 5	ini.	712.39	-185	-0.0001451	0.0003369	0.0035	1.42		7808.98	7808.98		10.96	Si
SLV 5	fin.	123.13	258	-0.0000243	0.0003369	0.0035	1.42		7808.98	7808.98		63.42	Si
SLV 10	ini.	701.95	-303	-0.0001429	0.0003369	0.0035	1.42		7808.98	7808.98		11.12	Si
SLV 10	fin.	78.94	54	-0.0000155	0.0003369	0.0035	1.42		7808.98	7808.98		98.92	Si
SLV 6	ini.	712.25	-186	-0.0001451	0.0003369	0.0035	1.42		7808.98	7808.98		10.96	Si
SLV 6	fin.	114.47	250	-0.0000226	0.0003369	0.0035	1.42		7808.98	7808.98		68.22	Si
SLV 7	ini.	-441.13	-209	-0.0000884	0.0003369	0.0035	1.42		7818.07	7818.07		17.72	Si
SLV 7	fin.	-148.11	-691	-0.0000292	0.0003369	0.0035	1.42		7818.07	7818.07		52.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 10	ini.	378.23	-465	1.42	0	494	6344	6124	3621	6838		14.69	Si
SLD 10	fin.	13.3	-807	1.42	0	494	6344	6124	3621	6838		8.48	Si
SLD 5	ini.	382.24	-402	1.42	0	494	6344	6124	3621	6838		17.03	Si
SLD 5	fin.	32.02	-743	1.42	0	494	6344	6124	3621	6838		9.21	Si
SLV 6	ini.	712.25	-789	1.42	0	494	6344	6124	3621	6838		8.67	Si
SLV 6	fin.	114.47	-1143	1.42	0	494	6344	6124	3621	6838		5.98	Si
SLV 10	ini.	701.95	-922	1.42	0	494	6344	6124	3621	6838		7.42	Si
SLV 10	fin.	78.94	-1275	1.42	0	494	6344	6124	3621	6838		5.36	Si
SLD 9	ini.	378.3	-458	1.42	0	494	6344	6124	3621	6838		14.93	Si
SLD 9	fin.	17.08	-799	1.42	0	494	6344	6124	3621	6838		8.56	Si
SLV 13	ini.	286.4	-537	1.42	0	494	6344	6124	3621	6838		12.74	Si
SLV 13	fin.	-46.38	-875	1.42	0	494	6344	6124	3621	6838		7.82	Si
SLV 14	ini.	286.17	-563	1.42	0	494	6344	6124	3621	6838		12.14	Si
SLV 14	fin.	-59.86	-901	1.42	0	494	6344	6124	3621	6838		7.59	Si
SLV 9	ini.	702.1	-905	1.42	0	494	6344	6124	3621	6838		7.56	Si
SLV 9	fin.	87.6	-1258	1.42	0	494	6344	6124	3621	6838		5.43	Si
SLD 6	ini.	382.18	-409	1.42	0	494	6344	6124	3621	6838		16.72	Si
SLD 6	fin.	28.23	-750	1.42	0	494	6344	6124	3621	6838		9.11	Si
SLV 5	ini.	712.39	-772	1.42	0	494	6344	6124	3621	6838		8.86	Si
SLV 5	fin.	123.13	-1126	1.42	0	494	6344	6124	3621	6838		6.07	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.962	SLV 5	Si
V_SLV	5.361	SLV 10	Si
PF_SLU	36.121	SLU 83	Si
V_SLU	10.581	SLU 83	Si

Trave di accoppiamento 129

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	8.34	10.34	2	-5.093	6.506	8.34	10.34	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	ini.	20.5	-22	-0.000002	0.0001872	0.0035	2		14344.28	14344.28	No	699.82	Si
SLU 43	fin.	1.69	-35	-0.0000002	0.0001872	0.0035	2		14344.28	14344.28	No	8498.78	Si
SLU 47	ini.	20.23	-24	-0.000002	0.0001872	0.0035	2		14344.28	14344.28	No	709.1	Si
SLU 47	fin.	9.34	-23	-0.0000009	0.0001872	0.0035	2		14344.28	14344.28	No	1536.53	Si
SLU 51	ini.	23.53	-28	-0.0000023	0.0001872	0.0035	2		14344.28	14344.28	No	609.49	Si
SLU 51	fin.	6.09	-29	-0.0000006	0.0001872	0.0035	2		14344.28	14344.28	No	2356.82	Si
SLU 46	ini.	20.4	-20	-0.000002	0.0001872	0.0035	2		14344.28	14344.28	No	702.98	Si
SLU 46	fin.	6.14	-28	-0.0000006	0.0001872	0.0035	2		14344.28	14344.28	No	2335.24	Si
SLU 48	ini.	24.22	-26	-0.0000024	0.0001872	0.0035	2		14344.28	14344.28	No	592.22	Si
SLU 48	fin.	1.34	-37	-0.0000001	0.0001872	0.0035	2		14344.28	14344.28	No	10732.07	Si
SLU 71	ini.	18.54	-8	-0.0000018	0.0001872	0.0035	2		14344.28	14344.28	No	773.82	Si
SLU 71	fin.	3.08	-33	-0.0000003	0.0001872	0.0035	2		14344.28	14344.28	No	4657.04	Si
SLU 45	ini.	21.94	-22	-0.0000022	0.0001872	0.0035	2		14344.28	14344.28	No	653.9	Si
SLU 45	fin.	1.47	-36	-0.0000001	0.0001872	0.0035	2		14344.28	14344.28	No	9742.08	Si
SLU 50	ini.	25.07	-30	-0.0000025	0.0001872	0.0035	2		14344.28	14344.28	No	572.25	Si
SLU 50	fin.	1.42	-37	-0.0000001	0.0001872	0.0035	2		14344.28	14344.28	No	10129.01	Si
SLU 49	ini.	22.69	-24	-0.0000022	0.0001872	0.0035	2		14344.28	14344.28	No	632.19	Si
SLU 49	fin.	6.01	-29	-0.0000006	0.0001872	0.0035	2		14344.28	14344.28	No	2388.05	Si
SLU 8	ini.	18.61	-19	-0.0000018	0.0001872	0.0035	2		14344.28	14344.28	No	770.6	Si
SLU 8	fin.	1.47	-28	-0.0000001	0.0001872	0.0035	2		14344.28	14344.28	No	9787.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	18.54	-1232	2	0	812	3965	8384	5100	4776	No	3.88	Si
SLU 71	fin.	3.08	793	2	0	812	3965	8384	5100	4776	No	6.02	Si
SLU 69	ini.	17.69	-1250	2	0	812	3965	8384	5100	4776	No	3.82	Si
SLU 69	fin.	3	821	2	0	812	3965	8384	5100	4776	No	5.82	Si
SLU 77	ini.	7.68	-1263	2	0	812	3965	8384	5100	4776	No	3.78	Si
SLU 77	fin.	5.76	919	2	0	812	3965	8384	5100	4776	No	5.19	Si
SLU 72	ini.	17.01	-1236	2	0	812	3965	8384	5100	4776	No	3.86	Si
SLU 72	fin.	7.75	808	2	0	812	3965	8384	5100	4776	No	5.91	Si
SLU 70	ini.	16.16	-1254	2	0	812	3965	8384	5100	4776	No	3.81	Si
SLU 70	fin.	7.67	837	2	0	812	3965	8384	5100	4776	No	5.71	Si
SLU 78	ini.	6.15	-1268	2	0	812	3965	8384	5100	4776	No	3.77	Si
SLU 78	fin.	10.43	935	2	0	812	3965	8384	5100	4776	No	5.11	Si
SLU 79	ini.	8.53	-1245	2	0	812	3965	8384	5100	4776	No	3.84	Si
SLU 79	fin.	5.84	891	2	0	812	3965	8384	5100	4776	No	5.36	Si
SLU 80	ini.	7	-1250	2	0	812	3965	8384	5100	4776	No	3.82	Si
SLU 80	fin.	10.51	907	2	0	812	3965	8384	5100	4776	No	5.27	Si
SLU 74	ini.	5.4	-1221	2	0	812	3965	8384	5100	4776	No	3.91	Si
SLU 74	fin.	5.9	907	2	0	812	3965	8384	5100	4776	No	5.26	Si
SLU 75	ini.	3.86	-1225	2	0	812	3965	8384	5100	4776	No	3.9	Si
SLU 75	fin.	10.57	923	2	0	812	3965	8384	5100	4776	No	5.18	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	711.36	-1362	-0.0000718	0.0002807	0.0035	2		14202.07	14202.07		19.96	Si
SLV 2	fin.	-203.11	-427	-0.0000202	0.0002807	0.0035	2		14215.41	14215.41		69.99	Si
SLV 3	ini.	629.48	-1121	-0.0000634	0.0002807	0.0035	2		14202.07	14202.07		22.56	Si
SLV 3	fin.	-165.76	-298	-0.0000165	0.0002807	0.0035	2		14215.41	14215.41		85.76	Si
SLV 15	ini.	-692.72	1369	-0.0000699	0.0002807	0.0035	2		14215.41	14215.41		20.52	Si
SLV 15	fin.	209.12	382	-0.0000208	0.0002807	0.0035	2		14202.07	14202.07		67.91	Si
SLV 4	ini.	612.98	-1088	-0.0000617	0.0002807	0.0035	2		14202.07	14202.07		23.17	Si
SLV 4	fin.	-157.17	-286	-0.0000156	0.0002807	0.0035	2		14215.41	14215.41		90.44	Si
SLV 6	ini.	366.31	-816	-0.0000366	0.0002807	0.0035	2		14202.07	14202.07		38.77	Si
SLV 6	fin.	-127.04	-357	-0.0000126	0.0002807	0.0035	2		14215.41	14215.41		111.9	Si
SLV 16	ini.	-709.23	1402	-0.0000716	0.0002807	0.0035	2		14215.41	14215.41		20.04	Si
SLV 16	fin.	217.71	394	-0.0000217	0.0002807	0.0035	2		14202.07	14202.07		65.23	Si
SLV 13	ini.	-594.34	1095	-0.0000598	0.0002807	0.0035	2		14215.41	14215.41		23.92	Si
SLV 13	fin.	163.18	240	-0.0000162	0.0002807	0.0035	2		14202.07	14202.07		87.03	Si
SLV 14	ini.	-610.85	1129	-0.0000615	0.0002807	0.0035	2		14215.41	14215.41		23.27	Si
SLV 14	fin.	171.77	253	-0.0000171	0.0002807	0.0035	2		14202.07	14202.07		82.68	Si
SLV 1	ini.	727.86	-1395	-0.0000735	0.0002807	0.0035	2		14202.07	14202.07		19.51	Si
SLV 1	fin.	-211.7	-440	-0.0000211	0.0002807	0.0035	2		14215.41	14215.41		67.15	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	376.92	-837	-0.0000377	0.0002807	0.0035	2		14202.07	14202.07		37.68	Si
SLV 5	fin.	-132.56	-365	-0.0000132	0.0002807	0.0035	2		14215.41	14215.41		107.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	271.28	-1426	2	0	1217	3965	12577	5100	5182		3.63	Si
SLD 3	fin.	-68.76	81	2	0	1217	3965	12577	5100	5182		63.98	Si
SLV 3	ini.	629.48	-2171	2	0	1217	3965	12577	5100	5182		2.39	Si
SLV 3	fin.	-165.76	-610	2	0	1217	3965	12577	5100	5182		8.49	Si
SLV 1	ini.	727.86	-2031	2	0	1217	3965	12577	5100	5182		2.55	Si
SLV 1	fin.	-211.7	-717	2	0	1217	3965	12577	5100	5182		7.22	Si
SLV 15	ini.	-692.72	176	2	0	1217	3965	12577	5100	5182		29.45	Si
SLV 15	fin.	209.12	1905	2	0	1217	3965	12577	5100	5182		2.72	Si
SLV 13	ini.	-594.34	315	2	0	1217	3965	12577	5100	5182		16.43	Si
SLV 13	fin.	163.18	1798	2	0	1217	3965	12577	5100	5182		2.88	Si
SLV 7	ini.	48.99	-1492	2	0	1217	3965	12577	5100	5182		3.47	Si
SLV 7	fin.	20.58	396	2	0	1217	3965	12577	5100	5182		13.09	Si
SLV 4	ini.	612.98	-2061	2	0	1217	3965	12577	5100	5182		2.52	Si
SLV 4	fin.	-157.17	-605	2	0	1217	3965	12577	5100	5182		8.57	Si
SLV 14	ini.	-610.85	426	2	0	1217	3965	12577	5100	5182		12.17	Si
SLV 14	fin.	171.77	1804	2	0	1217	3965	12577	5100	5182		2.87	Si
SLV 2	ini.	711.36	-1921	2	0	1217	3965	12577	5100	5182		2.7	Si
SLV 2	fin.	-203.11	-712	2	0	1217	3965	12577	5100	5182		7.28	Si
SLV 16	ini.	-709.23	286	2	0	1217	3965	12577	5100	5182		18.1	Si
SLV 16	fin.	217.71	1911	2	0	1217	3965	12577	5100	5182		2.71	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	19.512	SLV 1	Si
V_SLV	2.387	SLV 3	Si
PF_SLU	572.246	SLU 50	Si
V_SLU	3.768	SLU 78	Si

Trave di accoppiamento 130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	11.14	11.86	0.72	-5.093	6.506	11.14	11.86	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-23.82	-68	-0.0000183	0.0001872	0.0035	0.72		1901.86	1901.86	No	79.86	Si
SLU 75	fin.	17.16	-68	-0.0000132	0.0001872	0.0035	0.72		1897.3	1897.3	No	110.59	Si
SLU 78	ini.	-26.07	-65	-0.00002	0.0001872	0.0035	0.72		1901.86	1901.86	No	72.96	Si
SLU 78	fin.	16.96	-68	-0.000013	0.0001872	0.0035	0.72		1897.3	1897.3	No	111.86	Si
SLU 79	ini.	-24.54	-65	-0.0000188	0.0001872	0.0035	0.72		1901.86	1901.86	No	77.51	Si
SLU 79	fin.	16.05	-68	-0.0000123	0.0001872	0.0035	0.72		1897.3	1897.3	No	118.2	Si
SLU 77	ini.	-25.11	-69	-0.0000193	0.0001872	0.0035	0.72		1901.86	1901.86	No	75.73	Si
SLU 77	fin.	16.91	-71	-0.000013	0.0001872	0.0035	0.72		1897.3	1897.3	No	112.23	Si
SLU 84	ini.	-24.04	-77	-0.0000185	0.0001872	0.0035	0.72		1901.86	1901.86	No	79.11	Si
SLU 84	fin.	18.92	-73	-0.0000145	0.0001872	0.0035	0.72		1897.3	1897.3	No	100.3	Si
SLU 76	ini.	-23.87	-61	-0.0000183	0.0001872	0.0035	0.72		1901.86	1901.86	No	79.67	Si
SLU 76	fin.	16.34	-62	-0.0000125	0.0001872	0.0035	0.72		1897.3	1897.3	No	116.11	Si
SLU 36	ini.	-23.71	-66	-0.0000182	0.0001872	0.0035	0.72		1901.86	1901.86	No	80.23	Si
SLU 36	fin.	17.01	-65	-0.0000131	0.0001872	0.0035	0.72		1897.3	1897.3	No	111.55	Si
SLU 72	ini.	-23.61	-31	-0.0000181	0.0001872	0.0035	0.72		1901.86	1901.86	No	80.54	Si
SLU 72	fin.	10.01	-44	-0.0000077	0.0001872	0.0035	0.72		1897.3	1897.3	No	189.58	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-24.19	-35	-0.0000186	0.0001872	0.0035	0.72		1901.86	1901.86	No	78.62	Si
SLU 70	fin.	10.86	-48	-0.0000083	0.0001872	0.0035	0.72		1897.3	1897.3	No	174.68	Si
SLU 80	ini.	-25.49	-61	-0.0000196	0.0001872	0.0035	0.72		1901.86	1901.86	No	74.62	Si
SLU 80	fin.	16.11	-64	-0.0000124	0.0001872	0.0035	0.72		1897.3	1897.3	No	117.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-24.04	985	0.72	0	292	3965	3018	1836	4257	No	4.32	Si
SLU 84	fin.	18.92	-221	0.72	0	292	3965	3018	1836	4257	No	19.26	Si
SLU 79	ini.	-24.54	998	0.72	0	292	3965	3018	1836	4257	No	4.27	Si
SLU 79	fin.	16.05	-237	0.72	0	292	3965	3018	1836	4257	No	17.98	Si
SLU 77	ini.	-25.11	1022	0.72	0	292	3965	3018	1836	4257	No	4.17	Si
SLU 77	fin.	16.91	-239	0.72	0	292	3965	3018	1836	4257	No	17.84	Si
SLU 74	ini.	-22.86	984	0.72	0	292	3965	3018	1836	4257	No	4.33	Si
SLU 74	fin.	17.1	-231	0.72	0	292	3965	3018	1836	4257	No	18.42	Si
SLU 80	ini.	-25.49	1000	0.72	0	292	3965	3018	1836	4257	No	4.26	Si
SLU 80	fin.	16.11	-235	0.72	0	292	3965	3018	1836	4257	No	18.1	Si
SLU 69	ini.	-23.24	966	0.72	0	292	3965	3018	1836	4257	No	4.41	Si
SLU 69	fin.	10.8	-254	0.72	0	292	3965	3018	1836	4257	No	16.75	Si
SLU 70	ini.	-24.19	967	0.72	0	292	3965	3018	1836	4257	No	4.4	Si
SLU 70	fin.	10.86	-253	0.72	0	292	3965	3018	1836	4257	No	16.85	Si
SLU 83	ini.	-23.09	984	0.72	0	292	3965	3018	1836	4257	No	4.33	Si
SLU 83	fin.	18.86	-223	0.72	0	292	3965	3018	1836	4257	No	19.13	Si
SLU 78	ini.	-26.07	1023	0.72	0	292	3965	3018	1836	4257	No	4.16	Si
SLU 78	fin.	16.96	-237	0.72	0	292	3965	3018	1836	4257	No	17.96	Si
SLU 75	ini.	-23.82	985	0.72	0	292	3965	3018	1836	4257	No	4.32	Si
SLU 75	fin.	17.16	-230	0.72	0	292	3965	3018	1836	4257	No	18.54	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-176.63	-1219	-0.0001403	0.0002807	0.0035	0.72		1917.1	1917.1		10.85	Si
SLV 15	fin.	183.49	-610	-0.0001463	0.0002807	0.0035	0.72		1912.43	1912.43		10.42	Si
SLV 13	ini.	-185.42	-1142	-0.0001476	0.0002807	0.0035	0.72		1917.1	1917.1		10.34	Si
SLV 13	fin.	149.98	-553	-0.0001186	0.0002807	0.0035	0.72		1912.43	1912.43		12.75	Si
SLV 12	ini.	-48.67	-522	-0.0000375	0.0002807	0.0035	0.72		1917.1	1917.1		39.39	Si
SLV 12	fin.	114.16	-305	-0.0000895	0.0002807	0.0035	0.72		1912.43	1912.43		16.75	Si
SLV 2	ini.	149.25	1146	-0.000118	0.0002807	0.0035	0.72		1912.43	1912.43		12.81	Si
SLV 2	fin.	-166.26	531	-0.0001317	0.0002807	0.0035	0.72		1917.1	1917.1		11.53	Si
SLV 14	ini.	-184.18	-1175	-0.0001466	0.0002807	0.0035	0.72		1917.1	1917.1		10.41	Si
SLV 14	fin.	154.78	-567	-0.0001226	0.0002807	0.0035	0.72		1912.43	1912.43		12.36	Si
SLV 16	ini.	-175.39	-1251	-0.0001393	0.0002807	0.0035	0.72		1917.1	1917.1		10.93	Si
SLV 16	fin.	188.29	-624	-0.0001504	0.0002807	0.0035	0.72		1912.43	1912.43		10.16	Si
SLV 4	ini.	158.03	1070	-0.0001252	0.0002807	0.0035	0.72		1912.43	1912.43		12.1	Si
SLV 4	fin.	-132.75	474	-0.0001043	0.0002807	0.0035	0.72		1917.1	1917.1		14.44	Si
SLV 11	ini.	-49.47	-501	-0.0000381	0.0002807	0.0035	0.72		1917.1	1917.1		38.76	Si
SLV 11	fin.	111.08	-296	-0.000087	0.0002807	0.0035	0.72		1912.43	1912.43		17.22	Si
SLV 3	ini.	156.79	1103	-0.0001242	0.0002807	0.0035	0.72		1912.43	1912.43		12.2	Si
SLV 3	fin.	-137.55	488	-0.0001082	0.0002807	0.0035	0.72		1917.1	1917.1		13.94	Si
SLV 1	ini.	148.01	1179	-0.000117	0.0002807	0.0035	0.72		1912.43	1912.43		12.92	Si
SLV 1	fin.	-171.06	545	-0.0001357	0.0002807	0.0035	0.72		1917.1	1917.1		11.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 2	ini.	51.72	995	0.72	0	438	3965	4528	1836	4403		4.42	Si
SLD 2	fin.	-63.18	-288	0.72	0	438	3965	4528	1836	4403		15.3	Si
SLV 4	ini.	158.03	1305	0.72	0	438	3965	4528	1836	4403		3.37	Si
SLV 4	fin.	-132.75	-252	0.72	0	438	3965	4528	1836	4403		17.48	Si
SLV 3	ini.	156.79	1351	0.72	0	438	3965	4528	1836	4403		3.26	Si
SLV 3	fin.	-137.55	-289	0.72	0	438	3965	4528	1836	4403		15.21	Si
SLV 5	ini.	21.28	1098	0.72	0	438	3965	4528	1836	4403		4.01	Si
SLV 5	fin.	-96.93	-593	0.72	0	438	3965	4528	1836	4403		7.43	Si
SLD 4	ini.	56.04	942	0.72	0	438	3965	4528	1836	4403		4.68	Si
SLD 4	fin.	-48.84	-199	0.72	0	438	3965	4528	1836	4403		22.17	Si
SLD 1	ini.	51.18	1015	0.72	0	438	3965	4528	1836	4403		4.34	Si
SLD 1	fin.	-65.24	-304	0.72	0	438	3965	4528	1836	4403		14.49	Si
SLV 1	ini.	148.01	1473	0.72	0	438	3965	4528	1836	4403		2.99	Si
SLV 1	fin.	-171.06	-495	0.72	0	438	3965	4528	1836	4403		8.89	Si
SLD 3	ini.	55.51	961	0.72	0	438	3965	4528	1836	4403		4.58	Si
SLD 3	fin.	-50.9	-215	0.72	0	438	3965	4528	1836	4403		20.5	Si
SLV 6	ini.	22.08	1068	0.72	0	438	3965	4528	1836	4403		4.12	Si
SLV 6	fin.	-93.85	-569	0.72	0	438	3965	4528	1836	4403		7.74	Si
SLV 2	ini.	149.25	1427	0.72	0	438	3965	4528	1836	4403		3.09	Si
SLV 2	fin.	-166.26	-458	0.72	0	438	3965	4528	1836	4403		9.62	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.157	SLV 16	Si
V_SLV	2.99	SLV 1	Si
PF_SLU	72.964	SLU 78	Si
V_SLU	4.16	SLU 78	Si

Trave di accoppiamento 131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	8.34	9.24	0.9	-7.413	-3.314	8.34	9.24	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	229.63	-1663	-0.0001178	0.0001872	0.0035	0.9		2959	2959	No	12.89	Si
SLU 70	fin.	-2.33	-713	-0.0000011	0.0001872	0.0035	0.9		2964.67	2964.67	No	1270.46	Si
SLU 67	ini.	223.04	-1613	-0.0001142	0.0001872	0.0035	0.9		2959	2959	No	13.27	Si
SLU 67	fin.	-4.3	-686	-0.0000021	0.0001872	0.0035	0.9		2964.67	2964.67	No	689.93	Si
SLU 78	ini.	209.11	-1628	-0.0001067	0.0001872	0.0035	0.9		2959	2959	No	14.15	Si
SLU 78	fin.	47.32	-857	-0.0000234	0.0001872	0.0035	0.9		2959	2959	No	62.53	Si
SLU 64	ini.	211.19	-1528	-0.0001078	0.0001872	0.0035	0.9		2959	2959	No	14.01	Si
SLU 64	fin.	-5.7	-646	-0.0000028	0.0001872	0.0035	0.9		2964.67	2964.67	No	519.82	Si
SLU 65	ini.	213.39	-1538	-0.000109	0.0001872	0.0035	0.9		2959	2959	No	13.87	Si
SLU 65	fin.	-7.27	-645	-0.0000036	0.0001872	0.0035	0.9		2964.67	2964.67	No	408.07	Si
SLU 72	ini.	225.68	-1634	-0.0001156	0.0001872	0.0035	0.9		2959	2959	No	13.11	Si
SLU 72	fin.	-2.71	-699	-0.0000013	0.0001872	0.0035	0.9		2964.67	2964.67	No	1092.67	Si
SLU 71	ini.	224.35	-1628	-0.0001149	0.0001872	0.0035	0.9		2959	2959	No	13.19	Si
SLU 71	fin.	-1.78	-700	-0.0000009	0.0001872	0.0035	0.9		2964.67	2964.67	No	1669.14	Si
SLU 68	ini.	219.98	-1588	-0.0001126	0.0001872	0.0035	0.9		2959	2959	No	13.45	Si
SLU 68	fin.	-5.3	-672	-0.0000026	0.0001872	0.0035	0.9		2964.67	2964.67	No	559.21	Si
SLU 69	ini.	228.3	-1657	-0.000117	0.0001872	0.0035	0.9		2959	2959	No	12.96	Si
SLU 69	fin.	-1.4	-713	-0.0000007	0.0001872	0.0035	0.9		2964.67	2964.67	No	2122.96	Si
SLU 66	ini.	221.72	-1607	-0.0001135	0.0001872	0.0035	0.9		2959	2959	No	13.35	Si
SLU 66	fin.	-3.36	-686	-0.0000016	0.0001872	0.0035	0.9		2964.67	2964.67	No	882.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	224.35	-2890	0.9	0	365	7137	3773	2295	6068	No	2.1	Si
SLU 71	fin.	-1.78	822	0.9	0	365	7137	3773	2295	6068	No	7.38	Si
SLU 79	ini.	203.83	-2875	0.9	0	365	7137	3773	2295	6068	No	2.11	Si
SLU 79	fin.	47.88	1089	0.9	0	365	7137	3773	2295	6068	No	5.57	Si
SLU 66	ini.	221.72	-2850	0.9	0	365	7137	3773	2295	6068	No	2.13	Si
SLU 66	fin.	-3.36	800	0.9	0	365	7137	3773	2295	6068	No	7.59	Si
SLU 77	ini.	207.78	-2929	0.9	0	365	7137	3773	2295	6068	No	2.07	Si
SLU 77	fin.	48.26	1111	0.9	0	365	7137	3773	2295	6068	No	5.46	Si
SLU 80	ini.	205.16	-2886	0.9	0	365	7137	3773	2295	6068	No	2.1	Si
SLU 80	fin.	46.94	1086	0.9	0	365	7137	3773	2295	6068	No	5.59	Si
SLU 70	ini.	229.63	-2954	0.9	0	365	7137	3773	2295	6068	No	2.05	Si
SLU 70	fin.	-2.33	841	0.9	0	365	7137	3773	2295	6068	No	7.22	Si
SLU 78	ini.	209.11	-2940	0.9	0	365	7137	3773	2295	6068	No	2.06	Si
SLU 78	fin.	47.32	1108	0.9	0	365	7137	3773	2295	6068	No	5.48	Si
SLU 69	ini.	228.3	-2943	0.9	0	365	7137	3773	2295	6068	No	2.06	Si
SLU 69	fin.	-1.4	844	0.9	0	365	7137	3773	2295	6068	No	7.19	Si
SLU 67	ini.	223.04	-2860	0.9	0	365	7137	3773	2295	6068	No	2.12	Si
SLU 67	fin.	-4.3	797	0.9	0	365	7137	3773	2295	6068	No	7.61	Si
SLU 72	ini.	225.68	-2900	0.9	0	365	7137	3773	2295	6068	No	2.09	Si
SLU 72	fin.	-2.71	819	0.9	0	365	7137	3773	2295	6068	No	7.41	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1081.24	3380	-0.0006521	0.0002807	0.0035	0.9		2995.37	2995.37		2.77	Si
SLV 13	fin.	1683.75	-4203	-0.0011636	0.0002807	0.0035	0.9		2989.59	2989.59		1.78	Si
SLV 2	ini.	1309.27	-5158	-0.0008325	0.0002807	0.0035	0.9		2989.59	2989.59		2.28	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	fin.	-1751.16	3383	-0.001226	0.0002807	0.0035	0.9		2995.37	2995.37		1.71	Si
SLV 14	ini.	-1006.65	3119	-0.000597	0.0002807	0.0035	0.9		2995.37	2995.37		2.98	Si
SLV 14	fin.	1581.33	-3978	-0.0010678	0.0002807	0.0035	0.9		2989.59	2989.59		1.89	Si
SLV 1	ini.	1234.69	-4898	-0.0007723	0.0002807	0.0035	0.9		2989.59	2989.59		2.42	Si
SLV 1	fin.	-1648.73	3158	-0.0011275	0.0002807	0.0035	0.9		2995.37	2995.37		1.82	Si
SLV 15	ini.	-1010.27	2909	-0.0005997	0.0002807	0.0035	0.9		2995.37	2995.37		2.96	Si
SLV 15	fin.	1777.92	-4447	-0.0012558	0.0002807	0.0035	0.9		2989.59	2989.59		1.68	Si
SLD 15	ini.	-346.01	597	-0.0001782	0.0002807	0.0035	0.9		2995.37	2995.37		8.66	Si
SLD 15	fin.	767.95	-2208	-0.0004322	0.0002807	0.0035	0.9		2989.59	2989.59		3.89	Si
SLD 2	ini.	645.02	-2847	-0.0003531	0.0002807	0.0035	0.9		2989.59	2989.59		4.63	Si
SLD 2	fin.	-741.18	1144	-0.0004137	0.0002807	0.0035	0.9		2995.37	2995.37		4.04	Si
SLV 16	ini.	-935.68	2648	-0.0005461	0.0002807	0.0035	0.9		2995.37	2995.37		3.2	Si
SLV 16	fin.	1675.5	-4222	-0.0011557	0.0002807	0.0035	0.9		2989.59	2989.59		1.78	Si
SLV 4	ini.	1380.24	-5630	-0.0008914	0.0002807	0.0035	0.9		2989.59	2989.59		2.17	Si
SLV 4	fin.	-1656.99	3139	-0.0011352	0.0002807	0.0035	0.9		2995.37	2995.37		1.81	Si
SLV 3	ini.	1305.66	-5369	-0.0008295	0.0002807	0.0035	0.9		2989.59	2989.59		2.29	Si
SLV 3	fin.	-1554.57	2914	-0.0010409	0.0002807	0.0035	0.9		2995.37	2995.37		1.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1309.27	-8000	0.9	0	548	7137	5660	2295	7684		0.96	No
SLV 2	fin.	-1751.16	-7419	0.9	0	548	7137	5660	2295	7684		1.04	Si
SLD 4	ini.	675.41	-4838	0.9	0	548	7137	5660	2295	7684		1.59	Si
SLD 4	fin.	-700.08	-2589	0.9	0	548	7137	5660	2295	7684		2.97	Si
SLV 8	ini.	639.14	-4999	0.9	0	548	7137	5660	2295	7684		1.54	Si
SLV 8	fin.	-362.46	-957	0.9	0	548	7137	5660	2295	7684		8.03	Si
SLV 1	ini.	1234.69	-7649	0.9	0	548	7137	5660	2295	7684		1	Si
SLV 1	fin.	-1648.73	-6945	0.9	0	548	7137	5660	2295	7684		1.11	Si
SLV 15	ini.	-1010.27	3985	0.9	0	548	7137	5660	2295	7684		1.93	Si
SLV 15	fin.	1777.92	8700	0.9	0	548	7137	5660	2295	7684		0.88	No
SLV 14	ini.	-1006.65	4259	0.9	0	548	7137	5660	2295	7684		1.8	Si
SLV 14	fin.	1581.33	7731	0.9	0	548	7137	5660	2295	7684		0.99	No
SLV 13	ini.	-1081.24	4610	0.9	0	548	7137	5660	2295	7684		1.67	Si
SLV 13	fin.	1683.75	8204	0.9	0	548	7137	5660	2295	7684		0.94	No
SLV 4	ini.	1380.24	-8624	0.9	0	548	7137	5660	2295	7684		0.89	No
SLV 4	fin.	-1656.99	-6922	0.9	0	548	7137	5660	2295	7684		1.11	Si
SLV 3	ini.	1305.66	-8273	0.9	0	548	7137	5660	2295	7684		0.93	No
SLV 3	fin.	-1554.57	-6449	0.9	0	548	7137	5660	2295	7684		1.19	Si
SLV 16	ini.	-935.68	3635	0.9	0	548	7137	5660	2295	7684		2.11	Si
SLV 16	fin.	1675.5	8227	0.9	0	548	7137	5660	2295	7684		0.93	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.682	SLV 15	Si
V_SLV	0.883	SLV 15	No
PF_SLU	12.886	SLU 70	Si
V_SLU	2.054	SLU 70	Si

Trave di accoppiamento 132

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	11.04	11.86	0.82	-7.413	-3.314	11.04	11.86	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	ini.	-144.33	-964	-0.0000879	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.05	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	fin.	-47.09	-374	-0.000028	0.0001872	0.0035	0.82		2460.51	2460.51	No	52.25	Si
SLU 63	ini.	-143.73	-962	-0.0000875	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.12	Si
SLU 63	fin.	-48.26	-378	-0.0000287	0.0001872	0.0035	0.82		2460.51	2460.51	No	50.98	Si
SLU 56	ini.	-140.24	-953	-0.0000853	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.54	Si
SLU 56	fin.	-54.67	-406	-0.0000326	0.0001872	0.0035	0.82		2460.51	2460.51	No	45.01	Si
SLU 84	ini.	-146.74	-1008	-0.0000894	0.0001872	0.0035	0.82		2460.51	2460.51	No	16.77	Si
SLU 84	fin.	-58.7	-427	-0.000035	0.0001872	0.0035	0.82		2460.51	2460.51	No	41.92	Si
SLU 77	ini.	-143.25	-1000	-0.0000872	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.18	Si
SLU 77	fin.	-65.1	-456	-0.0000389	0.0001872	0.0035	0.82		2460.51	2460.51	No	37.8	Si
SLU 83	ini.	-147.34	-1011	-0.0000898	0.0001872	0.0035	0.82		2460.51	2460.51	No	16.7	Si
SLU 83	fin.	-57.52	-423	-0.0000343	0.0001872	0.0035	0.82		2460.51	2460.51	No	42.78	Si
SLU 82	ini.	-139.45	-966	-0.0000848	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.64	Si
SLU 82	fin.	-57.3	-410	-0.0000342	0.0001872	0.0035	0.82		2460.51	2460.51	No	42.94	Si
SLU 78	ini.	-142.65	-997	-0.0000868	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.25	Si
SLU 78	fin.	-66.27	-460	-0.0000396	0.0001872	0.0035	0.82		2460.51	2460.51	No	37.13	Si
SLU 81	ini.	-140.05	-969	-0.0000852	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.57	Si
SLU 81	fin.	-56.12	-407	-0.0000334	0.0001872	0.0035	0.82		2460.51	2460.51	No	43.84	Si
SLU 57	ini.	-139.64	-951	-0.0000849	0.0001872	0.0035	0.82		2460.51	2460.51	No	17.62	Si
SLU 57	fin.	-55.84	-410	-0.0000333	0.0001872	0.0035	0.82		2460.51	2460.51	No	44.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-138.98	2616	0.82	0	303	6502	3438	2091	5529	No	2.11	Si
SLU 79	fin.	-66.31	-1721	0.82	0	303	6502	3438	2091	5529	No	3.21	Si
SLU 82	ini.	-139.45	2566	0.82	0	303	6502	3438	2091	5529	No	2.15	Si
SLU 82	fin.	-57.3	-1617	0.82	0	303	6502	3438	2091	5529	No	3.42	Si
SLU 75	ini.	-135.36	2571	0.82	0	303	6502	3438	2091	5529	No	2.15	Si
SLU 75	fin.	-64.88	-1699	0.82	0	303	6502	3438	2091	5529	No	3.25	Si
SLU 78	ini.	-142.65	2675	0.82	0	303	6502	3438	2091	5529	No	2.07	Si
SLU 78	fin.	-66.27	-1755	0.82	0	303	6502	3438	2091	5529	No	3.15	Si
SLU 80	ini.	-138.38	2614	0.82	0	303	6502	3438	2091	5529	No	2.11	Si
SLU 80	fin.	-67.48	-1728	0.82	0	303	6502	3438	2091	5529	No	3.2	Si
SLU 81	ini.	-140.05	2568	0.82	0	303	6502	3438	2091	5529	No	2.15	Si
SLU 81	fin.	-56.12	-1610	0.82	0	303	6502	3438	2091	5529	No	3.43	Si
SLU 83	ini.	-147.34	2672	0.82	0	303	6502	3438	2091	5529	No	2.07	Si
SLU 83	fin.	-57.52	-1666	0.82	0	303	6502	3438	2091	5529	No	3.32	Si
SLU 74	ini.	-135.96	2573	0.82	0	303	6502	3438	2091	5529	No	2.15	Si
SLU 74	fin.	-63.7	-1692	0.82	0	303	6502	3438	2091	5529	No	3.27	Si
SLU 84	ini.	-146.74	2670	0.82	0	303	6502	3438	2091	5529	No	2.07	Si
SLU 84	fin.	-58.7	-1673	0.82	0	303	6502	3438	2091	5529	No	3.3	Si
SLU 77	ini.	-143.25	2677	0.82	0	303	6502	3438	2091	5529	No	2.06	Si
SLU 77	fin.	-65.1	-1748	0.82	0	303	6502	3438	2091	5529	No	3.16	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	805.42	2909	-0.0005721	0.0002807	0.0035	0.82		2482.11	2482.11		3.08	Si
SLV 3	fin.	-668.64	-1626	-0.0004563	0.0002807	0.0035	0.82		2487.45	2487.45		3.72	Si
SLV 13	ini.	-1018.48	-4292	-0.0007643	0.0002807	0.0035	0.82		2487.45	2487.45		2.44	Si
SLV 13	fin.	598.21	1056	-0.0004013	0.0002807	0.0035	0.82		2482.11	2482.11		4.15	Si
SLV 14	ini.	-960.18	-4090	-0.0007094	0.0002807	0.0035	0.82		2487.45	2487.45		2.59	Si
SLV 14	fin.	558.84	967	-0.0003709	0.0002807	0.0035	0.82		2482.11	2482.11		4.44	Si
SLV 4	ini.	863.71	3111	-0.0006234	0.0002807	0.0035	0.82		2482.11	2482.11		2.87	Si
SLV 4	fin.	-708	-1715	-0.0004885	0.0002807	0.0035	0.82		2487.45	2487.45		3.51	Si
SLD 15	ini.	-512.67	-2203	-0.0003353	0.0002807	0.0035	0.82		2487.45	2487.45		4.85	Si
SLD 15	fin.	178.83	104	-0.0001088	0.0002807	0.0035	0.82		2482.11	2482.11		13.88	Si
SLV 1	ini.	882.35	2980	-0.00064	0.0002807	0.0035	0.82		2482.11	2482.11		2.81	Si
SLV 1	fin.	-563.26	-1258	-0.0003734	0.0002807	0.0035	0.82		2487.45	2487.45		4.42	Si
SLV 15	ini.	-1095.42	-4363	-0.0008389	0.0002807	0.0035	0.82		2487.45	2487.45		2.27	Si
SLV 15	fin.	492.83	688	-0.0003214	0.0002807	0.0035	0.82		2482.11	2482.11		5.04	Si
SLV 16	ini.	-1037.12	-4161	-0.0007821	0.0002807	0.0035	0.82		2487.45	2487.45		2.4	Si
SLV 16	fin.	453.46	600	-0.0002928	0.0002807	0.0035	0.82		2482.11	2482.11		5.47	Si
SLV 2	ini.	940.65	3182	-0.0006931	0.0002807	0.0035	0.82		2482.11	2482.11		2.64	Si
SLV 2	fin.	-602.62	-1347	-0.0004038	0.0002807	0.0035	0.82		2487.45	2487.45		4.13	Si
SLV 11	ini.	-509.47	-1864	-0.0003329	0.0002807	0.0035	0.82		2487.45	2487.45		4.88	Si
SLV 11	fin.	-43.66	-567	-0.0000259	0.0002807	0.0035	0.82		2487.45	2487.45		56.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1095.42	6294	0.82	0	455	6502	5156	2091	6957		1.11	Si
SLV 15	fin.	492.83	2333	0.82	0	455	6502	5156	2091	6957		2.98	Si
SLD 15	ini.	-512.67	3618	0.82	0	455	6502	5156	2091	6957		1.92	Si
SLD 15	fin.	178.83	313	0.82	0	455	6502	5156	2091	6957		22.22	Si
SLV 16	ini.	-1037.12	5982	0.82	0	455	6502	5156	2091	6957		1.16	Si
SLV 16	fin.	453.46	2118	0.82	0	455	6502	5156	2091	6957		3.28	Si
SLV 13	ini.	-1018.48	6071	0.82	0	455	6502	5156	2091	6957		1.15	Si
SLV 13	fin.	598.21	2777	0.82	0	455	6502	5156	2091	6957		2.51	Si
SLD 13	ini.	-479.53	3521	0.82	0	455	6502	5156	2091	6957		1.98	Si
SLD 13	fin.	224.57	508	0.82	0	455	6502	5156	2091	6957		13.71	Si
SLV 4	ini.	863.71	-2832	0.82	0	455	6502	5156	2091	6957		2.46	Si
SLV 4	fin.	-708	-5157	0.82	0	455	6502	5156	2091	6957		1.35	Si
SLV 14	ini.	-960.18	5758	0.82	0	455	6502	5156	2091	6957		1.21	Si
SLV 14	fin.	558.84	2562	0.82	0	455	6502	5156	2091	6957		2.72	Si
SLV 3	ini.	805.42	-2520	0.82	0	455	6502	5156	2091	6957		2.76	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-668.64	-4942	0.82	0	455	6502	5156	2091	6957		1.41	Si
SLV 2	ini.	940.65	-3055	0.82	0	455	6502	5156	2091	6957		2.28	Si
SLV 2	fin.	-602.62	-4714	0.82	0	455	6502	5156	2091	6957		1.48	Si
SLV 1	ini.	882.35	-2743	0.82	0	455	6502	5156	2091	6957		2.54	Si
SLV 1	fin.	-563.26	-4499	0.82	0	455	6502	5156	2091	6957		1.55	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.271	SLV 15	Si
V_SLV	1.105	SLV 15	Si
PF_SLU	16.699	SLU 83	Si
V_SLU	2.065	SLU 77	Si

Trave di accoppiamento 133

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	8.34	10.34	2	-5.963	-3.314	8.34	10.34	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 46	ini.	283.15	-2616	-0.0000283	0.0001872	0.0035	2		14344.28	14344.28	No	50.66	Si
SLU 46	fin.	-147.65	-2084	-0.0000147	0.0001872	0.0035	2		14357.01	14357.01	No	97.24	Si
SLU 48	ini.	282.74	-2703	-0.0000283	0.0001872	0.0035	2		14344.28	14344.28	No	50.73	Si
SLU 48	fin.	-145.28	-2160	-0.0000144	0.0001872	0.0035	2		14357.01	14357.01	No	98.83	Si
SLU 64	ini.	283.89	-2763	-0.0000284	0.0001872	0.0035	2		14344.28	14344.28	No	50.53	Si
SLU 64	fin.	-169.47	-2209	-0.0000169	0.0001872	0.0035	2		14357.01	14357.01	No	84.72	Si
SLU 44	ini.	291.1	-2476	-0.0000291	0.0001872	0.0035	2		14344.28	14344.28	No	49.28	Si
SLU 44	fin.	-150.66	-1956	-0.000015	0.0001872	0.0035	2		14357.01	14357.01	No	95.3	Si
SLU 50	ini.	289.94	-2652	-0.000029	0.0001872	0.0035	2		14344.28	14344.28	No	49.47	Si
SLU 50	fin.	-146.42	-2111	-0.0000146	0.0001872	0.0035	2		14357.01	14357.01	No	98.05	Si
SLU 45	ini.	284.17	-2608	-0.0000284	0.0001872	0.0035	2		14344.28	14344.28	No	50.48	Si
SLU 45	fin.	-146.12	-2076	-0.0000145	0.0001872	0.0035	2		14357.01	14357.01	No	98.25	Si
SLU 43	ini.	292.8	-2464	-0.0000293	0.0001872	0.0035	2		14344.28	14344.28	No	48.99	Si
SLU 43	fin.	-148.11	-1944	-0.0000147	0.0001872	0.0035	2		14357.01	14357.01	No	96.94	Si
SLU 51	ini.	288.92	-2660	-0.0000289	0.0001872	0.0035	2		14344.28	14344.28	No	49.65	Si
SLU 51	fin.	-147.95	-2118	-0.0000147	0.0001872	0.0035	2		14357.01	14357.01	No	97.04	Si
SLU 47	ini.	289.67	-2571	-0.000029	0.0001872	0.0035	2		14344.28	14344.28	No	49.52	Si
SLU 47	fin.	-149.81	-2040	-0.0000149	0.0001872	0.0035	2		14357.01	14357.01	No	95.83	Si
SLU 65	ini.	282.19	-2775	-0.0000282	0.0001872	0.0035	2		14344.28	14344.28	No	50.83	Si
SLU 65	fin.	-172.02	-2222	-0.0000171	0.0001872	0.0035	2		14357.01	14357.01	No	83.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 68	ini.	280.76	-2321	2	0	812	3965	8384	5100	4776	No	2.06	Si
SLU 68	fin.	-171.18	-151	2	0	812	3965	8384	5100	4776	No	31.54	Si
SLU 65	ini.	282.19	-2286	2	0	812	3965	8384	5100	4776	No	2.09	Si
SLU 65	fin.	-172.02	-201	2	0	812	3965	8384	5100	4776	No	23.73	Si
SLU 72	ini.	280	-2354	2	0	812	3965	8384	5100	4776	No	2.03	Si
SLU 72	fin.	-169.31	-104	2	0	812	3965	8384	5100	4776	No	46.13	Si
SLU 69	ini.	273.82	-2347	2	0	812	3965	8384	5100	4776	No	2.03	Si
SLU 69	fin.	-166.64	-55	2	0	812	3965	8384	5100	4776	No	86.27	Si
SLU 67	ini.	274.24	-2315	2	0	812	3965	8384	5100	4776	No	2.06	Si
SLU 67	fin.	-169.01	-102	2	0	812	3965	8384	5100	4776	No	46.69	Si
SLU 64	ini.	283.89	-2283	2	0	812	3965	8384	5100	4776	No	2.09	Si
SLU 64	fin.	-169.47	-206	2	0	812	3965	8384	5100	4776	No	23.17	Si
SLU 66	ini.	275.26	-2313	2	0	812	3965	8384	5100	4776	No	2.07	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 66	fin.	-167.48	-105	2	0	812	3965	8384	5100	4776	No	45.39	Si
SLU 70	ini.	272.8	-2349	2	0	812	3965	8384	5100	4776	No	2.03	Si
SLU 70	fin.	-168.17	-52	2	0	812	3965	8384	5100	4776	No	91.06	Si
SLU 80	ini.	254.39	-2274	2	0	812	3965	8384	5100	4776	No	2.1	Si
SLU 80	fin.	-116.06	170	2	0	812	3965	8384	5100	4776	No	28.02	Si
SLU 71	ini.	281.02	-2352	2	0	812	3965	8384	5100	4776	No	2.03	Si
SLU 71	fin.	-167.78	-106	2	0	812	3965	8384	5100	4776	No	44.87	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1279.19	1263	-0.0001314	0.0002807	0.0035	2		14215.41	14215.41		11.11	Si
SLV 15	fin.	1741.4	1223	-0.0001819	0.0002807	0.0035	2		14202.07	14202.07		8.16	Si
SLV 16	ini.	-1152.03	1041	-0.0001179	0.0002807	0.0035	2		14215.41	14215.41		12.34	Si
SLV 16	fin.	1626.06	1047	-0.0001692	0.0002807	0.0035	2		14202.07	14202.07		8.73	Si
SLV 5	ini.	1229.05	-2050	-0.0001262	0.0002807	0.0035	2		14202.07	14202.07		11.56	Si
SLV 5	fin.	-597.09	-1655	-0.00006	0.0002807	0.0035	2		14215.41	14215.41		23.81	Si
SLV 4	ini.	1290.96	-6046	-0.0001328	0.0002807	0.0035	2		14202.07	14202.07		11	Si
SLV 4	fin.	-1971.9	-5061	-0.0002075	0.0002807	0.0035	2		14215.41	14215.41		7.21	Si
SLV 14	ini.	-737.76	1657	-0.0000745	0.0002807	0.0035	2		14215.41	14215.41		19.27	Si
SLV 14	fin.	1635.66	1566	-0.0001702	0.0002807	0.0035	2		14202.07	14202.07		8.68	Si
SLV 6	ini.	1310.78	-2193	-0.0001349	0.0002807	0.0035	2		14202.07	14202.07		10.83	Si
SLV 6	fin.	-671.22	-1768	-0.0000676	0.0002807	0.0035	2		14215.41	14215.41		21.18	Si
SLV 1	ini.	1578.06	-5209	-0.0001639	0.0002807	0.0035	2		14202.07	14202.07		9	Si
SLV 1	fin.	-1846.96	-4367	-0.0001935	0.0002807	0.0035	2		14215.41	14215.41		7.7	Si
SLV 2	ini.	1705.23	-5431	-0.0001779	0.0002807	0.0035	2		14202.07	14202.07		8.33	Si
SLV 2	fin.	-1962.31	-4543	-0.0002064	0.0002807	0.0035	2		14215.41	14215.41		7.24	Si
SLV 3	ini.	1163.79	-5824	-0.0001192	0.0002807	0.0035	2		14202.07	14202.07		12.2	Si
SLV 3	fin.	-1856.56	-4885	-0.0001945	0.0002807	0.0035	2		14215.41	14215.41		7.66	Si
SLV 13	ini.	-864.92	1878	-0.0000877	0.0002807	0.0035	2		14215.41	14215.41		16.44	Si
SLV 13	fin.	1751	1742	-0.0001829	0.0002807	0.0035	2		14202.07	14202.07		8.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-884.75	1802	2	0	1217	3965	12577	5100	5182		2.88	Si
SLV 11	fin.	450.32	5048	2	0	1217	3965	12577	5100	5182		1.03	Si
SLV 6	ini.	1310.78	-5207	2	0	1217	3965	12577	5100	5182		1	No
SLV 6	fin.	-671.22	-5252	2	0	1217	3965	12577	5100	5182		0.99	No
SLV 14	ini.	-737.76	4720	2	0	1217	3965	12577	5100	5182		1.1	Si
SLV 14	fin.	1635.66	6748	2	0	1217	3965	12577	5100	5182		0.77	No
SLV 4	ini.	1290.96	-8684	2	0	1217	3965	12577	5100	5182		0.6	No
SLV 4	fin.	-1971.9	-7615	2	0	1217	3965	12577	5100	5182		0.68	No
SLV 16	ini.	-1152.03	5443	2	0	1217	3965	12577	5100	5182		0.95	No
SLV 16	fin.	1626.06	8279	2	0	1217	3965	12577	5100	5182		0.63	No
SLV 15	ini.	-1279.19	6003	2	0	1217	3965	12577	5100	5182		0.86	No
SLV 15	fin.	1741.4	8943	2	0	1217	3965	12577	5100	5182		0.58	No
SLV 2	ini.	1705.23	-9408	2	0	1217	3965	12577	5100	5182		0.55	No
SLV 2	fin.	-1962.31	-9147	2	0	1217	3965	12577	5100	5182		0.57	No
SLV 1	ini.	1578.06	-8848	2	0	1217	3965	12577	5100	5182		0.59	No
SLV 1	fin.	-1846.96	-8483	2	0	1217	3965	12577	5100	5182		0.61	No
SLV 3	ini.	1163.79	-8125	2	0	1217	3965	12577	5100	5182		0.64	No
SLV 3	fin.	-1856.56	-6952	2	0	1217	3965	12577	5100	5182		0.75	No
SLV 13	ini.	-864.92	5279	2	0	1217	3965	12577	5100	5182		0.98	No
SLV 13	fin.	1751	7411	2	0	1217	3965	12577	5100	5182		0.7	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.209	SLV 4	Si
V_SLV	0.551	SLV 2	No
PF_SLU	48.989	SLU 43	Si
V_SLU	2.029	SLU 72	Si

Trave di accoppiamento 134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	11.14	11.86	0.72	-5.963	-3.314	11.14	11.86	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	73.91	-884	-0.0000577	0.0001872	0.0035	0.72		1897.3	1897.3	No	25.67	Si
SLU 77	fin.	-129.57	-984	-0.0001029	0.0001872	0.0035	0.72		1901.86	1901.86	No	14.68	Si
SLU 80	ini.	75.91	-860	-0.0000593	0.0001872	0.0035	0.72		1897.3	1897.3	No	24.99	Si
SLU 80	fin.	-127.69	-964	-0.0001013	0.0001872	0.0035	0.72		1901.86	1901.86	No	14.89	Si
SLU 56	ini.	73.98	-815	-0.0000578	0.0001872	0.0035	0.72		1897.3	1897.3	No	25.65	Si
SLU 56	fin.	-125.17	-935	-0.0000992	0.0001872	0.0035	0.72		1901.86	1901.86	No	15.19	Si
SLU 74	ini.	75.12	-843	-0.0000587	0.0001872	0.0035	0.72		1897.3	1897.3	No	25.26	Si
SLU 74	fin.	-125.64	-947	-0.0000996	0.0001872	0.0035	0.72		1901.86	1901.86	No	15.14	Si
SLU 75	ini.	74.72	-843	-0.0000584	0.0001872	0.0035	0.72		1897.3	1897.3	No	25.39	Si
SLU 75	fin.	-125.27	-945	-0.0000993	0.0001872	0.0035	0.72		1901.86	1901.86	No	15.18	Si
SLU 84	ini.	68.8	-886	-0.0000537	0.0001872	0.0035	0.72		1897.3	1897.3	No	27.58	Si
SLU 84	fin.	-128.76	-983	-0.0001022	0.0001872	0.0035	0.72		1901.86	1901.86	No	14.77	Si
SLU 81	ini.	70.42	-846	-0.0000549	0.0001872	0.0035	0.72		1897.3	1897.3	No	26.94	Si
SLU 81	fin.	-125.19	-948	-0.0000992	0.0001872	0.0035	0.72		1901.86	1901.86	No	15.19	Si
SLU 78	ini.	73.51	-883	-0.0000574	0.0001872	0.0035	0.72		1897.3	1897.3	No	25.81	Si
SLU 78	fin.	-129.2	-982	-0.0001026	0.0001872	0.0035	0.72		1901.86	1901.86	No	14.72	Si
SLU 83	ini.	69.2	-887	-0.000054	0.0001872	0.0035	0.72		1897.3	1897.3	No	27.42	Si
SLU 83	fin.	-129.12	-986	-0.0001025	0.0001872	0.0035	0.72		1901.86	1901.86	No	14.73	Si
SLU 79	ini.	76.31	-861	-0.0000597	0.0001872	0.0035	0.72		1897.3	1897.3	No	24.86	Si
SLU 79	fin.	-128.05	-966	-0.0001016	0.0001872	0.0035	0.72		1901.86	1901.86	No	14.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	73.91	95	0.72	0	292	3965	3018	1836	4257	No	44.69	Si
SLU 77	fin.	-129.57	-2279	0.72	0	292	3965	3018	1836	4257	No	1.87	Si
SLU 76	ini.	76.85	73	0.72	0	292	3965	3018	1836	4257	No	58.6	Si
SLU 76	fin.	-123.52	-2176	0.72	0	292	3965	3018	1836	4257	No	1.96	Si
SLU 79	ini.	76.31	81	0.72	0	292	3965	3018	1836	4257	No	52.55	Si
SLU 79	fin.	-128.05	-2249	0.72	0	292	3965	3018	1836	4257	No	1.89	Si
SLU 78	ini.	73.51	99	0.72	0	292	3965	3018	1836	4257	No	43.08	Si
SLU 78	fin.	-129.2	-2278	0.72	0	292	3965	3018	1836	4257	No	1.87	Si
SLU 83	ini.	69.2	98	0.72	0	292	3965	3018	1836	4257	No	43.33	Si
SLU 83	fin.	-129.12	-2231	0.72	0	292	3965	3018	1836	4257	No	1.91	Si
SLU 80	ini.	75.91	85	0.72	0	292	3965	3018	1836	4257	No	50.34	Si
SLU 80	fin.	-127.69	-2248	0.72	0	292	3965	3018	1836	4257	No	1.89	Si
SLU 81	ini.	70.42	84	0.72	0	292	3965	3018	1836	4257	No	50.7	Si
SLU 81	fin.	-125.19	-2159	0.72	0	292	3965	3018	1836	4257	No	1.97	Si
SLU 84	ini.	68.8	102	0.72	0	292	3965	3018	1836	4257	No	41.81	Si
SLU 84	fin.	-128.76	-2230	0.72	0	292	3965	3018	1836	4257	No	1.91	Si
SLU 74	ini.	75.12	81	0.72	0	292	3965	3018	1836	4257	No	52.57	Si
SLU 74	fin.	-125.64	-2207	0.72	0	292	3965	3018	1836	4257	No	1.93	Si
SLU 75	ini.	74.72	85	0.72	0	292	3965	3018	1836	4257	No	50.36	Si
SLU 75	fin.	-125.27	-2206	0.72	0	292	3965	3018	1836	4257	No	1.93	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	663.14	2297	-0.0006195	0.0002807	0.0035	0.72		1912.43	1912.43		2.88	Si
SLV 4	fin.	80.73	1848	-0.0000628	0.0002807	0.0035	0.72		1912.43	1912.43		23.69	Si
SLV 1	ini.	757.38	2338	-0.0007312	0.0002807	0.0035	0.72		1912.43	1912.43		2.53	Si
SLV 1	fin.	38.39	1578	-0.0000296	0.0002807	0.0035	0.72		1912.43	1912.43		49.82	Si
SLV 2	ini.	818.94	2520	-0.0008076	0.0002807	0.0035	0.72		1912.43	1912.43		2.34	Si
SLV 2	fin.	37.04	1679	-0.0000285	0.0002807	0.0035	0.72		1912.43	1912.43		51.63	Si
SLV 14	ini.	-461.66	-3132	-0.0004003	0.0002807	0.0035	0.72		1917.1	1917.1		4.15	Si
SLV 14	fin.	-253.78	-2971	-0.0002058	0.0002807	0.0035	0.72		1917.1	1917.1		7.55	Si
SLV 15	ini.	-679.02	-3538	-0.0006361	0.0002807	0.0035	0.72		1917.1	1917.1		2.82	Si
SLV 15	fin.	-208.74	-2903	-0.0001672	0.0002807	0.0035	0.72		1917.1	1917.1		9.18	Si
SLV 3	ini.	601.58	2115	-0.0005499	0.0002807	0.0035	0.72		1912.43	1912.43		3.18	Si
SLV 3	fin.	82.08	1747	-0.0000639	0.0002807	0.0035	0.72		1912.43	1912.43		23.3	Si
SLV 5	ini.	501.94	652	-0.0004428	0.0002807	0.0035	0.72		1912.43	1912.43		3.81	Si
SLV 5	fin.	-114.62	-228	-0.0000896	0.0002807	0.0035	0.72		1917.1	1917.1		16.73	Si
SLV 16	ini.	-617.46	-3356	-0.000566	0.0002807	0.0035	0.72		1917.1	1917.1		3.1	Si
SLV 16	fin.	-210.08	-2802	-0.0001683	0.0002807	0.0035	0.72		1917.1	1917.1		9.13	Si
SLV 6	ini.	541.5	770	-0.0004845	0.0002807	0.0035	0.72		1912.43	1912.43		3.53	Si
SLV 6	fin.	-115.48	-163	-0.0000903	0.0002807	0.0035	0.72		1917.1	1917.1		16.6	Si
SLV 13	ini.	-523.22	-3315	-0.0004638	0.0002807	0.0035	0.72		1917.1	1917.1		3.66	Si
SLV 13	fin.	-252.43	-3071	-0.0002046	0.0002807	0.0035	0.72		1917.1	1917.1		7.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	501.94	-1571	0.72	0	438	3965	4528	1836	4403		2.8	Si
SLV 5	fin.	-114.62	-1975	0.72	0	438	3965	4528	1836	4403		2.23	Si
SLV 15	ini.	-679.02	1845	0.72	0	438	3965	4528	1836	4403		2.39	Si
SLV 15	fin.	-208.74	-531	0.72	0	438	3965	4528	1836	4403		8.29	Si
SLD 2	ini.	391.12	-804	0.72	0	438	3965	4528	1836	4403		5.47	Si
SLD 2	fin.	-33.74	-1942	0.72	0	438	3965	4528	1836	4403		2.27	Si
SLV 3	ini.	601.58	-931	0.72	0	438	3965	4528	1836	4403		4.73	Si
SLV 3	fin.	82.08	-2262	0.72	0	438	3965	4528	1836	4403		1.95	Si
SLV 1	ini.	757.38	-1658	0.72	0	438	3965	4528	1836	4403		2.66	Si
SLV 1	fin.	38.39	-2401	0.72	0	438	3965	4528	1836	4403		1.83	Si
SLV 2	ini.	818.94	-1859	0.72	0	438	3965	4528	1836	4403		2.37	Si
SLV 2	fin.	37.04	-2505	0.72	0	438	3965	4528	1836	4403		1.76	Si
SLV 6	ini.	541.5	-1700	0.72	0	438	3965	4528	1836	4403		2.59	Si
SLV 6	fin.	-115.48	-2042	0.72	0	438	3965	4528	1836	4403		2.16	Si
SLD 4	ini.	322.48	-483	0.72	0	438	3965	4528	1836	4403		9.11	Si
SLD 4	fin.	-14.44	-1880	0.72	0	438	3965	4528	1836	4403		2.34	Si
SLD 1	ini.	364.69	-718	0.72	0	438	3965	4528	1836	4403		6.13	Si
SLD 1	fin.	-33.16	-1897	0.72	0	438	3965	4528	1836	4403		2.32	Si
SLV 4	ini.	663.14	-1132	0.72	0	438	3965	4528	1836	4403		3.89	Si
SLV 4	fin.	80.73	-2366	0.72	0	438	3965	4528	1836	4403		1.86	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.335	SLV 2	Si
V_SLV	1.758	SLV 2	Si
PF_SLU	14.678	SLU 77	Si
V_SLU	1.868	SLU 77	Si

Trave di accoppiamento 135

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	8.34	9.24	0.9	-3.183	-3.314	8.34	9.24	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 67	ini.	370.04	-1589	-0.0001966	0.0001872	0.0035	0.9		2959	2959	No	8	Si
SLU 67	fin.	130.56	-1115	-0.0000655	0.0001872	0.0035	0.9		2959	2959	No	22.66	Si
SLU 71	ini.	371.83	-1605	-0.0001976	0.0001872	0.0035	0.9		2959	2959	No	7.96	Si
SLU 71	fin.	135.22	-1137	-0.0000679	0.0001872	0.0035	0.9		2959	2959	No	21.88	Si
SLU 65	ini.	371.21	-1551	-0.0001972	0.0001872	0.0035	0.9		2959	2959	No	7.97	Si
SLU 65	fin.	109.62	-1025	-0.0000548	0.0001872	0.0035	0.9		2959	2959	No	26.99	Si
SLU 72	ini.	374.2	-1612	-0.000199	0.0001872	0.0035	0.9		2959	2959	No	7.91	Si
SLU 72	fin.	134.66	-1138	-0.0000676	0.0001872	0.0035	0.9		2959	2959	No	21.97	Si
SLU 69	ini.	369.96	-1615	-0.0001965	0.0001872	0.0035	0.9		2959	2959	No	8	Si
SLU 69	fin.	143.45	-1171	-0.0000722	0.0001872	0.0035	0.9		2959	2959	No	20.63	Si
SLU 51	ini.	361.27	-1498	-0.0001914	0.0001872	0.0035	0.9		2959	2959	No	8.19	Si
SLU 51	fin.	103.96	-983	-0.0000519	0.0001872	0.0035	0.9		2959	2959	No	28.46	Si
SLU 64	ini.	367.26	-1539	-0.0001949	0.0001872	0.0035	0.9		2959	2959	No	8.06	Si
SLU 64	fin.	110.56	-1024	-0.0000553	0.0001872	0.0035	0.9		2959	2959	No	26.76	Si
SLU 68	ini.	373.5	-1584	-0.0001986	0.0001872	0.0035	0.9		2959	2959	No	7.92	Si
SLU 68	fin.	121.95	-1081	-0.0000611	0.0001872	0.0035	0.9		2959	2959	No	24.26	Si
SLU 70	ini.	372.33	-1622	-0.0001979	0.0001872	0.0035	0.9		2959	2959	No	7.95	Si
SLU 70	fin.	142.89	-1171	-0.0000719	0.0001872	0.0035	0.9		2959	2959	No	20.71	Si
SLU 66	ini.	367.67	-1582	-0.0001952	0.0001872	0.0035	0.9		2959	2959	No	8.05	Si
SLU 66	fin.	131.12	-1114	-0.0000658	0.0001872	0.0035	0.9		2959	2959	No	22.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 51	ini.	361.27	-1454	0.9	0	365	7137	3773	2295	6068	No	4.17	Si
SLU 51	fin.	103.96	862	0.9	0	365	7137	3773	2295	6068	No	7.04	Si
SLU 67	ini.	370.04	-1481	0.9	0	365	7137	3773	2295	6068	No	4.1	Si
SLU 67	fin.	130.56	999	0.9	0	365	7137	3773	2295	6068	No	6.07	Si
SLU 66	ini.	367.67	-1472	0.9	0	365	7137	3773	2295	6068	No	4.12	Si
SLU 66	fin.	131.12	1002	0.9	0	365	7137	3773	2295	6068	No	6.06	Si
SLU 64	ini.	367.26	-1454	0.9	0	365	7137	3773	2295	6068	No	4.17	Si
SLU 64	fin.	110.56	867	0.9	0	365	7137	3773	2295	6068	No	6.99	Si
SLU 71	ini.	371.83	-1492	0.9	0	365	7137	3773	2295	6068	No	4.07	Si
SLU 71	fin.	135.22	1030	0.9	0	365	7137	3773	2295	6068	No	5.89	Si
SLU 65	ini.	371.21	-1471	0.9	0	365	7137	3773	2295	6068	No	4.13	Si
SLU 65	fin.	109.62	864	0.9	0	365	7137	3773	2295	6068	No	7.02	Si
SLU 69	ini.	369.96	-1491	0.9	0	365	7137	3773	2295	6068	No	4.07	Si
SLU 69	fin.	143.45	1083	0.9	0	365	7137	3773	2295	6068	No	5.6	Si
SLU 68	ini.	373.5	-1489	0.9	0	365	7137	3773	2295	6068	No	4.07	Si
SLU 68	fin.	121.95	945	0.9	0	365	7137	3773	2295	6068	No	6.42	Si
SLU 70	ini.	372.33	-1500	0.9	0	365	7137	3773	2295	6068	No	4.04	Si
SLU 70	fin.	142.89	1081	0.9	0	365	7137	3773	2295	6068	No	5.62	Si
SLU 72	ini.	374.2	-1502	0.9	0	365	7137	3773	2295	6068	No	4.04	Si
SLU 72	fin.	134.66	1028	0.9	0	365	7137	3773	2295	6068	No	5.9	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-713.44	843	-0.0003958	0.0002807	0.0035	0.9		2995.37	2995.37		4.2	Si
SLV 14	fin.	741.43	-2334	-0.0004148	0.0002807	0.0035	0.9		2989.59	2989.59		4.03	Si
SLV 2	ini.	1304.06	-2734	-0.0008282	0.0002807	0.0035	0.9		2989.59	2989.59		2.29	Si
SLV 2	fin.	-767.71	1471	-0.0004312	0.0002807	0.0035	0.9		2995.37	2995.37		3.9	Si
SLV 3	ini.	1262.61	-3182	-0.0007946	0.0002807	0.0035	0.9		2989.59	2989.59		2.37	Si
SLV 3	fin.	-560.5	733	-0.0003006	0.0002807	0.0035	0.9		2995.37	2995.37		5.34	Si
SLV 15	ini.	-754.9	395	-0.0004227	0.0002807	0.0035	0.9		2995.37	2995.37		3.97	Si
SLV 15	fin.	948.64	-3071	-0.0005565	0.0002807	0.0035	0.9		2989.59	2989.59		3.15	Si
SLV 1	ini.	1195.48	-2582	-0.0007413	0.0002807	0.0035	0.9		2989.59	2989.59		2.5	Si
SLV 1	fin.	-668.31	1187	-0.000367	0.0002807	0.0035	0.9		2995.37	2995.37		4.48	Si
SLV 4	ini.	1371.18	-3334	-0.0008838	0.0002807	0.0035	0.9		2989.59	2989.59		2.18	Si
SLV 4	fin.	-659.9	1017	-0.0003617	0.0002807	0.0035	0.9		2995.37	2995.37		4.54	Si
SLV 16	ini.	-646.32	243	-0.0003531	0.0002807	0.0035	0.9		2995.37	2995.37		4.63	Si
SLV 16	fin.	849.24	-2788	-0.000487	0.0002807	0.0035	0.9		2989.59	2989.59		3.52	Si
SLV 8	ini.	723.97	-2756	-0.0004034	0.0002807	0.0035	0.9		2989.59	2989.59		4.13	Si
SLV 8	fin.	11.83	-895	-0.0000058	0.0002807	0.0035	0.9		2989.59	2989.59		252.71	Si
SLV 13	ini.	-822.02	995	-0.0004675	0.0002807	0.0035	0.9		2995.37	2995.37		3.64	Si
SLV 13	fin.	840.83	-2618	-0.0004813	0.0002807	0.0035	0.9		2989.59	2989.59		3.56	Si
SLD 4	ini.	743.86	-2098	-0.0004164	0.0002807	0.0035	0.9		2989.59	2989.59		4.02	Si
SLD 4	fin.	-229.61	-27	-0.000116	0.0002807	0.0035	0.9		2995.37	2995.37		13.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	48.94	-572	0.9	0	548	7137	5660	2295	7684		13.43	Si
SLV 11	fin.	528.46	3090	0.9	0	548	7137	5660	2295	7684		2.49	Si
SLV 3	ini.	1262.61	-4762	0.9	0	548	7137	5660	2295	7684		1.61	Si
SLV 3	fin.	-560.5	-2892	0.9	0	548	7137	5660	2295	7684		2.66	Si
SLV 8	ini.	723.97	-3027	0.9	0	548	7137	5660	2295	7684		2.54	Si
SLV 8	fin.	11.83	294	0.9	0	548	7137	5660	2295	7684		26.11	Si
SLV 13	ini.	-822.02	2990	0.9	0	548	7137	5660	2295	7684		2.57	Si
SLV 13	fin.	840.83	4769	0.9	0	548	7137	5660	2295	7684		1.61	Si
SLV 16	ini.	-646.32	2161	0.9	0	548	7137	5660	2295	7684		3.56	Si
SLV 16	fin.	849.24	4875	0.9	0	548	7137	5660	2295	7684		1.58	Si
SLV 15	ini.	-754.9	2562	0.9	0	548	7137	5660	2295	7684		3	Si
SLV 15	fin.	948.64	5369	0.9	0	548	7137	5660	2295	7684		1.43	Si
SLV 1	ini.	1195.48	-4334	0.9	0	548	7137	5660	2295	7684		1.77	Si
SLV 1	fin.	-668.31	-3492	0.9	0	548	7137	5660	2295	7684		2.2	Si
SLV 4	ini.	1371.18	-5162	0.9	0	548	7137	5660	2295	7684		1.49	Si
SLV 4	fin.	-659.9	-3385	0.9	0	548	7137	5660	2295	7684		2.27	Si
SLV 2	ini.	1304.06	-4734	0.9	0	548	7137	5660	2295	7684		1.62	Si
SLV 2	fin.	-767.71	-3986	0.9	0	548	7137	5660	2295	7684		1.93	Si
SLV 14	ini.	-713.44	2589	0.9	0	548	7137	5660	2295	7684		2.97	Si
SLV 14	fin.	741.43	4275	0.9	0	548	7137	5660	2295	7684		1.8	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.18	SLV 4	Si
V_SLV	1.431	SLV 15	Si
PF_SLU	7.908	SLU 72	Si
V_SLU	4.04	SLU 72	Si

Trave di accoppiamento 136

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	11.04	11.86	0.82	-3.183	-3.314	11.04	11.86	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-77.39	-820	-0.0000463	0.0001872	0.0035	0.82		2460.51	2460.51	No	31.79	Si
SLU 78	fin.	-330.82	-1524	-0.0002129	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.44	Si
SLU 70	ini.	-27.44	-678	-0.0000162	0.0001872	0.0035	0.82		2460.51	2460.51	No	89.68	Si
SLU 70	fin.	-334.54	-1504	-0.0002156	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.35	Si
SLU 79	ini.	-69.78	-793	-0.0000417	0.0001872	0.0035	0.82		2460.51	2460.51	No	35.26	Si
SLU 79	fin.	-328.85	-1508	-0.0002115	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.48	Si
SLU 68	ini.	-6.77	-603	-0.000004	0.0001872	0.0035	0.82		2460.51	2460.51	No	363.33	Si
SLU 68	fin.	-329.9	-1464	-0.0002123	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.46	Si
SLU 67	ini.	-15.73	-630	-0.0000093	0.0001872	0.0035	0.82		2460.51	2460.51	No	156.39	Si
SLU 67	fin.	-329.35	-1470	-0.0002119	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.47	Si
SLU 71	ini.	-19.82	-650	-0.0000117	0.0001872	0.0035	0.82		2460.51	2460.51	No	124.14	Si
SLU 71	fin.	-332.56	-1489	-0.0002142	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.4	Si
SLU 72	ini.	-19.01	-651	-0.0000112	0.0001872	0.0035	0.82		2460.51	2460.51	No	129.41	Si
SLU 72	fin.	-334.07	-1495	-0.0002153	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.37	Si
SLU 69	ini.	-28.24	-677	-0.0000167	0.0001872	0.0035	0.82		2460.51	2460.51	No	87.12	Si
SLU 69	fin.	-333.02	-1498	-0.0002145	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.39	Si
SLU 80	ini.	-68.97	-793	-0.0000412	0.0001872	0.0035	0.82		2460.51	2460.51	No	35.68	Si
SLU 80	fin.	-330.36	-1514	-0.0002126	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.45	Si
SLU 77	ini.	-78.2	-820	-0.0000468	0.0001872	0.0035	0.82		2460.51	2460.51	No	31.47	Si
SLU 77	fin.	-329.31	-1518	-0.0002119	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-78.67	927	0.82	0	303	6502	3438	2091	5529	No	5.96	Si
SLU 84	fin.	-323.58	-2455	0.82	0	303	6502	3438	2091	5529	No	2.25	Si
SLU 75	ini.	-65.69	859	0.82	0	303	6502	3438	2091	5529	No	6.44	Si
SLU 75	fin.	-325.64	-2443	0.82	0	303	6502	3438	2091	5529	No	2.26	Si
SLU 79	ini.	-69.78	879	0.82	0	303	6502	3438	2091	5529	No	6.29	Si
SLU 79	fin.	-328.85	-2467	0.82	0	303	6502	3438	2091	5529	No	2.24	Si
SLU 74	ini.	-66.5	862	0.82	0	303	6502	3438	2091	5529	No	6.41	Si
SLU 74	fin.	-324.12	-2435	0.82	0	303	6502	3438	2091	5529	No	2.27	Si
SLU 78	ini.	-77.39	916	0.82	0	303	6502	3438	2091	5529	No	6.04	Si
SLU 78	fin.	-330.82	-2491	0.82	0	303	6502	3438	2091	5529	No	2.22	Si
SLU 83	ini.	-79.48	930	0.82	0	303	6502	3438	2091	5529	No	5.94	Si
SLU 83	fin.	-322.07	-2448	0.82	0	303	6502	3438	2091	5529	No	2.26	Si
SLU 76	ini.	-56.73	817	0.82	0	303	6502	3438	2091	5529	No	6.77	Si
SLU 76	fin.	-326.19	-2432	0.82	0	303	6502	3438	2091	5529	No	2.27	Si
SLU 70	ini.	-27.44	663	0.82	0	303	6502	3438	2091	5529	No	8.33	Si
SLU 70	fin.	-334.54	-2425	0.82	0	303	6502	3438	2091	5529	No	2.28	Si
SLU 77	ini.	-78.2	919	0.82	0	303	6502	3438	2091	5529	No	6.02	Si
SLU 77	fin.	-329.31	-2483	0.82	0	303	6502	3438	2091	5529	No	2.23	Si
SLU 80	ini.	-68.97	876	0.82	0	303	6502	3438	2091	5529	No	6.31	Si
SLU 80	fin.	-330.36	-2475	0.82	0	303	6502	3438	2091	5529	No	2.23	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	796.01	1065	-0.000564	0.0002807	0.0035	0.82		2482.11	2482.11		3.12	Si
SLV 2	fin.	-802.52	-2903	-0.0005682	0.0002807	0.0035	0.82		2487.45	2487.45		3.1	Si
SLV 3	ini.	645.4	453	-0.0004387	0.0002807	0.0035	0.82		2482.11	2482.11		3.85	Si
SLV 3	fin.	-840.76	-3201	-0.0006015	0.0002807	0.0035	0.82		2487.45	2487.45		2.96	Si
SLV 16	ini.	-712.3	-1745	-0.000492	0.0002807	0.0035	0.82		2487.45	2487.45		3.49	Si
SLV 16	fin.	263.85	588	-0.0001632	0.0002807	0.0035	0.82		2482.11	2482.11		9.41	Si
SLV 4	ini.	739.44	654	-0.0005158	0.0002807	0.0035	0.82		2482.11	2482.11		3.36	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-895.1	-3370	-0.0006499	0.0002807	0.0035	0.82		2487.45	2487.45		2.78	Si
SLV 8	ini.	148.53	-701	-0.0000899	0.0002807	0.0035	0.82		2482.11	2482.11		16.71	Si
SLV 8	fin.	-587.77	-2499	-0.0003923	0.0002807	0.0035	0.82		2487.45	2487.45		4.23	Si
SLV 13	ini.	-749.76	-1534	-0.0005232	0.0002807	0.0035	0.82		2487.45	2487.45		3.32	Si
SLV 13	fin.	410.77	1224	-0.0002625	0.0002807	0.0035	0.82		2482.11	2482.11		6.04	Si
SLV 14	ini.	-655.73	-1333	-0.0004459	0.0002807	0.0035	0.82		2487.45	2487.45		3.79	Si
SLV 14	fin.	356.43	1055	-0.0002249	0.0002807	0.0035	0.82		2482.11	2482.11		6.96	Si
SLV 7	ini.	88.1	-830	-0.0000527	0.0002807	0.0035	0.82		2482.11	2482.11		28.18	Si
SLV 7	fin.	-552.85	-2391	-0.0003655	0.0002807	0.0035	0.82		2487.45	2487.45		4.5	Si
SLV 15	ini.	-806.33	-1945	-0.0005715	0.0002807	0.0035	0.82		2487.45	2487.45		3.08	Si
SLV 15	fin.	318.19	757	-0.0001991	0.0002807	0.0035	0.82		2482.11	2482.11		7.8	Si
SLV 1	ini.	701.97	864	-0.0004846	0.0002807	0.0035	0.82		2482.11	2482.11		3.54	Si
SLV 1	fin.	-748.18	-2734	-0.0005219	0.0002807	0.0035	0.82		2487.45	2487.45		3.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	796.01	-2766	0.82	0	455	6502	5156	2091	6957		2.51	Si
SLV 2	fin.	-802.52	-4579	0.82	0	455	6502	5156	2091	6957		1.52	Si
SLV 16	ini.	-712.3	3247	0.82	0	455	6502	5156	2091	6957		2.14	Si
SLV 16	fin.	263.85	788	0.82	0	455	6502	5156	2091	6957		8.82	Si
SLV 4	ini.	739.44	-2510	0.82	0	455	6502	5156	2091	6957		2.77	Si
SLV 4	fin.	-895.1	-5012	0.82	0	455	6502	5156	2091	6957		1.39	Si
SLV 13	ini.	-749.76	3367	0.82	0	455	6502	5156	2091	6957		2.07	Si
SLV 13	fin.	410.77	1515	0.82	0	455	6502	5156	2091	6957		4.59	Si
SLV 3	ini.	645.4	-2135	0.82	0	455	6502	5156	2091	6957		3.26	Si
SLV 3	fin.	-840.76	-4717	0.82	0	455	6502	5156	2091	6957		1.47	Si
SLD 4	ini.	312.88	-827	0.82	0	455	6502	5156	2091	6957		8.41	Si
SLD 4	fin.	-521.9	-3146	0.82	0	455	6502	5156	2091	6957		2.21	Si
SLV 1	ini.	701.97	-2391	0.82	0	455	6502	5156	2091	6957		2.91	Si
SLV 1	fin.	-748.18	-4285	0.82	0	455	6502	5156	2091	6957		1.62	Si
SLV 15	ini.	-806.33	3623	0.82	0	455	6502	5156	2091	6957		1.92	Si
SLV 15	fin.	318.19	1083	0.82	0	455	6502	5156	2091	6957		6.42	Si
SLV 8	ini.	148.53	-130	0.82	0	455	6502	5156	2091	6957		53.65	Si
SLV 8	fin.	-587.77	-3434	0.82	0	455	6502	5156	2091	6957		2.03	Si
SLV 7	ini.	88.1	112	0.82	0	455	6502	5156	2091	6957		62.37	Si
SLV 7	fin.	-552.85	-3244	0.82	0	455	6502	5156	2091	6957		2.14	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.779	SLV 4	Si
V_SLV	1.388	SLV 4	Si
PF_SLU	7.355	SLU 70	Si
V_SLU	2.22	SLU 78	Si

Trave di accoppiamento 137

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	8.34	9.24	0.9	-2.963	5.826	8.34	9.24	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	397.1	-1774	-0.0002125	0.0001872	0.0035	0.9		2959	2959	No	7.45	Si
SLU 79	fin.	-68.63	-1014	-0.000034	0.0001872	0.0035	0.9		2964.67	2964.67	No	43.2	Si
SLU 81	ini.	400.84	-1761	-0.0002148	0.0001872	0.0035	0.9		2959	2959	No	7.38	Si
SLU 81	fin.	-87.39	-963	-0.0000434	0.0001872	0.0035	0.9		2964.67	2964.67	No	33.92	Si
SLU 82	ini.	399.06	-1755	-0.0002137	0.0001872	0.0035	0.9		2959	2959	No	7.41	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	fin.	-84.08	-968	-0.0000417	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.26	Si
SLU 83	ini.	402.84	-1784	-0.000216	0.0001872	0.0035	0.9		2959	2959	No	7.35	Si
SLU 83	fin.	-75.34	-1009	-0.0000373	0.0001872	0.0035	0.9		2964.67	2964.67	No	39.35	Si
SLU 75	ini.	399.31	-1772	-0.0002138	0.0001872	0.0035	0.9		2959	2959	No	7.41	Si
SLU 75	fin.	-78.33	-987	-0.0000388	0.0001872	0.0035	0.9		2964.67	2964.67	No	37.85	Si
SLU 74	ini.	401.1	-1779	-0.0002149	0.0001872	0.0035	0.9		2959	2959	No	7.38	Si
SLU 74	fin.	-81.64	-982	-0.0000405	0.0001872	0.0035	0.9		2964.67	2964.67	No	36.32	Si
SLU 78	ini.	401.31	-1795	-0.000215	0.0001872	0.0035	0.9		2959	2959	No	7.37	Si
SLU 78	fin.	-66.28	-1032	-0.0000328	0.0001872	0.0035	0.9		2964.67	2964.67	No	44.73	Si
SLU 80	ini.	395.31	-1768	-0.0002115	0.0001872	0.0035	0.9		2959	2959	No	7.49	Si
SLU 80	fin.	-65.32	-1018	-0.0000323	0.0001872	0.0035	0.9		2964.67	2964.67	No	45.39	Si
SLU 77	ini.	403.1	-1802	-0.0002161	0.0001872	0.0035	0.9		2959	2959	No	7.34	Si
SLU 77	fin.	-69.59	-1028	-0.0000344	0.0001872	0.0035	0.9		2964.67	2964.67	No	42.6	Si
SLU 84	ini.	401.06	-1778	-0.0002149	0.0001872	0.0035	0.9		2959	2959	No	7.38	Si
SLU 84	fin.	-72.03	-1013	-0.0000357	0.0001872	0.0035	0.9		2964.67	2964.67	No	41.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	403.1	-2408	0.9	0	365	7137	3773	2295	6068	No	2.52	Si
SLU 77	fin.	-69.59	-101	0.9	0	365	7137	3773	2295	6068	No	60.16	Si
SLU 79	ini.	397.1	-2361	0.9	0	365	7137	3773	2295	6068	No	2.57	Si
SLU 79	fin.	-68.63	-107	0.9	0	365	7137	3773	2295	6068	No	56.8	Si
SLU 70	ini.	383.24	-2372	0.9	0	365	7137	3773	2295	6068	No	2.56	Si
SLU 70	fin.	-78.74	-113	0.9	0	365	7137	3773	2295	6068	No	53.71	Si
SLU 74	ini.	401.1	-2371	0.9	0	365	7137	3773	2295	6068	No	2.56	Si
SLU 74	fin.	-81.64	-161	0.9	0	365	7137	3773	2295	6068	No	37.74	Si
SLU 48	ini.	369.86	-2347	0.9	0	365	7137	3773	2295	6068	No	2.59	Si
SLU 48	fin.	-106	-201	0.9	0	365	7137	3773	2295	6068	No	30.17	Si
SLU 75	ini.	399.31	-2352	0.9	0	365	7137	3773	2295	6068	No	2.58	Si
SLU 75	fin.	-78.33	-154	0.9	0	365	7137	3773	2295	6068	No	39.28	Si
SLU 56	ini.	387.93	-2364	0.9	0	365	7137	3773	2295	6068	No	2.57	Si
SLU 56	fin.	-93.54	-183	0.9	0	365	7137	3773	2295	6068	No	33.21	Si
SLU 69	ini.	385.02	-2391	0.9	0	365	7137	3773	2295	6068	No	2.54	Si
SLU 69	fin.	-82.05	-119	0.9	0	365	7137	3773	2295	6068	No	50.87	Si
SLU 66	ini.	383.02	-2354	0.9	0	365	7137	3773	2295	6068	No	2.58	Si
SLU 66	fin.	-94.1	-179	0.9	0	365	7137	3773	2295	6068	No	33.86	Si
SLU 78	ini.	401.31	-2389	0.9	0	365	7137	3773	2295	6068	No	2.54	Si
SLU 78	fin.	-66.28	-95	0.9	0	365	7137	3773	2295	6068	No	64.16	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	764.25	-2639	-0.0004298	0.0002807	0.0035	0.9		2989.59	2989.59		3.91	Si
SLV 3	fin.	-879.06	634	-0.0005065	0.0002807	0.0035	0.9		2995.37	2995.37		3.41	Si
SLV 1	ini.	908.83	-3306	-0.0005284	0.0002807	0.0035	0.9		2989.59	2989.59		3.29	Si
SLV 1	fin.	-896.67	196	-0.0005187	0.0002807	0.0035	0.9		2995.37	2995.37		3.34	Si
SLV 13	ini.	-117.16	-98	-0.0000582	0.0002807	0.0035	0.9		2995.37	2995.37		25.57	Si
SLV 13	fin.	600.32	-1734	-0.0003254	0.0002807	0.0035	0.9		2989.59	2989.59		4.98	Si
SLV 15	ini.	-261.74	569	-0.0001329	0.0002807	0.0035	0.9		2995.37	2995.37		11.44	Si
SLV 15	fin.	617.93	-1296	-0.0003362	0.0002807	0.0035	0.9		2989.59	2989.59		4.84	Si
SLV 2	ini.	842.36	-3116	-0.0004823	0.0002807	0.0035	0.9		2989.59	2989.59		3.55	Si
SLV 2	fin.	-783.17	26	-0.0004414	0.0002807	0.0035	0.9		2995.37	2995.37		3.82	Si
SLV 4	ini.	697.78	-2450	-0.0003865	0.0002807	0.0035	0.9		2989.59	2989.59		4.28	Si
SLV 4	fin.	-765.56	465	-0.0004297	0.0002807	0.0035	0.9		2995.37	2995.37		3.91	Si
SLV 5	ini.	706.53	-2927	-0.0003921	0.0002807	0.0035	0.9		2989.59	2989.59		4.23	Si
SLV 5	fin.	-372.99	-1022	-0.000193	0.0002807	0.0035	0.9		2995.37	2995.37		8.03	Si
SLV 16	ini.	-328.21	759	-0.0001685	0.0002807	0.0035	0.9		2995.37	2995.37		9.13	Si
SLV 16	fin.	731.43	-1465	-0.0004083	0.0002807	0.0035	0.9		2989.59	2989.59		4.09	Si
SLV 6	ini.	663.81	-2805	-0.0003649	0.0002807	0.0035	0.9		2989.59	2989.59		4.5	Si
SLV 6	fin.	-300.04	-1130	-0.0001533	0.0002807	0.0035	0.9		2995.37	2995.37		9.98	Si
SLV 14	ini.	-183.63	92	-0.0000921	0.0002807	0.0035	0.9		2995.37	2995.37		16.31	Si
SLV 14	fin.	713.82	-1904	-0.0003968	0.0002807	0.0035	0.9		2989.59	2989.59		4.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	764.25	-3706	0.9	0	548	7137	5660	2295	7684		2.07	Si
SLV 3	fin.	-879.06	-3185	0.9	0	548	7137	5660	2295	7684		2.41	Si
SLD 1	ini.	555.89	-3093	0.9	0	548	7137	5660	2295	7684		2.48	Si
SLD 1	fin.	-431.02	-1530	0.9	0	548	7137	5660	2295	7684		5.02	Si
SLD 5	ini.	471.96	-2957	0.9	0	548	7137	5660	2295	7684		2.6	Si
SLD 5	fin.	-207.79	-713	0.9	0	548	7137	5660	2295	7684		10.78	Si
SLV 2	ini.	842.36	-4599	0.9	0	548	7137	5660	2295	7684		1.67	Si
SLV 2	fin.	-783.17	-2890	0.9	0	548	7137	5660	2295	7684		2.66	Si
SLV 9	ini.	398.73	-3068	0.9	0	548	7137	5660	2295	7684		2.5	Si
SLV 9	fin.	76.11	318	0.9	0	548	7137	5660	2295	7684		24.17	Si
SLV 6	ini.	663.81	-4333	0.9	0	548	7137	5660	2295	7684		1.77	Si
SLV 6	fin.	-300.04	-1117	0.9	0	548	7137	5660	2295	7684		6.88	Si
SLV 5	ini.	706.53	-4515	0.9	0	548	7137	5660	2295	7684		1.7	Si
SLV 5	fin.	-372.99	-1384	0.9	0	548	7137	5660	2295	7684		5.55	Si
SLD 2	ini.	527.36	-2972	0.9	0	548	7137	5660	2295	7684		2.59	Si
SLD 2	fin.	-382.29	-1352	0.9	0	548	7137	5660	2295	7684		5.68	Si
SLV 1	ini.	908.83	-4882	0.9	0	548	7137	5660	2295	7684		1.57	Si
SLV 1	fin.	-896.67	-3304	0.9	0	548	7137	5660	2295	7684		2.33	Si
SLV 4	ini.	697.78	-3423	0.9	0	548	7137	5660	2295	7684		2.24	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-765.56	-2771	0.9	0	548	7137	5660	2295	7684		2.77	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.29	SLV 1	Si
V_SLV	1.574	SLV 1	Si
PF_SLU	7.341	SLU 77	Si
V_SLU	2.52	SLU 77	Si

Trave di accoppiamento 138

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	11.04	11.86	0.82	-2.963	5.826	11.04	11.86	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-16.78	-409	-0.0000099	0.0001872	0.0035	0.82		2460.51	2460.51	No	146.62	Si
SLU 74	fin.	-379.04	-1132	-0.0002481	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.49	Si
SLU 73	ini.	-6	-353	-0.0000035	0.0001872	0.0035	0.82		2460.51	2460.51	No	409.99	Si
SLU 73	fin.	-373.65	-1085	-0.0002441	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.58	Si
SLU 84	ini.	-23.45	-443	-0.0000139	0.0001872	0.0035	0.82		2460.51	2460.51	No	104.92	Si
SLU 84	fin.	-378.95	-1143	-0.000248	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.49	Si
SLU 81	ini.	-8.96	-379	-0.0000053	0.0001872	0.0035	0.82		2460.51	2460.51	No	274.75	Si
SLU 81	fin.	-385.62	-1126	-0.000253	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.38	Si
SLU 82	ini.	-10.58	-385	-0.0000062	0.0001872	0.0035	0.82		2460.51	2460.51	No	232.54	Si
SLU 82	fin.	-383.64	-1123	-0.0002515	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.41	Si
SLU 83	ini.	-21.83	-437	-0.0000129	0.0001872	0.0035	0.82		2460.51	2460.51	No	112.74	Si
SLU 83	fin.	-380.93	-1146	-0.0002495	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.46	Si
SLU 60	ini.	15.15	-249	-0.000009	0.0001872	0.0035	0.82		2455.37	2455.37	No	162.02	Si
SLU 60	fin.	-374.94	-1042	-0.0002451	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.56	Si
SLU 61	ini.	13.53	-256	-0.000008	0.0001872	0.0035	0.82		2455.37	2455.37	No	181.49	Si
SLU 61	fin.	-372.96	-1039	-0.0002436	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.6	Si
SLU 75	ini.	-18.41	-416	-0.0000109	0.0001872	0.0035	0.82		2460.51	2460.51	No	133.67	Si
SLU 75	fin.	-377.06	-1130	-0.0002466	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.53	Si
SLU 77	ini.	-29.65	-467	-0.0000176	0.0001872	0.0035	0.82		2460.51	2460.51	No	82.98	Si
SLU 77	fin.	-374.36	-1152	-0.0002446	0.0001872	0.0035	0.82		2460.51	2460.51	No	6.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-8.96	1088	0.82	0	303	6502	3438	2091	5529	No	5.08	Si
SLU 81	fin.	-385.62	-2040	0.82	0	303	6502	3438	2091	5529	No	2.71	Si
SLU 77	ini.	-29.65	1214	0.82	0	303	6502	3438	2091	5529	No	4.56	Si
SLU 77	fin.	-374.36	-2016	0.82	0	303	6502	3438	2091	5529	No	2.74	Si
SLU 74	ini.	-16.78	1123	0.82	0	303	6502	3438	2091	5529	No	4.92	Si
SLU 74	fin.	-379.04	-2018	0.82	0	303	6502	3438	2091	5529	No	2.74	Si
SLU 80	ini.	-30.66	1196	0.82	0	303	6502	3438	2091	5529	No	4.62	Si
SLU 80	fin.	-365.6	-1972	0.82	0	303	6502	3438	2091	5529	No	2.8	Si
SLU 75	ini.	-18.41	1128	0.82	0	303	6502	3438	2091	5529	No	4.9	Si
SLU 75	fin.	-377.06	-2008	0.82	0	303	6502	3438	2091	5529	No	2.75	Si
SLU 78	ini.	-31.28	1218	0.82	0	303	6502	3438	2091	5529	No	4.54	Si
SLU 78	fin.	-372.38	-2006	0.82	0	303	6502	3438	2091	5529	No	2.76	Si
SLU 83	ini.	-21.83	1179	0.82	0	303	6502	3438	2091	5529	No	4.69	Si
SLU 83	fin.	-380.93	-2038	0.82	0	303	6502	3438	2091	5529	No	2.71	Si
SLU 79	ini.	-29.03	1191	0.82	0	303	6502	3438	2091	5529	No	4.64	Si
SLU 79	fin.	-367.58	-1982	0.82	0	303	6502	3438	2091	5529	No	2.79	Si
SLU 84	ini.	-23.45	1184	0.82	0	303	6502	3438	2091	5529	No	4.67	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-378.95	-2028	0.82	0	303	6502	3438	2091	5529	No	2.73	Si
SLU 82	ini.	-10.58	1093	0.82	0	303	6502	3438	2091	5529	No	5.06	Si
SLU 82	fin.	-383.64	-2030	0.82	0	303	6502	3438	2091	5529	No	2.72	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	377.77	917	-0.0002395	0.0002807	0.0035	0.82		2482.11	2482.11		6.57	Si
SLV 1	fin.	-892.37	-1744	-0.0006474	0.0002807	0.0035	0.82		2487.45	2487.45		2.79	Si
SLV 5	ini.	98.1	-463	-0.0000588	0.0002807	0.0035	0.82		2482.11	2482.11		25.3	Si
SLV 5	fin.	-757.29	-1693	-0.0005296	0.0002807	0.0035	0.82		2487.45	2487.45		3.28	Si
SLD 1	ini.	166.78	279	-0.0001012	0.0002807	0.0035	0.82		2482.11	2482.11		14.88	Si
SLD 1	fin.	-542.18	-1195	-0.0003574	0.0002807	0.0035	0.82		2487.45	2487.45		4.59	Si
SLV 3	ini.	398.73	1340	-0.0002541	0.0002807	0.0035	0.82		2482.11	2482.11		6.23	Si
SLV 3	fin.	-705.61	-1341	-0.0004865	0.0002807	0.0035	0.82		2487.45	2487.45		3.53	Si
SLD 2	ini.	141.35	180	-0.0000854	0.0002807	0.0035	0.82		2482.11	2482.11		17.56	Si
SLD 2	fin.	-512.53	-1161	-0.0003352	0.0002807	0.0035	0.82		2487.45	2487.45		4.85	Si
SLV 2	ini.	318.53	687	-0.0001993	0.0002807	0.0035	0.82		2482.11	2482.11		7.79	Si
SLV 2	fin.	-823.31	-1665	-0.0005863	0.0002807	0.0035	0.82		2487.45	2487.45		3.02	Si
SLD 6	ini.	30.36	-382	-0.000018	0.0002807	0.0035	0.82		2482.11	2482.11		81.76	Si
SLD 6	fin.	-468.16	-1157	-0.0003027	0.0002807	0.0035	0.82		2487.45	2487.45		5.31	Si
SLV 6	ini.	60.03	-611	-0.0000357	0.0002807	0.0035	0.82		2482.11	2482.11		41.35	Si
SLV 6	fin.	-712.91	-1642	-0.0004925	0.0002807	0.0035	0.82		2487.45	2487.45		3.49	Si
SLV 4	ini.	339.49	1110	-0.0002134	0.0002807	0.0035	0.82		2482.11	2482.11		7.31	Si
SLV 4	fin.	-636.55	-1262	-0.0004306	0.0002807	0.0035	0.82		2487.45	2487.45		3.91	Si
SLD 5	ini.	46.98	-318	-0.0000279	0.0002807	0.0035	0.82		2482.11	2482.11		52.83	Si
SLD 5	fin.	-487.53	-1179	-0.0003168	0.0002807	0.0035	0.82		2487.45	2487.45		5.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-300.22	2655	0.82	0	455	6502	5156	2091	6957		2.62	Si
SLV 15	fin.	267.63	353	0.82	0	455	6502	5156	2091	6957		19.71	Si
SLV 5	ini.	98.1	-147	0.82	0	455	6502	5156	2091	6957		47.22	Si
SLV 5	fin.	-757.29	-3152	0.82	0	455	6502	5156	2091	6957		2.21	Si
SLV 3	ini.	398.73	-1801	0.82	0	455	6502	5156	2091	6957		3.86	Si
SLV 3	fin.	-705.61	-2770	0.82	0	455	6502	5156	2091	6957		2.51	Si
SLV 4	ini.	339.49	-1405	0.82	0	455	6502	5156	2091	6957		4.95	Si
SLV 4	fin.	-636.55	-2540	0.82	0	455	6502	5156	2091	6957		2.74	Si
SLV 1	ini.	377.77	-1791	0.82	0	455	6502	5156	2091	6957		3.89	Si
SLV 1	fin.	-892.37	-3469	0.82	0	455	6502	5156	2091	6957		2.01	Si
SLV 13	ini.	-321.18	2666	0.82	0	455	6502	5156	2091	6957		2.61	Si
SLV 13	fin.	80.86	-347	0.82	0	455	6502	5156	2091	6957		20.08	Si
SLV 14	ini.	-380.42	3062	0.82	0	455	6502	5156	2091	6957		2.27	Si
SLV 14	fin.	149.93	-117	0.82	0	455	6502	5156	2091	6957		59.38	Si
SLV 6	ini.	60.03	108	0.82	0	455	6502	5156	2091	6957		64.7	Si
SLV 6	fin.	-712.91	-3004	0.82	0	455	6502	5156	2091	6957		2.32	Si
SLV 2	ini.	318.53	-1394	0.82	0	455	6502	5156	2091	6957		4.99	Si
SLV 2	fin.	-823.31	-3240	0.82	0	455	6502	5156	2091	6957		2.15	Si
SLV 16	ini.	-359.46	3052	0.82	0	455	6502	5156	2091	6957		2.28	Si
SLV 16	fin.	336.69	582	0.82	0	455	6502	5156	2091	6957		11.95	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.787	SLV 1	Si
V_SLV	2.005	SLV 1	Si
PF_SLU	6.381	SLU 81	Si
V_SLU	2.71	SLU 81	Si

Trave di accoppiamento 139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	11.86	12.76	0.9	-22.713	5.826	11.86	12.76	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 44	ini.	-39.03	-11	-0.0000192	0.0001872	0.0035	0.9		2964.67	2964.67	No	75.97	Si
SLU 44	fin.	183.9	-591	-0.0000933	0.0001872	0.0035	0.9		2959	2959	No	16.09	Si
SLU 43	ini.	-44.14	5	-0.0000217	0.0001872	0.0035	0.9		2964.67	2964.67	No	67.16	Si
SLU 43	fin.	187.65	-596	-0.0000953	0.0001872	0.0035	0.9		2959	2959	No	15.77	Si
SLU 61	ini.	-12.19	-91	-0.000006	0.0001872	0.0035	0.9		2964.67	2964.67	No	243.23	Si
SLU 61	fin.	151.59	-539	-0.0000764	0.0001872	0.0035	0.9		2959	2959	No	19.52	Si
SLU 64	ini.	-7.58	-107	-0.0000037	0.0001872	0.0035	0.9		2964.67	2964.67	No	391.13	Si
SLU 64	fin.	147.73	-534	-0.0000744	0.0001872	0.0035	0.9		2959	2959	No	20.03	Si
SLU 60	ini.	-15.26	-81	-0.0000075	0.0001872	0.0035	0.9		2964.67	2964.67	No	194.31	Si
SLU 60	fin.	153.84	-542	-0.0000776	0.0001872	0.0035	0.9		2959	2959	No	19.23	Si
SLU 65	ini.	-2.46	-123	-0.0000012	0.0001872	0.0035	0.9		2964.67	2964.67	No	1202.78	Si
SLU 65	fin.	143.98	-529	-0.0000725	0.0001872	0.0035	0.9		2959	2959	No	20.55	Si
SLU 52	ini.	-18.81	-71	-0.0000092	0.0001872	0.0035	0.9		2964.67	2964.67	No	157.63	Si
SLU 52	fin.	160.23	-553	-0.0000809	0.0001872	0.0035	0.9		2959	2959	No	18.47	Si
SLU 47	ini.	-14.78	-86	-0.0000072	0.0001872	0.0035	0.9		2964.67	2964.67	No	200.57	Si
SLU 47	fin.	158.13	-549	-0.0000798	0.0001872	0.0035	0.9		2959	2959	No	18.71	Si
SLU 46	ini.	-15.96	-80	-0.0000078	0.0001872	0.0035	0.9		2964.67	2964.67	No	185.81	Si
SLU 46	fin.	159.07	-551	-0.0000803	0.0001872	0.0035	0.9		2959	2959	No	18.6	Si
SLU 45	ini.	-19.02	-70	-0.0000093	0.0001872	0.0035	0.9		2964.67	2964.67	No	155.83	Si
SLU 45	fin.	161.32	-554	-0.0000815	0.0001872	0.0035	0.9		2959	2959	No	18.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 43	ini.	-44.14	38	0.9	0	365	7137	3773	2295	6068	No	160.03	Si
SLU 43	fin.	187.65	813	0.9	0	365	7137	3773	2295	6068	No	7.46	Si
SLU 48	ini.	5.22	-364	0.9	0	365	7137	3773	2295	6068	No	16.65	Si
SLU 48	fin.	135.55	720	0.9	0	365	7137	3773	2295	6068	No	8.43	Si
SLU 44	ini.	-39.03	31	0.9	0	365	7137	3773	2295	6068	No	194.62	Si
SLU 44	fin.	183.9	781	0.9	0	365	7137	3773	2295	6068	No	7.77	Si
SLU 50	ini.	4.35	-338	0.9	0	365	7137	3773	2295	6068	No	17.97	Si
SLU 50	fin.	136.11	699	0.9	0	365	7137	3773	2295	6068	No	8.68	Si
SLU 46	ini.	-15.96	-181	0.9	0	365	7137	3773	2295	6068	No	33.6	Si
SLU 46	fin.	159.07	757	0.9	0	365	7137	3773	2295	6068	No	8.01	Si
SLU 49	ini.	8.29	-368	0.9	0	365	7137	3773	2295	6068	No	16.47	Si
SLU 49	fin.	133.3	701	0.9	0	365	7137	3773	2295	6068	No	8.66	Si
SLU 64	ini.	-7.58	-112	0.9	0	365	7137	3773	2295	6068	No	54.32	Si
SLU 64	fin.	147.73	619	0.9	0	365	7137	3773	2295	6068	No	9.81	Si
SLU 47	ini.	-14.78	-157	0.9	0	365	7137	3773	2295	6068	No	38.74	Si
SLU 47	fin.	158.13	724	0.9	0	365	7137	3773	2295	6068	No	8.38	Si
SLU 45	ini.	-19.02	-177	0.9	0	365	7137	3773	2295	6068	No	34.37	Si
SLU 45	fin.	161.32	777	0.9	0	365	7137	3773	2295	6068	No	7.81	Si
SLU 51	ini.	7.42	-342	0.9	0	365	7137	3773	2295	6068	No	17.76	Si
SLU 51	fin.	133.86	680	0.9	0	365	7137	3773	2295	6068	No	8.92	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-218.91	427	-0.0001104	0.0002807	0.0035	0.9		2995.37	2995.37		13.68	Si
SLV 9	fin.	456.41	-1282	-0.0002403	0.0002807	0.0035	0.9		2989.59	2989.59		6.55	Si
SLV 12	ini.	99.47	-216	-0.0000494	0.0002807	0.0035	0.9		2989.59	2989.59		30.05	Si
SLV 12	fin.	-292	709	-0.000149	0.0002807	0.0035	0.9		2995.37	2995.37		10.26	Si
SLV 5	ini.	-115.65	67	-0.0000574	0.0002807	0.0035	0.9		2995.37	2995.37		25.9	Si
SLV 5	fin.	523.3	-1536	-0.0002791	0.0002807	0.0035	0.9		2989.59	2989.59		5.71	Si
SLV 11	ini.	110.36	-270	-0.0000548	0.0002807	0.0035	0.9		2989.59	2989.59		27.09	Si
SLV 11	fin.	-288.33	671	-0.000147	0.0002807	0.0035	0.9		2995.37	2995.37		10.39	Si
SLV 6	ini.	-126.54	121	-0.0000629	0.0002807	0.0035	0.9		2995.37	2995.37		23.67	Si
SLV 6	fin.	519.63	-1498	-0.0002769	0.0002807	0.0035	0.9		2989.59	2989.59		5.75	Si
SLV 2	ini.	106.15	-529	-0.0000527	0.0002807	0.0035	0.9		2989.59	2989.59		28.16	Si
SLV 2	fin.	336	-1101	-0.0001731	0.0002807	0.0035	0.9		2989.59	2989.59		8.9	Si
SLD 6	ini.	-61.1	14	-0.0000301	0.0002807	0.0035	0.9		2995.37	2995.37		49.03	Si
SLD 6	fin.	293.73	-891	-0.0001502	0.0002807	0.0035	0.9		2989.59	2989.59		10.18	Si
SLV 10	ini.	-229.8	481	-0.0001161	0.0002807	0.0035	0.9		2995.37	2995.37		13.03	Si
SLV 10	fin.	452.74	-1244	-0.0002382	0.0002807	0.0035	0.9		2989.59	2989.59		6.6	Si
SLD 5	ini.	-56.34	-10	-0.0000277	0.0002807	0.0035	0.9		2995.37	2995.37		53.16	Si
SLD 5	fin.	295.34	-908	-0.0001511	0.0002807	0.0035	0.9		2989.59	2989.59		10.12	Si
SLV 1	ini.	123.1	-612	-0.0000613	0.0002807	0.0035	0.9		2989.59	2989.59		24.29	Si
SLV 1	fin.	341.71	-1159	-0.0001762	0.0002807	0.0035	0.9		2989.59	2989.59		8.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	-126.54	251	0.9	0	548	7137	5660	2295	7684		30.62	Si
SLV 6	fin.	519.63	2403	0.9	0	548	7137	5660	2295	7684		3.2	Si
SLV 2	ini.	106.15	-684	0.9	0	548	7137	5660	2295	7684		11.24	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	fin.	336	1386	0.9	0	548	7137	5660	2295	7684		5.55	Si
SLV 12	ini.	99.47	-303	0.9	0	548	7137	5660	2295	7684		25.39	Si
SLV 12	fin.	-292	-1497	0.9	0	548	7137	5660	2295	7684		5.13	Si
SLV 9	ini.	-218.91	693	0.9	0	548	7137	5660	2295	7684		11.09	Si
SLV 9	fin.	456.41	2197	0.9	0	548	7137	5660	2295	7684		3.5	Si
SLV 10	ini.	-229.8	750	0.9	0	548	7137	5660	2295	7684		10.25	Si
SLV 10	fin.	452.74	2167	0.9	0	548	7137	5660	2295	7684		3.55	Si
SLV 11	ini.	110.36	-359	0.9	0	548	7137	5660	2295	7684		21.39	Si
SLV 11	fin.	-288.33	-1467	0.9	0	548	7137	5660	2295	7684		5.24	Si
SLD 5	ini.	-56.34	59	0.9	0	548	7137	5660	2295	7684		130.89	Si
SLD 5	fin.	295.34	1335	0.9	0	548	7137	5660	2295	7684		5.76	Si
SLD 6	ini.	-61.1	83	0.9	0	548	7137	5660	2295	7684		92.1	Si
SLD 6	fin.	293.73	1321	0.9	0	548	7137	5660	2295	7684		5.82	Si
SLV 5	ini.	-115.65	194	0.9	0	548	7137	5660	2295	7684		39.55	Si
SLV 5	fin.	523.3	2433	0.9	0	548	7137	5660	2295	7684		3.16	Si
SLV 1	ini.	123.1	-772	0.9	0	548	7137	5660	2295	7684		9.96	Si
SLV 1	fin.	341.71	1432	0.9	0	548	7137	5660	2295	7684		5.36	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.713	SLV 5	Si
V_SLV	3.159	SLV 5	Si
PF_SLU	15.769	SLU 43	Si
V_SLU	7.464	SLU 43	Si

Trave di accoppiamento 140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	14.56	15.02	0.46	-22.713	5.826	14.56	15.02	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	-136.83	-50	-0.0002891	0.0001872	0.0035	0.46		780.23	780.23	No	5.7	Si
SLU 48	fin.	-30.88	163	-0.0000589	0.0001872	0.0035	0.46		780.23	780.23	No	25.27	Si
SLU 71	ini.	-122.72	-19	-0.0002552	0.0001872	0.0035	0.46		780.23	780.23	No	6.36	Si
SLU 71	fin.	-57.73	114	-0.0001125	0.0001872	0.0035	0.46		780.23	780.23	No	13.52	Si
SLU 50	ini.	-136.46	-51	-0.0002882	0.0001872	0.0035	0.46		780.23	780.23	No	5.72	Si
SLU 50	fin.	-27.57	168	-0.0000524	0.0001872	0.0035	0.46		780.23	780.23	No	28.3	Si
SLU 49	ini.	-133.95	-49	-0.0002821	0.0001872	0.0035	0.46		780.23	780.23	No	5.82	Si
SLU 49	fin.	-33.26	153	-0.0000635	0.0001872	0.0035	0.46		780.23	780.23	No	23.46	Si
SLU 43	ini.	-122.54	-99	-0.0002548	0.0001872	0.0035	0.46		780.23	780.23	No	6.37	Si
SLU 43	fin.	16.06	175	-0.0000304	0.0001872	0.0035	0.46		777.36	777.36	No	48.39	Si
SLU 46	ini.	-126.99	-73	-0.0002654	0.0001872	0.0035	0.46		780.23	780.23	No	6.14	Si
SLU 46	fin.	-11.44	156	-0.0000215	0.0001872	0.0035	0.46		780.23	780.23	No	68.2	Si
SLU 45	ini.	-129.88	-74	-0.0002723	0.0001872	0.0035	0.46		780.23	780.23	No	6.01	Si
SLU 45	fin.	-9.06	166	-0.000017	0.0001872	0.0035	0.46		780.23	780.23	No	86.09	Si
SLU 47	ini.	-124.7	-74	-0.0002599	0.0001872	0.0035	0.46		780.23	780.23	No	6.26	Si
SLU 47	fin.	-9.72	155	-0.0000182	0.0001872	0.0035	0.46		780.23	780.23	No	80.31	Si
SLU 51	ini.	-133.57	-50	-0.0002812	0.0001872	0.0035	0.46		780.23	780.23	No	5.84	Si
SLU 51	fin.	-29.95	158	-0.000057	0.0001872	0.0035	0.46		780.23	780.23	No	26.05	Si
SLU 69	ini.	-123.09	-18	-0.0002561	0.0001872	0.0035	0.46		780.23	780.23	No	6.34	Si
SLU 69	fin.	-61.04	109	-0.0001193	0.0001872	0.0035	0.46		780.23	780.23	No	12.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 28	ini.	-88.31	472	0.46	0	124	3648	1928	1173	3101	No	6.56	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 28	fin.	-75.07	-656	0.46	0	124	3648	1928	1173	3101	No	4.72	Si
SLU 78	ini.	-101.14	540	0.46	0	124	3648	1928	1173	3101	No	5.74	Si
SLU 78	fin.	-78.84	-710	0.46	0	124	3648	1928	1173	3101	No	4.37	Si
SLU 38	ini.	-68.86	408	0.46	0	124	3648	1928	1173	3101	No	7.6	Si
SLU 38	fin.	-87.2	-681	0.46	0	124	3648	1928	1173	3101	No	4.55	Si
SLU 77	ini.	-104.03	550	0.46	0	124	3648	1928	1173	3101	No	5.64	Si
SLU 77	fin.	-76.47	-704	0.46	0	124	3648	1928	1173	3101	No	4.41	Si
SLU 80	ini.	-100.77	534	0.46	0	124	3648	1928	1173	3101	No	5.81	Si
SLU 80	fin.	-75.54	-687	0.46	0	124	3648	1928	1173	3101	No	4.51	Si
SLU 35	ini.	-72.12	424	0.46	0	124	3648	1928	1173	3101	No	7.32	Si
SLU 35	fin.	-88.13	-698	0.46	0	124	3648	1928	1173	3101	No	4.44	Si
SLU 79	ini.	-103.65	544	0.46	0	124	3648	1928	1173	3101	No	5.7	Si
SLU 79	fin.	-73.16	-681	0.46	0	124	3648	1928	1173	3101	No	4.55	Si
SLU 36	ini.	-69.24	414	0.46	0	124	3648	1928	1173	3101	No	7.49	Si
SLU 36	fin.	-90.51	-704	0.46	0	124	3648	1928	1173	3101	No	4.41	Si
SLU 37	ini.	-71.75	418	0.46	0	124	3648	1928	1173	3101	No	7.43	Si
SLU 37	fin.	-84.82	-675	0.46	0	124	3648	1928	1173	3101	No	4.59	Si
SLU 70	ini.	-120.21	599	0.46	0	124	3648	1928	1173	3101	No	5.18	Si
SLU 70	fin.	-63.41	-662	0.46	0	124	3648	1928	1173	3101	No	4.68	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-207.89	-225	-0.000448	0.0002807	0.0035	0.46		788.4	788.4		3.79	Si
SLV 10	fin.	97.57	384	-0.0001933	0.0002807	0.0035	0.46		785.44	785.44		8.05	Si
SLV 5	ini.	-323.71	-383	-0.0007706	0.0002807	0.0035	0.46		788.4	788.4		2.44	Si
SLV 5	fin.	190.44	597	-0.0004059	0.0002807	0.0035	0.46		785.44	785.44		4.12	Si
SLV 3	ini.	-215.63	-233	-0.0004678	0.0002807	0.0035	0.46		788.4	788.4		3.66	Si
SLV 3	fin.	98.41	326	-0.0001951	0.0002807	0.0035	0.46		785.44	785.44		7.98	Si
SLV 2	ini.	-320.56	-364	-0.000761	0.0002807	0.0035	0.46		788.4	788.4		2.46	Si
SLV 2	fin.	186.56	566	-0.0003962	0.0002807	0.0035	0.46		785.44	785.44		4.21	Si
SLV 12	ini.	161.18	275	-0.000335	0.0002807	0.0035	0.46		785.44	785.44		4.87	Si
SLV 12	fin.	-207.68	-416	-0.0004474	0.0002807	0.0035	0.46		788.4	788.4		3.8	Si
SLV 16	ini.	163.82	275	-0.0003412	0.0002807	0.0035	0.46		785.44	785.44		4.79	Si
SLV 16	fin.	-207.23	-384	-0.0004463	0.0002807	0.0035	0.46		788.4	788.4		3.8	Si
SLV 1	ini.	-326.35	-383	-0.0007786	0.0002807	0.0035	0.46		788.4	788.4		2.42	Si
SLV 1	fin.	189.99	566	-0.0004047	0.0002807	0.0035	0.46		785.44	785.44		4.13	Si
SLV 4	ini.	-209.84	-214	-0.0004529	0.0002807	0.0035	0.46		788.4	788.4		3.76	Si
SLV 4	fin.	94.98	326	-0.0001878	0.0002807	0.0035	0.46		785.44	785.44		8.27	Si
SLV 6	ini.	-319.99	-372	-0.0007593	0.0002807	0.0035	0.46		788.4	788.4		2.46	Si
SLV 6	fin.	188.23	597	-0.0004004	0.0002807	0.0035	0.46		785.44	785.44		4.17	Si
SLV 9	ini.	-211.62	-237	-0.0004575	0.0002807	0.0035	0.46		788.4	788.4		3.73	Si
SLV 9	fin.	99.78	384	-0.0001979	0.0002807	0.0035	0.46		785.44	785.44		7.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-323.71	1088	0.46	0	187	3648	2893	1173	3834		3.52	Si
SLV 5	fin.	190.44	458	0.46	0	187	3648	2893	1173	3834		8.37	Si
SLV 1	ini.	-326.35	1148	0.46	0	187	3648	2893	1173	3834		3.34	Si
SLV 1	fin.	189.99	461	0.46	0	187	3648	2893	1173	3834		8.31	Si
SLV 11	ini.	157.45	-333	0.46	0	187	3648	2893	1173	3834		11.53	Si
SLV 11	fin.	-205.48	-938	0.46	0	187	3648	2893	1173	3834		4.09	Si
SLV 15	ini.	158.02	-388	0.46	0	187	3648	2893	1173	3834		9.89	Si
SLV 15	fin.	-203.8	-935	0.46	0	187	3648	2893	1173	3834		4.1	Si
SLV 6	ini.	-319.99	1080	0.46	0	187	3648	2893	1173	3834		3.55	Si
SLV 6	fin.	188.23	448	0.46	0	187	3648	2893	1173	3834		8.56	Si
SLV 12	ini.	161.18	-341	0.46	0	187	3648	2893	1173	3834		11.23	Si
SLV 12	fin.	-207.68	-948	0.46	0	187	3648	2893	1173	3834		4.04	Si
SLV 3	ini.	-215.63	832	0.46	0	187	3648	2893	1173	3834		4.61	Si
SLV 3	fin.	98.41	139	0.46	0	187	3648	2893	1173	3834		27.51	Si
SLV 2	ini.	-320.56	1135	0.46	0	187	3648	2893	1173	3834		3.38	Si
SLV 2	fin.	186.56	445	0.46	0	187	3648	2893	1173	3834		8.61	Si
SLV 4	ini.	-209.84	818	0.46	0	187	3648	2893	1173	3834		4.69	Si
SLV 4	fin.	94.98	123	0.46	0	187	3648	2893	1173	3834		31.09	Si
SLV 16	ini.	163.82	-401	0.46	0	187	3648	2893	1173	3834		9.55	Si
SLV 16	fin.	-207.23	-952	0.46	0	187	3648	2893	1173	3834		4.03	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.416	SLV 1	Si
V_SLV	3.339	SLV 1	Si
PF_SLU	5.702	SLU 48	Si
V_SLU	4.368	SLU 78	Si

Trave di accoppiamento 141

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	11.86	12.76	0.9	-22.493	-3.314	11.86	12.76	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	168.24	-812	-0.0000851	0.0001872	0.0035	0.9		2959	2959	No	17.59	Si
SLU 69	fin.	-10.2	-382	-0.000005	0.0001872	0.0035	0.9		2964.67	2964.67	No	290.63	Si
SLU 79	ini.	172.23	-806	-0.0000872	0.0001872	0.0035	0.9		2959	2959	No	17.18	Si
SLU 79	fin.	-25.32	-350	-0.0000124	0.0001872	0.0035	0.9		2964.67	2964.67	No	117.08	Si
SLU 57	ini.	165.9	-787	-0.0000839	0.0001872	0.0035	0.9		2959	2959	No	17.84	Si
SLU 57	fin.	-14.93	-362	-0.0000073	0.0001872	0.0035	0.9		2964.67	2964.67	No	198.54	Si
SLU 58	ini.	163.57	-767	-0.0000827	0.0001872	0.0035	0.9		2959	2959	No	18.09	Si
SLU 58	fin.	-21.26	-337	-0.0000104	0.0001872	0.0035	0.9		2964.67	2964.67	No	139.43	Si
SLU 77	ini.	178.17	-834	-0.0000903	0.0001872	0.0035	0.9		2959	2959	No	16.61	Si
SLU 77	fin.	-25.2	-362	-0.0000124	0.0001872	0.0035	0.9		2964.67	2964.67	No	117.66	Si
SLU 71	ini.	162.3	-784	-0.000082	0.0001872	0.0035	0.9		2959	2959	No	18.23	Si
SLU 71	fin.	-10.33	-370	-0.0000051	0.0001872	0.0035	0.9		2964.67	2964.67	No	287.12	Si
SLU 80	ini.	168.63	-798	-0.0000853	0.0001872	0.0035	0.9		2959	2959	No	17.55	Si
SLU 80	fin.	-19.12	-363	-0.0000094	0.0001872	0.0035	0.9		2964.67	2964.67	No	155.09	Si
SLU 70	ini.	164.64	-804	-0.0000832	0.0001872	0.0035	0.9		2959	2959	No	17.97	Si
SLU 70	fin.	-3.99	-395	-0.000002	0.0001872	0.0035	0.9		2964.67	2964.67	No	742.21	Si
SLU 78	ini.	174.56	-826	-0.0000884	0.0001872	0.0035	0.9		2959	2959	No	16.95	Si
SLU 78	fin.	-18.99	-376	-0.0000093	0.0001872	0.0035	0.9		2964.67	2964.67	No	156.11	Si
SLU 56	ini.	169.5	-795	-0.0000858	0.0001872	0.0035	0.9		2959	2959	No	17.46	Si
SLU 56	fin.	-21.14	-349	-0.0000104	0.0001872	0.0035	0.9		2964.67	2964.67	No	140.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	172.23	-1046	0.9	0	365	7137	3773	2295	6068	No	5.8	Si
SLU 79	fin.	-25.32	-151	0.9	0	365	7137	3773	2295	6068	No	40.28	Si
SLU 78	ini.	174.56	-1075	0.9	0	365	7137	3773	2295	6068	No	5.65	Si
SLU 78	fin.	-18.99	-117	0.9	0	365	7137	3773	2295	6068	No	52.05	Si
SLU 77	ini.	178.17	-1092	0.9	0	365	7137	3773	2295	6068	No	5.56	Si
SLU 77	fin.	-25.2	-142	0.9	0	365	7137	3773	2295	6068	No	42.73	Si
SLU 48	ini.	159.58	-1057	0.9	0	365	7137	3773	2295	6068	No	5.74	Si
SLU 48	fin.	-6.14	-31	0.9	0	365	7137	3773	2295	6068	No	195.04	Si
SLU 57	ini.	165.9	-1037	0.9	0	365	7137	3773	2295	6068	No	5.85	Si
SLU 57	fin.	-14.93	-95	0.9	0	365	7137	3773	2295	6068	No	64.05	Si
SLU 69	ini.	168.24	-1095	0.9	0	365	7137	3773	2295	6068	No	5.54	Si
SLU 69	fin.	-10.2	-53	0.9	0	365	7137	3773	2295	6068	No	114.6	Si
SLU 56	ini.	169.5	-1054	0.9	0	365	7137	3773	2295	6068	No	5.76	Si
SLU 56	fin.	-21.14	-120	0.9	0	365	7137	3773	2295	6068	No	50.5	Si
SLU 70	ini.	164.64	-1077	0.9	0	365	7137	3773	2295	6068	No	5.63	Si
SLU 70	fin.	-3.99	-28	0.9	0	365	7137	3773	2295	6068	No	220.4	Si
SLU 49	ini.	155.97	-1040	0.9	0	365	7137	3773	2295	6068	No	5.84	Si
SLU 49	fin.	0.06	-6	0.9	0	365	7137	3773	2295	6068	No	1065.79	Si
SLU 71	ini.	162.3	-1049	0.9	0	365	7137	3773	2295	6068	No	5.79	Si
SLU 71	fin.	-10.33	-62	0.9	0	365	7137	3773	2295	6068	No	98.53	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-266.61	439	-0.0001355	0.0002807	0.0035	0.9		2995.37	2995.37		11.24	Si
SLV 15	fin.	588.78	-1401	-0.0003183	0.0002807	0.0035	0.9		2989.59	2989.59		5.08	Si
SLV 16	ini.	-255.22	389	-0.0001294	0.0002807	0.0035	0.9		2995.37	2995.37		11.74	Si
SLV 16	fin.	587.8	-1426	-0.0003177	0.0002807	0.0035	0.9		2989.59	2989.59		5.09	Si
SLV 5	ini.	603.29	-1682	-0.0003272	0.0002807	0.0035	0.9		2989.59	2989.59		4.96	Si
SLV 5	fin.	-819.11	1368	-0.0004655	0.0002807	0.0035	0.9		2995.37	2995.37		3.66	Si
SLV 8	ini.	-270.78	300	-0.0001377	0.0002807	0.0035	0.9		2995.37	2995.37		11.06	Si
SLV 8	fin.	651.46	-1622	-0.0003571	0.0002807	0.0035	0.9		2989.59	2989.59		4.59	Si
SLV 12	ini.	-406.91	671	-0.0002118	0.0002807	0.0035	0.9		2995.37	2995.37		7.36	Si
SLV 12	fin.	859.81	-2010	-0.0004943	0.0002807	0.0035	0.9		2989.59	2989.59		3.48	Si
SLV 7	ini.	-278.1	332	-0.0001416	0.0002807	0.0035	0.9		2995.37	2995.37		10.77	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	fin.	652.09	-1605	-0.0003575	0.0002807	0.0035	0.9		2989.59	2989.59		4.58	Si
SLV 6	ini.	610.61	-1714	-0.0003317	0.0002807	0.0035	0.9		2989.59	2989.59		4.9	Si
SLV 6	fin.	-819.74	1352	-0.0004659	0.0002807	0.0035	0.9		2995.37	2995.37		3.65	Si
SLV 10	ini.	474.47	-1344	-0.0002506	0.0002807	0.0035	0.9		2989.59	2989.59		6.3	Si
SLV 10	fin.	-611.38	964	-0.0003315	0.0002807	0.0035	0.9		2995.37	2995.37		4.9	Si
SLV 9	ini.	467.16	-1312	-0.0002464	0.0002807	0.0035	0.9		2989.59	2989.59		6.4	Si
SLV 9	fin.	-610.75	980	-0.0003311	0.0002807	0.0035	0.9		2995.37	2995.37		4.9	Si
SLV 11	ini.	-414.23	703	-0.0002159	0.0002807	0.0035	0.9		2995.37	2995.37		7.23	Si
SLV 11	fin.	860.44	-1993	-0.0004947	0.0002807	0.0035	0.9		2989.59	2989.59		3.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	474.47	-2209	0.9	0	548	7137	5660	2295	7684		3.48	Si
SLV 10	fin.	-611.38	-2524	0.9	0	548	7137	5660	2295	7684		3.04	Si
SLV 11	ini.	-414.23	1843	0.9	0	548	7137	5660	2295	7684		4.17	Si
SLV 11	fin.	860.44	3375	0.9	0	548	7137	5660	2295	7684		2.28	Si
SLV 9	ini.	467.16	-2170	0.9	0	548	7137	5660	2295	7684		3.54	Si
SLV 9	fin.	-610.75	-2533	0.9	0	548	7137	5660	2295	7684		3.03	Si
SLV 5	ini.	603.29	-2947	0.9	0	548	7137	5660	2295	7684		2.61	Si
SLV 5	fin.	-819.11	-3378	0.9	0	548	7137	5660	2295	7684		2.27	Si
SLV 1	ini.	451.6	-2437	0.9	0	548	7137	5660	2295	7684		3.15	Si
SLV 1	fin.	-547.1	-2298	0.9	0	548	7137	5660	2295	7684		3.34	Si
SLV 8	ini.	-270.78	1029	0.9	0	548	7137	5660	2295	7684		7.47	Si
SLV 8	fin.	651.46	2540	0.9	0	548	7137	5660	2295	7684		3.03	Si
SLV 12	ini.	-406.91	1805	0.9	0	548	7137	5660	2295	7684		4.26	Si
SLV 12	fin.	859.81	3384	0.9	0	548	7137	5660	2295	7684		2.27	Si
SLV 7	ini.	-278.1	1067	0.9	0	548	7137	5660	2295	7684		7.2	Si
SLV 7	fin.	652.09	2531	0.9	0	548	7137	5660	2295	7684		3.04	Si
SLV 6	ini.	610.61	-2985	0.9	0	548	7137	5660	2295	7684		2.57	Si
SLV 6	fin.	-819.74	-3369	0.9	0	548	7137	5660	2295	7684		2.28	Si
SLV 2	ini.	462.98	-2497	0.9	0	548	7137	5660	2295	7684		3.08	Si
SLV 2	fin.	-548.08	-2284	0.9	0	548	7137	5660	2295	7684		3.37	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.474	SLV 11	Si
V_SLV	2.271	SLV 12	Si
PF_SLU	16.608	SLU 77	Si
V_SLU	5.544	SLU 69	Si

Trave di accoppiamento 142

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	14.56	15.02	0.46	-22.493	-3.314	14.56	15.02	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	ini.	-79.76	-99	-0.0001585	0.0001872	0.0035	0.46		780.23	780.23	No	9.78	Si
SLU 66	fin.	-63.76	-367	-0.0001249	0.0001872	0.0035	0.46		780.23	780.23	No	12.24	Si
SLU 70	ini.	-88.01	-97	-0.0001763	0.0001872	0.0035	0.46		780.23	780.23	No	8.87	Si
SLU 70	fin.	-71.54	-414	-0.0001411	0.0001872	0.0035	0.46		780.23	780.23	No	10.91	Si
SLU 69	ini.	-85.11	-88	-0.0001701	0.0001872	0.0035	0.46		780.23	780.23	No	9.17	Si
SLU 69	fin.	-73.42	-429	-0.0001451	0.0001872	0.0035	0.46		780.23	780.23	No	10.63	Si
SLU 72	ini.	-84.17	-89	-0.000168	0.0001872	0.0035	0.46		780.23	780.23	No	9.27	Si
SLU 72	fin.	-67.59	-394	-0.0001328	0.0001872	0.0035	0.46		780.23	780.23	No	11.54	Si
SLU 68	ini.	-80.74	-106	-0.0001606	0.0001872	0.0035	0.46		780.23	780.23	No	9.66	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 68	fin.	-56.67	-322	-0.0001103	0.0001872	0.0035	0.46		780.23	780.23	No	13.77	Si
SLU 78	ini.	-77.6	-68	-0.0001539	0.0001872	0.0035	0.46		780.23	780.23	No	10.05	Si
SLU 78	fin.	-78.17	-468	-0.0001551	0.0001872	0.0035	0.46		780.23	780.23	No	9.98	Si
SLU 49	ini.	-80.28	-90	-0.0001597	0.0001872	0.0035	0.46		780.23	780.23	No	9.72	Si
SLU 49	fin.	-65.16	-374	-0.0001278	0.0001872	0.0035	0.46		780.23	780.23	No	11.97	Si
SLU 71	ini.	-81.27	-79	-0.0001618	0.0001872	0.0035	0.46		780.23	780.23	No	9.6	Si
SLU 71	fin.	-69.47	-410	-0.0001368	0.0001872	0.0035	0.46		780.23	780.23	No	11.23	Si
SLU 67	ini.	-82.65	-109	-0.0001647	0.0001872	0.0035	0.46		780.23	780.23	No	9.44	Si
SLU 67	fin.	-61.88	-352	-0.000121	0.0001872	0.0035	0.46		780.23	780.23	No	12.61	Si
SLU 77	ini.	-74.7	-59	-0.0001478	0.0001872	0.0035	0.46		780.23	780.23	No	10.44	Si
SLU 77	fin.	-80.05	-483	-0.0001592	0.0001872	0.0035	0.46		780.23	780.23	No	9.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 35	ini.	-62.24	534	0.46	0	124	3648	1928	1173	3101	No	5.8	Si
SLU 35	fin.	-71.64	-1381	0.46	0	124	3648	1928	1173	3101	No	2.25	Si
SLU 77	ini.	-74.7	629	0.46	0	124	3648	1928	1173	3101	No	4.93	Si
SLU 77	fin.	-80.05	-1534	0.46	0	124	3648	1928	1173	3101	No	2.02	Si
SLU 79	ini.	-70.86	604	0.46	0	124	3648	1928	1173	3101	No	5.13	Si
SLU 79	fin.	-76.09	-1488	0.46	0	124	3648	1928	1173	3101	No	2.08	Si
SLU 72	ini.	-84.17	655	0.46	0	124	3648	1928	1173	3101	No	4.74	Si
SLU 72	fin.	-67.59	-1424	0.46	0	124	3648	1928	1173	3101	No	2.18	Si
SLU 80	ini.	-73.76	615	0.46	0	124	3648	1928	1173	3101	No	5.04	Si
SLU 80	fin.	-74.21	-1471	0.46	0	124	3648	1928	1173	3101	No	2.11	Si
SLU 70	ini.	-88.01	679	0.46	0	124	3648	1928	1173	3101	No	4.57	Si
SLU 70	fin.	-71.54	-1470	0.46	0	124	3648	1928	1173	3101	No	2.11	Si
SLU 69	ini.	-85.11	669	0.46	0	124	3648	1928	1173	3101	No	4.64	Si
SLU 69	fin.	-73.42	-1487	0.46	0	124	3648	1928	1173	3101	No	2.09	Si
SLU 56	ini.	-66.98	573	0.46	0	124	3648	1928	1173	3101	No	5.41	Si
SLU 56	fin.	-73.66	-1383	0.46	0	124	3648	1928	1173	3101	No	2.24	Si
SLU 78	ini.	-77.6	640	0.46	0	124	3648	1928	1173	3101	No	4.85	Si
SLU 78	fin.	-78.17	-1517	0.46	0	124	3648	1928	1173	3101	No	2.04	Si
SLU 71	ini.	-81.27	644	0.46	0	124	3648	1928	1173	3101	No	4.82	Si
SLU 71	fin.	-69.47	-1441	0.46	0	124	3648	1928	1173	3101	No	2.15	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	344.91	1116	-0.0008396	0.0002807	0.0035	0.46		785.44	785.44		2.28	Si
SLV 6	fin.	-272.92	-2049	-0.0006223	0.0002807	0.0035	0.46		788.4	788.4		2.89	Si
SLV 7	ini.	-354.3	-1015	-0.0008653	0.0002807	0.0035	0.46		788.4	788.4		2.23	Si
SLV 7	fin.	144.36	1236	-0.0002959	0.0002807	0.0035	0.46		785.44	785.44		5.44	Si
SLV 5	ini.	345.8	1120	-0.0008424	0.0002807	0.0035	0.46		785.44	785.44		2.27	Si
SLV 5	fin.	-272.77	-2053	-0.0006219	0.0002807	0.0035	0.46		788.4	788.4		2.89	Si
SLV 12	ini.	-445	-1257	-0.0011738	0.0002807	0.0035	0.46		788.4	788.4		1.77	Si
SLV 12	fin.	194.65	1602	-0.0004164	0.0002807	0.0035	0.46		785.44	785.44		4.04	Si
SLV 15	ini.	-303.61	-780	-0.0007106	0.0002807	0.0035	0.46		788.4	788.4		2.6	Si
SLV 15	fin.	107.72	868	-0.0002149	0.0002807	0.0035	0.46		785.44	785.44		7.29	Si
SLV 16	ini.	-304.99	-787	-0.0007146	0.0002807	0.0035	0.46		788.4	788.4		2.58	Si
SLV 16	fin.	107.48	874	-0.0002144	0.0002807	0.0035	0.46		785.44	785.44		7.31	Si
SLV 8	ini.	-355.19	-1020	-0.0008681	0.0002807	0.0035	0.46		788.4	788.4		2.22	Si
SLV 8	fin.	144.2	1240	-0.0002956	0.0002807	0.0035	0.46		785.44	785.44		5.45	Si
SLV 9	ini.	255.99	884	-0.0005777	0.0002807	0.0035	0.46		785.44	785.44		3.07	Si
SLV 9	fin.	-222.32	-1691	-0.0004851	0.0002807	0.0035	0.46		788.4	788.4		3.55	Si
SLV 11	ini.	-444.11	-1252	-0.0011706	0.0002807	0.0035	0.46		788.4	788.4		1.78	Si
SLV 11	fin.	194.81	1598	-0.0004168	0.0002807	0.0035	0.46		785.44	785.44		4.03	Si
SLV 10	ini.	255.1	879	-0.0005753	0.0002807	0.0035	0.46		785.44	785.44		3.08	Si
SLV 10	fin.	-222.47	-1687	-0.0004856	0.0002807	0.0035	0.46		788.4	788.4		3.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-445	1896	0.46	0	187	3648	2893	1173	3834		2.02	Si
SLV 12	fin.	194.65	867	0.46	0	187	3648	2893	1173	3834		4.42	Si
SLV 1	ini.	205.79	-625	0.46	0	187	3648	2893	1173	3834		6.13	Si
SLV 1	fin.	-185.59	-1513	0.46	0	187	3648	2893	1173	3834		2.53	Si
SLV 7	ini.	-354.3	1528	0.46	0	187	3648	2893	1173	3834		2.51	Si
SLV 7	fin.	144.36	673	0.46	0	187	3648	2893	1173	3834		5.7	Si
SLV 2	ini.	204.4	-621	0.46	0	187	3648	2893	1173	3834		6.17	Si
SLV 2	fin.	-185.83	-1508	0.46	0	187	3648	2893	1173	3834		2.54	Si
SLV 11	ini.	-444.11	1893	0.46	0	187	3648	2893	1173	3834		2.03	Si
SLV 11	fin.	194.81	864	0.46	0	187	3648	2893	1173	3834		4.44	Si
SLV 10	ini.	255.1	-761	0.46	0	187	3648	2893	1173	3834		5.04	Si
SLV 10	fin.	-222.47	-2152	0.46	0	187	3648	2893	1173	3834		1.78	Si
SLV 8	ini.	-355.19	1531	0.46	0	187	3648	2893	1173	3834		2.5	Si
SLV 8	fin.	144.2	676	0.46	0	187	3648	2893	1173	3834		5.67	Si
SLV 9	ini.	255.99	-763	0.46	0	187	3648	2893	1173	3834		5.02	Si
SLV 9	fin.	-222.32	-2156	0.46	0	187	3648	2893	1173	3834		1.78	Si
SLV 6	ini.	344.91	-1126	0.46	0	187	3648	2893	1173	3834		3.41	Si
SLV 6	fin.	-272.92	-2343	0.46	0	187	3648	2893	1173	3834		1.64	Si
SLV 5	ini.	345.8	-1128	0.46	0	187	3648	2893	1173	3834		3.4	Si
SLV 5	fin.	-272.77	-2347	0.46	0	187	3648	2893	1173	3834		1.63	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.772	SLV 12	Si
V_SLV	1.634	SLV 5	Si
PF_SLU	8.866	SLU 70	Si
V_SLU	2.021	SLU 77	Si

Trave di accoppiamento 143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	11.86	13.86	2	-19.313	-3.314	11.86	13.86	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	ini.	277.16	-791	-0.0000277	0.0001872	0.0035	2		14344.28	14344.28	No	51.75	Si
SLU 62	fin.	237.6	-1062	-0.0000237	0.0001872	0.0035	2		14344.28	14344.28	No	60.37	Si
SLU 78	ini.	283.52	-1074	-0.0000284	0.0001872	0.0035	2		14344.28	14344.28	No	50.59	Si
SLU 78	fin.	291.9	-1386	-0.0000292	0.0001872	0.0035	2		14344.28	14344.28	No	49.14	Si
SLU 83	ini.	296.41	-807	-0.0000297	0.0001872	0.0035	2		14344.28	14344.28	No	48.39	Si
SLU 83	fin.	282.75	-1117	-0.0000283	0.0001872	0.0035	2		14344.28	14344.28	No	50.73	Si
SLU 82	ini.	286.94	-681	-0.0000287	0.0001872	0.0035	2		14344.28	14344.28	No	49.99	Si
SLU 82	fin.	276.85	-988	-0.0000277	0.0001872	0.0035	2		14344.28	14344.28	No	51.81	Si
SLU 77	ini.	287.79	-1068	-0.0000288	0.0001872	0.0035	2		14344.28	14344.28	No	49.84	Si
SLU 77	fin.	293.34	-1380	-0.0000293	0.0001872	0.0035	2		14344.28	14344.28	No	48.9	Si
SLU 74	ini.	282.6	-935	-0.0000283	0.0001872	0.0035	2		14344.28	14344.28	No	50.76	Si
SLU 74	fin.	288.89	-1245	-0.0000289	0.0001872	0.0035	2		14344.28	14344.28	No	49.65	Si
SLU 79	ini.	267.32	-1029	-0.0000267	0.0001872	0.0035	2		14344.28	14344.28	No	53.66	Si
SLU 79	fin.	273.1	-1328	-0.0000273	0.0001872	0.0035	2		14344.28	14344.28	No	52.52	Si
SLU 84	ini.	292.13	-814	-0.0000292	0.0001872	0.0035	2		14344.28	14344.28	No	49.1	Si
SLU 84	fin.	281.31	-1123	-0.0000281	0.0001872	0.0035	2		14344.28	14344.28	No	50.99	Si
SLU 75	ini.	278.32	-941	-0.0000278	0.0001872	0.0035	2		14344.28	14344.28	No	51.54	Si
SLU 75	fin.	287.44	-1251	-0.0000288	0.0001872	0.0035	2		14344.28	14344.28	No	49.9	Si
SLU 81	ini.	291.21	-674	-0.0000291	0.0001872	0.0035	2		14344.28	14344.28	No	49.26	Si
SLU 81	fin.	278.3	-981	-0.0000278	0.0001872	0.0035	2		14344.28	14344.28	No	51.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	287.79	-270	2	0	812	3965	8384	5100	4776	No	17.66	Si
SLU 77	fin.	293.34	655	2	0	812	3965	8384	5100	4776	No	7.29	Si
SLU 67	ini.	198.33	-175	2	0	812	3965	8384	5100	4776	No	27.27	Si
SLU 67	fin.	254.52	675	2	0	812	3965	8384	5100	4776	No	7.08	Si
SLU 72	ini.	183.05	-233	2	0	812	3965	8384	5100	4776	No	20.47	Si
SLU 72	fin.	238.73	661	2	0	812	3965	8384	5100	4776	No	7.23	Si
SLU 70	ini.	203.53	-240	2	0	812	3965	8384	5100	4776	No	19.93	Si
SLU 70	fin.	258.98	697	2	0	812	3965	8384	5100	4776	No	6.86	Si
SLU 71	ini.	187.33	-233	2	0	812	3965	8384	5100	4776	No	20.5	Si
SLU 71	fin.	240.18	655	2	0	812	3965	8384	5100	4776	No	7.29	Si
SLU 78	ini.	283.52	-271	2	0	812	3965	8384	5100	4776	No	17.64	Si
SLU 78	fin.	291.9	661	2	0	812	3965	8384	5100	4776	No	7.23	Si
SLU 68	ini.	175	-169	2	0	812	3965	8384	5100	4776	No	28.24	Si
SLU 68	fin.	233.32	643	2	0	812	3965	8384	5100	4776	No	7.43	Si
SLU 66	ini.	202.6	-175	2	0	812	3965	8384	5100	4776	No	27.32	Si
SLU 66	fin.	255.96	669	2	0	812	3965	8384	5100	4776	No	7.14	Si
SLU 75	ini.	278.32	-206	2	0	812	3965	8384	5100	4776	No	23.15	Si
SLU 75	fin.	287.44	639	2	0	812	3965	8384	5100	4776	No	7.47	Si
SLU 69	ini.	207.8	-239	2	0	812	3965	8384	5100	4776	No	19.96	Si
SLU 69	fin.	260.42	691	2	0	812	3965	8384	5100	4776	No	6.91	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	1000.55	535	-0.000102	0.0002807	0.0035	2		14202.07	14202.07		14.19	Si
SLV 5	fin.	172.78	423	-0.0000172	0.0002807	0.0035	2		14202.07	14202.07		82.2	Si
SLV 11	ini.	-710.66	-1921	-0.0000717	0.0002807	0.0035	2		14215.41	14215.41		20	Si
SLV 11	fin.	210.22	-2228	-0.0000209	0.0002807	0.0035	2		14202.07	14202.07		67.56	Si
SLV 15	ini.	-1005.14	-2337	-0.0001024	0.0002807	0.0035	2		14215.41	14215.41		14.14	Si
SLV 15	fin.	511.81	-2690	-0.0000514	0.0002807	0.0035	2		14202.07	14202.07		27.75	Si
SLV 4	ini.	976.88	484	-0.0000995	0.0002807	0.0035	2		14202.07	14202.07		14.54	Si
SLV 4	fin.	-206.52	394	-0.0000205	0.0002807	0.0035	2		14215.41	14215.41		68.83	Si
SLV 16	ini.	-974.69	-2307	-0.0000992	0.0002807	0.0035	2		14215.41	14215.41		14.58	Si
SLV 16	fin.	467.87	-2641	-0.0000469	0.0002807	0.0035	2		14202.07	14202.07		30.35	Si
SLV 1	ini.	1284.14	940	-0.0001321	0.0002807	0.0035	2		14202.07	14202.07		11.06	Si
SLV 1	fin.	-113.12	867	-0.0000112	0.0002807	0.0035	2		14215.41	14215.41		125.67	Si
SLV 3	ini.	946.42	455	-0.0000963	0.0002807	0.0035	2		14202.07	14202.07		15.01	Si
SLV 3	fin.	-162.58	345	-0.0000161	0.0002807	0.0035	2		14215.41	14215.41		87.44	Si
SLV 12	ini.	-691.09	-1902	-0.0000697	0.0002807	0.0035	2		14215.41	14215.41		20.57	Si
SLV 12	fin.	181.98	-2197	-0.0000181	0.0002807	0.0035	2		14202.07	14202.07		78.04	Si
SLV 6	ini.	1020.12	554	-0.000104	0.0002807	0.0035	2		14202.07	14202.07		13.92	Si
SLV 6	fin.	144.54	454	-0.0000144	0.0002807	0.0035	2		14202.07	14202.07		98.26	Si
SLV 2	ini.	1314.6	969	-0.0001353	0.0002807	0.0035	2		14202.07	14202.07		10.8	Si
SLV 2	fin.	-157.06	916	-0.0000156	0.0002807	0.0035	2		14215.41	14215.41		90.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-710.66	1312	2	0	1217	3965	12577	5100	5182		3.95	Si
SLV 11	fin.	210.22	2394	2	0	1217	3965	12577	5100	5182		2.16	Si
SLV 13	ini.	-667.42	3639	2	0	1217	3965	12577	5100	5182		1.42	Si
SLV 13	fin.	561.27	3338	2	0	1217	3965	12577	5100	5182		1.55	Si
SLV 3	ini.	946.42	-3595	2	0	1217	3965	12577	5100	5182		1.44	Si
SLV 3	fin.	-162.58	-2308	2	0	1217	3965	12577	5100	5182		2.25	Si
SLV 4	ini.	976.88	-3852	2	0	1217	3965	12577	5100	5182		1.35	Si
SLV 4	fin.	-206.52	-2479	2	0	1217	3965	12577	5100	5182		2.09	Si
SLV 1	ini.	1284.14	-3733	2	0	1217	3965	12577	5100	5182		1.39	Si
SLV 1	fin.	-113.12	-2893	2	0	1217	3965	12577	5100	5182		1.79	Si
SLV 16	ini.	-974.69	3520	2	0	1217	3965	12577	5100	5182		1.47	Si
SLV 16	fin.	467.87	3751	2	0	1217	3965	12577	5100	5182		1.38	Si
SLV 14	ini.	-636.96	3381	2	0	1217	3965	12577	5100	5182		1.53	Si
SLV 14	fin.	517.34	3166	2	0	1217	3965	12577	5100	5182		1.64	Si
SLV 15	ini.	-1005.14	3777	2	0	1217	3965	12577	5100	5182		1.37	Si
SLV 15	fin.	511.81	3923	2	0	1217	3965	12577	5100	5182		1.32	Si
SLV 2	ini.	1314.6	-3991	2	0	1217	3965	12577	5100	5182		1.3	Si
SLV 2	fin.	-157.06	-3064	2	0	1217	3965	12577	5100	5182		1.69	Si
SLV 12	ini.	-691.09	1147	2	0	1217	3965	12577	5100	5182		4.52	Si
SLV 12	fin.	181.98	2284	2	0	1217	3965	12577	5100	5182		2.27	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.803	SLV 2	Si
V_SLV	1.299	SLV 2	Si
PF_SLU	48.394	SLU 83	Si
V_SLU	6.857	SLU 70	Si

Trave di accoppiamento 144

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	14.66	15.02	0.36	-19.313	-3.314	14.66	15.02	0.36	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-75.25	-586	-0.0002546	0.0001872	0.0035	0.36		482.14	482.14	No	6.41	Si
SLU 69	fin.	-17.92	-373	-0.0000555	0.0001872	0.0035	0.36		482.14	482.14	No	26.91	Si
SLU 75	ini.	-77.27	-625	-0.0002624	0.0001872	0.0035	0.36		482.14	482.14	No	6.24	Si
SLU 75	fin.	-13.95	-391	-0.000043	0.0001872	0.0035	0.36		482.14	482.14	No	34.57	Si
SLU 70	ini.	-75	-583	-0.0002537	0.0001872	0.0035	0.36		482.14	482.14	No	6.43	Si
SLU 70	fin.	-17.85	-370	-0.0000553	0.0001872	0.0035	0.36		482.14	482.14	No	27.01	Si
SLU 78	ini.	-81.61	-658	-0.0002794	0.0001872	0.0035	0.36		482.14	482.14	No	5.91	Si
SLU 78	fin.	-17.87	-423	-0.0000553	0.0001872	0.0035	0.36		482.14	482.14	No	26.98	Si
SLU 80	ini.	-77.41	-623	-0.000263	0.0001872	0.0035	0.36		482.14	482.14	No	6.23	Si
SLU 80	fin.	-16.64	-399	-0.0000515	0.0001872	0.0035	0.36		482.14	482.14	No	28.98	Si
SLU 83	ini.	-76.16	-626	-0.0002581	0.0001872	0.0035	0.36		482.14	482.14	No	6.33	Si
SLU 83	fin.	-12.79	-393	-0.0000394	0.0001872	0.0035	0.36		482.14	482.14	No	37.7	Si
SLU 79	ini.	-77.66	-627	-0.000264	0.0001872	0.0035	0.36		482.14	482.14	No	6.21	Si
SLU 79	fin.	-16.7	-402	-0.0000517	0.0001872	0.0035	0.36		482.14	482.14	No	28.87	Si
SLU 77	ini.	-81.86	-661	-0.0002804	0.0001872	0.0035	0.36		482.14	482.14	No	5.89	Si
SLU 77	fin.	-17.93	-425	-0.0000556	0.0001872	0.0035	0.36		482.14	482.14	No	26.88	Si
SLU 74	ini.	-77.52	-628	-0.0002634	0.0001872	0.0035	0.36		482.14	482.14	No	6.22	Si
SLU 74	fin.	-14.01	-394	-0.0000432	0.0001872	0.0035	0.36		482.14	482.14	No	34.4	Si
SLU 84	ini.	-75.91	-622	-0.0002572	0.0001872	0.0035	0.36		482.14	482.14	No	6.35	Si
SLU 84	fin.	-12.72	-390	-0.0000392	0.0001872	0.0035	0.36		482.14	482.14	No	37.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-81.61	505	0.36	0	105	2855	1509	918	2427	No	4.8	Si
SLU 78	fin.	-17.87	-22	0.36	0	105	2855	1509	918	2427	No	110.03	Si
SLU 69	ini.	-75.25	487	0.36	0	105	2855	1509	918	2427	No	4.98	Si
SLU 69	fin.	-17.92	-44	0.36	0	105	2855	1509	918	2427	No	55.24	Si
SLU 80	ini.	-77.41	480	0.36	0	105	2855	1509	918	2427	No	5.06	Si
SLU 80	fin.	-16.64	-21	0.36	0	105	2855	1509	918	2427	No	118.17	Si
SLU 70	ini.	-75	487	0.36	0	105	2855	1509	918	2427	No	4.98	Si
SLU 70	fin.	-17.85	-45	0.36	0	105	2855	1509	918	2427	No	54.28	Si
SLU 79	ini.	-77.66	480	0.36	0	105	2855	1509	918	2427	No	5.06	Si
SLU 79	fin.	-16.7	-20	0.36	0	105	2855	1509	918	2427	No	122.81	Si
SLU 77	ini.	-81.86	506	0.36	0	105	2855	1509	918	2427	No	4.8	Si
SLU 77	fin.	-17.93	-21	0.36	0	105	2855	1509	918	2427	No	114.04	Si
SLU 74	ini.	-77.52	477	0.36	0	105	2855	1509	918	2427	No	5.09	Si
SLU 74	fin.	-14.01	-3	0.36	0	105	2855	1509	918	2427	No	716.61	Si
SLU 72	ini.	-70.8	462	0.36	0	105	2855	1509	918	2427	No	5.26	Si
SLU 72	fin.	-16.62	-43	0.36	0	105	2855	1509	918	2427	No	56.19	Si
SLU 75	ini.	-77.27	476	0.36	0	105	2855	1509	918	2427	No	5.09	Si
SLU 75	fin.	-13.95	-4	0.36	0	105	2855	1509	918	2427	No	583.11	Si
SLU 71	ini.	-71.05	462	0.36	0	105	2855	1509	918	2427	No	5.26	Si
SLU 71	fin.	-16.69	-42	0.36	0	105	2855	1509	918	2427	No	57.21	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 6	ini.	-62.4	-639	-0.000201	0.0002807	0.0035	0.36		485.29	485.29		7.78	Si
SLD 6	fin.	-23.36	-510	-0.0000723	0.0002807	0.0035	0.36		485.29	485.29		20.78	Si
SLV 3	ini.	-80.7	-987	-0.0002655	0.0002807	0.0035	0.36		485.29	485.29		6.01	Si
SLV 3	fin.	-54.06	-924	-0.0001725	0.0002807	0.0035	0.36		485.29	485.29		8.98	Si
SLD 2	ini.	-66.82	-740	-0.0002163	0.0002807	0.0035	0.36		485.29	485.29		7.26	Si
SLD 2	fin.	-34.81	-643	-0.0001089	0.0002807	0.0035	0.36		485.29	485.29		13.94	Si
SLV 5	ini.	-82.4	-969	-0.0002717	0.0002807	0.0035	0.36		485.29	485.29		5.89	Si
SLV 5	fin.	-40.35	-848	-0.000127	0.0002807	0.0035	0.36		485.29	485.29		12.03	Si
SLD 1	ini.	-67.73	-737	-0.0002194	0.0002807	0.0035	0.36		485.29	485.29		7.16	Si
SLD 1	fin.	-32.05	-626	-0.0001	0.0002807	0.0035	0.36		485.29	485.29		15.14	Si
SLV 6	ini.	-81.04	-973	-0.0002667	0.0002807	0.0035	0.36		485.29	485.29		5.99	Si
SLV 6	fin.	-44.49	-873	-0.0001406	0.0002807	0.0035	0.36		485.29	485.29		10.91	Si
SLV 4	ini.	-78.59	-993	-0.0002579	0.0002807	0.0035	0.36		485.29	485.29		6.17	Si
SLV 4	fin.	-60.49	-964	-0.0001944	0.0002807	0.0035	0.36		485.29	485.29		8.02	Si
SLV 2	ini.	-91.92	-1218	-0.0003067	0.0002807	0.0035	0.36		485.29	485.29		5.28	Si
SLV 2	fin.	-71.65	-1193	-0.0002332	0.0002807	0.0035	0.36		485.29	485.29		6.77	Si
SLV 1	ini.	-94.03	-1211	-0.0003147	0.0002807	0.0035	0.36		485.29	485.29		5.16	Si
SLV 1	fin.	-65.21	-1153	-0.0002107	0.0002807	0.0035	0.36		485.29	485.29		7.44	Si
SLD 5	ini.	-62.99	-638	-0.000203	0.0002807	0.0035	0.36		485.29	485.29		7.7	Si
SLD 5	fin.	-21.55	-499	-0.0000666	0.0002807	0.0035	0.36		485.29	485.29		22.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-4.12	377	0.36	0	158	2855	2264	918	3012		7.99	Si
SLV 15	fin.	57.43	53	0.36	0	158	2855	2264	918	3012		56.83	Si
SLV 10	ini.	-58.07	496	0.36	0	158	2855	2264	918	3012		6.08	Si
SLV 10	fin.	-11.04	96	0.36	0	158	2855	2264	918	3012		31.54	Si
SLV 5	ini.	-82.4	447	0.36	0	158	2855	2264	918	3012		6.74	Si
SLV 5	fin.	-40.35	73	0.36	0	158	2855	2264	918	3012		41.02	Si
SLV 13	ini.	-17.45	478	0.36	0	158	2855	2264	918	3012		6.31	Si
SLV 13	fin.	46.27	105	0.36	0	158	2855	2264	918	3012		28.73	Si
SLD 13	ini.	-35.09	379	0.36	0	158	2855	2264	918	3012		7.95	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	fin.	15.68	44	0.36	0	158	2855	2264	918	3012		68.36	Si
SLV 14	ini.	-15.34	451	0.36	0	158	2855	2264	918	3012		6.68	Si
SLV 14	fin.	39.84	77	0.36	0	158	2855	2264	918	3012		39.22	Si
SLD 9	ini.	-53.2	395	0.36	0	158	2855	2264	918	3012		7.62	Si
SLD 9	fin.	-7.23	48	0.36	0	158	2855	2264	918	3012		62.51	Si
SLD 10	ini.	-52.61	388	0.36	0	158	2855	2264	918	3012		7.77	Si
SLD 10	fin.	-9.04	40	0.36	0	158	2855	2264	918	3012		74.7	Si
SLV 9	ini.	-59.42	513	0.36	0	158	2855	2264	918	3012		5.87	Si
SLV 9	fin.	-6.91	114	0.36	0	158	2855	2264	918	3012		26.53	Si
SLV 6	ini.	-81.04	430	0.36	0	158	2855	2264	918	3012		7.01	Si
SLV 6	fin.	-44.49	55	0.36	0	158	2855	2264	918	3012		54.35	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.161	SLV 1	Si
V_SLV	5.871	SLV 9	Si
PF_SLU	5.89	SLU 77	Si
V_SLU	4.8	SLU 77	Si

Trave di accoppiamento 145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	11.86	12.76	0.9	-18.263	-3.314	11.86	12.76	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	253.57	-800	-0.0001308	0.0001872	0.0035	0.9		2959	2959	No	11.67	Si
SLU 74	fin.	6.54	-371	-0.0000032	0.0001872	0.0035	0.9		2959	2959	No	452.23	Si
SLU 56	ini.	246.75	-792	-0.000127	0.0001872	0.0035	0.9		2959	2959	No	11.99	Si
SLU 56	fin.	25.27	-468	-0.0000124	0.0001872	0.0035	0.9		2959	2959	No	117.11	Si
SLU 80	ini.	255.43	-823	-0.0001318	0.0001872	0.0035	0.9		2959	2959	No	11.58	Si
SLU 80	fin.	22.87	-460	-0.0000112	0.0001872	0.0035	0.9		2959	2959	No	129.37	Si
SLU 79	ini.	256.61	-825	-0.0001324	0.0001872	0.0035	0.9		2959	2959	No	11.53	Si
SLU 79	fin.	21.31	-452	-0.0000105	0.0001872	0.0035	0.9		2959	2959	No	138.83	Si
SLU 78	ini.	267.05	-861	-0.0001382	0.0001872	0.0035	0.9		2959	2959	No	11.08	Si
SLU 78	fin.	22.69	-470	-0.0000111	0.0001872	0.0035	0.9		2959	2959	No	130.42	Si
SLU 77	ini.	268.24	-864	-0.0001388	0.0001872	0.0035	0.9		2959	2959	No	11.03	Si
SLU 77	fin.	21.13	-462	-0.0000104	0.0001872	0.0035	0.9		2959	2959	No	140.05	Si
SLU 81	ini.	247.25	-720	-0.0001273	0.0001872	0.0035	0.9		2959	2959	No	11.97	Si
SLU 81	fin.	-29.8	-170	-0.0000146	0.0001872	0.0035	0.9		2964.67	2964.67	No	99.49	Si
SLU 83	ini.	261.91	-784	-0.0001353	0.0001872	0.0035	0.9		2959	2959	No	11.3	Si
SLU 83	fin.	-15.21	-261	-0.0000074	0.0001872	0.0035	0.9		2964.67	2964.67	No	194.89	Si
SLU 84	ini.	260.73	-781	-0.0001347	0.0001872	0.0035	0.9		2959	2959	No	11.35	Si
SLU 84	fin.	-13.65	-269	-0.0000067	0.0001872	0.0035	0.9		2964.67	2964.67	No	217.15	Si
SLU 75	ini.	252.39	-798	-0.0001301	0.0001872	0.0035	0.9		2959	2959	No	11.72	Si
SLU 75	fin.	8.1	-380	-0.000004	0.0001872	0.0035	0.9		2959	2959	No	365.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	220.48	-499	0.9	0	365	7137	3773	2295	6068	No	12.16	Si
SLU 70	fin.	73.88	642	0.9	0	365	7137	3773	2295	6068	No	9.45	Si
SLU 51	ini.	187.37	-445	0.9	0	365	7137	3773	2295	6068	No	13.62	Si
SLU 51	fin.	78.2	711	0.9	0	365	7137	3773	2295	6068	No	8.53	Si
SLU 47	ini.	171.92	-415	0.9	0	365	7137	3773	2295	6068	No	14.63	Si
SLU 47	fin.	64.65	636	0.9	0	365	7137	3773	2295	6068	No	9.54	Si
SLU 72	ini.	208.86	-472	0.9	0	365	7137	3773	2295	6068	No	12.85	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	fin.	74.06	645	0.9	0	365	7137	3773	2295	6068	No	9.4	Si
SLU 69	ini.	221.66	-500	0.9	0	365	7137	3773	2295	6068	No	12.13	Si
SLU 69	fin.	72.32	627	0.9	0	365	7137	3773	2295	6068	No	9.68	Si
SLU 46	ini.	184.33	-442	0.9	0	365	7137	3773	2295	6068	No	13.72	Si
SLU 46	fin.	63.43	623	0.9	0	365	7137	3773	2295	6068	No	9.75	Si
SLU 48	ini.	200.18	-473	0.9	0	365	7137	3773	2295	6068	No	12.82	Si
SLU 48	fin.	76.46	693	0.9	0	365	7137	3773	2295	6068	No	8.75	Si
SLU 71	ini.	210.04	-473	0.9	0	365	7137	3773	2295	6068	No	12.82	Si
SLU 71	fin.	72.51	630	0.9	0	365	7137	3773	2295	6068	No	9.63	Si
SLU 49	ini.	198.99	-472	0.9	0	365	7137	3773	2295	6068	No	12.85	Si
SLU 49	fin.	78.02	708	0.9	0	365	7137	3773	2295	6068	No	8.57	Si
SLU 50	ini.	188.55	-446	0.9	0	365	7137	3773	2295	6068	No	13.59	Si
SLU 50	fin.	76.64	696	0.9	0	365	7137	3773	2295	6068	No	8.72	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	745.04	-1757	-0.0004172	0.0002807	0.0035	0.9		2989.59	2989.59		4.01	Si
SLV 2	fin.	-566.89	2141	-0.0003045	0.0002807	0.0035	0.9		2995.37	2995.37		5.28	Si
SLV 4	ini.	629.79	-1557	-0.0003436	0.0002807	0.0035	0.9		2989.59	2989.59		4.75	Si
SLV 4	fin.	-446.21	1532	-0.000234	0.0002807	0.0035	0.9		2995.37	2995.37		6.71	Si
SLV 15	ini.	-449.86	766	-0.000236	0.0002807	0.0035	0.9		2995.37	2995.37		6.66	Si
SLV 15	fin.	606.13	-2786	-0.000329	0.0002807	0.0035	0.9		2989.59	2989.59		4.93	Si
SLV 3	ini.	612.07	-1518	-0.0003326	0.0002807	0.0035	0.9		2989.59	2989.59		4.88	Si
SLV 3	fin.	-427.23	1468	-0.0002232	0.0002807	0.0035	0.9		2995.37	2995.37		7.01	Si
SLV 16	ini.	-432.14	727	-0.000226	0.0002807	0.0035	0.9		2995.37	2995.37		6.93	Si
SLV 16	fin.	587.14	-2722	-0.0003173	0.0002807	0.0035	0.9		2989.59	2989.59		5.09	Si
SLV 6	ini.	504.67	-1184	-0.0002682	0.0002807	0.0035	0.9		2989.59	2989.59		5.92	Si
SLV 6	fin.	-342.62	1351	-0.0001763	0.0002807	0.0035	0.9		2995.37	2995.37		8.74	Si
SLV 14	ini.	-316.89	527	-0.0001624	0.0002807	0.0035	0.9		2995.37	2995.37		9.45	Si
SLV 14	fin.	466.46	-2113	-0.000246	0.0002807	0.0035	0.9		2989.59	2989.59		6.41	Si
SLV 5	ini.	493.28	-1159	-0.0002615	0.0002807	0.0035	0.9		2989.59	2989.59		6.06	Si
SLV 5	fin.	-330.41	1309	-0.0001697	0.0002807	0.0035	0.9		2995.37	2995.37		9.07	Si
SLV 13	ini.	-334.6	566	-0.000172	0.0002807	0.0035	0.9		2995.37	2995.37		8.95	Si
SLV 13	fin.	485.45	-2177	-0.000257	0.0002807	0.0035	0.9		2989.59	2989.59		6.16	Si
SLV 1	ini.	727.33	-1718	-0.0004056	0.0002807	0.0035	0.9		2989.59	2989.59		4.11	Si
SLV 1	fin.	-547.9	2077	-0.0002931	0.0002807	0.0035	0.9		2995.37	2995.37		5.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	745.04	-1019	0.9	0	548	7137	5660	2295	7684		7.54	Si
SLV 2	fin.	-566.89	-3651	0.9	0	548	7137	5660	2295	7684		2.11	Si
SLV 12	ini.	-198.1	-64	0.9	0	548	7137	5660	2295	7684		120.62	Si
SLV 12	fin.	369.65	2855	0.9	0	548	7137	5660	2295	7684		2.69	Si
SLV 16	ini.	-432.14	352	0.9	0	548	7137	5660	2295	7684		21.86	Si
SLV 16	fin.	587.14	4111	0.9	0	548	7137	5660	2295	7684		1.87	Si
SLV 4	ini.	629.79	-980	0.9	0	548	7137	5660	2295	7684		7.84	Si
SLV 4	fin.	-446.21	-2696	0.9	0	548	7137	5660	2295	7684		2.85	Si
SLV 14	ini.	-316.89	312	0.9	0	548	7137	5660	2295	7684		24.61	Si
SLV 14	fin.	466.46	3156	0.9	0	548	7137	5660	2295	7684		2.43	Si
SLV 15	ini.	-449.86	378	0.9	0	548	7137	5660	2295	7684		20.31	Si
SLV 15	fin.	606.13	4179	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 13	ini.	-334.6	339	0.9	0	548	7137	5660	2295	7684		22.66	Si
SLV 13	fin.	485.45	3224	0.9	0	548	7137	5660	2295	7684		2.38	Si
SLV 11	ini.	-209.48	-46	0.9	0	548	7137	5660	2295	7684		165.41	Si
SLV 11	fin.	381.85	2898	0.9	0	548	7137	5660	2295	7684		2.65	Si
SLV 1	ini.	727.33	-992	0.9	0	548	7137	5660	2295	7684		7.75	Si
SLV 1	fin.	-547.9	-3583	0.9	0	548	7137	5660	2295	7684		2.14	Si
SLV 3	ini.	612.07	-953	0.9	0	548	7137	5660	2295	7684		8.07	Si
SLV 3	fin.	-427.23	-2628	0.9	0	548	7137	5660	2295	7684		2.92	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.013	SLV 2	Si
V_SLV	1.839	SLV 15	Si
PF_SLU	11.031	SLU 77	Si
V_SLU	8.53	SLU 51	Si

Trave di accoppiamento 146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	14.56	15.02	0.46	-18.263	-3.314	14.56	15.02	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-17.61	-438	-0.0000332	0.0001872	0.0035	0.46		780.23	780.23	No	44.29	Si
SLU 80	fin.	-164.24	-1225	-0.0003578	0.0001872	0.0035	0.46		780.23	780.23	No	4.75	Si
SLU 83	ini.	-0.71	-353	-0.0000013	0.0001872	0.0035	0.46		780.23	780.23	No	1099.03	Si
SLU 83	fin.	-163.52	-1218	-0.0003559	0.0001872	0.0035	0.46		780.23	780.23	No	4.77	Si
SLU 75	ini.	-10.13	-380	-0.000019	0.0001872	0.0035	0.46		780.23	780.23	No	77.02	Si
SLU 75	fin.	-162.41	-1215	-0.0003531	0.0001872	0.0035	0.46		780.23	780.23	No	4.8	Si
SLU 74	ini.	-8.85	-377	-0.0000166	0.0001872	0.0035	0.46		780.23	780.23	No	88.18	Si
SLU 74	fin.	-163.4	-1222	-0.0003556	0.0001872	0.0035	0.46		780.23	780.23	No	4.77	Si
SLU 78	ini.	-18.5	-448	-0.0000349	0.0001872	0.0035	0.46		780.23	780.23	No	42.19	Si
SLU 78	fin.	-173.15	-1292	-0.0003808	0.0001872	0.0035	0.46		780.23	780.23	No	4.51	Si
SLU 57	ini.	-8.16	-364	-0.0000153	0.0001872	0.0035	0.46		780.23	780.23	No	95.64	Si
SLU 57	fin.	-161.22	-1195	-0.00035	0.0001872	0.0035	0.46		780.23	780.23	No	4.84	Si
SLU 77	ini.	-17.21	-445	-0.0000325	0.0001872	0.0035	0.46		780.23	780.23	No	45.33	Si
SLU 77	fin.	-174.14	-1299	-0.0003834	0.0001872	0.0035	0.46		780.23	780.23	No	4.48	Si
SLU 56	ini.	-6.88	-361	-0.0000129	0.0001872	0.0035	0.46		780.23	780.23	No	113.47	Si
SLU 56	fin.	-162.21	-1202	-0.0003526	0.0001872	0.0035	0.46		780.23	780.23	No	4.81	Si
SLU 79	ini.	-16.33	-435	-0.0000308	0.0001872	0.0035	0.46		780.23	780.23	No	47.77	Si
SLU 79	fin.	-165.23	-1232	-0.0003603	0.0001872	0.0035	0.46		780.23	780.23	No	4.72	Si
SLU 84	ini.	-1.99	-356	-0.0000037	0.0001872	0.0035	0.46		780.23	780.23	No	391.66	Si
SLU 84	fin.	-162.53	-1212	-0.0003534	0.0001872	0.0035	0.46		780.23	780.23	No	4.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-10.13	194	0.46	0	124	3648	1928	1173	3101	No	15.96	Si
SLU 75	fin.	-162.41	-1492	0.46	0	124	3648	1928	1173	3101	No	2.08	Si
SLU 56	ini.	-6.88	180	0.46	0	124	3648	1928	1173	3101	No	17.2	Si
SLU 56	fin.	-162.21	-1488	0.46	0	124	3648	1928	1173	3101	No	2.08	Si
SLU 83	ini.	-0.71	157	0.46	0	124	3648	1928	1173	3101	No	19.8	Si
SLU 83	fin.	-163.52	-1460	0.46	0	124	3648	1928	1173	3101	No	2.12	Si
SLU 57	ini.	-8.16	184	0.46	0	124	3648	1928	1173	3101	No	16.84	Si
SLU 57	fin.	-161.22	-1482	0.46	0	124	3648	1928	1173	3101	No	2.09	Si
SLU 80	ini.	-17.61	208	0.46	0	124	3648	1928	1173	3101	No	14.93	Si
SLU 80	fin.	-164.24	-1479	0.46	0	124	3648	1928	1173	3101	No	2.1	Si
SLU 78	ini.	-18.5	220	0.46	0	124	3648	1928	1173	3101	No	14.08	Si
SLU 78	fin.	-173.15	-1578	0.46	0	124	3648	1928	1173	3101	No	1.97	Si
SLU 79	ini.	-16.33	204	0.46	0	124	3648	1928	1173	3101	No	15.21	Si
SLU 79	fin.	-165.23	-1486	0.46	0	124	3648	1928	1173	3101	No	2.09	Si
SLU 74	ini.	-8.85	191	0.46	0	124	3648	1928	1173	3101	No	16.28	Si
SLU 74	fin.	-163.4	-1499	0.46	0	124	3648	1928	1173	3101	No	2.07	Si
SLU 77	ini.	-17.21	216	0.46	0	124	3648	1928	1173	3101	No	14.33	Si
SLU 77	fin.	-174.14	-1585	0.46	0	124	3648	1928	1173	3101	No	1.96	Si
SLU 84	ini.	-1.99	161	0.46	0	124	3648	1928	1173	3101	No	19.32	Si
SLU 84	fin.	-162.53	-1454	0.46	0	124	3648	1928	1173	3101	No	2.13	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-330.87	-745	-0.0007923	0.0002807	0.0035	0.46		788.4	788.4		2.38	Si
SLV 15	fin.	242.16	1404	-0.00054	0.0002807	0.0035	0.46		785.44	785.44		3.24	Si
SLV 16	ini.	-319.63	-700	-0.0007582	0.0002807	0.0035	0.46		788.4	788.4		2.47	Si
SLV 16	fin.	232.09	1349	-0.000513	0.0002807	0.0035	0.46		785.44	785.44		3.38	Si
SLV 4	ini.	244.8	207	-0.0005471	0.0002807	0.0035	0.46		785.44	785.44		3.21	Si
SLV 4	fin.	-358.82	-2354	-0.0008796	0.0002807	0.0035	0.46		788.4	788.4		2.2	Si
SLV 14	ini.	-244.78	-616	-0.0005447	0.0002807	0.0035	0.46		788.4	788.4		3.22	Si
SLV 14	fin.	153.17	827	-0.0003162	0.0002807	0.0035	0.46		785.44	785.44		5.13	Si
SLV 5	ini.	200.19	36	-0.0004303	0.0002807	0.0035	0.46		785.44	785.44		3.92	Si
SLV 5	fin.	-314.71	-2144	-0.0007435	0.0002807	0.0035	0.46		788.4	788.4		2.51	Si
SLV 13	ini.	-256.02	-660	-0.0005753	0.0002807	0.0035	0.46		788.4	788.4		3.08	Si
SLV 13	fin.	163.24	882	-0.0003399	0.0002807	0.0035	0.46		785.44	785.44		4.81	Si
SLV 1	ini.	308.41	247	-0.000728	0.0002807	0.0035	0.46		785.44	785.44		2.55	Si
SLV 1	fin.	-427.66	-2821	-0.0011112	0.0002807	0.0035	0.46		788.4	788.4		1.84	Si
SLV 6	ini.	207.41	65	-0.0004486	0.0002807	0.0035	0.46		785.44	785.44		3.79	Si
SLV 6	fin.	-321.18	-2179	-0.0007629	0.0002807	0.0035	0.46		788.4	788.4		2.45	Si
SLV 3	ini.	233.56	162	-0.0005169	0.0002807	0.0035	0.46		785.44	785.44		3.36	Si
SLV 3	fin.	-348.74	-2299	-0.0008478	0.0002807	0.0035	0.46		788.4	788.4		2.26	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	319.65	291	-0.0007618	0.0002807	0.0035	0.46		785.44	785.44		2.46	Si
SLV 2	fin.	-437.73	-2876	-0.0011473	0.0002807	0.0035	0.46		788.4	788.4		1.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	244.8	-706	0.46	0	187	3648	2893	1173	3834		5.43	Si
SLV 4	fin.	-358.82	-2254	0.46	0	187	3648	2893	1173	3834		1.7	Si
SLV 3	ini.	233.56	-676	0.46	0	187	3648	2893	1173	3834		5.67	Si
SLV 3	fin.	-348.74	-2176	0.46	0	187	3648	2893	1173	3834		1.76	Si
SLD 4	ini.	100.94	-224	0.46	0	187	3648	2893	1173	3834		17.09	Si
SLD 4	fin.	-208.87	-1488	0.46	0	187	3648	2893	1173	3834		2.58	Si
SLD 2	ini.	133.84	-325	0.46	0	187	3648	2893	1173	3834		11.78	Si
SLD 2	fin.	-243.68	-1690	0.46	0	187	3648	2893	1173	3834		2.27	Si
SLV 2	ini.	319.65	-936	0.46	0	187	3648	2893	1173	3834		4.09	Si
SLV 2	fin.	-437.73	-2711	0.46	0	187	3648	2893	1173	3834		1.41	Si
SLV 1	ini.	308.41	-907	0.46	0	187	3648	2893	1173	3834		4.23	Si
SLV 1	fin.	-427.66	-2633	0.46	0	187	3648	2893	1173	3834		1.46	Si
SLV 5	ini.	200.19	-524	0.46	0	187	3648	2893	1173	3834		7.32	Si
SLV 5	fin.	-314.71	-2115	0.46	0	187	3648	2893	1173	3834		1.81	Si
SLD 1	ini.	129.02	-313	0.46	0	187	3648	2893	1173	3834		12.26	Si
SLD 1	fin.	-239.36	-1656	0.46	0	187	3648	2893	1173	3834		2.31	Si
SLV 6	ini.	207.41	-542	0.46	0	187	3648	2893	1173	3834		7.07	Si
SLV 6	fin.	-321.18	-2166	0.46	0	187	3648	2893	1173	3834		1.77	Si
SLD 6	ini.	86.98	-160	0.46	0	187	3648	2893	1173	3834		23.96	Si
SLD 6	fin.	-195.12	-1464	0.46	0	187	3648	2893	1173	3834		2.62	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.801	SLV 2	Si
V_SLV	1.414	SLV 2	Si
PF_SLU	4.481	SLU 77	Si
V_SLU	1.957	SLU 77	Si

Trave di accoppiamento 147

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	13.96	15.02	1.06	-18.518	0.706	13.96	15.02	1.06	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 8	ini.	68.62	20	-0.0000244	0.0002246	0.0035	1.06		4231.66	4231.66	No	61.66	Si
SLU 8	fin.	-8.61	-4	-0.000003	0.0002246	0.0035	1.06		4238.3	4238.3	No	492.45	Si
SLU 70	ini.	68.34	31	-0.0000243	0.0002246	0.0035	1.06		4231.66	4231.66	No	61.92	Si
SLU 70	fin.	-19.17	-5	-0.0000068	0.0002246	0.0035	1.06		4238.3	4238.3	No	221.13	Si
SLU 50	ini.	74.68	20	-0.0000266	0.0002246	0.0035	1.06		4231.66	4231.66	No	56.67	Si
SLU 50	fin.	-8.93	-5	-0.0000031	0.0002246	0.0035	1.06		4238.3	4238.3	No	474.6	Si
SLU 69	ini.	70.94	33	-0.0000252	0.0002246	0.0035	1.06		4231.66	4231.66	No	59.65	Si
SLU 69	fin.	-18.65	-5	-0.0000066	0.0002246	0.0035	1.06		4238.3	4238.3	No	227.25	Si
SLU 30	ini.	67.21	24	-0.0000239	0.0002246	0.0035	1.06		4231.66	4231.66	No	62.97	Si
SLU 30	fin.	-15.84	-5	-0.0000056	0.0002246	0.0035	1.06		4238.3	4238.3	No	267.65	Si
SLU 71	ini.	75.85	26	-0.000027	0.0002246	0.0035	1.06		4231.66	4231.66	No	55.79	Si
SLU 71	fin.	-15.64	-5	-0.0000055	0.0002246	0.0035	1.06		4238.3	4238.3	No	270.93	Si
SLU 51	ini.	72.08	17	-0.0000256	0.0002246	0.0035	1.06		4231.66	4231.66	No	58.71	Si
SLU 51	fin.	-9.45	-5	-0.0000033	0.0002246	0.0035	1.06		4238.3	4238.3	No	448.7	Si
SLU 72	ini.	73.26	24	-0.0000261	0.0002246	0.0035	1.06		4231.66	4231.66	No	57.76	Si
SLU 72	fin.	-16.16	-5	-0.0000057	0.0002246	0.0035	1.06		4238.3	4238.3	No	262.28	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 29	ini.	69.8	27	-0.0000248	0.0002246	0.0035	1.06		4231.66	4231.66	No	60.62	Si
SLU 29	fin.	-15.32	-4	-0.0000054	0.0002246	0.0035	1.06		4238.3	4238.3	No	276.65	Si
SLU 48	ini.	69.76	27	-0.0000248	0.0002246	0.0035	1.06		4231.66	4231.66	No	60.66	Si
SLU 48	fin.	-11.94	-5	-0.0000042	0.0002246	0.0035	1.06		4238.3	4238.3	No	355.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 56	ini.	60.73	70	1.06	0	246	6344	3048	2703	5751	No	81.97	Si
SLU 56	fin.	-18.37	-265	1.06	0	246	6344	3048	2703	5751	No	21.73	Si
SLU 80	ini.	64.23	67	1.06	0	246	6344	3048	2703	5751	No	86.34	Si
SLU 80	fin.	-22.59	-281	1.06	0	246	6344	3048	2703	5751	No	20.45	Si
SLU 70	ini.	68.34	67	1.06	0	246	6344	3048	2703	5751	No	85.93	Si
SLU 70	fin.	-19.17	-281	1.06	0	246	6344	3048	2703	5751	No	20.48	Si
SLU 79	ini.	66.82	62	1.06	0	246	6344	3048	2703	5751	No	92.1	Si
SLU 79	fin.	-22.07	-285	1.06	0	246	6344	3048	2703	5751	No	20.15	Si
SLU 72	ini.	73.26	69	1.06	0	246	6344	3048	2703	5751	No	83.54	Si
SLU 72	fin.	-16.16	-279	1.06	0	246	6344	3048	2703	5751	No	20.62	Si
SLU 58	ini.	65.65	72	1.06	0	246	6344	3048	2703	5751	No	79.79	Si
SLU 58	fin.	-15.36	-263	1.06	0	246	6344	3048	2703	5751	No	21.89	Si
SLU 77	ini.	61.91	61	1.06	0	246	6344	3048	2703	5751	No	95.01	Si
SLU 77	fin.	-25.08	-287	1.06	0	246	6344	3048	2703	5751	No	20.02	Si
SLU 71	ini.	75.85	65	1.06	0	246	6344	3048	2703	5751	No	88.92	Si
SLU 71	fin.	-15.64	-283	1.06	0	246	6344	3048	2703	5751	No	20.31	Si
SLU 78	ini.	59.31	65	1.06	0	246	6344	3048	2703	5751	No	88.9	Si
SLU 78	fin.	-25.59	-283	1.06	0	246	6344	3048	2703	5751	No	20.31	Si
SLU 69	ini.	70.94	63	1.06	0	246	6344	3048	2703	5751	No	91.63	Si
SLU 69	fin.	-18.65	-285	1.06	0	246	6344	3048	2703	5751	No	20.18	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	185.39	860	-0.0000665	0.0003369	0.0035	1.06		4343.51	4343.51		23.43	Si
SLV 11	fin.	69.02	440	-0.0000245	0.0003369	0.0035	1.06		4343.51	4343.51		62.93	Si
SLV 12	ini.	172.05	847	-0.0000616	0.0003369	0.0035	1.06		4343.51	4343.51		25.25	Si
SLV 12	fin.	66.81	440	-0.0000237	0.0003369	0.0035	1.06		4343.51	4343.51		65.01	Si
SLV 9	ini.	-165.18	-965	-0.000059	0.0003369	0.0035	1.06		4350.23	4350.23		26.34	Si
SLV 9	fin.	-130.94	-569	-0.0000466	0.0003369	0.0035	1.06		4350.23	4350.23		33.22	Si
SLV 8	ini.	203.73	987	-0.0000732	0.0003369	0.0035	1.06		4343.51	4343.51		21.32	Si
SLV 8	fin.	105.93	563	-0.0000377	0.0003369	0.0035	1.06		4343.51	4343.51		41	Si
SLV 10	ini.	-178.51	-978	-0.0000639	0.0003369	0.0035	1.06		4350.23	4350.23		24.37	Si
SLV 10	fin.	-133.15	-569	-0.0000474	0.0003369	0.0035	1.06		4350.23	4350.23		32.67	Si
SLV 7	ini.	217.07	1000	-0.0000781	0.0003369	0.0035	1.06		4343.51	4343.51		20.01	Si
SLV 7	fin.	108.14	562	-0.0000385	0.0003369	0.0035	1.06		4343.51	4343.51		40.17	Si
SLV 3	ini.	135.03	527	-0.0000482	0.0003369	0.0035	1.06		4343.51	4343.51		32.17	Si
SLV 3	fin.	84.4	352	-0.00003	0.0003369	0.0035	1.06		4343.51	4343.51		51.46	Si
SLV 6	ini.	-146.84	-838	-0.0000524	0.0003369	0.0035	1.06		4350.23	4350.23		29.63	Si
SLV 6	fin.	-94.04	-447	-0.0000334	0.0003369	0.0035	1.06		4350.23	4350.23		46.26	Si
SLV 5	ini.	-133.5	-825	-0.0000476	0.0003369	0.0035	1.06		4350.23	4350.23		32.59	Si
SLV 5	fin.	-91.82	-447	-0.0000326	0.0003369	0.0035	1.06		4350.23	4350.23		47.38	Si
SLV 4	ini.	114.28	507	-0.0000407	0.0003369	0.0035	1.06		4343.51	4343.51		38.01	Si
SLV 4	fin.	80.96	352	-0.0000288	0.0003369	0.0035	1.06		4343.51	4343.51		53.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-165.18	-168	1.06	0	369	6344	4571	2703	6712		39.94	Si
SLV 9	fin.	-130.94	-562	1.06	0	369	6344	4571	2703	6712		11.94	Si
SLV 10	ini.	-178.51	-146	1.06	0	369	6344	4571	2703	6712		46.11	Si
SLV 10	fin.	-133.15	-540	1.06	0	369	6344	4571	2703	6712		12.44	Si
SLV 12	ini.	172.05	328	1.06	0	369	6344	4571	2703	6712		20.45	Si
SLV 12	fin.	66.81	214	1.06	0	369	6344	4571	2703	6712		31.3	Si
SLD 10	ini.	-67.45	-5	1.06	0	369	6344	4571	2703	6712		1351.64	Si
SLD 10	fin.	-63.04	-328	1.06	0	369	6344	4571	2703	6712		20.48	Si
SLV 5	ini.	-133.5	-121	1.06	0	369	6344	4571	2703	6712		55.41	Si
SLV 5	fin.	-91.82	-537	1.06	0	369	6344	4571	2703	6712		12.51	Si
SLV 13	ini.	-75.73	-63	1.06	0	369	6344	4571	2703	6712		106.18	Si
SLV 13	fin.	-105.98	-334	1.06	0	369	6344	4571	2703	6712		20.09	Si
SLV 7	ini.	217.07	353	1.06	0	369	6344	4571	2703	6712		19.03	Si
SLV 7	fin.	108.14	217	1.06	0	369	6344	4571	2703	6712		30.87	Si
SLV 8	ini.	203.73	375	1.06	0	369	6344	4571	2703	6712		17.89	Si
SLV 8	fin.	105.93	240	1.06	0	369	6344	4571	2703	6712		27.98	Si
SLV 6	ini.	-146.84	-99	1.06	0	369	6344	4571	2703	6712		68.05	Si
SLV 6	fin.	-94.04	-514	1.06	0	369	6344	4571	2703	6712		13.06	Si
SLD 9	ini.	-61.63	-15	1.06	0	369	6344	4571	2703	6712		453.82	Si
SLD 9	fin.	-62.08	-338	1.06	0	369	6344	4571	2703	6712		19.89	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	20.01	SLV 7	Si
V_SLV	11.942	SLV 9	Si
PF_SLU	55.787	SLU 71	Si
V_SLU	20.02	SLU 77	Si

Trave di accoppiamento 148

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	11.86	12.76	0.9	-16.818	6.526	11.86	12.76	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	245.87	-879	-0.0001266	0.0001872	0.0035	0.9		2959	2959	No	12.03	Si
SLU 82	fin.	-81.78	-249	-0.0000406	0.0001872	0.0035	0.9		2964.67	2964.67	No	36.25	Si
SLU 61	ini.	247.25	-879	-0.0001273	0.0001872	0.0035	0.9		2959	2959	No	11.97	Si
SLU 61	fin.	-78.49	-247	-0.0000389	0.0001872	0.0035	0.9		2964.67	2964.67	No	37.77	Si
SLU 43	ini.	235.19	-866	-0.0001208	0.0001872	0.0035	0.9		2959	2959	No	12.58	Si
SLU 43	fin.	-51.18	-315	-0.0000252	0.0001872	0.0035	0.9		2964.67	2964.67	No	57.93	Si
SLU 73	ini.	239.6	-868	-0.0001232	0.0001872	0.0035	0.9		2959	2959	No	12.35	Si
SLU 73	fin.	-72.51	-269	-0.0000359	0.0001872	0.0035	0.9		2964.67	2964.67	No	40.89	Si
SLU 60	ini.	250	-887	-0.0001288	0.0001872	0.0035	0.9		2959	2959	No	11.84	Si
SLU 60	fin.	-79.61	-247	-0.0000395	0.0001872	0.0035	0.9		2964.67	2964.67	No	37.24	Si
SLU 64	ini.	233.81	-866	-0.00012	0.0001872	0.0035	0.9		2959	2959	No	12.66	Si
SLU 64	fin.	-54.47	-317	-0.0000269	0.0001872	0.0035	0.9		2964.67	2964.67	No	54.42	Si
SLU 52	ini.	240.98	-868	-0.0001239	0.0001872	0.0035	0.9		2959	2959	No	12.28	Si
SLU 52	fin.	-69.22	-268	-0.0000342	0.0001872	0.0035	0.9		2964.67	2964.67	No	42.83	Si
SLU 65	ini.	229.23	-853	-0.0001175	0.0001872	0.0035	0.9		2959	2959	No	12.91	Si
SLU 65	fin.	-52.61	-317	-0.0000259	0.0001872	0.0035	0.9		2964.67	2964.67	No	56.35	Si
SLU 81	ini.	248.62	-887	-0.0001281	0.0001872	0.0035	0.9		2959	2959	No	11.9	Si
SLU 81	fin.	-82.9	-249	-0.0000411	0.0001872	0.0035	0.9		2964.67	2964.67	No	35.76	Si
SLU 44	ini.	230.62	-853	-0.0001183	0.0001872	0.0035	0.9		2959	2959	No	12.83	Si
SLU 44	fin.	-49.32	-315	-0.0000243	0.0001872	0.0035	0.9		2964.67	2964.67	No	60.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 45	ini.	218.79	-911	0.9	0	365	7137	3773	2295	6068	No	6.66	Si
SLU 45	fin.	-26.25	-78	0.9	0	365	7137	3773	2295	6068	No	77.59	Si
SLU 46	ini.	216.05	-901	0.9	0	365	7137	3773	2295	6068	No	6.73	Si
SLU 46	fin.	-25.13	-72	0.9	0	365	7137	3773	2295	6068	No	84.37	Si
SLU 44	ini.	230.62	-926	0.9	0	365	7137	3773	2295	6068	No	6.55	Si
SLU 44	fin.	-49.32	-228	0.9	0	365	7137	3773	2295	6068	No	26.58	Si
SLU 53	ini.	229.16	-901	0.9	0	365	7137	3773	2295	6068	No	6.73	Si
SLU 53	fin.	-46.15	-222	0.9	0	365	7137	3773	2295	6068	No	27.32	Si
SLU 60	ini.	250	-929	0.9	0	365	7137	3773	2295	6068	No	6.53	Si
SLU 60	fin.	-79.61	-444	0.9	0	365	7137	3773	2295	6068	No	13.66	Si
SLU 61	ini.	247.25	-919	0.9	0	365	7137	3773	2295	6068	No	6.61	Si
SLU 61	fin.	-78.49	-438	0.9	0	365	7137	3773	2295	6068	No	13.85	Si
SLU 43	ini.	235.19	-943	0.9	0	365	7137	3773	2295	6068	No	6.43	Si
SLU 43	fin.	-51.18	-239	0.9	0	365	7137	3773	2295	6068	No	25.41	Si
SLU 52	ini.	240.98	-916	0.9	0	365	7137	3773	2295	6068	No	6.62	Si
SLU 52	fin.	-69.22	-372	0.9	0	365	7137	3773	2295	6068	No	16.3	Si
SLU 64	ini.	233.81	-910	0.9	0	365	7137	3773	2295	6068	No	6.66	Si
SLU 64	fin.	-54.47	-275	0.9	0	365	7137	3773	2295	6068	No	22.08	Si
SLU 81	ini.	248.62	-896	0.9	0	365	7137	3773	2295	6068	No	6.77	Si
SLU 81	fin.	-82.9	-480	0.9	0	365	7137	3773	2295	6068	No	12.63	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	350.53	-1208	-0.000181	0.0002807	0.0035	0.9		2989.59	2989.59		8.53	Si
SLV 9	fin.	-46.56	-651	-0.0000229	0.0002807	0.0035	0.9		2995.37	2995.37		64.33	Si
SLV 13	ini.	480.72	-1459	-0.0002542	0.0002807	0.0035	0.9		2989.59	2989.59		6.22	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	fin.	-266.52	-35	-0.0001354	0.0002807	0.0035	0.9		2995.37	2995.37		11.24	Si
SLD 13	ini.	310.7	-1008	-0.0001593	0.0002807	0.0035	0.9		2989.59	2989.59		9.62	Si
SLD 13	fin.	-140.56	-148	-0.00007	0.0002807	0.0035	0.9		2995.37	2995.37		21.31	Si
SLD 15	ini.	289.03	-922	-0.0001477	0.0002807	0.0035	0.9		2989.59	2989.59		10.34	Si
SLD 15	fin.	-161.24	-5	-0.0000806	0.0002807	0.0035	0.9		2995.37	2995.37		18.58	Si
SLD 14	ini.	304.31	-1008	-0.0001559	0.0002807	0.0035	0.9		2989.59	2989.59		9.82	Si
SLD 14	fin.	-127.95	-184	-0.0000636	0.0002807	0.0035	0.9		2995.37	2995.37		23.41	Si
SLV 15	ini.	430.89	-1261	-0.0002257	0.0002807	0.0035	0.9		2989.59	2989.59		6.94	Si
SLV 15	fin.	-313.48	291	-0.0001605	0.0002807	0.0035	0.9		2995.37	2995.37		9.56	Si
SLV 10	ini.	340.96	-1207	-0.0001758	0.0002807	0.0035	0.9		2989.59	2989.59		8.77	Si
SLV 10	fin.	-27.69	-705	-0.0000136	0.0002807	0.0035	0.9		2995.37	2995.37		108.19	Si
SLD 16	ini.	282.64	-922	-0.0001443	0.0002807	0.0035	0.9		2989.59	2989.59		10.58	Si
SLD 16	fin.	-148.62	-41	-0.0000741	0.0002807	0.0035	0.9		2995.37	2995.37		20.15	Si
SLV 14	ini.	465.83	-1458	-0.0002457	0.0002807	0.0035	0.9		2989.59	2989.59		6.42	Si
SLV 14	fin.	-237.14	-119	-0.0001199	0.0002807	0.0035	0.9		2995.37	2995.37		12.63	Si
SLV 16	ini.	416	-1259	-0.0002173	0.0002807	0.0035	0.9		2989.59	2989.59		7.19	Si
SLV 16	fin.	-284.11	207	-0.0001448	0.0002807	0.0035	0.9		2995.37	2995.37		10.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	304.31	-1121	0.9	0	548	7137	5660	2295	7684		6.85	Si
SLD 14	fin.	-127.95	-582	0.9	0	548	7137	5660	2295	7684		13.19	Si
SLV 10	ini.	340.96	-1087	0.9	0	548	7137	5660	2295	7684		7.07	Si
SLV 10	fin.	-27.69	-133	0.9	0	548	7137	5660	2295	7684		57.72	Si
SLV 15	ini.	430.89	-1684	0.9	0	548	7137	5660	2295	7684		4.56	Si
SLV 15	fin.	-313.48	-1373	0.9	0	548	7137	5660	2295	7684		5.6	Si
SLV 9	ini.	350.53	-1134	0.9	0	548	7137	5660	2295	7684		6.78	Si
SLV 9	fin.	-46.56	-209	0.9	0	548	7137	5660	2295	7684		36.84	Si
SLD 15	ini.	289.03	-1124	0.9	0	548	7137	5660	2295	7684		6.84	Si
SLD 15	fin.	-161.24	-729	0.9	0	548	7137	5660	2295	7684		10.55	Si
SLV 14	ini.	465.83	-1678	0.9	0	548	7137	5660	2295	7684		4.58	Si
SLV 14	fin.	-237.14	-1038	0.9	0	548	7137	5660	2295	7684		7.4	Si
SLV 16	ini.	416	-1610	0.9	0	548	7137	5660	2295	7684		4.77	Si
SLV 16	fin.	-284.11	-1255	0.9	0	548	7137	5660	2295	7684		6.12	Si
SLV 13	ini.	480.72	-1752	0.9	0	548	7137	5660	2295	7684		4.39	Si
SLV 13	fin.	-266.52	-1156	0.9	0	548	7137	5660	2295	7684		6.65	Si
SLD 16	ini.	282.64	-1092	0.9	0	548	7137	5660	2295	7684		7.03	Si
SLD 16	fin.	-148.62	-678	0.9	0	548	7137	5660	2295	7684		11.33	Si
SLD 13	ini.	310.7	-1153	0.9	0	548	7137	5660	2295	7684		6.67	Si
SLD 13	fin.	-140.56	-633	0.9	0	548	7137	5660	2295	7684		12.14	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.219	SLV 13	Si
V_SLV	4.387	SLV 13	Si
PF_SLU	11.836	SLU 60	Si
V_SLU	6.435	SLU 43	Si

Trave di accoppiamento 149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	14.56	15.02	0.46	-16.818	6.526	14.56	15.02	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	71.58	356	-0.0001417	0.0001872	0.0035	0.46		777.36	777.36	No	10.86	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	fin.	-140.41	-581	-0.0002979	0.0001872	0.0035	0.46		780.23	780.23	No	5.56	Si
SLU 75	ini.	63.71	348	-0.0001253	0.0001872	0.0035	0.46		777.36	777.36	No	12.2	Si
SLU 75	fin.	-145.84	-588	-0.0003113	0.0001872	0.0035	0.46		780.23	780.23	No	5.35	Si
SLU 66	ini.	54.36	318	-0.000106	0.0001872	0.0035	0.46		777.36	777.36	No	14.3	Si
SLU 66	fin.	-142.49	-568	-0.000303	0.0001872	0.0035	0.46		780.23	780.23	No	5.48	Si
SLU 77	ini.	55.77	343	-0.0001089	0.0001872	0.0035	0.46		777.36	777.36	No	13.94	Si
SLU 77	fin.	-145.88	-569	-0.0003114	0.0001872	0.0035	0.46		780.23	780.23	No	5.35	Si
SLU 74	ini.	64.78	349	-0.0001275	0.0001872	0.0035	0.46		777.36	777.36	No	12	Si
SLU 74	fin.	-146.73	-595	-0.0003135	0.0001872	0.0035	0.46		780.23	780.23	No	5.32	Si
SLU 70	ini.	44.28	311	-0.0000856	0.0001872	0.0035	0.46		777.36	777.36	No	17.56	Si
SLU 70	fin.	-140.75	-535	-0.0002987	0.0001872	0.0035	0.46		780.23	780.23	No	5.54	Si
SLU 81	ini.	80.59	362	-0.0001609	0.0001872	0.0035	0.46		777.36	777.36	No	9.65	Si
SLU 81	fin.	-141.26	-607	-0.0003	0.0001872	0.0035	0.46		780.23	780.23	No	5.52	Si
SLU 78	ini.	54.7	342	-0.0001067	0.0001872	0.0035	0.46		777.36	777.36	No	14.21	Si
SLU 78	fin.	-144.99	-562	-0.0003092	0.0001872	0.0035	0.46		780.23	780.23	No	5.38	Si
SLU 67	ini.	53.29	317	-0.0001038	0.0001872	0.0035	0.46		777.36	777.36	No	14.59	Si
SLU 67	fin.	-141.6	-561	-0.0003008	0.0001872	0.0035	0.46		780.23	780.23	No	5.51	Si
SLU 69	ini.	45.35	312	-0.0000878	0.0001872	0.0035	0.46		777.36	777.36	No	17.14	Si
SLU 69	fin.	-141.64	-542	-0.0003009	0.0001872	0.0035	0.46		780.23	780.23	No	5.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 57	ini.	51.62	-53	0.46	0	124	3648	1928	1173	3101	No	58.12	Si
SLU 57	fin.	-138.49	-895	0.46	0	124	3648	1928	1173	3101	No	3.46	Si
SLU 75	ini.	63.71	-107	0.46	0	124	3648	1928	1173	3101	No	29	Si
SLU 75	fin.	-145.84	-928	0.46	0	124	3648	1928	1173	3101	No	3.34	Si
SLU 78	ini.	54.7	-56	0.46	0	124	3648	1928	1173	3101	No	55.31	Si
SLU 78	fin.	-144.99	-941	0.46	0	124	3648	1928	1173	3101	No	3.3	Si
SLU 70	ini.	44.28	-10	0.46	0	124	3648	1928	1173	3101	No	299.54	Si
SLU 70	fin.	-140.75	-925	0.46	0	124	3648	1928	1173	3101	No	3.35	Si
SLU 56	ini.	52.69	-59	0.46	0	124	3648	1928	1173	3101	No	52.63	Si
SLU 56	fin.	-139.38	-898	0.46	0	124	3648	1928	1173	3101	No	3.45	Si
SLU 69	ini.	45.35	-16	0.46	0	124	3648	1928	1173	3101	No	194.84	Si
SLU 69	fin.	-141.64	-928	0.46	0	124	3648	1928	1173	3101	No	3.34	Si
SLU 67	ini.	53.29	-61	0.46	0	124	3648	1928	1173	3101	No	50.64	Si
SLU 67	fin.	-141.6	-912	0.46	0	124	3648	1928	1173	3101	No	3.4	Si
SLU 66	ini.	54.36	-67	0.46	0	124	3648	1928	1173	3101	No	46.43	Si
SLU 66	fin.	-142.49	-915	0.46	0	124	3648	1928	1173	3101	No	3.39	Si
SLU 74	ini.	64.78	-113	0.46	0	124	3648	1928	1173	3101	No	27.56	Si
SLU 74	fin.	-146.73	-931	0.46	0	124	3648	1928	1173	3101	No	3.33	Si
SLU 77	ini.	55.77	-62	0.46	0	124	3648	1928	1173	3101	No	50.32	Si
SLU 77	fin.	-145.88	-944	0.46	0	124	3648	1928	1173	3101	No	3.29	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	143.52	643	-0.000294	0.0002807	0.0035	0.46		785.44	785.44		5.47	Si
SLV 1	fin.	-46.67	-150	-0.0000892	0.0002807	0.0035	0.46		788.4	788.4		16.89	Si
SLV 9	ini.	-14.43	-111	-0.0000271	0.0002807	0.0035	0.46		788.4	788.4		54.65	Si
SLV 9	fin.	-159.81	-761	-0.0003304	0.0002807	0.0035	0.46		788.4	788.4		4.93	Si
SLV 14	ini.	-65.31	-301	-0.0001262	0.0002807	0.0035	0.46		788.4	788.4		12.07	Si
SLV 14	fin.	-178.62	-843	-0.0003752	0.0002807	0.0035	0.46		788.4	788.4		4.41	Si
SLV 13	ini.	-44.46	-222	-0.0000849	0.0002807	0.0035	0.46		788.4	788.4		17.73	Si
SLV 13	fin.	-192.83	-910	-0.0004101	0.0002807	0.0035	0.46		788.4	788.4		4.09	Si
SLD 13	ini.	11.16	47	-0.000021	0.0002807	0.0035	0.46		785.44	785.44		70.38	Si
SLD 13	fin.	-141.95	-642	-0.0002893	0.0002807	0.0035	0.46		788.4	788.4		5.55	Si
SLV 16	ini.	-37.85	-148	-0.000072	0.0002807	0.0035	0.46		788.4	788.4		20.83	Si
SLV 16	fin.	-160.9	-733	-0.000333	0.0002807	0.0035	0.46		788.4	788.4		4.9	Si
SLV 4	ini.	150.13	717	-0.0003092	0.0002807	0.0035	0.46		785.44	785.44		5.23	Si
SLV 4	fin.	-14.73	27	-0.0000277	0.0002807	0.0035	0.46		788.4	788.4		53.51	Si
SLV 15	ini.	-17	-69	-0.0000319	0.0002807	0.0035	0.46		788.4	788.4		46.39	Si
SLV 15	fin.	-175.12	-800	-0.0003668	0.0002807	0.0035	0.46		788.4	788.4		4.5	Si
SLV 10	ini.	-27.83	-162	-0.0000526	0.0002807	0.0035	0.46		788.4	788.4		28.33	Si
SLV 10	fin.	-150.67	-717	-0.0003092	0.0002807	0.0035	0.46		788.4	788.4		5.23	Si
SLV 3	ini.	170.98	796	-0.0003583	0.0002807	0.0035	0.46		785.44	785.44		4.59	Si
SLV 3	fin.	-28.95	-40	-0.0000548	0.0002807	0.0035	0.46		788.4	788.4		27.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	ini.	14.25	78	0.46	0	187	3648	2893	1173	3834		49.09	Si
SLD 16	fin.	-128.14	-749	0.46	0	187	3648	2893	1173	3834		5.12	Si
SLV 11	ini.	77.11	148	0.46	0	187	3648	2893	1173	3834		25.86	Si
SLV 11	fin.	-100.75	-925	0.46	0	187	3648	2893	1173	3834		4.14	Si
SLD 11	ini.	63.8	-3	0.46	0	187	3648	2893	1173	3834		1245.1	Si
SLD 11	fin.	-102.33	-765	0.46	0	187	3648	2893	1173	3834		5.01	Si
SLV 7	ini.	133.5	-69	0.46	0	187	3648	2893	1173	3834		55.31	Si
SLV 7	fin.	-56.9	-788	0.46	0	187	3648	2893	1173	3834		4.87	Si
SLV 14	ini.	-65.31	230	0.46	0	187	3648	2893	1173	3834		16.68	Si
SLV 14	fin.	-178.62	-778	0.46	0	187	3648	2893	1173	3834		4.93	Si
SLD 15	ini.	23.21	43	0.46	0	187	3648	2893	1173	3834		89.13	Si
SLD 15	fin.	-134.25	-782	0.46	0	187	3648	2893	1173	3834		4.91	Si
SLV 12	ini.	63.71	201	0.46	0	187	3648	2893	1173	3834		19.1	Si
SLV 12	fin.	-91.61	-877	0.46	0	187	3648	2893	1173	3834		4.37	Si
SLV 16	ini.	-37.85	340	0.46	0	187	3648	2893	1173	3834		11.27	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	fin.	-160.9	-891	0.46	0	187	3648	2893	1173	3834		4.3	Si
SLV 13	ini.	-44.46	148	0.46	0	187	3648	2893	1173	3834		25.89	Si
SLV 13	fin.	-192.83	-853	0.46	0	187	3648	2893	1173	3834		4.5	Si
SLV 15	ini.	-17	259	0.46	0	187	3648	2893	1173	3834		14.83	Si
SLV 15	fin.	-175.12	-966	0.46	0	187	3648	2893	1173	3834		3.97	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.088	SLV 13	Si
V_SLV	3.967	SLV 15	Si
PF_SLU	5.317	SLU 74	Si
V_SLU	3.285	SLU 77	Si

Trave di accoppiamento 150

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	11.86	12.76	0.9	-11.938	6.526	11.86	12.76	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	216.97	-1125	-0.0001109	0.0001872	0.0035	0.9		2959	2959	No	13.64	Si
SLU 83	fin.	-131.08	-437	-0.0000657	0.0001872	0.0035	0.9		2964.67	2964.67	No	22.62	Si
SLU 74	ini.	220.68	-1171	-0.0001129	0.0001872	0.0035	0.9		2959	2959	No	13.41	Si
SLU 74	fin.	-111.03	-500	-0.0000554	0.0001872	0.0035	0.9		2964.67	2964.67	No	26.7	Si
SLU 78	ini.	222.59	-1195	-0.000114	0.0001872	0.0035	0.9		2959	2959	No	13.29	Si
SLU 78	fin.	-101.27	-535	-0.0000504	0.0001872	0.0035	0.9		2964.67	2964.67	No	29.28	Si
SLU 81	ini.	213.13	-1093	-0.0001089	0.0001872	0.0035	0.9		2959	2959	No	13.88	Si
SLU 81	fin.	-138.97	-402	-0.0000697	0.0001872	0.0035	0.9		2964.67	2964.67	No	21.33	Si
SLU 82	ini.	211.19	-1085	-0.0001079	0.0001872	0.0035	0.9		2959	2959	No	14.01	Si
SLU 82	fin.	-137.1	-401	-0.0000688	0.0001872	0.0035	0.9		2964.67	2964.67	No	21.62	Si
SLU 80	ini.	212.65	-1136	-0.0001086	0.0001872	0.0035	0.9		2959	2959	No	13.91	Si
SLU 80	fin.	-103.31	-499	-0.0000515	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.7	Si
SLU 77	ini.	224.52	-1203	-0.000115	0.0001872	0.0035	0.9		2959	2959	No	13.18	Si
SLU 77	fin.	-103.14	-535	-0.0000514	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.74	Si
SLU 79	ini.	214.59	-1145	-0.0001097	0.0001872	0.0035	0.9		2959	2959	No	13.79	Si
SLU 79	fin.	-105.18	-499	-0.0000524	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.19	Si
SLU 75	ini.	218.74	-1163	-0.0001119	0.0001872	0.0035	0.9		2959	2959	No	13.53	Si
SLU 75	fin.	-109.16	-499	-0.0000544	0.0001872	0.0035	0.9		2964.67	2964.67	No	27.16	Si
SLU 84	ini.	215.03	-1117	-0.0001099	0.0001872	0.0035	0.9		2959	2959	No	13.76	Si
SLU 84	fin.	-129.21	-436	-0.0000647	0.0001872	0.0035	0.9		2964.67	2964.67	No	22.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	224.52	-1758	0.9	0	365	7137	3773	2295	6068	No	3.45	Si
SLU 77	fin.	-103.14	-343	0.9	0	365	7137	3773	2295	6068	No	17.67	Si
SLU 78	ini.	222.59	-1745	0.9	0	365	7137	3773	2295	6068	No	3.48	Si
SLU 78	fin.	-101.27	-337	0.9	0	365	7137	3773	2295	6068	No	18	Si
SLU 69	ini.	210	-1724	0.9	0	365	7137	3773	2295	6068	No	3.52	Si
SLU 69	fin.	-61.12	-193	0.9	0	365	7137	3773	2295	6068	No	31.39	Si
SLU 79	ini.	214.59	-1677	0.9	0	365	7137	3773	2295	6068	No	3.62	Si
SLU 79	fin.	-105.18	-354	0.9	0	365	7137	3773	2295	6068	No	17.12	Si
SLU 56	ini.	210.97	-1687	0.9	0	365	7137	3773	2295	6068	No	3.6	Si
SLU 56	fin.	-83.05	-278	0.9	0	365	7137	3773	2295	6068	No	21.83	Si
SLU 57	ini.	209.04	-1674	0.9	0	365	7137	3773	2295	6068	No	3.62	Si
SLU 57	fin.	-81.18	-272	0.9	0	365	7137	3773	2295	6068	No	22.34	Si
SLU 70	ini.	208.07	-1712	0.9	0	365	7137	3773	2295	6068	No	3.55	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	fin.	-59.25	-187	0.9	0	365	7137	3773	2295	6068	No	32.44	Si
SLU 80	ini.	212.65	-1664	0.9	0	365	7137	3773	2295	6068	No	3.65	Si
SLU 80	fin.	-103.31	-348	0.9	0	365	7137	3773	2295	6068	No	17.43	Si
SLU 75	ini.	218.74	-1683	0.9	0	365	7137	3773	2295	6068	No	3.61	Si
SLU 75	fin.	-109.16	-378	0.9	0	365	7137	3773	2295	6068	No	16.07	Si
SLU 74	ini.	220.68	-1695	0.9	0	365	7137	3773	2295	6068	No	3.58	Si
SLU 74	fin.	-111.03	-384	0.9	0	365	7137	3773	2295	6068	No	15.81	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	455.48	-2002	-0.0002397	0.0002807	0.0035	0.9		2989.59	2989.59		6.56	Si
SLV 10	fin.	-572.23	70	-0.0003077	0.0002807	0.0035	0.9		2995.37	2995.37		5.23	Si
SLV 15	ini.	746.75	-2919	-0.0004183	0.0002807	0.0035	0.9		2989.59	2989.59		4	Si
SLV 15	fin.	-1143.94	707	-0.0006996	0.0002807	0.0035	0.9		2995.37	2995.37		2.62	Si
SLV 2	ini.	-448.44	1307	-0.0002352	0.0002807	0.0035	0.9		2995.37	2995.37		6.68	Si
SLV 2	fin.	1007.31	-1431	-0.0005989	0.0002807	0.0035	0.9		2989.59	2989.59		2.97	Si
SLV 1	ini.	-450.17	1312	-0.0002362	0.0002807	0.0035	0.9		2995.37	2995.37		6.65	Si
SLV 1	fin.	1010.15	-1428	-0.0006009	0.0002807	0.0035	0.9		2989.59	2989.59		2.96	Si
SLV 3	ini.	-519.66	1619	-0.0002764	0.0002807	0.0035	0.9		2995.37	2995.37		5.76	Si
SLV 3	fin.	1109.17	-1490	-0.0006747	0.0002807	0.0035	0.9		2989.59	2989.59		2.7	Si
SLV 16	ini.	748.48	-2924	-0.0004194	0.0002807	0.0035	0.9		2989.59	2989.59		3.99	Si
SLV 16	fin.	-1146.79	704	-0.0007018	0.0002807	0.0035	0.9		2995.37	2995.37		2.61	Si
SLV 13	ini.	816.24	-3227	-0.0004646	0.0002807	0.0035	0.9		2989.59	2989.59		3.66	Si
SLV 13	fin.	-1242.96	769	-0.000777	0.0002807	0.0035	0.9		2995.37	2995.37		2.41	Si
SLV 4	ini.	-517.93	1614	-0.0002754	0.0002807	0.0035	0.9		2995.37	2995.37		5.78	Si
SLV 4	fin.	1106.33	-1492	-0.0006726	0.0002807	0.0035	0.9		2989.59	2989.59		2.7	Si
SLD 14	ini.	435.49	-1845	-0.0002283	0.0002807	0.0035	0.9		2989.59	2989.59		6.86	Si
SLD 14	fin.	-572.24	121	-0.0003077	0.0002807	0.0035	0.9		2995.37	2995.37		5.23	Si
SLV 14	ini.	817.97	-3232	-0.0004657	0.0002807	0.0035	0.9		2989.59	2989.59		3.65	Si
SLV 14	fin.	-1245.81	766	-0.0007793	0.0002807	0.0035	0.9		2995.37	2995.37		2.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	454.37	-2904	0.9	0	548	7137	5660	2295	7684		2.65	Si
SLV 9	fin.	-570.4	-1988	0.9	0	548	7137	5660	2295	7684		3.87	Si
SLV 16	ini.	748.48	-4552	0.9	0	548	7137	5660	2295	7684		1.69	Si
SLV 16	fin.	-1146.79	-3793	0.9	0	548	7137	5660	2295	7684		2.03	Si
SLV 13	ini.	816.24	-4966	0.9	0	548	7137	5660	2295	7684		1.55	Si
SLV 13	fin.	-1242.96	-4157	0.9	0	548	7137	5660	2295	7684		1.85	Si
SLV 4	ini.	-517.93	2642	0.9	0	548	7137	5660	2295	7684		2.91	Si
SLV 4	fin.	1106.33	3661	0.9	0	548	7137	5660	2295	7684		2.1	Si
SLV 3	ini.	-519.66	2621	0.9	0	548	7137	5660	2295	7684		2.93	Si
SLV 3	fin.	1109.17	3673	0.9	0	548	7137	5660	2295	7684		2.09	Si
SLV 1	ini.	-450.17	2227	0.9	0	548	7137	5660	2295	7684		3.45	Si
SLV 1	fin.	1010.15	3298	0.9	0	548	7137	5660	2295	7684		2.33	Si
SLV 2	ini.	-448.44	2249	0.9	0	548	7137	5660	2295	7684		3.42	Si
SLV 2	fin.	1007.31	3286	0.9	0	548	7137	5660	2295	7684		2.34	Si
SLV 10	ini.	455.48	-2890	0.9	0	548	7137	5660	2295	7684		2.66	Si
SLV 10	fin.	-572.23	-1995	0.9	0	548	7137	5660	2295	7684		3.85	Si
SLV 14	ini.	817.97	-4945	0.9	0	548	7137	5660	2295	7684		1.55	Si
SLV 14	fin.	-1245.81	-4169	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 15	ini.	746.75	-4573	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 15	fin.	-1143.94	-3782	0.9	0	548	7137	5660	2295	7684		2.03	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.404	SLV 14	Si
V_SLV	1.547	SLV 13	Si
PF_SLU	13.179	SLU 77	Si
V_SLU	3.452	SLU 77	Si

Trave di accoppiamento 151

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	14.56	15.02	0.46	-11.938	6.526	14.56	15.02	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-45.78	95	-0.0000883	0.0001872	0.0035	0.46		780.23	780.23	No	17.04	Si
SLU 70	fin.	-168.69	-302	-0.0003692	0.0001872	0.0035	0.46		780.23	780.23	No	4.63	Si
SLU 83	ini.	-14.7	215	-0.0000277	0.0001872	0.0035	0.46		780.23	780.23	No	53.07	Si
SLU 83	fin.	-166.72	-328	-0.0003642	0.0001872	0.0035	0.46		780.23	780.23	No	4.68	Si
SLU 80	ini.	-30.74	167	-0.0000586	0.0001872	0.0035	0.46		780.23	780.23	No	25.38	Si
SLU 80	fin.	-172.35	-313	-0.0003787	0.0001872	0.0035	0.46		780.23	780.23	No	4.53	Si
SLU 75	ini.	-23.94	176	-0.0000454	0.0001872	0.0035	0.46		780.23	780.23	No	32.6	Si
SLU 75	fin.	-167.98	-329	-0.0003674	0.0001872	0.0035	0.46		780.23	780.23	No	4.64	Si
SLU 78	ini.	-34.43	160	-0.0000658	0.0001872	0.0035	0.46		780.23	780.23	No	22.66	Si
SLU 78	fin.	-179.68	-332	-0.0003979	0.0001872	0.0035	0.46		780.23	780.23	No	4.34	Si
SLU 84	ini.	-15.38	211	-0.000029	0.0001872	0.0035	0.46		780.23	780.23	No	50.72	Si
SLU 84	fin.	-165.36	-323	-0.0003607	0.0001872	0.0035	0.46		780.23	780.23	No	4.72	Si
SLU 74	ini.	-23.25	179	-0.0000441	0.0001872	0.0035	0.46		780.23	780.23	No	33.55	Si
SLU 74	fin.	-169.35	-334	-0.0003709	0.0001872	0.0035	0.46		780.23	780.23	No	4.61	Si
SLU 69	ini.	-45.09	99	-0.0000869	0.0001872	0.0035	0.46		780.23	780.23	No	17.3	Si
SLU 69	fin.	-170.05	-307	-0.0003728	0.0001872	0.0035	0.46		780.23	780.23	No	4.59	Si
SLU 77	ini.	-33.75	163	-0.0000645	0.0001872	0.0035	0.46		780.23	780.23	No	23.12	Si
SLU 77	fin.	-181.04	-337	-0.0004015	0.0001872	0.0035	0.46		780.23	780.23	No	4.31	Si
SLU 79	ini.	-30.06	171	-0.0000573	0.0001872	0.0035	0.46		780.23	780.23	No	25.96	Si
SLU 79	fin.	-173.71	-318	-0.0003823	0.0001872	0.0035	0.46		780.23	780.23	No	4.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-23.25	423	0.46	0	124	3648	1928	1173	3101	No	7.34	Si
SLU 74	fin.	-169.35	-970	0.46	0	124	3648	1928	1173	3101	No	3.2	Si
SLU 69	ini.	-45.09	556	0.46	0	124	3648	1928	1173	3101	No	5.58	Si
SLU 69	fin.	-170.05	-995	0.46	0	124	3648	1928	1173	3101	No	3.12	Si
SLU 78	ini.	-34.43	508	0.46	0	124	3648	1928	1173	3101	No	6.1	Si
SLU 78	fin.	-179.68	-1040	0.46	0	124	3648	1928	1173	3101	No	2.98	Si
SLU 70	ini.	-45.78	559	0.46	0	124	3648	1928	1173	3101	No	5.54	Si
SLU 70	fin.	-168.69	-989	0.46	0	124	3648	1928	1173	3101	No	3.13	Si
SLU 79	ini.	-30.06	474	0.46	0	124	3648	1928	1173	3101	No	6.54	Si
SLU 79	fin.	-173.71	-1008	0.46	0	124	3648	1928	1173	3101	No	3.08	Si
SLU 80	ini.	-30.74	477	0.46	0	124	3648	1928	1173	3101	No	6.5	Si
SLU 80	fin.	-172.35	-1002	0.46	0	124	3648	1928	1173	3101	No	3.1	Si
SLU 77	ini.	-33.75	505	0.46	0	124	3648	1928	1173	3101	No	6.14	Si
SLU 77	fin.	-181.04	-1046	0.46	0	124	3648	1928	1173	3101	No	2.96	Si
SLU 75	ini.	-23.94	426	0.46	0	124	3648	1928	1173	3101	No	7.28	Si
SLU 75	fin.	-167.98	-964	0.46	0	124	3648	1928	1173	3101	No	3.22	Si
SLU 56	ini.	-32.65	471	0.46	0	124	3648	1928	1173	3101	No	6.59	Si
SLU 56	fin.	-164.71	-953	0.46	0	124	3648	1928	1173	3101	No	3.25	Si
SLU 71	ini.	-41.4	525	0.46	0	124	3648	1928	1173	3101	No	5.91	Si
SLU 71	fin.	-162.71	-957	0.46	0	124	3648	1928	1173	3101	No	3.24	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-307.36	-1295	-0.0007216	0.0002807	0.0035	0.46		788.4	788.4		2.57	Si
SLV 3	fin.	241.83	1143	-0.0005391	0.0002807	0.0035	0.46		785.44	785.44		3.25	Si
SLV 14	ini.	282.93	1533	-0.0006535	0.0002807	0.0035	0.46		785.44	785.44		2.78	Si
SLV 14	fin.	-455.29	-1584	-0.0012118	0.0002807	0.0035	0.46		788.4	788.4		1.73	Si
SLV 9	ini.	130.23	731	-0.0002641	0.0002807	0.0035	0.46		785.44	785.44		6.03	Si
SLV 9	fin.	-268.07	-909	-0.0006087	0.0002807	0.0035	0.46		788.4	788.4		2.94	Si
SLV 10	ini.	126.75	713	-0.0002563	0.0002807	0.0035	0.46		785.44	785.44		6.2	Si
SLV 10	fin.	-264.41	-897	-0.0005985	0.0002807	0.0035	0.46		788.4	788.4		2.98	Si
SLV 1	ini.	-273.5	-1180	-0.0006239	0.0002807	0.0035	0.46		788.4	788.4		2.88	Si
SLV 1	fin.	206.17	965	-0.0004455	0.0002807	0.0035	0.46		785.44	785.44		3.81	Si
SLV 13	ini.	288.34	1561	-0.0006691	0.0002807	0.0035	0.46		785.44	785.44		2.72	Si
SLV 13	fin.	-460.97	-1603	-0.0012332	0.0002807	0.0035	0.46		788.4	788.4		1.71	Si
SLV 16	ini.	249.07	1419	-0.0005588	0.0002807	0.0035	0.46		785.44	785.44		3.15	Si
SLV 16	fin.	-419.62	-1405	-0.0010829	0.0002807	0.0035	0.46		788.4	788.4		1.88	Si
SLV 4	ini.	-312.77	-1323	-0.0007377	0.0002807	0.0035	0.46		788.4	788.4		2.52	Si
SLV 4	fin.	247.52	1163	-0.0005545	0.0002807	0.0035	0.46		785.44	785.44		3.17	Si
SLV 15	ini.	254.48	1447	-0.0005736	0.0002807	0.0035	0.46		785.44	785.44		3.09	Si
SLV 15	fin.	-425.31	-1424	-0.0011029	0.0002807	0.0035	0.46		788.4	788.4		1.85	Si
SLV 2	ini.	-278.91	-1209	-0.0006392	0.0002807	0.0035	0.46		788.4	788.4		2.83	Si
SLV 2	fin.	211.85	984	-0.00046	0.0002807	0.0035	0.46		785.44	785.44		3.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	130.23	-432	0.46	0	187	3648	2893	1173	3834		8.88	Si
SLV 9	fin.	-268.07	-1293	0.46	0	187	3648	2893	1173	3834		2.97	Si
SLV 16	ini.	249.07	-1066	0.46	0	187	3648	2893	1173	3834		3.6	Si
SLV 16	fin.	-419.62	-1906	0.46	0	187	3648	2893	1173	3834		2.01	Si
SLV 10	ini.	126.75	-415	0.46	0	187	3648	2893	1173	3834		9.24	Si
SLV 10	fin.	-264.41	-1277	0.46	0	187	3648	2893	1173	3834		3	Si
SLV 14	ini.	282.93	-1219	0.46	0	187	3648	2893	1173	3834		3.14	Si
SLV 14	fin.	-455.29	-2061	0.46	0	187	3648	2893	1173	3834		1.86	Si
SLV 3	ini.	-307.36	1728	0.46	0	187	3648	2893	1173	3834		2.22	Si
SLV 3	fin.	241.83	836	0.46	0	187	3648	2893	1173	3834		4.59	Si
SLV 15	ini.	254.48	-1092	0.46	0	187	3648	2893	1173	3834		3.51	Si
SLV 15	fin.	-425.31	-1931	0.46	0	187	3648	2893	1173	3834		1.99	Si
SLV 4	ini.	-312.77	1754	0.46	0	187	3648	2893	1173	3834		2.19	Si
SLV 4	fin.	247.52	861	0.46	0	187	3648	2893	1173	3834		4.45	Si
SLV 13	ini.	288.34	-1245	0.46	0	187	3648	2893	1173	3834		3.08	Si
SLV 13	fin.	-460.97	-2085	0.46	0	187	3648	2893	1173	3834		1.84	Si
SLV 1	ini.	-273.5	1575	0.46	0	187	3648	2893	1173	3834		2.43	Si
SLV 1	fin.	206.17	681	0.46	0	187	3648	2893	1173	3834		5.63	Si
SLV 2	ini.	-278.91	1601	0.46	0	187	3648	2893	1173	3834		2.39	Si
SLV 2	fin.	211.85	706	0.46	0	187	3648	2893	1173	3834		5.43	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.71	SLV 13	Si
V_SLV	1.839	SLV 13	Si
PF_SLU	4.31	SLU 77	Si
V_SLU	2.964	SLU 77	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	11.86	12.76	0.9	-7.058	6.526	11.86	12.76	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 47	ini.	-45.41	-421	-0.0000224	0.0001872	0.0035	0.9		2964.67	2964.67	No	65.28	Si
SLU 47	fin.	159.2	-792	-0.0000804	0.0001872	0.0035	0.9		2959	2959	No	18.59	Si
SLU 43	ini.	-61.86	-382	-0.0000306	0.0001872	0.0035	0.9		2964.67	2964.67	No	47.93	Si
SLU 43	fin.	163.3	-794	-0.0000825	0.0001872	0.0035	0.9		2959	2959	No	18.12	Si
SLU 67	ini.	-29.07	-474	-0.0000143	0.0001872	0.0035	0.9		2964.67	2964.67	No	101.97	Si
SLU 67	fin.	153.54	-789	-0.0000774	0.0001872	0.0035	0.9		2959	2959	No	19.27	Si
SLU 64	ini.	-51.96	-407	-0.0000256	0.0001872	0.0035	0.9		2964.67	2964.67	No	57.06	Si
SLU 64	fin.	155.69	-772	-0.0000786	0.0001872	0.0035	0.9		2959	2959	No	19.01	Si
SLU 65	ini.	-57.94	-398	-0.0000286	0.0001872	0.0035	0.9		2964.67	2964.67	No	51.17	Si
SLU 65	fin.	159.22	-783	-0.0000804	0.0001872	0.0035	0.9		2959	2959	No	18.58	Si
SLU 52	ini.	-71.24	-354	-0.0000353	0.0001872	0.0035	0.9		2964.67	2964.67	No	41.61	Si
SLU 52	fin.	158.04	-762	-0.0000798	0.0001872	0.0035	0.9		2959	2959	No	18.72	Si
SLU 49	ini.	-16.55	-497	-0.0000081	0.0001872	0.0035	0.9		2964.67	2964.67	No	179.18	Si
SLU 49	fin.	153.51	-798	-0.0000774	0.0001872	0.0035	0.9		2959	2959	No	19.28	Si
SLU 44	ini.	-67.84	-373	-0.0000336	0.0001872	0.0035	0.9		2964.67	2964.67	No	43.7	Si
SLU 44	fin.	166.83	-805	-0.0000844	0.0001872	0.0035	0.9		2959	2959	No	17.74	Si
SLU 45	ini.	-35.38	-454	-0.0000174	0.0001872	0.0035	0.9		2964.67	2964.67	No	83.79	Si
SLU 45	fin.	159.03	-804	-0.0000803	0.0001872	0.0035	0.9		2959	2959	No	18.61	Si
SLU 46	ini.	-38.97	-448	-0.0000192	0.0001872	0.0035	0.9		2964.67	2964.67	No	76.07	Si
SLU 46	fin.	161.14	-811	-0.0000814	0.0001872	0.0035	0.9		2959	2959	No	18.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 46	ini.	-38.97	90	0.9	0	365	7137	3773	2295	6068	No	67.17	Si
SLU 46	fin.	161.14	1118	0.9	0	365	7137	3773	2295	6068	No	5.43	Si
SLU 49	ini.	-16.55	1	0.9	0	365	7137	3773	2295	6068	No	5317.24	Si
SLU 49	fin.	153.51	1092	0.9	0	365	7137	3773	2295	6068	No	5.55	Si
SLU 43	ini.	-61.86	197	0.9	0	365	7137	3773	2295	6068	No	30.82	Si
SLU 43	fin.	163.3	1083	0.9	0	365	7137	3773	2295	6068	No	5.6	Si
SLU 67	ini.	-29.07	70	0.9	0	365	7137	3773	2295	6068	No	87.22	Si
SLU 67	fin.	153.54	1038	0.9	0	365	7137	3773	2295	6068	No	5.84	Si
SLU 47	ini.	-45.41	129	0.9	0	365	7137	3773	2295	6068	No	46.95	Si
SLU 47	fin.	159.2	1077	0.9	0	365	7137	3773	2295	6068	No	5.63	Si
SLU 50	ini.	-17	18	0.9	0	365	7137	3773	2295	6068	No	328.23	Si
SLU 50	fin.	148.04	1032	0.9	0	365	7137	3773	2295	6068	No	5.88	Si
SLU 48	ini.	-12.95	-12	0.9	0	365	7137	3773	2295	6068	No	514.7	Si
SLU 48	fin.	151.4	1081	0.9	0	365	7137	3773	2295	6068	No	5.61	Si
SLU 51	ini.	-20.59	31	0.9	0	365	7137	3773	2295	6068	No	193.14	Si
SLU 51	fin.	150.16	1043	0.9	0	365	7137	3773	2295	6068	No	5.82	Si
SLU 44	ini.	-67.84	218	0.9	0	365	7137	3773	2295	6068	No	27.78	Si
SLU 44	fin.	166.83	1103	0.9	0	365	7137	3773	2295	6068	No	5.5	Si
SLU 45	ini.	-35.38	77	0.9	0	365	7137	3773	2295	6068	No	78.38	Si
SLU 45	fin.	159.03	1106	0.9	0	365	7137	3773	2295	6068	No	5.48	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	700.05	-903	-0.000388	0.0002807	0.0035	0.9		2989.59	2989.59		4.27	Si
SLV 16	fin.	-482.11	1560	-0.0002545	0.0002807	0.0035	0.9		2995.37	2995.37		6.21	Si
SLV 2	ini.	-774.63	316	-0.0004357	0.0002807	0.0035	0.9		2995.37	2995.37		3.87	Si
SLV 2	fin.	700.18	-2644	-0.000388	0.0002807	0.0035	0.9		2989.59	2989.59		4.27	Si
SLV 3	ini.	-854.62	393	-0.0004896	0.0002807	0.0035	0.9		2995.37	2995.37		3.5	Si
SLV 3	fin.	774.96	-2870	-0.0004369	0.0002807	0.0035	0.9		2989.59	2989.59		3.86	Si
SLV 1	ini.	-786.28	299	-0.0004435	0.0002807	0.0035	0.9		2995.37	2995.37		3.81	Si
SLV 1	fin.	719.96	-2733	-0.0004008	0.0002807	0.0035	0.9		2989.59	2989.59		4.15	Si
SLV 13	ini.	756.74	-1015	-0.0004248	0.0002807	0.0035	0.9		2989.59	2989.59		3.95	Si
SLV 13	fin.	-517.33	1608	-0.000275	0.0002807	0.0035	0.9		2995.37	2995.37		5.79	Si
SLV 14	ini.	768.39	-998	-0.0004325	0.0002807	0.0035	0.9		2989.59	2989.59		3.89	Si
SLV 14	fin.	-537.11	1697	-0.0002867	0.0002807	0.0035	0.9		2995.37	2995.37		5.58	Si
SLV 4	ini.	-842.97	411	-0.0004817	0.0002807	0.0035	0.9		2995.37	2995.37		3.55	Si
SLV 4	fin.	755.18	-2781	-0.0004238	0.0002807	0.0035	0.9		2989.59	2989.59		3.96	Si
SLD 3	ini.	-390.19	-4	-0.0002025	0.0002807	0.0035	0.9		2995.37	2995.37		7.68	Si
SLD 3	fin.	399.45	-1563	-0.0002081	0.0002807	0.0035	0.9		2989.59	2989.59		7.48	Si
SLV 15	ini.	688.4	-920	-0.0003805	0.0002807	0.0035	0.9		2989.59	2989.59		4.34	Si
SLV 15	fin.	-462.33	1471	-0.0002432	0.0002807	0.0035	0.9		2995.37	2995.37		6.48	Si
SLV 7	ini.	-392.21	47	-0.0002036	0.0002807	0.0035	0.9		2995.37	2995.37		7.64	Si
SLV 7	fin.	402.54	-1495	-0.0002098	0.0002807	0.0035	0.9		2989.59	2989.59		7.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-854.62	3138	0.9	0	548	7137	5660	2295	7684		2.45	Si
SLV 3	fin.	774.96	4200	0.9	0	548	7137	5660	2295	7684		1.83	Si
SLV 4	ini.	-842.97	3086	0.9	0	548	7137	5660	2295	7684		2.49	Si
SLV 4	fin.	755.18	4106	0.9	0	548	7137	5660	2295	7684		1.87	Si
SLV 8	ini.	-384.73	1214	0.9	0	548	7137	5660	2295	7684		6.33	Si
SLV 8	fin.	389.82	2278	0.9	0	548	7137	5660	2295	7684		3.37	Si
SLV 15	ini.	688.4	-2656	0.9	0	548	7137	5660	2295	7684		2.89	Si
SLV 15	fin.	-462.33	-2242	0.9	0	548	7137	5660	2295	7684		3.43	Si
SLV 14	ini.	768.39	-2834	0.9	0	548	7137	5660	2295	7684		2.71	Si
SLV 14	fin.	-537.11	-2688	0.9	0	548	7137	5660	2295	7684		2.86	Si
SLV 7	ini.	-392.21	1248	0.9	0	548	7137	5660	2295	7684		6.16	Si
SLV 7	fin.	402.54	2339	0.9	0	548	7137	5660	2295	7684		3.29	Si
SLV 1	ini.	-786.28	3011	0.9	0	548	7137	5660	2295	7684		2.55	Si
SLV 1	fin.	719.96	3849	0.9	0	548	7137	5660	2295	7684		2	Si
SLV 16	ini.	700.05	-2708	0.9	0	548	7137	5660	2295	7684		2.84	Si
SLV 16	fin.	-482.11	-2337	0.9	0	548	7137	5660	2295	7684		3.29	Si
SLV 2	ini.	-774.63	2960	0.9	0	548	7137	5660	2295	7684		2.6	Si
SLV 2	fin.	700.18	3754	0.9	0	548	7137	5660	2295	7684		2.05	Si
SLV 13	ini.	756.74	-2782	0.9	0	548	7137	5660	2295	7684		2.76	Si
SLV 13	fin.	-517.33	-2594	0.9	0	548	7137	5660	2295	7684		2.96	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.505	SLV 3	Si
V_SLV	1.829	SLV 3	Si
PF_SLU	17.737	SLU 44	Si
V_SLU	5.427	SLU 46	Si

Trave di accoppiamento 153

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	14.56	15.02	0.46	-7.058	6.526	14.56	15.02	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-102.48	-511	-0.0002084	0.0001872	0.0035	0.46		780.23	780.23	No	7.61	Si
SLU 70	fin.	-2.86	158	-0.0000053	0.0001872	0.0035	0.46		780.23	780.23	No	272.55	Si
SLU 54	ini.	-98.68	-496	-0.0001999	0.0001872	0.0035	0.46		780.23	780.23	No	7.91	Si
SLU 54	fin.	9.2	189	-0.0000173	0.0001872	0.0035	0.46		777.36	777.36	No	84.48	Si
SLU 67	ini.	-102.8	-516	-0.0002092	0.0001872	0.0035	0.46		780.23	780.23	No	7.59	Si
SLU 67	fin.	4.68	179	-0.0000088	0.0001872	0.0035	0.46		777.36	777.36	No	166.02	Si
SLU 48	ini.	-101.47	-514	-0.0002062	0.0001872	0.0035	0.46		780.23	780.23	No	7.69	Si
SLU 48	fin.	0.56	155	-0.000001	0.0001872	0.0035	0.46		777.36	777.36	No	1399.95	Si
SLU 49	ini.	-102.43	-519	-0.0002083	0.0001872	0.0035	0.46		780.23	780.23	No	7.62	Si
SLU 49	fin.	1.42	160	-0.0000027	0.0001872	0.0035	0.46		777.36	777.36	No	546.02	Si
SLU 45	ini.	-101.79	-520	-0.0002069	0.0001872	0.0035	0.46		780.23	780.23	No	7.67	Si
SLU 45	fin.	8.1	176	-0.0000152	0.0001872	0.0035	0.46		777.36	777.36	No	95.97	Si
SLU 75	ini.	-98.72	-488	-0.0002	0.0001872	0.0035	0.46		780.23	780.23	No	7.9	Si
SLU 75	fin.	4.92	187	-0.0000092	0.0001872	0.0035	0.46		777.36	777.36	No	158.16	Si
SLU 66	ini.	-101.83	-511	-0.000207	0.0001872	0.0035	0.46		780.23	780.23	No	7.66	Si
SLU 66	fin.	3.81	174	-0.0000071	0.0001872	0.0035	0.46		777.36	777.36	No	203.82	Si
SLU 46	ini.	-102.76	-525	-0.0002091	0.0001872	0.0035	0.46		780.23	780.23	No	7.59	Si
SLU 46	fin.	8.97	181	-0.0000169	0.0001872	0.0035	0.46		777.36	777.36	No	86.67	Si
SLU 69	ini.	-101.51	-506	-0.0002062	0.0001872	0.0035	0.46		780.23	780.23	No	7.69	Si
SLU 69	fin.	-3.73	154	-0.000007	0.0001872	0.0035	0.46		780.23	780.23	No	209.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 67	ini.	-102.8	1115	0.46	0	124	3648	1928	1173	3101	No	2.78	Si
SLU 67	fin.	4.68	-291	0.46	0	124	3648	1928	1173	3101	No	10.67	Si
SLU 49	ini.	-102.43	1106	0.46	0	124	3648	1928	1173	3101	No	2.8	Si
SLU 49	fin.	1.42	-302	0.46	0	124	3648	1928	1173	3101	No	10.26	Si
SLU 48	ini.	-101.47	1099	0.46	0	124	3648	1928	1173	3101	No	2.82	Si
SLU 48	fin.	0.56	-306	0.46	0	124	3648	1928	1173	3101	No	10.15	Si
SLU 77	ini.	-97.43	1118	0.46	0	124	3648	1928	1173	3101	No	2.77	Si
SLU 77	fin.	-3.5	-354	0.46	0	124	3648	1928	1173	3101	No	8.77	Si
SLU 74	ini.	-97.75	1091	0.46	0	124	3648	1928	1173	3101	No	2.84	Si
SLU 74	fin.	4.05	-297	0.46	0	124	3648	1928	1173	3101	No	10.43	Si
SLU 75	ini.	-98.72	1097	0.46	0	124	3648	1928	1173	3101	No	2.83	Si
SLU 75	fin.	4.92	-294	0.46	0	124	3648	1928	1173	3101	No	10.55	Si
SLU 66	ini.	-101.83	1109	0.46	0	124	3648	1928	1173	3101	No	2.8	Si
SLU 66	fin.	3.81	-294	0.46	0	124	3648	1928	1173	3101	No	10.55	Si
SLU 69	ini.	-101.51	1136	0.46	0	124	3648	1928	1173	3101	No	2.73	Si
SLU 69	fin.	-3.73	-350	0.46	0	124	3648	1928	1173	3101	No	8.85	Si
SLU 70	ini.	-102.48	1143	0.46	0	124	3648	1928	1173	3101	No	2.71	Si
SLU 70	fin.	-2.86	-347	0.46	0	124	3648	1928	1173	3101	No	8.94	Si
SLU 78	ini.	-98.4	1125	0.46	0	124	3648	1928	1173	3101	No	2.76	Si
SLU 78	fin.	-2.63	-350	0.46	0	124	3648	1928	1173	3101	No	8.85	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 1	ini.	-158.26	-880	-0.0003268	0.0002807	0.0035	0.46		788.4	788.4		4.98	Si
SLD 1	fin.	69.69	376	-0.0001356	0.0002807	0.0035	0.46		785.44	785.44		11.27	Si
SLD 3	ini.	-167.09	-919	-0.0003476	0.0002807	0.0035	0.46		788.4	788.4		4.72	Si
SLD 3	fin.	77.52	414	-0.0001516	0.0002807	0.0035	0.46		785.44	785.44		10.13	Si
SLV 7	ini.	-169.57	-892	-0.0003535	0.0002807	0.0035	0.46		788.4	788.4		4.65	Si
SLV 7	fin.	84.5	464	-0.0001659	0.0002807	0.0035	0.46		785.44	785.44		9.3	Si
SLD 2	ini.	-157.84	-875	-0.0003258	0.0002807	0.0035	0.46		788.4	788.4		4.99	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 2	fin.	70.88	385	-0.000138	0.0002807	0.0035	0.46		785.44	785.44		11.08	Si
SLD 4	ini.	-166.67	-914	-0.0003466	0.0002807	0.0035	0.46		788.4	788.4		4.73	Si
SLD 4	fin.	78.72	424	-0.000154	0.0002807	0.0035	0.46		785.44	785.44		9.98	Si
SLV 1	ini.	-273.62	-1567	-0.0006243	0.0002807	0.0035	0.46		788.4	788.4		2.88	Si
SLV 1	fin.	147.83	676	-0.0003039	0.0002807	0.0035	0.46		785.44	785.44		5.31	Si
SLV 2	ini.	-272.64	-1557	-0.0006215	0.0002807	0.0035	0.46		788.4	788.4		2.89	Si
SLV 2	fin.	150.61	699	-0.0003103	0.0002807	0.0035	0.46		785.44	785.44		5.21	Si
SLV 3	ini.	-293.81	-1657	-0.000682	0.0002807	0.0035	0.46		788.4	788.4		2.68	Si
SLV 3	fin.	165.76	764	-0.0003458	0.0002807	0.0035	0.46		785.44	785.44		4.74	Si
SLV 4	ini.	-292.84	-1647	-0.0006791	0.0002807	0.0035	0.46		788.4	788.4		2.69	Si
SLV 4	fin.	168.54	787	-0.0003525	0.0002807	0.0035	0.46		785.44	785.44		4.66	Si
SLV 8	ini.	-168.94	-885	-0.000352	0.0002807	0.0035	0.46		788.4	788.4		4.67	Si
SLV 8	fin.	86.29	479	-0.0001697	0.0002807	0.0035	0.46		785.44	785.44		9.1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 2	ini.	-157.84	1234	0.46	0	187	3648	2893	1173	3834		3.11	Si
SLD 2	fin.	70.88	144	0.46	0	187	3648	2893	1173	3834		26.68	Si
SLV 2	ini.	-272.64	1875	0.46	0	187	3648	2893	1173	3834		2.05	Si
SLV 2	fin.	150.61	534	0.46	0	187	3648	2893	1173	3834		7.18	Si
SLD 3	ini.	-167.09	1282	0.46	0	187	3648	2893	1173	3834		2.99	Si
SLD 3	fin.	77.52	176	0.46	0	187	3648	2893	1173	3834		21.78	Si
SLD 1	ini.	-158.26	1231	0.46	0	187	3648	2893	1173	3834		3.12	Si
SLD 1	fin.	69.69	142	0.46	0	187	3648	2893	1173	3834		26.96	Si
SLV 4	ini.	-292.84	1992	0.46	0	187	3648	2893	1173	3834		1.93	Si
SLV 4	fin.	168.54	611	0.46	0	187	3648	2893	1173	3834		6.27	Si
SLV 3	ini.	-293.81	1984	0.46	0	187	3648	2893	1173	3834		1.93	Si
SLV 3	fin.	165.76	608	0.46	0	187	3648	2893	1173	3834		6.31	Si
SLD 4	ini.	-166.67	1285	0.46	0	187	3648	2893	1173	3834		2.98	Si
SLD 4	fin.	78.72	178	0.46	0	187	3648	2893	1173	3834		21.6	Si
SLV 1	ini.	-273.62	1867	0.46	0	187	3648	2893	1173	3834		2.05	Si
SLV 1	fin.	147.83	531	0.46	0	187	3648	2893	1173	3834		7.23	Si
SLV 7	ini.	-169.57	1301	0.46	0	187	3648	2893	1173	3834		2.95	Si
SLV 7	fin.	84.5	196	0.46	0	187	3648	2893	1173	3834		19.53	Si
SLV 8	ini.	-168.94	1305	0.46	0	187	3648	2893	1173	3834		2.94	Si
SLV 8	fin.	86.29	199	0.46	0	187	3648	2893	1173	3834		19.31	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.683	SLV 3	Si
V_SLV	1.925	SLV 4	Si
PF_SLU	7.59	SLU 67	Si
V_SLU	2.714	SLU 70	Si

Trave di accoppiamento 154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.643	1.006	13.96	15.02	1.06	-19.443	1.006	13.96	15.02	1.06	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-1.19	-699	-0.0000004	0.0002246	0.0035	1.06		4210.93	4210.93	No	3534.83	Si
SLU 83	fin.	-241.5	-1043	-0.0000876	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.44	Si
SLU 84	ini.	-6.11	-709	-0.0000022	0.0002246	0.0035	1.06		4210.93	4210.93	No	689.45	Si
SLU 84	fin.	-235.77	-1032	-0.0000855	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.86	Si
SLU 77	ini.	-31.02	-904	-0.000011	0.0002246	0.0035	1.06		4210.93	4210.93	No	135.75	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-258.22	-1189	-0.0000939	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.31	Si
SLU 32	ini.	21.09	-598	-0.0000075	0.0002246	0.0035	1.06		4204.29	4204.29	No	199.38	Si
SLU 32	fin.	-239.5	-994	-0.0000868	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.58	Si
SLU 41	ini.	45.08	-468	-0.000016	0.0002246	0.0035	1.06		4204.29	4204.29	No	93.26	Si
SLU 41	fin.	-238.73	-914	-0.0000866	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.64	Si
SLU 74	ini.	-25.19	-829	-0.0000089	0.0002246	0.0035	1.06		4210.93	4210.93	No	167.2	Si
SLU 74	fin.	-242.28	-1123	-0.0000879	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.38	Si
SLU 75	ini.	-30.1	-839	-0.0000106	0.0002246	0.0035	1.06		4210.93	4210.93	No	139.89	Si
SLU 75	fin.	-236.55	-1112	-0.0000857	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.8	Si
SLU 35	ini.	15.25	-673	-0.0000054	0.0002246	0.0035	1.06		4204.29	4204.29	No	275.66	Si
SLU 35	fin.	-255.44	-1061	-0.0000928	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.48	Si
SLU 78	ini.	-35.94	-914	-0.0000127	0.0002246	0.0035	1.06		4210.93	4210.93	No	117.18	Si
SLU 78	fin.	-252.49	-1179	-0.0000917	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.68	Si
SLU 36	ini.	10.34	-683	-0.0000036	0.0002246	0.0035	1.06		4204.29	4204.29	No	406.79	Si
SLU 36	fin.	-249.71	-1050	-0.0000907	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-1.19	798	1.06	0	430	6344	5333	2703	6774	No	8.49	Si
SLU 83	fin.	-241.5	-2023	1.06	0	430	6344	5333	2703	6774	No	3.35	Si
SLU 36	ini.	10.34	704	1.06	0	430	6344	5333	2703	6774	No	9.62	Si
SLU 36	fin.	-249.71	-2073	1.06	0	430	6344	5333	2703	6774	No	3.27	Si
SLU 84	ini.	-6.11	824	1.06	0	430	6344	5333	2703	6774	No	8.22	Si
SLU 84	fin.	-235.77	-1994	1.06	0	430	6344	5333	2703	6774	No	3.4	Si
SLU 80	ini.	-47.95	1052	1.06	0	430	6344	5333	2703	6774	No	6.44	Si
SLU 80	fin.	-218.31	-1986	1.06	0	430	6344	5333	2703	6774	No	3.41	Si
SLU 78	ini.	-35.94	1080	1.06	0	430	6344	5333	2703	6774	No	6.27	Si
SLU 78	fin.	-252.49	-2204	1.06	0	430	6344	5333	2703	6774	No	3.07	Si
SLU 79	ini.	-43.03	1026	1.06	0	430	6344	5333	2703	6774	No	6.6	Si
SLU 79	fin.	-224.04	-2015	1.06	0	430	6344	5333	2703	6774	No	3.36	Si
SLU 74	ini.	-25.19	1006	1.06	0	430	6344	5333	2703	6774	No	6.73	Si
SLU 74	fin.	-242.28	-2072	1.06	0	430	6344	5333	2703	6774	No	3.27	Si
SLU 75	ini.	-30.1	1033	1.06	0	430	6344	5333	2703	6774	No	6.56	Si
SLU 75	fin.	-236.55	-2042	1.06	0	430	6344	5333	2703	6774	No	3.32	Si
SLU 35	ini.	15.25	678	1.06	0	430	6344	5333	2703	6774	No	9.99	Si
SLU 35	fin.	-255.44	-2102	1.06	0	430	6344	5333	2703	6774	No	3.22	Si
SLU 77	ini.	-31.02	1053	1.06	0	430	6344	5333	2703	6774	No	6.43	Si
SLU 77	fin.	-258.22	-2233	1.06	0	430	6344	5333	2703	6774	No	3.03	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1135.95	1733	-0.0004559	0.0003369	0.0035	1.06		4163.27	4163.27		3.67	Si
SLV 2	fin.	-1572.26	-3492	-0.0006728	0.0003369	0.0035	1.06		4170.47	4170.47		2.65	Si
SLV 3	ini.	1026.31	1549	-0.0004054	0.0003369	0.0035	1.06		4163.27	4163.27		4.06	Si
SLV 3	fin.	-1406.17	-3117	-0.0005867	0.0003369	0.0035	1.06		4170.47	4170.47		2.97	Si
SLV 6	ini.	537.11	513	-0.0001996	0.0003369	0.0035	1.06		4163.27	4163.27		7.75	Si
SLV 6	fin.	-885.03	-2236	-0.0003423	0.0003369	0.0035	1.06		4170.47	4170.47		4.71	Si
SLV 16	ini.	-1343.47	-3157	-0.0005553	0.0003369	0.0035	1.06		4170.47	4170.47		3.1	Si
SLV 16	fin.	1441.11	2380	-0.0006057	0.0003369	0.0035	1.06		4163.27	4163.27		2.89	Si
SLV 5	ini.	576.04	595	-0.000215	0.0003369	0.0035	1.06		4163.27	4163.27		7.23	Si
SLV 5	fin.	-928.83	-2324	-0.0003613	0.0003369	0.0035	1.06		4170.47	4170.47		4.49	Si
SLV 4	ini.	965.74	1423	-0.0003783	0.0003369	0.0035	1.06		4163.27	4163.27		4.31	Si
SLV 4	fin.	-1338.02	-2981	-0.0005526	0.0003369	0.0035	1.06		4170.47	4170.47		3.12	Si
SLV 14	ini.	-1173.27	-2848	-0.0004727	0.0003369	0.0035	1.06		4170.47	4170.47		3.55	Si
SLV 14	fin.	1206.86	1869	-0.0004895	0.0003369	0.0035	1.06		4163.27	4163.27		3.45	Si
SLV 13	ini.	-1112.7	-2721	-0.0004443	0.0003369	0.0035	1.06		4170.47	4170.47		3.75	Si
SLV 13	fin.	1138.71	1733	-0.0004572	0.0003369	0.0035	1.06		4163.27	4163.27		3.66	Si
SLV 15	ini.	-1282.91	-3031	-0.0005254	0.0003369	0.0035	1.06		4170.47	4170.47		3.25	Si
SLV 15	fin.	1372.96	2244	-0.0005711	0.0003369	0.0035	1.06		4163.27	4163.27		3.03	Si
SLV 1	ini.	1196.51	1859	-0.0004846	0.0003369	0.0035	1.06		4163.27	4163.27		3.48	Si
SLV 1	fin.	-1640.42	-3628	-0.0007093	0.0003369	0.0035	1.06		4170.47	4170.47		2.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1343.47	7962	1.06	0	645	6344	8000	2703	6989		0.88	No
SLV 16	fin.	1441.11	5999	1.06	0	645	6344	8000	2703	6989		1.16	Si
SLV 1	ini.	1196.51	-6064	1.06	0	645	6344	8000	2703	6989		1.15	Si
SLV 1	fin.	-1640.42	-8068	1.06	0	645	6344	8000	2703	6989		0.87	No
SLV 5	ini.	576.04	-2799	1.06	0	645	6344	8000	2703	6989		2.5	Si
SLV 5	fin.	-928.83	-4806	1.06	0	645	6344	8000	2703	6989		1.45	Si
SLV 13	ini.	-1112.7	6583	1.06	0	645	6344	8000	2703	6989		1.06	Si
SLV 13	fin.	1138.71	4603	1.06	0	645	6344	8000	2703	6989		1.52	Si
SLV 4	ini.	965.74	-4685	1.06	0	645	6344	8000	2703	6989		1.49	Si
SLV 4	fin.	-1338.02	-6672	1.06	0	645	6344	8000	2703	6989		1.05	Si
SLV 12	ini.	-723	4697	1.06	0	645	6344	8000	2703	6989		1.49	Si
SLV 12	fin.	729.52	2737	1.06	0	645	6344	8000	2703	6989		2.55	Si
SLV 14	ini.	-1173.27	6916	1.06	0	645	6344	8000	2703	6989		1.01	Si
SLV 14	fin.	1206.86	4942	1.06	0	645	6344	8000	2703	6989		1.41	Si
SLV 2	ini.	1135.95	-5731	1.06	0	645	6344	8000	2703	6989		1.22	Si
SLV 2	fin.	-1572.26	-7729	1.06	0	645	6344	8000	2703	6989		0.9	No
SLV 15	ini.	-1282.91	7629	1.06	0	645	6344	8000	2703	6989		0.92	No
SLV 15	fin.	1372.96	5660	1.06	0	645	6344	8000	2703	6989		1.23	Si
SLV 3	ini.	1026.31	-5018	1.06	0	645	6344	8000	2703	6989		1.39	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-1406.17	-7012	1.06	0	645	6344	8000	2703	6989		1	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.542	SLV 1	Si
V_SLV	0.866	SLV 1	No
PF_SLU	16.308	SLU 77	Si
V_SLU	3.033	SLU 77	Si

Trave di accoppiamento 155

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.163	1.006	13.96	15.02	1.06	-14.963	1.006	13.96	15.02	1.06	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 28	ini.	-323.56	-1131	-0.0001187	0.0002246	0.0035	1.06		4210.93	4210.93	No	13.01	Si
SLU 28	fin.	-56.87	-898	-0.0000202	0.0002246	0.0035	1.06		4210.93	4210.93	No	74.04	Si
SLU 43	ini.	-77.29	-981	-0.0000275	0.0002246	0.0035	1.06		4210.93	4210.93	No	54.49	Si
SLU 43	fin.	-318.61	-1130	-0.0001168	0.0002246	0.0035	1.06		4210.93	4210.93	No	13.22	Si
SLU 46	ini.	-131.48	-1183	-0.000047	0.0002246	0.0035	1.06		4210.93	4210.93	No	32.03	Si
SLU 46	fin.	-325.5	-1291	-0.0001194	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.94	Si
SLU 48	ini.	-159.24	-1224	-0.0000571	0.0002246	0.0035	1.06		4210.93	4210.93	No	26.44	Si
SLU 48	fin.	-315	-1304	-0.0001154	0.0002246	0.0035	1.06		4210.93	4210.93	No	13.37	Si
SLU 56	ini.	-129.91	-1149	-0.0000464	0.0002246	0.0035	1.06		4210.93	4210.93	No	32.42	Si
SLU 56	fin.	-317.47	-1252	-0.0001163	0.0002246	0.0035	1.06		4210.93	4210.93	No	13.26	Si
SLU 54	ini.	-102.15	-1108	-0.0000364	0.0002246	0.0035	1.06		4210.93	4210.93	No	41.22	Si
SLU 54	fin.	-327.97	-1239	-0.0001204	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.84	Si
SLU 45	ini.	-120.34	-1176	-0.000043	0.0002246	0.0035	1.06		4210.93	4210.93	No	34.99	Si
SLU 45	fin.	-338.94	-1302	-0.0001246	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.42	Si
SLU 53	ini.	-91.01	-1100	-0.0000324	0.0002246	0.0035	1.06		4210.93	4210.93	No	46.27	Si
SLU 53	fin.	-341.41	-1251	-0.0001255	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.33	Si
SLU 60	ini.	-35.39	-873	-0.0000125	0.0002246	0.0035	1.06		4210.93	4210.93	No	119	Si
SLU 60	fin.	-322.14	-1056	-0.0001181	0.0002246	0.0035	1.06		4210.93	4210.93	No	13.07	Si
SLU 30	ini.	-319.41	-984	-0.0001171	0.0002246	0.0035	1.06		4210.93	4210.93	No	13.18	Si
SLU 30	fin.	-12.61	-727	-0.0000044	0.0002246	0.0035	1.06		4210.93	4210.93	No	333.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 27	ini.	-312.42	1410	1.06	0	430	6344	5333	2703	6774	No	4.8	Si
SLU 27	fin.	-70.3	-437	1.06	0	430	6344	5333	2703	6774	No	15.52	Si
SLU 30	ini.	-319.41	1446	1.06	0	430	6344	5333	2703	6774	No	4.68	Si
SLU 30	fin.	-12.61	-265	1.06	0	430	6344	5333	2703	6774	No	25.6	Si
SLU 28	ini.	-323.56	1446	1.06	0	430	6344	5333	2703	6774	No	4.69	Si
SLU 28	fin.	-56.87	-387	1.06	0	430	6344	5333	2703	6774	No	17.5	Si
SLU 70	ini.	-305.71	1412	1.06	0	430	6344	5333	2703	6774	No	4.8	Si
SLU 70	fin.	-166.12	-778	1.06	0	430	6344	5333	2703	6774	No	8.71	Si
SLU 29	ini.	-308.27	1411	1.06	0	430	6344	5333	2703	6774	No	4.8	Si
SLU 29	fin.	-26.04	-314	1.06	0	430	6344	5333	2703	6774	No	21.57	Si
SLU 71	ini.	-290.41	1377	1.06	0	430	6344	5333	2703	6774	No	4.92	Si
SLU 71	fin.	-135.29	-705	1.06	0	430	6344	5333	2703	6774	No	9.61	Si
SLU 69	ini.	-294.56	1376	1.06	0	430	6344	5333	2703	6774	No	4.92	Si
SLU 69	fin.	-179.55	-827	1.06	0	430	6344	5333	2703	6774	No	8.19	Si
SLU 72	ini.	-301.56	1412	1.06	0	430	6344	5333	2703	6774	No	4.8	Si
SLU 72	fin.	-121.86	-655	1.06	0	430	6344	5333	2703	6774	No	10.34	Si
SLU 38	ini.	-290.08	1386	1.06	0	430	6344	5333	2703	6774	No	4.89	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 38	fin.	-15.08	-317	1.06	0	430	6344	5333	2703	6774	No	21.39	Si
SLU 36	ini.	-294.23	1386	1.06	0	430	6344	5333	2703	6774	No	4.89	Si
SLU 36	fin.	-59.34	-439	1.06	0	430	6344	5333	2703	6774	No	15.43	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1541.15	-1092	-0.0006577	0.0003369	0.0035	1.06		4163.27	4163.27		2.7	Si
SLV 1	fin.	-2539.36	-3871	-0.0012641	0.0003369	0.0035	1.06		4170.47	4170.47		1.64	Si
SLV 3	ini.	599.99	-1427	-0.0002245	0.0003369	0.0035	1.06		4163.27	4163.27		6.94	Si
SLV 3	fin.	-1485.9	-2728	-0.0006276	0.0003369	0.0035	1.06		4170.47	4170.47		2.81	Si
SLV 2	ini.	1488.72	-1138	-0.0006302	0.0003369	0.0035	1.06		4163.27	4163.27		2.8	Si
SLV 2	fin.	-2487.58	-3838	-0.0012278	0.0003369	0.0035	1.06		4170.47	4170.47		1.68	Si
SLV 4	ini.	547.56	-1473	-0.0002037	0.0003369	0.0035	1.06		4163.27	4163.27		7.6	Si
SLV 4	fin.	-1434.12	-2694	-0.0006009	0.0003369	0.0035	1.06		4170.47	4170.47		2.91	Si
SLV 6	ini.	1777.26	-393	-0.0007863	0.0003369	0.0035	1.06		4163.27	4163.27		2.34	Si
SLV 6	fin.	-2455.1	-3436	-0.0012053	0.0003369	0.0035	1.06		4170.47	4170.47		1.7	Si
SLV 15	ini.	-1739.57	-436	-0.0007637	0.0003369	0.0035	1.06		4170.47	4170.47		2.4	Si
SLV 15	fin.	2144.84	2246	-0.0010043	0.0003369	0.0035	1.06		4163.27	4163.27		1.94	Si
SLV 5	ini.	1810.96	-363	-0.0008054	0.0003369	0.0035	1.06		4163.27	4163.27		2.3	Si
SLV 5	fin.	-2488.38	-3458	-0.0012283	0.0003369	0.0035	1.06		4170.47	4170.47		1.68	Si
SLV 16	ini.	-1792	-482	-0.000793	0.0003369	0.0035	1.06		4170.47	4170.47		2.33	Si
SLV 16	fin.	2196.62	2279	-0.0010369	0.0003369	0.0035	1.06		4163.27	4163.27		1.9	Si
SLV 12	ini.	-2061.81	-1211	-0.000951	0.0003369	0.0035	1.06		4170.47	4170.47		2.02	Si
SLV 12	fin.	2145.64	1866	-0.0010048	0.0003369	0.0035	1.06		4163.27	4163.27		1.94	Si
SLV 11	ini.	-2028.11	-1181	-0.0009306	0.0003369	0.0035	1.06		4170.47	4170.47		2.06	Si
SLV 11	fin.	2112.36	1845	-0.0009841	0.0003369	0.0035	1.06		4163.27	4163.27		1.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	1810.96	-6930	1.06	0	645	6344	8000	2703	6989		1.01	Si
SLV 5	fin.	-2488.38	-7976	1.06	0	645	6344	8000	2703	6989		0.88	No
SLV 8	ini.	-1359.94	5371	1.06	0	645	6344	8000	2703	6989		1.3	Si
SLV 8	fin.	1056.42	3359	1.06	0	645	6344	8000	2703	6989		2.08	Si
SLV 2	ini.	1488.72	-5863	1.06	0	645	6344	8000	2703	6989		1.19	Si
SLV 2	fin.	-2487.58	-7577	1.06	0	645	6344	8000	2703	6989		0.92	No
SLV 11	ini.	-2028.11	8124	1.06	0	645	6344	8000	2703	6989		0.86	No
SLV 11	fin.	2112.36	6392	1.06	0	645	6344	8000	2703	6989		1.09	Si
SLV 6	ini.	1777.26	-6818	1.06	0	645	6344	8000	2703	6989		1.02	Si
SLV 6	fin.	-2455.1	-7853	1.06	0	645	6344	8000	2703	6989		0.89	No
SLV 12	ini.	-2061.81	8236	1.06	0	645	6344	8000	2703	6989		0.85	No
SLV 12	fin.	2145.64	6515	1.06	0	645	6344	8000	2703	6989		1.07	Si
SLV 15	ini.	-1739.57	7168	1.06	0	645	6344	8000	2703	6989		0.97	No
SLV 15	fin.	2144.84	6115	1.06	0	645	6344	8000	2703	6989		1.14	Si
SLV 16	ini.	-1792	7342	1.06	0	645	6344	8000	2703	6989		0.95	No
SLV 16	fin.	2196.62	6306	1.06	0	645	6344	8000	2703	6989		1.11	Si
SLV 7	ini.	-1326.24	5260	1.06	0	645	6344	8000	2703	6989		1.33	Si
SLV 7	fin.	1023.14	3236	1.06	0	645	6344	8000	2703	6989		2.16	Si
SLV 1	ini.	1541.15	-6036	1.06	0	645	6344	8000	2703	6989		1.16	Si
SLV 1	fin.	-2539.36	-7768	1.06	0	645	6344	8000	2703	6989		0.9	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.642	SLV 1	Si
V_SLV	0.849	SLV 12	No
PF_SLU	12.334	SLU 53	Si
V_SLU	4.684	SLU 30	Si

Trave di accoppiamento 156

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	14.36	15.02	0.66	-12.263	1.006	14.36	15.02	0.66	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-547.09	-1705	-0.0006255	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.99	Si
SLU 69	fin.	-32.84	296	-0.0000301	0.0002246	0.0035	0.66		1634.45	1634.45	No	49.77	Si
SLU 66	ini.	-534.92	-1619	-0.0006083	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.06	Si
SLU 66	fin.	-23.14	375	-0.0000212	0.0002246	0.0035	0.66		1634.45	1634.45	No	70.63	Si
SLU 75	ini.	-549.54	-1699	-0.000629	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.97	Si
SLU 75	fin.	-10.29	381	-0.0000094	0.0002246	0.0035	0.66		1634.45	1634.45	No	158.77	Si
SLU 77	ini.	-559.7	-1774	-0.0006435	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.92	Si
SLU 77	fin.	-21.47	303	-0.0000196	0.0002246	0.0035	0.66		1634.45	1634.45	No	76.13	Si
SLU 80	ini.	-507.29	-1664	-0.0005699	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.22	Si
SLU 80	fin.	-18.39	204	-0.0000168	0.0002246	0.0035	0.66		1634.45	1634.45	No	88.86	Si
SLU 79	ini.	-505.28	-1654	-0.0005671	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.23	Si
SLU 79	fin.	-19.87	204	-0.0000182	0.0002246	0.0035	0.66		1634.45	1634.45	No	82.26	Si
SLU 78	ini.	-561.71	-1785	-0.0006463	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.91	Si
SLU 78	fin.	-19.99	302	-0.0000183	0.0002246	0.0035	0.66		1634.45	1634.45	No	81.75	Si
SLU 67	ini.	-536.93	-1629	-0.0006112	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.04	Si
SLU 67	fin.	-21.67	375	-0.0000198	0.0002246	0.0035	0.66		1634.45	1634.45	No	75.44	Si
SLU 74	ini.	-547.52	-1688	-0.0006261	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.99	Si
SLU 74	fin.	-11.77	382	-0.0000107	0.0002246	0.0035	0.66		1634.45	1634.45	No	138.85	Si
SLU 70	ini.	-549.11	-1715	-0.0006284	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.98	Si
SLU 70	fin.	-31.36	296	-0.0000288	0.0002246	0.0035	0.66		1634.45	1634.45	No	52.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 67	ini.	-536.93	3478	0.66	0	179	5234	3321	1683	5004	No	1.44	Si
SLU 67	fin.	-21.67	-867	0.66	0	179	5234	3321	1683	5004	No	5.77	Si
SLU 69	ini.	-547.09	3476	0.66	0	179	5234	3321	1683	5004	No	1.44	Si
SLU 69	fin.	-32.84	-869	0.66	0	179	5234	3321	1683	5004	No	5.76	Si
SLU 74	ini.	-547.52	3516	0.66	0	179	5234	3321	1683	5004	No	1.42	Si
SLU 74	fin.	-11.77	-829	0.66	0	179	5234	3321	1683	5004	No	6.03	Si
SLU 75	ini.	-549.54	3522	0.66	0	179	5234	3321	1683	5004	No	1.42	Si
SLU 75	fin.	-10.29	-823	0.66	0	179	5234	3321	1683	5004	No	6.08	Si
SLU 66	ini.	-534.92	3472	0.66	0	179	5234	3321	1683	5004	No	1.44	Si
SLU 66	fin.	-23.14	-873	0.66	0	179	5234	3321	1683	5004	No	5.73	Si
SLU 57	ini.	-493.23	3270	0.66	0	179	5234	3321	1683	5004	No	1.53	Si
SLU 57	fin.	-30.4	-882	0.66	0	179	5234	3321	1683	5004	No	5.68	Si
SLU 70	ini.	-549.11	3482	0.66	0	179	5234	3321	1683	5004	No	1.44	Si
SLU 70	fin.	-31.36	-863	0.66	0	179	5234	3321	1683	5004	No	5.8	Si
SLU 54	ini.	-481.06	3265	0.66	0	179	5234	3321	1683	5004	No	1.53	Si
SLU 54	fin.	-20.7	-886	0.66	0	179	5234	3321	1683	5004	No	5.65	Si
SLU 77	ini.	-559.7	3520	0.66	0	179	5234	3321	1683	5004	No	1.42	Si
SLU 77	fin.	-21.47	-825	0.66	0	179	5234	3321	1683	5004	No	6.07	Si
SLU 78	ini.	-561.71	3526	0.66	0	179	5234	3321	1683	5004	No	1.42	Si
SLU 78	fin.	-19.99	-819	0.66	0	179	5234	3321	1683	5004	No	6.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	545.13	670	-0.0005885	0.0003369	0.0035	0.66		1610.37	1610.37		2.95	Si
SLV 1	fin.	-1999.05	-5640	-0.0046022	0.0003369	0.0035	0.66		1614.71	1614.71		0.81	No
SLV 14	ini.	-1002.75	-1555	-0.0012979	0.0003369	0.0035	0.66		1614.71	1614.71		1.61	Si
SLV 14	fin.	1800	6208	-0.0038858	0.0003369	0.0035	0.66		1610.37	1610.37		0.89	No
SLV 11	ini.	-983.06	-3337	-0.0012615	0.0003369	0.0035	0.66		1614.71	1614.71		1.64	Si
SLV 11	fin.	869.87	2106	-0.0010684	0.0003369	0.0035	0.66		1610.37	1610.37		1.85	Si
SLV 16	ini.	-1242.72	-2732	-0.0018115	0.0003369	0.0035	0.66		1614.71	1614.71		1.3	Si
SLV 16	fin.	1982.75	6225	-0.0045621	0.0003369	0.0035	0.66		1610.37	1610.37		0.81	No
SLV 3	ini.	305.16	-507	-0.0003015	0.0003369	0.0035	0.66		1610.37	1610.37		5.28	Si
SLV 3	fin.	-1816.29	-5623	-0.0039315	0.0003369	0.0035	0.66		1614.71	1614.71		0.89	No
SLV 13	ini.	-1007.27	-1576	-0.0013063	0.0003369	0.0035	0.66		1614.71	1614.71		1.6	Si
SLV 13	fin.	1807.55	6226	-0.0039151	0.0003369	0.0035	0.66		1610.37	1610.37		0.89	No
SLV 2	ini.	549.64	691	-0.0005944	0.0003369	0.0035	0.66		1610.37	1610.37		2.93	Si
SLV 2	fin.	-2006.61	-5657	-0.0046288	0.0003369	0.0035	0.66		1614.71	1614.71		0.8	No
SLV 15	ini.	-1247.24	-2753	-0.0018228	0.0003369	0.0035	0.66		1614.71	1614.71		1.29	Si
SLV 15	fin.	1990.31	6242	-0.0045889	0.0003369	0.0035	0.66		1610.37	1610.37		0.81	No
SLV 4	ini.	309.68	-487	-0.0003064	0.0003369	0.0035	0.66		1610.37	1610.37		5.2	Si
SLV 4	fin.	-1823.85	-5641	-0.0039605	0.0003369	0.0035	0.66		1614.71	1614.71		0.89	No
SLV 12	ini.	-980.15	-3324	-0.0012562	0.0003369	0.0035	0.66		1614.71	1614.71		1.65	Si
SLV 12	fin.	865.01	2095	-0.0010603	0.0003369	0.0035	0.66		1610.37	1610.37		1.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	309.68	-1965	0.66	0	268	5234	4981	1683	5501		2.8	Si
SLV 4	fin.	-1823.85	-4753	0.66	0	268	5234	4981	1683	5501		1.16	Si
SLV 1	ini.	545.13	-2646	0.66	0	268	5234	4981	1683	5501		2.08	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	fin.	-1999.05	-5414	0.66	0	268	5234	4981	1683	5501		1.02	Si
SLV 16	ini.	-1242.72	7245	0.66	0	268	5234	4981	1683	5501		0.76	No
SLV 16	fin.	1982.75	4261	0.66	0	268	5234	4981	1683	5501		1.29	Si
SLV 15	ini.	-1247.24	7267	0.66	0	268	5234	4981	1683	5501		0.76	No
SLV 15	fin.	1990.31	4283	0.66	0	268	5234	4981	1683	5501		1.28	Si
SLV 2	ini.	549.64	-2668	0.66	0	268	5234	4981	1683	5501		2.06	Si
SLV 2	fin.	-2006.61	-5436	0.66	0	268	5234	4981	1683	5501		1.01	Si
SLV 13	ini.	-1007.27	6564	0.66	0	268	5234	4981	1683	5501		0.84	No
SLV 13	fin.	1807.55	3599	0.66	0	268	5234	4981	1683	5501		1.53	Si
SLV 14	ini.	-1002.75	6542	0.66	0	268	5234	4981	1683	5501		0.84	No
SLV 14	fin.	1800	3577	0.66	0	268	5234	4981	1683	5501		1.54	Si
SLV 11	ini.	-983.06	4860	0.66	0	268	5234	4981	1683	5501		1.13	Si
SLV 11	fin.	869.87	1922	0.66	0	268	5234	4981	1683	5501		2.86	Si
SLV 12	ini.	-980.15	4846	0.66	0	268	5234	4981	1683	5501		1.14	Si
SLV 12	fin.	865.01	1907	0.66	0	268	5234	4981	1683	5501		2.88	Si
SLV 3	ini.	305.16	-1943	0.66	0	268	5234	4981	1683	5501		2.83	Si
SLV 3	fin.	-1816.29	-4731	0.66	0	268	5234	4981	1683	5501		1.16	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.805	SLV 2	No
V_SLV	0.757	SLV 15	No
PF_SLU	2.91	SLU 78	Si
V_SLU	1.419	SLU 78	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	14.36	15.02	0.66	-10.478	1.006	14.36	15.02	0.66	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-2.95	109	-0.0000027	0.0002246	0.0035	0.66		1634.45	1634.45	No	553.56	Si
SLU 79	fin.	-548.72	-1470	-0.0006278	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.98	Si
SLU 67	ini.	-31.92	-150	-0.0000293	0.0002246	0.0035	0.66		1634.45	1634.45	No	51.2	Si
SLU 67	fin.	-537.58	-1613	-0.0006121	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.04	Si
SLU 69	ini.	-45.34	-84	-0.0000417	0.0002246	0.0035	0.66		1634.45	1634.45	No	36.05	Si
SLU 69	fin.	-560.67	-1589	-0.0006449	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.92	Si
SLU 78	ini.	-1.01	37	-0.0000009	0.0002246	0.0035	0.66		1634.45	1634.45	No	1620.05	Si
SLU 78	fin.	-589.77	-1658	-0.0006869	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.77	Si
SLU 70	ini.	-41.08	-79	-0.0000378	0.0002246	0.0035	0.66		1634.45	1634.45	No	39.79	Si
SLU 70	fin.	-563.07	-1600	-0.0006483	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.9	Si
SLU 77	ini.	-5.27	32	-0.0000048	0.0002246	0.0035	0.66		1634.45	1634.45	No	310.13	Si
SLU 77	fin.	-587.37	-1647	-0.0006834	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.78	Si
SLU 75	ini.	8.15	-34	-0.0000074	0.0002246	0.0035	0.66		1630.36	1630.36	No	200.16	Si
SLU 75	fin.	-564.28	-1671	-0.00065	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.9	Si
SLU 84	ini.	27.63	93	-0.0000254	0.0002246	0.0035	0.66		1630.36	1630.36	No	59	Si
SLU 84	fin.	-537.07	-1519	-0.0006114	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.04	Si
SLU 80	ini.	1.31	115	-0.0000012	0.0002246	0.0035	0.66		1630.36	1630.36	No	1245.72	Si
SLU 80	fin.	-551.12	-1482	-0.0006312	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.97	Si
SLU 74	ini.	3.88	-40	-0.0000035	0.0002246	0.0035	0.66		1630.36	1630.36	No	419.77	Si
SLU 74	fin.	-561.88	-1659	-0.0006466	0.0002246	0.0035	0.66		1634.45	1634.45	No	2.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	3.88	79	0.66	0	179	5234	3321	1683	5004	No	63.46	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	fin.	-561.88	-2244	0.66	0	179	5234	3321	1683	5004	No	2.23	Si
SLU 69	ini.	-45.34	350	0.66	0	179	5234	3321	1683	5004	No	14.3	Si
SLU 69	fin.	-560.67	-2331	0.66	0	179	5234	3321	1683	5004	No	2.15	Si
SLU 72	ini.	-38.76	363	0.66	0	179	5234	3321	1683	5004	No	13.79	Si
SLU 72	fin.	-524.42	-2225	0.66	0	179	5234	3321	1683	5004	No	2.25	Si
SLU 70	ini.	-41.08	334	0.66	0	179	5234	3321	1683	5004	No	14.99	Si
SLU 70	fin.	-563.07	-2333	0.66	0	179	5234	3321	1683	5004	No	2.14	Si
SLU 75	ini.	8.15	63	0.66	0	179	5234	3321	1683	5004	No	79.96	Si
SLU 75	fin.	-564.28	-2246	0.66	0	179	5234	3321	1683	5004	No	2.23	Si
SLU 79	ini.	-2.95	228	0.66	0	179	5234	3321	1683	5004	No	21.99	Si
SLU 79	fin.	-548.72	-2313	0.66	0	179	5234	3321	1683	5004	No	2.16	Si
SLU 77	ini.	-5.27	198	0.66	0	179	5234	3321	1683	5004	No	25.21	Si
SLU 77	fin.	-587.37	-2421	0.66	0	179	5234	3321	1683	5004	No	2.07	Si
SLU 78	ini.	-1.01	182	0.66	0	179	5234	3321	1683	5004	No	27.46	Si
SLU 78	fin.	-589.77	-2423	0.66	0	179	5234	3321	1683	5004	No	2.06	Si
SLU 80	ini.	1.31	211	0.66	0	179	5234	3321	1683	5004	No	23.68	Si
SLU 80	fin.	-551.12	-2315	0.66	0	179	5234	3321	1683	5004	No	2.16	Si
SLU 71	ini.	-43.02	379	0.66	0	179	5234	3321	1683	5004	No	13.2	Si
SLU 71	fin.	-522.02	-2223	0.66	0	179	5234	3321	1683	5004	No	2.25	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1419.44	-5411	-0.0023257	0.0003369	0.0035	0.66		1614.71	1614.71		1.14	Si
SLV 14	fin.	135.2	-2307	-0.0001272	0.0003369	0.0035	0.66		1610.37	1610.37		11.91	Si
SLV 13	ini.	-1406.08	-5385	-0.0022814	0.0003369	0.0035	0.66		1614.71	1614.71		1.15	Si
SLV 13	fin.	127.19	-2329	-0.0001194	0.0003369	0.0035	0.66		1610.37	1610.37		12.66	Si
SLV 3	ini.	1370.11	5145	-0.0021774	0.0003369	0.0035	0.66		1610.37	1610.37		1.18	Si
SLV 3	fin.	-828.19	165	-0.0009968	0.0003369	0.0035	0.66		1614.71	1614.71		1.95	Si
SLV 15	ini.	-1137.58	-4883	-0.0015672	0.0003369	0.0035	0.66		1614.71	1614.71		1.42	Si
SLV 15	fin.	-141.34	-3057	-0.0001328	0.0003369	0.0035	0.66		1614.71	1614.71		11.42	Si
SLV 8	ini.	794.71	2201	-0.0009469	0.0003369	0.0035	0.66		1610.37	1610.37		2.03	Si
SLV 8	fin.	-894.49	-1792	-0.001106	0.0003369	0.0035	0.66		1614.71	1614.71		1.81	Si
SLV 7	ini.	803.29	2217	-0.0009604	0.0003369	0.0035	0.66		1610.37	1610.37		2	Si
SLV 7	fin.	-899.64	-1807	-0.0011147	0.0003369	0.0035	0.66		1614.71	1614.71		1.79	Si
SLV 4	ini.	1356.76	5120	-0.0021363	0.0003369	0.0035	0.66		1610.37	1610.37		1.19	Si
SLV 4	fin.	-820.17	188	-0.000984	0.0003369	0.0035	0.66		1614.71	1614.71		1.97	Si
SLV 16	ini.	-1150.93	-4908	-0.0015963	0.0003369	0.0035	0.66		1614.71	1614.71		1.4	Si
SLV 16	fin.	-133.32	-3034	-0.000125	0.0003369	0.0035	0.66		1614.71	1614.71		12.11	Si
SLV 2	ini.	1088.25	4617	-0.0014695	0.0003369	0.0035	0.66		1610.37	1610.37		1.48	Si
SLV 2	fin.	-551.65	915	-0.0005952	0.0003369	0.0035	0.66		1614.71	1614.71		2.93	Si
SLV 1	ini.	1101.6	4643	-0.001497	0.0003369	0.0035	0.66		1610.37	1610.37		1.46	Si
SLV 1	fin.	-559.66	892	-0.0006058	0.0003369	0.0035	0.66		1614.71	1614.71		2.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1419.44	2803	0.66	0	268	5234	4981	1683	5501		1.96	Si
SLV 14	fin.	135.2	1634	0.66	0	268	5234	4981	1683	5501		3.37	Si
SLV 7	ini.	803.29	-1905	0.66	0	268	5234	4981	1683	5501		2.89	Si
SLV 7	fin.	-899.64	-3827	0.66	0	268	5234	4981	1683	5501		1.44	Si
SLV 8	ini.	794.71	-1875	0.66	0	268	5234	4981	1683	5501		2.93	Si
SLV 8	fin.	-894.49	-3811	0.66	0	268	5234	4981	1683	5501		1.44	Si
SLD 4	ini.	567.39	-1024	0.66	0	268	5234	4981	1683	5501		5.37	Si
SLD 4	fin.	-550.96	-2649	0.66	0	268	5234	4981	1683	5501		2.08	Si
SLV 13	ini.	-1406.08	2756	0.66	0	268	5234	4981	1683	5501		2	Si
SLV 13	fin.	127.19	1609	0.66	0	268	5234	4981	1683	5501		3.42	Si
SLD 3	ini.	573.12	-1044	0.66	0	268	5234	4981	1683	5501		5.27	Si
SLD 3	fin.	-554.4	-2659	0.66	0	268	5234	4981	1683	5501		2.07	Si
SLV 3	ini.	1370.11	-2580	0.66	0	268	5234	4981	1683	5501		2.13	Si
SLV 3	fin.	-828.19	-4371	0.66	0	268	5234	4981	1683	5501		1.26	Si
SLV 1	ini.	1101.6	-1787	0.66	0	268	5234	4981	1683	5501		3.08	Si
SLV 1	fin.	-559.66	-3347	0.66	0	268	5234	4981	1683	5501		1.64	Si
SLV 2	ini.	1088.25	-1741	0.66	0	268	5234	4981	1683	5501		3.16	Si
SLV 2	fin.	-551.65	-3323	0.66	0	268	5234	4981	1683	5501		1.66	Si
SLV 4	ini.	1356.76	-2533	0.66	0	268	5234	4981	1683	5501		2.17	Si
SLV 4	fin.	-820.17	-4347	0.66	0	268	5234	4981	1683	5501		1.27	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.138	SLV 14	Si
V_SLV	1.259	SLV 3	Si
PF_SLU	2.771	SLU 78	Si
V_SLU	2.065	SLU 78	Si

Trave di accoppiamento 158

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	13.96	15.02	1.06	-7.463	1.006	13.96	15.02	1.06	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 46	ini.	-19.69	-728	-0.0000069	0.0002246	0.0035	1.06		4210.93	4210.93	No	213.9	Si
SLU 46	fin.	-191.06	-944	-0.0000688	0.0002246	0.0035	1.06		4210.93	4210.93	No	22.04	Si
SLU 44	ini.	13.43	-536	-0.0000047	0.0002246	0.0035	1.06		4204.29	4204.29	No	313.05	Si
SLU 44	fin.	-219.13	-915	-0.0000792	0.0002246	0.0035	1.06		4210.93	4210.93	No	19.22	Si
SLU 64	ini.	14.29	-560	-0.000005	0.0002246	0.0035	1.06		4204.29	4204.29	No	294.11	Si
SLU 64	fin.	-194.86	-837	-0.0000702	0.0002246	0.0035	1.06		4210.93	4210.93	No	21.61	Si
SLU 43	ini.	13.65	-533	-0.0000048	0.0002246	0.0035	1.06		4204.29	4204.29	No	308.12	Si
SLU 43	fin.	-218.7	-917	-0.0000791	0.0002246	0.0035	1.06		4210.93	4210.93	No	19.25	Si
SLU 51	ini.	-24.35	-720	-0.0000086	0.0002246	0.0035	1.06		4210.93	4210.93	No	172.9	Si
SLU 51	fin.	-171.04	-906	-0.0000615	0.0002246	0.0035	1.06		4210.93	4210.93	No	24.62	Si
SLU 45	ini.	-19.56	-726	-0.0000069	0.0002246	0.0035	1.06		4210.93	4210.93	No	215.31	Si
SLU 45	fin.	-190.8	-945	-0.0000687	0.0002246	0.0035	1.06		4210.93	4210.93	No	22.07	Si
SLU 65	ini.	14.08	-562	-0.000005	0.0002246	0.0035	1.06		4204.29	4204.29	No	298.61	Si
SLU 65	fin.	-195.29	-836	-0.0000704	0.0002246	0.0035	1.06		4210.93	4210.93	No	21.56	Si
SLU 47	ini.	-5.51	-629	-0.0000019	0.0002246	0.0035	1.06		4210.93	4210.93	No	764.89	Si
SLU 47	fin.	-195.17	-911	-0.0000704	0.0002246	0.0035	1.06		4210.93	4210.93	No	21.58	Si
SLU 68	ini.	-4.86	-655	-0.0000017	0.0002246	0.0035	1.06		4210.93	4210.93	No	867.23	Si
SLU 68	fin.	-171.33	-831	-0.0000616	0.0002246	0.0035	1.06		4210.93	4210.93	No	24.58	Si
SLU 50	ini.	-24.23	-719	-0.0000086	0.0002246	0.0035	1.06		4210.93	4210.93	No	173.82	Si
SLU 50	fin.	-170.79	-907	-0.0000614	0.0002246	0.0035	1.06		4210.93	4210.93	No	24.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 51	ini.	-24.35	1427	1.06	0	430	7930	5333	2703	8036	No	5.63	Si
SLU 51	fin.	-171.04	-2625	1.06	0	430	7930	5333	2703	8036	No	3.06	Si
SLU 48	ini.	-38.49	1661	1.06	0	430	7930	5333	2703	8036	No	4.84	Si
SLU 48	fin.	-166.85	-2719	1.06	0	430	7930	5333	2703	8036	No	2.96	Si
SLU 50	ini.	-24.23	1427	1.06	0	430	7930	5333	2703	8036	No	5.63	Si
SLU 50	fin.	-170.79	-2629	1.06	0	430	7930	5333	2703	8036	No	3.06	Si
SLU 72	ini.	-23.71	1629	1.06	0	430	7930	5333	2703	8036	No	4.93	Si
SLU 72	fin.	-147.21	-2764	1.06	0	430	7930	5333	2703	8036	No	2.91	Si
SLU 70	ini.	-37.97	1862	1.06	0	430	7930	5333	2703	8036	No	4.31	Si
SLU 70	fin.	-143.27	-2854	1.06	0	430	7930	5333	2703	8036	No	2.82	Si
SLU 49	ini.	-38.62	1661	1.06	0	430	7930	5333	2703	8036	No	4.84	Si
SLU 49	fin.	-167.1	-2715	1.06	0	430	7930	5333	2703	8036	No	2.96	Si
SLU 66	ini.	-18.91	1662	1.06	0	430	7930	5333	2703	8036	No	4.83	Si
SLU 66	fin.	-166.97	-2644	1.06	0	430	7930	5333	2703	8036	No	3.04	Si
SLU 71	ini.	-23.58	1629	1.06	0	430	7930	5333	2703	8036	No	4.93	Si
SLU 71	fin.	-146.95	-2768	1.06	0	430	7930	5333	2703	8036	No	2.9	Si
SLU 67	ini.	-19.04	1662	1.06	0	430	7930	5333	2703	8036	No	4.83	Si
SLU 67	fin.	-167.22	-2640	1.06	0	430	7930	5333	2703	8036	No	3.04	Si
SLU 69	ini.	-37.84	1862	1.06	0	430	7930	5333	2703	8036	No	4.32	Si
SLU 69	fin.	-143.01	-2858	1.06	0	430	7930	5333	2703	8036	No	2.81	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	712.08	1306	-0.0002699	0.0003369	0.0035	1.06		4163.27	4163.27		5.85	Si
SLV 4	fin.	-808.78	-1808	-0.0003097	0.0003369	0.0035	1.06		4170.47	4170.47		5.16	Si
SLV 14	ini.	-701.79	-2154	-0.0002653	0.0003369	0.0035	1.06		4170.47	4170.47		5.94	Si
SLV 14	fin.	539.28	622	-0.0002004	0.0003369	0.0035	1.06		4163.27	4163.27		7.72	Si
SLV 6	ini.	384.91	735	-0.0001407	0.0003369	0.0035	1.06		4163.27	4163.27		10.82	Si
SLV 6	fin.	-520.14	-1517	-0.0001926	0.0003369	0.0035	1.06		4170.47	4170.47		8.02	Si
SLV 1	ini.	803.99	1643	-0.0003082	0.0003369	0.0035	1.06		4163.27	4163.27		5.18	Si
SLV 1	fin.	-919.51	-2136	-0.0003573	0.0003369	0.0035	1.06		4170.47	4170.47		4.54	Si
SLV 5	ini.	384.63	725	-0.0001406	0.0003369	0.0035	1.06		4163.27	4163.27		10.82	Si
SLV 5	fin.	-527.19	-1531	-0.0001954	0.0003369	0.0035	1.06		4170.47	4170.47		7.91	Si
SLV 13	ini.	-702.22	-2170	-0.0002654	0.0003369	0.0035	1.06		4170.47	4170.47		5.94	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	fin.	528.3	599	-0.0001961	0.0003369	0.0035	1.06		4163.27	4163.27		7.88	Si
SLV 16	ini.	-794.13	-2508	-0.0003036	0.0003369	0.0035	1.06		4170.47	4170.47		5.25	Si
SLV 16	fin.	639.03	927	-0.0002402	0.0003369	0.0035	1.06		4163.27	4163.27		6.51	Si
SLV 3	ini.	711.65	1290	-0.0002698	0.0003369	0.0035	1.06		4163.27	4163.27		5.85	Si
SLV 3	fin.	-819.76	-1830	-0.0003144	0.0003369	0.0035	1.06		4170.47	4170.47		5.09	Si
SLV 2	ini.	804.43	1660	-0.0003084	0.0003369	0.0035	1.06		4163.27	4163.27		5.18	Si
SLV 2	fin.	-908.53	-2114	-0.0003525	0.0003369	0.0035	1.06		4170.47	4170.47		4.59	Si
SLV 15	ini.	-794.56	-2524	-0.0003038	0.0003369	0.0035	1.06		4170.47	4170.47		5.25	Si
SLV 15	fin.	628.05	905	-0.0002358	0.0003369	0.0035	1.06		4163.27	4163.27		6.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	804.43	-2409	1.06	0	645	7930	8000	2703	8575		3.56	Si
SLV 2	fin.	-908.53	-4889	1.06	0	645	7930	8000	2703	8575		1.75	Si
SLV 6	ini.	384.91	-910	1.06	0	645	7930	8000	2703	8575		9.42	Si
SLV 6	fin.	-520.14	-3421	1.06	0	645	7930	8000	2703	8575		2.51	Si
SLV 14	ini.	-701.79	3775	1.06	0	645	7930	8000	2703	8575		2.27	Si
SLV 14	fin.	539.28	958	1.06	0	645	7930	8000	2703	8575		8.95	Si
SLV 3	ini.	711.65	-1874	1.06	0	645	7930	8000	2703	8575		4.57	Si
SLV 3	fin.	-819.76	-4360	1.06	0	645	7930	8000	2703	8575		1.97	Si
SLV 13	ini.	-702.22	3743	1.06	0	645	7930	8000	2703	8575		2.29	Si
SLV 13	fin.	528.3	987	1.06	0	645	7930	8000	2703	8575		8.69	Si
SLV 4	ini.	712.08	-1843	1.06	0	645	7930	8000	2703	8575		4.65	Si
SLV 4	fin.	-808.78	-4389	1.06	0	645	7930	8000	2703	8575		1.95	Si
SLV 15	ini.	-794.56	4309	1.06	0	645	7930	8000	2703	8575		1.99	Si
SLV 15	fin.	628.05	1487	1.06	0	645	7930	8000	2703	8575		5.77	Si
SLV 5	ini.	384.63	-931	1.06	0	645	7930	8000	2703	8575		9.21	Si
SLV 5	fin.	-527.19	-3403	1.06	0	645	7930	8000	2703	8575		2.52	Si
SLV 16	ini.	-794.13	4341	1.06	0	645	7930	8000	2703	8575		1.98	Si
SLV 16	fin.	639.03	1458	1.06	0	645	7930	8000	2703	8575		5.88	Si
SLV 1	ini.	803.99	-2440	1.06	0	645	7930	8000	2703	8575		3.51	Si
SLV 1	fin.	-919.51	-4860	1.06	0	645	7930	8000	2703	8575		1.76	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.536	SLV 1	Si
V_SLV	1.754	SLV 2	Si
PF_SLU	19.217	SLU 44	Si
V_SLU	2.812	SLU 69	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-4.113	1.006	13.96	15.02	1.06	-4.913	1.006	13.96	15.02	1.06	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 65	ini.	145.63	-227	-0.0000523	0.0002246	0.0035	1.06		4204.29	4204.29	No	28.87	Si
SLU 65	fin.	-248.6	-954	-0.0000903	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.94	Si
SLU 70	ini.	68.51	-536	-0.0000244	0.0002246	0.0035	1.06		4204.29	4204.29	No	61.37	Si
SLU 70	fin.	-257.61	-1173	-0.0000936	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.35	Si
SLU 68	ini.	113.84	-339	-0.0000407	0.0002246	0.0035	1.06		4204.29	4204.29	No	36.93	Si
SLU 68	fin.	-248.18	-1019	-0.0000901	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.97	Si
SLU 49	ini.	81.41	-466	-0.000029	0.0002246	0.0035	1.06		4204.29	4204.29	No	51.65	Si
SLU 49	fin.	-250.8	-1100	-0.0000911	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.79	Si
SLU 48	ini.	79.36	-470	-0.0000282	0.0002246	0.0035	1.06		4204.29	4204.29	No	52.98	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	fin.	-250.23	-1099	-0.0000909	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.83	Si
SLU 46	ini.	113.19	-354	-0.0000405	0.0002246	0.0035	1.06		4204.29	4204.29	No	37.14	Si
SLU 46	fin.	-251.22	-1035	-0.0000912	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.76	Si
SLU 69	ini.	66.46	-539	-0.0000236	0.0002246	0.0035	1.06		4204.29	4204.29	No	63.26	Si
SLU 69	fin.	-257.03	-1173	-0.0000934	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.38	Si
SLU 67	ini.	100.29	-424	-0.0000358	0.0002246	0.0035	1.06		4204.29	4204.29	No	41.92	Si
SLU 67	fin.	-258.03	-1109	-0.0000938	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.32	Si
SLU 66	ini.	98.25	-427	-0.000035	0.0002246	0.0035	1.06		4204.29	4204.29	No	42.79	Si
SLU 66	fin.	-257.45	-1109	-0.0000936	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.36	Si
SLU 45	ini.	111.15	-357	-0.0000397	0.0002246	0.0035	1.06		4204.29	4204.29	No	37.83	Si
SLU 45	fin.	-250.65	-1035	-0.000091	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 46	ini.	113.19	276	1.06	0	430	6344	5333	2703	6774	No	24.51	Si
SLU 46	fin.	-251.22	-2198	1.06	0	430	6344	5333	2703	6774	No	3.08	Si
SLU 69	ini.	66.46	411	1.06	0	430	6344	5333	2703	6774	No	16.47	Si
SLU 69	fin.	-257.03	-2182	1.06	0	430	6344	5333	2703	6774	No	3.11	Si
SLU 66	ini.	98.25	325	1.06	0	430	6344	5333	2703	6774	No	20.83	Si
SLU 66	fin.	-257.45	-2214	1.06	0	430	6344	5333	2703	6774	No	3.06	Si
SLU 65	ini.	145.63	125	1.06	0	430	6344	5333	2703	6774	No	54.11	Si
SLU 65	fin.	-248.6	-2158	1.06	0	430	6344	5333	2703	6774	No	3.14	Si
SLU 64	ini.	142.23	129	1.06	0	430	6344	5333	2703	6774	No	52.64	Si
SLU 64	fin.	-247.64	-2128	1.06	0	430	6344	5333	2703	6774	No	3.18	Si
SLU 70	ini.	68.51	409	1.06	0	430	6344	5333	2703	6774	No	16.56	Si
SLU 70	fin.	-257.61	-2199	1.06	0	430	6344	5333	2703	6774	No	3.08	Si
SLU 45	ini.	111.15	278	1.06	0	430	6344	5333	2703	6774	No	24.32	Si
SLU 45	fin.	-250.65	-2180	1.06	0	430	6344	5333	2703	6774	No	3.11	Si
SLU 67	ini.	100.29	323	1.06	0	430	6344	5333	2703	6774	No	20.97	Si
SLU 67	fin.	-258.03	-2231	1.06	0	430	6344	5333	2703	6774	No	3.04	Si
SLU 48	ini.	79.36	365	1.06	0	430	6344	5333	2703	6774	No	18.58	Si
SLU 48	fin.	-250.23	-2148	1.06	0	430	6344	5333	2703	6774	No	3.15	Si
SLU 49	ini.	81.41	362	1.06	0	430	6344	5333	2703	6774	No	18.69	Si
SLU 49	fin.	-250.8	-2165	1.06	0	430	6344	5333	2703	6774	No	3.13	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-596.3	-1861	-0.0002227	0.0003369	0.0035	1.06		4170.47	4170.47		6.99	Si
SLV 15	fin.	16.94	-1091	-0.000006	0.0003369	0.0035	1.06		4163.27	4163.27		245.76	Si
SLV 13	ini.	-800.25	-2185	-0.0003061	0.0003369	0.0035	1.06		4170.47	4170.47		5.21	Si
SLV 13	fin.	166.48	-774	-0.0000596	0.0003369	0.0035	1.06		4163.27	4163.27		25.01	Si
SLV 7	ini.	701.98	945	-0.0002658	0.0003369	0.0035	1.06		4163.27	4163.27		5.93	Si
SLV 7	fin.	-527.44	-1198	-0.0001955	0.0003369	0.0035	1.06		4170.47	4170.47		7.91	Si
SLV 16	ini.	-632.89	-1933	-0.0002373	0.0003369	0.0035	1.06		4170.47	4170.47		6.59	Si
SLV 16	fin.	37.06	-1063	-0.0000131	0.0003369	0.0035	1.06		4163.27	4163.27		112.33	Si
SLV 1	ini.	841.12	1570	-0.000324	0.0003369	0.0035	1.06		4163.27	4163.27		4.95	Si
SLV 1	fin.	-408.16	-380	-0.0001494	0.0003369	0.0035	1.06		4170.47	4170.47		10.22	Si
SLV 2	ini.	804.53	1499	-0.0003085	0.0003369	0.0035	1.06		4163.27	4163.27		5.17	Si
SLV 2	fin.	-388.04	-352	-0.0001417	0.0003369	0.0035	1.06		4170.47	4170.47		10.75	Si
SLV 3	ini.	1045.06	1894	-0.000414	0.0003369	0.0035	1.06		4163.27	4163.27		3.98	Si
SLV 3	fin.	-557.7	-696	-0.0002074	0.0003369	0.0035	1.06		4170.47	4170.47		7.48	Si
SLV 14	ini.	-836.84	-2257	-0.0003216	0.0003369	0.0035	1.06		4170.47	4170.47		4.98	Si
SLV 14	fin.	186.6	-747	-0.0000669	0.0003369	0.0035	1.06		4163.27	4163.27		22.31	Si
SLV 8	ini.	678.47	899	-0.0002562	0.0003369	0.0035	1.06		4163.27	4163.27		6.14	Si
SLV 8	fin.	-514.51	-1180	-0.0001904	0.0003369	0.0035	1.06		4170.47	4170.47		8.11	Si
SLV 4	ini.	1008.48	1823	-0.0003974	0.0003369	0.0035	1.06		4163.27	4163.27		4.13	Si
SLV 4	fin.	-537.57	-668	-0.0001994	0.0003369	0.0035	1.06		4170.47	4170.47		7.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	841.12	-1843	1.06	0	645	6344	8000	2703	6989		3.79	Si
SLV 1	fin.	-408.16	-3763	1.06	0	645	6344	8000	2703	6989		1.86	Si
SLV 4	ini.	1008.48	-2556	1.06	0	645	6344	8000	2703	6989		2.73	Si
SLV 4	fin.	-537.57	-4564	1.06	0	645	6344	8000	2703	6989		1.53	Si
SLD 4	ini.	492.2	-1037	1.06	0	645	6344	8000	2703	6989		6.74	Si
SLD 4	fin.	-337.4	-2872	1.06	0	645	6344	8000	2703	6989		2.43	Si
SLV 7	ini.	701.98	-2034	1.06	0	645	6344	8000	2703	6989		3.44	Si
SLV 7	fin.	-527.44	-3998	1.06	0	645	6344	8000	2703	6989		1.75	Si
SLD 3	ini.	507.91	-1094	1.06	0	645	6344	8000	2703	6989		6.39	Si
SLD 3	fin.	-346.04	-2936	1.06	0	645	6344	8000	2703	6989		2.38	Si
SLV 14	ini.	-836.84	2905	1.06	0	645	6344	8000	2703	6989		2.41	Si
SLV 14	fin.	186.6	1527	1.06	0	645	6344	8000	2703	6989		4.58	Si
SLV 2	ini.	804.53	-1711	1.06	0	645	6344	8000	2703	6989		4.08	Si
SLV 2	fin.	-388.04	-3614	1.06	0	645	6344	8000	2703	6989		1.93	Si
SLV 8	ini.	678.47	-1949	1.06	0	645	6344	8000	2703	6989		3.59	Si
SLV 8	fin.	-514.51	-3901	1.06	0	645	6344	8000	2703	6989		1.79	Si
SLV 13	ini.	-800.25	2773	1.06	0	645	6344	8000	2703	6989		2.52	Si
SLV 13	fin.	166.48	1377	1.06	0	645	6344	8000	2703	6989		5.08	Si
SLV 3	ini.	1045.06	-2688	1.06	0	645	6344	8000	2703	6989		2.6	Si
SLV 3	fin.	-557.7	-4714	1.06	0	645	6344	8000	2703	6989		1.48	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.984	SLV 3	Si
V_SLV	1.483	SLV 3	Si
PF_SLU	16.32	SLU 67	Si
V_SLU	3.036	SLU 67	Si

Trave di accoppiamento 160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.163	1.246	13.96	15.02	1.06	-5.163	2.046	13.96	15.02	1.06	0.8	0.16	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-84.4	-4	-0.00003	0.0002246	0.0035	1.06		4238.3	4238.3	No	50.22	Si
SLU 80	fin.	-249.25	-158	-0.0000905	0.0002246	0.0035	1.06		4238.3	4238.3	No	17	Si
SLU 82	ini.	-84.34	2	-0.00003	0.0002246	0.0035	1.06		4238.3	4238.3	No	50.25	Si
SLU 82	fin.	-254.62	-161	-0.0000925	0.0002246	0.0035	1.06		4238.3	4238.3	No	16.65	Si
SLU 75	ini.	-86.8	0	-0.0000309	0.0002246	0.0035	1.06		4238.3	4238.3	No	48.83	Si
SLU 75	fin.	-255.21	-157	-0.0000927	0.0002246	0.0035	1.06		4238.3	4238.3	No	16.61	Si
SLU 84	ini.	-87.1	-1	-0.000031	0.0002246	0.0035	1.06		4238.3	4238.3	No	48.66	Si
SLU 84	fin.	-259.74	-164	-0.0000944	0.0002246	0.0035	1.06		4238.3	4238.3	No	16.32	Si
SLU 81	ini.	-84.96	2	-0.0000302	0.0002246	0.0035	1.06		4238.3	4238.3	No	49.89	Si
SLU 81	fin.	-256.97	-163	-0.0000934	0.0002246	0.0035	1.06		4238.3	4238.3	No	16.49	Si
SLU 79	ini.	-85.02	-4	-0.0000302	0.0002246	0.0035	1.06		4238.3	4238.3	No	49.85	Si
SLU 79	fin.	-251.59	-160	-0.0000914	0.0002246	0.0035	1.06		4238.3	4238.3	No	16.85	Si
SLU 83	ini.	-87.72	-1	-0.0000312	0.0002246	0.0035	1.06		4238.3	4238.3	No	48.32	Si
SLU 83	fin.	-262.09	-166	-0.0000953	0.0002246	0.0035	1.06		4238.3	4238.3	No	16.17	Si
SLU 74	ini.	-87.42	0	-0.0000311	0.0002246	0.0035	1.06		4238.3	4238.3	No	48.48	Si
SLU 74	fin.	-257.56	-159	-0.0000936	0.0002246	0.0035	1.06		4238.3	4238.3	No	16.46	Si
SLU 77	ini.	-90.18	-3	-0.0000321	0.0002246	0.0035	1.06		4238.3	4238.3	No	47	Si
SLU 77	fin.	-262.68	-162	-0.0000955	0.0002246	0.0035	1.06		4238.3	4238.3	No	16.14	Si
SLU 78	ini.	-89.56	-3	-0.0000319	0.0002246	0.0035	1.06		4238.3	4238.3	No	47.32	Si
SLU 78	fin.	-260.33	-160	-0.0000947	0.0002246	0.0035	1.06		4238.3	4238.3	No	16.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-90.18	-183	1.06	0	246	6344	3048	2703	5751	No	31.36	Si
SLU 77	fin.	-262.68	-518	1.06	0	246	6344	3048	2703	5751	No	11.11	Si
SLU 78	ini.	-89.56	-180	1.06	0	246	6344	3048	2703	5751	No	31.94	Si
SLU 78	fin.	-260.33	-514	1.06	0	246	6344	3048	2703	5751	No	11.18	Si
SLU 79	ini.	-85.02	-174	1.06	0	246	6344	3048	2703	5751	No	33	Si
SLU 79	fin.	-251.59	-509	1.06	0	246	6344	3048	2703	5751	No	11.3	Si
SLU 84	ini.	-87.1	-186	1.06	0	246	6344	3048	2703	5751	No	30.84	Si
SLU 84	fin.	-259.74	-521	1.06	0	246	6344	3048	2703	5751	No	11.04	Si
SLU 82	ini.	-84.34	-183	1.06	0	246	6344	3048	2703	5751	No	31.34	Si
SLU 82	fin.	-254.62	-518	1.06	0	246	6344	3048	2703	5751	No	11.1	Si
SLU 75	ini.	-86.8	-177	1.06	0	246	6344	3048	2703	5751	No	32.48	Si
SLU 75	fin.	-255.21	-511	1.06	0	246	6344	3048	2703	5751	No	11.24	Si
SLU 83	ini.	-87.72	-190	1.06	0	246	6344	3048	2703	5751	No	30.29	Si
SLU 83	fin.	-262.09	-524	1.06	0	246	6344	3048	2703	5751	No	10.97	Si
SLU 74	ini.	-87.42	-180	1.06	0	246	6344	3048	2703	5751	No	31.88	Si
SLU 74	fin.	-257.56	-515	1.06	0	246	6344	3048	2703	5751	No	11.17	Si
SLU 80	ini.	-84.4	-171	1.06	0	246	6344	3048	2703	5751	No	33.64	Si
SLU 80	fin.	-249.25	-505	1.06	0	246	6344	3048	2703	5751	No	11.38	Si
SLU 81	ini.	-84.96	-187	1.06	0	246	6344	3048	2703	5751	No	30.78	Si
SLU 81	fin.	-256.97	-521	1.06	0	246	6344	3048	2703	5751	No	11.03	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	62.34	401	-0.0000221	0.0003369	0.0035	1.06		4343.51	4343.51		69.67	Si
SLV 9	fin.	-454.83	109	-0.0001672	0.0003369	0.0035	1.06		4350.23	4350.23		9.56	Si
SLD 14	ini.	-94.47	-45	-0.0000335	0.0003369	0.0035	1.06		4350.23	4350.23		46.05	Si
SLD 14	fin.	-258.33	-128	-0.0000931	0.0003369	0.0035	1.06		4350.23	4350.23		16.84	Si
SLV 13	ini.	-150.06	-116	-0.0000535	0.0003369	0.0035	1.06		4350.23	4350.23		28.99	Si
SLV 13	fin.	-363.91	-143	-0.0001326	0.0003369	0.0035	1.06		4350.23	4350.23		11.95	Si
SLV 5	ini.	150.41	557	-0.0000538	0.0003369	0.0035	1.06		4343.51	4343.51		28.88	Si
SLV 5	fin.	-372.86	182	-0.0001359	0.0003369	0.0035	1.06		4350.23	4350.23		11.67	Si
SLV 6	ini.	147.73	556	-0.0000528	0.0003369	0.0035	1.06		4343.51	4343.51		29.4	Si
SLV 6	fin.	-388.67	167	-0.0001419	0.0003369	0.0035	1.06		4350.23	4350.23		11.19	Si
SLV 14	ini.	-154.23	-116	-0.0000551	0.0003369	0.0035	1.06		4350.23	4350.23		28.21	Si
SLV 14	fin.	-388.51	-167	-0.0001419	0.0003369	0.0035	1.06		4350.23	4350.23		11.2	Si
SLD 10	ini.	-5.1	172	-0.0000018	0.0003369	0.0035	1.06		4350.23	4350.23		853.35	Si
SLD 10	fin.	-296.64	-18	-0.0001073	0.0003369	0.0035	1.06		4350.23	4350.23		14.67	Si
SLD 6	ini.	31.4	236	-0.0000111	0.0003369	0.0035	1.06		4343.51	4343.51		138.34	Si
SLD 6	fin.	-262.34	12	-0.0000946	0.0003369	0.0035	1.06		4350.23	4350.23		16.58	Si
SLV 10	ini.	59.66	400	-0.0000211	0.0003369	0.0035	1.06		4343.51	4343.51		72.81	Si
SLV 10	fin.	-470.64	94	-0.0001733	0.0003369	0.0035	1.06		4350.23	4350.23		9.24	Si
SLD 9	ini.	-3.93	173	-0.0000014	0.0003369	0.0035	1.06		4350.23	4350.23		1107.84	Si
SLD 9	fin.	-289.74	-11	-0.0001048	0.0003369	0.0035	1.06		4350.23	4350.23		15.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 6	ini.	31.4	-319	1.06	0	369	6344	4571	2703	6712		21.03	Si
SLD 6	fin.	-262.34	-596	1.06	0	369	6344	4571	2703	6712		11.26	Si
SLV 5	ini.	150.41	-567	1.06	0	369	6344	4571	2703	6712		11.84	Si
SLV 5	fin.	-372.86	-873	1.06	0	369	6344	4571	2703	6712		7.69	Si
SLV 13	ini.	-150.06	-378	1.06	0	369	6344	4571	2703	6712		17.77	Si
SLV 13	fin.	-363.91	-732	1.06	0	369	6344	4571	2703	6712		9.16	Si
SLD 10	ini.	-5.1	-355	1.06	0	369	6344	4571	2703	6712		18.91	Si
SLD 10	fin.	-296.64	-651	1.06	0	369	6344	4571	2703	6712		10.31	Si
SLV 10	ini.	59.66	-677	1.06	0	369	6344	4571	2703	6712		9.91	Si
SLV 10	fin.	-470.64	-1030	1.06	0	369	6344	4571	2703	6712		6.52	Si
SLV 14	ini.	-154.23	-419	1.06	0	369	6344	4571	2703	6712		16.03	Si
SLV 14	fin.	-388.51	-773	1.06	0	369	6344	4571	2703	6712		8.68	Si
SLV 9	ini.	62.34	-651	1.06	0	369	6344	4571	2703	6712		10.31	Si
SLV 9	fin.	-454.83	-1003	1.06	0	369	6344	4571	2703	6712		6.69	Si
SLV 6	ini.	147.73	-593	1.06	0	369	6344	4571	2703	6712		11.31	Si
SLV 6	fin.	-388.67	-899	1.06	0	369	6344	4571	2703	6712		7.46	Si
SLD 9	ini.	-3.93	-343	1.06	0	369	6344	4571	2703	6712		19.54	Si
SLD 9	fin.	-289.74	-640	1.06	0	369	6344	4571	2703	6712		10.5	Si
SLD 5	ini.	32.57	-308	1.06	0	369	6344	4571	2703	6712		21.81	Si
SLD 5	fin.	-255.44	-584	1.06	0	369	6344	4571	2703	6712		11.49	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	9.243	SLV 10	Si
V_SLV	6.518	SLV 10	Si
PF_SLU	16.135	SLU 77	Si
V_SLU	10.969	SLU 83	Si

Trave di accoppiamento 161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	11.86	13.86	2	-5.093	6.506	11.86	13.86	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 8	ini.	28.38	-38	-0.0000028	0.0001872	0.0035	2		14344.28	14344.28	No	505.49	Si
SLU 8	fin.	-54.93	-70	-0.0000054	0.0001872	0.0035	2		14357.01	14357.01	No	261.39	Si
SLU 51	ini.	31.18	-59	-0.0000031	0.0001872	0.0035	2		14344.28	14344.28	No	460.11	Si
SLU 51	fin.	-69.6	-91	-0.0000069	0.0001872	0.0035	2		14357.01	14357.01	No	206.28	Si
SLU 50	ini.	33.05	-53	-0.0000033	0.0001872	0.0035	2		14344.28	14344.28	No	434.05	Si
SLU 50	fin.	-74.66	-95	-0.0000074	0.0001872	0.0035	2		14357.01	14357.01	No	192.3	Si
SLU 47	ini.	19.12	-54	-0.0000019	0.0001872	0.0035	2		14344.28	14344.28	No	750.31	Si
SLU 47	fin.	-59.02	-82	-0.0000058	0.0001872	0.0035	2		14357.01	14357.01	No	243.27	Si
SLU 43	ini.	11.43	-34	-0.0000011	0.0001872	0.0035	2		14344.28	14344.28	No	1255.32	Si
SLU 43	fin.	-60.24	-79	-0.000006	0.0001872	0.0035	2		14357.01	14357.01	No	238.32	Si
SLU 49	ini.	29.06	-54	-0.0000029	0.0001872	0.0035	2		14344.28	14344.28	No	493.54	Si
SLU 49	fin.	-66.77	-89	-0.0000066	0.0001872	0.0035	2		14357.01	14357.01	No	215.03	Si
SLU 48	ini.	30.94	-48	-0.0000031	0.0001872	0.0035	2		14344.28	14344.28	No	463.68	Si
SLU 48	fin.	-71.83	-92	-0.0000071	0.0001872	0.0035	2		14357.01	14357.01	No	199.88	Si
SLU 71	ini.	25.34	-28	-0.0000025	0.0001872	0.0035	2		14344.28	14344.28	No	566.14	Si
SLU 71	fin.	-52.55	-71	-0.0000052	0.0001872	0.0035	2		14357.01	14357.01	No	273.23	Si
SLU 45	ini.	20.13	-39	-0.000002	0.0001872	0.0035	2		14344.28	14344.28	No	712.75	Si
SLU 45	fin.	-64.62	-84	-0.0000064	0.0001872	0.0035	2		14357.01	14357.01	No	222.18	Si
SLU 46	ini.	18.25	-45	-0.0000018	0.0001872	0.0035	2		14344.28	14344.28	No	785.83	Si
SLU 46	fin.	-59.56	-81	-0.0000059	0.0001872	0.0035	2		14357.01	14357.01	No	241.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 48	ini.	30.94	-587	2	0	812	3965	8384	5100	4776	No	8.14	Si
SLU 48	fin.	-71.83	-215	2	0	812	3965	8384	5100	4776	No	22.21	Si
SLU 51	ini.	31.18	-585	2	0	812	3965	8384	5100	4776	No	8.16	Si
SLU 51	fin.	-69.6	-239	2	0	812	3965	8384	5100	4776	No	19.98	Si
SLU 46	ini.	18.25	-517	2	0	812	3965	8384	5100	4776	No	9.24	Si
SLU 46	fin.	-59.56	-190	2	0	812	3965	8384	5100	4776	No	25.08	Si
SLU 72	ini.	23.47	-573	2	0	812	3965	8384	5100	4776	No	8.33	Si
SLU 72	fin.	-47.49	-168	2	0	812	3965	8384	5100	4776	No	28.46	Si
SLU 70	ini.	21.35	-580	2	0	812	3965	8384	5100	4776	No	8.24	Si
SLU 70	fin.	-44.65	-149	2	0	812	3965	8384	5100	4776	No	32.07	Si
SLU 49	ini.	29.06	-592	2	0	812	3965	8384	5100	4776	No	8.07	Si
SLU 49	fin.	-66.77	-220	2	0	812	3965	8384	5100	4776	No	21.69	Si
SLU 71	ini.	25.34	-568	2	0	812	3965	8384	5100	4776	No	8.41	Si
SLU 71	fin.	-52.55	-163	2	0	812	3965	8384	5100	4776	No	29.37	Si
SLU 50	ini.	33.05	-580	2	0	812	3965	8384	5100	4776	No	8.23	Si
SLU 50	fin.	-74.66	-234	2	0	812	3965	8384	5100	4776	No	20.42	Si
SLU 69	ini.	23.22	-574	2	0	812	3965	8384	5100	4776	No	8.31	Si
SLU 69	fin.	-49.71	-144	2	0	812	3965	8384	5100	4776	No	33.23	Si
SLU 57	ini.	11.72	-516	2	0	812	3965	8384	5100	4776	No	9.26	Si
SLU 57	fin.	-31.2	-104	2	0	812	3965	8384	5100	4776	No	46.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-628.89	647	-0.0000633	0.0002807	0.0035	2		14215.41	14215.41		22.6	Si
SLV 15	fin.	1037.96	1096	-0.0001059	0.0002807	0.0035	2		14202.07	14202.07		13.68	Si
SLV 7	ini.	-27.33	279	-0.0000027	0.0002807	0.0035	2		14215.41	14215.41		520.12	Si
SLV 7	fin.	-619.06	-528	-0.0000623	0.0002807	0.0035	2		14215.41	14215.41		22.96	Si
SLV 14	ini.	-532.15	417	-0.0000534	0.0002807	0.0035	2		14215.41	14215.41		26.71	Si
SLV 14	fin.	1219.23	1210	-0.0001251	0.0002807	0.0035	2		14202.07	14202.07		11.65	Si
SLV 16	ini.	-658.43	689	-0.0000663	0.0002807	0.0035	2		14215.41	14215.41		21.59	Si
SLV 16	fin.	1077.26	1138	-0.00011	0.0002807	0.0035	2		14202.07	14202.07		13.18	Si
SLV 1	ini.	657.62	-693	-0.0000663	0.0002807	0.0035	2		14202.07	14202.07		21.6	Si
SLV 1	fin.	-1125.31	-1213	-0.000115	0.0002807	0.0035	2		14215.41	14215.41		12.63	Si
SLV 2	ini.	628.09	-650	-0.0000633	0.0002807	0.0035	2		14202.07	14202.07		22.61	Si
SLV 2	fin.	-1086.01	-1171	-0.0001109	0.0002807	0.0035	2		14215.41	14215.41		13.09	Si
SLV 3	ini.	531.35	-420	-0.0000534	0.0002807	0.0035	2		14202.07	14202.07		26.73	Si
SLV 3	fin.	-1267.28	-1285	-0.0001301	0.0002807	0.0035	2		14215.41	14215.41		11.22	Si
SLV 4	ini.	501.81	-378	-0.0000504	0.0002807	0.0035	2		14202.07	14202.07		28.3	Si
SLV 4	fin.	-1227.98	-1243	-0.0001259	0.0002807	0.0035	2		14215.41	14215.41		11.58	Si
SLV 13	ini.	-502.61	374	-0.0000504	0.0002807	0.0035	2		14215.41	14215.41		28.28	Si
SLV 13	fin.	1179.93	1168	-0.0001209	0.0002807	0.0035	2		14202.07	14202.07		12.04	Si
SLV 8	ini.	-46.32	307	-0.0000046	0.0002807	0.0035	2		14215.41	14215.41		306.93	Si
SLV 8	fin.	-593.8	-501	-0.0000597	0.0002807	0.0035	2		14215.41	14215.41		23.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	281.42	-2169	2	0	1217	3965	12577	5100	5182		2.39	Si
SLD 1	fin.	-491.9	-1392	2	0	1217	3965	12577	5100	5182		3.72	Si
SLV 14	ini.	-532.15	3750	2	0	1217	3965	12577	5100	5182		1.38	Si
SLV 14	fin.	1219.23	2726	2	0	1217	3965	12577	5100	5182		1.9	Si
SLV 1	ini.	657.62	-4662	2	0	1217	3965	12577	5100	5182		1.11	Si
SLV 1	fin.	-1125.31	-3166	2	0	1217	3965	12577	5100	5182		1.64	Si
SLV 3	ini.	531.35	-4354	2	0	1217	3965	12577	5100	5182		1.19	Si
SLV 3	fin.	-1267.28	-2850	2	0	1217	3965	12577	5100	5182		1.82	Si
SLV 15	ini.	-628.89	3854	2	0	1217	3965	12577	5100	5182		1.34	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	fin.	1037.96	2921	2	0	1217	3965	12577	5100	5182		1.77	Si
SLV 5	ini.	393.58	-2113	2	0	1217	3965	12577	5100	5182		2.45	Si
SLV 5	fin.	-145.83	-1493	2	0	1217	3965	12577	5100	5182		3.47	Si
SLV 2	ini.	628.09	-4457	2	0	1217	3965	12577	5100	5182		1.16	Si
SLV 2	fin.	-1086.01	-3044	2	0	1217	3965	12577	5100	5182		1.7	Si
SLV 4	ini.	501.81	-4149	2	0	1217	3965	12577	5100	5182		1.25	Si
SLV 4	fin.	-1227.98	-2728	2	0	1217	3965	12577	5100	5182		1.9	Si
SLV 16	ini.	-658.43	4059	2	0	1217	3965	12577	5100	5182		1.28	Si
SLV 16	fin.	1077.26	3042	2	0	1217	3965	12577	5100	5182		1.7	Si
SLV 13	ini.	-502.61	3545	2	0	1217	3965	12577	5100	5182		1.46	Si
SLV 13	fin.	1179.93	2605	2	0	1217	3965	12577	5100	5182		1.99	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	11.217	SLV 3	Si
V_SLV	1.112	SLV 1	Si
PF_SLU	192.299	SLU 50	Si
V_SLU	8.067	SLU 49	Si

Trave di accoppiamento 162

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	14.66	15.02	0.36	-5.093	6.506	14.66	15.02	0.36	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 39	ini.	-39.35	27	-0.0001255	0.0001872	0.0035	0.36		482.14	482.14	No	12.25	Si
SLU 39	fin.	27.93	-147	-0.0000881	0.0001872	0.0035	0.36		479.9	479.9	No	17.18	Si
SLU 84	ini.	-37.81	32	-0.0001203	0.0001872	0.0035	0.36		482.14	482.14	No	12.75	Si
SLU 84	fin.	26.39	-136	-0.000083	0.0001872	0.0035	0.36		479.9	479.9	No	18.19	Si
SLU 41	ini.	-35.74	29	-0.0001134	0.0001872	0.0035	0.36		482.14	482.14	No	13.49	Si
SLU 41	fin.	23.72	-125	-0.0000744	0.0001872	0.0035	0.36		479.9	479.9	No	20.23	Si
SLU 81	ini.	-42.03	30	-0.0001345	0.0001872	0.0035	0.36		482.14	482.14	No	11.47	Si
SLU 81	fin.	31.4	-163	-0.0000995	0.0001872	0.0035	0.36		479.9	479.9	No	15.28	Si
SLU 74	ini.	-35.92	28	-0.000114	0.0001872	0.0035	0.36		482.14	482.14	No	13.42	Si
SLU 74	fin.	24.99	-135	-0.0000785	0.0001872	0.0035	0.36		479.9	479.9	No	19.21	Si
SLU 75	ini.	-35.31	29	-0.0001119	0.0001872	0.0035	0.36		482.14	482.14	No	13.65	Si
SLU 75	fin.	24.19	-130	-0.0000759	0.0001872	0.0035	0.36		479.9	479.9	No	19.84	Si
SLU 83	ini.	-38.42	32	-0.0001224	0.0001872	0.0035	0.36		482.14	482.14	No	12.55	Si
SLU 83	fin.	27.18	-141	-0.0000856	0.0001872	0.0035	0.36		479.9	479.9	No	17.65	Si
SLU 73	ini.	-36.4	29	-0.0001156	0.0001872	0.0035	0.36		482.14	482.14	No	13.25	Si
SLU 73	fin.	27.22	-140	-0.0000858	0.0001872	0.0035	0.36		479.9	479.9	No	17.63	Si
SLU 82	ini.	-41.42	31	-0.0001325	0.0001872	0.0035	0.36		482.14	482.14	No	11.64	Si
SLU 82	fin.	30.6	-158	-0.0000968	0.0001872	0.0035	0.36		479.9	479.9	No	15.68	Si
SLU 40	ini.	-38.74	28	-0.0001234	0.0001872	0.0035	0.36		482.14	482.14	No	12.45	Si
SLU 40	fin.	27.13	-142	-0.0000855	0.0001872	0.0035	0.36		479.9	479.9	No	17.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 53	ini.	-28.91	197	0.36	0	105	2855	1509	918	2427	No	12.3	Si
SLU 53	fin.	21.77	-263	0.36	0	105	2855	1509	918	2427	No	9.22	Si
SLU 81	ini.	-42.03	241	0.36	0	105	2855	1509	918	2427	No	10.09	Si
SLU 81	fin.	31.4	-279	0.36	0	105	2855	1509	918	2427	No	8.71	Si
SLU 78	ini.	-31.7	214	0.36	0	105	2855	1509	918	2427	No	11.33	Si
SLU 78	fin.	19.97	-281	0.36	0	105	2855	1509	918	2427	No	8.63	Si
SLU 73	ini.	-36.4	220	0.36	0	105	2855	1509	918	2427	No	11.04	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 73	fin.	27.22	-267	0.36	0	105	2855	1509	918	2427	No	9.08	Si
SLU 75	ini.	-35.31	225	0.36	0	105	2855	1509	918	2427	No	10.8	Si
SLU 75	fin.	24.19	-286	0.36	0	105	2855	1509	918	2427	No	8.49	Si
SLU 84	ini.	-37.81	228	0.36	0	105	2855	1509	918	2427	No	10.66	Si
SLU 84	fin.	26.39	-274	0.36	0	105	2855	1509	918	2427	No	8.87	Si
SLU 77	ini.	-32.31	216	0.36	0	105	2855	1509	918	2427	No	11.22	Si
SLU 77	fin.	20.77	-282	0.36	0	105	2855	1509	918	2427	No	8.62	Si
SLU 83	ini.	-38.42	230	0.36	0	105	2855	1509	918	2427	No	10.55	Si
SLU 83	fin.	27.18	-274	0.36	0	105	2855	1509	918	2427	No	8.86	Si
SLU 82	ini.	-41.42	238	0.36	0	105	2855	1509	918	2427	No	10.18	Si
SLU 82	fin.	30.6	-278	0.36	0	105	2855	1509	918	2427	No	8.72	Si
SLU 74	ini.	-35.92	227	0.36	0	105	2855	1509	918	2427	No	10.69	Si
SLU 74	fin.	24.99	-286	0.36	0	105	2855	1509	918	2427	No	8.48	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	241.59	-44	-0.0009982	0.0002807	0.0035	0.36		482.94	482.94		2	Si
SLV 2	fin.	-187.47	639	-0.000715	0.0002807	0.0035	0.36		485.29	485.29		2.59	Si
SLV 12	ini.	-168.42	46	-0.0006256	0.0002807	0.0035	0.36		485.29	485.29		2.88	Si
SLV 12	fin.	131.02	-457	-0.0004642	0.0002807	0.0035	0.36		482.94	482.94		3.69	Si
SLV 14	ini.	-259.25	77	-0.001091	0.0002807	0.0035	0.36		485.29	485.29		1.87	Si
SLV 14	fin.	203.8	-783	-0.0007995	0.0002807	0.0035	0.36		482.94	482.94		2.37	Si
SLV 15	ini.	-285.64	79	-0.001248	0.0002807	0.0035	0.36		485.29	485.29		1.7	Si
SLV 15	fin.	223.56	-823	-0.0009011	0.0002807	0.0035	0.36		482.94	482.94		2.16	Si
SLV 13	ini.	-245.53	74	-0.0010138	0.0002807	0.0035	0.36		485.29	485.29		1.98	Si
SLV 13	fin.	193.06	-740	-0.0007463	0.0002807	0.0035	0.36		482.94	482.94		2.5	Si
SLV 3	ini.	215.19	-42	-0.0008575	0.0002807	0.0035	0.36		482.94	482.94		2.24	Si
SLV 3	fin.	-167.71	599	-0.0006224	0.0002807	0.0035	0.36		485.29	485.29		2.89	Si
SLV 16	ini.	-299.36	83	-0.0013347	0.0002807	0.0035	0.36		485.29	485.29		1.62	Si
SLV 16	fin.	234.3	-865	-0.0009584	0.0002807	0.0035	0.36		482.94	482.94		2.06	Si
SLV 11	ini.	-159.6	43	-0.0005856	0.0002807	0.0035	0.36		485.29	485.29		3.04	Si
SLV 11	fin.	124.12	-429	-0.0004354	0.0002807	0.0035	0.36		482.94	482.94		3.89	Si
SLV 4	ini.	201.48	-39	-0.0007879	0.0002807	0.0035	0.36		482.94	482.94		2.4	Si
SLV 4	fin.	-156.97	556	-0.0005738	0.0002807	0.0035	0.36		485.29	485.29		3.09	Si
SLV 1	ini.	255.31	-47	-0.0010751	0.0002807	0.0035	0.36		482.94	482.94		1.89	Si
SLV 1	fin.	-198.21	681	-0.0007672	0.0002807	0.0035	0.36		485.29	485.29		2.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-259.25	392	0.36	0	158	2855	2264	918	3012		7.69	Si
SLV 14	fin.	203.8	705	0.36	0	158	2855	2264	918	3012		4.27	Si
SLV 3	ini.	215.19	-99	0.36	0	158	2855	2264	918	3012		30.28	Si
SLV 3	fin.	-167.71	-1082	0.36	0	158	2855	2264	918	3012		2.78	Si
SLV 15	ini.	-285.64	415	0.36	0	158	2855	2264	918	3012		7.27	Si
SLV 15	fin.	223.56	812	0.36	0	158	2855	2264	918	3012		3.71	Si
SLV 2	ini.	241.59	-122	0.36	0	158	2855	2264	918	3012		24.65	Si
SLV 2	fin.	-187.47	-1189	0.36	0	158	2855	2264	918	3012		2.53	Si
SLV 6	ini.	115.55	-20	0.36	0	158	2855	2264	918	3012		153.49	Si
SLV 6	fin.	-88.02	-682	0.36	0	158	2855	2264	918	3012		4.42	Si
SLV 16	ini.	-299.36	452	0.36	0	158	2855	2264	918	3012		6.66	Si
SLV 16	fin.	234.3	834	0.36	0	158	2855	2264	918	3012		3.61	Si
SLV 5	ini.	124.36	-44	0.36	0	158	2855	2264	918	3012		68.68	Si
SLV 5	fin.	-94.93	-696	0.36	0	158	2855	2264	918	3012		4.33	Si
SLV 1	ini.	255.31	-160	0.36	0	158	2855	2264	918	3012		18.83	Si
SLV 1	fin.	-198.21	-1212	0.36	0	158	2855	2264	918	3012		2.49	Si
SLV 13	ini.	-245.53	354	0.36	0	158	2855	2264	918	3012		8.51	Si
SLV 13	fin.	193.06	683	0.36	0	158	2855	2264	918	3012		4.41	Si
SLV 4	ini.	201.48	-62	0.36	0	158	2855	2264	918	3012		48.78	Si
SLV 4	fin.	-156.97	-1060	0.36	0	158	2855	2264	918	3012		2.84	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.621	SLV 16	Si
V_SLV	2.486	SLV 1	Si
PF_SLU	11.471	SLU 81	Si
V_SLU	8.485	SLU 74	Si

Trave di accoppiamento 163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	11.86	12.76	0.9	-2.963	5.826	11.86	12.76	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 47	ini.	123.66	-482	-0.000062	0.0001872	0.0035	0.9		2959	2959	No	23.93	Si
SLU 47	fin.	-160.89	50	-0.0000811	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.43	Si
SLU 45	ini.	128.28	-502	-0.0000643	0.0001872	0.0035	0.9		2959	2959	No	23.07	Si
SLU 45	fin.	-163.43	44	-0.0000824	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.14	Si
SLU 60	ini.	143.86	-547	-0.0000724	0.0001872	0.0035	0.9		2959	2959	No	20.57	Si
SLU 60	fin.	-175.32	40	-0.0000887	0.0001872	0.0035	0.9		2964.67	2964.67	No	16.91	Si
SLU 44	ini.	145.72	-564	-0.0000734	0.0001872	0.0035	0.9		2959	2959	No	20.31	Si
SLU 44	fin.	-177.02	53	-0.0000896	0.0001872	0.0035	0.9		2964.67	2964.67	No	16.75	Si
SLU 61	ini.	143.48	-545	-0.0000722	0.0001872	0.0035	0.9		2959	2959	No	20.62	Si
SLU 61	fin.	-175.37	41	-0.0000887	0.0001872	0.0035	0.9		2964.67	2964.67	No	16.91	Si
SLU 43	ini.	146.35	-568	-0.0000737	0.0001872	0.0035	0.9		2959	2959	No	20.22	Si
SLU 43	fin.	-176.93	51	-0.0000895	0.0001872	0.0035	0.9		2964.67	2964.67	No	16.76	Si
SLU 53	ini.	126.54	-488	-0.0000635	0.0001872	0.0035	0.9		2959	2959	No	23.38	Si
SLU 53	fin.	-162.29	37	-0.0000818	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.27	Si
SLU 52	ini.	143.98	-550	-0.0000725	0.0001872	0.0035	0.9		2959	2959	No	20.55	Si
SLU 52	fin.	-175.89	46	-0.000089	0.0001872	0.0035	0.9		2964.67	2964.67	No	16.86	Si
SLU 54	ini.	126.16	-486	-0.0000633	0.0001872	0.0035	0.9		2959	2959	No	23.45	Si
SLU 54	fin.	-162.35	39	-0.0000819	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.26	Si
SLU 46	ini.	127.9	-500	-0.0000642	0.0001872	0.0035	0.9		2959	2959	No	23.13	Si
SLU 46	fin.	-163.48	46	-0.0000825	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 44	ini.	145.72	-1226	0.9	0	365	7137	3773	2295	6068	No	4.95	Si
SLU 44	fin.	-177.02	-475	0.9	0	365	7137	3773	2295	6068	No	12.78	Si
SLU 43	ini.	146.35	-1232	0.9	0	365	7137	3773	2295	6068	No	4.92	Si
SLU 43	fin.	-176.93	-472	0.9	0	365	7137	3773	2295	6068	No	12.85	Si
SLU 53	ini.	126.54	-1156	0.9	0	365	7137	3773	2295	6068	No	5.25	Si
SLU 53	fin.	-162.29	-380	0.9	0	365	7137	3773	2295	6068	No	15.98	Si
SLU 47	ini.	123.66	-1195	0.9	0	365	7137	3773	2295	6068	No	5.08	Si
SLU 47	fin.	-160.89	-355	0.9	0	365	7137	3773	2295	6068	No	17.09	Si
SLU 51	ini.	101.86	-1167	0.9	0	365	7137	3773	2295	6068	No	5.2	Si
SLU 51	fin.	-144.72	-234	0.9	0	365	7137	3773	2295	6068	No	25.91	Si
SLU 50	ini.	102.23	-1170	0.9	0	365	7137	3773	2295	6068	No	5.18	Si
SLU 50	fin.	-144.66	-233	0.9	0	365	7137	3773	2295	6068	No	26.09	Si
SLU 48	ini.	106.22	-1221	0.9	0	365	7137	3773	2295	6068	No	4.97	Si
SLU 48	fin.	-147.29	-225	0.9	0	365	7137	3773	2295	6068	No	26.93	Si
SLU 45	ini.	128.28	-1252	0.9	0	365	7137	3773	2295	6068	No	4.85	Si
SLU 45	fin.	-163.43	-345	0.9	0	365	7137	3773	2295	6068	No	17.58	Si
SLU 46	ini.	127.9	-1248	0.9	0	365	7137	3773	2295	6068	No	4.86	Si
SLU 46	fin.	-163.48	-347	0.9	0	365	7137	3773	2295	6068	No	17.5	Si
SLU 49	ini.	105.85	-1217	0.9	0	365	7137	3773	2295	6068	No	4.99	Si
SLU 49	fin.	-147.34	-227	0.9	0	365	7137	3773	2295	6068	No	26.74	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-126.58	188	-0.0000629	0.0002807	0.0035	0.9		2995.37	2995.37		23.66	Si
SLV 15	fin.	505.78	-1319	-0.0002688	0.0002807	0.0035	0.9		2989.59	2989.59		5.91	Si
SLD 1	ini.	199.97	-624	-0.0001007	0.0002807	0.0035	0.9		2989.59	2989.59		14.95	Si
SLD 1	fin.	-419.6	665	-0.0002189	0.0002807	0.0035	0.9		2995.37	2995.37		7.14	Si
SLV 2	ini.	331.49	-981	-0.0001706	0.0002807	0.0035	0.9		2989.59	2989.59		9.02	Si
SLV 2	fin.	-756.69	1361	-0.0004239	0.0002807	0.0035	0.9		2995.37	2995.37		3.96	Si
SLV 6	ini.	464.2	-1754	-0.0002447	0.0002807	0.0035	0.9		2989.59	2989.59		6.44	Si
SLV 6	fin.	-619.44	525	-0.0003365	0.0002807	0.0035	0.9		2995.37	2995.37		4.84	Si
SLV 3	ini.	134.7	-143	-0.0000672	0.0002807	0.0035	0.9		2989.59	2989.59		22.19	Si
SLV 3	fin.	-602.65	1440	-0.0003262	0.0002807	0.0035	0.9		2995.37	2995.37		4.97	Si
SLV 12	ini.	-256.7	918	-0.0001302	0.0002807	0.0035	0.9		2995.37	2995.37		11.67	Si
SLV 12	fin.	402.45	-588	-0.0002097	0.0002807	0.0035	0.9		2989.59	2989.59		7.43	Si
SLV 5	ini.	461.61	-1712	-0.0002432	0.0002807	0.0035	0.9		2989.59	2989.59		6.48	Si
SLV 5	fin.	-653.36	630	-0.0003576	0.0002807	0.0035	0.9		2995.37	2995.37		4.58	Si
SLV 4	ini.	138.74	-209	-0.0000692	0.0002807	0.0035	0.9		2989.59	2989.59		21.55	Si
SLV 4	fin.	-549.88	1276	-0.0002943	0.0002807	0.0035	0.9		2995.37	2995.37		5.45	Si
SLV 16	ini.	-122.54	122	-0.0000609	0.0002807	0.0035	0.9		2995.37	2995.37		24.44	Si
SLV 16	fin.	558.56	-1483	-0.0003001	0.0002807	0.0035	0.9		2989.59	2989.59		5.35	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	327.45	-915	-0.0001684	0.0002807	0.0035	0.9		2989.59	2989.59		9.13	Si
SLV 1	fin.	-809.46	1526	-0.000459	0.0002807	0.0035	0.9		2995.37	2995.37		3.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	464.2	-3391	0.9	0	548	7137	5660	2295	7684		2.27	Si
SLV 6	fin.	-619.44	-2083	0.9	0	548	7137	5660	2295	7684		3.69	Si
SLV 9	ini.	383.22	-2613	0.9	0	548	7137	5660	2295	7684		2.94	Si
SLV 9	fin.	-320.83	-1127	0.9	0	548	7137	5660	2295	7684		6.82	Si
SLV 1	ini.	327.45	-2785	0.9	0	548	7137	5660	2295	7684		2.76	Si
SLV 1	fin.	-809.46	-2554	0.9	0	548	7137	5660	2295	7684		3.01	Si
SLV 16	ini.	-122.54	1060	0.9	0	548	7137	5660	2295	7684		7.25	Si
SLV 16	fin.	558.56	1892	0.9	0	548	7137	5660	2295	7684		4.06	Si
SLV 5	ini.	461.61	-3384	0.9	0	548	7137	5660	2295	7684		2.27	Si
SLV 5	fin.	-653.36	-2184	0.9	0	548	7137	5660	2295	7684		3.52	Si
SLD 6	ini.	261.62	-1974	0.9	0	548	7137	5660	2295	7684		3.89	Si
SLD 6	fin.	-341.49	-1098	0.9	0	548	7137	5660	2295	7684		7	Si
SLV 3	ini.	134.7	-1501	0.9	0	548	7137	5660	2295	7684		5.12	Si
SLV 3	fin.	-602.65	-1789	0.9	0	548	7137	5660	2295	7684		4.29	Si
SLV 2	ini.	331.49	-2795	0.9	0	548	7137	5660	2295	7684		2.75	Si
SLV 2	fin.	-756.69	-2396	0.9	0	548	7137	5660	2295	7684		3.21	Si
SLD 5	ini.	260.49	-1971	0.9	0	548	7137	5660	2295	7684		3.9	Si
SLD 5	fin.	-356.3	-1142	0.9	0	548	7137	5660	2295	7684		6.73	Si
SLV 10	ini.	385.82	-2620	0.9	0	548	7137	5660	2295	7684		2.93	Si
SLV 10	fin.	-286.91	-1026	0.9	0	548	7137	5660	2295	7684		7.49	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.7	SLV 1	Si
V_SLV	2.266	SLV 6	Si
PF_SLU	16.747	SLU 44	Si
V_SLU	4.848	SLU 45	Si

Trave di accoppiamento 164

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	14.56	15.02	0.46	-2.963	5.826	14.56	15.02	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	ini.	-10.03	118	-0.0000188	0.0001872	0.0035	0.46		780.23	780.23	No	77.78	Si
SLU 43	fin.	-85.28	-114	-0.0001704	0.0001872	0.0035	0.46		780.23	780.23	No	9.15	Si
SLU 66	ini.	-48.09	-44	-0.0000929	0.0001872	0.0035	0.46		780.23	780.23	No	16.23	Si
SLU 66	fin.	-83.2	-32	-0.0001659	0.0001872	0.0035	0.46		780.23	780.23	No	9.38	Si
SLU 49	ini.	-47.27	-26	-0.0000913	0.0001872	0.0035	0.46		780.23	780.23	No	16.5	Si
SLU 49	fin.	-87.46	-34	-0.0001751	0.0001872	0.0035	0.46		780.23	780.23	No	8.92	Si
SLU 48	ini.	-46.65	-21	-0.00009	0.0001872	0.0035	0.46		780.23	780.23	No	16.73	Si
SLU 48	fin.	-88.66	-38	-0.0001778	0.0001872	0.0035	0.46		780.23	780.23	No	8.8	Si
SLU 45	ini.	-29.92	45	-0.000057	0.0001872	0.0035	0.46		780.23	780.23	No	26.08	Si
SLU 45	fin.	-89.54	-81	-0.0001797	0.0001872	0.0035	0.46		780.23	780.23	No	8.71	Si
SLU 50	ini.	-43.49	-13	-0.0000837	0.0001872	0.0035	0.46		780.23	780.23	No	17.94	Si
SLU 50	fin.	-83.52	-28	-0.0001666	0.0001872	0.0035	0.46		780.23	780.23	No	9.34	Si
SLU 46	ini.	-30.54	40	-0.0000582	0.0001872	0.0035	0.46		780.23	780.23	No	25.54	Si
SLU 46	fin.	-88.34	-77	-0.0001771	0.0001872	0.0035	0.46		780.23	780.23	No	8.83	Si
SLU 44	ini.	-11.08	109	-0.0000208	0.0001872	0.0035	0.46		780.23	780.23	No	70.45	Si
SLU 44	fin.	-83.28	-108	-0.0001661	0.0001872	0.0035	0.46		780.23	780.23	No	9.37	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 47	ini.	-27.8	44	-0.0000529	0.0001872	0.0035	0.46		780.23	780.23	No	28.06	Si
SLU 47	fin.	-82.4	-65	-0.0001642	0.0001872	0.0035	0.46		780.23	780.23	No	9.47	Si
SLU 53	ini.	-34.79	10	-0.0000665	0.0001872	0.0035	0.46		780.23	780.23	No	22.42	Si
SLU 53	fin.	-83.11	-59	-0.0001657	0.0001872	0.0035	0.46		780.23	780.23	No	9.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-70.32	1278	0.46	0	124	3648	1928	1173	3101	No	2.43	Si
SLU 78	fin.	-74.7	-857	0.46	0	124	3648	1928	1173	3101	No	3.62	Si
SLU 79	ini.	-66.54	1234	0.46	0	124	3648	1928	1173	3101	No	2.51	Si
SLU 79	fin.	-70.77	-825	0.46	0	124	3648	1928	1173	3101	No	3.76	Si
SLU 80	ini.	-67.16	1236	0.46	0	124	3648	1928	1173	3101	No	2.51	Si
SLU 80	fin.	-69.57	-819	0.46	0	124	3648	1928	1173	3101	No	3.79	Si
SLU 69	ini.	-64.82	1245	0.46	0	124	3648	1928	1173	3101	No	2.49	Si
SLU 69	fin.	-82.33	-890	0.46	0	124	3648	1928	1173	3101	No	3.48	Si
SLU 70	ini.	-65.44	1248	0.46	0	124	3648	1928	1173	3101	No	2.49	Si
SLU 70	fin.	-81.12	-885	0.46	0	124	3648	1928	1173	3101	No	3.51	Si
SLU 77	ini.	-69.69	1275	0.46	0	124	3648	1928	1173	3101	No	2.43	Si
SLU 77	fin.	-75.9	-862	0.46	0	124	3648	1928	1173	3101	No	3.6	Si
SLU 71	ini.	-61.66	1204	0.46	0	124	3648	1928	1173	3101	No	2.58	Si
SLU 71	fin.	-77.19	-853	0.46	0	124	3648	1928	1173	3101	No	3.64	Si
SLU 72	ini.	-62.29	1206	0.46	0	124	3648	1928	1173	3101	No	2.57	Si
SLU 72	fin.	-75.99	-847	0.46	0	124	3648	1928	1173	3101	No	3.66	Si
SLU 35	ini.	-72.17	1200	0.46	0	124	3648	1928	1173	3101	No	2.59	Si
SLU 35	fin.	-54.55	-701	0.46	0	124	3648	1928	1173	3101	No	4.43	Si
SLU 36	ini.	-72.8	1202	0.46	0	124	3648	1928	1173	3101	No	2.58	Si
SLU 36	fin.	-53.35	-695	0.46	0	124	3648	1928	1173	3101	No	4.46	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-147.97	-887	-0.000303	0.0002807	0.0035	0.46		788.4	788.4		5.33	Si
SLV 8	fin.	171.72	840	-0.0003601	0.0002807	0.0035	0.46		785.44	785.44		4.57	Si
SLV 11	ini.	-172.62	-956	-0.0003608	0.0002807	0.0035	0.46		788.4	788.4		4.57	Si
SLV 11	fin.	112.52	515	-0.0002252	0.0002807	0.0035	0.46		785.44	785.44		6.98	Si
SLV 5	ini.	135.67	1027	-0.0002762	0.0002807	0.0035	0.46		785.44	785.44		5.79	Si
SLV 5	fin.	-226.07	-583	-0.000495	0.0002807	0.0035	0.46		788.4	788.4		3.49	Si
SLV 6	ini.	134.43	1020	-0.0002735	0.0002807	0.0035	0.46		785.44	785.44		5.84	Si
SLV 6	fin.	-233.09	-624	-0.0005135	0.0002807	0.0035	0.46		788.4	788.4		3.38	Si
SLV 13	ini.	-18.91	198	-0.0000356	0.0002807	0.0035	0.46		788.4	788.4		41.69	Si
SLV 13	fin.	-225.92	-852	-0.0004946	0.0002807	0.0035	0.46		788.4	788.4		3.49	Si
SLV 9	ini.	109.78	952	-0.0002193	0.0002807	0.0035	0.46		785.44	785.44		7.15	Si
SLV 9	fin.	-292.29	-949	-0.0006776	0.0002807	0.0035	0.46		788.4	788.4		2.7	Si
SLV 10	ini.	108.55	945	-0.0002167	0.0002807	0.0035	0.46		785.44	785.44		7.24	Si
SLV 10	fin.	-299.31	-989	-0.000698	0.0002807	0.0035	0.46		788.4	788.4		2.63	Si
SLV 14	ini.	-20.83	188	-0.0000392	0.0002807	0.0035	0.46		788.4	788.4		37.85	Si
SLV 14	fin.	-236.84	-915	-0.0005234	0.0002807	0.0035	0.46		788.4	788.4		3.33	Si
SLV 7	ini.	-146.74	-881	-0.0003002	0.0002807	0.0035	0.46		788.4	788.4		5.37	Si
SLV 7	fin.	178.74	881	-0.0003771	0.0002807	0.0035	0.46		785.44	785.44		4.39	Si
SLV 12	ini.	-173.85	-963	-0.0003637	0.0002807	0.0035	0.46		788.4	788.4		4.53	Si
SLV 12	fin.	105.49	475	-0.0002101	0.0002807	0.0035	0.46		785.44	785.44		7.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-172.62	1280	0.46	0	187	3648	2893	1173	3834		3	Si
SLV 11	fin.	112.52	129	0.46	0	187	3648	2893	1173	3834		29.71	Si
SLV 3	ini.	-17.35	1256	0.46	0	187	3648	2893	1173	3834		3.05	Si
SLV 3	fin.	116.27	355	0.46	0	187	3648	2893	1173	3834		10.8	Si
SLV 7	ini.	-146.74	1549	0.46	0	187	3648	2893	1173	3834		2.47	Si
SLV 7	fin.	178.74	509	0.46	0	187	3648	2893	1173	3834		7.53	Si
SLV 12	ini.	-173.85	1275	0.46	0	187	3648	2893	1173	3834		3.01	Si
SLV 12	fin.	105.49	108	0.46	0	187	3648	2893	1173	3834		35.45	Si
SLV 14	ini.	-20.83	-171	0.46	0	187	3648	2893	1173	3834		22.38	Si
SLV 14	fin.	-236.84	-1463	0.46	0	187	3648	2893	1173	3834		2.62	Si
SLV 13	ini.	-18.91	-163	0.46	0	187	3648	2893	1173	3834		23.55	Si
SLV 13	fin.	-225.92	-1431	0.46	0	187	3648	2893	1173	3834		2.68	Si
SLV 4	ini.	-19.27	1248	0.46	0	187	3648	2893	1173	3834		3.07	Si
SLV 4	fin.	105.35	322	0.46	0	187	3648	2893	1173	3834		11.89	Si
SLV 8	ini.	-147.97	1544	0.46	0	187	3648	2893	1173	3834		2.48	Si
SLV 8	fin.	171.72	489	0.46	0	187	3648	2893	1173	3834		7.85	Si
SLV 9	ini.	109.78	-459	0.46	0	187	3648	2893	1173	3834		8.36	Si
SLV 9	fin.	-292.29	-1597	0.46	0	187	3648	2893	1173	3834		2.4	Si
SLV 10	ini.	108.55	-464	0.46	0	187	3648	2893	1173	3834		8.26	Si
SLV 10	fin.	-299.31	-1618	0.46	0	187	3648	2893	1173	3834		2.37	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.634	SLV 10	Si
V_SLV	2.37	SLV 10	Si
PF_SLU	8.714	SLU 45	Si
V_SLU	2.428	SLU 78	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	13.96	15.083	1.123	-16.333	-3.314	13.96	15.084	1.124	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 72	ini.	-341.07	-1485	-0.0001118	0.0001872	0.0035	1.123		4629.75	4629.75	No	13.57	Si
SLU 72	fin.	651.83	-1482	-0.000225	0.0001872	0.0035	1.1238		4621.23	4621.23	No	7.09	Si
SLU 69	ini.	-336.28	-1510	-0.0001101	0.0001872	0.0035	1.123		4629.75	4629.75	No	13.77	Si
SLU 69	fin.	673.71	-1507	-0.0002334	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.86	Si
SLU 67	ini.	-337.87	-1351	-0.0001107	0.0001872	0.0035	1.123		4629.75	4629.75	No	13.7	Si
SLU 67	fin.	627.13	-1348	-0.0002154	0.0001872	0.0035	1.1238		4621.23	4621.23	No	7.37	Si
SLU 71	ini.	-338.88	-1483	-0.000111	0.0001872	0.0035	1.123		4629.75	4629.75	No	13.66	Si
SLU 71	fin.	650.54	-1480	-0.0002245	0.0001872	0.0035	1.1238		4621.23	4621.23	No	7.1	Si
SLU 66	ini.	-335.68	-1349	-0.0001099	0.0001872	0.0035	1.123		4629.75	4629.75	No	13.79	Si
SLU 66	fin.	625.83	-1346	-0.000215	0.0001872	0.0035	1.1238		4621.23	4621.23	No	7.38	Si
SLU 70	ini.	-338.47	-1513	-0.0001109	0.0001872	0.0035	1.123		4629.75	4629.75	No	13.68	Si
SLU 70	fin.	675.01	-1510	-0.000234	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.85	Si
SLU 78	ini.	-292.91	-1489	-0.0000953	0.0001872	0.0035	1.123		4629.75	4629.75	No	15.81	Si
SLU 78	fin.	639.19	-1486	-0.0002201	0.0001872	0.0035	1.1238		4621.23	4621.23	No	7.23	Si
SLU 80	ini.	-295.52	-1461	-0.0000962	0.0001872	0.0035	1.123		4629.75	4629.75	No	15.67	Si
SLU 80	fin.	616.02	-1459	-0.0002112	0.0001872	0.0035	1.1238		4621.23	4621.23	No	7.5	Si
SLU 79	ini.	-293.33	-1459	-0.0000955	0.0001872	0.0035	1.123		4629.75	4629.75	No	15.78	Si
SLU 79	fin.	614.72	-1456	-0.0002107	0.0001872	0.0035	1.1238		4621.23	4621.23	No	7.52	Si
SLU 77	ini.	-290.73	-1486	-0.0000946	0.0001872	0.0035	1.123		4629.75	4629.75	No	15.92	Si
SLU 77	fin.	637.89	-1484	-0.0002196	0.0001872	0.0035	1.1238		4621.23	4621.23	No	7.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-295.52	2840	1.123	0	456	7137	4708	2864	7571	No	2.67	Si
SLU 80	fin.	616.02	-280	1.1238	0	456	7137	4711	2866	7577	No	27.06	Si
SLU 77	ini.	-290.73	2953	1.123	0	456	7137	4708	2864	7571	No	2.56	Si
SLU 77	fin.	637.89	-367	1.1238	0	456	7137	4711	2866	7577	No	20.63	Si
SLU 69	ini.	-336.28	3043	1.123	0	456	7137	4708	2864	7571	No	2.49	Si
SLU 69	fin.	673.71	-276	1.1238	0	456	7137	4711	2866	7577	No	27.45	Si
SLU 79	ini.	-293.33	2836	1.123	0	456	7137	4708	2864	7571	No	2.67	Si
SLU 79	fin.	614.72	-284	1.1238	0	456	7137	4711	2866	7577	No	26.69	Si
SLU 70	ini.	-338.47	3047	1.123	0	456	7137	4708	2864	7571	No	2.48	Si
SLU 70	fin.	675.01	-272	1.1238	0	456	7137	4711	2866	7577	No	27.84	Si
SLU 67	ini.	-337.87	2809	1.123	0	456	7137	4708	2864	7571	No	2.7	Si
SLU 67	fin.	627.13	-264	1.1238	0	456	7137	4711	2866	7577	No	28.66	Si
SLU 72	ini.	-341.07	2930	1.123	0	456	7137	4708	2864	7571	No	2.58	Si
SLU 72	fin.	651.83	-189	1.1238	0	456	7137	4711	2866	7577	No	40.13	Si
SLU 78	ini.	-292.91	2957	1.123	0	456	7137	4708	2864	7571	No	2.56	Si
SLU 78	fin.	639.19	-363	1.1238	0	456	7137	4711	2866	7577	No	20.85	Si
SLU 66	ini.	-335.68	2805	1.123	0	456	7137	4708	2864	7571	No	2.7	Si
SLU 66	fin.	625.83	-268	1.1238	0	456	7137	4711	2866	7577	No	28.25	Si
SLU 71	ini.	-338.88	2926	1.123	0	456	7137	4708	2864	7571	No	2.59	Si
SLU 71	fin.	650.54	-193	1.1238	0	456	7137	4711	2866	7577	No	39.33	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1019.31	648	-0.0003586	0.0002807	0.0035	1.123		4654.6	4654.6		4.57	Si
SLV 3	fin.	-623.08	-105	-0.0002077	0.0002807	0.0035	1.1238		4682.2	4682.2		7.51	Si
SLV 2	ini.	1043.15	294	-0.0003683	0.0002807	0.0035	1.123		4654.6	4654.6		4.46	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	fin.	-723.04	-449	-0.0002439	0.0002807	0.0035	1.1238		4682.2	4682.2		6.48	Si
SLD 15	ini.	-787.85	-1333	-0.0002682	0.0002807	0.0035	1.123		4662.08	4662.08		5.92	Si
SLD 15	fin.	881.68	-1014	-0.0003041	0.0002807	0.0035	1.1238		4674.7	4674.7		5.3	Si
SLV 16	ini.	-1474.85	-1926	-0.0005537	0.0002807	0.0035	1.123		4662.08	4662.08		3.16	Si
SLV 16	fin.	1473.64	-1179	-0.0005537	0.0002807	0.0035	1.1238		4674.7	4674.7		3.17	Si
SLV 15	ini.	-1521.9	-1989	-0.0005753	0.0002807	0.0035	1.123		4662.08	4662.08		3.06	Si
SLV 15	fin.	1524.75	-1243	-0.0005772	0.0002807	0.0035	1.1238		4674.7	4674.7		3.07	Si
SLD 13	ini.	-797.38	-1515	-0.0002717	0.0002807	0.0035	1.123		4662.08	4662.08		5.85	Si
SLD 13	fin.	859.93	-1191	-0.0002957	0.0002807	0.0035	1.1238		4674.7	4674.7		5.44	Si
SLV 14	ini.	-1498.05	-2342	-0.0005643	0.0002807	0.0035	1.123		4662.08	4662.08		3.11	Si
SLV 14	fin.	1424.79	-1587	-0.0005315	0.0002807	0.0035	1.1238		4674.7	4674.7		3.28	Si
SLV 1	ini.	996.1	232	-0.0003493	0.0002807	0.0035	1.123		4654.6	4654.6		4.67	Si
SLV 1	fin.	-671.92	-512	-0.0002253	0.0002807	0.0035	1.1238		4682.2	4682.2		6.97	Si
SLV 4	ini.	1066.35	711	-0.0003777	0.0002807	0.0035	1.123		4654.6	4654.6		4.36	Si
SLV 4	fin.	-674.19	-41	-0.0002261	0.0002807	0.0035	1.1238		4682.2	4682.2		6.94	Si
SLV 13	ini.	-1545.1	-2405	-0.0005861	0.0002807	0.0035	1.123		4662.08	4662.08		3.02	Si
SLV 13	fin.	1475.9	-1650	-0.0005547	0.0002807	0.0035	1.1238		4674.7	4674.7		3.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1474.85	4877	1.123	0	684	7137	7062	2864	7820		1.6	Si
SLV 16	fin.	1473.64	2575	1.1238	0	684	7137	7067	2866	7821		3.04	Si
SLD 15	ini.	-787.85	3164	1.123	0	684	7137	7062	2864	7820		2.47	Si
SLD 15	fin.	881.68	1048	1.1238	0	684	7137	7067	2866	7821		7.46	Si
SLV 11	ini.	-597	3315	1.123	0	684	7137	7062	2864	7820		2.36	Si
SLV 11	fin.	820.87	303	1.1238	0	684	7137	7067	2866	7821		25.79	Si
SLV 3	ini.	1019.31	-922	1.123	0	684	7137	7062	2864	7820		8.48	Si
SLV 3	fin.	-623.08	-3180	1.1238	0	684	7137	7067	2866	7821		2.46	Si
SLV 13	ini.	-1545.1	4629	1.123	0	684	7137	7062	2864	7820		1.69	Si
SLV 13	fin.	1475.9	2948	1.1238	0	684	7137	7067	2866	7821		2.65	Si
SLV 14	ini.	-1498.05	4520	1.123	0	684	7137	7062	2864	7820		1.73	Si
SLV 14	fin.	1424.79	2839	1.1238	0	684	7137	7067	2866	7821		2.75	Si
SLV 4	ini.	1066.35	-1031	1.123	0	684	7137	7062	2864	7820		7.59	Si
SLV 4	fin.	-674.19	-3288	1.1238	0	684	7137	7067	2866	7821		2.38	Si
SLD 16	ini.	-767.66	3117	1.123	0	684	7137	7062	2864	7820		2.51	Si
SLD 16	fin.	859.74	1002	1.1238	0	684	7137	7067	2866	7821		7.81	Si
SLV 12	ini.	-566.76	3245	1.123	0	684	7137	7062	2864	7820		2.41	Si
SLV 12	fin.	788.02	233	1.1238	0	684	7137	7067	2866	7821		33.5	Si
SLV 15	ini.	-1521.9	4986	1.123	0	684	7137	7062	2864	7820		1.57	Si
SLV 15	fin.	1524.75	2683	1.1238	0	684	7137	7067	2866	7821		2.91	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.017	SLV 13	Si
V_SLV	1.568	SLV 15	Si
PF_SLU	6.846	SLU 70	Si
V_SLU	2.485	SLU 70	Si

Trave di accoppiamento 169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	13.96	15.077	1.117	-9.333	-3.314	13.96	15.078	1.118	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	ini.	775.3	-1597	-0.0002775	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.89	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	fin.	-616.81	-1613	-0.0002131	0.0001872	0.0035	1.1179		4605.28	4605.28	No	7.47	Si
SLU 69	ini.	798.2	-1684	-0.000287	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.72	Si
SLU 69	fin.	-638.19	-1703	-0.0002213	0.0001872	0.0035	1.1179		4605.28	4605.28	No	7.22	Si
SLU 67	ini.	774.2	-1595	-0.0002771	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.9	Si
SLU 67	fin.	-616.74	-1611	-0.000213	0.0001872	0.0035	1.1179		4605.28	4605.28	No	7.47	Si
SLU 78	ini.	807.26	-1752	-0.0002908	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.66	Si
SLU 78	fin.	-637.11	-1771	-0.0002209	0.0001872	0.0035	1.1179		4605.28	4605.28	No	7.23	Si
SLU 80	ini.	779.1	-1689	-0.0002791	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.86	Si
SLU 80	fin.	-633.13	-1709	-0.0002194	0.0001872	0.0035	1.1179		4605.28	4605.28	No	7.27	Si
SLU 70	ini.	797.1	-1683	-0.0002865	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.73	Si
SLU 70	fin.	-638.13	-1701	-0.0002213	0.0001872	0.0035	1.1179		4605.28	4605.28	No	7.22	Si
SLU 75	ini.	784.36	-1664	-0.0002813	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.82	Si
SLU 75	fin.	-615.72	-1681	-0.0002127	0.0001872	0.0035	1.1179		4605.28	4605.28	No	7.48	Si
SLU 79	ini.	780.2	-1691	-0.0002796	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.86	Si
SLU 79	fin.	-633.2	-1711	-0.0002194	0.0001872	0.0035	1.1179		4605.28	4605.28	No	7.27	Si
SLU 77	ini.	808.36	-1753	-0.0002912	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.65	Si
SLU 77	fin.	-637.17	-1773	-0.0002209	0.0001872	0.0035	1.1179		4605.28	4605.28	No	7.23	Si
SLU 74	ini.	785.46	-1666	-0.0002817	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.82	Si
SLU 74	fin.	-615.79	-1683	-0.0002127	0.0001872	0.0035	1.1179		4605.28	4605.28	No	7.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	797.1	166	1.1171	0	453	7137	4683	2849	7532	No	45.33	Si
SLU 70	fin.	-638.13	-3030	1.1179	0	454	7137	4687	2851	7537	No	2.49	Si
SLU 80	ini.	779.1	54	1.1171	0	453	7137	4683	2849	7532	No	139.84	Si
SLU 80	fin.	-633.13	-2951	1.1179	0	454	7137	4687	2851	7537	No	2.55	Si
SLU 79	ini.	780.2	53	1.1171	0	453	7137	4683	2849	7532	No	143.16	Si
SLU 79	fin.	-633.2	-2952	1.1179	0	454	7137	4687	2851	7537	No	2.55	Si
SLU 78	ini.	807.26	157	1.1171	0	453	7137	4683	2849	7532	No	48.02	Si
SLU 78	fin.	-637.11	-3041	1.1179	0	454	7137	4687	2851	7537	No	2.48	Si
SLU 72	ini.	768.95	63	1.1171	0	453	7137	4683	2849	7532	No	119.22	Si
SLU 72	fin.	-634.15	-2939	1.1179	0	454	7137	4687	2851	7537	No	2.56	Si
SLU 69	ini.	798.2	165	1.1171	0	453	7137	4683	2849	7532	No	45.67	Si
SLU 69	fin.	-638.19	-3031	1.1179	0	454	7137	4687	2851	7537	No	2.49	Si
SLU 71	ini.	770.05	62	1.1171	0	453	7137	4683	2849	7532	No	121.62	Si
SLU 71	fin.	-634.21	-2941	1.1179	0	454	7137	4687	2851	7537	No	2.56	Si
SLU 74	ini.	785.46	100	1.1171	0	453	7137	4683	2849	7532	No	75.22	Si
SLU 74	fin.	-615.79	-2850	1.1179	0	454	7137	4687	2851	7537	No	2.64	Si
SLU 77	ini.	808.36	156	1.1171	0	453	7137	4683	2849	7532	No	48.4	Si
SLU 77	fin.	-637.17	-3043	1.1179	0	454	7137	4687	2851	7537	No	2.48	Si
SLU 75	ini.	784.36	101	1.1171	0	453	7137	4683	2849	7532	No	74.29	Si
SLU 75	fin.	-615.72	-2849	1.1179	0	454	7137	4687	2851	7537	No	2.65	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	2290.56	-1886	-0.0009819	0.0002807	0.0035	1.1171		4616.67	4616.67		2.02	Si
SLV 4	fin.	-1937.91	-2574	-0.0007849	0.0002807	0.0035	1.1179		4603.77	4603.77		2.38	Si
SLV 2	ini.	2426.34	-2027	-0.0010607	0.0002807	0.0035	1.1171		4616.67	4616.67		1.9	Si
SLV 2	fin.	-2063.97	-2676	-0.000851	0.0002807	0.0035	1.1179		4603.77	4603.77		2.23	Si
SLV 15	ini.	-1362.96	-142	-0.0005101	0.0002807	0.0035	1.1171		4624.12	4624.12		3.39	Si
SLV 15	fin.	1198.14	486	-0.0004364	0.0002807	0.0035	1.1179		4596.34	4596.34		3.84	Si
SLD 1	ini.	1312.8	-1464	-0.0004885	0.0002807	0.0035	1.1171		4616.67	4616.67		3.52	Si
SLD 1	fin.	-1114.25	-1748	-0.0004002	0.0002807	0.0035	1.1179		4603.77	4603.77		4.13	Si
SLV 16	ini.	-1295.29	-198	-0.0004799	0.0002807	0.0035	1.1171		4624.12	4624.12		3.57	Si
SLV 16	fin.	1160.02	431	-0.0004202	0.0002807	0.0035	1.1179		4596.34	4596.34		3.96	Si
SLV 6	ini.	1317.61	-1592	-0.0004907	0.0002807	0.0035	1.1171		4616.67	4616.67		3.5	Si
SLV 6	fin.	-1119.95	-1734	-0.0004026	0.0002807	0.0035	1.1179		4603.77	4603.77		4.11	Si
SLV 1	ini.	2358.66	-1971	-0.0010211	0.0002807	0.0035	1.1171		4616.67	4616.67		1.96	Si
SLV 1	fin.	-2025.86	-2621	-0.0008308	0.0002807	0.0035	1.1179		4603.77	4603.77		2.27	Si
SLD 2	ini.	1341.85	-1488	-0.0005015	0.0002807	0.0035	1.1171		4616.67	4616.67		3.44	Si
SLD 2	fin.	-1130.61	-1771	-0.0004071	0.0002807	0.0035	1.1179		4603.77	4603.77		4.07	Si
SLD 4	ini.	1282.81	-1426	-0.0004752	0.0002807	0.0035	1.1171		4616.67	4616.67		3.6	Si
SLD 4	fin.	-1075.63	-1726	-0.0003841	0.0002807	0.0035	1.1179		4603.77	4603.77		4.28	Si
SLV 3	ini.	2222.88	-1830	-0.0009437	0.0002807	0.0035	1.1171		4616.67	4616.67		2.08	Si
SLV 3	fin.	-1899.8	-2519	-0.0007653	0.0002807	0.0035	1.1179		4603.77	4603.77		2.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1227.18	3894	1.1171	0	680	7137	7025	2849	7817		2.01	Si
SLV 13	fin.	1072.08	2056	1.1179	0	680	7137	7030	2851	7817		3.8	Si
SLV 2	ini.	2426.34	-4282	1.1171	0	680	7137	7025	2849	7817		1.83	Si
SLV 2	fin.	-2063.97	-6108	1.1179	0	680	7137	7030	2851	7817		1.28	Si
SLV 16	ini.	-1295.29	4144	1.1171	0	680	7137	7025	2849	7817		1.89	Si
SLV 16	fin.	1160.02	2213	1.1179	0	680	7137	7030	2851	7817		3.53	Si
SLD 2	ini.	1341.85	-1838	1.1171	0	680	7137	7025	2849	7817		4.25	Si
SLD 2	fin.	-1130.61	-3693	1.1179	0	680	7137	7030	2851	7817		2.12	Si
SLV 15	ini.	-1362.96	4261	1.1171	0	680	7137	7025	2849	7817		1.83	Si
SLV 15	fin.	1198.14	2329	1.1179	0	680	7137	7030	2851	7817		3.36	Si
SLV 4	ini.	2290.56	-3916	1.1171	0	680	7137	7025	2849	7817		2	Si
SLV 4	fin.	-1937.91	-5835	1.1179	0	680	7137	7030	2851	7817		1.34	Si
SLV 14	ini.	-1159.51	3777	1.1171	0	680	7137	7025	2849	7817		2.07	Si
SLV 14	fin.	1033.96	1940	1.1179	0	680	7137	7030	2851	7817		4.03	Si
SLV 3	ini.	2222.88	-3798	1.1171	0	680	7137	7025	2849	7817		2.06	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	fin.	-1899.8	-5718	1.1179	0	680	7137	7030	2851	7817		1.37	Si
SLD 1	ini.	1312.8	-1788	1.1171	0	680	7137	7025	2849	7817		4.37	Si
SLD 1	fin.	-1114.25	-3643	1.1179	0	680	7137	7030	2851	7817		2.15	Si
SLV 1	ini.	2358.66	-4165	1.1171	0	680	7137	7025	2849	7817		1.88	Si
SLV 1	fin.	-2025.86	-5991	1.1179	0	680	7137	7030	2851	7817		1.3	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.903	SLV 2	Si
V_SLV	1.28	SLV 2	Si
PF_SLU	5.652	SLU 77	Si
V_SLU	2.477	SLU 77	Si

Trave di accoppiamento 171

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	11.86	12.76	0.9	-7.413	-3.314	11.86	12.76	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 72	ini.	164.83	-1089	-0.0000833	0.0001872	0.0035	0.9		2959	2959	No	17.95	Si
SLU 72	fin.	80.4	-733	-0.0000399	0.0001872	0.0035	0.9		2959	2959	No	36.8	Si
SLU 65	ini.	151.12	-966	-0.0000762	0.0001872	0.0035	0.9		2959	2959	No	19.58	Si
SLU 65	fin.	50.87	-588	-0.0000251	0.0001872	0.0035	0.9		2959	2959	No	58.16	Si
SLU 69	ini.	165.45	-1108	-0.0000836	0.0001872	0.0035	0.9		2959	2959	No	17.88	Si
SLU 69	fin.	92.49	-783	-0.0000461	0.0001872	0.0035	0.9		2959	2959	No	31.99	Si
SLU 71	ini.	164.07	-1086	-0.0000829	0.0001872	0.0035	0.9		2959	2959	No	18.03	Si
SLU 71	fin.	80.74	-733	-0.0000401	0.0001872	0.0035	0.9		2959	2959	No	36.65	Si
SLU 66	ini.	158.34	-1045	-0.0000799	0.0001872	0.0035	0.9		2959	2959	No	18.69	Si
SLU 66	fin.	77.83	-710	-0.0000386	0.0001872	0.0035	0.9		2959	2959	No	38.02	Si
SLU 68	ini.	158.23	-1029	-0.0000799	0.0001872	0.0035	0.9		2959	2959	No	18.7	Si
SLU 68	fin.	65.53	-660	-0.0000325	0.0001872	0.0035	0.9		2959	2959	No	45.16	Si
SLU 70	ini.	166.21	-1112	-0.000084	0.0001872	0.0035	0.9		2959	2959	No	17.8	Si
SLU 70	fin.	92.15	-783	-0.0000459	0.0001872	0.0035	0.9		2959	2959	No	32.11	Si
SLU 64	ini.	149.85	-960	-0.0000755	0.0001872	0.0035	0.9		2959	2959	No	19.75	Si
SLU 64	fin.	51.44	-588	-0.0000254	0.0001872	0.0035	0.9		2959	2959	No	57.52	Si
SLU 28	ini.	146.45	-955	-0.0000737	0.0001872	0.0035	0.9		2959	2959	No	20.21	Si
SLU 28	fin.	76.55	-659	-0.000038	0.0001872	0.0035	0.9		2959	2959	No	38.65	Si
SLU 67	ini.	159.1	-1049	-0.0000803	0.0001872	0.0035	0.9		2959	2959	No	18.6	Si
SLU 67	fin.	77.49	-710	-0.0000385	0.0001872	0.0035	0.9		2959	2959	No	38.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	136.26	-1234	0.9	0	365	7137	3773	2295	6068	No	4.92	Si
SLU 49	fin.	99.67	662	0.9	0	365	7137	3773	2295	6068	No	9.17	Si
SLU 48	ini.	135.5	-1228	0.9	0	365	7137	3773	2295	6068	No	4.94	Si
SLU 48	fin.	100.01	662	0.9	0	365	7137	3773	2295	6068	No	9.16	Si
SLU 71	ini.	164.07	-1326	0.9	0	365	7137	3773	2295	6068	No	4.58	Si
SLU 71	fin.	80.74	517	0.9	0	365	7137	3773	2295	6068	No	11.75	Si
SLU 66	ini.	158.34	-1273	0.9	0	365	7137	3773	2295	6068	No	4.77	Si
SLU 66	fin.	77.83	497	0.9	0	365	7137	3773	2295	6068	No	12.21	Si
SLU 69	ini.	165.45	-1346	0.9	0	365	7137	3773	2295	6068	No	4.51	Si
SLU 69	fin.	92.49	584	0.9	0	365	7137	3773	2295	6068	No	10.39	Si
SLU 72	ini.	164.83	-1331	0.9	0	365	7137	3773	2295	6068	No	4.56	Si
SLU 72	fin.	80.4	516	0.9	0	365	7137	3773	2295	6068	No	11.76	Si
SLU 68	ini.	158.23	-1263	0.9	0	365	7137	3773	2295	6068	No	4.81	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 68	fin.	65.53	428	0.9	0	365	7137	3773	2295	6068	No	14.18	Si
SLU 51	ini.	134.88	-1214	0.9	0	365	7137	3773	2295	6068	No	5	Si
SLU 51	fin.	87.93	594	0.9	0	365	7137	3773	2295	6068	No	10.22	Si
SLU 67	ini.	159.1	-1279	0.9	0	365	7137	3773	2295	6068	No	4.74	Si
SLU 67	fin.	77.49	496	0.9	0	365	7137	3773	2295	6068	No	12.23	Si
SLU 70	ini.	166.21	-1352	0.9	0	365	7137	3773	2295	6068	No	4.49	Si
SLU 70	fin.	92.15	583	0.9	0	365	7137	3773	2295	6068	No	10.4	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1016.18	-4062	-0.0006053	0.0002807	0.0035	0.9		2989.59	2989.59		2.94	Si
SLV 3	fin.	-903.97	1402	-0.0005238	0.0002807	0.0035	0.9		2995.37	2995.37		3.31	Si
SLV 13	ini.	-841.49	2798	-0.0004807	0.0002807	0.0035	0.9		2995.37	2995.37		3.56	Si
SLV 13	fin.	1039.73	-2381	-0.0006227	0.0002807	0.0035	0.9		2989.59	2989.59		2.88	Si
SLV 14	ini.	-812.05	2706	-0.0004607	0.0002807	0.0035	0.9		2995.37	2995.37		3.69	Si
SLV 14	fin.	1008.93	-2319	-0.0006	0.0002807	0.0035	0.9		2989.59	2989.59		2.96	Si
SLV 7	ini.	536.17	-2420	-0.0002867	0.0002807	0.0035	0.9		2989.59	2989.59		5.58	Si
SLV 7	fin.	-159.36	-293	-0.0000796	0.0002807	0.0035	0.9		2995.37	2995.37		18.8	Si
SLV 16	ini.	-703.31	2216	-0.0003892	0.0002807	0.0035	0.9		2995.37	2995.37		4.26	Si
SLV 16	fin.	1054.96	-2571	-0.000634	0.0002807	0.0035	0.9		2989.59	2989.59		2.83	Si
SLV 8	ini.	555.09	-2479	-0.000298	0.0002807	0.0035	0.9		2989.59	2989.59		5.39	Si
SLV 8	fin.	-179.16	-254	-0.0000898	0.0002807	0.0035	0.9		2995.37	2995.37		16.72	Si
SLV 2	ini.	936.88	-3664	-0.0005482	0.0002807	0.0035	0.9		2989.59	2989.59		3.19	Si
SLV 2	fin.	-980.81	1715	-0.0005783	0.0002807	0.0035	0.9		2995.37	2995.37		3.05	Si
SLV 4	ini.	1045.62	-4154	-0.000627	0.0002807	0.0035	0.9		2989.59	2989.59		2.86	Si
SLV 4	fin.	-934.78	1463	-0.0005455	0.0002807	0.0035	0.9		2995.37	2995.37		3.2	Si
SLV 15	ini.	-732.75	2308	-0.0004083	0.0002807	0.0035	0.9		2995.37	2995.37		4.09	Si
SLV 15	fin.	1085.77	-2633	-0.000657	0.0002807	0.0035	0.9		2989.59	2989.59		2.75	Si
SLV 1	ini.	907.44	-3572	-0.0005274	0.0002807	0.0035	0.9		2989.59	2989.59		3.29	Si
SLV 1	fin.	-950.01	1653	-0.0005563	0.0002807	0.0035	0.9		2995.37	2995.37		3.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-732.75	3041	0.9	0	548	7137	5660	2295	7684		2.53	Si
SLV 15	fin.	1085.77	5151	0.9	0	548	7137	5660	2295	7684		1.49	Si
SLV 8	ini.	555.09	-3258	0.9	0	548	7137	5660	2295	7684		2.36	Si
SLV 8	fin.	-179.16	-1875	0.9	0	548	7137	5660	2295	7684		4.1	Si
SLV 7	ini.	536.17	-3212	0.9	0	548	7137	5660	2295	7684		2.39	Si
SLV 7	fin.	-159.36	-1766	0.9	0	548	7137	5660	2295	7684		4.35	Si
SLV 1	ini.	907.44	-4626	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 1	fin.	-950.01	-4370	0.9	0	548	7137	5660	2295	7684		1.76	Si
SLV 4	ini.	1045.62	-5390	0.9	0	548	7137	5660	2295	7684		1.43	Si
SLV 4	fin.	-934.78	-4924	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 2	ini.	936.88	-4699	0.9	0	548	7137	5660	2295	7684		1.64	Si
SLV 2	fin.	-980.81	-4540	0.9	0	548	7137	5660	2295	7684		1.69	Si
SLV 13	ini.	-841.49	3733	0.9	0	548	7137	5660	2295	7684		2.06	Si
SLV 13	fin.	1039.73	5535	0.9	0	548	7137	5660	2295	7684		1.39	Si
SLV 3	ini.	1016.18	-5318	0.9	0	548	7137	5660	2295	7684		1.45	Si
SLV 3	fin.	-903.97	-4754	0.9	0	548	7137	5660	2295	7684		1.62	Si
SLV 16	ini.	-703.31	2969	0.9	0	548	7137	5660	2295	7684		2.59	Si
SLV 16	fin.	1054.96	4981	0.9	0	548	7137	5660	2295	7684		1.54	Si
SLV 14	ini.	-812.05	3660	0.9	0	548	7137	5660	2295	7684		2.1	Si
SLV 14	fin.	1008.93	5366	0.9	0	548	7137	5660	2295	7684		1.43	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.753	SLV 15	Si
V_SLV	1.388	SLV 13	Si
PF_SLU	17.802	SLU 70	Si
V_SLU	4.489	SLU 70	Si

Trave di accoppiamento 172

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	14.56	15.075	0.515	-7.413	-3.314	14.56	15.076	0.516	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 49	ini.	-133.8	-559	-0.0002183	0.0001872	0.0035	0.5154		975.69	975.69	No	7.29	Si
SLU 49	fin.	-36.29	-607	-0.0000547	0.0001872	0.0035	0.5162		988.93	988.93	No	27.25	Si
SLU 59	ini.	-133.14	-554	-0.0002171	0.0001872	0.0035	0.5154		975.69	975.69	No	7.33	Si
SLU 59	fin.	-31.08	-583	-0.0000467	0.0001872	0.0035	0.5162		988.93	988.93	No	31.82	Si
SLU 56	ini.	-143.55	-590	-0.0002362	0.0001872	0.0035	0.5154		975.69	975.69	No	6.8	Si
SLU 56	fin.	-32.72	-602	-0.0000492	0.0001872	0.0035	0.5162		988.93	988.93	No	30.22	Si
SLU 77	ini.	-138.71	-606	-0.0002273	0.0001872	0.0035	0.5154		975.69	975.69	No	7.03	Si
SLU 77	fin.	-49.69	-773	-0.0000755	0.0001872	0.0035	0.5162		988.93	988.93	No	19.9	Si
SLU 48	ini.	-134.04	-561	-0.0002187	0.0001872	0.0035	0.5154		975.69	975.69	No	7.28	Si
SLU 48	fin.	-36.08	-607	-0.0000544	0.0001872	0.0035	0.5162		988.93	988.93	No	27.41	Si
SLU 58	ini.	-133.38	-556	-0.0002175	0.0001872	0.0035	0.5154		975.69	975.69	No	7.31	Si
SLU 58	fin.	-30.88	-583	-0.0000464	0.0001872	0.0035	0.5162		988.93	988.93	No	32.03	Si
SLU 69	ini.	-129.2	-577	-0.00021	0.0001872	0.0035	0.5154		975.69	975.69	No	7.55	Si
SLU 69	fin.	-53.05	-779	-0.0000808	0.0001872	0.0035	0.5162		988.93	988.93	No	18.64	Si
SLU 70	ini.	-128.96	-575	-0.0002095	0.0001872	0.0035	0.5154		975.69	975.69	No	7.57	Si
SLU 70	fin.	-53.26	-779	-0.0000811	0.0001872	0.0035	0.5162		988.93	988.93	No	18.57	Si
SLU 78	ini.	-138.47	-604	-0.0002268	0.0001872	0.0035	0.5154		975.69	975.69	No	7.05	Si
SLU 78	fin.	-49.89	-773	-0.0000759	0.0001872	0.0035	0.5162		988.93	988.93	No	19.82	Si
SLU 57	ini.	-143.31	-588	-0.0002358	0.0001872	0.0035	0.5154		975.69	975.69	No	6.81	Si
SLU 57	fin.	-32.92	-602	-0.0000495	0.0001872	0.0035	0.5162		988.93	988.93	No	30.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-128.3	662	0.5154	0	139	4090	2161	1314	3475	No	5.25	Si
SLU 80	fin.	-48.05	-783	0.5162	0	140	4090	2164	1316	3480	No	4.44	Si
SLU 78	ini.	-138.47	715	0.5154	0	139	4090	2161	1314	3475	No	4.86	Si
SLU 78	fin.	-49.89	-810	0.5162	0	140	4090	2164	1316	3480	No	4.3	Si
SLU 72	ini.	-118.79	623	0.5154	0	139	4090	2161	1314	3475	No	5.58	Si
SLU 72	fin.	-51.41	-817	0.5162	0	140	4090	2164	1316	3480	No	4.26	Si
SLU 70	ini.	-128.96	676	0.5154	0	139	4090	2161	1314	3475	No	5.14	Si
SLU 70	fin.	-53.26	-844	0.5162	0	140	4090	2164	1316	3480	No	4.12	Si
SLU 67	ini.	-112.96	609	0.5154	0	139	4090	2161	1314	3475	No	5.7	Si
SLU 67	fin.	-52.71	-809	0.5162	0	140	4090	2164	1316	3480	No	4.3	Si
SLU 68	ini.	-102.63	556	0.5154	0	139	4090	2161	1314	3475	No	6.25	Si
SLU 68	fin.	-51	-783	0.5162	0	140	4090	2164	1316	3480	No	4.44	Si
SLU 77	ini.	-138.71	715	0.5154	0	139	4090	2161	1314	3475	No	4.86	Si
SLU 77	fin.	-49.69	-808	0.5162	0	140	4090	2164	1316	3480	No	4.31	Si
SLU 71	ini.	-119.03	623	0.5154	0	139	4090	2161	1314	3475	No	5.57	Si
SLU 71	fin.	-51.21	-815	0.5162	0	140	4090	2164	1316	3480	No	4.27	Si
SLU 66	ini.	-113.2	610	0.5154	0	139	4090	2161	1314	3475	No	5.7	Si
SLU 66	fin.	-52.5	-807	0.5162	0	140	4090	2164	1316	3480	No	4.32	Si
SLU 69	ini.	-129.2	676	0.5154	0	139	4090	2161	1314	3475	No	5.14	Si
SLU 69	fin.	-53.05	-842	0.5162	0	140	4090	2164	1316	3480	No	4.13	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	352.73	934	-0.0006495	0.0002807	0.0035	0.5154		983.87	983.87		2.79	Si
SLV 2	fin.	-312.44	-2635	-0.0005522	0.0002807	0.0035	0.5162		992.88	992.88		3.18	Si
SLV 13	ini.	-562.18	-1836	-0.0011879	0.0002807	0.0035	0.5154		987.2	987.2		1.76	Si
SLV 13	fin.	322.34	1787	-0.0005758	0.0002807	0.0035	0.5162		989.52	989.52		3.07	Si
SLV 9	ini.	-324.25	-1165	-0.0005832	0.0002807	0.0035	0.5154		987.2	987.2		3.04	Si
SLV 9	fin.	192.76	469	-0.000315	0.0002807	0.0035	0.5162		989.52	989.52		5.13	Si
SLV 1	ini.	335.41	913	-0.0006103	0.0002807	0.0035	0.5154		983.87	983.87		2.93	Si
SLV 1	fin.	-300.44	-2527	-0.0005266	0.0002807	0.0035	0.5162		992.88	992.88		3.3	Si
SLV 10	ini.	-313.12	-1152	-0.0005589	0.0002807	0.0035	0.5154		987.2	987.2		3.15	Si
SLV 10	fin.	185.05	399	-0.0003009	0.0002807	0.0035	0.5162		989.52	989.52		5.35	Si
SLV 16	ini.	-476.86	-1562	-0.0009507	0.0002807	0.0035	0.5154		987.2	987.2		2.07	Si
SLV 16	fin.	232.73	1499	-0.0003907	0.0002807	0.0035	0.5162		989.52	989.52		4.25	Si
SLV 3	ini.	403.4	1166	-0.0007688	0.0002807	0.0035	0.5154		983.87	983.87		2.44	Si
SLV 3	fin.	-378.04	-2708	-0.0006985	0.0002807	0.0035	0.5162		992.88	992.88		2.63	Si
SLV 15	ini.	-494.18	-1583	-0.0009967	0.0002807	0.0035	0.5154		987.2	987.2		2	Si
SLV 15	fin.	244.73	1607	-0.0004143	0.0002807	0.0035	0.5162		989.52	989.52		4.04	Si
SLV 4	ini.	420.73	1187	-0.0008112	0.0002807	0.0035	0.5154		983.87	983.87		2.34	Si
SLV 4	fin.	-390.04	-2816	-0.0007265	0.0002807	0.0035	0.5162		992.88	992.88		2.55	Si
SLV 14	ini.	-544.85	-1815	-0.0011375	0.0002807	0.0035	0.5154		987.2	987.2		1.81	Si
SLV 14	fin.	310.34	1679	-0.0005498	0.0002807	0.0035	0.5162		989.52	989.52		3.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-494.18	2005	0.5154	0	209	4090	3241	1314	4299		2.14	Si
SLV 15	fin.	244.73	1572	0.5162	0	209	4090	3246	1316	4300		2.74	Si
SLV 16	ini.	-476.86	1916	0.5154	0	209	4090	3241	1314	4299		2.24	Si
SLV 16	fin.	232.73	1527	0.5162	0	209	4090	3246	1316	4300		2.82	Si
SLV 14	ini.	-544.85	2219	0.5154	0	209	4090	3241	1314	4299		1.94	Si
SLV 14	fin.	310.34	1714	0.5162	0	209	4090	3246	1316	4300		2.51	Si
SLV 8	ini.	182.8	-657	0.5154	0	209	4090	3241	1314	4299		6.54	Si
SLV 8	fin.	-260.47	-1518	0.5162	0	209	4090	3246	1316	4300		2.83	Si
SLV 4	ini.	420.73	-1523	0.5154	0	209	4090	3241	1314	4299		2.82	Si
SLV 4	fin.	-390.04	-2834	0.5162	0	209	4090	3246	1316	4300		1.52	Si
SLV 2	ini.	352.73	-1220	0.5154	0	209	4090	3241	1314	4299		3.53	Si
SLV 2	fin.	-312.44	-2646	0.5162	0	209	4090	3246	1316	4300		1.62	Si
SLD 4	ini.	139.71	-428	0.5154	0	209	4090	3241	1314	4299		10.05	Si
SLD 4	fin.	-186.45	-1520	0.5162	0	209	4090	3246	1316	4300		2.83	Si
SLV 1	ini.	335.41	-1130	0.5154	0	209	4090	3241	1314	4299		3.8	Si
SLV 1	fin.	-300.44	-2602	0.5162	0	209	4090	3246	1316	4300		1.65	Si
SLV 13	ini.	-562.18	2308	0.5154	0	209	4090	3241	1314	4299		1.86	Si
SLV 13	fin.	322.34	1759	0.5162	0	209	4090	3246	1316	4300		2.44	Si
SLV 3	ini.	403.4	-1433	0.5154	0	209	4090	3241	1314	4299		3	Si
SLV 3	fin.	-378.04	-2789	0.5162	0	209	4090	3246	1316	4300		1.54	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.756	SLV 13	Si
V_SLV	1.517	SLV 4	Si
PF_SLU	6.797	SLU 56	Si
V_SLU	4.125	SLU 70	Si

Trave di accoppiamento 173

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	11.86	13.86	2	-5.963	-3.314	11.86	13.86	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	316.31	-1717	-0.0000317	0.0001872	0.0035	2		14344.28	14344.28	No	45.35	Si
SLU 48	fin.	2.15	-1391	-0.0000002	0.0001872	0.0035	2		14344.28	14344.28	No	6683.7	Si
SLU 71	ini.	303.41	-1808	-0.0000304	0.0001872	0.0035	2		14344.28	14344.28	No	47.28	Si
SLU 71	fin.	-40.56	-1483	-0.000004	0.0001872	0.0035	2		14357.01	14357.01	No	353.97	Si
SLU 50	ini.	316.05	-1666	-0.0000316	0.0001872	0.0035	2		14344.28	14344.28	No	45.39	Si
SLU 50	fin.	-9.9	-1343	-0.000001	0.0001872	0.0035	2		14357.01	14357.01	No	1450.91	Si
SLU 49	ini.	309.36	-1719	-0.000031	0.0001872	0.0035	2		14344.28	14344.28	No	46.37	Si
SLU 49	fin.	1.82	-1397	-0.0000002	0.0001872	0.0035	2		14344.28	14344.28	No	7864.46	Si
SLU 46	ini.	292.28	-1599	-0.0000292	0.0001872	0.0035	2		14344.28	14344.28	No	49.08	Si
SLU 46	fin.	-9.38	-1292	-0.0000009	0.0001872	0.0035	2		14357.01	14357.01	No	1531.04	Si
SLU 51	ini.	309.11	-1668	-0.0000309	0.0001872	0.0035	2		14344.28	14344.28	No	46.4	Si
SLU 51	fin.	-10.22	-1349	-0.000001	0.0001872	0.0035	2		14357.01	14357.01	No	1405.15	Si
SLU 70	ini.	296.72	-1860	-0.0000297	0.0001872	0.0035	2		14344.28	14344.28	No	48.34	Si
SLU 70	fin.	-28.84	-1538	-0.0000029	0.0001872	0.0035	2		14357.01	14357.01	No	497.8	Si
SLU 45	ini.	299.23	-1597	-0.0000299	0.0001872	0.0035	2		14344.28	14344.28	No	47.94	Si
SLU 45	fin.	-9.06	-1286	-0.0000009	0.0001872	0.0035	2		14357.01	14357.01	No	1585.52	Si
SLU 72	ini.	296.47	-1809	-0.0000297	0.0001872	0.0035	2		14344.28	14344.28	No	48.38	Si
SLU 72	fin.	-40.88	-1489	-0.000004	0.0001872	0.0035	2		14357.01	14357.01	No	351.18	Si
SLU 69	ini.	303.67	-1859	-0.0000304	0.0001872	0.0035	2		14344.28	14344.28	No	47.24	Si
SLU 69	fin.	-28.52	-1532	-0.0000028	0.0001872	0.0035	2		14357.01	14357.01	No	503.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 66	ini.	286.59	-1173	2	0	812	3965	8384	5100	4776	No	4.07	Si
SLU 66	fin.	-39.72	-356	2	0	812	3965	8384	5100	4776	No	13.4	Si
SLU 69	ini.	303.67	-1231	2	0	812	3965	8384	5100	4776	No	3.88	Si
SLU 69	fin.	-28.52	-328	2	0	812	3965	8384	5100	4776	No	14.56	Si
SLU 71	ini.	303.41	-1240	2	0	812	3965	8384	5100	4776	No	3.85	Si
SLU 71	fin.	-40.56	-381	2	0	812	3965	8384	5100	4776	No	12.53	Si
SLU 72	ini.	296.47	-1219	2	0	812	3965	8384	5100	4776	No	3.92	Si
SLU 72	fin.	-40.88	-357	2	0	812	3965	8384	5100	4776	No	13.36	Si
SLU 51	ini.	309.11	-1168	2	0	812	3965	8384	5100	4776	No	4.09	Si
SLU 51	fin.	-10.22	-371	2	0	812	3965	8384	5100	4776	No	12.86	Si
SLU 49	ini.	309.36	-1158	2	0	812	3965	8384	5100	4776	No	4.13	Si
SLU 49	fin.	1.82	-318	2	0	812	3965	8384	5100	4776	No	15.02	Si
SLU 50	ini.	316.05	-1189	2	0	812	3965	8384	5100	4776	No	4.02	Si
SLU 50	fin.	-9.9	-395	2	0	812	3965	8384	5100	4776	No	12.09	Si
SLU 67	ini.	279.64	-1152	2	0	812	3965	8384	5100	4776	No	4.15	Si
SLU 67	fin.	-40.04	-333	2	0	812	3965	8384	5100	4776	No	14.36	Si
SLU 70	ini.	296.72	-1210	2	0	812	3965	8384	5100	4776	No	3.95	Si
SLU 70	fin.	-28.84	-304	2	0	812	3965	8384	5100	4776	No	15.71	Si
SLU 48	ini.	316.31	-1179	2	0	812	3965	8384	5100	4776	No	4.05	Si
SLU 48	fin.	2.15	-342	2	0	812	3965	8384	5100	4776	No	13.97	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	785	-3749	-0.0000795	0.0002807	0.0035	2		14202.07	14202.07		18.09	Si
SLV 2	fin.	-1152.64	-3160	-0.0001179	0.0002807	0.0035	2		14215.41	14215.41		12.33	Si
SLV 10	ini.	1160.71	-68	-0.0001189	0.0002807	0.0035	2		14202.07	14202.07		12.24	Si
SLV 10	fin.	521.81	697	-0.0000524	0.0002807	0.0035	2		14202.07	14202.07		27.22	Si
SLV 4	ini.	179.69	-3931	-0.0000179	0.0002807	0.0035	2		14202.07	14202.07		79.04	Si
SLV 4	fin.	-1283.39	-3691	-0.0001319	0.0002807	0.0035	2		14215.41	14215.41		11.08	Si
SLV 5	ini.	1251.7	-1615	-0.0001286	0.0002807	0.0035	2		14202.07	14202.07		11.35	Si
SLV 5	fin.	-150.47	-770	-0.0000149	0.0002807	0.0035	2		14215.41	14215.41		94.47	Si
SLV 3	ini.	94.82	-3856	-0.0000094	0.0002807	0.0035	2		14202.07	14202.07		149.78	Si
SLV 3	fin.	-1241.83	-3653	-0.0001274	0.0002807	0.0035	2		14215.41	14215.41		11.45	Si
SLV 9	ini.	1106.16	-20	-0.0001131	0.0002807	0.0035	2		14202.07	14202.07		12.84	Si
SLV 9	fin.	548.52	721	-0.0000551	0.0002807	0.0035	2		14202.07	14202.07		25.89	Si
SLV 13	ini.	215.01	1642	-0.0000214	0.0002807	0.0035	2		14202.07	14202.07		66.05	Si
SLV 13	fin.	1218.9	1848	-0.0001251	0.0002807	0.0035	2		14202.07	14202.07		11.65	Si
SLV 6	ini.	1306.24	-1663	-0.0001344	0.0002807	0.0035	2		14202.07	14202.07		10.87	Si
SLV 6	fin.	-177.19	-794	-0.0000176	0.0002807	0.0035	2		14215.41	14215.41		80.23	Si
SLV 14	ini.	299.88	1568	-0.0000299	0.0002807	0.0035	2		14202.07	14202.07		47.36	Si
SLV 14	fin.	1177.34	1811	-0.0001207	0.0002807	0.0035	2		14202.07	14202.07		12.06	Si
SLV 1	ini.	700.13	-3675	-0.0000707	0.0002807	0.0035	2		14202.07	14202.07		20.28	Si
SLV 1	fin.	-1111.08	-3122	-0.0001135	0.0002807	0.0035	2		14215.41	14215.41		12.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	1251.7	-4369	2	0	1217	3965	12577	5100	5182		1.19	Si
SLV 5	fin.	-150.47	-4316	2	0	1217	3965	12577	5100	5182		1.2	Si
SLV 11	ini.	-911.54	2964	2	0	1217	3965	12577	5100	5182		1.75	Si
SLV 11	fin.	112.7	4002	2	0	1217	3965	12577	5100	5182		1.29	Si
SLV 2	ini.	785	-4881	2	0	1217	3965	12577	5100	5182		1.06	Si
SLV 2	fin.	-1152.64	-5279	2	0	1217	3965	12577	5100	5182		0.98	No
SLV 16	ini.	-305.43	2968	2	0	1217	3965	12577	5100	5182		1.75	Si
SLV 16	fin.	1046.59	4296	2	0	1217	3965	12577	5100	5182		1.21	Si
SLV 12	ini.	-857	2765	2	0	1217	3965	12577	5100	5182		1.87	Si
SLV 12	fin.	85.98	3740	2	0	1217	3965	12577	5100	5182		1.39	Si
SLV 6	ini.	1306.24	-4568	2	0	1217	3965	12577	5100	5182		1.13	Si
SLV 6	fin.	-177.19	-4577	2	0	1217	3965	12577	5100	5182		1.13	Si
SLV 15	ini.	-390.3	3278	2	0	1217	3965	12577	5100	5182		1.58	Si
SLV 15	fin.	1088.15	4703	2	0	1217	3965	12577	5100	5182		1.1	Si
SLV 3	ini.	94.82	-2930	2	0	1217	3965	12577	5100	5182		1.77	Si
SLV 3	fin.	-1241.83	-3076	2	0	1217	3965	12577	5100	5182		1.68	Si
SLV 4	ini.	179.69	-3240	2	0	1217	3965	12577	5100	5182		1.6	Si
SLV 4	fin.	-1283.39	-3483	2	0	1217	3965	12577	5100	5182		1.49	Si
SLV 1	ini.	700.13	-4571	2	0	1217	3965	12577	5100	5182		1.13	Si
SLV 1	fin.	-1111.08	-4871	2	0	1217	3965	12577	5100	5182		1.06	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.872	SLV 6	Si
V_SLV	0.982	SLV 2	No
PF_SLU	45.349	SLU 48	Si
V_SLU	3.851	SLU 71	Si

Trave di accoppiamento 174

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	14.66	15.074	0.414	-5.963	-3.314	14.66	15.075	0.415	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	-22.03	-152	-0.0000515	0.0001872	0.0035	0.4145		637.25	637.25	No	28.92	Si
SLU 48	fin.	-82.66	-445	-0.0002062	0.0001872	0.0035	0.4149		636.41	636.41	No	7.7	Si
SLU 71	ini.	-18.07	-135	-0.0000421	0.0001872	0.0035	0.4145		637.25	637.25	No	35.26	Si
SLU 71	fin.	-81.54	-416	-0.0002031	0.0001872	0.0035	0.4149		636.41	636.41	No	7.8	Si
SLU 50	ini.	-17.31	-122	-0.0000402	0.0001872	0.0035	0.4145		637.25	637.25	No	36.82	Si
SLU 50	fin.	-82.4	-417	-0.0002055	0.0001872	0.0035	0.4149		636.41	636.41	No	7.72	Si
SLU 49	ini.	-22.64	-157	-0.0000529	0.0001872	0.0035	0.4145		637.25	637.25	No	28.15	Si
SLU 49	fin.	-81.25	-444	-0.0002023	0.0001872	0.0035	0.4149		636.41	636.41	No	7.83	Si
SLU 72	ini.	-18.68	-139	-0.0000435	0.0001872	0.0035	0.4145		637.25	637.25	No	34.11	Si
SLU 72	fin.	-80.14	-415	-0.0001993	0.0001872	0.0035	0.4149		636.41	636.41	No	7.94	Si
SLU 56	ini.	-28.73	-196	-0.0000675	0.0001872	0.0035	0.4145		637.25	637.25	No	22.18	Si
SLU 56	fin.	-76.32	-460	-0.0001888	0.0001872	0.0035	0.4149		636.41	636.41	No	8.34	Si
SLU 45	ini.	-16.52	-116	-0.0000384	0.0001872	0.0035	0.4145		637.25	637.25	No	38.57	Si
SLU 45	fin.	-76.94	-394	-0.0001905	0.0001872	0.0035	0.4149		636.41	636.41	No	8.27	Si
SLU 51	ini.	-17.91	-126	-0.0000417	0.0001872	0.0035	0.4145		637.25	637.25	No	35.58	Si
SLU 51	fin.	-81	-415	-0.0002016	0.0001872	0.0035	0.4149		636.41	636.41	No	7.86	Si
SLU 70	ini.	-23.41	-169	-0.0000547	0.0001872	0.0035	0.4145		637.25	637.25	No	27.22	Si
SLU 70	fin.	-80.39	-443	-0.0001999	0.0001872	0.0035	0.4149		636.41	636.41	No	7.92	Si
SLU 69	ini.	-22.8	-165	-0.0000533	0.0001872	0.0035	0.4145		637.25	637.25	No	27.95	Si
SLU 69	fin.	-81.79	-445	-0.0002038	0.0001872	0.0035	0.4149		636.41	636.41	No	7.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 48	ini.	-22.03	287	0.4145	0	139	3288	1738	1057	2794	No	9.74	Si
SLU 48	fin.	-82.66	-467	0.4149	0	140	3288	1739	1058	2797	No	5.99	Si
SLU 51	ini.	-17.91	248	0.4145	0	139	3288	1738	1057	2794	No	11.27	Si
SLU 51	fin.	-81	-458	0.4149	0	140	3288	1739	1058	2797	No	6.11	Si
SLU 50	ini.	-17.31	242	0.4145	0	139	3288	1738	1057	2794	No	11.56	Si
SLU 50	fin.	-82.4	-464	0.4149	0	140	3288	1739	1058	2797	No	6.03	Si
SLU 72	ini.	-18.68	310	0.4145	0	139	3288	1738	1057	2794	No	9.02	Si
SLU 72	fin.	-80.14	-468	0.4149	0	140	3288	1739	1058	2797	No	5.98	Si
SLU 67	ini.	-17.9	305	0.4145	0	139	3288	1738	1057	2794	No	9.17	Si
SLU 67	fin.	-74.67	-445	0.4149	0	140	3288	1739	1058	2797	No	6.29	Si
SLU 69	ini.	-22.8	349	0.4145	0	139	3288	1738	1057	2794	No	8.01	Si
SLU 69	fin.	-81.79	-477	0.4149	0	140	3288	1739	1058	2797	No	5.86	Si
SLU 70	ini.	-23.41	355	0.4145	0	139	3288	1738	1057	2794	No	7.87	Si
SLU 70	fin.	-80.39	-471	0.4149	0	140	3288	1739	1058	2797	No	5.94	Si
SLU 66	ini.	-17.29	298	0.4145	0	139	3288	1738	1057	2794	No	9.37	Si
SLU 66	fin.	-76.08	-451	0.4149	0	140	3288	1739	1058	2797	No	6.2	Si
SLU 71	ini.	-18.07	304	0.4145	0	139	3288	1738	1057	2794	No	9.2	Si
SLU 71	fin.	-81.54	-474	0.4149	0	140	3288	1739	1058	2797	No	5.9	Si
SLU 49	ini.	-22.64	293	0.4145	0	139	3288	1738	1057	2794	No	9.53	Si
SLU 49	fin.	-81.25	-461	0.4149	0	140	3288	1739	1058	2797	No	6.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-153.55	-790	-0.0003999	0.0002807	0.0035	0.4145		641.69	641.69		4.18	Si
SLV 13	fin.	-129.56	-1369	-0.0003287	0.0002807	0.0035	0.4149		641.84	641.84		4.95	Si
SLV 1	ini.	166.47	893	-0.0004417	0.0002807	0.0035	0.4145		638.93	638.93		3.84	Si
SLV 1	fin.	-71.69	662	-0.0001726	0.0002807	0.0035	0.4149		641.84	641.84		8.95	Si
SLV 9	ini.	8.13	166	-0.0000188	0.0002807	0.0035	0.4145		638.93	638.93		78.56	Si
SLV 9	fin.	-241.17	-877	-0.0006886	0.0002807	0.0035	0.4149		641.84	641.84		2.66	Si
SLV 6	ini.	112.68	725	-0.0002827	0.0002807	0.0035	0.4145		638.93	638.93		5.67	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	fin.	-232.96	-251	-0.0006595	0.0002807	0.0035	0.4149		641.84	641.84		2.76	Si
SLV 7	ini.	-31.01	-335	-0.0000725	0.0002807	0.0035	0.4145		641.69	641.69		20.7	Si
SLV 7	fin.	145.68	370	-0.0003776	0.0002807	0.0035	0.4149		639.15	639.15		4.39	Si
SLV 10	ini.	16.67	220	-0.0000388	0.0002807	0.0035	0.4145		638.93	638.93		38.32	Si
SLV 10	fin.	-250.32	-861	-0.0007216	0.0002807	0.0035	0.4149		641.84	641.84		2.56	Si
SLV 2	ini.	179.76	978	-0.0004839	0.0002807	0.0035	0.4145		638.93	638.93		3.55	Si
SLV 2	fin.	-85.93	687	-0.0002093	0.0002807	0.0035	0.4149		641.84	641.84		7.47	Si
SLV 15	ini.	-194.09	-1092	-0.000528	0.0002807	0.0035	0.4145		641.69	641.69		3.31	Si
SLV 15	fin.	-18.71	-1177	-0.0000433	0.0002807	0.0035	0.4149		641.84	641.84		34.31	Si
SLV 5	ini.	104.14	671	-0.0002592	0.0002807	0.0035	0.4145		638.93	638.93		6.14	Si
SLV 5	fin.	-223.81	-268	-0.0006276	0.0002807	0.0035	0.4149		641.84	641.84		2.87	Si
SLV 16	ini.	-180.81	-1007	-0.0004849	0.0002807	0.0035	0.4145		641.69	641.69		3.55	Si
SLV 16	fin.	-32.94	-1152	-0.000077	0.0002807	0.0035	0.4149		641.84	641.84		19.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	8.13	-628	0.4145	0	209	3288	2606	1057	3498		5.57	Si
SLV 9	fin.	-241.17	-985	0.4149	0	210	3288	2609	1058	3498		3.55	Si
SLV 10	ini.	16.67	-683	0.4145	0	209	3288	2606	1057	3498		5.12	Si
SLV 10	fin.	-250.32	-1033	0.4149	0	210	3288	2609	1058	3498		3.39	Si
SLV 5	ini.	104.14	-759	0.4145	0	209	3288	2606	1057	3498		4.61	Si
SLV 5	fin.	-223.81	-1109	0.4149	0	210	3288	2609	1058	3498		3.15	Si
SLV 7	ini.	-31.01	991	0.4145	0	209	3288	2606	1057	3498		3.53	Si
SLV 7	fin.	145.68	408	0.4149	0	210	3288	2609	1058	3498		8.58	Si
SLV 8	ini.	-22.47	936	0.4145	0	209	3288	2606	1057	3498		3.74	Si
SLV 8	fin.	136.54	360	0.4149	0	210	3288	2609	1058	3498		9.73	Si
SLV 6	ini.	112.68	-814	0.4145	0	209	3288	2606	1057	3498		4.3	Si
SLV 6	fin.	-232.96	-1157	0.4149	0	210	3288	2609	1058	3498		3.02	Si
SLV 12	ini.	-118.47	1068	0.4145	0	209	3288	2606	1057	3498		3.28	Si
SLV 12	fin.	119.18	484	0.4149	0	210	3288	2609	1058	3498		7.22	Si
SLV 2	ini.	179.76	-370	0.4145	0	209	3288	2606	1057	3498		9.46	Si
SLV 2	fin.	-85.93	-785	0.4149	0	210	3288	2609	1058	3498		4.46	Si
SLV 11	ini.	-127.01	1123	0.4145	0	209	3288	2606	1057	3498		3.12	Si
SLV 11	fin.	128.33	532	0.4149	0	210	3288	2609	1058	3498		6.57	Si
SLV 1	ini.	166.47	-284	0.4145	0	209	3288	2606	1057	3498		12.3	Si
SLV 1	fin.	-71.69	-711	0.4149	0	210	3288	2609	1058	3498		4.92	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.564	SLV 10	Si
V_SLV	3.022	SLV 6	Si
PF_SLU	7.7	SLU 48	Si
V_SLU	5.859	SLU 69	Si

Trave di accoppiamento 175

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	11.86	12.76	0.9	-3.183	-3.314	11.86	12.76	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 45	ini.	140.56	-639	-0.0000707	0.0001872	0.0035	0.9		2959	2959	No	21.05	Si
SLU 45	fin.	45.39	-512	-0.0000224	0.0001872	0.0035	0.9		2959	2959	No	65.19	Si
SLU 65	ini.	145.59	-655	-0.0000733	0.0001872	0.0035	0.9		2959	2959	No	20.32	Si
SLU 65	fin.	42.33	-499	-0.0000209	0.0001872	0.0035	0.9		2959	2959	No	69.9	Si
SLU 43	ini.	159.86	-651	-0.0000807	0.0001872	0.0035	0.9		2959	2959	No	18.51	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	fin.	22.7	-420	-0.0000112	0.0001872	0.0035	0.9		2959	2959	No	130.32	Si
SLU 64	ini.	144.76	-652	-0.0000729	0.0001872	0.0035	0.9		2959	2959	No	20.44	Si
SLU 64	fin.	42.46	-498	-0.0000209	0.0001872	0.0035	0.9		2959	2959	No	69.69	Si
SLU 47	ini.	148.6	-643	-0.0000749	0.0001872	0.0035	0.9		2959	2959	No	19.91	Si
SLU 47	fin.	34.62	-471	-0.000017	0.0001872	0.0035	0.9		2959	2959	No	85.48	Si
SLU 46	ini.	141.06	-640	-0.0000709	0.0001872	0.0035	0.9		2959	2959	No	20.98	Si
SLU 46	fin.	45.31	-513	-0.0000224	0.0001872	0.0035	0.9		2959	2959	No	65.3	Si
SLU 44	ini.	160.68	-654	-0.0000812	0.0001872	0.0035	0.9		2959	2959	No	18.42	Si
SLU 44	fin.	22.58	-421	-0.0000111	0.0001872	0.0035	0.9		2959	2959	No	131.06	Si
SLU 51	ini.	136.19	-630	-0.0000684	0.0001872	0.0035	0.9		2959	2959	No	21.73	Si
SLU 51	fin.	46.71	-520	-0.0000231	0.0001872	0.0035	0.9		2959	2959	No	63.35	Si
SLU 68	ini.	133.51	-643	-0.000067	0.0001872	0.0035	0.9		2959	2959	No	22.16	Si
SLU 68	fin.	54.37	-549	-0.0000269	0.0001872	0.0035	0.9		2959	2959	No	54.42	Si
SLU 50	ini.	135.7	-628	-0.0000682	0.0001872	0.0035	0.9		2959	2959	No	21.81	Si
SLU 50	fin.	46.78	-520	-0.0000231	0.0001872	0.0035	0.9		2959	2959	No	63.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	76.98	-254	0.9	0	365	7137	3773	2295	6068	No	23.9	Si
SLU 77	fin.	105.89	710	0.9	0	365	7137	3773	2295	6068	No	8.55	Si
SLU 57	ini.	92.56	-324	0.9	0	365	7137	3773	2295	6068	No	18.75	Si
SLU 57	fin.	86.05	615	0.9	0	365	7137	3773	2295	6068	No	9.87	Si
SLU 35	ini.	36.11	-112	0.9	0	365	7137	3773	2295	6068	No	54.16	Si
SLU 35	fin.	105.86	688	0.9	0	365	7137	3773	2295	6068	No	8.82	Si
SLU 36	ini.	36.6	-115	0.9	0	365	7137	3773	2295	6068	No	52.74	Si
SLU 36	fin.	105.78	689	0.9	0	365	7137	3773	2295	6068	No	8.81	Si
SLU 79	ini.	84.19	-272	0.9	0	365	7137	3773	2295	6068	No	22.31	Si
SLU 79	fin.	95.24	636	0.9	0	365	7137	3773	2295	6068	No	9.55	Si
SLU 69	ini.	113.39	-426	0.9	0	365	7137	3773	2295	6068	No	14.24	Si
SLU 69	fin.	77.18	615	0.9	0	365	7137	3773	2295	6068	No	9.87	Si
SLU 38	ini.	43.81	-133	0.9	0	365	7137	3773	2295	6068	No	45.57	Si
SLU 38	fin.	95.14	615	0.9	0	365	7137	3773	2295	6068	No	9.87	Si
SLU 70	ini.	113.89	-429	0.9	0	365	7137	3773	2295	6068	No	14.14	Si
SLU 70	fin.	77.11	616	0.9	0	365	7137	3773	2295	6068	No	9.85	Si
SLU 78	ini.	77.47	-257	0.9	0	365	7137	3773	2295	6068	No	23.62	Si
SLU 78	fin.	105.81	711	0.9	0	365	7137	3773	2295	6068	No	8.53	Si
SLU 80	ini.	84.68	-275	0.9	0	365	7137	3773	2295	6068	No	22.06	Si
SLU 80	fin.	95.17	637	0.9	0	365	7137	3773	2295	6068	No	9.52	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	423.89	-1292	-0.0002218	0.0002807	0.0035	0.9		2989.59	2989.59		7.05	Si
SLV 7	fin.	-27.88	-691	-0.0000137	0.0002807	0.0035	0.9		2995.37	2995.37		107.45	Si
SLV 13	ini.	-379.04	521	-0.0001963	0.0002807	0.0035	0.9		2995.37	2995.37		7.9	Si
SLV 13	fin.	284.83	-890	-0.0001454	0.0002807	0.0035	0.9		2989.59	2989.59		10.5	Si
SLV 8	ini.	435.98	-1295	-0.0002286	0.0002807	0.0035	0.9		2989.59	2989.59		6.86	Si
SLV 8	fin.	-43.67	-636	-0.0000215	0.0002807	0.0035	0.9		2995.37	2995.37		68.6	Si
SLD 4	ini.	311.77	-919	-0.0001599	0.0002807	0.0035	0.9		2989.59	2989.59		9.59	Si
SLD 4	fin.	-69.84	-174	-0.0000344	0.0002807	0.0035	0.9		2995.37	2995.37		42.89	Si
SLV 14	ini.	-360.22	515	-0.000186	0.0002807	0.0035	0.9		2995.37	2995.37		8.32	Si
SLV 14	fin.	260.26	-805	-0.0001324	0.0002807	0.0035	0.9		2989.59	2989.59		11.49	Si
SLV 3	ini.	568.76	-1487	-0.0003062	0.0002807	0.0035	0.9		2989.59	2989.59		5.26	Si
SLV 3	fin.	-187.22	29	-0.0000939	0.0002807	0.0035	0.9		2995.37	2995.37		16	Si
SLV 4	ini.	587.58	-1493	-0.0003176	0.0002807	0.0035	0.9		2989.59	2989.59		5.09	Si
SLV 4	fin.	-211.79	114	-0.0001067	0.0002807	0.0035	0.9		2995.37	2995.37		14.14	Si
SLV 1	ini.	447.77	-1153	-0.0002353	0.0002807	0.0035	0.9		2989.59	2989.59		6.68	Si
SLV 1	fin.	-186.24	301	-0.0000934	0.0002807	0.0035	0.9		2995.37	2995.37		16.08	Si
SLD 3	ini.	303.69	-917	-0.0001556	0.0002807	0.0035	0.9		2989.59	2989.59		9.84	Si
SLD 3	fin.	-59.3	-211	-0.0000292	0.0002807	0.0035	0.9		2995.37	2995.37		50.52	Si
SLV 2	ini.	466.59	-1159	-0.0002461	0.0002807	0.0035	0.9		2989.59	2989.59		6.41	Si
SLV 2	fin.	-210.81	386	-0.0001062	0.0002807	0.0035	0.9		2995.37	2995.37		14.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-360.22	1510	0.9	0	548	7137	5660	2295	7684		5.09	Si
SLV 14	fin.	260.26	1664	0.9	0	548	7137	5660	2295	7684		4.62	Si
SLV 15	ini.	-258.05	1026	0.9	0	548	7137	5660	2295	7684		7.49	Si
SLV 15	fin.	283.85	1935	0.9	0	548	7137	5660	2295	7684		3.97	Si
SLV 3	ini.	568.76	-2167	0.9	0	548	7137	5660	2295	7684		3.55	Si
SLV 3	fin.	-187.22	-1186	0.9	0	548	7137	5660	2295	7684		6.48	Si
SLV 1	ini.	447.77	-1632	0.9	0	548	7137	5660	2295	7684		4.71	Si
SLV 1	fin.	-186.24	-1324	0.9	0	548	7137	5660	2295	7684		5.81	Si
SLV 7	ini.	423.89	-1683	0.9	0	548	7137	5660	2295	7684		4.57	Si
SLV 7	fin.	-27.88	44	0.9	0	548	7137	5660	2295	7684		174.29	Si
SLV 16	ini.	-239.23	975	0.9	0	548	7137	5660	2295	7684		7.88	Si
SLV 16	fin.	259.28	1802	0.9	0	548	7137	5660	2295	7684		4.26	Si
SLV 13	ini.	-379.04	1562	0.9	0	548	7137	5660	2295	7684		4.92	Si
SLV 13	fin.	284.83	1796	0.9	0	548	7137	5660	2295	7684		4.28	Si
SLV 4	ini.	587.58	-2219	0.9	0	548	7137	5660	2295	7684		3.46	Si
SLV 4	fin.	-211.79	-1318	0.9	0	548	7137	5660	2295	7684		5.83	Si
SLV 8	ini.	435.98	-1716	0.9	0	548	7137	5660	2295	7684		4.48	Si
SLV 8	fin.	-43.67	-41	0.9	0	548	7137	5660	2295	7684		187.27	Si
SLV 2	ini.	466.59	-1683	0.9	0	548	7137	5660	2295	7684		4.57	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	fin.	-210.81	-1456	0.9	0	548	7137	5660	2295	7684		5.28	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.088	SLV 4	Si
V_SLV	3.464	SLV 4	Si
PF_SLU	18.416	SLU 44	Si
V_SLU	8.53	SLU 78	Si

Trave di accoppiamento 176

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	14.56	15.072	0.512	-3.183	-3.314	14.56	15.072	0.512	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 45	ini.	-12.03	30	-0.0000183	0.0001872	0.0035	0.5116		963.49	963.49	No	80.09	Si
SLU 45	fin.	-77.85	-539	-0.0001231	0.0001872	0.0035	0.5124		963.77	963.77	No	12.38	Si
SLU 50	ini.	-14.21	41	-0.0000216	0.0001872	0.0035	0.5116		963.49	963.49	No	67.79	Si
SLU 50	fin.	-79.5	-557	-0.0001259	0.0001872	0.0035	0.5124		963.77	963.77	No	12.12	Si
SLU 71	ini.	-30.42	5	-0.0000467	0.0001872	0.0035	0.5116		963.49	963.49	No	31.68	Si
SLU 71	fin.	-78.67	-554	-0.0001245	0.0001872	0.0035	0.5124		963.77	963.77	No	12.25	Si
SLU 70	ini.	-38.97	-16	-0.0000601	0.0001872	0.0035	0.5116		963.49	963.49	No	24.73	Si
SLU 70	fin.	-79.03	-554	-0.0001251	0.0001872	0.0035	0.5124		963.77	963.77	No	12.19	Si
SLU 46	ini.	-11.91	30	-0.0000181	0.0001872	0.0035	0.5116		963.49	963.49	No	80.9	Si
SLU 46	fin.	-77.86	-539	-0.0001231	0.0001872	0.0035	0.5124		963.77	963.77	No	12.38	Si
SLU 48	ini.	-22.88	19	-0.000035	0.0001872	0.0035	0.5116		963.49	963.49	No	42.11	Si
SLU 48	fin.	-79.86	-557	-0.0001265	0.0001872	0.0035	0.5124		963.77	963.77	No	12.07	Si
SLU 51	ini.	-14.09	41	-0.0000214	0.0001872	0.0035	0.5116		963.49	963.49	No	68.37	Si
SLU 51	fin.	-79.5	-557	-0.0001259	0.0001872	0.0035	0.5124		963.77	963.77	No	12.12	Si
SLU 69	ini.	-39.09	-16	-0.0000603	0.0001872	0.0035	0.5116		963.49	963.49	No	24.65	Si
SLU 69	fin.	-79.03	-554	-0.0001251	0.0001872	0.0035	0.5124		963.77	963.77	No	12.2	Si
SLU 49	ini.	-22.76	19	-0.0000348	0.0001872	0.0035	0.5116		963.49	963.49	No	42.33	Si
SLU 49	fin.	-79.86	-557	-0.0001265	0.0001872	0.0035	0.5124		963.77	963.77	No	12.07	Si
SLU 72	ini.	-30.3	6	-0.0000465	0.0001872	0.0035	0.5116		963.49	963.49	No	31.8	Si
SLU 72	fin.	-78.67	-554	-0.0001245	0.0001872	0.0035	0.5124		963.77	963.77	No	12.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	-30.42	472	0.5116	0	138	4060	2145	1305	3450	No	7.31	Si
SLU 71	fin.	-78.67	-1368	0.5124	0	139	4060	2148	1307	3455	No	2.53	Si
SLU 77	ini.	-63.33	606	0.5116	0	138	4060	2145	1305	3450	No	5.7	Si
SLU 77	fin.	-65.36	-1299	0.5124	0	139	4060	2148	1307	3455	No	2.66	Si
SLU 69	ini.	-39.09	516	0.5116	0	138	4060	2145	1305	3450	No	6.69	Si
SLU 69	fin.	-79.03	-1395	0.5124	0	139	4060	2148	1307	3455	No	2.48	Si
SLU 49	ini.	-22.76	428	0.5116	0	138	4060	2145	1305	3450	No	8.07	Si
SLU 49	fin.	-79.86	-1315	0.5124	0	139	4060	2148	1307	3455	No	2.63	Si
SLU 72	ini.	-30.3	471	0.5116	0	138	4060	2145	1305	3450	No	7.32	Si
SLU 72	fin.	-78.67	-1367	0.5124	0	139	4060	2148	1307	3455	No	2.53	Si
SLU 50	ini.	-14.21	384	0.5116	0	138	4060	2145	1305	3450	No	8.98	Si
SLU 50	fin.	-79.5	-1288	0.5124	0	139	4060	2148	1307	3455	No	2.68	Si
SLU 70	ini.	-38.97	515	0.5116	0	138	4060	2145	1305	3450	No	6.7	Si
SLU 70	fin.	-79.03	-1394	0.5124	0	139	4060	2148	1307	3455	No	2.48	Si
SLU 48	ini.	-22.88	428	0.5116	0	138	4060	2145	1305	3450	No	8.06	Si
SLU 48	fin.	-79.86	-1316	0.5124	0	139	4060	2148	1307	3455	No	2.63	Si
SLU 51	ini.	-14.09	384	0.5116	0	138	4060	2145	1305	3450	No	8.99	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 51	fin.	-79.5	-1288	0.5124	0	139	4060	2148	1307	3455	No	2.68	Si
SLU 78	ini.	-63.21	605	0.5116	0	138	4060	2145	1305	3450	No	5.7	Si
SLU 78	fin.	-65.36	-1299	0.5124	0	139	4060	2148	1307	3455	No	2.66	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	122.34	322	-0.0001963	0.0002807	0.0035	0.5116		970.11	970.11		7.93	Si
SLV 8	fin.	-145.64	-1035	-0.0002355	0.0002807	0.0035	0.5124		975.28	975.28		6.7	Si
SLV 13	ini.	-183.45	-405	-0.0003041	0.0002807	0.0035	0.5116		973.5	973.5		5.31	Si
SLV 13	fin.	74.01	515	-0.0001156	0.0002807	0.0035	0.5124		971.98	971.98		13.13	Si
SLV 14	ini.	-174.93	-379	-0.0002884	0.0002807	0.0035	0.5116		973.5	973.5		5.56	Si
SLV 14	fin.	69.5	482	-0.0001083	0.0002807	0.0035	0.5124		971.98	971.98		13.98	Si
SLV 9	ini.	-142.48	-300	-0.0002304	0.0002807	0.0035	0.5116		973.5	973.5		6.83	Si
SLV 9	fin.	38.24	290	-0.0000587	0.0002807	0.0035	0.5124		971.98	971.98		25.42	Si
SLV 10	ini.	-137.01	-284	-0.0002208	0.0002807	0.0035	0.5116		973.5	973.5		7.11	Si
SLV 10	fin.	35.34	268	-0.0000542	0.0002807	0.0035	0.5124		971.98	971.98		27.5	Si
SLV 7	ini.	116.87	305	-0.0001869	0.0002807	0.0035	0.5116		970.11	970.11		8.3	Si
SLV 7	fin.	-142.75	-1013	-0.0002304	0.0002807	0.0035	0.5124		975.28	975.28		6.83	Si
SLV 1	ini.	102.75	281	-0.0001631	0.0002807	0.0035	0.5116		970.11	970.11		9.44	Si
SLV 1	fin.	-142.06	-970	-0.0002292	0.0002807	0.0035	0.5124		975.28	975.28		6.87	Si
SLV 4	ini.	163.31	426	-0.0002683	0.0002807	0.0035	0.5116		970.11	970.11		5.94	Si
SLV 4	fin.	-181.41	-1261	-0.0002998	0.0002807	0.0035	0.5124		975.28	975.28		5.38	Si
SLV 2	ini.	111.27	306	-0.0001774	0.0002807	0.0035	0.5116		970.11	970.11		8.72	Si
SLV 2	fin.	-146.56	-1003	-0.0002371	0.0002807	0.0035	0.5124		975.28	975.28		6.65	Si
SLV 3	ini.	154.8	401	-0.000253	0.0002807	0.0035	0.5116		970.11	970.11		6.27	Si
SLV 3	fin.	-176.91	-1227	-0.0002916	0.0002807	0.0035	0.5124		975.28	975.28		5.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 2	ini.	41.73	65	0.5116	0	208	4060	3217	1305	4268		65.89	Si
SLD 2	fin.	-93.33	-1108	0.5124	0	208	4060	3222	1307	4268		3.85	Si
SLD 3	ini.	60.97	-16	0.5116	0	208	4060	3217	1305	4268		272.35	Si
SLD 3	fin.	-106.71	-1184	0.5124	0	208	4060	3222	1307	4268		3.6	Si
SLD 4	ini.	64.62	-29	0.5116	0	208	4060	3217	1305	4268		147.92	Si
SLD 4	fin.	-108.65	-1200	0.5124	0	208	4060	3222	1307	4268		3.56	Si
SLV 7	ini.	116.87	-254	0.5116	0	208	4060	3217	1305	4268		16.82	Si
SLV 7	fin.	-142.75	-1380	0.5124	0	208	4060	3222	1307	4268		3.09	Si
SLD 1	ini.	38.08	78	0.5116	0	208	4060	3217	1305	4268		54.75	Si
SLD 1	fin.	-91.4	-1092	0.5124	0	208	4060	3222	1307	4268		3.91	Si
SLV 4	ini.	163.31	-393	0.5116	0	208	4060	3217	1305	4268		10.85	Si
SLV 4	fin.	-181.41	-1737	0.5124	0	208	4060	3222	1307	4268		2.46	Si
SLV 1	ini.	102.75	-150	0.5116	0	208	4060	3217	1305	4268		28.5	Si
SLV 1	fin.	-142.06	-1490	0.5124	0	208	4060	3222	1307	4268		2.87	Si
SLV 3	ini.	154.8	-363	0.5116	0	208	4060	3217	1305	4268		11.77	Si
SLV 3	fin.	-176.91	-1700	0.5124	0	208	4060	3222	1307	4268		2.51	Si
SLV 8	ini.	122.34	-273	0.5116	0	208	4060	3217	1305	4268		15.61	Si
SLV 8	fin.	-145.64	-1403	0.5124	0	208	4060	3222	1307	4268		3.04	Si
SLV 2	ini.	111.27	-180	0.5116	0	208	4060	3217	1305	4268		23.65	Si
SLV 2	fin.	-146.56	-1526	0.5124	0	208	4060	3222	1307	4268		2.8	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.307	SLV 13	Si
V_SLV	2.458	SLV 4	Si
PF_SLU	12.068	SLU 49	Si
V_SLU	2.477	SLU 69	Si

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	13.03	14.248	1.218	-11.933	-4.824	13.03	14.247	1.217	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 72	ini.	-17.5	31	-0.0000047	0.0001872	0.0035	1.2178		5379.36	5379.36	No	307.34	Si
SLU 72	fin.	-181.23	-103	-0.0000492	0.0001872	0.0035	1.2169		5389.58	5389.58	No	29.74	Si
SLU 79	ini.	-9.57	82	-0.0000026	0.0001872	0.0035	1.2178		5379.36	5379.36	No	562.17	Si
SLU 79	fin.	-177.38	-63	-0.0000481	0.0001872	0.0035	1.2169		5389.58	5389.58	No	30.38	Si
SLU 66	ini.	-17.42	67	-0.0000046	0.0001872	0.0035	1.2178		5379.36	5379.36	No	308.79	Si
SLU 66	fin.	-177.73	-75	-0.0000482	0.0001872	0.0035	1.2169		5389.58	5389.58	No	30.32	Si
SLU 70	ini.	-15.99	29	-0.0000043	0.0001872	0.0035	1.2178		5379.36	5379.36	No	336.35	Si
SLU 70	fin.	-185.72	-114	-0.0000505	0.0001872	0.0035	1.2169		5389.58	5389.58	No	29.02	Si
SLU 77	ini.	-8.06	79	-0.0000021	0.0001872	0.0035	1.2178		5379.36	5379.36	No	667.45	Si
SLU 77	fin.	-181.87	-75	-0.0000494	0.0001872	0.0035	1.2169		5389.58	5389.58	No	29.63	Si
SLU 80	ini.	-8.93	81	-0.0000024	0.0001872	0.0035	1.2178		5379.36	5379.36	No	602.07	Si
SLU 80	fin.	-178.79	-67	-0.0000485	0.0001872	0.0035	1.2169		5389.58	5389.58	No	30.15	Si
SLU 78	ini.	-7.43	79	-0.000002	0.0001872	0.0035	1.2178		5379.36	5379.36	No	724.45	Si
SLU 78	fin.	-183.28	-79	-0.0000498	0.0001872	0.0035	1.2169		5389.58	5389.58	No	29.41	Si
SLU 67	ini.	-16.79	66	-0.0000045	0.0001872	0.0035	1.2178		5379.36	5379.36	No	320.46	Si
SLU 67	fin.	-179.14	-78	-0.0000486	0.0001872	0.0035	1.2169		5389.58	5389.58	No	30.09	Si
SLU 69	ini.	-16.63	29	-0.0000044	0.0001872	0.0035	1.2178		5379.36	5379.36	No	323.52	Si
SLU 69	fin.	-184.31	-111	-0.0000501	0.0001872	0.0035	1.2169		5389.58	5389.58	No	29.24	Si
SLU 71	ini.	-18.14	32	-0.0000048	0.0001872	0.0035	1.2178		5379.36	5379.36	No	296.6	Si
SLU 71	fin.	-179.82	-99	-0.0000488	0.0001872	0.0035	1.2169		5389.58	5389.58	No	29.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-9.57	879	1.2178	0	529	7930	5470	3105	8459	No	9.63	Si
SLU 79	fin.	-177.38	-1292	1.2169	0	529	7930	5466	3103	8459	No	6.55	Si
SLU 58	ini.	-21.03	812	1.2178	0	529	7930	5470	3105	8459	No	10.42	Si
SLU 58	fin.	-165.88	-1164	1.2169	0	529	7930	5466	3103	8459	No	7.27	Si
SLU 80	ini.	-8.93	876	1.2178	0	529	7930	5470	3105	8459	No	9.66	Si
SLU 80	fin.	-178.79	-1296	1.2169	0	529	7930	5466	3103	8459	No	6.53	Si
SLU 78	ini.	-7.43	839	1.2178	0	529	7930	5470	3105	8459	No	10.09	Si
SLU 78	fin.	-183.28	-1284	1.2169	0	529	7930	5466	3103	8459	No	6.59	Si
SLU 69	ini.	-16.63	851	1.2178	0	529	7930	5470	3105	8459	No	9.94	Si
SLU 69	fin.	-184.31	-1263	1.2169	0	529	7930	5466	3103	8459	No	6.7	Si
SLU 71	ini.	-18.14	888	1.2178	0	529	7930	5470	3105	8459	No	9.52	Si
SLU 71	fin.	-179.82	-1275	1.2169	0	529	7930	5466	3103	8459	No	6.64	Si
SLU 70	ini.	-15.99	848	1.2178	0	529	7930	5470	3105	8459	No	9.97	Si
SLU 70	fin.	-185.72	-1267	1.2169	0	529	7930	5466	3103	8459	No	6.67	Si
SLU 72	ini.	-17.5	885	1.2178	0	529	7930	5470	3105	8459	No	9.55	Si
SLU 72	fin.	-181.23	-1279	1.2169	0	529	7930	5466	3103	8459	No	6.61	Si
SLU 59	ini.	-20.4	809	1.2178	0	529	7930	5470	3105	8459	No	10.45	Si
SLU 59	fin.	-167.28	-1168	1.2169	0	529	7930	5466	3103	8459	No	7.24	Si
SLU 77	ini.	-8.06	841	1.2178	0	529	7930	5470	3105	8459	No	10.05	Si
SLU 77	fin.	-181.87	-1280	1.2169	0	529	7930	5466	3103	8459	No	6.61	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1499.27	1915	-0.0004651	0.0002807	0.0035	1.2178		5432.34	5432.34		3.62	Si
SLV 15	fin.	-1989.89	-1893	-0.0006554	0.0002807	0.0035	1.2169		5401.76	5401.76		2.71	Si
SLV 4	ini.	-1425.82	-1745	-0.0004375	0.0002807	0.0035	1.2178		5440.59	5440.59		3.82	Si
SLV 4	fin.	1668.65	1419	-0.0005291	0.0002807	0.0035	1.2169		5393.51	5393.51		3.23	Si
SLV 3	ini.	-1398.34	-1705	-0.0004276	0.0002807	0.0035	1.2178		5440.59	5440.59		3.89	Si
SLV 3	fin.	1631.12	1391	-0.0005148	0.0002807	0.0035	1.2169		5393.51	5393.51		3.31	Si
SLD 16	ini.	620.74	853	-0.0001743	0.0002807	0.0035	1.2178		5432.34	5432.34		8.75	Si
SLD 16	fin.	-906.38	-804	-0.0002617	0.0002807	0.0035	1.2169		5401.76	5401.76		5.96	Si
SLV 16	ini.	1471.79	1876	-0.000455	0.0002807	0.0035	1.2178		5432.34	5432.34		3.69	Si
SLV 16	fin.	-1952.37	-1865	-0.0006401	0.0002807	0.0035	1.2169		5401.76	5401.76		2.77	Si
SLV 2	ini.	-1529.76	-1733	-0.0004756	0.0002807	0.0035	1.2178		5440.59	5440.59		3.56	Si
SLV 2	fin.	1739.95	1874	-0.0005567	0.0002807	0.0035	1.2169		5393.51	5393.51		3.1	Si
SLD 15	ini.	632.53	870	-0.0001778	0.0002807	0.0035	1.2178		5432.34	5432.34		8.59	Si
SLD 15	fin.	-922.5	-816	-0.0002668	0.0002807	0.0035	1.2169		5401.76	5401.76		5.86	Si
SLV 14	ini.	1367.85	1888	-0.0004174	0.0002807	0.0035	1.2178		5432.34	5432.34		3.97	Si
SLV 14	fin.	-1881.06	-1409	-0.0006114	0.0002807	0.0035	1.2169		5401.76	5401.76		2.87	Si
SLV 13	ini.	1395.33	1927	-0.0004272	0.0002807	0.0035	1.2178		5432.34	5432.34		3.89	Si
SLV 13	fin.	-1918.59	-1437	-0.0006265	0.0002807	0.0035	1.2169		5401.76	5401.76		2.82	Si
SLV 1	ini.	-1502.28	-1694	-0.0004654	0.0002807	0.0035	1.2178		5440.59	5440.59		3.62	Si
SLV 1	fin.	1702.42	1846	-0.0005421	0.0002807	0.0035	1.2169		5393.51	5393.51		3.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-1398.34	5421	1.2178	0	794	7930	8205	3105	8724		1.61	Si
SLV 3	fin.	1631.12	4231	1.2169	0	794	7930	8199	3103	8723		2.06	Si
SLD 16	ini.	620.74	-1790	1.2178	0	794	7930	8205	3105	8724		4.87	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 16	fin.	-906.38	-2979	1.2169	0	794	7930	8199	3103	8723		2.93	Si
SLV 16	ini.	1471.79	-4753	1.2178	0	794	7930	8205	3105	8724		1.84	Si
SLV 16	fin.	-1952.37	-5992	1.2169	0	794	7930	8199	3103	8723		1.46	Si
SLV 14	ini.	1367.85	-4573	1.2178	0	794	7930	8205	3105	8724		1.91	Si
SLV 14	fin.	-1881.06	-5685	1.2169	0	794	7930	8199	3103	8723		1.53	Si
SLV 13	ini.	1395.33	-4677	1.2178	0	794	7930	8205	3105	8724		1.87	Si
SLV 13	fin.	-1918.59	-5790	1.2169	0	794	7930	8199	3103	8723		1.51	Si
SLD 15	ini.	632.53	-1835	1.2178	0	794	7930	8205	3105	8724		4.76	Si
SLD 15	fin.	-922.5	-3024	1.2169	0	794	7930	8199	3103	8723		2.88	Si
SLV 1	ini.	-1502.28	5601	1.2178	0	794	7930	8205	3105	8724		1.56	Si
SLV 1	fin.	1702.42	4538	1.2169	0	794	7930	8199	3103	8723		1.92	Si
SLV 4	ini.	-1425.82	5525	1.2178	0	794	7930	8205	3105	8724		1.58	Si
SLV 4	fin.	1668.65	4335	1.2169	0	794	7930	8199	3103	8723		2.01	Si
SLV 2	ini.	-1529.76	5706	1.2178	0	794	7930	8205	3105	8724		1.53	Si
SLV 2	fin.	1739.95	4643	1.2169	0	794	7930	8199	3103	8723		1.88	Si
SLV 15	ini.	1499.27	-4857	1.2178	0	794	7930	8205	3105	8724		1.8	Si
SLV 15	fin.	-1989.89	-6097	1.2169	0	794	7930	8199	3103	8723		1.43	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.715	SLV 15	Si
V_SLV	1.431	SLV 15	Si
PF_SLU	29.02	SLU 70	Si
V_SLU	6.527	SLU 80	Si

Trave di accoppiamento 179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	4.19	5.72	1.53	-22.493	-3.314	4.19	5.72	1.53	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-1248.28	-2952	-0.0002329	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.83	Si
SLU 78	fin.	1061.9	-2952	-0.0001948	0.0001872	0.0035	1.53		8515.89	8515.89	No	8.02	Si
SLU 74	ini.	-1257.2	-2901	-0.0002348	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.78	Si
SLU 74	fin.	1068.76	-2901	-0.0001962	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.97	Si
SLU 82	ini.	-1264.28	-2942	-0.0002363	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.74	Si
SLU 82	fin.	1068.94	-2942	-0.0001962	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.97	Si
SLU 81	ini.	-1272.35	-2936	-0.000238	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.7	Si
SLU 81	fin.	1075.27	-2936	-0.0001975	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.92	Si
SLU 79	ini.	-1247.55	-2918	-0.0002328	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.83	Si
SLU 79	fin.	1059.55	-2918	-0.0001943	0.0001872	0.0035	1.53		8515.89	8515.89	No	8.04	Si
SLU 77	ini.	-1256.34	-2946	-0.0002346	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.79	Si
SLU 77	fin.	1068.24	-2946	-0.0001961	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.97	Si
SLU 80	ini.	-1239.48	-2924	-0.0002311	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.88	Si
SLU 80	fin.	1053.21	-2924	-0.0001931	0.0001872	0.0035	1.53		8515.89	8515.89	No	8.09	Si
SLU 84	ini.	-1263.43	-2987	-0.0002361	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.75	Si
SLU 84	fin.	1068.42	-2987	-0.0001961	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.97	Si
SLU 75	ini.	-1249.13	-2907	-0.0002331	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.83	Si
SLU 75	fin.	1062.42	-2907	-0.0001949	0.0001872	0.0035	1.53		8515.89	8515.89	No	8.02	Si
SLU 83	ini.	-1271.5	-2981	-0.0002378	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.71	Si
SLU 83	fin.	1074.76	-2981	-0.0001974	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-1263.43	3105	1.53	0	621	7137	6414	3902	7758	No	2.5	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	fin.	1068.42	2087	1.53	0	621	7137	6414	3902	7758	No	3.72	Si
SLU 80	ini.	-1239.48	3062	1.53	0	621	7137	6414	3902	7758	No	2.53	Si
SLU 80	fin.	1053.21	2043	1.53	0	621	7137	6414	3902	7758	No	3.8	Si
SLU 83	ini.	-1271.5	3121	1.53	0	621	7137	6414	3902	7758	No	2.49	Si
SLU 83	fin.	1074.76	2103	1.53	0	621	7137	6414	3902	7758	No	3.69	Si
SLU 79	ini.	-1247.55	3078	1.53	0	621	7137	6414	3902	7758	No	2.52	Si
SLU 79	fin.	1059.55	2059	1.53	0	621	7137	6414	3902	7758	No	3.77	Si
SLU 78	ini.	-1248.28	3081	1.53	0	621	7137	6414	3902	7758	No	2.52	Si
SLU 78	fin.	1061.9	2063	1.53	0	621	7137	6414	3902	7758	No	3.76	Si
SLU 77	ini.	-1256.34	3097	1.53	0	621	7137	6414	3902	7758	No	2.5	Si
SLU 77	fin.	1068.24	2079	1.53	0	621	7137	6414	3902	7758	No	3.73	Si
SLU 74	ini.	-1257.2	3099	1.53	0	621	7137	6414	3902	7758	No	2.5	Si
SLU 74	fin.	1068.76	2080	1.53	0	621	7137	6414	3902	7758	No	3.73	Si
SLU 82	ini.	-1264.28	3107	1.53	0	621	7137	6414	3902	7758	No	2.5	Si
SLU 82	fin.	1068.94	2088	1.53	0	621	7137	6414	3902	7758	No	3.71	Si
SLU 75	ini.	-1249.13	3083	1.53	0	621	7137	6414	3902	7758	No	2.52	Si
SLU 75	fin.	1062.42	2064	1.53	0	621	7137	6414	3902	7758	No	3.76	Si
SLU 81	ini.	-1272.35	3123	1.53	0	621	7137	6414	3902	7758	No	2.48	Si
SLU 81	fin.	1075.27	2104	1.53	0	621	7137	6414	3902	7758	No	3.69	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-5674.27	-1023	-0.0014464	0.0002807	0.0035	1.53		8479.69	8479.69		1.49	Si
SLV 13	fin.	5586.35	-1002	-0.0014154	0.0002807	0.0035	1.53		8469.61	8469.61		1.52	Si
SLV 14	ini.	-5077.61	-1049	-0.0012313	0.0002807	0.0035	1.53		8479.69	8479.69		1.67	Si
SLV 14	fin.	4993.1	-1028	-0.0012044	0.0002807	0.0035	1.53		8469.61	8469.61		1.7	Si
SLV 1	ini.	3263.86	-1617	-0.0006892	0.0002807	0.0035	1.53		8469.61	8469.61		2.59	Si
SLV 1	fin.	-3597.62	-1776	-0.0007783	0.0002807	0.0035	1.53		8479.69	8479.69		2.36	Si
SLD 15	ini.	-2946.77	-2158	-0.0006063	0.0002807	0.0035	1.53		8479.69	8479.69		2.88	Si
SLD 15	fin.	2900.21	-2090	-0.0005954	0.0002807	0.0035	1.53		8469.61	8469.61		2.92	Si
SLD 13	ini.	-2943.16	-1580	-0.0006054	0.0002807	0.0035	1.53		8479.69	8479.69		2.88	Si
SLD 13	fin.	2828.25	-1569	-0.0005774	0.0002807	0.0035	1.53		8469.61	8469.61		2.99	Si
SLV 16	ini.	-5081.05	-2380	-0.0012324	0.0002807	0.0035	1.53		8479.69	8479.69		1.67	Si
SLV 16	fin.	5150.61	-2221	-0.0012583	0.0002807	0.0035	1.53		8469.61	8469.61		1.64	Si
SLV 15	ini.	-5677.7	-2353	-0.0014477	0.0002807	0.0035	1.53		8479.69	8479.69		1.49	Si
SLV 15	fin.	5743.86	-2195	-0.0014756	0.0002807	0.0035	1.53		8469.61	8469.61		1.47	Si
SLV 4	ini.	3857.08	-2974	-0.0008522	0.0002807	0.0035	1.53		8469.61	8469.61		2.2	Si
SLV 4	fin.	-4033.36	-2995	-0.0009019	0.0002807	0.0035	1.53		8479.69	8479.69		2.1	Si
SLV 3	ini.	3260.43	-2948	-0.0006883	0.0002807	0.0035	1.53		8469.61	8469.61		2.6	Si
SLV 3	fin.	-3440.11	-2969	-0.0007353	0.0002807	0.0035	1.53		8479.69	8479.69		2.46	Si
SLV 2	ini.	3860.52	-1644	-0.0008532	0.0002807	0.0035	1.53		8469.61	8469.61		2.19	Si
SLV 2	fin.	-4190.87	-1802	-0.0009484	0.0002807	0.0035	1.53		8479.69	8479.69		2.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	3857.08	-8567	1.53	0	931	7137	9621	3902	8068		0.94	No
SLV 4	fin.	-4033.36	-9269	1.53	0	931	7137	9621	3902	8068		0.87	No
SLV 16	ini.	-5081.05	12005	1.53	0	931	7137	9621	3902	8068		0.67	No
SLV 16	fin.	5150.61	11078	1.53	0	931	7137	9621	3902	8068		0.73	No
SLD 13	ini.	-2943.16	6888	1.53	0	931	7137	9621	3902	8068		1.17	Si
SLD 13	fin.	2828.25	6074	1.53	0	931	7137	9621	3902	8068		1.33	Si
SLV 1	ini.	3263.86	-7471	1.53	0	931	7137	9621	3902	8068		1.08	Si
SLV 1	fin.	-3597.62	-8107	1.53	0	931	7137	9621	3902	8068		1	No
SLD 15	ini.	-2946.77	6991	1.53	0	931	7137	9621	3902	8068		1.15	Si
SLD 15	fin.	2900.21	6150	1.53	0	931	7137	9621	3902	8068		1.31	Si
SLV 2	ini.	3860.52	-8793	1.53	0	931	7137	9621	3902	8068		0.92	No
SLV 2	fin.	-4190.87	-9429	1.53	0	931	7137	9621	3902	8068		0.86	No
SLV 13	ini.	-5674.27	13101	1.53	0	931	7137	9621	3902	8068		0.62	No
SLV 13	fin.	5586.35	12240	1.53	0	931	7137	9621	3902	8068		0.66	No
SLV 14	ini.	-5077.61	11779	1.53	0	931	7137	9621	3902	8068		0.68	No
SLV 14	fin.	4993.1	10918	1.53	0	931	7137	9621	3902	8068		0.74	No
SLV 15	ini.	-5677.7	13327	1.53	0	931	7137	9621	3902	8068		0.61	No
SLV 15	fin.	5743.86	12400	1.53	0	931	7137	9621	3902	8068		0.65	No
SLV 3	ini.	3260.43	-7245	1.53	0	931	7137	9621	3902	8068		1.11	Si
SLV 3	fin.	-3440.11	-7947	1.53	0	931	7137	9621	3902	8068		1.02	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.475	SLV 15	Si
V_SLV	0.605	SLV 15	No
PF_SLU	6.701	SLU 81	Si
V_SLU	2.484	SLU 81	Si

Trave di accoppiamento 183

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	4.19	5.72	1.53	-18.263	-3.314	4.19	5.72	1.53	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	856.8	-1466	-0.0001543	0.0001872	0.0035	1.53		8515.89	8515.89	No	9.94	Si
SLU 81	fin.	-555.41	-1466	-0.0000975	0.0001872	0.0035	1.53		8525.78	8525.78	No	15.35	Si
SLU 84	ini.	866.52	-1492	-0.0001562	0.0001872	0.0035	1.53		8515.89	8515.89	No	9.83	Si
SLU 84	fin.	-552.26	-1492	-0.0000969	0.0001872	0.0035	1.53		8525.78	8525.78	No	15.44	Si
SLU 75	ini.	793.62	-1420	-0.0001422	0.0001872	0.0035	1.53		8515.89	8515.89	No	10.73	Si
SLU 75	fin.	-472.79	-1420	-0.0000825	0.0001872	0.0035	1.53		8525.78	8525.78	No	18.03	Si
SLU 60	ini.	792.62	-1300	-0.000142	0.0001872	0.0035	1.53		8515.89	8515.89	No	10.74	Si
SLU 60	fin.	-539.85	-1300	-0.0000947	0.0001872	0.0035	1.53		8525.78	8525.78	No	15.79	Si
SLU 62	ini.	795.83	-1321	-0.0001426	0.0001872	0.0035	1.53		8515.89	8515.89	No	10.7	Si
SLU 62	fin.	-528.96	-1321	-0.0000927	0.0001872	0.0035	1.53		8525.78	8525.78	No	16.12	Si
SLU 61	ini.	799.14	-1305	-0.0001432	0.0001872	0.0035	1.53		8515.89	8515.89	No	10.66	Si
SLU 61	fin.	-547.59	-1305	-0.0000961	0.0001872	0.0035	1.53		8525.78	8525.78	No	15.57	Si
SLU 82	ini.	863.32	-1471	-0.0001556	0.0001872	0.0035	1.53		8515.89	8515.89	No	9.86	Si
SLU 82	fin.	-563.15	-1471	-0.0000989	0.0001872	0.0035	1.53		8525.78	8525.78	No	15.14	Si
SLU 83	ini.	860	-1487	-0.0001549	0.0001872	0.0035	1.53		8515.89	8515.89	No	9.9	Si
SLU 83	fin.	-544.52	-1487	-0.0000955	0.0001872	0.0035	1.53		8525.78	8525.78	No	15.66	Si
SLU 63	ini.	802.34	-1326	-0.0001438	0.0001872	0.0035	1.53		8515.89	8515.89	No	10.61	Si
SLU 63	fin.	-536.7	-1326	-0.0000941	0.0001872	0.0035	1.53		8525.78	8525.78	No	15.89	Si
SLU 78	ini.	796.82	-1441	-0.0001428	0.0001872	0.0035	1.53		8515.89	8515.89	No	10.69	Si
SLU 78	fin.	-461.9	-1441	-0.0000805	0.0001872	0.0035	1.53		8525.78	8525.78	No	18.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 62	ini.	795.83	-1002	1.53	0	621	7137	6414	3902	7758	No	7.74	Si
SLU 62	fin.	-528.96	-1891	1.53	0	621	7137	6414	3902	7758	No	4.1	Si
SLU 82	ini.	863.32	-1110	1.53	0	621	7137	6414	3902	7758	No	6.99	Si
SLU 82	fin.	-563.15	-2010	1.53	0	621	7137	6414	3902	7758	No	3.86	Si
SLU 84	ini.	866.52	-1101	1.53	0	621	7137	6414	3902	7758	No	7.04	Si
SLU 84	fin.	-552.26	-2001	1.53	0	621	7137	6414	3902	7758	No	3.88	Si
SLU 63	ini.	802.34	-1018	1.53	0	621	7137	6414	3902	7758	No	7.62	Si
SLU 63	fin.	-536.7	-1907	1.53	0	621	7137	6414	3902	7758	No	4.07	Si
SLU 81	ini.	856.8	-1094	1.53	0	621	7137	6414	3902	7758	No	7.09	Si
SLU 81	fin.	-555.41	-1994	1.53	0	621	7137	6414	3902	7758	No	3.89	Si
SLU 75	ini.	793.62	-932	1.53	0	621	7137	6414	3902	7758	No	8.32	Si
SLU 75	fin.	-472.79	-1832	1.53	0	621	7137	6414	3902	7758	No	4.23	Si
SLU 61	ini.	799.14	-1026	1.53	0	621	7137	6414	3902	7758	No	7.56	Si
SLU 61	fin.	-547.59	-1916	1.53	0	621	7137	6414	3902	7758	No	4.05	Si
SLU 73	ini.	782.82	-930	1.53	0	621	7137	6414	3902	7758	No	8.35	Si
SLU 73	fin.	-481.37	-1830	1.53	0	621	7137	6414	3902	7758	No	4.24	Si
SLU 60	ini.	792.62	-1010	1.53	0	621	7137	6414	3902	7758	No	7.68	Si
SLU 60	fin.	-539.85	-1900	1.53	0	621	7137	6414	3902	7758	No	4.08	Si
SLU 83	ini.	860	-1085	1.53	0	621	7137	6414	3902	7758	No	7.15	Si
SLU 83	fin.	-544.52	-1986	1.53	0	621	7137	6414	3902	7758	No	3.91	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	5507.96	-1698	-0.0013862	0.0002807	0.0035	1.53		8469.61	8469.61		1.54	Si
SLV 4	fin.	-6038.19	-1688	-0.001591	0.0002807	0.0035	1.53		8479.69	8479.69		1.4	Si
SLV 15	ini.	-4494.45	-1364	-0.001041	0.0002807	0.0035	1.53		8479.69	8479.69		1.89	Si
SLV 15	fin.	5406.33	-1439	-0.0013489	0.0002807	0.0035	1.53		8469.61	8469.61		1.57	Si
SLV 2	ini.	5462.45	-479	-0.0013694	0.0002807	0.0035	1.53		8469.61	8469.61		1.55	Si
SLV 2	fin.	-5924.04	-404	-0.0015444	0.0002807	0.0035	1.53		8479.69	8479.69		1.43	Si
SLV 3	ini.	5094.63	-1682	-0.001239	0.0002807	0.0035	1.53		8469.61	8469.61		1.66	Si
SLV 3	fin.	-5582.37	-1672	-0.0014117	0.0002807	0.0035	1.53		8479.69	8479.69		1.52	Si
SLV 16	ini.	-4081.12	-1380	-0.0009159	0.0002807	0.0035	1.53		8479.69	8479.69		2.08	Si
SLV 16	fin.	4950.51	-1455	-0.0011901	0.0002807	0.0035	1.53		8469.61	8469.61		1.71	Si
SLD 4	ini.	2633.73	-1250	-0.0005295	0.0002807	0.0035	1.53		8469.61	8469.61		3.22	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 4	fin.	-2728.78	-1248	-0.000552	0.0002807	0.0035	1.53		8479.69	8479.69		3.11	Si
SLV 1	ini.	5049.11	-464	-0.0012234	0.0002807	0.0035	1.53		8469.61	8469.61		1.68	Si
SLV 1	fin.	-5468.22	-388	-0.0013694	0.0002807	0.0035	1.53		8479.69	8479.69		1.55	Si
SLV 13	ini.	-4539.97	-146	-0.0010553	0.0002807	0.0035	1.53		8479.69	8479.69		1.87	Si
SLV 13	fin.	5520.48	-156	-0.0013908	0.0002807	0.0035	1.53		8469.61	8469.61		1.53	Si
SLD 2	ini.	2608.39	-736	-0.0005233	0.0002807	0.0035	1.53		8469.61	8469.61		3.25	Si
SLD 2	fin.	-2679.68	-703	-0.00054	0.0002807	0.0035	1.53		8479.69	8479.69		3.16	Si
SLV 14	ini.	-4126.63	-161	-0.0009293	0.0002807	0.0035	1.53		8479.69	8479.69		2.05	Si
SLV 14	fin.	5064.66	-171	-0.0012287	0.0002807	0.0035	1.53		8469.61	8469.61		1.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	5049.11	-11417	1.53	0	931	7137	9621	3902	8068		0.71	No
SLV 1	fin.	-5468.22	-12099	1.53	0	931	7137	9621	3902	8068		0.67	No
SLV 2	ini.	5462.45	-12383	1.53	0	931	7137	9621	3902	8068		0.65	No
SLV 2	fin.	-5924.04	-13065	1.53	0	931	7137	9621	3902	8068		0.62	No
SLV 16	ini.	-4081.12	10495	1.53	0	931	7137	9621	3902	8068		0.77	No
SLV 16	fin.	4950.51	9797	1.53	0	931	7137	9621	3902	8068		0.82	No
SLD 2	ini.	2608.39	-5548	1.53	0	931	7137	9621	3902	8068		1.45	Si
SLD 2	fin.	-2679.68	-6240	1.53	0	931	7137	9621	3902	8068		1.29	Si
SLV 4	ini.	5507.96	-12537	1.53	0	931	7137	9621	3902	8068		0.64	No
SLV 4	fin.	-6038.19	-13230	1.53	0	931	7137	9621	3902	8068		0.61	No
SLV 14	ini.	-4126.63	10649	1.53	0	931	7137	9621	3902	8068		0.76	No
SLV 14	fin.	5064.66	9962	1.53	0	931	7137	9621	3902	8068		0.81	No
SLV 15	ini.	-4494.45	11461	1.53	0	931	7137	9621	3902	8068		0.7	No
SLV 15	fin.	5406.33	10763	1.53	0	931	7137	9621	3902	8068		0.75	No
SLV 3	ini.	5094.63	-11571	1.53	0	931	7137	9621	3902	8068		0.7	No
SLV 3	fin.	-5582.37	-12264	1.53	0	931	7137	9621	3902	8068		0.66	No
SLV 13	ini.	-4539.97	11615	1.53	0	931	7137	9621	3902	8068		0.69	No
SLV 13	fin.	5520.48	10928	1.53	0	931	7137	9621	3902	8068		0.74	No
SLD 4	ini.	2633.73	-5627	1.53	0	931	7137	9621	3902	8068		1.43	Si
SLD 4	fin.	-2728.78	-6314	1.53	0	931	7137	9621	3902	8068		1.28	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.404	SLV 4	Si
V_SLV	0.61	SLV 4	No
PF_SLU	9.828	SLU 84	Si
V_SLU	3.859	SLU 82	Si

Trave di accoppiamento 187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	2.9	4.07	1.17	-11.933	-4.824	2.9	4.07	1.17	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	732.29	-480	-0.0002338	0.0001872	0.0035	1.17		4962.97	4962.97	No	6.78	Si
SLU 78	fin.	-243.39	-480	-0.0000722	0.0001872	0.0035	1.17		4970.37	4970.37	No	20.42	Si
SLU 81	ini.	733.75	-493	-0.0002343	0.0001872	0.0035	1.17		4962.97	4962.97	No	6.76	Si
SLU 81	fin.	-247.83	-493	-0.0000736	0.0001872	0.0035	1.17		4970.37	4970.37	No	20.06	Si
SLU 79	ini.	729.29	-474	-0.0002327	0.0001872	0.0035	1.17		4962.97	4962.97	No	6.81	Si
SLU 79	fin.	-246.03	-474	-0.000073	0.0001872	0.0035	1.17		4970.37	4970.37	No	20.2	Si
SLU 84	ini.	739.9	-498	-0.0002365	0.0001872	0.0035	1.17		4962.97	4962.97	No	6.71	Si
SLU 84	fin.	-246.09	-498	-0.000073	0.0001872	0.0035	1.17		4970.37	4970.37	No	20.2	Si
SLU 83	ini.	744.38	-499	-0.0002381	0.0001872	0.0035	1.17		4962.97	4962.97	No	6.67	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	fin.	-252.17	-499	-0.0000749	0.0001872	0.0035	1.17		4970.37	4970.37	No	19.71	Si
SLU 80	ini.	724.81	-473	-0.0002311	0.0001872	0.0035	1.17		4962.97	4962.97	No	6.85	Si
SLU 80	fin.	-239.95	-473	-0.0000712	0.0001872	0.0035	1.17		4970.37	4970.37	No	20.71	Si
SLU 82	ini.	729.27	-492	-0.0002327	0.0001872	0.0035	1.17		4962.97	4962.97	No	6.81	Si
SLU 82	fin.	-241.75	-492	-0.0000717	0.0001872	0.0035	1.17		4970.37	4970.37	No	20.56	Si
SLU 74	ini.	726.14	-475	-0.0002316	0.0001872	0.0035	1.17		4962.97	4962.97	No	6.83	Si
SLU 74	fin.	-245.12	-475	-0.0000727	0.0001872	0.0035	1.17		4970.37	4970.37	No	20.28	Si
SLU 77	ini.	736.77	-481	-0.0002354	0.0001872	0.0035	1.17		4962.97	4962.97	No	6.74	Si
SLU 77	fin.	-249.46	-481	-0.0000741	0.0001872	0.0035	1.17		4970.37	4970.37	No	19.92	Si
SLU 75	ini.	721.66	-474	-0.00023	0.0001872	0.0035	1.17		4962.97	4962.97	No	6.88	Si
SLU 75	fin.	-239.05	-474	-0.0000709	0.0001872	0.0035	1.17		4970.37	4970.37	No	20.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	736.77	-467	1.17	0	509	7930	5255	2984	8239	No	17.64	Si
SLU 77	fin.	-249.46	-1510	1.17	0	509	7930	5255	2984	8239	No	5.45	Si
SLU 74	ini.	726.14	-452	1.17	0	509	7930	5255	2984	8239	No	18.23	Si
SLU 74	fin.	-245.12	-1495	1.17	0	509	7930	5255	2984	8239	No	5.51	Si
SLU 80	ini.	724.81	-445	1.17	0	509	7930	5255	2984	8239	No	18.5	Si
SLU 80	fin.	-239.95	-1489	1.17	0	509	7930	5255	2984	8239	No	5.53	Si
SLU 75	ini.	721.66	-441	1.17	0	509	7930	5255	2984	8239	No	18.67	Si
SLU 75	fin.	-239.05	-1485	1.17	0	509	7930	5255	2984	8239	No	5.55	Si
SLU 79	ini.	729.29	-456	1.17	0	509	7930	5255	2984	8239	No	18.07	Si
SLU 79	fin.	-246.03	-1499	1.17	0	509	7930	5255	2984	8239	No	5.49	Si
SLU 81	ini.	733.75	-462	1.17	0	509	7930	5255	2984	8239	No	17.82	Si
SLU 81	fin.	-247.83	-1506	1.17	0	509	7930	5255	2984	8239	No	5.47	Si
SLU 78	ini.	732.29	-456	1.17	0	509	7930	5255	2984	8239	No	18.05	Si
SLU 78	fin.	-243.39	-1500	1.17	0	509	7930	5255	2984	8239	No	5.49	Si
SLU 82	ini.	729.27	-452	1.17	0	509	7930	5255	2984	8239	No	18.24	Si
SLU 82	fin.	-241.75	-1495	1.17	0	509	7930	5255	2984	8239	No	5.51	Si
SLU 84	ini.	739.9	-467	1.17	0	509	7930	5255	2984	8239	No	17.65	Si
SLU 84	fin.	-246.09	-1510	1.17	0	509	7930	5255	2984	8239	No	5.46	Si
SLU 83	ini.	744.38	-477	1.17	0	509	7930	5255	2984	8239	No	17.26	Si
SLU 83	fin.	-252.17	-1521	1.17	0	509	7930	5255	2984	8239	No	5.42	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	3204.43	693	-0.0013735	0.0002807	0.0035	1.17		5035.38	5035.38		1.57	Si
SLV 11	fin.	-3088.45	-375	-0.0012994	0.0002807	0.0035	1.17		5042.83	5042.83		1.63	Si
SLV 3	ini.	-4505.88	375	-0.0024745	0.0002807	0.0035	1.17		5042.83	5042.83		1.12	Si
SLV 3	fin.	5670.65	121	-0.0040434	0.0002807	0.0035	1.17		5035.38	5035.38		0.89	No
SLV 4	ini.	-4872.71	391	-0.0029462	0.0002807	0.0035	1.17		5042.83	5042.83		1.03	Si
SLV 4	fin.	6092.18	138	-0.0045467	0.0002807	0.0035	1.17		5035.38	5035.38		0.83	No
SLV 16	ini.	6072.75	-323	-0.0045242	0.0002807	0.0035	1.17		5035.38	5035.38		0.83	No
SLV 16	fin.	-6533.72	-699	-0.0050346	0.0002807	0.0035	1.17		5042.83	5042.83		0.77	No
SLV 1	ini.	-5072.7	-293	-0.0032344	0.0002807	0.0035	1.17		5042.83	5042.83		0.99	No
SLV 1	fin.	6208.57	83	-0.0046804	0.0002807	0.0035	1.17		5035.38	5035.38		0.81	No
SLV 15	ini.	6439.58	-339	-0.0049405	0.0002807	0.0035	1.17		5035.38	5035.38		0.78	No
SLV 15	fin.	-6955.25	-715	-0.0054912	0.0002807	0.0035	1.17		5042.83	5042.83		0.73	No
SLV 14	ini.	5505.93	-991	-0.0038359	0.0002807	0.0035	1.17		5035.38	5035.38		0.91	No
SLV 14	fin.	-5995.8	-737	-0.0044247	0.0002807	0.0035	1.17		5042.83	5042.83		0.84	No
SLD 15	ini.	3040.05	-319	-0.001273	0.0002807	0.0035	1.17		5035.38	5035.38		1.66	Si
SLD 15	fin.	-3066.78	-482	-0.0012864	0.0002807	0.0035	1.17		5042.83	5042.83		1.64	Si
SLV 2	ini.	-5439.53	-277	-0.0037401	0.0002807	0.0035	1.17		5042.83	5042.83		0.93	No
SLV 2	fin.	6630.1	99	-0.0051505	0.0002807	0.0035	1.17		5035.38	5035.38		0.76	No
SLV 13	ini.	5872.76	-1007	-0.004289	0.0002807	0.0035	1.17		5035.38	5035.38		0.86	No
SLV 13	fin.	-6417.33	-753	-0.0049056	0.0002807	0.0035	1.17		5042.83	5042.83		0.79	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	6439.58	-12752	1.17	0	763	7930	7883	2984	8693		0.68	No
SLV 15	fin.	-6955.25	-13081	1.17	0	763	7930	7883	2984	8693		0.66	No
SLV 2	ini.	-5439.53	12224	1.17	0	763	7930	7883	2984	8693		0.71	No
SLV 2	fin.	6630.1	10952	1.17	0	763	7930	7883	2984	8693		0.79	No
SLV 14	ini.	5505.93	-10893	1.17	0	763	7930	7883	2984	8693		0.8	No
SLV 14	fin.	-5995.8	-11988	1.17	0	763	7930	7883	2984	8693		0.73	No
SLD 13	ini.	2795.12	-5138	1.17	0	763	7930	7883	2984	8693		1.69	Si
SLD 13	fin.	-2835.46	-6069	1.17	0	763	7930	7883	2984	8693		1.43	Si
SLV 13	ini.	5872.76	-11682	1.17	0	763	7930	7883	2984	8693		0.74	No
SLV 13	fin.	-6417.33	-12776	1.17	0	763	7930	7883	2984	8693		0.68	No
SLD 15	ini.	3040.05	-5607	1.17	0	763	7930	7883	2984	8693		1.55	Si
SLD 15	fin.	-3066.78	-6201	1.17	0	763	7930	7883	2984	8693		1.4	Si
SLV 3	ini.	-4505.88	10365	1.17	0	763	7930	7883	2984	8693		0.84	No
SLV 3	fin.	5670.65	9858	1.17	0	763	7930	7883	2984	8693		0.88	No
SLV 1	ini.	-5072.7	11436	1.17	0	763	7930	7883	2984	8693		0.76	No
SLV 1	fin.	6208.57	10163	1.17	0	763	7930	7883	2984	8693		0.86	No
SLV 4	ini.	-4872.71	11154	1.17	0	763	7930	7883	2984	8693		0.78	No
SLV 4	fin.	6092.18	10646	1.17	0	763	7930	7883	2984	8693		0.82	No
SLV 16	ini.	6072.75	-11964	1.17	0	763	7930	7883	2984	8693		0.73	No
SLV 16	fin.	-6533.72	-12293	1.17	0	763	7930	7883	2984	8693		0.71	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.725	SLV 15	No
V_SLV	0.665	SLV 15	No
PF_SLU	6.667	SLU 83	Si
V_SLU	5.418	SLU 83	Si

Trave di accoppiamento 188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	6.07	7.51	1.44	-11.933	-4.824	6.07	7.51	1.44	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	951.89	-1029	-0.0001973	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.83	Si
SLU 84	fin.	-136.96	-1163	-0.0000264	0.0001872	0.0035	1.44		7459.72	7459.72	No	54.47	Si
SLU 83	ini.	955.53	-1024	-0.0001982	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.8	Si
SLU 83	fin.	-143.59	-1158	-0.0000277	0.0001872	0.0035	1.44		7459.72	7459.72	No	51.95	Si
SLU 75	ini.	924.41	-992	-0.0001911	0.0001872	0.0035	1.44		7450.46	7450.46	No	8.06	Si
SLU 75	fin.	-137.58	-1121	-0.0000265	0.0001872	0.0035	1.44		7459.72	7459.72	No	54.22	Si
SLU 81	ini.	944.07	-1013	-0.0001956	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.89	Si
SLU 81	fin.	-140.81	-1145	-0.0000271	0.0001872	0.0035	1.44		7459.72	7459.72	No	52.98	Si
SLU 74	ini.	928.06	-988	-0.0001919	0.0001872	0.0035	1.44		7450.46	7450.46	No	8.03	Si
SLU 74	fin.	-144.21	-1117	-0.0000278	0.0001872	0.0035	1.44		7459.72	7459.72	No	51.73	Si
SLU 77	ini.	939.52	-999	-0.0001945	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.93	Si
SLU 77	fin.	-147	-1130	-0.0000283	0.0001872	0.0035	1.44		7459.72	7459.72	No	50.75	Si
SLU 79	ini.	933.93	-997	-0.0001932	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.98	Si
SLU 79	fin.	-139.15	-1127	-0.0000268	0.0001872	0.0035	1.44		7459.72	7459.72	No	53.61	Si
SLU 78	ini.	935.87	-1003	-0.0001937	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.96	Si
SLU 78	fin.	-140.36	-1134	-0.000027	0.0001872	0.0035	1.44		7459.72	7459.72	No	53.15	Si
SLU 82	ini.	940.43	-1017	-0.0001947	0.0001872	0.0035	1.44		7450.46	7450.46	No	7.92	Si
SLU 82	fin.	-134.17	-1149	-0.0000258	0.0001872	0.0035	1.44		7459.72	7459.72	No	55.6	Si
SLU 80	ini.	930.28	-1001	-0.0001924	0.0001872	0.0035	1.44		7450.46	7450.46	No	8.01	Si
SLU 80	fin.	-132.51	-1131	-0.0000255	0.0001872	0.0035	1.44		7459.72	7459.72	No	56.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	930.28	-156	1.44	0	626	7930	6468	3672	8556	No	54.77	Si
SLU 80	fin.	-132.51	-1649	1.44	0	626	7930	6468	3672	8556	No	5.19	Si
SLU 82	ini.	940.43	-171	1.44	0	626	7930	6468	3672	8556	No	49.98	Si
SLU 82	fin.	-134.17	-1662	1.44	0	626	7930	6468	3672	8556	No	5.15	Si
SLU 74	ini.	928.06	-172	1.44	0	626	7930	6468	3672	8556	No	49.88	Si
SLU 74	fin.	-144.21	-1658	1.44	0	626	7930	6468	3672	8556	No	5.16	Si
SLU 84	ini.	951.89	-176	1.44	0	626	7930	6468	3672	8556	No	48.58	Si
SLU 84	fin.	-136.96	-1678	1.44	0	626	7930	6468	3672	8556	No	5.1	Si
SLU 83	ini.	955.53	-188	1.44	0	626	7930	6468	3672	8556	No	45.62	Si
SLU 83	fin.	-143.59	-1688	1.44	0	626	7930	6468	3672	8556	No	5.07	Si
SLU 77	ini.	939.52	-176	1.44	0	626	7930	6468	3672	8556	No	48.48	Si
SLU 77	fin.	-147	-1674	1.44	0	626	7930	6468	3672	8556	No	5.11	Si
SLU 79	ini.	933.93	-168	1.44	0	626	7930	6468	3672	8556	No	51.04	Si
SLU 79	fin.	-139.15	-1660	1.44	0	626	7930	6468	3672	8556	No	5.15	Si
SLU 75	ini.	924.41	-160	1.44	0	626	7930	6468	3672	8556	No	53.44	Si
SLU 75	fin.	-137.58	-1648	1.44	0	626	7930	6468	3672	8556	No	5.19	Si
SLU 78	ini.	935.87	-165	1.44	0	626	7930	6468	3672	8556	No	51.84	Si
SLU 78	fin.	-140.36	-1663	1.44	0	626	7930	6468	3672	8556	No	5.14	Si
SLU 81	ini.	944.07	-183	1.44	0	626	7930	6468	3672	8556	No	46.86	Si
SLU 81	fin.	-140.81	-1673	1.44	0	626	7930	6468	3672	8556	No	5.12	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	6263.2	16	-0.0020913	0.0002807	0.0035	1.44		7533.98	7533.98		1.2	Si
SLV 15	fin.	-6265.78	-966	-0.0020884	0.0002807	0.0035	1.44		7543.76	7543.76		1.2	Si
SLV 1	ini.	-4584.95	-1331	-0.0012646	0.0002807	0.0035	1.44		7543.76	7543.76		1.65	Si
SLV 1	fin.	5640.91	-552	-0.0017362	0.0002807	0.0035	1.44		7533.98	7533.98		1.34	Si
SLV 11	ini.	3159.28	-835	-0.0007705	0.0002807	0.0035	1.44		7533.98	7533.98		2.38	Si
SLV 11	fin.	-2135.13	-2326	-0.0004753	0.0002807	0.0035	1.44		7543.76	7543.76		3.53	Si
SLV 2	ini.	-4977.88	-1383	-0.001425	0.0002807	0.0035	1.44		7543.76	7543.76		1.52	Si
SLV 2	fin.	6087.74	-575	-0.0019832	0.0002807	0.0035	1.44		7533.98	7533.98		1.24	Si
SLV 4	ini.	-4474.72	-1627	-0.0012219	0.0002807	0.0035	1.44		7543.76	7543.76		1.69	Si
SLV 4	fin.	6010.92	-1564	-0.0019379	0.0002807	0.0035	1.44		7533.98	7533.98		1.25	Si
SLV 3	ini.	-4081.79	-1576	-0.0010763	0.0002807	0.0035	1.44		7543.76	7543.76		1.85	Si
SLV 3	fin.	5564.09	-1542	-0.0016973	0.0002807	0.0035	1.44		7533.98	7533.98		1.35	Si
SLV 16	ini.	5870.28	-35	-0.0018582	0.0002807	0.0035	1.44		7533.98	7533.98		1.28	Si
SLV 16	fin.	-5818.95	-988	-0.0018264	0.0002807	0.0035	1.44		7543.76	7543.76		1.3	Si
SLD 15	ini.	3046.48	-387	-0.0007358	0.0002807	0.0035	1.44		7533.98	7533.98		2.47	Si
SLD 15	fin.	-2728.67	-860	-0.0006402	0.0002807	0.0035	1.44		7543.76	7543.76		2.76	Si
SLV 13	ini.	5760.04	260	-0.0017984	0.0002807	0.0035	1.44		7533.98	7533.98		1.31	Si
SLV 13	fin.	-6188.95	24	-0.0020403	0.0002807	0.0035	1.44		7543.76	7543.76		1.22	Si
SLV 14	ini.	5367.11	209	-0.0016018	0.0002807	0.0035	1.44		7533.98	7533.98		1.4	Si
SLV 14	fin.	-5742.12	1	-0.0017854	0.0002807	0.0035	1.44		7543.76	7543.76		1.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-4584.95	10339	1.44	0	939	7930	9702	3672	8869		0.86	No
SLV 1	fin.	5640.91	10123	1.44	0	939	7930	9702	3672	8869		0.88	No
SLV 13	ini.	5760.04	-10713	1.44	0	939	7930	9702	3672	8869		0.83	No
SLV 13	fin.	-6188.95	-12685	1.44	0	939	7930	9702	3672	8869		0.7	No
SLV 16	ini.	5870.28	-10493	1.44	0	939	7930	9702	3672	8869		0.85	No
SLV 16	fin.	-5818.95	-12472	1.44	0	939	7930	9702	3672	8869		0.71	No
SLV 3	ini.	-4081.79	9760	1.44	0	939	7930	9702	3672	8869		0.91	No
SLV 3	fin.	5564.09	9481	1.44	0	939	7930	9702	3672	8869		0.94	No
SLV 4	ini.	-4474.72	10559	1.44	0	939	7930	9702	3672	8869		0.84	No
SLV 4	fin.	6010.92	10336	1.44	0	939	7930	9702	3672	8869		0.86	No
SLV 14	ini.	5367.11	-9914	1.44	0	939	7930	9702	3672	8869		0.89	No
SLV 14	fin.	-5742.12	-11830	1.44	0	939	7930	9702	3672	8869		0.75	No
SLV 2	ini.	-4977.88	11138	1.44	0	939	7930	9702	3672	8869		0.8	No
SLV 2	fin.	6087.74	10979	1.44	0	939	7930	9702	3672	8869		0.81	No
SLD 13	ini.	2826.26	-4616	1.44	0	939	7930	9702	3672	8869		1.92	Si
SLD 13	fin.	-2694.27	-6087	1.44	0	939	7930	9702	3672	8869		1.46	Si
SLV 15	ini.	6263.2	-11291	1.44	0	939	7930	9702	3672	8869		0.79	No
SLV 15	fin.	-6265.78	-13328	1.44	0	939	7930	9702	3672	8869		0.67	No
SLD 15	ini.	3046.48	-4873	1.44	0	939	7930	9702	3672	8869		1.82	Si
SLD 15	fin.	-2728.67	-6373	1.44	0	939	7930	9702	3672	8869		1.39	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.203	SLV 15	Si
V_SLV	0.665	SLV 15	No
PF_SLU	7.797	SLU 83	Si
V_SLU	5.068	SLU 83	Si

Trave di accoppiamento 189

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	9.51	11.03	1.52	-11.933	-4.824	9.51	11.03	1.52	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	595.57	-1012	-0.0001064	0.0001872	0.0035	1.52		8297.04	8297.04	No	13.93	Si
SLU 74	fin.	-170.67	-1012	-0.0000295	0.0001872	0.0035	1.52		8306.86	8306.86	No	48.67	Si
SLU 81	ini.	597.53	-1049	-0.0001068	0.0001872	0.0035	1.52		8297.04	8297.04	No	13.89	Si
SLU 81	fin.	-167.99	-1049	-0.0000291	0.0001872	0.0035	1.52		8306.86	8306.86	No	49.45	Si
SLU 83	ini.	606.19	-1061	-0.0001084	0.0001872	0.0035	1.52		8297.04	8297.04	No	13.69	Si
SLU 83	fin.	-166.63	-1061	-0.0000288	0.0001872	0.0035	1.52		8306.86	8306.86	No	49.85	Si
SLU 79	ini.	603.65	-1022	-0.0001079	0.0001872	0.0035	1.52		8297.04	8297.04	No	13.74	Si
SLU 79	fin.	-150.34	-1022	-0.000026	0.0001872	0.0035	1.52		8306.86	8306.86	No	55.25	Si
SLU 78	ini.	603.29	-1028	-0.0001079	0.0001872	0.0035	1.52		8297.04	8297.04	No	13.75	Si
SLU 78	fin.	-170.61	-1028	-0.0000295	0.0001872	0.0035	1.52		8306.86	8306.86	No	48.69	Si
SLU 82	ini.	596.6	-1052	-0.0001066	0.0001872	0.0035	1.52		8297.04	8297.04	No	13.91	Si
SLU 82	fin.	-169.29	-1052	-0.0000293	0.0001872	0.0035	1.52		8306.86	8306.86	No	49.07	Si
SLU 75	ini.	594.63	-1016	-0.0001063	0.0001872	0.0035	1.52		8297.04	8297.04	No	13.95	Si
SLU 75	fin.	-171.97	-1016	-0.0000298	0.0001872	0.0035	1.52		8306.86	8306.86	No	48.3	Si
SLU 80	ini.	602.71	-1026	-0.0001078	0.0001872	0.0035	1.52		8297.04	8297.04	No	13.77	Si
SLU 80	fin.	-151.64	-1026	-0.0000262	0.0001872	0.0035	1.52		8306.86	8306.86	No	54.78	Si
SLU 84	ini.	605.26	-1064	-0.0001082	0.0001872	0.0035	1.52		8297.04	8297.04	No	13.71	Si
SLU 84	fin.	-167.93	-1064	-0.0000291	0.0001872	0.0035	1.52		8306.86	8306.86	No	49.47	Si
SLU 77	ini.	604.23	-1024	-0.0001081	0.0001872	0.0035	1.52		8297.04	8297.04	No	13.73	Si
SLU 77	fin.	-169.31	-1024	-0.0000293	0.0001872	0.0035	1.52		8306.86	8306.86	No	49.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	596.6	-126	1.52	0	661	7930	6827	3876	8590	No	68.01	Si
SLU 82	fin.	-169.29	-1314	1.52	0	661	7930	6827	3876	8590	No	6.54	Si
SLU 79	ini.	603.65	-114	1.52	0	661	7930	6827	3876	8590	No	75.08	Si
SLU 79	fin.	-150.34	-1302	1.52	0	661	7930	6827	3876	8590	No	6.6	Si
SLU 81	ini.	597.53	-126	1.52	0	661	7930	6827	3876	8590	No	68.21	Si
SLU 81	fin.	-167.99	-1314	1.52	0	661	7930	6827	3876	8590	No	6.54	Si
SLU 77	ini.	604.23	-134	1.52	0	661	7930	6827	3876	8590	No	64.13	Si
SLU 77	fin.	-169.31	-1322	1.52	0	661	7930	6827	3876	8590	No	6.5	Si
SLU 75	ini.	594.63	-127	1.52	0	661	7930	6827	3876	8590	No	67.63	Si
SLU 75	fin.	-171.97	-1315	1.52	0	661	7930	6827	3876	8590	No	6.53	Si
SLU 78	ini.	603.29	-134	1.52	0	661	7930	6827	3876	8590	No	63.95	Si
SLU 78	fin.	-170.61	-1322	1.52	0	661	7930	6827	3876	8590	No	6.5	Si
SLU 74	ini.	595.57	-127	1.52	0	661	7930	6827	3876	8590	No	67.82	Si
SLU 74	fin.	-170.67	-1314	1.52	0	661	7930	6827	3876	8590	No	6.54	Si
SLU 80	ini.	602.71	-115	1.52	0	661	7930	6827	3876	8590	No	74.85	Si
SLU 80	fin.	-151.64	-1302	1.52	0	661	7930	6827	3876	8590	No	6.6	Si
SLU 84	ini.	605.26	-134	1.52	0	661	7930	6827	3876	8590	No	64.3	Si
SLU 84	fin.	-167.93	-1321	1.52	0	661	7930	6827	3876	8590	No	6.5	Si
SLU 83	ini.	606.19	-133	1.52	0	661	7930	6827	3876	8590	No	64.47	Si
SLU 83	fin.	-166.63	-1321	1.52	0	661	7930	6827	3876	8590	No	6.5	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	2491.89	-705	-0.0005031	0.0002807	0.0035	1.52		8347.35	8347.35		3.35	Si
SLV 11	fin.	-2821.61	-900	-0.000584	0.0002807	0.0035	1.52		8357.44	8357.44		2.96	Si
SLV 3	ini.	-4239.99	-1546	-0.0009797	0.0002807	0.0035	1.52		8357.44	8357.44		1.97	Si
SLV 3	fin.	4979.2	-1410	-0.0012215	0.0002807	0.0035	1.52		8347.35	8347.35		1.68	Si
SLV 14	ini.	5093.64	177	-0.0012614	0.0002807	0.0035	1.52		8347.35	8347.35		1.64	Si
SLV 14	fin.	-5163.34	41	-0.001284	0.0002807	0.0035	1.52		8357.44	8357.44		1.62	Si
SLV 16	ini.	5395.87	15	-0.0013706	0.0002807	0.0035	1.52		8347.35	8347.35		1.55	Si
SLV 16	fin.	-5758.65	-207	-0.0015081	0.0002807	0.0035	1.52		8357.44	8357.44		1.45	Si
SLD 15	ini.	2655.79	-372	-0.0005432	0.0002807	0.0035	1.52		8347.35	8347.35		3.14	Si
SLD 15	fin.	-2632.19	-467	-0.0005367	0.0002807	0.0035	1.52		8357.44	8357.44		3.18	Si
SLV 4	ini.	-4486	-1580	-0.0010566	0.0002807	0.0035	1.52		8357.44	8357.44		1.86	Si
SLV 4	fin.	5247.98	-1444	-0.0013164	0.0002807	0.0035	1.52		8347.35	8347.35		1.59	Si
SLV 15	ini.	5641.89	49	-0.0014644	0.0002807	0.0035	1.52		8347.35	8347.35		1.48	Si
SLV 15	fin.	-6027.43	-172	-0.0016191	0.0002807	0.0035	1.52		8357.44	8357.44		1.39	Si
SLV 13	ini.	5339.66	211	-0.0013498	0.0002807	0.0035	1.52		8347.35	8347.35		1.56	Si
SLV 13	fin.	-5432.12	75	-0.0013819	0.0002807	0.0035	1.52		8357.44	8357.44		1.54	Si
SLV 1	ini.	-4542.22	-1383	-0.0010745	0.0002807	0.0035	1.52		8357.44	8357.44		1.84	Si
SLV 1	fin.	5574.51	-1162	-0.0014382	0.0002807	0.0035	1.52		8347.35	8347.35		1.5	Si
SLV 2	ini.	-4788.23	-1418	-0.001155	0.0002807	0.0035	1.52		8357.44	8357.44		1.75	Si
SLV 2	fin.	5843.29	-1196	-0.0015449	0.0002807	0.0035	1.52		8347.35	8347.35		1.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	5339.66	-10454	1.52	0	991	7930	10241	3876	8921		0.85	No
SLV 13	fin.	-5432.12	-11333	1.52	0	991	7930	10241	3876	8921		0.79	No
SLV 1	ini.	-4542.22	10477	1.52	0	991	7930	10241	3876	8921		0.85	No
SLV 1	fin.	5574.51	9575	1.52	0	991	7930	10241	3876	8921		0.93	No
SLV 16	ini.	5395.87	-10533	1.52	0	991	7930	10241	3876	8921		0.85	No
SLV 16	fin.	-5758.65	-11455	1.52	0	991	7930	10241	3876	8921		0.78	No
SLD 16	ini.	2550.16	-4521	1.52	0	991	7930	10241	3876	8921		1.97	Si
SLD 16	fin.	-2516.8	-5437	1.52	0	991	7930	10241	3876	8921		1.64	Si
SLV 4	ini.	-4486	10398	1.52	0	991	7930	10241	3876	8921		0.86	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	fin.	5247.98	9453	1.52	0	991	7930	10241	3876	8921		0.94	No
SLV 15	ini.	5641.89	-11048	1.52	0	991	7930	10241	3876	8921		0.81	No
SLV 15	fin.	-6027.43	-11969	1.52	0	991	7930	10241	3876	8921		0.75	No
SLD 15	ini.	2655.79	-4742	1.52	0	991	7930	10241	3876	8921		1.88	Si
SLD 15	fin.	-2632.19	-5658	1.52	0	991	7930	10241	3876	8921		1.58	Si
SLV 14	ini.	5093.64	-9939	1.52	0	991	7930	10241	3876	8921		0.9	No
SLV 14	fin.	-5163.34	-10818	1.52	0	991	7930	10241	3876	8921		0.82	No
SLV 3	ini.	-4239.99	9883	1.52	0	991	7930	10241	3876	8921		0.9	No
SLV 3	fin.	4979.2	8939	1.52	0	991	7930	10241	3876	8921		1	No
SLV 2	ini.	-4788.23	10992	1.52	0	991	7930	10241	3876	8921		0.81	No
SLV 2	fin.	5843.29	10090	1.52	0	991	7930	10241	3876	8921		0.88	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.387	SLV 15	Si
V_SLV	0.745	SLV 15	No
PF_SLU	13.687	SLU 83	Si
V_SLU	6.498	SLU 78	Si

Trave di accoppiamento 192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	4.19	5.72	1.53	-7.413	-3.314	4.19	5.72	1.53	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 61	ini.	-396.11	-1740	-0.0000687	0.0001872	0.0035	1.53		8525.78	8525.78	No	21.52	Si
SLU 61	fin.	402.52	-1740	-0.00007	0.0001872	0.0035	1.53		8515.89	8515.89	No	21.16	Si
SLU 60	ini.	-401.43	-1737	-0.0000697	0.0001872	0.0035	1.53		8525.78	8525.78	No	21.24	Si
SLU 60	fin.	407.02	-1737	-0.0000708	0.0001872	0.0035	1.53		8515.89	8515.89	No	20.92	Si
SLU 56	ini.	-333.52	-1729	-0.0000576	0.0001872	0.0035	1.53		8525.78	8525.78	No	25.56	Si
SLU 56	fin.	363.8	-1729	-0.000063	0.0001872	0.0035	1.53		8515.89	8515.89	No	23.41	Si
SLU 63	ini.	-394.62	-1774	-0.0000685	0.0001872	0.0035	1.53		8525.78	8525.78	No	21.6	Si
SLU 63	fin.	407.59	-1774	-0.0000709	0.0001872	0.0035	1.53		8515.89	8515.89	No	20.89	Si
SLU 84	ini.	-341.5	-1950	-0.000059	0.0001872	0.0035	1.53		8525.78	8525.78	No	24.97	Si
SLU 84	fin.	399.74	-1950	-0.0000695	0.0001872	0.0035	1.53		8515.89	8515.89	No	21.3	Si
SLU 62	ini.	-399.95	-1772	-0.0000694	0.0001872	0.0035	1.53		8525.78	8525.78	No	21.32	Si
SLU 62	fin.	412.09	-1772	-0.0000717	0.0001872	0.0035	1.53		8515.89	8515.89	No	20.67	Si
SLU 82	ini.	-342.99	-1916	-0.0000593	0.0001872	0.0035	1.53		8525.78	8525.78	No	24.86	Si
SLU 82	fin.	394.67	-1916	-0.0000686	0.0001872	0.0035	1.53		8515.89	8515.89	No	21.58	Si
SLU 81	ini.	-348.31	-1913	-0.0000602	0.0001872	0.0035	1.53		8525.78	8525.78	No	24.48	Si
SLU 81	fin.	399.16	-1913	-0.0000694	0.0001872	0.0035	1.53		8515.89	8515.89	No	21.33	Si
SLU 58	ini.	-337.86	-1714	-0.0000584	0.0001872	0.0035	1.53		8525.78	8525.78	No	25.23	Si
SLU 58	fin.	363.07	-1714	-0.0000629	0.0001872	0.0035	1.53		8515.89	8515.89	No	23.46	Si
SLU 83	ini.	-346.83	-1947	-0.00006	0.0001872	0.0035	1.53		8525.78	8525.78	No	24.58	Si
SLU 83	fin.	404.24	-1947	-0.0000703	0.0001872	0.0035	1.53		8515.89	8515.89	No	21.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 60	ini.	-401.43	1322	1.53	0	621	7137	6414	3902	7758	No	5.87	Si
SLU 60	fin.	407.02	373	1.53	0	621	7137	6414	3902	7758	No	20.77	Si
SLU 58	ini.	-337.86	1203	1.53	0	621	7137	6414	3902	7758	No	6.45	Si
SLU 58	fin.	363.07	254	1.53	0	621	7137	6414	3902	7758	No	30.55	Si
SLU 63	ini.	-394.62	1316	1.53	0	621	7137	6414	3902	7758	No	5.9	Si
SLU 63	fin.	407.59	366	1.53	0	621	7137	6414	3902	7758	No	21.17	Si
SLU 62	ini.	-399.95	1326	1.53	0	621	7137	6414	3902	7758	No	5.85	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 62	fin.	412.09	377	1.53	0	621	7137	6414	3902	7758	No	20.55	Si
SLU 56	ini.	-333.52	1199	1.53	0	621	7137	6414	3902	7758	No	6.47	Si
SLU 56	fin.	363.8	250	1.53	0	621	7137	6414	3902	7758	No	31.04	Si
SLU 82	ini.	-342.99	1250	1.53	0	621	7137	6414	3902	7758	No	6.21	Si
SLU 82	fin.	394.67	290	1.53	0	621	7137	6414	3902	7758	No	26.77	Si
SLU 84	ini.	-341.5	1254	1.53	0	621	7137	6414	3902	7758	No	6.19	Si
SLU 84	fin.	399.74	294	1.53	0	621	7137	6414	3902	7758	No	26.41	Si
SLU 83	ini.	-346.83	1264	1.53	0	621	7137	6414	3902	7758	No	6.13	Si
SLU 83	fin.	404.24	305	1.53	0	621	7137	6414	3902	7758	No	25.46	Si
SLU 61	ini.	-396.11	1312	1.53	0	621	7137	6414	3902	7758	No	5.91	Si
SLU 61	fin.	402.52	363	1.53	0	621	7137	6414	3902	7758	No	21.4	Si
SLU 81	ini.	-348.31	1261	1.53	0	621	7137	6414	3902	7758	No	6.15	Si
SLU 81	fin.	399.16	301	1.53	0	621	7137	6414	3902	7758	No	25.8	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	6860.01	-361	-0.0019774	0.0002807	0.0035	1.53		8469.61	8469.61		1.23	Si
SLV 2	fin.	-5262.34	-429	-0.0012954	0.0002807	0.0035	1.53		8479.69	8479.69		1.61	Si
SLD 15	ini.	-3166.69	-1642	-0.0006628	0.0002807	0.0035	1.53		8479.69	8479.69		2.68	Si
SLD 15	fin.	2543.76	-1613	-0.0005078	0.0002807	0.0035	1.53		8469.61	8469.61		3.33	Si
SLV 1	ini.	6326.34	-387	-0.001718	0.0002807	0.0035	1.53		8469.61	8469.61		1.34	Si
SLV 1	fin.	-4825.21	-456	-0.0011468	0.0002807	0.0035	1.53		8479.69	8479.69		1.76	Si
SLV 13	ini.	-6574.4	-1876	-0.0018299	0.0002807	0.0035	1.53		8479.69	8479.69		1.29	Si
SLV 13	fin.	5233.77	-1801	-0.0012873	0.0002807	0.0035	1.53		8469.61	8469.61		1.62	Si
SLV 3	ini.	5711.48	-666	-0.0014631	0.0002807	0.0035	1.53		8469.61	8469.61		1.48	Si
SLV 3	fin.	-4384.38	-742	-0.001007	0.0002807	0.0035	1.53		8479.69	8479.69		1.93	Si
SLV 11	ini.	-3296	-1956	-0.0006968	0.0002807	0.0035	1.53		8479.69	8479.69		2.57	Si
SLV 11	fin.	2590.15	-1945	-0.0005189	0.0002807	0.0035	1.53		8469.61	8469.61		3.27	Si
SLV 16	ini.	-6655.6	-2129	-0.0018695	0.0002807	0.0035	1.53		8479.69	8479.69		1.27	Si
SLV 16	fin.	5237.47	-2060	-0.0012886	0.0002807	0.0035	1.53		8469.61	8469.61		1.62	Si
SLV 15	ini.	-7189.26	-2155	-0.0021558	0.0002807	0.0035	1.53		8479.69	8479.69		1.18	Si
SLV 15	fin.	5674.6	-2087	-0.0014489	0.0002807	0.0035	1.53		8469.61	8469.61		1.49	Si
SLV 4	ini.	6245.15	-640	-0.001682	0.0002807	0.0035	1.53		8469.61	8469.61		1.36	Si
SLV 4	fin.	-4821.51	-715	-0.0011456	0.0002807	0.0035	1.53		8479.69	8479.69		1.76	Si
SLV 14	ini.	-6040.73	-1850	-0.0015921	0.0002807	0.0035	1.53		8479.69	8479.69		1.4	Si
SLV 14	fin.	4796.64	-1774	-0.0011391	0.0002807	0.0035	1.53		8469.61	8469.61		1.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	6860.01	-13293	1.53	0	931	7137	9621	3902	8068		0.61	No
SLV 2	fin.	-5262.34	-14055	1.53	0	931	7137	9621	3902	8068		0.57	No
SLV 1	ini.	6326.34	-12214	1.53	0	931	7137	9621	3902	8068		0.66	No
SLV 1	fin.	-4825.21	-12977	1.53	0	931	7137	9621	3902	8068		0.62	No
SLV 3	ini.	5711.48	-10776	1.53	0	931	7137	9621	3902	8068		0.75	No
SLV 3	fin.	-4384.38	-11566	1.53	0	931	7137	9621	3902	8068		0.7	No
SLV 16	ini.	-6655.6	13697	1.53	0	931	7137	9621	3902	8068		0.59	No
SLV 16	fin.	5237.47	12988	1.53	0	931	7137	9621	3902	8068		0.62	No
SLV 14	ini.	-6040.73	12258	1.53	0	931	7137	9621	3902	8068		0.66	No
SLV 14	fin.	4796.64	11577	1.53	0	931	7137	9621	3902	8068		0.7	No
SLV 4	ini.	6245.15	-11854	1.53	0	931	7137	9621	3902	8068		0.68	No
SLV 4	fin.	-4821.51	-12645	1.53	0	931	7137	9621	3902	8068		0.64	No
SLV 15	ini.	-7189.26	14776	1.53	0	931	7137	9621	3902	8068		0.55	No
SLV 15	fin.	5674.6	14066	1.53	0	931	7137	9621	3902	8068		0.57	No
SLV 13	ini.	-6574.4	13337	1.53	0	931	7137	9621	3902	8068		0.6	No
SLV 13	fin.	5233.77	12656	1.53	0	931	7137	9621	3902	8068		0.64	No
SLV 11	ini.	-3296	7318	1.53	0	931	7137	9621	3902	8068		1.1	Si
SLV 11	fin.	2590.15	6548	1.53	0	931	7137	9621	3902	8068		1.23	Si
SLD 15	ini.	-3166.69	6743	1.53	0	931	7137	9621	3902	8068		1.2	Si
SLD 15	fin.	2543.76	6014	1.53	0	931	7137	9621	3902	8068		1.34	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.179	SLV 15	Si
V_SLV	0.546	SLV 15	No
PF_SLU	20.665	SLU 62	Si
V_SLU	5.848	SLU 62	Si

Trave di accoppiamento 196

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	4.19	5.72	1.53	-3.183	-3.314	4.19	5.72	1.53	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	1109.64	-3086	-0.0002045	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.67	Si
SLU 78	fin.	-1283.84	-3086	-0.0002404	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.64	Si
SLU 66	ini.	1135.54	-2788	-0.0002098	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.5	Si
SLU 66	fin.	-1289.51	-2788	-0.0002416	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.61	Si
SLU 71	ini.	1142.77	-2811	-0.0002113	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.45	Si
SLU 71	fin.	-1295.98	-2811	-0.000243	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.58	Si
SLU 70	ini.	1153.11	-2844	-0.0002134	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.39	Si
SLU 70	fin.	-1305.34	-2844	-0.000245	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.53	Si
SLU 80	ini.	1108.24	-3059	-0.0002042	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.68	Si
SLU 80	fin.	-1282.4	-3059	-0.0002401	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.65	Si
SLU 65	ini.	1140.41	-2721	-0.0002108	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.47	Si
SLU 65	fin.	-1293.33	-2721	-0.0002424	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.59	Si
SLU 72	ini.	1151.71	-2817	-0.0002131	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.39	Si
SLU 72	fin.	-1303.9	-2817	-0.0002447	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.54	Si
SLU 69	ini.	1144.17	-2838	-0.0002116	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.44	Si
SLU 69	fin.	-1297.43	-2838	-0.0002433	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.57	Si
SLU 68	ini.	1149.04	-2771	-0.0002126	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.41	Si
SLU 68	fin.	-1301.25	-2771	-0.0002441	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.55	Si
SLU 67	ini.	1144.48	-2794	-0.0002116	0.0001872	0.0035	1.53		8515.89	8515.89	No	7.44	Si
SLU 67	fin.	-1297.42	-2794	-0.0002433	0.0001872	0.0035	1.53		8525.78	8525.78	No	6.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 66	ini.	1135.54	-2222	1.53	0	621	7137	6414	3902	7758	No	3.49	Si
SLU 66	fin.	-1289.51	-3183	1.53	0	621	7137	6414	3902	7758	No	2.44	Si
SLU 69	ini.	1144.17	-2240	1.53	0	621	7137	6414	3902	7758	No	3.46	Si
SLU 69	fin.	-1297.43	-3202	1.53	0	621	7137	6414	3902	7758	No	2.42	Si
SLU 78	ini.	1109.64	-2187	1.53	0	621	7137	6414	3902	7758	No	3.55	Si
SLU 78	fin.	-1283.84	-3148	1.53	0	621	7137	6414	3902	7758	No	2.46	Si
SLU 72	ini.	1151.71	-2256	1.53	0	621	7137	6414	3902	7758	No	3.44	Si
SLU 72	fin.	-1303.9	-3217	1.53	0	621	7137	6414	3902	7758	No	2.41	Si
SLU 64	ini.	1125.51	-2200	1.53	0	621	7137	6414	3902	7758	No	3.53	Si
SLU 64	fin.	-1280.15	-3162	1.53	0	621	7137	6414	3902	7758	No	2.45	Si
SLU 68	ini.	1149.04	-2250	1.53	0	621	7137	6414	3902	7758	No	3.45	Si
SLU 68	fin.	-1301.25	-3211	1.53	0	621	7137	6414	3902	7758	No	2.42	Si
SLU 65	ini.	1140.41	-2231	1.53	0	621	7137	6414	3902	7758	No	3.48	Si
SLU 65	fin.	-1293.33	-3193	1.53	0	621	7137	6414	3902	7758	No	2.43	Si
SLU 67	ini.	1144.48	-2240	1.53	0	621	7137	6414	3902	7758	No	3.46	Si
SLU 67	fin.	-1297.42	-3202	1.53	0	621	7137	6414	3902	7758	No	2.42	Si
SLU 70	ini.	1153.11	-2259	1.53	0	621	7137	6414	3902	7758	No	3.43	Si
SLU 70	fin.	-1305.34	-3220	1.53	0	621	7137	6414	3902	7758	No	2.41	Si
SLU 71	ini.	1142.77	-2237	1.53	0	621	7137	6414	3902	7758	No	3.47	Si
SLU 71	fin.	-1295.98	-3199	1.53	0	621	7137	6414	3902	7758	No	2.43	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-4685.16	-2404	-0.0011014	0.0002807	0.0035	1.53		8479.69	8479.69		1.81	Si
SLV 15	fin.	4434.47	-2285	-0.0010239	0.0002807	0.0035	1.53		8469.61	8469.61		1.91	Si
SLV 1	ini.	5716.85	-1779	-0.0014651	0.0002807	0.0035	1.53		8469.61	8469.61		1.48	Si
SLV 1	fin.	-5703.04	-1899	-0.0014575	0.0002807	0.0035	1.53		8479.69	8479.69		1.49	Si
SLV 4	ini.	5811.35	-2211	-0.001502	0.0002807	0.0035	1.53		8469.61	8469.61		1.46	Si
SLV 4	fin.	-5661.01	-2273	-0.0014414	0.0002807	0.0035	1.53		8479.69	8479.69		1.5	Si
SLV 5	ini.	3043.53	-1363	-0.0006319	0.0002807	0.0035	1.53		8469.61	8469.61		2.78	Si
SLV 5	fin.	-3340.16	-1486	-0.0007085	0.0002807	0.0035	1.53		8479.69	8479.69		2.54	Si
SLV 13	ini.	-4124.5	-1984	-0.0009287	0.0002807	0.0035	1.53		8479.69	8479.69		2.06	Si
SLV 13	fin.	3730.91	-1922	-0.0008165	0.0002807	0.0035	1.53		8469.61	8469.61		2.27	Si
SLV 3	ini.	5156.19	-2199	-0.0012602	0.0002807	0.0035	1.53		8469.61	8469.61		1.64	Si
SLV 3	fin.	-4999.47	-2261	-0.0012047	0.0002807	0.0035	1.53		8479.69	8479.69		1.7	Si
SLV 2	ini.	6372.01	-1791	-0.0017386	0.0002807	0.0035	1.53		8469.61	8469.61		1.33	Si
SLV 2	fin.	-6364.57	-1911	-0.0017322	0.0002807	0.0035	1.53		8479.69	8479.69		1.33	Si
SLV 16	ini.	-4030	-2416	-0.0009009	0.0002807	0.0035	1.53		8479.69	8479.69		2.1	Si
SLV 16	fin.	3772.94	-2297	-0.0008283	0.0002807	0.0035	1.53		8469.61	8469.61		2.24	Si
SLV 14	ini.	-3469.34	-1996	-0.0007432	0.0002807	0.0035	1.53		8479.69	8479.69		2.44	Si
SLV 14	fin.	3069.38	-1934	-0.0006385	0.0002807	0.0035	1.53		8469.61	8469.61		2.76	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	3464.6	-1370	-0.000743	0.0002807	0.0035	1.53		8469.61	8469.61		2.44	Si
SLV 6	fin.	-3765.32	-1494	-0.000825	0.0002807	0.0035	1.53		8479.69	8479.69		2.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-4685.16	10083	1.53	0	931	7137	9621	3902	8068		0.8	No
SLV 15	fin.	4434.47	9480	1.53	0	931	7137	9621	3902	8068		0.85	No
SLV 13	ini.	-4124.5	9637	1.53	0	931	7137	9621	3902	8068		0.84	No
SLV 13	fin.	3730.91	8913	1.53	0	931	7137	9621	3902	8068		0.91	No
SLV 4	ini.	5811.35	-12931	1.53	0	931	7137	9621	3902	8068		0.62	No
SLV 4	fin.	-5661.01	-13682	1.53	0	931	7137	9621	3902	8068		0.59	No
SLD 2	ini.	3205.22	-6661	1.53	0	931	7137	9621	3902	8068		1.21	Si
SLD 2	fin.	-3274.05	-7456	1.53	0	931	7137	9621	3902	8068		1.08	Si
SLV 14	ini.	-3469.34	8174	1.53	0	931	7137	9621	3902	8068		0.99	No
SLV 14	fin.	3069.38	7450	1.53	0	931	7137	9621	3902	8068		1.08	Si
SLV 2	ini.	6372.01	-13377	1.53	0	931	7137	9621	3902	8068		0.6	No
SLV 2	fin.	-6364.57	-14249	1.53	0	931	7137	9621	3902	8068		0.57	No
SLV 3	ini.	5156.19	-11468	1.53	0	931	7137	9621	3902	8068		0.7	No
SLV 3	fin.	-4999.47	-12219	1.53	0	931	7137	9621	3902	8068		0.66	No
SLV 1	ini.	5716.85	-11914	1.53	0	931	7137	9621	3902	8068		0.68	No
SLV 1	fin.	-5703.04	-12786	1.53	0	931	7137	9621	3902	8068		0.63	No
SLV 16	ini.	-4030	8620	1.53	0	931	7137	9621	3902	8068		0.94	No
SLV 16	fin.	3772.94	8017	1.53	0	931	7137	9621	3902	8068		1.01	Si
SLD 4	ini.	2963.38	-6461	1.53	0	931	7137	9621	3902	8068		1.25	Si
SLD 4	fin.	-2969.26	-7203	1.53	0	931	7137	9621	3902	8068		1.12	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.329	SLV 2	Si
V_SLV	0.566	SLV 2	No
PF_SLU	6.531	SLU 70	Si
V_SLU	2.409	SLU 70	Si